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DEPARTMENT OF EDUCATION

2018 PENNSYLVANIA SYSTEM OF SCHOOL ASSESSMENT TECHNICAL REPORT

MATHEMATICS, ENGLISH LANGUAGE ARTS, AND SCIENCE

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GLOSSARY OF COMMON TERMS

The following table contains some terms used in this technical report and their meanings. Some of these terms are used universally in the assessment community, and some of these terms are used commonly by psychometric professionals. A glossary of accommodation terms as applied to the PSSA is provided in Chapter Ten.

TABLE G–1. GLOSSARY OF TERMS

Term	Common Definition
Ability	In Rasch scaling, ability is a generic term indicating the level of an individual on the construct measured by an exam. As an example for the PSSA, a student's reading ability is measured by how the student performed on the PSSA Reading test. A student who answered more items correctly has a higher ability than a student who answered fewer items correctly.
Adjacent Agreement	A score/rating difference of one (1) point in value usually assigned by two different raters under the same conditions (e.g., two independent raters give the same paper scores that differ by one point).
Alternate Forms	Two or more versions of a test that are considered exchangeable, i.e., they measure the same constructs in the same ways, are intended for the same purposes, and are administered using the same directions. More specific terminology applies depending on the degree of statistical similarity between the test forms (e.g., parallel forms, equivalent forms, and comparable forms) where parallel forms refers to the situation in which the test forms have the highest degree of similarity to each other.
Average	A measure of central tendency in a score distribution that usually refers to the arithmetic mean of a set of scores. In this case, it is determined by adding all the scores in a distribution and then dividing the obtained value by the total number of scores. Sometimes people use the word average to refer to other measures of central tendency such as the median (the score in the middle of a distribution) or mode (the score value with the greatest frequency).
Bias	In a statistical context, bias refers to any source of systematic error in the measurement of a test score. In discussing test fairness, bias may refer to construct-irrelevant components of test scores that differentially affect the performance of different groups of test takers (e.g., gender, ethnicity, etc.). Attempts are made to reduce bias by conducting item fairness reviews and various differential item functioning (DIF) analyses, detecting potential areas of concern, and either removing or revising the flagged test items prior to the development of the final operational form of the test (see also Differential Item Functioning).
Constructed-Response Item	A constructed-response (CR) item is an item that requires examinees to create their own responses, which can be expressed in various forms (e.g., written essay, created table/graph, formulated calculation, etc.). Such items are frequently scored using more than two score categories, that is, polytomously (e.g., 0, 1, 2, and 3). This format is in contrast to when students make a choice from a supplied set of answer options (e.g., multiple-choice (MC) items which are typically dichotomously scored as right = 1 or wrong = 0). When interpreting item difficulty and discrimination indices it is important to consider whether an item is polytomously or dichotomously scored.
Content Validity Evidence	Evidence regarding the extent to which a test provides an appropriate sampling of a content domain of interest (e.g., assessable portions of a state's Grade 6 mathematics curriculum in terms of the knowledge, skills, objectives, and processes sampled).
Core-Linking Item	Items that are utilized during the linking process (see also Linking). They are a subset of the PSSA operational items and so they 1) are the same on all test forms for any grade/subject-area test and 2) contribute to student total raw scores and scaled scores.
Criterion- Referenced Interpretation	When a score is interpreted as a measure of a student's performance with respect to an expected level of mastery, educational objective, or standard. The types of resulting score interpretations provide information about what a student knows or can do with respect to a given content area.
Cut Score	A specified point on a score scale such that scores at or above that point are interpreted or acted upon differently from scores below that point (e.g., a score designated as the minimum level of performance needed to pass a competency test). One or more cut scores can be set for a test that results in dividing the score range into various proficiency level ranges. Methods for establishing cut scores vary. For the PSSA, three cut scores are used to place students into one of four performance levels (see also Performance Level Setting).

Term	Common Definition
Decision Consistency	The extent to which classifications based on test scores would match the decisions based on scores from a second, parallel form of the same test. It is often expressed as the proportion of examinees who are classified the same way from the two test administrations.
Differential Item Functioning (DIF)	A statistical property of a test item in which different groups of test takers (who have the same total test score) have different average item scores. In other words, students with the same ability level but different group memberships do not have the same probability of answering the item correctly (see also Bias).
Distractor	An incorrect option in a multiple-choice item (also called a foil).
Equating	The strongest of several linking methods used to establish comparability between scores from multiple tests. Equated test scores should be considered exchangeable. Consequently, the criteria needed to refer to a linkage as equating are strong and somewhat complex (equal construct and precision, equity, and invariance). In practical terms, it is often stated that it should be a matter of indifference to a student if he/she takes any of the equated tests (see also Linking).
Equating Block (EB) Items	The PSSA uses multiple test forms for each grade/subject-area test. Each form is composed of operational (OP) items, equating block (EB) items, and field-test (FT) items. EB items are utilized during the linking process (see also Linking). Each test form includes a set of EB items. EB items are not part of any student scores.
Error of Measurement	The amount by which the score actually received (an observed score) differs from a hypothetical true score (see also Standard Error of Measurement).
Evidence-Based Selected-Response Item	A type of item that has two parts and requires the test taker to select a response from a group of possible answer choices in Part One, one of which is the correct answer (or key) to the question posed, and to then select one or two responses from a group of possible answer choices in Part Two, which provide evidence to support the correct answer in Part One.
Exact Agreement	When identical scores/ratings are assigned by two different raters under the same conditions (e.g., two independent raters give a paper the same score).
Field-Test (FT) Items	The PSSA uses multiple test forms for each grade/subject-area test. Each form is composed of operational (OP) items, equating block (EB) items, and field-test (FT) items. An FT item is a newly developed item that is ready to be tried out to determine its statistical properties (see also *P*-value and Point-Biserial Correlation). Each test form includes a set of FT items. FT items are not part of any student scores.
Frequency	The number of times that a certain value or range of values (score interval) occurs in a distribution of scores.
Frequency Distribution	A tabulation of scores from low to high or high to low showing the number and/or percent of individuals who obtain each score or who fall within each score interval or category.
Infit/Outfit	Statistical indicators of the agreement of the data and the measurement model (see also Outfit/Infit).
Item Difficulty	For the Rasch model, the dichotomous item difficulty represents the point along the latent trait continuum where an examinee has a 0.50 probability of making a correct response. For a polytomous item, the difficulty is the average of the item's step difficulties (see also Step Difficulty).
Key	The correct response option or answer to a test item.
Linking	A generic term referring to one of a number of processes by which scores from one or more tests are made comparable to some degree. Linking includes several classes of transformations (equating, scale alignment, prediction, etc.). Equating is associated with the strongest degree of comparability (exchangeable scores). Other linkages may be very strong but fail to meet one or more of the strict criteria required of equating (see also Equating).
Logit	In Rasch scaling, logits are units used to express both examinee ability and item difficulty. When expressing examinee ability, a student who answers more items correctly has a higher logit than a student who answers fewer items correctly. Logits are transformed into Scaled Scores through a linear transformation. When expressing item difficulty, logits are transformed *p*-value (see also *P*-value). The logit difficulty scale is inversely related to *p*-values. A higher logit value would represent a relatively harder item, while a lower logit value would represent a relatively easier item.
Mean	Also referred to as the arithmetic mean of a set of scores, is found by adding all the score values in a distribution and dividing by the total number of scores. For example, the mean of the set {66, 76, 85, 97} is 81. The value of a mean can be influenced by extreme values in a score distribution.

Term	Common Definition
Measure	In Rasch scaling, measure generally refers to a specific estimate of an examinee's ability (often expressed as logits) or an item's difficulty (again, often expressed as logits). As an example for the PSSA, a student's reading measure might be equal to 0.525 logits. Or, a PSSA Reading test item might have logit equal to -0.905.
Median	The middle point or score in a set of rank-ordered observations that divides the distribution into two equal parts such that each part contains 50 percent of the total data set. More simply put, half of the scores are below the median value and half of the scores are above the median value. As an example, the median for the following ranked set of scores {2, 3, 6, 8, 9} is 6.
Multiple-Choice Item	A type of item that requires the test taker to select a response from a group of possible choices, one of which is the correct answer (or key) to the question posed (see also Constructed-Response Item).
N-count	Sometimes designated as *N* or *n*, it is the number of observations (usually individuals or students) in a particular group. Some examples include the number of students tested, the number of students tested from a specific subpopulation (e.g., females), the number of students who attained a specific score, etc. In the follow set {23, 32, 56, 65, 78, 87}, $n = 6$.
Open-Ended Item	A type of constructed-response item found in the mathematics and science assessments that requires examinees to create their own responses, which can be expressed in various forms (e.g., written description, created table/graph, formulated calculation, etc.). Such items are frequently scored using more than two score categories, that is, polytomously (e.g., 0, 1, 2, 3, and 4). This format is in contrast to when students make a choice from a supplied set of answer options (e.g., multiple-choice (MC) items which are typically dichotomously scored as right = 1 or wrong = 0.) When interpreting item difficulty and discrimination indices it is important to consider whether an item is polytomously or dichotomously scored.
Operational Item	The PSSA uses multiple test forms for each grade/subject-area test. Each form is composed of operational (OP) items, equating block (EB) items, and field-test (FT) items. OP items are the same on all forms for any grade/subject-area test. Student total raw scores and scaled scores are based exclusively on the OP items.
Outfit/Infit	Statistical indicators of the agreement of the data and the measurement model. Infit and Outfit are highly correlated, and both are highly correlated with the point-biserial correlation. Underfit can be caused when low-ability students correctly answer difficult items (perhaps by guessing or atypical experience) or high-ability students incorrectly answer easy items (perhaps because of carelessness or gaps in instruction). Any model expects some level of variability, so overfit can occur when nearly all low-ability students miss an item while nearly all high-ability students get the item correct.
Percent Correct	When referring to an individual item, the percent correct is the item's p-value expressed as a percent (instead of a proportion). When referring to a total test score, it is the percentage of the total number of points that a student received. The percent correct score is obtained by dividing the student's raw score by the total number of possible points and multiplying the result by 100. Percent Correct scores are often used in criterion-referenced interpretations and are generally more helpful if the overall difficulty of a test is known. Sometimes Percent Correct scores are incorrectly interpreted as Percentile Ranks.
Percentile	The score or point in a score distribution at or below which a given percentage of scores fall. It should be emphasized that it is a value on the score scale, not the associated percentage (although sometimes in casual usage this misinterpretation is made). For example, if 72 percent of the students score at or below a Scaled Score of 1500 on a given test, then the Scaled Score of 1500 would be considered the 72nd percentile. As another example, the median is the 50th percentile.
Percentile Rank	The percentage of scores in a specified distribution falling at/below a certain point on a score distribution. Percentile Ranks range in value from 1 to 99, and indicate the status or relative standing of an individual within a specified group by indicating the percent of individuals in that group who obtained equal or lower scores. An individual's percentile rank can vary depending on which group is used to determine the ranking. As suggested above, Percentiles and Percentile Rank are sometimes used interchangeably; however, strictly speaking, a percentile is a value on the score scale.
Performance Level Descriptors	Descriptions of an individual's competency in a particular content area, usually defined as ordered categories on a continuum, often labeled from Below Basic to Advanced, that constitute broad ranges for classifying performance. The exact labeling of these categories, and narrative descriptions, may vary from one assessment or testing program to another.

Term	Common Definition
Performance Level Setting	Also referred to as standard setting, a procedure used in the determination of the cut scores for a given assessment that is used to measure students' progress towards certain performance standards. Standard setting methods vary (e.g., modified Angoff, Bookmark Method, etc.), but most use a panel of educators and expert judgments to operationalize the level of achievement students must demonstrate in order to be categorized within each performance level.
Point-Biserial Correlation	In classical test theory this is an item discrimination index. It is the correlation between a dichotomously scored item and a continuous criterion, usually represented by the total test score (or the corrected total test score with the reference item removed). It reflects the extent to which an item differentiates between high-scoring and low-scoring examinees. This discrimination index ranges from –1.00 to +1.00. The higher the discrimination index (the closer to +1.00), the better the item is considered to be performing. For multiple-choice items scored as 0 or 1, it is rare for the value of this index to exceed 0.5.
P-value	An index indicating an item's difficulty for some specified group (perhaps grade). It is calculated as the proportion (sometimes percent) of students in the group who answer an item correctly. *P*-values range from 0.0 to 1.0 on the proportion scale. Lower values correspond to more difficult items and higher values correspond to easier items. *P*-values are usually provided for multiple-choice items or other items worth one point. For open-ended items or items worth more than one point, difficulty on a *p*-value-like scale can be estimated by dividing the item mean score by the maximum number of points possible for the item (see also Logit).
Raw Score	Sometimes abbreviated by RS—it is an unadjusted score usually determined by tallying the number of questions answered correctly, or by the sum of item scores (i.e., points). (Some rarer situations might include formula-scoring, the amount of time required to perform a task, the number of errors, application of basal/ceiling rules, etc.). Raw scores typically have little or no meaning by themselves and require additional information—like the number of items on the test, the difficulty of the test items, norm-referenced information, or criterion-referenced information.
Reliability	The expected degree to which test scores for a group of examinees are consistent over exchangeable replications of an assessment procedure, and therefore, are considered dependable and repeatable for an individual examinee. A test that produces highly consistent, stable results (i.e., relatively free from random error) is said to be highly reliable. The reliability of a test is typically expressed as a reliability coefficient or by the standard error of measurement derived by that coefficient.
Reliability Coefficient	A statistical index that reflects the degree to which scores are free from random measurement error. Theoretically, it expresses the consistency of test scores as the ratio of true score variance to total score variance (true score variance plus error variance). This statistic is often expressed as correlation coefficient (e.g., correlation between two forms of a test) or with an index that resembles a correlation coefficient (e.g., calculation of a test's internal consistency using Coefficient Alpha). Expressed this way, the reliability coefficient is a unitless index. The higher the value of the index (closer to 1.0), the greater the reliability of the test (see also Standard Error of Measurement).
Scaled Score	A mathematical transformation of a raw score developed through a process called scaling. Scaled scores are most useful when comparing test results over time. Several different methods of scaling exist, but each is intended to provide a continuous and meaningful score scale across different forms of a test.
Selected-Response Item	See Multiple-Choice Item.
Short-Answer Item	A type of constructed-response item found in the grade 3 ELA assessment that requires the test taker to compose an answer based on a passage or passage set the student has read. Each short-answer (SA) item is scored using an item-specific scoring guideline based on a 0–3 point general scoring guideline.
Spiraling	A packaging process used when multiple forms of a test exist and it is desired that each form be tested in all classrooms (or other grouping unit (e.g., schools)) participating in the testing process. This process allows for the random distribution of test booklets to students. For example, if a package has four test forms labeled A, B, C, and D, the order of the test booklets in the package would be A, B, C, D, A, B, C, D, A, B, C, D, etc.

Term	Common Definition
Standard Deviation (SD)	A statistic that measures the degree of spread or dispersion of a set of scores. The value of this statistic is always greater than or equal to zero. If all of the scores in a distribution are identical, the standard deviation is equal to zero. The further the scores are away from each other in value, the greater the standard deviation. This statistic is calculated using the information about the deviations (distances) between each score and the distribution's mean. It is equivalent to the square root of the variance statistic. The standard deviation is a commonly used method of examining a distribution's variability since the standard deviation is expressed in the same units as the data.
Standard Error of Measurement (SEM)	The amount an observed score is expected to fluctuate around the true score. As an example, across replications of a measurement procedure, the true score will not differ by more than plus or minus one standard error from the observed score about 68 percent of the time (assuming normally distributed errors). The SEM is frequently used to obtain an idea of the consistency of a person's score in actual score units or to set a confidence band around a score in terms of the error of measurement. Often a single SEM value is calculated for all test scores. On other occasions, however, the value of the SEM can vary along a score scale. Conditional standard errors of measurement (CSEMs) provide an SEM for each possible scaled score.
Step Difficulty	Step difficulty is a parameter estimate in Master's partial credit model (PCM) that represents the relative difficulty of each score step (e.g., going from a score of 1 to a score of 2). The higher the value of a particular step difficulty, the more difficult a particular step is relative to other score steps (e.g., is it harder to go from a 1 to a 2, or to go from a 2 to a 3).
Strand	On score reports, a strand often refers to a set of items on a test measuring the same contextual area (e.g., Number Sense in Mathematics). Items developed to measure the same reporting category would be used to determine the strand score (sometimes called "subscale" score).
Technical Advisory Committee (TAC)	A group of individuals, most often professionals in the field of testing, who are either appointed or selected to make recommendations for and to guide the technical development of a given testing program.
Text-Dependent Analysis Item	A type of constructed-response item found in the ELA assessment in Grades 4–8 that requires the test taker to compose an essay based on a passage or passage set that the student has read during the test event. Test takers must draw on basic writing skills while inferring and synthesizing information from the passage in order to develop the response. The text-dependent analysis (TDA) item is scored on a holistic scoring guideline on a 1–4 point scale.
Validity	The degree to which accumulated evidence and theory support specific interpretations of test scores entailed by the purposed uses of a test. There are various ways of gathering validity evidence.
Writing Prompt	A type of constructed-response item found in the ELA assessment that requires the test taker to compose a mode-specific (opinion (Grades 3–5)/argumentative (Grades 6–8), informative/explanatory, or narrative) essay that is scored on a holistic, mode-specific scoring guideline on a 1–4 point scale.

PREFACE: AN OVERVIEW OF ASSESSMENTS FROM 2003 TO THE PRESENT

The period from 2003 through 2006 brought significant structural changes to the test blueprint for the Pennsylvania System of School Assessment (PSSA). These changes necessitated extensive test development and field testing activity along with phased-in implementation of the operational assessment. Included in this process was the development and implementation of assessments at additional grade levels.

For mathematics and reading, content changes for Grades 5, 8, and 11 were developed in 2003, field tested in spring 2004, and implemented in spring 2005. The *2005 PSSA Technical Report for Reading and Mathematics* provides a description of test development activities including a review of open-ended tasks and multiple-choice items, field testing, selection of items, statistical analysis of assessment data, reliability, validity, standard setting, and other technical characteristics of the operational 2005 PSSA. Test development for the new grade levels of 4, 6, and 7 began in 2004, with field testing in 2005, and full implementation in 2006. Similarly, the *2006 PSSA Technical Report for Reading and Mathematics: Grades 4, 6, and 7* provides a complete description of test development activities, item review, field testing, statistical analysis, item selection, and technical characteristics of the operational 2006 PSSA for these grade levels. In 2007, the Grade 3 reading and mathematics assessment became DRC's responsibility and is covered in the *2007 PSSA Technical Report for Reading and Mathematics*, along with the remaining grades.

Changes implemented in the writing assessment of spring 2006 were designed to sharpen the focus on what is assessed with respect to Academic Standards 1.4 and 1.5. To support this effort, a shift in grade levels assessed was made, moving from Grades 6 and 9 to Grades 5 and 8, thereby aligning assessment to the end of elementary and middle school years. The writing testing window was changed from fall to February 2006 for Grades 5 and 8, making it consistent with Grade 11. Mode-specific scoring guidelines replaced domain scoring, and the introduction of stimulus-based passages and associated multiple-choice items measuring revising and editing expanded the basis of the conventions score. An account of the development of writing prompts and stimulus-based, multiple-choice items, review processes, field testing and item analysis, standard setting, and other technical characteristics of the operational 2006 PSSA may be found in the *2006 PSSA Technical Report for Writing*.

The introduction of an operational science assessment in 2008 moved closer to reality with a major standalone field test at Grades 4, 8, and 11 in April–May of 2007. A description of the development of science scenarios and related multiple-choice, short answer open-ended, and extended open-ended questions, item review processes, statistical analysis of field test data, and selection of items for the 2008 operational science test may be found in the *2008 PSSA Preliminary Technical Report for Science*. Subsequently, the first operational science assessment took place in the spring of 2008, along with standard setting and reporting of results.

With the exception of some shifting of test windows, the spring assessments of 2009, 2010, 2011, and 2012 were conducted without change in content structure of the PSSA test instruments.

A transition to begin measuring the Pennsylvania Core Standards (PCS) in Mathematics and English Language Arts was initiated with standalone and embedded field test events in 2013 for Grades 3, 4, and 5. The transition continued in 2014 with standalone field tests in Grades 6, 7, and 8 and embedded field tests in Grades 3 through 8. As a part of this transition, starting in spring 2013, the Grade 11 PSSA and the Grade 12 PSSA Retest were dropped in favor of the Keystone Exams in Algebra I, Biology, and Literature. The 2015 administration of the PSSA marked the completion of the transition to the PCS in Mathematics and English Language Arts. Mathematics and ELA were administered in separate testing windows as separate test and answer booklets (in contrast to the combined Mathematics and Reading test and answer booklets used previously) and students in all grades participated in both the Writing and Reading portions of the ELA assessment.

In 2017 and 2018 the PSSA test designs underwent a reevaluation. In an effort to reduce testing time in the classroom the Mathematics, English Language Arts, and Science tests were reduced in overall length. For mathematics and science, the test length was shortened by reducing the number of test questions by reporting category proportionally. For ELA, in contrast, reducing the length of the test meant removing the writing prompt and a group of approximately nine multiple-choice items.

The following pages provide an overview of the year-to-year changes to the PSSA. Tables and descriptions show the subject areas assessed, time of year the testing activity took place, and the type of testing that occurred (e.g., operational, field testing, Grade 12 retest) for each year.

To access any of the PSSA technical reports referenced in the Preface, please go to the Pennsylvania Department of Education website, www.education.pa.gov. Hover over K-12 in the blue banner at the top of the page and select "Assessment and Accountability." Then select "Pennsylvania System of School Assessment (PSSA)" followed by "PSSA Technical Reports" in the column on the right under "PSSA and AYP Results."

ASSESSMENT ACTIVITIES OCCURRING IN THE 2003–04 SCHOOL YEAR

Table P–1 outlines the operational assessments and field tests administered during the 2003–04 school year. (A spring operational assessment in mathematics and reading took place at Grades 3, 5, 8, and 11.)

As a result of new Assessment Anchor Content Standards (Assessment Anchors) developed by the Pennsylvania Department of Education (PDE) during 2003, new test items were developed (see Chapter Two of the *2005 PSSA Technical Report for Reading and Mathematics*). Following the spring operational assessment, a separate, standalone field test of new items for Grades 5, 8, and 11 was conducted. Note that Grade 11 students also took an operational writing assessment in February, and Grades 6 and 9 students participated in a fall writing assessment. Lastly, Grade 12 students who as 11th graders in the preceding spring failed to attain at least the Proficient level in any subject area were offered an opportunity to retest.

Table P–1. Operational Assessment and Field Testing During the 2003–04 School Year

Grade	Assessment Activity	Date
3	Operational mathematics and reading with embedded field test (conducted by CTB/ McGraw-Hill)	April 2004
5	Operational mathematics and reading	April 2004
5	Standalone field test in mathematics and reading	April/May 2004
6	Operational writing	October 2004
8	Operational mathematics and reading	April 2004
8	Standalone field test in mathematics and reading	April/May 2004
9	Operational writing	October 2004
11	Operational mathematics and reading	April 2004
11	Standalone field test in mathematics and reading	April/May 2004
11	Operational writing	February 2004
12	Retest opportunity for students who as Grade 11 students in the spring of 2003 failed to reach at least the Proficient level in mathematics, reading, or writing	October/ November 2004

ASSESSMENT ACTIVITIES OCCURRING IN THE 2004–05 SCHOOL YEAR

Table P–2 displays the operational assessments and field tests that took place during the 2004–05 school year. The operational assessment at Grades 5, 8, and 11 used items chosen from the spring 2004 field test. This was the first operational assessment that reflected the Pennsylvania Assessment Anchors and Eligible Content. Fulfilling the No Child Left Behind Act of 2001 (NCLB) requirement that states must implement a test at Grades 3–8, a major field test in mathematics and reading was administered at Grades 4, 6, and 7. Item development for these new grade levels took place during 2004.

The Grades 6 and 9 writing assessment was reevaluated in favor of moving the writing assessment to Grades 5 and 8. This accounts for the separate (standalone) field test at these grade levels. There was also a test administration change from October to February. In addition, the writing assessment underwent changes to align the test to the Academic Standards for writing. New writing prompts and stimulus-based multiple-choice items were also field tested at Grade 11 as part of the operational assessment, hence the reference to an embedded field test. No assessment activity of any kind occurred at Grade 9. As in fall 2003, the retest opportunity at Grade 12 continued.

Table P–2. Operational Assessment and Field Testing During the 2004–05 School Year

Grade	Assessment Activity	Date
3	Operational mathematics and reading with embedded field test (conducted by CTB/ McGraw-Hill)	April 2005
4	Standalone field test for mathematics and reading	April 2005
5	Operational mathematics and reading with embedded field test	April 2005
5	Standalone field test in writing	February 2005
6	Standalone field test for mathematics and reading	April 2005
7	Standalone field test for mathematics and reading	April 2005
8	Operational mathematics and reading with embedded field test	April 2005
8	Standalone field test in writing	February 2005
11	Operational mathematics and reading with embedded field test	April 2005
11	Operational writing with embedded field test	February 2005
12	Retest opportunity for students who as Grade 11 students in the spring of 2004 failed to reach at least the Proficient level in mathematics, reading, or writing	October/ November 2004

ASSESSMENT ACTIVITIES OCCURRING IN THE 2005–06 SCHOOL YEAR

Table P–3 shows the assessment activities that occurred during the 2005–06 school year. Note that the reading and mathematics operational assessments ran consecutively in Grades 3–8 and Grade 11. For Grades 4, 6, and 7, it was the first year for operational assessments. Field testing for mathematics and reading was embedded as part of the operational assessment at each grade level. At Grade 3, the reference to field testing with items developed by DRC reflects the transition of shifting the assessment from CTB/McGraw-Hill to DRC in 2007. As in previous years, the retest opportunity at Grade 12 continued.

The first operational assessments for writing at Grades 5 and 8 took place in the 2005–06 school year, while the Grade 11 writing assessment continued in the same February testing window. For all three grade levels, the operational writing assessments featured mode-specific scoring guidelines, stimulus-based multiple-choice items, and a grade-specific emphasis shift in writing modes assessed. See the *2006 PSSA Technical Report for Writing: Grades 5, 8, and 11* for further information about the new writing assessments. Since extensive field testing in February 2005 produced a pool of prompts for use over several years, no additional writing prompts were field tested in 2006. However, new multiple-choice items were field tested in the 2006 writing assessment.

Table P–3. Operational Assessment and Field Testing During the 2005–06 School Year

Grade	Assessment Activity	Date
3	Operational mathematics and reading with embedded field test of DRC-written items (conducted by CTB/McGraw-Hill)	April 2006
4	Operational mathematics and reading with embedded field test	March 2006
5	Operational mathematics and reading with embedded field test	March 2006
5	Operational writing with embedded field test	February 2006
6	Operational mathematics and reading with embedded field test	March 2006
7	Operational mathematics and reading with embedded field test	March 2006
8	Operational mathematics and reading with embedded field test	March 2006
8	Operational writing with embedded field test	February 2006
11	Operational mathematics and reading with embedded field test	March 2006
11	Operational writing with embedded field test	February 2006
12	Retest opportunity for students who as Grade 11 students in the spring of 2005 failed to reach at least the Proficient level in mathematics, reading, or writing	October/ November 2005

ASSESSMENT ACTIVITIES OCCURRING IN THE 2006–07 SCHOOL YEAR

Table P–4 shows the assessment plan for the 2006–07 school year. Note that the mathematics and reading assessments ran consecutively in Grades 3–8 and Grade 11. For Grades 4, 6, and 7, it was the second year for operational assessments and the first year in which these grade levels were included in the adequate yearly progress (AYP) calculations. Field testing for mathematics and reading continued to be embedded as part of the operational assessments at each grade level. This was the first year in which DRC was responsible for the Grade 3 assessment, as the transition from CTB/McGraw-Hill was complete. As in previous years, the retest opportunity at Grade 12 continued.

The operational assessment for writing at Grades 5, 8, and 11 continued in the same February testing window featuring the mode-specific scoring guidelines, stimulus-based multiple-choice items, and a grade-specific emphasis in writing modes assessed, which were introduced in 2006. Since extensive field testing in February 2005 produced a pool of prompts for use over several years, no additional writing prompts needed to be field tested in 2007. However, new multiple-choice items were field tested in the 2007 writing assessment.

Following the spring operational assessments in writing, reading, and mathematics, a separate, standalone field test in science was administered for Grades 4, 8, and 11 with full implementation scheduled for 2008.

Table P–4. Operational Assessment and Field Testing During the 2006–07 School Year

Grade	Assessment Activity	Date
3	Operational mathematics and reading with embedded field test	March 2007
4	Operational mathematics and reading with embedded field test	March 2007
4	Standalone field test in science	April/May 2007
5	Operational mathematics and reading with embedded field test	March 2007
5	Operational writing with embedded field test	February 2007
6	Operational mathematics and reading with embedded field test	March 2007
7	Operational mathematics and reading with embedded field test	March 2007
8	Operational mathematics and reading with embedded field test	March 2007
8	Operational writing with embedded field test	February 2007
8	Standalone field test in science	April/May 2007
11	Operational mathematics and reading with embedded field test	March 2007
11	Operational writing with embedded field test	February 2007
11	Standalone field test in science	April/May 2007
12	Retest opportunity for students who as Grade 11 students in the spring of 2006 failed to reach at least the Proficient level in mathematics, reading, or writing	October/ November 2006

ASSESSMENT ACTIVITIES OCCURRING IN THE 2007–08 SCHOOL YEAR

Table P–5 shows the assessment plan for the 2007–08 school year. Note that the mathematics and reading assessments ran consecutively in Grades 3–8 and Grade 11. For Grades 4, 6, and 7, it was the third year for operational assessments and the second year in which these grade levels were included in the AYP calculations. Field testing for mathematics and reading continued to be embedded as part of the operational assessments at each grade level. This was the second year in which DRC was responsible for the Grade 3 assessment. As in previous years, the retest opportunity at Grade 12 continued.

The operational assessment for writing at Grades 5, 8, and 11 continued in the same February testing window featuring the mode-specific scoring guidelines, stimulus-based multiple-choice items, and a grade-specific emphasis in writing modes assessed, which was introduced in 2006. Since extensive field testing in February 2005 produced a pool of prompts for use over several years, no additional writing prompts needed to be field tested in 2007. However, new multiple-choice items were field tested in the 2008 writing assessment.

Joining the spring operational assessments in writing, reading, and mathematics was science at Grades 4, 8, and 11. See the *2008 PSSA Technical Report for Science: Grades 4, 8, and 11* for further information about the new science assessments

Table P–5. Operational Assessment and Field Testing During the 2007–08 School Year

Grade	Assessment Activity	Date
3	Operational mathematics and reading with embedded field test	March/April 2008
4	Operational mathematics and reading with embedded field test	March/April 2008
4	Operational science with embedded field test	April/May 2008
5	Operational mathematics and reading with embedded field test	March/April 2008
5	Operational writing with embedded field test	February 2008
6	Operational mathematics and reading with embedded field test	March/April 2008
7	Operational mathematics and reading with embedded field test	March/April 2008
8	Operational mathematics and reading with embedded field test	March/April 2008
8	Operational writing with embedded field test	February 2008
8	Operational science with embedded field test	April/May 2008
11	Operational mathematics and reading with embedded field test	March/April 2008
11	Operational writing with embedded field test	February 2008
11	Operational science with embedded field test	April/May 2008
12	Retest opportunity for students who as Grade 11 students in the spring of 2007 failed to reach at least the Proficient level in mathematics, reading, or writing	October/ November 2007

ASSESSMENT ACTIVITIES OCCURRING IN THE 2008–09 SCHOOL YEAR

Table P–6 shows the assessment plan for the 2008–09 school year. The mathematics and reading assessments continued to be operational for Grades 3–8 and Grade 11. Field testing for mathematics and reading continued to be embedded as part of the operational assessments at each grade level. As in previous years, the fall retest opportunity at Grade 12 continued.

The operational assessment for writing at Grades 5, 8, and 11 continued with a February testing window featuring mode-specific scoring guidelines; stimulus-based, multiple-choice items; and a grade-specific emphasis in writing modes assessed. An embedded field test of writing prompts was incorporated in the 2009 assessment along with a set of embedded field test multiple-choice items.

The second operational assessment in science took place in April/May. Similar to the other operational assessments, field testing for science was embedded as part of the operational assessments at each grade level.

Table P–6. Operational Assessment and Field Testing During the 2008–09 School Year

Grade	Assessment Activity	Date
3	Operational mathematics and reading with embedded field test	March 2009
4	Operational mathematics and reading with embedded field test	March 2009
4	Operational science with embedded field test	April/May 2009
5	Operational mathematics and reading with embedded field test	March 2009
5	Operational writing with embedded field test	February 2009
6	Operational mathematics and reading with embedded field test	March 2009
7	Operational mathematics and reading with embedded field test	March 2009
8	Operational mathematics and reading with embedded field test	March 2009
8	Operational writing with embedded field test	February 2009
8	Operational science with embedded field test	April/May 2009
11	Operational mathematics and reading with embedded field test	March 2009
11	Operational writing with embedded field test	February 2009
11	Operational science with embedded field test	April/May 2009
12	Retest opportunity for students who as Grade 11 students in the spring of 2008 failed to reach at least the Proficient level in mathematics, reading, or writing	October/ November 2008

ASSESSMENT ACTIVITIES OCCURRING IN THE 2009–10 SCHOOL YEAR

Table P–7 shows the assessment plan for the 2009–10 school year. A notable change from previous years was that all assessments and make-ups were completed during the testing window from April through the first week of May.

The mathematics and reading assessments continued to be operational for Grades 3–8 and Grade 11. Field testing for mathematics and reading continued to be embedded as part of the operational assessments at each grade level. As in previous years, the fall retest opportunity at Grade 12 continued.

The operational assessment for writing at Grades 5, 8, and 11 continued to feature mode-specific scoring guidelines, stimulus-based multiple-choice items, and a grade-specific emphasis in writing modes assessed. An embedded field test of writing prompts was included in the 2010 assessment along with a set of embedded field test multiple-choice items.

The operational assessment for science at Grades 4, 8, and 11 included multiple-choice and open-ended questions. Students responded to standalone multiple-choice and open-ended questions (all grades) as well as scenario-based multiple-choice (Grades 8 and 11) and open-ended (Grade 11 only) questions. Field testing was embedded as part of the operational assessments at each grade level.

Table P–7. Operational Assessment and Field Testing During the 2009–10 School Year

Grade	Assessment Activity	Date
3	Operational mathematics and reading with embedded field test	April/May 2010
4	Operational mathematics and reading with embedded field test	April/May 2010
4	Operational science with embedded field test	April/May 2010
5	Operational mathematics and reading with embedded field test	April/May 2010
5	Operational writing with embedded field test	April/May 2010
6	Operational mathematics and reading with embedded field test	April/May 2010
7	Operational mathematics and reading with embedded field test	April/May 2010
8	Operational mathematics and reading with embedded field test	April/May 2010
8	Operational writing with embedded field test	April/May 2010
8	Operational science with embedded field test	April/May 2010
11	Operational mathematics and reading with embedded field test	April/May 2010
11	Operational writing with embedded field test	April/May 2010
11	Operational science with embedded field test	April/May 2010
12	Retest opportunity for students who as Grade 11 students in the spring of 2009 failed to reach at least the Proficient level in mathematics, reading, science, or writing	October/ November 2009

ASSESSMENT ACTIVITIES OCCURRING IN THE 2010–11 SCHOOL YEAR

Table P–8 shows the assessment plan for the 2010–11 school year. A change from the previous year is an earlier testing window, beginning in mid-March for mathematics and reading, late-March to April for writing, and early April for science. A make-up period extended into mid-April for all assessments.

The mathematics and reading assessments continued to be operational for Grades 3–8 and Grade 11. Field testing for mathematics and reading continued to be embedded as part of the operational assessments at each grade level. As in previous years, the fall retest opportunity at Grade 12 continued.

The operational assessment for writing at Grades 5, 8, and 11 continued to feature mode-specific scoring guidelines, stimulus-based multiple-choice items, and a grade-specific emphasis in writing modes assessed. An embedded field test of writing prompts was included in the 2011 assessment along with a set of embedded field test multiple-choice items.

The operational assessment for science at Grades 4, 8, and 11 included multiple-choice and open-ended questions. Students responded to standalone multiple-choice and open-ended questions (all grades) as well as scenario-based multiple-choice (Grades 8 and 11) and open-ended (Grade 11 only) questions. Field testing was embedded as part of the operational assessments at each grade level.

Table P–8. Operational Assessment and Field Testing During the 2010–11 School Year

Grade	Assessment Activity	Date
3	Operational mathematics and reading with embedded field test	March/April 2011
4	Operational mathematics and reading with embedded field test	March/April 2011
4	Operational science with embedded field test	March/April 2011
5	Operational mathematics and reading with embedded field test	March/April 2011
5	Operational writing with embedded field test	March/April 2011
6	Operational mathematics and reading with embedded field test	March/April 2011
7	Operational mathematics and reading with embedded field test	March/April 2011
8	Operational mathematics and reading with embedded field test	March/April 2011
8	Operational writing with embedded field test	March/April 2011
8	Operational science with embedded field test	March/April 2011
11	Operational mathematics and reading with embedded field test	March/April 2011
11	Operational writing with embedded field test	March/April 2011
11	Operational science with embedded field test	March/April 2011
12	Retest opportunity for students who as Grade 11 students in the spring of 2010 failed to reach at least the Proficient level in mathematics, reading, science, or writing	October/ November 2010

ASSESSMENT ACTIVITIES OCCURRING IN THE 2011–12 SCHOOL YEAR

Table P–9 shows the assessment plan for the 2011–12 school year. The testing window for mathematics and reading began in mid-March, while writing and science began in mid to late April. The make-up period for mathematics and reading extended into late March, while writing and science extended into early May.

The mathematics and reading assessments continued to be operational for Grades 3–8 and Grade 11. Field testing for mathematics and reading continued to be embedded as part of the operational assessments at each grade level. As in previous years, the fall retest opportunity at Grade 12 continued.

The operational assessment for writing at Grades 5, 8, and 11 continued to feature mode-specific scoring guidelines, stimulus-based multiple-choice items, and a grade-specific emphasis in writing modes assessed. An embedded field test of writing prompts was included in the 2012 assessment along with a set of embedded field test multiple-choice items.

The operational assessment for science at Grades 4, 8, and 11 included multiple-choice and open-ended questions. Students responded to standalone multiple-choice and open-ended questions (all grades) as well as scenario-based multiple-choice (Grades 8 and 11) and open-ended (Grade 11 only) questions. Field testing was embedded as part of the operational assessments at each grade level.

Table P–9. Operational Assessment and Field Testing During the 2011–12 School Year

Grade	Assessment Activity	Date
3	Operational mathematics and reading with embedded field test	March 2012
4	Operational mathematics and reading with embedded field test	March 2012
4	Operational science with embedded field test	April 2012
5	Operational mathematics and reading with embedded field test	March 2012
5	Operational writing with embedded field test	April 2012
6	Operational mathematics and reading with embedded field test	March 2012
7	Operational mathematics and reading with embedded field test	March 2012
8	Operational mathematics and reading with embedded field test	March 2012
8	Operational writing with embedded field test	April 2012
8	Operational science with embedded field test	April 2012
11	Operational mathematics and reading with embedded field test	March 2012
11	Operational writing with embedded field test	April 2012
11	Operational science with embedded field test	April 2012
12	Retest opportunity for students who as Grade 11 students in the spring of 2011 failed to reach at least the Proficient level in mathematics, reading, science, or writing	October/ November 2011

TRANSITION TO THE PENNSYLVANIA CORE STANDARDS

The 2012–13 school year began the initial transition for the PSSA Mathematics, Reading, and Writing tests to align to the newly-developed Pennsylvania Assessment Anchors and Eligible Content aligned to the Pennsylvania Core Standards (PCS). The two-stage transition from the Legacy PSSA Mathematics, Reading, and Writing tests to the new PCS-based PSSA tests was proposed to occur during the operational 2013–14 and 2014–15 administrations, with Grades 3, 4, and 5 part of the first phase, and Grades 6, 7, and 8 part of the second phase. (The final decision was made for a single operational transition, to occur during the operational 2014–15 administration.)

As a part of the PCS transition, the Legacy PSSA Reading test and the Legacy PSSA Writing test were phased out and were replaced with an English Language Arts test aligned to the PCS. As part of this transition, there was a standalone field test for the Writing component of the English Language Arts test. This standalone field test included standalone multiple-choice items (as opposed to stimulus-based multiple-choice items on the Legacy Writing test) and writing prompts at each grade. In addition, at Grade 3 there were open-ended items on the standalone ELA Writing test. For Grades 3, 4, and 5, this standalone field test took place during a two-week testing window in early to mid-February 2013. A similar standalone field test took place in February 2014 for Grades 6, 7, and 8. The Reading component of the new PCS ELA test was embedded in the 2013 Reading field test in Grades 3 through 5; additional items for the Reading component of the new PCS ELA test were embedded in the 2014 Reading field test in Grades 3 through 5. The Reading component of the new PCS ELA test in Grades 6 through 8 was embedded in the 2014 Reading field test.

ASSESSMENT ACTIVITIES OCCURRING IN THE 2012–13 SCHOOL YEAR

Table P–10 shows the assessment plan for the 2012–13 school year. PDE modified the order of the testing windows for writing, reading and mathematics, and science. Writing took place earlier than reading and mathematics instead of at the same time as science. The testing window for writing began mid-March; mathematics and reading began early to mid-April, while science began mid to late April. The make-up period for writing extended into mid to late March, while mathematics, reading, and science extended into early May. These operational assessments were all offered in an online format in addition to the paper/pencil format used in previous assessments.

An additional change from previous years was the removal of Grade 11 from the Mathematics, Reading, Science, and Writing. As Grade 11 was no longer a part of the assessments, the fall retest opportunity at Grade 12 was no longer available. Operational tests continued to be available for Mathematics and Reading at Grades 3–8, Science at grades 4 and 8, and Writing at grades 5 and 8.

Field testing for mathematics and reading continued to be embedded as part of the operational assessments at each grade level. The embedded field test items for Grades 3, 4, and 5 were aligned to the Pennsylvania Assessment Anchors and Eligible Content aligned to the Pennsylvania Core Standards, while the embedded field test items for Grades 6, 7, and 8 continued to be aligned to the previous Assessment Anchor Content Standards.

The operational assessment for Science at Grades 4 and 8 included multiple-choice and open-ended questions. Students responded to standalone multiple-choice and open-ended questions (all grades) as well as scenario-based multiple-choice questions (Grades 8 only). Field testing was embedded as part of the operational assessments at each grade level.

The operational assessment for Writing at Grades 5 and 8 continued to feature mode-specific scoring guidelines, stimulus-based multiple-choice items, and a grade-specific emphasis in writing modes assessed. An embedded field test of writing prompts along with a set of embedded field test multiple-choice items was included in the 2013 assessment at Grade 8. The operational assessment at Grade 5 included placeholder multiple-choice items for consistency in the length of the multiple-choice section of the assessment; however, students responded to only two writing prompts at Grade 5, as a field-test writing prompt was not needed due to the standalone field test at that grade.

Table P–10. Operational Assessment and Field Testing During the 2012–13 School Year

Grade	Assessment Activity	Date
3	Operational mathematics and reading with embedded field test (field test aligned to the PCS)	April 2013
3	Standalone field test in ELA: writing (aligned to the PCS)	February 2013
4	Operational mathematics and reading with embedded field test (field test aligned to the PCS)	April 2013
4	Operational science with embedded field test	April 2013
4	Standalone field test in ELA: writing (aligned to the PCS)	February 2013
5	Operational mathematics and reading with embedded field test (field test aligned to the PCS)	April 2013
5	Operational writing	March 2013
5	Standalone field test in ELA: writing (aligned to the PCS)	February 2013
6	Operational mathematics and reading with embedded field test	April 2013
7	Operational mathematics and reading with embedded field test	April 2013
8	Operational mathematics and reading with embedded field test	April 2013
8	Operational writing with embedded field test	March 2013
8	Operational science with embedded field test	April 2013

ASSESSMENT ACTIVITIES OCCURRING IN THE 2013–14 SCHOOL YEAR

Table P–11 shows the assessment plan for the 2013–14 school year. The 2013–14 school year continued the transition for the PSSA Mathematics, Reading, and Writing tests to align to the newly-developed Pennsylvania Assessment Anchors and Eligible Content aligned to the Pennsylvania Core Standards (PCS), as field-test items were aligned to the PCS-aligned Assessment Anchors and Eligible Content. The operational assessments in Mathematics, Reading, and Writing were comprised of items that align to both the PCS and the existing Assessment Anchors and Eligible Content. Reporting in 2013–14 continued to use the previous content structure. The transition from the Legacy PSSA Mathematics, Reading, and Writing tests to the new PCS-based PSSA tests was planned to occur during the operational 2014–15 administration.

As a part of the PCS transition, the Legacy PSSA Reading test and the Legacy PSSA Writing test were phased out and were replaced with an English Language Arts test aligned to the PCS. As part of this transition, there was a standalone field test at Grades 6, 7, and 8 for the Writing component of the English Language Arts test. This standalone field test included standalone multiple-choice items (as opposed to stimulus-based multiple-choice items on the Legacy Writing test) and writing prompts at Grades 6, 7, and 8. This standalone field test took place during a two-week testing window in early to mid-February. The Reading component of the new PCS ELA test was embedded in the 2014 Reading field test for Grades 6, 7, and 8 and in the 2013 and 2014 Reading field test for Grades 3, 4, and 5.

Writing took place after reading and mathematics but before science. The testing window for mathematics and reading began mid-March; writing began late March to early April; and science began late April. The make-up period for mathematics and reading extended into early April, while the make-up period for writing extended into early to mid-April and science extended into early May. These operational assessments continued to be offered in an online format in addition to the paper/pencil format used in previous assessments.

Field testing for mathematics and reading continued to be embedded as part of the operational assessments at each grade level. The embedded field test items were aligned to the Pennsylvania Assessment Anchors and Eligible Content aligned to the Pennsylvania Core Standards.

The operational assessment for science at Grades 4 and 8 included multiple-choice and open-ended questions. Students responded to standalone multiple-choice and open-ended questions (all grades) as well as scenario-based multiple-choice questions (Grades 8 only). Field testing was embedded as part of the operational assessments at each grade level.

The operational assessment for writing at Grades 5 and 8 continued to feature mode-specific scoring guidelines, stimulus-based multiple-choice items, and a grade-specific emphasis in writing modes assessed. Students responded to only two writing prompts, as a field-test writing prompt was not needed due to the upcoming transition to the ELA assessments.

Table P–11. Operational Assessment and Field Testing During the 2013–14 School Year

Grade	Assessment Activity	Date
3	Operational mathematics and reading with embedded field test	March 2014
4	Operational mathematics and reading with embedded field test	March 2014
4	Operational science with embedded field test	April-May 2014
5	Operational mathematics and reading with embedded field test	March 2014
5	Operational writing	March-April 2014
6	Operational mathematics and reading with embedded field test	March 2014
6	Standalone field test in ELA: writing	February 2014
7	Operational mathematics and reading with embedded field test	March 2014
7	Standalone field test in ELA: writing	February 2014
8	Operational mathematics and reading with embedded field test	March 2014
8	Operational writing with embedded field test	March-April 2014
8	Operational science with embedded field test	April-May 2014
8	Standalone field test in ELA: writing	February 2014

ASSESSMENT ACTIVITIES OCCURRING IN THE 2014–15 SCHOOL YEAR

Table P–12 shows the assessment plan for the 2014–15 school year. The 2014–15 school year completes the transition for the PSSA Mathematics, Reading, and Writing tests to align to the newly-developed Pennsylvania Assessment Anchors and Eligible Content aligned to the Pennsylvania Core Standards (PCS), as both operational and field-test items were aligned only to the PCS-aligned Assessment Anchors and Eligible Content. Reporting in 2014–15 also transitioned to the new content structure. The transition from the Legacy PSSA Mathematics, Reading, and Writing tests to the new PCS-based PSSA Mathematics and ELA tests occurred during the operational 2014–15 administration.

The testing window for English Language Arts began in mid-April followed by the testing windows for Mathematics in mid to late April and then Science in late April to early May. These operational assessments continued to be offered in an online format in addition to the paper/pencil format used in previous assessments. The online assessment became available for students to take on iPads and Chromebooks beginning with the 2015 administration.

Field testing for mathematics and reading continued to be embedded as part of the operational assessments at each grade level. The embedded field test items continued to be aligned to the Pennsylvania Assessment Anchors and Eligible Content aligned to the Pennsylvania Core Standards.

The operational assessment for science at Grades 4 and 8 included multiple-choice and open-ended questions. Students responded to standalone multiple-choice and open-ended questions (both grades) as well as scenario-based multiple-choice questions (Grades 8 only). Field testing was embedded as part of the operational assessments at each grade level.

Table P–12. Operational Assessment and Field Testing During the 2014–15 School Year

Grade	Assessment Activity	Date
3	Operational mathematics with embedded field test	April 2015
3	Operational ELA with embedded field test	April 2015
4	Operational mathematics with embedded field test	April 2015
4	Operational ELA with embedded field test	April 2015
4	Operational science with embedded field test	April-May 2015
5	Operational mathematics embedded field test	April 2015
5	Operational ELA with embedded field test	April 2015
6	Operational mathematics with embedded field test	April 2015
6	Operational ELA with embedded field test	April 2015
7	Operational mathematics with embedded field test	April 2015
7	Operational ELA with embedded field test	April 2015
8	Operational mathematics with embedded field test	April 2015
8	Operational ELA with embedded field test	April 2015
8	Operational science with embedded field test	April-May 2015

ASSESSMENT ACTIVITIES OCCURRING IN THE 2015–16 SCHOOL YEAR

Table P–13 shows the assessment plan for the 2015–16 school year. The PSSA tests administered in the 2015–16 school year will continue to be aligned to the Assessment Anchors and Eligible Content aligned to the Pennsylvania Core Standards.

The testing window for English Language Arts began early to mid-April followed by the testing windows for Mathematics in mid-April and then Science in late April. Makeup assessments were available through early May. These operational assessments continued to be offered in an online format in addition to the paper/pencil format used in previous assessments. The online assessment were available for students to take on iPads and Chromebooks.

Field testing for mathematics and English language arts continued to be embedded as part of the operational assessments at each grade level. The embedded field test items continued to be aligned to the Pennsylvania Assessment Anchors and Eligible Content aligned to the Pennsylvania Core Standards.

The operational assessment for science at Grades 4 and 8 included multiple-choice and open-ended questions. Students responded to standalone multiple-choice and open-ended questions (both grades) as well as scenario-based multiple-choice questions (Grades 8 only). Field testing was embedded as part of the operational assessments at each grade level.

Table P–13. Operational Assessment and Field Testing During the 2015–16 School Year

Grade	Assessment Activity	Date
3	Operational mathematics with embedded field test	April 2016
3	Operational ELA with embedded field test	April 2016
4	Operational mathematics with embedded field test	April 2016
4	Operational ELA with embedded field test	April 2016
4	Operational science with embedded field test	April 2016
5	Operational mathematics embedded field test	April 2016
5	Operational ELA with embedded field test	April 2016
6	Operational mathematics with embedded field test	April 2016
6	Operational ELA with embedded field test	April 2016
7	Operational mathematics with embedded field test	April 2016
7	Operational ELA with embedded field test	April 2016
8	Operational mathematics with embedded field test	April 2016
8	Operational ELA with embedded field test	April 2016
8	Operational science with embedded field test	April 2016

ASSESSMENT ACTIVITIES OCCURRING IN THE 2016–17 SCHOOL YEAR

Table P–14 shows the assessment plan for the 2016–17 school year. The PSSA tests administered in the 2016–17 school year will continue to be aligned to the Assessment Anchors and Eligible Content aligned to the Pennsylvania Core Standards.

The testing window for English Language Arts began early April followed by the testing windows for Mathematics in mid-April and then Science in early May. Makeup assessments were available through early to mid-May. These operational assessments continued to be offered in an online format in addition to the paper/pencil format used in previous assessments. The online assessment were available for students to take on PCs, iPads, and Chromebooks.

Field testing for mathematics and English language arts continued to be embedded as part of the operational assessments at each grade level. The embedded field test items continued to be aligned to the Pennsylvania Assessment Anchors and Eligible Content aligned to the Pennsylvania Core Standards.

The operational assessment for science at Grades 4 and 8 included multiple-choice and open-ended questions. Students responded to standalone multiple-choice and open-ended questions (both grades) as well as scenario-based multiple-choice questions (Grades 8 only). Field testing was embedded as part of the operational assessments at each grade level.

Table P–14. Operational Assessment and Field Testing During the 2016–17 School Year

Grade	Assessment Activity	Date
3	Operational mathematics with embedded field test	April 2017
3	Operational ELA with embedded field test	April 2017
4	Operational mathematics with embedded field test	April 2017
4	Operational ELA with embedded field test	April 2017
4	Operational science with embedded field test	May 2017
5	Operational mathematics embedded field test	April 2017
5	Operational ELA with embedded field test	April 2017
6	Operational mathematics with embedded field test	April 2017
6	Operational ELA with embedded field test	April 2017
7	Operational mathematics with embedded field test	April 2017
7	Operational ELA with embedded field test	April 2017
8	Operational mathematics with embedded field test	April 2017
8	Operational ELA with embedded field test	April 2017
8	Operational science with embedded field test	May 2017

ASSESSMENT ACTIVITIES OCCURING IN THE 2017–18 SCHOOL YEAR

Table P–15 shows the assessment plan for the 2017–18 school year. The PSSA tests administered in the 2017–18 school year will continue to be aligned to the Assessment Anchors and Eligible Content aligned to the Pennsylvania Core Standards.

The testing window for English Language Arts will be in early to mid-April followed by the testing windows for Mathematics in mid-April and then Science in late-April into early May. The makeup assessments will be available through early May. These operational assessments will continue to be offered in an online format in addition to the paper/pencil format.

Field testing for mathematics and English language arts will continue to be embedded as part of the operational assessments at each grade level. The embedded field test items will continue to be aligned to the Pennsylvania Assessment Anchors and Eligible Content aligned to the Pennsylvania Core Standards.

The operational assessment for science at Grades 4 and 8 will continue to include multiple-choice and open-ended questions. Students will respond to standalone multiple-choice and open-ended questions (both grades) as well as scenario-based multiple-choice questions (Grades 8 only). Field testing will be embedded as part of the operational assessments at each grade level.

Table P–15. Operational Assessment and Field Testing During the 2017–18 School Year

Grade	Assessment Activity	Date
3	Operational mathematics with embedded field test	April 2018
3	Operational ELA with embedded field test	April 2018
4	Operational mathematics with embedded field test	April 2018
4	Operational ELA with embedded field test	April 2018
4	Operational science with embedded field test	April 2018
5	Operational mathematics embedded field test	April 2018
5	Operational ELA with embedded field test	April 2018
6	Operational mathematics with embedded field test	April 2018
6	Operational ELA with embedded field test	April 2018
7	Operational mathematics with embedded field test	April 2018
7	Operational ELA with embedded field test	April 2018
8	Operational mathematics with embedded field test	April 2018
8	Operational ELA with embedded field test	April 2018
8	Operational science with embedded field test	April 2018

ASSESSMENT ACTIVITIES PLANNED FOR THE 2018–19 SCHOOL YEAR

Table P–16 shows the assessment plan for the 2018–19 school year. The PSSA tests administered in the 2018–19 school year will continue to be aligned to the Assessment Anchors and Eligible Content aligned to the Pennsylvania Core Standards.

The testing window for English Language Arts will be in mid-April followed by the testing windows for Mathematics and science in late-April into early May. The makeup assessments will be available through early late-April into early May. These operational assessments will continue to be offered in an online format in addition to the paper/pencil format.

Field testing for mathematics and English language arts will continue to be embedded as part of the operational assessments at each grade level. The embedded field test items will continue to be aligned to the Pennsylvania Assessment Anchors and Eligible Content aligned to the Pennsylvania Core Standards.

The operational assessment for science at Grades 4 and 8 will continue to include multiple-choice and open-ended questions. Students will respond to standalone multiple-choice and open-ended questions (both grades) as well as scenario-based multiple-choice questions (Grades 8 only). Field testing will be embedded as part of the operational assessments at each grade level.

Table P–15. Operational Assessment and Field Testing During the 2018–19 School Year (Planned)

Grade	Assessment Activity	Date
3	Operational mathematics with embedded field test	April 2019
3	Operational ELA with embedded field test	April 2019
4	Operational mathematics with embedded field test	April 2019
4	Operational ELA with embedded field test	April 2019
4	Operational science with embedded field test	April 2019
5	Operational mathematics embedded field test	April 2019
5	Operational ELA with embedded field test	April 2019
6	Operational mathematics with embedded field test	April 2019
6	Operational ELA with embedded field test	April 2019
7	Operational mathematics with embedded field test	April 2019
7	Operational ELA with embedded field test	April 2019
8	Operational mathematics with embedded field test	April 2019
8	Operational ELA with embedded field test	April 2019
8	Operational science with embedded field test	April 2019

CHAPTER ONE: BACKGROUND, PURPOSE, AND INTENDED USES OF THE PENNSYLVANIA SYSTEM OF SCHOOL ASSESSMENT (PSSA)

This brief overview of the Pennsylvania System of School Assessment (PSSA) summarizes the history of the current program's development process, the program's intent and purpose, recent changes to the program, and the student population that participates in the assessments. Pennsylvania's involvement in state-wide assessment actually began in the 1969–70 school year with a purely school-based assessment known as *Educational Quality Assessment* (EQA), which continued through the 1987–88 school year. A state mandated student competency testing program called *Testing for Essential Learning and Literacy Skills* (TELLS) also operated from the school years of 1984–85 through 1990–91.

THE PENNSYLVANIA SYSTEM OF SCHOOL ASSESSMENT

The Pennsylvania System of School Assessment program was instituted in 1992 as a school evaluation model with reporting at the school level only. Test administration took place in February/March, and school district participation was every third year based on the strategic planning cycle. Mathematics and reading were assessed at Grades 5, 8, and 11; districts could choose to participate in the writing assessment at Grades 6 and 9. The State Board of Education's revisions to Chapter 5 in November 1994 brought major changes to the PSSA, beginning with the spring 1995 assessment. These changes included the following:

- All districts were required to participate in the mathematics and reading assessment each year.
- Student-level reports were generated in addition to school reports.
- The Grades 6 and 9 writing assessments became mandatory on a three-year cycle corresponding with the district's strategic planning cycle.

Yearly administration of the PSSA in 1996, 1997, and 1998 continued at the assessed grades for mathematics and reading, utilizing essentially the same test structure, reporting practices, and testing window. Writing assessment continued on the established mandatory cycle; however, an increasing number of districts chose to participate every year on a voluntary basis.

PENNSYLVANIA ACADEMIC STANDARDS AND THE PSSA

A major structural change took place in test content with the State Board of Education's adoption of the Pennsylvania Academic Standards for Reading, Writing, Speaking and Listening, and Mathematics in January 1999 (Pennsylvania State Board of Education, 1999). These new, more rigorous standards aimed to better prepare students for the 21st century work force. The Academic Standards, which are part of *Chapter 4 Regulations on Academic Standards and Assessment*, detailed what students should know (knowledge) and be able to do (skills) at various grade levels. Subsequently, the State Board approved a set of criteria defining Advanced, Proficient, Basic, and Below Basic levels of performance. Mathematics and reading performance level results were reported at both the student and school levels for the 2000 PSSA. At that point, the PSSA became a standards-based, criterion-referenced assessment measuring student attainment of the Academic Standards while simultaneously determining the extent to which school programs enabled students to achieve proficiency of the Academic Standards. The regulations also stipulated that appropriate results be broadly disseminated to an array of audiences including students, parents, educators, citizens, and state policymakers, including the State Senate, the General Assembly, and the State Board. School reporting was to include the aggregate performance of all students and for relevant subgroups, such as those students with an Individualized Education Plan (IEP). Finally, the data was intended to inform educators regarding school program strengths and weaknesses in order to guide the improvement of curricula and instructional strategies. The data was also intended to be used in the development of strategic plans.

The mathematics and reading assessments from 2001 through 2004 underwent various content enhancements to improve alignment to the Academic Standards. For example, the reading assessment transitioned to utilizing more passages of shorter length and fewer items to improve the range of topics to which students responded. Various reporting modifications were introduced to more effectively communicate results.

ASSESSMENT ANCHOR CONTENT STANDARDS, CONTENT STRUCTURE, AND NEW GRADE LEVELS FOR MATHEMATICS AND READING

Assessment in 2005 was marked by major structural changes to the PSSA. Assessment Anchor Content Standards (Assessment Anchors) developed during the previous school year to clarify content structure and improve articulation between assessment and instruction were implemented in terms of test design and reporting. At the same time, field testing of mathematics and reading occurred at Grades 4, 6, and 7. As specified by PL 107–110, the *No Child Left Behind Act of 2001* (NCLB), states, school districts, and schools must achieve a minimum level of improvement each year, known as adequate yearly progress, or AYP. Accordingly, the third year of calculations for AYP were conducted and reported for Grades 5, 8, and 11.

The 2006 operational mathematics and reading assessment incorporated Grades 4, 6, and 7 for the first time. The assessed grade levels for 2006 included Grades 3–8 and 11. The fourth year of calculations for AYP were conducted and reported for Grades 5, 8, and 11 and, for the first time, Grade 3.

In 2007 the operational mathematics and reading assessment continued in Grades 3–8 and 11. AYP calculations for Grades 4, 6, and 7 took place in 2007 when they were assessed for the second time.

The operational mathematics and reading assessments of 2008, 2009, 2010, 2011, and 2012 continued in Grades 3–8 and 11, utilizing the same content structure. AYP calculations continued for all grades. The operational mathematics and reading assessments continued for Grades 3–8 in 2013 utilizing the same content structure.

TRANSITION TO PENNSYLVANIA CORE STANDARDS-ALIGNED ASSESSMENTS IN ENGLISH LANGUAGE ARTS AND MATHEMATICS

As a part of the transition to align to the Pennsylvania Core Standards, the operational mathematics and reading assessments for Grades 3–8 in 2014 aligned to both the previous Assessment Anchors (those aligned to the Pennsylvania Academic Standards) and the newly developed Assessment Anchors aligned to the Pennsylvania Core Standards. The operational assessments of 2015 in Grades 3–8 marked the completion of the transition to alignment with the Pennsylvania Core Standards in mathematics and English language arts. The 2018 PSSA had nine field test forms per grade in Grades 3–8, each with core items as well as placeholder items to ensure consistency in the length of the assessment in future years when equating block items are again included in the test design. More information about the operational layout for mathematics and English language arts can be found in Chapter Three.

Preliminary performance level descriptors were developed for mathematics and English language arts in the spring of 2012. These descriptions of the expectations of students at each performance level (Basic, Proficient, and Advanced) were used to guide development of items aligned to the PCS-aligned Assessment Anchors and Eligible Content that were field tested in 2013 (Grades 3, 4, and 5) and in 2014 (Grades 3–8). These performance level descriptors were validated by committees of Pennsylvania educators in February 2015 prior to standard setting in June 2015.

More information regarding the 2018 mathematics and reading tests may be found in Chapter Two and in the following Pennsylvania Department of Education publications available on the PDE website: *PSSA Assessment Handbook*, *PSSA English Language Arts Preliminary Item and Scoring Sampler* (one per assessed grade level), and *PSSA Mathematics Preliminary Item and Scoring Sampler* (one per assessed grade level). These handbooks can be accessed by going to www.education.pa.gov. Roll over `Data and Reporting' in the dark blue bar across the top of the page. Select `Assessment and Accountability.' Click on the link that reads `Pennsylvania System of School Assessment (PSSA)'. Then click on one of the content area in the Resource Materials section.

THE PENNSYLVANIA SCIENCE ASSESSMENT

In accordance with the NCLB requirement to implement an operational science assessment in 2008, a major test development effort in science took place during 2006, followed by a large-scale, standalone field test in April/May of 2007. A full implementation of an operational science assessment at Grades 4, 8, and 11 first occurred in April–May 2008. The 2009 PSSA operational science assessment continued with the same content structure and testing window as in 2008.

Several historical milestones were significant to the development of a science test in Pennsylvania. These include the following:

- The adoption of Act 16 or Pennsylvania Senate Bill 652 in 2000, which redefined the PSSA "as a test developed and implemented by the Department of Education to determine only academic achievement relating directly to objective Academic Standards in the areas of reading, mathematics, and science." (See the *Science Assessment Handbook*, PDE, November 2006).
- Pennsylvania State Board of Education adoption of the *Science and Technology Standards* on July 12, 2001, and the *Environment and Ecology Standards* on January 5, 2002.

Aligned to the *Pennsylvania Science Assessment Anchor Content Standards* and Eligible Content, the science test is designed to measure and report results in four major categories:

- The Nature of Science
- Biological Sciences
- Physical Sciences
- Earth and Space Sciences

Students use their content knowledge and science process skills to answer a set of multiple-choice items and open-ended questions that are standalone or related to a scenario. A science scenario consists of a description of a class project, an experiment, or other research and typically contains text, graphs, charts, and/or tables. Science test questions at Grade 4 consist of standalone multiple-choice and 0–2-point short answer open-ended items. At Grade 8, multiple-choice questions consist of both standalone and scenario-based items. All open-ended items at Grade 8 are standalone 0–2-point questions. More information may be found in Chapter Two and in the following Pennsylvania Department of Education publications available on the PDE website: *PSSA Assessment Handbook* and *PSSA Science Item and Scoring Sampler Supplement* (one per assessed grade level). These handbooks can be accessed by going to www.education.pa.gov. Roll over `Data and Reporting' in the dark blue bar across the top of the page. Select `Assessment and Accountability.' Click on the link that reads `Pennsylvania System of School Assessment (PSSA)'. Then click on 'Science' in the Resource Materials section. The establishment of performance levels for science, utilizing the Bookmark method, took place during the summer of 2008. See Chapter Thirteen of this technical report for a brief summary.

PURPOSE AND INTENDED USES OF THE PSSA

The preceding discussion provides some important background and rationale for the development of the PSSA. Although the topic of test validity is covered in detail in Chapter 19 of this report, some introductory remarks to frame how a validity argument is linked to test purpose and use is appropriate here. Validity is often defined as, the degree to which theory and evidence support the intended purpose and use of test scores. As such, the beginning of any validation process is to clearly articulate test purpose and intended uses. The purpose of the PSSA is to measure how well students acquire the knowledge and skills described in the *Pennsylvania Assessment Anchor Content Standards* (Assessment Anchors) as defined by the Eligible Content for mathematics, ELA, and Science. The intended uses of the PSSA are to:

1. Provide information for use in school and district accountability systems
2. Improve curricular and instructional practices in order to help students reach proficiency in the Pennsylvania Core Standards (ELA and Mathematics) or the Pennsylvania Academic Standards (Science)

It follows, then, that a validity argument must be developed to support claims that PSSA test scores are appropriate for these uses. The *Standards for Educational and Psychological Testing* (AERA, APA, & NCME, 2014) links the concept of validity, test purpose, and test use to this need for evidence that test scores are appropriate for their intended purpose and uses. Briefly, a validity argument is characterized as an accumulation of five sources, or types, of evidence that test scores are appropriate for their intended use, including evidence related to test content, its internal structure and relation to other variables, examinee response processes, and testing consequences. Complete definitions of these sources, and corresponding evidence that PSSA scores may be interpreted as intended is provided in Chapter 19.

CHAPTER TWO: OVERVIEW OF THE PSSA FRAMEWORK

PENNSYLVANIA CORE STANDARDS, PENNSYLVANIA ACADEMIC STANDARDS, ASSESSMENT ANCHOR CONTENT STANDARDS, AND ELIGIBLE CONTENT

PSSA ENGLISH LANGUAGE ARTS, MATHEMATICS, AND SCIENCE

The PSSA Assessment Anchor Content Standards and Eligible Content are based on the Pennsylvania Core Standards in English language arts and mathematics and the Pennsylvania Academic Standards in science. Although the Academic Standards indicated what students should know and be able to do, educator concerns regarding the number and breadth of Academic Standards led to an initiative by the Pennsylvania Department of Education (PDE) to develop Assessment Anchor Content Standards (Assessment Anchors) to indicate which parts of the Academic Standards (Instructional Standards) would be assessed on the PSSA. Based on recommendations from Pennsylvania educators, the Assessment Anchors were designed as a tool to improve the articulation of curricular, instructional, and assessment practices.

With Pennsylvania's decision to adopt the Pennsylvania Core Standards based on the Common Core State Standards, committees of Pennsylvania educators met in October 2011 to write, review, and approve the Assessment Anchors and Eligible Content statements. To provide initial focus, each content and grade span committee was presented with materials specific to the content and grade span in question, including a basic blueprint structure, the Pennsylvania Academic Standards, the Pennsylvania Assessment Anchors and Eligible Content aligned to the Pennsylvania Academic Standards, the Common Core State Standards, and draft Eligible Content statements. Committees then completed an iterative process of reviewing and revising the draft Eligible Content statements followed by discussions across grade-span committees to ensure vertical articulation across the grades. The results from the committee work were evaluated by national, state, and local subject experts, and following revisions, they were ultimately validated by another committee of Pennsylvania educators. Following committee approval, the Pennsylvania Core Standards-aligned Assessment Anchors and Eligible Content for English Language Arts and Mathematics were approved by the State Board of Education in September 2013.

The Assessment Anchors clarify what is expected across each grade span and focus the content of the standards into what is assessable on a large-scale test. The Assessment Anchor documents also serve to communicate Eligible Content, also called assessment limits, or the range of knowledge and skills from which the PSSA would be designed.

The Assessment Anchor's coding is read like an outline. The coding includes the content, grade level, Reporting Category, Assessment Anchor, descriptor (Sub-Assessment Anchor), and Eligible Content. Thus, S.4.A.1.3.1 would be Science, Grade 4, Reporting Category A, Assessment Anchor 1, descriptor (Sub-Assessment Anchor) 3, and Eligible Content 1.

Each of the Assessment Anchors has one or more descriptors (Sub-Assessment Anchors) and Eligible Content varying to reflect grade-level appropriateness. The Assessment Anchors form the basis of the test design. In turn, this hierarchy is the basis for organizing the total content scores (based on the core [common] sections).

Achieve, Inc., Washington, D.C., conducted a preliminary review of the science Assessment Anchors in 2003 to evaluate the alignment with the Academic Standards and produced a follow-up report on the anchors in 2005.

The complete set of Assessment Anchors and Eligible Content aligned to the Pennsylvania Academic Standards can be referenced at PDE's website: www.education.pa.gov. Roll over 'Data and Reporting' in the dark blue bar across the top of the page. Select 'Assessment and Accountability.' Then click on the link that reads 'Pennsylvania System of School Assessment (PSSA)'. Then click on 'Assessment Anchors/Eligible Content' on the right side of the screen.

OVERVIEW OF THE 2018 PSSA

MATHEMATICS ASSESSMENT MEASURES

The Assessment Anchors are organized into four classifications, as listed below.

- A = Numbers and Operations
- B = Algebraic Concepts
- C = Geometry
- D = Data Analysis and Probability

These four classifications are used throughout the grade levels. In addition to these classifications, there are five Reporting Categories for each grade level. The first letter of each Reporting Category represents the classification, and the second letter represents the Domain as stated in the Pennsylvania Core Standards for Mathematics. These Reporting Categories are listed below.

- A = Numbers and Operations
    - A-T = Numbers and Operations in Base Ten (grades 3–5)
    - A-F = Numbers and Operations—Fractions (grades 3–5)
    - A-N = The Number System (grades 6–8)
    - A-R = Ratios and Proportional Relationships (grades 6, 7)
- B = Algebraic Concepts
    - B-O = Operations and Algebraic Thinking (grades 3–5)
    - B-E = Expressions and Equations (grades 6–8)
    - B-F = Functions (grade 8)
- C = Geometry
    - C-G = Geometry (grades 3–8)
- D = Data Analysis and Probability
    - D-M = Measurement and Data (grades 3–5)
    - D-S = Statistics and Probability (grades 6–8)

The PSSA mathematics assessment employs two types of test items: multiple-choice and open-ended. These item types assess different levels of knowledge and provide different kinds of information about mathematics achievement. Psychometrically, multiple-choice items are very useful and efficient tools for collecting information about a student's academic achievement. Open-ended performance tasks generally generate fewer scoreable points than multiple-choice items in the same amount of testing time; however, they provide tasks that are more realistic and are better at sampling higher-level thinking skills. Furthermore, well-constructed scoring guides have made it possible to include open-ended tasks in large-scale assessments such as the PSSA. Trained scorers can apply the scoring guides to efficiently score large numbers of student papers in a highly reliable way. The design of the PSSA attempts to achieve a reasonable balance between the two item types.

Furthermore, the Standards for Mathematical Practice is included in the development and review process of each item. Some items may align to none of the practices while others may align to multiple practices. The Standards for Mathematical Practice originated in the Common Core State Standards for Mathematics and were adopted by Pennsylvania as part of the Academic Standards for Mathematics.

MATHEMATICS MULTIPLE-CHOICE ITEMS

The majority of the mathematics items included on the PSSA are multiple-choice (selected-response) items. This item type is especially efficient for measuring a broad range of content. In the PSSA mathematics assessment, each multiple-choice item has four response options, only one of which is correct. The student is awarded one point for choosing the correct response. Distractors typically represent incorrect concepts, incorrect logic, incorrect application of an algorithm, or computational errors.

Multiple-choice items are used to assess a variety of skill levels, from short-term recall of facts to problem solving. PSSA items involving application emphasize the requirement to carry out some mathematical process to find an answer, rather than simply recalling information from memory.

OPEN-ENDED TASKS FOR MATHEMATICS

Open-ended, or constructed-response, tasks require students to read a problem description and to develop an appropriate solution. The open-ended items are designed to take about ten minutes per item. Most of the open-ended items have several components to the overall task that may enable students to enter or begin the problem at different places. In some items, each successive component is designed to assess progressively more difficult skills or higher knowledge levels. Certain components ask students to explain their reasoning for engaging in particular mathematical operations or for arriving at certain conclusions. The types of tasks utilized do not necessarily require computations. Students may also be asked to perform such tasks as constructing a graph, shading some portion of a figure, or listing object combinations that meet specified criteria.

Open-ended tasks are especially useful for measuring students' problem-solving skills in mathematics. They offer the opportunity to present real-life situations that require students to solve problems using mathematics abilities learned in the classroom. Students must read the task carefully, identify the necessary information, devise a method of solution, perform the calculations, enter the solution directly in the response space, and, when required, offer an explanation. This provides insight into the students' mathematical knowledge, abilities, and reasoning processes.

The open-ended mathematics items are scored on a 0–4 point scale using an item-specific scoring guideline. The item-specific scoring guideline outlines the requirements for each score point. Item-specific scoring guidelines are based on the "General Description of Mathematics Scoring Guidelines for Open-Ended Items". The general guidelines describe a hierarchy of responses, which represent the five score levels. See Appendix A or the *Mathematics Item and Scoring Samplers* available on the PDE website.

ENGLISH LANGUAGE ARTS ASSESSMENT MEASURES

The content blueprints for the English language arts assessment are shown in the following tables. The blueprints are organized around three Reporting Clusters (Reading, Writing, and Text-Dependent Analysis) based on the expressed emphasis contained within the Pennsylvania Core Standards.

- Reading
  - A = Literature Text
  - B = Informational Text
  - A-K and B-K = Key Ideas and Details
  - A-C and B-C = Craft and Structure/Integration of Knowledge and Ideas
  - A-V and B-V = Vocabulary Acquisition and Use
- Writing
  - D = Conventions of Standard English
- Text-Dependent Analysis
  - E = Text-Dependent Analysis (Grades 4–8 only)

Within the Reading Reporting Cluster, each Eligible Content aligns to a Genre Reporting Category (Literature Text or Informational Text) as well as a Core Competency Reporting Category (Key Ideas and Details; Craft and Structure/ Integration of Knowledge and Ideas; or Vocabulary Acquisition and Use) as shown in the table below.

Table 2–1. English Language Arts Eligible Content Blueprint

Genre	Key Ideas and Details (Key Ideas)	Craft and Structure/Integration of Knowledge and Ideas (CSI)	Vocabulary Acquisition and Use (Vocabulary)
Literature Text	A-K.1.1.1	A-C.2.1.1	A-V.4.1.1
Literature Text	A-K.1.1.2	A-C.3.1.1	A-V.4.1.2
Literature Text	A-K.1.1.3	NA	NA
Informational Text	B-K.1.1.1	B-C.2.1.1	B-V.4.1.1
Informational Text	B-K.1.1.2	B-C.2.1.2	B-V.4.1.2
Informational Text	B-K.1.1.3	B-C.3.1.1	NA
Informational Text	NA	B-C.3.1.2	NA
Informational Text	NA	B-C.3.1.3	NA

The English language arts assessment employs several types of test questions, including standalone and passage-based Multiple-Choice questions (MC), Evidence-Based Selected-Response (EBSR) questions, Short-Answer (SA) questions (Grade 3 only) and Text-Dependent Analysis (TDA) questions (Grades 4–8).

PASSAGE-BASED MULTIPLE-CHOICE ITEMS

Passage-based multiple-choice items measure how well students comprehend the overall meaning of a passage or make basic inferences about it. At times, asking students to choose a preferred answer is the best way to determine whether they have gleaned certain information from a story. Such information may include setting, central idea, or main events and their sequence. These multiple-choice items are aligned to Reporting Categories within the Reading Reporting Cluster.

Each reading multiple-choice item has four response options, only one of which is correct. The student is awarded one point for choosing the correct response. Incorrect response choices, or distractors, typically represent some kind of misinterpretation, predisposition, unsound reasoning, or casual reading of the item and/or stimuli.

STANDALONE MULTIPLE-CHOICE ITEMS

Standalone multiple-choice items require that a student demonstrate both passive (recognizing and identifying grammatical and mechanical errors in text, such as misspellings, errors in word choice, errors in verb tense, or pronoun usage) and active (choosing the appropriate correction of an embedded error, such as deleting an irrelevant detail, changing the sequence of details, or placing correct marks of punctuation) language skills related to conventions of standard English and knowledge of language. These multiple-choice items are aligned to the Language Reporting Category within the Writing Reporting Cluster.

All language multiple-choice items have four response options that include only one correct answer. The student is awarded one raw score point for choosing the correct response. Incorrect response choices, or distractors, typically represent some kind of misinterpretation or predisposition, unsound reasoning, or casual reading of the item and/or stimuli.

EVIDENCE-BASED SELECTED-RESPONSE ITEMS

Each two-part evidence-based selected-response (EBSR) question is designed to elicit an evidence-based response from a student who has read either a Literature or Informational Text passage. In Part One, which is similar to a multiple-choice question, the student analyzes a passage and chooses the best answer from four answer choices. In Part Two, the student elicits evidence from the passage to select one or more answers based on his/her response to Part One. Part Two is different from a multiple-choice question in that there may be more than four answer options and more than one correct answer. Each EBSR test question is worth either two or three points, and students can receive partial credit for providing a correct response to Part One or for providing one or more correct responses in Part Two. The student is awarded one raw score point for choosing each correct response. Incorrect response choices, or distractors, in both Part One and Part Two typically represent some kind of misinterpretation, predisposition, unsound reasoning, or casual reading of the item and/or stimuli.

SHORT-ANSWER ITEMS (GRADE 3)

Constructed response tasks such as the short-answer questions included on the assessment for Grade 3 require written responses. These items are designed to address comprehension of text in ways that multiple-choice items cannot. These short written responses require about five minutes per item and allow a student to prepare an answer using supporting details or examples derived from the text. Prior to 2013, these test questions were called "open-ended" items due to the many possible responses students could construct compared to the four static options available in a multiple-choice item. These items began to be labeled as short-answer items during the 2013 administration. The shift in labeling, from "open-ended" to "short-answer," was implemented to draw a greater contrast to the new "Text-Dependent Analysis" questions which require substantial student writing. By comparison, responses to the short-answer items are simpler and require less explication and almost no analysis.

The reading short-answer items are scored on a 0–3-point scale using an item-specific scoring guideline. This scale is consistent with the scale used on the National Assessment of Educational Progress (NAEP). The change from the former 0–4-point scale improves the alignment with the types of tasks required. Each task is text-dependent and is carefully constructed with the scoring guideline reflecting the task requirements. All item-specific scoring guidelines are based on the "General Scoring Guidelines for Short-Answer Reading Items." The general guidelines describe a hierarchy of responses, which represent the four score levels. See Appendix A or the *English Language Arts Item and Scoring Samplers* available on the PDE website.

TEXT-DEPENDENT ANALYSIS ITEMS (GRADES 4–8)

Text-dependent analysis questions require students to draw on basic writing skills while inferring and synthesizing information from a passage or passage set they have read during the test event, in order to develop a comprehensive, holistic essay response. Both Literature and Informational Texts are addressed through this item type. The demand required of a student's reading and writing skills in response to a TDA coincides with the similar demands required for a student to be college and career ready. The essay responses developed for this item type require approximately thirty minutes. These items are reported under the Text-Dependent Analysis Reporting Category, which is found in the Reporting Cluster of the same name.

The text-dependent analysis items are scored on a 1–4-point scale using the holistic "PSSA Text-Dependent Analysis Scoring Guidelines." The TDA scoring guidelines describe a hierarchy of responses, which represent the four score levels, and include comprehension, writing, and analysis skills. See Appendix A or the *English Language Arts Item and Scoring Samplers* available on the PDE website.

PASSAGE COMPLEXITY

The Pennsylvania Core Standards require students to read increasingly complex texts with greater independence and proficiency as they progress toward college- and career-readiness. DRC has worked with PDE to develop a process that measures (1) the quantitative evaluation of the text, and (2) the qualitative evaluation of the text that is reported out on a passage placemat. In addition, a third component, matching reader to text and task, is also taken into consideration during passage evaluation and teacher committee reviews.

QUANTITATIVE EVALUATION

Evaluating the complexity of a passage is essentially a judgmental process by individuals familiar with the classroom context and what is developmentally and linguistically appropriate for students at a given grade level. Although readability indices will be computed and made available on the passage placemat for each passage, we believe that these indices measure different aspects of readability and can result in various interpretations. Because no readability formula is perfect, qualitative measures have been implemented to help determine placement and appropriateness for passages used in the Pennsylvania assessments. These measures include: 1) rubric-based qualitative evaluations, and 2) teacher content review committees to provide expert opinions on grade-level appropriateness as part of matching the reader to text and task considerations.

QUALITATIVE EVALUATION

Rubrics provide the qualitative measures for literary and informational passages. As indicated on these placemats, the quantitative measures suggest the appropriate grade band of the text, while the qualitative rubrics pinpoint the specific grade level. These rubrics provide a powerful and comprehensive way of evaluating a range of stimulus materials that cover the literary and informational scope outlined in the Pennsylvania Core Standards. Passages selected for the Pennsylvania assessments should have evidence of their complexity determination and grade-level placement, based on both quantitative and qualitative measures as specified above.

SCIENCE ASSESSMENT MEASURES

The PSSA science assessment has four major reporting categories: The Nature of Science, Biological Sciences, Physical Sciences, and Earth and Space Sciences. These categories are similar to those used by the National Assessment of Educational Progress (NAEP) and The Third International Mathematics and Science Study (TIMSS). However, the PSSA organizes the categories differently. The science assessment anchors cover seventeen major categories from two sets of standards: Science and Technology Standards (3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, and 3.8) and Environment and Ecology Standards (4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, and 4.9).

The Assessment Anchors are organized into four classifications, as listed below.

- A = Nature of Science
- B = Biological Sciences
- C = Physical Sciences
- D = Earth and Space Sciences

These four reporting categories are used in both grades four and eight. In addition to these reporting categories, there are additional Assessment Anchors for each grade level. The first letter of each Assessment Anchors represents the reporting category, and the second letter represents the Assessment Anchors. These Assessment Anchors are listed below.

- A. The Nature of Science
    - S.A.1. Reasoning and Analysis
    - S.A.2. Processes, Procedures, and Tools of Scientific
    - S.A.3. Systems, Models, and Patterns
- B. Biological Sciences
    - S.B.1. Structure and Function of Organisms
    - S.B.2. Continuity of Life
    - S.B.3. Ecological Behavior and Systems

- C. Physical Sciences
    - S.C.1. Structure, Properties and Interactions of Matter and Energy
    - S.C.2 Forms, Sources, Conversions, and Transfer of Energy
    - S.C.3 Principles of Force and Motion
- D. Earth and Space Sciences
    - S.D.1 Earth Features and Processes that Change Earth and Its Resources
    - S.D.2 Weather, Climate, and Atmospheric Processes
    - S.D.3 Composition and Structure of the Universe

The science assessment employs two types of test items: multiple-choice and open-ended. These item types assess different levels of knowledge and provide different kinds of information about science achievement. The design of the operational 2018 PSSA for science achieves a reasonable balance between the two item types. Concepts include

SCIENCE MULTIPLE-CHOICE ITEMS

The majority of the science items included on the PSSA are multiple-choice (selected-response) items, either as standalone multiple-choice items or as scenario-based multiple-choice items. (Scenario-based multiple-choice items are found in Grade 8 only.) Multiple-choice items are especially efficient for measuring a broad range of content. In the PSSA science assessment, each multiple-choice item has four response options, only one of which is correct. The student is awarded one point for choosing the correct response. Distractors typically represent incorrect concepts, incorrect logic, or incorrect application of a scientific principle.

Multiple-choice items are used to assess a variety of skill levels, from short-term recall of facts to the application of science content. PSSA items involving application emphasize the requirement to utilize science content to find an answer rather than simply recalling information from memory.

OPEN-ENDED ITEMS FOR SCIENCE

At all grades, standalone open-ended science items require students to read a description of a scientific problem and to develop an appropriate solution. Standalone open-ended items require about five minutes per task.

Open-ended tasks are especially useful for measuring students' skills in science. These tasks may present real-life situations that require students to solve problems using science abilities learned in the classroom. Students must read a task carefully, identify the necessary information, devise a method of solution, enter the solution directly into the answer document, and when required, offer an explanation. This provides insight into students' science knowledge, abilities, and reasoning processes.

The open-ended science items are scored on a 0–2-point scale with an item-specific scoring guideline, and each task is carefully constructed with a scoring guideline reflecting the task requirements. The general guidelines describe a hierarchy of responses, which represent the three score levels. Each item-specific scoring guideline outlines the requirements at each score point, and each item-specific scoring guideline is based on the "Science Scoring Guidelines for Open-Ended Items." See Appendix A or the *Science Item and Scoring Samplers* available on the PDE website.

SCIENCE SCENARIOS FOR GRADE 8

In addition to standalone multiple-choice and open-ended items, the science assessment includes scenarios at Grade 8. In consideration of the multidisciplinary and interdisciplinary nature of science content, science scenarios create stronger connections between The Nature of Science/Science Content and the multiple-choice items associated with a scenario. As a result, science scenarios allow the assessment to efficiently address and utilize the connections among the science content domains. A science scenario contains text, graphics, charts, and/or tables and uses these elements to describe the results of a class project, an experiment, or other similar research. Students use the information found in a science scenario as a platform from which to answer multiple-choice

questions. Scenarios and questions reach beyond simple fact recollection; they are designed to challenge students to think and to apply the knowledge and skills learned in their classrooms. Scenarios are designed to reflect multi-dimensional classroom activities that incorporate higher cognitive levels of understanding. Science scenarios challenge students to interpret stimulus content and to apply existing knowledge to new data, while using science knowledge and process skills to arrive at their answers.

CHAPTER THREE: ITEM DEVELOPMENT PROCESS

The core portion of the 2018 PSSA operational administration is made up of items that were field tested primarily in the 2017 PSSA administration. Therefore, the activities that led to the 2018 PSSA operational administration began with the development of the test items that appeared in the field test portion of the 2017 operational administration. In turn, items that appeared on the field test portion of the 2017 operational administration were developed during and prior to 2017. (See Table 3–1 for a graphic representation of the basic process flow and overlap of the development cycles.)

Table 3–1. General Development Timeline Pattern of the PSSA

Oper Admin Year	2012	2013	2014	2015	2016	2017	2018
2014	Initial Item Dev →	Field Test →	Oper Core Admin with embedded equating block items →	Core-to-Core Link			
2015		Initial Item Dev →	Field Test →	Oper Core Admin with embedded equating block items →	Core-to-Core Link		
2016			Initial Item Dev →	Field Test →	Oper Core Admin with embedded equating block items[1]	Core-to-Core Link	
2017				Initial Item Dev →	Field Test →	Oper Core Admin with embedded equating block items	Core-to-Core Link
2018					Initial Item Dev →	Field Test →	Oper Core Admin with embedded equating block items

Table 3–2. General Timeline Associated with 2013 and 2014 Field Test and 2015-2018 Operational Assessment of ELA and Mathematics at Grades 3, 4, 5, 6, 7, and 8

Time Frame	Assessment	Activity
January 2012–July 2012	’13 FT for ’15 OP	Item development for items to embed in 2013 operational test (Grades 3–5 only)
July 2012	’13 FT for ’15 OP	Item review for the embedded field test in 2013 operational assessment (Grades 3–5 only)
September 2012–January 2013	’13 OP & ’13 FT for ’15 OP	Forms construction for 2013 operational assessment with embedded field test (Grades 3–5 only)
January 2013–June 2013	’14 FT for ’15 OP	Item development for items to embed on 2014 operational assessment
February 2013	’13 FT for ’15 OP	2013 standalone field test for ELA: Writing Grades 3–5
March 2013–May 2013	’13 FT for ’15 OP	2013 embedded field test in 2013 operational test (Grades 3–5 only)
June 2013	’14 FT for ’15 OP	Item review for the embedded field test in 2014 operational assessment
July 2013	’13 FT for ’15 OP	Statistical review of 2013 field tested items (Grades 3–5 only)
September 2013–January 2014	’14 OP & ’14 FT for ’15 OP	Forms construction for 2014 operational assessment
January 2014–July 2014	’15 FT for ’16 OP	Item development for items to embed in 2015 operational test
February 2014	’14 FT for ’15 OP	2014 standalone field test for ELA: Writing Grades 6–8
April 2014–May 2014	’14 OP & ’14 FT for ’15 OP	2014 embedded field test in 2014 operational assessment
June 2014	’15 FT for ’16 OP	Item review for the embedded field test in 2015 operational assessment
July 2014	’14 FT for ’15 OP	Statistical review of 2014 field tested items
September 2014–January 2015	’15 OP & ’15 FT for ’16 OP	Forms construction for 2015 operational assessment
April 2015–May 2015	’15 OP & ’15 FT for ’16 OP	2015 operational assessment
January 2015–July 2015	’15 FT for ’16 OP	Item development for items to embed in 2016 operational test
April 2015–May 2015	’14 OP & ’14 FT for ’15 OP	2015 embedded field test in 2015 operational assessment
June 2015	’15 FT for ’16 OP	Item review for the embedded field test in 2015 operational assessment
July 2015	’14 FT for ’15 OP	Statistical review of 2015 field tested items
September 2015–January 2016	’16 OP & ’16 FT for ’17 OP	Forms construction for 2016 operational assessment
April 2016–May 2016	’16 OP & ’16 FT for ’17 OP	2016 operational assessment
January 2016–July 2016	’17 FT for ’18 OP	Item development for items to embed in 2018 operational test
April 2016–May 2016	’15 OP & ’15 FT for ’16 OP	2016 embedded field test in 2016 operational assessment
June 2016	’16 FT for ’17 OP	Item review for the embedded field test in 2016 operational assessment
July 2016	’15 FT for ’16 OP	Statistical review of 2016 field tested items
September 2016–January 2017	’17 OP & ’17 FT for ’18 OP	Forms construction for 2017 operational assessment
April 2017–May 2017	’17 OP & ’17 FT for ’18 OP	2017 operational assessment
January 2017–July 2017	’18 FT for ’19 OP	Item development for items to embed in 2019 operational test
April 2017–May 2017	’16 OP & ’16 FT for ’17 OP	2017 embedded field test in 2017 operational assessment
June 2017	’17 FT for ’18 OP	Item review for the embedded field test in 2017 operational assessment
July 2017	’16 FT for ’17 OP	Statistical review of 2017 field tested items
September 2017–January 2018	’18 OP & ’18 FT for ’19 OP	Forms construction for 2018 operational assessment
April 2018–May 2018	’18 OP & ’18 FT for ’19 OP	2018 operational assessment

Table 3–3. Participating Districts by Region

Region of Commonwealth	School District
Western	Athens Area, Grove City Area, Penn Hills, Pittsburgh Public Schools
Central	Manheim Township, Newport, State College Area, West Shore, Wilkes-Barre Area
Eastern	Haverford Township, Lower Merion, Mid-Valley, Philadelphia City SD, Upper Merion

PROCESS AND PROCEDURES FOR THE 2006 ITEM PILOT

Two parallel forms of the science assessment were designed for each grade level, with a designated administration time of thirty minutes. No attempt was made to replicate the design of a PSSA science operational test for the cognitive lab or pilot test because of testing-time limitations and the objectives of this study. The items were representative of items from each of the proposed PSSA's four reporting categories (i.e., The Nature of Science, Biological Sciences, Physical Sciences, and Earth and Space Sciences). All test items were approved by PDE before inclusion in the PSSA Science Item Tryout Project.

In Grade 4, each form of the test consisted of ten multiple-choice items, 70 percent of which included graphs, graphics, charts, or tables with relevant information associated with the item. All four reporting strands were assessed in each Grade 4 test form. In Grades 8 and 11, age/grade-appropriate science scenarios were developed. The scenarios included graphics, charts, tables, graphs, and diagrams to support the scenario text. A set of test items associated with each science scenario was developed. In Grade 8, each test form included items from all four reporting strands. In Grade 11, scenarios in test Form A assessed the biological, earth and space, and nature of science reporting strands, while test Form B assessed the physical, earth and space, and nature of science reporting strands.

Scenarios and questions reached beyond simple fact recollection; they were designed to challenge students to think and to apply knowledge and skills learned in their classrooms. The science scenarios were based on Pennsylvania Assessment Anchors and Eligible Content. Scenarios were designed to reflect multi-dimensional classroom activities that incorporate higher cognitive levels of understanding. Each scenario was stimulus-based and included passages with graphics, charts, graphs, or a combination of all three media. Science scenarios challenged students to interpret passage content while using science knowledge and process skills to determine their answers.

IMPLEMENTATION AND TEST ADMINISTRATION FOR 2006 ITEM PILOT

Two classrooms within one geographic region participated in the project each day. At least two test development specialists were present at all but one school district during the pilot study project sessions; in addition, representatives from PDE attended most sessions. The PSSA Science Item Tryout Project field work occurred during a three-week window, beginning on February 27 and concluding on March 16.

TEST DEVELOPMENT CONSIDERATIONS: ALL ASSESSMENTS

The major considerations in the item development process were the alignment to the Pennsylvania Core Standards-aligned Assessment Anchors and Eligible Content (mathematics and ELA), alignment to the Pennsylvania Academic Standards-aligned Assessment Anchors and Eligible Content (science only), grade-level appropriateness (reading/interest level, etc.), depth of knowledge, cognitive level, item/task level of complexity, estimated difficulty level, relevancy of context, rationale for distractors, style, accuracy, and correct terminology. The *Standards for Educational and Psychological Testing* (AERA, APA, NCME, 2014) and the *Principles of Universal Design* (Thompson, Johnstone, & Thurlow, 2002) guided the development process. In addition, DRC's manual, *Fairness in Testing: Guidelines for Training on Bias, Fairness, and Sensitivity Issues* was used for developing items. All items were reviewed for fairness by bias and sensitivity committees and for content by Pennsylvania educators and field-specialists. Items were also reviewed for adherence to the Principles of Universal Design by representatives from the National Center for Educational Outcomes (NCEO). In addition, the items were reviewed for adherence to the guidelines outlined in the Pennsylvania publication *Principles, Guidelines and Procedures for Developing Fair Assessment Systems: Pennsylvania Assessment Through Themes* (PATT).

BIAS, FAIRNESS, AND SENSITIVITY: ALL ASSESSMENTS

At every stage of the item and test development process, DRC employs procedures that are designed to ensure that items and tests met Standard 7.4 of the Standards for Educational and Psychological Testing (AERA, APA, NCME, 2014).

> *Standard 7.4: Test developers should strive to identify and eliminate language, symbols, words, phrases, and content that are generally regarded as offensive by members of racial, ethnic, gender, or other groups, except when judged to be necessary for adequate representation of the domain.*

To meet Standard 7.4, DRC employs a series of internal quality steps. DRC provides specific training for test developers, item writers, and reviewers on how to write, review, revise, and edit items for issues of bias, fairness, and sensitivity (as well as for technical quality). Training also includes an awareness of and sensitivity to issues of cultural diversity. In addition to providing *internal* training in reviewing items in order to eliminate potential bias, DRC also provides *external* training to the review panels of minority experts, teachers, and other stakeholders.

DRC's guidelines for bias, fairness, and sensitivity include instruction concerning how to eliminate language, symbols, words, phrases, and content that might be considered offensive by members of racial, ethnic, gender, or other groups. Areas of bias that are specifically targeted include, but are not limited to, stereotyping, gender, regional/geographic, ethnic/cultural, socioeconomic/class, religious, and biases against a particular age group (ageism) or persons with disabilities. DRC catalogues topics that should be avoided and maintains balance in gender and ethnic emphasis within the pool of available items and passages.

UNIVERSAL DESIGN: ALL ASSESSMENTS

As stated above, the Principles of Universal Design were incorporated throughout the item development process to allow participation of the widest possible range of students in the PSSA. The following checklist was used as a guideline:

- Items measure what they are intended to measure.
- Items respect the diversity of the assessment population.
- Items have a clear format for text.
- Stimuli and items have clear pictures and graphics.
- Items have concise and readable text.
- Items allow changes to other formats, such as Braille, without changing meaning or difficulty.
- The arrangement of the items on the test has an overall appearance that is clean and well organized.

A more extensive description of the application of the Principles of Universal Design is described in Chapter Four.

DEPTH OF KNOWLEDGE: ALL ASSESSMENTS

An important element in statewide assessment is the alignment between the overall assessment system and the state's standards. A methodology developed by Norman Webb (1999) offers a comprehensive model that can be applied to a wide variety of contexts. With regard to the alignment between standards statements and the assessment instruments, Webb's criteria include five categories, one of which deals with content. Within the content category is a useful set of levels for evaluating depth of knowledge (DOK). According to Webb (1999), "depth-of-knowledge consistency between standards and assessments indicates alignment if what is elicited from students on the assessment is as demanding cognitively as what students are expected to know and do as stated in the standards" (p. 7–8). The four levels of cognitive complexity (i.e., depths of knowledge) are as follows:

- Level 1: Recall
- Level 2: Application of Skill/Concept
- Level 3: Strategic Thinking
- Level 4: Extended Thinking

Depth-of-knowledge levels were incorporated in the item writing and review process, and items were coded with respect to the level they represented. Generally, multiple-choice items are written to DOK levels 1 and 2, evidence-based selected-response items are written to DOK levels 2 and 3, and constructed-response items are written to DOK level 3.

PASSAGE READABILITY

Evaluating the readability of a passage is essentially a judgmental process by individuals familiar with the classroom context and what is linguistically appropriate at a given grade level as described in the section on reading passage selection later in this chapter. Although various readability indices were computed and reviewed, it is recognized that such methods measure different aspects of readability and are often fraught with particular interpretive liabilities. Thus, the commonly available readability formulas were not used in a rigid way, but more informally to provide for several snapshots of a passage that senior test development staff considered along with experience-based judgments in guiding the passage selection process. In addition, passages were reviewed by committees of Pennsylvania educators who evaluated each passage for readability and grade-level appropriateness.

TEST ITEM READABILITY: ALL ASSESSMENTS

Careful attention was given to the readability of the items to make certain that the assessment focus of the item did not shift based on the difficulty of reading the item. Subject areas such as mathematics or science contain many content-specific vocabulary terms. As a result, readability formulas were not used. However, wherever it was practicable and reasonable, every effort was made to keep the vocabulary one grade level below the tested grade level for non-reading tests. There was a conscious consideration made to ensure that each test question was evaluating a student's ability to build toward mastery of the mathematics standards or the science standards versus the student's reading ability. Resources used to verify the vocabulary level were the *EDL Core Vocabularies* and the *Children's Writer's Word Book.*

In addition, every test question is brought before several different committees comprised of grade-level experts in the field of mathematics education and science education. They review each question from the perspective of the students they teach, and they determine the validity of the vocabulary used and work to minimize the level of reading required.

Vocabulary was also addressed at the Bias, Fairness, and Sensitivity Review, although the focus was on how certain words or phrases may represent a possible source of bias or issue of fairness or sensitivity.

TEST DEVELOPMENT PROCESS: ALL ASSESSMENTS

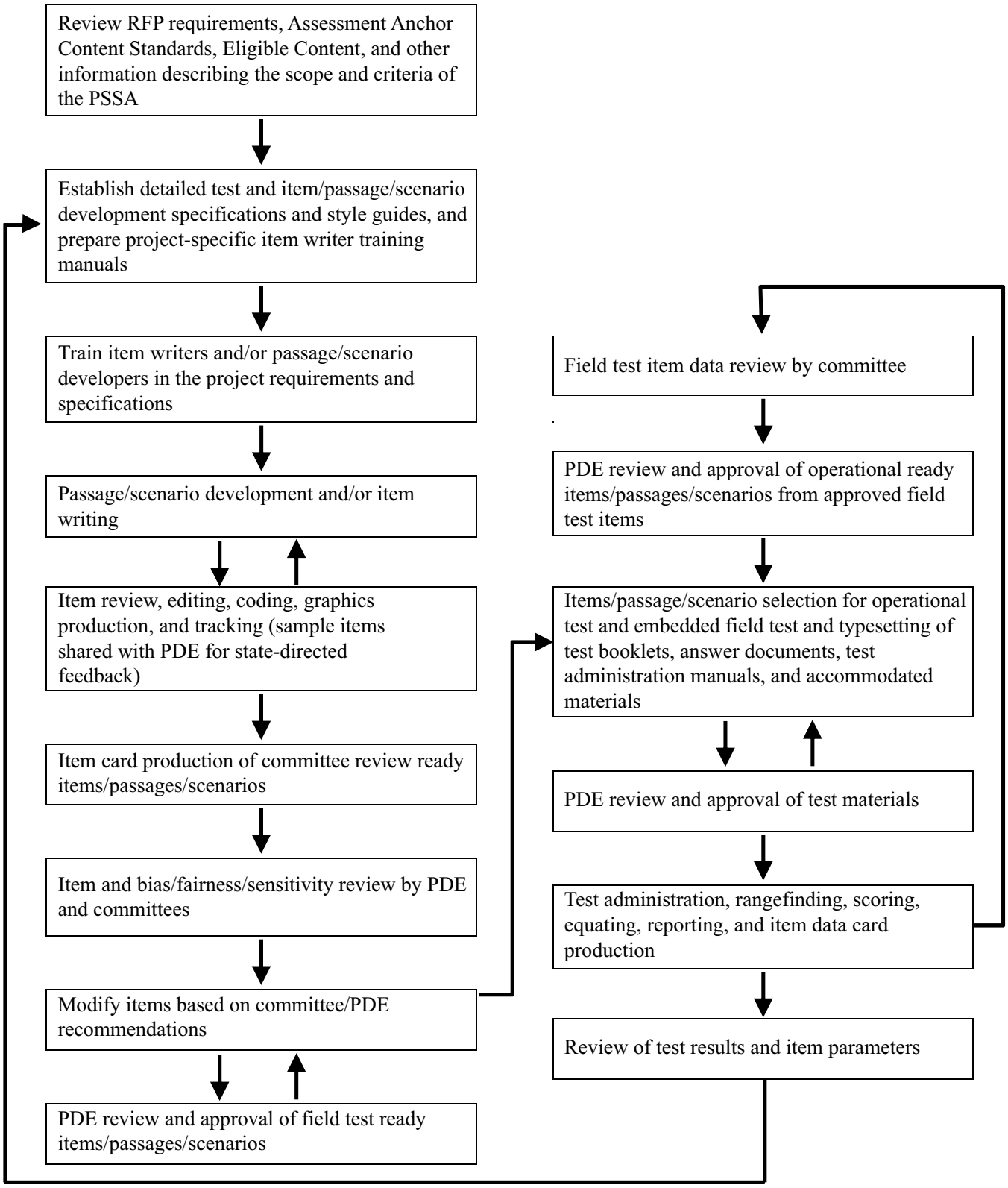
The test development process for passages, scenarios, and items followed a logical timeline, which is outlined below in Figure 3–1. On the front end of the schedule, tasks were generally completed with the goal of presenting field test candidate items to committees of Pennsylvania educators. On the back-end of the schedule, all tasks lead to the field test data review.

Figure 3–1. Item and Test Development Cycle and Timeline

Steps in Development Cycle	Timeline Before/After New Item Review		
Development planning	Fall	⇩	-12 to -9 months
Reading passage selection	Fall	⇩	-12 to -9 months
Item writer training	Fall/Winter	⇩	-9 months
Initial item authoring	Winter/Spring	⇩	-9 to -4 months
Internal reviews and PDE reviews	Spring/Summer	⇳	-8 to -1 month
Bias, Fairness, and Sensitivity Review	Summer/Fall	⇩	+/- 0 months
New Item Content Review	Summer/Fall	⇨	+/- 0 months
Post-review resolution and clean-up	Summer/Fall	⇩	+1 to +2 months
Build test forms	Fall	⇩	+2 to +4 months
Internal form reviews and PDE reviews	Fall/Winter	⇳	+3 to +4 months
Form printing, packaging, and shipping	Winter/Spring	⇩	+4 to +8 months
Test administration	Spring	⇩	+9 months
Material/data processing, rangefinding, and scoring	Spring/Summer	⇩	+10 to +12 months
Field Test Item Data Review	Summer	⇨	+12 months
Select operational items	Summer/Fall	⇩	+13 to +15 months

The process flowchart in Figure 3–2 illustrates the interrelationship among the steps in the process that occur in a normal year of development (i.e., when the items for field testing are primarily from new development, as opposed to being selected from an existing item bank). In addition, a detailed process table describing the item and test development processes also appears in Appendix C.

Figure 3–2. DRC Item and Test Development Process



The following paragraphs describe the processes which lead up to the operational test in a normal round of development. These processes were used to develop all the 2013 field test items used as operational items in the 2014 administration.

ITEM DEVELOPMENT PLANNING MEETING: ALL ASSESSMENTS

Prior to the start of any item development work, DRC's test development staff meets with PDE's assessment office to discuss the test development plans for the next PSSA administration, including the test blueprint, the field test plan (including development counts), procedures, timelines, etc. With a complete development cycle lasting several years (from item authoring through field test, data review, and operational usage), the initial planning begins well in advance of the anticipated administration. For the 2018 operational administration, the initial planning meeting for the item authoring process for the 2018 field test occurred in fall 2017. Item authoring began early in 2017, with the item review meetings occurring in June 2017. See Table 3–2.

ITEM WRITER TRAINING: ALL ASSESSMENTS

Item writers were selected and trained for the content areas of mathematics, English language arts, and science. Qualified writers were college graduates with teaching experience and a demonstrated base of knowledge in the content area. Many of these writers were content assessment specialists and curriculum specialists. The writers were trained individually and had previous experience in writing selected-response and constructed-response items. Prior to developing items for the PSSA, the cadre of item writers was trained with regard to the following:

- Pennsylvania Core Standards, Assessment Anchors, and Eligible Content (mathematics and ELA)
- Pennsylvania Academic Standards, Assessment Anchors, and Eligible Content (science)
- Webb's Four Levels of Cognitive Complexity: Recall, Basic Application of Skill/Concept, Strategic Thinking, and Extended Thinking
- General Scoring Guidelines for Each Content Area
- Specific and General Guidelines for Item Writing
- Bias, Fairness, and Sensitivity Guidelines
- Principles of Universal Design
- Item Quality Technical Style Guidelines
- Reference Information
- Sample Items

READING PASSAGE SELECTION

The task of searching for passages was conducted by DRC professionals with classroom experience in reading/language arts. These professionals also underwent specialized training (provided by DRC) in the characteristics of acceptable passages. Guidelines for passage selection included appropriate length, text structure, density, and vocabulary for the grade level. A judgment was also made about whether the reading level required by a particular passage was at the independent level, that is, where the average student should be able to read 90 percent of words in the text independently. Passage finders were given the charge to search for a specified number of passages for each genre. Generally, at least twice as many passages as needed were sought. Most passages acquired for the 2018 field test were authentic in that they were culled from published materials. Approval to reprint was secured from the publishers as necessary. Passages underwent an internal review by several test development content editors to judge their merit with regard to the following criteria:

- Passages have interest value for students.
- Passages are grade-appropriate in terms of text complexity, vocabulary, and language characteristics.
- Passages are free of bias, fairness, and sensitivity issues.
- Passages represent different cultures.
- Passages are from a variety of sources.
- Passages are able to stand the test of time.
- Passages are sufficiently rich to generate a variety of SR and CR items.
- Passages are complete with all necessary permissions documentation.
- Passages avoid dated subject matter unless a relevant historical context is provided.
- Passages should not require students to have extensive background knowledge in a certain discipline or area to understand a text.

Once through the internal review process, those passages deemed potentially acceptable were reviewed by the Reading Content Committee and Bias, Fairness, and Sensitivity Committee for final approval.

ITEM AUTHORING AND TRACKING: ALL ASSESSMENTS

Initially, items are generated with software-prepared PSSA Item Cards, which allows for preliminary sorting and reviewing. Although very similar, the PSSA Item Card for Multiple-Choice Items differs from the PSSA Item Card for Evidence-Based Selected-Response Items and the PSSA Item Card for Constructed-Response Items in that the former has a location at the bottom of the card for comments regarding the distractors. Examples of these three cards are shown in Appendix D. In both instances a column against the right margin includes codes to identify the subject area, grade level, content categories, passage information (in the case of reading), item type, depth of knowledge (cognitive complexity), estimated difficulty, answer key (for MC items), and calculator use (for mathematics items).

All items undergoing field testing in 2018 were entered into the DRC Item Development and Educational Assessment System (IDEAS), which is a comprehensive, secure, online item banking system. It accommodates item writing, item viewing and reviewing, and item tracking and versioning. IDEAS manages the transition of an item from its developmental stage to its approval for use within a test form. The system supports an extensive item history that includes item usage within a form, item-level notes, content categories and subcategories, item statistics from both classical and Rasch item analyses, and classifications derived from analyses of differential item functioning (DIF). A sample IDEAS Data Card is presented in Appendix D.

INTERNAL REVIEWS AND PDE REVIEWS: ALL ASSESSMENTS

To ensure that the items produced were sufficient in number and adequately distributed across subcategories and levels of difficulty, item writers were informed of the required quantities of items. As items were written, an item authoring card was completed. It contained information about the item, such as grade level, content category, and subcategories. Based on the item writer's classroom teaching experience, knowledge of the content area curriculum, and cognitive demands required by the item, estimates were recorded for level of cognitive complexity and difficulty level. Items were written to provide for a range of difficulty.

As part of the item construction process, each item was reviewed by content specialists and editors at DRC. Content specialists and editors evaluated each item to make sure that it measured the intended Eligible Content and/or Assessment Anchor Content Standard. They also assessed each item to make certain that it was appropriate for the intended grade and that it provided and cued only one correct answer (MC items only). In addition, the difficulty level, depth of knowledge, graphics, language demand, and distractors were also evaluated. Other elements considered in this process included, but were not limited to, Universal Design, bias, source of challenge, grammar/punctuation, and PSSA style.

Following this internal process, items were reviewed by content specialists at the Pennsylvania Department of Education. PDE staff then consulted with DRC about any general issues or concerns (e.g., style, format, interpretation of Assessment Anchors and Eligible Content) and about edits to specific items. Following PDE's review, the items were prepared for the content review meetings conducted with Pennsylvania educators.

ITEM CONTENT REVIEW IN SUMMER 2017: ALL ASSESSMENTS

Prior to the 2014 field testing, all newly-developed test items were submitted to content committees for review. The content committees consisted of Pennsylvania educators from school districts throughout the Commonwealth of Pennsylvania, some with postsecondary university affiliations. The primary responsibility of the content committee was to evaluate items with regard to quality and content classification, including grade-level appropriateness, estimated difficulty, depth of knowledge, and source of challenge. With source of challenge, items are identified where the cognitive demand is focused on an unintended content, concept, or skill (Webb, 2002). In addition, source of challenge may be attributed if the reason that an answer could be given results from a cultural bias, an inappropriate reading level, or a flawed graphic in an item, or if an item requires specialized, non-content related knowledge to answer. Source of challenge could result in a student who has mastered the intended content or skill answering the item incorrectly or a student who has not mastered the intended content or skill answering the item correctly. Committee members were asked to note any items with a source of challenge and to suggest revisions to remove the source of challenge. They also suggested revisions and made recommendations for reclassification

of items. In some cases when an item was deleted, the committee suggested a replacement item and/or reviewed a suggested replacement item provided by the facilitators. The committee also reviewed the items for adherence to the Principles of Universal Design, including language demand and issues of bias, fairness, and sensitivity.

The content review was held June 19–21, 2017, for science and ELA, June 19–22, 2017, for ELA, and June 19–22, 2017, for mathematics. Committee members were approved by PDE, and PDE-approved invitations were sent to them by DRC. PDE also selected internal staff members for attendance. The meeting commenced with a welcome by PDE and DRC. This was followed by an overview of the test development process by DRC. PDE, along with DRC, also provided training on the procedures and forms to be used for item content review.

DRC content assessment specialists facilitated the reviews and were assisted by representatives of PDE. Committee members, grouped by grade level and content area, worked through and reviewed the items for quality and content, as well as for the following categories:

- Assessment Anchor Alignment (classified as Full, Partial, or No)
- Content Limits (classified as Yes or No)
- Grade-Level Appropriateness (classified as At Grade Level, Below Grade Level, or Above Grade Level)
- Difficulty Level (classified as Easy, Medium, or Hard)
- Depth of Knowledge (classified as Recall, Application, Strategic Thinking)
- Appropriate Source of Challenge (classified as Yes or No)
- Correct Answer (classified as Yes or No)
- Quality of Distractors (classified as Yes or No)
- Graphics (classified as Yes or No) in regards to appropriateness
- Appropriate Language Demand (classified as Yes or No)
- Freedom from Bias (classified as Yes or No)

The members then came to a consensus and assigned a status to each item as a group: Approved, Accepted with Revision, Move to Another Assessment Anchor or Grade, or Rejected. All comments were recorded, and a master rating sheet was completed. Committee facilitators recorded the committee consensus on the Item Review Rating Sheet. A sample form and rating criteria may be found in Appendix E.

Security was addressed by adhering to a strict set of procedures. Items in binders were distributed for committee review by number and signed for by each member on a daily basis. All attendees, with the exception of PDE staff, were required to sign a confidentiality agreement. All materials not in use at any time were stored in a locked room. Secure materials that did not need to be retained after the meetings were deposited in secure barrels and the contents shredded.

BIAS, FAIRNESS, AND SENSITIVITY REVIEWS IN JULY AND AUGUST 2017: ALL ASSESSMENTS

Prior to 2018 field testing, all newly-developed test items for English language arts, mathematics, and science were also submitted to a Bias, Fairness, and Sensitivity Committee for review. This took place from July 30 to August 3, 2018. The committee's primary responsibility was to evaluate items with regard to bias, fairness, and sensitivity issues. They also made recommendations for changes to or deletion of items in order to remove the potential for issues of bias, fairness, and/or sensitivity. Included in the review were proposed reading passages. An expert, multi-ethnic committee composed of men and women was trained by a DRC test development lead to review items for bias, fairness, and sensitivity issues. Training materials included a manual developed by DRC (DRC, 2003–2016). Members of the committee also had expertise with students with special needs and English Language Learners. PDE staff members were also trained and participated in the review. All mathematics, English language arts, and science items were read by a cross-section of committee members. Each member noted bias, fairness, and/or sensitivity comments on tracking sheets and on the item, if needed for clarification. Committee members individually categorized any concerns as related to ageism, disability, ethnicity/culture, gender, region, religion, socioeconomic status, or stereotyping. These categories were then the framework through which recommendations for modification or rejection of items occurred during the subsequent committee consensus process. The

committee then discussed each of the issues as a group and came to a consensus as to which issues should represent the view of the committee. All consensus comments were then compiled, and the suggested actions on these items were recorded and submitted to PDE. This review followed the same security procedures as outlined above, except that the materials were locked up and stored at the DRC offices in Harrisburg. Table 3–4 shows the gender and race/ethnicity composition of the members of the bias committee who reviewed the PSSA items and passages.

Table 3–4. Demographic Composition of the 2018 Bias, Fairness, and Sensitivity Committee

Member #	Gender	Race/Ethnicity	Background
1.	Male	Asian American	National Consultant (Retired Educator)
2.	Female	Native American	Title II Supervisor/Coordinator (Bilingual)
3.	Female	Caucasian American	National Consultant (SPED expertise)
4.	Female	Caucasian American	Educator (Special Education)
5.	Male	Caucasian American	University Professor
6.	Male	Caucasian American	Director of Curriculum and Assessment
7.	Male	African American	Middle School Educator
8.	Female	African American	Literacy Coach, Education Director
9.	Female	African American	National Consultant (SPED expertise)
10.	Female	Latino	Migrant education student support specialist
11.	Female	Latino	National Consultant (Community Leader, Disability Rights Activist)
Totals	7 Females, 4 Males	2 Latinos, 1 Asian American, 4 Caucasian Americans, 1 Native American, 3 African Americans	

The results from the Bias, Fairness, and Sensitivity Committee review of mathematics are summarized in Table 3–5.

Table 3–5. Number of Items—2018 Bias, Fairness, and Sensitivity Committee Review for Mathematics

Grade	Total items reviewed per grade	Accepted As Is	Accepted With Revision	Rejected
3	69	68	1	0
4	68	65	3	0
5	69	68	1	0
6	71	70	1	0
7	70	69	1	0
8	71	71	0	0
Total	418	411	7	0

The results from the Bias, Fairness, and Sensitivity Committee review of science are summarized in Table 3–6.

Table 3–6. Number of Items—2018 Bias, Fairness, and Sensitivity Committee Review for Science

Grade	Total scenarios reviewed per grade	Total items reviewed per grade	Accepted As Is	Accepted With Revision	Rejected
4	n/a	109	105	4	0
8	8	137	135	2	0
Total	8		8	0	0

The results from the Bias, Fairness, and Sensitivity Committee review of ELA: Reading are summarized in Table 3–7.

Table 3–7. Number of Items—2018 Bias, Fairness, and Sensitivity Committee Review for ELA: Reading

Grade	Total passages reviewed per grade	Total items or prompts reviewed per grade	Accepted As Is	Accepted With Revision	Rejected
3	9	121	120	1	0
4	11	152	151	1	0
5	12	149	148	1	0
6	9	124	124	0	0
7	10	125	100	0	25
8	10	136	132	4	0
Total	61	807	775	7	25

CHAPTER FOUR: UNIVERSAL DESIGN PROCEDURES APPLIED IN THE PSSA TEST DEVELOPMENT PROCESS

Universally designed assessments allow participation of the widest possible range of students and contribute to valid inferences about participating students. Principles of Universal Design are based on the premise that each child in school is a part of the population to be tested and that testing results should not be affected by disability, gender, race, or English language ability (Thompson, Johnstone, & Thurlow, 2002). At every stage of the item and test development process, including the 2014 field test, procedures were employed to ensure that items and subsequent tests were designed and developed using the elements of universally designed assessments developed by the National Center for Educational Outcomes (NCEO).

Federal legislation addresses the need for universally designed assessments. The No Child Left Behind Act (Elementary and Secondary Education Act) requires that each state must "provide for the participation in [statewide] assessments of all students" [Section 1111(b)(3)(C)(ix)(I)]. Both Title 1 and IDEA regulations call for universally designed assessments that are accessible and valid for all students, including students with disabilities and English Language Learners. The benefits of universally designed assessments not only apply to these groups of students, but to all individuals with wide-ranging characteristics.

DRC's test development team was trained in the elements of Universal Design as it relates to developing large-scale statewide assessments. Team leaders were trained directly by NCEO, and other team members were subsequently trained by team leaders. Committees involved in content review included some members who were familiar with the unique needs of students with disabilities and English Language Learners. Likewise some members of the Bias, Fairness, and Sensitivity Committee were conversant with these issues. What follows are the Universal Design guidelines followed during all stages of the item development process for the PSSA.

ELEMENTS OF UNIVERSALLY DESIGNED ASSESSMENTS

After a review of research relevant to the assessment development process and the Principles of Universal Design (Center for Universal Design, 1997), NCEO has produced seven elements of Universal Design as they apply to assessments (Thompson, Johnstone, & Thurlow, 2002). These elements served to guide PSSA item development.

- **Inclusive Assessment Population**

  The PSSA target population includes all students at the assessed grades attending Commonwealth schools. For state, district, and school accountability purposes, the target population includes all students except those who will participate in accountability through an alternate assessment.

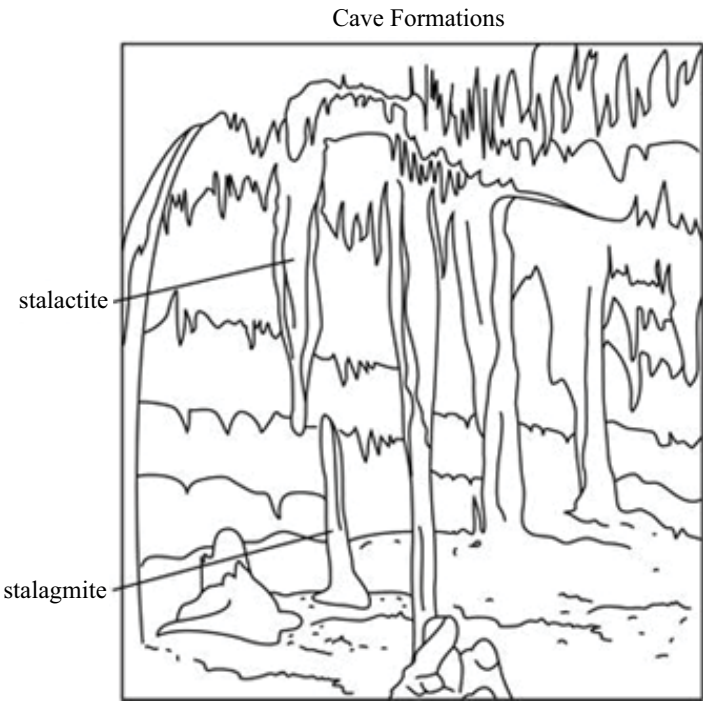
- **Precisely Defined Constructs**

  An important function of well-designed assessments is that they actually measure what they are intended to measure. The Pennsylvania Assessment Anchors and Eligible Content provided clear descriptions of the constructs to be measured by the PSSA at the assessed grade levels. Universally designed assessments must remove all non-construct-oriented cognitive, sensory, emotional, and physical barriers.

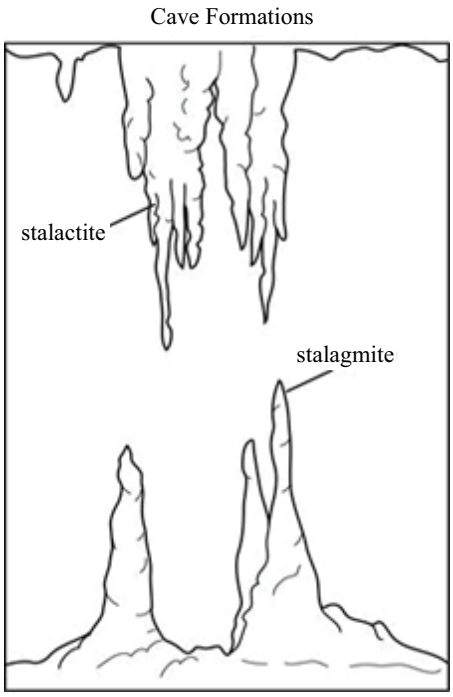
- **Accessible, Non-biased Items**

  DRC conducted both internal and external reviews of items and test specifications to ensure that they did not create barriers because of lack of sensitivity to disability, culture, or other subgroups. Items and test specifications were developed by a team of individuals who understand the varied characteristics of items that might create difficulties for any group of students. Accessibility is incorporated as a primary dimension of test specifications, so accessibility was woven into the fabric of the test rather than added after the fact. The following examples show two graphics with the same construct, example 1 being less accessible and example 2 being more accessible.

Example 1 – Less Accessible:



Example 2 – More Accessible:



- **Amenable to Accommodations**

  Even though items on universally designed assessments are accessible for most students, there are some students who continue to need accommodations. This essential element of a universally designed assessment requires that the test is compatible with accommodations and a variety of widely used adaptive equipment and assistive technology. (See the section on Assessment Accommodations later in Chapter Four.)

- **Simple, Clear, and Intuitive Instructions and Procedures**

  Assessment instructions should be easy to understand, regardless of a student's experience, knowledge, language skills, or current concentration level. Questions that are posed using complex language can invalidate the test if students cannot understand how they are expected to respond to a question. To meet this guideline, directions and questions were prepared in simple, clear, and understandable language that underwent multiple reviews.

- **Maximum Readability and Comprehensibility**

  A variety of guidelines exist to ensure the maximum readability and comprehensibility of a test. These features go beyond what is measured by readability formulas. Readability and comprehensibility are affected by many factors, including student background, sentence difficulty, text organization, and others. All of these features were considered as item text was developed.

  Plain language is a concept now being highlighted in research on assessments. Plain language has been defined as language that is straightforward and concise. The following strategies for editing text to produce plain language were used during the editing process of the new PSSA items:

  - Reduction of excessive length
  - Use of common words
  - Avoidance of ambiguous words
  - Avoidance of irregularly spelled words

- Avoidance of proper names
- Avoidance of inconsistent naming and graphic conventions
- Avoidance of unclear signals about how to direct attention

- **Maximum Legibility**

  Legibility is the physical appearance of text, the way that the shapes of letters and numbers enable people to read text easily. Bias can result when tests contain physical features that interfere with a student's focus on or understanding of the constructs that test items are intended to assess. A style guide developed and updated annually (DRC, 2004–2013) was utilized, with PDE approval, which included dimensions of style consistent with universal design.

GUIDELINES FOR UNIVERSALLY DESIGNED ITEMS

All test items written and reviewed adhered closely to the following guidelines for Universal Design. Item writers and reviewers used a checklist during the item development process to ensure that each aspect was attended to. For more information on the checklist, see the Universal Design: All Assessments section in Chapter Three of this report.

1. **Items measure what they are intended to measure.** Item writing training included ensuring that writers and reviewers had a clear understanding of Pennsylvania's Core Standards (ELA and mathematics) or Academic Standards (science) and the Assessment Anchors. During all phases of test development, items were presented with content-standard information to ensure that each item reflected the intended Assessment Anchor. Careful consideration of the content standards was important in determining which skills involved in responding to an item were extraneous and which were relevant to what was being tested. In certain types of items an additional skill is necessary, such as the mathematics test, which requires the student to read.
2. **Items respect the diversity of the assessment population.** To develop items that avoid content that might unfairly advantage or disadvantage any student subgroup, item writers, test developers, and reviewers were trained to write and review items for issues of bias, fairness, and sensitivity. Training also included an awareness of, and sensitivity to, issues of cultural and regional diversity.
3. **Items have a clear format for text.** Decisions about how items are presented to students must allow for maximum readability for all students. Appropriate fonts and point sizes were employed with minimal use of italics, which is far less legible and is read considerably more slowly than standard typeface. Captions, footnotes, keys, and legends were at least a 12-point size.[1] Legibility was enhanced by sufficient spacing between letters, words, and lines. Blank space around paragraphs and between columns and staggered right margins were used.
4. **Stimuli and items have clear pictures and graphics.** When pictures and graphics were used, they were designed to provide essential information in a clear and uncluttered manner. Illustrations were placed directly next to the information to which they referred, and labels were used where possible. Sufficient contrast between background and text, with minimal use of shading, increased readability for students with visual impairments. Color was not used to convey important information.
5. **Items have concise and readable text.** Linguistic demands of stimuli and items can interfere with a student's ability to demonstrate knowledge of the construct being assessed. During item writing and review, the following guidelines were used.

   - Simple, clear, commonly-used words were used whenever possible.
   - Extraneous text was omitted.
   - Vocabulary and sentence complexity were appropriate for the grade level being assessed.
   - Technical terms and abbreviations were used only if they were related to the content being measured.
   - Definitions and examples were clear and understandable.

[1] While font size follows specific requirements during online setup of an assessment, the screen resolution used at the local level can impact whether the effective font size is visible to the student.

- Idioms were avoided unless idiomatic speech was being assessed.
- The questions to be answered were clearly identifiable.

6. **Items allow changes to format without changing meaning or difficulty.** A Braille version of the PSSA was available at each assessed grade. Attention was given to using items that allow for Braille. Specific accommodations were permitted, such as signing to a student, the use of oral presentation under specified conditions, and the use of various assistive technologies. Spanish versions of the PSSA mathematics and PSSA science tests were available for use by English Language Learners who would benefit from this accommodation. In the online format, permitted accommodations included text-to-speech audio, a color overlay, contrasting text options, and American Sign Language videos.
7. **The test has an overall appearance that is clean and organized.** Images, pictures, and text that may not be necessary (e.g., sidebars, overlays, callout boxes, visual crowding, shading) and that could be potentially distracting to students were avoided. Also avoided were purely decorative features that did not serve a purpose. Information was organized in a left-right, top-bottom format.

ITEM DEVELOPMENT

DRC worked closely with the Pennsylvania Department of Education to help ensure that PSSA tests complied with nationally recognized Principles of Universal Design. The implementation of accommodations on large-scale statewide assessments for students with disabilities was supported in the development of the PSSA. In addition to the Principles of Universal Design described in the Pennsylvania Technical Report, DRC applied to each content area assessment the standards for test accessibility described in *Tests Access: Making Tests Accessible for Students with Visual Impairments—A Guide for Test Publishers, Test Developers, and State Assessment Personnel* (Allman, 2004). To this end, DRC embraced the following precepts:

Test directions were carefully worded to allow for alternate responses to constructed-response (e.g., open-ended or short-answer) questions.

- During item and bias reviews, test committee members were made aware of the Principles of Universal Design and of issues that might adversely affect students with disabilities, with the goal of ensuring that PSSA tests were bias-free for all students.
- With the goal of ensuring that the PSSA tests are accessible to the widest range of diverse student populations, PDE instructed DRC to limit item types that were difficult to format in Braille and that might become distorted when published in large print. DRC was instructed to limit the following on the PSSA.
    - Mathematics: Complicated tessellations; charts or graphs that extended beyond one page
    - Reading: Graphics and illustrations that were not germane to the content presented
    - All content areas: Unnecessary boxes and framing of text, unless enclosing the text provided necessary context for the student; use of italics (limited to only when it was absolutely necessary, such as with variables)

ITEM FORMATTING

For all content areas, DRC formatted PSSA tests to maximize accessibility for all students by using text that was in a size and font style easily readable. DRC limited shading, graphics, charts, and the number of items per page so that there was sufficient white space on each page. Whenever possible, DRC ensured that graphics, pictures, diagrams, charts, and tables were positioned on the page with the associated test items. DRC used high contrast for text and background where possible to convey pertinent information. Tests were published on dull-finish paper to avoid the glare encountered on glossy paper. DRC paid close attention to the binding of the PSSA test booklets to ensure that they laid flat for two-page viewing and ease of reading and handling.

DRC ensured consistency across PSSA assessments by following these Principles of Universal Design:

- High contrast and clarity was used to convey detailed information.
- Typically, shading was avoided; when necessary for content purposes, 10 percent screens were used as the standard.
- Overlaid print on diagrams, charts, and graphs was avoided.
- Charts, graphs, diagrams, and tables were clearly labeled with titles and with short descriptions where applicable.
- Only relevant information was included in diagrams, pictures, and graphics.
- Symbols used in keys and legends were meaningful and provided reasonable representations of the topics they depicted.
- Pictures that required physical measurement were true to size.

ASSESSMENT ACCOMMODATIONS

While universally designed assessments provide for participation of the widest range of students, many students require accommodations in order to participate in the regular assessment. Clearly, the intent of providing accommodations for students is to ensure that students are not unfairly disadvantaged during testing and that the accommodations used during instruction, if appropriate, are made available as students take the test. The literature related to assessment accommodations is still evolving and often focuses on state policies regulating accommodations rather than on providing empirical data that supports the reliability and validity of the use of accommodations. On a yearly basis, the Pennsylvania Department of Education examines accommodations policies and current research to ensure that valid, acceptable accommodations are available for students. Accommodations manuals, *Accommodations Guidelines* and *Accommodations Guidelines for English Language Learners*, were developed for use with the 2018 PSSA.

The manuals can be accessed by going to www.education.pa.gov. Roll over `Data and Reporting' in the dark blue bar across the top of the page. Select `Assessment and Accountability.' Click on the link that reads `Pennsylvania System of School Assessment (PSSA)'. Select 'Accommodations'. Then click on Accommodations Guidelines for ELs in the Accommodations section.

In addition, Spanish-language versions, translated from the original English versions, were made available for both the mathematics and science PSSAs. The Spanish-translation versions are discussed in Chapter Six.

CHAPTER FIVE: FIELD TEST LEADING TO THE 2018 CORE

Generally, all non-linking core items appearing on the 2018 assessments came from the 2017 embedded field test positions. PSSA test forms contained common items that were identical on all forms along with embedded field test items and equating block items. The common items consisted of a set of core items taken by all students. The field test items and equating block items were embedded and were unique, in most instances, to a form; however, there were instances in which an embedded field test or equating block item appeared on more than one form. More information on the field test designs for all contents can be found in the content-specific portions of Chapter Three.

The purpose of administering field test items is to obtain statistics for them so they can be reviewed before becoming operational. Based on this statistical review, many of the field test items embedded in the 2017 PSSA were selected for use as common or equating block items in the 2018 PSSA.

STATISTICAL ANALYSIS OF ITEM DATA

All field tested items were analyzed statistically following conventional item analysis methods. For SR items (including multiple-choice and evidence-based selected-response items), traditional or classical item statistics included the corrected point-biserial correlation (Pt. Bis.) for the correct and incorrect responses (distractors), percent correct (*p*value), and the percent responding to incorrect responses. For constructed-response (CR) items (including open-ended questions, short-answer questions, and text-dependent analysis questions,), the statistical indices included the item-test correlation, the point-biserial correlation for each score level, percent in each score category or level, and the percent of non-scoreable responses.

In general, more capable students are expected to respond correctly to easy items and less capable students are expected to respond incorrectly to difficult items. If either of these situations does not occur, the item will be reviewed by DRC test development staff and committees of Pennsylvania educators to determine the nature of the problem and the characteristics of the students affected. The primary way of detecting such conditions is through the point-biserial correlation coefficient for dichotomous (MC) items and the item-total correlation for polytomous (EBSR and CR) items. In each case the statistic will be positive if the total test mean score is higher for the students who respond correctly to MC items (or attain a higher CR item score) and negative when the reverse is true.

Item statistics are used as a means of detecting items that deserve closer scrutiny, rather than being a mechanism for automatic retention or rejection. Toward this end, a set of criteria was used as a screening tool to identify items that needed a closer review by committees of Pennsylvania educators. For an MC item to be flagged, the criteria included any of the following:

- Percent correct less than 0.3 or greater than 0.9
- Point-biserial correlation for the correct response of less than 0.25
- Point-biserial correlation for any incorrect response greater than 0.0
- Percent responding to any incorrect responses greater than the percent correct
- Gender DIF code of either C- or C+
- Any ethnic DIF code of C- or C+

For an EBSR item to be flagged, the criteria included any of the following:

- P-value less than 0.3 or greater than 0.9
- Part One point-biserial correlation for the correct response of less than 0.25
- Part One point-biserial correlation for any incorrect response greater than 0.0
- Part One percent responding to any incorrect responses greater than the percent correct

- Gender DIF code of either C- or C+
- Any ethnic DIF code of C- or C+
- Score proportion < 0.05

For a CR item to be flagged, the criteria included any of the following:

- P-value less than 0.3 or greater than 0.9
- Score Proportion < 0.05
- Gender DIF code of C- or C+
- Any ethnic DIF code of C- or C+

Item analysis results for field test items are presented in Appendix F.

REVIEW OF ITEMS WITH DATA

In the preceding section on Statistical Analysis of Item Data, it was stated that test development content-area specialists used certain statistics from item and DIF analyses of the 2017 field test to identify items for further review. Specific flagging criteria for this purpose were specified in the previous section. Items not identified for this review were those that had good statistical characteristics and, consequently, were regarded as statistically acceptable. Likewise, items of extremely poor statistical quality were regarded as unacceptable and needed no further review. However, there were some items—relatively few in number—that DRC content-area test development specialists and DRC psychometric specialists regarded as needing further review by a committee of Pennsylvania educators. The intent was to capture all items that needed a closer look; thus, the criteria employed tended to over-identify rather than under-identify items.

The review of the items with data was conducted by over 50 Pennsylvania educators (teachers and PDE staff) broken out into subject-area and/or grade level or span committees. Additional information, including gender, ethnicity (when available), and Instructional Unit (geographic location within Pennsylvania), about the participants is provided in Tables 5–1 through 5–5. The review for mathematics Grades 3–8 took place July 25–27, 2017. The review for ELA Grades 3–8 took place July 25–26, 2017. The review for science took place on July 25, 2017. In these sessions, committee members were first trained by a representative from DRC's psychometrics staff with regard to the statistical indices used in item evaluation. This was followed by a discussion with examples concerning reasons that an item might be retained regardless of the statistics. The committee review process involved a brief exploration of possible reasons for the statistical profile of an item (e.g., possible bias, grade appropriateness, instructional issues) and a decision regarding acceptance. DRC content-area test development specialists facilitated the review of the items. Each committee reviewed the pool of field tested items and made recommendations on each item and/or scenario/passage. Further discussion on how this information was used is covered in Chapter Six.

Table 5–1. Demographic Composition of the 2017 Mathematics Grades 3–5 Data Review Committee

Member #	Gender	Race/Ethnicity	Instructional Unit Represented
1.	Female	White	27
2.	Female	White	7
3.	Female	White	23
4.	Female	White	20
5.	Female	White	19
6.	Male	White	11
7.	Female	White	23
8.	Female	White	6
9.	Female	White	3
10.	Female	Black or African American	26
11.	Female	White	5
Totals	10 Female, 1 Male	10 White, 1 Black or African American	N/A

Table 5–2. Demographic Composition of the 2017 Mathematics Grades 6–8 Data Review Committee

Member #	Gender	Race/Ethnicity	Instructional Unit Represented
1.	Female	White	23
2.	Female	White	10
3.	Female	White	11
4.	Female	White	5
5.	Female	White	7
6.	Female	White	26
7.	Female	White	25
8.	Female	White	29
9.	Female	White	5
10.	Male	White	4
11.	Female	White	26
Totals	7 Female, 1 Male	8 White	N/A

Table 5–3. Demographic Composition of the 2017 English Language Arts Grades 3–5 Data Review Committee

Member #	Gender	Race/Ethnicity	Instructional Unit Represented
1.	Female	White	21
2.	Female	White	28
3.	Female	White	3
4.	Female	White	15
5.	Female	Multi-Racial	26
6.	Female	Black or African American	2
7.	Female	White	N/A
Totals	7 Female	1 Black or African American, 1 Multi-Racial, 5 White	N/A

Table 5–4. Demographic Composition of the 2017 English Language Arts Grades 6–8 Data Review Committee

Member #	Gender	Race/Ethnicity	Instructional Unit Represented
1.	Female	White	2
2.	Female	White	2
3.	Female	White	6
4.	Female	Black or African American	26
5.	Male	White	17
6.	Female	White	24
7.	Male	White	3
8.	Female	Black	3
Totals	6 Female, 2 Male	2 Black or African American, 6 White	N/A

Table 5–5. Demographic Composition of the 2017 Science Data Review Committee

Member #	Gender	Race/Ethnicity	Instructional Unit Represented
1.	Male	White	4
2.	Male	White	14
3.	Female	White	17
4.	Male	White	16
5.	Female	White	3
6.	Female	White	25
7.	Female	Black or African American	3
8.	Male	White	2
9.	Female	White	7
10.	Female	Two or more races	24
11.	Female	White	15
Totals	7 Female, 4 Male	1 Multiracial, 1 Black or African American, 9 White	N/A

Table 5–6. 2017 Data Review Committee Results

Test	Gr	No. of Items in 2017 FT	SR*†	CR*	DIF only *	Total*	% Total *	No. of Items Rejected**	% of Items Rejected**	No. of Items Classified as Rejected ***	% of Item Classified as Rejected ***
ELA	3	99	19	3	0	22	22%	4	4%	4	4%
ELA	4	99	20	9	3	29	29%	6	6%	6	6%
ELA	5	99	23	9	3	32	32%	3	3%	3	3%
ELA	6	99	17	9	3	29	29%	5	5%	5	5%
ELA	7	99	19	9	7	35	35%	2	2%	2	2%
ELA	8	99	20	9	8	37	37%	4	4%	4	4%
Math	3	99	34	5	1	40	40%	13	13%	14	14%
Math	4	99	46	7	0	53	54%	17	17%	17	17%
Math	5	99	39	8	1	48	48%	12	12%	12	12%
Math	6	99	33	6	0	39	39%	11	11%	11	11%
Math	7	99	40	9	0	49	49%	11	11%	11	11%
Math	8	99	26	6	2	32	32%	9	9%	9	9%
Science	4	108	96	12	3	108	100%	1	1%	1	1%
Science	8	130	118	12	2	130	100%	6	5%	6	5%
Totals	N/A	1426	550	113	33	663	46%	104	7%	105	7%

† SR includes multiple-choice items and EBSR items.

*Flagged Items in 2017 Field Test Examined at 2017 Data Review Committee

**Flagged Items in 2017 Field Test Rejected by 2017 Data Review Committee

***Items Classified as “Rejected” from 2017 Field Test (all sources: Data Review Committee, PDE, and DRC)

DIFFERENTIAL ITEM FUNCTIONING

Differential item functioning (DIF) occurs when examinees with the same ability level but different group memberships do not have the same probability of answering an item correctly. When the probability differs, it is important for content experts to review such items for any potential *item bias*. It is important to note that, as a statistical concept, DIF is different from item bias. DIF detects a difference in performance after controlling for student ability, whereas bias is a content issue that can arise in situations where something other than the intended construct of measurement affects the probability of a correct response for a particular group. For example, bias is likely present when an item presents negative group stereotypes that draw the attention of the examinee, uses non-construct relevant language that is more familiar to one subpopulation than to another, or is presented in a non-construct relevant format that disadvantages certain learning styles. While the source of item bias can be plain to trained judges, DIF may have no clear cause. In such cases, something other than bias, including construct relevant content, may be explaining the differential performance on the item. Flagging DIF then, provides the opportunity for reviewers to assess and correct potential bias, but DIF does not necessarily mean that bias is present.

LIMITATIONS OF STATISTICAL DETECTION

No statistical procedure should be used as a substitute for rigorous, hands-on reviews by content and bias specialists. The statistical results can help organize the review so the effort is concentrated on the most problematic cases. Further, no items should be automatically rejected simply because a statistical method flagged them or accepted because they were not flagged.

Statistical detection of DIF is also not an exact science. There have been a variety of methods proposed for detecting DIF, but no single statistic can be considered either necessary or sufficient. Different methods are more or less successful, but can also detect DIF at different rates. No analysis can guarantee that a test is free of bias, but thoughtful item development and post field test analysis can prevent most bias situations with the potential to unfairly impact student scores.

A fundamental shortcoming of all statistical methods used in DIF evaluation is that all are intrinsic to the test being evaluated. If a test is unbiased overall but contains one or two DIF items, any method can identify DIF. However, because all current methods use total test performance as the measure on which to control for group abilities, a test with all DIF items will not be able to separate DIF effects from differences in achievement on the test.

MANTEL-HAENSZEL PROCEDURE FOR DIFFERENTIAL ITEM FUNCTIONING

For multiple-choice (MC) items, the *Mantel-Haenszel* procedure (Mantel & Haenszel, 1959) for detecting differential item functioning is a commonly used technique in educational testing. It does not depend on the application or the fit of any specific measurement model. However, it does have significant philosophical overlap with the Rasch model since it uses a test's total score to organize the analysis.

The procedure as implemented by DRC contrasts a focal group with a reference group. While it makes no practical difference in the analysis which group is defined as the focal group, the group most apt to be disadvantaged by a biased measurement is typically defined as the focal group. In these analyses, the focal group was female for gender-based DIF and black for ethnicity-based DIF; reference groups were male and white, respectively. The Mantel-Haenszel (MH) statistic for each item is computed from a contingency table. It has two groups (focal and reference) and two outcomes (right or wrong). The ability groups are defined by the test's score distribution for the total examinee populations.

The basic MH statistic is a single degree of freedom chi-square that compares the observed number in each cell to the expected number. The expected counts are computed to ensure that the analysis is not confounded with differences in the achievement level of the two groups.

For OE items, a comparable statistic is computed based on the standardized mean difference (SMD) (Dorans, Schmitt, & Bleistein, 1992), which is computed as the differences in mean scores for the focal and reference groups if both groups had the same score distribution.

To assist the review committees in interpreting the analyses, the items are assigned a severity code based on the magnitude of the MH statistic. Items classified as A+ or A- have little or no statistical indication of DIF. Items classified as B+ or B- have some indication of DIF but may be judged to be acceptable for future use. Items classified as C+ or C- have strong evidence of DIF and should be reviewed and possibly rejected from the eligible item pool. The plus sign indicates that the item favors the focal group and a minus sign indicates that the item favors the reference group.

RESULTS AND OBSERVATIONS

Counts of the number of items from each grade and subject area that were assigned to each severity code are shown below in Table 5–7A (MC items), 5–7B (OE items), 5–7C (EBSR items), and 5–7D (TDA items). DIF analyses were conducted on the 2017 PSSA field test items and may be compared to the 2016 results.

Moderate (B) DIF for MC item results show a general balance in the numbers of items favoring males and females, except in grade 8 where 5 items favor males and 1 favors females. The pattern for grade 8 is different from 2017 where more items favored females than males (4 to 3). Fewer mathematics items were flagged for B DIF for Black and White students, however, there was an increase in ELA items favoring White students in 2018. Very few items were flagged for gender C DIF in either year although there was a small increase in the number of grade 3 ELA items favoring Whites students. Recall that the overall test lengths were reduced by the removal of MC items, so were the numbers of items showing DIF are generally comparable year-to-year, the proportion of items flagged for B and C DIF is not.

Similar to 2017 there are few open ended items showing B and C DIF for gender. Small decreases in the numbers of open ended items favoring White students are noted in 2018, except for ELA grade 3 where there was one more

B DIF item favoring Whites. Small increases in the numbers of EBSR items favoring White students are noted in 2018, but gender DIF is largely not present on the EBSR items.

The number of TDA items flagged for B and C DIF is similar across years with some slight increases in the number of items favoring White students, and varying differences across grades 4-8 in the number of items year-to-year that favor females.

Table 5–7A1. DIF Summary for Male/Female—MC Items

Subject	Grade	A+ 2017	A- 2017	B+ 2017	B- 2017	C+ 2017	C- 2017	Tot 2017	A+ 2018	A+ 2018	B+ 2018	B- 2018	C+ 2018	C- 2018	Tot (2018)
Math	3	36	53	1	0	0	0	90	28	25	1	0	0	0	54
Math	4	35	55	0	0	0	0	90	29	25	0	0	0	0	54
Math	5	38	50	0	1	1	0	90	24	30	0	0	0	0	54
Math	6	37	52	0	1	0	0	90	33	20	0	1	0	0	54
Math	7	33	54	1	2	0	0	90	27	27	0	0	0	0	54
Math	8	44	43	1	1	0	1	90	23	31	0	0	0	0	54
ELA	3	43	38	0	0	0	0	81	47	36	0	0	0	1	84
ELA	4	45	33	0	2	0	1	81	38	41	1	2	0	1	83
ELA	5	38	38	0	5	0	0	81	54	25	3	1	0	1	84
ELA	6	30	48	1	2	0	0	81	56	24	3	0	0	1	84
ELA	7	58	20	3	0	0	0	81	52	31	0	1	0	0	84
ELA	8	42	31	4	3	0	1	81	44	32	1	5	0	0	82
Science	4	68	25	1	2	0	0	96	40	32	0	0	0	0	72
Science	8	75	39	3	1	0	0	118	48	42	3	3	0	0	96

Table 5–7A2. DIF Summary for Whites/Black—MC Items

Subject	Grade	A+ 2017	A- 2017	B+ 2017	B- 2017	C+ 2017	C- 2017	Tot 2017	A+ 2018	A+ 2018	B+ 2018	B- 2018	C+ 2018	C- 2018	Tot (2018)
Math	3	18	66	0	6	0	0	90	13	37	0	2	0	2	54
Math	4	19	68	0	3	0	0	90	15	37	0	2	0	0	54
Math	5	24	64	0	2	0	0	90	13	41	0	0	0	0	54
Math	6	22	67	0	1	0	0	90	8	46	0	0	0	0	54
Math	7	25	64	0	1	0	0	90	14	40	0	0	0	0	54
Math	8	25	64	0	1	0	0	90	13	39	0	1	0	1	54
ELA	3	9	71	0	1	0	0	81	4	67	0	9	0	4	84
ELA	4	14	64	0	3	0	0	81	3	69	0	11	0	0	83
ELA	5	14	63	0	4	0	0	81	7	69	0	8	0	0	84
ELA	6	13	61	0	7	0	0	81	18	64	0	2	0	0	84
ELA	7	26	50	1	3	0	1	81	17	59	0	7	0	1	84
ELA	8	30	47	0	3	0	1	81	16	60	0	4	0	2	82
Science	4	17	74	0	5	0	0	96	8	62	0	2	0	0	72
Science	8	27	90	0	1	0	0	118	13	77	0	6	0	0	96

Table 5–7B1. DIF Summary Male/Female—OE Items

Subject	Grade	A+ 2017	A- 2017	B+ 2017	B- 2017	C+ 2017	C- 2017	Tot 2017	A+ 2018	A+ 2018	B+ 2018	B- 2018	C+ 2018	C- 2018	Tot (2018)
Math	3	5	3	0	0	0	0	8	6	2	1	0	0	0	9
Math	4	8	1	0	0	0	0	9	7	2	0	0	0	0	9
Math	5	8	0	1	0	0	0	9	6	1	2	0	0	0	9
Math	6	5	4	0	0	0	0	9	5	4	0	0	0	0	9
Math	7	6	2	1	0	0	0	9	7	1	1	0	0	0	9
Math	8	7	2	0	0	0	0	9	6	3	0	0	0	0	9
ELA	3	3	3	3	0	0	0	9	6	0	2	0	1	0	9
Science	4	8	4	0	0	0	0	12	8	4	0	0	0	0	12
Science	8	7	3	2	0	0	0	12	10	2	0	0	0	0	12

Table 5–7B2. DIF Summary White/Black—OE Items

Subject	Grade	A+ 2017	A- 2017	B+ 2017	B- 2017	C+ 2017	C- 2017	Tot 2017	A+ 2018	A+ 2018	B+ 2018	B- 2018	C+ 2018	C- 2018	Tot (2018)
Math	3	0	2	0	4	0	2	8	0	7	0	2	0	0	9
Math	4	1	6	0	1	0	1	9	1	6	0	1	0	1	9
Math	5	0	5	0	1	0	3	9	0	9	0	0	0	0	9
Math	6	0	8	0	1	0	0	9	0	8	0	1	0	0	9
Math	7	2	6	0	1	0	0	9	2	6	0	1	0	0	9
Math	8	0	8	0	0	0	1	9	0	7	0	2	0	0	9
ELA	3	1	6	0	2	0	0	9	2	4	0	3	0	0	9
Science	4	1	2	0	5	0	4	12	0	8	0	1	0	3	12
Science	8	2	6	0	4	0	0	12	0	9	0	3	0	0	12

Table 5–7C1. DIF Summary Male/Female—EBSR Items

Subject	Grade	A+ 2017	A- 2017	B+ 2017	B- 2017	C+ 2017	C- 2017	Tot 2017	A+ 2018	A+ 2018	B+ 2018	B- 2018	C+ 2018	C- 2018	Tot (2018)
ELA	3	9	9	0	0	0	0	18	11	7	0	0	0	0	18
ELA	4	13	5	0	0	0	0	18	8	10	0	0	0	0	18
ELA	5	12	6	0	0	0	0	18	11	7	0	0	0	0	18
ELA	6	12	6	0	0	0	0	18	12	6	0	0	0	0	18
ELA	7	14	2	2	0	0	0	18	12	6	0	0	0	0	18
ELA	8	12	6	0	0	0	0	18	10	8	0	0	0	0	18

Table 5–7C2. DIF Summary White/Black—EBSR Items

Subject	Grade	A+ 2017	A- 2017	B+ 2017	B- 2017	C+ 2017	C- 2017	Tot 2017	A+ 2018	A+ 2018	B+ 2018	B- 2018	C+ 2018	C- 2018	Tot (2018)
ELA	3	0	15	0	3	0	0	18	1	17	0	0	0	0	18
ELA	4	3	15	0	0	0	0	18	1	14	0	3	0	0	18
ELA	5	3	15	0	0	0	0	18	0	15	0	3	0	0	18
ELA	6	4	13	0	1	0	0	18	2	14	0	2	0	0	18
ELA	7	4	12	0	2	0	0	18	2	13	0	3	0	0	18
ELA	8	2	15	0	1	0	0	18	4	12	0	2	0	0	18

Table 5–7D1. DIF Summary Male/Female—TDA Items

		A+ 2018		B+ 2018	B- 2018	C+ 2015				A+ 2016					
Subject	Grade	A+ 2017	A- 2017	B+ 2017	B- 2017	C+ 2017	C- 2017	Tot 2017	A+ 2018	A+ 2018	B+ 2018	B- 2018	C+ 2018	C- 2018	Tot (2018)
ELA	4	4	0	3	0	2	0	9	0	0	9	0	0	0	9
ELA	5	2	0	5	0	2	0	9	1	0	4	0	4	0	9
ELA	6	0	0	4	0	5	0	9	4	0	2	0	3	0	9
ELA	7	1	0	2	0	6	0	9	1	0	4	0	4	0	9
ELA	8	5	0	3	0	1	0	9	1	0	4	0	4	0	9

Table 5–7D2. DIF Summary White/Black—TDA Items

Subject	Grade	A+ 2017	A- 2017	B+ 2017	B- 2017	C+ 2017	C- 2017	Tot 2017	A+ 2018	A+ 2018	B+ 2018	B- 2018	C+ 2018	C- 2018	Tot (2018)
ELA	4	0	6	0	3	0	0	9	0	4	0	4	0	1	9
ELA	5	0	6	0	2	0	1	9	0	4	0	4	0	1	9
ELA	6	0	7	0	2	0	0	9	0	4	0	2	0	3	9
ELA	7	0	5	0	4	0	0	9	0	3	0	5	0	1	9
ELA	8	0	5	0	3	0	1	9	0	4	0	4	0	1	9

CHAPTER SIX: OPERATIONAL FORMS CONSTRUCTION FOR 2018

FINAL SELECTION OF ITEMS AND 2018 PSSA FORMS CONSTRUCTION

When the final selection of items for the operational 2018 test was ready to begin, the candidate items that emerged, including those from the spring 2017 field test, had undergone multiple reviews, including:

- Reviews by DRC content-area test development specialists and curriculum specialists to ensure that all items were properly aligned with content standards
- Formal bias, fairness, and sensitivity review by the Bias, Fairness, and Sensitivity Committee consisting of a multi-ethnic group of men and women having expertise with students with special needs and English Language Learners
- Formal review by the content committees consisting of Pennsylvania educators, including teachers as well as district personnel
- PDE review
- Item data review by members of the PDE subject-area teacher committees

The item and bias reviews are detailed in Chapter Three. The results of the data review are summarized in Chapter Five.

The end product of the above process was an item status designation for each field tested item. All items having an item status code of Acceptable/Active were candidates to be selected for the 2018 PSSA. To have an item status code of Acceptable/Active meant that the item met the following criteria:

- Appropriately aligned with its designated Assessment Anchor Content Standard (Assessment Anchor) and sub-classifications
- Acceptable in terms of bias/fairness/sensitivity issues, including differential item functioning (for gender and ethnicity)
- Acceptable in terms of psychometric standards, including a special review of flagged items

Next, all relevant information regarding the acceptable items, including associated graphics, was entered into the item banking system known as IDEAS (Item Development and Education Assessment System). From IDEAS and other database sources, Microsoft Excel files were created for each content area at each grade. These files contained all relevant content codes and statistical characteristics. IDEAS also created an item card displaying each acceptable item, any associated graphic, and all relevant content codes and item statistics for use by the content-area test development specialists and psychometric services staff.

DRC test development specialists reviewed the test design blueprint, including the number of items per strand for each content-area test. Special considerations, such as calculator use and manipulatives, were noted.

Psychometricians provided content-area test development specialists with an overview of the psychometric guidelines for forms construction, including guidelines for selecting linking items to link to previous test forms.

Senior DRC content-area test development specialists reviewed all items in the operational pool to make an initial selection for common (core) and equating block positions according to test blueprint requirements and psychometric guidelines. Changes to items were not encouraged since alterations could affect how an item might perform on subsequent testing.

For the common items, this meant that the combination of SR and CR items would yield the appropriate range of points while tapping an appropriate variety of the Assessment Anchors and related Eligible Content within each Reporting Category. Items selected in the first round were examined with regard to how well they went together as a set. Of particular concern were the following:

- One item providing cues as to the correct answer to another item
- Context redundancy (e.g., mathematics items with a sports context)

- Presence of clang (distractors not unique from one another)
- Diversity of names and artwork for gender and ethnicity

The first round of items was then evaluated for statistical features such as an acceptable point-biserial correlation and whether correct answers were distributed equally—that is, whether approximately 25 percent of correct answers appeared in each of the four possible positions (A, B, C, or D). Selected items that were deemed psychometrically less advantageous in contrast to the overall psychometric characteristics of the core resulted in a search by the senior reviewer for suitable replacements. At this point, the second round of items was analyzed. If necessary, this iterative process between content-based selections and statistical properties continued in an effort to reach the best possible balance.

In the case of the core-to-core linking items, content considerations remained relevant, together with statistical features, such as an acceptable point-biserial correlation and whether the items, as a collection, had an average logit value and a test characteristic curve approximating that of the previous year.

The process for selecting equating block items was slightly different. The chief consideration was that items in equating block positions of the various forms mirrored the psychometric considerations of the core. In some cases, the selection of equating block items also required multiple rounds of selection and evaluation until the best possible balance of content and statistical properties was obtained. The content-area test development specialist's task was to distribute these items in equating block positions across the forms so that the MC items assigned to a particular form would go well with one another and reflect the same content and statistical considerations as previously outlined. Additionally, the forms needed to display similar difficulty levels.

Once the recommendations were finalized for the core items, core-to-core linking items, and equating block items, they were submitted to PDE for review. Department staff provided feedback, which could be in the form of approval or recommendations for replacing certain items. Any item replacement was accomplished by the collective effort of the test development specialists, psychometricians, and PDE staff until final PDE approval was given. Once final PDE approval of the forms was given, PDE also participated in the construction and review of scrambled forms.

SPECIAL FORMS USED IN THE 2018 PSSA

SPANISH TRANSLATION OF THE MATHEMATICS AND SCIENCE ASSESSMENTS

Starting with the 2005 assessment, school personnel had the option of allowing Spanish-speaking students who had been enrolled in schools in the United States for less than three years to respond to a Spanish version of the PSSA for mathematics. In 2009, a Spanish version was also added for the science component of the PSSA. The original translation of the items and the *Directions for Administration Manual* was completed by Second Language Testing, Incorporated (SLTI). SLTI used translators with varying cultural and regional backgrounds to create the Spanish versions of the mathematics and science assessments. The translations were then reviewed and verified by DRC's internal Spanish group. As part of the internal review, a Spanish style guide is maintained to document Spanish word choice from administration to administration and across grades within an administration. After discussions with PDE and SLTI, the mathematics assessment for Grades 4–8 and the science assessment for Grades 4 and 8 were designed with a side-by-side format, that is, the English text and Spanish-translated text were printed on facing pages. The Spanish-translated text was on the left-hand side of the page and the original English text on the right-hand (facing) side.

The mathematics answer booklets for Grades 4–8 and the science answer booklets for Grades 4 and 8 were also presented in Spanish and English. In the case of mathematics, each open-ended item covered a total of four pages in the answer booklet. In the case of science, each open-ended item covered either two or four pages in the answer booklet, depending on the length of the original English-language item. In the case of four-page open-ended items, the first set of facing pages of an item was presented in Spanish. The second set of facing pages of an item was presented in the original English. Those students using this accommodated version of the mathematics assessment could write their answers on either the English language pages or on the translated Spanish language pages. Their answers could be written in English, Spanish, or a combination of both Spanish and English as all pages were evaluated and scored, and the highest possible scores from those combinations recorded for the students.

The mathematics scannable booklets for Grade 3 were presented in Spanish and English using a modified over/under format, with the Spanish presented directly above or to the left of the English. To assist the presentation of the two languages on the same page, the English portion was presented in italics and in a smaller font. Those students using this accommodated version of the mathematics assessment could also write their answers in English, Spanish, or a combination of both Spanish and English, with the highest possible scores from those combinations recorded for the students.

For the current Spanish forms, DRC utilized an outside vendor (Victory Productions) for translations of PSSA mathematics and science items by using the style guide setup and continuously used since 2005. Once Victory Productions has completed the initial translation of the entire set of materials, all translated material and the original English version are then sent to Language Services Consultants (LSC) for a third-party verification of the translation. LSC's review helps to ensure the equivalence of the original and translated assessments. When completed, the verified materials, along with any recommendations or questions, are passed back to DRC for processing.

Once Language Services Consultants (LSC) has adjudicated the initial translation completed by Victory Productions, the translated text is returned to DRC for final processing and typesetting. DRC has a Spanish translation team comprised of native Spanish-speaking translators and native English-speakers with formal education in Spanish. DRC's Spanish Team is supported by all content areas and their respective content leads in order to maintain the integrity of each translated item or passage. DRC conducts a minimum of five separate reads during the final preparation of the translated material. These reads include editorial reviews of items and forms and are used to polish language and eliminate any typographical errors.

An initial reading of items and passages is conducted individually by each member of the team. The team then reads, discusses, and edits the items as a group before sending the material to be entered into the item bank that houses Pennsylvania's test items (IDEAS). As part of the discussion and editing process, DRC's Spanish Team may also conduct an informational investigation, validating concepts within the translation related to specialized topics. Once the data entry is completed, DRC's Spanish Team confirms that the correct edits have been made and the items are read once again. After all newly-translated items have been edited and approved in this round of review, a PDF of the entire test form is produced. The Spanish Team then conducts a group review of the complete test form, coinciding with an independent review outside the team, making any edits that are necessary. Within each review, checks are performed to ensure accuracy of semantics, lexicon, syntax, and grammar.

Internal reviewers are instructed to address a number of issues when reviewing a translation, including the following:

- Are the stimulus and the item translated correctly?
- Are there inappropriate omissions in the translation?
- Are there inappropriate additions in the translation?
- Is there any wording that may not be comprehensible to speakers of a particular dialect? If so, the reviewer will enter an alternate wording in parentheses.
- Are standard item writing guidelines followed in the translated version?
- Are any options less or more attractive than in the English version? If so, the reviewer will suggest an alternate wording.
- Is the content of any item culturally insensitive or offensive? Is a substitute item required? Why?
- Is the wording of any item culturally insensitive or offensive?
- Is the language of the translation at the same register as the original?
- Is the language of the translation at an appropriate register for the grade level of the examinee?

Instructions for the appropriate use of these special forms are detailed in accommodation manuals titled *2018 Accommodations Guidelines* and *Accommodations Guidelines for English Language Learners.*

AUDIO

For students requiring an auditory presentation accommodation, a text-to-speech synthesizer is available to students taking the online mode of test delivery. For each operational exam, one form was selected for the creation of the audio version. Special scripts are crafted, writing out each item, distractor, graphic, and directions to utilize the rich, synthesized voice features while accounting for specific nuances of the intended sounds. The resulting audio information is provided to students receiving the accommodation. Since additional software is required to generate the vocalization from the scripted text and since headphones are required to minimize disruptions within a computer lab setting, local school personnel generally must preplan to use the audio version in order to ensure that the student has a properly equipped computer and a proper setting.

BRAILLE, LARGE PRINT, AND VIDEO SIGN LANGUAGE

Students were able to respond to test materials that were available in Braille, large print, or Video Sign Language. At each grade level assessed, one form was selected for the creation of these accommodations.

The large print edition is a replication of the standard print form; 8.5X11 standard form is enlarged to an 11×17 page format to achieve a font size of approximately 18-point. A side-by-side verification is completed between the standard print and large print forms to ensure that the integrity of all formatting and graphics is maintained on the large print forms.

For Braille production, the final selected form is delivered to American Printing House for the Blind (APH) via APH's secure website. APH ensures that all tests are translated correctly and accurately by using a translator and a validator. After all Braille booklets are printed, APH conducts a quality assurance step to ensure all items are bound in order and directions are included. All Braille booklets are shipped from APH to DRC via UPS.

DRC applies a security barcode to each large print and Braille booklet for purposes of shipping, distributing, and collecting the materials. This security barcode is used with DRC's Operations Materials Management System (Ops MMS).

School personnel were directed to transcribe all student answers (SR and CR) into scannable answer documents exactly as the student responded. No alterations or corrections of student work were permitted, and the transcribed answer document had to have the same form designation as the Braille and large print version.

DRC utilizes Victory Productions for the production of Sign Language Videos. The items are passed to Victory Productions via a secure ftp site. Two to three different interpreters are used to interpret and validate the translations during video recording. After the interpretations are recorded and returned to DRC via a secure ftp site, DRC loads these videos in the online test engine. When school personnel assign the specific sign language accommodation, the student will be able to play each video next to the item.

SUMMARY OF THE TRANSLATION VERIFICATION STUDY BY SLTI OF THE 2009 PSSA SCIENCE ASSESSMENTS

From November 2009 through January 2010 SLTI conducted a translation verification study of the 2009 PSSA Science Assessments titled "Translation Verification Study of the 2009 Pennsylvania System of School Assessment (PSSA) of Science for Grades 4, 8, and 11." In this study, the appropriateness of the transadaptation of the PSSA Science Assessments into Spanish was investigated. Three independent reviewers, specialists in bilingual science education and science translation, determined the appropriateness of each translated or adapted item. The purpose of the report was to conduct qualitative research on the comparability of the Spanish and English versions of the PSSA Science Assessments.

The report of this study by Second Language Testing, Incorporated described the assessments, the purpose of the translation verification study, the reviewers, the translation verification process, and the translation verification results. A total of 185 items covering tests at Grades 4 (63 items), 8 (63 items), and 11 (59 items) were reviewed. The study showed that none of the 185 reviewed items were judged by the reviewers to be inappropriately translated or adapted into Spanish. The study did provide suggestions for nine items that were judged appropriate but whose translation could still be improved in the event the items were used again.

Overall, the report concluded that the transadaptation of the 2009 PSSA Science Assessments was clearly appropriate. Since both the English and Spanish versions are comparable in the sense that both versions assess the same content, use the same format, have equal numbers of items, follow the same test administration and scoring procedures, and are used and interpreted in the same way, the study concluded that the English and Spanish versions of the science assessments measured the same content in two different languages. Thus, the study indicated that both language versions showed the same degree of alignment and the same depth-of-knowledge described in the Assessment Anchors alignment study. As a result, the report concluded that there was no need to conduct a separate alignment study of the Spanish version of the PSSA Science Assessments.

Beyond the findings presented in the study, the report recommended that appropriate quantitative analyses be carried out on construct equivalence. Unless such analyses clearly demonstrate a lack of equivalence, it is appropriate to assume that there is no need to conduct a separate linking study or a separate standard setting study for the Spanish versions of the tests. Both versions can be scored on the same scale, and scores on each version have the same meaning in terms of student mastery of the Science Assessment Anchors as defined by the Eligible Content.

The full report can be obtained by request from the Pennsylvania Department of Education.

SUMMARY OF COMPARABILITY REPORT FROM SIRECI PSYCHOMETRIC SERVICES

In addition to the study conducted by Second Language Testing, Incorporated, a second comparability study of the 2009 PSSA Spanish translations for science was completed in February 2010 by Sireci Psychometric Services. The report of the study is titled “Evaluating the Comparability of English and English-Spanish Science Tests from the Pennsylvania System of School Assessment.”

In this study, the data from the English language and English-Spanish dual-language Pennsylvania science tests for Grades 4, 8, and 11 were analyzed. These analyses were designed to evaluate the consistency of the structure of the data and the consistency of item functioning across the English and Spanish versions of these assessments using various psychometrics methods.

The full report can be obtained by request from the Pennsylvania Department of Education.

CHAPTER SEVEN: TEST ADMINISTRATION PROCEDURES

TEST SESSIONS, TEST SECTIONS, TEST TIMING, AND TEST LAYOUT

Some assessments utilized separate test booklets and answer booklets. An answer booklet was used to respond to the selected-response items (i.e., multiple-choice items and evidence-based selected-response items) and constructed-response items (i.e., open-ended items, short-answer items, and text-dependent analysis items,) and to collect demographic information. The selected-response items and all stimulus-text were placed within the test booklet. Other assessments used a single consumable booklet. When a single scannable answer booklet was utilized, the contents of the answer booklet and the test booklet were combined into one integrated booklet.

Table 7–1. Booklet Type by Administration

Assessment	Grade	Booklet Type
ELA	3	Single Consumable Booklet
ELA	4	Test Booklet and Answer Document
ELA	5	Test Booklet and Answer Document
ELA	6	Test Booklet and Answer Document
ELA	7	Test Booklet and Answer Document
ELA	8	Test Booklet and Answer Document
Mathematics	3	Single Consumable Booklet
Mathematics	4	Test Booklet and Answer Document
Mathematics	5	Test Booklet and Answer Document
Mathematics	6	Test Booklet and Answer Document
Mathematics	7	Test Booklet and Answer Document
Mathematics	8	Test Booklet and Answer Document
Science	4	Test Booklet and Answer Document
Science	8	Test Booklet and Answer Document

Generally, a separate test booklet and answer booklet were used to separate the selected-response items and constructed-response items. For the Grade 3 mathematics and ELA assessments, a single booklet was used for each assessment to accommodate the younger age of the students.

The number of sections for the 2018 operational assessment varied based on the content area of the assessment. The ELA assessments consisted of four sections. The mathematics assessments consisted of three sections. The science assessments consisted of two sections. See also Appendix G.

Table 7–2. PSSA Test Section Information

Content Area	No. of Sections per Form
ELA	4
Mathematics	3
Science	2

Table 7–3. PSSA Testing Load and Duration by Subject by Grade

Assessment	Grade	Total No. of SR Items per Form per Administration	Total No. of CR Items per Form per Administration	Total Estimated Administration Time per Form (in Minutes)
ELA	3	52	3	190 to 235
ELA	4	57	2	270 to 315
ELA	5	57	2	270 to 315
ELA	6	57	2	270 to 315
ELA	7	57	2	270 to 315
ELA	8	57	2	270 to 315
Mathematics	3	48	4	170 to 200
Mathematics	4	48	4	170 to 200
Mathematics	5	48	4	170 to 200
Mathematics	6	48	4	170 to 200
Mathematics	7	48	4	170 to 200
Mathematics	8	48	4	170 to 200
Science	4	46	6	90 to 120
Science	8	48	6	110 to 140

Table 7–4. PSSA Testing Load and Duration by Grade by Subject

Grade	Content	Total No. of Items per Form per Administration	Total Estimated Administration Time per Form (in Minutes)	Total No. of Items per Student	Total Estimated Administration Time per Student (in Minutes)
3	ELA	55	190 to 235	107	360 to 435
3	Mathematics	52	170 to 200	107	360 to 435
4	ELA	59	270 to 315	163	530 to 635
4	Mathematics	52	170 to 200	163	530 to 635
4	Science	52	90 to 120	163	530 to 635
5	ELA	59	270 to 315	111	440 to 515
5	Mathematics	52	170 to 200	111	440 to 515
6	ELA	59	270 to 315	111	440 to 515
6	Mathematics	52	170 to 200	111	440 to 515
7	ELA	59	270 to 315	111	440 to 515
7	Mathematics	52	170 to 200	111	440 to 515
8	ELA	59	270 to 315	165	470 to 655
8	Mathematics	52	170 to 200	165	470 to 655
8	Science	54	110 to 140	165	470 to 655

In general, the estimated testing times allowed 1–3 minutes per multiple-choice item, depending on the content area. The evidence-based selected-response items were estimated to take approximately 3–5 minutes per item, depending on the number of responses required by the item. The open-ended or short-answer items were estimated to take approximately 5–10 minutes per item, also depending on the content area. Text-dependent analysis questions were estimated to take approximately 55–65 minutes per item.

Test administrators were instructed that each section in a form should be scheduled as one assessment session. However, they were allowed to combine multiple sections into a single session, as long as the sections were administered in the sequence in which they are printed in the test booklets (or shown on the screen). In all cases, individual assessment sections had to be completed within one school day.

Since not all students finished the assessment sections at the same time, test administrators were advised to use the flexibility of the time limits to the students' advantage. For example, test administrators managed the testing time so that students did not feel rushed while they were taking any assessment section, and no student was penalized because he or she worked slowly. It was equally stressed to test administrators that a student should not be given an opportunity to waste time. Students were told to close their booklets when they had finished the section of the assessment in which they had been working. Students who finished early were allowed to sit quietly or read for pleasure until all students had finished. Students with special requirements and/or abilities (i.e., physical, visual, auditory, or learning disabilities as defined by their IEP or service contracts) and students who just worked slowly may have required extended time. Special assessment situations were arranged for these students. When all students in a testing session indicated that they had finished an assessment section, test administrators ended the section and began the next section or allowed the students to return to regular activities.

Scheduled extended time was provided by a test administrator, and students were allowed to request extended time if they indicated that they had not completed the task. Such requests were granted if the test administrator found the request to be educationally valid. Test administrators were advised that not permitting ample time for students to complete the assessment might impact the students' and school's performance.

As a general guideline, however, when all students indicated that they had finished a section, that section was closed. Students requiring time beyond the majority of the student population were allowed to continue immediately following the regularly scheduled session in another setting. When such accommodations were made, school personnel ensured that students were monitored at all times to prevent sharing of information. Students were not permitted to continue a section of the assessment after a significant lapse of time from the original session.

Additional information concerning testing time and test layouts can be found in Chapter Three.

TESTING WINDOW

The testing windows for the 2018 operational assessments were as follows:

- English Language Arts – April 9 through April 13, 2018
- Mathematics – April 16 through April 20, 2018
- Science – April 23 through April 27, 2018
- Make-ups for ELA, Mathematics, and Science– April 30 through May 4, 2018

Additional information concerning testing time and test layouts can be found in Chapter Three.

SHIPPING, PACKAGING, AND DELIVERY OF MATERIALS

DRC sent two shipments for the 2018 PSSA operational assessment:

- Shipment one contained the *Handbook for Assessment Coordinators* and the *Directions for Administration Manual*s for each grade tested at a school participating in the English Language Arts, Mathematics, and Science assessments. Shipment one was delivered by March 12, 2018.
- Shipment two contained the administrative materials (e.g., Return Shipping labels, District/School labels, Do Not Score labels, and Student Precode labels) and secure materials (e.g., consumable test/answer booklets) for each grade tested at a school participating in the English Language Arts, Mathematics, and Science assessments. Shipment two was delivered by March 26, 2018.

DRC ensured that all assessment materials were assembled correctly prior to shipping. DRC operations staff used the automated Operations Materials Management System (Ops MMS) to assign secure materials to a school at the time of ship out. This system used barcode technology to provide an automated quality check between items

requested for a site and items shipped to a site. A shipment box manifest was produced for and placed in each box shipped. DRC operations staff double-checked all box contents with the box manifest prior to sealing the box for shipping to ensure accurate delivery of materials. DRC operations staff performed lot acceptance sampling on both shipments. Districts and schools were selected at random and examined for correct and complete packaging and labeling. This sampling represented a minimum of 10 percent of all shipping sites.

DRC's materials management system, along with the systems of shippers, allowed DRC to track materials from DRC's warehouse facility to receipt at the district, school, or testing site. All DRC shipping facilities, materials processing facilities, and storage facilities are secure. Access is restricted by security code. Non-DRC personnel are escorted by a DRC employee at all times. Only DRC inventory control personnel have access to stored secure materials. DRC employees are trained in and made aware of the high level of security that is required.

DRC packed 4,129,143 assessment booklets and 195,208 *Directions for Administration Manual*s for 2,623 testing sites. DRC used United Parcel Service (UPS) and Advanced Shipping Technologies to deliver the secure materials to the testing sites.

ONLINE TESTING

Online administration is managed through the DRC eDIRECT client portal that provides tiered, secure access to all required administrative functions. Within eDIRECT, users manage student information and create test sessions.

Student information from the Pennsylvania Information Management System (PIMS) is imported into eDIRECT via file transfer or LEAs upload student directly into eDIRECT. From here, LEAs are able to view all of the demographic information associated with the students from PIMS before placing them in test sessions for test tickets.

Once the student data is loaded into Test Setup, users organize students into test sessions. Test sessions can be created by class, grade, or school. Through Test Setup, users can also update student accommodation information, print test tickets, and monitor student testing status.

The student login ticket contains unique login credentials used by the student to access the testing software. For a selected test session, users can download and print a PDF document containing instructions, a roster of student tickets being printed, and the actual test tickets. Student test tickets are considered secure materials and LEAs are required to keep printed tickets in a predetermined, locked, secure storage area.

The web-based test engine, DRC INSIGHT Online Learning System, is downloaded onto computers that students will access during the assessment. Test items and forms can only be accessed using a valid test ticket. During testing, responses are sent to a DRC server each time the student navigates away from an item or clicks the *Next* button to submit an answer. The system is configured to allow students to review answers before submitting their test.

MATERIALS RETURNED

DRC used UPS for all returns. The return windows for the PSSA materials were as follows:

- English Language Arts primary return window – April 12 through May 4, 2018
- Mathematics primary return window – April 18 through May 4, 2018
- Science primary return window – April 25 through May 4, 2018
- Make-ups for ELA, Mathematics, and Science primary return window – April 30 through May 4, 2018

TEST SECURITY MEASURES

Test security is essential to obtaining reliable and valid scores for accountability purposes. Test Security Certifications were required to be signed by each building Principal, School Assessment Coordinator, District Assessment Coordinator, Test Administrator, and Proctor after to the assessment being administered. All signed Certifications were returned to the Chief School Administrator who must retain the Certifications for three years. The purpose of the Certifications was to serve as a tool to document that the individuals responsible for administering the assessments both understood and acknowledged the importance of test security and accountability. The Certifications attested that all security measures were followed concerning the handling of secure materials. Additional details can be found in the *PSSA Handbook for Assessment Coordinators*. A screen shot of the Test Administrator Certificate is provided in Figure 7-1.

Figure 7-1. Test Administrator and Proctor PSSA Test Security Certification

2018 PSSA Test Security Certification

(Test Administrator and Proctor)

District: _____

School: _____

AUN: _____

Maintaining the security and integrity of all assessment materials, preventing any dishonest or fraudulent behavior in the administration and handling of the assessment, and promoting a fair and equitable testing environment are essential in order to obtain reliable and valid student scores. In that regard, I certify the following:

Prior to the administration of the assessment, I completed the Pennsylvania State Test Administration Training, and I understand that the assessment materials are secure, confidential, and proprietary documents owned by the Pennsylvania Department of Education.

I have not reviewed, discussed, disseminated, described, or otherwise revealed the contents of the assessment to anyone. I have not removed any assessment materials from the school building unless I was specifically authorized to administer the assessment to a student on homebound instruction. I have not kept, copied, reproduced, released, or used any assessment, assessment question, specific assessment content, or examinee response to any item or any section of the secure assessment in any manner that is inconsistent with the instructions provided by or through the Pennsylvania Department of Education. I have not provided any examinee with an answer to an assessment question or in any way influenced an examinee's response to any assessment question. I have not in any manner altered or caused the alteration of any examinee response, assessment booklet, or papers used by examinees.

I understand that any breach in assessment security could result in the invalidation of assessment results, professional discipline, and/or criminal prosecution.

I understand that false statements herein are made subject to the penalties of 18 Pa.C.S. § 4904.

Administrator/Proctor Name	Administrator/Proctor Signature	Date of Signature

SAMPLE MANUALS

Copies of the *Handbook for Assessment Coordinators* and the *Directions for Administration Manual*s can be found on the PDE website at www.education.pa.gov.

TESTING WINDOW ASSESSMENT ACCOMMODATIONS

The *Accommodations Guidelines* was developed by PDE for use with the PSSA. This manual can be found on the PDE website at www.education.pa.gov. Additional information regarding assessment accommodations can be found in Chapter Four of this report.

CHAPTER EIGHT: PROCESSING AND SCORING

RECEIPT OF MATERIALS

Receipt of PSSA test materials began on April 12, 2018, and concluded with all make-up tests on May 9, 2018. DRC's Operations Materials Management System (Ops MMS) was utilized to receive assessment materials securely, accurately, and efficiently. This system features innovative automation and advanced barcode scanners. Captured data were organized into reports, which provided timely information with respect to suspected missing material.

The first step in the Ops MMS was the Box Receipt System. When a shipment arrived at DRC, the boxes were removed from the carrier's truck and passed under a barcode reader, which read the barcode printed on the return label and identified the district and school. The number of boxes was immediately compared to what was picked up at the district. The data collected in this process were stored in the Ops MMS database. After the barcode data were captured, the boxes were placed on a pallet and assigned a corresponding pallet number.

Once the box receipt process was completed, the materials separation phase began. Warehouse personnel opened the boxes and sorted materials by grade, subject, and status (used or unused booklets) into scanning boxes. Every booklets' security barcode and precode barcode were hand-scanned to link each document to the original box. As the booklets were sorted, the Ops MMS system guided the floor operator to which box to place the document. The Ops MMS system kept count and record of the materials placed in each box. This count remained correlated to the box as an essential quality-control step throughout the secure booklet processing and provided a target number for all steps of the check-in process. Once a box was closed, an MMS Processing Label was placed on that box.

Once labeled, the sorted and counted boxes proceeded to the Quality Assurance process, where a secure booklet check-in operator used a hand scanner to scan the MMS Processing Label. This procedure identified the material type and quantity parameters for what the Ops MMS should expect within a box. The box contents were then loaded into the streamfeeder.

The documents were fed past oscillating scanners that captured both the security code and precode from the booklets. A human operator monitored an Ops MMS screen that displayed scan errors, an ordered accounting of what was successfully scanned, and the document count for each box. The system ensured that each material within the box matched the information obtained from the original hand-scanning process.

When all materials were scanned and the correct document count was confirmed, the box was sealed and placed on a pallet. If the correct document count was not confirmed, or if the operator encountered difficulties with material scanning, the box and its contents were delivered to an exception handling station for resolution.

This check-in process occurred immediately upon receipt of materials; therefore, DRC provided feedback to districts and schools regarding any missing materials based on actual receipt versus expected receipt. Sites that had 100 percent of their materials missing after the date they were due to DRC were contacted, and any issues were resolved.

Throughout the process of secure booklet check-in, DRC project management ran a daily missing materials report. Every site that was missing any number of booklets was contacted by DRC. Results of these correspondences were recorded for inclusion in the final Missing Materials Report if the missing booklets were not returned by the testing site. DRC produced the Missing Materials Report for PDE upon completion of secure booklet check-in. The report listed all schools in each participating district along with security barcodes for any booklets not returned to DRC.

After scannable materials (used answer booklets) were processed through booklet check-in, the materials became available to the DRC Document Processing log-in staff for document log-in. The booklets were logged-in using the following process:

- A DRC scannable barcode batch header was scanned, and a batch number was assigned to each box of booklets.

- The DRC box label barcode was scanned into the system to link the box and booklets to the newly created batch and to create a Batch Control Sheet.
- The DRC box label barcode number, along with the number of booklets in the box, was printed on the Batch Control Sheet for document tracking purposes. All booklets that were linked to the box barcode were assigned to the batch number and tracked through all processing steps. As booklets were processed, DRC staff dated and initialed the Batch Control Sheet to indicate that proper processing and controls were observed.

Before the booklets were scanned, all batches went through a quality inspection to ensure batch integrity and correct document placement.

After a quality check-in at the DRC Document Processing log-in area, the spines were cut off the scannable documents, and the pages were sent to DRC's Imaging and Scoring System.

SCANNING OF MATERIALS

Customized scanning programs for all scannable documents were prepared to read the booklets and to format the scanned information electronically. Before materials arrived, all image scanning programs went through a quality review process that included scanning of mock data from production booklets to ensure proper data collection.

DRC's image scanners were calibrated using a standard deck of scannable pages with 16 known levels of gray. On a predefined page location, the average pixel darkness was compared to the standard calibration to determine the level of gray. Marks with an average darkness level of 4 or above on a scale of 16 (0 through F) were determined to be valid responses, per industry standards. If multiple marks were read for a single item and the difference of the grayscale reads was greater than four levels, the lighter mark was discarded. If the multiple marks had fewer than four levels of grayscale difference, the response was flagged systematically and forwarded to an editor for resolution.

DRC's image scanners read selected-response, demographic, and identification information. The image scanners also used barcode readers to read pre-printed barcodes from a label on the booklets.

The scannable documents were automatically fed into the image scanners where predefined processing criteria determined which fields were to be captured electronically. Open-ended response images were separated out for image-based scoring.

During scanning, a unique serial number was printed on each sheet of paper. This serial number was used for document integrity and to maintain sequencing within a batch of booklets.

A monitor randomly displayed images, and the human operator adjusted or cleaned the scanner when the scanned image did not meet DRC's strict quality standards for image clarity.

All images passed through a software clean-up program that despeckled, deskewed, and desmeared the images. A random sample of images was reviewed for image quality approval. If any document failed to meet image quality standards, the document was returned for rescanning.

Page-scan verification was performed to ensure that all predefined portions of the booklets were represented in their entirety in the image files. If a page was missing, the entire booklet was flagged for resolution.

After each batch was scanned, booklets were processed through a computer-based editing program to detect potential errors as a result of smudges, multiple marks, and omissions in predetermined fields. Marks that did not meet the predefined editing standards were routed to editors for resolution.

Experienced DRC Document Processing editing staff reviewed all potential errors detected during scanning and made necessary corrections to the data files. The imaging system displayed each suspected error. The editing staff then inspected the image and made any needed corrections using the unique serial number printed on the document during scanning.

Upon completion of editing, quality control reports were run to ensure that all detected potential errors were reviewed again and a final disposition was determined.

Before batches of booklets were extracted for scoring, a final edit was performed to ensure that all requirements for final processing were met. If a batch contained errors, it was flagged for further review before being extracted for scoring and reporting.

During this processing step, the actual number of documents scanned was compared to the number of booklets assigned to the box during book receipt. Count discrepancies between book receipt and booklets scanned were resolved at this time.

Once all requirements for final processing were met, the batch was released for scoring and student level processing.

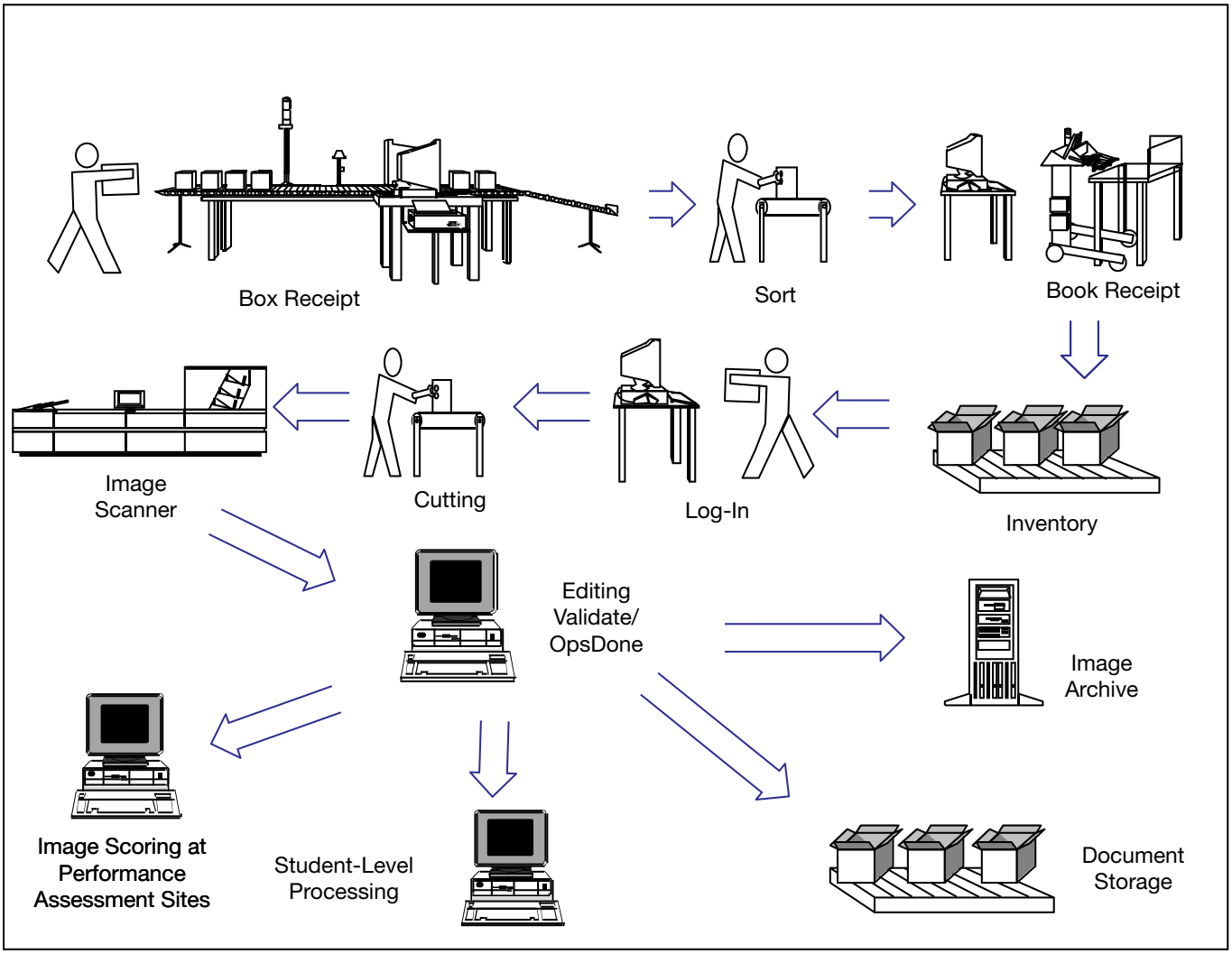
Table 8–1 shows the number of answer booklets received through booklet check-in, the number of booklets that contained student responses that were scanned and scored, the number of test booklets received, and the total number of booklets received for the English Language Arts assessment (ELA), the Mathematics assessment, and the Science assessment.

Table 8–1. Counts of 2018 PSSA Materials Received: Grades 3–8

Grade/Subject	Answer Booklets Received	Used Answer Booklets Received	Test Booklets Received	Total Booklets Received	Total Booklets Shipped
Grade 3 ELA	158,314	125,311	NA	158,314	158,325
Grade 4 ELA	162,286	129,159	162283	324,569	324,590
Grade 5 ELA	161,164	127,875	161162	322,326	322,350
Grade 6 ELA	157,505	126,069	157505	315,010	315,024
Grade 7 ELA	155,833	124,988	155829	311,662	311,690
Grade 8 ELA	156,984	126,359	156980	313,964	313,976
Grade 3 Math	160,018	124,545	NA	160,018	160,036
Grade 4 Math	162,279	128,435	162274	324,553	324,598
Grade 5 Math	160,909	126,890	160905	321,814	321,892
Grade 6 Math	157,311	125,159	157309	314,620	314,676
Grade 7 Math	155,637	124,319	155615	311,252	311,314
Grade 8 Math	157,001	125,638	156998	313,999	314,032
Grade 4 Science	161,716	127,460	161715	323,431	323,468
Grade 8 Science	156,582	123,543	156582	313,164	313,172

Figure 8–1 illustrates the production workflow for DRC's Ops MMS and Image Scanning and Scoring System from receipt of materials through all processing of materials and the presentation of scanned images for scoring.

Figure 8–1. Workflow System



MATERIALS STORAGE

Upon completion of processing, student response documents were boxed for security purposes and final storage:

- Project-specific box labels were created containing unique customer and project information, material type, batch number, pallet/box number, and the number of boxes for a given batch.
- Boxes were stacked on pallets that were labeled with the project information and a list of the pallet's contents before delivery to the Materials Distribution Center for final secure storage.
- Materials will be destroyed one year after contract year ends, with PDE written approval.

ONLINE TESTING

The DRC INSIGHT test engine runs on a custom web browser that is designed to ensure a fully secure environment during testing. The secure browser "locks down" the student's testing device, preventing the student from accessing the desktop, the Internet, and other external programs. For non-secure testing such as practice and training sessions, students can use the Online Tools Training (OTT) environment, which runs on a standard web browser.

The custom browser software is downloaded from eDIRECT and installed onto student testing devices. The secure browser can be installed on computers individually, or it can be downloaded to a central location, copied, and distributed to multiple computers simultaneously using common network distribution tools. Everything needed for testing is found within the secure browser, eliminating the need for districts to coordinate updates to third-party software.

Prior to operational use, DRC's quality assurance staff will perform full system-level tests in an independent test environment that simulates the production configuration. Tests are run on all supported computer platforms and browsers and include comprehensive review of system functionality, usability, reliability, security, and overall performance. Test content is also validated during this process.

Multiple methods are used to ensure secure data transfer, including encryption technologies and Secure Sockets Layer (SSL) protocol through Hypertext Transfer Protocol Secure (HTTPS). Test content is encrypted at the host server, and remains encrypted throughout all network transmissions; content is decrypted only once the student login is validated. Decrypted test content on the student workstation is stored only in memory during each test session. Once the session is ended (the test is completed or the student logs out), computer memory is purged to ensure security of test content is maintained.

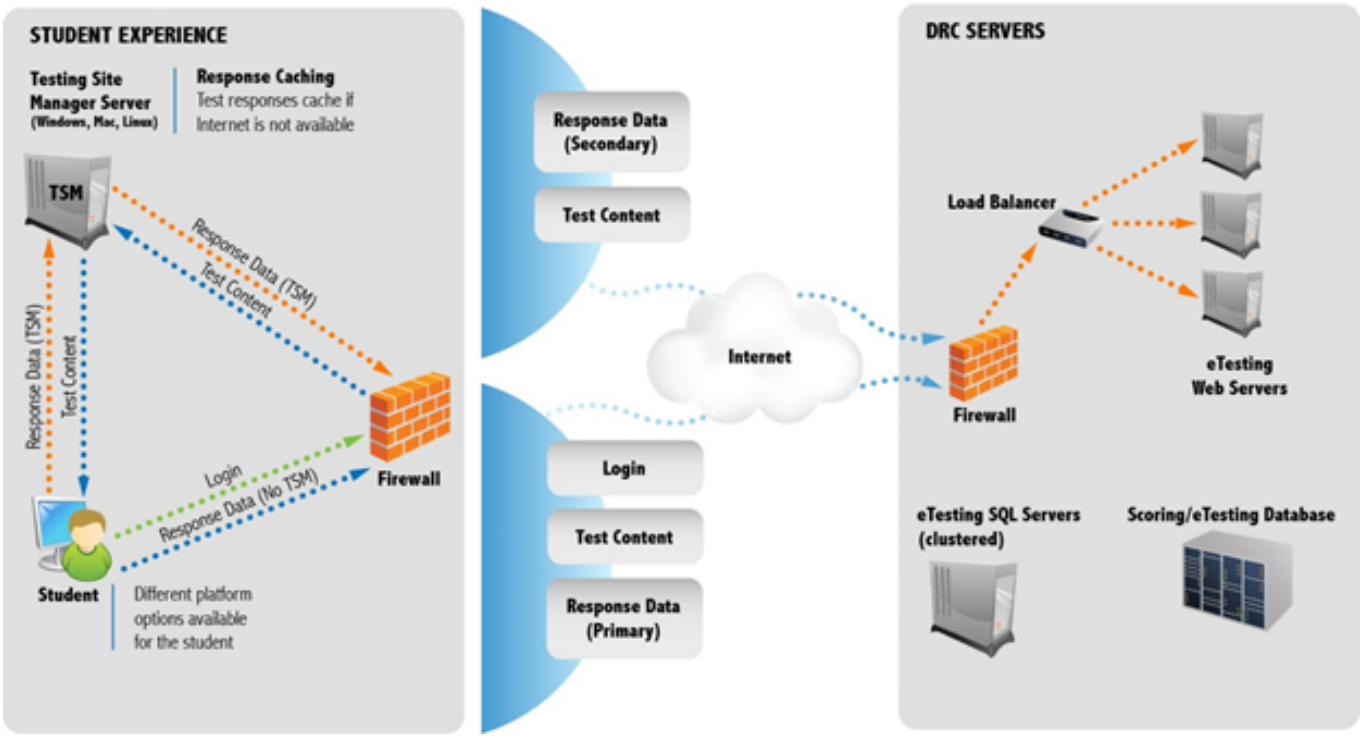
Responses are saved automatically every 45 seconds during testing, or when the student navigates away from an item or answers a selected-response item (whichever comes first). If a particular question takes the student longer than 45 seconds to answer, then the partial, incomplete responses are submitted at 45-second intervals until the student completes the item. This auto-save helps safeguard against students losing their work on longer items, such as constructed-response items. When the student returns to the test after a break or interruption, the student is returned to the point that they left off without having to navigate through all previously answered questions.

Table 8–2. Counts of 2018 PSSA Online Assessments: Grades 3–8

Grade/Subject	Total Online Assessments Completed
Grade 3 ELA	3,044
Grade 4 ELA	3,280
Grade 5 ELA	5,088
Grade 6 ELA	5,595
Grade 7 ELA	6,327
Grade 8 ELA	6,512
Grade 3 Math	3,158
Grade 4 Math	3,371
Grade 5 Math	5,384
Grade 6 Math	5,507
Grade 7 Math	6,128
Grade 8 Math	6,401
Grade 4 Science	4,084
Grade 8 Science	8,226

Figure 8–2 illustrates the secure transfer of online test responses between the student and DRC.

Figure 8–2. Architecture of the Student Testing Experience



SCORING MULTIPLE-CHOICE ITEMS

The scoring process included the scoring of multiple-choice items against the answer key and the aggregation of raw scores from the open-ended responses. A student's raw score is the actual number of points achieved by the student for tested elements of an assessment. From the raw scores, the scale scores were calculated.

The student file was scored against the final and approved multiple-choice answer key. Items were scored as right, wrong, omitted, or double-gridded (more than one answer was bubbled for an item). Sections of the test were evaluated as a whole and an attempt status was determined for each student for each subject. The score program defined all data elements at the student level for reporting.

RANGEFINDING

After student answer documents were received and processed, DRC's Performance Assessment Services (PAS) staff assembled groups of responses that exemplified the different score points for each subject. The score point ranges were represented by the following scoring guidelines:

- 0–3 item-specific scoring guidelines for ELA: reading (short answer)
- 1–4 holistic scoring guideline for ELA: text-dependent analysis
- 0–4 item-specific scoring guidelines for math
- 0–2 item-specific scoring guidelines for science

  Note: For English language arts and mathematics at all grade levels (3–8), Pennsylvania Core Standards (PCS) items were rangefound and field tested. ELA and Mathematics rangefound/field tested 9 forms per subject, per grade. Science rangefound/field tested 12 forms per subject, per grade level tested (4 and 8). All items were embedded in the 2018 operational PSSA.

Responses were pulled from the embedded field test portion of the PSSA for each subject. Once examples covering the range of score points were selected for each item, sets were assembled for rangefinding. Copies were made for each rangefinding participant. Rangefinding committees consisted of Pennsylvania educators, PDE staff members, DRC Test Development staff, and DRC Performance Assessment Services staff. The rangefinding meetings were as follows:

- ELA: Text-Dependent Analysis (TDA) Field Test Rangefinding (grades 4–8), June 4-8, Crowne Plaza Harrisburg-Hershey, Harrisburg, PA
- Reading Field Test Rangefinding (grade 3), June 4-6, Crowne Plaza Harrisburg-Hershey, Harrisburg, PA
- Math Field Test Rangefinding (grades 3–8), May 30 – June 1, Hilton Harrisburg, Harrisburg, PA
- Science Field Test Rangefinding (grades 4 and 8), May 30-31, Hilton Harrisburg, Harrisburg, PA

Each rangefinding meeting began in a joint session with a review of the history of the assessment as well as a discussion of the purpose of the rangefinding meeting and the role rangefinding plays within the item development process. The session then broke into subject/grade-specific committees. Sets of student responses were presented to the committees, one item at a time. Each committee initially reviewed and scored student responses as a group to ensure that everyone was interpreting the scoring guidelines consistently. Committee members then went on to score responses independently. For each student response, committee members' scores were discussed until a consensus was reached. Only those responses for which there was strong agreement among committee members were chosen for inclusion in training materials for DRC raters.

Discussions of student responses included the mandatory use of scoring guideline language. This ensured that committee members remained focused on the specific requirements of each score level. DRC PAS staff took notes addressing how and why the committees arrived at score point decisions, and this information was used by the scoring directors in rater training.

DRC and PDE discussed scoring guideline edits suggested by the rangefinding committees. Changes approved by PDE were then incorporated into the scoring guidelines by DRC Test Development staff. The edited scoring guidelines were used in the preparation of materials and the training of raters.

RATER RECRUITMENT/QUALIFICATIONS

DRC retains a number of raters from year to year; the overall return rate in 2018 was 54%. This pool of experienced raters was drawn from to staff the scoring of the 2018 PSSA. To complete the rater staffing, recruiting events were held and applications for rater positions were screened by DRC's recruiting staff. Candidates were personally interviewed by DRC staff. In addition, each candidate was required to provide an on-demand writing sample, an on-demand math sample, references, and proof of a four-year college degree. In this screening process, preference was given to candidates with previous experience scoring large-scale assessments and degrees emphasizing expertise in mathematics, English language arts, or science. In some locations, staffing partners were used to augment hiring using the same practices as those employed by DRC. The rater pool consisted of educators and other professionals with content-specific backgrounds. These individuals were valued for their content-specific knowledge, but they were required to set aside their own biases about student performance and accept the scoring standards outlined in the PSSA.

LEADERSHIP RECRUITMENT/QUALIFICATIONS

Scoring directors and team leaders were selected from a pool of employees who displayed expertise as raters and leaders on previous DRC projects. These individuals had strong backgrounds in mathematics, English language arts, or science and demonstrated organizational, leadership, communication, and management skills. All scoring directors had previous leadership experience working on large scale assessments. All scoring directors, team leaders, and raters were required to sign confidentiality agreements before handling secure materials.

Each room of raters was assigned a scoring director. All handscoring activities were led by a scoring director for the duration of the project. Scoring directors assisted in rangefinding, worked with supervisors to create training materials, conducted team leader training, and were responsible for training the raters. The scoring director made sure that reports were available and interpreted those reports for the raters. The scoring director also supervised the team leaders. Scoring directors were monitored by the project managers.

Team leaders assisted the scoring director with rater training by answering individual questions that raters may not have felt comfortable asking in a large group. Once raters were qualified, team leaders were responsible for monitoring and maintaining the accuracy and workload of each team member. Ongoing monitoring identified those individuals having difficulty scoring accurately. These raters received one-on-one retraining from the team leader or scoring director. Any rater who could not be successfully retrained had his/her scores purged and was released from the project.

TRAINING

As part of preparation for the 2018 ELA, mathematics, and science assessments, DRC's PAS staff assembled the PDE-approved scoring guidelines and scored student responses approved by rangefinding committees into sets used for training raters. The item-specific scoring guidelines for mathematics, science and ELA: reading (short answer), as well as the focused holistic scoring guidelines for TDAs served as the raters' constant reference. Responses that were relevant in terms of the scoring concepts they illustrated were annotated and included in an anchor set. The full range of each score point was clearly represented and annotated in the anchor set, which was used for reference by raters throughout the project.

Training sets and qualifying sets contained student responses consensus-scored by rangefinding committee members. Raters were instructed on how to apply the scoring guidelines and were required to demonstrate a clear comprehension of each anchor set by performing well on the associated training materials. Responses were selected for training to show raters the range of each score point (e.g., high, mid, and low 2s). Examples of 0s were also included for all mathematics, reading, and science items. This process helped raters recognize the various ways that a student could respond in order to earn each score point outlined and defined in the scoring guidelines.

The scoring director conducted a team leader training session before training the raters. This session followed the same procedures as rater training, but standards were more stringent due to the extra responsibilities required of team leaders. During team leader training, all PSSA materials were reviewed and discussed. Team leaders were required to annotate all of their training materials with committee justifications from the rangefinding meetings. To facilitate scoring consistency, it was imperative that all team leaders imparted the same rationale for each response. Once the team leaders were qualified, leadership responsibilities were reviewed and team assignments were given. A ratio of one team leader per 7–10 raters ensured sufficient monitoring rates for team members.

Rater training began with the scoring director providing an intensive review of the scoring guidelines and anchor papers. Next, raters practiced by independently scoring the responses in the training sets. After each training set was taken, the scoring director led a thorough discussion of the responses.

Once the scoring guidelines, anchor sets, and training sets were thoroughly discussed, each rater was required to demonstrate understanding of the scoring criteria by qualifying (i.e., scoring with acceptable agreement to the true scores) on at least one of the qualifying sets. Raters who failed to achieve at least 70 percent exact agreement on the first qualifying set were given additional, individual training. Raters who did not perform at the required level of agreement by the end of the qualifying process were not allowed to score any student responses. These individuals were removed from the pool of potential raters in DRC's imaging system and released from the project.

The 2018 assessment included the opportunity for students to respond in Spanish to mathematics and science items. Rater training for the for Spanish language response scoring was conducted at Tri-Lin Integrated Services in San Antonio, Texas, and was overseen by a DRC scoring director, who is a Spanish language speaker with a strong mathematics and science background. This individual has worked closely with the PSSA in this capacity for nine years. All Spanish raters were bilingual and hired specifically to score the Spanish portion of the assessment and were required to meet the same standards set for raters of the English language version of the assessment.

Table 8–3. Qualification Rates for 2018 PSSA Open-Ended Response Items

Subject	% Qualifying	% That Did Not Qualify
ELA	99	1
Math	99	1
Science	100	0

HANDSCORING PROCESS

Student responses were scored independently. All responses were scored once, and ten percent of the responses were scored a second time. The data collected from the ten-percent double-read portion was used to calculate the exact and adjacent agreement rates in the Scoring Summary Reports. The responses that were used for the ten percent read behind were randomly chosen by the imaging system at the item level. Additional read behinds by the team leaders and scoring directors were done to further ensure reliability.

Raters scored the imaged student responses on PC monitors at scoring locations in Sharonville, Ohio; Plymouth, Minnesota; Woodbury, Minnesota; King of Prussia, Pennsylvania; Indianapolis, Indiana; Atlanta, Georgia; Jacksonville, Florida; Lake Mary, Florida; and San Antonio, Texas.

In all locations, raters were seated at tables with individual imaging stations. Image distribution was controlled, ensuring that student images were sent only to designated groups of raters qualified to score those items. Imaged student responses were electronically separated for routing to individual raters by item. Raters were only provided with student responses for items that they were qualified to score. Scores were keyed into DRC's imaging system.

To handle possible alerts (i.e., student responses indicating potential issues related to students' safety and well-being that sometimes require attention at the state or local level), DRC's imaging system allows raters to forward responses needing attention to the scoring director. These alerts are reviewed by project management, who then notifies the students' schools and PDE of the occurrences. PDE does not receive any identifying information about the students. At no time in the alerts process do raters, or other DRC handscoring staff, acquire any knowledge concerning a student's personal identity.

HANDSCORING VALIDITY PROCESS

One of the training tools PAS utilized to ensure rater accuracy was the validity process. The goal of the validity process is to ensure that scoring standards are maintained. Specifically, the objective is to make sure that raters score student responses in a manner consistent with statewide standards both within a single administration of the PSSA and across consecutive administrations. During the scoring of the 2018 PSSA, scoring consistency was maintained, in part, through the validity process.

The validity process began with the selection of scored responses. Forty validity papers were selected for each core open-ended (OE) item. These 40 papers were drawn from a pool of exemplars (responses that are representative of a particular score point and have been verified by the scoring director). The scores on validity papers are considered true scores.

The validity papers were then implemented to test rater accuracy. The responses were selected within the imaging system and dispersed intermittently to the raters. By the end of the project, raters had scored all 40 validity papers for any items they were qualified to score. Raters were unaware when they were being dealt pre-scored validity responses and assumed that they were scoring live student responses. This helped bolster the internal validity of the process. All raters who received validity papers had already successfully completed the training/qualifying process.

The scores that the raters assigned to the validity papers were compared to the true scores in order to determine the validity of the raters' scores. For each item, the percentage of exact agreement as well as the percentage of high and low scores was computed. This data was accessed through the Validity Item Detail Report. The same sort of data was also computed for each specific rater. This data was accessed through the Validity Reader Detail Report. Both of these may be run as daily or cumulative reports.

The Validity Reader Detail Report was used to identify particular raters for retraining. If a rater on a certain day generated a lower rate of agreement on a group of validity papers, it was immediately apparent in the Validity Reader Detail Report. A lower rate of agreement was defined as anything below 70 percent exact agreement with the true scores. Any time a rater's validity agreement rate fell below 70 percent, the scoring director was cued to examine that rater's scoring. First, the scoring director attempted to ascertain what kind of validity papers the rater was scoring incorrectly. This was done to determine whether there was any sort of a trend (e.g., trending low on the 1–2 line). Once the source of the low agreement rate was determined, the rater was retrained. If it was determined that the rater had been scoring live papers inaccurately, then his/her scores were purged for that day, and the responses were re-circulated and scored by other raters.

The cumulative Validity Item Detail Report was utilized to identify potential room-wide trends in need of correction. For instance, if a particular validity response with a true score of 3 was given a score of 2 by a significant number of raters within the room, that trend would be revealed in the Validity Item Detail Report. To correct a trend of this sort, the scoring director would look for student responses similar to the validity paper being scored incorrectly. Once located, these responses would be used in room-wide re-training, usually in the form of an annotated handout or a short set of papers without printed scores given to raters as a recalibration test.

Validity was employed on all operational mathematics, ELA: reading, and science OE items, as well as on all operational TDAs. Each 40-paper validity set was formulated to mirror the score point distribution that the item generated during its previous administration. Each validity set included at least five examples of each score point. Examples of different types of responses were included to ensure that raters were tested on the full spectrum of response types.

The exact rater agreement rate generated during the validity process was often higher than the inter-rater agreement rate for the same item. The reason for this discrepancy often has to do with how validity sets are formulated. The 40 validity papers for each item are intended to cover the full breadth of each score point. For example, each validity set contains examples of high, mid, and low 2s. This scope ensures that the validity process is truly valid in terms of addressing the complete spectrum of response types. However, certain types of responses are generally not included in validity sets. These include line papers (i.e., examples of score points that are so close to the adjacent score point that raters are instructed to consult with a supervisor before assigning a score) and responses that, because of poor word choice/writing, are difficult to understand. The reason for these exclusions is that confusing/line/illegible papers often do not impart a teachable lesson. Since these types of papers are usually unique, any potential lesson the response might teach would apply only to that particular paper. Conversely, the papers in validity sets are chosen because they represent common response-types and teach lessons that can be applied to other similar papers. Due to this distinction, validity sets often generate a slightly higher agreement rate than is typically generated during operational scoring. However, in some cases, particular validity papers generate lower rates of agreement on certain scoring lines than inter-rater agreement rate averages. For instance, in this year's TDA validity paper selection a significant number of examples that were close to scoring lines for particular response types were included at all grade levels. Validity was then leveraged in order to discern scoring trends so that targeted retraining could occur. For this reason, this year's validity cumulative averages for the TDA item type are actually lower than the inter-rater agreement rates. Both cumulative averages, inter-rater agreement and validity, are above expected handscoring best practice rates.

QUALITY CONTROL

Rater accuracy was monitored throughout the scoring session by means of daily and on-demand reports. These reports ensured that an acceptable level of scoring accuracy was maintained throughout the project. Interrater reliability was tracked and monitored with multiple quality control reports that were reviewed by quality assurance analysts. These reports and other quality control documents were generated at the scoring centers, where they were reviewed by the scoring directors, team leaders, and project managers. The following reports and documents were used during the scoring of the open-ended items:

The Scoring Summary Report (includes two related reports)

1. The Reader Monitor Report monitored how often raters were in exact agreement with one another and ensured that an acceptable agreement rate was maintained. This report provided daily and cumulative exact and adjacent inter-rater agreement on the ten percent that was double read.
2. The Score Point Distribution Report monitored the percentage of responses given each of the score points.

For example, the mathematics daily and cumulative reports showed what percentage of 0s, 1s, 2s, 3s, and 4s a rater had given to all the responses scored at the time the report was produced. It also indicated the number of responses read by each rater so that production rates could be monitored.

The Item Status Report monitored the progress of handscoring. This report tracked each response and indicated the status (e.g., not read, complete, awaiting supervisor review, etc.). This report ensured that all responses were scored by the end of the project.

The Reader Score Report identified all responses scored by an individual rater. This report was useful if any responses needed rescoring because of possible rater drift.

The Validity Reports (addressed in detail on previous pages) tracked how raters performed by comparing pre-scored responses to raters' scores for the same responses. If a rater's scoring fell below the 70 percent determined agreement rate, remediation occurred. Raters who did not retrain to the required level of agreement were released from the project.

The Read-Behind Log was used by the team leader/scoring director to monitor individual rater reliability. Team leaders read randomly-selected, scored items from each team member. If the team leader disagreed with a rater's score, remediation occurred. This proved to be a very effective type of feedback because it was done with live items scored by a particular rater.

Recalibration Sets were used throughout the scoring sessions to ensure accuracy by comparing each rater's scores with the true scores on a pre-selected set of responses. Recalibration sets helped to refocus raters on Pennsylvania scoring standards. This check made sure there was no change in the scoring pattern as the project progressed. Raters failing to achieve 70 percent agreement with the recalibration true scores were given additional training to achieve the highest degree of accuracy possible. Raters who were unable to recalibrate were released from the project. The process for creating and administering recalibration sets was similar to the one used for training sets.

Table 8–4. Inter-rater Agreement for 2018 PSSA Mathematics Grades 3–8 Open-Ended Response Items and Validity

Mathematics	Common Item	% Exact Agreement	% Adjacent Agreement	% Exact + Adjacent Agreement	% Exact Validity Agreement
Grade 3	1	82	18	100	85
Grade 3	2	85	15	100	89
Grade 3	3	95	5	100	95
Grade 4	1	87	13	100	91
Grade 4	2	95	5	100	98
Grade 4	3	94	6	100	94
Grade 5	1	94	6	100	97
Grade 5	2	84	16	100	88
Grade 5	3	85	14	99	88
Grade 6	1	82	18	100	90
Grade 6	2	93	7	100	91
Grade 6	3	88	11	99	93
Grade 7	1	85	14	99	90
Grade 7	2	93	7	100	95
Grade 7	3	88	12	100	88
Grade 8	1	90	10	100	94
Grade 8	2	86	14	100	81
Grade 8	3	87	13	100	89

Note. 0–4 possible score points

Table 8–5. Percentages Awarded for Each Possible Score Point 2018 PSSA Mathematics Grades 3–8

Mathematics	Common Item	%0	%1	%2	%3	%4	%B/NS*
Grade 3	1	10	31	28	20	7	3
Grade 3	2	25	29	21	12	9	4
Grade 3	3	16	28	29	15	9	3
Grade 4	1	15	28	24	19	10	4
Grade 4	2	8	12	19	29	24	7
Grade 4	3	27	28	29	6	7	3
Grade 5	1	27	34	18	12	6	3
Grade 5	2	28	23	18	15	9	6
Grade 5	3	17	20	44	6	10	3
Grade 6	1	27	29	18	14	9	3
Grade 6	2	44	22	11	9	6	9
Grade 6	3	39	21	17	11	8	4
Grade 7	1	36	21	15	16	7	5
Grade 7	2	40	29	12	5	4	11
Grade 7	3	20	45	17	10	3	5
Grade 8	1	20	26	16	16	15	7
Grade 8	2	17	39	22	11	0	10
Grade 8	3	26	29	15	14	8	7

*B=blank and NS=non-scoreable

Table 8–6. Inter-rater Agreement for 2018 PSSA Reading Grade 3 Open-Ended Response Items and Validity

Reading	Common Item	% Exact Agreement	% Adjacent Agreement	% Exact + Adjacent Agreement	% Exact Validity Agreement
Grade 3	1	73	27	100	76
Grade 3	2	77	23	100	79

Note. 0–3 possible score points

Table 8–7. Percentages Awarded for Each Possible Score Point 2018 PSSA Reading Grade 3

Reading	Common Item	%0	%1	%2	%3	%B/NS*
Grade 3	1	15	46	27	8	6
Grade 3	2	11	45	27	10	6

*B=blank and NS=non-scoreable

Table 8–8. Inter-rater Agreement for 2018 PSSA ELA Grades 4–8 Text-Dependent Analysis Items and Validity

TDA	Common Item	% Exact Agreement	% Adjacent Agreement	% Exact + Adjacent Agreement	% Exact Validity Agreement
Grade 4	1	81	18	99	73
Grade 5	1	84	16	100	81
Grade 6	1	88	12	100	78
Grade 7	1	85	15	100	77
Grade 8	1	79	21	100	73

Note. 1–4 possible score points

Table 8–9. Percentages Awarded for Each Possible Score Point 2018 PSSA TDA items Grades 4–8

TDA	Common Item	%1	%2	%3	%4	%B/NS*
Grade 4	1	36	42	9	1	11
Grade 5	1	33	44	10	1	11
Grade 6	1	38	43	11	1	8
Grade 7	1	27	41	21	3	9
Grade 8	1	24	39	23	2	12

*B=blank and NS=non-scoreable

Table 8–10. Inter-rater Agreement for 2018 PSSA Science Grades 4 and 8 Open-Ended Response Items and Validity

Science	Common Item	% Exact Agreement	% Adjacent Agreement	% Exact + Adjacent Agreement	% Exact Validity Agreement
Grade 4	1	89	11	100	93
Grade 4	2	88	12	100	94
Grade 4	3	90	10	100	98
Grade 4	4	99	1	100	98
Grade 4	5	94	6	100	97
Grade 8	1	97	3	100	97
Grade 8	2	93	7	100	96
Grade 8	3	81	19	100	90
Grade 8	4	93	7	100	94
Grade 8	5	87	13	100	95

Note. 0–2 possible score points

Table 8–11. Percentages Awarded for Each Possible Score Point 2018 PSSA Science Grades 4 and 8

Science	Common Item	%0	%1	%2	%B/NS*
Grade 4	1	22	50	25	4
Grade 4	2	20	45	31	3
Grade 4	3	36	36	23	4
Grade 4	4	46	38	10	6
Grade 4	5	13	27	56	4
Grade 8	1	25	63	6	6
Grade 8	2	52	28	12	8
Grade 8	3	10	48	37	6
Grade 8	4	38	30	24	8
Grade 8	5	33	35	24	8

*B=blank and NS=non-scoreable

CHAPTER NINE: DESCRIPTION OF DATA SOURCES AND SAMPLING ADEQUACY

This chapter describes the data sources (e.g., *n*-counts, characteristics of students) used for the various analysis procedures discussed in the remaining chapters of this technical report. Psychometric analyses are conducted at several points for the PSSA: 1) early analyses for quality control purposes; 2) analyses associated with the calibration, scaling, and linking processes; 3) analyses used for item banking; and 4) analyses for the technical report. Detailed information regarding the attributes of students is provided in Chapter Ten.

PRIMARY STUDENT FILTERING CRITERIA

For many data files, the primary means of filtering students for inclusion/exclusion from any data analysis are based on the state reporting criteria which are outlined below. Within the state reporting rules are separate attempt criteria for individual subject areas. The attempt criteria are discussed more fully below.

STATE REPORTING CRITERIA

The state reporting criteria are as follows:

- The student must be enrolled for the full academic year.
- The student must be attributed to a public district/school (state).
- The student must receive a score (i.e., met the subject attempt logic—see additional information below).
- The student is not a homeschool student.
- The student is not a foreign exchange student.
- The student is not a first year EL student (mathematics/ELA only).

PSSA ATTEMPT CRITERIA

For all data sources, only students who meet the attempt criteria are included. For mathematics, ELA, and science, the attempt criteria required students to complete a minimum of five items (multiple-choice (MC) or open-ended (OE)) in each respective subject area section of the test booklets. All subjects' counts were based on operational and nonoperational items.

KEY VALIDATION DATA

These data are only mentioned for the sake of completeness, as no formal results from these data are provided in this technical document. An analysis on all operational MC items is conducted early in the scoring process to ensure that the items are performing as expected. This is an important quality check that is always done for the PSSA. This analysis is usually (but not always) done using all students from early-return schools. The sample does not need to be representative of the entire state for these quality checks. Available student data typically suffices as long as there is reasonable variability in the total test scores of students.

For 2018 this data included all public school students who 1) had their MC items scanned and scored by mid-May and 2) met preliminary attempt criteria (i.e., attempt was determined based on MC items only). Note that the full state reporting criteria were not in effect for this file (only attribution to a public school based on tested site and preliminary attempt criteria were used to filter students).

CALIBRATION DATA

Calibration data included students who met the preliminary state reporting criteria (including attempt criteria) by May 25th. The state reporting criteria were preliminary, meaning that attributions and final PIMS[1] information were not complete by this time. No sampling was undertaken in this data (i.e., it included all students who met the above criteria with operational test scores up to this point[2]). This data file was used to provide impact results to the Technical Advisory Committee (TAC) during the linking review process.

ITEM BANK DATA

The item bank data included students who met the state reporting criteria by July 5th. No sampling was undertaken in this data (i.e., it included all students who met the above criteria with scored field test data up to this point). The data banked for field test items were based on this data file.

FINAL DATA

This file included all students who met state reporting criteria by August 2nd for all subject areas. The final data reflects update by schools for correction of certain fields (e.g., student ethnicity). All other files contained preliminary data (item bank data). The majority of the results included in this technical report were derived using the final data file.

FINAL *N*-COUNTS FOR ALL DATA SOURCES

The *n*-counts for all data sources are provided in Table 9–1.The calibration count includes students who met the preliminary state reporting criteria, while the final count includes students who met the final state reporting criteria.[3] A computer-based test (CBT) was offered for all subjects. Calibration data shows the number of students in both modes. Calibration of item parameters was conducted with paper students only; however, other analyses conducted during the calibration period (see Chapter Twelve) used both paper and CBT students. The *n* counts of item bank data show only the number of students who took a paper test, because values for item banking (e.g., CTT statistics) were obtained with paper students. However, the *n* counts of paper students and total are not very different because the proportions of CBT students were small (see Table 9–2).

Table 9–1. Data Source *N*-Counts

Subject	Grade	Key Validation (Paper)	Key Validation (CBT)	Calibration (Paper/CBT)	Item Bank (Paper)	Final (Paper/ CBT)
Mathematics	3	122512	2950	122860	120314	122563
Mathematics	4	126020	3102	126568	123908	126481
Mathematics	5	124363	5050	127073	122532	126868
Mathematics	6	122268	5160	125483	121087	125385
Mathematics	7	120348	5739	124239	119582	124225
Mathematics	8	120462	5913	124541	119930	124780
ELA	3	121785	2831	122372	119890	122397
ELA	4	125219	3008	126019	123378	126223
ELA	5	123480	4744	126644	122334	126761
ELA	6	121819	5253	125294	120612	125341
ELA	7	119440	5915	124066	119053	124226
ELA	8	119969	6019	124479	119686	124907
Science	4	125015	3803	126259	123102	126353
Science	8	118128	7686	124004	117845	124417

COMPUTER-BASED TEST (CBT)

Table 9–2 displays the count of students who took the 2018 PSSAs broken out by content, grade, and mode with the final data. In all grades, only approximately three percent or less of students were enrolled to take the PSSAs online in the spring. Lower grades had fewer students who took CBT and grade 8 had highest CBT proportion of students in all subjects. Almost five percent of grade 8 students took CBT with mathematics and ELA, and slightly over 6 percent of grade 8 students took science CBT.

Table 9–2. Final *N*-Counts and Proportion by Mode

Subject	Grade	*N*-Counts Paper	*N*-Counts CBT	Proportion (%) Paper	Proportion (%) CBT
Mathematics	3	119594	2969	97.58	2.42
Mathematics	4	123348	3133	97.52	2.48
Mathematics	5	121794	5074	96.00	4.00
Mathematics	6	120214	5171	95.88	4.12
Mathematics	7	118460	5765	95.36	4.64
Mathematics	8	118800	5980	95.21	4.79
ELA	3	119543	2854	97.67	2.33
ELA	4	123181	3042	97.59	2.41
ELA	5	121976	4785	96.23	3.77
ELA	6	120072	5269	95.80	4.20
ELA	7	118282	5944	95.22	4.78
ELA	8	118818	6089	95.13	4.87
Science	4	122531	3822	96.98	3.02
Science	8	116709	7708	93.80	6.20

SPIRALING OF FORMS

PSSA forms were scrambled and spiraled for all grades and subjects. Appendix H provides summary statistics for all test forms for each grade and subject-area test. The tables provide the form number (Form), the number of students (N), test length in items (L), total points (Pts.), the minimum score (Min), the maximum score (Max), the mean score (Mean), the median score (Med), and the standard deviation (SD). The mean raw scores across forms are similar, indicating the student populations taking each form are of approximately equal ability and item scrambling are appropriate. This equivalence of ability distributions across forms is the desired outcome of spiraling and allows for optimum analysis of the embedded field-test items.

SCRAMBLING OF FORMS

In response to test security issues raised in prior PSSA administrations, multiple scrambled patterns of operational forms were constructed for each mathematics, ELA, and science assessment. The core form was constructed following the past test construction and equating guidelines and will be referred to as the Master Core throughout the remainder of this document. Based on previous TAC recommendation, the Master Core is the pattern of the test that would have been administered to all students in the absence of scrambling. More importantly, the data obtained from administration of the Master Core were used for operational MC item calibration.

Once the Master Core was constructed and approved, DRC and PDE content specialists built seven scrambled patterns of the Master Core for each content and grade. OE items were not scrambled so each OE item appeared in the same position on every form. Some MC items also appear in the same position on multiple forms due to content constraints. In some content areas and grades the number of field-test forms was greater than the number of scrambled patterns. In these instances the Master Core and scrambled patterns were repeated with no specific pattern appearing more than two times. Due to the limited enrollment for the PSSA CBT, only three forms were offered for CBT. These forms included the accommodation form, a Master Core form, and one additional scrambled form; therefore, these forms have slightly higher participation than other forms when paper and CBT counts are combined.

When the Master Core was built, the linking position rules were observed for all core-linking and equating block items. The Master Core was used at least as often, or more often, than any scrambled version of the core form. Since form 1 was used for all accommodated forms (e.g., Braille, Large Print, Audio, and Spanish) it was never designated as a Master Core. The specific forms presenting the Master Core vary across grades within each content area. Given that all forms were spiraled at the student level, the distribution of forms is reasonably uniform. The exception is Form 1, which had higher participation due to the fact that it is the only form used for accommodations.

Based on TAC recommendations to minimize possible item position effects, each section of the Master Core was divided into blocks of non-overlapping MC and EBSR items. Recall that other item types were not part of the scrambling. The blocks generally contained six to seven items (or one passage), but the block sizes varied depending on the content and section. Within each block, items were scrambled following general psychometric and content guidelines to create up to five versions of the block in addition to the Master Core sequencing. The blocks were assembled to create seven scrambled versions of the Master Core. Table 5 shows the mathematics grade 8 scrambled form structure. The core was divided into seven blocks (labeled 1–7) and each block was scrambled in four different permutations. This results in five sequences for each block – Master Core and four permutations (labeled M, I, II, III, and IV). Seven scrambled variations (labeled A, B, C, D, E, F, and G in the “Var.” column) of the Master Core were used in addition to the Master Core across the field test forms. The Master Core was used on forms 2 and 9.

Table 9–3. Mathematics Grade 8 Scrambling

Form	1	2	3	4	5	6	7	Pattern
1	II	M	I	I	II	III	III	C
2	M	M	M	M	M	M	M	Master
3	II	I	M	IV	III	M	II	A
4	I	II	III	IV	III	IV	M	B
5	I	IV	IV	II	I	II	I	D
6	II	III	II	III	M	I	II	E
7	M	M	M	M	M	M	M	Master
8	M	II	II	M	IV	III	III	F
9	M	III	III	M	III	I	IV	G

Prior to scrambling the Master Core, DRC and PDE content specialists developed the following general psychometric and content guidelines:

- Items cannot move between blocks.
- DRC and PDE content specialists will work to ensure that the scrambling does not result in making content more difficult than the Master Core item sequence. For example, items of similar cognitive complexity will be swapped rather than random scrambling.
- A block scramble pattern is only valid if it does not contain an invalid key distribution within the block. Additional checks for an invalid key distribution across blocks must be made when combining block scramble patterns to create forms. For example, scrambling must not create more than three (3) of the same key positions in a row.
- A block scramble pattern is only valid if it does not contain an invalid standard (AA/EC) distribution within a block. Additional checks for standard distribution across blocks must be made when combining block scramble patterns to create forms. An exception was made for one mathematics scramble for each grade which ordered items within block by eligible content per PDE request.
- Scrambling should not place a difficult item as the first item in a section. The first item in a block that does NOT begin a section may be a difficult item since blocks are invisible to the student.
- For passage-based items, a block scramble pattern is only valid if it does not create dissonance between the items and passage(s).
- Scrambling should not place a difficult item as the first item in a passage set.
- Within a set of items connected to a paired set of passages, an item associated with both passages can be swapped only with another item associated with both passages. (These items must remain at the end of the set of items associated with the passage set.)

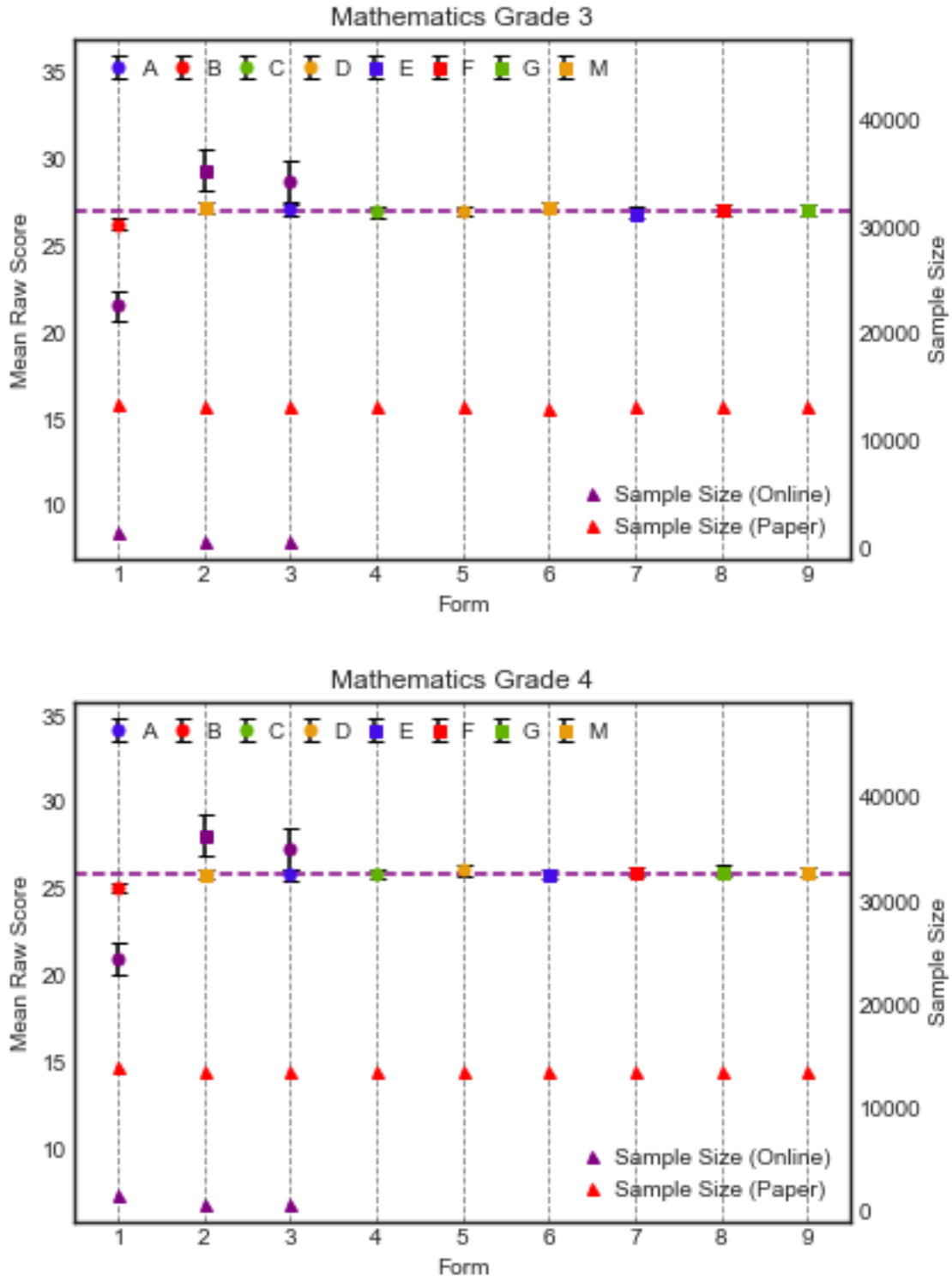
Table 9–4 shows a summary of the scrambling strategy employed for the 2018 PSSAs. Each content and grade used a total of eight different patterns of the core including the Master Core.

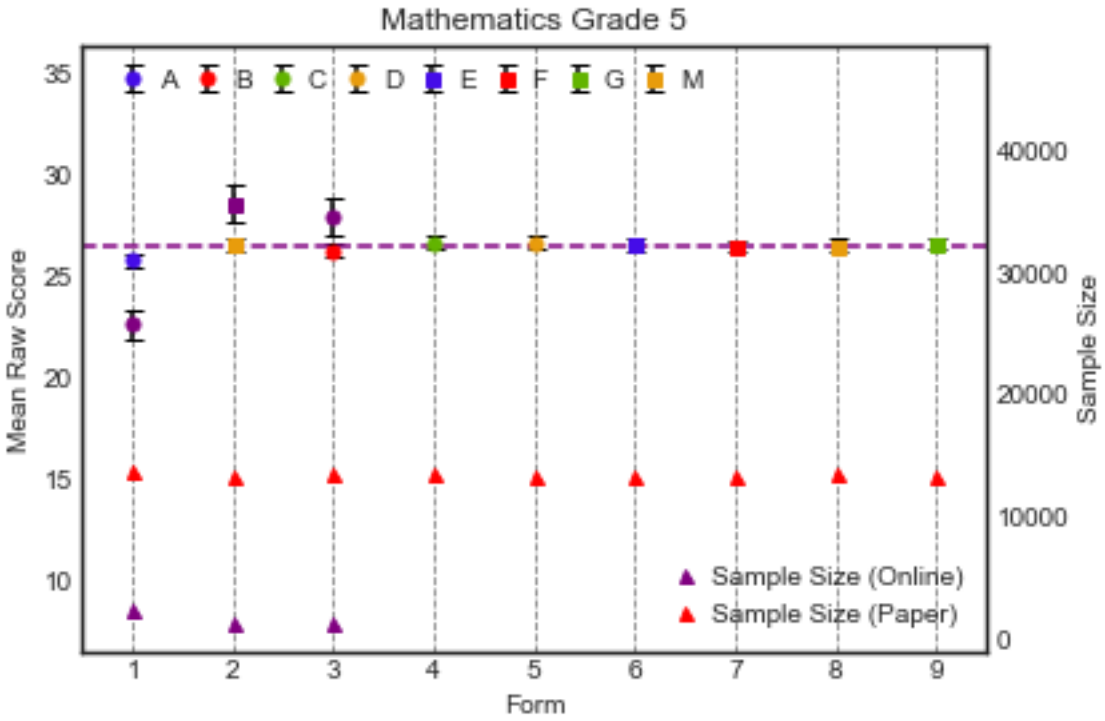
Table 9–4. Form Scrambling

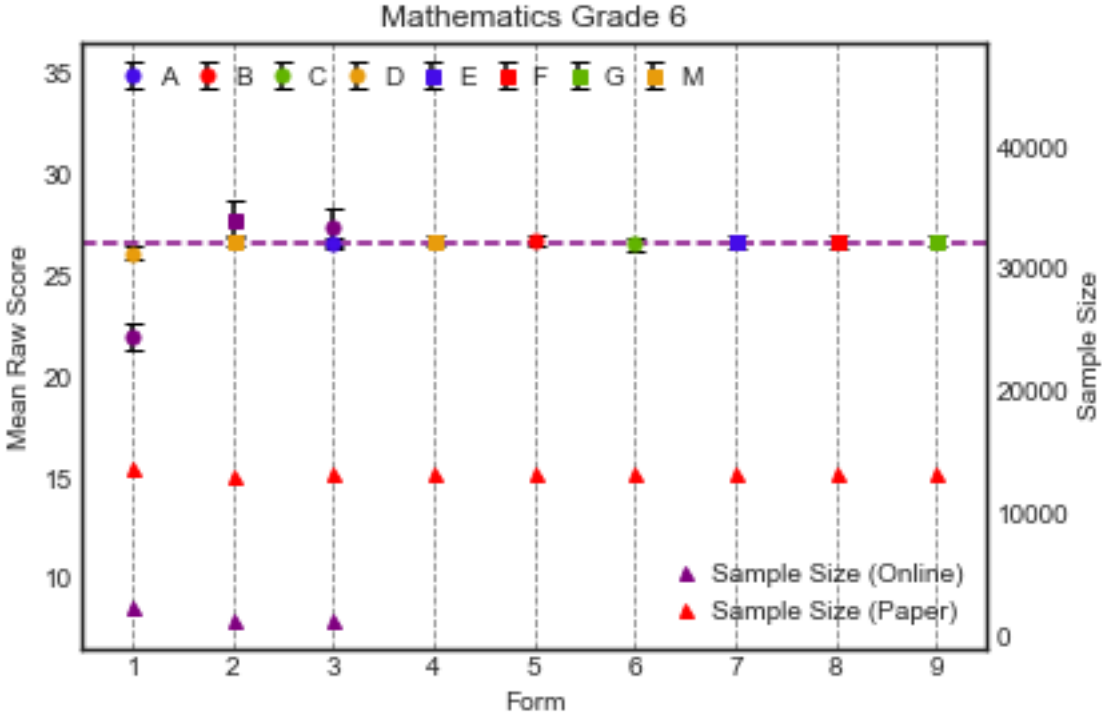
Content	Grade	Forms	Total Patterns	Master Cores
Mathematics	3	9	8	2
Mathematics	4	9	8	2
Mathematics	5	9	8	2
Mathematics	6	9	8	2
Mathematics	7	9	8	2
Mathematics	8	9	8	2
ELA	3	9	8	2
ELA	4	9	8	2
ELA	5	9	8	2
ELA	6	9	8	2
ELA	7	9	8	2
ELA	8	9	8	2
Science	4	12	8	2
Science	8	12	8	2

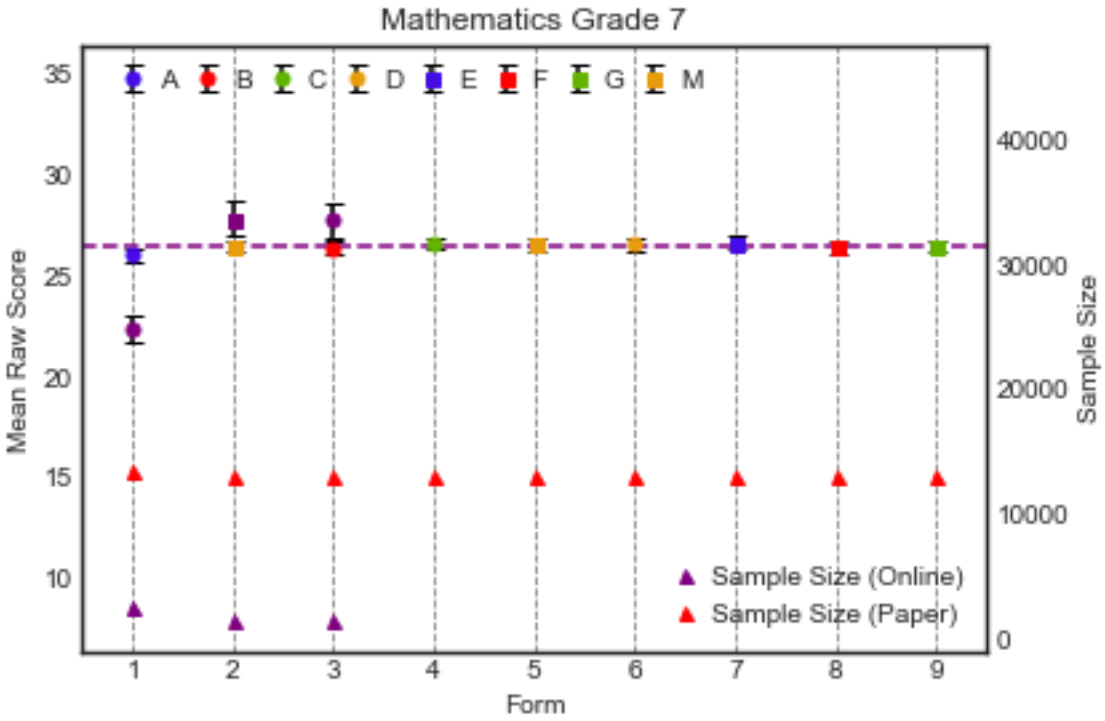
An important assumption for effectively collapsing forms into pattern groups is that the form spiraling yielded randomly equivalent groups. Figure 9–1 displays the raw score mean, a 3 standard error band, and the scramble pattern for each form by mode. Online is shown in light purple for both mean and sample size. The standard error bands we have plotted here are equivalent to approximately 99 percent confidence interval for the form means. When the error bands for a form overlapped the overall mean (the red line), the form means were not statistically different from the overall mean regardless of the type of scrambling. As can be seen, the spiraling essentially produced randomly equivalent groups. Please note that Form 1 is used for all accommodated administrations and as such appears different from the remaining forms in these plots.

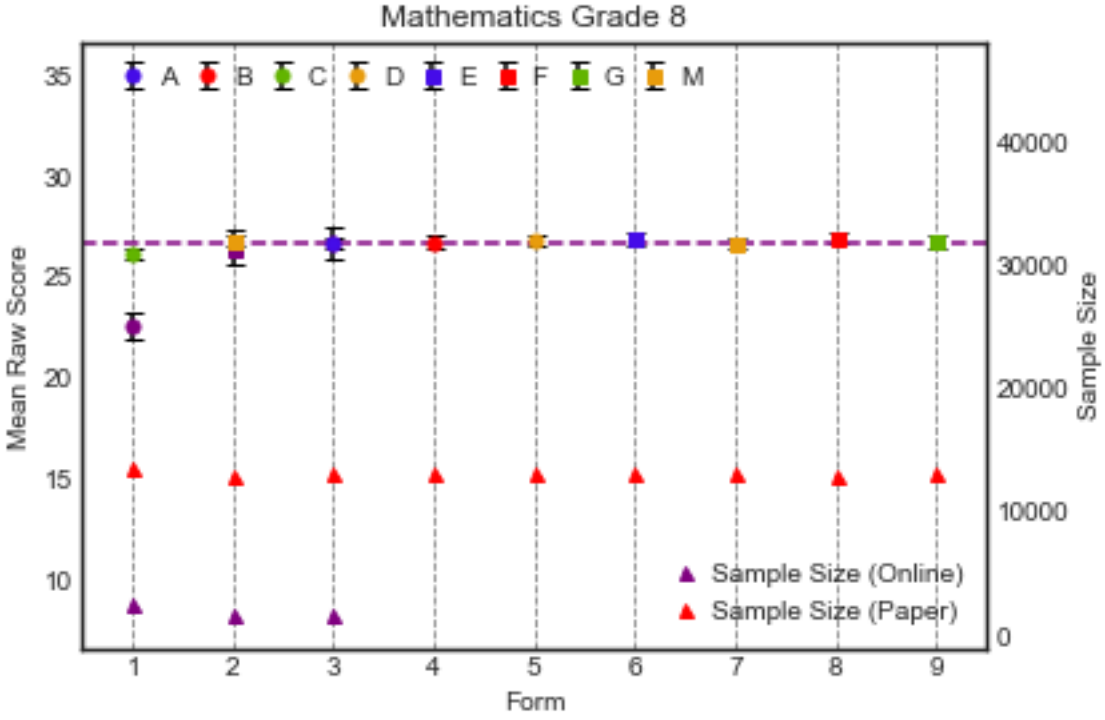
Figure 9–1. Form Mean Scores with +/- Three Standard Error (SE) Bands

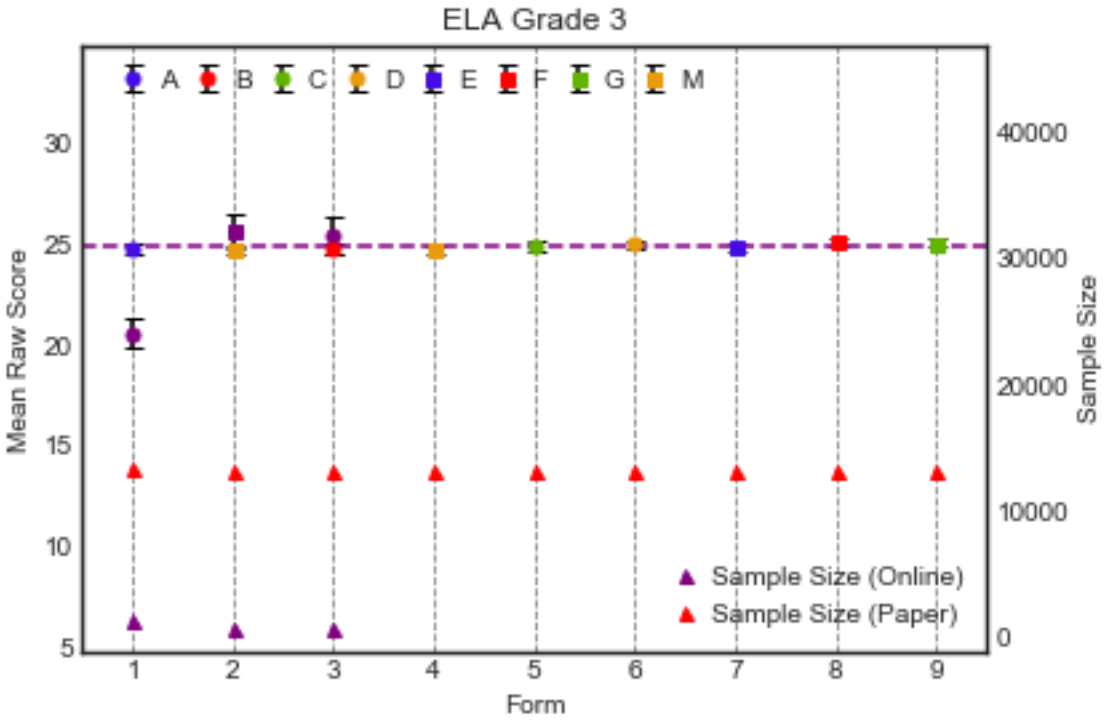


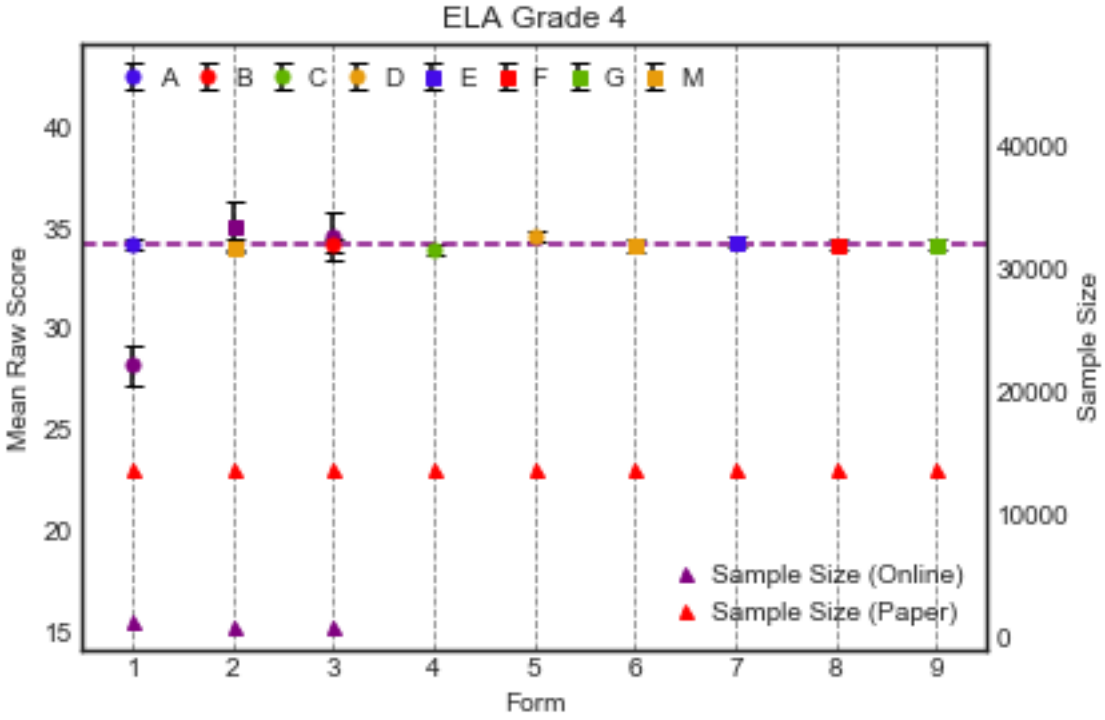

Mathematics Grade 5
A
B
C
D
E
F
G
M
Mean Raw Score
Sample Size
Form
Sample Size (Online)
Sample Size (Paper)

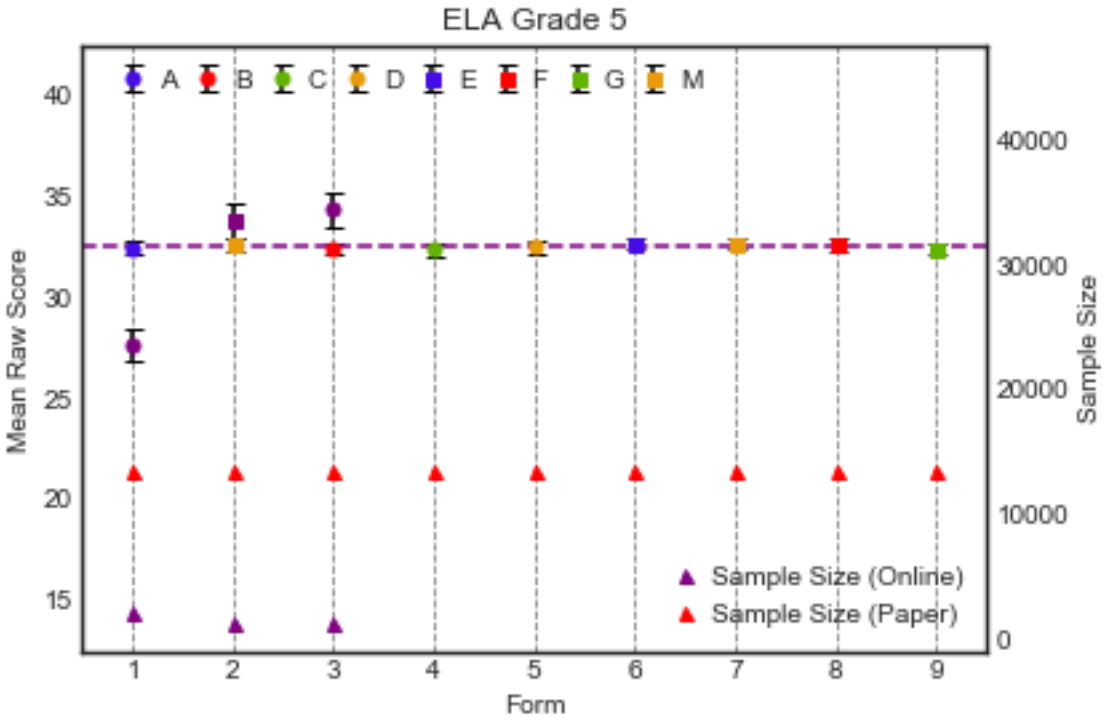

Mathematics Grade 6
A
B
C
D
E
F
G
M
Mean Raw Score
Sample Size
Form
Sample Size (Online)
Sample Size (Paper)


Mathematics Grade 7
A
B
C
D
E
F
G
M
Mean Raw Score
Sample Size
Form
Sample Size (Online)
Sample Size (Paper)


Mathematics Grade 8
A
B
C
D
E
F
G
M
Mean Raw Score
Sample Size
Form
Sample Size (Online)
Sample Size (Paper)


ELA Grade 3
A
B
C
D
E
F
G
M
Mean Raw Score
Sample Size
Form
Sample Size (Online)
Sample Size (Paper)


ELA Grade 4
A
B
C
D
E
F
G
M
Mean Raw Score
Sample Size
Form
Sample Size (Online)
Sample Size (Paper)


ELA Grade 5
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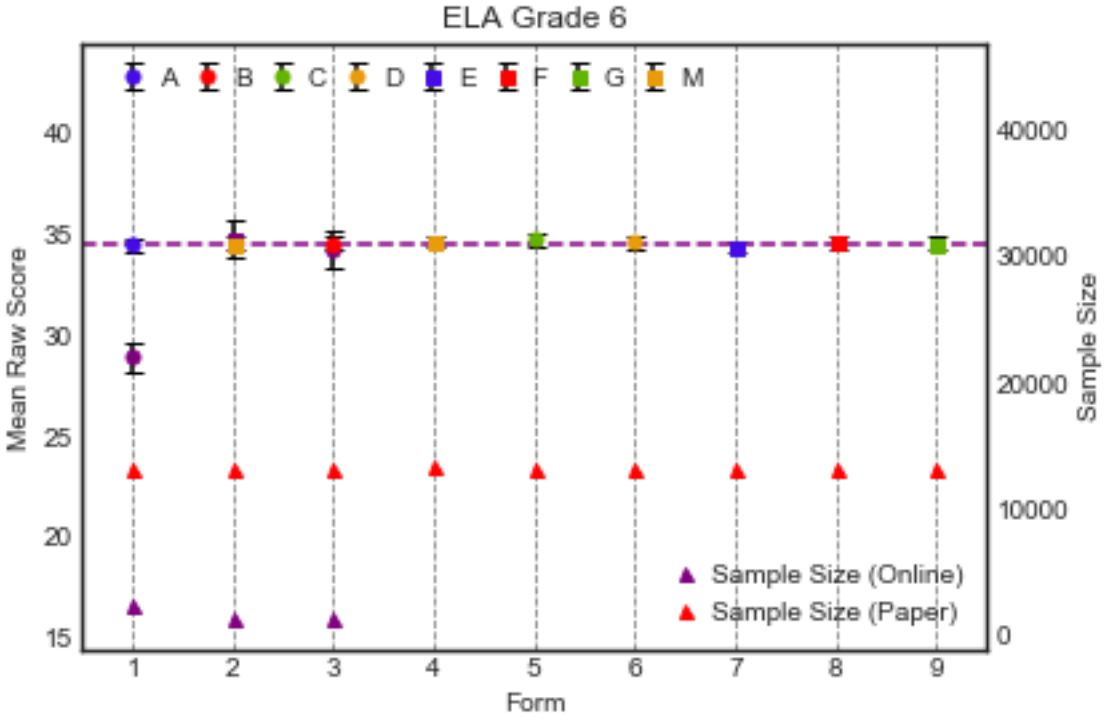
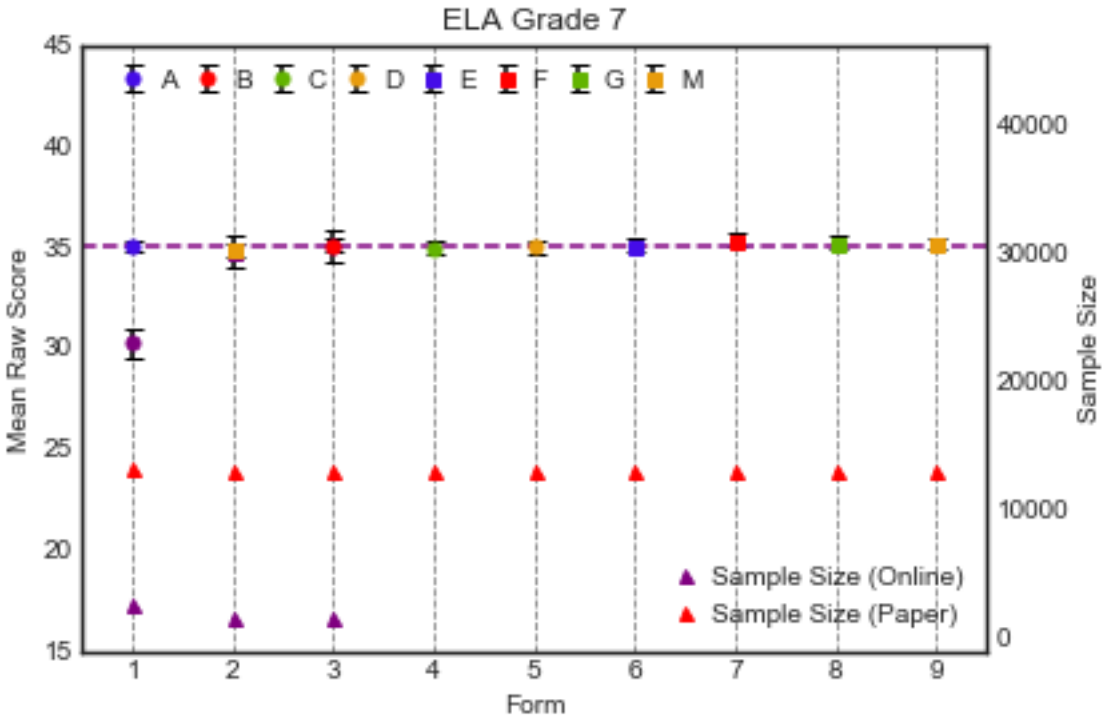
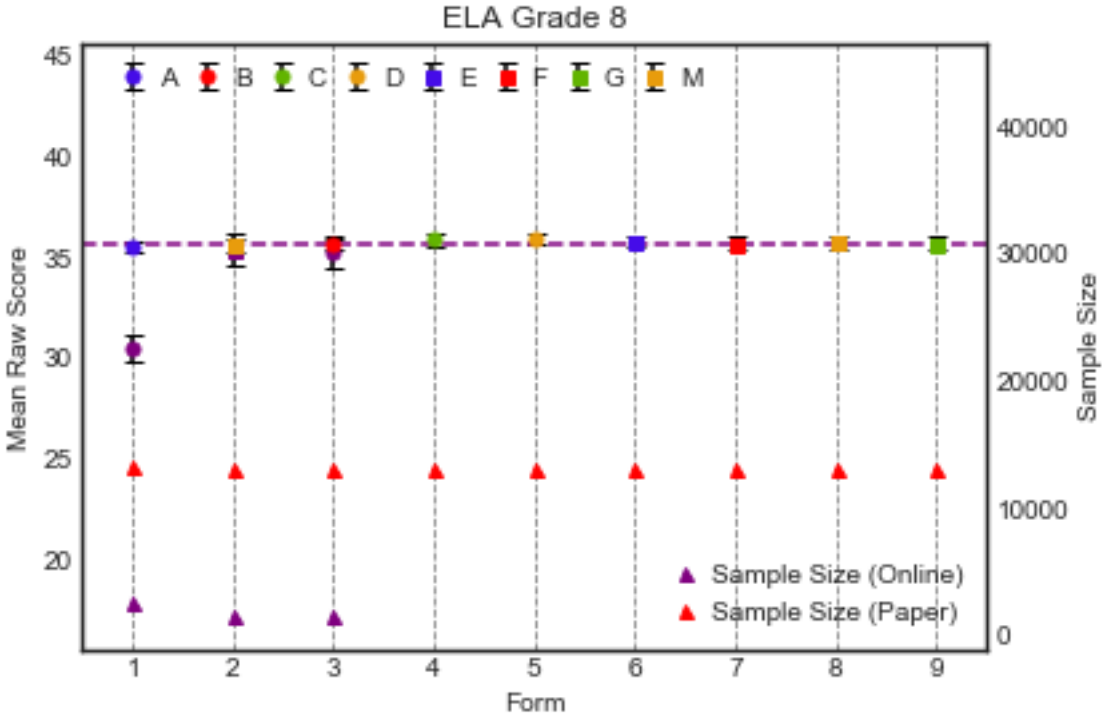
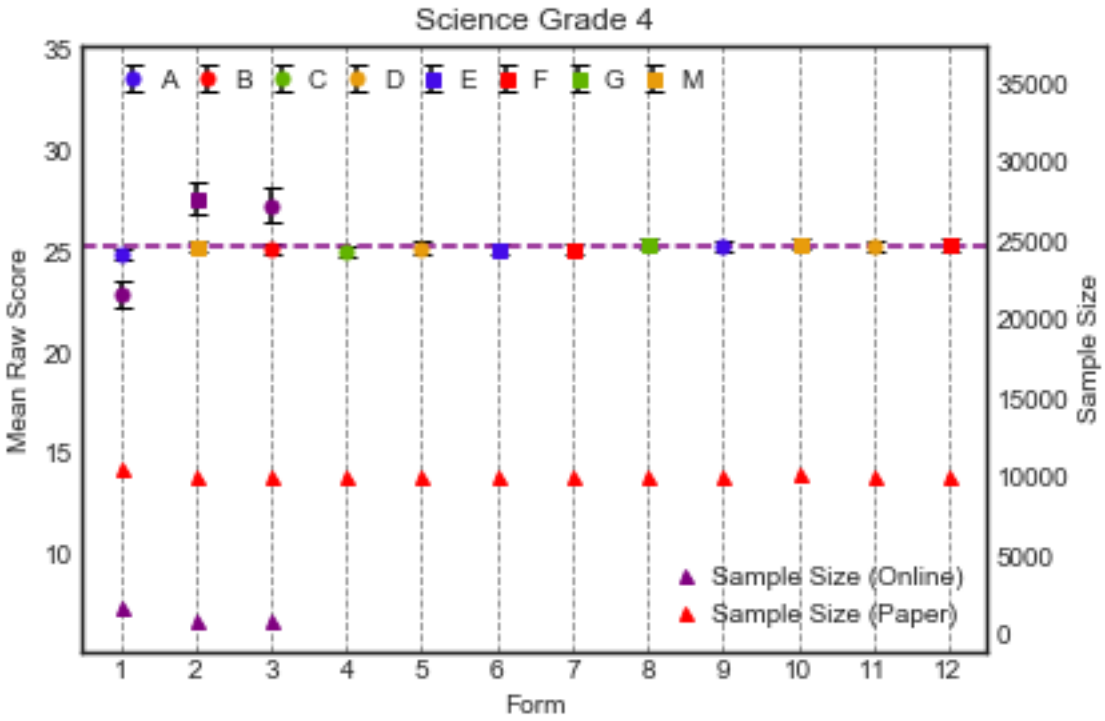
B
C
D
E
F
G
M
Mean Raw Score
Sample Size
Form
Sample Size (Online)
Sample Size (Paper)


ELA Grade 6
A
B
C
D
E
F
G
M
Mean Raw Score
Sample Size
Form
Sample Size (Online)
Sample Size (Paper)


ELA Grade 7
A
B
C
D
E
F
G
M
Mean Raw Score
Sample Size
Form
Sample Size (Online)
Sample Size (Paper)


ELA Grade 8
A
B
C
D
E
F
G
M
Mean Raw Score
Sample Size
Form
Sample Size (Online)
Sample Size (Paper)


Science Grade 4
A
B
C
D
E
F
G
M
Mean Raw Score
Sample Size
Form
Sample Size (Online)
Sample Size (Paper)

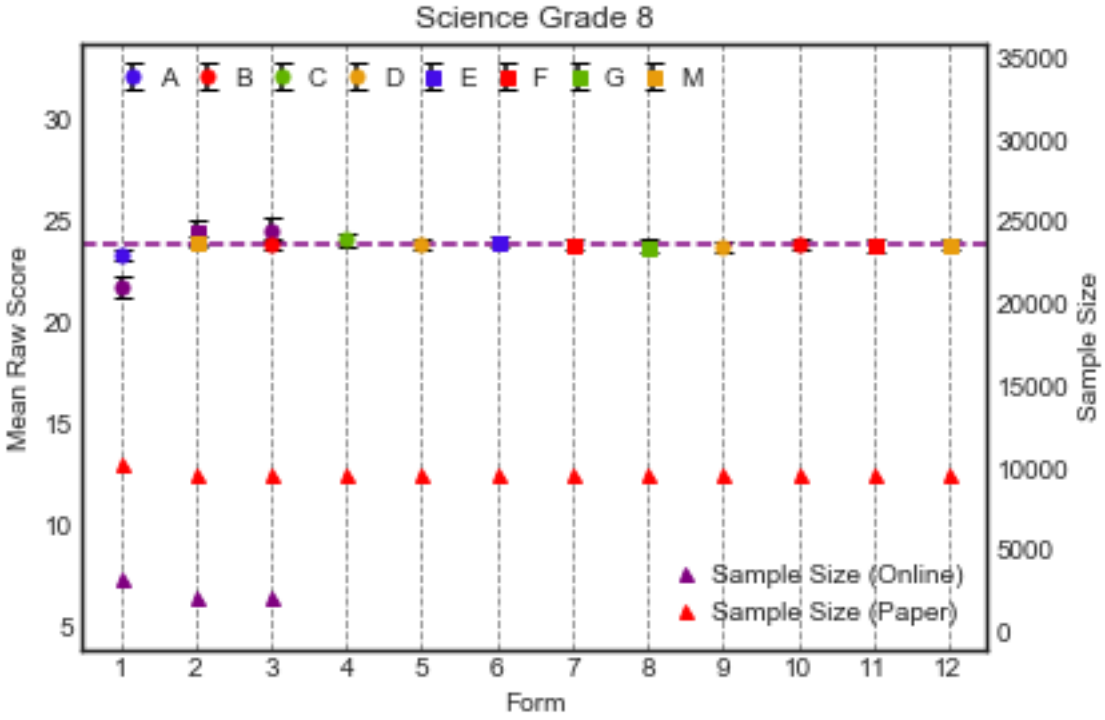

Science Grade 8
A
B
C
D
E
F
G
M
Mean Raw Score
Sample Size
Form
Sample Size (Online)
Sample Size (Paper)

Table 9–5 shows the number of students who took each form pattern (recall that pattern M is the Master Core version), and Table 9–6 gives the form to scramble pattern conversion.

Table 9–5. Form Pattern Counts

Content	Grade	A	B	C	D	E	F	G	M
Mathematics	3	13985	15099	13258	13307	13206	13231	13273	27204
Mathematics	4	14439	15667	13635	13657	13667	13646	13687	28083
Mathematics	5	16328	14876	13521	13461	13440	13464	13431	28347
Mathematics	6	14608	13331	13304	16364	13299	13289	13262	27928
Mathematics	7	16240	14670	13110	13090	13158	13083	13093	27781
Mathematics	8	14832	13176	16402	13130	13128	13079	13128	27905
ELA	3	14745	14051	13314	13277	13196	13187	13225	27402
ELA	4	15229	14476	13650	13704	13655	13675	13673	28161
ELA	5	15793	14804	13538	13543	13567	13532	13586	28398
ELA	6	15816	14731	13296	13356	13337	13323	13339	28143
ELA	7	15814	14859	13101	13114	13065	13162	13167	27944
ELA	8	15948	14927	13167	13226	13166	13190	13174	28109
Science	4	22673	11174	10163	20323	10185	20311	10164	21360
Science	8	13520	21604	9704	19368	9653	19373	9707	21488

Note. Final data was used

Table 9–6. Form to Pattern Conversion Table

Content	Grade	1	2	3	4	5	6	7	8	9	10	11	12
Mathematics	3	B*	M*	A*	C	D	M	E	F	G			
Mathematics	4	B*	M*	A*	C	D	E	F	G	M			
Mathematics	5	A*	M*	B*	C	D	E	F	M	G			
Mathematics	6	D*	M*	A*	M	B	C	E	F	G			
Mathematics	7	A*	M*	B*	C	M	D	E	F	G			
Mathematics	8	C*	M*	A*	B	D	E	M	F	G			
ELA	3	A*	M*	B*	M	C	D	E	F	G			
ELA	4	A*	M*	B*	C	D	M	E	F	G			
ELA	5	A*	M*	B*	C	D	E	M	F	G			
ELA	6	A*	M*	B*	M	C	D	E	F	G			
ELA	7	A*	M*	B*	C	D	E	F	G	M			
ELA	8	A*	M*	B*	C	D	E	F	M	G			
Science	4	A*	M*	B*	C	D	E	F	G	A	M	D	F
Science	8	A*	M*	B*	C	D	E	F	G	D	B	F	M

Note. * indicates the form was offered online

SCRAMBLING ANALYSIS

FORM LEVEL

The test-level and item-level effects of scrambling are presented in the following section. Table 9–7 shows the mean raw score difference from the Master Core for each scramble pattern (scramble pattern mean minus Master Core mean). The highlighted mean differences are statistically significant at family-wise Type I error rate (alpha) 0.01 with two-sample t-test. For example, with grade 3 math, seven two sample t-tests are conducted (Master Core vs. A, B, C, D, E, F, and G) and each test had Type I error rate (alpha) of 0.001428571 to keep the family-wise Type I error rate 0.01. Form 1, the form designated for use with accommodations was included in these analyses and as expected, a statistically significant difference was found wherever a pattern corresponds to Form 1. This difference, however, is likely attributable to the general pattern of lower item and test level scores for examinees using accommodations, and not to scrambling effects. Form 1 for all mathematics, ELA, and science grades followed pattern A. For science grade 4, form 5 followed pattern A as well.

Table 9–7 shows that, aside from results that are likely influenced by examinees receiving accommodations, 6 of 42, 6 of 42, and 3 of 14 scramble pattern raw score means showed a statistically significant difference from the Master Core in mathematics, ELA, and science, respectively.

Table 9–7. Mean Raw Score Differences From the Master Core

Content	Grade	A	B	C	D	E	F	G
Mathematics	3	-0.36	0.07	0.16	0.23	0.12	0.38	0.36
Mathematics	4	-0.54	0.00	-0.20	0.42	0.15	0.04	0.04
Mathematics	5	-0.92	-0.10	-0.34	-0.22	0.00	-0.08	-0.33
Mathematics	6	-1.01	-0.07	0.11	-0.01	-0.23	0.00	-0.04
Mathematics	7	-0.74	0.09	-0.06	0.00	0.10	0.37	0.24
Mathematics	8	-0.98	-0.05	0.23	0.24	0.10	0.02	0.04
ELA	3	-0.14	-1.50	-0.35	-0.30	-0.39	-0.21	-0.23
ELA	4	-0.09	-1.33	-0.13	0.10	-0.12	-0.03	0.05
ELA	5	-1.36	-0.24	0.01	0.00	-0.08	-0.16	-0.02
ELA	6	-0.08	-0.05	-0.22	-1.28	-0.09	-0.11	-0.06
ELA	7	-1.18	-0.05	0.01	-0.02	0.04	-0.15	-0.12
ELA	8	-0.08	-0.01	-1.17	0.06	0.15	0.21	0.03
Science	4	-0.61	-0.10	-0.44	-0.23	-0.36	-0.21	-0.02
Science	8	-1.01	-0.01	0.11	-0.12	0.06	-0.13	-0.16

Note. Highlighted cells indicate the scramble patter is statistically significantly different from the Master Core form at family-wise α = 0.01 (corrected for 7 pairwise comparisons) for each subject and grade combination.

ITEM LEVEL

The item level scrambling was examined using differential item functioning (DIF) described in Chapter Five. The *Mantel-Haenszel* procedure (Mantel & Haenszel, 1959) for detecting differential item functioning is a commonly used technique for MC items in educational testing and contrasts a focal group with a reference group. With ELA, EBSR items were also scrambled. As with the MC items, DIF analysis was used for item level scrambling check for EBSR items. For EBSR items, a comparable statistic is computed based on the standardized mean difference (SMD) (Dorans, Schmitt, & Bleistein, 1992), which is computed as the differences in mean scores for the focal and reference groups if both groups had the same score distribution.

In this section, master core form is reference group and non-master core form was focal groups. The items are assigned a severity code based on the magnitude of the effect sizes. Items classified as A+ or A- have little or no statistical indication of DIF. Items classified as B+ or B- have some indication of DIF but may be judged to be acceptable for future use. Items classified as C+ or C- have strong evidence of DIF and should be reviewed. Table 9–8 shows the number of items with C DIF items. There were 4 items exhibiting C DIF across forms.

Table 9–8. The Number of Items with C DIF for Scrambling Effect

Content	Item Type	Grade	A	B	C	D	E	F	G
Mathematics	MC	3	-	0	0	0	0	0	0
Mathematics	MC	4	-	0	0	0	0	0	0
Mathematics	MC	5	-	0	0	0	0	0	0
Mathematics	MC	6	-	0	0	0	0	0	0
Mathematics	MC	7	-	0	0	0	0	0	0
Mathematics	MC	8	-	0	0	0	0	0	0
ELA	MC	3	-	0	0	0	0	0	0
ELA	MC	4	-	0	0	0	0	0	0
ELA	MC	5	-	0	0	0	0	0	0
ELA	MC	6	-	0	0	0	0	0	0
ELA	MC	7	-	1	0	0	1	1	0
ELA	MC	8	-	0	0	0	1	0	0
Science	MC	4	0	0	0	0	0	0	0
Science	MC	8	-	0	0	0	0	0	0

CHAPTER TEN: SUMMARY DEMOGRAPHIC, PROGRAM, AND ACCOMMODATION DATA FOR THE 2018 PSSA

ASSESSED STUDENTS

The PSSA assessed students include those from public schools who are required to participate as well as those from a small number of non-public schools (fewer than 500 students per grade level) that elected to participate. Also included were home-schooled students (fewer than 100 per grade) and a small number of foreign exchange students (generally fewer than 30 per grade through Grade 8). An exception was granted for those IEP students with quite significant cognitive impairments who met each of the following criteria, making them eligible to participate in the Pennsylvania Alternate System of Assessment (PASA) for mathematics, reading, and science: 1) was enrolled in the assessed grade level for the subject area, 2) had a very severe cognitive disability, 3) required very intensive instruction, 4) required very extensive adaptation and support to perform or participate meaningfully, 5) required very substantial modification of the general education curriculum, and 6) participated in the general education curriculum that differed markedly in form and substance from that of other students. (See the *2018 Pennsylvania System of School Assessment: Handbook for Assessment Coordinators*, p.8.)

Results for this chapter are presented in tables for the three PSSA subject areas (mathematics, ELA, and science). Accompanying each numbered table is a letter (M, E, or S) to designate the subject area. Mathematics results are indicated by "M," ELA results are indicated by "E," and science results are indicate by "S." Tables 10–1E through 10–1S provide a summary of the assessed students for each subject. The third line combines the number of paper and online tests that are processed. This number is typically less than the "Used Answer Booklets Received" column shown in Table 8-1. The reason for the difference is that completely blank answer booklets (no student name and no items responded to) are removed from the initial batch of materials scanned. See Chapter Eight for more details on processing. Some processed booklets have student identifying information but will not receive a score. These results are presented within the 10-1 tables. Explanations for non-assessed students is provided later in this chapter.

Table 10–1E. Students Assessed on the 2018 PSSA: ELA

Description	Gr. 3	Gr. 4	Gr. 5	Gr. 6	Gr. 7	Gr. 8
Total number of PPT processed	124,154	128,250	126,946	125,182	123,981	125,299
Total number of CBT processed	3,044	3,280	5,088	5,595	6,327	6,512
Total number of tests processed	127,198	131,530	132,034	130,777	130,308	131,811
Total number of tests processed with a score	124,543	128,360	128,827	127,416	126,318	126,957
Total percent of tests processed with a score	97.9	97.6	97.6	97.4	96.9	96.3
Total number of tests processed without a score	2,655	3,170	3,207	3,361	3,990	4,854
Total percent of tests processed without a score	2.1	2.4	2.4	2.6	3.1	3.7
Students with an English Language Arts score used in state summaries	122,397	126,223	126,761	125,341	124,226	124,907

Note. PPT = Paper/Pencil Test
CBT = Computer-Based Test

Table 10–1M. Students Assessed on the 2018 PSSA: Mathematics

Description	Gr. 3	Gr. 4	Gr. 5	Gr. 6	Gr. 7	Gr. 8
Total number of PPT processed	124,161	128,350	126,812	125,442	124,285	125,532
Total number of CBT processed	3,158	3,371	5,384	5,507	6,128	6,401
Total number of tests processed	127,319	131,721	132,196	130,949	130,413	131,933
Total number of tests processed with a score	125,350	129,286	129,606	128,034	126,840	127,355
Total percent of tests processed with a score	98.5	98.2	98	97.8	97.3	96.5
Total number of tests processed without a score	1,969	2,435	2,590	2,915	3,573	4,578
Total percent of tests processed without a score	1.5	1.8	2	2.2	2.7	3.5
Students with a Mathematics score used in state summaries	122,563	126,481	126,868	125,385	124,225	124,780

Note. PPT = Paper/Pencil Test
CBT = Computer-Based Test

Table 10–1S. Students Assessed on the 2018 PSSA: Science

Description	Gr. 4	Gr. 8
Total number of PPT processed	127,601	123,636
Total number of CBT processed	4,084	8,226
Total number of tests processed	131,685	131,862
Total number of tests processed with a score	129,150	126,966
Total percent of tests processed with a score	98.1	96.3
Total number of tests processed without a score	2,535	4,896
Total percent of tests processed without a score	1.9	3.7
Students with a Science score used in state summaries	126,353	124,417

Note. PPT = Paper/Pencil Test
CBT = Computer-Based Test

NON-ASSESSED STUDENTS

As may be observed from Tables 10–1E through 10–1S, not all students were assessed. Although there are a variety of reasons for this, the major ones pertain to the following:

- Extended absence from school that continued beyond the assessment window
- Absence without make-up for at least one section of a subject-area test
- Failure to meet the attempt criteria on one or more subject-area test sections and no exclusion code was marked by school personnel. For mathematics, ELA, and science, the attempt criteria required a minimum of five items to be completed in each subject area section.
- EL students in the first year in U.S. schools (ELA only)
- Medical emergency
- Other reasons (includes parental request, students who are court-agency placed, students with multiple reasons coded, and the category of other)

The numbers of students without test scores for these reasons are presented in Tables 10–2E through 10–2S.

Table 10–2E. Counts of Students without Scores on the 2018 PSSA: ELA

Reason for Non-Assessment	Gr. 3	Gr. 4	Gr. 5	Gr. 6	Gr. 7	Gr. 8
Extended absence from school (Number)	66	80	96	131	217	319
Extended absence from school (Percent)	2.5	2.5	3	3.9	5.4	6.6
Non-attempt (Number)	397	595	376	415	531	532
Non-attempt (Percent)	15	18.8	11.7	12.3	13.3	11
EL in first year in U.S. schools (Number)	518	469	487	365	372	330
EL in first year in U.S. schools (Percent)	19.5	14.8	15.2	10.9	9.3	6.8
Medical emergency (Number)	110	138	165	205	280	378
Medical emergency (Percent)	4.1	4.4	5.1	6.1	7	7.8
Parental request - Chapter 4 (Number)	927	1,201	1,307	1,429	1,504	1,767
Parental request - Chapter 4 (Percent)	34.9	37.9	40.8	42.5	37.7	36.4
Parental request - Other reasons (Number)	510	532	592	627	769	1,108
Parental request - Other reasons (Percent)	19.2	16.8	18.5	18.7	19.3	22.8
Other reasons (Number)	127	155	184	189	317	420
Other reasons (Percent)	4.8	4.9	5.7	5.6	7.9	8.7
Total not assessed	2,655	3,170	3,207	3,361	3,990	4,854

Table 10–2M. Counts of Students without Scores on the 2018 PSSA: Mathematics

Reason for Non-Assessment	Gr. 3	Gr. 4	Gr. 5	Gr. 6	Gr. 7	Gr. 8
Extended absence from school (Number)	80	102	116	160	252	405
Extended absence from school (Percent)	4.1	4.2	4.5	5.5	7.1	8.8
Non-attempt (Number)	241	284	211	301	374	404
Non-attempt (Percent)	12.2	11.7	8.1	10.3	10.5	8.8
Medical emergency (Number)	123	155	182	220	330	424
Medical emergency (Percent)	6.2	6.4	7	7.5	9.2	9.3
Parental request - Chapter 4 (Number)	896	1,211	1,319	1,432	1,504	1,801
Parental request - Chapter 4 (Percent)	45.5	49.7	50.9	49.1	42.1	39.3
Parental request - Other reasons (Number)	511	540	578	620	808	1,149
Parental request - Other reasons (Percent)	26	22.2	22.3	21.3	22.6	25.1
Other reasons (Number)	118	143	184	182	305	395
Other reasons (Percent)	6	5.9	7.1	6.2	8.5	8.6
Total not assessed	1,969	2,435	2,590	2,915	3,573	4,578

Table 10–2S. Counts of Students without Scores on the 2018 PSSA: Science

Reason for Non-Assessment	Gr. 4	Gr. 8
Extended absence from school (Number)	153	498
Extended absence from school (Percent)	6	10.2
Non-attempt (Number)	295	462
Non-attempt (Percent)	11.6	9.4
Medical emergency (Number)	182	491
Medical emergency (Percent)	7.2	10
Parental request - Chapter 4 (Number)	1,184	1,825
Parental request - Chapter 4 (Percent)	46.7	37.3
Parental request - Other reasons (Number)	557	1,197
Parental request - Other reasons (Percent)	22	24.4
Other reasons (Number)	164	423
Other reasons (Percent)	6.5	8.6
Total not assessed	2,535	4,896

COMPOSITION OF SAMPLE USED IN SUBSEQUENT TABLES

Students included in the following demographic analyses were those who contributed to state summary statistics, using the final individual student data file provided to the Pennsylvania Department of Education in August, 2018. Students not included in the present state summary data were those who were 1) enrolled in a Pennsylvania school after October 1, 2017, 2) coded as EL and enrolled after May 6, 2017, 3) foreign exchange students, 4) home schooled, 5) enrolled in a non-public school, or 6) without a subject-area test score.

Demographic data for students taking the PSSA is presented separately for each subject area in Appendix I. Results for accommodations received were collected separately by subject area and are presented in separate tables as well.

COLLECTION OF STUDENT DEMOGRAPHIC INFORMATION

Data for analyses involving demographic characteristics were obtained primarily from information supplied by school district personnel through the Pennsylvania Information Management System (PIMS) and subsequently transmitted to DRC. Updates of attribution data were carried out through the DRC Attribution System. Some data such as accommodation information is marked directly on the student answer document at the time the PSSA is administered.

PARTICIPATION BY ADMINISTRATION MODE

Online (CBT) testing was available for the PSSA. As anticipated the vast majority of students were assessed utilizing paper/pencil tests (PPT). The bottom row of the tables presented in Appendix I present the number of students involved in the PPT and CBT administrations as well as Table 9–2 in Chapter Nine. Overall, the percent of students responding by CBT was approximately 2.33 to 6.20 percent for mathematics and ELA, and science. There was an increase in the percent of students taking a CBT across grade levels from 2017 to 2018, with percentages roughly doubling year-to-year.

DEMOGRAPHIC CHARACTERISTICS

Frequency data for each demographic category is presented in Appendix I. Percentages are based on students with scores in a subject area, which are shown at the bottom of the appropriate table. Included are students receiving education in a non-traditional setting, such as a court-agency placement.

TEST ACCOMMODATIONS PROVIDED

School personnel supplied information regarding accommodations that a student may have received while taking the PSSA. Accommodations are classified in terms of presentation, response, setting, and timing to enable students to better manage disabilities that hinder their ability to learn and respond to assessments. An accommodations manual entitled, 2018 *Accommodations Guidelines: Keystone Exams and PSSA* guides the development and analysis of the PSSA. This manual may be found on the PDE website at www.education.pa.gov. A glossary of accommodation terms as applied to the PSSA is provided in Table 10–3 at the end of this chapter.

The frequency with which accommodations were utilized for PPT and CBT formats is summarized separately for each subject area in Appendix J. Tabled values are based on all students whose score contributed to state summary statistics in a given subject area. Because of the very small number of students utilizing CBT, combined with the fact that a number of accommodations are primarily accessed by only one of the two administration modes, meaningful comparisons with PPT are rather limited. In the tables an NA denotes those instances in which a particular accommodation does not apply to one of the testing modes.

PRESENTATION ACCOMMODATIONS RECEIVED

Presentation Accommodations are those that provide alternate ways for students to access and process printed instructional material and assessments. These include auditory, tactile, visual, and combined auditory/visual modes of presentation. The number of presentation accommodations provided in the 2018 PSSA varied by subject and testing mode and are presented in Appendix J.

As depicted in Appendix J, the actual frequencies were low, with all but the read-aloud, audio, and other accommodation being used by less than one percent of assessed students statewide. Among accommodations specific to CBT the use of audio was the most frequent. For CBT administration there were also four unique accommodations for mathematics and science and three for ELA. They include audio, color chooser, and contrasting text chooser for all content areas, plus video sign language for mathematics and science.

RESPONSE ACCOMMODATIONS RECEIVED

Response Accommodations permit students to complete assignments, tests, and activities in different ways to solve or organize problems using some type of assistive device or organizer. The number of response accommodations provided on the 2018 PSSA varied by subject and testing mode and are presented in Appendix J. Very few response accommodations were coded as being utilized by students responding by CBT.

SETTING ACCOMMODATIONS RECEIVED

Setting Accommodations permit a change in location in which a student receives instruction or participates in an assessment. There were four categories of setting accommodations for mathematics, ELA, and science on the 2018 PSSA. As depicted in Appendix J, the most common accommodation across subject areas was small group setting. This was true for PPT and CBT modes of administration.

TIMING ACCOMMODATIONS RECEIVED

Timing Accommodations involve a change in the allowable length of time to complete assignments or assessments, including the way in which time is organized. There were four categories of timing accommodations for mathematics, ELA, and science on the 2018 PSSA. As depicted in Appendix J, the most commonly used accommodation was extended time, followed by frequent breaks. One consistent finding was that students responding by CBT had a higher usage of frequent breaks than observed for students taking a PPT.

ACCOMMODATION RATE FOR NON-IEP AND IEP STUDENTS

A comparison between students without an IEP (non-IEP students) and those with an IEP (IEP students) with regard to having received an accommodation is provided in Appendix K. In this data, accommodated means that a student received one or more of the total number of accommodations available for a given subject area; however, this also varies with administration mode. The total number of available accommodations for students taking a PPT was as follows: mathematics and science, 31; and ELA, 27. The number of available accommodations for students taking a CBT was as follows: mathematics and science, 27; and ELA, 22. The category of non-accommodated indicates that a student did not receive any accommodation during testing.

The general pattern of findings reveals a consistent and substantially higher percentage of IEP students receiving an accommodation in contrast to non-IEP students. This same pattern holds true regardless of test administration mode and PSSA test.

THE INCIDENCE OF ACCOMMODATIONS AND IEP AND EL STATUS

As noted in Appendix L, students with an IEP received an accommodation of some type far more often than non-IEP students, with the exception of the extended time accommodation. As the PSSA is designed as having no time limit, any student may opt for extended time. Certain accommodations with very low frequencies are specific to particular disabilities while others, such as extended time are far more common and may also apply to any student. Accommodations having the largest frequencies can potentially supply the most stable data when separated out for subgroup analysis. Listed below are the most commonly used accommodations, which were chosen for display.

- Some test items/questions read aloud (mathematics, science)
- All test items/questions read aloud (mathematics, science)
- Small group setting (mathematics, ELA, science)
- Extended time (mathematics, ELA, science)
- Frequent breaks (mathematics, ELA, science)
- Some language questions/text-dependent analysis questions read aloud (ELA)
- All language questions/text-dependent analysis questions read aloud (ELA)

Coding for IEP is dichotomous, as students are classified IEP and non-IEP. For purposes of this analysis, an English Language Learner (EL) is a student classified EL and enrolled in a U.S. school on or before May 6, 2017. All other assessed students, including those who have exited an ESL/bilingual program and are in the first or second year of monitoring, are regarded as non-EL. Students coded as EL and enrolled in a U.S. school after May 6, 2017, are excluded from state summary statistics as stated earlier in this chapter.

Customarily, a considerably larger percentage of IEP students receive a given accommodation than non-IEP students. Although less frequent, certain accommodations also have a high frequency rate for EL students. To separate out the effect of being classified IEP or EL, four possible combinations are presented in the Appendix L. These include general education students who are neither IEP nor EL, students who are IEP but non-EL, students who are EL but non-IEP, and students who are both IEP and EL. The bottom row for each grade provides the total number of assessed students in each of the four classifications.

GLOSSARY OF ACCOMMODATION TERMS

Table 10–3 provides a brief description of accommodation terms as used in the PSSA. Accommodation data was supplied by school personnel as noted in the left column of the table. The right column contains an explanation derived from the PDE publication, 2018 *Accommodations Guidelines: Keystone Exams and PSSA*. This manual may be found on the PDE website at www.education.pa.gov.

Table 10–3. Glossary of Accommodation Terms as Applied in the 2018 PSSA

Type of Testing Accommodation	Explanation
Student used the following Presentation Accommodations	
Braille format	Students may use a Braille format of the test. Answers must then be transcribed into the answer booklet without alteration.
Large print format	Students with visual impairments may use a large print format. Answers must then be transcribed into the answer booklet without alteration.
Magnification device	Devices to magnify print may be used for students with visual impairments and/or print disabilities.
Color overlay	Students with visual impairments may place a color overlay on a printed page of the test document to make text more readable.
Computer assistive technology (e.g., electronic screen reader) (PDE approval required)	Students with severe visual disabilities that prevent them from accessing instructional material or performing the skill may use computer assistive technology; however, PDE must approve the program and functions prior to the test window.
Test items/questions/text-dependent analysis signed	Deaf/hearing impaired students may receive test directions from a qualified interpreter. Signing is also permitted for PSSA ELA writing section multiple choice items, and text-dependent analysis questions and all items in PSSA mathematics and science and for Keystone Algebra and Biology.
Test items/questions/text-dependent analysis interpreted for EL	A qualified interpreter may translate directions or clarify instructions for the assessments. The interpreter may translate but not define specific words or test questions on the PSSA mathematics, science, ELA writing section multiple choice items, and text-dependent analysis questions and Keystone Algebra and Biology exams.
Some or all test items/questions/text-dependent analysis read aloud	Students unable to decode text visually may have items/questions read aloud for PSSA ELA writing section multiple choice items, and text-dependent analysis questions and all items in PSSA mathematics and science and for Keystone Algebra and Biology; however, words may not be defined.
Amplification device	In addition to using hearing aids, an amplification device to enhance clarity may be required.
Other (PDE approval required)	Other presentation accommodations indicated in the *Accommodation Guidelines* may be provided; however, PDE approval is required prior to the test window.
Spanish version for PSSA (Math and Science) and Keystone (Algebra and Biology)	Students whose first language is Spanish and who have been enrolled in U.S. schools for fewer than three years may take this version.

Table 10–3 (continued). Glossary of Accommodation Terms as Applied in the 2018 PSSA

Type of Testing Accommodation	Explanation
Student used the following Online Presentation Accommodations	
Audio	The online test form reads permissible test directions and items for a student unable to decode text. The accommodation must be marked within the test engine system. The accommodation is available on PSSA mathematics, science, ELA writing section multiple choice items, and text-dependent analysis questions and Keystone Algebra and Biology exams.
Video sign language (per accommodations guidelines)	Eligible students who use a sign language accommodation during instructional periods may use VSL on the PSSA mathematics and science and Keystone Algebra and Biology assessments.
Color chooser or contrasting text chooser	The use of this accommodation enables a visually impaired student to change the background color or text color to make text more readable.
Refreshable Braille	This accommodation allows students to use a screen reader to produce a Braille translation output.
Student used the following Response Accommodations	
Brailler/Note taker (per *Accommodations Guidelines*)	Students using this device as part of their regular instructional program may use it on the assessments; however, without thesaurus, spelling, or grammar checker.
Test administrator scribed **open-ended** responses at student's direction	A test administrator may record word-for-word exactly what a student dictated directly into the test booklet. This includes MC and OE responses Keystone Algebra, Biology, and Literature tests and PSSA mathematics, ELA, and science.
Test administrator marked **multiple-choice** responses at student's direction	A test administrator may mark an answer booklet at the direction of a student (e.g., a student may point to an MC answer with the test administrator marking the response in the answer booklet).
Test administrator transcribed student responses (per **Accommodations Guidelines**)	A test administrator may transcribe (copy) a student's written, typed, or keyed response into a standard answer booklet.
Qualified Interpreter translated, transcribed, and/or scribed student's **signed** responses	A qualified interpreter may interpret a student's **signed** responses into written English for Keystone Algebra and Biology exams, and PSSA mathematics and science assessments. Interpreters are not permitted to make corrections or change the meaning of the response.
Qualified Interpreter translated, transcribed, and/or scribed EL student responses	A qualified interpreter may interpret a student's non-English oral responses into written English for Keystone Algebra and Biology exams, and PSSA mathematics and science assessments. Interpreters are not permitted to make corrections or change the meaning of the response.
Mixed-mode test administration	Examinee taking the PSSA in computer-based mode provides handwritten responses to constructed response items in paper answer booklet.

Table 10–3 (continued). Glossary of Accommodation Terms as Applied in the 2018 PSSA

Type of Testing Accommodation	Explanation
Augmentative communication device	Students with severe communication difficulties may use a special device to convey responses, which must be transcribed into the answer booklet by the test administrator.
Keyboard, word processor, or computer (per *Accommodations Guidelines*)	This is an allowable accommodation as a typing function only for students with the identified need. Supports such as dictionaries, thesauri, spell checkers, and grammar checkers must be turned off. Answers must then be transcribed into the answer booklet without alteration.
Translation dictionary for EL student	A word-to-word dictionary that translates native language to English (or vice versa) without word definitions or pictures is allowed on any portion of the Keystone Algebra and Biology exams, and PSSA mathematics and science tests.
Computer assistive technology e.g., electronic screen reader) (PDE approval required)	Students with blindness or extremely low vision may use dictate text into a computer. Responses must be transcribed verbatim into student's regular answer booklet.
Other (per *Accommodations Guidelines* or PDE approval)	Other accommodations may be appropriate and available if they do not compromise the integrity of the assessment. Documentation must be provided to PDE.
Student used the following Setting Accommodations	
Hospital/home testing	A student who is confined to a hospital or to home during the testing window may be tested in that environment.
One-on-one setting	One-on-one settings are necessitated in certain instances, such as to reduce distraction or in the use of certain devices. A separate room may be used to reduce distraction.
Small group setting	Some students may require a test setting with fewer students or a setting apart from all other students to minimize distraction.
Other (per *Accommodations Guidelines* or PDE approval)	Other accommodations may be appropriate and available if they do not compromise the integrity of the assessment. Documentation must be provided to PDE.

Table 10–3 (continued). Glossary of Accommodation Terms as Applied in the 2018 PSSA

Type of Testing Accommodation	Explanation
Student used the following Timing Accommodations	
Extended time	Extended time may be allotted for each section of the test as a planned accommodation to enable students to finish.
Frequent breaks	Frequent breaks (breaks within a test section) may be scheduled for the completion of each test section; however, a test section must be completed within one school day.
Changed test schedule	Students whose disabilities prevent them from following a regular, planned test schedule may follow an individual schedule that enables test completion.
Other (per *Accommodations Guidelines* or PDE approval)	Other accommodations may be appropriate and available if they do not compromise the integrity of the assessment. Documentation must be provided to PDE.

CHAPTER ELEVEN: CLASSICAL ITEM STATISTICS

This chapter provides an overview of the two most familiar item-level statistics obtained from any classical (traditional) item analysis: item difficulty and item discrimination. The following results pertain only to operational PSSA items (i.e., those items that contributed to a student's total test score). Rasch item statistics are discussed in Chapter Twelve, and test-level statistics are found in Chapter Seventeen.

ITEM-LEVEL STATISTICS

Appendix F provides classical item statistics for all PSSA items. Results are organized by subject and grade. These statistics represent the item characteristics most often used to determine whether an item functioned properly and/or how a group of students performed on a particular item. The item statistics in the appendices include *p*-values for multiple-choice (MC) items and item means for open-ended (OE)[1] items (indicators of item difficulty); point-biserial correlations for MC items and item-test correlations for OE items (indicators of item discrimination); and the proportion of students selecting each MC item option or earning each OE item score point.

ITEM DIFFICULTY

At the most general level, an item's difficulty is indicated by its mean score in some specified group (e.g., grade level).

$$\bar{x} = \frac{1}{n} \cdot \sum_{i=1}^{n} x_i$$

In the mean score formula above, the individual item scores (*x*i) are summed and then divided by the total number of students (*n*). For multiple-choice items, student scores are represented by 0s and 1s (0 = wrong, 1 = right). With 0–1 scoring, the equation above also represents the number of students correctly answering the item divided by the total number of students. Therefore, this is also the proportion correct for the item, or the *p*-value. In theory, *p*-values can range from 0.00[2] to 1.00 on the proportion-correct scale. For example, if an item has a *p*-value of 0.89, it means 89 percent of the students answered the item correctly. Additionally, this value might also suggest that the item was relatively easy and/or the students who attempted the item were relatively high achievers. In other words, item difficulty and student ability are somewhat confounded.

For OE items, mean scores can range from the minimum possible score (usually zero) to the maximum possible score (e.g., four points in the case of some mathematics, ELA, and science items). Sometimes a pseudo *p*-value is provided for an OE item. This is done by dividing the mean item score by the maximum possible item score.

The minimum and maximum extremes of the difficulty scale are typically not seen in applied practice. However, understanding the extremes helps illustrate that relatively lower values correspond to more difficult items, and that relatively higher values correspond to easier items. (As a result of this, some assert that this index would be more accurately referred to as the item's easiness.)

Item difficulty is an important consideration for the PSSA tests because of the ranging achievement levels of students in Pennsylvania (Below Basic, Basic, Proficient, and Advanced). Items that are either very hard or very easy provide little information about student differences in achievement. However, an item answered correctly by a high percentage of students would suggest that the knowledge or skill the item taps has been mastered by most students. Conversely, an item answered incorrectly by a low percentage of students would suggest few students have mastered the knowledge or skill the item taps. On a standards-referenced test like the PSSAs, a test development goal is to include a wide range of item difficulties.

ITEM DISCRIMINATION

At the most general level, item discrimination[3] indicates an item's ability to differentiate between high and low achievers. It is expected that students with high ability (i.e., those who perform well on the PSSA overall) would be more likely to answer any given PSSA item correctly, while students with low ability (i.e., those who perform poorly on the PSSA overall) would be more likely to answer the same item incorrectly. For the PSSA tests, Pearson's product-moment correlation coefficient between item scores and test scores is used to indicate discrimination. (As commonly practiced, DRC removes the item score from the total score such that the resulting correlations will not be spuriously high.) The correlation coefficient can range from -1.0 to +1.0. If the aforementioned expectation is met (high-scoring students tend to get the item right while low-scoring students do not), the correlation between the item score and the total test score will be both positive and noticeably large in its magnitude (i.e., well above zero), meaning the item is a good discriminator between high and low ability students. This should be the case for all PSSA operational test items.

In summary, the correlation will be positive in value when the mean test score of the students answering the item correctly is higher than the mean test score of the students answering the item incorrectly.[4] In other words, this indicates that students who did well on the total test tended to do well on the item as well. However, an interaction can exist between item discrimination and item difficulty. Items answered correctly (or incorrectly) by a large proportion of examinees (i.e., the items have extreme *p*-values) can have reduced power to discriminate, and thus, can have lower correlations.

Discrimination is an important consideration for the PSSA because the use of more discriminating items on a test is associated with more reliable test scores. This in turn means that score estimates will be more precise (i.e., there will be smaller confidence intervals around the scores) and, perhaps more importantly, that more accurate performance level placements will be made. The issues of reliability, confidence intervals, and performance level classifications are further discussed in Chapter Eighteen.

DISCRIMINATION ON DIFFICULTY SCATTERPLOTS

Figure 11–1 contains a series of scatterplots showing item discrimination values (item-total correlation, *y*-axis) on the item difficulty (p-value, *x*-axis) for each grade and subject area test. Note that pseudo *p*-values (described above) are used for OE items in these plots. These plots provide maximum information about item discrimination and difficulty in a single visual image for each PSSA test. This is because the *x*- and *y*-axes also show histogram with following descriptive statistics:

- Minimum and maximum values
- Mean scores
- Median scores
- First and third quantile (Q1 and Q3).

The bivariate relationship between item discrimination (item-test *correlations*) and difficulty (item *mean* scores) is also presented through scatterplots in these figures. One does not usually expect any type of trend here. However, as noted earlier, it is often the case that items with extreme difficulties can have lower discrimination values, as this can be revealed in such plots.

[3] As noted earlier, the discrimination index for PSSA dichotomous MC items is typically referred to as the point-biserial correlation coefficient. For OE items, the term item-test correlation is sometimes used.

[4] It is legitimate to view the point-biserial correlation as a standardized mean difference. A positive value indicates students who chose that response had a higher mean score than the average student; a negative value indicates students who chose that response had a lower than average mean score.

OBSERVATIONS AND INTERPRETATIONS

To support the visuals, Table 11–1 provides break-out results for the MC and OE items. The mean *p*-values for the MC items ranged from about 0.51 to 0.57 for Mathematics and from 0.56 to 0.60 for ELA. Science MC items' *p*-values were 0.51 for grade 4 and 0.53 for grade 8. As test difficulties were intentionally increased during the construction of the 2018 tests to coincide with student performance, all mean MC *p*-values were slightly higher than the prior year. OE items' *p*-values ranged from 0.31 to 0.46 in mathematics, 0.52 to 0.59 in ELA, and were 0.50 and 0.43 for grades 4 and 8 respectively. These means show comparable difficulty from 2017 to 2018.

The mean item-test correlations ranged from roughly 0.34 to 0.46 and 0.46 to 0.72 for the MC and OE items, respectively. These are similar to historic trends. The OE correlations tended to be higher than the MC correlations, which is not surprising because the OE items include more score points. Based on the distribution of the discrimination (correlation) statistics, the overall item quality appears quite good. However, it is difficult to make global conclusions about overall test quality from these item statistics alone. With that caveat in mind, the results presented in this chapter indicate that the PSSA item difficulty and discrimination were in expected and acceptable ranges, and further evidence of the quality of the internal test structure is provided in the chapters that follow.

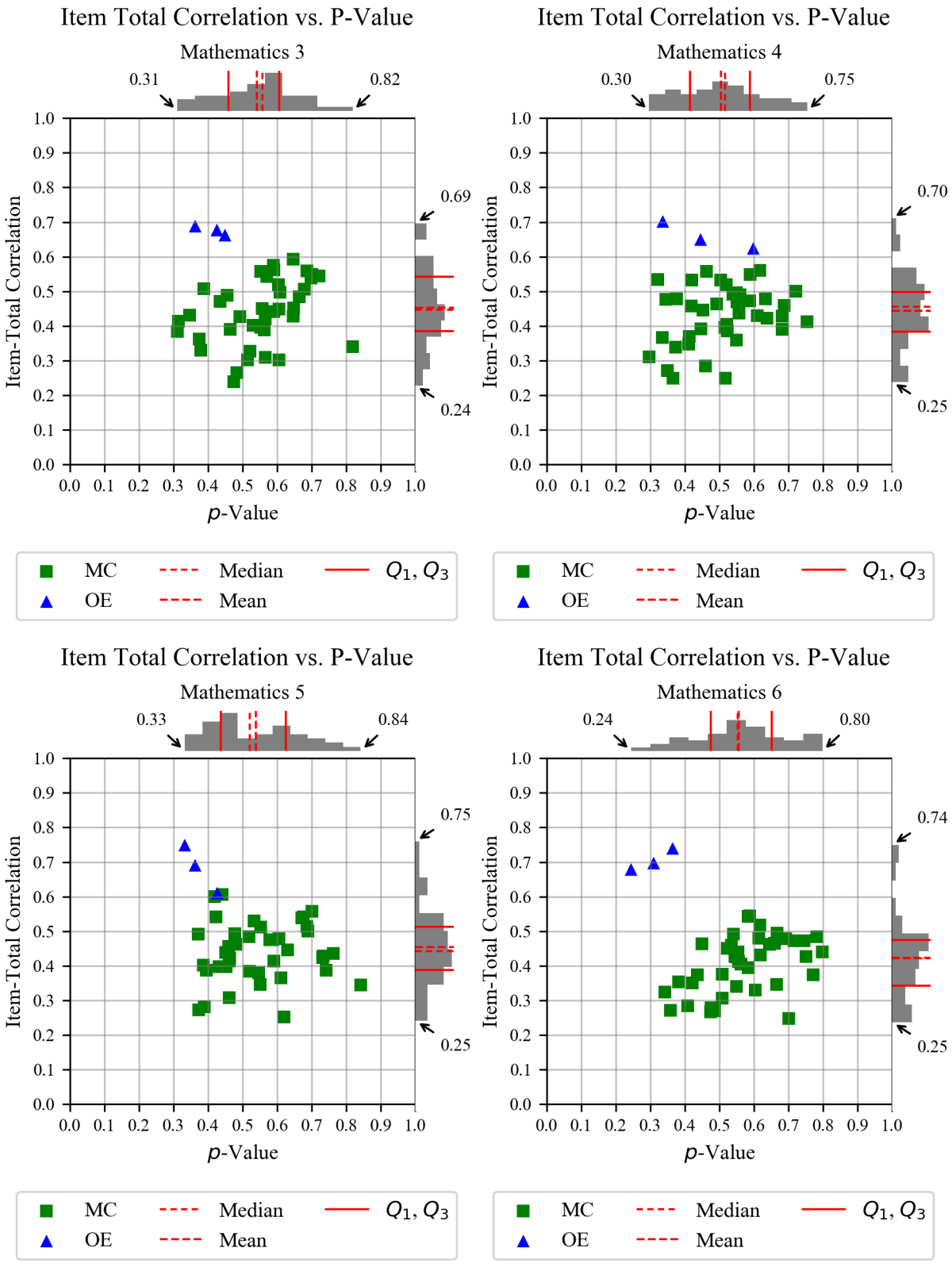
Figure 11–1 displays scatter plots for each content area and grade and displaying each item plotted by its p-value on the *x*-axis and its item-total correlation on the *y*-axis. Green squares indication MC items and blue triangles indicate OE items. From the difficulty distributions illustrated in Figure 11–1, a wide range of item difficulties appeared on each exam, which was one test development goal.

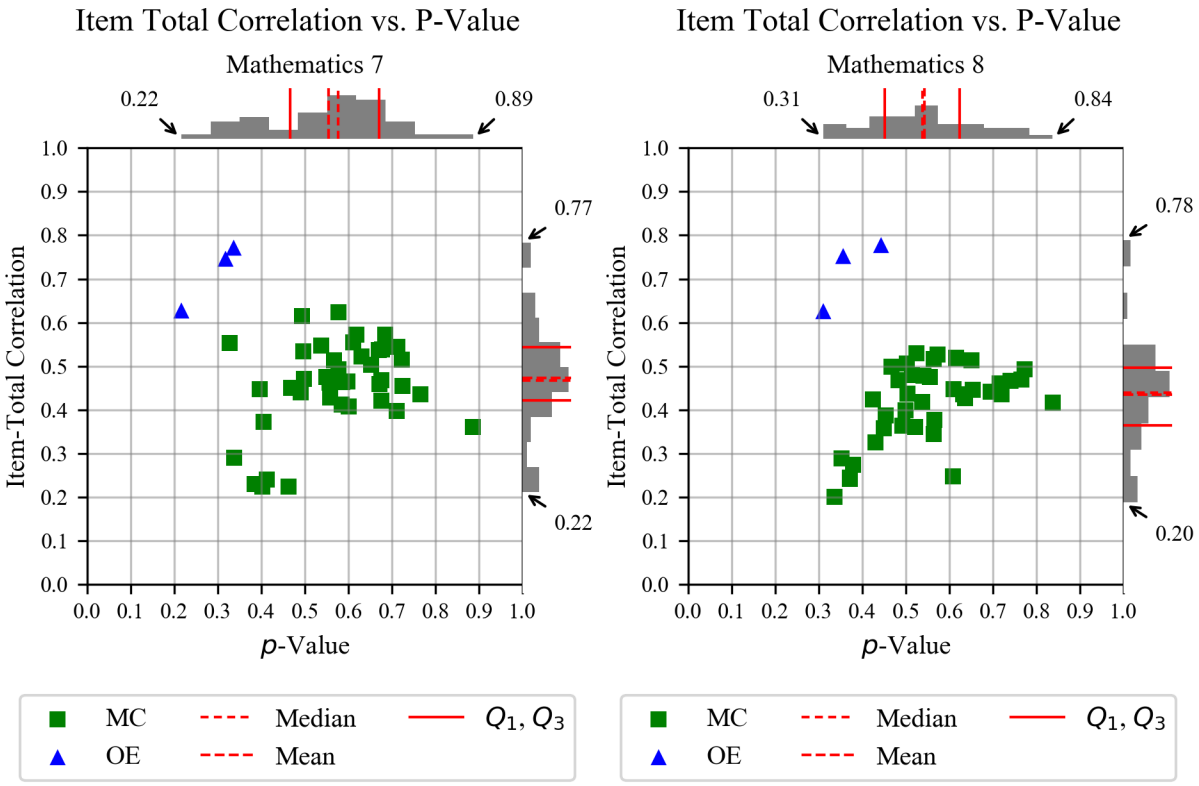
Table 11–1. Sum and Mean Statistics for MC and OE Items

Subject	Grade	MC Points	MC Sum	MC Mean *P*-val.	MC Mean I-T Corr.	OE Points	OE Sum	OE Mean *P*-Val.	OE Mean I-T Corr.
Mathematics	3	40	22.06	0.55	0.44	12	4.95	0.41	0.68
Mathematics	4	40	20.34	0.51	0.43	12	5.52	0.46	0.66
Mathematics	5	40	22.01	0.55	0.44	12	4.49	0.37	0.68
Mathematics	6	40	22.96	0.57	0.40	12	3.67	0.31	0.71
Mathematics	7	40	22.95	0.57	0.46	12	3.48	0.29	0.72
Mathematics	8	40	22.24	0.56	0.42	12	4.44	0.37	0.72
ELA	3	29	16.40	0.57	0.38	16	8.53	0.54	0.53
ELA	4	32	18.48	0.58	0.38	19	10.92	0.59	0.53
ELA	5	32	17.81	0.56	0.35	19	9.74	0.52	0.51
ELA	6	32	18.88	0.59	0.39	19	10.76	0.57	0.51
ELA	7	32	18.54	0.58	0.36	19	10.71	0.57	0.51
ELA	8	32	19.16	0.60	0.37	19	10.73	0.57	0.46
Science	4	38	20.24	0.53	0.36	10	5.02	0.50	0.48
Science	8	38	19.55	0.51	0.34	10	4.30	0.43	0.47

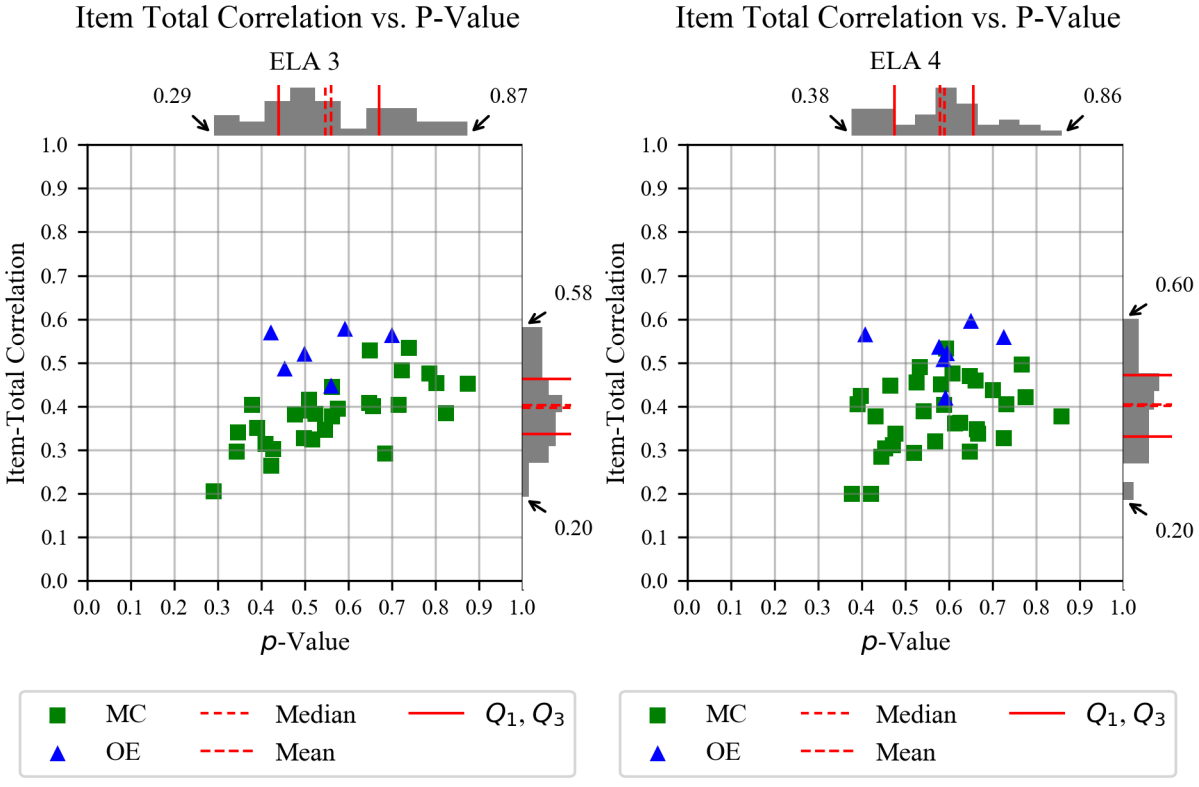
Note. I-T Corr. is the item-test score correlation. OE items for ELA include SA, EBSR, and TDA.

Figure 11–1. Discrimination on Difficulty Scatterplots

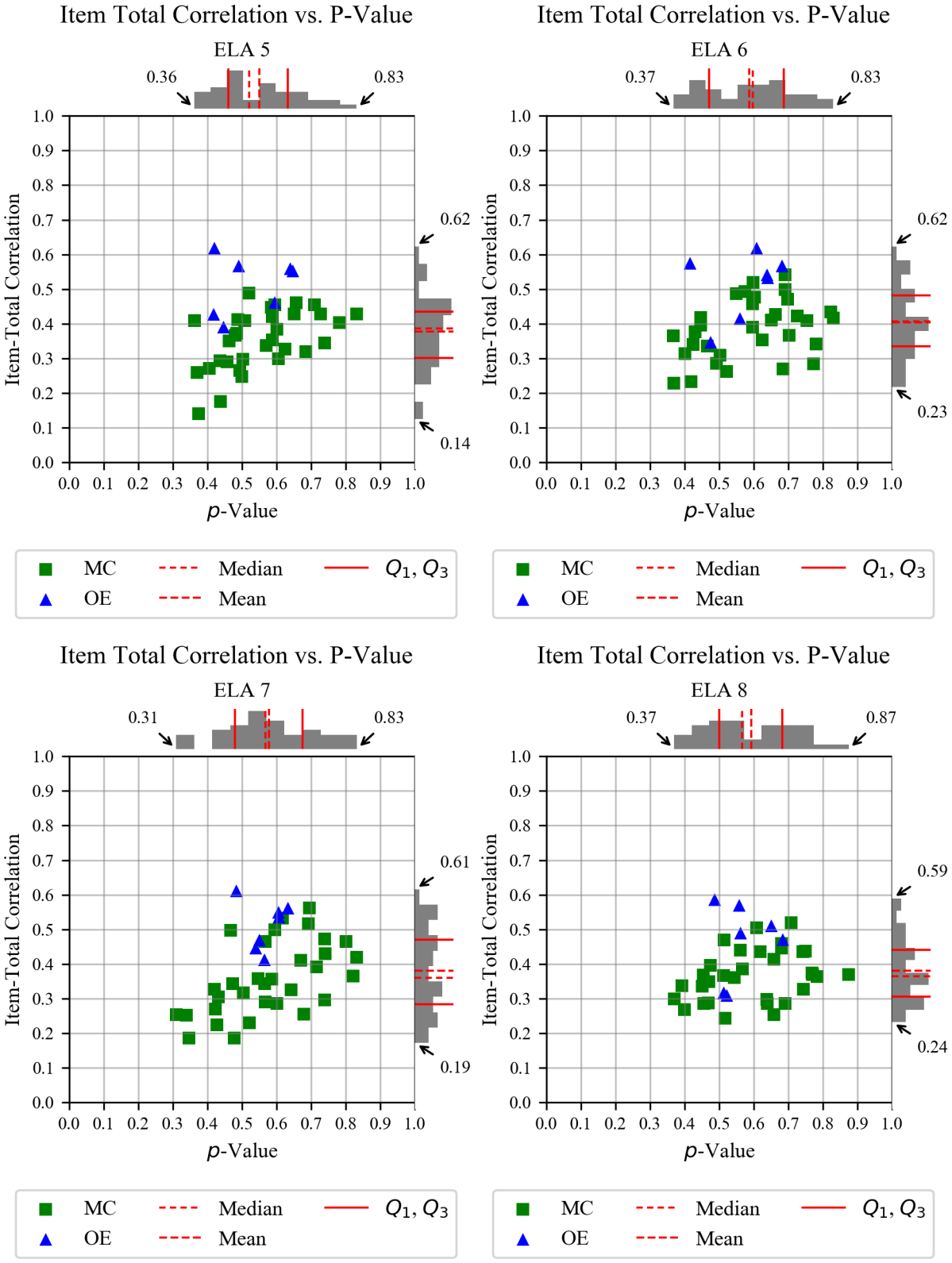


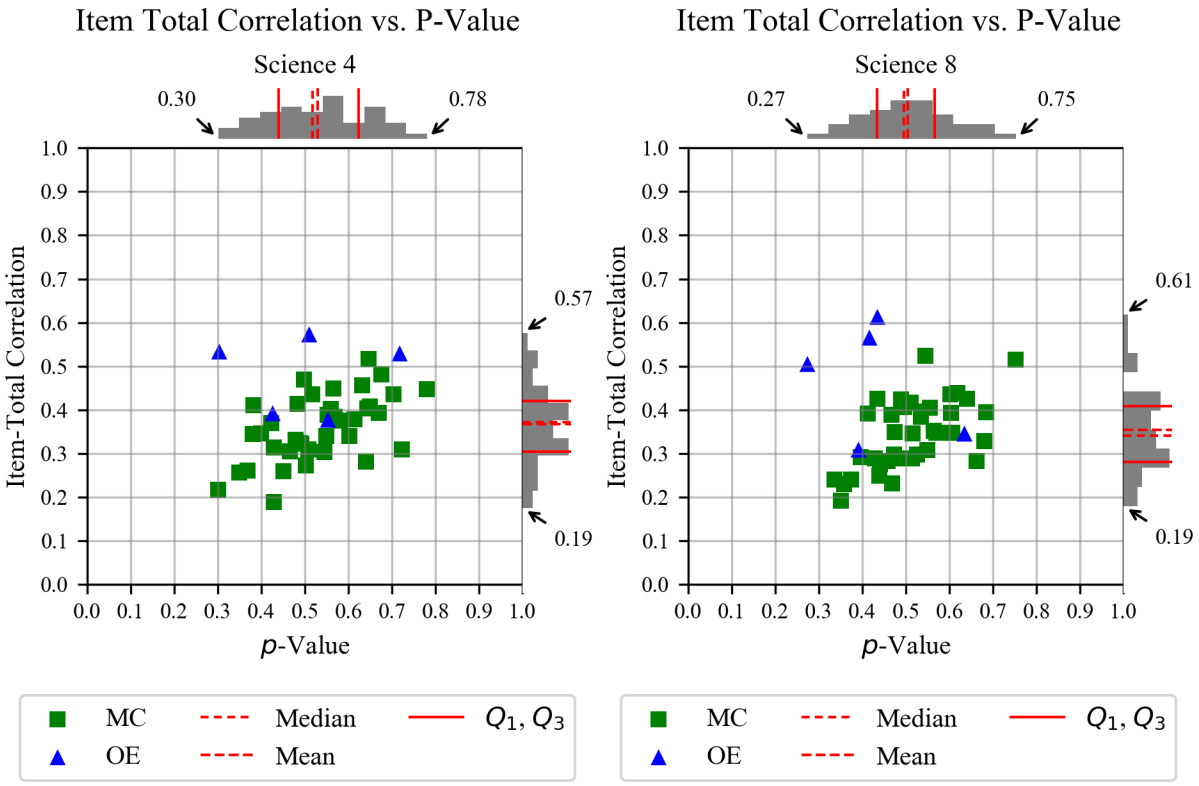

Item Total Correlation vs. P-Value
Mathematics 7
0.22
0.89
0.77
0.22
Item-Total Correlation
p-Value
MC
OE
Median
Mean
Q_1, Q_3

Item Total Correlation vs. P-Value
Mathematics 8
0.31
0.84
0.78
0.20
Item-Total Correlation
p-Value
MC
OE
Median
Mean
Q_1, Q_3


Item Total Correlation vs. P-Value
ELA 3
0.29
0.87
0.58
0.20
Item-Total Correlation
p-Value
MC
OE
Median
Mean
Q_1, Q_3

Item Total Correlation vs. P-Value
ELA 4
0.38
0.86
0.60
0.20
Item-Total Correlation
p-Value
MC
OE
Median
Mean
Q_1, Q_3


Item Total Correlation vs. P-Value
ELA 5
0.36
0.83
0.62
0.14
Item-Total Correlation
p-Value
MC
OE
Median
Mean
Q_1, Q_3
Item Total Correlation vs. P-Value
ELA 6
0.37
0.83
0.62
0.23
Item-Total Correlation
p-Value
MC
OE
Median
Mean
Q_1, Q_3
Item Total Correlation vs. P-Value
ELA 7
0.31
0.83
0.61
0.19
Item-Total Correlation
p-Value
MC
OE
Median
Mean
Q_1, Q_3
Item Total Correlation vs. P-Value
ELA 8
0.37
0.87
0.59
0.24
Item-Total Correlation
p-Value
MC
OE
Median
Mean
Q_1, Q_3


Item Total Correlation vs. P-Value
Science 4
0.30
0.78
0.57
0.19
Item-Total Correlation
p-Value
MC
OE
Median
Mean
Q_1, Q_3
Item Total Correlation vs. P-Value
Science 8
0.27
0.75
0.61
0.19
Item-Total Correlation
p-Value
MC
OE
Median
Mean
Q_1, Q_3

CHAPTER TWELVE: RASCH ITEM CALIBRATION

The item response theory (IRT) model used for the PSSA is based on the work of Georg Rasch. Rasch models have had a long-standing presence in applied testing programs and it has been the methodology continually used to calibrate PSSA items in recent history. IRT has several advantages over classical test theory, so it has become the standard procedure for analyzing item response data in large-scale assessments. However, IRT models make a number of strong assumptions related to dimensionality, local independence, model-data fit, and item parameter invariance. Resulting inferences derived from any application of IRT rests strongly on the degree to which the underlying assumptions are met.

This chapter outlines the procedures used for calibrating the operational PSSA items. Generally, item calibration is the process of assigning a difficulty-parameter estimate to each item on an assessment so that all items are placed onto a common scale. This chapter briefly introduces the Rasch model, reports the results from evaluations of the adequacy of the Rasch assumptions, and summarizes the Rasch item statistics for the PSSA mathematics, ELA, and science tests. Additional Rasch procedures are discussed with respect to scale linking in Chapter Fifteen.

DESCRIPTION OF THE RASCH MODEL

The Rasch partial credit model (RPCM; Wright and Masters, 1982) was used to calibrate PSSA items because both multiple-choice (MC) and open-ended (OE) items were part of the assessment. The RPCM extends the Rasch model (Rasch, 1960) for dichotomous (0, 1) items so that it accommodates the polytomous OE item data. Under the RPCM, for a given item *i* with *mi* score categories, the probability of person *n* scoring *x* (*x* = 0, 1, 2,... *mi*) is given by:

$$P_{ni}(X = x) = \frac{\exp\sum_{j=0}^{x}(\theta_n - D_{ij})}{\sum_{k=0}^{m_i}\exp\sum_{j=0}^{k}(\theta_n - D_{ij})},$$

where θ^n represents a student's proficiency (ability) level, and D^{ij} is the step difficulty of the j^{th} step on item i. For dichotomous MC items, the RPCM reduces to the standard Rasch model and the single step difficulty is referred to as the item's difficulty. The Rasch model predicts the probability of person n getting item i correct as follows:

$$P_{ni}(X = 1) = \frac{\exp(\theta_n - D_{ij})}{1 + \exp(\theta_n - D_{ij})}.$$

The Rasch model places both student ability and item difficulty (estimated in terms of log-odds or logits) on the same continuum. When the model assumptions are met, the Rasch model provides estimates of a person's ability which are independent of the items employed in the assessment, and conversely, estimates item difficulty independently of the sample of examinees. (As noted in Chapter Eleven, interpretation of item *p*-values confounds item difficulty and student ability.)

SOFTWARE AND ESTIMATION ALGORITHM

Item calibration was implemented via WINSTEPS 3.81.00 computer program (Wright and Linacre, 2014), which employs unconditional (UCON), joint-maximum-likelihood estimation (JMLE).

SAMPLE CHARACTERISTICS

The characteristics of calibration samples are reported in Chapter Nine. These samples only include the students who attempted the tests. All omits (no response) and multiple responses (more than one response selected) were scored as incorrect answers (coded as 0s) for calibration.

CHECKING RASCH ASSUMPTIONS

Since the Rasch model was the basis of all calibration, scoring, and scaling analyses associated with the PSSA, the validity of the inferences from these results depends on the degree to which the assumptions of the model were met and how well the model fits the test data. Therefore, it is important to check these assumptions. This section evaluates the dimensionality of the data, local item independence, item fit, and item parameter invariance. It should be noted that only operational items were analyzed since they are the basis of student scores.

UNIDIMENSIONALITY

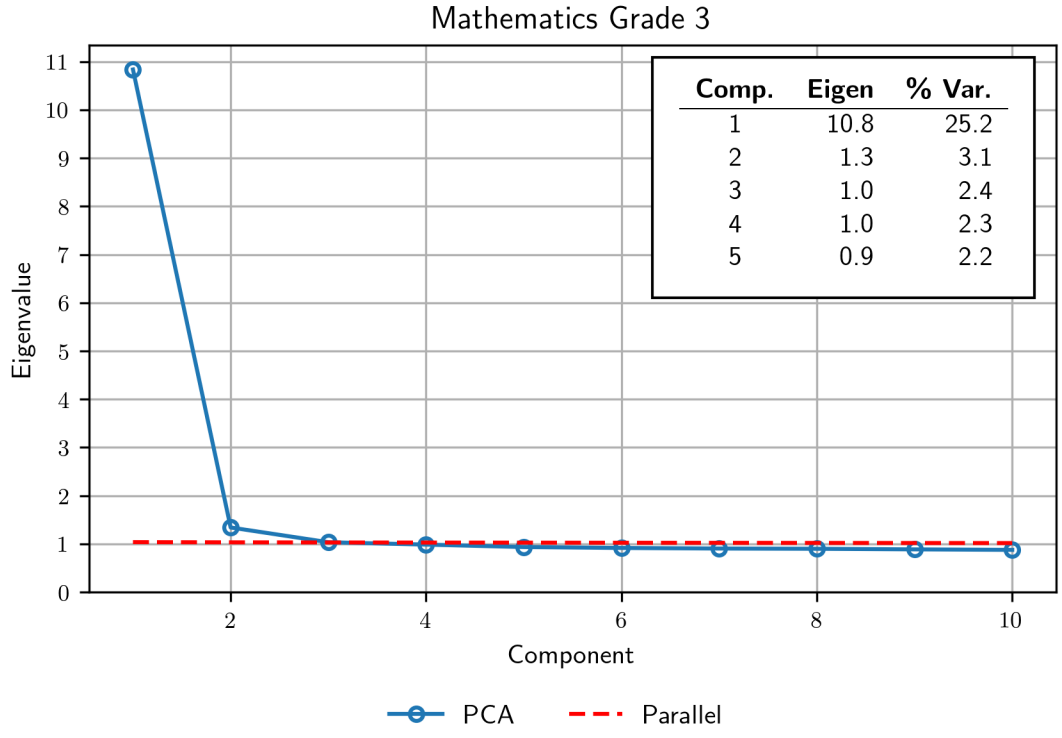
Rasch models assume that one dominant dimension determines the difference among students' performances. Principal Components Analysis (PCA) can be used to assess the unidimensionality assumption. The purpose of the analysis is to verify whether any other dominant component(s) exist among the items. If any other dimensions are found, the unidimensionality assumption would be violated.

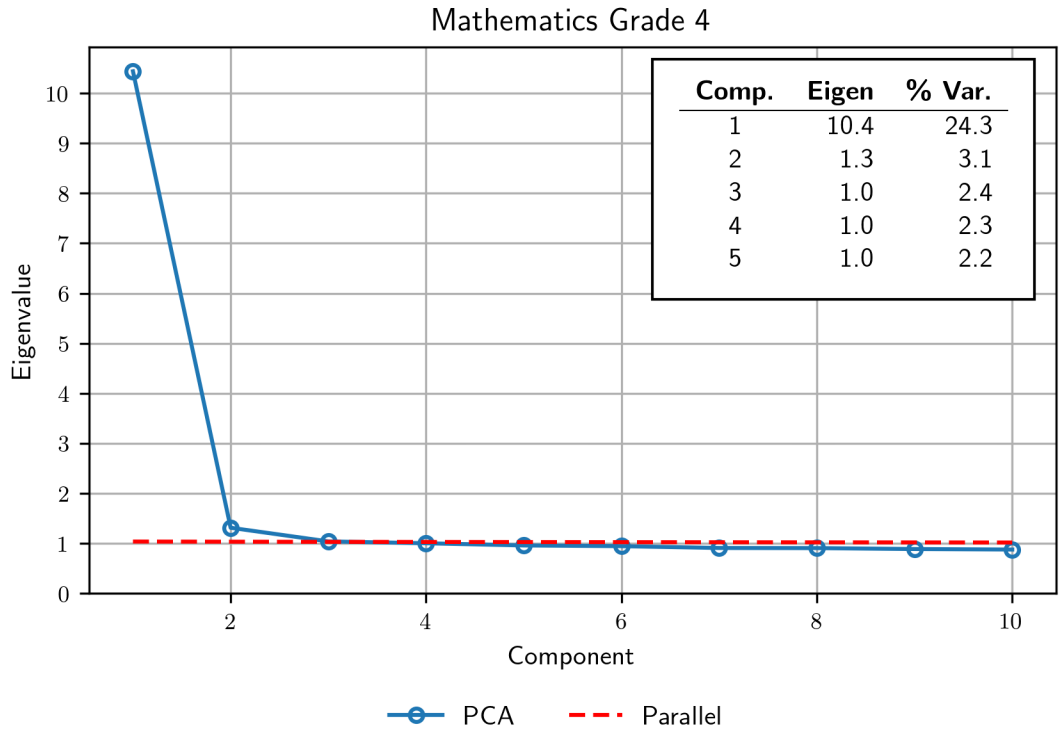
Figure 12–1 shows the PCA results for the mathematics, ELA, and science tests. The results include the eigenvalues and the percentage of variance explained for the first five components as well as the scree plots. The scree plots show the eigenvalues plotted by component number and the results from a parallel analysis. The total number of components in PCA is same as the total number of items in a test; however, Figure 12–1 shows only the first 10 components given that beyond 10th component the additional information would be negligible.

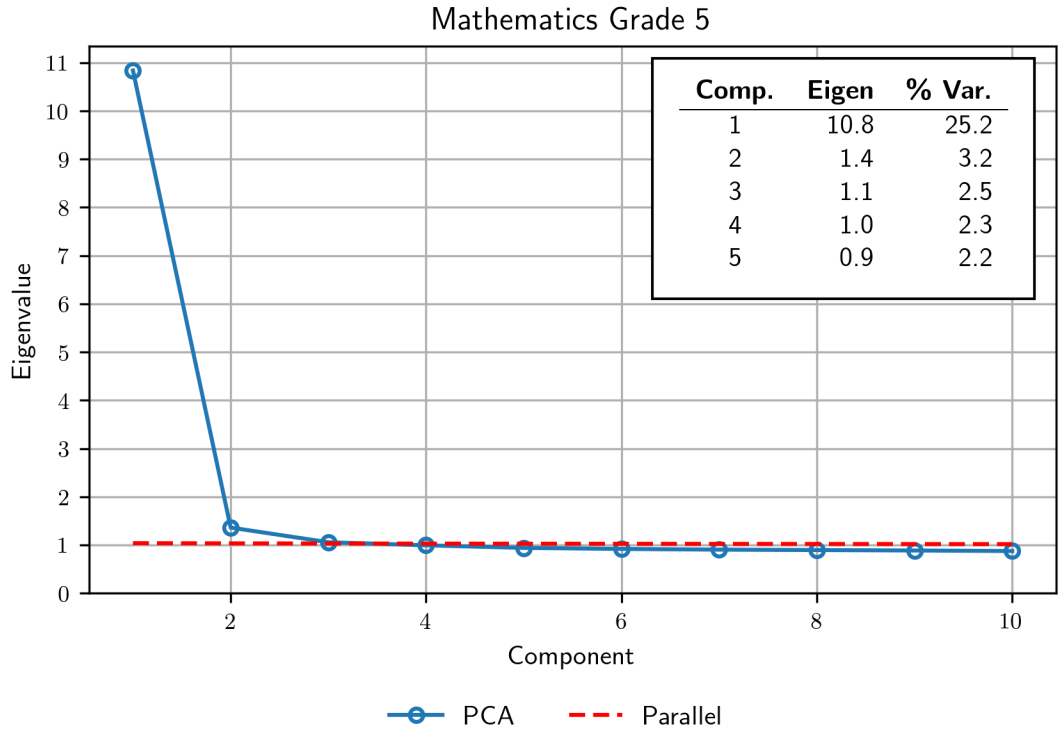
Parallel analysis (Horn, 1965) is a technique to decide how many factors exists in principal components. A parallel analysis (Horn, 1965) was also conducted to help distinguish components that are real from components that are random. For the parallel analysis, 100 random data sets were created of size equal to the original data. For each random data set, a PCA was performed and the resulting eigenvalues stored. Then for each component, the upper 95th percentile value of the distribution of the 100 eigenvalues from the random data sets was plotted. Given the size of the data generated for the parallel analysis, the reference line is essentially equivalent to plotting a reference line for an eigenvalue of 1.

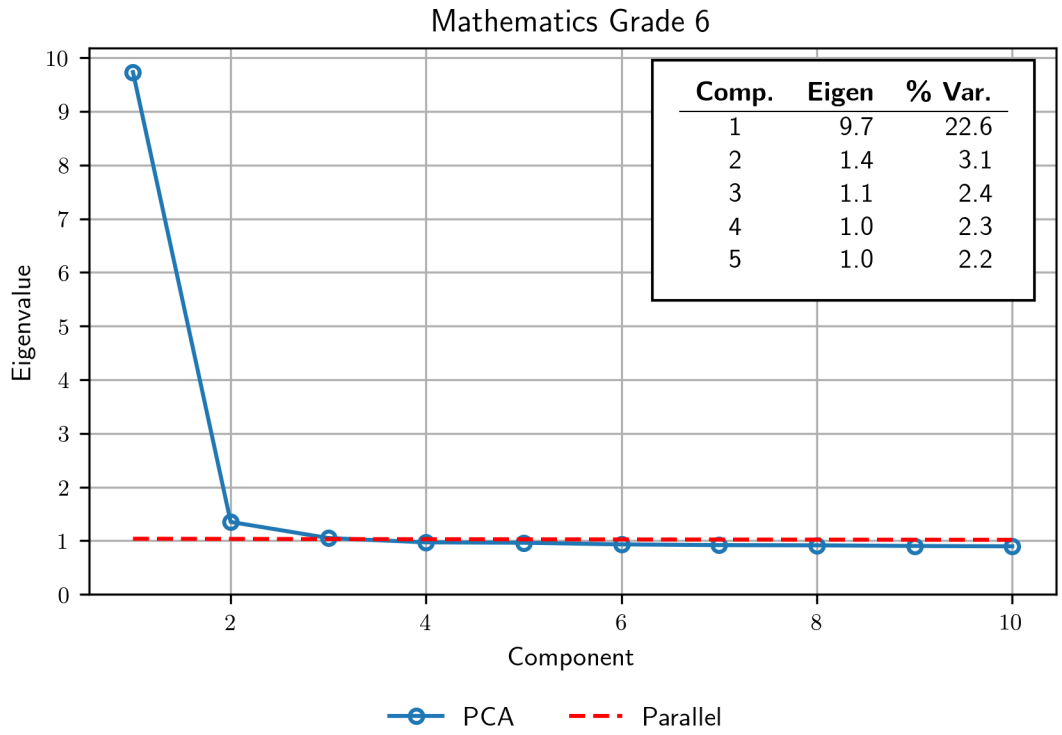
As can been seen in Figure 12–1, for PSSA mathematics the primary dimension explained about 22.5 percent to 27.1 percent of the total variance across Grades 3 through 8. The eigenvalues of the second dimensions ranged from 3.1 to 3.3. This indicates that the second dimension accounted for 3.1 to 3.3 of total variance. For ELA, the primary dimension explained 19.5 to 21.7 and the second dimension explained 3.1 to 4.0. For science the corresponding ranges were 18.3 and 2.7 for grade 4, and 17.3 and 2.8 for grade 8. Overall, the PCA suggests that there is one clearly dominant dimension for all mathematics, ELA, and science tests.

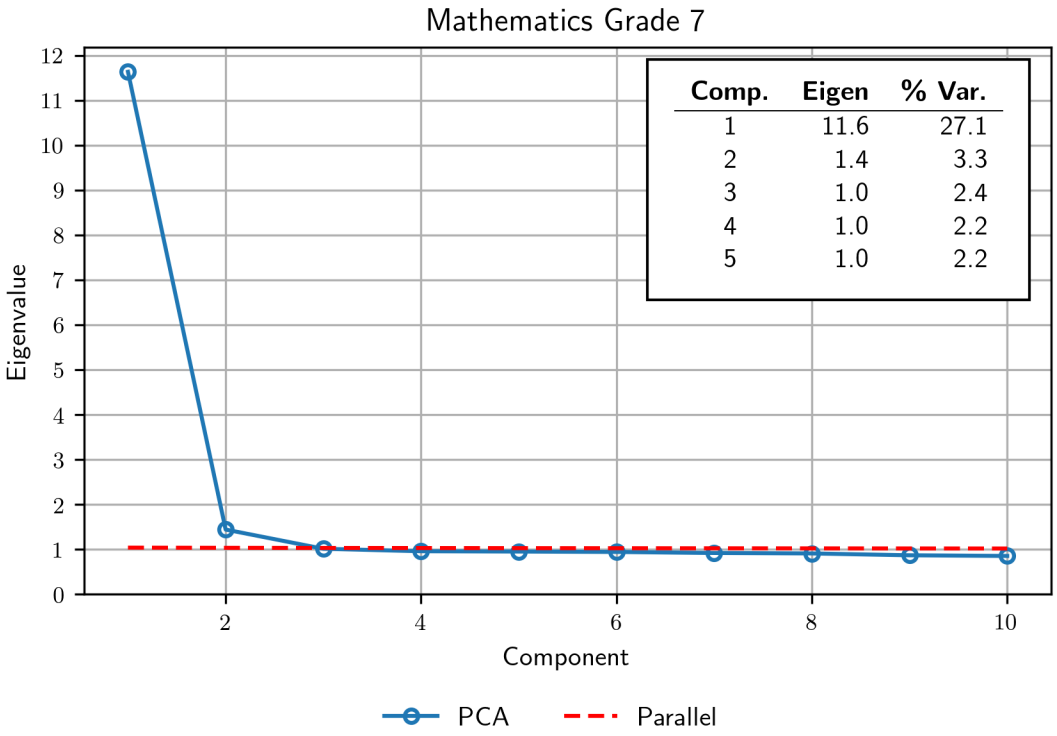
Figure 12–1. Scree Plots Local Independence

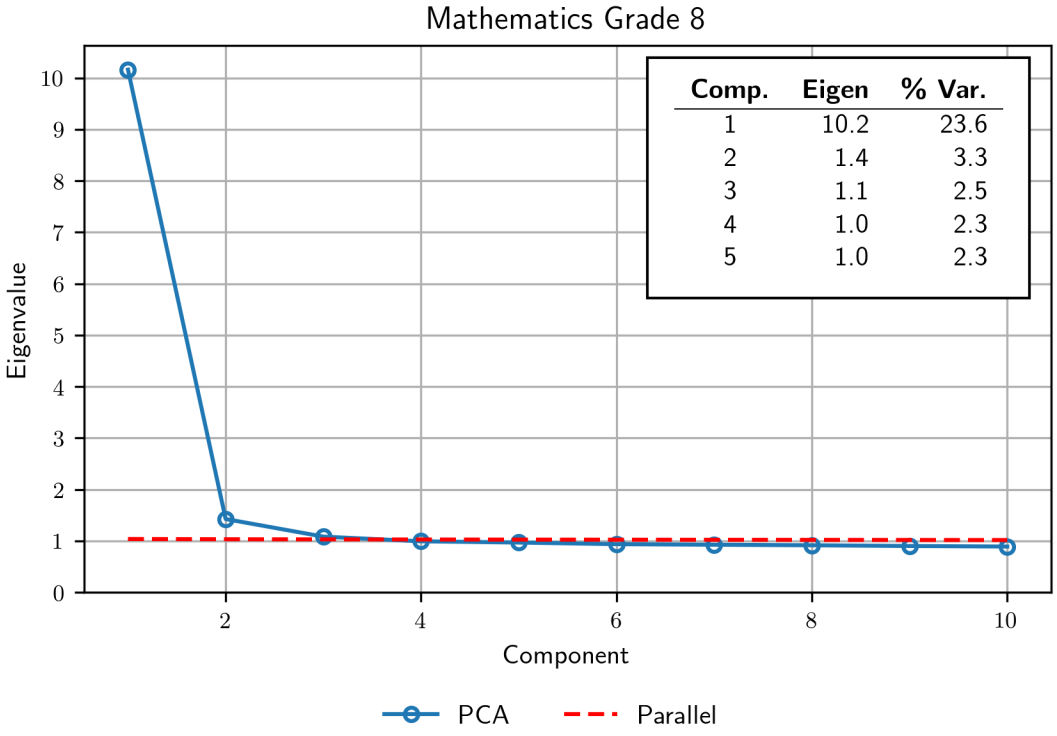


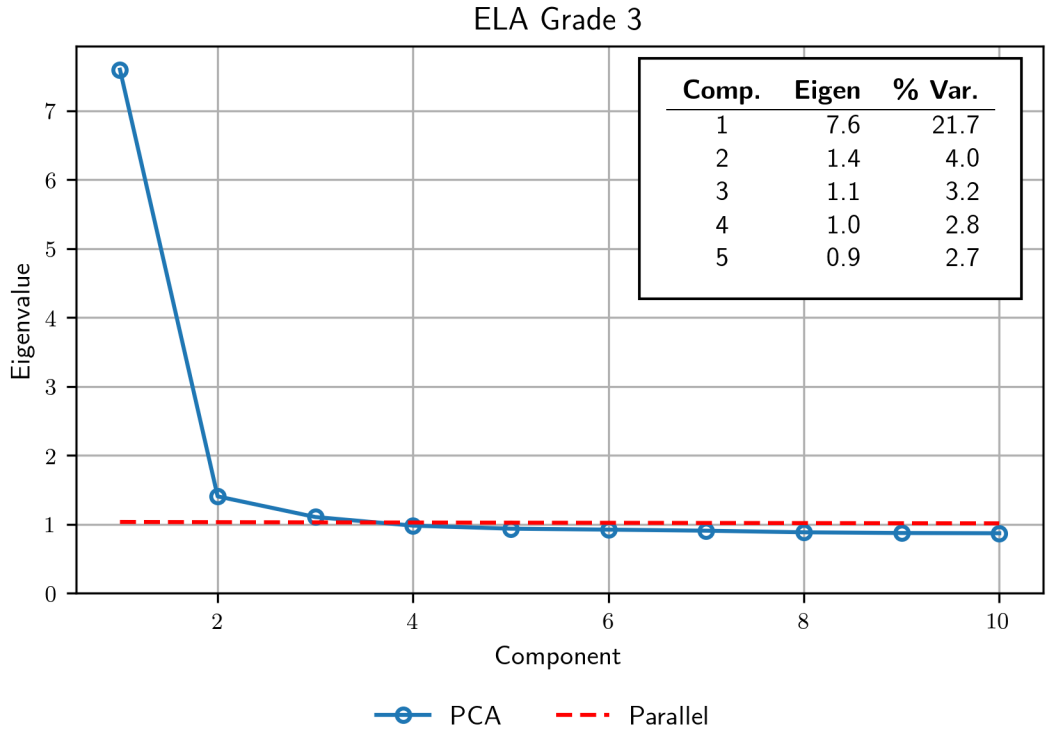


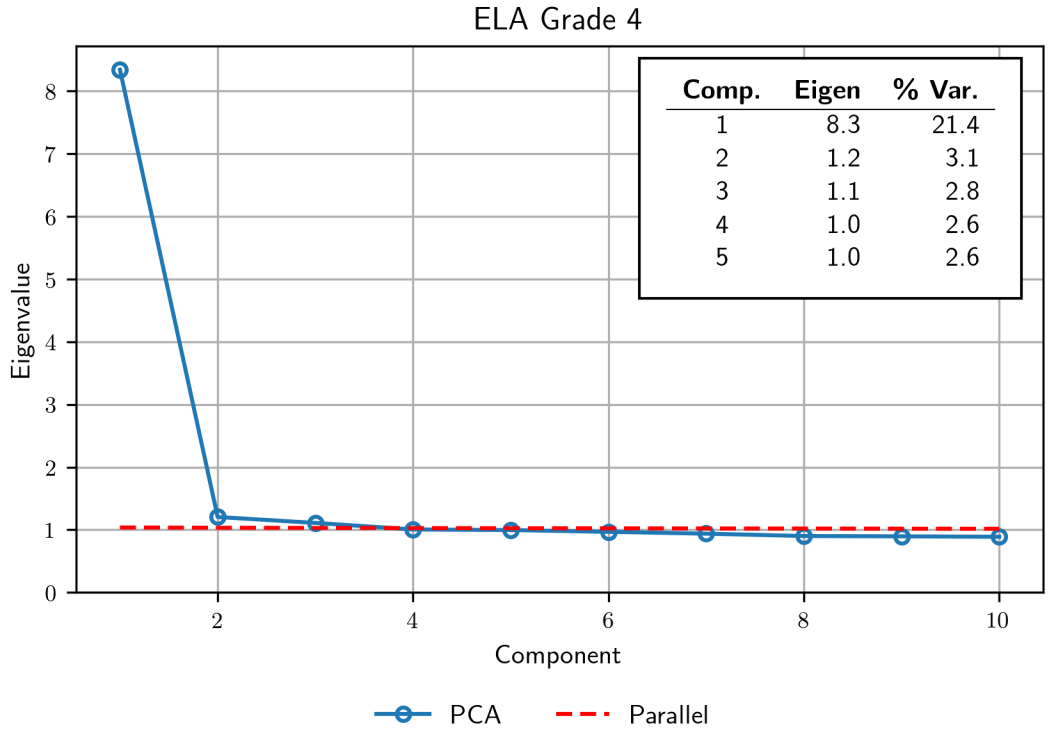

Mathematics Grade 5
Comp. Eigen % Var.
1 10.8 25.2
2 1.4 3.2
3 1.1 2.5
4 1.0 2.3
5 0.9 2.2
Eigenvalue
Component
PCA
Parallel


Mathematics Grade 6
Comp. Eigen % Var.
1 9.7 22.6
2 1.4 3.1
3 1.1 2.4
4 1.0 2.3
5 1.0 2.2
Eigenvalue
Component
PCA
Parallel


Mathematics Grade 7
Comp. Eigen % Var.
1 11.6 27.1
2 1.4 3.3
3 1.0 2.4
4 1.0 2.2
5 1.0 2.2
Eigenvalue
Component
PCA
Parallel


Mathematics Grade 8
Comp. Eigen % Var.
1 10.2 23.6
2 1.4 3.3
3 1.1 2.5
4 1.0 2.3
5 1.0 2.3
Eigenvalue
Component
PCA
Parallel


ELA Grade 3
Comp. Eigen % Var.
1 7.6 21.7
2 1.4 4.0
3 1.1 3.2
4 1.0 2.8
5 0.9 2.7
Eigenvalue
Component
PCA
Parallel


ELA Grade 4
Comp. Eigen % Var.
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2 1.2 3.1
3 1.1 2.8
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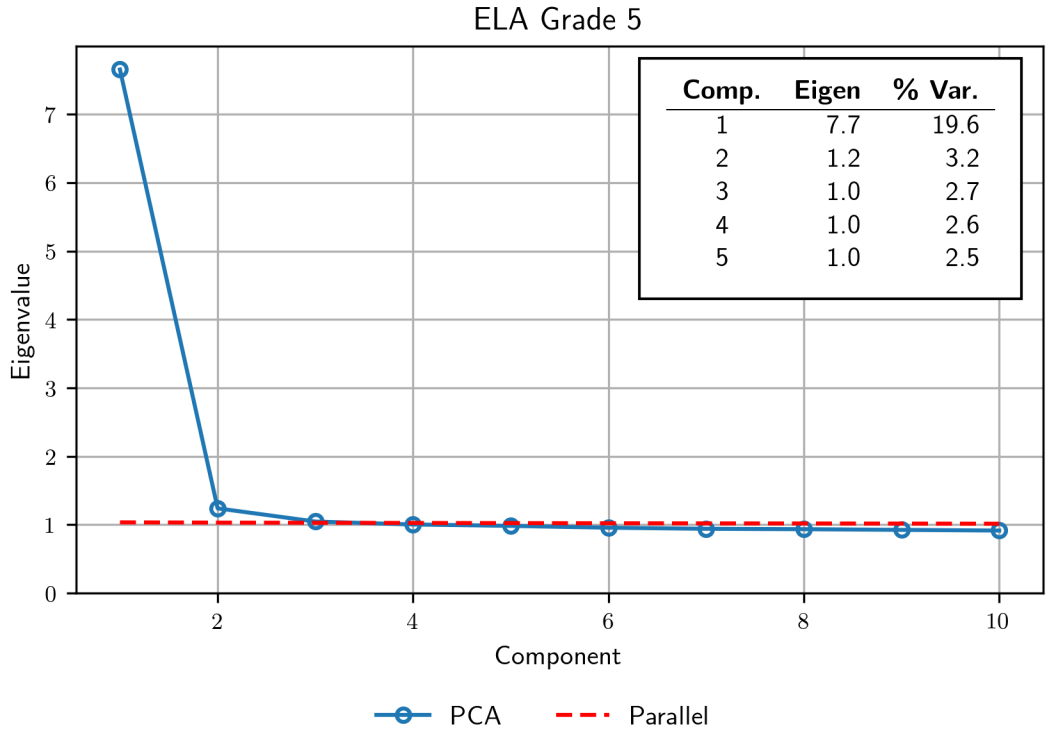
Eigenvalue
Component
PCA
Parallel


ELA Grade 5
Comp. Eigen % Var.
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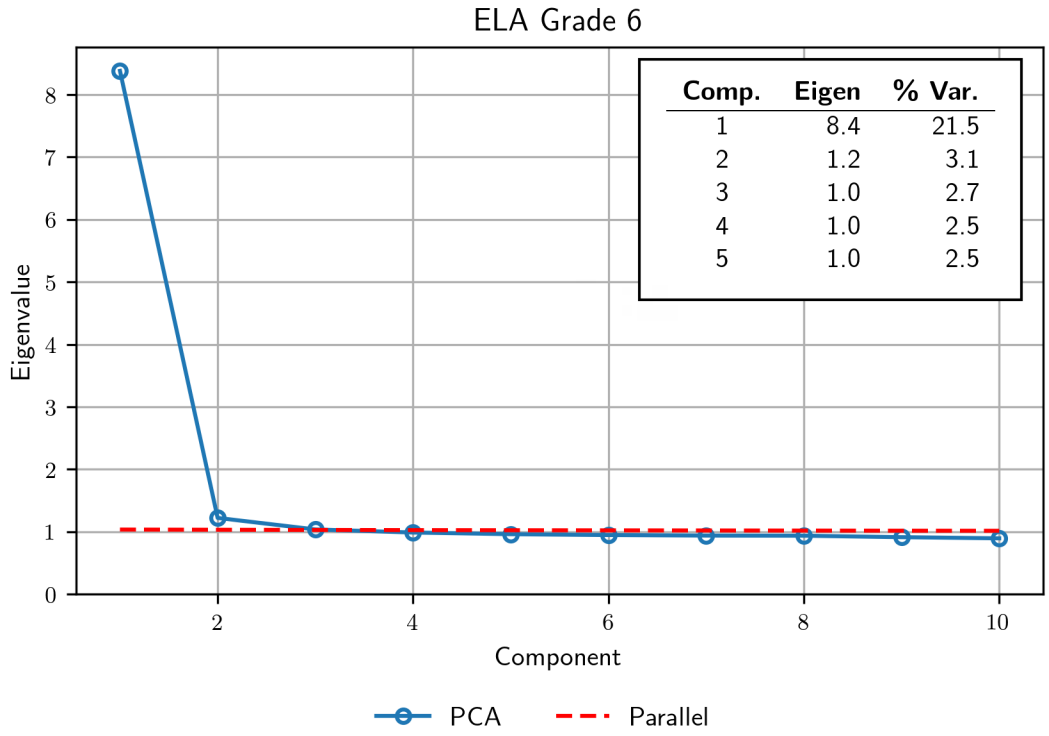
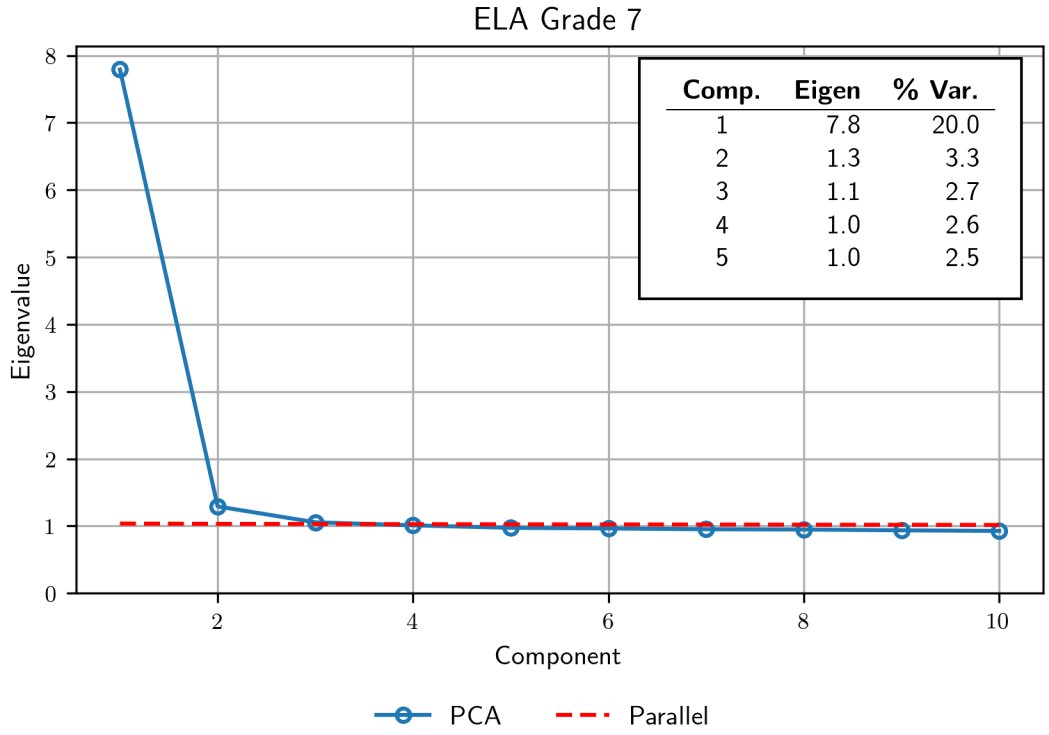
2 1.2 3.2
3 1.0 2.7
4 1.0 2.6
5 1.0 2.5
Eigenvalue
Component
PCA
Parallel


ELA Grade 6
Comp. Eigen % Var.
1 8.4 21.5
2 1.2 3.1
3 1.0 2.7
4 1.0 2.5
5 1.0 2.5
Eigenvalue
Component
PCA
Parallel


ELA Grade 7
Comp. Eigen % Var.
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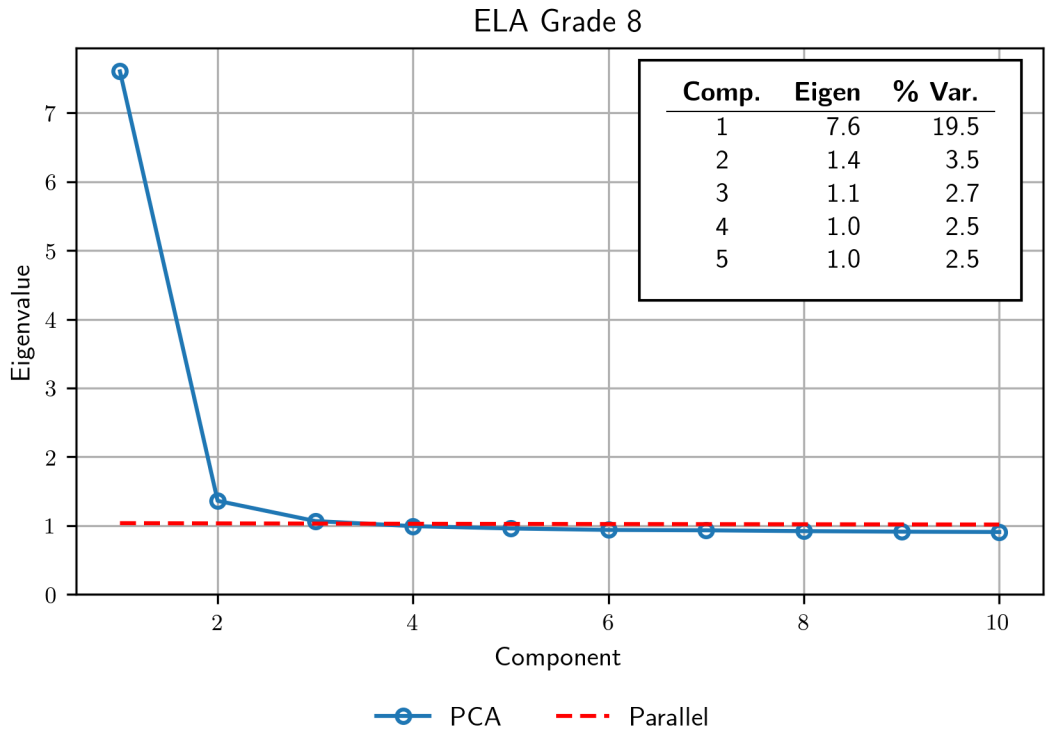
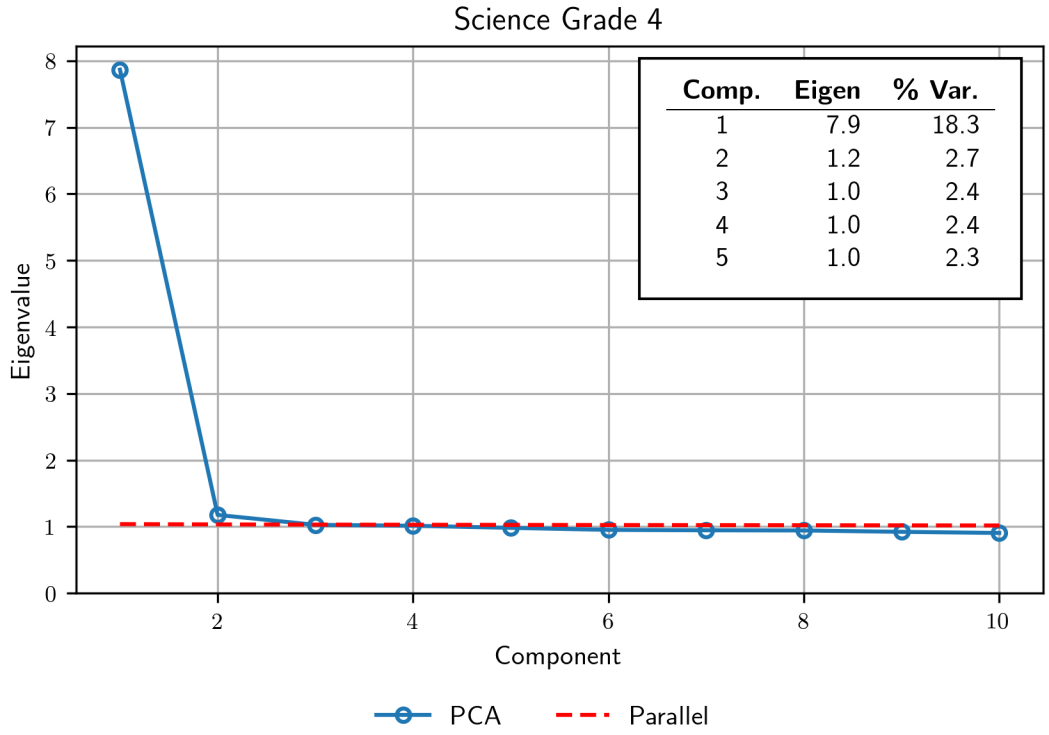
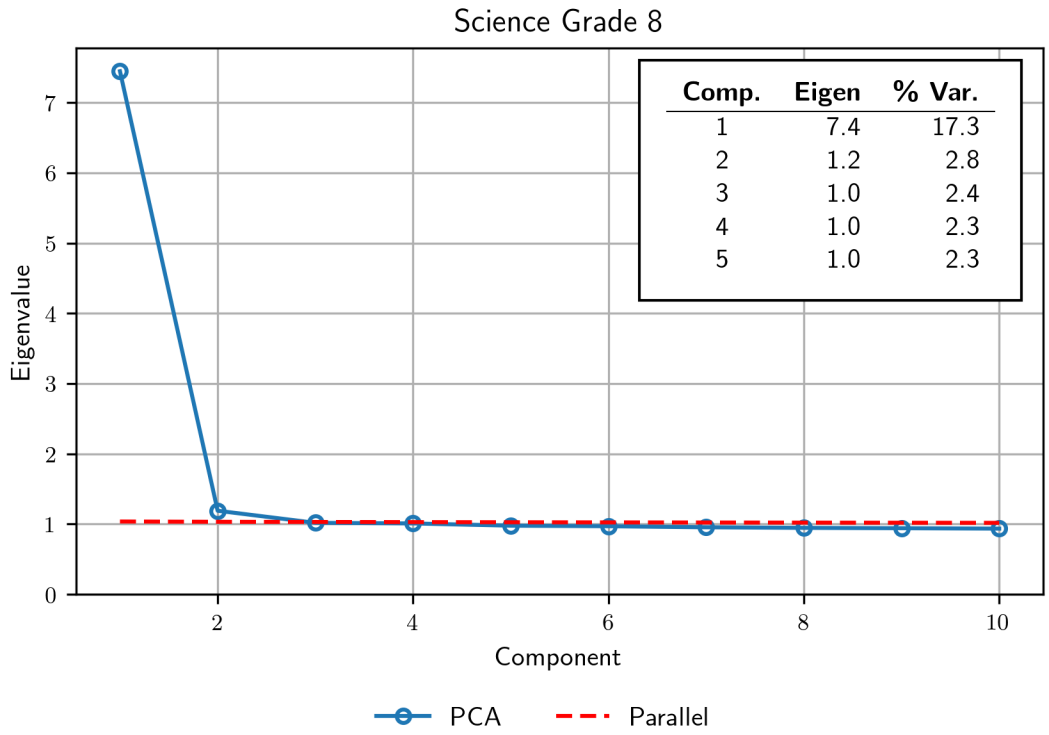
2 1.3 3.3
3 1.1 2.7
4 1.0 2.6
5 1.0 2.5
Eigenvalue
Component
PCA
Parallel


ELA Grade 8
Comp. Eigen % Var.
1 7.6 19.5
2 1.4 3.5
3 1.1 2.7
4 1.0 2.5
5 1.0 2.5
Eigenvalue
Component
PCA
Parallel


Science Grade 4
Comp. Eigen % Var.
1 7.9 18.3
2 1.2 2.7
3 1.0 2.4
4 1.0 2.4
5 1.0 2.3
Eigenvalue
Component
PCA
Parallel


Science Grade 8
Comp. Eigen % Var.
1 7.4 17.3
2 1.2 2.8
3 1.0 2.4
4 1.0 2.3
5 1.0 2.3
Eigenvalue
Component
PCA
Parallel

Local independence (LI) is a fundamental assumption of IRT. No relationship should exist between examinees' responses to different items after accounting for the abilities measured by a test. In formal statistical terms, a test X that is comprised of items $X_1, X_2,\ldots X_n$ is locally independent with respect to the latent variable θ if, for all $x = (x_1, x_2,\ldots x_n)$ and θ,

$$P\left(\mathbf{X} = \mathbf{x} \mid \theta\right) = \prod_{i=1}^{I} P\left(X_i = x_i \mid \theta\right).$$

This formula essentially states that the probability of any pattern of responses across all items ($\mathbf{x}$), after conditioning on the abilities (θ) measured by the test, should be equal to the product of the conditional probabilities across each item (cf. the multiplication rule for independent events where the joint probabilities are equal to the product of the associated marginal probabilities).

The equation above shows the condition after satisfying the strong form of local independence. A weak form of local independence (WLI) was proposed by McDonald (1979). The distinction is important as many indicators of local dependency are actually framed by WLI. The requirement would be for the conditional covariances of all pairs of item responses, conditioned on the abilities, to be equal to zero. When this assumption is met, the joint probability of responses to an item pair, conditioned on abilities, is the product of the probabilities of responses to these two items, as shown below. (This is a weaker form because higher-order dependencies among items are allowed.) Based on the WLI, the following expression can be derived:

$$P\left(X_i = x_i, X_j = x_j \mid \theta\right) = P\left(X_i = x_i \mid \theta\right) P\left(X_j = x_j \mid \theta\right).$$

Marais and Andrich (2008) pointed out that local item dependence in the Rasch model can occur in two ways that some may not distinguish. The first way occurs when the assumption of unidimensionality is violated. Here, other nuisance dimensions besides a dominant dimension determine student performance (this can be called "trait dependence"). The second violation occurs when responses to an item depend on responses to another. This is a violation of statistical independence and can be called response dependence. Many people treat the assumptions of unidimensionality and local independence as one phenomenon and believe that once unidimensionality holds, that local independence also holds. By distinguishing the two sources of local dependence, one can see that while local independence can be related to unidimensionality, the two are different assumptions and therefore, require different tests.

Residual item correlations provided in WINSTEPS for each item pair were used to assess the local dependence among the PSSA items. In general, these residuals are computed as follows. First, expected item performance based on the Rasch model is determined using ability and item parameter estimates. Next, deviations (residuals) between the examinees' expected and observed performance is determined for each item. Finally, for each item pair, a correlation between the respective deviations is computed.

Three types of residual correlations are available in WINSTEPS: raw, standardized, and logit. It should be noted that the raw score residual correlation essentially corresponds to Yen's Q_3 index, a popular LI statistic. The expected value for the Q_3 statistic is approximately -1/(k-1) when no local dependence exists, where k is test length (Yen, 1993). Thus, the expected Q_3 values should be approximately -0.02 for the PSSA tests (since most of the PSSA tests had more than 50 core items). Index values that are greater than 0.20 indicate a degree of local dependence that probably should be examined by test developers (Chen & Thissen, 1997).

Since the three residual correlations are very similar, the default "standardized residual correlation" in WINSTEPS was used for these analyses. Table 12–1 shows the summary statistics—mean, SD, minimum, maximum, and several percentiles (P_{10}, P_{25}, P_{50}, P_{75}, P_{90}) — for all the residual correlations for each test. The total number of item pairs (N) and the number of pairs with the residual correlations greater than 0.20 are also reported in this table. The mean residual correlations were close to 0.00. One in mathematics and eight in ELA showed residual correlations greater than 0.2, and all were less than 0.3, suggesting local item independence holds well for the 2018 PSSA ELA, mathematics, and science tests. Refer to Table 12–1 and 12–2 for details.

Table 12–1M. Summary of Item Residual Correlations for PSSA Mathematics

Statistic	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
N	903	903	903	903	903	903
Mean	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
SD	0.03	0.02	0.03	0.02	0.03	0.03
Minimum	-0.09	-0.09	-0.10	-0.09	-0.13	-0.11
P_{10}	-0.06	-0.05	-0.05	-0.05	-0.05	-0.06
P_{25}	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04
P_{50}	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
P_{75}	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
P_{90}	0.01	0.01	0.01	0.01	0.01	0.02
Maximum	0.23	0.14	0.12	0.07	0.15	0.08
$>\|0.20\|$	1	0	0	0	0	0

Table 12–1E. Summary of Item Residual Correlations for PSSA English Language Arts

Statistic	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
N	595	741	741	741	741	741
Mean	-0.03	-0.02	-0.02	-0.02	-0.02	-0.01
SD	0.03	0.03	0.03	0.03	0.04	0.03
Minimum	-0.10	-0.21	-0.24	-0.21	-0.23	-0.25
P_{10}	-0.06	-0.04	-0.04	-0.04	-0.05	-0.04
P_{25}	-0.04	-0.03	-0.03	-0.03	-0.03	-0.02
P_{50}	-0.03	-0.01	-0.01	-0.01	-0.01	-0.01
P_{75}	-0.01	0.00	0.00	0.00	0.00	0.00
P_{90}	0.00	0.01	0.01	0.01	0.02	0.02
Maximum	0.13	0.14	0.10	0.08	0.13	0.11
$>\|0.20\|$	0	1	2	2	1	2

Table 12–1S. Summary of Item Residual Correlations for PSSA Science

Statistic	Grade 4	Grade 8
N	903	903
Mean	-0.02	-0.02
SD	0.02	0.02
Minimum	-0.08	-0.10
P_{10}	-0.05	-0.04
P_{25}	-0.03	-0.03
P_{50}	-0.02	-0.02
P_{75}	-0.01	-0.01
P_{90}	0.00	0.00
Maximum	0.04	0.10
$>\|0.20\|$	0	0

Table 12–2 lists all item pairs with residual correlations greater than 0.20 with the added information of session, sequence, and Eligible Content. Item sequence in the table is the master core form's item sequence, but the MC items are scrambled across forms.

The pattern that is evident is that these correlated items share identical Eligible Content and are testing the same skills when the correlations are positive, so some small dependence is noted beyond the main ELA construct's explanation of item performance for these pairs. Negative residual correlations were observed with Evidence Based Select Response (EBSR) items and Text Dependent Analysis (TDA) items showing that, after the relationship between the items and the ELA construct is accounted for, there may be small, but different factors that are contributing to examinee performance on the item pairs. Test blueprints determine what Assessment Anchors, as defined by the Eligible Content, will be assessed. PDE and DRC make every effort to avoid one item cueing another through careful item selection and sequencing, so this is an unlikely source of local item dependence for the PSSA tests.

Table 12–2. Item Pairs With Large Residual Correlations

Subject	Grade	Item 1 Seq.	Item 1 Type	Item 1 Eligible Content	Item 2 Seq.	Item 2 Type	Item 2 Eligible Content	Resid. Corr.
Mathematics	3	13	MC	B-0.2.2.1	28	MC	B-0.2.2.1	0.23
ELA	4	26	ESR	B-C.3.1.1	59	TDA	E.1.1	-0.21
ELA	5	17	ESR	A-K.1.1.3	59	TDA	E.1.1	-0.24
ELA	5	22	ESR	B-C.3.1.1	59	TDA	E.1.1	-0.20
ELA	6	13	ESR	A-K.1.1.1	59	TDA	E.1.1	-0.21
ELA	6	28	ESR	B-K.1.1.1	59	TDA	E.1.1	-0.20
ELA	7	10	ESR	A-K.1.1.1	59	TDA	E.1.1	-0.23
ELA	8	10	ESR	B-V.4.1.2	59	TDA	E.1.1	-0.25
ELA	8	23	ESR	A-C.2.1.3	59	TDA	E.1.1	-0.21

ITEM FIT

WINSTEPS provides two item fit statistics (infit and outfit) for evaluating the degree to which the Rasch model predicts the observed item responses. Each fit statistic can be expressed as a mean square (MnSq) statistic or on a standardized metric (Zstd with mean = 0 and variance = 1). MnSq values are more oriented toward practical significance, while Zstd values are more oriented toward statistical significance. Though both are informative, the Zstd values are very likely too sensitive to the large sample sizes observed on the PSSA. In this situation it is recommended that the Zstd values be ignored if the MnSq values are acceptable (Linacre, 2014).

Both infit and outfit MnSq are the average of standardized residual variance (the difference between the observed score and the Rasch estimated score divided by the square root of the Rasch model variance). The difference is that the outfit statistic gives all examinees equal weight in computing the fit and tends to be affected more by unexpected responses far from the person, item, or rating scale category measure (i.e., it is more sensitive to outlying, off-target, low-information responses). The infit statistic is weighted by the examinee locations relative to item difficulty and tends to be affected more by unexpected responses close to the person, item, or rating scale category measure (i.e., informative, on-target responses). Some feel that extreme infit values are a greater threat to the measurement process than extreme outfit since most tests intend to measure the on-target population rather than extreme outliers.

The expected MnSq value is 1.0 and can range from 0 to infinity. Deviation in excess of the expected value can be interpreted as noise or lack of fit between the items and the model. Values lower than the expected value can be interpreted as item redundancy or overfitting items (too predictable, too much redundancy), and values greater than the expected value indicate underfitting items (too unpredictable, too much noise). Rules of thumb regarding "practically significant" MnSq values vary. More conservative users might prefer items with MnSq values that range from 0.8 to 1.2. Others believe reasonable test results can be achieved with values from 0.5 to 1.5. In the results below, values outside of 0.7 to 1.3 are given practical importance.

Table 12–3 presents the summary statistics of infit and outfit mean square statistics for the PSSA ELA, mathematics, and science tests, including the mean, SD, and minimum and maximum values. The number of items within the range of [0.7, 1.3] is also reported. The mean values for both fit statistics were very close to 1.00 for all subjects. Almost all the items had infit values falling in the range of [0.7, 1.3], suggesting reasonable model infit. More outfit values fell either below 0.7 or above the 1.3 threshold. Values above 1.3 can sometimes suggest higher than normal guessing or careless mistake patterns, and values below 0.7 can suggest an item is over fit. The maximum outfit values noted are fairly close to the 1.3 threshold, and the minimum values noted are very close to 0.7, which could also suggest well discriminating items.

Table 12–3. Summary of Infit and Outfit Mean Square Statistics for PSSA Mathematics, ELA, and Science

Subject	Grade	Mean*	SD*	Min*	Max*	[0.7,1.3]*	Mean†	SD†	Min†	Max†	[0.7,1.3] †
Mathematics	3	1.00	0.12	0.80	1.26	43/43	1.00	0.17	0.71	1.37	41/43
Mathematics	4	1.00	0.10	0.84	1.23	43/43	1.01	0.16	0.77	1.37	41/43
Mathematics	5	1.00	0.11	0.81	1.24	43/43	1.00	0.17	0.70	1.47	39/43
Mathematics	6	0.99	0.11	0.83	1.20	43/43	0.99	0.17	0.71	1.34	42/43
Mathematics	7	0.99	0.16	0.75	1.38	39/43	0.99	0.25	0.60	1.60	36/43
Mathematics	8	1.00	0.12	0.77	1.26	43/43	1.00	0.19	0.66	1.51	39/43
ELA	3	0.99	0.09	0.82	1.14	35/35	1.00	0.17	0.58	1.36	33/35
ELA	4	1.02	0.12	0.70	1.26	38/39	1.06	0.16	0.70	1.39	34/39
ELA	5	1.02	0.12	0.64	1.34	37/39	1.05	0.17	0.64	1.41	34/39
ELA	6	1.02	0.13	0.70	1.45	37/39	1.07	0.21	0.70	1.78	34/39
ELA	7	1.01	0.13	0.65	1.22	38/39	1.04	0.19	0.65	1.36	36/39
ELA	8	1.02	0.13	0.68	1.38	37/39	1.05	0.19	0.68	1.55	35/39
Science	4	1.00	0.09	0.85	1.16	43/43	1.00	0.12	0.74	1.23	43/43
Science	8	0.99	0.08	0.81	1.13	43/43	1.00	0.12	0.66	1.20	42/43

*Infit Mean Square
†Outfit Mean Square

POPULATION INVARIANCE

The property of invariance is regarded as the cornerstone of IRT and is its major distinguishing attribute from classical test theory (Hambleton, Swaminathan, & Rogers, 1991). It is this property that makes many IRT applications possible (e.g., equating, item banking, investigation of item bias, and adaptive testing) (Hambleton et al., 1991, p.25). Inferences from these IRT applications are valid to the extent that the property of invariance holds. Therefore, it is important to evaluate invariance whenever applying IRT.

Invariance should hold for both item and ability parameters. Item invariance implies that item parameter estimates do not depend on the particular sample of examinees used to derive them. Person (ability parameter) invariance means that examinees' ability estimates do not depend on which items are administered. For the Rasch item calibrations, it is more important to determine how well the item invariance assumption holds. Therefore, only item invariance is evaluated here. We call item invariance "population invariance" with the intention that item parameters do not depend on particular population.

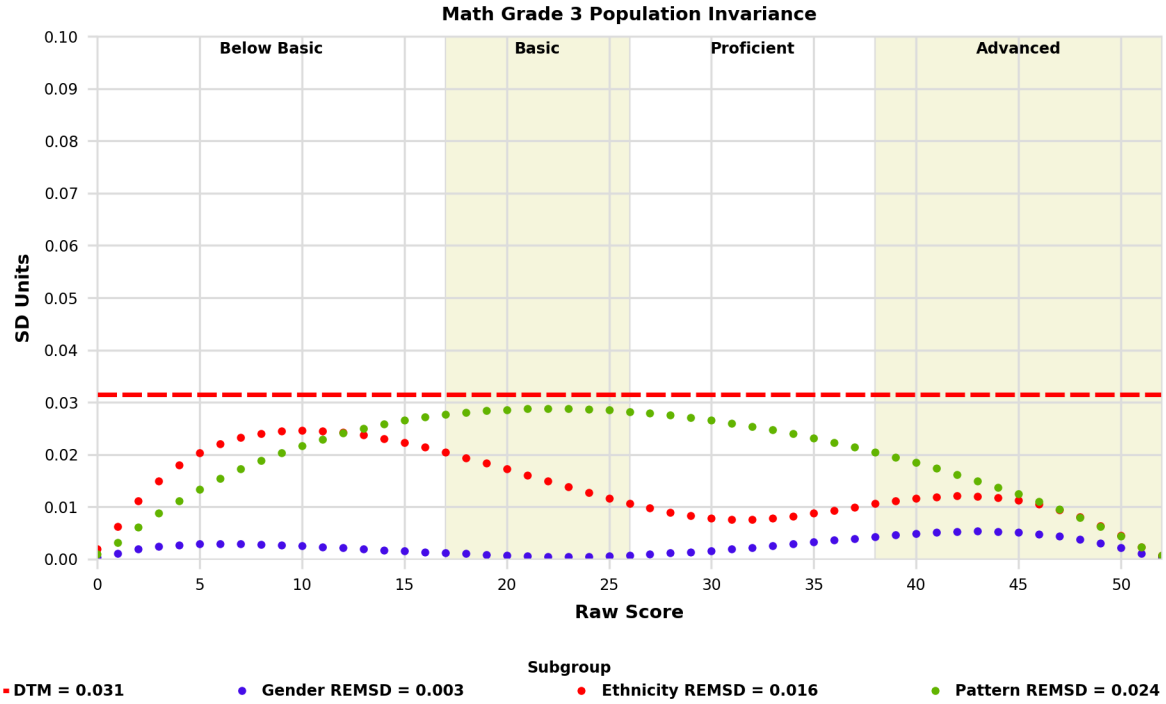
Population invariance was examined using the root mean squared difference (RMSD) and the root expected mean standardized difference (REMSD) statistics (Dorans and Holland, 2000; von Davier & Wilson, 2008). The RMSD statistic quantifies the difference in the equating relationship at a given observed raw score point in terms of the subgroup relationship and the full group (population) equating relationship. The RMSD statistic is given as follows:

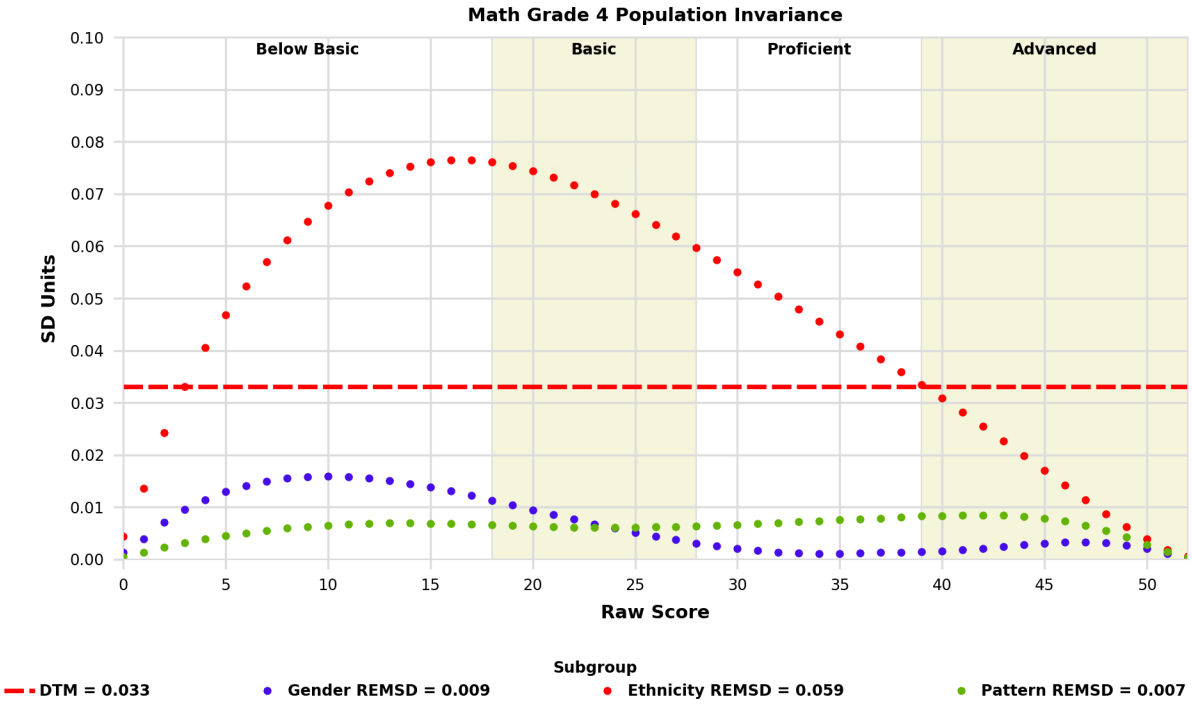
$$RMSD_x = \frac{\sqrt{\sum_{j=1}^{J} w_j [\hat{y}_{jx} - \hat{y}_{Px}]^2}}{\sigma_Y},$$

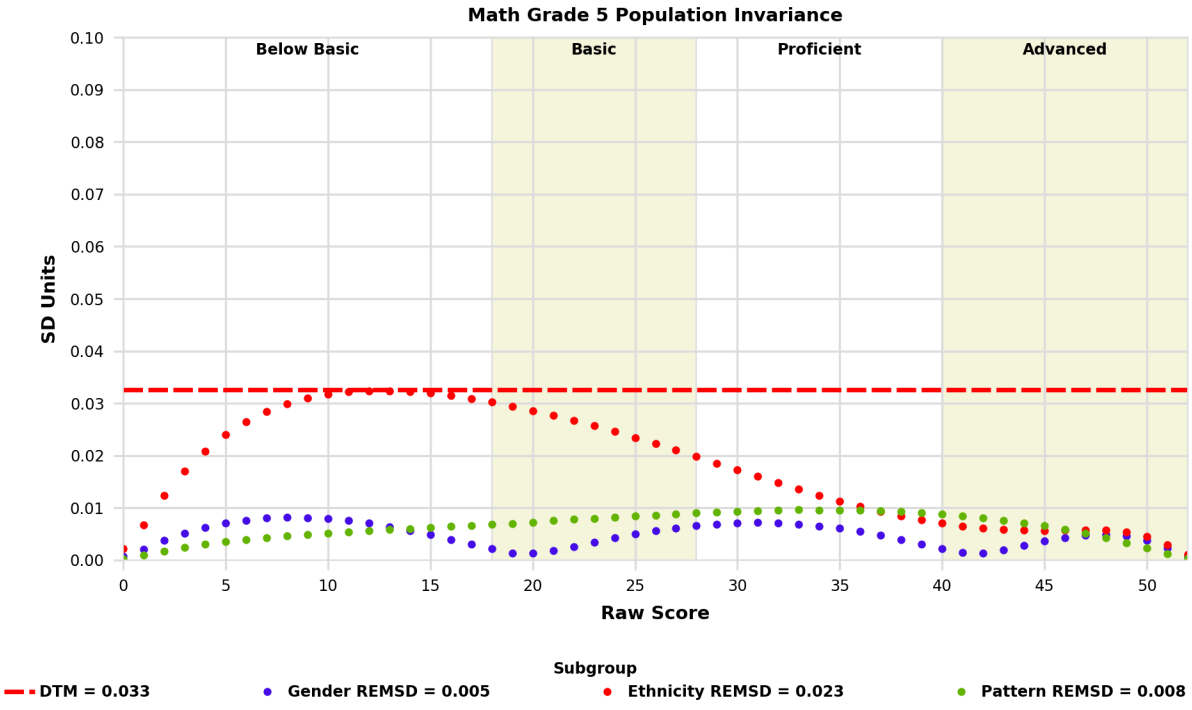
where x is an observed current year (scale of X) raw score, $\hat{y}_{jx}$ is the expected previous year's raw score for subgroup j (based on the subgroup calibration/equating) given current year's raw score x, $\hat{y}_{Px}$ is the expected previous year raw score for population (*P*, based on calibration/equating with all students) given current year's raw score, the weight, w_j, is the proportion for the subgroup, and is the standard deviation of the previous year raw scores with all students. A related index, REMSD, summarizes the average difference between the equating across all observed score points. Dorans, Holland, Thayer and Tatenkeni (2003) used the notion of a "difference that matters" (DTM) to provide further context for interpreting the population invariance results. The DTM for a particular assessment depends on the reporting scale. For the PSSAs, one raw score point translates to different scaled scores and potentially different performance level classifications. Differences in equating functions greater than half a raw score point could result in different scores reported. For this reason, a DTM of a half a point is used for our evaluation of population invariance. RMSD and REMSD are compared relative to the standardized DTM which is obtained by dividing 0.5 by the standard deviation in the denominator of the RMSD and REMSD.

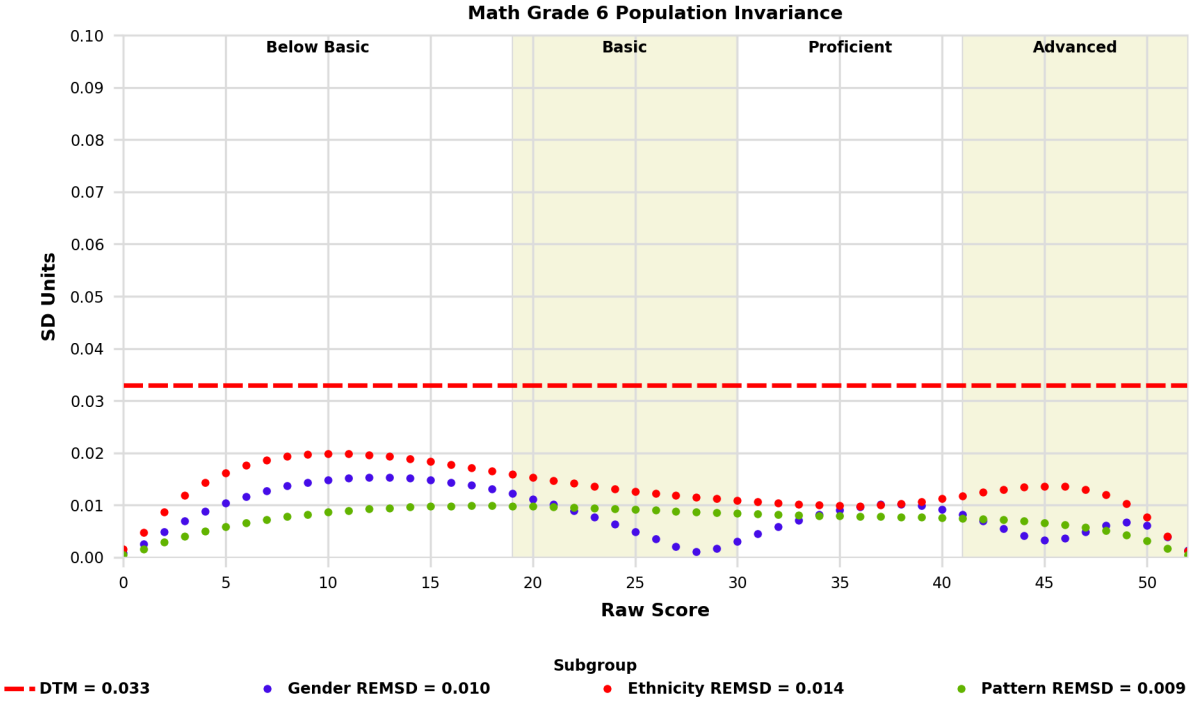
The subgroups considered within the population invariance analyses are gender (male, female), ethnicity (White, Black, and Hispanic), city (City or Not City), and scrambling pattern (A, B, C, D, E, F, G, M). The REMSD statistics, which provide a summary of the differences across all observed score points, were generally lower than the DTM for most subjects and grades. Math grade 4 shows a difference based on ethnicity and math grade 7 shows small differences for all three subgroups. Population invariance of the equating will continue to be monitored for trends in subsequent PSSA administrations. Figure 12–2 presents the RMSDs (y-axis) for gender, ethnicity, city, and scramble pattern group and includes REMSD estimates for each equating set.

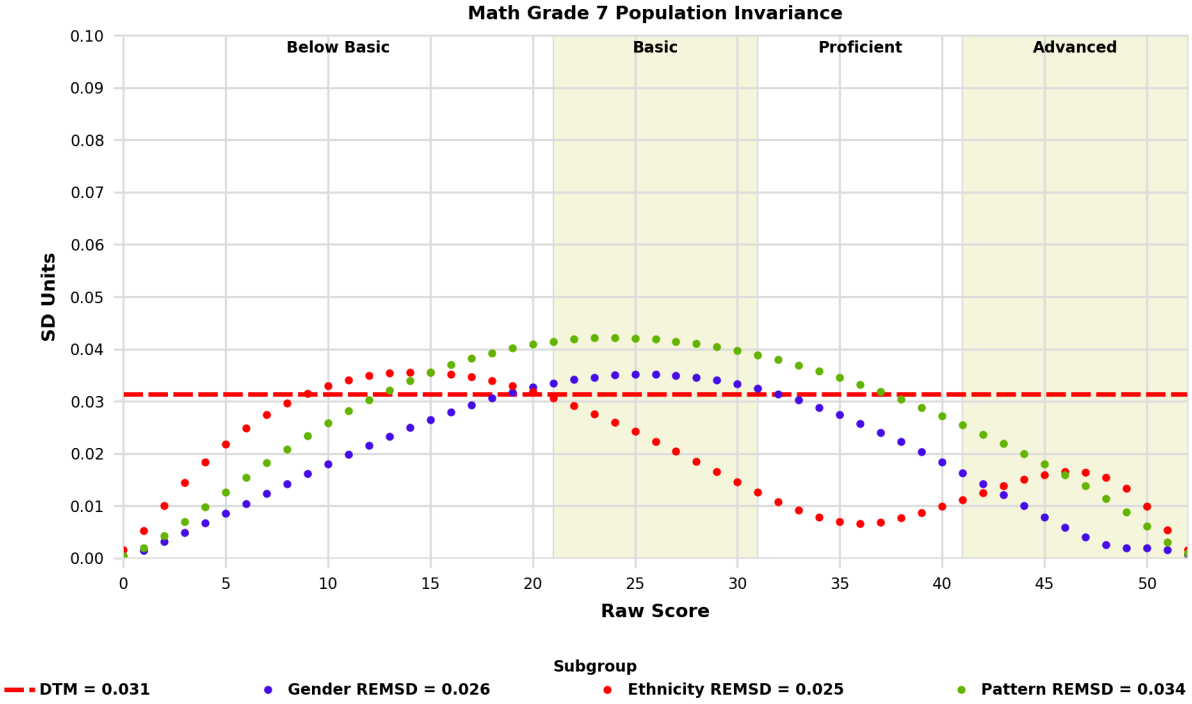
Figure 12–2. Population Invariance Plots

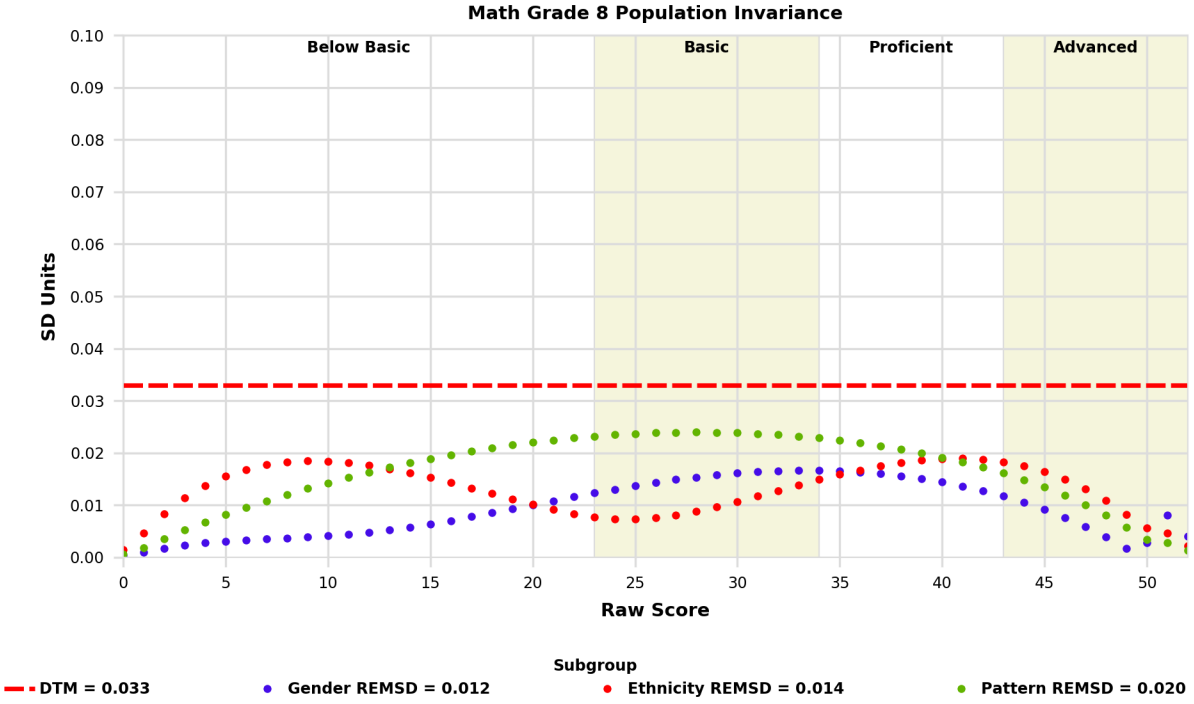


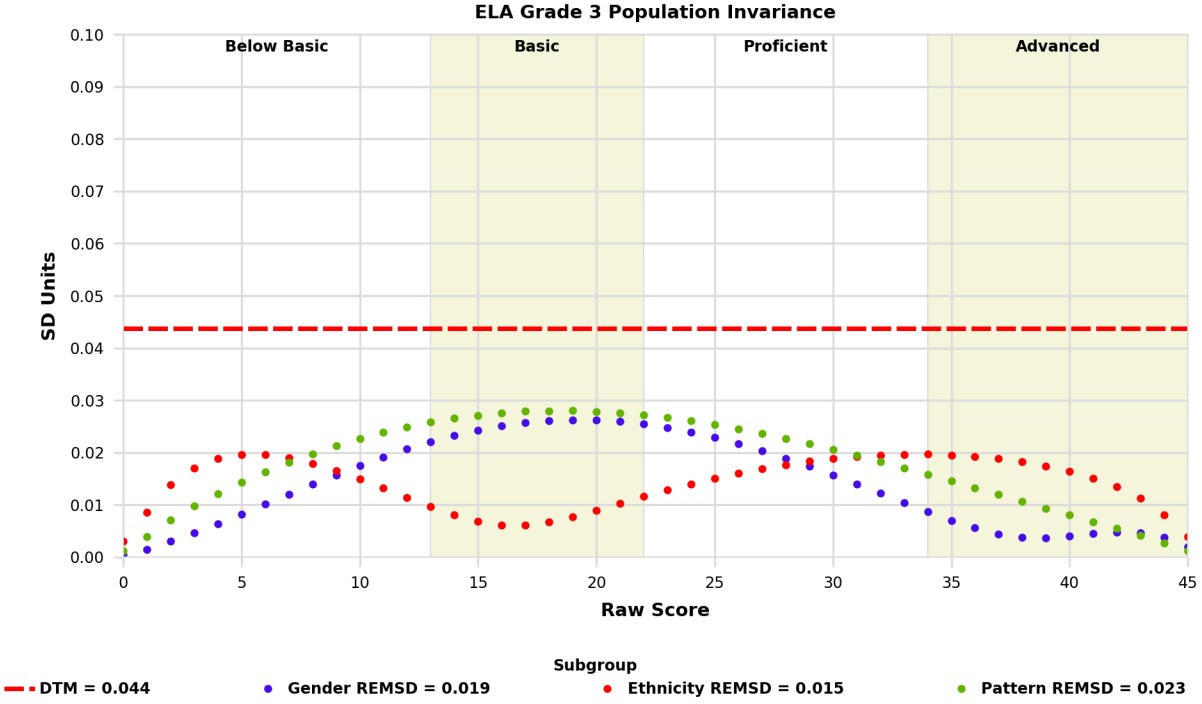

Math Grade 4 Population Invariance
Below Basic
Basic
Proficient
Advanced
SD Units
Raw Score
Subgroup
DTM = 0.033
Gender REMSD = 0.009
Ethnicity REMSD = 0.059
Pattern REMSD = 0.007

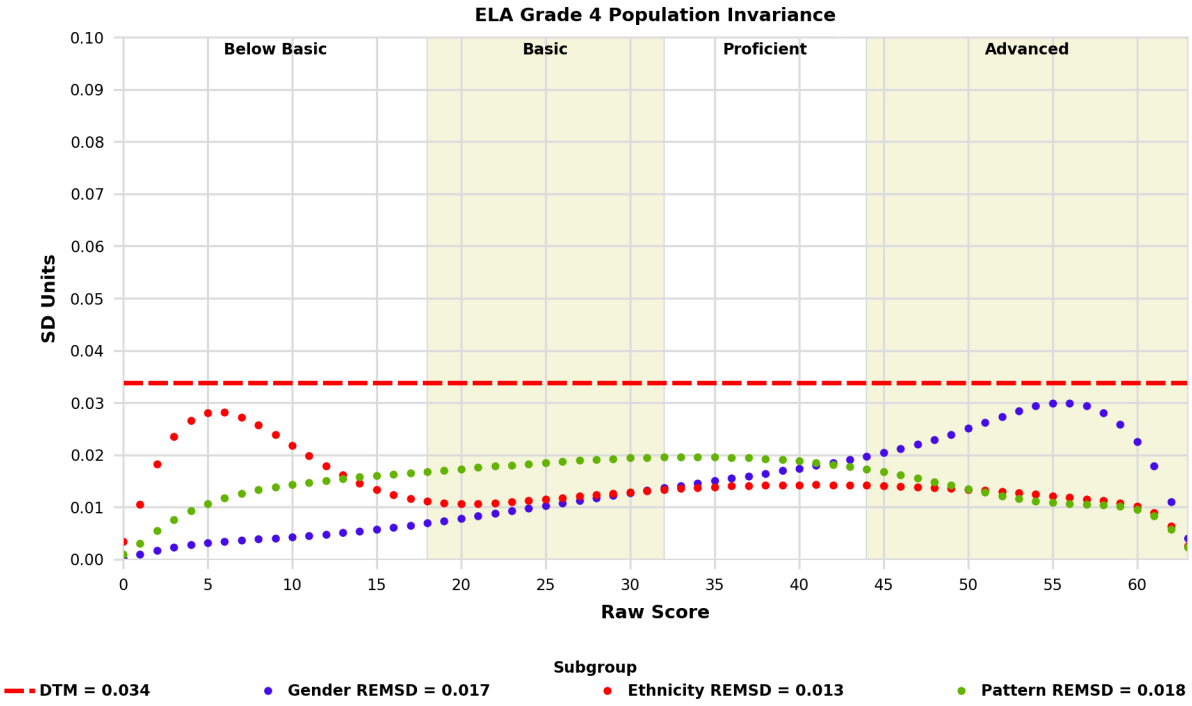

Math Grade 5 Population Invariance
Below Basic
Basic
Proficient
Advanced
SD Units
Raw Score
Subgroup
DTM = 0.033
Gender REMSD = 0.005
Ethnicity REMSD = 0.023
Pattern REMSD = 0.008

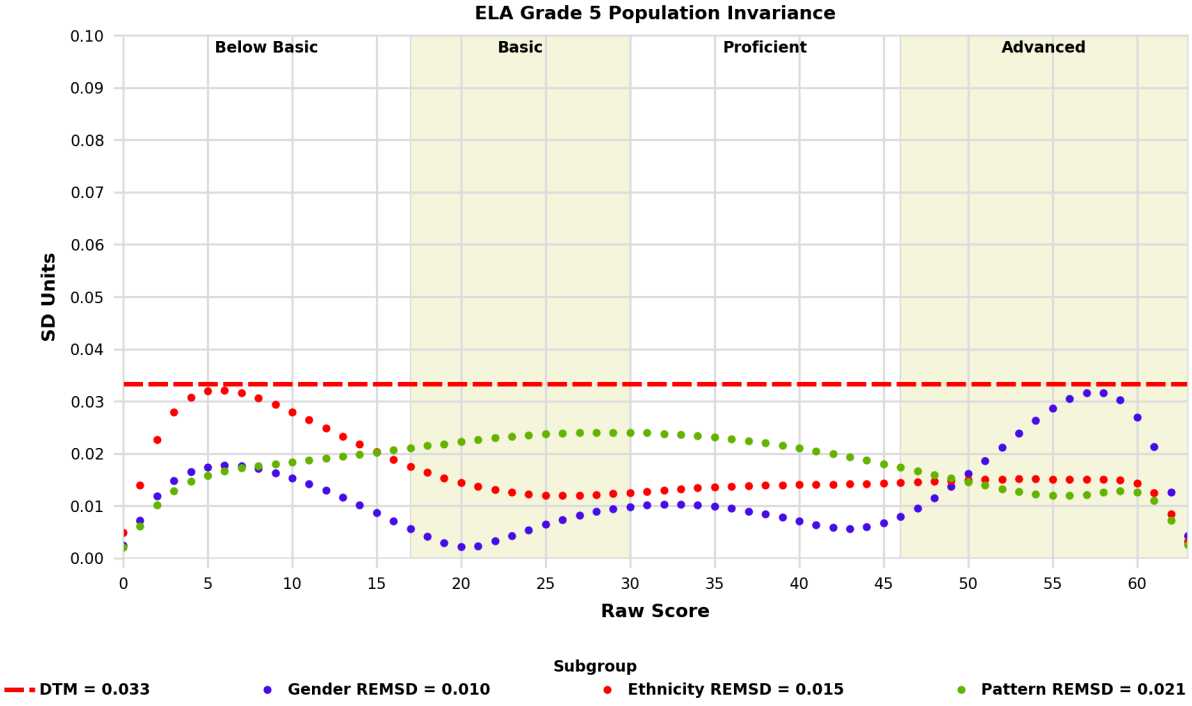

Math Grade 6 Population Invariance
Below Basic
Basic
Proficient
Advanced
SD Units
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
0
5
10
15
20
25
30
35
40
45
50
Raw Score
Subgroup
DTM = 0.033
Gender REMSD = 0.010
Ethnicity REMSD = 0.014
Pattern REMSD = 0.009

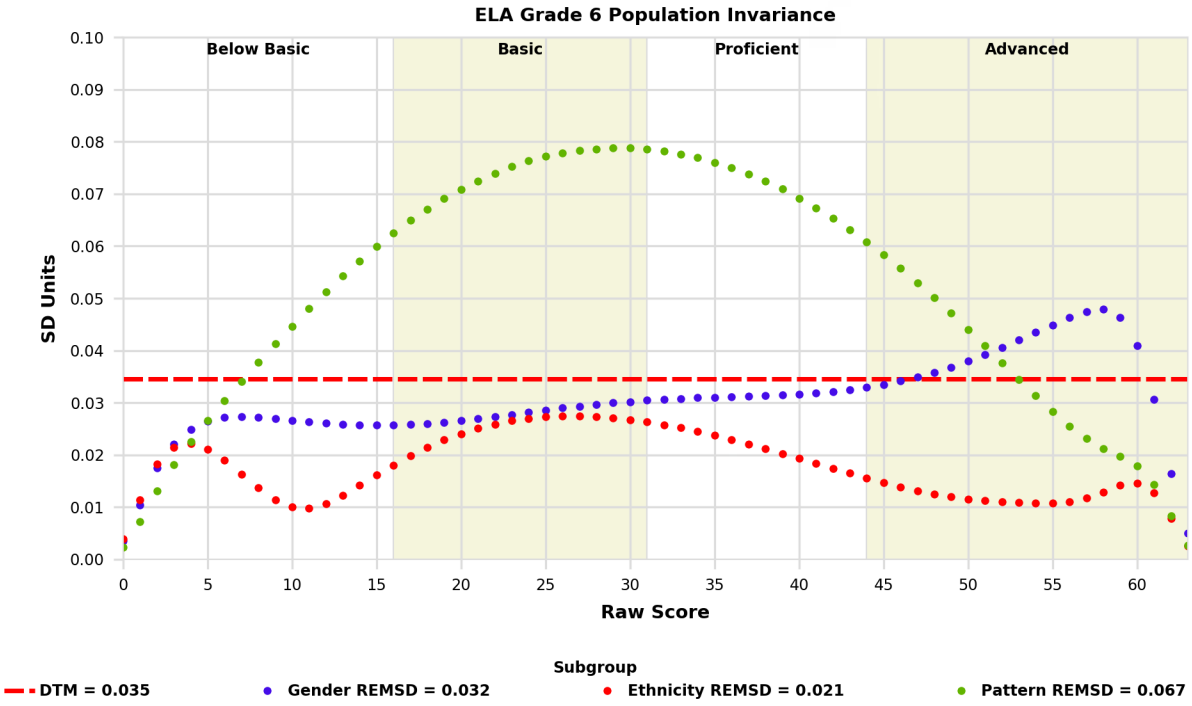

Math Grade 7 Population Invariance
Below Basic
Basic
Proficient
Advanced
SD Units
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
0
5
10
15
20
25
30
35
40
45
50
Raw Score
Subgroup
DTM = 0.031
Gender REMSD = 0.026
Ethnicity REMSD = 0.025
Pattern REMSD = 0.034

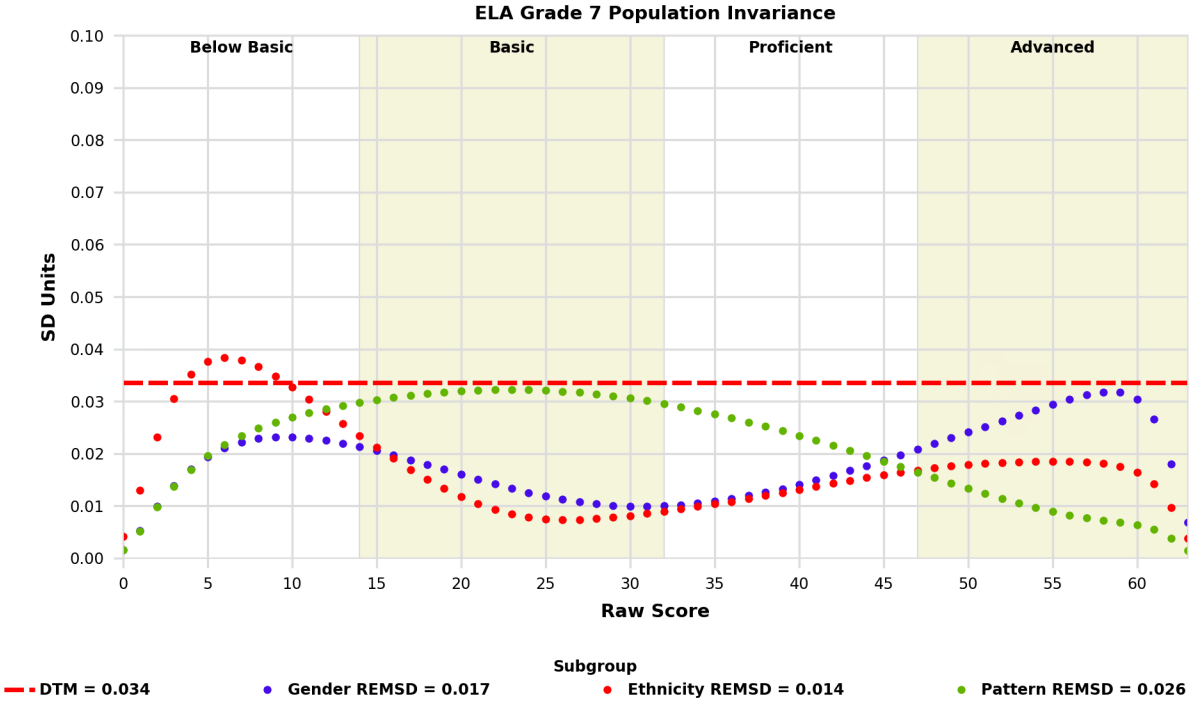

Math Grade 8 Population Invariance
Below Basic
Basic
Proficient
Advanced
SD Units
Raw Score
Subgroup
DTM = 0.033
Gender REMSD = 0.012
Ethnicity REMSD = 0.014
Pattern REMSD = 0.020

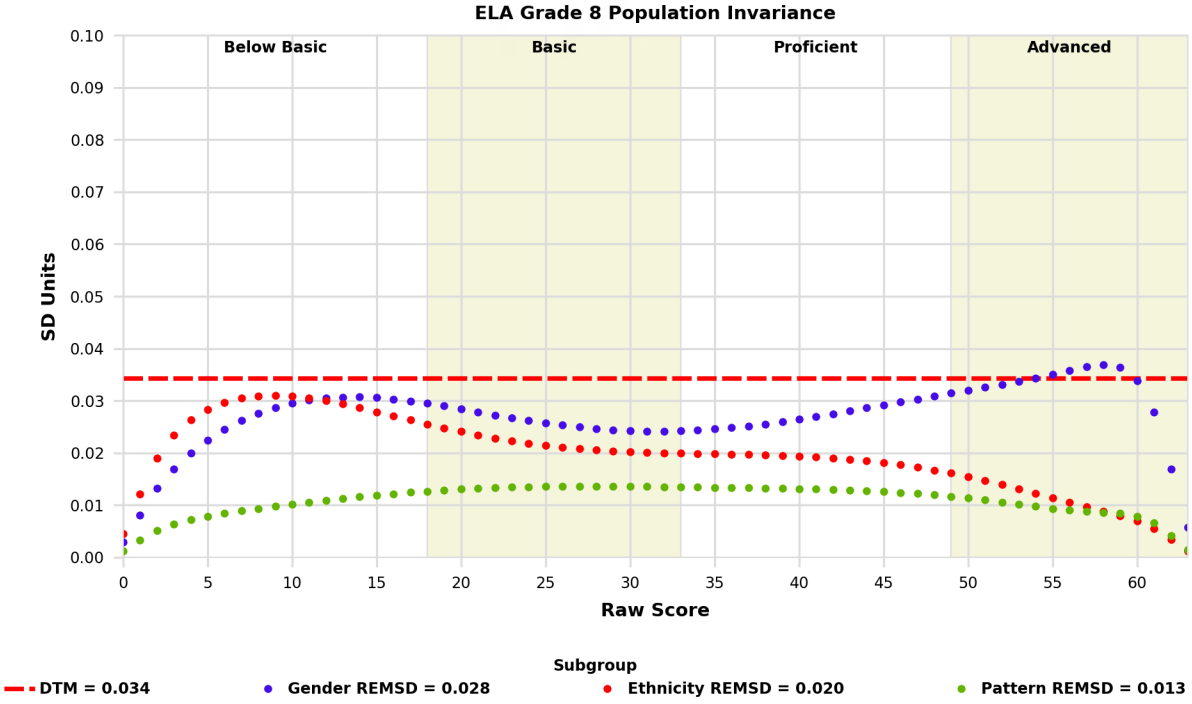

ELA Grade 3 Population Invariance
Below Basic
Basic
Proficient
Advanced
SD Units
Raw Score
Subgroup
DTM = 0.044
Gender REMSD = 0.019
Ethnicity REMSD = 0.015
Pattern REMSD = 0.023

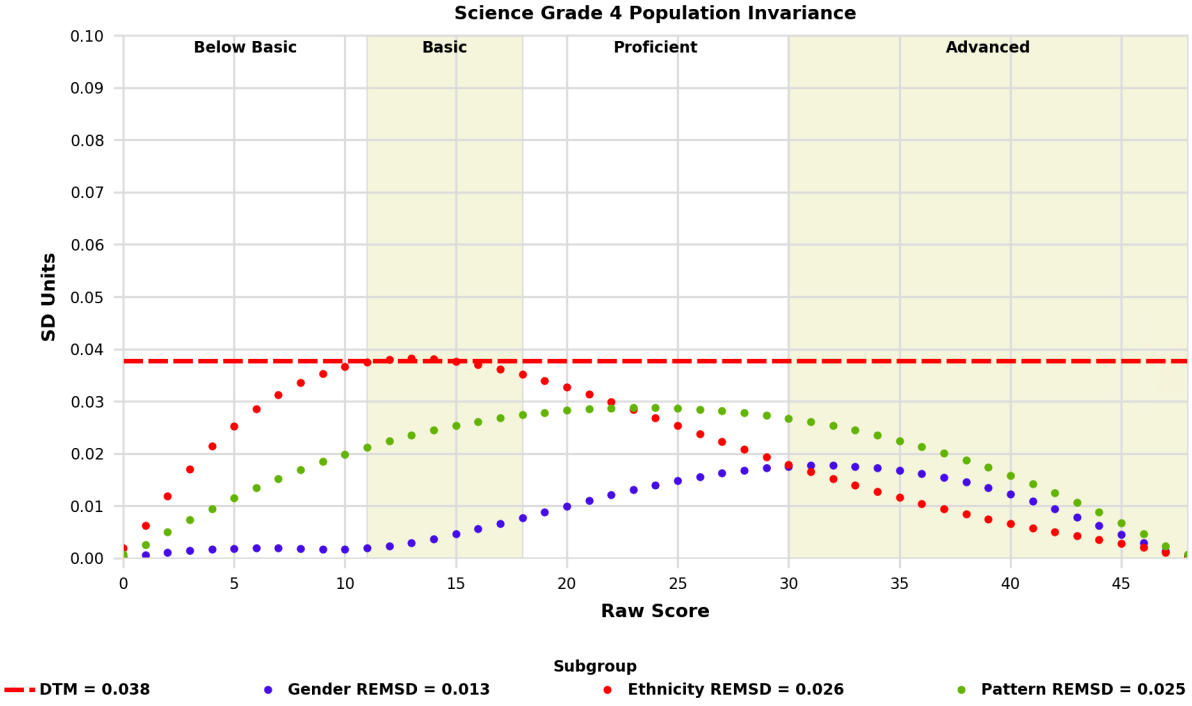

ELA Grade 4 Population Invariance
Below Basic
Basic
Proficient
Advanced
SD Units
Raw Score
Subgroup
DTM = 0.034
Gender REMSD = 0.017
Ethnicity REMSD = 0.013
Pattern REMSD = 0.018

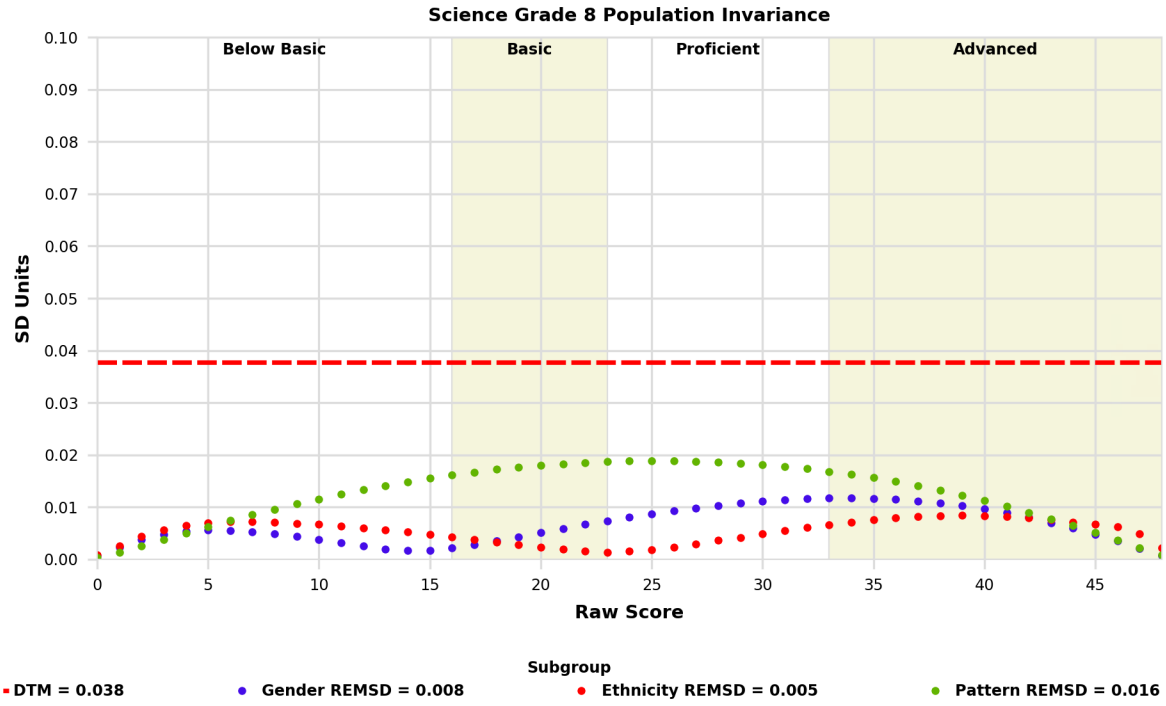

ELA Grade 5 Population Invariance
Below Basic
Basic
Proficient
Advanced
SD Units
Raw Score
Subgroup
DTM = 0.033
Gender REMSD = 0.010
Ethnicity REMSD = 0.015
Pattern REMSD = 0.021


ELA Grade 6 Population Invariance
Below Basic
Basic
Proficient
Advanced
SD Units
Raw Score
Subgroup
DTM = 0.035
Gender REMSD = 0.032
Ethnicity REMSD = 0.021
Pattern REMSD = 0.067


ELA Grade 7 Population Invariance
Below Basic
Basic
Proficient
Advanced
SD Units
Raw Score
Subgroup
DTM = 0.034
Gender REMSD = 0.017
Ethnicity REMSD = 0.014
Pattern REMSD = 0.026


ELA Grade 8 Population Invariance
Below Basic
Basic
Proficient
Advanced
SD Units
Raw Score
Subgroup
DTM = 0.034
Gender REMSD = 0.028
Ethnicity REMSD = 0.020
Pattern REMSD = 0.013


Science Grade 4 Population Invariance
Below Basic
Basic
Proficient
Advanced
SD Units
Raw Score
Subgroup
DTM = 0.038
Gender REMSD = 0.013
Ethnicity REMSD = 0.026
Pattern REMSD = 0.025



RASCH ITEM STATISTICS

As noted earlier, the Rasch model expresses item difficulty (and student ability) in units referred to as logits, rather than on the percent-correct metric. The logit metric has several mathematical advantages. Logits have an interval scale, meaning that two items with logits of 0.0 and +1.0 (respectively) are the same distance apart as two items with logits of +3.0 and +4.0. Logits are not dependent on the ability level of the students. For example, a test form can have a mean logit of zero, whether the average item p-value for the student sample is 0.8 or 0.3.

The standard Rasch calibration procedure arbitrarily sets the mean difficulty of the items on any form at zero. Under normal circumstances where all students are administered the same set of items, any item with a *p*-value lower than the average item on the form receives a positive logit difficulty and any item with a *p*-value higher than the average receives a negative logit. Consequently, the logits for any calibration, whether it is a third-grade ELA test or a grade 8 science test, relate to an arbitrary origin defined by the center of items on that form. The average third-grade ELA item will have a logit of zero; the average grade 8 science item will have a logit of zero. Logits for both item difficulties and student abilities are placed on the same scale and relate to the same mean item difficulty.

There are a number of other arbitrary choices that could be made for centering the item difficulties. Rather than using all the items, the origin could be defined by a subset. For the PSSA, all test forms in a particular grade and content area share the same operational item set. All items on each form can then be easily adjusted to a single (but still arbitrary) origin by defining the origin as the mean of the operational items. With this done, the origins for all the forms will be statistically equal. For example, items on any two forms that are equally difficult will now have statistically equal logit difficulties. This is partly how PSSA items can be placed on the same logit difficulty scale across years. Chapter Fifteen has more detailed information about the PSSA scale linking procedures.

Appendix F reports the item statistics including classical and Rasch logit difficulties for all the operational items. Table 12–4 summarizes the Rasch logit difficulties of the operational items on each test. The minimum and maximum values and standard deviations suggest that the PSSA items covered a relatively wide range of difficulties. It is important to note that the logit difficulty values presented have not been linked to a common scale of measurement across grades and subjects. Therefore, the relative magnitude of the statistics across content areas and grades cannot be compared. The mean item difficulties are not exactly zero with mathematics and ELA although there was no equating was conducted. This is because the first round of calibration is only with a subset of all items (operational MC items only). Calibration of non-MC items are conducted anchoring the MC item. See Chapter Fifteen for more detailed information on mathematics and ELA calibration.

Table 12–4. Summary of Rasch Item Difficulties for PSSA Mathematics, ELA, and Science

Subject	Grade	N	Mean	SD	Min	Max
Mathematics	3	43	0.37	0.64	-1.33	1.63
Mathematics	4	43	0.00	0.63	-1.32	1.14
Mathematics	5	43	0.05	0.71	-1.76	1.17
Mathematics	6	43	0.12	0.70	-1.28	1.63
Mathematics	7	43	-0.23	0.81	-2.27	1.69
Mathematics	8	43	-0.30	0.75	-2.11	1.72
ELA	3	35	0.46	0.82	-1.52	1.88
ELA	4	39	0.31	0.65	-1.37	1.35
ELA	5	39	0.45	0.62	-1.06	1.42
ELA	6	39	0.55	0.72	-0.97	1.74
ELA	7	39	0.45	0.66	-0.96	1.70
ELA	8	39	0.19	0.66	-1.56	1.31
Science	4	43	0.90	0.58	-0.43	2.10
Science	8	43	0.53	0.51	-0.73	1.61

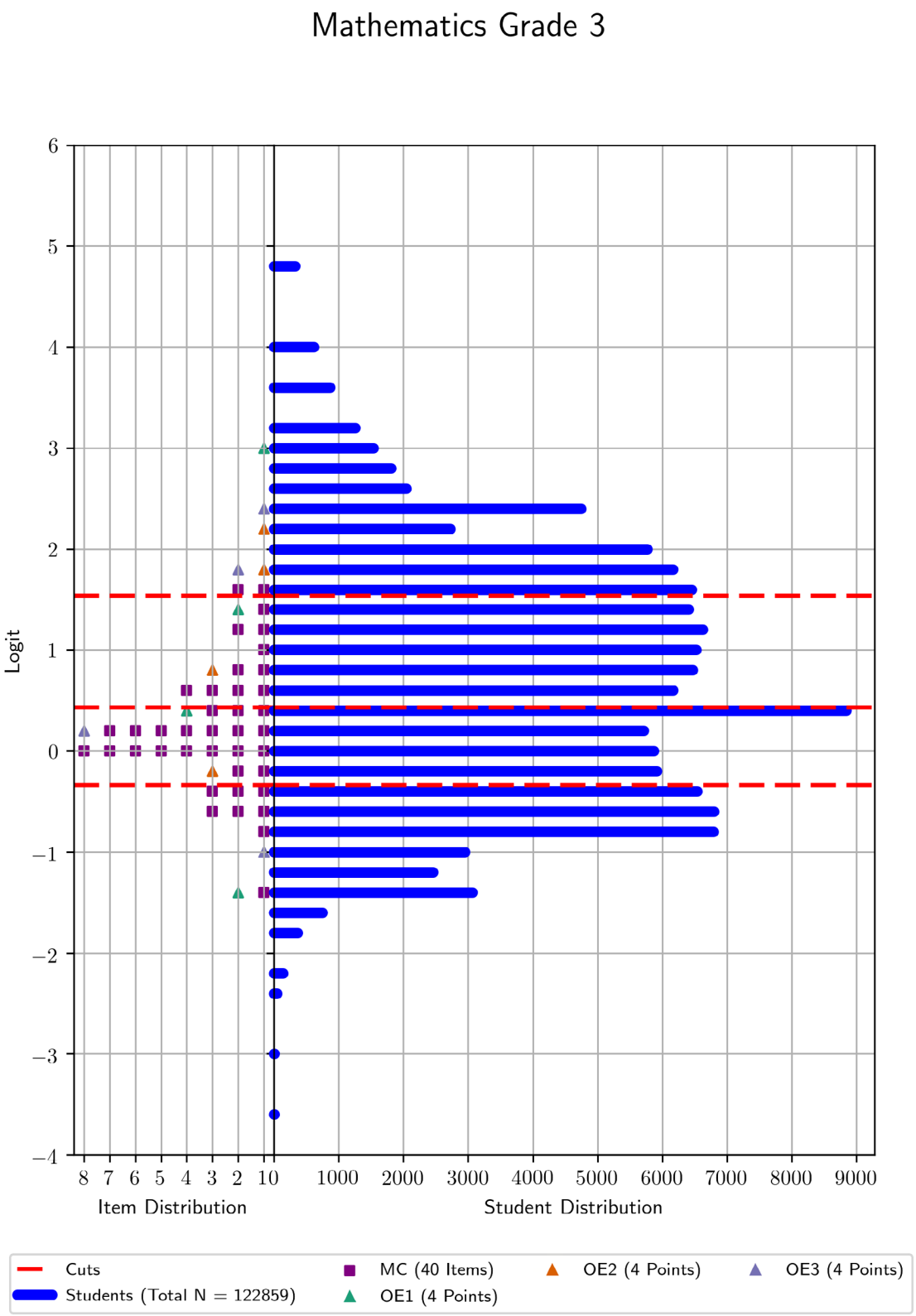
Note. The the base scales were set in 2008 for science and 2015 for mathematics and ELA so the means are not expected to be zero.

ITEM DIFFICULTY-STUDENT ABILITY WRIGHT MAPS

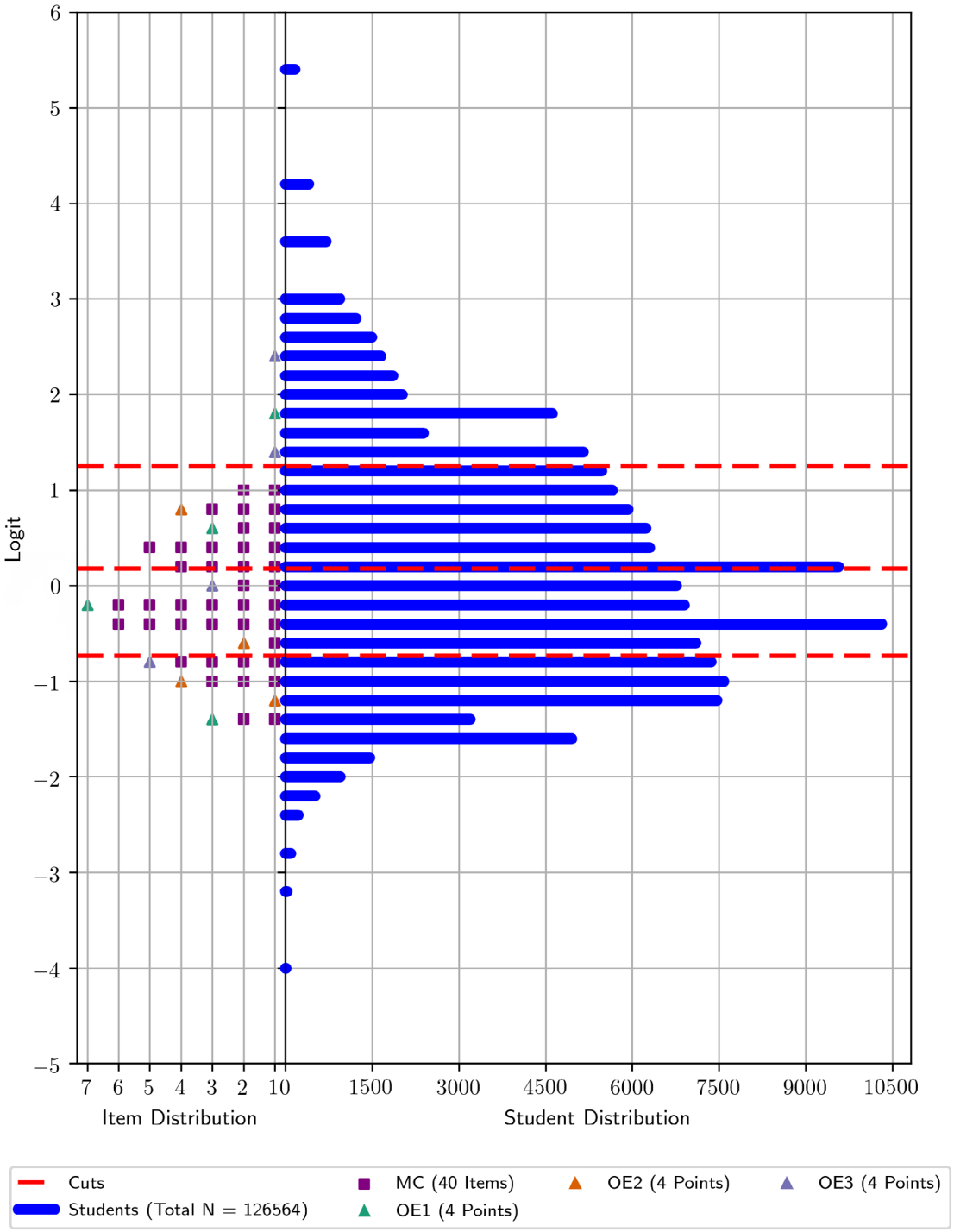
The distributions of the Rasch item logits (item difficulty estimates) are shown on the item difficulty-student ability maps presented in Figure 12–3. In each item-student map, markers on the left-hand side represent item difficulty parameter estimates, whereas markers on the right hand side represent person ability parameter estimates. One MC item is represented by one symbol on the left-hand side of the plots and one OE item has multiple symbols to present score points. As noted earlier, the Rasch model enables placement of both items and students on the same scale. Consequently, one can easily visualize information about how the difficulty of the test items related to the ability distribution of students who took the test. The students located in the upper right quadrant of any given plot have relatively higher ability. Items in the lower left quadrant are relatively easier. High ability students have higher probabilities of correctly answering easier items. Similarly, low ability students (in lower right quadrant of any given plot) have lower probabilities of answering harder items (in upper left quadrant).

In 2016 a pattern noted across the maps for many grades and content areas was for students to have relatively higher ability and for items to be relatively easier. Accordingly, test development for the 2017 PSSAs focused on centering the predicted test difficulties on the center of the 2016 examinee ability distribution to more closely align item difficulty with examinee performance. The same targets used to construct the 2017 PSSAs were used for construction of the 2018 PSSAs as well. The Wright maps are presented in Figure 12–3.

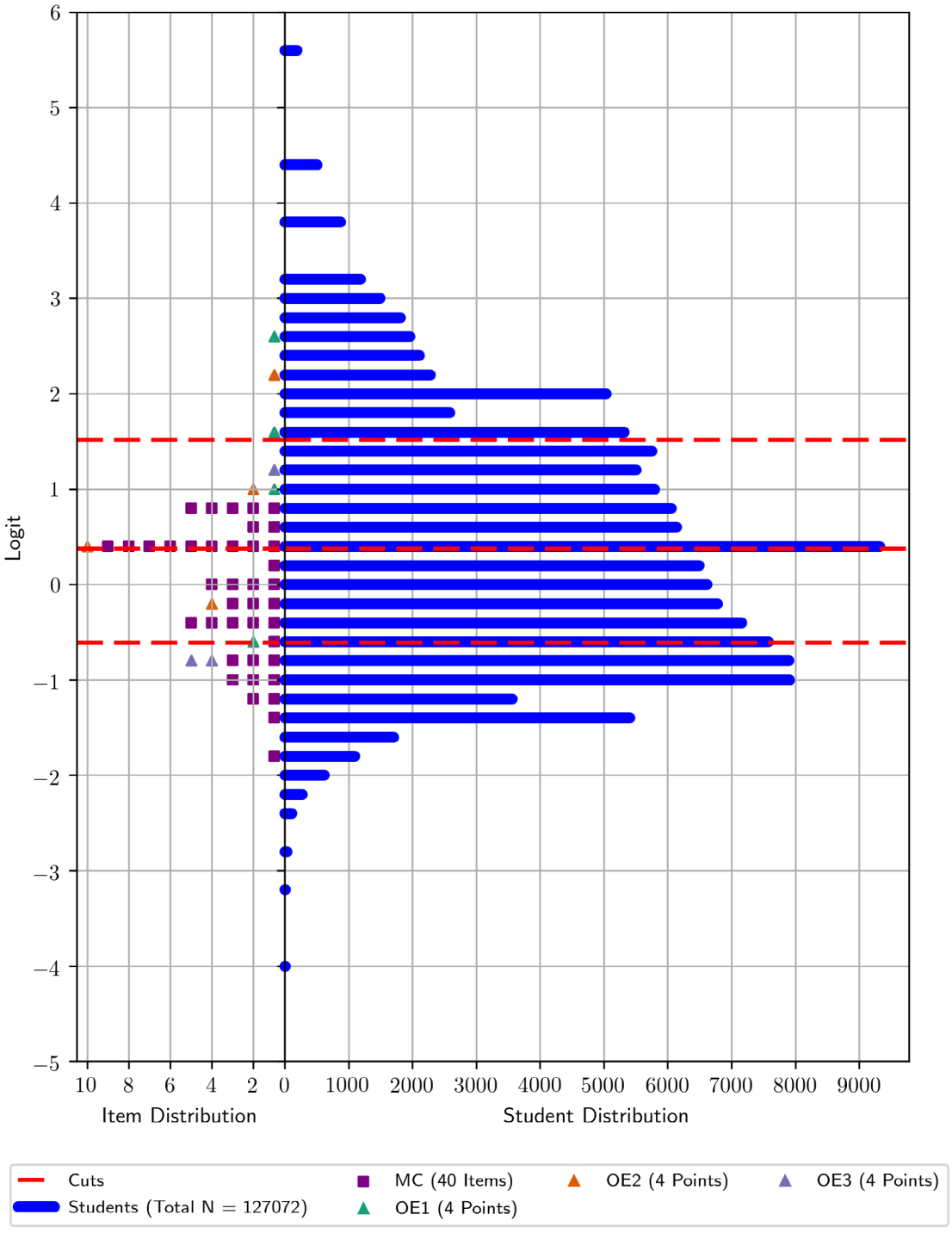
Figure 12–3. Item-Student Maps



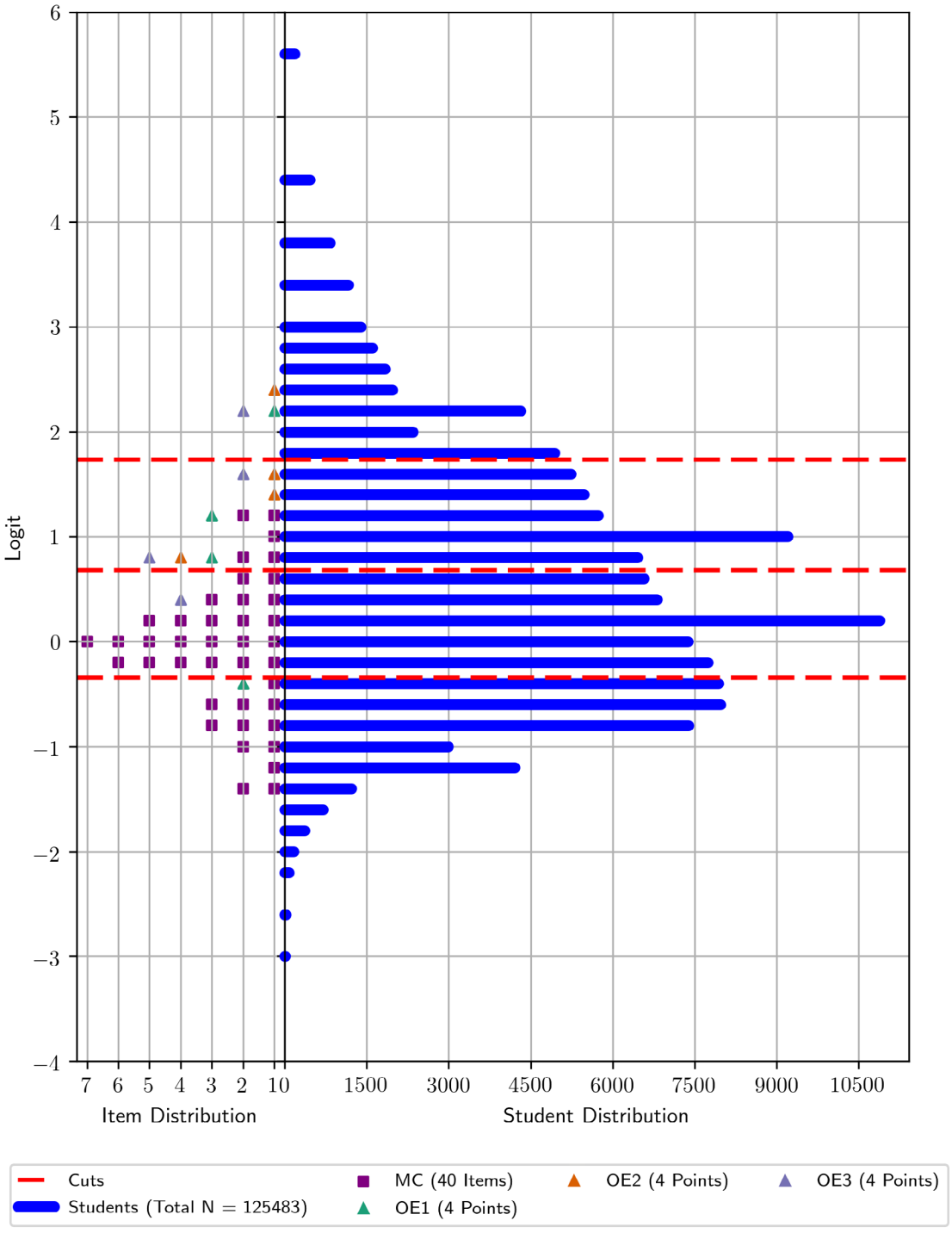
Mathematics Grade 4



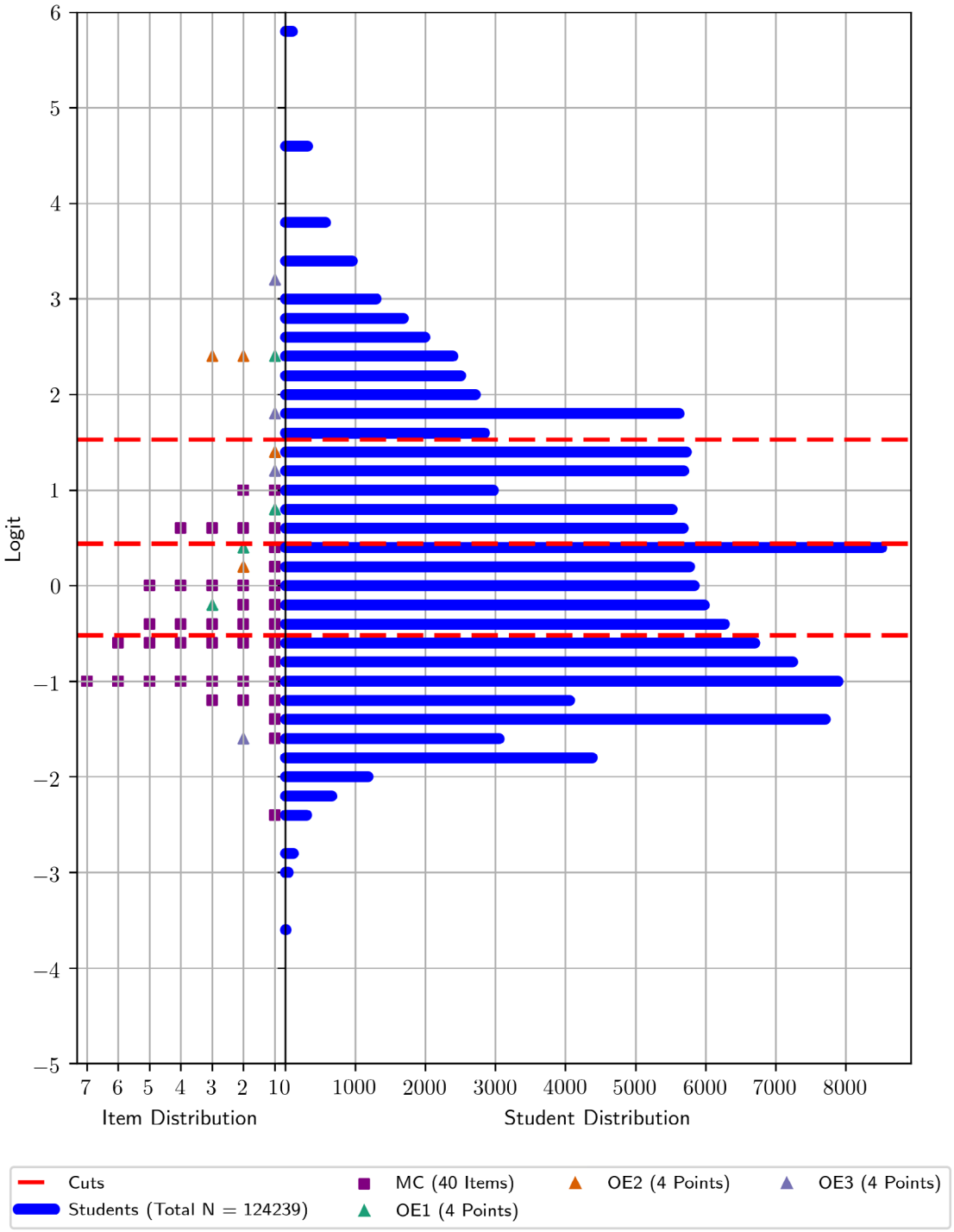
Mathematics Grade 5



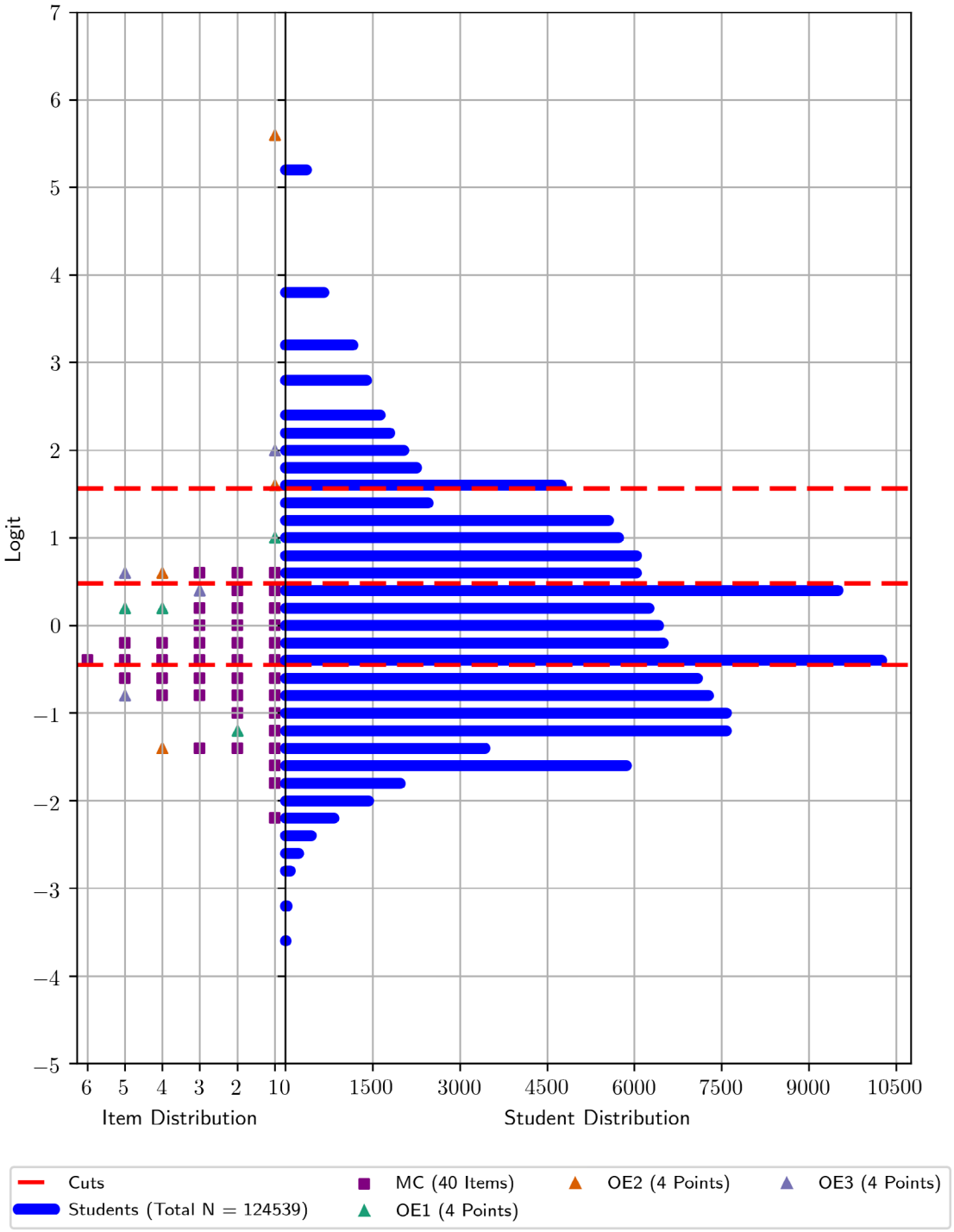
Mathematics Grade 6



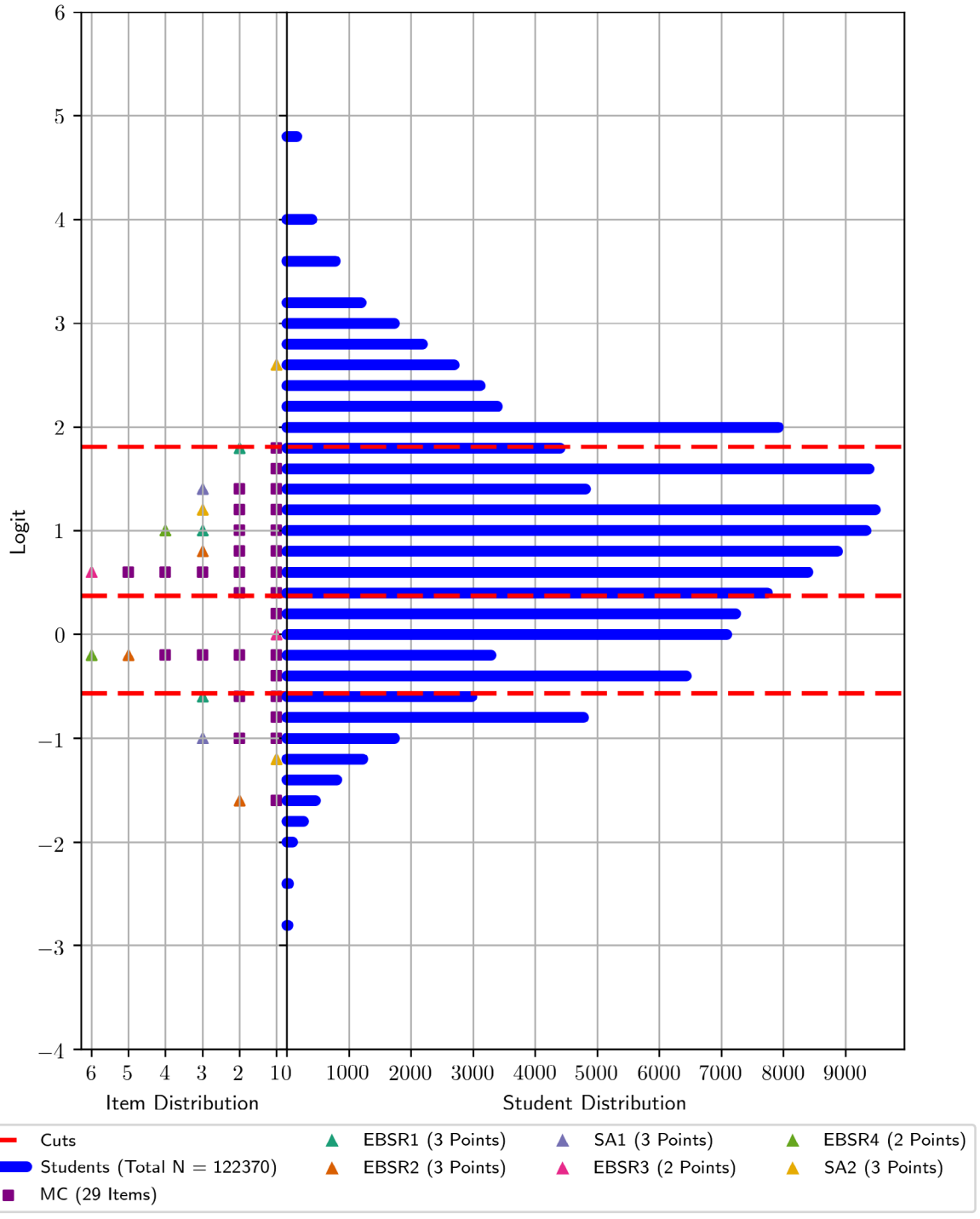
Mathematics Grade 7



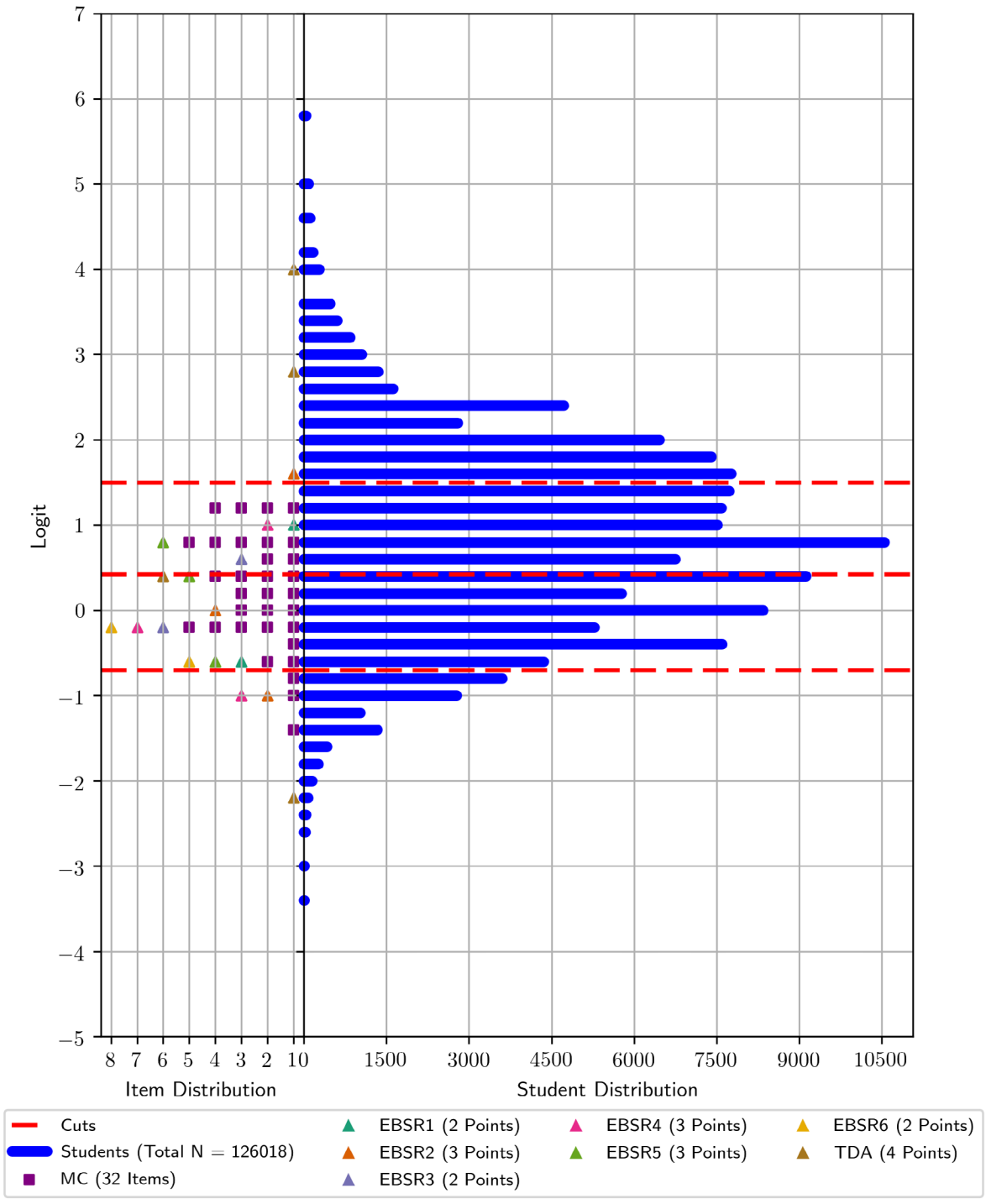
Mathematics Grade 8



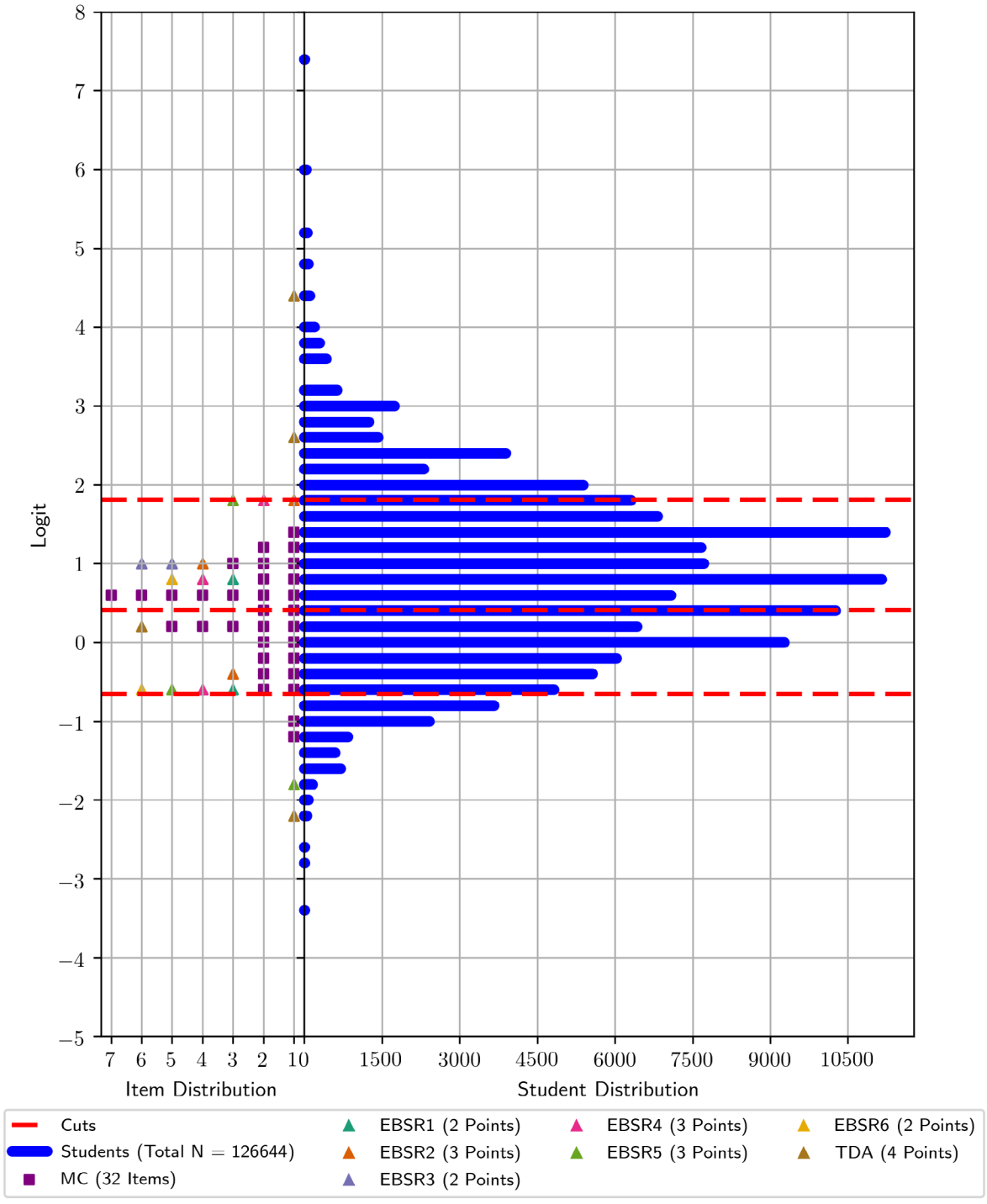
ELA Grade 3


Logit
6
5
4
3
2
1
0
−1
−2
−3
−4
6 5 4 3 2 10
1000 2000 3000 4000 5000 6000 7000 8000 9000
Item Distribution
Student Distribution
Cuts
Students (Total N = 122370)
MC (29 Items)
EBSR1 (3 Points)
EBSR2 (3 Points)
EBSR3 (2 Points)
SA1 (3 Points)
SA2 (3 Points)
EBSR4 (2 Points)

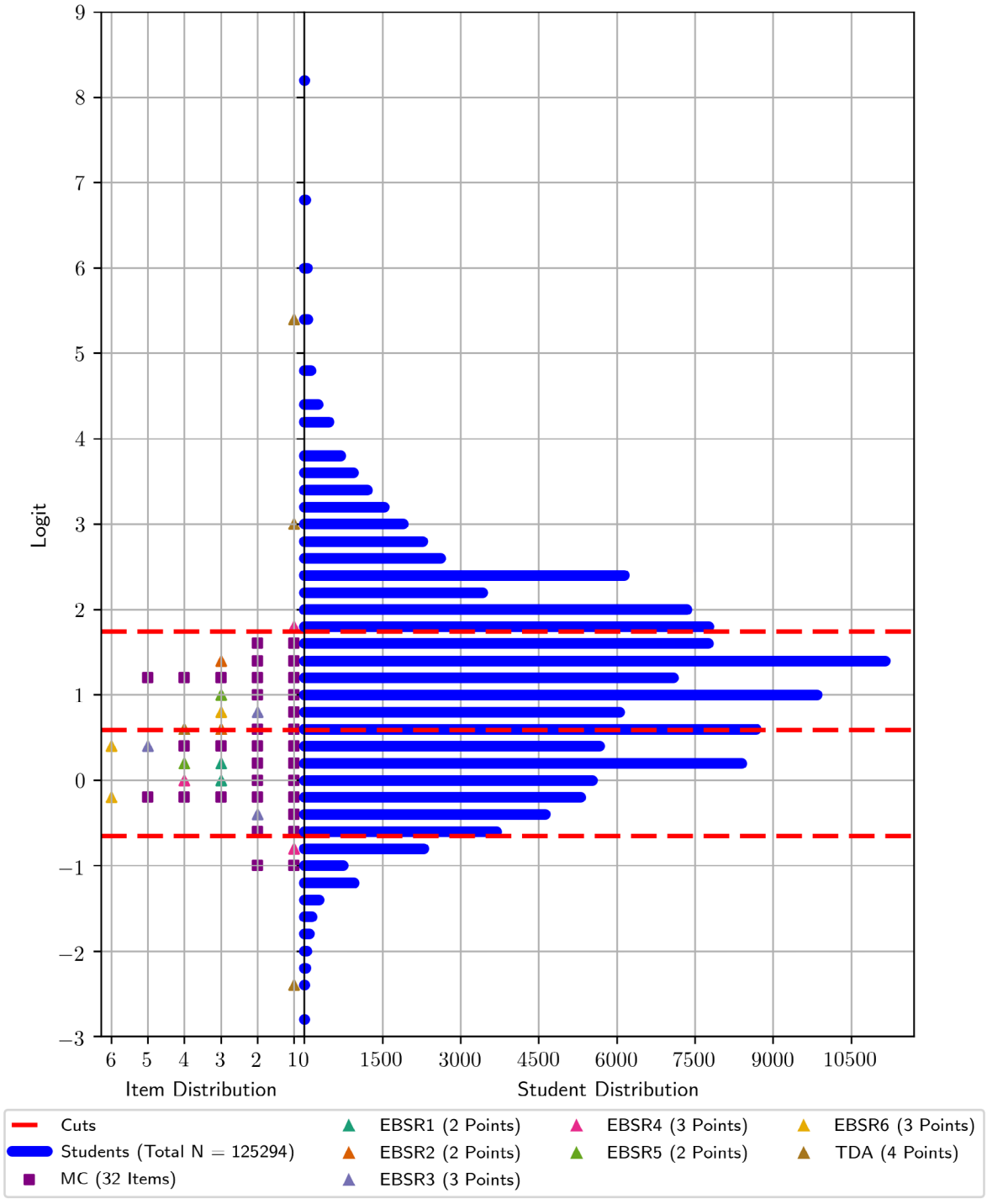
ELA Grade 4


Logit
7
6
5
4
3
2
1
0
−1
−2
−3
−4
−5
8 7 6 5 4 3 2 10
1500 3000 4500 6000 7500 9000 10500
Item Distribution
Student Distribution
Cuts
Students (Total N = 126018)
MC (32 Items)
EBSR1 (2 Points)
EBSR2 (3 Points)
EBSR3 (2 Points)
EBSR4 (3 Points)
EBSR5 (3 Points)
EBSR6 (2 Points)
TDA (4 Points)

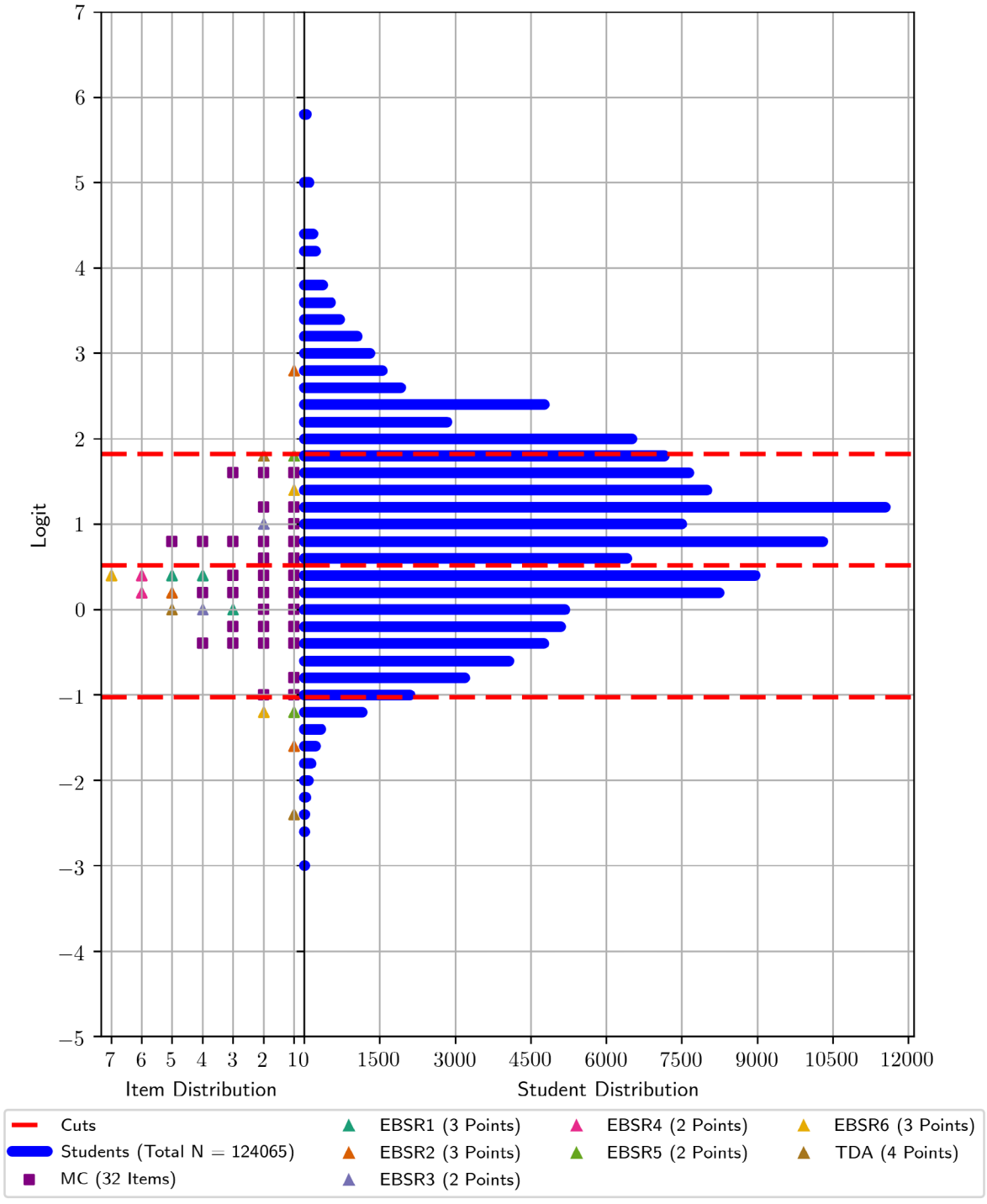
ELA Grade 5

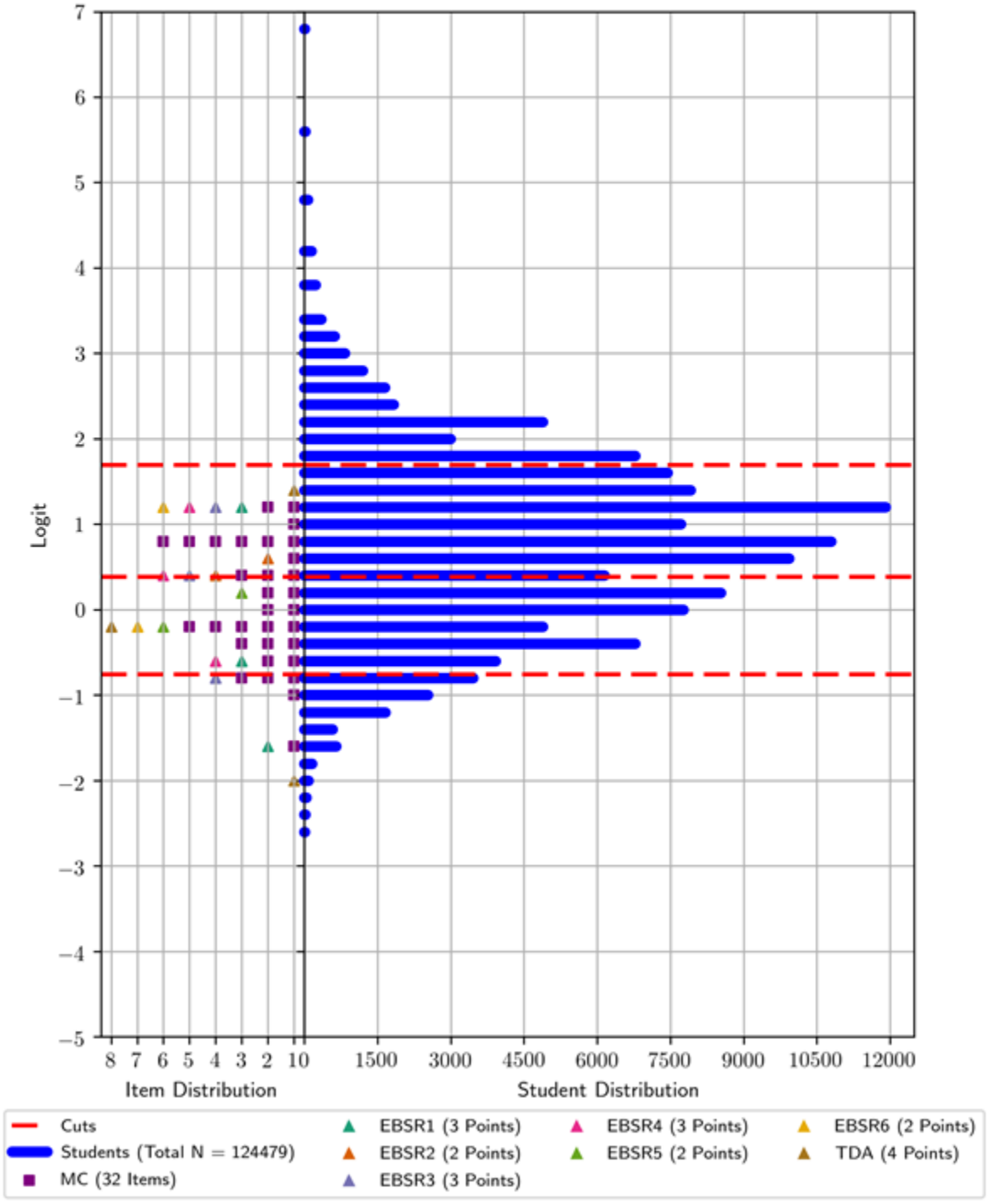

Logit
8
7
6
5
4
3
2
1
0
−1
−2
−3
−4
−5
7 6 5 4 3 2 10
Item Distribution
1500 3000 4500 6000 7500 9000 10500
Student Distribution
Cuts
Students (Total N = 126644)
MC (32 Items)
EBSR1 (2 Points)
EBSR2 (3 Points)
EBSR3 (2 Points)
EBSR4 (3 Points)
EBSR5 (3 Points)
EBSR6 (2 Points)
TDA (4 Points)

ELA Grade 6

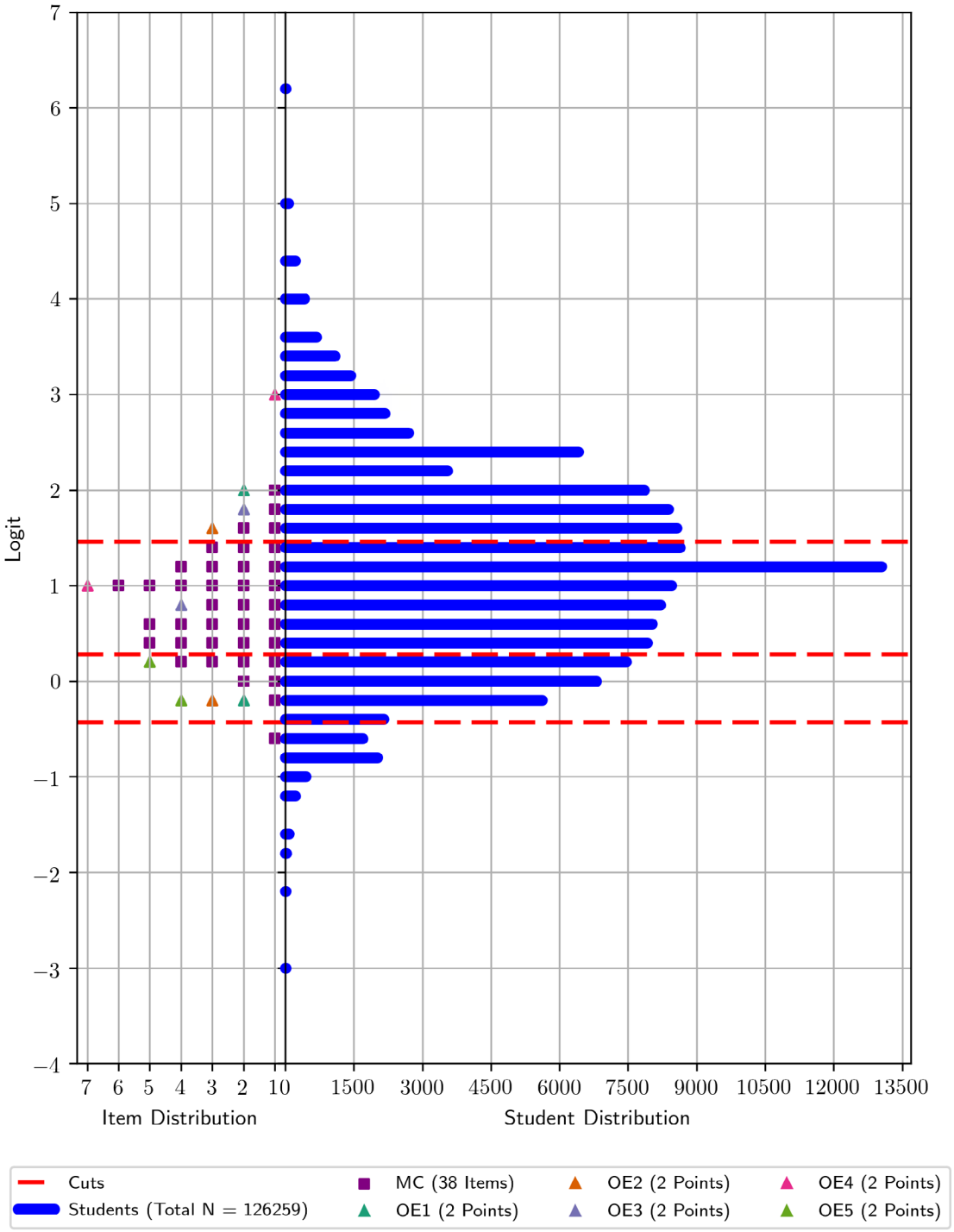

Logit
9
8
7
6
5
4
3
2
1
0
−1
−2
−3
6
5
4
3
2
10
1500
3000
4500
6000
7500
9000
10500
Item Distribution
Student Distribution
Cuts
Students (Total N = 125294)
MC (32 Items)
EBSR1 (2 Points)
EBSR2 (2 Points)
EBSR3 (3 Points)
EBSR4 (3 Points)
EBSR5 (2 Points)
EBSR6 (3 Points)
TDA (4 Points)

ELA Grade 7

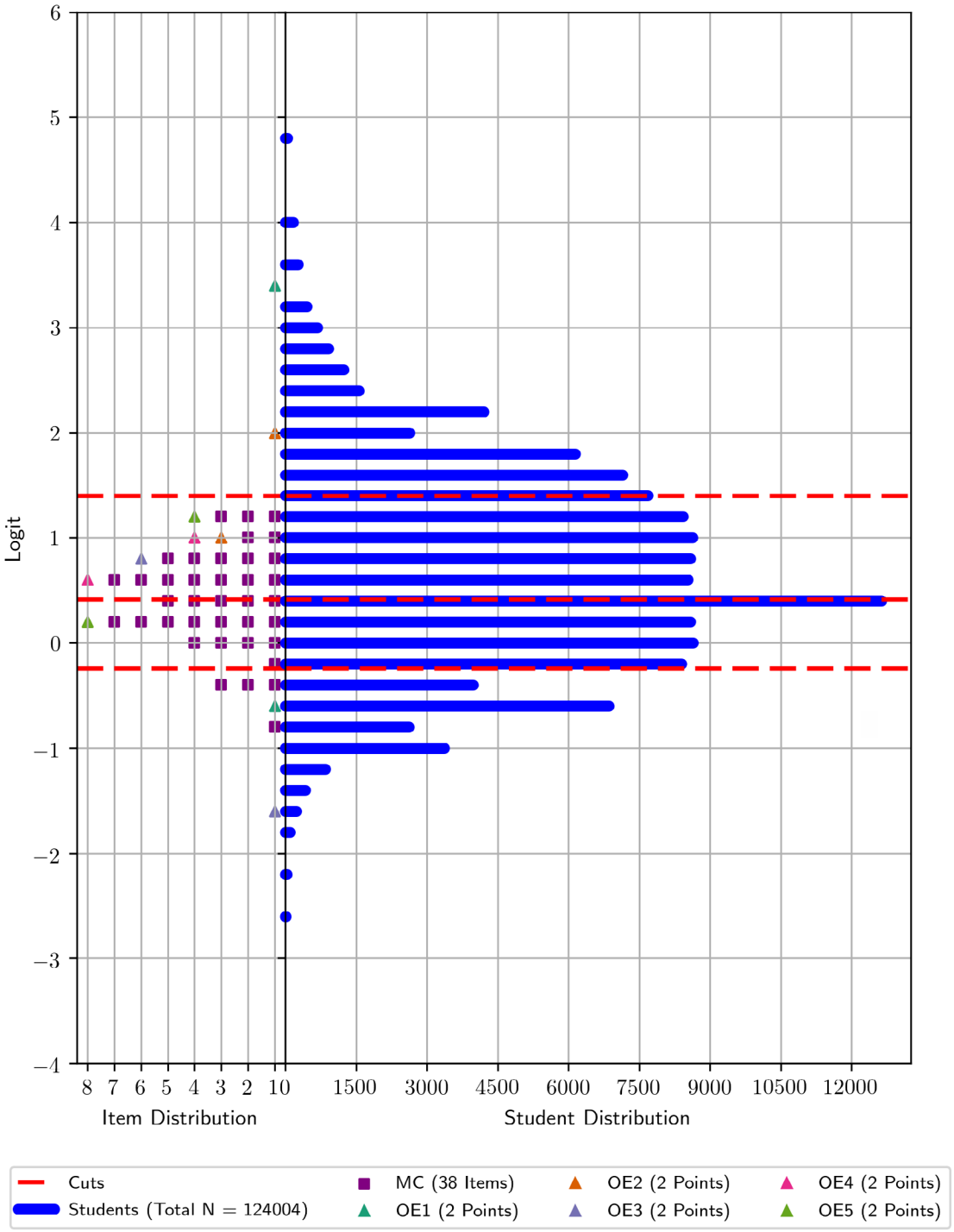

Logit
7
6
5
4
3
2
1
0
−1
−2
−3
−4
−5
7 6 5 4 3 2 10
Item Distribution
1500 3000 4500 6000 7500 9000 10500 12000
Student Distribution
Cuts
Students (Total N = 124065)
MC (32 Items)
EBSR1 (3 Points)
EBSR2 (3 Points)
EBSR3 (2 Points)
EBSR4 (2 Points)
EBSR5 (2 Points)
EBSR6 (3 Points)
TDA (4 Points)


ELA Grade 8
Logit
7
6
5
4
3
2
1
0
−1
−2
−3
−4
−5
8 7 6 5 4 3 2 1 0
1500 3000 4500 6000 7500 9000 10500 12000
Item Distribution
Student Distribution
Cuts
Students (Total N = 124479)
MC (32 Items)
EBSR1 (3 Points)
EBSR2 (2 Points)
EBSR3 (3 Points)
EBSR4 (3 Points)
EBSR5 (2 Points)
EBSR6 (2 Points)
TDA (4 Points)

Science Grade 4



Science Grade 8



CHAPTER THIRTEEN: PERFORMANCE LEVEL SETTING

Performance level setting events for grades 3 through 8 in mathematics and ELA took place June 9–12, 2015. No performance level setting occurred for science this year. A history (dates and methodology) of performance level setting events are provided in Table 13–1. The resulting cut scores from those events are provided in Table 13–2. For additional details about sciences standard setting event, refer to the PSSA science performance level setting technical report in 2008. For mathematics and ELA, please refer to the performance level setting report in 2015 for full details on the procedures used and the standard setting results.

Subsequent to the first administration of the reduced length tests described in detail in Chapter 2, the ELA cut scores reported below in Table 13-2 were validated by Pennsylvania educators during a modified Bookmark standards validation procedure in the Summer of 2018. Please refer to the standards validation report in 2018 for full details.

Table 13–1. Performance Level Setting/Validation Event Dates and Methodology

Subject	Grade	Methodology	Validation?	Event Date
Mathematics	3,4,5,6,7,8	Bookmark	No	Summer 2015
ELA	3,4,5,6,7,8	Bookmark	No	Summer 2015
Science	4, 8, 11	Bookmark	No	Summer 2008

PSSA CUT SCORES

Appendix M provides the Rasch ability and scaled score cuts for each PSSA test. For reader convenience, these are documented next in a different format. Table 13–2 documents the cut scores on the scaled-score metric. PSSA scaling procedures are discussed further in Chapter Fourteen.

Table 13–2. PSSA Scaled-Score Metric Cut Scores by Grade and Subject Area

Subject	Grade	BB/B	B/P	P/A
Mathematics	3	923	1000	1110
Mathematics	4	908	1000	1107
Mathematics	5	901	1000	1113
Mathematics	6	897	1000	1105
Mathematics	7	904	1000	1109
Mathematics	8	906	1000	1108
ELA	3	905	1000	1143
ELA	4	887	1000	1107
ELA	5	893	1000	1139
ELA	6	875	1000	1115
ELA	7	845	1000	1130
ELA	8	886	1000	1130
Science	4	1150	1275	1483
Science	8	1150	1275	1464

Note. BB = Below Basic; B = Basic; P = Proficient; and A = Advanced.

CHAPTER FOURTEEN: SCALING

The purpose of a scaling analysis is to create a score scale. Scaling is used to transform test score values onto a scale more easily interpreted by users. For the PSSA, the resulting scaled scores will be used for score reporting and performance level classification. The PSSA classifies students into four achievement levels: Below Basic, Basic, Proficient, and Advanced.

The adoption of the Pennsylvania Core Standards in 2013 brought a number of changes to the PSSA in mathematics and ELA. In mathematics, content changed grades levels, items involved more problem solving for deeper understanding, rulers were provided in grade 3 only, protractors were provided in grade 4, and formula sheets were provided in grades 4 through 8. In ELA, the new PSSA replaces PSSA Reading and PSSA Writing. Additional changes in ELA include reading passages that reflect the increased expectations of text complexity and new item types to reflect the emphasis on text-based answers and evidence to support claims. PSSA science continues to be aligned to the Pennsylvania Academic Standards for Science, Technology, Environment and Ecology.

The changes to mathematics and ELA necessitated performance level setting and the establishment of new score scales in 2015. Therefore, mathematics and ELA scaled scores for 2018 are not comparable to years prior to 2015. Science score scales were established in 2008 and no changes were made to science cutpoints or score scales since that time. Therefore, science scaled scores are comparable to previous years back to the 2008 scores. Table 14–1 shows the scale score cutpoints.

SCALED SCORES

Individual student scores are reported as scaled scores. However, they are initially estimated as Rasch abilities (more information on the Rasch model is given in Chapter Twelve). Generally, scaled scores are preferred over Rasch ability values for reporting purposes. One issue is that Rasch ability values are on a scale that includes negative and decimal values. By transforming the Rasch ability values to scaled scores, all reported values can become positive integers. Scaled scores are usually obtained through some linear transformation of the Rasch ability values. The linear transformations used for the PSSA produce numeric values with three or four digits that are unit interval scaled scores. Each grade and subject has its own unique PSSA scaled score. Positive scores with no decimals make more sense to parents and students. Since Rasch ability values are comparative after linking to the base year, the transformed scaled scores have a common scale across years, even though the corresponding raw scores may differ. (Linking is discussed further in Chapter Fifteen.)

Essentially, PSSA scaled scores are derived through a two-step process. First, there is a nonlinear transformation that converts number correct scores to Rasch ability logits. Second, a linear transformation is used to convert logits to scaled scores. These and some additional considerations (e.g., rounding rules), are discussed further below.

DEFINITION OF SCOREABILITY

Answer documents are considered scoreable if they meet the attempt logic criterion for inclusion in the data files (see Chapter Nine).

At the item level, responses that were considered non-attempted or non-scoreable were assigned a score of zero. Details by item type are provided below.

- Multiple-choice (MC) items: All omit (no response) and multiple marks (more than one response selected without machine-discernible erasures) were scored as zeroes.
- Open-ended (OE) items: All blank, copied, non-scorable, foreign language, off-task, refusal, or unreadable responses were scored as zeroes.
- Evidence-based selected response (EBSR) items: Blank response for both parts OR part one marked with multiple marks and part two marked for all responses were scored as zeroes.

WINSTEPS SCALING

Parameter estimates are derived using the WINSTEPS 3.81.00 computer program (Linacre & Wright, 2014), which employs unconditional (UCON), joint-maximum-likelihood estimation (JMLE). WINSTEPS provides a conversion table that maps raw scores to logits (Rasch ability estimates). The logits are transformed to scaled scores as discussed below. Every year each test is scaled separately and then linked (see Chapter Fifteen).

ZERO AND PERFECT SCORES

WINSTEPS does not provide a direct ability estimate for zero (no points earned) or perfect (all points earned) raw scores. However, WINSTEPS has a default procedure for estimating such extreme scores, and this was used for the PSSA. Essentially, a fractional raw score (a value less than one) is added to zero scores and subtracted from perfect scores to determine the corresponding logit values for these extreme scores.

LINEAR TRANSFORMATION FORMULAS

PSSA scaled scores are obtained through a linear transformation of the Rasch ability estimates ($\hat{\theta}$). Specifically,

$$SS = m\hat{\theta} + b,$$

where m is the slope and b is the intercept.

For mathematics and ELA, the slope and intercept for each grade were derived by anchoring the Proficient cutpoint to a scaled score of 1000 and fixing the slope at 100. For science, the slope and intercept for each grade were derived by anchoring the Basic cutpoint at 1150 and the Proficient cutpoint at 1275.[1]

The slopes and intercepts for deriving PSSA scaled scores are provided in Table 14–2.

ROUNDING

The linearly transformed scaled scores are generally rounded to the nearest integer value for reporting purposes. Values greater than or equal to 0.50 are rounded up. Values less than 0.50 are rounded down.[2]

LOWEST OBTAINABLE SCALED SCORES

PSSA mathematics and ELA tests have a lowest obtainable scaled score (LOSS) of 600. For PSSA science, the LOSS values have been set to 1050 at Grades 4 and 925 for Grade 8. The selection of a LOSS is mainly based on two considerations: 1) extreme low scaled scores may have an impact on the average of the scaled scores at school/district level and 2) score truncation makes sense from a score precision perspective given measurement errors at the extremes are large. The LOSS values are documented in Table 14–1. See tables in Appendix N for LOSS *n*-counts.

HIGHEST OBTAINABLE SCALED SCORES

A highest obtainable scaled score (HOSS) is not set for the PSSA. Thus, the maximum possible scaled score value is allowed to float for each subject and grade. The upper bound varies from year to year, depending on the difficulty of the test form. Table 14–1 shows the maximum possible observed score for the current year's test. (Note: It may be that no student actually earned the maximum possible.) See tables in Appendix N for HOSS *n*-counts.

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[1] Anchoring two cutpoints for mathematics and ELA was considered. However, this led to large variability in scaled scores across grades. Therefore, it was determined that one cutpoint would be anchored and the slope set at 100 for all grades.

[2] One exception to this rounding is in science where scores are rounded up (even if less than 0.50) if this action would put the rounded score into a higher performance level. This rounding rule has been in place for science since the establishment of the score scale and cutpoints in 2008.

RAW-SCORE-TO-SCALED-SCORE TABLES

Full raw-to-scaled score tables can be found in Appendix N.

Table 14–1. PSSA Scaled Score Cuts for Each Performance Level by Grade and Subject Area

Subject	Grade	Min	BB/B[1]	B/P[1]	P/A[1]	Max[2]
Mathematics	3	600	923	1000	1110	1545
Mathematics	4	600	908	1000	1107	1514
Mathematics	5	600	901	1000	1113	1515
Mathematics	6	600	897	1000	1105	1490
Mathematics	7	600	904	1000	1109	1522
Mathematics	8	600	906	1000	1108	1638
ELA	3	600	905	1000	1143	1551
ELA	4	600	887	1000	1107	1652
ELA	5	600	893	1000	1139	1685
ELA	6	600	875	1000	1115	1754
ELA	7	600	845	1000	1130	1641
ELA	8	600	886	1000	1130	1640
Science	4	1050	1150	1275	1483	2321
Science	8	925	1150	1275	1464	2337

Notes. 1. BB = Below Basic; B = Basic; P = Proficient; and A = Advanced.
2. Scaled Score Maximum Values are unique for the each year's test.

Table 14–2. PSSA Intercept and Slope by Grade and Subject Area

Subject	Grade	Intercept	Slope
Mathematics	3	956.31	100
Mathematics	4	981.92	100
Mathematics	5	961.69	100
Mathematics	6	931.41	100
Mathematics	7	956.16	100
Mathematics	8	951.76	100
ELA	3	962.47	100
ELA	4	957.49	100
ELA	5	958.32	100
ELA	6	940.78	100
ELA	7	947.65	100
ELA	8	961.11	100
Science	4	1225.65	176.75
Science	8	1196.64	191.54

Notes. Linear Transformation Intercepts and Slopes are used to derive the Scaled Scores.
BB = Below Basic; B = Basic; P = Proficient; and A = Advanced

STRAND (REPORTING CATEGORY) SCORE STRENGTH PROFILE

Strength profiles for strand (reporting category) scores have been provided since 2009. New mathematics and ELA continue to report the strength profile. The following process was followed to derive the profile:

- The items for each strand were identified.
- WINSTEPS runs were undertaken that anchored the logit values for each strand's items to get the raw-to-logit score table for each strand. This is sometimes referred to as fixed item parameter scaling.
- The appropriate linear transformations (based on content and grade from Table 14–2) were applied to the logit values to derive strand scaled scores.

The strand scaled scores were categorized as follows: L=Low; M=Medium; H=High. The maximum possible strand scaled score was converted to H in cases where no strand scaled score equaled or exceeded the Advanced scaled score cut. Note that these designations are provided as an indication of performance levels within a strand, but as standards have not been set that describe strand performance as has been done at the overall test level, performance level descriptions for the overall test should not be used to describe strand performance. See Chapter Sixteen for information regarding strength profiles are used in score reports.

CHAPTER FIFTEEN: LINKING

In large-scale testing programs it is a common practice to have different item sets appear in test forms within and/or across years. Linking operational scores from the different test forms to a common scale of measurement ensures that all forms for a given grade and subject area provide comparable scores. Consequently, students are not given an unfair advantage or disadvantage because the particular test form they took is easier or harder than a test form taken by other students.

In order to account for the differences between different test forms, an application of an item response theory (IRT) linking methodology is required to place the item parameters and student ability estimates on the same scale as other forms. (As cautioned earlier, the success of these methods depends on how well the IRT assumptions are met.) The IRT model used for the PSSA is the Rasch Partial Credit Model (RPCM; Masters, 1982). Further descriptions of the RPCM are given in Chapter Twelve. Without linking analyses, the Rasch item calibrations for the new test items and associated scores on these items would be unique to the new test administration.

A chained linking design is utilized for the mathematics, ELA, and science PSSA operational scores. With a chained linking design, scores from the new test form are linked to the scale of previous test forms. The chain originates from scale of measurement defined for each test's base form, which is used as the reference for calibrating all items in the item pool. The base form is usually the form upon which the cut scores were established (see Chapter Thirteen). In the case of the PSSA, scales and cut scores were established for Science in 2008, and 2015 for ELA and mathematics. Therefore, the 2018 mathematics and ELA test are chain linked to the scales set in 2015 and the science tests are chain linked to the scales set in 2008. When the item parameters from the new test are placed on the test scale, the resulting scaled scores for the new test form will be expressed on the same scales as defined by the base forms.

This chapter begins with an explanation of specific PSSA design elements and associated analysis procedures. This is followed by a summary of the entire PSSA linking procedure. Some summary results are also provided. The linking procedure described will be used for each year-to-year linking cycle to support the comparability of scores within grade and subject area over time for all PSSAs.

PSSA MATHEMATICS, ELA, AND SCIENCE

The test designs for the operational PSSA mathematics, ELA, and science assessments used multiple test forms that shared several common elements. The operational items are the same on all forms and for all students. Student total raw scores and scaled scores, as well as accountability reporting, are based exclusively on the operational items. In addition, each test form has a different set of nonoperational items (i.e., items that are not part of student scores). One such example is the embedded field test items that are tested for possible inclusion in the PSSA item pool. Equating block items were included to bolster the linking design (discussed further below). The forms containing the nonoperational items were spiraled to ensure the items would have randomly equivalent samples of students responding to them. In summary, each test form for 2018 mathematics, ELA, and science was composed of core operational, equating block, and field test sections.

DATA COLLECTION DESIGN

The item status codes used in the IDEAS item banking system are given in Table 15–1. For brevity, these codes are used for the remainder of this chapter.

The link between years was based on the core linking (LK) and equating block (EB) items. These items had been used in previous administrations (most often from the prior year). The LK and EB items were used in approximately the same context. That is, the items were not altered in any way, they appeared in about the same position in the booklet, and they were administered at about the same time of year.

The equivalence of student samples across years cannot be assumed. Further, the same item can have different properties in different years because of changes in the item's position or changes in the students' experiences. Consequently, between-year linking requires more scrutiny than within-year linking. This chapter focuses more on the linking between years.

The linking design employed for PSSA is often referred to as a common-item nonequivalent groups design. Test forms contain a set of common items, called core LK items or EB items, which served as anchors for linking test forms across years to a common scale. LK items were internal anchor items (i.e., they contribute to student test scores) and EB items were external anchor items (i.e., they did not contribute to student test scores). All EB items were MC items.

Since LK items were in the tests' operational sections, they were common across all test forms within a year. For the 2018 PSSA, all core MC LK items were from 2017 operational tests. The forms containing EB items were spiraled, and thus, randomly distributed across the student population. All EB items in the 2018 PSSA tests were previously administered in 2017. The number of the LK/EB items are summarized in Table 15–2, and the number of EB items shown in Table 15–2 is the total number of EB items across all forms, noting that there are no changes in the total numbers of LK and EB items for 2018 from prior years. The linking design was held constant under the overall reduced test length conditions.

There were 40 core MC items in mathematics, 29 core MC items in grade 3 ELA, 41 core MC items in grades 4 and higher ELA, and science had 38 MC items. There were three core OE with mathematics, six core OE[1] items in grade 3 ELA, seven in grades 4 and higher ELA. A further break down of OE items is also presented in Table 16–1 in Chapter Sixteen. There were three core OE items in mathematics, and 5 in science.

Table 15–1. Item Status Codes in IDEAS

Item	Comments	Code in IDEAS
Core	Include core linking (i.e., anchor) items and unique core items	OP
Core linking	Linking items in the core section which include MC and OE items	LK
Equating Block	All items in the EB are MC linking items	EB
Field Test	Items in the embedded FT section	FT

Table 15–2. 2018 PSSA Linking Designs: Mathematics, ELA, and Science

Subject	Grade	Number Of Forms	Total Core MC	Total Core Non-MC	Core Links MC	Core Links Non MC	Equating Block (All MC)
Mathematics	3	9	40	3	18	16	2
Mathematics	4	9	40	3	18	16	2
Mathematics	5	9	40	3	18	16	2
Mathematics	6	9	40	3	18	16	2
Mathematics	7	9	40	3	18	16	2
Mathematics	8	9	40	3	18	16	2
ELA	3	9	29	6	21	8	2
ELA	4	9	32	7	21	11	2
ELA	5	9	32	7	21	9	1
ELA	6	9	32	7	21	11	2
ELA	7	9	32	7	21	9	1
ELA	8	9	32	7	21	10	1
Science	4	12	38	5	24	16	2
Science	8	12	38	5	24	16	2

[1] OE items in ELA include SA, EBSR, and TDA in this chapter.

LINKING METHOD FOR PSSA

The first step in linking the 2018 PSSAs in mathematics, ELA, and Science to their base scales was to express all 2018 item parameters for each test on its same respective scale. This was accomplished by calibrating all OP (including LK) MC items based on examinees taking the paper-based, master core forms. Then the OP MC items were anchored to calibrate EB MC items based on examinees taking all forms in the paper-based mode. Next, the resulting MC item parameters were used as anchors in a final WINSTEPS calibration of all OE items in the operational section (including OP LKs) based on examinees taking all forms in the paper-based mode.[2] At this point all OP and EB item parameters were on a unique scale for 2018. Between-year linking was required to the 2018 tests on their base scale.

Between-year linking utilized the 2018 LK and EB item parameters and their previous item parameters. The scale transformation methodology used for PSSA is the mean-shift procedure. This has been the procedure employed by the PSSA program for some time. After evaluating the robustness of the link by identifying items that did not maintain their relative difficulty across years, the difference between the current year and previous Rasch item parameters was then determined. The mean of the differences was then used to statistically adjust the 2018 parameters to the PSSA scales. The final (linking) item parameters were then used to estimate student abilities, which were, in turn, transformed to scaled scores. (Transformation formulas are provided in Chapter Fourteen.)

SUMMARY OF THE PSSA LINKING PROCEDURE AND PROCESS

The following steps outline the linking procedure. Mathematics and ELA item calibration in 2018 followed the first and third steps followed by the eighth and ninth steps to calibrate MC and OE operational items and produce raw to scale score tables.

1. Calibrate all operational (OP) multiple-choice (MC) items in an unanchored Winsteps run
    a. Include only the Master Core and paper students with completeness status “01” and “00” (all students with MC responses).
    b. Include all MC items in the core operational section (OP MC).
    c. Do not include any equating block (EB) items.
    d. Do not include any field test (FT) items.
2. Calibrate selected multiple-choice (MC) items in an anchored run:
    a. Include all forms, but only paper students with completeness status “01” and “00” (all students with MC responses).
    b. Include all MC items in the core operational section (OP MC).
    c. Include all equating block (EB) items.
    d. Do not include any field test (FT) items.
    e. Fix all OP MC items from Step 1.

3. Calibrate selected open-ended (OE) items in an anchored run by putting them on the MC item scale from Step 3:
    a. Include all forms, but only paper students.
    b. Include all OE items in the Core section (OP OE).
    c. Do not include any FT items.
    d. Fix all MC items from Step 2.
4. Evaluate the stability of the linking items using Robust *Z*:
    a. Include all core linking (LK) items—LK MC and LK OE.
    b. Include all EB items.
    c. LK OE item parameters should be obtained from Step 5.
    d. Calculate Robust *Z* for each item in the linking.
5. Once the above calculations were made, the following guidelines were used in determining possible sets of linking items used for the equating:
    a. Items with an absolute value of Robust *Z* exceeding 1.645 may be considered for exclusion.
    b. No more than 20 percent of the pool of linking items may be considered for exclusion.
    c. The ratio of the standard deviations of previous year and current Rasch difficulties should be in the 90 to 110 percent range.
    d. The correlation of previous year and current year Rasch difficulties is greater than 0.95.
6. Final decisions about the linking items were made in the national technical advisory committee (TAC) meeting in collaboration with PDE and DRC staff following these rules:
    a. Drop items that DRC identified as having a large Robust Z and were out of sequence because they were pulled from a separate FT form.
    b. If an item has been changed in any way from the previous year, it may no longer be used for linking.
    c. Scatterplots of the linking item difficulties (logits) were constructed (i.e., the current year values were plotted against those from the prior year). Ideally, these plots should have a strong linear trend. Items straying from the trend line did not perform in the same way in both years. As noted above, items that departed significantly from this were further evaluated. The scatterplots with final LK/EB item sets are shown in Figure 15–1.
7. Calculate the mean shift over MC and OE linking items using global item difficulties (weighted by number of score points) for OE items:
    a. Include all core linking (LK) items—LK MC and LK OE.
    b. Include all EB items.
    c. Weight LK OE items by maximum possible score.
8. Apply the mean shift to the item parameters calibrated in Steps 2 and 3:
    a. All OP items (OP MC + OP OE).
    b. All EB items.
9. Scale the operational test by fixing all operational (OP) items obtained in Step 8:
    a. Include all students (all forms and all modes).
    b. The result from this step is a Raw-to-Logit (Rasch Ability) table.

10. Apply the appropriate linear transformation to the logit values to derive the scaled scores and SEMs:
    a. The result from this step is a Raw-to-Scaled Score table.

RESULTS SUMMARY

Table 15–3 shows the number of linking items and the shift parameters associated with those over the two years, and the correlation of item difficulties across years for each grade/content area. The shift constants were applied to parameter estimates for operational items in the equating process. The adjustment needed to place the operational item estimates on the current scale can be large in magnitude as it must take into account multiple factors (e.g., weighting in the case of the TDA, changes in student ability, and differences in test difficulty as mentioned).

Table 15–3. Summary Data for Linking Items

Subject	Grade	Final Counts MC	Final Counts OE	2017 Shift	2018 Shift	2018 Correlation
Mathematics	3	34	2	-0.054	0.31	0.98
Mathematics	4	34	2	-0.469	-0.02	0.99
Mathematics	5	34	2	-0.040	-0.02	0.99
Mathematics	6	34	2	0.102	0.03	0.99
Mathematics	7	34	2	-0.221	-0.35	0.99
Mathematics	8	34	2	-0.220	-0.38	0.99
ELA	3	29	3	0.147	0.43	0.99
ELA	4	32	2	0.128	0.31	0.98
ELA	5	30	3	0.189	0.41	0.98
ELA	6	32	4	0.502	0.52	0.97
ELA	7	31	3	0.209	0.43	0.98
ELA	8	32	3	0.009	0.16	0.97
Science	4	40	2	0.829	0.88	0.96
Science	8	40	2	0.373	0.46	0.98

Note. No item was dropped during the linking procedures.

Appendix O provides the statistics for the linking items used. The previous and current values for item sequence, *p*-values, and logits are also provided. Appendix Q provides the mean raw and scaled score points across years. Together, these appendices provide a summary of how the items and test changed across years.

VISUALIZATION SUPPLEMENT

Linking analyses require considerable scrutiny given their critical role in reporting student performance. Items repeated over administrations can behave differently because of contextual changes or changes in the students' experiences. In addition to evaluating the linking items using Robust Z analyses, the graphs in Figure 15–1 provide a visualization to help identify extreme differences over different test administrations. The calibration data file described in Chapter Nine was used to construct these plots.

GRAPHS

This technical report uses figures to help one visualize the across-year differences in linking items at each grade. This section presents four types of figures, three of which illustrate the stability between the old (2017) and new (2018) item data:

1. Test Characteristic Curves (TCCs) for the linked score distribution.
2. Cummulative distribution functions for 2015-2018
3. Scatterplot of new-year *p*-values (2018) on old-year *p*-values (2017).
4. Scatterplot of new-year logits (2018) on old-year logits (2017).

All four plots are presented for each grade and subject-area test.

TEST CHARACTERISTIC CURVES

The old and new-year Test Characteristic Curves (TCCs) by grade and subject are shown in the bottom right-hand plot figures. The TCCs show the similarity between the new- and old-year tests in terms of difficulty in the logit metric (new-year results are for the final, linked values). Regarding the prior and current year TCCs, curves that are close to being coincident will translate into similar raw-score cut points (and smaller equating constants) across years. All grade and content areas showed very small year-to-year differences in TCCs from 2017 to 2018. Examinee performance distributions are included in the TCC plots to illustrate their 2018 alignment with test difficulty.

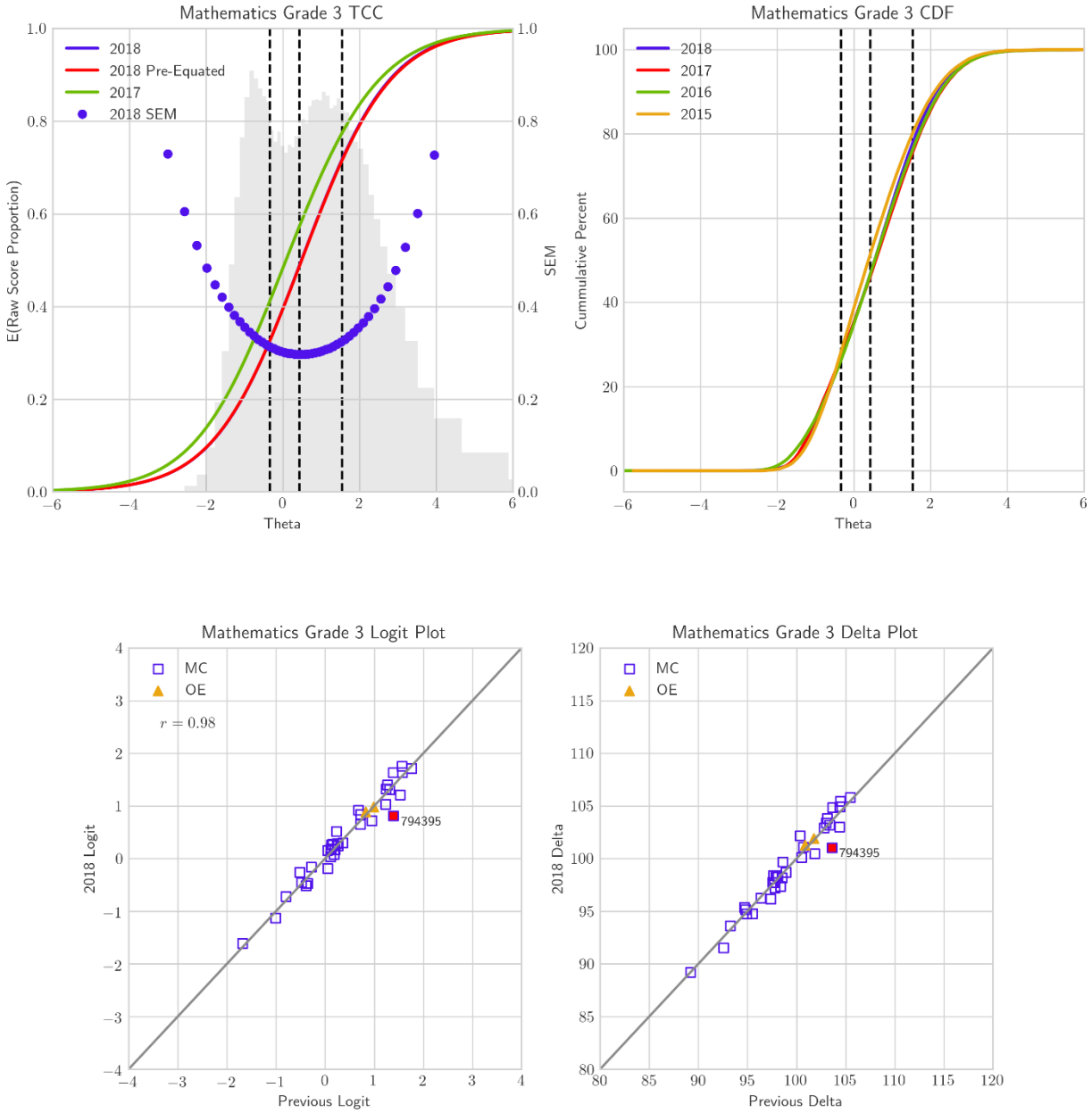
NEW-YEAR *P*-VALUES ON OLD-YEAR *P*-VALUES

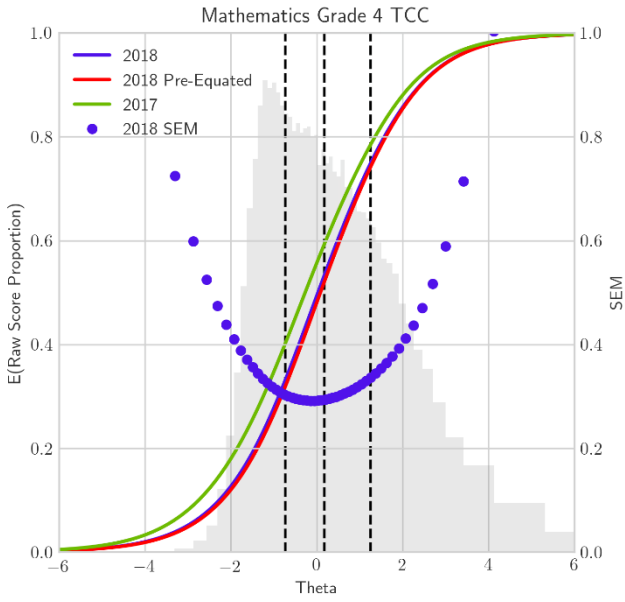
The top left-hand plot in Figure 15–1 describes the relationship between the item *p*-values for the two years. This type of scatter plot assists in a visualization of the year to year trends in item difficulty for items used in the linking procedure. The data points in these plots should have a clear trend where the vertical axis values rise as the horizontal axis values increases (i.e., as one moves from left to right). If the *p*-values for both years were correlated at 1.0, the relationship would be expected to fall on a straight line. Generally, linking items are not perfectly stable across years, so some scatter is expected. The extent to which the trend does not pass through the origin indicates a change in student performance.

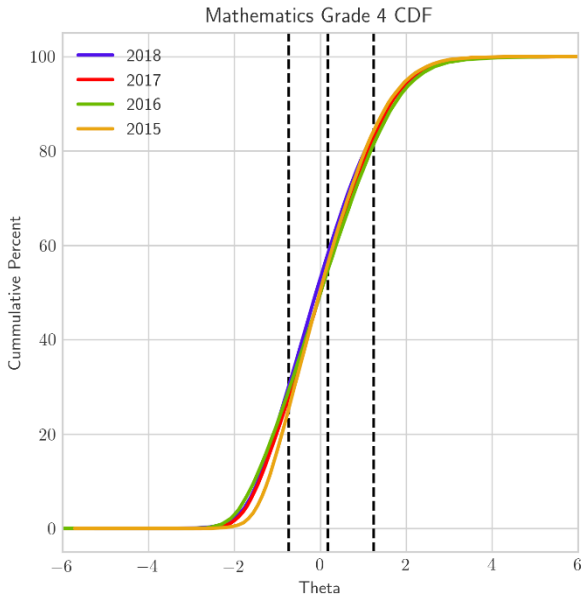
NEW-YEAR LOGITS ON OLD-YEAR LOGITS

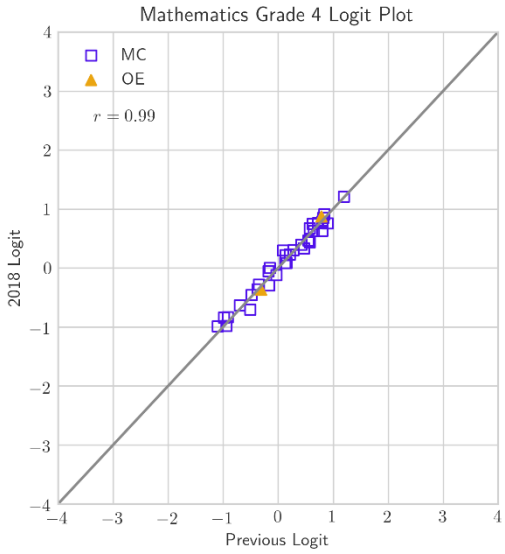
The top right-hand plot in Figure 15–1 focuses on the logit difficulties. It shows more clearly the relationship between new- and old-year item difficulties. Logit plots often provide more defined trends, but still can present varying degrees of scatter and in some instances reveal outlier data points. As with the associated *p*-value plots, these figures suggest good across-year stability of item difficulty based on both difficulty values.

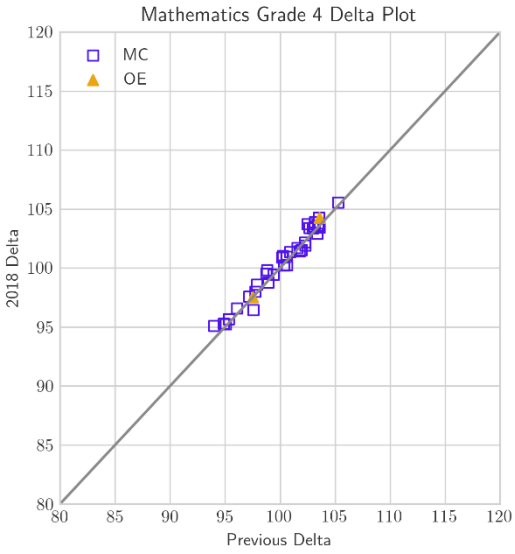
Figure 15–1. Item Stability Plots and Test Characteristic Curves

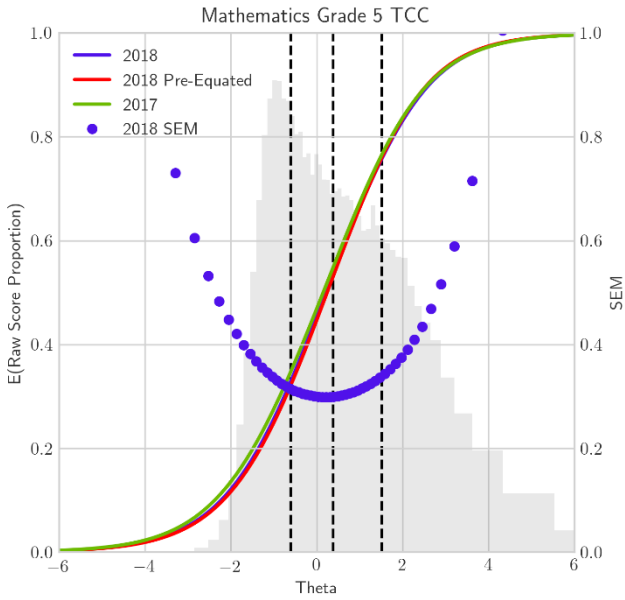


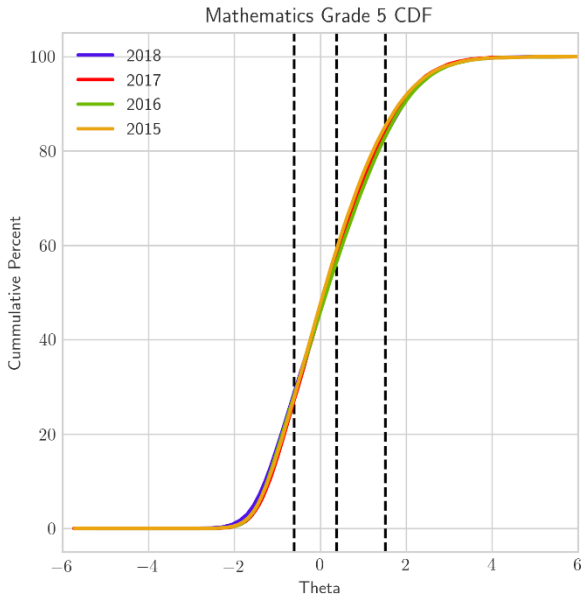

Mathematics Grade 4 TCC
2018
2018 Pre-Equated
2017
2018 SEM
E(Raw Score Proportion)
SEM
Theta

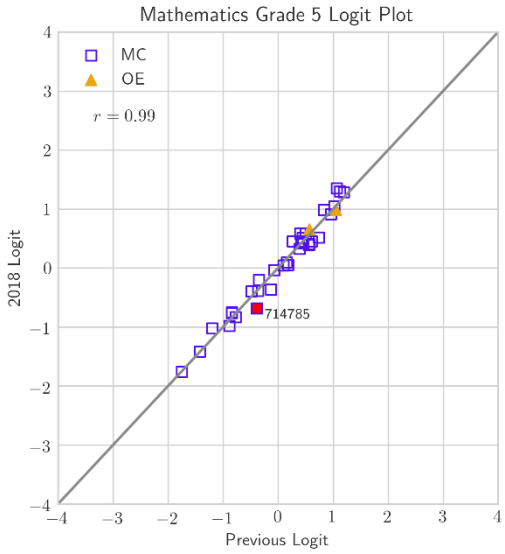

Mathematics Grade 4 CDF
2018
2017
2016
2015
Cummulative Percent
Theta

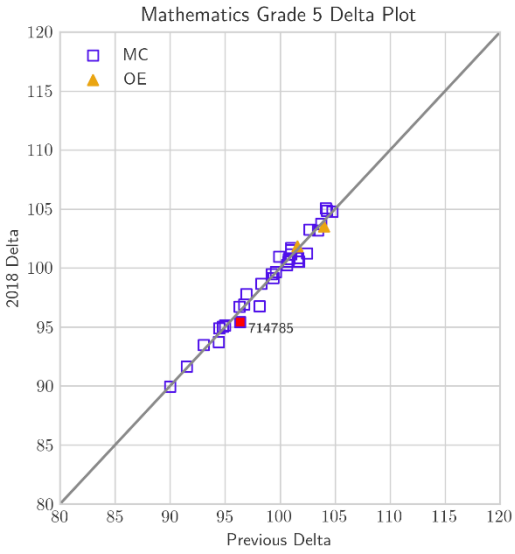

Mathematics Grade 4 Logit Plot
MC
OE
r = 0.99
2018 Logit
Previous Logit

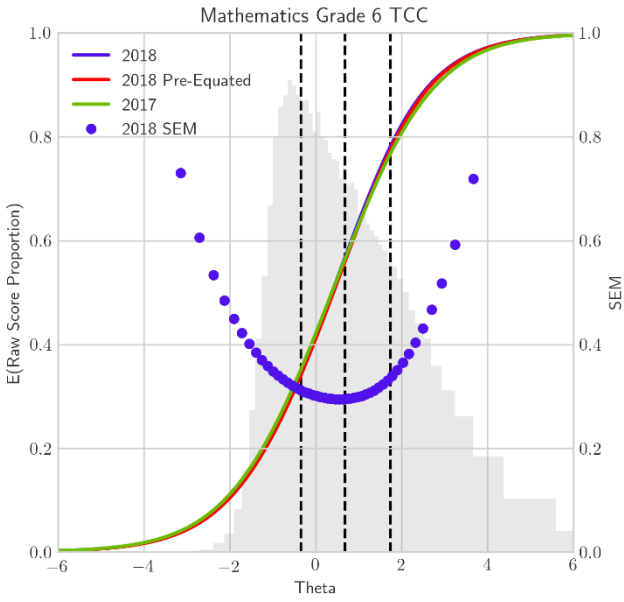

Mathematics Grade 4 Delta Plot
MC
OE
2018 Delta
Previous Delta

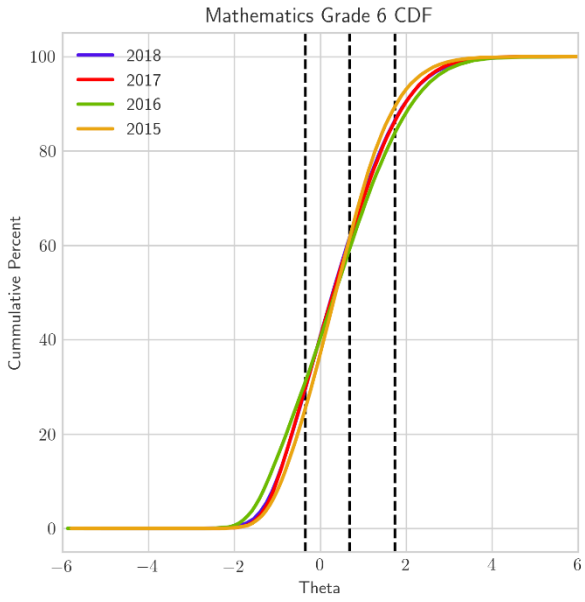

Mathematics Grade 5 TCC
2018
2018 Pre-Equated
2017
2018 SEM
E(Raw Score Proportion)
SEM
Theta

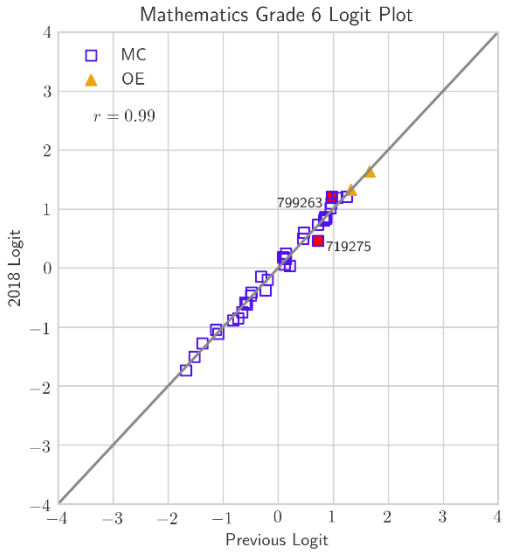

Mathematics Grade 5 CDF
2018
2017
2016
2015
Cummulative Percent
Theta

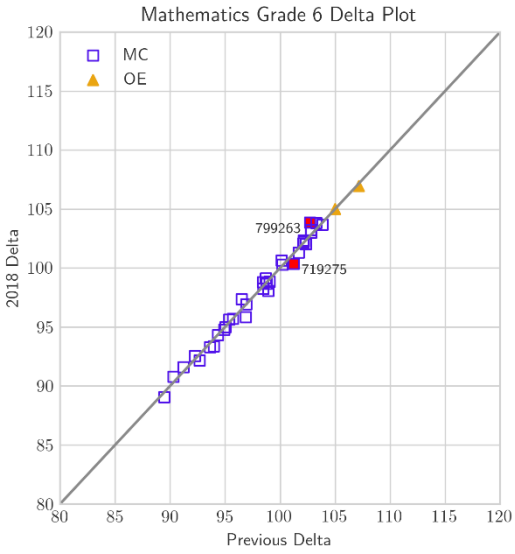

Mathematics Grade 5 Logit Plot
MC
OE
r = 0.99
714785
2018 Logit
Previous Logit

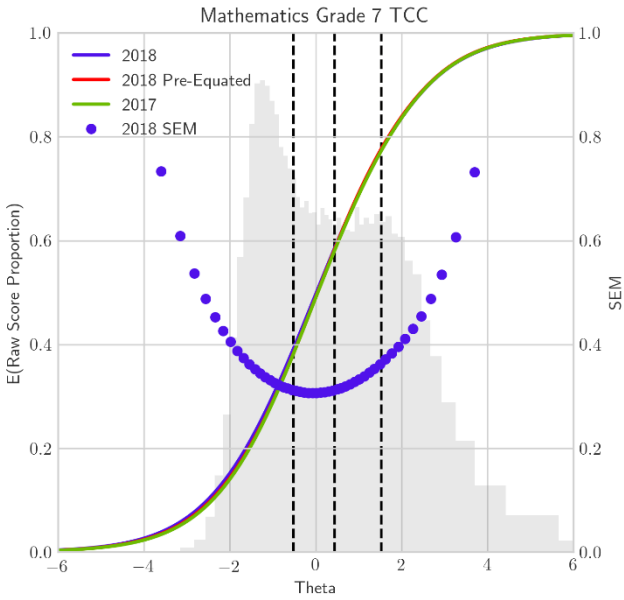

Mathematics Grade 5 Delta Plot
MC
OE
714785
2018 Delta
Previous Delta

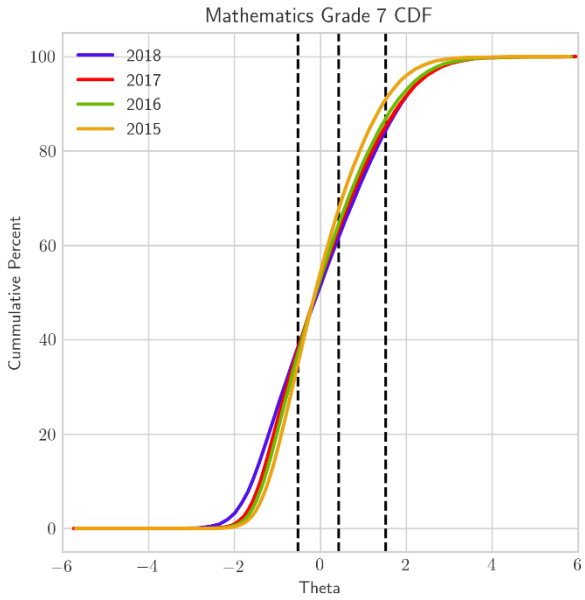

Mathematics Grade 6 TCC
2018
2018 Pre-Equated
2017
2018 SEM
E(Raw Score Proportion)
SEM
Theta

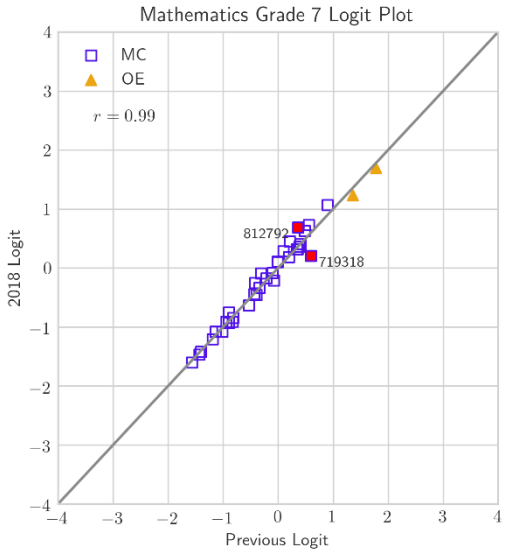

Mathematics Grade 6 CDF
2018
2017
2016
2015
Cummulative Percent
Theta

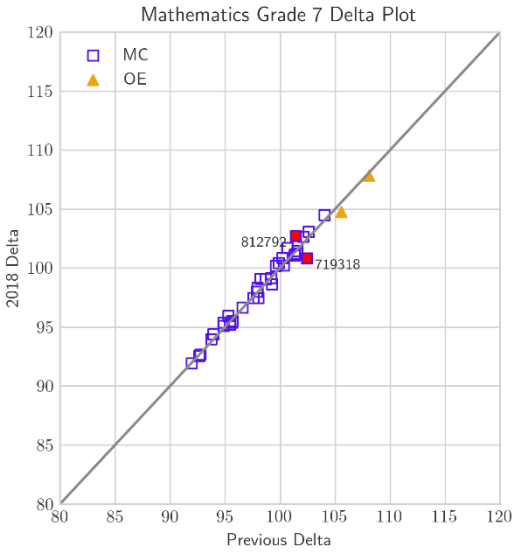

Mathematics Grade 6 Logit Plot
MC
OE
r = 0.99
799263
719275
2018 Logit
Previous Logit

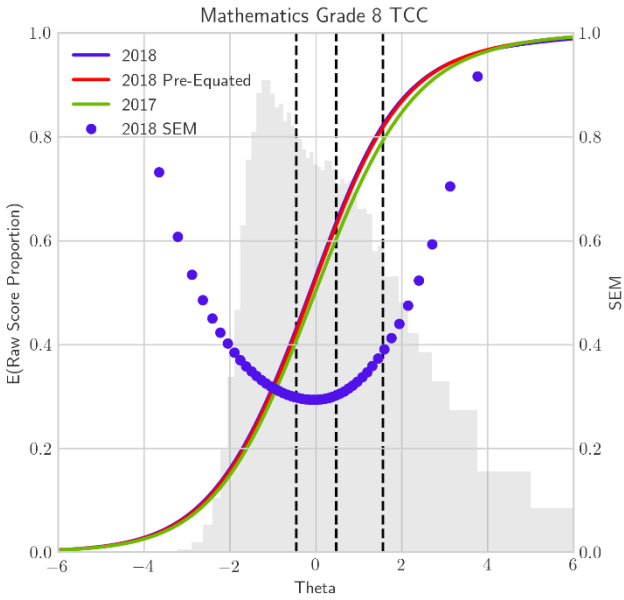

Mathematics Grade 6 Delta Plot
MC
OE
799263
719275
2018 Delta
Previous Delta

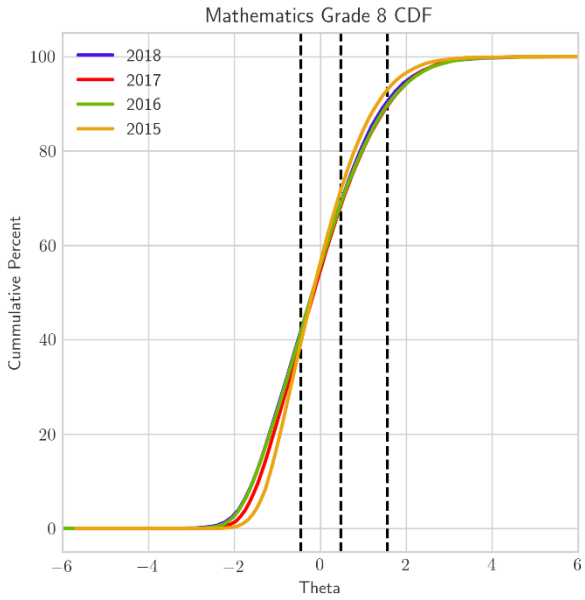

Mathematics Grade 7 TCC
2018
2018 Pre-Equated
2017
2018 SEM
E(Raw Score Proportion)
SEM
Theta

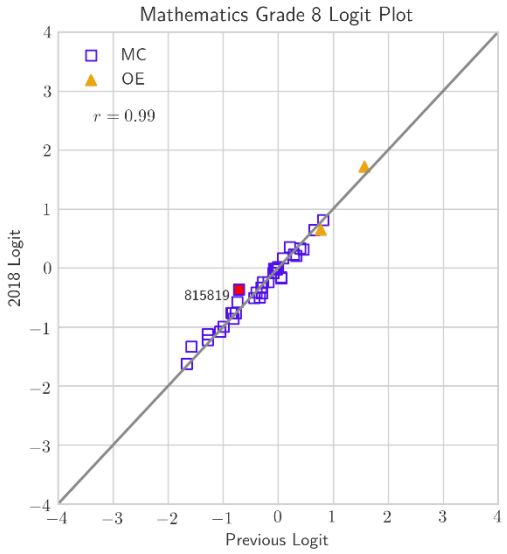

Mathematics Grade 7 CDF
2018
2017
2016
2015
Cummulative Percent
Theta

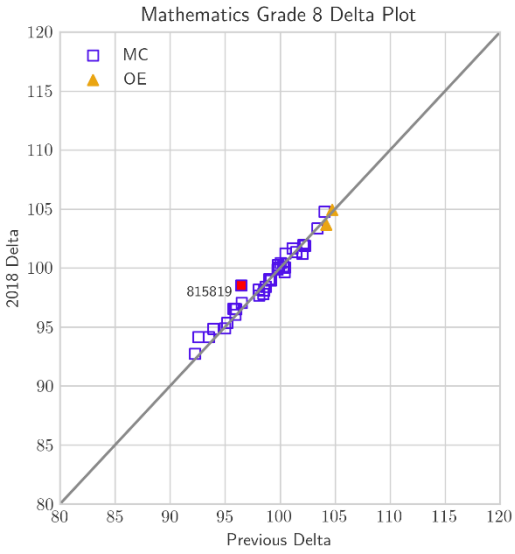

Mathematics Grade 7 Logit Plot
MC
OE
r = 0.99
812792
719318
2018 Logit
Previous Logit


Mathematics Grade 7 Delta Plot
MC
OE
812792
719318
2018 Delta
Previous Delta


Mathematics Grade 8 TCC
2018
2018 Pre-Equated
2017
2018 SEM
E(Raw Score Proportion)
SEM
Theta


Mathematics Grade 8 CDF
2018
2017
2016
2015
Cummulative Percent
Theta


Mathematics Grade 8 Logit Plot
MC
OE
r = 0.99
815819
2018 Logit
Previous Logit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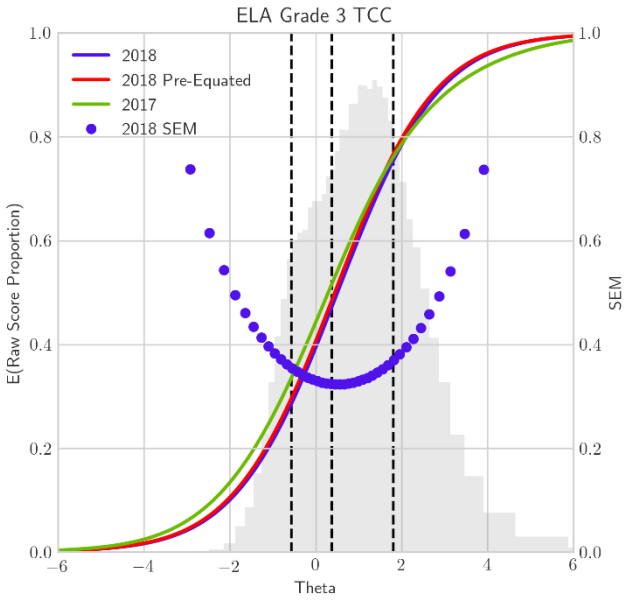
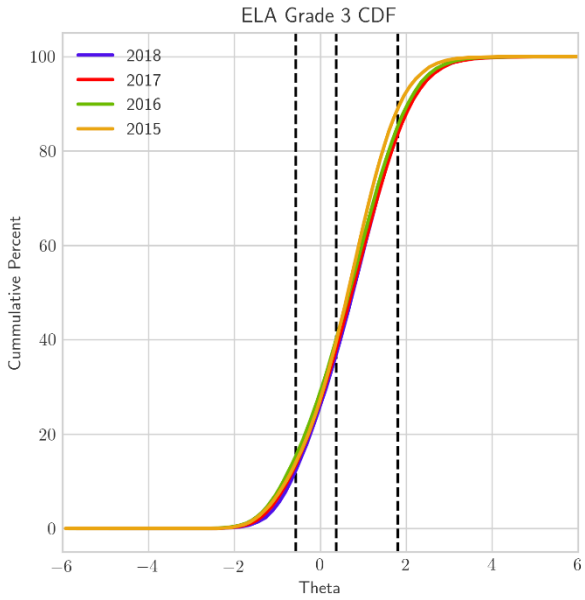
MC
OE
815819
2018 Delta
Previous Delta


ELA Grade 3 TCC
2018
2018 Pre-Equated
2017
2018 SEM
E(Raw Score Proportion)
SEM
Theta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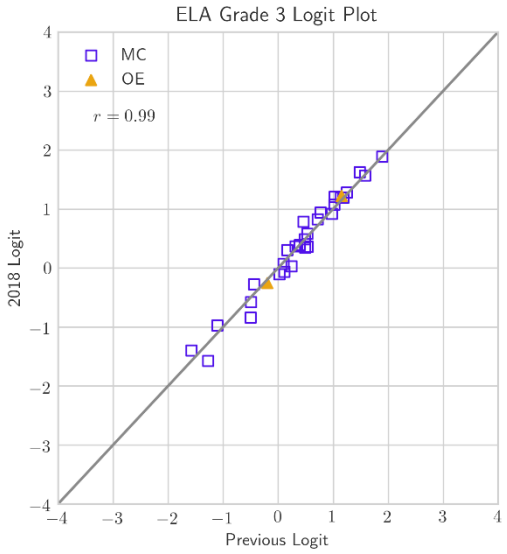
2018
2017
2016
2015
Cummulative Percent
Theta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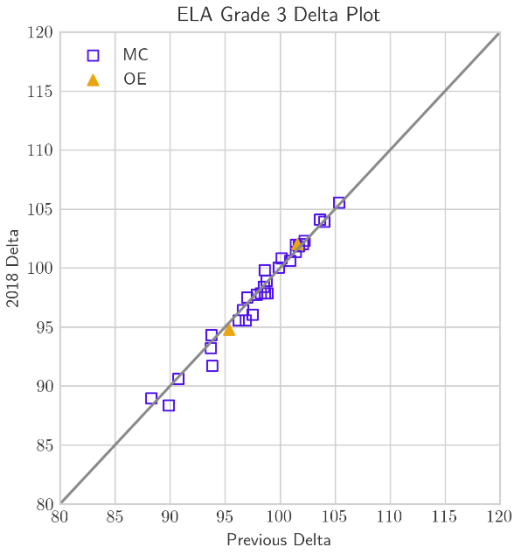
MC
OE
r = 0.99
2018 Logit
Previous Logit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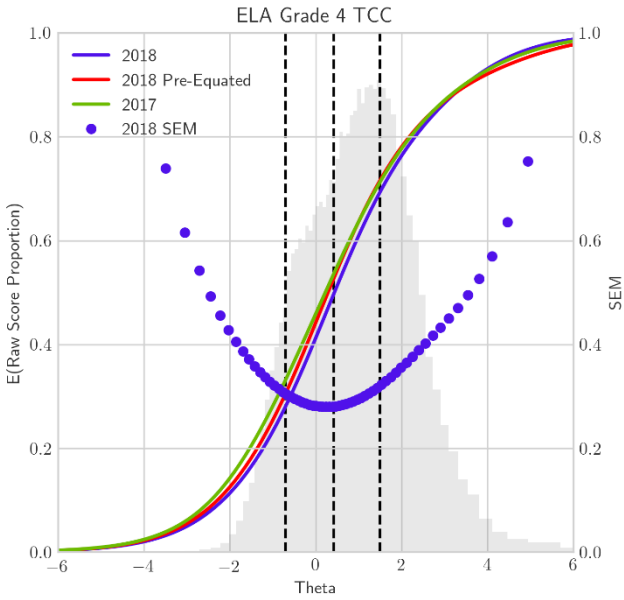
MC
OE
2018 Delta
Previous Delta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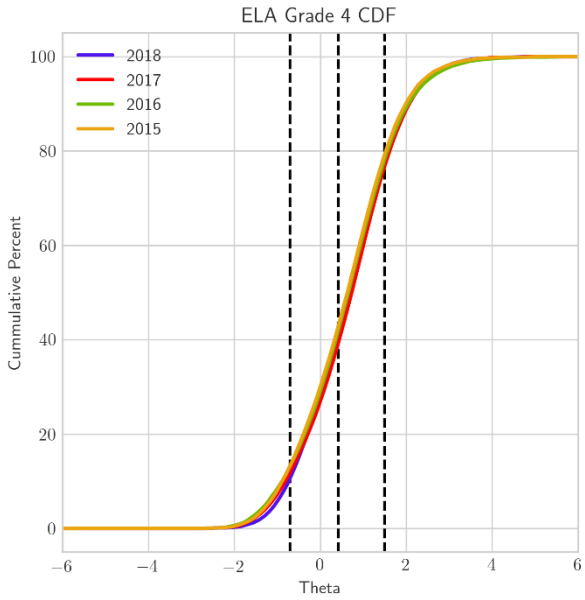
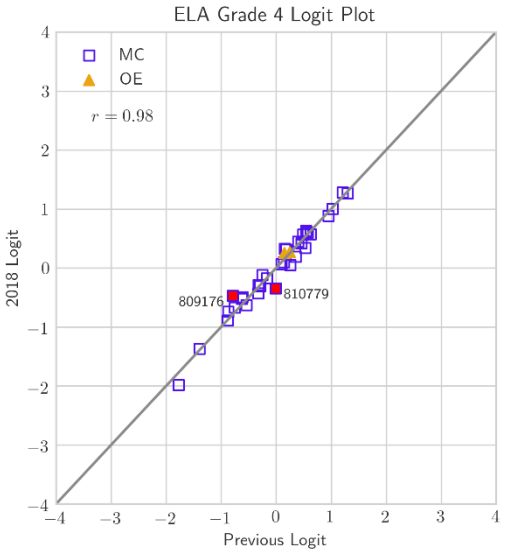
2018
2018 Pre-Equated
2017
2018 SEM
E(Raw Score Proportion)
SEM
Theta


ELA Grade 4 CDF
2018
2017
2016
2015
Cummulative Percent
Theta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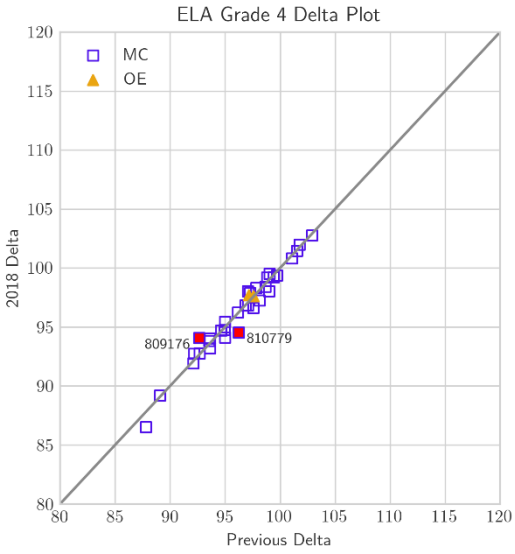
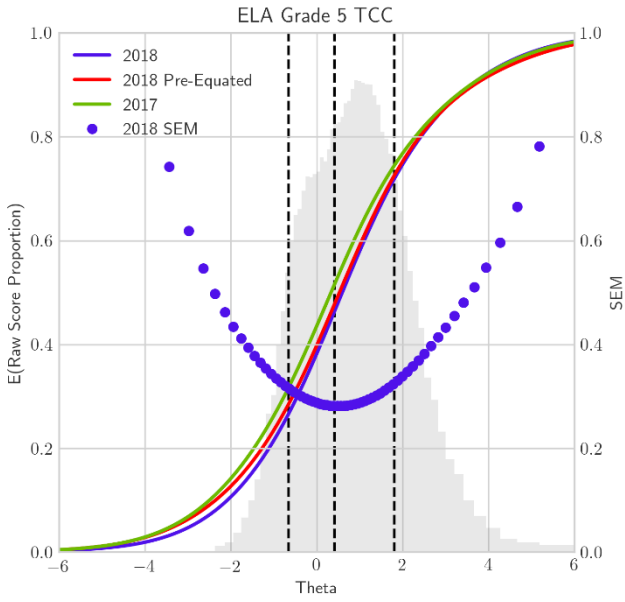
MC
OE
r = 0.98
809176
810779
2018 Logit
Previous Logit


ELA Grade 4 Delta Plot
MC
OE
809176
810779
2018 Delta
Previous Delta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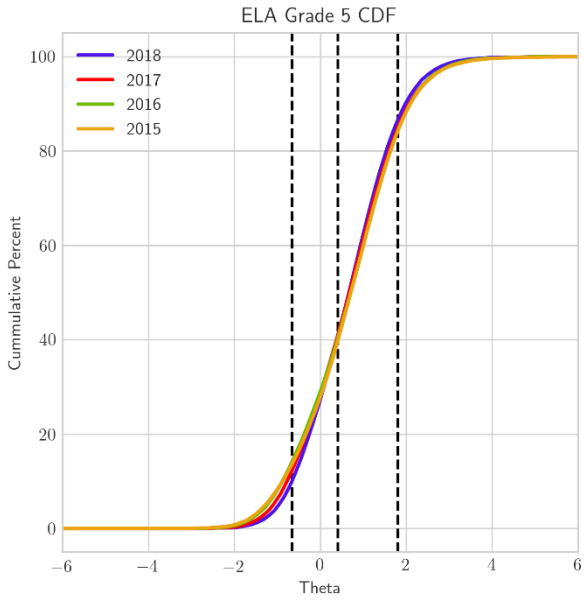
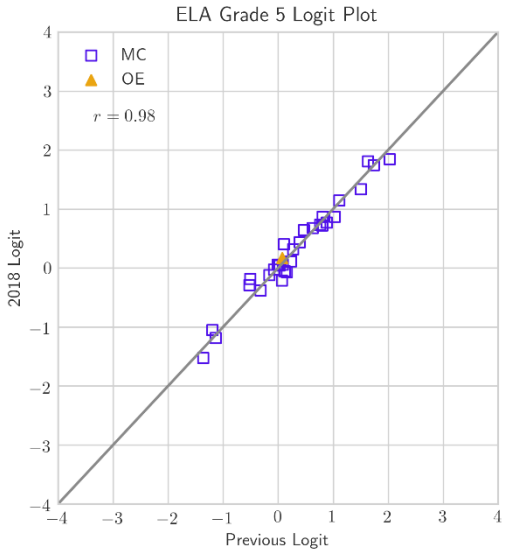
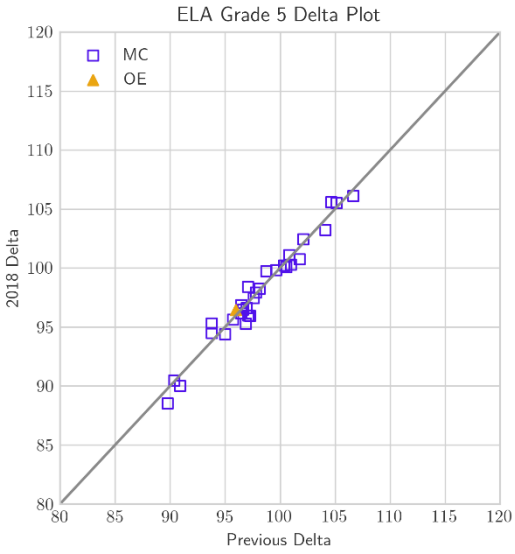
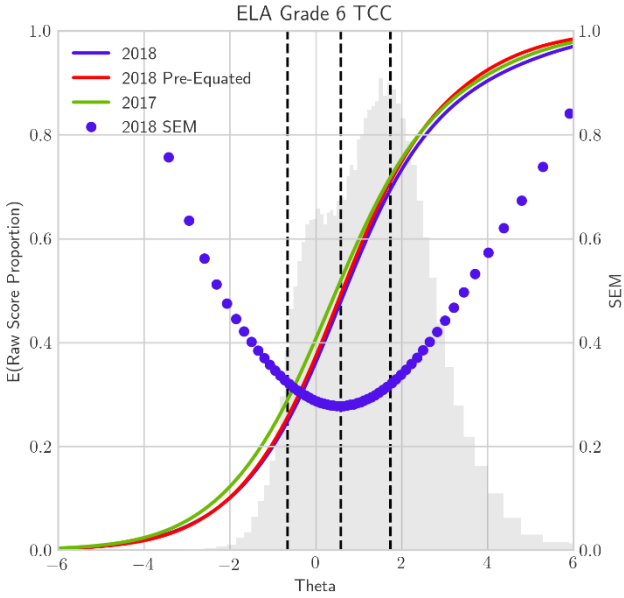
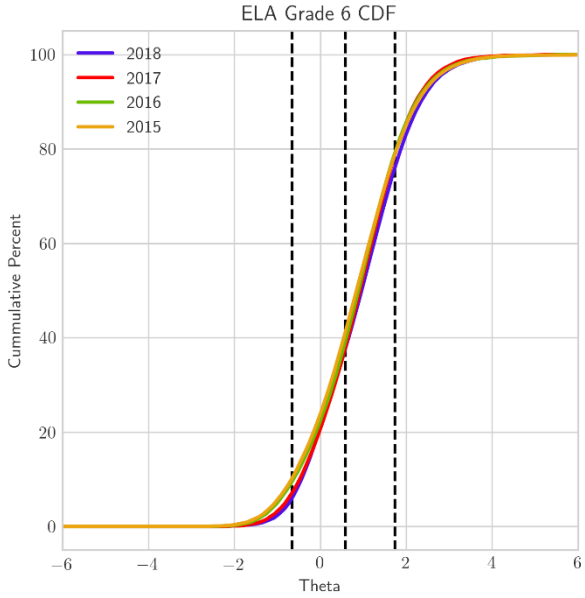
2018
2018 Pre-Equated
2017
2018 SEM
E(Raw Score Proportion)
SEM
Theta

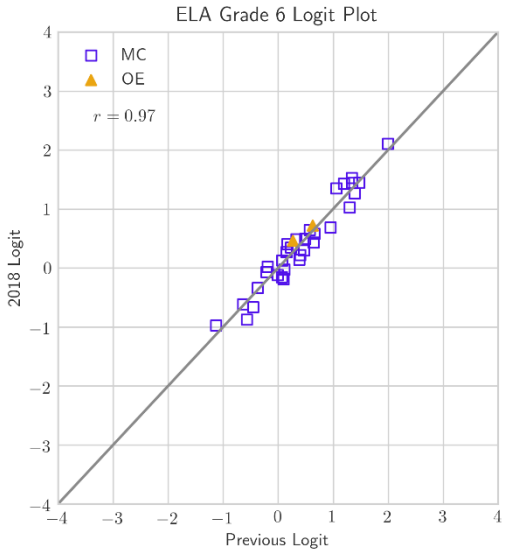

ELA Grade 5 CDF
2018
2017
2016
2015
Cummulative Percent
Theta

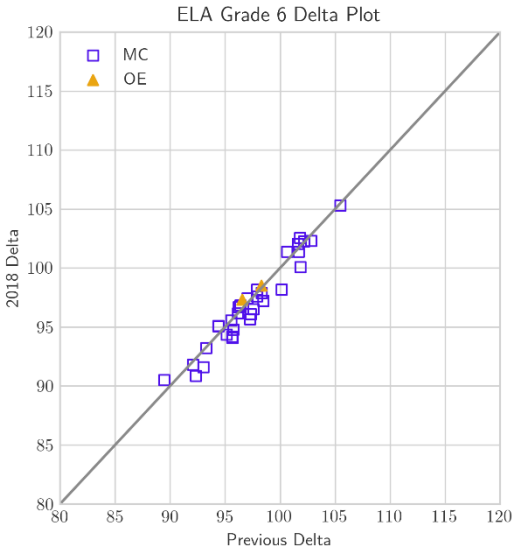

ELA Grade 5 Logit Plot
MC
OE
r = 0.98
2018 Logit
Previous Logit

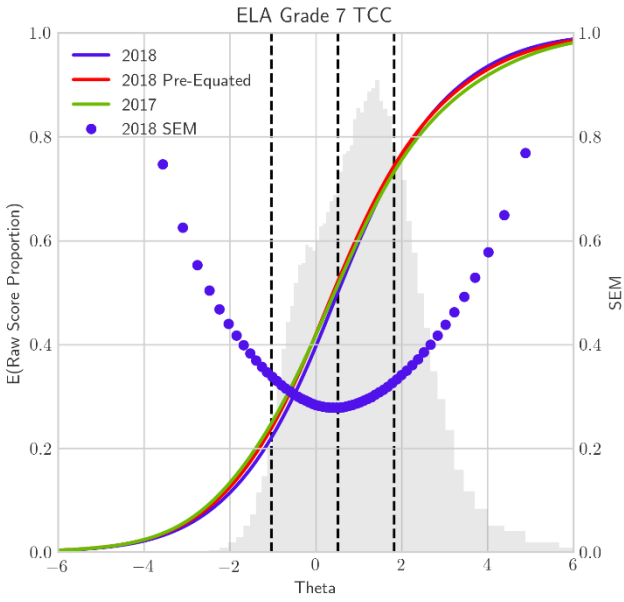

ELA Grade 5 Delta Plot
MC
OE
2018 Delta
Previous Delta

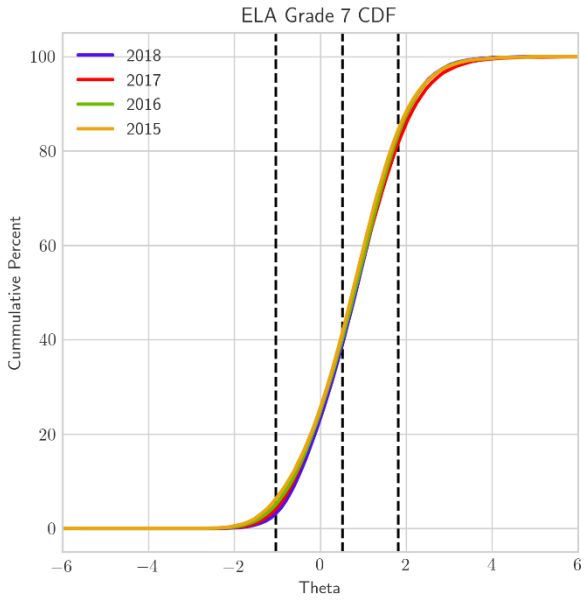

ELA Grade 6 TCC
2018
2018 Pre-Equated
2017
2018 SEM
E(Raw Score Proportion)
SEM
Theta

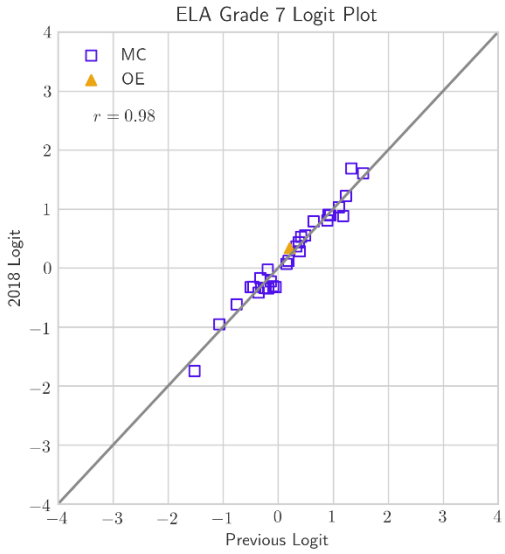

ELA Grade 6 CDF
2018
2017
2016
2015
Cummulative Percent
Theta

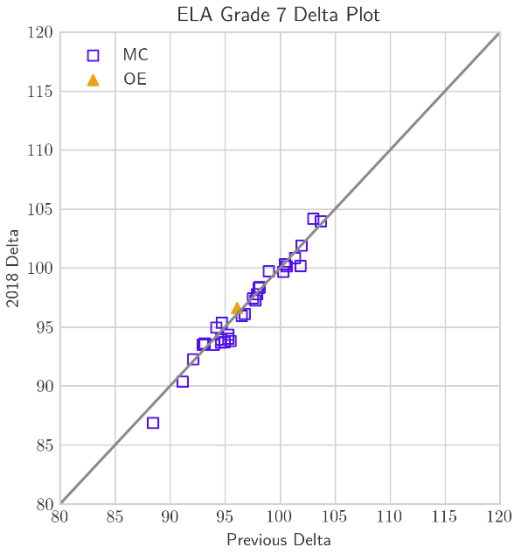

ELA Grade 6 Logit Plot
MC
OE
r = 0.97
2018 Logit
Previous Logit

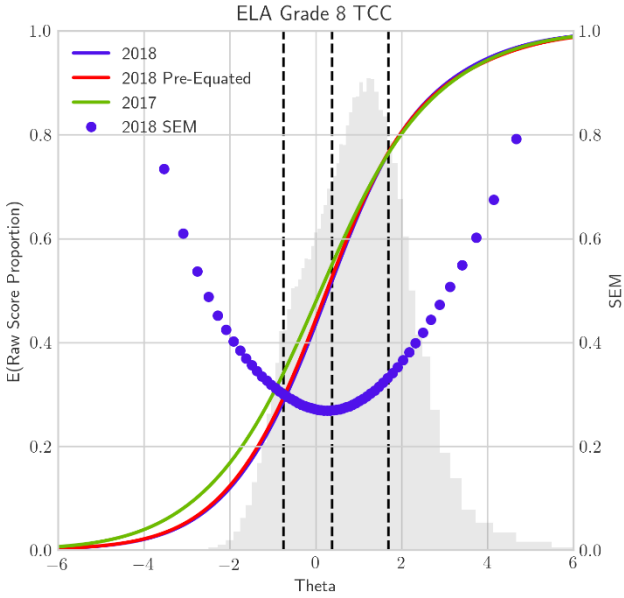

ELA Grade 6 Delta Plot
MC
OE
2018 Delta
Previous Delta

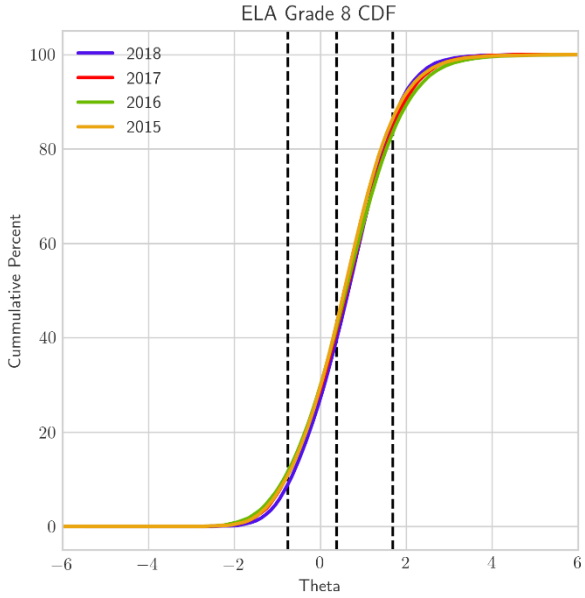

ELA Grade 7 TCC
2018
2018 Pre-Equated
2017
2018 SEM
E(Raw Score Proportion)
SEM
Theta

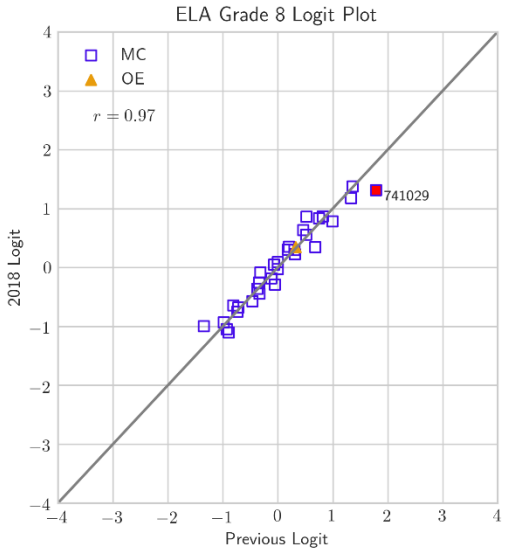

ELA Grade 7 CDF
2018
2017
2016
2015
Cummulative Percent
Theta

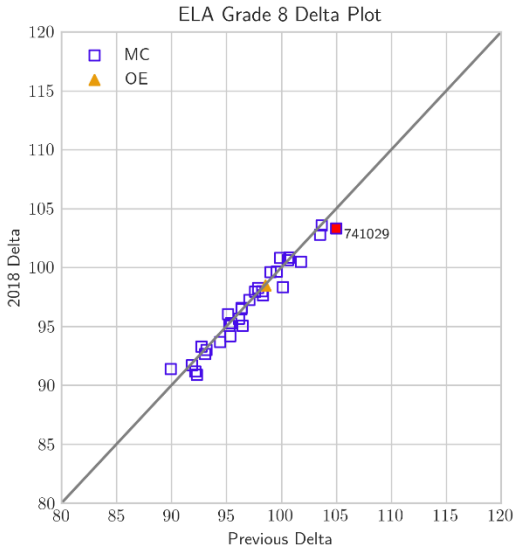

ELA Grade 7 Logit Plot
MC
OE
r = 0.98
2018 Logit
Previous Logit

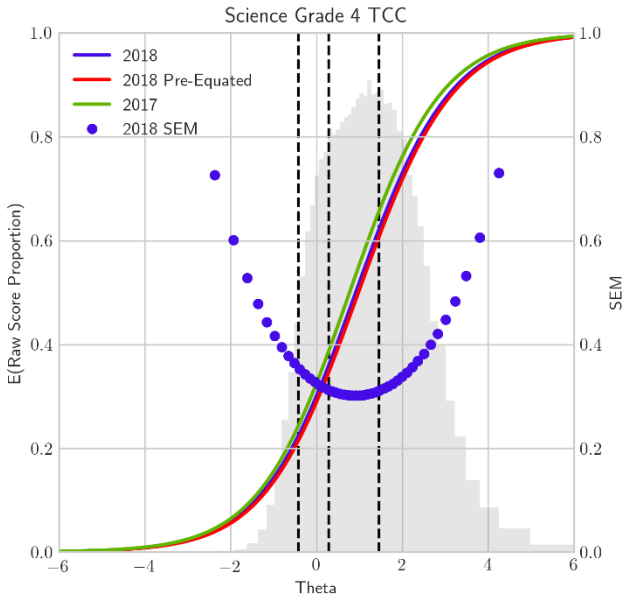

ELA Grade 7 Delta Plot
MC
OE
2018 Delta
Previous Delta

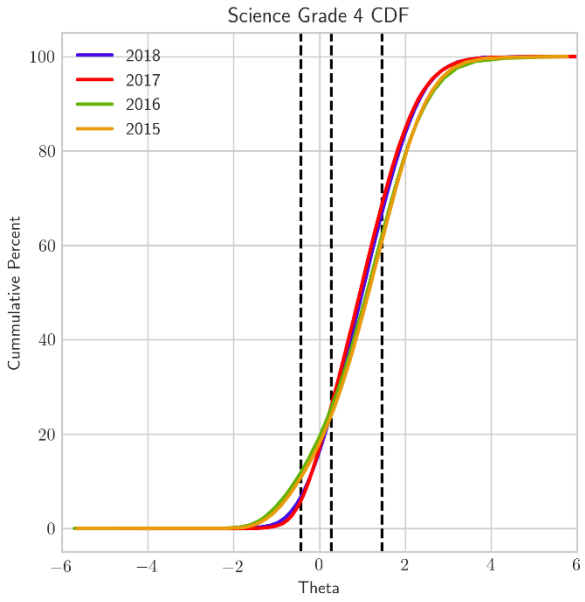

ELA Grade 8 TCC
2018
2018 Pre-Equated
2017
2018 SEM
E(Raw Score Proportion)
SEM
Theta

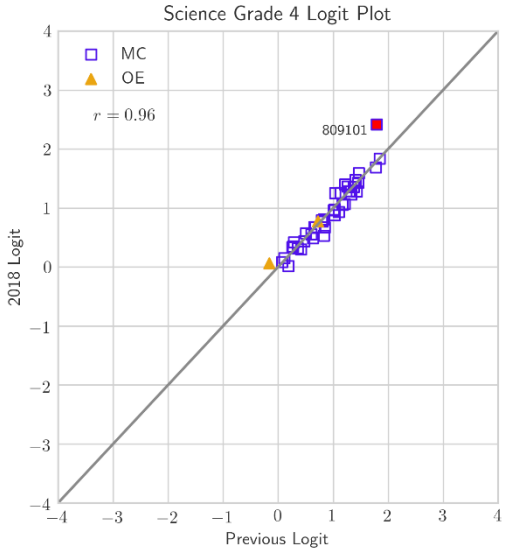

ELA Grade 8 CDF
2018
2017
2016
2015
Cummulative Percent
Theta

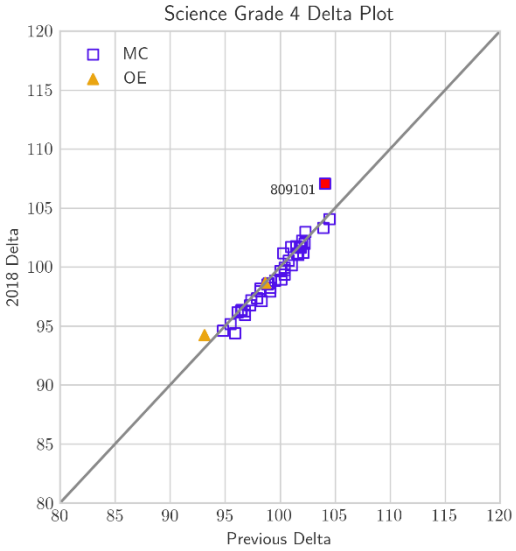

ELA Grade 8 Logit Plot
MC
OE
r = 0.97
741029
2018 Logit
Previous Logit

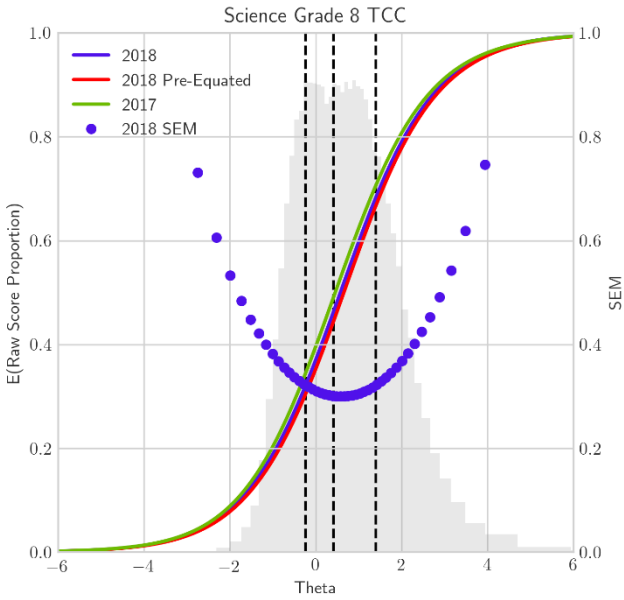

ELA Grade 8 Delta Plot
MC
OE
741029
2018 Delta
Previous Delta

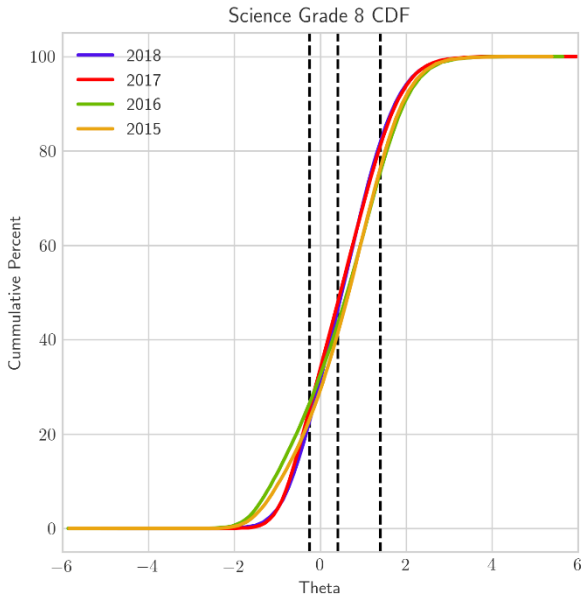

Science Grade 4 TCC
2018
2018 Pre-Equated
2017
2018 SEM
E(Raw Score Proportion)
SEM
Theta

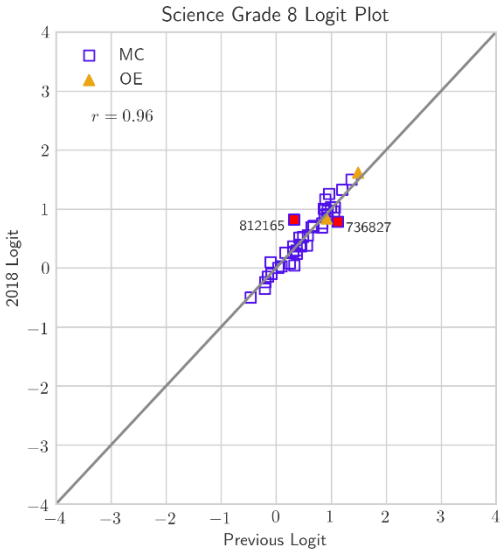

Science Grade 4 CDF
2018
2017
2016
2015
Cummulative Percent
Theta

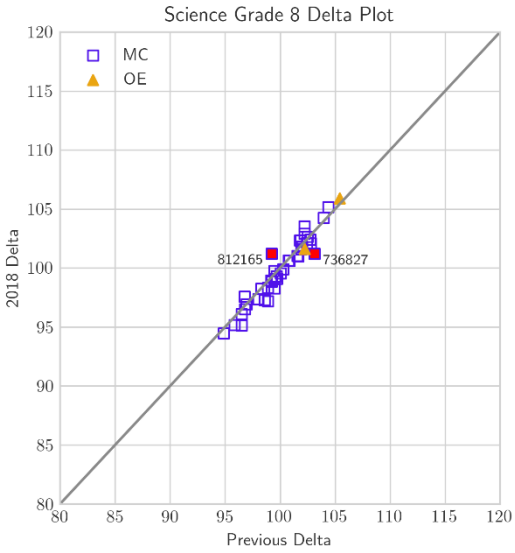

Science Grade 4 Logit Plot
MC
OE
$r = 0.96$
809101
2018 Logit
Previous Logit


Science Grade 4 Delta Plot
MC
OE
809101
2018 Delta
Previous Delta


Science Grade 8 TCC
2018
2018 Pre-Equated
2017
2018 SEM
E(Raw Score Proportion)
SEM
Theta


Science Grade 8 CDF
2018
2017
2016
2015
Cummulative Percent
Theta


Science Grade 8 Logit Plot
MC
OE
$r = 0.96$
812165
736827
2018 Logit
Previous Logit


Science Grade 8 Delta Plot
MC
OE
812165
736827
2018 Delta
Previous Delta

CHAPTER SIXTEEN: SCORES AND SCORE REPORTS

This chapter provides information about the scores provided for the PSSA (e.g., scaled scores, performance levels, and strand scores), how they are presented on score reports, and appropriate and inappropriate uses of the scores.

SCORING THE PSSA

PSSA items are composed of multiple-choice (MC) and open-ended (OE) items. Each correct response to an MC item receives a score of 1. Incorrect responses receive a score of zero. Scores on OE items range from zero to four, depending on the grade and subject area. Table 16–1 summarizes the types of items used on each subject-area test. More detailed information about the various item types is provided in Chapter Three.

Table 16–1. Item Types Used by Subject Area

Item Type	Mathematics	ELA	Science
Multiple-Choice	1 point	1 point	1 point
Open-Ended	4 points	N/A	2 points
Short Answer	N/A	3 points	N/A
Evidence Based Select Response	N/A	2 or 3 points	N/A
Text Dependent Analysis	N/A	4 points	N/A

Note. Text-dependent analysis items are weighted as described in Chapter Three.

DESCRIPTION OF TOTAL TEST SCORES

Different types of scores have been developed for PSSA reporting. Since the underlying properties of these scores are not necessarily the same, the particular scores used depend on the purposes for which the test has been given. The following types of scores are provided for reporting a student's overall performance on each PSSA subject-area test:

- Raw scores
- Scaled scores
- Performance levels

RAW SCORES

A raw score is the number of points a student earned over the operational MC and OE items. By itself, the raw score has some limited utility. One limitation is that it can only be interpreted with reference to the total number of items on a subject-area test (e.g., a raw score of 15 on a 20-item test is different than a raw score of 15 on a 30-item test). In addition, raw scores depend on the difficulty of test items across test forms (e.g., a raw score of 15 on a test with 20 easy items is different than a raw score of 15 on a test with 20 difficult items). Because the difficulty of the items on a test can change from year to year, raw scores should not be compared across tests or administrations.

SCALED SCORES

Scaled scores are introduced in Chapter Fourteen. In the simplest sense, a scaled score is a transformed number-correct score. The specifics of the transformation processes for the PSSA are also discussed in Chapter Fourteen. When all students take the same items, as with the operational items on the PSSA, the more points the student earns, the higher the associated scaled score will be.

The value of using the methods described in Chapters 14 and 16 to to produce a scaled score metric is that it produces more general, interpretable, and equitable results across year-to-year test scores. As noted above, a raw score of 30 is meaningless unless the maximum raw score is known. The difficulty of the test items was also mentioned as an additional challenge with interpreting raw scores. Number-correct scores are transformed to scaled scores to remove the effects of test length and item difficulty. (Strictly speaking, transformation of number-correct scores to percent-correct scores would also remove the effect of test length, but it would do nothing to adjust for the difficulty of the items to support year-to-year equivalence of scores.)

Another advantage of scaled scores is that they lend themselves to interpretations of what is referred to as an interval level, while raw scores do not. Interval-level scales allow an interpretation of a scaled score difference of 5 points to be the same whether the scores are 1095 vs. 1100 or 1245 vs. 1250. Raw score differences, in this context, cannot be interpreted in this manner and are thus neither generalizable nor equitable.

When test scores are properly linked across years, a scaled score of 1300—or any other value for a particular grade and content area test, should have the same absolute meaning in the current year as it had in previous years. More importantly, an increase in the scaled score for a test from last year to the current year means that student performance improved;[1] it does not say anything about whether this year's test is easier or harder than last year's test. To make these interpretations requires no information about the length or the difficulty of the test in either year, although these variables are essential for the process of deriving the scaled scores.

There is considerable auxiliary information presented in this report that might aid the reader in further contextualizing PSSA scaled scores. The reader is specifically referred to the following information:

- Chapter Fourteen provides information on the development of the PSSA scaled score system, including transformation formulas, rounding rules, and general scale characteristics (e.g., minimum values).
- Chapter Seventeen provides total test score statistics. In particular, Table 17–2 lists the scaled score means and standard deviations for this year's test results.

PERFORMANCE LEVELS

PSSA results are also reported using four Performance Levels: Below Basic, Basic, Proficient, and Advanced. The cut scores on the scaled score metric (i.e., the lowest possible scaled score to enter the Basic, Proficient, and Advanced levels) were presented earlier in this report. However, the information is repeated below (Table 16–2) for convenience.

Table 16–2. PSSA Scaled Score Cuts for Each Performance Level by Grade and Subject Area

Subject	Grade	Min	BB/B[1]	B/P[1]	P/A[1]	Max[2]
Mathematics	3	600	923	1000	1110	1561
Mathematics	4	600	908	1000	1107	1529
Mathematics	5	600	901	1000	1113	1550
Mathematics	6	600	897	1000	1105	1534
Mathematics	7	600	904	1000	1109	1551
Mathematics	8	600	906	1000	1108	1618
ELA	3	600	905	1000	1143	1680
ELA	4	600	887	1000	1107	1714
ELA	5	600	893	1000	1139	1723
ELA	6	600	875	1000	1115	1737
ELA	7	600	845	1000	1130	1724
ELA	8	600	886	1000	1130	1677
Science	4	1050	1150	1275	1483	2344
Science	8	925	1150	1275	1464	2416

Notes. [1] BB = Below Basic; B = Basic; P = Proficient; and A = Advanced.
[2] Scaled Score Maximum Values are unique for the current year's test.

Performance levels descriptors (PLDs) are another way to attach meaning to the scaled score metric. PLDs associate precise quantitative ranges of scaled scores with verbal, qualitative descriptions of student status. While much less precise, the qualitative description of the levels is one way for parents and teachers to interpret the student scores. They are also useful in assessing the status of the school. The Pennsylvania General Performance Level Descriptors, as developed by PDE and teacher panels, are given below. These are also included on student score reports.

- Advanced: The Advanced Level reflects superior academic performance, and work at this level demonstrates a thorough command of, and ability to apply the knowledge, skills, and practices represented in the Pennsylvania standards. Consistent performance at this level indicates advanced academic preparation for engaging successfully in further studies in this content area.
- Proficient: The Proficient Level reflects satisfactory academic performance, and work at this level demonstrates an adequate command of and ability to apply the knowledge, skills, and practices represented in the Pennsylvania standards. Consistent performance at this level indicates academic preparation for engaging successfully in further studies in this content area.
- Basic: The Basic Level reflects marginal academic performance, and work at this level demonstrates a partial command of and ability to apply the knowledge, skills, and practices represented in the Pennsylvania standards. Consistent performance at this level indicates additional academic support may be needed for engaging successfully in further studies in this content area.
- Below Basic: The Below Basic Level reflects inadequate academic performance, and work at this level demonstrates a minimal command of and ability to apply the knowledge, skills, and practices represented in the Pennsylvania standards. Consistent performance at this level indicates extensive additional academic support may be needed for engaging successfully in further studies in this content area.

DESCRIPTION OF STRAND (REPORTING CATEGORY) SCORES

The following types of scores are provided for PSSA strand scores:

- Strand (Reporting Category) Scores
- Strength Profile

STRAND (REPORTING CATEGORY) SCORES

A strand (reporting category) score describes performance of a student, school, or district on a particular strand (content standard defined in the test). For the PSSA, strand scores are raw scores, indicating the points a student or a school/district earned for that strand. Attributes of raw scores are described earlier in this chapter and should be interpreted with caution. This is particularly true with respect to year-to-year comparisons where item difficulties may vary. Strand scores cannot be compared across years because they are not statistically linked nor are they interval scores. Also, it is not advisable to compare strand raw scores even within the same form because some strands may contain items that are easier or more difficult than other strands (the strength profile, discussed below, mitigates this problem to some degree). Another concern is the low reliability of many of these scores, especially for strand scores based on a small number of possible points. Chapter Eighteen provides more information about strand-score reliability.

When compared to other results from the same year, strand scores can be somewhat helpful in identifying a group's strengths and weaknesses as measured by the test. For example, it can be informative to compare average strand scores of a school against the scores of another reference group (e.g., the state average). Hence, strand scores can suggest group strengths and weaknesses relative to another reference group. (Challenges pertaining to interpreting results for individual students are discussed below.)

STRENGTH PROFILE

The strength profile provides another indication of a student's performance within each of the strands. This profile can be used to identify areas in which a student needs to improve and areas in which a student has performed more successfully. Unlike strand scores that are reported as raw scores, strength profile scores categorize students into one of three levels: Low, Medium, and High. These categories take into account the difficulty of the items and are based on the same scaling techniques used to derive the PSSA scaled scores (See Chapter Fourteen for a description of how strength profiles are produced). Scaled scores, however, are not printed on score reports. High, medium, and low designations are provided as an indication of performance within a strand, but as standards have been set at the test level only, performance level descriptions for the overall test should not be used as validated descriptions of strand performance.

APPROPRIATE SCORE USES

INDIVIDUAL STUDENTS

Scaled scores on the PSSA indicate a student's achievement of the PSSA Assessment Anchors and Eligible Content. Scaled scores are primarily used to determine student performance level classifications (i.e., a criterion-referenced inference). Scaled scores that are based on Item Response Theory (IRT) models are typically assumed to be of the interval type; so comparisons may be made on differences in scaled scores. If this assumption holds, then it would be safe to infer for Grade 4 ELA that the ability difference between 1110 and 1120 represents the same ability difference that separates 1250 and 1260. Scaled scores can also be used to compare the performance of an individual student to the performance of a similar demographic or subgroup at a school or district. However, when comparing performance of an individual student, test score standard errors (discussed in Chapter Eighteen) should be considered because scaled scores are estimate of students' achievement which comes with estimation error.

GROUPS OF STUDENTS

Test results can be used to evaluate performance over time. Mean scaled scores can be compared across administrations within the same grade and subject area to indicate whether student performance is improving across years. Generally, such trend analyses benefit from using mean results from as many test administration years as possible. Different cohorts of students are used (i.e., the same student or students are not tracked across grade levels). All scores can be analyzed within the same subject and grade for any single administration to determine which demographic or program group had, for example, the highest average performance or the highest percentage of students at or above the Proficient standard.

Strand scores can help evaluate academic areas for relative strengths or weaknesses. These category scores provide information to identify areas where further diagnosis is warranted. Generalizations from test results may be made to the specific content domain represented by the academic standards measured in the PSSA. However, all instruction and program evaluations should include as much information from other sources as possible to provide a more complete picture of performance.

CAUTIONS FOR SCORE USES

EXTREME ERROR FOR EXTREME SCORES

Student scores toward the minimum or maximum ends of the score range will have very large standard errors of measurement and, therefore, such scores should be viewed very cautiously. The maximum scaled score only provides a very rough estimate of a student's ability. For instance, if the maximum score for the PSSA Grade 6 mathematics test were 1550[2] and a student achieved this score, it could not be determined whether the student could have achieved an even higher scaled score. If the test were 10 items longer, a different estimate might have been obtained. Similarly, if the items in a new test were more difficult than the items on a previous administration, the maximum scaled score would likely be higher on the new test because it would take a greater level of achievement to answer the items correctly. In this manner, extreme scaled scores may vary from one administration to the next even if the number of test items does not change. The fluctuation of extreme scaled scores complicates the comparisons of students with scaled scores at the extreme ends of the score distribution. To minimize confusion and potential misinterpretation, the minimum scaled scores possible on the PSSA tests have been fixed (see Table 16–2) so they do not change between administrations. However, the maximum scaled score values have not been fixed. Therefore, caution must be taken when comparing scores at the maximum end of the scale.

EACH TEST HAS A UNIQUE SCALE

Scaling was conducted for each grade and subject area test separately. Therefore, PSSA scaled scores should be interpreted only within each grade and content area. PSSA scaled scores are not status indicators in the same sense as percentile ranks (or scales that are essentially transformations of percentile ranks) and, therefore, cannot be used to profile relative strengths and weaknesses across subject areas. As an example, student scaled scores of 1250 in Grade 4 ELA and 1200 in Grade 4 mathematics do not necessarily imply that the student performed better in ELA than in mathematics. Neither do the PSSA scaled scores represent a developmental or vertical scale. This means that, although the content is articulated across grades to reflect the grade-to-grade articulations in the Pennsylvania Standards, no across-grade statistical comparisons or growth statements for a student are appropriate. For example, a 1200 in Grade 4 ELA and a 1200 in Grade 5 ELA does not mean a student had no achievement growth in ELA from Grade 4 to Grade 5.

STRENGTH PROFILE CAVEATS

The category labels of Low, Medium, and High are deliberately used instead of the PSSA performance level names—Below Basic, Basic, Proficient, and Advanced—to acknowledge that the PSSA cut scores were established on the basis of the total test score and standards were set on this total test score. Therefore, the categories should not be interpreted in the same way as PSSA performance levels because they likely do not carry the same meaning.

While the strength profile might facilitate comparisons of a student's strengths and weaknesses across strands in some cases, several factors merit caution. As noted earlier, strand scores are often not fully reliable. The scaling underlying the strength profile does not mitigate this problem.

Additionally, the categories reflect more absolute comparisons. Relative comparisons are more difficult to make. As an example, if one scored High in both strand A and B, we know the student did very well in both strands compared to overall performance in the state (i.e., absolute status). However, we do not know whether the student's performance in strand A was better or worse relative to the performance in strand B (relative status).

Finally, some seemingly unusual results might occur that may be difficult for users to understand. As one example, it may be possible for a student to earn Medium in all strands but have an Advanced performance level. This can happen because the strand scores are correlated, meaning the distributional properties of the total score depends not only on the variances of the strand scores, but also on the covariances among the strand scores. (An analogy would be when a school track team places first overall in a competition although they did not win a single event.)

USING PSSA RESULTS FOR OTHER PURPOSES

Scaled scores and performance level classificaitons are used primarily to measure well students acquire the knowledge and skills described in the *Pennsylvania Assessment Anchor Content Standards* (Assessment Anchors) as defined by the Eligible Content for mathematics, ELA, and Science. They are also used to provide information on school and district accountability. These same results, plus strand scores and strength profiles are also appropriate for use in improving curricular and instructional practices. Evidence supporting the validity of such interpretations is framed in Chapter 19 and provided throughout this technical report.

Other uses or inferences based on PSSA results may or may not be valid as the validity evidence and arguments provided in Chapter Nineteen may not necessarily support other score uses and interpretations. According to the AERA/APA/NCME *Standards* (2014) (i.e., Standard 1.4), if a test is used in a way that has not been validated, it is incumbent on the user to justify the new use, collecting new evidence if necessary. Finally, a universal caveat for any test's result is that it not be used for placement and educational planning alone. Instead, other information about the student (e.g., other test performance data) should be considered.

REPORTS

The following score reports are provided to students, parents, schools, and districts for the PSSA tests in mathematics, ELA, and science:

- Individual Student Report
- School Summary Report
- District Summary Report
- Interpretive Guide

PARENT LETTER

Parent letters were delivered to Pennsylvania districts on June 22, 2018. This score report provided parents and students with their first glimpse of performance on the spring 2018 PSSA tests. This report provides results at the student level. A sample of the report is provided in Figure 16–1.

Fgure 16–1. Parent Letter

Pennsylvania System of School Assessment (PSSA) — **Parent Letter**

Test Date: **School:**
Student Name: **District:**
PA Student ID:
Grade:

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ENGLISH LANGUAGE ARTS

How did perform overall?

Performance Level: Proficient | **Score:** 1016

Below Basic	Basic	Proficient	Advanced
600	886	1000 ↑	1130	1640

Student's test scale score is indicated by the ↑. If this student were to test again under similar circumstances, his or her score would likely remain in the following range: **989-1043**.

Score Reporting Category	Student's Points	Total Points Possible
Reading**		
Key Ideas and Details	8	12
Craft and Structure/Integration of Knowledge and Ideas	11	16
Vocabulary Acquisition and Use	8	10
Writing		
Conventions of Standard English	4	9
Reading/Writing		
Text-Dependent Analysis	4	16

** **Each reading question connects to a Reading reporting category in the table above as well as to a Text Type reporting category in the table below. However, each reading question counts only one time in the student's score.**

Score Reporting Category	Student's Points	Total Points Possible
Text Types		
Literature Text	13	19
Informational Text	14	19

Note that the performance level line graphs are not drawn to scale because some performance levels have more scaled score points than others. Additionally, the graphs do not display the actual percentage of students in each performance level.

MATHEMATICS

How did perform overall?

Performance Level: Basic | **Score:** 990

Below Basic	Basic	Proficient	Advanced
600	906	1000 ↑	1108	1638

Student's test scale score is indicated by the ↑. If this student were to test again under similar circumstances, his or her score would likely remain in the following range: **960-1020**.

Score Reporting Category	Student's Points	Total Points Possible
The Number System	5	7
Expressions and Equations	11	17
Functions	7	11
Geometry	5	9
Statistics and Probability	4	8

SCIENCE

How did perform overall?

Performance Level: Advanced | **Score:** 1532

Below Basic	Basic	Proficient	Advanced
925	1150	1275	1464 ↑	2337

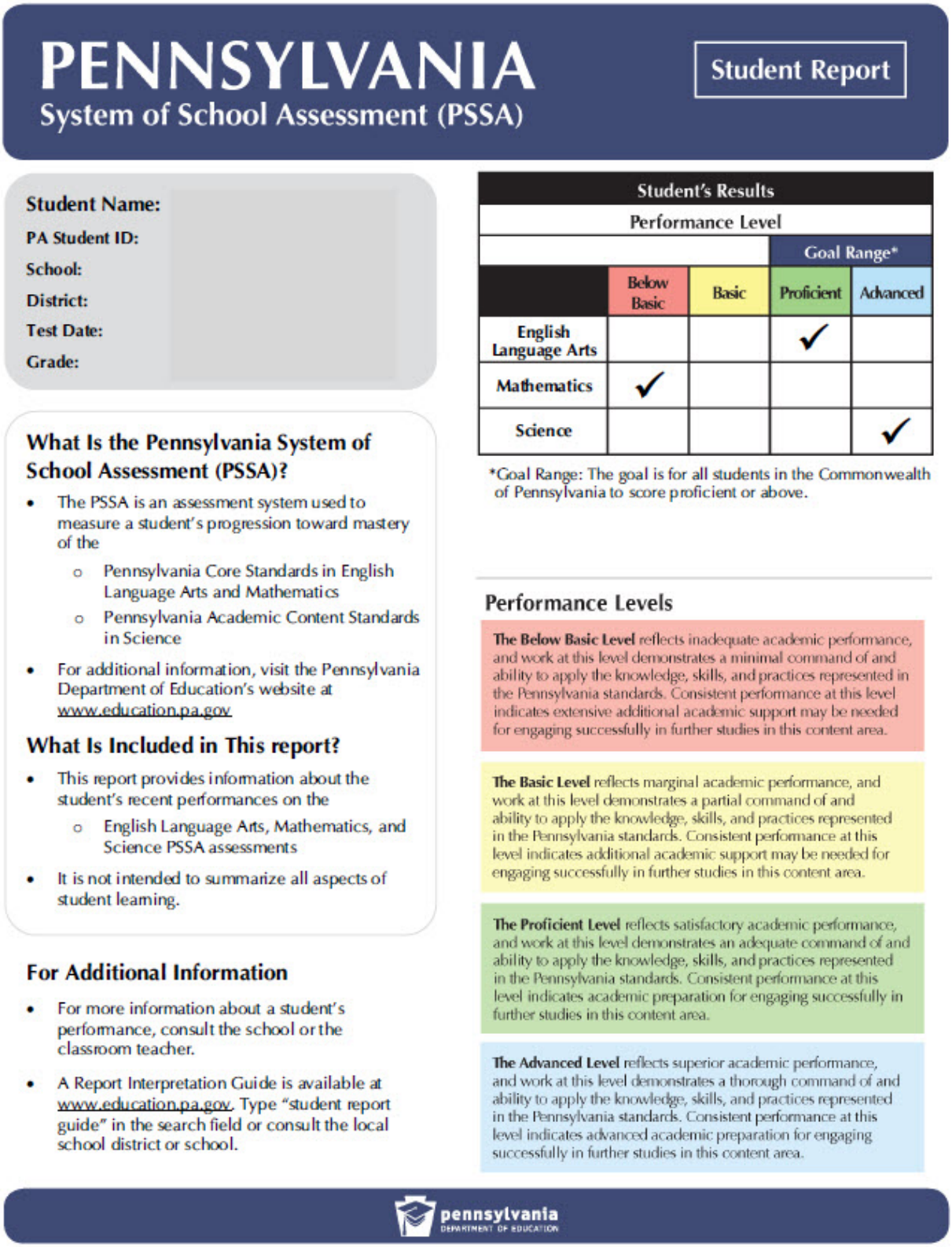
Student's test scale score is indicated by the ↑. If this student were to test again under similar circumstances, his or her score would likely remain in the following range: **1466-1598**.

Score Reporting Category	Student's Points	Total Points Possible
The Nature of Science	18	23
Biological Sciences	4	9
Physical Sciences	8	8
Earth and Space Sciences	6	8

INDIVIDUAL STUDENT REPORT

An individual student report is provided for all students who took the PSSA. This report was delivered to Pennsylvania school districts in September 2018. Districts are responsible for sending the reports home to individual students. This report is a four-page color document that provides the types of scores explained earlier in this chapter. Appendix R contains detailed information about the development of the 2018 Individual Student Reports. Screen shots of the four pages from a sample individual student report are provided in Figures 16–2.

Figure 16–2A. Page 1 of the Individual Student Report



PENNSYLVANIA
System of School Assessment (PSSA)

Student Report

Student Name:
PA Student ID:
School:
District:
Test Date:
Grade:

What Is the Pennsylvania System of School Assessment (PSSA)?

- The PSSA is an assessment system used to measure a student's progression toward mastery of the
  - Pennsylvania Core Standards in English Language Arts and Mathematics
  - Pennsylvania Academic Content Standards in Science
- For additional information, visit the Pennsylvania Department of Education's website at www.education.pa.gov

What Is Included in This report?

- This report provides information about the student's recent performances on the
  - English Language Arts, Mathematics, and Science PSSA assessments
- It is not intended to summarize all aspects of student learning.

For Additional Information

- For more information about a student's performance, consult the school or the classroom teacher.
- A Report Interpretation Guide is available at www.education.pa.gov. Type "student report guide" in the search field or consult the local school district or school.

Student's Results

Performance Level				
			Goal Range*	
	Below Basic	Basic	Proficient	Advanced
English Language Arts			✓	
Mathematics	✓			
Science				✓

*Goal Range: The goal is for all students in the Commonwealth of Pennsylvania to score proficient or above.

Performance Levels

The Below Basic Level reflects inadequate academic performance, and work at this level demonstrates a minimal command of and ability to apply the knowledge, skills, and practices represented in the Pennsylvania standards. Consistent performance at this level indicates extensive additional academic support may be needed for engaging successfully in further studies in this content area.

The Basic Level reflects marginal academic performance, and work at this level demonstrates a partial command of and ability to apply the knowledge, skills, and practices represented in the Pennsylvania standards. Consistent performance at this level indicates additional academic support may be needed for engaging successfully in further studies in this content area.

The Proficient Level reflects satisfactory academic performance, and work at this level demonstrates an adequate command of and ability to apply the knowledge, skills, and practices represented in the Pennsylvania standards. Consistent performance at this level indicates academic preparation for engaging successfully in further studies in this content area.

The Advanced Level reflects superior academic performance, and work at this level demonstrates a thorough command of and ability to apply the knowledge, skills, and practices represented in the Pennsylvania standards. Consistent performance at this level indicates advanced academic preparation for engaging successfully in further studies in this content area.

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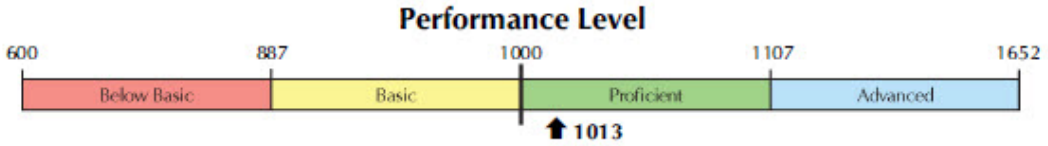
Figure 16–2B. Page 2 of the Individual Student Report

English Language Arts



Student's test scale score is indicated by the (⬆). If this student were to test again under similar circumstances, his or her score would likely remain in the following range: **985-1041**

Score Reporting Category	Student's Points	Total Points Possible	Strength Profile*
Reading**			
Key Ideas and Details	**11**	16	**Medium**
Craft and Structure/Integration of Knowledge and Ideas	**7**	13	**Low**
Vocabulary Acquisition and Use	**7**	9	**Medium**
Writing			
Conventions of Standard English (Writing)	**4**	9	**Low**
Text-Dependent Analysis			
Text-Dependent Analysis (Reading/Writing)	**4**	16	**Low**

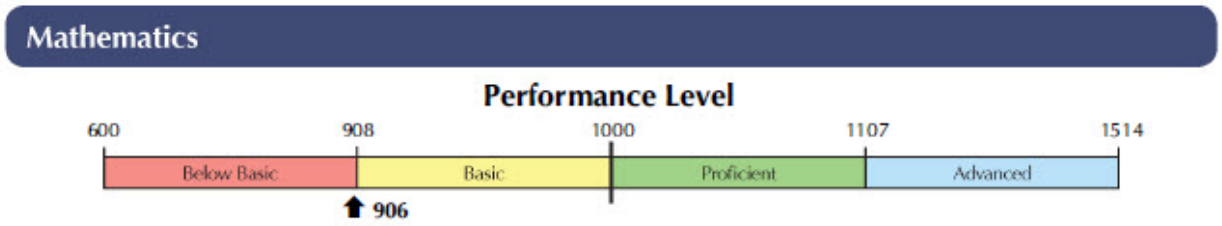
**Each reading question connects to a Reading reporting category in the table above as well as to a Text Type reporting category in the table below. However, each reading question counts only one time in the student's score.

Score Reporting Category	Student's Points	Total Points Possible	Strength Profile*
Text Types			
Literature Text	**12**	17	**Medium**
Informational Text	**13**	21	**Medium**

To learn more about the Score Reporting Categories, see page 4.

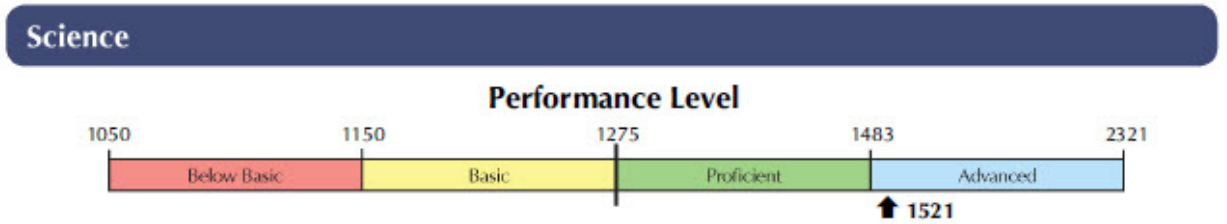
*The Strength Profile (Low, Medium, High): The strength profile provides an indication of this student's performance within each of the reporting categories. The Strength Profile takes into account the difficulty of the assessment questions and can be used to help identify the student's strengths and/or areas of need.

Figure 16–2C. Page 3 of the Individual Student Report



Student's test scale score is indicated by the (⬆). If this student were to test again under similar circumstances, his or her score would likely remain in the following range: **876-936**

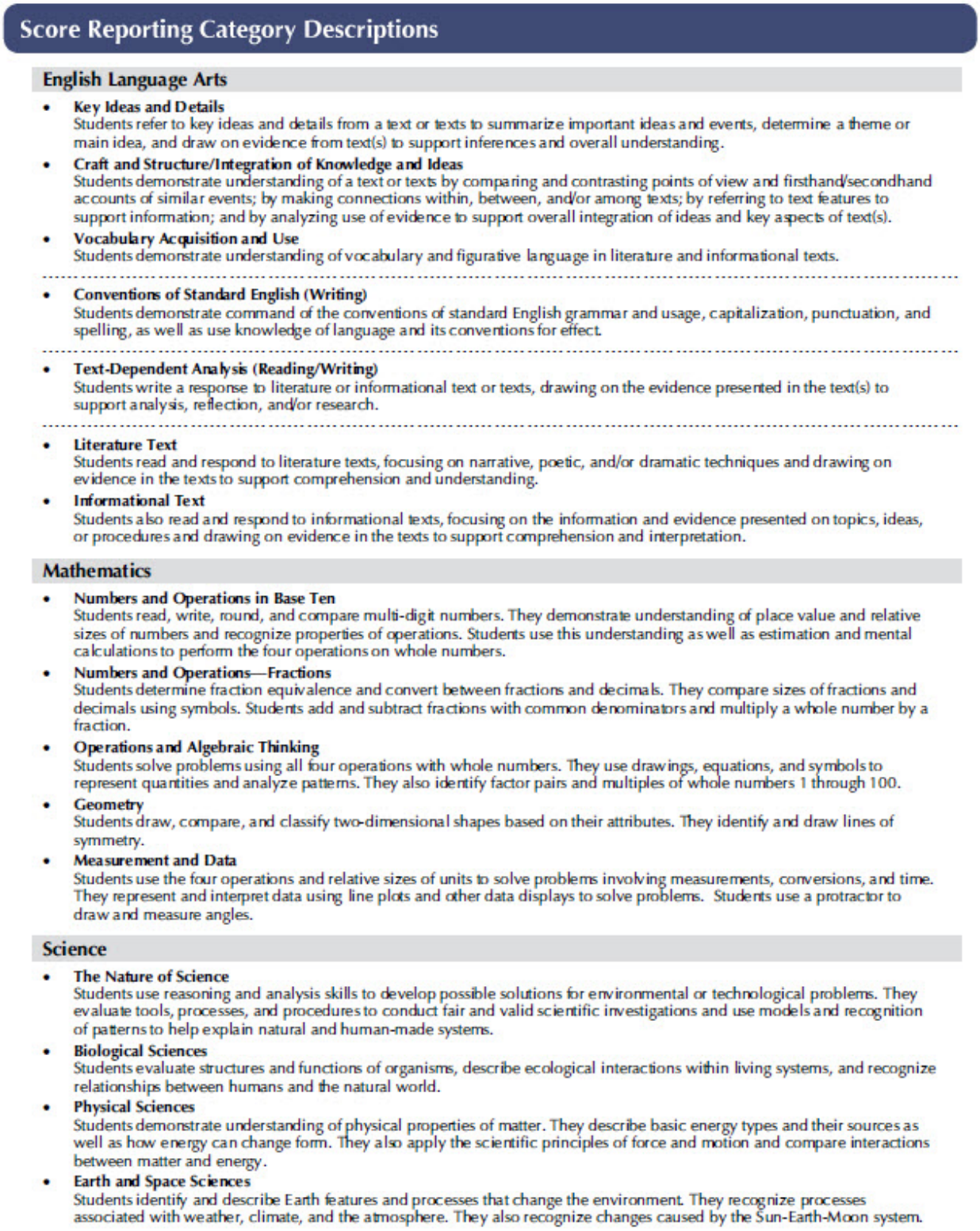
Score Reporting Category	Student's Points	Total Points Possible	Strength Profile*
Numbers and Operations in Base Ten	1	10	Low
Numbers and Operations—Fractions	4	11	Low
Operations and Algebraic Thinking	6	13	Low
Geometry	3	8	Low
Measurement and Data	3	10	Low



Student's test scale score is indicated by the (⬆). If this student were to test again under similar circumstances, his or her score would likely remain in the following range: **1465-1577**

Score Reporting Category	Student's Points	Total Points Possible	Strength Profile*
The Nature of Science	14	24	Medium
Biological Sciences	6	8	High
Physical Sciences	8	8	High
Earth and Space Sciences	4	8	High

Figure 16–2D. Page 4 of the Individual Student Report



Score Reporting Category Descriptions

English Language Arts

- **Key Ideas and Details**
  Students refer to key ideas and details from a text or texts to summarize important ideas and events, determine a theme or main idea, and draw on evidence from text(s) to support inferences and overall understanding.
- **Craft and Structure/Integration of Knowledge and Ideas**
  Students demonstrate understanding of a text or texts by comparing and contrasting points of view and firsthand/secondhand accounts of similar events; by making connections within, between, and/or among texts; by referring to text features to support information; and by analyzing use of evidence to support overall integration of ideas and key aspects of text(s).
- **Vocabulary Acquisition and Use**
  Students demonstrate understanding of vocabulary and figurative language in literature and informational texts.

- **Conventions of Standard English (Writing)**
  Students demonstrate command of the conventions of standard English grammar and usage, capitalization, punctuation, and spelling, as well as use knowledge of language and its conventions for effect.

- **Text-Dependent Analysis (Reading/Writing)**
  Students write a response to literature or informational text or texts, drawing on the evidence presented in the text(s) to support analysis, reflection, and/or research.

- **Literature Text**
  Students read and respond to literature texts, focusing on narrative, poetic, and/or dramatic techniques and drawing on evidence in the texts to support comprehension and understanding.
- **Informational Text**
  Students also read and respond to informational texts, focusing on the information and evidence presented on topics, ideas, or procedures and drawing on evidence in the texts to support comprehension and interpretation.

Mathematics

- **Numbers and Operations in Base Ten**
  Students read, write, round, and compare multi-digit numbers. They demonstrate understanding of place value and relative sizes of numbers and recognize properties of operations. Students use this understanding as well as estimation and mental calculations to perform the four operations on whole numbers.
- **Numbers and Operations—Fractions**
  Students determine fraction equivalence and convert between fractions and decimals. They compare sizes of fractions and decimals using symbols. Students add and subtract fractions with common denominators and multiply a whole number by a fraction.
- **Operations and Algebraic Thinking**
  Students solve problems using all four operations with whole numbers. They use drawings, equations, and symbols to represent quantities and analyze patterns. They also identify factor pairs and multiples of whole numbers 1 through 100.
- **Geometry**
  Students draw, compare, and classify two-dimensional shapes based on their attributes. They identify and draw lines of symmetry.
- **Measurement and Data**
  Students use the four operations and relative sizes of units to solve problems involving measurements, conversions, and time. They represent and interpret data using line plots and other data displays to solve problems. Students use a protractor to draw and measure angles.

Science

- **The Nature of Science**
  Students use reasoning and analysis skills to develop possible solutions for environmental or technological problems. They evaluate tools, processes, and procedures to conduct fair and valid scientific investigations and use models and recognition of patterns to help explain natural and human-made systems.
- **Biological Sciences**
  Students evaluate structures and functions of organisms, describe ecological interactions within living systems, and recognize relationships between humans and the natural world.
- **Physical Sciences**
  Students demonstrate understanding of physical properties of matter. They describe basic energy types and their sources as well as how energy can change form. They also apply the scientific principles of force and motion and compare interactions between matter and energy.
- **Earth and Space Sciences**
  Students identify and describe Earth features and processes that change the environment. They recognize processes associated with weather, climate, and the atmosphere. They also recognize changes caused by the Sun-Earth-Moon system.

SCHOOL AND DISTRICT SUMMARY REPORTS

Summary reports are provided at the school and district level. These reports contain summary information about the percentage of students in each of the four performance levels. Raw scores are also provided by assessment anchor to allow schools or districts to identify strengths or weaknesses at the content strand level.

INTERPRETATIVE GUIDE

An interpretative guide is provided to help parents and other PSSA stakeholders better understand test result information presented in the individual student report. The interpretative guide can be found on the PDE website.

CHAPTER SEVENTEEN: OPERATIONAL TEST STATISTICS

This chapter presents various summary statistics for the PSSA total test scores based on the final data file described in Chapter Nine. Related information covered elsewhere in this report includes the item-level statistics presented in Chapter Eleven (classical item statistics) and Chapter Twelve (Rasch item statistics). These chapters provide additional consideration as item difficulty distributions can affect total score distributions.

PERFORMANCE LEVEL STATISTICS

Table 17–1 presents performance level percentages by grade and content. Appendix Q provides performance level percentages for prior years.

Table 17–1. Performance Level Percentages for 2018 PSSA

Subject	Grade	Below Basic	Basic	Proficient	Advanced
Mathematics	3	24.49	21.44	31.37	22.70
ELA	3	10.38	26.07	44.41	19.14
Mathematics	4	29.76	26.71	25.75	17.78
ELA	4	9.65	30.56	34.73	25.06
Science	4	5.44	19.06	39.70	35.79
Mathematics	5	28.70	26.09	27.44	17.76
ELA	5	8.89	31.71	45.42	13.99
Mathematics	6	29.66	30.78	24.83	14.73
ELA	6	5.26	32.24	36.31	26.18
Mathematics	7	37.76	23.32	22.76	16.16
ELA	7	2.52	35.55	44.28	17.65
Mathematics	8	41.06	27.89	20.21	10.84
ELA	8	7.83	30.63	47.10	14.44
Science	8	22.20	23.94	33.47	20.38

SCALED SCORES

SUMMARY STATISTICS

Table 17–2 provides the scaled score means and standard deviations. See the section Every Test has a Unique Scale in Chapter Sixteen for caveats regarding interpretation of scale scores.

Table 17–2. Means and Standard Deviations for the 2018 PSSA Scaled Scores

Subject	Grade	Mean	SD
Mathematics	3	1017.38	123.06
Mathematics	4	987.88	120.51
Mathematics	5	991.83	126.15
Mathematics	6	976.34	117.60
Mathematics	7	967.32	134.16
Mathematics	8	948.41	123.41
ELA	3	1042.06	108.34
ELA	4	1029.60	109.89
ELA	5	1029.17	104.53
ELA	6	1041.36	110.45
ELA	7	1032.49	105.77
ELA	8	1027.49	101.42
Science	4	1412.60	173.56
Science	8	1305.20	180.89

SCALED-SCORE DISTRIBUTIONS

Scaled scores are based on a linear transformation of the Rasch ability estimates. Distributions of the Rasch abilities are provided at the end of Chapter Twelve.

RAW SCORES

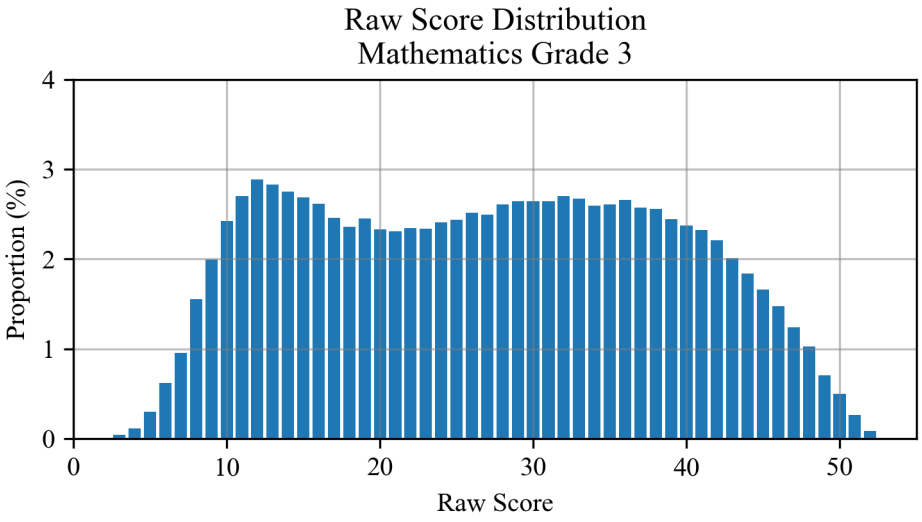
SUMMARY STATISTICS

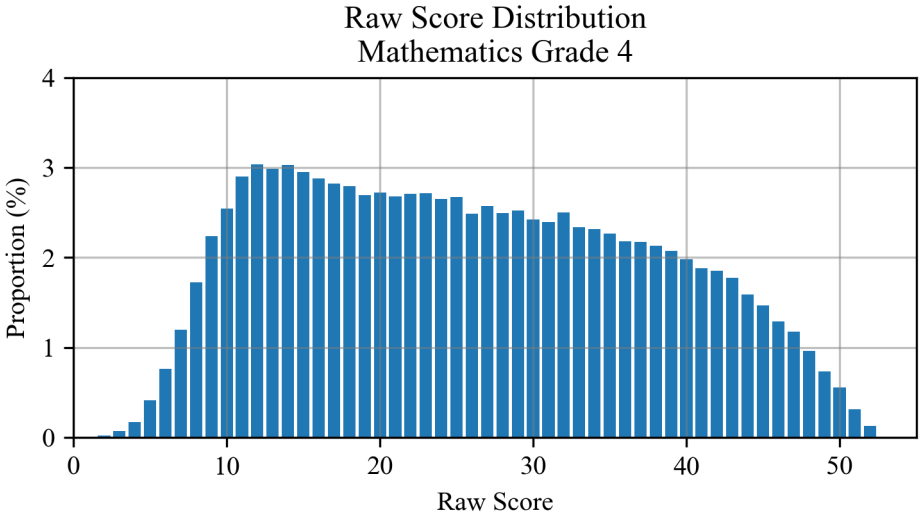
Appendix P provides summary statistics for the operational raw scores. The statistics reported include the number of points possible (Pts.), number of items (Len.), number of students tested (N), mean number of score points received (Mean), standard deviation of test scores (SD), reliability (r), traditional standard error of measurement (SEM), and item types (Items) used to determine each score. These statistics are based on the total test using both MC and OE items for the operational sections of each form. For ELA, OE items are further disaggregated by short-answer (grade 3 only), EBSR, and text dependent analysis (TDA, grade 4 and higher). (For information disaggregated by item type, Chapter Eleven provides breakout statistics for MC and OE items.)

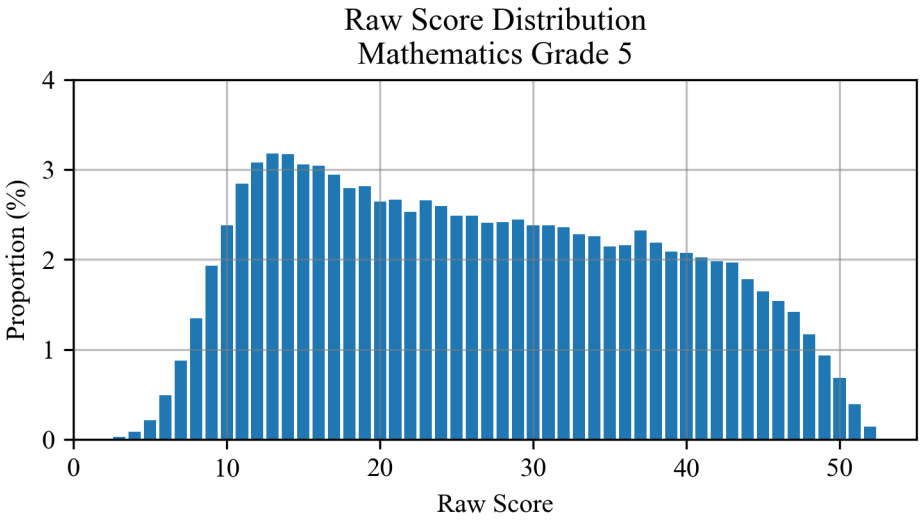
SCORE DISTRIBUTIONS

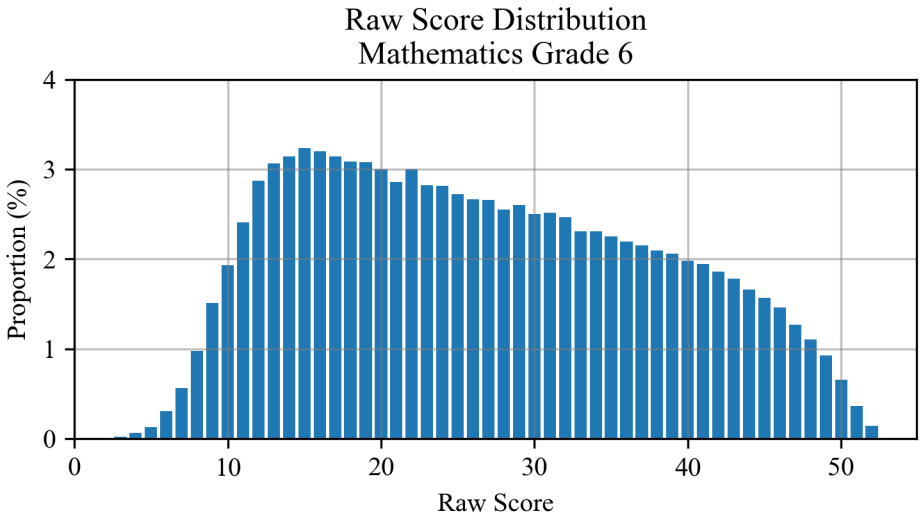
Raw score relative-frequency (rf) distributions are provided in Figure 17–1. The distributions for ELA slightly negatively skewed.Mathematics grades 5-8 distributions are slightly positively skewed and grades 3-4, and Science are somewhat flat.

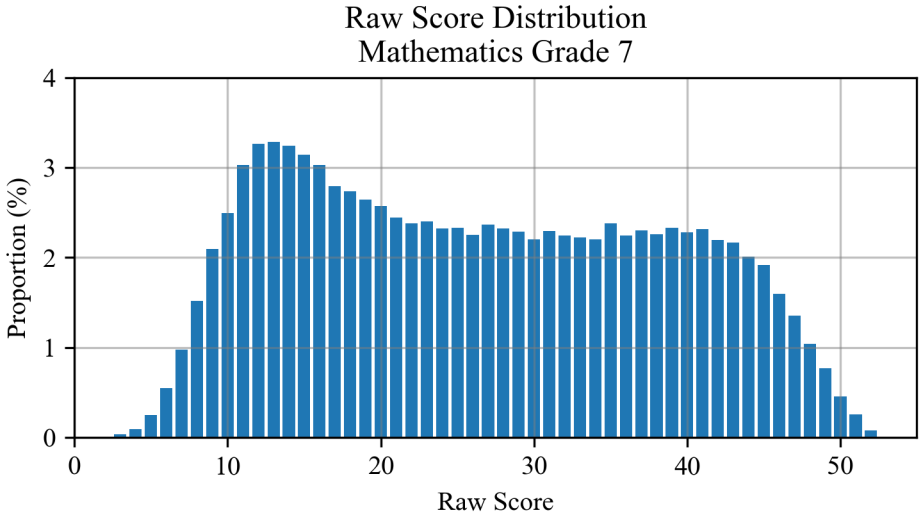
Figure 17–1. 2018 PSSA Raw Score Distributions

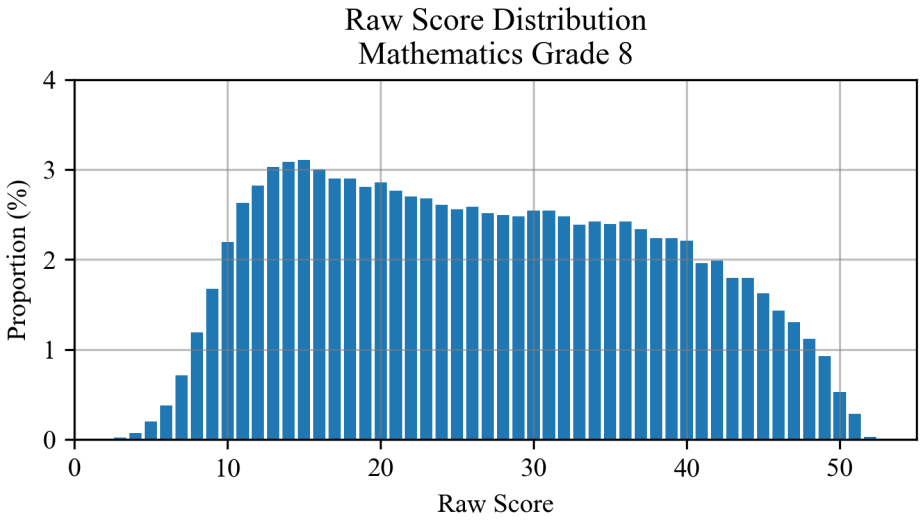

Raw Score Distribution
Mathematics Grade 3
Proportion (%)
Raw Score
0
1
2
3
4
0
10
20
30
40
50

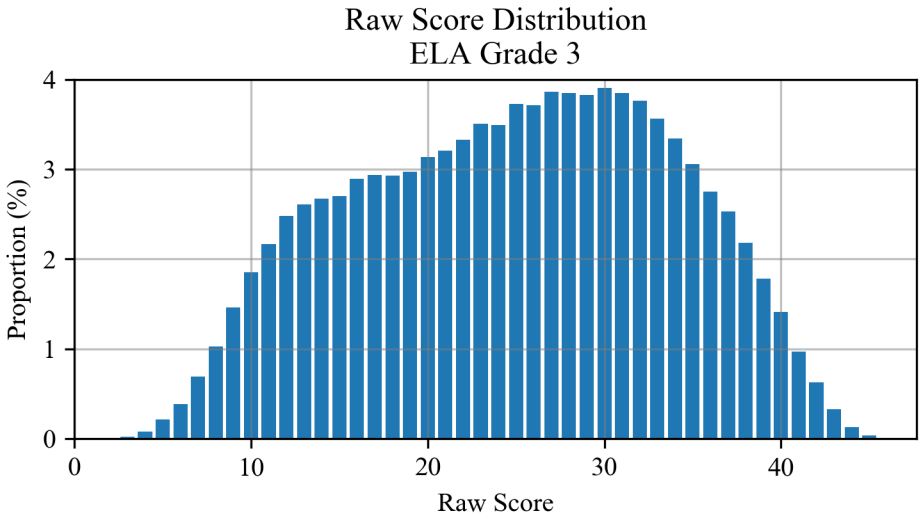

Raw Score Distribution
Mathematics Grade 4
Proportion (%)
Raw Score
0
1
2
3
4
0
10
20
30
40
50

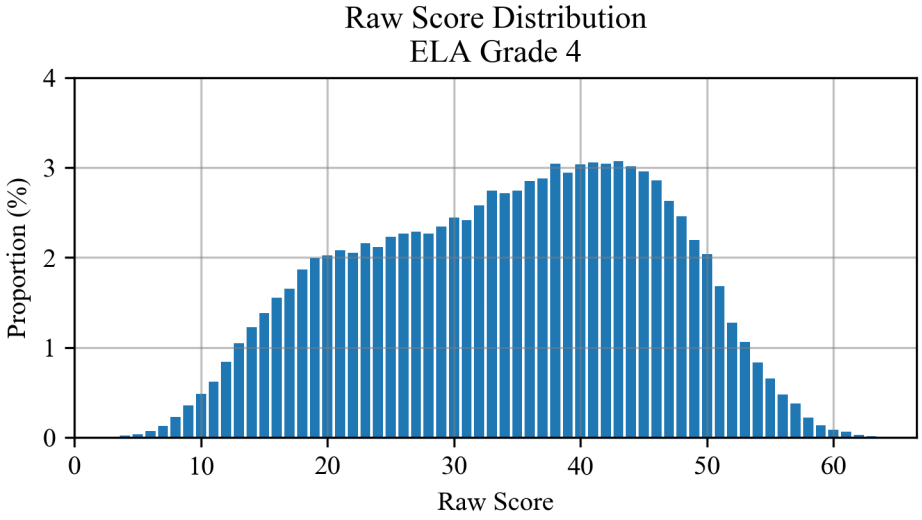

Raw Score Distribution
Mathematics Grade 5
Proportion (%)
Raw Score
0
1
2
3
4
0
10
20
30
40
50

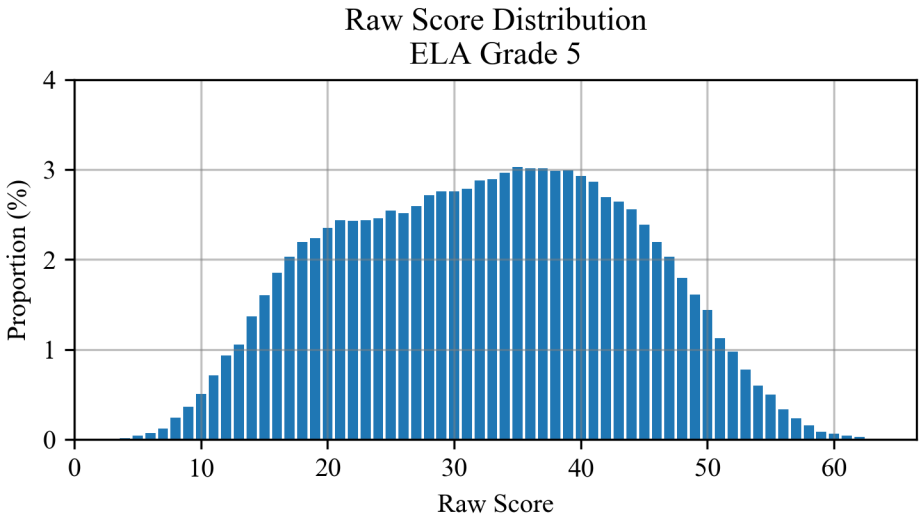

Raw Score Distribution
Mathematics Grade 6
Proportion (%)
Raw Score
0
1
2
3
4
0
10
20
30
40
50

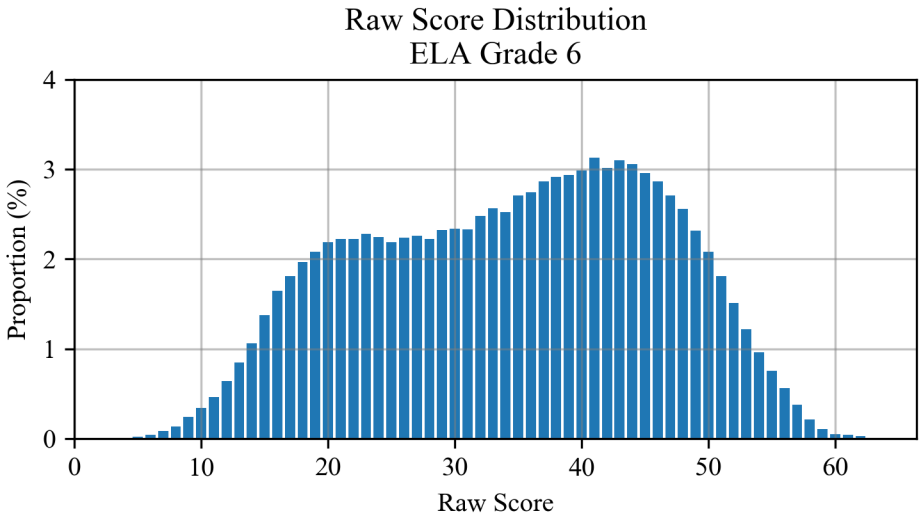

Raw Score Distribution
Mathematics Grade 7
Proportion (%)
Raw Score
0
1
2
3
4
0
10
20
30
40
50

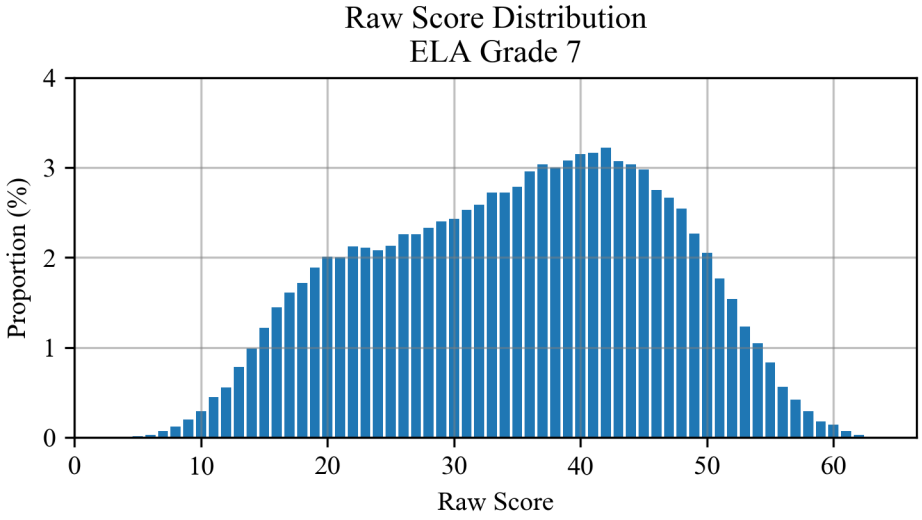

Raw Score Distribution
Mathematics Grade 8
Proportion (%)
Raw Score
0
1
2
3
4
0
10
20
30
40
50

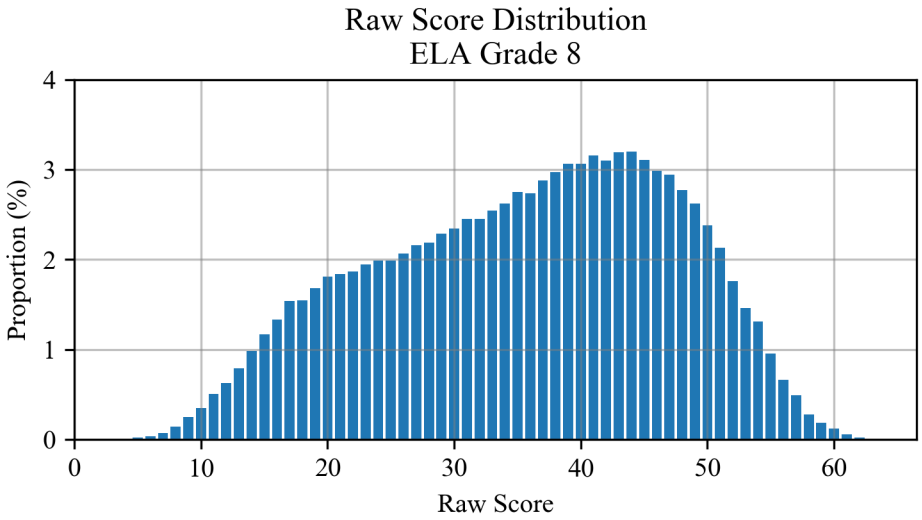

Raw Score Distribution
ELA Grade 3
Proportion (%)
Raw Score
0
1
2
3
4
0
10
20
30
40

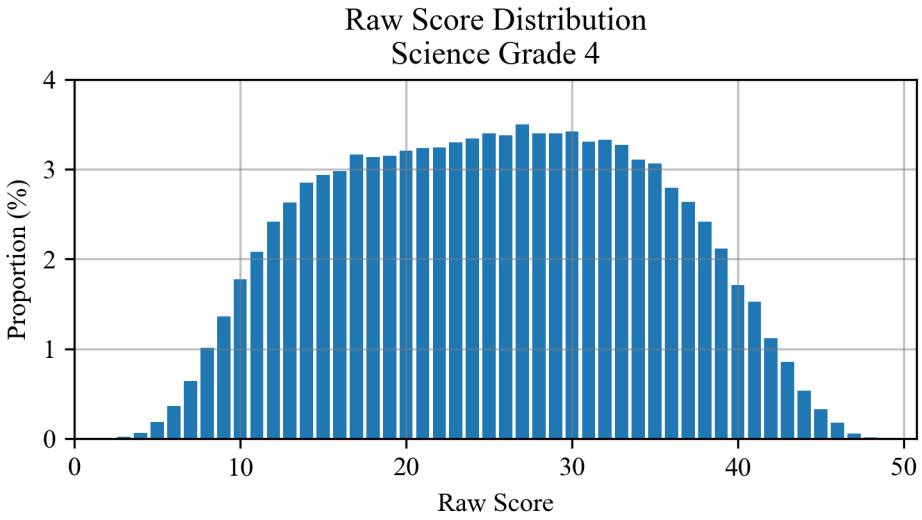

Raw Score Distribution
ELA Grade 4
Proportion (%)
Raw Score
0
1
2
3
4
0
10
20
30
40
50
60

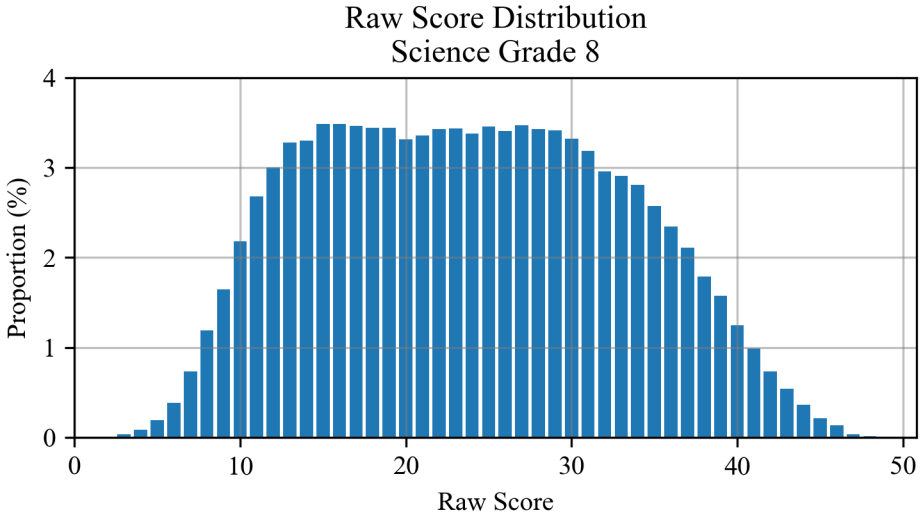

Raw Score Distribution
ELA Grade 5
Proportion (%)
Raw Score
0
1
2
3
4
0
10
20
30
40
50
60


Raw Score Distribution
ELA Grade 6
Proportion (%)
Raw Score
0
1
2
3
4
0
10
20
30
40
50
60


Raw Score Distribution
ELA Grade 7
Proportion (%)
Raw Score
0
1
2
3
4
0
10
20
30
40
50
60


Raw Score Distribution
ELA Grade 8
Proportion (%)
Raw Score
0
1
2
3
4
0
10
20
30
40
50
60


Raw Score Distribution
Science Grade 4
Proportion (%)
0
1
2
3
4
0
10
20
30
40
50
Raw Score


Raw Score Distribution
Science Grade 8
Proportion (%)
0
1
2
3
4
0
10
20
30
40
50
Raw Score

CHAPTER EIGHTEEN: RELIABILITY

This chapter addresses the reliability of PSSA test scores. According to the *Standards for Educational and Psychological Testing (*AERA, APA, & NCME, 2014), the general notion of reliability/precision refers to:

> the consistency of scores across replications of a testing procedure, regardless of how this consistency is estimated or reported (p.33).

This chapter will use the term reliability.

Frisbie (2005) highlighted several elements of reliability. First, reliability is a property of test scores, not a test itself. Many may appreciate this distinction, but in casual usage, individuals frequently make reference to a reliable test. While reliability concerns test scores (and not the test specifically), it is important to appreciate the fact that test scores can be affected by characteristics of the instrument. For example, all other things being equal, tests with more items/points tend to be more reliable than tests with fewer items/points. Second, reliability coefficients are group specific. Reliabilities tend to be higher in populations that are more heterogeneous and lower in populations that are more homogeneous. Consequently, both test length and population heterogeneity should be considered when evaluating reliability.

There is a reliability consideration that may be less evident from the *Standard's* definition, yet still important for test users to understand. While freedom from measurement error is very important, reliability is specifically concerned with random sources of error. Indeed, the degree of inconsistency due to random error sources is what determines reliability: less consistency is associated with lower reliability and more consistency is associated with higher reliability. Of course, systematic error sources also exist. These can artificially increase reliability and decrease validity. (Validity is further discussed in Chapter Nineteen.)

Another noteworthy issue is that multiple sources of error exist (e.g., the day of testing, the items used, the raters who score the items). However, most widely used reliability indices only reflect a single type of error. Consequently, it is important for test users to understand what specific type of error is being considered in a reliability study, and equally, if not more important, what types are not.

Understanding the distinction between relative error and absolute error is also important as many reliability indices only reflect relative error. Relative error is of interest whenever the relative ordering of individuals respective to their test performance is of interest. Understanding examinee rank-order stability is important; however, such stability might be well achieved even when the specific score values are considerably different. When specific score values are considered important (e.g., if cuts cores are used), then absolute error is too. Generally, there is more error variance when considering the absolute scores of examinees, which in turn suggests lower reliability.

As suggested, reliability is a complex, nonunitary notion that cannot be adequately represented by a single number. There are several reliability indices available, and these may not provide the same results (Frisbie, 2005). The remainder of this chapter covers the following:

- Reliability coefficients and their interpretation
- Unconditional and conditional standard errors of measurement (SEMs and CSEMs)
- Decision consistency
- Rater agreement

RELIABILITY INDICES

As shown below, the reliability coefficient expresses the consistency of test scores as the ratio of true score variance to total score variance. The total variance contains two components: 1) the variance in true scores and 2) the variance due to the imperfections in the measurement process. Put differently, total variance equals true score variance plus error variance.[1]

$$\rho_X^2 = \frac{\sigma_T^2}{\sigma_X^2} = \frac{\sigma_T^2}{\sigma_T^2 + \sigma_E^2}$$

Reliability coefficients indicate the degree to which differences in test scores reflect true differences in the attribute being tested rather than random fluctuations. Total test score variance (i.e., individual differences) is partly due to real differences in the attribute (true variance) and partly due to random error in the measurement process (error variance).

Reliability coefficients range from 0.0 to 1.0. If all test score variances were true, the index would equal 1.0. The index will be 0.0 if none of the test score variances were true. Such scores would be pure random noise (i.e., all measurement error). If the index achieved a value of 1.0, scores would be perfectly consistent (i.e., contain no measurement error). Although values of 1.0 are never achieved in practice, it is clear that larger coefficients are more desirable because they indicate that test scores are less influenced by random error. (How big is big enough and how small is too small are issues considered in a later section.)

As noted in the introduction, there are several different indices that can be used to estimate this ratio. One approach is referred to as internal consistency, which is derived from analyzing the performance consistency of individuals over the items within a test. As discussed below, these internal consistency indices do not take into account other sources of error, for example, variations due to random errors associated with the linking process, day-to-day variations (student health, testing environment, etc.), and rater inconsistency.

COEFFICIENT ALPHA

Although a number of reliability indices exist, perhaps the one most frequently reported for achievement tests is Coefficient Alpha. Consequently, this index is the one reported for the PSSA. Alpha indicates the internal consistency over the responses to a set of items measuring an underlying trait, in this case, academic achievement in subject areas such as mathematics, ELA, and science.

Alpha is an internal consistency index. It can be conceptualized as the extent to which an exchangeable set of items from the same domain would result in a similar rank ordering of students. Note that relative error is reflected in this index. Variation in student performance from one sample of items to the next should be of particular concern for any achievement test user. Consider two hypothetical vocabulary tests intended for the same group of students. Each test contains different sets of unique words that are believed to be randomly equivalent, perhaps like the ones shown below.

Table 18–1. Two Hypothetical Vocabulary Tests

Test One	Test Two
Abase	Abate
Boon	Bilk
Capricious	Circuitous
Deface	Debase
....	....
Zealous	Zenith

If a representative group of students could take both of these tests, and the correlation between the scores could be obtained, then that result would represent the parallel forms reliability of the test scores. However, such data-collection designs are impractical in large-scale settings and experimental confounds like fatigue and practice effects are likely to affect the results. Internal-consistency reliability indices arose in part to provide reliability measures using the data from just a single test administration. So, if students only took Test One and the Coefficient Alpha index for those test scores was high, then this would suggest that Test Two would provide a very similar rank ordering of the students if they had taken it instead. If Coefficient Alpha were low, dissimilar rank orderings would likely be observed—again, relative-error variance is reflected in Alpha. (It should also be noted that Coefficient Alpha is algebraically identical to a *Person* × *Item* design under Generalizability Theory when relative error variance is assumed.)

FORMULA

Consider the data matrix in Table 18-2 representing the scores of persons (p) in rows, and items (i) in columns. Each cell is the score of person "p" on item i, and Y represents each item raw score for each person.

Table 18–2. Person × Item Score (X_{pi}) Infinite (Population-Universe) Matrix

Person	Item 1	Item 2	Item *i*
1	*Y*11	*Y*12	. . . Y1*i*
2…	*Y*21	*Y*22	. . . Y2*i*
p	*Yp*1	*Yp*2	. . . Yp*i*

The general computational formula for Alpha is as follows:

$$\alpha = \frac{N}{N-1}\left(1 - \frac{\sum_{i=1}^{N}\sigma_{Yi}^2}{\sigma_X^2}\right),$$

where N is the number of parts (items or testlets), , as noted, is the item score, σ_X^2 is the total test score, σ_X^2 is the variance of the observed total test scores, and σ_{Yi}^2 is the variance of part i.

FURTHER INTERPRETATIONS

RULES OF THUMB

What reliability value is considered high enough? What values are considered too low? Although frequently asked for, any rules of thumb for interpreting the magnitude of reliability indices are mostly arbitrary. Another approach is to research the reliabilities from similar testing instruments to see what values are commonly observed. For the PSSA, comparisons to tests of similar lengths that were administered to similar student populations from other large-scale assessment programs would be relevant. For many other state assessment programs, reliabilities in the low 0.90s are usually the highest ever observed and reliabilities in the high 0.80s are very common.

The lower a given reliability coefficient, the greater the potential for over-interpretation of the associated results. As suggested above, there is no firm guideline regarding how low is too low. However, as an informative point of reference, a reliability coefficient of 0.50 would suggest that there is as much error variance as true-score variance in the scores.

IS ALPHA A LOWER LIMIT TO RELIABILITY?

According to Brennan (1998), "the conventional wisdom that Coefficient Alpha is a lower limit to reliability is based largely on a misunderstanding." In reflecting on the 50th anniversary of his seminal 1951 article, Cronbach—in Cronbach and Shavelson (2004)—expressed similar misgivings about this conventional wisdom:

> one could argue that alpha was almost an unbiased estimate of the desired reliability….the almost in the preceding sentence refers to a small mathematical detail that causes the alpha coefficient to run a trifle lower

than the desired value. This detail is of no consequence and does not support the statement made frequently in textbooks or in articles that alpha is a lower value to the reliability coefficient. That statement is justified by reasoning that starts with the definition of the desired coefficient as the expected consistency among measurements that had a higher degree of parallelism than the random parallel concept implied.

The assumptions for three common parallelism models are presented in Table 18–3. Alpha's assumptions come from the Essentially-Tau Equivalent model, which does not require equal means or equal variances across test parts. Based on this, Brennan (1998) asserts that the lower-limit issue, as conceptualized by many, provides an answer to a question that is of minimal importance. Reframed differently, the goal of selecting a reliability coefficient is not to find the one that provides the highest coefficient, but the one that most accurately reflects the test data under study.

It is important to note that there are factors encountered in practice that may legitimately make Coefficient Alpha an underestimate of reliability. However, there are also factors that might make Coefficient Alpha an overestimate of reliability. Both possibilities are discussed further below and generally arise when the Essentially-Tau Equivalent assumptions are strained.

Table 18–3. Summary of Expectations/Observable Relationships for Different Parallelism Models

Relationship	Classically Parallel	Essentially-Tau Equivalent	Congeneric
Content Similarity	Yes	Yes	Yes
Equal Means across Parts	Yes	No	No
Equal Variances across Parts	Yes	No	No
Equal Covariances across Parts	Yes	Yes	No
Equal Covariances with Other Variables	Yes	Yes	No

* Other models exist, but are not considered here due to their limited application in practice.

BIASES THAT MIGHT MAKE ALPHA AN UNDERESTIMATE OF RELIABILITY

There are factors that might negatively bias Coefficent Alpha, making the apparent reliability lower than it may actually be. Two situations frequently encountered in practice that might cause this include tests that are composed of mixed item types (e.g., multiple-choice (MC) and open-ended (OE) items) and tests that include a planned stratification of the test items according to topics or subdomains.

Although both situations strictly violate the assumptions on which Coefficient Alpha is derived (i.e., the tests are not based on equal part lengths in the former case and are not randomly parallel in the latter case), neither necessarily guarantees that the reliability will be markedly lower. In the latter case, reliability will be underestimated only when strand items are homogeneous enough for the average covariance within strata to exceed the average covariance between strata. Although both are potential influences for the PSSAs, most of the total test score reliabilities reported in Appendix P are all close to or above 0.90, indicating highly consistent test scores for these instruments.

BIASES THAT MIGHT MAKE ALPHA AN OVERESTIMATE OF RELIABILITY

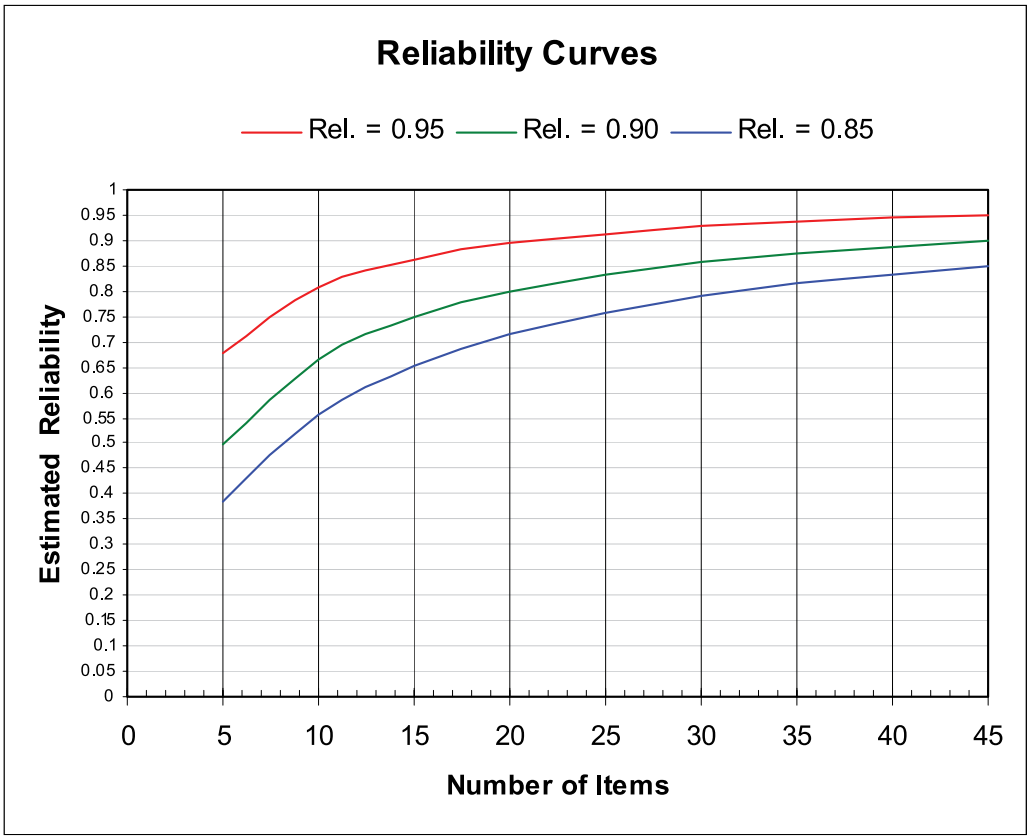
As emphasized in earlier sections, Coefficient Alpha only takes into account measurement error that arises from the selection of items used on a particular test form. There are other sources of random inaccuracy. One is due to the occasion of testing. Other various random conditions that might affect students on any particular testing occasions include illness, fatigue, and anxiety. Also, when a test includes OE items, as the PSSA does, another source that can cause random fluctuation is the OE item scorers. In a sense, Alpha may be positively biased because it does not take into account these other important sources of random error. Any internal consistency reliability index could understate the overall problem of measurement error because it ignores such sources or random error.

Another positive bias can occur when items are associated (clustered) with a common stimulus. Item bundles and testlets are other frequently used terms for this situation. One concrete example is when multiple reading comprehension items are associated with a common passage selection. Again, such a situation does not guarantee that the reliability estimate will be markedly affected, but the potential exists.

STRAND SCORES

As noted in the introduction, reliabilities tend to go up in value with an increase in test length and go down in value with a decrease in test length. Figure 18–1 illustrates this relationship for a hypothetical 45-point test with three total score reliabilities: 0.95, 0.90, and 0.85. As an example, the curve for reliability equal to 0.90 suggests that a 10-item strand would be expected to have a score reliability of just over 0.65. The use of the Spearman-Brown prophecy formula assumes all items are exchangeable, which in practice they may not be. While such a chart may not perfectly model actual strand correlations, the intent is only to illustrate the substantial impact that limited numbers of strand items can have on strand-score reliability. One should not be surprised that strand scores with more points tend to show higher reliability coefficients and those with fewer points tend to show lower reliability coefficients. Further, what is most important for PSSA users to note is that some strand score reliabilities may be too low to warrant interpretation at the individual student level.

Figure 18–1. Example of the Relationship between Test Length and Reliability



Note. Tabled values derived using the Spearman-Brown formula.

INDIVIDUAL-LEVEL VERSUS GROUP-LEVEL SCORES

The results presented in this chapter pertain to the reliability of individual scores. Group results (e.g., is state and district levels) are also provided on PSSA score reports, but the reliability of those scores is not specifically calculated here. However, as a general rule, the reliabilities of group mean scores are almost always higher (sometimes substantially) than the corresponding reliabilities for individual scores. This is especially important to remember for strand scores because those scores can be quite reliable at the group level, even though their individual reliabilities may be too low. Because the reliability of group mean scores (e.g., school or district means) tends to be higher than that of individual scores, the interpretation of strand scores at these aggregate levels is likely very reasonable in most instances. Even though the reliability for means scores based on only a few items might be adequate, the validity of those same scores might be suspect because use of only a few items may not adequately cover the construct of interest. Validity is further discussed in Chapter Nineteen.

RELIABILITY OF WRITING SCORES

An extension of Coefficient Alpha that was derived to specifically fit stratified parallel tests (sometimes called stratified alpha; Cronbach, Schonemann, & McKie, 1965) was used to compute the PSSA ELA score reliabilities. This approach is often used when it is believed that Alpha may be yielding a lower coefficient than it should for the reasons noted above. Although originally developed for content-stratified tests, Qualls (1995) demonstrated its utility for mixed-format tests as well when the stratification is based on item type. It may be computed as

$$_{strat\alpha}\rho_{xx'} = 1 - \frac{\Sigma\sigma^2 x_h (1 - {}_{\alpha}\rho_{x_h x_{h'}})}{\sigma^2 x},$$

where *h* indexes the individual strata.

The reliability of ELA assessments (and many other performance-based tests) with mixed-format tends to be lower than reliabilities for other tests. Part of the reason for this is that there can be student-by-task, rater-by-task, and rater-by-examinee response interactions on such assessments. In the case of ELA, individual student performance may fluctuate significantly across text-dependent analysis (TDA) and evidence-based selected response (EBSR) item types on the same test. In principle, adding more prompts and items can improve reliability to a more acceptable level. However, this is challenging in practice because of costs, testing time, and student fatigue. These conditions can result in reliabilities for ELA assessments that are slightly lower than those for mathematics and science assessments.

STANDARD ERROR OF MEASUREMENT

The reliability coefficient is a unit-free indicator that reflects the degree to which scores are free of measurement error. It always ranges between 0.0 and 1.0 regardless of the test's scale. Reliability coefficients best reflect the extent to which measurement inconsistencies may be present or absent in a group. However, they are not that useful for helping users interpret test scores. The standard error of measurement (SEM) is another indicator of degree of consistency for the scores obtained by individual examinees. A relatively large SEM indicates relatively low reliability. The conditional SEMs (CSEM) discussed further below is SEM at that score level.

TRADITIONAL STANDARD ERROR OF MEASUREMENT

A precise, theoretical interpretation of the SEM is somewhat unwieldy. A beginning point for understanding the concept is as follows. If everyone being tested had the same true score,[2] there would still be some variation in observed scores due to imperfections in the measurement process, such as random differences in attention during instruction or concentration during testing and the sampling of test items. The standard error is defined as the standard deviation[3] of the distribution of observed scores for students with identical true scores. Because the SEM is an index of the random variability in test scores in actual score units, it represents very important information for test score users.

The SEM formula is provided below.

$$SEM = SD\sqrt{1—reliability}$$

This formula indicates the value of the SEM depends on both the reliability coefficient and the standard deviation of test scores. If the reliability were equal to 0.00 (the lowest possible value) the SEM would be equal to the standard deviation of the test scores. If test reliability were equal to 1.00 (the highest possible value) the SEM would be 0.0. In other words, a perfectly reliable test has no measurement error (Harvill, 1991). Additionally, the value of the SEM takes the group variation (i.e., score standard deviation) into account. Consider that an SEM of 3 on a 10point test would be very different than an SEM of 3 on a 100-point test.

TRADITIONAL STANDARD ERROR OF MEASUREMENT CONFIDENCE INTERVALS

The SEM is an index of the random variability in test scores in actual score units, which is why it has such great utility for test score users. SEMs allow statements regarding the precision of individual test scores. SEMs help place 'reasonable limits' (Gulliksen, 1950) around observed scores through construction of an approximate score

band. Often referred to as confidence intervals, these bands are constructed by taking the observed scores, *X*, and adding and subtracting a multiplicative factor of the SEM. As an example, students with a given true score will have observed scores that fall between +/-1 SEM about two-thirds of the time.[4] For +/-2 SEM confidence intervals, this increases to about 95 percent.

FURTHER INTERPRETATIONS

ONE STANDARD ERROR OF MEASUREMENT FOR ALL TEST SCORES

The SEM approach described above only provides a single numerical estimate for constructing the confidence intervals for examinees regardless of their score level. In reality however, such confidence intervals vary according to a student's score. Consequently, care should be taken using the SEM for students with extreme scores. (In the next sections, an alternate approach is described that conditions the SEM on a student's score estimate.)

GROUP SPECIFIC

As noted in the introduction, reliabilities are group specific. The same is true for SEMs because both score reliabilities and score standard deviations vary across groups.

RAW-SCORE METRIC

The SEM approach is calculated using raw scores, and as such, the resulting confidence interval bands are on the raw score metric. Error bands on the scaled score metric are considered in the next section.

TYPE OF ERROR REFLECTED

The interpretation of the SEM should be driven by the type of score reliability that underpins it. So, the PSSA SEMs involve the same source of error relevant to internal consistency indices. As noted earlier, a precise technical explanation of the SEM (and resulting confidence intervals) can be unwieldy. Because of this, score users are often provided less complex interpretations.

One simpler description is that a confidence interval represents the possible score range one would observe if a student could be tested twice with the same instrument. Taking the same test on a different day implies the only source of random error being considered is related to the occasion of testing, such as a student might be sleepier one day than another, or may be sick, or did not get a good breakfast. There is a reliability index that captures this source of random error, and it is referred to as the test-retest reliability coefficient. This is not the type of reliability computed for the PSSAs. When internal consistency reliability estimates are used, such an explanation blurs the fact that random error based on the occasion of testing is not considered.

When SEMs are derived from internal consistency reliability estimates, a better approach is to describe the confidence interval as providing reasonable bounds for the range of scores that a student might receive if he or she took an equivalent version of the test; that is, the student took a test that covered exactly the same content but included a different set of items (if an infinite number of tests with equivalent content were taken, the student's true score will lie within the constructed confidence intervals 68 percent of the time). As an example, if the PSSA score was 1150 and the SEM band was 1100 to 1200, then a student would be likely to receive a score somewhere between 1100 and 1200 if a different version of the test had been taken.

[4] Some prefer the following interpretation: if a student were tested an infinite number of times, the +/-1 SEM confidence intervals constructed for each score would capture the student's true score 68 percent of the time.

RESULTS AND OBSERVATIONS

Coefficient Alpha results and associated (traditional) SEMs for various PSSA scores are documented in Table 18–4 and Appendix P. Values were derived using the PSSA final data file (see Chapter Nine). The results are organized by subject area and grade. Each table in Appendix P also breaks out the various reporting strands and groups of interest (i.e., the total student population, gender and ethnic groups, English learners (EL), students with individualized education plan (IEP), and the economically disadvantaged (ED)). The statistics reported in Appendix P include number of points possible (Pts.), number of items (Len.), number of students tested (N), mean number of score points received (Mean), standard deviation of test scores (SD), reliability (r), traditional standard error of measurement (SEM), and item types (Items) used to determine each score.

Table 18–4. Reliabilities and Standard Errors of Measurement

Subject	Grade	Reliability	*SEM*
Mathematics	3	0.92	3.27
Mathematics	4	0.92	3.35
Mathematics	5	0.92	3.29
Mathematics	6	0.91	3.39
Mathematics	7	0.93	3.17
Mathematics	8	0.92	3.32
ELA	3	0.89	2.92
ELA	4	0.90	3.65
ELA	5	0.89	3.76
ELA	6	0.90	3.67
ELA	7	0.89	3.79
ELA	8	0.89	3.92
Science	4	0.89	3.13
Science	8	0.88	3.15

Note. Raw scores are not weighted

Note that these tables in Appendix P report the standard deviations of observed scores. Assuming normally distributed scores, one would expect about two-thirds of the observations to be within one standard deviation of the mean. An estimate of the standard deviation of the true scores can be computed as

$$\hat{\sigma}_T = \sqrt{\hat{\sigma}_x^2 - \hat{\sigma}_x^2(1-\hat{\rho}_{xx})}\,.$$

The results are historically consistent with past PSSA reliability results. The overall test score reliability values are strong, at 0.88 or above. Compared with previous years, the 2018 test reliabilities are slightly lower under the reduced test lengths, so predicted versus actual test reliabilities were evaluated. In theory and in practice, test reliability is influenced by test length. However, theory and practice also provide methods to offset this tendency, and facilitate the production of reliable assessments under different test length scenarios. These methods focus on the statistical information that is provided by items. When this information is proven to be high during field testing, and is balanced with test blueprint requirements, the use of such items allows for the optimization of content validity and test reliability. This is the approach that was used for construction of the 2018 PSSAs and will continue to be used moving forward as the item pool is routinely replenished with similarly high quality items.

During test construction activities for the 2018 operational PSSAs, test lengths were reduced consistent with the changes noted in chapter two. Although on the surface this might be expected to facilitate test construction by virtue of requiring fewer items from the pools, the reality is that shorter tests require the highest quality items in terms of item discrimination, and sufficient items along the full test scale in order to provide measurement precision

that comes as close as possible to the longer tests. It is well demonstrated that the number of test items strongly influences test reliability and measurement precision (Spearman, 1910; Brown, 1910), but there are tactics that can be, and were used to attempt to control the impact of test reductions on these statistical properties of the tests.

Given challenges in selecting items that span the full score range, and the tendency for items at the extremes to have less optimal discrimination, meeting test targets for average difficulty proved to be challenging in ELA and Science. Generally, the tradeoff made during test construction for the 2018 tests was to accept items with less than a 0.25 point biserial only under 2 conditions which were, 1) there were no other items to satisfy content requirements, or 2) there were no other items to satisfy test difficulty requirements.

Before construction of the 2018 tests, predicted test reliabilities (Spearman, 1910; Brown, 1910) were computed for use in comparing to the 2018 empirical values. Predictions were made based on 2017 PSSA test reliabilities, and the results are reported in Table 18-5. A comparison of the predicted and observed reliabilities based on unweighted raw scores shows that the 2018 observed reliabilities are right on target or very close to their predicted values, with the largest differences in ELA grades 5 and 7 where the predicted values are 0.90 and the observed values are 0.88.

Table 18-5. Predicted and Operational Reliabilities

Subject and Grade	2017 Max Unweighted RS	2017 Reliability	2018 Max Unweighted RS	2018 Spearman-Brown Predicted Reliability	2018 Reliability
Mathematics 3	72	0.94	52	0.92	0.92
Mathematics 4	72	0.94	52	0.92	0.92
Mathematics 5	72	0.94	52	0.92	0.92
Mathematics 6	72	0.94	52	0.92	0.91
Mathematics 7	72	0.95	52	0.93	0.93
Mathematics 8	72	0.94	52	0.92	0.92
ELA 3	58	0.91	45	0.89	0.89
ELA 4	64	0.92	51	0.90	0.90
ELA 5	64	0.92	51	0.90	0.89
ELA 6	64	0.91	51	0.89	0.90
ELA 7	64	0.92	51	0.90	0.89
ELA 8	64	0.91	51	0.89	0.89
Science 4	68	0.92	48	0.89	0.89
Science 8	68	0.92	48	0.89	0.88

Across the grades and subjects tabled in Appendix P, reliabilities for the sub-strands tended are also provided. Strands with more items tend to show higher reliability coefficients, but the test length reductions implemented in 2018 resulted in a larger reduction of the reliabilities at the strand level than at the total test level. Also, groups exhibiting more variability in test scores tended to have higher reliability coefficients. Perhaps the most significant result pertains to an earlier caution (i.e., that some strand score reliabilities may be too low to warrant interpretation at the individual student level). Once again, there is no firm guideline regarding how low is too low. The lower a given reliability coefficient, the greater the potential for over-interpretation. As a point of reference, a reliability coefficient of 0.50 would suggest that there is as much error variance as true-score variance in the scores. It should be noted that the reliability of group mean scores (e.g., school or district means) tends to be higher than that of individual scores, suggesting interpretation of strand scores at these aggregate levels is likely reasonable.

RASCH CONDITIONAL STANDARD ERROR OF MEASUREMENT

The CSEM also indicates the degree of measurement error but does so in scaled-score units and varies as a function of a student's actual scaled score. Therefore, the CSEM may be especially useful in characterizing measurement precision in the neighborhood of a score level used for decision-making—such as cut scores for identifying students who meet a performance standard.

Technically, when a Rasch model is applied, the CSEM at any given point on the ability continuum is defined as the reciprocal of the square root of the test information function derived from the Rasch scaling model.

$$CSEM(\hat{\theta}) = \frac{1}{\sqrt{I(\hat{\theta})}}$$

where $CSEM(\hat{\theta})$ is the conditional standard error of measurement and $I(\hat{\theta})$ is the test information function. Test information depends on the sum of the corresponding information functions for the test items. Item information depends on each item's difficulty and conditional item score variance. The formula above utilizes the Rasch ability (θ) metric. The conditional standard error on the scaled score (SS) metric is determined by simply multiplying the $CSEM(\hat{\theta})$ by the slope (multiplicative constant, m) of the linear transformation equation used to convert the Rasch ability estimates to scaled scores.

$$\text{CSEM(SS)} = CSEM(\hat{\theta}) * m$$

Chapter Fourteen provides the linear transformation formulas for each PSSA test.

RASCH CONDITIONAL STANDARD ERROR OF MEASUREMENT CONFIDENCE INTERVALS

CSEMs also allow statements regarding the precision of individual tests scores. And like SEMs, they help place reasonable limits around observed scaled scores through construction of an approximate score band. The confidence intervals are constructed by adding and subtracting a multiplicative factor of the CSEM and may be interpreted as described in the earlier section.

FURTHER INTERPRETATIONS

DIFFERENT CONDITIONAL STANDARD ERROR OF MEASUREMENT FOR DIFFERENT TEST SCORES

The CSEM approach provides different numerical estimates for constructing the confidence intervals for examinees depending on their specific score level. The magnitude of the CSEM values is U-shaped with larger CSEM values associated with lower and higher scores.

GROUP SPECIFIC

Assuming reasonable model-data fit—as explored in Chapter Twelve—the Rasch based CSEMs (conditioned on score level) should not vary across groups.

SCALED-SCORE METRIC

The CSEM and associated confidence interval bands are on the scaled score metric.

TYPE OF ERROR REFLECTED

The SEMs documented on the PSSA score reports are the Rasch-based conditional standard errors of measurement described above. These are provided by the WINSTEPS scaling program described in Chapter Twelve. As noted earlier, these CSEMs are based on the concept of statistical information. For the purpose of providing a simpler explanation of SEMs to test score users, the earlier description of SEMs framed using the idea of internal consistency reliability was provided in the PSSA score report interpretive documents.[5] Score report content is considered in greater detail in Chapter Sixteen.

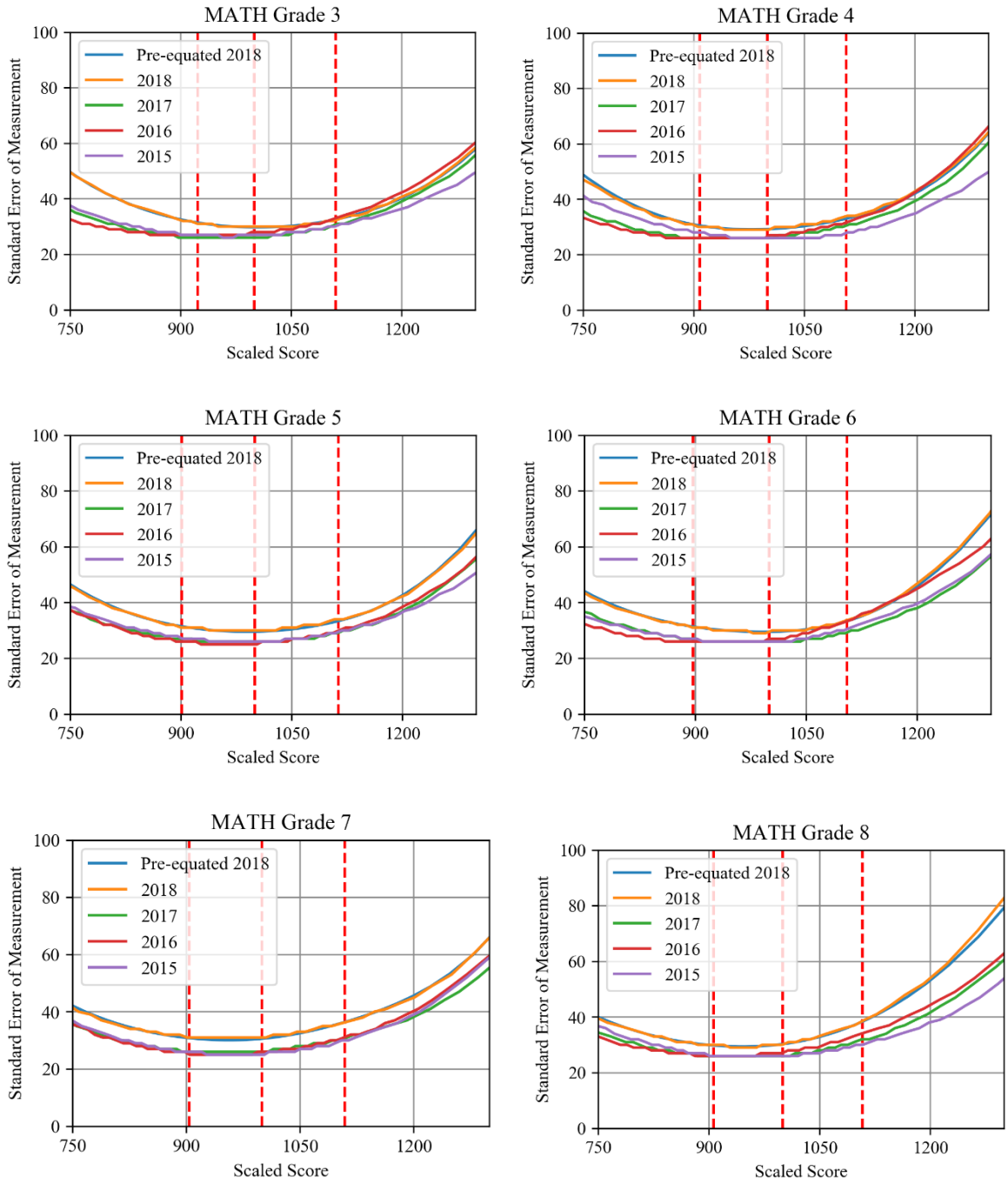
RESULTS AND OBSERVATIONS

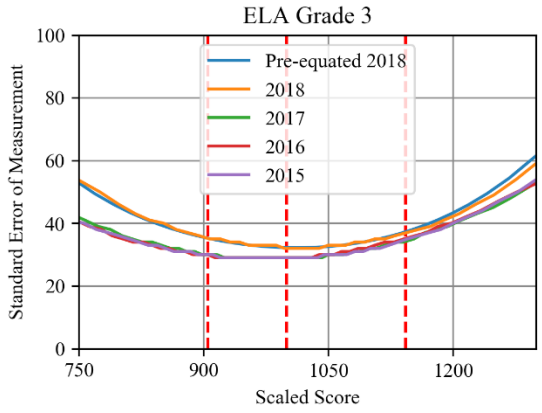
Figure 18–2 shows the Rasch CSEMs associated with each scaled score level. (This information is also provided in tabular form in Appendix N.) Values were derived using the calibration data file described in Chapter Nine. The values are fairly consistent across a large range of the scaled scores, as demonstrated by the relatively flat bottoms of most plots. The values increase at both extremes (i.e., at smaller and larger scaled scores) giving these figures their typical U-shaped pattern. (Only the SEMs for scores greater than the lowest observable scaled scores [LOSS] are shown in the figures; consequently, the complete U-shape does not appear in most plots.) The three red-dashed lines represent the Basic, Proficient, and Advanced scaled score cuts, respectively, moving from lower to higher scaled score values. CSEM values at the cut score lines were generally associated with smaller CSEM values, indicating more precise measurement occurs at these points on the scales. The curves are presented for 2018 and are overlayed on the curves for the three most recent prior years to demonstrate their relative stability under the reduced test length condition. Note that the curves for 2017 and 2018 are quite similar, whereas a comparison of the curves for 2016 and 2017 reflects intentional shifts in difficulty to better align with student test performance. Similar to the small changes in reliability, the CSEM comparisons show generally that the test length reduction resulted in minimal increases in conditional error and are within expectations for a shorter test.

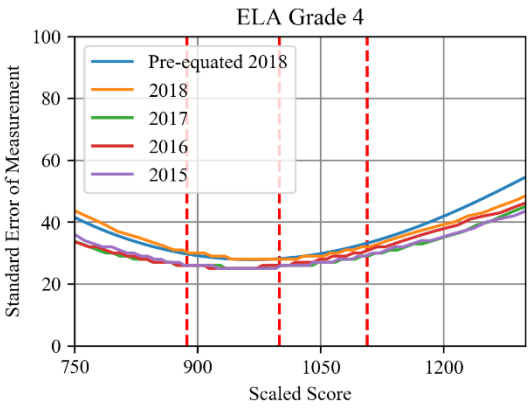
As the 2018 tests were also prepared with the possibility of producing pre-equated tables, highest priority (after meeting content requirements) was placed on producing tables with CSEM as comparable as possible to the 2017 full length tests. Grade 4 Science showed the largest dips in test information around the basic and proficient cut scores, and a corresponding increase in CSEMs in this range. This is primarily due to the result of an effort to shift test difficulty during construction of the 2017 PSSAs to better align test difficulty with student performance distributions in support of providing the best measurement where the most students are in the distribution. The mean scale score for grade 4 science in 2017 was 1405.9 with a standard deviation of 170.8. Looking at the CSEMs, we note that this centers the distribution well above the proficient cut score, so future test construction efforts will attend to maintaining the difficulty targets, but will work toward selecting some more items around the proficient and basic cut scores to improve test information at these points, while still providing strong measurement of examinees through the center of the distribution.

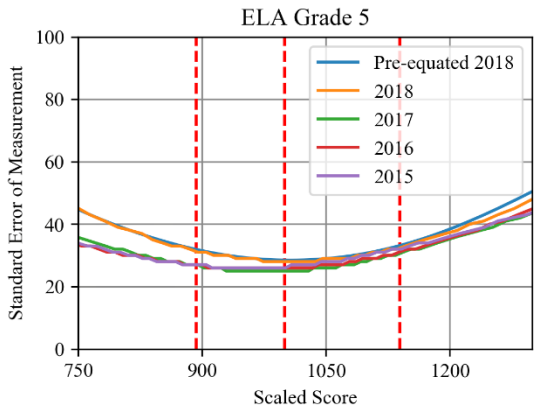
Figure 18-2 provides a view of the conditional standard errors for each of the 14 PSSA's from 2015 through the 2018 predictions, and includes the CSEM curves for the pre-equated predictions. Generally, small differences are noted for the shortened tests, with increases of roughly 5-8 across the cut points for all tests. Some larger increases are noted in at the low end of the scales, but some decreases are noted at the upper end of the scales. For example, the science tests for 2018 show a notable reduction in CSEM at the advanced cut point, which is also an artifact of the shift in test difficulty that occurred in 2017. In fact, across all plots, the shape of the 2017 and 2018 curves is quite similar, pointing to good isolation of the statistical impact of the reduction alone as the primary source of difference. The greatest change in CSEM is noted at the basic cut point for the two science tests. This is also likely to be the result of the 2017 shift to test difficulty, impacting science more than ELA and mathematics. Generally, these results, combined with the predicted versus observed test reliabilities, provide some evidence that changes in measurement precision between the original length, 2017, and reduced length 2018 tests meet with expectations and are likely to be mostly due to the reduction itself. Other factors, such as curriculum shifts and rater variability that may contribute to precision differences, are likely to be present in any equating procedure. These types of factors will be evaluated further to inform decisions related to transitioning the PSSAs to a pre-equating process.

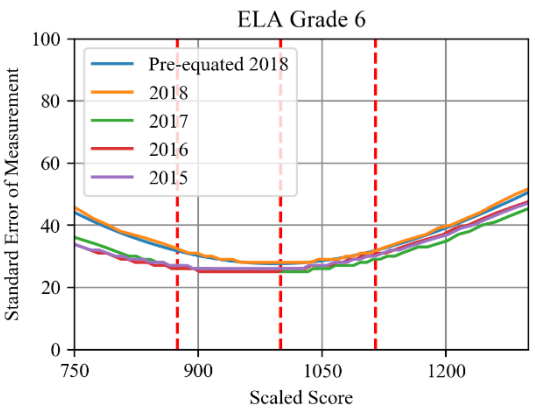
Figure 18–2. Conditional Standard Error Plots for Each Grade and Subject

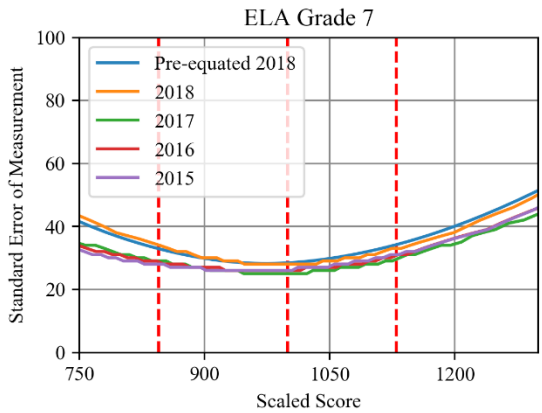


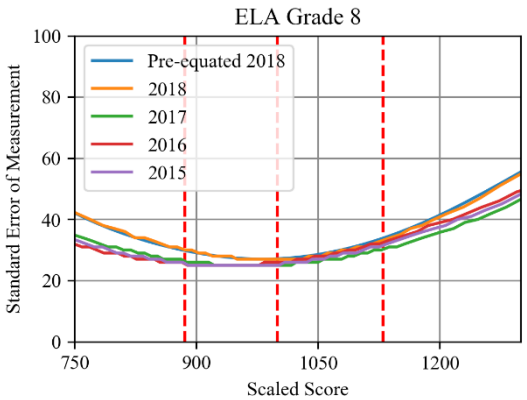

ELA Grade 3
Pre-equated 2018
2018
2017
2016
2015
Standard Error of Measurement
Scaled Score
0
20
40
60
80
100
750
900
1050
1200

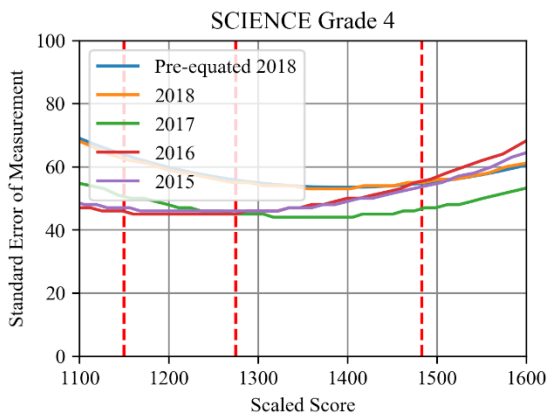

ELA Grade 4
Pre-equated 2018
2018
2017
2016
2015
Standard Error of Measurement
Scaled Score
0
20
40
60
80
100
750
900
1050
1200

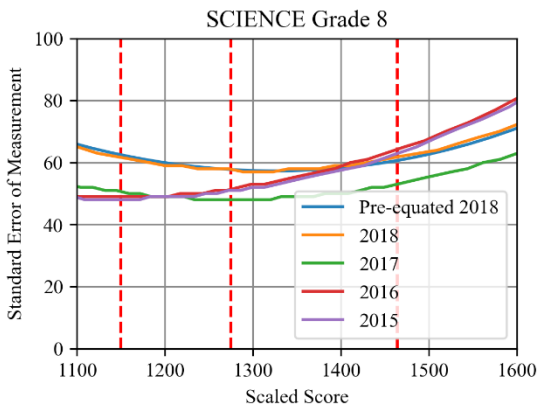

ELA Grade 5
Pre-equated 2018
2018
2017
2016
2015
Standard Error of Measurement
Scaled Score
0
20
40
60
80
100
750
900
1050
1200


ELA Grade 6
Pre-equated 2018
2018
2017
2016
2015
Standard Error of Measurement
Scaled Score
0
20
40
60
80
100
750
900
1050
1200


ELA Grade 7
Pre-equated 2018
2018
2017
2016
2015
Standard Error of Measurement
Scaled Score
0
20
40
60
80
100
750
900
1050
1200


ELA Grade 8
Pre-equated 2018
2018
2017
2016
2015
Standard Error of Measurement
Scaled Score
0
20
40
60
80
100
750
900
1050
1200


SCIENCE Grade 4
Pre-equated 2018
2018
2017
2016
2015
Standard Error of Measurement
Scaled Score
0
20
40
60
80
100
1100
1200
1300
1400
1500
1600


SCIENCE Grade 8
Pre-equated 2018
2018
2017
2016
2015
Standard Error of Measurement
Scaled Score
0
20
40
60
80
100
1100
1200
1300
1400
1500
1600

DECISION CONSISTENCY AND ACCURACY

In a standards-based testing program there should be great interest in knowing how accurately students are classified into performance categories. In contrast to Coefficient Alpha that is concerned with the relative rank-ordering of students, it is the absolute values of student scores that are important in decision consistency and accuracy.

Classification consistency refers to the degree to which the achievement level for each student can be replicated upon retesting using an equivalent form (Huynh, 1976). Decision consistency answers the question: What is the agreement between the classifications based on two non-overlapping, equally difficult forms of the test. If two parallel forms of the test were given to the same students, the consistency of the measure would be reflected by the extent that the classification decisions made from the first set of test scores matched the decisions based on the second set of test scores. Consider Tables 18–5 and 18–6 below.

Table 18–5. Pseudo-Decision Table for Two Hypothetical Categories

Tests One And Two	Test One Level I	Test One Level II	Test One Marginal
Test Two Level I	φ11	φ12	φ1●
Test Two Level II	φ21	φ22	φ2●
Test Two Marginal	φ●1	φ●2	1

Table 18–6. Pseudo-Decision Table for Four Hypothetical Categories

Tests One And Two	Test One Level I	Test One Level II	Test One Level III	Test One Level IV	Test One Marginal
Test Two Level I	φ11	φ12	φ13	φ14	φ1●
Test Two Level II	φ21	φ22	φ23	φ24	φ2●
Test Two Level III	φ31	φ32	φ33	φ34	φ3●
Test Two Level IV	φ41	φ42	φ43	φ44	φ4●
Test Two Marginal	φ●1	φ●2	φ●3	φ●4	1

If a student is classified as being in one category based on Test One's score, how probable would it be that the student would be reclassified as being in the same category if he or she took Test Two (a non-overlapping, equally difficult form of the test)?

The proportions of correct decisions, φ, for two and four categories are computed by the following two formulas, respectively:

$$\varphi = \varphi_{11} + \varphi_{22}$$
$$\varphi = \varphi_{11} + \varphi_{22} + \varphi_{33} + \varphi_{44}$$

It is the sum of the diagonal entries—that is, the proportion of students classified by the two forms into exactly the same achievement level—that signifies the overall consistency.

Classification accuracy refers to the agreement of the observed classifications of students with the classifications made on the basis of their true scores. An observed score contains measurement error while a true score is free of measurement error. A student's observed score can be formulated by the sum of his or her true score plus measurement error, or . Decision accuracy is an index to determine the extent to which measurement error causes a classification different than expected from the true score.

Since true scores are unobserved and since it is not feasible to repeat PSSA testing in order to estimate the proportion of students who would be reclassified in the same performance levels, a statistical model needs to be imposed on the data to estimate the true scores and to project the consistency and accuracy of classifications solely using data from the available administration (Hambleton & Novick, 1973). Although a number of procedures are available, one well-known method was developed by Livingston and Lewis (1995) utilizing a specific True Score Model. This approach is fairly complex, and the cited source contains details regarding the statistical model used to calculate decision consistency and accuracy from the single PSSA administration.

FURTHER INTERPRETATIONS

Several factors might affect decision consistency and accuracy. One important factor is the reliability of the scores. All other things being equal, more reliable test scores tend to result in more similar reclassifications and less measurement error. Another factor is the location of the cut score in the score distribution. More consistent and accurate classifications are observed when the cut scores are located away from the mass of the score distribution. For example, when scores are close to being normally distributed, the mass is concentrated in the middle of the distribution, and, thus classifications tend to become more consistent when cut scores go up from 70 percent to 80 percent to 90 percent or, alternatively, go down from 30 percent to 20 percent to 10 percent. The number of performance levels is also a consideration. Consistency and accuracy indices for four performance levels should be lower than those based on two categories. This is not surprising since classification and accuracy using four levels would allow more opportunity to change achievement levels. Hence, there would be more classification errors and less accuracy with four achievement levels, resulting in lower consistency indices.

RESULTS AND OBSERVATIONS

The results for the overall consistency across all four performance levels as well as for the dichotomies created by the three cut scores are presented in Table 18–7. The tabled values, derived using the program *BB-Class* (Brennan, 2004) which applies the Livingston and Lewis (1995) method. Across all subject areas, the overall decision consistency ranged from the 0.75 to 0.81 while the decision accuracy ranged from 0.65 to 0.74. It should be noted that consistency and accuracy indices for the four performance levels should be lower than those based on two categories (discussed above). Dichotomous decisions between each adjacent pair of performance level classifications have consistency values that range from 0.86 to 0.95 and accuracy values that range from 0.91 to 0.95. These results are consistent with past year decision consistency and accuracy values.

Table 18–7. Decision Consistency and Accuracy Results

Subject	Grade	Statistic	Overall	BBas/Bas	Bas/Prof	Prof/Adv
Mathematics	3	accuracy	0.79	0.93	0.93	0.94
Mathematics	3	consistency	0.71	0.90	0.90	0.91
Mathematics	4	accuracy	0.79	0.92	0.92	0.95
Mathematics	4	consistency	0.71	0.88	0.89	0.92
Mathematics	5	accuracy	0.80	0.92	0.93	0.95
Mathematics	5	consistency	0.72	0.89	0.90	0.93
Mathematics	6	accuracy	0.79	0.91	0.93	0.95
Mathematics	6	consistency	0.70	0.88	0.89	0.93
Mathematics	7	accuracy	0.81	0.93	0.94	0.95
Mathematics	7	consistency	0.74	0.90	0.91	0.93
Mathematics	8	accuracy	0.81	0.92	0.93	0.95
Mathematics	8	consistency	0.73	0.89	0.91	0.94
ELA	3	accuracy	0.78	0.95	0.91	0.93
ELA	3	consistency	0.70	0.92	0.87	0.90
ELA	4	accuracy	0.79	0.95	0.91	0.92
ELA	4	consistency	0.70	0.93	0.88	0.88
ELA	5	accuracy	0.79	0.95	0.91	0.94
ELA	5	consistency	0.71	0.93	0.87	0.91
ELA	6	accuracy	0.80	0.96	0.92	0.92
ELA	6	consistency	0.71	0.95	0.88	0.88
ELA	7	accuracy	0.81	0.98	0.91	0.92
ELA	7	consistency	0.73	0.97	0.87	0.89
ELA	8	accuracy	0.79	0.96	0.91	0.92
ELA	8	consistency	0.70	0.94	0.87	0.89
Science	4	accuracy	0.78	0.96	0.92	0.91
Science	4	consistency	0.70	0.94	0.88	0.87
Science	8	accuracy	0.75	0.91	0.90	0.93
Science	8	consistency	0.65	0.88	0.86	0.90

Note. Results derived using PSSA final data file (see Chapter Nine).

RATER AGREEMENT

Because open-ended items are included on the PSSAs, another source of random error is related to the scorers of those items. Frisbie (2005) noted that "test score reliability differs from scorer reliability" and that "the need for one kind of estimate cannot be satisfied by the other." Additionally, the data most easily obtainable that captures this information comes from the "10 percent read behinds" collected during the scoring process (see Chapter Eight for a description). Partly because of the way that this data is obtained and reported (i.e., it is not a ratio of true score variance over observed score variance), the term rater agreement is used here, not rater reliability or inter-rater reliability as these terms are somewhat misleading as explained above.

FURTHER INTERPRETATIONS

For the PSSAs, both within-year and across-year rater consistency are available. As noted earlier, the linking process adjusts for across-year changes (see Chapter Sixteen). As part of the data collected for that process, additional across-year rater consistency data is available for consideration.

RESULTS AND OBSERVATIONS

Within-year rater agreement information is provided in Chapter Eight. This information is reformatted in Tables 18–8 through 18–10 for PSSA mathematics, ELA, and science OE items, respectively. In addition, the percentages awarded to each score point are also presented in these tables. As seen from these tables, the inter-rater exact agreement percentages range from 82 percent to 95 percent for mathematics, 73 percent to 88 percent for ELA, and 81 percent to 99 percent for science. Mathematics had validity ranging from 85 percent to 98 percent; ELA had validity ranging from 73 percent to 81 percent; and science had validity ranging from 90 percent to 98 percent. (Validity in terms of scoring practices is discussed further in Chapter Eight.)

Table 18–8a. Inter-Rater Agreement for OE Items—Mathematics

Grade	Item	Percent Exact	Percent Adjacent	Validity
3	1	82	18	85
3	2	85	15	89
3	3	95	5	95
4	1	87	13	91
4	2	95	5	98
4	3	94	6	94
5	1	94	6	97
5	2	84	16	88
5	3	85	14	88
6	1	82	18	90
6	2	93	7	91
6	3	88	11	93
7	1	85	14	90
7	2	93	7	95
7	3	88	12	88
8	1	90	10	94
8	2	86	14	81
8	3	87	13	89

Note. For more information regarding validity, see the section on Handscoring Validity Process in Chapter Eight.

Table 18–8b. Percentage Awarded for Each Score Point for OE Items—Mathematics

Grade	Item	0	1	2	3	4	Blank or non-scoreable
3	1	10	31	28	20	7	3
3	2	25	29	21	12	9	4
3	3	16	28	29	15	9	3
4	1	15	28	24	19	10	4
4	2	8	12	19	29	24	7
4	3	27	28	29	6	7	3
5	1	27	34	18	12	6	3
5	2	28	23	18	15	9	6
5	3	17	20	44	6	10	3
6	1	27	29	18	14	9	3
6	2	44	22	11	9	6	9
6	3	39	21	17	11	8	4
7	1	36	21	15	16	7	5
7	2	40	29	12	5	4	11
7	3	20	45	17	10	3	5
8	1	20	26	16	16	15	7
8	2	17	39	22	11	0	10
8	3	26	29	15	14	8	7

Table 18–9a. Inter-Rater Agreement for OE Items—ELA

Grade	Item	Item Type	Exact	Adjacent	Validity
3	1	SA	73	27	76
3	2	SA	77	23	79
4	1	TDA	81	18	73
5	1	TDA	84	16	81
6	1	TDA	88	12	78
7	1	TDA	85	15	77
8	1	TDA	79	21	73

Note. EBSR items are machine scored because they are two-part MC like items and not shown in this table. For more information regarding validity, see the section on Handscoring Validity Process in Chapter Eight.

Table 18–9b. Percentage Awarded for Each Score Point for OE Items—ELA

Grade	Item	Item Type	0	1	2	3	4	Blank or non-scoreable
3	1	SA	15	46	27	8	-	6
3	2	SA	11	45	27	10	-	6
4	1	TDA	-	36	42	9	1	11
5	1	TDA	-	33	44	10	1	11
6	1	TDA	-	38	43	11	1	8
7	1	TDA	-	27	41	21	3	9
8	1	TDA	-	24	39	23	2	12

Note. EBSR items are machine scored because they are two-part MC like items and not shown in this table.

Table 18–10a. Inter-Rater Agreement for OE Items—Science

Grade	Item	Exact	Adjacent	Validity
4	1	89	11	93
4	2	88	12	94
4	3	90	10	98
4	4	99	1	98
4	5	94	6	97
8	1	97	3	97
8	2	93	7	96
8	3	81	19	90
8	4	93	7	94
8	5	87	13	95

Note. For more information regarding validity, see the section on Handscoring Validity Process in Chapter Eight.

Table 18–10b. Percentage Awarded for Each Score Point for OE Items—Science

Grade	Item	0	1	2	Blank or non-scoreable
4	1	22	50	25	4
4	2	20	45	31	3
4	3	36	36	23	4
4	4	46	38	10	6
4	5	13	27	56	4
8	1	25	63	6	6
8	2	52	28	12	8
8	3	10	48	37	6
8	4	38	30	24	8
8	5	33	35	24	8

CHAPTER NINETEEN: VALIDITY

As defined in the *Standards for Educational and Psychological Testing* (AERA, APA, & NCME, 2014), validity refers to "the degree to which evidence and theory support the interpretation of test scores entailed by proposed uses of tests" (p. 11). The *Standards* provides a framework for describing the sources of evidence that should be considered when evaluating validity. These sources include evidence based on 1) test content, 2) response processes, 3) the internal structure of the test, 4) the relationships between test scores and other variables, and 5) the consequences of testing. In addition, when Item Response Theory (IRT) models are used to analyze assessment data, validity considerations related to those processes should also be explored.

The validity process involves the collection of evidence from a variety of sources to support the proposed test score interpretations and uses. This technical report describes throughout, the technical aspects of the PSSA tests in support of their score interpretations and uses. Each of the previous chapters contributes important evidence components that pertain to score validation: test development, test administration, test scoring, item analysis, Rasch calibration, scaling, linking, score reporting, and reliability. This chapter summarizes and synthesizes the evidence based on the *Standards'* framework. The purposes and intended uses of PSSA test scores are reviewed first, then each type of validity evidence is addressed in turn.

PURPOSES AND INTENDED USES OF THE PSSA

The *Standards* emphasize that validity pertains to how test scores are used. To help contextualize the evidence that will be presented below, the purposes of the PSSA will be reviewed first. As stated in Chapter One, the purpose of the PSSA is to measure how well students acquire the knowledge and skills described in the *Pennsylvania Assessment Anchor Content Standards* (Assessment Anchors) as defined by the Eligible Content for mathematics, ELA, and Science. The intended uses of the PSSA are to:

1. Provide information for use in school and district accountability systems
2. Improve curricular and instructional practices in order to help students reach proficiency in the Pennsylvania Core Standards (ELA and Mathematics) or the Pennsylvania Academic Standards (Science)

TEST LENGTH REDUCTION – 2018

The Pennsylvania Department of Education (PDE) established new, reduced length PSSA test designs in 2017 for administration beginning in 2018. The PSSA test length reductions were designed to reduce PSSA testing burdens while maintaining rigor in test reliabilities, and test score validity arguments. The approved test design changes are detailed in Chapter 2, and briefly summarized as follows:

- Mathematics
  - Proportional reduction of each reporting category
  - Grades 3-8: 72 to 52 total raw score points
- Science
  - Proportional reduction of each reporting category
  - Grades 4 and 8: 68 to 48 total raw score points
- ELA
  - Removed writing prompt and selection of standalone multiple-choice language items
  - Grade 3: 62 to 45 total raw score points (weighted)
  - Grades 4-8: 84 to 63 total raw score points (weighted)

The PSSA tests have been consistently constructed with attention to balancing content and statistical requirements in order to optimize test score reliability and validity. This remained true during construction of the reduced length tests. Although test reliability is influenced by test length (Spearman & Brown, 1910), the use of high quality items, with strong statistical features, can facilitate the production of reliable assessments under different test length scenarios. As discussed in chapter eighteen, reliability was shown to change in predicted ways between the original and reduced length tests, where results for the shorter tests continued to show strong internal consistency of scores.

As there was a change to the test blueprint for ELA beyond a proportional reduction of the content, caution was used with respect to proceeding on an assumption that the original 2015 standards appropriately defined performance on the reduced length ELA tests. Consequently, a standards validation was conducted in June of 2018 prior to formally reporting ELA scores. The purpose of the standards validation was to consider whether or not the 2015 cut scores continued to reflect appropriate distinctions in performance on the ELA tests, given the removal of the writing prompt and nine language items. Pennsylvania educators participated in a four-day workshop to review the new tests and applied a modified Bookmark standard setting procedure. Results of the standards validation confirmed that the existing standards still appropriately classify examinee performance into the four levels of Below Basic, Basic, Proficient, and Advance. For example, a score of 1000 was determined to appropriately separate examinee performance on the ELA tests between the below basic and proficient levels. The same was true for each of the remaining cut scores for grades 3 through 8, below basic and advanced. Please refer to the Pennsylvania System of School Assessment Grades 3-8 English Language Arts Standards Validation 2018 Final Technical Report for full details regarding the standards validation design, implementation, committee review, and final results.

Beyond standards validation, the provision of ongoing of validity evidence will continue to be a central feature in the PSSA technical documentation. This chapter proceeds with a discussion of five sources of validity evidence for the PSSA, including studies that were conducted for the purpose of evaluating the PSSAs for evidence of any shifts in the ELA construct related to the test design modification for ELA, i.e. removal of the writing prompt and nine language items.

EVIDENCE BASED ON TEST CONTENT

Test content validity evidence for the PSSA rests greatly on establishing a link between each component of the assessment (i.e., the items) and what the students should know and be able to do as required by the Assessment Anchors, Eligible Content, and/or the Academic Content Standards (refer to Chapter Two for a description of each of these elements). The PSSA tests are intended to measure students' knowledge and skills described in the Assessment Anchors as defined by the Eligible Content for mathematics, ELA, and science. Thus the evidence supporting the alignment among the PSSA tasks, the Assessment Anchors as defined by the Eligible Content and the Academic Content Standards should be provided.

Lane (1999) suggests taking the following steps to support the content validity of tests:

- Evaluate the degree to which the test specifications represent and align with the knowledge and skills described in the Assessment Anchors as defined by the Eligible Content for mathematics, ELA, and science.
- Evaluate the alignment between the test items and test specifications to ensure representativeness.
- Evaluate the extent to which the curriculum aligns with the Assessment Anchors. If some contents are not included in the curriculum, then low scores on the test should not be interpreted as meaning that instruction was ineffective.
- Conduct content reviews of the test items using a panel of content experts to see whether they measure the intended construct or are the sources of construct-irrelevant variance.
- Conduct fairness reviews of the items to avoid issues related to a specific subpopulation.
- Evaluate procedures for administration and scoring, such as the appropriateness of instructions to examinees, time limit for the assessment, and training of raters.
- Submit operational tests to third-party, independent reviews.

Chapters Two through Eight of this report present evidence related to test content. As described in these chapters, all PSSA test blueprints (specifications) and items were developed and aligned with the PSSA Assessment Anchors and Eligible Content for mathematics, ELA, and science, consistently following these well-established procedures. After the items were developed, they underwent multiple rounds of content and bias reviews. After they were field tested, they were reviewed with respect to their statistical properties. Items selected for the operational assessment had to pass content, psychometric, and PDE reviews. Tests were administered according to standardized procedures with allowable accommodations. The following summarizes the efforts described in in greater detail in Chapters Two through Eight:

- DRC used Webb's (1999) Depth of Knowledge (DOK) model to ensure the PSSA items aligned with the Assessment Anchors as defined by the Eligible Content and the Academic Content Standards in terms of both content and cognitive levels.
- DRC established detailed test and item/passage development specifications and ensured the items were sufficient in number and adequately distributed across content and levels of cognitive complexity and difficulty.
- DRC and WestEd selected qualified item writers and provided training to help ensure they wrote high-quality items.
- Each newly-developed item was first reviewed by content specialists and editors at DRC and/or WestEd to make sure that all items measured the intended Assessment Anchors, as defined by the Eligible Content for Mathematics, ELA, and Science. Appropriateness for the intended grade was also considered, as well as depth of knowledge, graphics, grammar/punctuation, language demand, and distractor reasonableness.
- Before field testing, the test items were submitted to content committees (composed of Pennsylvania educators) for review using, but not limited to, the following categories:
    - Overall quality and clarity
    - Anchor, eligible content, and/or standard alignment
    - Grade-level appropriateness
    - Difficulty level
    - Depth of knowledge
    - Appropriate sources of challenge (e.g., unintended content and skills)
    - Correct answer
    - Quality of distractors
    - Graphics
    - Appropriate language demand
    - Freedom from bias
- The items were also submitted to a Bias, Fairness, and Sensitivity Committee for review. This committee reviewed items for issues related to diversity, gender, and other pertinent factors.
- Items passing all the prior hurdles were tried out in a field test event. Several statistical analyses were conducted on the field test data, including classical item analyses, distractor analyses, and differential item functioning (DIF). Items were once again carefully reviewed by DRC staff and a committee of Pennsylvania teachers with respect to their statistical characteristics. DIF was used to detect test items that might bias test scores for particular groups. Empirical investigation of DIF strengthens the validity evidence related to score interpretations for students in particular groups by eliminating potential sources of construct-irrelevant variance as such, DIF results might be better considered as internal structure validity evidence.

- The PSSA tests were administered according to standardized procedures with allowable accommodations and recommended testing times.
- As shown in Chapter Eight, the raters for open-ended (OE) items were carefully recruited and well trained. Their scoring was monitored throughout the scoring session to ensure that an acceptable level of scoring accuracy was maintained.

In addition to the foundational and routine procedures described above and in Chapters Two through Five, and summarized in Appendix C, two external studies were conducted to assess the alignment of the PSSA tests to the PSSA Assessment Anchors and Eligible Content. Achieve, Inc., Washington, D.C., conducted a preliminary review of the science Assessment Anchors in 2003 to evaluate the alignment with the Academic Standards and produced a follow-up report on the anchors in 2005.

EVIDENCE BASED ON RESPONSE PROCESSES

Response-process evidence is used to examine the extent to which the cognitive skills and processes employed by students match that identified in the test developer's defined construct domains for all students and for each subgroup. Think-aloud procedures or cognitive labs can be used to collect this type of evidence. In addition, when an assessment includes OE items, an examination of the extent to which the raters interpret and apply the scoring criteria accurately when assigning scores to students' responses on OE items also provides validity of the response-processes evidence.

For the PSSA science tests, DRC conducted a science cognitive lab study to gather relative information about the thinking processes students used to solve science scenario items. The use of the cognitive lab helped ensure that the intended response processes were employed by students.

For all the PSSA tests, well-organized scorer training and subsequent monitoring of rating accuracy helped ensure that raters strictly followed the scoring criteria to minimize rater biases that may affect their scoring. Refer to Chapter Eight for a detailed description of all hand-scoring procedures, and to Chapter Eighteen for statistical information regarding inter-rater reliability.

EVIDENCE BASED ON INTERNAL STRUCTURE

As described in the *Standards* (2014), internal-structure evidence refers to the degree to which the relationships between test items and test components conform to the construct on which the proposed test interpretations are based. For each PSSA test, one total test score as well as strand scores are reported (see Chapter Sixteen for more information about PSSA scores). Additionally, principle component and parallel analyses were conducted and provide strong internal-structure evidence of the unidimensionality of the PSSAs.

ITEM DIFFICULTY RANGES AND DISCRIMINATION

Multiple sources of evidence are provided that address the appropriateness of the range of difficulty and discrimination of the items on the PSSA tests. Plots of item p-values by point biserial correlations are provided in Chapter 11, and summary statistics are provided for IRT item difficulty parameters in Chapter Twelve.

ITEM RESPONSE THEORY DIMENSIONALITY

Results from principle component and parallel analyses were presented in Chapter Twelve. The PSSA mathematics, ELA and science tests are shown through a principle components analysis to be strongly unidimensional, providing evidence that the tests are measuring a single construct without undue irrelevant variance.

A confirmatory factor analysis was also applied to the 2017 original length and 2018 reduced length test data to assess the degree to which the intended construct for each test explains performance on the operational test items. Specifically, significant factor loadings, consistency of standardized variances of the unique factor scores, and model fit were examined across the CFA models for the original and reduced length tests, for each PSSA test.

Using *Mplus* (Muthén & Muthén, 1998-2012) a single factor model was specified for the original and reduced length tests, for each PSSA test as:

$$y_i = \tau + \Lambda\eta_i + \varepsilon_i$$

where y_2 is the outcome vector, t is the intercept vector, Λ is the factor loading matrix, η_i is the common factor score, and represents the unique factor scores. For each model, the factor variance was fixed to 1.0 for model identification purposes. As the indicators in these models are ordered categorical variables and likely violate the assumption of multivariate normality required for maximum likelihood estimation, the models were fit using robust weighted least squares estimation. Model fit was evaluated for each model using adjusted Chi-Square tests of fit (Satorra & Bentler, 1994; Asparouhov & Muthén, 2010), Root Mean Square Error of Approximation (RMSEA), and the comparative fit index (CFI). RMSEA values below 0.06 and CFI values of 0.90 and above were considered to represent good fit (Hu & Bentler, 1999).

Results for the single factor mathematics model show that factor loadings for all items are statistically significant, with most factor loading values falling above 0.30. This indicates that for both the original and reduced length tests, the construct is explaining individual item performance reasonably well.

The Chi-square test of fit results for the CFAs show that, for all tests, the model does not fit perfectly in the population with p-values < 0.000. MacCallum (2001) notes that this is often the finding with larger sample sizes. The RMSEA results shows good fit for both test lengths for all tests with values ranging between 0.018 and 0.026 for the original length tests and between 0.014 and 0.025 for the reduced length tests. The CFI results also show good fit with values ranging from 0.926 to 0.972 for the original length tests and from 0.962 to 0.980 for the reduced length tests. Tables 19-1a and 19-1b provide a summary of the fit results for the original and reduced length test respectively.

Note that as the models are not nested, a direct statistical comparison of model fit would not be informative. Procedures that allows for the comparison of non-nested models such as Akaike's Information Criterion (AIC; Akaike, 1973) and the Bayesian Information Criterion (BIC; Schwarz, 1978) are designed primarily for model selection purposes, so are less useful here where the model has been chosen based on based on criteria external to the test.

Table 19–1a. Model Fit for Original Length PSSAs - 2017

Subject	Grade	No. Indicators (Items)	RMSEA	CFI	x^2 df	P-Value Adj x^2	N
ELA	3	45	0.022	0.964	882	< 0.000	125874
	4	49	0.023	0.957	1045	< 0.000	125911
	5	49	0.018	0.972	1067	< 0.000	124758
	6	49	0.022	0.955	1059	< 0.000	123625
	7	49	0.019	0.969	1063	< 0.000	125921
	8	49	0.023	0.952	1051	< 0.000	123587
Math	3	63	0.023	0.953	1705	< 0.000	126172
	4	63	0.021	0.954	1708	< 0.000	126281
	5	63	0.026	0.930	1683	< 0.000	125052
	6	63	0.023	0.944	1710	< 0.000	123618
	7	63	0.021	0.956	1726	< 0.000	125769
	8	63	0.026	0.926	1700	< 0.000	123223
Science	4	49	0.021	0.954	1708	< 0.000	126281
	8	49	0.026	0.926	1700	< 0.000	123223

Table 19–1b. CFA Model Fit for Reduced Length PSSAs - 2018

Subject	Grade	No. Indicators (Items)	RMSEA	CFI	x^2df	P-Value Adj x^2	N
ELA	3	35	0.025	0.962	527	< 0.000	122372
	4	39	0.020	0.972	669	< 0.000	126019
	5	39	0.017	0.978	675	< 0.000	126644
	6	39	0.018	0.979	673	< 0.000	125294
	7	39	0.019	0.973	669	< 0.000	124066
	8	39	0.020	0.968	671	< 0.000	124479
Math	3	43	0.023	0.968	802	< 0.000	122860
	4	43	0.021	0.969	810	< 0.000	126568
	5	43	0.022	0.970	802	< 0.000	127073
	6	43	0.018	0.977	813	< 0.000	125483
	7	43	0.022	0.975	799	< 0.000	124239
	8	43	0.022	0.966	802	< 0.000	124541
Science	4	43	0.021	0.969	810	< 0.000	126568
	8	43	0.014	0.980	830	< 0.000	124004

Overall, the factor analysis results suggest that a single factor (the ELA construct as detailed in Chapter 2) is explaining the variance in responses well for both the 2017 (Table 19-1a) and 2018 (Table 19-1b) reduced length tests, supporting an overall conclusion of construct stability between the original and reduced length tests.

EVIDENCE RELATED TO THE USE OF THE RASCH MODEL

Since the Rasch model is the basis of all calibration, scaling, and linking analyses associated with the PSSA, the validity of the inferences from these results depends on the degree to which the assumptions of the model are met as well as the fit between the model and test data. As discussed at length in Chapter Twelve, the underlying assumptions of Rasch models were essentially met for all the PSSA data, indicating the appropriateness of using the Rasch models to analyze the PSSA data.

In addition, the Rasch model was also used to link science operational PSSA tests across years. The accuracy of the linking also affects the accuracy of student scores and the validity of score uses. As described in Chapter Fifteen, DRC Psychometric Services staff follow linking procedures previously vetted by the Pennsylvania National TAC. Moreover, DRC internal replication and TAC review ensured the accuracy of the linking results.

TEST RELIABILITY, ERRORS OF MEASUREMENT, AND DECISION CONSISTENCY AND ACCURACY

Reliability estimates, SEM, and decision consistency and accuracy results are presented in Chapter Eighteen and provide important evidence that the PSSA tests have strong internal consistency, expected measurement errors, and that examinees are being appropriately classified into performance levels based on the test scores and standards set on those scores.

STRAND CORRELATIONS

Correlations and disattenuated correlations between strand scores within each subject area are presented below. Values were computed using the PSSA final data file (see Chapter Nine). This data can also provide information on score dimensionality that is part of internal-structure validity evidence. As noted in Chapter Three, the PSSA mathematics tests have four strands (denoted by M.A, M.B, M.C, and M.D). The PSSA ELA tests have four strands (denoted by E.A, E.B, E.D, and E.E), except grade 3 which has three strands (E.A, E.B, and E.D). Note again that E.C (writing prompt) for all grades was removed in the 2018 tests. The PSSA science tests have four strands (denoted by S.A, S.B, S.C, and S.D).

For each grade, Pearson's correlation coefficients between these strands are reported in Tables 19–2a through 19–2f. The inter-correlations between the strands within the content areas are positive and generally range from moderate to high in value, and correlations between strands across content areas are generally slightly lower, providing contrasting evidence of convergent and discriminant validity.

Table 19–2a. Correlations between Mathematics and ELA Strands for Grade 3

	M.A	M.B	M.C	M.D	E.A	E.B	E.D
M.A	-						
M.B	0.79	-					
M.C	0.67	0.64	-				
M.D	0.79	0.75	0.65	-			
E.A	0.69	0.68	0.60	0.67	-		
E.B	0.67	0.66	0.57	0.65	0.77	-	
E.D	0.62	0.59	0.53	0.60	0.64	0.63	-

Table 19–2b. Correlations between Mathematics, ELA, and Science Strands for Grade 4

	M.A	M.B	M.C	M.D	E.A	E.B	E.D	E.E	S.A	S.B	S.C	S.D
M.A	-											
M.B	0.79	-										
M.C	0.69	0.66	-									
M.D	0.77	0.74	0.66	-								
E.A	0.64	0.65	0.58	0.60	-							
E.B	0.67	0.67	0.60	0.63	0.76	-						
E.D	0.62	0.62	0.56	0.58	0.64	0.67	-					
E.E	0.49	0.49	0.44	0.46	0.51	0.53	0.49	-				
S.A	0.73	0.72	0.66	0.69	0.73	0.75	0.65	0.51	-			
S.B	0.57	0.57	0.53	0.54	0.60	0.61	0.52	0.41	0.68	-		
S.C	0.58	0.58	0.54	0.56	0.58	0.59	0.51	0.40	0.66	0.55	-	
S.D	0.56	0.54	0.51	0.52	0.52	0.53	0.47	0.36	0.62	0.49	0.51	-

Table 19–2c. Correlations between Mathematics and ELA Strands for Grade 5

	M.A	M.B	M.C	M.D	E.A	E.B	E.D	E.E
M.A	-							
M.B	0.69	-						
M.C	0.75	0.61	-					
M.D	0.79	0.64	0.70	-				
E.A	0.67	0.55	0.61	0.60	-			
E.B	0.71	0.59	0.64	0.64	0.74	-		
E.D	0.60	0.50	0.55	0.54	0.61	0.63	-	
E.E	0.56	0.45	0.51	0.48	0.57	0.57	0.49	-

Table 19–2d. Correlations between Mathematics and ELA Strands for Grade 6

	M.A	M.B	M.C	M.D	E.A	E.B	E.D	E.E
M.A	-							
M.B	0.80	-						
M.C	0.74	0.74	-					
M.D	0.69	0.68	0.65	-				
E.A	0.67	0.68	0.60	0.56	-			
E.B	0.71	0.72	0.64	0.60	0.77	-		
E.D	0.61	0.61	0.55	0.51	0.63	0.65	-	
E.E	0.52	0.52	0.48	0.45	0.52	0.55	0.48	-

Table 19–2e. Correlations between Mathematics and ELA Strands for Grade 7

	M.A	M.B	M.C	M.D				
M.A	-							
M.B	0.85	-						
M.C	0.71	0.69	-					
M.D	0.77	0.74	0.61	-				
E.A	0.68	0.65	0.55	0.64	-			
E.B	0.71	0.68	0.57	0.65	0.73	-		
E.D	0.63	0.60	0.53	0.57	0.61	0.63	-	
E.E	0.56	0.54	0.45	0.50	0.55	0.58	0.48	-

Table 19–2f. Correlations between Mathematics, ELA, and Science Strands for Grade 8

	M.A	M.B	M.C	M.D	E.A	E.B	E.D	E.E	S.A	S.B	S.C	S.D
M.A	-											
M.B	0.71	-										
M.C	0.57	0.71	-									
M.D	0.60	0.75	0.62	-								
E.A	0.53	0.68	0.53	0.56	-							
E.B	0.54	0.69	0.54	0.59	0.72	-						
E.D	0.52	0.67	0.53	0.56	0.66	0.65	-					
E.E	0.47	0.58	0.44	0.47	0.54	0.53	0.50	-				
S.A	0.59	0.77	0.62	0.65	0.68	0.70	0.65	0.51	-			
S.B	0.47	0.62	0.50	0.53	0.60	0.61	0.56	0.45	0.68	-		
S.C	0.50	0.64	0.53	0.55	0.58	0.60	0.55	0.43	0.69	0.58	-	
S.D	0.44	0.58	0.48	0.50	0.51	0.54	0.49	0.36	0.63	0.53	0.56	-

The correlations in Tables 19–2a through 19–2f are based on the observed strand scores. These observed-score correlations are weakened by the existing measurement error contained within each strand. As a result, disattenuating the observed correlations can provide an estimate of the relationships between strands if there were no measurement error. (An important caveat is provided further below.) The disattenuated correlation coefficients (R_{xy}) can be computed by using the formula (Spearman 1904, 1910) below:

$$R_{xy} = \frac{r_{xy}}{\sqrt{r_{xx} r_{yy}}},$$

where r_{xy} is the observed correlation, and r_{xx} and r_{yy} are the reliabilities for strand X and strand Y. Disattenuated correlations very near 1.00 might suggest that the same or very similar constructs are being measured. Values somewhat less than 1.00 might suggest that different strands are measuring slightly different aspects of the same construct. Values markedly less than 1.00 might suggest the strands reflect different constructs.

Tables 19–3a through 19–3f show the corresponding disattenuated correlations for the 2018 PSSA tests for each grade. Note that with ELA, text dependent analysis (TDA) items belongs to a separate strand and is the only item for the strand. Given that this strand (E.E) has only one item, reliability cannot be computed. Therefore, disattenuated correlation cannot be computed with these strands. Where reliability can be computed, the disattenuated strand correlations are higher than their observed score counterparts, given that none of the strands has perfect reliabilities (see Chapter Eighteen).

Some within-subject correlations are very high (e.g., above 0.95), suggesting that the within-subject strands appear to be measuring essentially the same construct. This, in turn, suggests that some strand scores might not provide entirely unique information about the strengths or weaknesses of students.

Table 19–3a. Disattenuated Strand Correlations for Mathematics and ELA: Grade 3

	M.A	M.B	M.C	M.D	E.A	E.B	E.D
M.A	-						
M.B	0.97	-					
M.C	1.04	0.98	-				
M.D	1.06	0.98	1.07	-			
E.A	0.88	0.85	0.95	0.91	-		
E.B	0.87	0.83	0.91	0.89	1.00	-	
E.D	0.90	0.83	0.94	0.92	0.94	0.92	-

Table 19–3b. Disattenuated Strand Correlations for Mathematics and ELA: Grade 4

	M.A	M.B	M.C	M.D	E.A	E.B	E.D	E.E	S.A	S.B	S.C	S.D
M.A	-											
M.B	1.03	-										
M.C	1.04	1.07	-									
M.D	0.99	1.00	1.05	-								
E.A	0.81	0.87	0.90	0.79	-							
E.B	0.84	0.90	0.94	0.83	0.99	-						
E.D	0.85	0.90	0.94	0.83	0.90	0.94	-					
E.E								-				
S.A	0.89	0.93	1.00	0.87	0.92	0.94	0.88		-			
S.B	0.84	0.90	0.97	0.84	0.92	0.93	0.87		1.00	-		
S.C	0.87	0.93	0.99	0.87	0.90	0.91	0.85		0.99	1.00	-	
S.D	0.88	0.90	1.00	0.86	0.84	0.86	0.83		0.98	0.93	0.97	-

Table 19–3 (continued). Correlations among Students' Performance Between PSSA and CDT Tests

Table 19–3c. Disattenuated Strand Correlations for Mathematics and ELA: Grade 5

	M.A	M.B	M.C	M.D	E.A	E.B	E.D	E.E
M.A	-							
M.B	1.00	-						
M.C	1.07	1.09	-					
M.D	0.98	1.00	1.06	-				
E.A	0.85	0.87	0.95	0.80	-			
E.B	0.87	0.91	0.97	0.85	0.99	-		
E.D	0.84	0.88	0.95	0.81	0.94	0.94	-	
E.E								-

Table 19–3d. Disattenuated Strand Correlations for Mathematics and ELA: Grade 6

	M.A	M.B	M.C	M.D	E.A	E.B	E.D	E.E
M.A	-							
M.B	1.04	-						
M.C	1.06	1.09	-					
M.D	0.98	1.00	1.04	-				
E.A	0.87	0.91	0.88	0.83	-			
E.B	0.89	0.93	0.91	0.86	1.00	-		
E.D	0.89	0.91	0.91	0.85	0.95	0.95	-	
E.E								-

Table19–3e. Disattenuated Strand Correlations for Mathematics and ELA: Grade 7

	M.A	M.B	M.C	M.D	E.A	E.B	E.D	E.E
M.A	-							
M.B	1.04	-						
M.C	1.01	1.04	-					
M.D	0.98	1.00	0.97	-				
E.A	0.87	0.88	0.86	0.90	-			
E.B	0.86	0.87	0.85	0.87	0.98	-		
E.D	0.88	0.89	0.91	0.88	0.95	0.92	-	
E.E								-

Table 19–3f. Disattenuated Strand Correlations for Mathematics, ELA, and Science: Grade 8

	M.A	M.B	M.C	M.D	E.A	E.B	E.D	E.E	S.A	S.B	S.C	S.D
M.A	-											
M.B	0.96	-										
M.C	0.90	0.97	-									
M.D	0.98	1.06	1.02	-								
E.A	0.76	0.85	0.77	0.85	-							
E.B	0.79	0.88	0.81	0.91	0.98	-						
E.D	0.81	0.90	0.83	0.92	0.95	0.96	-					
E.E								-				
S.A	0.82	0.93	0.88	0.97	0.89	0.94	0.91		-			
S.B	0.78	0.89	0.84	0.92	0.92	0.95	0.92		1.01	-		
S.C	0.82	0.92	0.87	0.96	0.89	0.94	0.90		1.03	1.02	-	
S.D	0.77	0.87	0.85	0.93	0.82	0.89	0.86		1.00	0.98	1.03	-

Some caution is needed in interpreting the disattenuated results because the reliabilities used to calculate the disattenuated correlations are subject to both upward and downward biases. (These are also discussed in some detail in Chapter Eighteen.) Consequently, some of the values tabled above may be higher or lower than they should be, depending on which bias prevails for any given pair of strand scores. When the reliabilities are lower than they should be, the disattenuated correlations will be inflated (and in some instances can appear larger than the theoretical correlation maximum value of 1.00).

EVIDENCE BASED ON RELATIONSHIPS WITH OTHER VARIABLES

As described in the *Standards* (2014), "Evidence based on relationships with other variables provides evidence about the degree to which relationships are consistent with the construct underlying the proposed test score interpretations" (p. 16). This category of evidence is classified by three types—convergent, discriminant, and criterion-related evidence. Convergent evidence is provided by relationships between students' performance on different assessments intended to measure a similar construct. Discriminant evidence is provided by relationships between students' performance on different tests intended to measure different constructs. Criterion-related evidence, either predictive or concurrent, is provided by relationships between students' test scores and their performance on a criterion measure (Cronbach, 1971; Messick, 1989).

Evidence of the relationship of the PSSA with other variables for previous PSSA mathematics and reading tests has been examined by HumRRO in a series of independent studies using 2001–2003 PSSA data (Koger, Thacker & Dickinson, 2004; Sinclair & Thacker, 2005; Thacker, Dickinson, & Koger, 2004).

As useful studies of convergent, discriminant, and predictive validity rely heavily on the technical quality of the criteria measures, the Pennsylvania CDTs, which are well documented high quality assessments aligned to the same Assessment Anchors and Eligible Content as the PSSA tests, were used to assess convergent and discriminant validity. Table 19-4 shows the correlations between the PSSA and CDT assessments. The within subject correlations are strong, ranging from 0.76 to 0.83 across all three years. This illustrates a strong positive relationship between the PSSA and the CDT where the subjects are the same or similar. Conversely, the correlations between different content areas in 2018 are noticeable lower, ranging from 0.67 to 0.77, where most cross-subject correlations fall below 0.75. These patterns demonstrate reasonable convergent and discriminant validity of PSSA scores.

Table 19–4. Correlations among Students' Performance Between PSSA and CDT Tests

CDT	PSSA	Grade	N	*r*
Mathematics - Lower Grades	PSSA ELA Grade 3	3	21385	0.70
Mathematics - Lower Grades	PSSA ELA Grade 4	4	23331	0.71
Mathematics - Lower Grades	PSSA ELA Grade 5	5	26543	0.73
Mathematics	PSSA ELA Grade 6	6	31240	0.74
Mathematics	PSSA ELA Grade 7	7	31958	0.73
Mathematics	PSSA ELA Grade 8	8	25942	0.71
Reading - Lower Grades	PSSA ELA Grade 3	3	19214	0.81
Reading - Lower Grades	PSSA ELA Grade 4	4	21214	0.82
Reading - Lower Grades	PSSA ELA Grade 5	5	23880	0.82
Reading/Literature	PSSA ELA Grade 6	6	26166	0.81
Reading/Literature	PSSA ELA Grade 7	7	28420	0.80
Reading/Literature	PSSA ELA Grade 8	8	29193	0.77
Science - Lower Grades	PSSA ELA Grade 3	3	2230	0.75
Science - Lower Grades	PSSA ELA Grade 4	4	11505	0.74
Science - Lower Grades	PSSA ELA Grade 5	5	2066	0.75
Science	PSSA ELA Grade 6	6	10742	0.73
Science	PSSA ELA Grade 7	7	17086	0.71
Science	PSSA ELA Grade 8	8	29195	0.70
Writing - Lower Grades	PSSA ELA Grade 3	3	2481	0.77
Writing - Lower Grades	PSSA ELA Grade 4	4	2914	0.78
Writing - Lower Grades	PSSA ELA Grade 5	5	3813	0.79
Writing - English Comp	PSSA ELA Grade 6	6	5917	0.79
Writing - English Comp	PSSA ELA Grade 7	7	8747	0.79
Writing - English Comp	PSSA ELA Grade 8	8	8952	0.76
Mathematics - Lower Grades	PSSA Math Grade 3	3	21387	0.78
Mathematics - Lower Grades	PSSA Math Grade 4	4	23362	0.80
Mathematics - Lower Grades	PSSA Math Grade 5	5	26551	0.80
Mathematics	PSSA Math Grade 6	6	31231	0.83
Mathematics	PSSA Math Grade 7	7	31965	0.83
Mathematics	PSSA Math Grade 8	8	25906	0.80
Reading - Lower Grades	PSSA Math Grade 3	3	19214	0.73
Reading - Lower Grades	PSSA Math Grade 4	4	21236	0.72
Reading - Lower Grades	PSSA Math Grade 5	5	23882	0.72
Reading/Literature	PSSA Math Grade 6	6	26154	0.73
Reading/Literature	PSSA Math Grade 7	7	28418	0.73
Reading/Literature	PSSA Math Grade 8	8	29137	0.69
Science - Lower Grades	PSSA Math Grade 3	3	2229	0.71
Science - Lower Grades	PSSA Math Grade 4	4	11524	0.68

CDT	PSSA	Grade	N	*r*
Science - Lower Grades	PSSA Math Grade 5	5	2068	0.68
Science	PSSA Math Grade 6	6	10754	0.70
Science	PSSA Math Grade 7	7	17089	0.70
Science	PSSA Math Grade 8	8	29166	0.67
Writing - Lower Grades	PSSA Math Grade 3	3	2478	0.68
Writing - Lower Grades	PSSA Math Grade 4	4	2916	0.67
Writing - Lower Grades	PSSA Math Grade 5	5	3807	0.68
Writing - English Comp	PSSA Math Grade 6	6	5911	0.72
Writing - English Comp	PSSA Math Grade 7	7	8755	0.73
Writing - English Comp	PSSA Math Grade 8	8	8935	0.69
Mathematics - Lower Grades	PSSA Science	4	23353	0.72
Mathematics	PSSA Science	8	25797	0.72
Reading - Lower Grades	PSSA Science	4	21229	0.77
Reading/Literature	PSSA Science	8	29028	0.74
Science - Lower Grades	PSSA Science	4	11502	0.77
Science	PSSA Science	8	29080	0.76
Writing - Lower Grades	PSSA Science	4	2916	0.71
Writing - English Comp	PSSA Science	8	8894	0.70

To further assess discriminant validity for the 2018 PSSA tests, correlations between students' test scores on different PSSA tests, including mathematics, ELA, and science are shown in Table 19–5. In this table, both the observed and disattenuated correlations are reported.

Table 19–5. Correlations among Students' Performance on All PSSA Tests

Grade	Mathematics/ELA	Mathematics/Science	ELA/Science
3	0.79 (0.87)	-	-
4	0.77 (0.85)	0.80 (0.89)	0.80 (0.89)
5	0.78 (0.86)	-	-
6	0.79 (0.87)	-	-
7	0.79 (0.87)	-	-
8	0.77 (0.85)	0.79 (0.88)	0.78 (0.88)

Note. Numbers in the parenthesis are disattenuated correlations. The PSSA final data file was used for these calculations (see Chapter Nine). Case-wise elimination of missing data was used.

Each PSSA assessment measures a different construct, so the correlations between them were not expected to be extremely high. The values in this table are consistent with this expectation. As can be seen, the correlations between the PSSA subject tests range from 0.77 to 0.80.

As 2015 was the first year of new PSSA mathematics and ELA, several additional analyses were conducted in 2017 in support of the federal peer review process for the PSSA. These studies include 1) an analysis of how well the PSSA scores predict performance (predictive validity) on high school exams in Algebra I and Literature (Keystone exams), and 2) multiple comparisons of PSSA mathematics and ELA results with other external criteria. These studies provide additional evidence in support of arguments for the convergent and discriminant validity of the PSSA test results detailed in the 2015 and 2016 PSSA Technical Reports referenced above. This report provides a summary of these seven additional analyses and results:

- Keystone predictions
- PSSA relation to other variables:
    - PSSA mathematics and ELA relationship with NAEP
    - PSSA mathematics and ELA relationship with Classroom Diagnostic Tools (CDT)
    - PSSA ELA relationship with GRADE (Group Reading Assessment and Diagnostic Evaluation) literacy assessments
    - PSSA mathematics and ELA relationship with Terra Nova Complete Battery ELA and mathematics
    - PSSA mathematics and ELA relationship with teacher ratings of student proficiency
    - PSSA mathematics and ELA subscore correlations

The results of these analyses provide reasonably strong evidence of the convergent and discriminant validity of the PSSA, as well its predictive relationship with college and career readiness expectations. Results for this set of analyses are reported in Appendix T.

EVIDENCE BASED ON CONSEQUENCES OF TESTING

Based on the *Standards* (2014), evidence supporting the appropriateness of the consequences of testing is an additional source of validity information. Often, this part of the validity argument for a tests includes evidence that the test serves all students comparably. The most common methods that are used for this purpose are those that examine the invariance of construct measurement across student groups, and those that seek to detect bias in test content that might lead to some construct irrelevant variation in examinee responses.

As reported in Chapter Five and Appendix F, review and consideration of differential item functioning results with respect to gender and ethnicity offers some evidence that construct-irrelevant variance affecting these groups differentially is not present. The presence of construct-irrelevant variance is generally considered to be a serious a threat to the validity of inferences made from test scores, where those differences are due to content that is unrelated to the intended construct for one or more groups. A distinct limitation of DIF methods is that they treat such variance at the examinee group level and not at the individual level. As not all members of a defined group can ever be assumed to share the exact same characteristics, it can be inappropriate to generalize the group level results to all group members. Nevertheless, the presence of suspected group level construct irrelevant variance may indicate the need to review and reconsider the inclusion of items that have been statistically flagged for DIF. As noted in that chapter, field test items are screened and reviewed for DIF. Only items approved by teacher committees are eligible for operational use.

Population invariance was examined using the root mean squared difference (RMSD) and the root expected mean standardized difference (REMSD) statistics (Dorans and Holland, 2000; von Davier & Wilson, 2008). In this analysis, IRT item parameters are evaluated for group invariance as described in Chapter Twelve. Findings for 2018 show some small DTF, but those differences have not proven to systematically impact specific tests or student groups.

Additionally, analyses were conducted to assess the comparability of scores across paper-based and computer-based modes of assessment (PBT and CBT) by evaluating differences in person fit. Results of these analyses indicate that the PSSA tests are functioning similarly across mode and mode by subgroups. Refer to Appendix S for a detailed discussion of these analyses and findings.

A comprehensive independent study of the invariance of scores across accommodations was also conducted by Sireci and Wells (2016) with results that support claims of measurement invariance across the PSSA tests for accommodated groups with sufficient cases for analysis.

As evidence of consequential validity is related to its uses, as well as to statistical measures of invariance, it is difficult to directly measure all aspects of consequential validity. Test data provide important evidence of the validity of PSSA scores for their intended uses, and as such, may serve to warrant the intended purpose and use that is defined in this technical report and supporting documentation. Generally, the results of the many content development and review procedures, and the statistical analyses discussed throughout this report, provide evidence that PSSA scores are sufficiently comparable across all examinees, regardless of conditions of gender, ethnicity, test mode, and accommodations used. This has remained true under the reduced test length design. Population invariance, however, will be monitored annually for violations.

Regarding the use of test scores, Chapter Sixteen includes several different types of scores and score reports used for the PSSA. This chapter also provides accurate and clear test score and report information to help users avoid unintended uses and interpretations of the PSSA results. The extent to which various groups of users (e.g., students, teachers, and parents) interpret these scores and reports appropriately affects the validity of subsequent uses of these results. PDE continues to gather evidence to improve or guide decisions pertaining to all aspects of intended and unintended consequences of the PSSA program.

VALIDITY EVIDENCE SUMMARY

Validity evidence related to test content was reviewed earlier in this chapter. On the whole, the early chapters of this technical report show that a strong link can be established between each PSSA item and its associated eligible content. Details regarding how the PSSA operational assessments were assembled to reflect the state content standards and detailed information regarding educator reviews (including content, bias, data, and sensitivity reviews) are presented in Chapters Three and Five.

Evidence of the validity of score interpretations is also provided as it relates to response processes. Cognitive labs for Science scenario-based items showed that examinees were responding as intended and routine hand-scoring processes describe in Chapter Eight provide evidence that ratings show reasonable consistency and that rigorous scoring processes are in place to reduce rater bias and increase consistency.

Evidence of the validity related to internal test structure is provided through the results of multiple analyses including, high test score reliabilities, reasonable SEM and CSEM values, good decision consistency and accuracy, strongly unidimensional constructs, and selections of items that have appropriate difficulty ranges, and discriminate performance well.

Strand score inter-correlations are also presented in this chapter. In general, within-subject-area strands (e.g., mathematics) correlate more highly with themselves than they do with other subject-area strands (e.g., ELA). These results, as well as the additional analyses of the relationship between the PSSA ELA and Mathematics tests with other established measures and classroom performance provides evidence of their convergent, discriminant and predictive validity.

A study of the relationship of PSSA scores with CDT scores shows a strong relationship between similar content areas, and a slightly weaker relationship across different content areas, providing useful convergent and discriminant validity evidence.

Last, evidence that PSSA test scores are largely invariant across multiple subgroups of students is also provided through the results of DIF analyses and subsequent item selection processes, a multi-method study on the invariance of accommodated test scores, and a person fit analysis to investigate the comparability of scores from different modes of administration for different populations of students.

APPENDIX A: GENERAL SCORING GUIDELINES

GENERAL DESCRIPTION OF SCORING GUIDELINES FOR READING SHORT-ANSWER QUESTIONS

GENERAL DESCRIPTION OF SCORING GUIDELINES FOR READING SHORT-ANSWER QUESTIONS

3 Points

- The response provides a complete answer to the task (e.g., a statement that offers a correct answer as well as text-based support).
- The response provides specific, appropriate, and accurate details (e.g., naming, describing, explaining, or comparing) or examples.

2 Points

- The response provides a partial answer to the task (e.g., indicates some awareness of the task and at least one text-based detail).
- The response attempts to provide sufficient, appropriate details (e.g., naming, describing, explaining, or comparing) or examples; may contain minor inaccuracies.

1 Point

- The response provides an incomplete answer to the task (e.g., indicating either a misunderstanding of the task or no text-based details).
- The response provides insufficient or inappropriate details or examples that have a major effect on accuracy.
- The response consists entirely of relevant copied text.

0 Points

- The response provides insufficient material for scoring.
- The response is inaccurate in all aspects.

Categories within zero reported separately:

BLK (blank).....No response or written refusal to respond or too brief to determine response

OT .....Off task/topic

LOE.....Response in a language other than English

IL.....Illegible

TEXT-DEPENDENT ANALYSIS SCORING GUIDELINES

Score	Description
4	• Effectively addresses all parts of the task demonstrating in-depth analytic understanding of the text(s) • Effective introduction, development, and conclusion identifying an opinion, topic, or controlling idea related to the text(s) • Strong organizational structure that effectively supports the focus and ideas • Thorough analysis of explicit and implicit meanings from text(s) to effectively support claims, opinions, ideas, and inferences • Substantial, accurate, and direct reference to the text(s) using relevant key details, examples, quotes, facts, and/or definitions • Substantial reference to the main idea(s) and relevant key details of the text(s) to support the writer's purpose • Skillful use of transitions to link ideas • Effective use of precise language and domain-specific vocabulary drawn from the text(s) to explain the topic and/or to convey experiences/events • Few errors, if any, are present in sentence formation, grammar, usage, spelling, capitalization, and punctuation; errors present do not interfere with meaning
3	• Adequately addresses all parts of the task demonstrating sufficient analytic understanding of the text(s) • Clear introduction, development, and conclusion identifying an opinion, topic, or controlling idea related to the text(s) • Appropriate organizational structure that adequately supports the focus and ideas • Clear analysis of explicit and implicit meanings from text(s) to support claims, opinions, ideas, and inferences • Sufficient, accurate, and direct reference to the text(s) using relevant details, examples, quotes, facts, and/or definitions • Sufficient reference to the main idea(s) and relevant key details of the text(s) to support the writer's purpose • Appropriate use of transitions to link ideas • Appropriate use of precise language and domain-specific vocabulary drawn from the text(s) to explain the topic and/or to convey experiences/events • Some errors may be present in sentence formation, grammar, usage, spelling, capitalization, and punctuation; errors present seldom interfere with meaning

Score	Description
2	• Inconsistently addresses some parts of the task demonstrating partial analytic understanding of the text(s) • Weak introduction, development, and/or conclusion identifying an opinion, topic, or controlling idea somewhat related to the text(s) • Weak organizational structure that inconsistently supports the focus and ideas • Weak or inconsistent analysis of explicit and/or implicit meanings from text(s) that somewhat supports claims, opinions, ideas, and inferences • Vague reference to the text(s) using some details, examples, quotes, facts, and/or definitions • Weak reference to the main idea(s) and relevant details of the text(s) to support the writer's purpose • Inconsistent use of transitions to link ideas • Inconsistent use of precise language and domain-specific vocabulary drawn from the text(s) to explain the topic and/or to convey experiences/events • Errors may be present in sentence formation, grammar, usage, spelling, capitalization, and punctuation; errors present may interfere with meaning
1	• Minimally addresses part(s) of the task demonstrating inadequate analytic understanding of the text(s) • Minimal evidence of an introduction, development, and/or conclusion • Minimal evidence of an organizational structure • Insufficient or no analysis of the text(s); may or may not support claims, opinions, ideas, and inferences • Insufficient reference to the text(s) using few details, examples, quotes, facts, and/or definitions • Minimal reference to the main idea(s) and/or relevant details of the text(s) • Few, if any, transitions to link ideas • Little or no use of precise language or domain-specific vocabulary drawn from the text(s) • Many errors may be present in sentence formation, grammar, usage, spelling, capitalization, and punctuation; errors present often interfere with meaning

GENERAL DESCRIPTION OF SCORING GUIDELINES FOR MATHEMATICS OPEN-ENDED QUESTIONS

4 – The response demonstrates a *thorough* understanding of the mathematical concepts and procedures required by the task.

The response provides correct answer(s) with clear and complete mathematical procedures shown and a correct explanation, as required by the task. Response may contain a minor "blemish" or omission in work or explanation that does not detract from demonstrating a *thorough* understanding.

3 – The response demonstrates a *general* understanding of the mathematical concepts and procedures required by the task.

The response and explanation (as required by the task) are mostly complete and correct. The response may have minor errors or omissions that do not detract from demonstrating a *general* understanding.

2 – The response demonstrates a *partial* understanding of the mathematical concepts and procedures required by the task.

The response is somewhat correct with *partial* understanding of the required mathematical concepts and/or procedures demonstrated and/or explained. The response may contain some work that is incomplete or unclear.

1 – The response demonstrates a *minimal* understanding of the mathematical concepts and procedures required by the task.

0 – The response has no correct answer and *insufficient* evidence to demonstrate any understanding of the mathematical concepts and procedures required by the task for that grade level.

Response may show only information copied from the question.

Special Categories within zero reported separately:

BLK (blank).....Blank, entirely erased, or written refusal to respond
OT.....Off task
LOE .....Response in a language other than English
IL .....Illegible

GENERAL 2-POINT SCORING GUIDELINES FOR SCIENCE

2 – The response demonstrates a *thorough* understanding of the scientific content, concepts, and procedures required by the task(s).

The response provides a clear, complete, and correct response as required by the task(s). The response may contain a minor blemish or omission in work or explanation that does not detract from demonstrating a *thorough* understanding.

1 – The response demonstrates a *partial* understanding of the scientific content, concepts, and procedures required by the task(s).

The response is somewhat correct with *partial* understanding of the required scientific content, concepts, and/or procedures demonstrated and/or explained. The response may contain some work that is incomplete or unclear.

0 – The response provides *insufficient* evidence to demonstrate any understanding of the scientific content, concepts, and procedures as required by the task(s) for that grade level.

The response may show only information copied or rephrased from the question or *insufficient* correct information to receive a score of 1.

Special categories within zero reported separately:

BLK (blank) – No response or written refusal to respond or too brief to determine response
OT – Off task/topic
LOE – Response in a language other than English
IL – Illegible

APPENDIX B: TALLY SHEETS

Grade 03 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
A-T: Numbers and Operations in Base Ten	1			Use place-value understanding and properties of operations to perform multi-digit arithmetic.														
	1	1		Apply place-value strategies to solve problems.	1				1		1	1				1		1
	1	1	1	Round two- and three-digit whole numbers to the nearest ten or hundred, respectively.	2		1		3		3	2		1		3		3
	1	1	2	Add two- and three-digit whole numbers and/or subtract two- and three-digit numbers from three-digit whole numbers.	2				2		2	2				2		2
	1	1	3	Multiply one-digit whole numbers by two-digit multiples of ten.	2		1		3		3	2		1		3		3
	1	1	4	Order a set of whole numbers from least to greatest or greatest to least.	1		1		2		2	1		1		2		2
	Total for Assessment Anchor A-T.1 Use place-value understanding and properties of operations to perform multi-digit arithmetic.				8		3		11		11	8		3		11		11
Total For Reporting Category A-T					8		3		11		11	8		3		11		11

Grade 03 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
A-F: Numbers and Operations—Fractions	1			Develop an understanding of fractions as numbers.	1				1		1	1				1		1
	1	1		Develop and apply number theory concepts to compare quantities and magnitudes of fractions and whole numbers.														
	1	1	1	Demonstrate that when a whole or set is partitioned into y equal parts, the fraction 1/y represents 1 part of the whole and/or the fraction x/y represents x equal parts of the whole.	1	4			1	4	5	1	1			1	1	2
	1	1	2	Represent fractions on a number line.			1		1		1			1		1		1
	1	1	3	Recognize and generate simple equivalent fractions.	1		1		2		2	1		1		2		2
	1	1	4	Express whole numbers as fractions, and/or generate fractions that are equivalent to whole numbers.														
	1	1	5	Compare two fractions with the same denominator, using the symbols >, =, or <, and/or justify the conclusions.	1		1		2		2	1		1		2		2
	Total for Assessment Anchor A-F.1 Develop an understanding of fractions as numbers.				4	4	3		7	4	11	4	1	3		7	1	8
Total For Reporting Category A-F					4	4	3		7	4	11	4	1	3		7	1	8

Grade 03 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
	1			Represent and solve problems involving multiplication and division.														
	1	1		Understand various meanings of multiplication and division.	2				2		2	2				2		2
	1	1	1	Interpret and/or describe products of whole numbers.	1				1		1	1				1		1
	1	1	2	Interpret and/or describe whole-number quotients of whole numbers.														
	1	2		Solve mathematical and real-world problems using multiplication and division, including determining a missing number in a multiplication and/or division equation.														
	1	2	1	Use multiplication and/or division to solve word problems in situations involving equal groups, arrays, and/or measurement quantities.	1		1		2		2	1		1		2		2
	1	2	2	Determine the unknown whole number in a multiplication or division equation relating three whole numbers.	1		1		2		2	1		1		2		2
	Total For Assessment Anchor B-O.1 Represent and solve problems involving multiplication and division.				5		2		7		7	5		2		7		7
	2			Understand properties of multiplication and the relationship between multiplication and division.														
	2	1		Use properties to simplify and solve multiplication problems.	1				1		1	1				1		1
	2	1	1	Apply the commutative property of multiplication (not identification or definition of the property).														
	2	1	2	Apply the associative property of multiplication (not identification or definition of the property).	1		1		2		2	1		1		2		2
	2	2		Relate division to a missing-number multiplication equation.														
	2	2	1	Interpret and/or model division as a multiplication equation with an unknown factor.	2		1		3		3	2		1		3		3
rations and Algebraic Thinking	Total For Assessment Anchor B-O.2 Understand properties of multiplication and the relationship between multiplication and division.				4		2		6		6	4		2		6		6

B-O: Ope	3			Solve problems involving the four operations, and identify and explain patterns in arithmetic.	1				1		1	1				1		1
	3	1		Use operations, patterns, and estimation strategies to solve problems (may include word problems).	1				1		1	1				1		1
	3	1	1	Solve two-step word problems using the four operations. Limit to problems with whole numbers and having whole-number answers.	1				1		1	1				1		1
	3	1	2	Represent two-step word problems using equations with a symbol standing for the unknown quantity. Limit to problems with whole numbers and having whole-number answers.	1		1		2		2	1		1		2		2
	3	1	3	Assess the reasonableness of answers. Limit problems posed with whole numbers and having whole-number answers.														
	3	1	4	Solve two-step equations using order of operations (equation is explicitly stated with no grouping symbols).														
	3	1	5	Identify arithmetic patterns (including patterns in the addition table or multiplication table) and/or explain them using properties of operations.	1				1		1	1				1		1
	3	1	6	Create or match a story to a given combination of symbols and numbers.	1				1		1	1				1		1
	3	1	7	Identify the missing symbol that makes a number sentence true.														
	Total For Assessment Anchor B-O.3 Solve problems involving the four operations, and identify and explain patterns in arithmetic.				6		1		7		7	6		1		7		7
Total For Reporting Category B-O					15		5		20		20	15		5		20		20

Grade 03 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
C-G: Geometry	1			Reason with shapes and their attributes.		4				4	4		1				1	1
	1	1		Analyze characteristics of polygons.	1		1		2		2	1		1		2		2
	1	1	1	Explain that shapes in different categories may share attributes and that the shared attributes can define a larger category.														
	1	1	2	Recognize rhombi, rectangles, and squares as examples of quadrilaterals and/or draw examples of quadrilaterals that do not belong to any of these subcategories.	1		1		2		2	1		1		2		2
	1	1	3	Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole.	1				1		1	1				1		1
	Total For Assessment Anchor C-G.1 Reason with shapes and their attributes.				3	4	2		5	4	9	3	1	2		5	1	6
Total For Reporting Category C-G					3	4	2		5	4	9	3	1	2		5	1	6

Grade 03 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
	1			Solve problems involving measurement and estimation of intervals of time, money, liquid volumes, masses, and lengths of objects.														
	1	1		Determine or calculate time and elapsed time.														
	1	1	1	Tell, show, and/or write time (analog) to the nearest minute.	1				1		1	1				1		1
	1	1	2	Calculate elapsed time to the minute in a given situation.	1		1		2		2	1		1		2		2
	1	2		Use the attributes of liquid volume, mass, and length of objects.														
	1	2	1	Measure and estimate liquid volumes and masses of objects using standard units and metric units.														
	1	2	2	Add, subtract, multiply, and divide to solve one-step word problems involving masses or liquid volumes that are given in the same units.														
	1	2	3	Use a ruler to measure lengths to the nearest quarter inch or centimeter.	1				1		1	1				1		1
	1	3		Count, compare, and make change using a collection of coins and one-dollar bills.														
	1	3	1	Compare total values of combinations of coins and/or dollar bills less than $5.00.	1				1		1	1				1		1
	1	3	2	Make change for an amount up to $5.00 with no more than $2.00 change given.			1		1		1			1		1		1
	1	3	3	Round amounts of money to the nearest dollar.			1		1		1			1		1		1
	Total For Assessment Anchor D-M.1 Solve problems involving measurement and estimation of intervals of time, money, liquid volumes, masses, and lengths of objects.				4		3		7		7	4		3		7		7

D-M: Measurement and Data	2			Represent and interpret data.														
	2	1		Organize, display, and answer questions based on data.														
	2	1	1	Complete a scaled pictograph and a scaled bar graph to represent a data set with several categories.	1				1		1	1				1		1
	2	1	2	Solve one- and two-step problems using information to interpret data presented in scaled pictographs and scaled bar graphs.	1		1		2		2	1		1		2		2
	2	1	3	Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Display the data by making a line plot, where the horizontal scale is marked in appropriate units—whole numbers, halves, or quarters.	1				1		1	1				1		1
	2	1	4	Translate information from one type of display to another. Limit to pictographs, tally charts, bar graphs, and tables.	1		1		2		2	1		1		2		2
	Total For Assessment Anchor D-M.2 Represent and interpret data.				4		2		6		6	4		2		6		6
	3			Geometric measurement: understand concepts of area and relate area to multiplication and to addition.		4				4	4		1				1	1
	3	1		Find the areas of plane figures.														
	3	1	1	Measure areas by counting unit squares.														
	3	1	2	Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real-world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.														
	Total For Assessment Anchor D-M.3 Geometric measurement: understand concepts of area and relate area to multiplication and to addition.					4				4	4		1				1	1

4			Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.															
4	1		Find and use the perimeters of plane figures.	1				1		1	1				1		1
4	1	1	Solve real-world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters. Use the same units throughout the problem.	1				1		1	1				1		1
Total For Assessment Anchor D-M.4 Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.				2				2		2	2				2		2
Total For Reporting Category D-M				10	4	5		15	4	19	10	1	5		15	1	16

Grade 04 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
A-T: Numbers and Operations in Base Ten	1			Generalize place-value understanding for multi-digit whole numbers.		4				4	4		1				1	1
	1	1		Apply place-value and numeration concepts to compare, find equivalencies, and round.	1		1		2		2	1		1		2		2
	1	1	1	Demonstrate an understanding that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.														
	1	1	2	Read and write whole numbers in expanded, standard, and word form through 1,000,000.														
	1	1	3	Compare two multi-digit numbers through 1,000,000 based on meanings of the digits in each place, using >, =, and < symbols.														
	1	1	4	Round multi-digit whole numbers to any place.	1				1		1	1				1		1
	Total For Assessment Anchor A-T.1 Generalize place-value understanding for multi-digit whole numbers.				2	4	1		3	4	7	2	1	1		3	1	4
	2			Use place-value understanding and properties of operations to perform multi-digit arithmetic.	1				1		1	1				1		1
	2	1		Use operations to solve problems.														
	2	1	1	Add and subtract multi-digit whole numbers.														
	2	1	2	Multiply a whole number of up to four digits by a one-digit whole number and multiply 2 two-digit numbers.	1		1		2		2	1		1		2		2
	2	1	3	Divide up to four-digit dividends by one-digit divisors with answers written as whole-number quotients and remainders.	1		1		2		2	1		1		2		2
	2	1	4	Estimate the answer to addition, subtraction, and multiplication problems using whole numbers through six digits.	1				1		1	1				1		1
	Total For Assessment Anchor A-T.2 Use place-value understanding and properties of operations to perform multi-digit arithmetic.				4		2		6		6	4		2		6		6
Total For Reporting Category A-T					6	4	3		9	4	13	6	1	3		9	1	10

Grade 04

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items Core		EB		Total Number of Items (Core & EB)		
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
A-F: Numbers and Operations—Fractions	1			Extend understanding of fraction equivalence and ordering.	1				1		1	1				1		1
	1	1		Find equivalencies and compare fractions.			1		1		1			1		1		1
	1	1	1	Recognize and generate equivalent fractions.	1				1		1	1				1		1
	1	1	2	Compare two fractions with different numerators and different denominators using the symbols >, =, or < and justify the conclusions.	1		1		2		2	1		1		2		2
	Total For Assessment Anchor A-F.1 Extend understanding of fraction equivalence and ordering.				3		2		5		5	3		2		5		5
	2			Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.														
	2	1		Solve problems involving fractions and whole numbers (straight computation or word problems).	1				1		1	1				1		1
	2	1	1	Add and subtract fractions with a common denominator.														
	2	1	2	Decompose a fraction or a mixed number into a sum of fractions with the same denominator.														
	2	1	3	Add and subtract mixed numbers with a common denominator.														
	2	1	4	Solve word problems involving addition and subtraction of fractions referring to the same whole or set and having like denominators.	1				1		1	1				1		1
	2	1	5	Multiply a whole number by a unit fraction.			1		1		1			1		1		1
	2	1	6	Multiply a whole number by a non-unit fraction.	1				1		1	1				1		1
	2	1	7	Solve word problems involving multiplication of a whole number by a fraction.	1				1		1	1				1		1
	Total For Assessment Anchor A-F.2 Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.				4		1		5		5	4		1		5		5

3			Understand decimal notation for fractions and compare decimal fractions.			1		1		1			1		1		1
3	1		Use operations to solve problems involving decimals, including converting between fractions and decimals.	1				1		1	1				1		1
3	1	1	Add two fractions with respective denominators 10 and 100.	1		1		2		2	1		1		2		2
3	1	2	Use decimal notation for fractions with denominators of 10 or 100.	1				1		1	1				1		1
3	1	3	Compare two decimals to hundredths using the symbols >, =, or <, and justify the conclusions.	1				1		1	1				1		1
Total For Assessment Anchor A-F.3 Understand decimal notation for fractions and compare decimal fractions.				4		2		6		6	4		2		6		6
Total For Reporting Category A-F				11		5		16		16	11		5		16		16

Grade 04 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
B-O: Operations and Algebraic Thinking	1			Use the four operations with whole numbers to solve problems.		4				4	4		1				1	1
	1	1		Use numbers and symbols to model the concepts of expressions and equations.	1				1		1	1				1		1
	1	1	1	Interpret a multiplication equation as a comparison. Represent verbal statements of multiplicative comparisons as multiplication equations.			1		1		1			1		1		1
	1	1	2	Multiply or divide to solve word problems involving multiplicative comparison, distinguishing multiplicative comparison from additive comparison.	1				1		1	1				1		1
	1	1	3	Solve multi-step word problems posed with whole numbers using the four operations. Answers will be either whole numbers or have remainders that must be interpreted yielding a final answer that is a whole number. Represent these problems using equations with a symbol or letter standing for the unknown quantity.			1		1		1			1		1		1
	1	1	4	Identify the missing symbol that makes a number sentence true.														
	Total For Assessment Anchor B-O.1 Use the four operations with whole numbers to solve problems.				2	4	2		4	4	8	2	1	2		4	1	5
	2			Gain familiarity with factors and multiples.	1				1		1	1				1		1
	2	1		Develop and apply number theory concepts to represent numbers in various ways.	1		1		2		2	1		1		2		2
	2	1	1	Find all factor pairs for a whole number in the interval 1 through 100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the interval 1 through 100 is a multiple of a given one-digit number. Determine whether a given whole number in the interval 1 through 100 is prime or composite.	1				1		1	1				1		1
	Total For Assessment Anchor B-O.2 Gain familiarity with factors and multiples.				3		1		4		4	3		1		4		4
	3			Generate and analyze patterns.	1				1		1	1				1		1

	3	1		Recognize, describe, extend, create, and replicate a variety of patterns.	1		1		2		2	1		1		2		2
	3	1	1	Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.														
	3	1	2	Determine the missing elements in a function table.	1				1		1	1				1		1
	3	1	3	Determine the rule for a function given a table.	1				1		1	1				1		1
	Total For Assessment Anchor B-O.3 Generate and analyze patterns.				4		1		5		5	4		1		5		5
Total For Reporting Category B-O					9	4	4		13	4	17	9	1	4		13	1	14

Grade 04 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
C-G: Geometry	1			Draw and identify lines and angles, and classify shapes by properties of their lines and angles.														
	1	1		List properties, classify, draw, and identify geometric figures in two dimensions.	1		1		2		2	1		1		2		2
	1	1	1	Draw points, lines, line segments, rays, angles, and perpendicular and parallel lines. Identify these in two-dimensional figures.	1	4	1		2	4	6	1	1	1		2	1	3
	1	1	2	Classify two-dimensional figures based on the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.	1		1		2		2	1		1		2		2
	1	1	3	Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into mirroring parts. Identify line-symmetric figures and draw lines of symmetry.	1				1		1	1				1		1
	Total For Assessment Anchor C-G.1 Draw and identify lines and angles, and classify shapes by properties of their lines and angles.				4	4	3		7	4	11	4	1	3		7	1	8
Total For Reporting Category C-G					4	4	3		7	4	11	4	1	3		7	1	8

Grade 04 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
surement and Data	1			Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.														
	1	1		Solve problems involving length, weight (mass), liquid volume, time, area, and perimeter.			1		1		1			1		1		1
	1	1	1	Know relative sizes of measurement units within one system of units including standard units, metric units, and time. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit.	1				1		1	1				1		1
	1	1	2	Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects; money, including problems involving simple fractions or decimals; and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	1		1		2		2	1		1		2		2
	1	1	3	Apply the area and perimeter formulas for rectangles in real-world and mathematical problems.	1				1		1	1				1		1
	1	1	4	Identify time (analog or digital) as the amount of minutes before or after the hour.	1				1		1	1				1		1
	Total For Assessment Anchor D-M.1 Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.				4		2		6		6	4		2		6		6

D-M: Mea	2			Represent and interpret data.														
	2	1		Organize, display, and answer questions based on data.														
	2	1	1	Make a line plot to display a data set of measurements in fractions of a unit.	1				1		1	1				1		1
	2	1	2	Solve problems involving addition and subtraction of fractions by using information presented in line plots.	1		1		2		2	1		1		2		2
	2	1	3	Translate information from one type of display to another.	1				1		1	1				1		1
	Total For Assessment Anchor D-M.2 Represent and interpret data.				3		1		4		4	3		1		4		4
	3			Geometric measurement: understand concepts of angle; measure and create angles.														
	3	1		Use appropriate tools and units to sketch an angle and determine angle measurements.														
	3	1	1	Measure angles in whole-number degrees using a protractor. With the aid of a protractor, sketch angles of a specified measure.	2				2		2	2				2		2
	3	1	2	Solve addition and subtraction problems to find unknown angles on a diagram in real-world and mathematical problems.	1				1		1	1				1		1
	Total For Assessment Anchor D-M.3 Geometric measurement: understand concepts of angle; measure and create angles.				3				3		3	3				3		3
Total For Reporting Category D-M					10		3		13		13	10		3		13		13

Grade 05 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
A-T: Numbers and Operations in Base Ten	1			Understand the place-value system.														
	1	1		Demonstrate understanding of place-value of whole numbers and decimals, and compare quantities or magnitudes of numbers.	1				1		1	1				1		1
	1	1	1	Demonstrate an understanding that in a multi-digit number, a digit in one place represents 1/10 of what it represents in the place to its left.	1		1		2		2	1		1		2		2
	1	1	2	Explain patterns in the number of zeros of the product when multiplying a number by powers of 10 and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.	1				1		1	1				1		1
	1	1	3	Read and write decimals to thousandths using base-ten numerals, word form, and expanded form.		4	1		1	4	5		1	1		1	1	2
	1	1	4	Compare two decimals to thousandths based on meanings of the digits in each place using >, =, and < symbols.	1				1		1	1				1		1
	1	1	5	Round decimals to any place.			1		1		1			1		1		1
	Total For Assessment Anchor A-T.1 Understand the place-value system.				4	4	3		7	4	11	4	1	3		7	1	8
	2			Perform operations with multi-digit whole numbers and with decimals to hundredths.	1				1		1	1				1		1
	2	1		Use whole numbers and decimals to compute accurately.	1				1		1	1				1		1
	2	1	1	Multiply multi-digit whole numbers.	1		1		2		2	1		1		2		2
	2	1	2	Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors.	1				1		1	1				1		1
	2	1	3	Add, subtract, multiply, and divide decimals to hundredths.	1		1		2		2	1		1		2		2
	Total For Assessment Anchor A-T.2 Perform operations with multi-digit whole numbers and with decimals to hundredths.				5		2		7		7	5		2		7		7
Total For Reporting Category A-T					9	4	5		14	4	18	9	1	5		14	1	15

Grade 05 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
A-F: Numbers and Operations—Fractions	1			Use equivalent fractions as a strategy to add and subtract fractions.	1	4	1		2	4	6	1	1	1		2	1	3
	1	1		Solve addition and subtraction problems involving fractions.	1		1		2		2	1		1		2		2
	1	1	1	Add and subtract fractions with unlike denominators.	2		1		3		3	2		1		3		3
	Total For Assessment Anchor A-F.1 Use equivalent fractions as a strategy to add and subtract fractions.				4	4	3		7	4	11	4	1	3		7	1	8
	2			Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	1				1		1	1				1		1
	2	1		Solve multiplication and division problems involving fractions and whole numbers.	1				1		1	1				1		1
	2	1	1	Solve word problems involving division of whole numbers leading to answers in the form of fractions.	1		1		2		2	1		1		2		2
	2	1	2	Multiply a fraction by a fraction.	1				1		1	1				1		1
	2	1	3	Demonstrate an understanding of multiplication as scaling.	1				1		1	1				1		1
	2	1	4	Divide unit fractions by whole numbers and whole numbers by unit fractions.	2		1		3		3	2		1		3		3
	Total For Assessment Anchor A-F.2 Apply and extend previous understandings of multiplication and division to multiply and divide fractions.				7		2		9		9	7		2		9		9
Total For Reporting Category A-F					11	4	5		16	4	20	11	1	5		16	1	17

Grade 05 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
B-O: Operations and Algebraic Thinking	1			Write and interpret numerical expressions.														
	1	1		Analyze and complete calculations by applying the order of operations.	1				1		1	1				1		1
	1	1	1	Use multiple grouping symbols in numerical expressions and evaluate expressions containing these symbols.	1		1		2		2	1		1		2		2
	1	1	2	Write simple expressions that model calculations with numbers and interpret numerical expressions without evaluating them.	1				1		1	1				1		1
	Total For Assessment Anchor B-O.1 Write and interpret numerical expressions.				3		1		4		4	3		1		4		4
	2			Analyze patterns and relationships.														
	2	1		Create, extend, and analyze patterns.	2				2		2	2				2		2
	2	1	1	Generate two numerical patterns using two given rules.	1				1		1	1				1		1
	2	1	2	Identify apparent relationships between corresponding terms of two patterns with the same starting numbers that follow different rules.	1		1		2		2	1		1		2		2
	Total For Assessment Anchor B-O.2 Analyze patterns and relationships.				4		1		5		5	4		1		5		5
Total For Reporting Category B-O					7		2		9		9	7		2		9		9

Grade 05 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
C-G: Geometry	1			Graph points on the coordinate plane to solve real-world and mathematical problems.														
	1	1		Identify parts of a coordinate grid and describe or interpret points given an ordered pair.		4	1		1	4	5		1	1		1	1	2
	1	1	1	Identify parts of the coordinate plane and the ordered pair. Limit the coordinate plane to quadrant I.	1		1		2		2	1		1		2		2
	1	1	2	Represent real-world and mathematical problems by plotting points in quadrant I of the coordinate plane and interpret coordinate values of points in the context of the situation.	1				1		1	1				1		1
	Total For Assessment Anchor C-G.1 Graph points on the coordinate plane to solve real-world and mathematical problems.				2	4	2		4	4	8	2	1	2		4	1	5
	2			Classify two-dimensional figures into categories based on their properties.														
	2	1		Use basic properties to classify two-dimensional figures.	1				1		1	1				1		1
	2	1	1	Classify two-dimensional figures in a hierarchy based on properties.	1		1		2		2	1		1		2		2
	Total For Assessment Anchor C-G.2 Classify two-dimensional figures into categories based on their properties.				2		1		3		3	2		1		3		3
Total For Reporting Category C-G					4	4	3		7	4	11	4	1	3		7	1	8

Grade 05 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items Core		Number of Items EB		Total Number of Items (Core & EB)		
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
D-M: Measurement and Data	1			Convert like measurement units within a given measurement system.														
	1	1		Solve problems using simple conversions.														
	1	1	1	Convert between different-sized measurement units within a given measurement system.	2		1		3		3	2		1		3		3
	Total for Assessment Anchor D-M.1 Convert like measurement units within a given measurement system.				2		1		3		3	2		1		3		3
	2			Represent and interpret data.														
	2	1		Organize, display, and answer questions based on data.														
	2	1	1	Solve problems involving computation of fractions by using information presented in line plots.	2		1		3		3	2		1		3		3
	2	1	2	Display and interpret data shown in tallies, tables, charts, pictographs, bar graphs, and line graphs, and use a title, appropriate scale, and labels. A grid will be provided to display data on bar graphs or line graphs.	2				2		2	2				2		2
	Total For Assessment Anchor D-M.2 Represent and interpret data.				4		1		5		5	4		1		5		5
	3			Geometric measurement: understand concepts of volume and relate volume to mutliplication and to addition.														
	3	1		Use, describe, and develop procedures to solve problems involving volume.	1		1		2		2	1		1		2		2
	3	1	1	Apply the formulas $V = l \times w \times h$ and $V = B \times h$ for rectangular prisms with whole-number edge lengths in the context of solving real-world and mathematical problems.	1				1		1	1				1		1
	3	1	2	Find volumes of solid figures composed of two non-overlapping right rectangular prisms.	1				1		1	1				1		1
	Total For Assessment Anchor D-M.3 Geometric measurement: understand concepts of volume and relate volume to mutliplication and to addition.				3		1		4		4	3		1		4		4
Total For Reporting Category D-M					9		3		12		12	9		3		12		12

Grade 06 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
	1			Apply and extend previous understandings of multiplication and division to divide fractions by fractions.														
	1	1		Solve real-world and mathematical problems involving division of fractions.														
	1	1	1	Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions.	2				2		2	2				2		2
	Total For Assessment Anchor A-N.1 Apply and extend previous understandings of multiplication and division to divide fractions by fractions.				2				2		2	2				2		2
	2			Compute with multi-digit numbers and find common factors and multiples.														
	2	1		Compute with multi-digit numbers using the four arithmetic operations with or without a calculator.														
	2	1	1	Solve problems involving operations with whole numbers, decimals, straight computation, or word problems.	2		1		3		3	2		1		3		3
	2	2		Apply number theory concepts.														
	2	2	1	Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12.	1				1		1	1				1		1
	2	2	2	Apply the distributive property to express a sum of two whole numbers, 1 through 100, with a common factor as a multiple of a sum of two whole numbers with no common factor.	1		1		2		2	1		1		2		2
tem	Total For Assessment Anchor A-N.2 Compute with multi-digit numbers and find common factors and multiples.				4		2		6		6	4		2		6		6

A-N: The Number Sys	3			Apply and extend previous understandings of numbers to the system of rational numbers.															
	3	1		Understand that positive and negative numbers are used together to describe quantities having opposite directions or values and locations on the number line and coordinate plane.															
	3	1	1	Represent quantities in real-world contexts using positive and negative numbers, explaining the meaning of 0 in each situation.	1				1		1	1				1		1	
	3	1	2	Determine the opposite of a number and recognize that the opposite of the opposite of a number is the number itself.	1				1		1	1				1		1	
	3	1	3	Locate and plot integers and other rational numbers on a horizontal or vertical number line; locate and plot pairs of integers and other rational numbers on a coordinate plane.	1		1		2		2	1		1		2		2	
	3	2		Understand ordering and absolute value of rational numbers.															
	3	2	1	Write, interpret, and explain statements of order for rational numbers in real-world contexts.	1		1		2		2	1		1		2		2	
	3	2	2	Interpret the absolute value of a rational number as its distance from 0 on the number line and as a magnitude for a positive or negative quantity in a real-world situation.															
	3	2	3	Solve real-world and mathematical problems by plotting points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.															
	Total For Assessment Anchor A-N.3 Apply and extend previous understandings of numbers to the system of rational numbers.				4		2		6		6	4		2		6		6	
Total For Reporting Category A-N					10		4		14		14	10		4		14		14	

Grade 06 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
A-R: Ratios and Proportional Relationships	1			Understand ratio concepts and use ratio reasoning to solve problems.		4				4	4		1				1	1
	1	1		Represent and/or solve real-world and mathematical problems using rates, ratios, and/or percents.	1		1		2		2	1		1		2		2
	1	1	1	Use ratio language and notation to describe a ratio relationship between two quantities.	1		1		2		2	1		1		2		2
	1	1	2	Find the unit rate a/b associated with a ratio a:b and use rate language in the context of a ratio relationship.	1				1		1	1				1		1
	1	1	3	Construct tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and/or plot the pairs of values on the coordinate plane. Use tables to compare ratios.	1		1		2		2	1		1		2		2
	1	1	4	Solve unit rate problems including those involving unit pricing and constant speed.	1				1		1	1				1		1
	1	1	5	Find a percent of a quantity as a rate per 100; solve problems involving finding the whole, given a part and the percentage.	1				1		1	1				1		1
	Total For Assessment Anchor A-R.1 Understand ratio concepts and use ratio reasoning to solve problems.				6	4	3		9	4	13	6	1	3		9	1	10
Total For Reporting Category A-R					6	4	3		9	4	13	6	1	3		9	1	10

Grade 06 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items Core		Number of Items EB		Total Number of Items (Core & EB)		
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
B-E: Expressions and Equations	1			Apply and extend previous understandings of arithmetic to numerical and algebraic expressions.														
	1	1		Identify, write, and evaluate numerical and algebraic expressions.	1				1		1	1				1		1
	1	1	1	Write and evaluate numerical expressions involving whole-number exponents.			1		1		1			1		1		1
	1	1	2	Write algebraic expressions from verbal descriptions.	1				1		1	1				1		1
	1	1	3	Identify parts of an expression using mathematical terms.	1				1		1	1				1		1
	1	1	4	Evaluate expressions at specific values of their variables, including expressions that arise from formulas used in real-world problems.	1				1		1	1				1		1
	1	1	5	Apply the properties of operations to generate equivalent expressions.														
	Total For Assessment Anchor B-E.1 Apply and extend previous understandings of arithmetic to numerical and algebraic expressions.				4		1		5		5	4		1		5		5
	2			Interpret and solve one-variable equations and inequalities.		4				4	4		1				1	1
	2	1		Create, solve, and interpret one-variable equations or inequalities in real-world and mathematical problems.	1				1		1	1				1		1
	2	1	1	Use substitution to determine whether a given number in a specified set makes an equation or inequality true.														
	2	1	2	Write algebraic expressions to represent real-world or mathematical problems.														
	2	1	3	Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q, and x are all non-negative rational numbers.	1		1		2		2	1		1		2		2
	2	1	4	Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem and/or represent solutions of such inequalities on number lines.	1				1		1	1				1		1
	Total For Assessment Anchor B-E.2 Interpret and solve one-variable equations and inequalities.				3	4	1		4	4	8	3	1	1		4	1	5

3			Represent and analyze quantitative relationships between dependent and independent variables.	2		1		3		3	2		1		3		3
3	1		Use variables to represent two quantities in a real-world problem that change in relationship to one another.			1		1		1			1		1		1
3	1	1	Write an equation to express the relationship between the dependent and independent variables.	1				1		1	1				1		1
3	1	2	Analyze the relationship between the dependent and independent variables using graphs and tables and/or relate these to an equation.	1				1		1	1				1		1
Total For Assessment Anchor B-E.3 Represent and analyze quantitative relationships between dependent and independent variables.				4		2		6		6	4		2		6		6
Total For Reporting Category B-E				11	4	4		15	4	19	11	1	4		15	1	16

Grade 06 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
C-G: Geometry	1			Solve real-world and mathematical problems involving area, surface area, and volume.			1		1		1			1		1		1
	1	1		Find area, surface area, and volume by applying formulas and using various strategies.			1		1		1			1		1		1
	1	1	1	Determine the area of triangles and special quadrilaterals.	1				1		1	1				1		1
	1	1	2	Determine the area of irregular or compound polygons.	1	4			1	4	5	1	1			1	1	2
	1	1	3	Determine the volume of right rectangular prisms with fractional edge lengths.	1				1		1	1				1		1
	1	1	4	Given coordinates for the vertices of a polygon in the plane, use the coordinates to find side lengths and area of the polygon.	1				1		1	1				1		1
	1	1	5	Represent three-dimensional figures using nets made of rectangles and triangles.			1		1		1			1		1		1
	1	1	6	Determine the surface area of triangular and rectangular prisms.														
	Total For Assessment Anchor C-G.1 Solve real-world and mathematical problems involving area, surface area, and volume.				4	4	3		7	4	11	4	1	3		7	1	8
Total For Reporting Category C-G					4	4	3		7	4	11	4	1	3		7	1	8

Grade 06 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
D-S: Statistics and Probability	1			Demonstrate understanding of statistical variability by summarizing and describing distributions.			1		1		1			1		1		1
	1	1		Display, analyze, and summarize numerical data sets in relation to their context.	2		1		3		3	2		1		3		3
	1	1	1	Display numerical data in plots on a number line, including line plots, histograms, and box-and-whisker plots.	2		1		3		3	2		1		3		3
	1	1	2	Determine quantitative measures of center and variability.	2		1		3		3	2		1		3		3
	1	1	3	Describe any overall pattern and any deviations from the overall pattern with reference to the context in which the data were gathered.	1				1		1	1				1		1
	1	1	4	Relate the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.	2				2		2	2				2		2
	Total For Assessment Anchor D-S.1 Demonstrate understanding of statistical variability by summarizing and describing distributions.				9		4		13		13	9		4		13		13
Total For Reporting Category D-S					9		4		13		13	9		4		13		13

Grade 07 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
A-N: The Number System	1			Apply and extend previous understandings of operations to add, subtract, multiply, and divide rational numbers.														
	1	1		Solve real-world and mathematical problems involving the four operations with rational numbers.	2				2		2	2				2		2
	1	1	1	Apply properties of operations to add and subtract rational numbers, including real-world contexts.	2		2		4		4	2		2		4		4
	1	1	2	Represent addition and subtraction on a horizontal or vertical number line.	2		1		3		3	2		1		3		3
	1	1	3	Apply properties of operations to multiply and divide rational numbers, including real-world contexts; demonstrate that the decimal form of a rational number terminates or eventually repeats.	2				2		2	2				2		2
	Total For Assessment Anchor A-N.1 Apply and extend previous understandings of operations to add, subtract, multiply, and divide rational numbers.				8		3		11		11	8		3		11		11
Total For Reporting Category A-N					8		3		11		11	8		3		11		11

Grade 07 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
A-R: Ratios and Proportional Relationships	1			Demonstrate an understanding of proportional relationships.		4				4	4		1				1	1
	1	1		Analyze, recognize, and represent proportional relationships and use them to solve real-world and mathematical problems.														
	1	1	1	Compute unit rates associated with ratios of fractions, including ratios of lengths, areas, and other quantities measured in like or different units.	2		1		3		3	2		1		3		3
	1	1	2	Determine whether two quantities are proportionally related.	2		1		3		3	2		1		3		3
	1	1	3	Identify the constant of proportionality in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.	2				2		2	2				2		2
	1	1	4	Represent proportional relationships by equations.			1		1		1			1		1		1
	1	1	5	Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, r), where r is the unit rate.	2		1		3		3	2		1		3		3
	1	1	6	Use proportional relationships to solve multi-step ratio and percent problems.	1				1		1	1				1		1
	Total For Assessment Anchor A-R.1 Demonstrate an understanding of proportional relationships.				9	4	4		13	4	17	9	1	4		13	1	14
Total For Reporting Category A-R					9	4	4		13	4	17	9	1	4		13	1	14

Grade 07 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
B-E: Expressions and Equations	1			Represent expressions in equivalent forms.	1				1		1	1				1		1
	1	1		Use properties of operations to generate equivalent expressions.	1		1		2		2	1		1		2		2
	1	1	1	Apply properties of operations to add, subtract, factor, and expand linear expressions with rational coefficients.	2		1		3		3	2		1		3		3
	Total For Assessment Anchor B-E.1 Represent expressions in equivalent forms.				4		2		6		6	4		2		6		6
	2			Solve real-world and mathematical problems using numerical and algebraic expressions, equations, and inequalities.														
	2	1		Solve multi-step real-world and mathematical problems posed with positive and negative rational numbers.														
	2	1	1	Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate.	1	4			1	4	5	1	1			1	1	2
	2	2		Use variables to represent quantities in a real-world or mathematical problem and construct simple equations and inequalities to solve problems.			1		1		1			1		1		1
	2	2	1	Solve word problems leading to equations of the form $px + q = r$ and $p(x+q) = r$, where p, q, and r are specific rational numbers.	1		1		2		2	1		1		2		2
	2	2	2	Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p, q, and r are specific rational numbers, and graph the solution set of the inequality.	2				2		2	2				2		2
	2	3		Determine the reasonableness of the answer(s) in problem-solving situations.	1				1		1	1				1		1
	2	3	1	Determine the reasonableness of answer(s) or interpret the solution(s) in the context of the problem.	1		1		2		2	1		1		2		2
	Total For Assessment Anchor B-E.2 Solve real-world and mathematical problems using numerical and algebraic expressions, equations, and inequalities.				6	4	3		9	4	13	6	1	3		9	1	10
Total For Reporting Category B-E					10	4	5		15	4	19	10	1	5		15	1	16

Grade 07 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
C-G: Geometry	1			Demonstrate an understanding of geometric figures and their properties.														
	1	1		Demonstrate and apply properties of geometric figures.	2	4			2	4	6	2	1			2	1	3
	1	1	1	Solve problems involving scale drawings of geometric figures, including finding length and area.														
	1	1	2	Identify or describe the properties of all types of triangles based on angle and side measures.														
	1	1	3	Use and apply the triangle inequality theorem.														
	1	1	4	Describe the two-dimensional figures that result from slicing three-dimensional figures.			1		1		1			1		1		1
	Total For Assessment Anchor C-G.1 Demonstrate an understanding of geometric figures and their properties.				2	4	1		3	4	7	2	1	1		3	1	4
	2			Solve real-world and mathematical problems involving angle measure, circumference, area, surface area, and volume.														
	2	1		Identify, use, and describe properties of angles and their measures.														
	2	1	1	Identify and use properties of supplementary, complementary, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.														
	2	1	2	Identify and use properties of angles formed when two parallel lines are cut by a transversal.	1		1		2		2	1		1		2		2
	2	2		Determine circumference, area, surface area, and volume.														
	2	2	1	Find the area and circumference of a circle. Solve problems involving area and circumference of a circle(s).	1				1		1	1				1		1
	2	2	2	Solve real-world and mathematical problems involving area, volume, and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	1		1		2		2	1		1		2		2
	Total For Assessment Anchor C-G.2 Solve real-world and mathematical problems involving angle measure, circumference, area, surface area, and volume.				3		2		5		5	3		2		5		5
Total For Reporting Category C-G					5	4	3		8	4	12	5	1	3		8	1	9

Grade 07 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items Core		Number of Items EB		Total Number of Items (Core & EB)		
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
D-S: Statistics and Probability	1			Use random sampling to draw inferences about a population.														
	1	1		Use random samples.														
	1	1	1	Determine whether a sample is a random given a real-world situation.	2				2		2	2				2		2
	1	1	2	Use data from a random sample to draw inferences about a population with an unknown characteristic of interest.	1				1		1	1				1		1
	Total For Assessment Anchor D-S.1 Use random sampling to draw inferences about a population.				3				3		3	3				3		3
	2			Draw comparative inferences about populations.														
	2	1		Use statistical measures to compare two numerical data distributions.	1				1		1	1				1		1
	2	1	1	Compare two numerical data distributions using measures of center and variability.			1		1		1			1		1		1
	Total For Assessment Anchor D-S.2 Draw comparative inferences about populations.				1		1		2		2	1		1		2		2
	3			Investigate chance processes and develop, use, and evaluate probability models.														
	3	1		Predict or determine the likelihood of outcomes.														
	3	1	1	Predict or determine whether some outcomes are certain, more likely, less likely, equally likely, or impossible.	2				2		2	2				2		2
	3	2		Use probability to predict outcomes.			1		1		1			1		1		1
	3	2	1	Determine the probability of a chance event given relative frequency. Predict the approximate relative frequency given the probability.	2				2		2	2				2		2
	3	2	2	Find the probability of a simple event, including the probability of a simple event not occurring.			1		1		1			1		1		1
	3	2	3	Find probabilities of independent compound events using organized lists, tables, tree diagrams, and simulation.														
	Total For Assessment Anchor D-S.3 Investigate chance processes and develop, use, and evaluate probability models.				4		2		6		6	4		2		6		6
Total For Reporting Category D-S					8		3		11		11	8		3		11		11

Grade 08 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
A-N: The Number System	1			Demonstrate an understanding of rational and irrational numbers.														
	1	1		Apply concepts of rational and irrational numbers.	1				1		1	1				1		1
	1	1	1	Determine whether a number is rational or irrational. For rational numbers, show that the decimal expansion terminates or repeats.	2				2		2	2				2		2
	1	1	2	Convert a terminating or repeating decimal to a rational number.	1		1		2		2	1		1		2		2
	1	1	3	Estimate the value of irrational numbers without a calculator.	1				1		1	1				1		1
	1	1	4	Use rational approximations of irrational numbers to compare and order irrational numbers.	1		1		2		2	1		1		2		2
	1	1	5	Locate/identify rational and irrational numbers at their approximate locations on a number line.	1				1		1	1				1		1
	Total For Assessment Anchor A-N.1 Demonstrate an understanding of rational and irrational numbers.				7		2		9		9	7		2		9		9
Total For Reporting Category A-N					7		2		9		9	7		2		9		9

Grade 08					Mathematics													
Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
	1			Demonstrate an understanding of expressions and equations with radicals and integer exponents.	1				1		1	1				1		1
	1	1		Represent and use expressions and equations to solve problems involving radicals and integer exponents.	1		1		2		2	1		1		2		2
	1	1	1	Apply one or more properties of integer exponents to generate equivalent numerical expressions without a calculator.	1				1		1	1				1		1
	1	1	2	Use square root and cube root symbols to represent solutions to equations of the form x^2 = p and x^3 = p, where p is a positive rational number. Evaluate square roots of perfect squares and cube roots of perfect cubes without a calculator.														
	1	1	3	Estimate very large or very small quantities by using numbers expressed in the form of a single digit times an integer power of 10 and express how many times larger or smaller one number is than another.	1		1		2		2	1		1		2		2
	1	1	4	Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Express answers in scientific notation and choose units of appropriate size for measurements of very large or very small quantities. Interpret scientific notation that has been generated by technology.	1		1		2		2	1		1		2		2
	Total For Assessment Anchor B-E.1 Demonstrate an understanding of expressions and equations with radicals and integer exponents.				5		3		8		8	5		3		8		8

B-E: Expressions and Equations	2			Understand the connections between proportional relationships, lines, and linear equations.		4				4	4		1				1	1
	2	1		Analyze and describe linear relationships between two variables, using slope.			1		1		1			1		1		1
	2	1	1	Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.	1		1		2		2	1		1		2		2
	2	1	2	Use similar right triangles to show and explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane.	1				1		1	1				1		1
	2	1	3	Derive the equation y = mx for a line through the origin and the equation y = mx + b for a line intercepting the vertical axis at b.	1				1		1	1				1		1
	Total For Assessment Anchor B-E.2 Understand the connections between proportional relationships, lines, and linear equations.				3	4	2		5	4	9	3	1	2		5	1	6

3			Analyze and solve linear equations and pairs of simultaneous linear equations.															
3	1		Write, solve, graph, and interpret linear equations in one or two variables, using various methods.	1				1		1	1				1		1
3	1	1	Write and identify linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms until an equivalent equation of the form x = a, a = a, or a = b results.	1				1		1	1				1		1
3	1	2	Solve linear equations that have rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.	1				1		1	1				1		1
3	1	3	Interpret solutions to a system of two linear equations in two variables as points of intersection of their graphs because points of intersection satisfy both equations simultaneously.	1				1		1	1				1		1
3	1	4	Solve systems of two linear equations in two variables algebraically and estimate solutions by graphing the equations. Solve simple cases by inspection.			1		1		1			1		1		1
3	1	5	Solve real-world and mathematical problems leading to two linear equations in two variables.	1				1		1	1				1		1
Total For Assessment Anchor B-E.3 Analyze and solve linear equations and pairs of simultaneous linear equations.				5		1		6		6	5		1		6		6
Total For Reporting Category B-E				13	4	6		19	4	23	13	1	6		19	1	20

Grade 08 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
B-F: Functions	1			Analyze and interpret functions.														
	1	1		Define, evaluate, and compare functions displayed algebraically, graphically, or numerically in tables or by verbal descriptions.	1				1		1	1				1		1
	1	1	1	Determine whether a relation is a function.	1		1		2		2	1		1		2		2
	1	1	2	Compare properties of two functions, each represented in a different way.	1		1		2		2	1		1		2		2
	1	1	3	Interpret the equation y = mx + b as defining a linear function whose graph is a straight line; give examples of functions that are not linear.	1				1		1	1				1		1
	Total For Assessment Anchor B-F.1 Analyze and interpret functions.				4		2		6		6	4		2		6		6
	2			Use functions to model relationships between quantities.														
	2	1		Represent or interpret functional relationships between quantities using tables, graphs, and descriptions.	1	4	1		2	4	6	1	1	1		2	1	3
	2	1	1	Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models and in terms of its graph or a table of values.	1		1		2		2	1		1		2		2
	2	1	2	Describe qualitatively the functional relationship between two quantities by analyzing a graph. Sketch or determine a graph that exhibits the qualitative features of a function that has been described verbally.	1				1		1	1				1		1
	Total For Assessment Anchor B-F.2 Use functions to model relationships between quantities.				3	4	2		5	4	9	3	1	2		5	1	6
Total For Reporting Category B-F					7	4	4		11	4	15	7	1	4		11	1	12

Grade 08 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
C-G: Geometry	1			Demonstrate an understanding of geometric transformations.														
	1	1		Apply properties of geometric transformations to verify congruence or similarity.	1				1		1	1				1		1
	1	1	1	Identify and apply properties of rotations, reflections, and translations.	1		1		2		2	1		1		2		2
	1	1	2	Given two congruent figures, describe a sequence of transformations that exhibits the congruence between them.	1				1		1	1				1		1
	1	1	3	Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.			1		1		1			1		1		1
	1	1	4	Given two similar two-dimensional figures, describe a sequence of transformations that exhibits the similarity between them.	1				1		1	1				1		1
	Total For Assessment Anchor C-G.1 Demonstrate an understanding of geometric transformations.				4		2		6		6	4		2		6		6
	2			Understand and apply the Pythagorean theorem.														
	2	1		Solve problems involving right triangles by applying the Pythagorean theorem.														
	2	1	1	Apply the converse of the Pythagorean theorem to show a triangle is a right triangle.	1				1		1	1				1		1
	2	1	2	Apply the Pythagorean theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.	1		1		2		2	1		1		2		2
	2	1	3	Apply the Pythagorean theorem to find the distance between two points in a coordinate system.	1				1		1	1				1		1
	Total For Assessment Anchor C-G.2 Understand and apply the Pythagorean theorem.				3		1		4		4	3		1		4		4

	3			Solve real-world and mathematical problems involving volume.														
	3	1		Apply volume formulas of cones, cylinders, and spheres.														
	3	1	1	Apply formulas for the volumes of cones, cylinders, and spheres to solve real-world and mathematical problems.	2				2		2	2				2		2
	Total For Assessment Anchor C-G.3 Solve real-world and mathematical problems involving volume.				2				2		2	2				2		2
Total For Reporting Category C-G					9		3		12		12	9		3		12		12

Grade 08 **Mathematics**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
D-S: Statistics and Probability	1			Investigate patterns of association in bivariate data.		4				4	4		1				1	1
	1	1		Analyze and interpret bivariate data displayed in multiple representations.														
	1	1	1	Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative correlation, linear association, and nonlinear association.	1		1		2		2	1		1		2		2
	1	1	2	For scatter plots that suggest a linear association, identify a line of best fit by judging the closeness of the data points to the line.	1				1		1	1				1		1
	1	1	3	Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpeting the slope and intercept.			1		1		1			1		1		1
	1	2		Understand that patterns of association can be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table.	1				1		1	1				1		1
	1	2	1	Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible associations between the two variables.	1		1		2		2	1		1		2		2
	Total For Assessment Anchor D-S.1 Investigate patterns of association in bivariate data.				4	4	3		7	4	11	4	1	3		7	1	8
Total For Reporting Category D-S					4	4	3		7	4	11	4	1	3		7	1	8

Grade 03 **English Language Arts**

Reporting Category		Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items (Core & EB)			
																Core			EB						
						MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total	MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total
A: Literature Text	A-K	1	1	1	Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.	3						3			3	3						3			3
		1	1	2	Recount poems, dramas, or stories, including fables, folktales, and myths from diverse cultures; determine the central message, lesson, or moral and explain how it is conveyed through key details in the text.	1		3	4			5		3	8	1		1	4			5		1	6
		1	1	3	Describe characters in a story and explain how their actions contribute to the sequence of events.	1			8			9			9	1			8			9			9
		Total For Assessment Anchor A-K.1 Key Ideas and Details				5		3	12			17		3	20	5		1	12			17		1	18
	A-C	2	1	1	Explain the point of view from which a story is narrated, including the difference between first- and third-person narrations.		5		4			4	5		9		2		4			4	2		6
		Total For Assessment Anchor A-C.2 Craft and Structure					5		4			4	5		9		2		4			4	2		6
	A-C	3	1	1	Compare and contrast the themes, settings, and plots of stories written by the same author about the same or similar characters.																				
		Total For Assessment Anchor A-C.3 Integration of Knowledge and Ideas																							
	A-V	4	1	1	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 3 reading and content, choosing flexibly from a range of strategies.	1			4			5			5	1			4			5			5
		4	1	2	Demonstrate understanding of word relationships and nuances in word meanings.	5			4			9			9	5			4			9			9
		Total For Assessment Anchor A-V.4 Vocabulary Acquisition and Use				6			8			14			14	6			8			14			14
Total For Reporting Category A						11	5	3	24			35	5	3	43	11	2	1	24			35	2	1	38

Grade 03 **English Language Arts**

Reporting Category		Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items			
																Core			EB			(Core & EB)			
						MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total	MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total
B: Informational Text	B-K	1	1	1	Answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.	1	2	3	5			6	2	3	11	1	1	1	5			6	1	1	8
		1	1	2	Determine the main idea of a text; recount the key details and explain how they support the main idea.	1			5			6			6	1			5			6			6
		1	1	3	Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.	2						2			2	2						2			2
		Total For Assessment Anchor B-K.1 Key Ideas and Details				4	2	3	10			14	2	3	19	4	1	1	10			14	1	1	16
	B-C	2	1	1	Explain the point of view from which a text is written.	1						1			1	1						1			1
		2	1	2	Use text features and search tools to efficiently locate information relevant to a given topic.				5			5			5				5			5			5
		Total For Assessment Anchor B-C.2 Craft and Structure				1			5			6			6	1			5			6			6
	B-C	3	1	1	Describe the logical connection between particular sentences and paragraphs to support specific points in a text.	2						2			2	2						2			2
		3	1	2	Compare and contrast the most important points and key details presented in two texts on the same topic.																				
		3	1	3	Use information gained from illustrations, maps, photographs, and the words in a text to demonstrate understanding of the text.				5			5			5				5			5			5
		Total For Assessment Anchor B-C.3 Integration of Knowledge and Ideas				2			5			7			7	2			5			7			7
	B-V	4	1	1	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 3 reading and content, choosing flexibly from a range of strategies.		3		5			5	3		8		1		5			5	1		6
		4	1	2	Demonstrate understanding of word relationships and nuances in word meanings.	2			5			7			7	2			5			7			7
		Total For Assessment Anchor B-V.4 Vocabulary Acquisition and Use				2	3		10			12	3		15	2	1		10			12	1		13
Total For Reporting Category B						9	5	3	30			39	5	3	47	9	2	1	30			39	2	1	42

Grade 03 **English Language Arts**

Reporting Category		Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items			
																Core			EB			(Core & EB)			
						MC	ESR	WP	MC	ESR	WP	MC	ESR	WP	Total	MC	ESR	WP	MC	ESR	WP	MC	ESR	WP	Total
C: Writing	C	1	1		Write opinion pieces on topics or texts, supporting a point of view with reasons.																				
		1	2		Write informative/explanatory texts to examine a topic and convey ideas and information clearly.																				
		1	3		Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.																				
		Total For Assessment Anchor C.1 Text Types and Purposes																							
Total For Reporting Category C																									

Grade 03 **English Language Arts**

Reporting Category		Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items (Core & EB)			
																Core			EB						
						MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total	MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total
D: Language	D	1	1	1	Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences.				1			1			1				1			1			1
		1	1	2	Form and use regular and irregular plural nouns.	1						1			1	1						1			1
		1	1	3	Use abstract nouns.	1						1			1	1						1			1
		1	1	4	Form and use regular and irregular verbs.																				
		1	1	5	Form and use the simple verb tenses.				1			1			1				1			1			1
		1	1	6	Ensure subject-verb and prounoun-antecedent agreement.																				
		1	1	7	Form and use comparative and superlative adjectives and adverbs, and choose between them depending on what is to be modified.	1						1			1	1						1			1
		1	1	8	Use coordinating and subordinating conjunctions.																				
		1	1	9	Produce simple, compound, and complex sentences.	1						1			1	1						1			1
		1	2	1	Capitalize appropriate words in titles.	1			2			3			3	1			2			3			3
		1	2	2	Use commas in addresses.	1						1			1	1						1			1
		1	2	3	Use commas and quotation marks in dialogue.	1			2			3			3	1			2			3			3
		1	2	4	Form and use possessives.				1			1			1				1			1			1
		1	2	5	Use conventional spelling for high-frequency and other studied words and for adding suffixes to base words.																				
		1	2	6	Use spelling patterns and generalizations in writing words.	1						1			1	1						1			1
		Total For Assessment Anchor D.1 Conventions of Standard English				8			7			15			15	8			7			15			15
		2	1	1	Choose words and phrases for effect.	1			2			3			3	1			2			3			3
		Total For Assessment Anchor D.2 Knowledge of Language				1			2			3			3	1			2			3			3
Total For Reporting Category D						9			9			18			18	9			9			18			18

Grade 04 **English Language Arts**

Reporting Category		Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items (Core & EB)			
																Core			EB						
						MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total	MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total
A: Literature Text	A-K	1	1	1	Refer to details and examples in a text when explaining what the text explicitly says and when drawing inferences from the text.	1	2		8			9	2		11	1	1		8			9	1		10
		1	1	2	Determine a theme of a story, drama, or poem from details in the text; summarize the text.																				
		1	1	3	Describe in depth a character, setting, or event in a story, drama, or poem, drawing on specific details in the text.	4	2		4			8	2		10	4	1		4			8	1		9
		Total For Assessment Anchor A-K.1 Key Ideas and Details				5	4		12			17	4		21	5	2		12			17	2		19
	A-C	2	1	1	Compare and contrast the point of view from which different stories are narrated, including the difference between first- and third-person narrations.	1						1			1	1						1			1
		Total For Assessment Anchor A-C.2 Craft and Structure				1						1			1	1						1			1
		3	1	1	Compare and contrast the treatment of similar themes and topics and patterns of events in stories, myths, and traditional literature from different cultures.		3		4			4	3		7		1		4			4	1		5
		Total For Assessment Anchor A-C.3 Integration of Knowledge and Ideas					3		4			4	3		7		1		4			4	1		5
	A-V	4	1	1	Determine or clarify the meaning of unknown multiple-meaning words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.	3			4			7			7	3			4			7			7
		4	1	2	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.	1			4			5			5	1			4			5			5
		Total For Assessment Anchor A-V.4 Vocabulary Acquisition and Use				4			8			12			12	4			8			12			12
Total For Reporting Category A						10	7		24			34	7		41	10	3		24			34	3		37

Grade 04 **English Language Arts**

Reporting Category		Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items (Core & EB)			
																Core			EB						
						MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total	MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total
B: Informational Text	B-K	1	1	1	Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.	1	3		5			6	3		9	1	1		5			6	1		7
		1	1	2	Determine the main idea of a text and explain how it is supported by key details; summarize the text.	1			5			6			6	1			5			6			6
		1	1	3	Explain events, procedures, ideas, steps, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.	2			5			7			7	2			5			7			7
		Total For Assessment Anchor B-K.1 Key Ideas and Details				4	3		15			19	3		22	4	1		15			19	1		20
	B-C	2	1	1	Compare and contrast a firsthand and secondhand account of the same event or topic; describe the differences in focus and the information provided.	1						1			1	1						1			1
		2	1	2	Describe the overall structure of events, ideas, concepts, or information and text features in a text or part of a text.	1			5			6			6	1			5			6			6
		Total For Assessment Anchor B-C.2 Craft and Structure				2			5			7			7	2			5			7			7
	B-C	3	1	1	Explain how an author uses reasons and evidence to support particular points in a text.	1	3					1	3		4	1	1					1	1		2
		3	1	2	Integrate information from two texts on the same topic in order to demonstrate subject knowledge.	1						1			1	1						1			1
		3	1	3	Interpret text features and/or make connections between text and the content of text features.	2						2			2	2						2			2
		Total For Assessment Anchor B-C.3 Integration of Knowledge and Ideas				4	3					4	3		7	4	1					4	1		5
	B-V	4	1	1	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.	2	2		5			7	2		9	2	1		5			7	1		8
		4	1	2	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.	1			5			6			6	1			5			6			6
		Total For Assessment Anchor B-V.4 Vocabulary Acquisition and Use				3	2		10			13	2		15	3	1		10			13	1		14
Total For Reporting Category B						13	8		30			43	8		51	13	3		30			43	3		46

Grade 04 **English Language Arts**

Reporting Category		Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items (Core & EB)			
																Core			EB						
						MC	ESR	WP	MC	ESR	WP	MC	ESR	WP	Total	MC	ESR	WP	MC	ESR	WP	MC	ESR	WP	Total
C: Writing	C	1	1		Write opinion pieces on topics or texts, supporting a point of view with reasons and information.																				
		1	2		Write informative/explanatory texts to examine a topic and convey ideas and information clearly.																				
		1	3		Write narratives to develop real or imagined experiences or events using effective techniques, descriptive details, and clear event sequences.																				
		Total For Assessment Anchor C.1 Text Types and Purposes																							
Total For Reporting Category C																									

Grade 04 **English Language Arts**

Reporting Category		Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items (Core & EB)			
																Core			EB						
						MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total	MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total
D: Language	D	1	1	1	Use relative pronouns and relative adverbs.				1			1			1				1			1			1
		1	1	2	Form and use the progressive verb tenses.				1			1			1				1			1			1
		1	1	3	Use modal auxiliaries to convey various conditions.																				
		1	1	4	Order adjectives within sentences according to conventional patterns.																				
		1	1	5	Form and use prepositional phrases.	1			1			2			2	1			1			2			2
		1	1	6	Produce complete sentences, recognizing and correcting inappropriate fragments and run-on sentences.	1						1			1	1						1			1
		1	1	7	Correctly use frequently confused words.	1						1			1	1						1			1
		1	1	8	Ensure subject-verb and pronoun-antecedent agreement.																				
		1	2	1	Use correct capitalization.	1						1			1	1						1			1
		1	2	2	Use commas and quotation marks to mark direct speech and quotations from a text.	1			1			2			2	1			1			2			2
		1	2	3	Use a comma before a coordinating conjunction in a compound sentence.	1			1			2			2	1			1			2			2
		1	2	4	Spell grade-appropriate words correctly.				1			1			1				1			1			1
		Total For Assessment Anchor D.1 Conventions of Standard English				6			6			12			12	6			6			12			12
	D	2	1	1	Choose words and phrases to convey ideas precisely.				2			2			2				2			2			2
		2	1	2	Choose punctuation for effect.	1			1			2			2	1			1			2			2
		2	1	3	Choose words and phrases for effect.	2						2			2	2						2			2
		Total For Assessment Anchor D.2 Knowledge of Language				3			3			6			6	3			3			6			6
Total For Reporting Category D						9			9			18			18	9			9			18			18

Grade 04 **English Language Arts**

Reporting Category		Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items (Core & EB)			
																Core			EB						
						MC	ESR	TDA	MC	ESR	TDA	MC	ESR	TDA	Total	MC	ESR	TDA	MC	ESR	TDA	MC	ESR	TDA	Total
E: Text-Dependent Analysis	E	1	1		Draw evidence from literary or informational texts to support analysis, reflection, and/or research.			4						4	4			1						1	1
		Total For Assessment Anchor E.1 Evidence-based Analysis of Text						4						4	4			1						1	1
Total For Reporting Category E								4						4	4			1						1	1

Grade 05 **English Language Arts**

Reporting Category		Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items (Core & EB)			
																Core			EB						
						MC	ESR	TDA	MC	ESR	TDA	MC	ESR	TDA	Total	MC	ESR	TDA	MC	ESR	TDA	MC	ESR	TDA	Total
A: Literature Text	A-K	1	1	1	Quote accurately from a text when explaining what the text says explicitly and when drawing inferences and/or making generalizations from the text.	2			10			12			12	2			10			12			12
		1	1	2	Determine a theme of a story, drama, or poem from details in the text, including how characters in a story or drama respond to challenges or how the speaker in a poem reflects upon a topic; summarize the text.	2	2					2	2		4	2	1					2	1		3
		1	1	3	Compare and contrast two or more characters, settings, or events in a story, drama, or poem, drawing on specific details in the text.		6		5			5	6		11		2		5			5	2		7
		Total For Assessment Anchor A-K.1 Key Ideas and Details				4	8		15			19	8		27	4	3		15			19	3		22
	A-C	2	1	1	Describe how a narrator's or speaker's point of view influences how events are described; describe an author's purpose and explain how it is conveyed in the text.	2			5			7			7	2			5			7			7
		Total For Assessment Anchor A-C.2 Craft and Structure				2			5			7			7	2			5			7			7
	A-C	3	1	1	Compare and contrast stories in the same genre on their approaches to similar themes and topics.																				
		Total For Assessment Anchor A-C.3 Integration of Knowledge and Ideas																							
	A-V	4	1	1	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.	2						2			2	2						2			2
		4	1	2	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.	3			10			13			13	3			10			13			13
		Total For Assessment Anchor A-V.4 Vocabulary Acquisition and Use				5			10			15			15	5			10			15			15
Total For Reporting Category A						11	8		30			41	8		49	11	3		30			41	3		44

Grade 05 **English Language Arts**

Reporting Category		Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items (Core & EB)			
																Core			EB						
						MC	ESR	TDA	MC	ESR	TDA	MC	ESR	TDA	Total	MC	ESR	TDA	MC	ESR	TDA	MC	ESR	TDA	Total
B: Informational Text	B-K	1	1	1	Quote accurately from a text when explaining what the text says explicitly and when drawing inferences and/or making generalizations from the text.	2	2		4			6	2		8	2	1		4			6	1		7
		1	1	2	Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.		3						3		3		1						1		1
		1	1	3	Explain the relationships or interactions between two or more individuals, events, ideas, steps, or concepts in a historical, scientific, or technical text based on specific information in the text.	1			4			5			5	1			4			5			5
		Total For Assessment Anchor B-K.1 Key Ideas and Details				3	5		8			11	5		16	3	2		8			11	2		13
	B-C	2	1	1	Analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.	1						1			1	1						1			1
		2	1	2	Compare and contrast the overall structure of events, ideas, concepts, or information and text features in two or more texts.	1						1			1	1						1			1
		Total For Assessment Anchor B-C.2 Craft and Structure				2						2			2	2						2			2
	B-C	3	1	1	Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point(s).	2	2					2	2		4	2	1					2	1		3
		3	1	2	Integrate information from several texts on the same topic in order to demonstrate subject knowledge.	1						1			1	1						1			1
		3	1	3	Interpret text features and/or make connections between text and the content of text features.	2			8			10			10	2			8			10			10
		Total For Assessment Anchor B-C.3 Integration of Knowledge and Ideas				5	2		8			13	2		15	5	1		8			13	1		14
	B-V	4	1	1	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.																				
		4	1	2	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.	2			8			10			10	2			8			10			10
		Total For Assessment Anchor B-V.4 Vocabulary Acquisition and Use				2			8			10			10	2			8			10			10
Total For Reporting Category B						12	7		24			36	7		43	12	3		24			36	3		39

Grade 05 **English Language Arts**

Reporting Category		Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items Core			Number of Items EB			Total Number of Items (Core & EB)			
						MC	ESR	WP	MC	ESR	WP	MC	ESR	WP	Total	MC	ESR	WP	MC	ESR	WP	MC	ESR	WP	Total
C: Writing	C	1	1		Write opinion pieces on topics or texts, supporting a point of view with reasons and information.																				
		1	2		Write informative/explanatory texts to examine a topic and convey ideas and information clearly.																				
		1	3		Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.																				
		Total For Assessment Anchor C.1 Text Types and Purposes																							
Total For Reporting Category C																									

Grade 05 **English Language Arts**

Reporting Category		Assessment	Descriptor (Sub-	Eligible Content	Focus	Points										Items									
						Student (Core			Equating Block (EB)			Total Points (Core &				Number of Items Core			EB			Total Number (Core &			
						MC	ESR	WP	MC	ESR	WP	MC	ESR	WP	Total	MC	ESR	WP	MC	ESR	WP	MC	ESR	WP	Total
D: Language	D	1	1	1	Explain the function of conjunctions, prepositions, and interjections in general and their function in particular sentences.				1			1			1				1			1			1
		1	1	2	Form and use the perfect verb tenses.																				
		1	1	3	Use verb tense to convey various times, sequences, states, and conditions.	1						1			1	1						1			1
		1	1	4	Recognize and correct inappropriate shifts in verb tense.				1			1			1				1			1			1
		1	1	5	Use correlative conjunctions.																				
		1	1	6	Produce complete sentences, recognizing and correcting inappropriate fragments and run-on sentences.																				
		1	1	7	Correctly use frequently confused words.	1						1			1	1						1			1
		1	1	8	Ensure subject-verb and pronoun-antecedent agreement.																				
		1	2	1	Use punctuation to separate items in a series.				1			1			1				1			1			1
		1	2	2	Use a comma to separate an introductory element from the rest of the sentence.	1			1			2			2	1			1			2			2
		1	2	3	Use a comma to set off the words yes and no, to set off a tag question from the rest of the sentence, and to indicate direct address.	1						1			1	1						1			1
		1	2	4	Use underlining, quotation marks, or italics to indicate titles of works.	1			1			2			2	1			1			2			2
		1	2	5	Spell grade-appropriate words correctly.	1						1			1	1						1			1
		Total For Assessment Anchor D.1 Conventions of Standard English				6			5			11			11	6			5			11			11
		2	1	1	Expand, combine, and reduce sentences for meaning, reader/listener interest, and style.	1			1			2			2	1			1			2			2
		2	1	2	Choose words and phrases to convey ideas precisely.	1			1			2			2	1			1			2			2
		2	1	3	Choose punctuation for effect.				1			1			1				1			1			1
		2	1	4	Choose words and phrases for effect.	1			1			2			2	1			1			2			2
		Total For Assessment Anchor D.2 Knowledge of Language				3			4			7			7	3			4			7			7
Total For Reporting Category D						9			9			18			18	9			9			18			18

Grade 05 **English Language Arts**

Reporting Category		Assessment	Descriptor (Sub-	Eligible Content	Focus	Points										Items									
						Student (Core			Equating Block (EB)			Total Points (Core &				Number of Items Core			EB			Total Number (Core &			
						MC	ESR	TDA	MC	ESR	TDA	MC	ESR	TDA	Total	MC	ESR	TDA	MC	ESR	TDA	MC	ESR	TDA	Total
E: Text-Dependent Analysis	E	1	1		Draw evidence from literary or informational texts to support analysis, reflection, and/or research.			4						4	4			1						1	1
		Total For Assessment Anchor E.1 Evidence-based Analysis of Text						4						4	4			1						1	1
Total For Reporting Category E								4						4	4			1						1	1

Grade 06 **English Language Arts**

Reporting Category		Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items (Core & EB)			
																Core			EB						
						MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total	MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total
A: Literature Text	A-K	1	1	1	Cite textual evidence to support analysis of what the text says explicitly as well as inferences and/or generalizations drawn from the text.		2		4			4	2		6		1		4			4	1		5
		1	1	2	Determine a theme or central idea of a text and how it is conveyed through relevant details; provide a summary of the text distinct from personal opinions or judgments.	1	2					1	2		3	1	1					1	1		2
		1	1	3	Describe how the plot of a particular story, drama, or poem unfolds; as well as how the characters respond or change as the plot moves toward a resolution.	1			4			5			5	1			4			5			5
		Total For Assessment Anchor A-K.1 Key Ideas and Details				2	4		8			10	4		14	2	2		8			10	2		12
	A-C	2	1	1	Determine an author's purpose in a text and explain how it is conveyed in the text; explain how an author develops the point of view of the narrator or speaker in a text; describe the effectiveness of the point of view used by the author.	1			4			5			5	1			4			5			5
		2	1	2	Analyze how a particular sentence, chapter, scene, or stanza fits into the overall structure of a text and contributes to the development of the theme, setting, or plot.	2			4			6			6	2			4			6			6
		2	1	3	Determine how the author uses the meaning of words or phrases, including figurative and connotative meanings, in a text; analyze the impact of a specific word choice on meaning and tone.	2			4			6			6	2			4			6			6
		Total For Assessment Anchor A-C.2 Craft and Structure				5			12			17			17	5			12			17			17
		3	1	1	Compare and contrast texts in different forms or genres in terms of their approaches to similar themes and topics.	1	3					1	3		4	1	1					1	1		2
		Total For Assessment Anchor A-C.3 Integration of Knowledge and Ideas				1						1			4	1						1			2
	A-V	4	1	1	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 6 reading and content, choosing flexibly from a range of strategies.	1			4			5			5	1			4			5			5
		4	1	2	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.	2						2			2	2						2			2
		Total For Assessment Anchor A-V.4 Vocabulary Acquisition and Use				3			4			7			7	3			4			7			7
Total For Reporting Category A						11	4		24			35	4		42	11	2		24			35	2		38

Grade 06 **English Language Arts**

Reporting Category		Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items (Core & EB)			
																Core			EB						
						MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total	MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total
B: Informational Text	B-K	1	1	1	Cite textual evidence to support analysis of what the text says explicitly as well as inferences and/or generalizations drawn from the text.	1	2					1	2		3	1	1					1	1		2
		1	1	2	Determine a central idea of a text and how it is conveyed through relevant details; provide a summary of the text distinct from personal opinions or judgments.	2						2			2	2						2			2
		1	1	3	Analyze in detail how a key individual, event, or idea is introduced, illustrated, or elaborated in a text.	2			5			7			7	2			5			7			7
		Total For Assessment Anchor B-K.1 Key Ideas and Details				5	2		5			10	2		12	5	1		5			10	1		11
	B-C	2	1	1	Determine an author's point of view or purpose in a text and explain how it is conveyed in the text.	1			5			6			6	1			5			6			6
		2	1	2	Analyze how a particular sentence, paragraph, chapter, section, or text feature fits into the overall development of the ideas.	1	3		5			6	3		9	1	1		5			6	1		7
		2	1	3	Determine how the author uses the meaning of words or phrases, including figurative, connotative, or technical meanings, in a text.	1			5			6			6	1			5			6			6
		Total For Assessment Anchor B-C.2 Craft and Structure				3	3		15			18	3		21	3	1		15			18	1		19
		3	1	1	Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.	2	3		5			7	3		10	2	1		5			7	1		8
		3	1	2	Compare and contrast one author's presentation of events with that of another.																				
		Total For Assessment Anchor B-C.3 Integration of Knowledge and Ideas				2	3		5			7	3		10	2	1		5			7	1		8
	B-V	4	1	1	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 6 reading and content, choosing flexbily from a range of strategies.																				
		4	1	2	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.	2			5			7			7	2			5			7			7
		Total For Assessment Anchor B-V.4 Vocabulary Acquisition and Use				2			5			7			7	2			5			7			7
Total For Reporting Category B						12	8		30			42	8		50	12	3		30			42	3		45

Grade 06 **English Language Arts**

Reporting Category		Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items (Core & EB)			
																Core			EB						
						MC	ESR	WP	MC	ESR	WP	MC	ESR	WP	Total	MC	ESR	WP	MC	ESR	WP	MC	ESR	WP	Total
C: Writing	C	1	1		Write arguments to support claims with clear reasons and relevant evidence.																				
		1	2		Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.																				
		1	3		Write narratives to develop real or imagined experiences or events using effective techniques, relevant descriptive details, and well-structured event sequences.																				
		Total For Assessment Anchor C.1 Text Types and Purposes																							
Total For Reporting Category C																									

Grade 06 **English Language Arts**

Reporting Category		Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items (Core & EB)			
																Core			EB						
						MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total	MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total
D: Language	D	1	1	1	Ensure that pronouns are in the proper case.	1			1			2			2	1			1			2			2
		1	1	2	Use intensive pronouns.				1			1			1				1			1			1
		1	1	3	Recognize and correct inappropriate shifts in pronoun number and person.	1						1			1	1						1			1
		1	1	4	Recognize and correct vague pronouns.																				
		1	1	5	Recognize and correct inappropriate shifts in verb tense.	1			1			2			2	1			1			2			2
		1	1	6	Produce complete sentences, recognizing and correcting inappropriate fragments and run-on sentences.	1						1			1	1						1			1
		1	1	7	Correctly use frequently confused words.				1			1			1				1			1			1
		1	1	8	Ensure subject-verb and pronoun-antecedent agreement.																				
		1	2	1	Use punctuation to set of nonrestrictive/parenthetical elements.	1			1			2			2	1			1			2			2
		1	2	2	Spell correctly.				1			1			1				1			1			1
		1	2	3	Use punctuation to separate items in a series.				1			1			1				1			1			1
		Total For Assessment Anchor D.1 Conventions of Standard English				5			7			12			12	5			7			12			12
		2	1	1	Vary sentence patterns for meaning, reader/listener interest, and style.	1						1			1	1						1			1
		2	1	2	Maintain consistency in style and tone.																				
		2	1	3	Choose words and phrases to convey ideas precisely.	1						1			1	1						1			1
		2	1	4	Choose punctuation for effect.	1			1			2			2	1			1			2			2
		2	1	5	Choose words and phrases for effect.	1			1			2			2	1			1			2			2
		Total For Assessment Anchor D.2 Knowledge of Language				4			2			6			6	4			2			6			6
Total For Reporting Category D						9			9			18			18	9			9			18			18

Grade 06 **English Language Arts**

Reporting Category		Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items (Core & EB)			
																Core			EB						
						MC	ESR	TDA	MC	ESR	TDA	MC	ESR	TDA	Total	MC	ESR	TDA	MC	ESR	TDA	MC	ESR	TDA	Total
E: Text-Dependent	E	1	1		Draw evidence from literary or informational texts to support analysis, reflection, and/or research.			4						4	4			1						1	1
		Total For Assessment Anchor E.1 Evidence-based Analysis of Text						4						4	4			1						1	1
Total For Reporting Category E								4						4	4			1						1	1

Grade 07 **English Language Arts**

Reporting Category		Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items (Core & EB)			
																Core			EB						
						MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total	MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total
A: Literature Text	A-K	1	1	1	Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences, conclusions, and/or generalizations drawn from the text.	1	3					1	3		4	1	1					1	1		2
		1	1	2	Determine a theme or central idea of a text and analyze its development over the course of the text; provide an objective summary of the text.	1						1			1	1						1			1
		1	1	3	Analyze how particular elements of a story, drama, or poem interact.	2			5			7			7	2			5			7			7
		Total For Assessment Anchor A-K.1 Key Ideas and Details				4	3		5			9	3		12	4	1		5			9	1		10
	A-C	2	1	1	Analyze how an author develops and contrasts the points of view of different characters or narrators in a text.		3		5			5	3		8		1		5			5	1		6
		2	1	2	Analyze how a drama's or poem's form or structure contributes to its meaning.																				
		2	1	3	Determine how the author uses the meaning of words or phrases, including figurative and connotative meanings, in a text; analyze the impact of rhymes and other repititions of sounds on a specific verse or stanza of a poem or section of a story or drama.	3			10			13			13	3			10			13			13
		Total For Assessment Anchor A-C.2 Craft and Structure				3	3		15			18	3		21	3	1		15			18	1		19
	A-C	3	1	1	Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history.																				
		Total For Assessment Anchor A-C.3 Integration of Knowledge and Ideas																							
	A-V	4	1	1	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 7 reading and content, choosing flexibly from a range of strategies.	2			5			7			7	2			5			7			7
		4	1	2	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.	1	2		5			6	2		8	1	1		5			6	1		7
		Total For Assessment Anchor A-V.4 Vocabulary Acquisition and Use				3	2		10			13	2		15	3	1		10			13	1		14
Total For Reporting Category A						10	8		30			40	8		48	10	3		30			40	3		43

Grade 07 **English Language Arts**

Reporting Category		Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items (Core & EB)			
																Core			EB						
						MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total	MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total
Informational Text	B-K	1	1	1	Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences, conclusions, and/or generalizations drawn from the text.	1	2		4			5	2		7	1	1		4			5	1		6
		1	1	2	Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text.	1	3		4			5	3		8	1	1		4			5	1		6
		1	1	3	Analyze the interactions between individuals, events, and ideas in a text.	2			4			6			6	2			4			6			6
		Total For Assessment Anchor B-K.1 Key Ideas and Details				4	5		12			16	5		21	4	2		12			16	2		18
	B-C	2	1	1	Determine an author's point of view or purpose in a text and analyze how the author distinguishes his or her position from that of others.	1						1			1	1						1			1
		2	1	2	Analyze the structure an author uses to organize a text, including how major sections and text features contribute to the whole and to the development of the ideas.	2						2			2	2						2			2
		2	1	3	Determine how the author uses the meaning of words or phrases, including figurative, connotative, or technical meanings, in a text; analyze the impact of a specific word choice on meaning and tone.	1			4			5			5	1			4			5			5
		Total For Assessment Anchor B-C.2 Craft and Structure				4			4			8			8	4			4			8			8

B: Ir	B-C	3	1	1	Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.	1	2					1	2		3	1	1					1	1		2
		3	1	2	Analyze how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts.	2						2			2	2						2			2
		Total For Assessment Anchor B-C.3 Integration of Knowledge and Ideas				3	2					3	2		5	3	1					3	1		4
	B-V	4	1	1	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 7 reading and content, choosing flexibly from a range of strategies.	1			4			5			5	1			4			5			5
		4	1	2	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.	1			4			5			5	1			4			5			5
		Total For Assessment Anchor B-V.4 Vocabulary Acquisition and Use				2			8			10			10	2			8			10			10
Total For Reporting Category B						13	7		24			37	7		44	13	3		24			37	3		40

Grade 07 **English Language Arts**

Reporting Category		Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items (Core & EB)			
																Core			EB						
						MC	ESR	WP	MC	ESR	WP	MC	ESR	WP	Total	MC	ESR	WP	MC	ESR	WP	MC	ESR	WP	Total
C: Writing	**C**	1	1		Write arguments to support claims with clear reasons and relevant evidence.																				
		1	2		Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.																				
		1	3		Write narratives to develop real or imagined experiences or events using effective techniques, relevant descriptive details, and well-structured event sequences.																				
		Total For Assessment Anchor C.1 Text Types and Purposes																							
Total For Reporting Category C																									

Grade 07 **English Language Arts**

Reporting Category		Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items (Core & EB)			
																Core			EB						
						MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total	MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total
D: Language	D	1	1	1	Explain the function of phrases and clauses in general and their function in specific sentences.	1						1			1	1						1			1
		1	1	2	Choose among simple, compound, complex, and compound-complex sentences to signal differing relationships among ideas.				1			1			1				1			1			1
		1	1	3	Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers.	1						1			1	1						1			1
		1	1	4	Recognize and correct inappropriate shifts in pronoun number and person.	1						1			1	1						1			1
		1	1	5	Recognize and correct vague pronouns.																				
		1	1	6	Recognize and correct inappropriate shifts in verb tense.	1						1			1	1						1			1
		1	1	7	Produce complete sentences, recognizing and correcting inappropriate fragments and run-on sentences.				1			1			1				1			1			1
		1	1	8	Correctly use frequently confused words.																				
		1	1	9	Ensure subject-verb and pronoun-antecedent agreement.																				
		1	2	1	Use a comma to separate coordinate adjectives.				1			1			1				1			1			1
		1	2	2	Spell correctly.				1			1			1				1			1			1
		1	2	3	Use punctuation to set of nonrestrictive/parenthetical elements.	1			1			2			2	1			1			2			2
		1	2	4	Use punctuation to separate items in a series.	1			1			2			2	1			1			2			2
		Total For Assessment Anchor D.1 Conventions of Standard English				6			6			12			12	6			6			12			12
		2	1	1	Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy.	1						1			1	1						1			1
		2	1	2	Vary sentence patterns for meaning, reader/listener interest, and style.	1			1			2			2	1			1			2			2
		2	1	3	Maintain consistency in style and tone.	1			1			2			2	1			1			2			2
		2	1	4	Choose punctuation for effect.				1			1			1				1			1			1
		2	1	5	Choose words and phrases for effect.																				
		Total For Assessment Anchor D.2 Knowledge of Language				3			3			6			6	3			3			6			6
Total For Reporting Category D						9			9			18			18	9			9			18			18

Grade 07 **English Language Arts**

Reporting Category		Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items (Core & EB)			
																Core			EB						
						MC	ESR	TDA	MC	ESR	TDA	MC	ESR	TDA	Total	MC	ESR	TDA	MC	ESR	TDA	MC	ESR	TDA	Total
E: Text-Dependent Analysis	**E**	1	1		Draw evidence from literary or informational texts to support analysis, reflection, and/or research.			4						4	4			1						1	1
		Total For Assessment Anchor E.1 Evidence-based Analysis of Text						4						4	4			1						1	1
Total For Reporting Category E								4						4	4			1						1	1

Grade 08 **English Language Arts**

Reporting Category		Assessment Anchor	DesESRiptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items (Core & EB)			
																Core			EB						
						MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total	MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total
A: Literature Text	A-K	1	1	1	Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences, conclusions, and/or generalizations drawn from the text.	2	2		4			6	2		8	2	1		4			6	1		7
	A-K	1	1	2	Determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot; provide an objective summary of the text.	1			4			5			5	1			4			5			5
	A-K	1	1	3	Analyze how particular lines of dialogue or incidents in a story, drama, or poem propel the action, reveal aspects of a character, or provoke a decision.	1	3		4			5	3		8	1	1		4			5	1		6
	Total For Assessment Anchor A-K.1 Key Ideas and Details					4	5		12			16	5		21	4	2		12			16	2		18
	A-C	2	1	1	Analyze how differences in the points of view of the characters and the audience or reader ESReate such effects as suspense or humor.				4			4			4				4			4			4
	A-C	2	1	2	Compare and contrast the structure of two or more texts, and analyze how the differing structure of each text contributes to its meaning and style.																				
	A-C	2	1	3	Determine how the author uses the meaning of words or phrases, including figurative and connotative meanings, in a text; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.	2	3		4			6	3		9	2	1		4			6	1		7
	Total For Assessment Anchor A-C.2 ESRaft and Structure					2	3		8			10	3		13	2	1		8			10	1		11
	A-C	3	1	1	Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths and traditional stories, including desESRibing how the material is rendered new.																				
	Total For Assessment Anchor A-C.3 Integration of Knowledge and Ideas																								
	A-V	4	1	1	Determine or clarify the meaning of unknown and multiple-meaning words or phrases based on grade 8 reading and content, choosing flexibly from a range of strategies.	3			4			7			7	3			4			7			7
	A-V	4	1	2	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.	2						2			2	2						2			2
	Total For Assessment Anchor A-V.4 Vocabulary Acquisition and Use					5			4			9			9	5			4			9			9
Total For Reporting Category A						11	8		24			35	8		43	11	3		24			35	3		38

Grade 08 **English Language Arts**

Reporting Category		Assessment Anchor	DesESRiptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items (Core & EB)			
																Core			EB						
						MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total	MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total
B: Informational Text	B-K	1	1	1	Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences, conclusions and/or generalizations drawn from the text.	1			5			6			6	1			5			6			6
	B-K	1	1	2	Determine a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.	1						1			1	1						1			1
	B-K	1	1	3	Analyze how a text makes connections among and distinctions between individuals, ideas, or events.	1			10			11			11	1			10			11			11
		Total For Assessment Anchor B-K.1 Key Ideas and Details				3			15			18			18	3			15			18			18
	B-C	2	1	1	Determine an author's point of view or purpose in a text and analyze how the author acknowledges and responds to conflicting evidence or viewpoints.	1	2		5			6	2		8	1	1		5			6	1		7
	B-C	2	1	2	Analyze in detail the structure of a specific paragraph in a text, including the role of particular sentences in developing and refining a key concept.	2						2			2	2						2			2
	B-C	2	1	3	Determine how the author uses the meaning of words or phrases, including figurative, connotative, or technical meanings, in a text; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.	2			5			7			7	2			5			7			7
		Total For Assessment Anchor B-C.2 ESRaft and Structure				5	2		10			15	2		17	5	1		10			15	1		16
	B-C	3	1	1	Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced.	1	3					1	3		4	1	1					1	1		2
	B-C	3	1	2	Analyze a case in which two or more texts provide conflicting information on the same topic, and identify where the texts disagree on matters of fact or interpretation.																				
		Total For Assessment Anchor B-C.3 Integration of Knowledge and Ideas				1	3					1	3		4	1	1					1	1		2
	B-V	4	1	1	Determine or clarify the meaning of unknown and multiple-meaning words or phrases based on grade 8 reading and content, choosing flexibly from a range of strategies.	3			5			8			8	3			5			8			8
	B-V	4	1	2	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.		2						2		2		1						1		1
		Total For Assessment Anchor B-V.4 Vocabulary Acquisition and Use				3	2		5			8	2		10	3	1		5			8	1		9
Total For Reporting Category B						12	7		30			42	7		49	12	3		30			42	3		45

Grade 08 **English Language Arts**

Reporting Category		Assessment Anchor	DesESRiptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items						Total Number of Items (Core & EB)			
																Core			EB						
						MC	ESR	WP	MC	ESR	WP	MC	ESR	WP	Total	MC	ESR	WP	MC	ESR	WP	MC	ESR	WP	Total
C: Writing	C	1	1		Write arguments to support claims with clear reasons and relevant evidence.																				
	C	1	2		Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.																				
	C	1	3		Write narratives to develop real or imagined experiences or events using effective techniques, relevant desESRiptive details, and well-structured event sequences.																				
		Total For Assessment Anchor C.1 Text Types and Purposes																							
Total For Reporting Category C																									

Grade 08 **English Language Arts**

Reporting Category		Assessment Anchor	DesESRiptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items Core			Number of Items EB			Total Number of Items (Core & EB)			
						MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total	MC	ESR	OE	MC	ESR	OE	MC	ESR	OE	Total
D: Language	D	1	1	1	Explain the function of verbals in general and their function in particular sentences.																				
	D	1	1	2	Form and use verbs in the active and passive voice.	1			1			2			2	1			1			2			2
	D	1	1	3	Form and use verbs in the indicative, imperative, interrogative, conditional, and subjunctive mood.																				
	D	1	1	4	Recognize and correct inappropriate shifts in verb voice and mood.				1			1			1				1			1			1
	D	1	1	5	Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers.	1						1			1	1						1			1
	D	1	1	6	Recognize and correct inappropriate shifts in pronoun number and person.	1						1			1	1						1			1
	D	1	1	7	Recognize and correct vague pronouns.																				
	D	1	1	8	Recognize and correct inappropriate shifts in verb tense.	1						1			1	1						1			1
	D	1	1	9	Produce complete sentences, recognizing and correcting inappropriate fragments and run-on sentences.	1						1			1	1						1			1
	D	1	1	10	Correctly use frequently confused words.				1			1			1				1			1			1
	D	1	1	11	Ensure subject-verb and pronoun-antecedent agreement.																				
	D	1	2	1	Use punctuation to indicate a pause or a break.	1			1			2			2	1			1			2			2
	D	1	2	2	Use an ellipsis to indicate an omission.																				
	D	1	2	3	Spell correctly.																				
	D	1	2	4	Use punctuation to set of nonrestrictive/parenthetical elements.																				
	D	1	2	5	Use punctuation to separate items in a series.				1			1			1				1			1			1
		Total For Assessment Anchor D.1 Conventions of Standard English				6			5			11			11	6			5			11			11
	D	2	1	1	Use verbs in the active and passive voice and in the conditional and subjunctive mood to achieve particular effects.																				
	D	2	1	2	Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy.				1			1			1				1			1			1
	D	2	1	3	Vary sentence patterns for meaning, reader/listener interest, and style.	1			1			2			2	1			1			2			2
	D	2	1	4	Maintain consistency in style and tone.	1			1			2			2	1			1			2			2
	D	2	1	5	Choose punctuation for effect.	1						1			1	1						1			1
	D	2	1	6	Choose words and phrases for effect.				1			1			1				1			1			1
		Total For Assessment Anchor D.2 Knowledge of Language				3			4			7			7	3			4			7			7
Total For Reporting Category D						9			9			18			18	9			9			18			18

Grade 08 **English Language Arts**

Reporting Category		Assessment Anchor	DesESRiptor (Sub-anchor)	Eligible Content	Focus	Points										Items									
						Student Scores (Core Points)			Equating Block (EB)			Total Points (Core & EB)				Number of Items Core			Number of Items EB			Total Number of Items (Core & EB)			
						MC	ESR	TDA	MC	ESR	TDA	MC	ESR	TDA	Total	MC	ESR	TDA	MC	ESR	TDA	MC	ESR	TDA	Total
E: Text-Dependent Analysis	E	1	1		Draw evidence from literary or informational texts to support analysis, reflection, and/or research.			4						4	4			1						1	1
		Total For Assessment Anchor E.1 Evidence-based Analysis of Text						4						4	4			1						1	1
Total For Reporting Category E								4						4	4			1						1	1

Grade 04 **Science**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	SCR	MC	SCR	MC	SCR	Total	MC	SCR	MC	SCR	MC	SCR	Total
	1	1	1	Distinguish between a scientific fact and an opinion, providing clear explanations that connect observations and results (e.g., a scientific fact can be supported by making observations).			2		2		2			2		2		2
	1	1	2	Identify and describe examples of common technological changes past to present in the community (e.g., energy production, transportation, communications,	1				1		1	1				1		1
	1	3	1	Observe and record change by using time and measurement.	3				3		3	3				3		3
	1	3	2	Describe relative size, distance, or motion.			1		1		1			1		1		1
	1	3	3	Observe and describe the change to objects caused by temperature change or light.														
	1	3	4	Explain what happens to a living organism when its food supply, access to water, shelter, or space is changed (e.g., it might die, migrate, change behavior, eat something else).	1		1		2		2	1		1		2		2
	1	3	5	Provide examples, predict, or describe how everyday human activities (e.g., solid waste production, food production and consumption, transportation, water consumption, energy production and use) may change the environment.	1	2			1	2	3	1	1			1	1	2
	Total For Assessment Anchor A.1 Reasoning and Analysis				6	2	4		10	2	12	6	1	4		10	1	11

2	1	1	Generate questions about objects, organisms, or events that can be answered through scientific investigations.	1		2		3		3	1		2		3		3
2	1	2	Design and describe an investigation (a fair test) to test one variable.	1		1		2		2	1		1		2		2
2	1	3	Observe a natural phenomenon (e.g., weather changes, length of daylight/night, movement of shadows, animal migrations, growth of plants), record observations, and then make a prediction based on those observations.	1		1		2		2	1		1		2		2
2	1	4	State a conclusion that is consistent with the information/data.	2				2		2	2				2		2
2	2	1	Identify appropriate tools or instruments for specific tasks and describe the information they can provide (e.g., measuring: length - ruler, mass - balance scale, volume - beaker, temperature - thermometer; making observations: hand lens, binoculars, telescope).	1	2			1	2	3	1	1			1	1	2
Total For Assessment Anchor A.2 Processes, Procedures, and Tools of Scientific Investigations				6	2	4		10	2	12	6	1	4		10	1	11

A

3	1	1	Categorize systems as either natural or human-made (e.g., ballpoint pens, simple electrical circuits, plant anatomy, water cycle).	3				3		3	3				3		3
3	1	2	Explain a relationship between the living and nonliving components in a system (e.g., food web, terrarium).	1		1		2		2	1		1		2		2
3	1	3	Categorize the parts of an ecosystem as either living or nonliving and describe their roles in the system.	1		1		2		2	1		1		2		2
3	1	4	Identify the parts of the food and fiber systems as they relate to agricultural products from the source to the consumer.	1				1		1	1				1		1
3	2	1	Identify what different models represent (e.g., maps show physical features, directions, distances; globes represent Earth; drawings of watersheds depict terrain; dioramas show ecosystems; concept maps show relationships of ideas).Identify what different models represent	1				1		1	1				1		1
3	2	2	Use models to make observations to explain how systems work (e.g., water cycle, Sun-Earth-Moon system).														
3	2	3	Use appropriate, simple modeling tools and techniques to describe or illustrate a system (e.g., two cans and string to model a communications system, terrarium to model an ecosystem).			1		1		1			1		1		1
3	3	1	Identify and describe observable patterns (e.g., growth patterns in plants, weather, water cycle).	1		1		2		2	1		1		2		2
3	3	2	Predict future conditions/events based on observable patterns (e.g., day/night, seasons, sunrise/sunset, lunar phases).														
Total For Assessment Anchor A.3 Systems, Models, and Patterns				8		4		12		12	8		4		12		12
Total For Reporting Category A: Nature of Science				20	4	12		32	4	36	20	2	12		32	2	34

Grade 04 **Science**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	SCR	MC	SCR	MC	SCR	Total	MC	SCR	MC	SCR	MC	SCR	Total
	1	1	1	Identify life processes of living things (e.g., growth, digestion, respiration).														
	1	1	2	Compare similar functions of external characteristics of organisms (e.g., anatomical characteristics: appendages, type of covering, body segments).			1		1		1			1		1		1
	1	1	3	Describe basic needs of plants and animals (e.g., air, water, food).														
	1	1	4	Describe how different parts of a living thing work together to provide what the organism needs (e.g., parts of plants: roots, stems, leaves).	1		1		2		2	1		1		2		2
	1	1	5	Describe the life cycles of different organisms (e.g., moth, grasshopper, frog, seed-producing plant).		2				2	2		1				1	1
	Total For Assessment Anchor B.1 Structures and Functions of Organisms				1	2	2		3	2	5	1	1	2		3	1	4
	2	1	1	Identify characteristics for plant and animal survival in different environments (e.g., wetland, tundra, desert, prairie, deep ocean, forest).	2				2		2	2				2		2
	2	1	2	Explain how specific adaptations can help a living organism survive (e.g., protective coloration, mimicry, leaf sizes and shapes, ability to catch or retain water).														
	2	2	1	Identify physical characteristics (e.g., height, hair color, eye color, attached earlobes, ability to roll tongue) that appear in both parents and could be passed on to offspring.	1				1		1	1				1		1
	Total For Assessment Anchor B.2 Continuity of Life				3				3		3	3				3		3

B	3	1	1	Describe the living and nonliving components of a local ecosystem (e.g., lentic and lotic systems, forest, cornfield, grasslands, city park, playground).															
	3	1	2	Describe interactions between living and nonliving components (e.g. plants – water, soil, sunlight, carbon dioxide, temperature; animals – food, water, shelter, oxygen, temperature) of a local ecosystem.															
	3	2	1	Describe what happens to a living thing when its habitat is changed.															
	3	2	2	Describe and predict how changes in the environment (e.g., fire, pollution, flood, building dams) can affect systems.															
	3	2	3	Explain and predict how changes in seasons affect plants, animals, or daily human life (e.g., food availability, shelter, mobility).	1				1		1	1				1		1	
	3	3	1	Identify everyday human activities (e.g., driving, washing, eating, manufacturing, farming) within a community that depend on the natural environment.															
	3	3	2	Describe the human dependence on the food and fiber systems from production to consumption (e.g., food, clothing, shelter, products).			1		1		1			1		1		1	
	3	3	3	Identify biological pests (e.g., fungi – molds, plants – foxtail, purple loosestrife, Eurasian water milfoil; animals – aphides, ticks, zebra mussels, starlings, mice) that compete with humans for resources.	1				1		1	1				1		1	
	3	3	4	Identify major land uses in the urban, suburban and rural communities (e.g., housing, commercial, recreation).			1		1		1			1		1		1	
	3	3	5	Describe the effects of pollution (e.g., litter) in the community.															
	Total For Assessment Anchor B.3 Ecological Behavior and Systems				2		2		4		4	2		2		4		4	
Total For Reporting Category B: Biology					6	2	4		10	2	12	6	1	4		10	1	11	

Grade 04 **Science**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	SCR	MC	SCR	MC	SCR	Total	MC	SCR	MC	SCR	MC	SCR	Total
C	1	1	1	Use physical properties [e.g., mass, shape, size, volume, color, texture, magnetism, state to describe matter.	1				1		1	1				1		1
	1	1	2	Categorize/group objects using physical characteristics.	1				1		1	1				1		1
	Total For Assessment Anchor C.1 Structures, Properties, and Interaction of Matter and Energy				2				2		2	2				2		2
	2	1	1	Identify energy forms, energy transfer, and energy examples (e.g., light, heat, electrical).														
	2	1	2	Describe the flow of energy through an object or system (e.g., feeling radiant heat from a light bulb, eating food to get energy, using a battery to light a bulb or run a fan).	2		1		3		3	2		1		3		3
	2	1	3	Recognize or illustrate simple direct current series and parallel circuits composed of batteries, light bulbs (or other common loads), wire, and on/off switches.	1		2		3		3	1		2		3		3
	2	1	4	Identify characteristics of sound (e.g., pitch, loudness, reflection).														
	Total For Assessment Anchor C.2 Forms, Sources, Conversions, and Transer of Energy				3		3		6		6	3		3		6		6
	3	1	1	Describe changes in motion caused by forces (e.g., magnetic, pushes or pulls, gravity, friction).		2				2	2		1				1	1
	3	1	2	Compare the relative movement of objects or describe types of motion that are evident (e.g., bouncing ball, moving in a straight line, back and forth, merry-go-round).	1				1		1	1				1		1
	3	1	3	Describe the position of an object by locating it relative to another object or a stationary background (e.g., geographic direction, left, up).			1		1		1			1		1		1
	Total For Assessment Anchor C.3 Principles of Motion and Force				1	2	1		2	2	4	1	1	1		2	1	3
Total For Reporting Category C: Physical Sciences					6	2	4		10	2	12	6	1	4		10	1	11

Grade 04 **Science**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	SCR	MC	SCR	MC	SCR	Total	MC	SCR	MC	SCR	MC	SCR	Total
D	1	1	1	Describe how prominent Earth features in Pennsylvania (e.g., mountains, valleys, caves, sinkholes, lakes, rivers) were formed.														
	1	1	2	Identify various Earth structures (e.g., mountains, watersheds, peninsulas, lakes, rivers, valleys) through the use of models.														
	1	1	3	Describe the composition of soil as weathered rock and decomposed organic remains.			1		1		1			1		1		1
	1	2	1	Identify products and by-products of plants and animals for human use (e.g., food, clothing, building materials, paper products).														
	1	2	2	Identify the types and uses of Earth materials for renewable, nonrenewable, and reusable products (e.g., human-made products: concrete, paper, plastics, fabrics).														
	1	2	3	Recognize ways that humans benefit from the use of water resources (e.g., agriculture, energy, recreation).														
	1	3	1	Describe types of freshwater and saltwater bodies (e.g., lakes, rivers, wetlands, oceans).	1				1		1	1				1		1
	1	3	2	Explain how water goes through phase changes (i.e., evaporation, condensation, freezing, and melting).														
	1	3	3	Describe or compare lentic systems (i.e., ponds, lakes, and bays) and lotic systems (i.e., streams, creeks, and rivers).		2	1		1	2	3		1	1		1	1	2
	1	3	4	Explain the role and relationship of a watershed or a wetland on water sources (e.g., water storage, groundwater recharge, water filtration, water source, water cycle).														
	Total For Assessment Anchor D.1 Earth Features and Processes that Change Earth and its Resources				1	2	2		3	2	5	1	1	2		3	1	4
	2	1	1	Identify basic cloud types (i.e., cirrus, cumulus, stratus, and cumulonimbus) and make connections to basic elements of weather (e.g., changes in temperature, precipitation).	1		1		2		2	1		1		2		2

2	1	2	Identify weather patterns from data charts or graphs of the data (e.g., temperature, wind direction, wind speed, cloud types, precipitation).	1				1		1	1				1		1
2	1	3	Identify appropriate instruments (i.e., thermometer, rain gauge, weather vane, anemometer, and barometer) to study weather and what they measure.	1				1		1	1				1		1
Total For Assessment Anchor D.2 Weather, Climate, and Atmospheric Processes				3		1		4		4	3		1		4		4
3	1	1	Describe motions of the Sun - Earth - Moon system.			1		1		1			1		1		1
3	1	2	Explain how the motion of the Sun - Earth - Moon system relates to time (e.g., days, months, years).	1				1		1	1				1		1
3	1	3	Describe the causes of seasonal change as they relate to the revolution of Earth and the tilt of Earth's axis.	1				1		1	1				1		1
Total For Assessment Anchor D.3 Composition and Structure of the Universe				2		1		3		3	2		1		3		3
Total For Reporting Category D: Earth and Space Sciences				6	2	4		10	2	12	6	1	4		10	1	11

Grade 08 **Science**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	SCR	MC	SCR	MC	SCR	Total	MC	SCR	MC	SCR	MC	SCR	Total
	1	1	1	Distinguish between a scientific theory and an opinion, explaining how a theory is supported with evidence, or how new data/information may change existing theories and practices														
	1	1	2	Explain how certain questions can be answered through scientific inquiry and/or technological design.	1				1		1	1				1		1
	1	1	3	Use evidence, such as observations or experimental results, to support inferences about a relationship.	1				1		1	1				1		1
	1	1	4	Develop descriptions, explanations, predictions, and models using evidence.			1		1		1			1		1		1
	1	2	1	Describe the positive and negative, intended and unintended, effects of specific scientific results or technological developments (e.g., air/space travel, genetic engineering, nuclear fission/fusion, artificial intelligence, lasers, organ transplants).														
	1	2	2	Identify environmental issues and explain their potential long-term health effects (e.g., pollution, pest controls, vaccinations).	1		1		2		2	1		1		2		2
	1	2	3	Describe fundamental scientific or technological concepts that could solve practical problems (e.g., Newton's laws of motion, Mendelian genetics).														
	1	2	4	Explain society's standard of living in terms of technological advancements and how these advancements impact on agriculture (e.g., transportation, processing, production, storage).	1		1		2		2	1		1		2		2

1	3	1	Use ratio to describe change (e.g., percents, parts per million, grams per cubic centimeter, mechanical advantage).															
1	3	2	Use evidence, observations, or explanations to make inferences about change in systems over time (e.g., carrying capacity, succession, population dynamics, loss of mass in chemical reactions, indicator fossils in geologic time scale) and the variables affecting these changes.															
1	3	3	Examine systems changing over time, identifying the possible variables causing this change, and drawing inferences about how these variables affect this change.	1		1		2		2	1		1		2		2	
1	3	4	Given a scenario, explain how a dynamically changing environment provides for the sustainability of living systems.	1				1		1	1				1		1	
Total For Assessment Anchor A.1 Reasoning and Analysis				6		4		10		10	6		4		10		10	

A: Nature of Science	2	1	1	Use evidence, observations, or a variety of scales (e.g., mass, distance, volume, temperature) to describe relationships.	1	2			1	2	3	1	1			1	1	2
	2	1	2	Use space/time relationships, define concepts operationally, raise testable questions, or formulate hypotheses.														
	2	1	3	Design a controlled experiment by specifying how the independent variables will be manipulated, how the dependent variable will be measured, and which variables will be held constant.	1		1		2		2	1		1		2		2
	2	1	4	Interpret data/observations; develop relationships among variables based on data/observations to design models as solutions.	1				1		1	1				1		1
	2	1	5	Use evidence from investigations to clearly communicate and support conclusions.		2				2	2		1				1	1
	2	1	6	Identify a design flaw in a simple technological system and devise possible working solutions.	1		1		2		2	1		1		2		2
	2	2	1	Describe the appropriate use of instruments and scales to accurately and safely measure time, mass, distance, volume, or temperature under a variety of conditions.	1				1		1	1				1		1
	2	2	2	Apply appropriate measurement systems (e.g., time, mass, distance, volume, temperature) to record and interpret observations under varying conditions.			1		1		1			1		1		1
	2	2	3	Describe ways technology (e.g., microscope, telescope, micrometer, hydraulics, barometer) extends and enhances human abilities for specific purposes.			1		1		1			1		1		1
	Total For Assessment Anchor A.2 Processes, Procedures, and Tools of Scientific Investigations				5	4	4		9	4	13	5	2	4		9	2	11

3	1	1	Describe a system (e.g., watershed, circulatory system, heating system, agricultural system) as a group of related parts with specific roles that work together to achieve an observed result.			1		1		1			1		1		1
3	1	2	Explain the concept of order in a system [e.g., (first to last: manufacturing steps, trophic levels); (simple to complex: cell, tissue, organ, organ system)].	3				3		3	3				3		3
3	1	3	Distinguish between system inputs, system processes, system outputs, and feedback (e.g., physical, ecological, biological, informational).			1		1		1			1		1		1
3	1	4	Distinguish between open loop (e.g., energy flow, food web) and closed loop (e.g., materials in the nitrogen and carbon cycles, closed-switch) systems.	1				1		1	1				1		1
3	1	5	Explain how components of natural and human-made systems play different roles in a working system.	1				1		1	1				1		1
3	2	1	Describe how scientists use models to explore relationships in natural systems (e.g., an ecosystem, river system, the solar system).	1				1		1	1				1		1
3	2	2	Describe how engineers use models to develop new and improved technologies to solve problems.	1				1		1	1				1		1
3	2	3	Given a model showing simple cause- and-effect relationships in a natural system, predict results that can be used to test the assumptions in the model (e.g., photosynthesis, water cycle, diffusion, infiltration).			1		1		1			1		1		1
3	3	1	Identify and describe patterns as repeated processes or recurring elements in human-made systems (e.g., trusses, hub-and-spoke system in communications and transportation systems, feedback controls in regulated systems).														
3	3	2	Describe repeating structure patterns in nature(e.g., veins in a leaf, tree rings, crystals, water waves) or periodic patterns (e.g., daily, monthly, annually).	1		1		2		2	1		1		2		2
Total For Assessment Anchor A.3 Systems, Models, and Patterns				8		4		12		12	8		4		12		12
Total For Reporting Category A				19	4	12		31	4	35	19	2	12		31	2	33

Grade 08 **Science**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
B: Biological Sciences	1	1	1	Describe the structures of living things that help them function effectively in specific ways (e.g., adaptations, characteristics).	1	2			1	2	3	1	1			1	1	2
	1	1	2	Compare similarities and differences in internal structures of organisms (e.g., invertebrate/vertebrate, vascular/nonvascular, single-celled/multi-celled) and external structures (e.g., appendages, body segments, type of covering, size, shape).			1		1		1			1		1		1
	1	1	3	Apply knowledge of characteristic structures to identify or categorize organisms (i.e., plants, animals, fungi, bacteria, and protista).														
	1	1	4	Identify the levels of organization from cell to organism and describe how specific structures (parts), which underlie larger systems, enable the system to function as a whole.														
	Total For Assessment Anchor B.1 Structures and Functions of Organisms				1	2	1		2	2	4	1	1	1		2	1	3
	2	1	1	Explain how inherited structures or behaviors help organisms survive and reproduce in different environments.	2				2		2	2				2		2
	2	1	2	Explain how different adaptations in individuals of the same species may affect survivability or reproduction success.														
	2	1	3	Explain that mutations can alter a gene and are the original source of new variations.			1		1		1			1		1		1
	2	1	4	Describe how selective breeding or biotechnology can change the genetic makeup of organisms.			1		1		1			1		1		1
	2	1	5	Explain that adaptations are developed over long periods of time and are passed from one generation to another														
	2	2	1	Identify and explain differences between inherited and acquired traits.	1				1		1	1				1		1
	2	2	2	Recognize that the gene is the basic unit of inheritance, that there are dominant and recessive genes, and that traits are inherited.														
	Total For Assessment Anchor B.2 Continuity of Life				3		2		5		5	3		2		5		5

3	1	1	Explain the flow of energy through an ecosystem (e.g., food chains, food webs).	1				1		1	1				1		1
3	1	2	Identify major biomes and describe abiotic and biotic components (e.g., abiotic: different soil types, air, water sunlight; biotic: soil microbes, decomposers).														
3	1	3	Explain relationships among organisms (e.g., producers/consumers, predator/prey) in an ecosystem.														
3	2	1	Use evidence to explain factors that affect changes in populations (e.g., deforestation, disease, land use, natural disaster, invasive species).														
3	2	2	Use evidence to explain how diversity affects the ecological integrity of natural systems	1				1		1	1				1		1
3	2	3	Describe the response of organisms to environmental changes (e.g., changes in climate, hibernation, migration, coloration) and how those changes affect survival.														
3	3	1	Explain how human activities may affect local, regional, and global environments.	1				1		1	1				1		1
3	3	2	Explain how renewable and nonrenewable resources provide for human needs (i.e., energy, food, water, clothing, and shelter).														
3	3	3	Describe how waste management affects the environment (e.g., recycling, composting, landfills, incineration, sewage treatment).														
3	3	4	Explain the long-term effects of using integrated pest management (e.g., herbicides, natural predators, biogenetics) on the environment.			1		1		1			1		1		1
Total For Assessment Anchor B.3 Ecological Behavior and Systems				3		1		4		4	3		1		4		4
Total For Reporting Category B				7	2	4		11	2	13	7	1	4		11	1	12

Grade 08 **Science**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items (Core & EB)		
												Core		EB				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
C: Physical Sciences	1	1	1	Explain the differences among elements, compounds, and mixtures.		2				2	2		1				1	1
	1	1	2	Use characteristic physical or chemical properties to distinguish one substance from another (e.g., density, thermal expansion/contraction, freezing/melting points, streak test).			1		1		1			1		1		1
	1	1	3	Identify and describe reactants and products of simple chemical reactions.	1				1		1	1				1		1
	Total For Assessment Anchor C.1 Structures, Properties, and Interaction of Matter and Energy				1	2	1		2	2	4	1	1	1		2	1	3
	2	1	1	Distinguish among forms of energy (e.g., electrical, mechanical, chemical, light, sound, nuclear) and sources of energy (i.e., renewable and nonrenewable energy)			1		1		1			1		1		
	2	1	2	Explain how energy is transferred from one place to another through convection, conduction, or radiation.	1				1		1	1				1		
	2	1	3	Describe how one form of energy (e.g., electrical, mechanical, chemical, light, sound, nuclear) can be converted into a different form of energy.			1		1		1			1		1		
	2	2	1	Describe the Sun as the major source of energy that impacts the environment.														
	2	2	2	Compare the time span of renewability for fossil fuels and the time span of renewability for alternative fuels.	1				1		1	1				1		
	2	2	3	Describe the waste (i.e., kind and quantity) derived from the use of renewable and nonrenewable resources and their potential impact on the environment.														
	Total For Assessment Anchor C.2 Forms, Sources, Conversions, and Transer of Energy				2		2		4		4	2		2		4		

3	1	1	Describe forces acting on objects (e.g., friction, gravity, balanced versus unbalanced).	2				2		2	2				2		2
3	1	2	Distinguish between kinetic and potential energy.	1		1		2		2	1		1		2		2
3	1	3	Explain that mechanical advantage helps to do work (physics) by either changing a force or changing the direction of the applied force (e.g., simple machines, hydraulic systems).														
Total For Assessment Anchor C.3 Principles of Motion and Force				3		1		4		4	3		1		4		4
Total For Reporting Category C				6	2	4		10	2	12	6	1	4		10	1	7

Grade 08 **Science**

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Points							Items						
					Student Scores (Core Points)		Equating Block (EB)		Total Points (Core & EB)			Number of Items				Total Number of Items		
												Core		EB		(Core & EB)		
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
	1	1	1	Explain the rock cycle as changes in the solid earth and rock types found in Pennsylvania (igneous – granite, basalt, pumice; sedimentary – limestone, sandstone, shale, coal; and metamorphic – slate, quartzite, marble, gneiss).														
	1	1	2	Describe natural processes that change Earth's surface (e.g., landslides, volcanic eruptions, earthquakes, mountain building, new land being formed, weathering, erosion, sedimentation, soil formation).		2	1		1	2	3		1	1		1	1	2
	1	1	3	Identify soil types (i.e., humus, topsoil, subsoil, loam, loess, and parent material) and their characteristics (i.e., particle size, porosity, and permeability) found in different biomes and in Pennsylvania, and explain how they formed.	1		1		2		2	1		1		2		2
	1	1	4	Explain how fossils provide evidence about plants and animals that once lived throughout Pennsylvania's history (e.g., fossils provide evidence of different environments).														
	1	2	1	Describe a product's transformation process from production to consumption (e.g., prospecting, propagating, growing, maintaining, adapting, treating, converting, distributing, disposing) and explain the process's potential impact on Earth's resources.														
	1	2	2	Describe potential impacts of human-made processes (e.g., manufacturing, agriculture, transportation, mining) on Earth's resources, both nonliving (i.e., air, water, or earth materials) and living (i.e., plants and animals).														

D: Earth and Space Sciences	1	3	1	Describe the water cycle and the physical processes on which it depends (i.e., evaporation, condensation, precipitation, transpiration, runoff, infiltration, energy inputs, and phase changes).	2				2		2	2				2		2
	1	3	2	Compare and contrast characteristics of freshwater and saltwater systems on the basis of their physical characteristics (i.e., composition, density, and electrical conductivity) and their use as natural resources.			1		1		1			1		1		1
	1	3	3	Distinguish among different water systems (e.g., wetland systems, ocean systems, river systems, watersheds) and describe their relationships to each other as well as to landforms.														
	1	3	4	Identify the physical characteristics of a stream and how these characteristics determine the types of organisms found within the stream environment (e.g., biological diversity, water quality, flow rate, tributaries, surrounding watershed).														
	Total For Assessment Anchor D.1 Earth Features and Processes that Change Earth and its Resources				3	2	3		6	2	8	3	1	3		6	1	7
	2	1	1	Explain the impact of water systems on the local weather or the climate of a region (e.g., lake effect snow, land/ocean breezes).														
	2	1	2	Identify how global patterns of atmospheric movement influence regional weather and climate.														
	2	1	3	Identify how cloud types, wind directions, and barometric pressure changes are associated with weather patterns in different regions of the country.	1				1		1	1				1		1
	Total For Assessment Anchor D.2 Weather, Climate, and Atmospheric Processes				1				1		1	1				1		1

	3	1	1	Describe patterns of Earth's movements (i.e., rotation and revolution) and the Moon's movements (i.e., phases, eclipses, and tides) in relation to the Sun.			1		1		1			1		1		1
	3	1	2	Describe the role of gravity as the force that governs the movement of the solar system and universe.	1				1		1	1				1		1
	3	1	3	Compare and contrast characteristics of celestial bodies found in the solar system (e.g., moons, asteroids, comets, meteors, inner and outer planets).	1				1		1	1				1		1
	Total For Assessment Anchor D.3 Composition and Structure of the Universe				2		1		3		3	2		1		3		3
Total For Reporting Category D					6	2	4		10	2	12	6	1	4		10	1	11

APPENDIX C: ITEM AND TEST DEVELOPMENT PROCESS

ITEM AND TEST DEVELOPMENT PROCESS FOR PSSA

Step	Description
1. Review Guiding Documentation	Each year item and test development specialists meet internally to review all guiding documentation related to the PSSA. Documentation reviewed includes the test design blueprints, the Pennsylvania Assessment Anchors and Eligible Content, the test item specifications, the test style specifications (style guide), and all test content descriptions.
2. Meet with PDE to Confirm Understanding of Program	The goal of the meeting each year is to ensure that item and test development teams have a clear understanding of PDE's vision for test development. A successful development cycle requires a clear understanding of Pennsylvania's content-area test specifications and of any unique interpretations of the Pennsylvania Assessment Anchors (if any).
3. Create Preliminary Test Item Development Plan	Item and test development specialists generate a preliminary development plan which includes an overview of the program, the internal and external (PDE) review and approval processes, a projected schedule for development of test items—including the number of test items to be developed for review by PDE and subsequent review by the committees of Pennsylvania educators. Item and test development specialists also generate strategies for securing passages and developing science scenarios and passage-based items, etc.
4. Meet with PDE to Finalize Test Item Development Plan	Over the course of the meeting, item and test development specialists verify all steps in the development process including timelines and schedules for test item/test development.
5. Analyze Item Bank	Existing test items in the current PSSA Item Bank are reviewed for technical psychometric quality as well as for their match to the Assessment Anchors. During this phase, test development specialists also make a tally of the test items by Assessment Anchor—including test development specialists' best thinking regarding the number of usable test items in the existing item bank. A tally is also made of the number of usable passages, as well as other stimulus prompts in the bank, including science scenarios.
6. Refine Test Item Development Plan to Include Writers and Subcontractors	Item and test development specialists identify the writers who will write the test items (test development specialists or other professional item writers, subcontractors, etc.), the estimated number of writers needed, the qualifications of writers, and the approximate number of test items to be submitted by each source.
7. Train Item Writers	Item and test development specialists train item writers, as needed. Item writers who have written for the PSSA in the past receive updated information, as needed.
8. Write and Review Items	Test items are written by item writers after training is complete, and feedback is provided by the item and test development specialists to item writers on a regular basis. As test items are written, they are reviewed and edited in a series of internal reviews. Item and test development specialists review and edit items to include, but not limited to, the following: match to Assessment Anchor/Eligible Content, relevance to purpose, accuracy of content, item difficulty, interest level, grade appropriateness, depth of knowledge and cognitive complexity, adherence to the principles of Universal Design, and freedom from issues of bias/fairness/sensitivity. At the same time, the process of procuring permissions also begins, including securing permissions for passages, art, etc.
9. Enter Test Items into Database	Upon acceptance from item writers, test items are entered into the item management system, IDEAS (*Item Development and Educational Assessment System*). Item data stored in the system database includes, but is not limited to, the following: readability, cognitive level, estimated level of difficulty, alignment to Assessment Anchors, and correlation to stimulus prompts and passages.
10. Prepare Item Set for Sample Item Review by PDE	Item and test development specialists prepare a subset of the items for review by PDE.

Step	Description
11. PDE Conducts Sample Item Review	After a subset of the items is submitted to PDE for review, PDE reviews the items and provides feedback to item and test development teams via a conference call. Items are revised per PDE feedback.
12. Continue to Write and Review Items	The remaining items are written, and feedback is provided by the item and test development specialists to item writers on a regular basis. Items are entered into the item management system, IDEAS (*Item Development and Educational Assessment System*) (See step 8 and step 9).
13. Review Items Prior to Test Item Review and Validation Sessions	Prior to New Item Content Review, all items are submitted to PDE for review. Item and test development specialists incorporate all PDE feedback, and PDE-requested edits to items are made.
14. Prepare for Test Item Review Sessions (the New Item Content Review and the Bias, Fairness, and Sensitivity Review)	Item and test development specialists prepare all items and stimulus passages for review by the New Item Content Review Committee (consisting of Pennsylvania educators) and by the separate Bias, Fairness, and Sensitivity Committee (consisting of a panel of experts including Pennsylvania educators). Item and test development specialists also prepare training materials needed for training committee members to review items for content or for bias, fairness, and sensitivity issues. All training materials and other ancillary materials (e.g., agendas, presentations, etc.) are also developed and then submitted to PDE for review and approval. Invitations are sent to Pennsylvania educators and national experts from PDE-approved committee lists.
15. Conduct Test Item Review Sessions (the New Item Content Review and the Bias, Fairness, and Sensitivity Review)	Committees of Pennsylvania educators and national experts review items in two meetings: one addressing item content and quality, the other addressing bias, fairness, and sensitivity. PDE, with support from item and test development specialists, presents training on how to review new test items for content considerations or bias/fairness/sensitivity issues. At the New Item Content Review, suggested edits to test items are made and/or replacement test items are written during the actual item review so that both the committee and the PDE are able to observe changes to the test items and approve the test items during the committee review process. At the Bias, Fairness, and Sensitivity Review, experts in bias, fairness, and sensitivity review all test items and passages and come to a consensus about any issues that are noted. At both meetings the results are carefully documented.
16. Conduct Item Review Resolution and Cleanup	Following the conclusion of the New Item Content Review Committee meetings, PDE re-examines the consensus changes suggested by the committee members during the New Item Content Review Committee meetings. DRC item and test development specialists then record all of PDE's follow-up decisions and changes. During this cleanup process, PDE either accepts the changes as requested by the committee or rejects the decision of the committee. If a committee decision is rejected, PDE provides an alternate decision for DRC to implement. During this cleanup process, PDE also interprets the report from the Bias, Fairness, and Sensitivity Committee meetings and subsequently identifies changes to test items and passages. DRC item and test development specialists then apply the changes to the test items and passages per PDE's decisions.
17. Submit Field Test Items for Final Sign-Off	PDE-approved changes are applied to the items, scenarios, non-permissioned passages, prompts, etc. (Changes reflect PDE's arbitration of the committee decisions.) Once all revisions to the items, non-permissioned passage text, and/or the art used by test items and passages are completed, the test items are submitted to PDE for final review and sign-off. (Changes requested to permissioned passages are sought from the publisher of record, and, if approved by the copyright holders, changes are implemented.) [PDE's approval process for field test items generally occurs simultaneously with PDE's approval of the core test forms. See step 25.]
*To follow the path for new field test items, skip to **step 22**, or to follow the chronological test development path, continue with **step 18**.*	

Step	Description
18. Review Results of the Field Test	Following the administration of a field test form and the subsequent rangefinding and field test scoring processes for field test items, performance data for all field test items are analyzed by DRC psychometricians and test development specialists. Test item performance data that meet certain triggering criteria are flagged for additional reviews by test development specialists. Flagged field-test items with extreme performance data are considered psychometrically unusable and are removed from future operational consideration. Field-test items with marginal performance data are prepared for the Field Test Item Data Review meeting.
19. Prepare for Field Test Item Data Review	Test development specialists prepare the items and stimulus passages for review by the Field Test Item Data Review Committee (which consists of Pennsylvania educators). Psychometricians also prepare training materials needed for training committee members to review items for their performance. All training materials and other ancillary materials (e.g., agendas, presentations, etc.) are submitted to PDE for review and approval. Invitations are also sent to Pennsylvania educators from PDE-approved committee lists.
20. Conduct Field Test Item Data Review	Committees of Pennsylvania educators review the performance data of flagged field-test items. Psychometricians present training on how to review field-test items based on their performance data. At the Item Data Review, committee members examine the performance of the items and determine whether each field-test item is technically sound and appropriate for use on an operational PSSA test. Since test items cannot be modified at the Field Test Item Data Review, the committee can either accept an item as is, or the committee can reject the item.
21. Conduct Field Test Item Data Review Reconciliation	Following the conclusion of the Field Test Item Data Review Committee meetings, PDE re-examines the consensus decisions (accept or reject) suggested by the committee members during the Field Test Item Data Review Committee meetings. Test development specialists record all of PDE's follow-up decisions and changes. During this cleanup process, PDE either accepts the decisions of the data review committee, or PDE rejects the decisions of the data review committee. If a committee decision is not accepted, PDE provides an alternate decision for test development specialists to implement. All PDE-approved changes to the test items status (accepted or rejected) are incorporated into the *Item Development and Educational Assessment System*, IDEAS.
22. Select Items to Fill Core, Field Test, and Equating Block Positions in Core and Field Test Forms	After the PDE-approved changes to the new field-test items is completed AND the results of the prior field test have been finalized following data review, test development specialists collaborate with psychometricians to follow the Test Design Blueprints and build requirements to make the initial selection of items for core, field-test, and equating block positions for all test forms.
23. Review Core and Equating Block Selections	After test content and psychometric requirements have been achieved for core and equating block positions, the core and equating block items are provided to PDE for review and approval. Any changes to the content of the core or equating block requested by PDE are balanced with psychometric requirements until all core and equating block positions are approved by PDE, test development specialists, and psychometricians. Test development specialists work with psychometricians and PDE staff to create scrambled versions of the core items that will appear across forms.
24. Construct Test Forms	Items, passages, and test components are assembled into forms using the form construction and typesetting function of DRC's *Item Development and Educational Assessment System*, IDEAS. Forms are reviewed internally for style and formatting requirements.
25. Review Typeset Forms	After forms are constructed in IDEAS, draft hard copies of the forms are produced and presented to PDE for review and approval. Any changes to the content of the core or equating block requested by PDE are balanced with psychometric requirements until all core and equating block positions are approved by PDE, test development specialists, and psychometricians. PDE also re-reviews all field-test items appearing in the test forms. DRC applies changes to the field-test items as required.

Step	Description
26. Print Test Forms	Following PDE's approval of the test forms, DRC completes a series of final proofing of all test forms. Final forms (along with ancillary materials) are then approved for printing.
27. Assemble Documentation of Test Materials	Metadata for each test item and form is documented and proofed, including: grade, form, session/section, item sequence, reporting category, Assessment Anchor, descriptor (sub-anchor), Eligible Content, number of points, item type, number of answer options, item usage, stimulus ID, etc.
28. Prepare Online Forms	Following approval of the print forms, all online forms are prepared. Forms are rendered in form sets, and items and forms are compared for continuity with the print forms as well as to ensure that all tools and features are functioning as expected.
*To follow the path for new field test items, return to **step 18**.*	

APPENDIX D: ITEM AND DATA REVIEW CARD EXAMPLES

ITEM REVIEW CARD EXAMPLE

Standard: Use the four operations with whole numbers to solve problems.

1.

A.

B.

PA - Item Card

Item ID	
Content Area	Mathematics
Passage ID	
Passage Title	
Grade	4
CCAACS Standards	B-O.1
Item Type	Open Ended
Points	4
Depth of Knowledge	2
Bloom's Taxonomy	
Est Difficulty	Medium
Key	
Calculator	C

1. ***Continued.*** Please refer to the previous page for task explanation.

C.

Standard: Describe how prominent Earth features in Pennsylvania (e.g., mountains, valleys, caves, sinkholes, lakes, rivers) were formed.

1. [redacted]

PA - Data Card

Item ID	[redacted]
Content Area	Science
Passage ID	
Passage Title	
Grade	4
Standards	AACS: D.1.1.1
Item Type	Multiple Choice
Points	1
Depth of Knowledge	2
Est Difficulty	Medium
Key	A
Focus	

Data Recognition Corporation [redacted]

PA - Master Statistics Data Card

Administration(s)

Form Name	Use Function	Rptg Flag	Seq	Period	Year	Session	Calc	Model/Ext	Grade	N	P-Value	Item Total Corr
				Spring	2015		Yes	Rasch	4	1548	0.54	0.34

Traditional Statistics

N	P-Val	Mean	Item Total Corr
122762	0.54		0.34

Distractor/Step Specific

Label	Proportion	Corr	Avg Meas	Step Meas
A*	0.54	0.34		
B	0.20	-0.10		
C	0.14	-0.21		
D	0.12	-0.16		
MULTS	0.00			
OMITS	0.00			

DIF Analysis

Category	Bias Code	Num Value	N - Ref	N - Focal
MALEFEMALE	A-	-0.26	5349	5011
WHITEBLACK	A+	0.14	7285	1569
WHITEHISPANIC	A-	-0.40	7285	889

Data Recognition Corporation

Reviewer Signature: _____

Item Rating Sheet

Content Area: _____ Grade: _____

	Content Alignment	Rigor Level Alignment				Technical Design			Universal Design		STATUS
	Standards	Grade	Difficulty	Depth of Knowledge	Source of Challenge	Correct Answer	Distractors	Graphics	Language Demand	Bias	Acceptance Status
Unique ID number	—Higher —Lower —None	—Above —At —Below	—Hard —Medium —Easy	—Recall —Application —Strategic Thinking	—Yes —No	—Yes —No	—Yes —No	—Yes —No	—Yes —No	—Yes —No	— Approved as is — Accepted with suggested revisions — Dissenting View

Item Review Criteria Guidelines

The purpose of this form is to provide guidelines to the item review process in terms of item characteristics that are essential in building a fair and balanced assessment. Use these guidelines in conjunction with the Item Rating Sheet when recording your feedback on individual items.

Content Alignment		Options
Standards, Anchors, Eligible Content	Does the content of the item align with the Standard/Anchor/Eligible Content? Each item was written to assess a particular Standard/Anchor/ Eligible Content statement which is indicated on the individual Item Card. Consider the degree to which the item is, in fact, aligned with the indicated eligible content. In making this judgment, it is important to consider whether the **content** is aligned (e.g., do the eligible content and the item both deal with fractions) and whether the required **performance** is aligned (e.g., if the eligible content calls for a comparison to be made, is this reflected in the item).	**HIGHER**—Aligns to the higher level of the EC **LOWER**—Aligns to the lower level of the EC **NONE**—No alignment with EC

Rigor Level Alignment		Options
Grade	Is the item grade-level appropriate? Is the content consistent with the experiences of a student at the grade level assessed? Is the challenge level appropriate for the grade?	**ABOVE** Grade Level **AT** Grade Level **BELOW** Grade Level
Difficulty	Do you agree with the item's difficulty rating? Item Difficulty is indicated as Easy, Medium, and Hard? Is your rating in agreement with the difficulty rating on the Item Form?	**HARD** **MEDIUM** **EASY**
Depth of Knowledge	Depth of Knowledge is based on the alignment work of Norman Webb. Rate each item based on the cognitive demand, using the following levels: 1. Recall – ***Recall*** of a fact, information, or procedure. 2. Basic Application of Skill or Concept – ***Use*** of information, conceptual knowledge, procedures, two or more steps, etc. 3. Strategic Thinking – Requires reasoning, developing a plan or sequence of steps; has some complexity; more than one possible answer. 4. Extended Thinking – Requires an investigation, time to think and process multiple conditions of the problem or task, and more than 10 minutes to do non-routine manipulations. (This level is generally not assessed in on-demand assessments.)	**4** = Extended Thinking **3** = Strategic Thinking **2** = Basic Application **1** = Recall

Source of Challenge	Is the source of challenge appropriately targeted to the content? The hardest part of the item (i.e., source of challenge) should be the content that is targeted. For example, in mathematics, the mathematics should be the major source of challenge rather than the wording or graphic. Students should not give an incorrect answer to a mathematics item because the reading level is too high or a graphic is flawed. Conversely, students should not give correct answers for reasons such as prior knowledge that make the answer to the question obvious (e.g., if the question asks which country has the largest population and students are to read a graph that includes China, there is no need to read the graph to answer the question).	**Y** = Yes **N** = No

Technical Design		**Options**
Correct Answer	Is there one clear, correct answer? There should be no other answer that "could" be correct. CAUTION: This does not mean that "good" distractors are unfair.	**Y** = Yes **N** = No
Distractors	Are distractors fair and appropriate? Distractors that are appropriate offer students reasonable choices that can be arrived at by making common errors. There should be no distractors that make no sense at all. It should be possible to examine each option and to reason how a student with some deficiency in knowledge or skill could choose it. The distractors should be formatted according to acceptable standards of test construction (e.g., a phrase that is common to each distractor should be placed in the stem).	**Y** = Yes **N** = No
Graphics	Are the graphics clear and accurate?	**Y** = Yes **N** = No

Universal Design		**Options**
Language Demand	Is language clear, well-formatted, and precise? Does the item use correct terminology for the content area? In order for all students to enter into the questions of the assessment, they must be able to understand them. If the items are formatted poorly, use unnecessarily complex words or phrases, or use figures or layouts that are difficult to understand, some students will give incorrect answers due to these factors rather than the content that is being assessed.	**Y** = Yes **N** = No
Bias	Is the item free of bias? All students will not be able to enter into the assessment if bias considerations are not resolved. Does the item contain clear bias problems? *A thorough, independent bias review* (separate from this meeting) *will be completed for all items.*	**Y** = Yes **N** = No

Status		**Options**
Acceptance Status	This is an overall judgment about the item. Based on the consensus of the committee, indicate whether the item was approved without revision to the content of the item or whether the item was accepted by the committee after revision of the content of the item. If there is a dissenting view (opposed to the committee consensus), record a brief explanation of the dissenting view on the back of the Item Rating Sheet.	**—Approved** as is **—Accepted** with suggested revisions **—Dissenting View**

NOTES:

- If you leave a box blank on the Item Rating Sheet, it will be recorded to indicate that you did not have any specific feedback for that item or issue.
- If you object to the consensus of the committee, please note this on the item rating sheet and then record a brief explanation of the dissenting view on the back of the Item Rating Sheet.
- **Do NOT remove any items from the item binder at any time.**
- You must sign your Item Rating Sheet.

APPENDIX F: ITEM STATISTICS

Multiple-Choice Paper/Pencil Item Statistics

Column Heading	Definition
ContArea	Content
FormGrade	Grade
PublD	Form ID
FormNumber	Form
Standard1	Standard
Depth	Depth of Knowledge
N	N
PValue	P-Value
ProportionA	Proportion A
ProportionB	Proportion B
ProportionC	Proportion C
ProportionD	Proportion D
ProportionOMITS	Proportion Omits
PtBiserial	Point Biserial
CorrelationA	Correlation A
CorrelationB	Correlation B
CorrelationC	Correlation C
CorrelationD	Correlation D
FinalB	IRT Difficulty Estimate
FinalBErr	IRT Difficulty Error
Infit	Infit
InfitMnSq	Infit Mean Square
Outfit	Outfit
OutfitMnSq	Outfit Mean Square
BiasCodeMALEFEMALE	Male/Female DIF Code
BiasCodeWHITEBLACK	White/Black DIF Code
BiasCodeWHITEHISPANIC	White/Hispanic DIF Code

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
ELA	3	187899	0	D	2	119890	0.715797815	0.094236383	0.058970723	0.126349153	0.715797815	0.003544916	0.403522492	-0.223722018	-0.188984668	-0.20715003	0.403522492	-0.2786	0.007	-9.8991	0.9411	-9.8991	0.9213			
ELA	3	667840	0	D	2	119890	0.647585287	0.207106514	0.035540913	0.106063892	0.647585287	0.002594045	0.407200527	-0.222732452	-0.183699061	-0.218980161	0.407200527	-0.0357	0.0067	-0.189	0.9995	-7.469	0.9645			
ELA	3	955477	0	D	2	119890	0.378004838	0.309400284	0.12376345	0.378004838	0.18347652	0.003227959	0.403210038	-0.13988456	-0.137447652	0.403210038	-0.211799839	1.3989	0.0066	-9.899	0.9646	0.931	1.0038			
ELA	3	404480	0	D	2	119890	0.423187922	0.102535658	0.267178247	0.202185337	0.423187922	0.00331971	0.263210638	-0.249947304	-0.023031033	-0.102918204	0.263210638	1.1917	0.0065	9.9011	1.1295	9.9012	1.2059			
ELA	3	628579	0	D	2	119890	0.824630912	0.824630912	0.036842105	0.102635749	0.024847777	0.003336392	0.383391299	0.383391299	-0.241820175	-0.220782531	-0.213071107	-0.9786	0.008	-9.8991	0.8821	-9.8992	0.8169			
ELA	3	992688	0	B-K	2	119890	0.346559346	0.395787805	0.151714071	0.346559346	0.092301276	0.012486446	0.339292039	-0.126292901	-0.134937099	0.339292039	-0.134839728	1.5643	0.0067	7.901	1.0227	9.9011	1.1092			
ELA	3	980060	0	B-V	2	119890	0.476478439	0.476478439	0.146776212	0.289190091	0.075902911	0.010793227	0.380595024	0.380595024	-0.232909561	-0.082739318	-0.227047615	0.9164	0.0064	5.451	1.0136	7.021	1.0244			
ELA	3	468168	0	B-C	3	119890	0.562707482	0.243314705	0.562707482	0.084694303	0.096413379	0.011627325	0.444559107	-0.186006204	0.444559107	-0.236185097	-0.218310867	0.4841	0.0065	-9.8991	0.9492	-9.8991	0.9276			
ELA	3	382430	0	B-K	3	119890	0.426849612	0.276570189	0.115205605	0.167094837	0.426849612	0.012619902	0.301145937	0.014406306	-0.276482477	-0.147606557	0.301145937	1.1892	0.0065	9.9011	1.1063	9.9011	1.1424			
ELA	3	344406	0	A-K	2	119890	0.523921928	0.523921928	0.060447076	0.064559179	0.343298023	0.007173242	0.382101309	0.382101309	-0.258692464	-0.245065206	-0.13326368	0.7748	0.0064	5.091	1.0127	8.271	1.0287			
ELA	3	416388	0	A-K	2	119890	0.509416966	0.232980232	0.117791309	0.509416966	0.131270331	0.007064809	0.38953562	-0.278842526	-0.145885879	0.38953562	-0.071997223	0.6133	0.0064	6.711	1.0169	9.901	1.0378			
ELA	3	556098	0	A-V	2	119890	0.87393444	0.87393444	0.040070064	0.03876053	0.040220202	0.006455918	0.45200723	0.45200723	-0.239813201	-0.219113767	-0.281475201	-1.5205	0.0092	-9.8992	0.8371	-9.8994	0.586			
ELA	3	119311	0	A-V	2	119890	0.785394945	0.104670948	0.05366586	0.047968972	0.785394945	0.007657019	0.474523442	-0.278890709	-0.252258394	-0.219831837	0.474523442	-0.7789	0.0076	-9.8991	0.8512	-9.8992	0.777			
ELA	3	656213	0	A-V	2	119890	0.723062808	0.134723497	0.071590625	0.723062808	0.064250563	0.005997164	0.482275123	-0.260191789	-0.235918118	0.482275123	-0.25167939	-0.4217	0.0071	-9.8991	0.8897	-9.8992	0.8136			
ELA	3	388917	0	A-V	2	119890	0.802777546	0.064542497	0.802777546	0.052056051	0.056510134	0.005413296	0.45253782	-0.263804269	0.45253782	-0.219958671	-0.23821652	-0.8106	0.0077	-9.8992	0.8336	-9.8993	0.7179			
ELA	3	927942	0	D	1	119890	0.562857619	0.144657603	0.562857619	0.186262407	0.100775711	0.004454083	0.377044468	-0.193912137	0.377044468	-0.171494409	-0.162754957	0.4656	0.0065	9.901	1.0259	5.261	1.0196			
ELA	3	773981	0	D	2	119890	0.409875719	0.13415631	0.18764701	0.409875719	0.261764951	0.004604221	0.313452338	-0.251769202	-0.108796808	0.313452338	-0.050698772	1.2774	0.0065	9.9011	1.0842	9.9011	1.1401			
ELA	3	370897	0	D	2	119890	0.291116857	0.240236884	0.291116857	0.265952123	0.199274335	0.002360497	0.204085504	-0.063044806	0.204085504	-0.059041018	-0.093461834	1.8843	0.007	9.9011	1.1431	9.9014	1.3644			
ELA	3	883708	0	D	2	119890	0.390966719	0.234798565	0.168354325	0.390966719	0.200650596	0.0032363	0.350888902	-0.185897739	-0.144945762	0.350888902	-0.087757004	1.4046	0.0066	9.901	1.0376	9.9011	1.1004			
ELA	3	116226	0	A-K	1	119890	0.656793728	0.18849779	0.656793728	0.069922429	0.070681458	0.01073484	0.400597419	-0.188991509	0.400597419	-0.207657133	-0.219185641	-0.0043	0.0067	-5.899	0.9831	-7.679	0.9642			
ELA	3	695097	0	B-V	2	119890	0.649778964	0.170022521	0.075027108	0.649778964	0.096922179	0.007715406	0.528493824	-0.263044047	-0.254166298	0.528493824	-0.271132158	-0.0181	0.0067	-9.8991	0.865	-9.8992	0.7809			
ELA	3	788245	0	B-K	3	119890	0.516757027	0.237726249	0.153849362	0.516757027	0.079406122	0.01141046	0.324143394	-0.149466657	-0.120581616	0.324143394	-0.172322936	0.8044	0.0064	9.9011	1.0808	9.9011	1.1215			
ELA	3	812298	0	B-K	2	119890	0.546742848	0.546742848	0.216590208	0.108232547	0.120552173	0.007214947	0.345382292	0.345382292	-0.111803324	-0.179282745	-0.196993194	0.6742	0.0064	9.9011	1.051	9.9011	1.0662			
ELA	3	308139	0	A-K	3	119890	0.738468596	0.151322045	0.051438819	0.050346151	0.738468596	0.007957294	0.53386397	-0.320253831	-0.271290436	-0.244335345	0.53386397	-0.483	0.0072	-9.8992	0.8215	-9.8993	0.7189			
ELA	3	105278	0	A-K	2	119890	0.510192677	0.31814163	0.071782467	0.510192677	0.088773042	0.010509634	0.415156175	-0.172410306	-0.246557751	0.415156175	-0.200790592	0.7532	0.0064	-8.949	0.9779	-6.489	0.9778			
ELA	3	402170	0	A-V	2	119890	0.344173826	0.235115523	0.169438652	0.344173826	0.242797564	0.007882225	0.29653698	-0.166815778	-0.108770827	0.29653698	-0.053131346	1.6226	0.0067	9.9011	1.0698	9.9012	1.1956			
ELA	3	692095	0	A-V	2	119890	0.684877805	0.684877805	0.197839686	0.058511969	0.035657686	0.006747852	0.2907489	0.2907489	-0.073814024	-0.226412207	-0.232524324	-0.146	0.0068	9.9011	1.0684	9.9013	1.2522			
ELA	3	125935	0	B-C	3	119890	0.497072316	0.147376762	0.087254984	0.255183919	0.497072316	0.012428059	0.327300781	-0.22832977	-0.239534089	-0.016864103	0.327300781	0.6986	0.0064	9.9011	1.081	9.9011	1.1116			
ELA	3	534284	0	B-C	2	119890	0.575852865	0.575852865	0.128075736	0.114521645	0.167486863	0.013520727	0.394924442	0.394924442	-0.20878958	-0.226791281	-0.118729746	0.3444	0.0065	3.811	1.01	6.171	1.0242			
ELA	3	277960	1	B-C	2	66784	0.752949808	0.09280666	0.102913872	0.752949808	0.042674892	0.008175611	0.481557797	-0.263056239	-0.257578484	0.481557797	-0.240245902	-0.5779	0.0098	-9.8991	0.8674	-9.8992	0.7638	A+	A-	A-
ELA	3	388070	1	B-V	2	66784	0.878623622	0.878623622	0.041162554	0.052287973	0.024871227	0.002695256	0.426976811	0.426976811	-0.255464934	-0.240931389	-0.207796808	-1.5767	0.0125	-9.8992	0.847	-9.8993	0.6774	A+	A-	B-
ELA	3	523623	1	B-C	3	66784	0.588389435	0.211802228	0.588389435	0.106896862	0.084077024	0.007891112	0.483531454	-0.278148875	0.483531454	-0.213365522	-0.193594639	0.3466	0.0087	-9.8991	0.9049	-9.8991	0.8633	A-	A-	A-
ELA	3	982780	1	B-K	2	66784	0.641336248	0.1230684	0.641336248	0.097987542	0.131288931	0.004462147	0.409027943	-0.298552214	0.409027943	-0.168557659	-0.125421065	0.0697	0.0089	-6.509	0.9757	-6.889	0.9593	A-	A-	A-
ELA	3	510621	1	B-K	2	66784	0.586128414	0.170430043	0.116614758	0.586128414	0.11752815	0.008684715	0.353585562	-0.148440742	-0.175926314	0.353585562	-0.176646777	0.358	0.0087	9.901	1.0435	9.9011	1.0904	A+	A-	A-
ELA	3	112665	1	B-V	2	66784	0.674233349	0.076096071	0.128114518	0.118231912	0.674233349	0.002560494	0.447288494	-0.328864804	-0.221032905	-0.141757339	0.447288494	-0.1081	0.0091	-9.8991	0.9205	-9.8991	0.9021	A-	A-	A-
ELA	3	779983	1	D	2	13411	0.470807546	0.177242562	0.18894937	0.144806502	0.470807546	0.017224666	0.313054029	-0.115649782	-0.170041747	-0.113559069	0.313054029	0.9359	0.0192	9.9011	1.0764	9.9011	1.1054	A+	A-	A-
ELA	3	552649	1	A-C	3	13411	0.348445306	0.352248155	0.080008948	0.203564238	0.348445306	0.014018343	0.345509888	-0.037686514	-0.231280462	-0.189249241	0.345509888	1.5453	0.0199	2.011	1.017	6.0011	1.0797	A+	A-	A-
ELA	3	111055	1	A-K	2	13411	0.289240176	0.291328014	0.12184028	0.289240176	0.29140258	0.004921333	0.003465363	0.057293861	-0.25314069	0.003465363	0.135557039	1.874	0.0208	9.9014	1.3618	9.9016	1.6244	A+	A+	A+
ELA	3	433682	1	A-V	2	13411	0.489672657	0.489672657	0.145104765	0.158601148	0.201401834	0.003653717	0.307717862	0.307717862	-0.240724832	-0.128181238	-0.042117775	0.8317	0.0191	9.9011	1.0816	9.9011	1.1086	A+	A-	A-
ELA	3	537210	1	A-K	2	13411	0.627842816	0.145104765	0.106181493	0.109611513	0.627842816	0.009246141	0.51449757	-0.296935183	-0.18094522	-0.257438225	0.51449757	0.1421	0.0197	-9.8991	0.854	-9.8992	0.7996	A+	A-	A-
ELA	3	779678	1	A-K	1	13411	0.279695772	0.474610394	0.279695772	0.054209231	0.186936097	0.004175677	0.256134163	0.054716167	0.256134163	-0.208348981	-0.234190598	1.9299	0.021	6.6111	1.0666	9.9013	1.2745	A+	A-	A-
ELA	3	880351	1	A-V	2	13411	0.779061964	0.779061964	0.087763776	0.085526806	0.038997838	0.008202222	0.451759198	0.451759198	-0.25577845	-0.228974539	-0.229378642	-0.7351	0.0224	-9.8991	0.8838	-9.8992	0.7564	A-	B-	A-
ELA	3	597310	1	A-V	2	13411	0.53612706	0.081425695	0.172917754	0.53612706	0.19804638	0.010662889	0.323351371	-0.268461383	-0.080871312	0.323351371	-0.122925343	0.6036	0.0192	9.5111	1.0716	8.9511	1.0925	A-	B-	B-
ELA	3	469914	1	A-V	2	13411	0.179628663	0.371113265	0.179628663	0.221161733	0.222876743	0.004101111	-0.007454442	-0.064086673	-0.007454442	0.082546511	0.007934069	2.601	0.0241	9.9013	1.2632	9.902	1.9871	A+	A+	A-
ELA	3	602993	1	D	2	13411	0.91231079	0.014167474	0.018715979	0.047647454	0.91231079	0.007009172	0.273852758	-0.180755609	-0.149532492	-0.154900252	0.273852758	-1.9474	0.0318	-1.909	0.9559	-2.6391	0.8929	A+	A-	A-
ELA	3	602993	1	D	2	13265	0.914964191	0.012514135	0.020505089	0.046664154	0.914964191	0.005050886	0.286036455	-0.168450378	-0.1628214	-0.161566983	0.286036455	-1.9584	0.0323	-2.049	0.9515	-4.7092	0.8113	A-	B-	A-
ELA	3	937427	1	D	2	13411	0.351427932	0.225561107	0.351427932	0.168145552	0.236447692	0.017150101	0.071560529	0.034204045	0.071560529	-0.083872571	-0.027189517	1.5294	0.0199	9.9013	1.2902	9.9015	1.5436	A+	A+	A+
ELA	3	937427	1	D	2	13265	0.361100641	0.228269883	0.361100641	0.168413117	0.233622314	0.007764795	0.079219324	0.034019726	0.079219324	-0.1024664	-0.021264495	1.4845	0.0199	9.9013	1.2798	9.9015	1.4878	A-	A+	A-
ELA	3	215556	2	D	2	13315	0.595493804	0.187157341	0.130679685	0.595493804	0.073751408	0.012241833	0.5002648	-0.263604246	-0.222770023	0.5002648	-0.240794891	0.3016	0.0197	-9.8991	0.8983	-9.8992	0.841	A+	B-	A-
ELA	3	772979	2	A-K	2	13315	0.480435599	0.179571911	0.068794593	0.26068344	0.480435599	0.009763425	0.380680344	-0.27283496	-0.284533595	-0.016448317	0.380680344	0.8787	0.0194	3.341	1.0259	4.8211	1.0531	A+	A-	A-
ELA	3	389690	2	A-C	3	13315	0.626060834	0.626060834	0.145700338	0.093278258	0.128651896	0.005407435	0.455943258	0.455943258	-0.23112122	-0.224763732	-0.204492251	0.1348	0.02	-6.8691	0.9431	-9.3291	0.8801	A+	A-	A-
ELA	3	182424	2	A-K	2	13315	0.68689448	0.17746902	0.057904619	0.071047691	0.68689448	0.005707848	0.52157384	-0.273279668	-0.250560536	-0.283746618	0.52157384	-0.1992	0.0207	-9.8991	0.851	-9.8992	0.7921	A+	A-	A+
ELA	3	383002	2	A-V	2	13315	0.774990612	0.04551258	0.104093128	0.774990612	0.055726624	0.01907623	0.512532735	-0.2398825	-0.304094637	0.512532735	-0.266901096	-0.7446	0.0226	-9.8992	0.8175	-9.8993	0.6782	A+	A-	A+
ELA	3	657815	2	A-V	2	13315	0.761096508	0.066766804	0.761096508	0.091701089	0.065790462	0.013819001	0.515159354	-0.286075209	0.515159354	-0.233047369	-0.288165489	-0.6514	0.0222	-9.8992	0.8264	-9.8993	0.6955	A+	A-	A-
ELA	3	665231	2	A-V	2	13315	0.664739016	0.664739016	0.073976718	0.172662411	0.082162974	0.005782952	0.480213642	0.480213642	-0.318211994	-0.171762761	-0.262729043	-0.0747	0.0204	-9.8991	0.9072	-9.8992	0.8336	A+	A-	A-
ELA	3	295739	2	A-K	2	13315	0.494404807	0.265565152	0.075553887	0.494404807	0.140443109	0.020503192	0.349434666	-0.104856722	-0.254811681	0.349434666	-0.142676251	0.8084	0.0194	3.911	1.0303	3.621	1.0395	A+	A-	A+
ELA	3	130646	2	A-V	2	13315	0.665264739	0.122793842	0.665264739	0.09770935	0.106496433	0.006834397	0.471817119	-0.246782341	0.471817119	-0.290843138	-0.151032639	-0.0776	0.0204	-9.6391	0.9158	-9.8992	0.8499	A-	A-	A-
ELA	3	676237	2	D	2	13315	0.795193391	0.092602328	0.795193391	0.065414946	0.039429215	0.006383778	0.463231898	-0.248111795	0.463231898	-0.242966759	-0.260614585	-0.8865	0.0233	-9.8991	0.8726	-9.8992	0.7568	A+	B-	B-
ELA	3	676237	2	D	2	13212	0.7985165	0.091204965	0.7985165	0.061459279	0.040720557	0.006433545	0.460432641	-0.24329769	0.460432641	-0.233703297	-0.269362762	-0.8509	0.0235	-9.8991	0.8726	-9.8992	0.7536	A+	B-	B-
ELA	3	881286	2	D	2	13315	0.513481036	0.513481036	0.217423958	0.092977845	0.161922644	0.013143072	0.362055075	0.362055075	-0.086138966	-0.236357904	-0.194205187	0.7125	0.0194	6.271	1.049	5.2411	1.0579	A+	A-	A-
ELA	3	881286	2	D	2	13212	0.468135029	0.468135029	0.276339691	0.09582198	0.149636694	0.009385407	0.319157879	0.319157879	-0.066787272	-0.228841925	-0.162265182	0.988	0.0195	9.9011	1.0887	9.9011	1.1331	A+	A-	A-
ELA	3	263426	3	D	2	13335	0.443044619	0.166254218	0.198875141	0.443044619	0.176302962	0.0143982	0.294860498	-0.168663422	-0.053604005	0.294860498	-0.146717748	1.0743	0.0194	9.9011	1.1204	9.9012	1.1808	A+	A-	A-
ELA	3	870994	3	A-C	3	13335	0.4	0.34255718	0.122759655	0.120659918	0.4	0.013048369	0.380205269	-0.10866667	-0.222606128	-0.170105803	0.380205269	1.2873	0.0197	0.411	1.0033	3.531	1.0423	A+	A-	A+
ELA	3	233500	3	A-K	2	13335	0.531008624	0.124484439	0.531008624	0.145181852	0.179902512	0.018822647	0.436096242	-0.222766757	0.436096242	-0.132498945	-0.2332556	0.6282	0.0194	-5.529	0.9585	-5.3191	0.9442	A+	A-	A-
ELA	3	670992	3	A-K	1	13335	0.66944132	0.086464192	0.097637795	0.141207349	0.66944132	0.004574428	0.519633208	-0.259915326	-0.281820471	-0.240470978	0.519633208	-0.0908	0.0204	-9.8991	0.8523	-9.8992	0.7809	A-	A-	A-
ELA	3	814139	3	A-K	2	13335	0.524184477	0.524184477	0.252193476	0.12928384	0.075290589	0.018672666	0.255134807	0.255134807	-0.030988543	-0.13831162	-0.230267429	0.6623	0.0194	9.9012	1.164	9.9012	1.2357	A-	A-	A-
ELA	3	557153	3	A-V	2	13335	0.769853768	0.769853768	0.106411699	0.049193851	0.06831646	0.005624297	0.511106556	0.511106556	-0.298742915	-0.259564627	-0.240157333	-0.6952	0.0224	-9.8992	0.8299	-9.8993	0.6657	A+	C-	B-
ELA	3	851330	3	A-V	2	13335	0.763554556	0.116610424	0.763554556	0.051368579	0.063817023	0.004349456	0.453473091	-0.253370546	0.453473091	-0.233317797	-0.226870771	-0.6534	0.0222	-9.8991	0.8869	-9.3892	0.8157	A+	A-	A-
ELA	3	365612	3	A-V	2	13335	0.84551931	0.053693288	0.059542557	0.84551931	0.02752156	0.01319835	0.456649079	-0.274953855	-0.249738789	0.456649079	-0.237151873	-1.2674	0.0256	-9.8992	0.8388	-9.8994	0.6303	A-	A-	B-
ELA	3	751909	3	A-V	2	13335	0.652193476	0.176977878	0.102587177	0.652193476	0.057217848	0.010573678	0.395464735	-0.197204131	-0.145225979	0.395464735	-0.269776838	0.0035	0.0201	-1.689	0.9854	0.771	1.0108	A+	A-	A-
ELA	3	159926	3	D	2	13335	0.757480315	0.065541807	0.090213723	0.082189726	0.757480315	0.003674541	0.527662855	-0.253480457	-0.312244501	-0.256638352	0.527662855	-0.6138	0.022	-9.8992	0.8245	-9.8993	0.6737	A+	C-	B-
ELA	3	159926	3	D	2	13277	0.758831061	0.069217444	0.086615952	0.079310085	0.758831061	0.005196957	0.518052492	-0.264182314	-0.300645826	-0.243324004	0.518052492	-0.5691	0.022	-9.8992	0.8295	-9.8993	0.6823	A+	C-	A-
ELA	3	668900	3	D	2	13335	0.547581552	0.547581552	0.179527559	0.157030371	0.10063742	0.014773153	0.381632943	0.381632943	-0.194734729	-0.172630614	-0.155399537	0.5451	0.0194	3.681	1.0285	2.271	1.0249	A+	A-	A-
ELA	3	668900	3	D	2	13277	0.553588913	0.553588913	0.183625819	0.161030353	0.090231227	0.010469233	0.352309057	0.352309057	-0.181608594	-0.161092963	-0.141208985	0.5533	0.0194	5.811	1.0442	4.391	1.0483	A+	A-	A-
ELA	3	334612	4	D	2	13355	0.419767877	0.295320105	0.140995882	0.133582928	0.419767877	0.00980906	0.304044307	-0.089949658	-0.130240032	-0.174836985	0.304044307	1.1901	0.0195	9.9011	1.0969	9.9011	1.1442	A+	A-	A-
ELA	3	616122	4	A-K	2	13355	0.657356795	0.117933358	0.090752527	0.657356795	0.11561213	0.014825908	0.463063149	-0.20590356	-0.277521725	0.463063149	-0.201778934	-0.0274	0.0201	-9.8991	0.9074	-9.3091	0.8738	A+	A-	A-
ELA	3	397225	4	A-V	2	13355	0.618569824	0.118906776	0.618569824	0.111269188	0.137551479	0.013103706	0.390091523	-0.214568674	0.390091523	-0.149903917	-0.18599625	0.1786	0.0198	-0.629	0.9948	-1.749	0.978	A+	A-	A-
ELA	3	679136	4	A-K	3	13355	0.465892924	0.253987271	0.140097342	0.132384875	0.465892924	0.006439536	0.380131614	-0.137430053	-0.233486046	-0.123577528	0.380131614	0.9466	0.0193	1.281	1.0097	1.901	1.0201	A+	A-	A-
ELA	3	624997	4	A-K	2	13355	0.688131786	0.097641333	0.090228379	0.688131786	0.081842007	0.030700112	0.506555591	-0.295912559	-0.244862839	0.506555591	-0.247121118	-0.1974	0.0206	-9.8991	0.8519	-9.8992	0.7778	A+	A-	A-
ELA	3	107325	4	A-V	2	13355	0.704080869	0.136128791	0.051965556	0.098839386	0.704080869	0.00846125	0.484742665	-0.236975118	-0.236531668	-0.260596133	0.484742665	-0.2886	0.0208	-9.8991	0.8776	-9.8992	0.8133	A-	C-	C-
ELA	3	989251	4	A-V	2	13355	0.531860726	0.531860726	0.106027705	0.272182703	0.081317858	0.007562711	0.466759928	0.466759928	-0.247941643	-0.24250852	-0.151452729	0.6185	0.0193	-9.8191	0.9278	-9.8991	0.898	A-	A-	A-
ELA	3	963428	4	A-V	2	13355	0.324747286	0.324747286	0.193186073	0.100711344	0.370273306	0.010632722	0.188713449	0.188713449	-0.086415099	-0.162501557	0.006575526	1.6807	0.0204	9.9012	1.1646	9.9014	1.4071	A+	A-	A-
ELA	3	127439	4	A-C	3	13355	0.465219019	0.248371396	0.465219019	0.2	0.079745414	0.005690753	0.354632306	-0.216804578	0.354632306	-0.039301933	-0.221274509	0.95	0.0193	4.961	1.0378	6.2311	1.0669	A-	A-	A-
ELA	3	320318	4	D	2	13355	0.547734931	0.131336578	0.087233246	0.547734931	0.225533508	0.007338076	0.307402136	-0.080467733	-0.196779288	0.307402136	-0.156388663	0.5392	0.0194	9.9011	1.1015	9.4211	1.105	A-	A-	A-
ELA	3	133314	4	D	1	13355	0.721452639	0.098614751	0.095320105	0.721452639	0.074279296	0.00935979	0.497484119	-0.251972324	-0.249255599	0.497484119	-0.263961685	-0.3908	0.0211	-9.8991	0.8678	-9.8992	0.789	A-	A-	A-
ELA	3	564655	5	D	2	13368	0.340065829	0.243716338	0.340065829	0.293985637	0.113479952	0.008004189	0.329607484	-0.136077328	0.329607484	-0.081914486	-0.18101723	1.6217	0.0201	4.251	1.0372	7.7111	1.1088	A+	A-	A-
ELA	3	988734	5	A-C	3	13368	0.418087971	0.418087971	0.265709156	0.188734291	0.111759425	0.01398863	0.308046406	0.308046406	-0.105071918	-0.145203182	-0.122517395	1.2072	0.0194	9.9011	1.0799	9.9011	1.1127	A-	A-	A-
ELA	3	226631	5	A-C	3	13368	0.602558348	0.155745063	0.147666068	0.602558348	0.080266308	0.010921604	0.443318533	-0.179897384	-0.213522394	0.443318533	-0.243643869	0.288	0.0196	-7.6991	0.9405	-6.0491	0.9301	A+	A-	A-
ELA	3	926691	5	A-V	2	13368	0.798174746	0.059021544	0.068521843	0.798174746	0.058647516	0.015185518	0.555164868	-0.288231867	-0.309661796	0.555164868	-0.288736398	-0.8577	0.0232	-9.8992	0.7666	-9.8994	0.5736	A+	A-	A-
ELA	3	298712	5	A-K	2	13368	0.552139437	0.182450628	0.185068821	0.057226212	0.552139437	0.022217235	0.330032748	-0.032723611	-0.183567325	-0.292185109	0.330032748	0.542	0.0193	8.3011	1.0636	6.0011	1.065	A-	A-	A-
ELA	3	925221	5	A-K	2	13368	0.48219629	0.101062238	0.320391981	0.08572711	0.48219629	0.009275883	0.32043923	-0.244863374	-0.01550204	-0.245368621	0.32043923	0.8878	0.0192	9.7411	1.0736	9.0311	1.0943	A+	A-	A-
ELA	3	307215	5	A-V	2	13368	0.531268701	0.231822262	0.531268701	0.086400359	0.137417714	0.012492519	0.452147339	-0.230021441	0.452147339	-0.238674702	-0.15353542	0.6455	0.0192	-9.3891	0.9318	-8.6391	0.9134	A+	A-	A-
ELA	3	339247	5	A-V	2	13368	0.422351885	0.273414123	0.422351885	0.196663674	0.097546379	0.008602633	0.360034369	-0.165032425	0.360034369	-0.0541364	-0.250282798	1.1856	0.0194	3.151	1.0242	5.5611	1.0618	A-	A-	B-
ELA	3	734331	5	A-V	2	13368	0.628216637	0.628216637	0.161654698	0.07839617	0.125374028	0.005460802	0.41642604	0.41642604	-0.242670425	-0.191692667	-0.164003273	0.1555	0.0198	-3.829	0.969	-4.9891	0.9378	A-	A-	A-

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
ELA	3	248948	5	D	3	13368	0.400658288	0.400658288	0.098444045	0.133677439	0.358243567	0.008453022	0.288712594	0.288712594	-0.175303156	-0.230526034	-0.015192455	1.2957	0.0195	9.9011	1.0946	9.9012	1.1655	A+	A-	A-
ELA	3	340517	5	D	2	13368	0.247381807	0.304458408	0.247381807	0.162552364	0.279099342	0.00516158	0.112920932	0.038642496	0.112920932	-0.072129745	-0.081159421	2.1541	0.0218	9.9012	1.2285	9.9015	1.5431	A+	A-	A+
ELA	3	917141	6	D	2	13352	0.589424805	0.589424805	0.083807669	0.206111444	0.111443978	0.008687837	0.209270655	0.209270655	-0.192793048	-0.021944637	-0.114161444	0.3682	0.0195	9.9012	1.1938	9.9013	1.2694	A+	A-	A-
ELA	3	237696	6	A-C	3	53106	0.421967386	0.400048959	0.054475954	0.118461191	0.421967386	0.004217979	0.411674839	-0.190187241	-0.203571462	-0.186944269	0.411674839	1.2029	0.0098	-8.929	0.9659	-0.499	0.9972	A+	A-	A-
ELA	3	351390	6	A-V	2	53106	0.796331865	0.796331865	0.051067676	0.061725605	0.058712763	0.006948367	0.388857361	0.388857361	-0.212904173	-0.199808349	-0.22209765	-0.8422	0.0116	-9.8991	0.9383	-8.4391	0.9026	A-	A-	B-
ELA	3	997116	6	A-K	3	53106	0.653749106	0.171430723	0.085884834	0.653749106	0.08059353	0.007513275	0.493431187	-0.268095137	-0.285242204	0.493431187	-0.180568587	0.0265	0.0101	-9.8991	0.8835	-9.8992	0.8255	A+	A-	A-
ELA	3	543682	6	A-K	2	53106	0.585715362	0.090422928	0.190844726	0.123827816	0.585715362	0.008473619	0.453428676	-0.246637428	-0.17440053	-0.240312188	0.453428676	0.3835	0.0098	-9.8991	0.9316	-9.8991	0.9113	A+	A-	A-
ELA	3	649153	6	A-K	3	53106	0.497947501	0.175215607	0.497947501	0.260573193	0.061631454	0.003973186	0.322155154	-0.268911344	0.322155154	0.001660671	-0.230016692	0.8237	0.0096	9.9011	1.0755	9.9011	1.0887	A+	A-	A-
ELA	3	157124	6	A-V	2	53106	0.670865816	0.205551162	0.062008059	0.670865816	0.055511618	0.005215983	0.499792219	-0.270575522	-0.274451882	0.499792219	-0.240179786	-0.0659	0.0102	-9.8991	0.8742	-9.8992	0.7949	A-	A-	A-
ELA	3	978649	6	B-V	2	13352	0.613840623	0.077890953	0.203415219	0.096015578	0.613840623	0.00786399	0.466707556	-0.247676388	-0.213349832	-0.226540743	0.466707556	0.2358	0.0197	-9.8991	0.919	-9.8991	0.8733	A-	A-	A+
ELA	3	128903	6	B-C	1	13352	0.564709407	0.15540743	0.564709407	0.102905932	0.16065009	0.015727981	0.443054741	-0.163401294	0.443054741	-0.277488751	-0.180049857	0.4859	0.0194	-7.8991	0.9407	-7.7191	0.9177	A+	A-	A-
ELA	3	524183	6	B-K	2	13352	0.547109047	0.14522169	0.183118634	0.547109047	0.10987118	0.014155183	0.54683908	-0.300068951	-0.183774619	0.54683908	-0.275344592	0.5739	0.0193	-9.8992	0.8338	-9.8992	0.7944	A-	B-	A-
ELA	3	181765	6	B-K	3	13352	0.561189335	0.137582385	0.561189335	0.180721989	0.102905932	0.014604554	0.307552882	-0.173715647	0.307552882	-0.073214209	-0.180775256	0.5035	0.0194	9.9011	1.0921	9.9011	1.1448	A+	A-	A-
ELA	3	170663	6	B-K	2	13352	0.577142001	0.577142001	0.082384661	0.116461953	0.216746555	0.006740563	0.294117617	0.294117617	-0.158930501	-0.201942238	-0.077512262	0.4233	0.0195	9.9011	1.1071	9.9012	1.1758	A-	A-	A-
ELA	3	219776	6	B-V	2	13352	0.476707609	0.476707609	0.093244458	0.266926303	0.141776513	0.020596165	0.352484938	0.352484938	-0.250646409	-0.078978706	-0.167024175	0.9233	0.0193	5.411	1.041	6.1311	1.0642	A+	C-	B-
ELA	3	790210	6	B-V	2	13352	0.630167765	0.118559017	0.180497304	0.06620731	0.630167765	0.003969443	0.300316595	-0.232921893	-0.046451267	-0.191579399	0.300316595	0.1506	0.0198	9.9011	1.0888	9.9012	1.1944	A-	A-	A+
ELA	3	699160	6	B-V	2	13352	0.532354703	0.045311564	0.334631516	0.532354703	0.072124026	0.015053925	0.402967717	-0.281453249	-0.151736801	0.402967717	-0.236598645	0.6475	0.0193	-1.599	0.988	-1.149	0.9881	A-	A-	A-
ELA	3	640994	6	D	2	13352	0.686638706	0.072273817	0.175704014	0.686638706	0.058118634	0.005841821	0.421073457	-0.210412396	-0.239400044	0.421073457	-0.193391578	-0.1552	0.0205	-5.089	0.9543	-5.4291	0.9182	A+	B-	A-
ELA	3	767576	6	D	3	13352	0.221165368	0.394397843	0.123502097	0.247828041	0.221165368	0.009811264	0.241412343	-0.081883974	-0.138544598	-0.017424748	0.241412343	2.3412	0.0227	4.4611	1.0542	9.9014	1.3668	A-	A-	A-
ELA	3	987326	7	D	2	13265	0.542781757	0.256087448	0.108028647	0.542781757	0.084281945	0.007614022	0.404070426	-0.229761647	-0.121619603	0.404070426	-0.207697968	0.5774	0.0192	-2.419	0.9824	-3.689	0.9627	A+	A-	A-
ELA	3	484569	7	B-C	2	13265	0.474632492	0.474632492	0.177007162	0.209649453	0.116622691	0.021635884	0.345899805	0.345899805	-0.204857761	-0.091865875	-0.148392359	0.913	0.0192	4.151	1.0305	4.511	1.0451	A+	A-	A-
ELA	3	287708	7	B-V	2	13265	0.69845458	0.69845458	0.17580098	0.044930268	0.073200151	0.006483227	0.337078264	0.337078264	-0.140403901	-0.217448624	-0.189931076	-0.2257	0.0206	2.321	1.0213	3.4311	1.0549	A-	B-	B-
ELA	3	799531	7	B-C	3	13265	0.580173389	0.144666415	0.148511119	0.580173389	0.114662646	0.009800226	0.47339392	-0.188514048	-0.242970148	0.47339392	-0.221157609	0.3948	0.0194	-9.8991	0.9	-9.8991	0.8518	A-	A-	A-
ELA	3	687219	7	B-K	3	13265	0.609800226	0.236788541	0.063550697	0.084206559	0.609800226	0.005050886	0.53512524	-0.310135638	-0.240939012	-0.230767646	0.53512524	0.2458	0.0196	-9.8992	0.8347	-9.8992	0.7743	A+	A-	A-
ELA	3	269604	7	B-K	1	13265	0.453825858	0.243724086	0.09204674	0.453825858	0.205201658	0.004447795	0.41082931	-0.189305489	-0.148624388	0.41082931	-0.187706512	1.0153	0.0193	-6.159	0.9552	-3.509	0.9651	A-	A-	A-
ELA	3	239640	7	B-V	2	13265	0.472672446	0.138183189	0.472672446	0.044327177	0.338484734	0.005653977	0.380794974	-0.293970984	0.380794974	-0.271412578	-0.057377573	0.9226	0.0192	0.211	1.0015	0.851	1.0084	A-	A-	A-
ELA	3	397580	7	B-V	2	13265	0.188164342	0.208292499	0.188164342	0.391632115	0.191330569	0.01944968	0.085441028	0.034598122	0.085441028	0.032451179	-0.134456118	2.5436	0.0239	9.9011	1.1479	9.9017	1.7167	A-	A-	A-
ELA	3	249371	7	B-V	2	13265	0.312551828	0.251865812	0.326724463	0.098077648	0.312551828	0.009800226	0.321483339	-0.158349633	-0.006493337	-0.231368722	0.321483339	1.7473	0.0205	0.451	1.0041	7.3911	1.1104	A-	A-	A-
ELA	3	602993	7	D	2	13411	0.91231079	0.014167474	0.018715979	0.047647454	0.91231079	0.007009172	0.273852758	-0.180755609	-0.149532492	-0.154900252	0.273852758	-1.9474	0.0318	-1.909	0.9559	-2.6391	0.8929	A+	A-	A-
ELA	3	602993	7	D	2	13265	0.914964191	0.012514135	0.020505089	0.046664154	0.914964191	0.005050886	0.286036455	-0.168450378	-0.1628214	-0.161566983	0.286036455	-1.9584	0.0323	-2.049	0.9515	-4.7092	0.8113	A-	B-	A-
ELA	3	937427	7	D	2	13411	0.351427932	0.225561107	0.351427932	0.168145552	0.236447692	0.017150101	0.071560529	0.034204045	0.071560529	-0.083872571	-0.027189517	1.5294	0.0199	9.9013	1.2902	9.9015	1.5436	A+	A+	A+
ELA	3	937427	7	D	2	13265	0.361100641	0.228269883	0.361100641	0.168413117	0.233622314	0.007764795	0.079219324	0.034019726	0.079219324	-0.1024664	-0.021264495	1.4845	0.0199	9.9013	1.2798	9.9015	1.4878	A-	A+	A-
ELA	3	379728	8	D	3	13212	0.865122616	0.055706933	0.044050863	0.02459885	0.865122616	0.009158341	0.35078705	-0.257934191	-0.164260003	-0.157906004	0.35078705	-1.3988	0.027	-4.7891	0.92	-3.4991	0.8865	A+	A-	A-
ELA	3	310434	8	B-C	3	13212	0.563729942	0.172873146	0.112851953	0.563729942	0.142446261	0.0067363	0.434653775	-0.228885651	-0.218471939	0.434653775	-0.151986007	0.5094	0.0196	-5.239	0.9599	-6.1391	0.9302	A-	A-	A-
ELA	3	254273	8	B-C	2	13212	0.419467151	0.099984862	0.419467151	0.077278232	0.379503482	0.022933697	0.248447022	-0.064107532	0.248447022	-0.079925041	-0.147939494	1.2338	0.0197	9.9011	1.1487	9.9013	1.2552	A+	A-	A-
ELA	3	820842	8	B-C	2	13212	0.770965789	0.085755374	0.073266727	0.770965789	0.053966091	0.015667575	0.499519233	-0.278184869	-0.270785472	0.499519233	-0.236059857	-0.6585	0.0225	-9.8992	0.8423	-9.8993	0.7065	A-	A-	A-
ELA	3	661829	8	B-K	2	13212	0.495231608	0.145700878	0.19285498	0.153950954	0.495231608	0.00613079	0.299072526	-0.105426988	-0.135768982	-0.142036325	0.299072526	0.8526	0.0194	9.9011	1.1118	9.9012	1.1551	A+	A-	A+
ELA	3	572043	8	B-K	1	13212	0.848849531	0.848849531	0.025431426	0.031032395	0.0902967	0.004011505	0.378204407	0.378204407	-0.221388358	-0.192901372	-0.21970198	-1.2538	0.0259	-5.5991	0.9138	-4.7091	0.8603	A+	B-	A-
ELA	3	890990	8	B-V	2	13212	0.785270966	0.785270966	0.112700575	0.052073872	0.044504995	0.004768392	0.405711177	0.405711177	-0.184698951	-0.210498432	-0.272466378	-0.7563	0.023	-5.9991	0.9285	-3.9691	0.909	A+	A+	A-
ELA	3	214529	8	B-V	2	13212	0.646987587	0.118604299	0.041855889	0.184831971	0.646987587	0.007114744	0.393978043	-0.227921419	-0.226585015	-0.161827458	0.393978043	0.0768	0.0202	-0.559	0.9951	-0.189	0.9973	A-	A-	A-
ELA	3	733375	8	B-V	2	13212	0.540342113	0.170224039	0.540342113	0.094308205	0.179533757	0.015289131	0.523556962	-0.244900443	0.523556962	-0.212754963	-0.258011266	0.6272	0.0195	-9.8991	0.8708	-9.8992	0.8417	C-	B-	A-
ELA	3	676237	8	D	2	13315	0.795193391	0.092602328	0.795193391	0.065414946	0.039429215	0.006383778	0.463231898	-0.248111795	0.463231898	-0.242966759	-0.260614585	-0.8865	0.0233	-9.8991	0.8726	-9.8992	0.7568	A+	B-	B-
ELA	3	676237	8	D	2	13212	0.7985165	0.091204965	0.7985165	0.061459279	0.040720557	0.006433545	0.460432641	-0.24329769	0.460432641	-0.233703297	-0.269362762	-0.8509	0.0235	-9.8991	0.8726	-9.8992	0.7536	A+	B-	B-
ELA	3	881286	8	D	2	13315	0.513481036	0.513481036	0.217423958	0.092977845	0.161922644	0.013143072	0.362055075	0.362055075	-0.086138966	-0.236357904	-0.194205187	0.7125	0.0194	6.271	1.049	5.2411	1.0579	A+	A-	A-
ELA	3	881286	8	D	2	13212	0.468135029	0.468135029	0.276339691	0.09582198	0.149636694	0.009385407	0.319157879	0.319157879	-0.066787272	-0.228841925	-0.162265182	0.988	0.0195	9.9011	1.0887	9.9011	1.1331	A+	A-	A-
ELA	3	271209	9	D	2	13277	0.506138435	0.506138435	0.217594336	0.111395647	0.155607441	0.008209686	0.357434613	0.357434613	-0.065215331	-0.253702714	-0.187927232	0.78	0.0193	5.941	1.0447	5.4011	1.0565	A+	A-	A-
ELA	3	713629	9	B-C	3	13277	0.480454922	0.174888906	0.480454922	0.11252542	0.216087972	0.014837689	0.287782447	-0.188923885	0.287782447	-0.236706626	0.028431692	0.9152	0.0193	9.9011	1.1144	9.9011	1.1452	A-	A-	A-
ELA	3	256380	9	B-V	2	13277	0.489267154	0.099344731	0.320780297	0.081193041	0.489267154	0.008962868	0.456011277	-0.26303401	-0.18187073	-0.204588615	0.456011277	0.8716	0.0193	-9.3291	0.9323	-6.8591	0.9314	A-	A-	A-
ELA	3	728387	9	B-C	2	13277	0.393613015	0.393613015	0.113203284	0.255102809	0.222866611	0.014611735	0.185199321	0.185199321	-0.203477102	0.060514248	-0.109091637	1.3518	0.0197	9.9012	1.2213	9.9013	1.3047	A-	A-	A-
ELA	3	641713	9	B-C	2	13277	0.446637042	0.300067786	0.12352188	0.446637042	0.119153423	0.009414777	0.399735172	-0.11597461	-0.243887063	0.399735172	-0.178008744	1.0832	0.0194	-1.919	0.9855	0.151	1.0016	A-	A-	A-
ELA	3	465556	9	B-C	1	13277	0.5270769	0.251186262	0.063643895	0.151389621	0.5270769	0.006025458	0.458208724	-0.195021843	-0.241840232	-0.217640857	0.458208724	0.6848	0.0193	-9.8991	0.928	-8.9091	0.9097	A+	A-	A-
ELA	3	408005	9	B-K	2	13277	0.500489568	0.102282142	0.500489568	0.15779167	0.194245688	0.044211795	0.428491953	-0.260779926	0.428491953	-0.108141516	-0.196944737	0.8162	0.0193	-5.329	0.961	-4.379	0.9557	A-	A-	A-
ELA	3	307723	9	B-K	2	13277	0.478346012	0.366046547	0.052722754	0.478346012	0.095955412	0.005950139	0.310727608	-0.084457488	-0.25313283	0.310727608	-0.176407378	0.9256	0.0193	9.9011	1.0819	9.9011	1.1199	A+	A-	A-
ELA	3	908657	9	B-V	2	13277	0.706258944	0.706258944	0.06643067	0.048053024	0.169014085	0.009339459	0.440014918	0.440014918	-0.240306609	-0.273715072	-0.199117772	-0.2508	0.0208	-8.6591	0.9207	-7.3091	0.882	A-	B-	B-
ELA	3	159926	9	D	2	13335	0.757480315	0.065541807	0.090213723	0.082189726	0.757480315	0.003674541	0.527662855	-0.253480457	-0.312244501	-0.256638352	0.527662855	-0.6138	0.022	-9.8992	0.8245	-9.8993	0.6737	A+	C-	B-
ELA	3	159926	9	D	2	13277	0.758831061	0.069217444	0.086615952	0.079310085	0.758831061	0.005196957	0.518052492	-0.264182314	-0.300645826	-0.243324004	0.518052492	-0.5691	0.022	-9.8992	0.8295	-9.8993	0.6823	A+	C-	A-
ELA	3	668900	9	D	2	13335	0.547581552	0.547581552	0.179527559	0.157030371	0.10063742	0.014773153	0.381632943	0.381632943	-0.194734729	-0.172630614	-0.155399537	0.5451	0.0194	3.681	1.0285	2.271	1.0249	A+	A-	A-
ELA	3	668900	9	D	2	13277	0.553588913	0.553588913	0.183625819	0.161030353	0.090231227	0.010469233	0.352309057	0.352309057	-0.181608594	-0.161092963	-0.141208985	0.5533	0.0194	5.811	1.0442	4.391	1.0483	A+	A-	A-
ELA	4	145770	0	D	2	123378	0.701267649	0.155222163	0.05304025	0.087065765	0.701267649	0.00233429	0.437462634	-0.237903795	-0.208375599	-0.227399072	0.437462634	-0.292	0.0068	-9.8991	0.9297	-9.8991	0.9029			
ELA	4	183677	0	D	2	123378	0.613237368	0.139368445	0.613237368	0.075929258	0.167396132	0.002885441	0.359955855	-0.287802749	0.359955855	-0.140088303	-0.092408672	0.1893	0.0065	9.901	1.0373	9.9011	1.0603			
ELA	4	554826	0	D	2	123378	0.664364798	0.151639676	0.664364798	0.094433367	0.087106291	0.000786202	0.346849286	-0.183527768	0.346849286	-0.18505327	-0.148267503	-0.1251	0.0067	9.901	1.0466	9.9011	1.0654			
ELA	4	423678	0	D	3	123378	0.608341844	0.608341844	0.14171084	0.152125987	0.093241907	0.002844916	0.475186779	0.475186779	-0.127030773	-0.319680575	-0.237209144	0.1862	0.0065	-9.8991	0.9199	-9.8991	0.8873			
ELA	4	372865	0	A-V	2	123378	0.454359772	0.349341049	0.454359772	0.076739775	0.116414596	0.001815559	0.303770667	-0.08818735	0.303770667	-0.215101051	-0.153912341	0.9585	0.0064	9.9011	1.1024	9.9012	1.1654			
ELA	4	164638	0	A-V	2	123378	0.666634246	0.06921007	0.035792443	0.666634246	0.225177909	0.001596719	0.336522794	-0.263363003	-0.24772418	0.336522794	-0.102532834	-0.1744	0.0067	9.9011	1.0606	9.9012	1.1597			
ELA	4	410676	0	A-K	2	123378	0.541579536	0.090940038	0.190252719	0.541579536	0.169876315	0.006062669	0.388875764	-0.299848283	-0.060915664	0.388875764	-0.21135072	0.5364	0.0064	7.651	1.0191	9.901	1.046			
ELA	4	708984	0	A-K	2	123378	0.661276727	0.135332069	0.076188624	0.11964856	0.661276727	0.006070774	0.45928838	-0.222828074	-0.244952432	-0.21989215	0.45928838	-0.0827	0.0066	-9.8991	0.9255	-9.8991	0.9146			
ELA	4	514501	0	A-C	2	123378	0.589537843	0.589537843	0.195739921	0.12436577	0.081975717	0.007278445	0.402824511	0.402824511	-0.195930084	-0.181854733	-0.206341825	0.2678	0.0064	1.331	1.0035	2.491	1.0097			
ELA	4	887518	0	B-C	2	123378	0.567913242	0.043046572	0.567913242	0.193405631	0.191484706	0.002966493	0.31984368	-0.197866368	0.31984368	-0.137447494	-0.15097225	0.4439	0.0064	9.9011	1.0897	9.9011	1.119			
ELA	4	628366	0	B-V	2	123378	0.766822286	0.121820746	0.05654979	0.766822286	0.050989642	0.003112386	0.495246413	-0.342964218	-0.232374566	0.495246413	-0.178047406	-0.7451	0.0073	-9.8991	0.8694	-9.8992	0.7543			
ELA	4	438114	0	B-V	2	123378	0.648024769	0.183103957	0.084812527	0.079511744	0.648024769	0.002966493	0.295327203	-0.140863836	-0.144044468	-0.156592737	0.295327203	-0.1808	0.0067	9.9011	1.1386	9.9013	1.2883			
ELA	4	305930	0	B-K	2	123378	0.533344681	0.059799964	0.154055018	0.533344681	0.24587852	0.005260257	0.489589496	-0.250576786	-0.248419501	0.489589496	-0.207225721	0.56	0.0064	-9.8991	0.9115	-9.8991	0.8962			
ELA	4	616861	0	B-K	2	123378	0.421112354	0.346560975	0.421112354	0.185940767	0.041117541	0.004028271	0.198627255	-0.090344834	0.198627255	-0.024239167	-0.206243482	1.2734	0.0065	9.9012	1.246	9.9014	1.3664			
ELA	4	711879	0	B-K	2	123378	0.724975279	0.083232019	0.06665694	0.121139911	0.724975279	0.003007019	0.32671556	-0.113982812	-0.142980535	-0.228394612	0.32671556	-0.4991	0.007	9.9011	1.0532	9.9011	1.1436			
ELA	4	369011	0	B-C	2	123378	0.731994359	0.731994359	0.06099953	0.046774952	0.15534374	0.003695959	0.404999514	0.404999514	-0.216553722	-0.244202374	-0.196578836	-0.5235	0.0071	-9.899	0.9642	-1.249	0.9924			
ELA	4	644977	0	B-V	2	123378	0.776143235	0.776143235	0.085574414	0.050624909	0.081059832	0.005252152	0.420052593	0.420052593	-0.227406496	-0.263091847	-0.171821594	-0.811	0.0074	-9.8991	0.9375	-9.8991	0.9119			
ELA	4	179070	0	B-C	2	123378	0.593720112	0.221579212	0.081100358	0.098672373	0.593720112	0.004198479	0.533066499	-0.197687922	-0.302789675	-0.305754833	0.533066499	0.2822	0.0064	-9.8991	0.8635	-9.8992	0.8198			
ELA	4	893974	0	B-C	3	123378	0.525239508	0.270396667	0.107028806	0.525239508	0.092844754	0.003817536	0.45511304	-0.147417449	-0.302166653	0.45511304	-0.215904503	0.5977	0.0063	-9.8991	0.9462	-9.8991	0.937			
ELA	4	195957	0	B-K	1	123378	0.471923682	0.471923682	0.135664381	0.229830278	0.148324661	0.012830488	0.309879068	0.309879068	-0.131322367	-0.090217237	-0.17168576	0.7264	0.0063	9.9011	1.1054	9.9011	1.1446			
ELA	4	563603	0	B-C	3	123378	0.582235082	0.066340839	0.219642076	0.124535979	0.582235082	0.00633014	0.450682247	-0.265397904	-0.162606713	-0.250172654	0.450682247	0.3599	0.0064	-9.899	0.954	-9.8991	0.9342			
ELA	4	154565	0	B-C	3	123378	0.520303458	0.171570296	0.131757688	0.520303458	0.168328227	0.006702978	0.293307356	-0.148129417	-0.095477034	0.293307356	-0.140426765	0.6587	0.0063	9.9011	1.1273	9.9012	1.1696			
ELA	4	266657	0	D	2	123378	0.858645788	0.046345378	0.027573798	0.062328778	0.858645788	0.003655433	0.375926903	-0.232157399	-0.213484757	-0.17700551	0.375926903	-1.3698	0.0085	-9.8991	0.8705	-9.8992	0.8461			
ELA	4	315309	0	D	2	123378	0.391155636	0.244978845	0.151931463	0.391155636	0.206908849	0.003371752	0.404986636	-0.096424362	-0.112325218	0.404986636	-0.273737108	1.2602	0.0065	-9.899	0.9741	2.471	1.0098			
ELA	4	959806	0	D	2	123378	0.444771353	0.444771353	0.192741007	0.166909822	0.169965472	0.001272512	0.283494941	0.283494941	-0.122986484	-0.039331092	-0.175135374	0.99	0.0064	9.9011	1.1224	9.9012	1.1829			
ELA	4	365387	0	D	2	123378	0.62528976	0.62528976	0.128434567	0.180161779	0.064314546	0.000607888	0.362248051	0.362248051	-0.138906517	-0.213859881	-0.184009168	0.0598	0.0065	9.901	1.0456	9.9011	1.0702			
ELA	4	419418	0	A-K	2	123378	0.465690804	0.206998006	0.465690804	0.091458769	0.226977257	0.007481074	0.447018458	-0.148152651	0.447018458	-0.23323593	-0.210801212	0.9	0.0064	-9.899	0.9582	-6.839	0.9763			
ELA	4	117110	0	A-K	2	123378	0.376785164	0.220898377	0.128539934	0.376785164	0.267778696	0.004068797	0.198079235	-0.068305821	-0.246200756	0.198079235	0.047483399	1.338	0.0065	9.9012	1.2169	9.9014	1.3703			
ELA	4	563694	0	A-K	2	123378	0.476956994	0.476956994	0.221368477	0.191581968	0.104078523	0.004814473	0.337292547	0.337292547	-0.140985317	-0.118446936	-0.186659131	0.9291	0.0064	9.9011	1.077	9.9011	1.1341			
ELA	4	331122	0	A-V	2	123378	0.648381397	0.648381397	0.147943718	0.069274911	0.128053624	0.005195416	0.468827535	0.468827535	-0.195488883	-0.282806869	-0.227022195	-0.0101	0.0066	-9.8991	0.9266	-9.8991	0.8847			
ELA	4	719801	0	A-V	2	123378	0.398126084	0.122477265	0.398126084	0.258725218	0.215322019	0.004166059	0.424183831	-0.125454977	0.424183831	-0.133334021	-0.248877808	1.267	0.0065	-9.899	0.9624	4.721	1.0188			
ELA	4	588781	0	D	2	123378	0.431665289	0.174147741	0.063042033	0.326395305	0.431665289	0.001142829	0.376906064	-0.144527769	-0.184141256	-0.178958979	0.376906064	0.9719	0.0064	6.191	1.0154	9.901	1.0418			
ELA	4	242721	1	D	2	13836	0.728606534	0.145490026	0.053555941	0.728606534	0.067577334	0.002529633	0.358979069	-0.193630107	-0.224211719	0.358979069	-0.152910703	-0.4731	0.0208	-0.219	0.9978	-0.339	0.9937	A+	A-	A-
ELA	4	456958	1	B-K	3	68601	0.580822437	0.153656652	0.189384994	0.072593694	0.580822437	0.002929986	0.312190457	-0.130216931	-0.091162088	-0.266268343	0.312190457	0.3238	0.0086	9.9011	1.1012	9.9012	1.1752	A-	A-	A-
ELA	4	183287	1	B-C	2	68601	0.707234588	0.064284777	0.122184808	0.707234588	0.10233087	0.0026676	0.348147304	-0.251214815	-0.207099265	0.348147304	-0.083488126	-0.3476	0.0092	6.071	1.0261	6.061	1.0457	A+	A-	A+
ELA	4	897884	1	B-V	2	68601	0.530065159	0.381597936	0.530065159	0.048235448	0.035130683	0.002099095	0.433791734	-0.269983507	0.433791734	-0.174372756	-0.23607737	0.5735	0.0085	-8.439	0.9722	-6.619	0.9689	A-	A-	B-

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
ELA	4	873018	1 B-V	2	68601	0.467194356	0.233786679	0.207023221	0.467194356	0.087506013	0.002142826	0.249068953	-0.204504699	0.037814449	0.249068953	-0.173116828	0.8836	0.0085	9.9012	1.1723	9.9013	1.255	A+	A-	A-	
ELA	4	939015	1 B-K	2	68601	0.753720791	0.090698386	0.753720791	0.115829215	0.03806067	0.000830892	0.475058994	-0.282557572	0.475058994	-0.255031134	-0.209083543	-0.628	0.0096	-9.8991	0.873	-9.8992	0.8161	A+	B-	A-	
ELA	4	152756	1 B-K	2	68601	0.634189006	0.634189006	0.129254676	0.099386306	0.134458681	0.001297357	0.432926158	0.432926158	-0.191259798	-0.206652865	-0.235147158	0.049	0.0088	-9.899	0.9611	-9.8991	0.9391	A+	A-	A-	
ELA	4	759551	1 A-K	2	13836	0.578707719	0.179676207	0.159439144	0.578707719	0.080008673	0.001228679	0.464148716	-0.284180429	-0.179482845	0.464148716	-0.195067641	0.3243	0.0191	-8.5491	0.9367	-6.2491	0.9297	A+	A-	A-	
ELA	4	742238	1 A-V	2	13836	0.635732871	0.635732871	0.174761492	0.066420931	0.120049147	0.001590055	0.399559189	0.399559189	-0.201363501	-0.286186212	-0.129852409	0.0304	0.0195	-0.329	0.9973	0.531	1.0071	C-	A-	A-	
ELA	4	944380	1 A-C	3	13836	0.679387106	0.117085863	0.679387106	0.117230413	0.082971957	0.002095981	0.475572805	-0.234636312	0.475572805	-0.237886819	-0.24061215	-0.2057	0.02	-9.8991	0.9057	-9.8992	0.8443	A+	A-	A-	
ELA	4	192612	1 A-C	3	13836	0.649176062	0.217331599	0.088609425	0.043798786	0.649176062	0.00014455	0.44618367	-0.212252384	-0.264495613	-0.237906536	0.446183367	-0.0411	0.0197	-8.1591	0.9336	-4.2791	0.9415	A+	A-	A-	
ELA	4	592124	1 A-K	2	13836	0.306374675	0.086802544	0.279921943	0.306374675	0.310422087	0.013226366	0.129353072	-0.226519397	-0.03415701	0.129353072	0.046617593	1.722	0.0203	9.9012	1.2432	9.9015	1.5154	A-	A-	A-	
ELA	4	199217	1 A-K	2	13836	0.49833767	0.49833767	0.096487424	0.214079214	0.186397803	0.003830587	0.374194468	0.374194468	-0.30133577	-0.124372266	-0.113917713	0.7248	0.0189	4.571	1.0336	5.3311	1.0564	A-	A-	A-	
ELA	4	378167	1 A-V	2	13836	0.6613183	0.137395201	0.060422087	0.127782596	0.6613183	0.011853137	0.501113655	-0.242778758	-0.217353648	-0.285283856	0.501113655	-0.1065	0.0198	-9.8991	0.8848	-9.8992	0.8268	A+	A-	A-	
ELA	4	133567	1 A-V	2	13836	0.697600463	0.697600463	0.055362822	0.163920208	0.081020526	0.001373229	0.508004429	0.508004429	-0.272119314	-0.24513286	-0.284255976	-0.3083	0.0203	-9.8991	0.8714	-9.8992	0.7868	A+	A-	A-	
ELA	4	648607	1 D	3	13836	0.713934663	0.130818156	0.110291992	0.040763226	0.713934663	0.002818734	0.463874461	-0.233170458	-0.266737596	-0.230579199	0.463874461	-0.4029	0.0206	-9.8591	0.9087	-9.8992	0.8289	A+	A-	A-	
ELA	4	648607	1 D	3	13668	0.724319579	0.122110038	0.100014633	0.047117354	0.724319579	0.005340942	0.475025505	-0.237039076	-0.269139914	-0.244674284	0.475025505	-0.462	0.0209	-9.8991	0.8998	-9.8992	0.8257	A+	A-	A-	
ELA	4	884771	1 D	2	13836	0.657849089	0.09518647	0.157632264	0.083694709	0.657849089	0.005131541	0.384959506	-0.158739792	-0.22125905	-0.18386548	0.384959506	-0.0878	0.0198	0.851	1.0072	0.301	1.0042	A+	A-	A-	
ELA	4	235248	2 D	2	13708	0.761161366	0.066676393	0.761161366	0.05741173	0.108476802	0.003209804	0.371077343	-0.180684984	0.371077343	-0.243132214	-0.164569422	-0.6756	0.0217	-2.999	0.9675	0.051	1.0008	A+	A+	A+	
ELA	4	989656	2 A-C	3	13708	0.774584184	0.774584184	0.084986869	0.082725416	0.048365918	0.008097461	0.487069248	0.487069248	-0.226269301	-0.295791039	-0.245658439	-0.7899	0.0222	-9.8991	0.8604	-9.8992	0.7578	A+	A-	A-	
ELA	4	385074	2 A-V	1	13708	0.872410271	0.872410271	0.040049606	0.049241319	0.036693901	0.000656551	0.340596486	0.340596486	-0.193335233	-0.180887149	-0.188443862	-1.5814	0.0271	-3.4491	0.9404	-3.7791	0.8782	A+	A-	A-	
ELA	4	911577	2 A-K	2	13708	0.668733586	0.240370587	0.040997957	0.047709367	0.668733586	0.000875401	0.311990497	-0.093257234	-0.241227657	-0.270686027	0.311990497	-0.152	0.02	7.8911	1.0709	9.9012	1.1523	B+	A-	A-	
ELA	4	508792	2 A-V	2	13708	0.655091917	0.131747884	0.079442661	0.126203677	0.655091917	0.00685731	0.366440604	-0.162182323	-0.207515337	-0.173995239	0.366440604	-0.0776	0.0199	3.311	1.0285	2.881	1.0408	A-	A-	A-	
ELA	4	279432	2 A-K	3	13708	0.653195214	0.102057193	0.653195214	0.095126933	0.145024803	0.003209804	0.43537608	-0.230339813	0.43537608	-0.254265241	-0.163505068	-0.0674	0.0198	-5.109	0.957	-4.0891	0.9442	A+	A-	A-	
ELA	4	757052	2 A-V	2	13708	0.401809163	0.305442078	0.401809163	0.187992413	0.099503939	0.003355705	0.271585449	0.041203735	0.271585449	-0.21446104	-0.208527495	1.2045	0.0193	9.9011	1.1269	9.9012	1.242	A-	A-	A-	
ELA	4	713204	2 A-V	2	13708	0.424277794	0.238109133	0.234607528	0.424277794	0.099358039	0.002626204	0.267972858	0.008053013	-0.170610296	0.267972858	-0.203333308	1.0903	0.0192	9.9011	1.1295	9.9012	1.2284	A-	B-	A-	
ELA	4	490789	2 A-V	2	13708	0.712868398	0.098190837	0.081922965	0.712868398	0.101838343	0.003647505	0.46728309	-0.287549265	-0.272189895	0.46728309	-0.151686159	-0.4025	0.0207	-9.8991	0.9019	-7.7091	0.8743	A-	A-	A-	
ELA	4	479345	2 D	3	13708	0.410417275	0.241173038	0.410417275	0.227458418	0.112562008	0.005325357	0.353520786	-0.189327699	0.353520786	-0.157812368	-0.066546108	1.1606	0.0193	5.251	1.0405	8.2511	1.0967	A-	A-	A-	
ELA	4	479345	2 D	3	13667	0.451891417	0.232530914	0.451891417	0.202458477	0.10565596	0.004097461	0.351655989	-0.209113294	0.351655989	-0.162802232	-0.051504883	0.9388	0.0191	5.921	1.0439	7.9311	1.085	A-	A-	A-	
ELA	4	485812	2 D	2	13708	0.495841844	0.495841844	0.287788153	0.058578932	0.151590312	0.005544208	0.302955068	0.302955068	-0.190349422	-0.183372407	-0.0474898	0.7336	0.019	9.9011	1.1073	9.9011	1.1403	A-	B-	A-	
ELA	4	485812	2 D	2	13667	0.493085534	0.493085534	0.282871149	0.055315724	0.161630204	0.006073023	0.301005119	0.301005119	-0.191781472	-0.214095946	-0.029039819	0.7352	0.019	9.9011	1.1062	9.9011	1.1368	A+	B-	A-	
ELA	4	382140	3 A-V	2	13668	0.665496049	0.181372549	0.089698566	0.061311092	0.665496049	0.001243781	0.463804434	-0.261227483	-0.233858187	-0.20419813	0.463804434	-0.1264	0.02	-9.2591	0.9217	-9.7991	0.8677	B-	B-	A-	
ELA	4	978740	3 A-V	2	13668	0.620793093	0.039581504	0.184884402	0.620793093	0.150131694	0.002780217	0.267825063	-0.239366919	-0.087153131	0.267825063	-0.130579943	0.1114	0.0195	9.9011	1.1332	9.9012	1.1969	A+	A-	A-	
ELA	4	648607	3 D	3	13836	0.713934663	0.130818156	0.110291992	0.040763226	0.713934663	0.002818734	0.463874461	-0.233170458	-0.266737596	-0.230579199	0.463874461	-0.4029	0.0206	-9.8591	0.9087	-9.8992	0.8289	A+	A-	A-	
ELA	4	648607	3 D	3	13668	0.724319579	0.122110038	0.100014633	0.047117354	0.724319579	0.005340942	0.475025505	-0.237039076	-0.269139914	-0.244674284	0.475025505	-0.462	0.0209	-9.8991	0.8998	-9.8992	0.8257	A+	A-	A-	
ELA	4	894824	3 D	2	13668	0.659130817	0.179836114	0.095917471	0.659130817	0.059774656	0.004536143	0.444275824	-0.250056992	-0.209486104	0.444275824	-0.206242693	-0.0919	0.0199	-6.1791	0.9479	-5.8791	0.9207	A-	A-	A-	
ELA	4	930248	4 D	2	13667	0.790005122	0.059120509	0.052388966	0.790005122	0.093509914	0.002560913	0.448995998	-0.224501581	-0.187681929	0.448995998	-0.288539417	-0.8922	0.0227	-9.8991	0.8797	-8.9992	0.8115	A+	B-	A-	
ELA	4	636370	4 A-V	2	13667	0.611253384	0.130313895	0.209409527	0.611253384	0.045364747	0.002268237	0.325235673	-0.222537886	-0.081903715	0.325235673	-0.224332447	0.1441	0.0194	8.1211	1.0659	9.9012	1.1632	A-	A-	A-	
ELA	4	486890	4 A-C	3	13667	0.697153728	0.697153728	0.109314407	0.104412088	0.086412527	0.001682886	0.406970189	0.406970189	-0.186031062	-0.21223663	-0.22000824	-0.3196	0.0204	-4.179	0.9615	-0.829	0.9869	A-	A-	A-	
ELA	4	562199	4 A-C	3	13667	0.774054291	0.098778079	0.774054291	0.065559377	0.052681642	0.007902246	0.542942015	-0.276298418	0.542942015	-0.293300077	-0.291562353	-0.7934	0.0222	-9.8992	0.804	-9.8994	0.6425	A+	A-	A-	
ELA	4	154449	4 A-K	2	13667	0.758322968	0.062632619	0.758322968	0.097461038	0.078363942	0.001609717	0.536542493	-0.281683762	0.536542493	-0.295529427	-0.263355993	-0.6898	0.0217	-9.8992	0.8109	-9.8993	0.6981	A-	B-	A-	
ELA	4	385120	4 A-K	2	13667	0.81100461	0.058974171	0.096948855	0.027584693	0.81100461	0.004682813	0.486012482	-0.280035408	-0.293155563	-0.213087626	0.486012482	-1.0562	0.0235	-9.8992	0.8394	-9.8993	0.6793	A+	A-	A-	
ELA	4	659392	4 A-V	2	13667	0.563986244	0.118241019	0.075437184	0.563986244	0.24043316	0.001243872	0.358050992	-0.20354004	-0.157179773	0.358050992	-0.160622341	0.384	0.0191	6.341	1.0484	4.8311	1.0532	A-	A-	A-	
ELA	4	121518	4 A-V	2	13667	0.269773908	0.184605254	0.223823809	0.317333724	0.269773908	0.002926758	0.217833498	-0.0754044	-0.105538649	-0.042827708	0.217833498	1.9137	0.021	9.9011	1.1385	9.9013	1.335	A-	A-	A-	
ELA	4	301901	4 A-V	1	13667	0.872539694	0.872539694	0.059705861	0.030291944	0.034169898	0.002121899	0.40228791	0.40228791	-0.235257366	-0.212193641	-0.214440825	-1.588	0.0271	-7.5491	0.8724	-9.3893	0.7196	A+	B-	B-	
ELA	4	479345	4 D	3	13708	0.410417275	0.241173038	0.410417275	0.227458418	0.112562008	0.005325357	0.353520786	-0.189327699	0.353520786	-0.157812368	-0.066546108	1.1606	0.0193	5.251	1.0405	8.2511	1.0967	A-	A-	A-	
ELA	4	479345	4 D	3	13667	0.451891417	0.232530914	0.451891417	0.202458477	0.10565596	0.004097461	0.351655989	-0.209113294	0.351655989	-0.162802232	-0.051504883	0.9388	0.0191	5.921	1.0439	7.9311	1.085	A-	A-	A-	
ELA	4	485812	4 D	2	13708	0.495841844	0.495841844	0.287788153	0.058578932	0.151590312	0.005544208	0.302955068	0.302955068	-0.190349422	-0.183372407	-0.0474898	0.7336	0.019	9.9011	1.1073	9.9011	1.1403	A-	B-	A-	
ELA	4	485812	4 D	2	13667	0.493085534	0.493085534	0.282871149	0.055315724	0.161630204	0.006073023	0.301005119	0.301005119	-0.191781472	-0.214095946	-0.029039819	0.7352	0.019	9.9011	1.1062	9.9011	1.1368	A+	B-	A-	
ELA	4	157551	5 D	2	13722	0.674974494	0.099912549	0.674974494	0.134965748	0.083296895	0.004081038	0.466609238	-0.224014142	0.466609238	-0.211137855	-0.27191803	-0.1229	0.0203	-8.0891	0.9277	-6.6691	0.9005	A+	A-	B-	
ELA	4	890099	5 A-C	3	13722	0.563839091	0.563839091	0.221542049	0.107491619	0.102463198	0.003352281	0.299662327	0.299662327	-0.048382934	-0.29507437	-0.109582895	0.4413	0.0194	9.9011	1.148	9.9012	1.2193	A+	A-	A-	
ELA	4	642954	5 A-V	2	13722	0.593645241	0.153767672	0.593645241	0.073312928	0.173589856	0.004518292	0.456598079	-0.192700998	0.456598079	-0.269615718	-0.210845397	0.2867	0.0195	-4.189	0.966	-2.559	0.9683	A-	A-	A-	
ELA	4	708323	5 A-K	2	13722	0.574114561	0.137735024	0.150196764	0.574114561	0.125346159	0.012097362	0.533532176	-0.289921499	-0.187729071	0.533532176	-0.277331729	0.3883	0.0194	-9.8991	0.8774	-9.8991	0.8577	A-	A-	A-	
ELA	4	518577	5 A-V	2	13722	0.90161784	0.029441772	0.03133654	0.036802215	0.90161784	0.000437254	0.43003101	-0.258712705	-0.243370788	-0.215949694	0.43003101	-1.9152	0.0303	-8.6692	0.8285	-9.8994	0.5736	A-	A-	B-	
ELA	4	748560	5 A-V	2	13722	0.885220813	0.039644367	0.885220813	0.044235534	0.027765632	0.001894768	0.442568583	-0.263115848	0.442568583	-0.234797595	-0.233532733	-1.721	0.0285	-9.0392	0.8386	-9.8994	0.5677	A+	A-	A-	
ELA	4	822423	5 A-V	2	13722	0.718044017	0.080381869	0.045911675	0.718044017	0.152601662	0.001967643	0.452185667	-0.257585575	-0.146387057	0.452185667	-0.276251744	-0.4085	0.0211	-6.0791	0.9396	-6.7491	0.8818	A-	A-	A-	
ELA	4	469653	5 A-V	2	13722	0.871228684	0.871228684	0.03891561	0.022664335	0.062381577	0.003498032	0.471031557	0.471031557	-0.223079982	-0.21008845	-0.332656181	-1.5717	0.0273	-9.8992	0.8207	-9.8994	0.5665	A+	B-	B-	
ELA	4	924512	5 A-V	2	13722	0.710537822	0.108803381	0.113030171	0.065660982	0.710537822	0.000874508	0.579663985	-0.331047353	-0.290371518	-0.263291129	0.579663985	-0.3631	0.0209	-9.8992	0.7966	-9.8993	0.6915	A-	B-	B-	
ELA	4	148534	5 D	3	13722	0.80760822	0.066316863	0.047442064	0.80760822	0.070835155	0.006850313	0.419849731	-0.181933877	-0.221169615	0.419849731	-0.276434755	-1.0145	0.0236	-6.6991	0.9143	-1.469	0.9622	A+	A-	A-	
ELA	4	148534	5 D	3	13688	0.809687317	0.066846873	0.044929866	0.809687317	0.073202805	0.004529515	0.405672993	-0.179241892	-0.205834179	0.405672993	-0.269671414	-1.0067	0.0234	-7.0091	0.9105	-4.2691	0.9024	A+	A-	A-	
ELA	4	289181	5 D	2	13722	0.633653986	0.633653986	0.175047369	0.118495846	0.06704562	0.005319924	0.447903496	0.447903496	-0.145477914	-0.288355944	-0.254129236	0.0738	0.0199	-2.769	0.9762	-2.969	0.9594	A+	B-	A-	
ELA	4	105756	6 D	2	13704	0.722489784	0.063047285	0.046993579	0.722489784	0.161120841	0.003721541	0.406511431	-0.18069003	-0.211754582	0.406511431	-0.245230169	-0.4348	0.0209	-3.639	0.9644	-3.2491	0.944	A+	A-	A-	
ELA	4	511906	6 A-C	2	54777	0.607773336	0.146064954	0.162677766	0.607773336	0.07902952	0.002628841	0.398417261	-0.177984969	-0.164612219	0.398417261	-0.248442604	0.1863	0.0097	0.591	1.0023	-1.449	0.9913	A-	A-	A+	
ELA	4	308009	6 A-K	2	54777	0.578052832	0.578052832	0.139529365	0.217828651	0.059039378	0.00206291	0.477551256	0.477551256	-0.198877364	-0.267234415	-0.22291603	0.3351	0.0096	-9.8991	0.9228	-9.8991	0.9088	A+	A-	A-	
ELA	4	157955	6 A-K	2	54777	0.625116381	0.625116381	0.258374865	0.048779597	0.063366011	0.002208956	0.253945345	0.253945345	-0.041959907	-0.216684408	-0.221018263	0.0969	0.0098	9.9011	1.1494	9.9012	1.2138	A-	A-	A-	
ELA	4	531992	6 A-K	2	54777	0.519634153	0.066889388	0.519634153	0.271044416	0.138561805	0.003322562	0.364113766	-0.232304587	0.364113766	-0.209807543	-0.081197256	0.6247	0.0095	9.901	1.0446	9.9011	1.0952	A+	A-	A-	
ELA	4	991977	6 A-V	2	54777	0.910728956	0.034959928	0.027621082	0.910728956	0.024934774	0.000949304	0.369514928	-0.252198417	-0.217852846	0.369514928	-0.136893092	-1.987	0.0155	-9.8991	0.8565	-9.8993	0.6846	A+	A-	A-	
ELA	4	752294	6 A-V	1	54777	0.562535371	0.191832338	0.168592658	0.073424978	0.562535371	0.001898607	0.498546715	-0.300979382	-0.208333918	-0.183466849	0.498546715	0.4138	0.0096	-9.8991	0.9032	-9.8991	0.8695	A-	B-	B-	
ELA	4	233184	6 B-C	3	13704	0.35880035	0.415718039	0.11872446	0.097854641	0.35880035	0.007370111	0.235847312	0.08193943	-0.191885069	-0.289171682	0.235847312	1.4426	0.0197	9.9011	1.1478	9.9013	1.3407	A+	A-	A-	
ELA	4	815999	6 B-C	2	13704	0.658129013	0.658129013	0.115805604	0.01003561	0.114200234	0.007807939	0.508021691	0.508021691	-0.237517054	-0.247754873	-0.262238845	-0.0903	0.02	-9.8991	0.885	-9.8992	0.8142	A-	A-	A-	
ELA	4	297510	6 B-V	2	13704	0.743505546	0.103692353	0.056333917	0.743505546	0.093768243	0.001094571	0.461545822	-0.272950511	-0.235646539	0.461545822	-0.210282416	-0.5878	0.0214	-8.9391	0.9085	-8.9992	0.8365	A+	A-	A-	
ELA	4	767949	6 B-C	3	13704	0.759997081	0.759997081	0.069322825	0.064068885	0.102378867	0.001897256	0.505006987	0.505006987	-0.254572382	-0.279179224	-0.25791378	-0.6936	0.0218	-9.8992	0.8497	-9.8993	0.7486	A+	A-	A-	
ELA	4	134245	6 B-V	2	13704	0.815820198	0.067790426	0.038455925	0.815820198	0.077057793	0.000364857	0.50826818	-0.307774468	-0.219843871	0.50826818	-0.284688944	-1.0892	0.0238	-9.8992	0.8242	-9.8994	0.642	A-	B-	B-	
ELA	4	534001	6 B-K	2	13704	0.754670169	0.057136602	0.112667834	0.07114711	0.754670169	0.002408056	0.511781428	-0.255316031	-0.286327263	-0.257176576	0.511781428	-0.659	0.0217	-9.8992	0.8468	-9.8993	0.7264	A-	B-	A-	
ELA	4	183209	6 B-V	2	13704	0.781815528	0.089098074	0.781815528	0.068739054	0.057939288	0.001751313	0.472296312	-0.225688217	0.472296312	-0.212759332	-0.317092541	-0.8403	0.0225	-9.8991	0.8766	-9.8992	0.7774	A-	A-	A-	
ELA	4	623059	6 B-V	1	13704	0.559252773	0.286485698	0.559252773	0.080122592	0.069395797	0.002991827	0.185986093	-0.001253647	0.185986093	-0.134757233	-0.197917869	0.4257	0.0192	9.9012	1.2495	9.9014	1.3568	A-	B-	A-	
ELA	4	920319	6 D	2	13704	0.492483946	0.14433742	0.217162872	0.492483946	0.138718622	0.006567426	0.343181963	-0.144537312	-0.137405429	0.343181963	-0.172353747	0.7598	0.0191	9.9011	1.0781	9.9011	1.1135	A+	A-	A-	
ELA	4	920319	6 D	2	13701	0.490475148	0.140281731	0.224363185	0.490475148	0.137362236	0.006641851	0.329949655	-0.125546218	-0.131657048	0.329949655	-0.17689175	0.7693	0.0191	9.9011	1.0855	9.9011	1.1138	A+	A-	A-	
ELA	4	833950	6 D	3	13704	0.505691769	0.255472855	0.505691769	0.107486865	0.124416229	0.005326912	0.495009406	-0.286240043	0.495009406	-0.137568766	-0.231260533	0.694	0.0191	-9.8991	0.9059	-9.8991	0.897	A+	A-	A-	
ELA	4	833950	6 D	3	13701	0.50237209	0.249324867	0.50237209	0.122034888	0.120356178	0.004744179	0.502620909	-0.280115372	0.502620909	-0.151236271	-0.23868976	0.7101	0.0191	-9.8991	0.8937	-9.8991	0.8773	A+	A-	A-	
ELA	4	336962	7 D	2	13688	0.441846873	0.32663647	0.103229106	0.441846873	0.123100526	0.002118644	0.230684242	-0.060665142	-0.142069761	0.230684242	-0.127967162	1.0015	0.019	9.9012	1.161	9.9012	1.2198	A+	A-	A-	
ELA	4	573301	7 B-C	2	13688	0.507963179	0.194038574	0.507963179	0.152542373	0.132963179	0.011177674	0.424697454	-0.130154848	0.424697454	-0.217592125	-0.222197644	0.6871	0.0189	-4.909	0.9654	-2.579	0.9751	A-	A-	A-	
ELA	4	932981	7 B-K	2	13688	0.338690824	0.263807715	0.308153127	0.338690824	0.08635301	0.001899474	0.061555365	-0.107629248	0.170786549	0.061555365	-0.203620945	1.5379	0.0198	9.9013	1.302	9.9015	1.5402	A+	A-	A-	
ELA	4	407154	7 B-C	3	13688	0.218366452	0.218366452	0.21179135	0.474503214	0.090371128	0.002703098	0.15176191	0.15176191	-0.171351153	0.156325085	-0.231206053	2.2543	0.0223	9.9011	1.126	9.9016	1.5621	A-	A-	A-	
ELA	4	869572	7 B-K	2	13688	0.647428404	0.07817066	0.17182934	0.647428404	0.097749854	0.004091175	0.355786651	-0.208315412	-0.100674439	0.355786651	-0.242701255	-0.0136	0.0197	2.281	1.0191	9.9011	1.1377	A+	A-	A-	
ELA	4	477594	7 B-K	2	13688	0.51789889	0.22041204	0.51789889	0.147209234	0.109438925	0.003433665	0.389950018	-0.195220779	0.389950018	-0.136200499	-0.197515383	0.6385	0.0189	0.471	1.0033	1.591	1.0155	A-	A-	A-	
ELA	4	710663	7 B-V	2	13688	0.720338983	0.101914085	0.051285798	0.124853887	0.720338983	0.000730567	0.438352127	-0.275565435	-0.216814112	-0.192334002	0.438352127	-0.4193	0.0208	-8.1491	0.9222	-6.9991	0.8889	A+	A-	A-	
ELA	4	960082	7 B-V	2	13688	0.515634132	0.515634132	0.088106371	0.080362361	0.310344828	0.003141438	0.261303596	0.261303596	-0.238211112	-0.284078394	0.042424038	0.6496	0.0189	9.9011	1.1375	9.9012	1.177	A-	A-	A-	
ELA	4	516849	7 B-V	2	13688	0.72041204	0.072837522	0.089640561	0.112361192	0.72041204	0.002630041	0.51523934	-0.292176338	-0.279377094	-0.225444265	0.51523934	-0.4197	0.0208	-9.8991	0.8531	-9.8992	0.7695	A-	A-	A-	
ELA	4	148534	7 D	3	13722	0.80760822	0.066316863	0.047442064	0.80760822	0.070835155	0.006850313	0.419849731	-0.181933877	-0.221169615	0.419849731	-0.276434755	-1.0145	0.0236	-6.6991	0.9143	-1.469	0.9622	A+	A-	A-	
ELA	4	148534	7 D	3	13688	0.809687317	0.066846873	0.044929866	0.809687317	0.073202805	0.004529515	0.405672993	-0.179241892	-0.205834179	0.405672993	-0.269671414	-1.0067	0.0234	-7.0091	0.9105	-4.2691	0.9024	A+	A-	A-	

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
ELA	4	258095	7	D	1	13688	0.85710111	0.032437171	0.064289889	0.85710111	0.03974284	0.005844535	0.451150963	-0.22654193	-0.29511322	0.451150963	-0.211483863	-1.3975	0.0259	-9.7292	0.8496	-9.8994	0.6482	A+	A-	A-
ELA	4	258095	7	D	1	13684	0.860201695	0.033396668	0.061312482	0.860201695	0.037123648	0.006942414	0.433422217	-0.235882772	-0.26671412	0.433422217	-0.212278371	-1.4417	0.0262	-8.7491	0.8622	-9.7393	0.7276	A+	A-	A-
ELA	4	327526	8	D	2	13701	0.524779213	0.1583826	0.183125319	0.12780089	0.524779213	0.003357419	0.266482329	-0.101674453	-0.113470584	-0.146624332	0.266482329	0.6008	0.0191	9.9012	1.1583	9.9012	1.2038	A+	A+	A-
ELA	4	393545	8	B-C	3	13701	0.530618203	0.530618203	0.184439092	0.089701482	0.19254069	0.001532735	0.332226039	0.332226039	-0.173662029	-0.240524187	-0.070710086	0.5694	0.0191	9.9011	1.0794	9.3811	1.1034	A-	A-	A-
ELA	4	250590	8	B-C	3	13701	0.587475367	0.193927451	0.155755054	0.587475367	0.058024962	0.003211444	0.47234456	-0.212918989	-0.225884125	0.47234456	-0.268335558	0.2832	0.0193	-9.6791	0.9269	-9.8991	0.8864	A+	A-	A-
ELA	4	175280	8	B-V	2	13701	0.684256624	0.095613459	0.100065689	0.115903949	0.684256624	0.002335596	0.472674605	-0.194774811	-0.254311733	-0.257818178	0.472674605	-0.2319	0.0203	-9.8991	0.9081	-8.8791	0.8678	A-	A-	A-
ELA	4	177170	8	B-C	2	13701	0.563462521	0.204072695	0.085468214	0.563462521	0.142690315	0.003138457	0.47823274	-0.228456082	-0.275244445	0.47823274	-0.184361001	0.4048	0.0192	-9.8991	0.922	-9.8991	0.8914	A-	A-	A-
ELA	4	742332	8	B-C	3	13701	0.736150646	0.736150646	0.100503613	0.085103277	0.072695424	0.004744179	0.546705201	0.546705201	-0.258578774	-0.30719786	-0.287019451	-0.5365	0.0212	-9.8992	0.8164	-9.8993	0.7013	A+	A-	A-
ELA	4	987694	8	B-K	2	13701	0.689438727	0.139697832	0.689438727	0.075906868	0.090942267	0.001970659	0.5148627	-0.290820001	0.5148627	-0.243960828	-0.242093381	-0.2612	0.0203	-9.8991	0.8664	-9.8992	0.8074	A+	A-	A-
ELA	4	514190	8	B-V	2	13701	0.417122838	0.085322239	0.417122838	0.089044595	0.403839136	0.002846508	0.256300466	-0.282356278	0.256300466	-0.218575	0.037157131	1.1375	0.0193	9.9011	1.1478	9.9013	1.2553	A+	A-	A+
ELA	4	370176	8	B-V	2	13701	0.679950369	0.124370484	0.049777389	0.144806948	0.679950369	0.000583899	0.5621426	-0.340416359	-0.229361335	-0.280364633	0.5621426	-0.2078	0.0202	-9.8992	0.8222	-9.8993	0.7354	A-	B-	B-
ELA	4	920319	8	D	2	13704	0.492483946	0.14433742	0.217162872	0.492483946	0.138718622	0.006567426	0.343181963	-0.144537312	-0.137405429	0.343181963	-0.172353747	0.7598	0.0191	9.9011	1.0781	9.9011	1.1135	A+	A-	A-
ELA	4	920319	8	D	2	13701	0.490475148	0.140281731	0.224363185	0.490475148	0.137362236	0.006641851	0.329949655	-0.125546218	-0.131657048	0.329949655	-0.17689175	0.7693	0.0191	9.9011	1.0855	9.9011	1.1138	A+	A-	A-
ELA	4	833950	8	D	3	13704	0.505691769	0.255472855	0.505691769	0.107486865	0.124416229	0.005326912	0.495009406	-0.286240043	0.495009406	-0.137568766	-0.231260533	0.694	0.0191	-9.8991	0.9059	-9.8991	0.897	A+	A-	A-
ELA	4	833950	8	D	3	13701	0.50237209	0.249324867	0.50237209	0.122034888	0.120356178	0.004744179	0.502620909	-0.280115372	0.502620909	-0.151236271	-0.23868976	0.7101	0.0191	-9.8991	0.8937	-9.8991	0.8773	A+	A-	A-
ELA	4	723065	9	D	2	13684	0.699356913	0.141552178	0.068693365	0.699356913	0.08572055	0.002703888	0.52005457	-0.273322201	-0.286804214	0.52005457	-0.242921722	-0.3119	0.0204	-9.8991	0.8641	-9.8992	0.7743	A+	B-	A-
ELA	4	952057	9	B-C	3	13684	0.654706226	0.105963169	0.109543993	0.654706226	0.124305759	0.002776966	0.485140692	-0.226316266	-0.240549903	0.485140692	-0.245164658	-0.0622	0.0198	-9.8991	0.9026	-9.8991	0.8562	A+	A-	A+
ELA	4	671700	9	B-C	3	13684	0.549181526	0.549181526	0.13022508	0.169467992	0.142282958	0.007527039	0.31263555	0.31263555	-0.179380828	-0.120588016	-0.127764086	0.4789	0.0191	9.9011	1.0904	9.5811	1.1038	A-	A-	A-
ELA	4	697995	9	B-C	2	13684	0.278719673	0.168591055	0.435106694	0.278719673	0.113417129	0.002923122	0.06128756	-0.235150475	0.269149055	0.06128756	-0.218428819	1.8808	0.0209	9.9013	1.2869	9.9017	1.6815	A-	A-	A-
ELA	4	138409	9	B-K	2	13684	0.511473253	0.21221865	0.122990354	0.15192926	0.511473253	0.000876937	0.502947839	-0.291859024	-0.286288874	-0.100982957	0.502947839	0.6654	0.019	-9.8991	0.8965	-9.8991	0.8798	A+	A-	A-
ELA	4	214038	9	B-K	3	13684	0.430575855	0.430575855	0.149663841	0.252119263	0.164864075	0.001388483	0.236359816	0.236359816	-0.128413088	-0.00655408	-0.175408118	1.0657	0.0191	9.9012	1.1778	9.9013	1.2696	A-	A-	A-
ELA	4	832148	9	B-K	2	13684	0.316501023	0.285223619	0.316501023	0.288000585	0.10779012	0.001826951	0.071123258	-0.047720399	0.071123258	0.106394174	-0.184236795	1.6634	0.0202	9.9013	1.2938	9.9016	1.5958	A+	A-	A-
ELA	4	392846	9	B-V	2	13684	0.41318328	0.356767027	0.41318328	0.130663549	0.094636071	0.003069278	0.275347229	0.016330864	0.275347229	-0.244082235	-0.198604955	1.1532	0.0192	9.9011	1.1226	9.9012	1.1861	B-	B-	A-
ELA	4	214197	9	B-V	1	13684	0.520681087	0.070520316	0.113417129	0.289315989	0.520681087	0.004165449	0.404724081	-0.272372431	-0.277761383	-0.091402497	0.404724081	0.62	0.019	-0.559	0.9959	-0.689	0.9929	A+	A-	A+
ELA	4	690667	9	D	2	13684	0.604063139	0.144182987	0.159237065	0.604063139	0.087401345	0.003653902	0.441855091	-0.236635471	-0.171262265	0.441855091	-0.236713877	0.2029	0.0193	-5.629	0.9567	-5.6491	0.935	A+	A-	A-
ELA	4	258095	9	D	1	13688	0.85710111	0.032437171	0.064289889	0.85710111	0.03974284	0.005844535	0.451150963	-0.22654193	-0.29511322	0.451150963	-0.211483863	-1.3975	0.0259	-9.7292	0.8496	-9.8994	0.6482	A+	A-	A-
ELA	4	258095	9	D	1	13684	0.860201695	0.033396668	0.061312482	0.860201695	0.037123648	0.006942414	0.433422217	-0.235882772	-0.26671412	0.433422217	-0.212278371	-1.4417	0.0262	-8.7491	0.8622	-9.7393	0.7276	A+	A-	A-
ELA	5	872828	0	D	1	122334	0.60490951	0.132121896	0.60490951	0.135816699	0.124977521	0.000702993	0.298140911	-0.124074416	0.298140911	-0.115469388	-0.189268024	0.247	0.0064	9.9011	1.0812	9.9011	1.0926			
ELA	5	116345	0	D	2	122334	0.499852862	0.499852862	0.18694721	0.18116795	0.129596024	0.00143051	0.247886256	0.247886256	-0.105525116	-0.060365909	-0.171613734	0.782	0.0063	9.9012	1.1514	9.9012	1.2106			
ELA	5	727862	0	D	2	122334	0.600421796	0.138244478	0.144179051	0.115151961	0.600421796	0.000719342	0.383798473	-0.176539469	-0.205488996	-0.167731177	0.383798473	0.1096	0.0065	6.911	1.0181	5.641	1.0232			
ELA	5	689447	0	D	3	122334	0.650334331	0.650334331	0.066539147	0.096915003	0.183685647	0.000449589	0.428350916	0.428350916	-0.10895616	-0.256249754	-0.257610962	-0.0321	0.0066	-9.8991	0.9481	-9.8991	0.9031			
ELA	5	322234	0	D	3	122334	0.584130332	0.062304838	0.058372979	0.584130332	0.293025651	0.001136234	0.447126828	-0.252629192	-0.219321765	0.447126828	-0.232634807	0.3377	0.0064	-9.8991	0.9369	-9.8991	0.9089			
ELA	5	947399	0	B-V	2	122334	0.831134435	0.831134435	0.045351251	0.039678258	0.081391927	0.00192097	0.427395468	0.427395468	-0.239559352	-0.264374153	-0.208104104	-1.0574	0.0079	-9.8992	0.813	-9.8993	0.6739			
ELA	5	892496	0	B-K	2	122334	0.456757729	0.087252931	0.278745075	0.456757729	0.174056272	0.00254222	0.289916002	-0.16478136	-0.203723901	0.289916002	-0.010809744	0.8662	0.0063	9.9011	1.1028	9.9012	1.1524			
ELA	5	751478	0	B-K	2	122334	0.709729102	0.125394412	0.053084179	0.109127471	0.709729102	0.001937319	0.454399081	-0.303194507	-0.264308426	-0.142132665	0.454399081	-0.2925	0.0068	-9.8991	0.8731	-9.8991	0.8619			
ELA	5	188313	0	B-C	3	122334	0.507389606	0.238175814	0.071165825	0.507389606	0.181707457	0.001013618	0.409205036	-0.119561544	-0.168622898	0.409205036	-0.28212842	0.6797	0.0063	-6.729	0.9841	-3.909	0.987			
ELA	5	890783	0	B-C	3	122334	0.569972371	0.569972371	0.104484444	0.250331061	0.072326581	0.002321513	0.336398332	0.336398332	-0.176657131	-0.085076573	-0.285127428	0.433	0.0064	9.901	1.0473	9.9011	1.079			
ELA	5	791897	0	A-C	3	122334	0.436452662	0.158304314	0.243472788	0.436452662	0.157969166	0.002697533	0.29221116	-0.213656003	-0.047111631	0.29221116	-0.119007453	1.1159	0.0064	9.9011	1.1134	9.9012	1.1876			
ELA	5	703710	0	A-V	2	122334	0.738404695	0.081678029	0.738404695	0.108645184	0.067765298	0.002820148	0.34373626	-0.108825201	0.34373626	-0.220864899	-0.19587913	-0.4781	0.007	-9.899	0.9644	9.9011	1.0596			
ELA	5	459051	0	A-V	2	122334	0.726862524	0.726862524	0.072857914	0.093890497	0.10291497	0.00229699	0.428137803	0.428137803	-0.247459334	-0.213570053	-0.201714249	-0.4413	0.0069	-9.8991	0.9074	-9.8991	0.8974			
ELA	5	819381	0	A-V	2	122334	0.374630111	0.256044926	0.374630111	0.062934262	0.302426145	0.003138947	0.140000896	-0.050699558	0.140000896	-0.183486123	0.004327037	1.3376	0.0065	9.9012	1.2468	9.9014	1.3974			
ELA	5	273805	0	A-K	2	122334	0.493337911	0.167018163	0.131745876	0.493337911	0.204938938	0.00192097	0.264745251	-0.015246577	-0.196628481	0.264745251	-0.142035936	0.7946	0.0063	9.9011	1.1349	9.9012	1.1906			
ELA	5	861348	0	A-K	3	122334	0.480169045	0.165244331	0.099449049	0.251156669	0.480169045	0.002435954	0.366589653	-0.202304253	-0.201886696	-0.102376729	0.366589653	0.6596	0.0063	9.901	1.0309	9.9011	1.0634			
ELA	5	682937	0	A-V	2	122334	0.484812072	0.484812072	0.170410515	0.15084114	0.190592967	0.001577648	0.37241331	0.37241331	-0.13884703	-0.207412062	-0.146716095	0.7904	0.0063	9.271	1.0222	9.901	1.0374			
ELA	5	182742	0	A-V	2	122334	0.781933068	0.146067324	0.040405774	0.02802982	0.781933068	0.001667566	0.403368189	-0.253301685	-0.20794807	-0.204310072	0.403368189	-0.9151	0.0076	-8.639	0.9648	-9.8991	0.9036			
ELA	5	752417	0	A-C	3	122334	0.59440548	0.136102801	0.155402423	0.108686056	0.59440548	0.00416074	0.45405833	-0.231887654	-0.182519002	-0.238936156	0.45405833	0.272	0.0064	-9.8991	0.9249	-9.8991	0.928			
ELA	5	605176	0	A-K	2	122334	0.656146288	0.050754492	0.656146288	0.115102915	0.172421404	0.004643026	0.459928686	-0.237583569	0.459928686	-0.27007991	-0.203519517	-0.1125	0.0066	-9.8991	0.9192	-9.8991	0.884			
ELA	5	447431	0	A-K	2	122334	0.587089444	0.107222849	0.587089444	0.194810927	0.106413589	0.003261563	0.421083662	-0.249011254	0.421083662	-0.152093086	-0.220046747	0.2788	0.0064	-9.899	0.9643	-7.949	0.9705			
ELA	5	879681	0	B-V	2	122334	0.587310151	0.08117122	0.587310151	0.068329328	0.260761522	0.001757484	0.353587275	-0.231946915	0.353587275	-0.23288175	-0.111824103	0.286	0.0064	9.901	1.0391	9.9011	1.0521			
ELA	5	196402	0	D	2	122334	0.684764661	0.13790933	0.684764661	0.044002485	0.13101836	0.001405987	0.319874782	-0.196852492	0.319874782	-0.20028581	-0.111783096	-0.2889	0.0068	9.9011	1.0592	9.9011	1.0965			
ELA	5	482887	0	D	2	122334	0.624094692	0.624094692	0.043356712	0.244952344	0.08546275	0.001217977	0.326844539	0.326844539	-0.231332431	-0.113727079	-0.215681055	0.0555	0.0065	9.9011	1.0596	9.9011	1.0783			
ELA	5	863449	0	D	2	122334	0.404556378	0.219709974	0.404556378	0.17215165	0.200966207	0.001708438	0.27103633	-0.067131818	0.27103633	-0.141567802	-0.124134084	1.1435	0.0064	9.9011	1.1102	9.9012	1.1828			
ELA	5	773582	0	B-C	3	122334	0.520296892	0.139944741	0.142192686	0.190380434	0.520296892	0.006359638	0.488997369	-0.225410973	-0.195408434	-0.236234281	0.488997369	0.5734	0.0063	-9.8991	0.9042	-9.8991	0.8865			
ELA	5	112240	0	B-C	2	122334	0.362074321	0.247159416	0.273382706	0.11206206	0.362074321	0.004373273	0.409260455	-0.120362906	-0.237503332	-0.110227247	0.409260455	1.4249	0.0066	-9.899	0.9569	7.611	1.0322			
ELA	5	728430	0	B-C	3	122334	0.437548024	0.437548024	0.068296631	0.319159024	0.169029052	0.004708421	0.174889022	0.174889022	-0.182381792	-0.060871637	-0.023196943	1.0314	0.0064	9.9012	1.2283	9.9013	1.3236			
ELA	5	508762	0	B-C	3	122334	0.462479769	0.462479769	0.187167917	0.210759069	0.135677735	0.00273023	0.350871914	0.350871914	-0.209949147	-0.086766215	-0.158451589	0.886	0.0063	9.901	1.0446	9.9011	1.0691			
ELA	5	248276	0	B-C	3	122334	0.486904704	0.262257426	0.150914709	0.486904704	0.095983128	0.002901892	0.412167759	-0.094077854	-0.268795788	0.412167759	-0.220257465	0.7743	0.0063	-7.279	0.9828	-3.349	0.9889			
ELA	5	589036	0	B-K	3	122334	0.502313339	0.267456308	0.061168604	0.502313339	0.163952785	0.004430494	0.296626774	-0.110458391	-0.258660805	0.296626774	-0.088042309	0.6695	0.0063	9.9011	1.1035	9.9012	1.1543			
ELA	5	274620	0	D	2	122334	0.369946213	0.093882322	0.194165154	0.369946213	0.339930028	0.000613076	0.258877876	-0.136069528	-0.084200382	0.258877876	-0.106063414	1.3203	0.0065	9.9011	1.1109	9.9012	1.2098			
ELA	5	388105	1	A-C	3	67941	0.562782414	0.562782414	0.219440397	0.153662737	0.061126566	0.002458015	0.260965547	0.260965547	-0.112408958	-0.111548043	-0.171188832	0.3997	0.0085	9.9011	1.119	9.9012	1.2005	A+	A+	A+
ELA	5	866397	1	A-V	2	67941	0.493648901	0.493648901	0.075359503	0.141372662	0.286881265	0.001398272	0.132054909	0.132054909	-0.209205853	-0.139642799	0.088716607	0.7319	0.0085	9.9013	1.2619	9.9014	1.372	A-	A+	A-
ELA	5	338316	1	A-K	2	67941	0.497137222	0.291473484	0.130775231	0.077375959	0.497137222	0.001354116	0.422163123	-0.206248412	-0.167191558	-0.216810319	0.422163123	0.716	0.0085	-9.899	0.9634	-8.739	0.9622	A+	A-	A-
ELA	5	274614	1	A-K	2	67941	0.684535111	0.064894541	0.129641895	0.684535111	0.118264376	0.001427709	0.457063265	-0.221521176	-0.213256138	0.457063265	-0.260482993	-0.2158	0.009	-9.8991	0.8977	-9.8992	0.8452	A+	A-	A-
ELA	5	984958	1	A-V	2	67941	0.631974802	0.157209932	0.057461621	0.151572688	0.631974802	0.000750651	0.502934992	-0.226312865	-0.262743224	-0.27144158	0.502934992	0.0575	0.0087	-9.8991	0.8665	-9.8992	0.8205	A+	A-	A-
ELA	5	319544	1	D	2	13645	0.275045804	0.371418102	0.158666178	0.19120557	0.275045804	0.00190546	0.327978379	-0.222591128	0.023108877	-0.116014601	0.327978379	1.8412	0.0208	-0.249	0.9975	7.7511	1.1317	A+	A-	A-
ELA	5	100421	1	A-K	2	67941	0.714207916	0.092595046	0.714207916	0.042375002	0.149467921	0.000647621	0.492327746	-0.280538272	0.492327746	-0.209527406	-0.273498076	-0.3809	0.0092	-9.8992	0.8491	-9.8992	0.7813	A+	A-	A-
ELA	5	403847	1	B-C	3	13645	0.610993038	0.610993038	0.138805423	0.087651154	0.1591059	0.001758886	0.388784048	0.388784048	-0.235268905	-0.298795073	-0.05744885	0.1477	0.0193	-1.959	0.9848	4.4511	1.0531	A+	A-	A-
ELA	5	620485	1	B-V	1	13645	0.852693294	0.042139978	0.036057164	0.0661048	0.852693294	0.002345181	0.374454667	-0.195045055	-0.178843201	-0.234469182	0.374454667	-1.3838	0.0256	-6.3691	0.9018	-7.1592	0.8058	A-	A-	A-
ELA	5	903092	1	B-K	2	13645	0.244411872	0.178013925	0.460315134	0.115133749	0.244411872	0.001392451	0.103031186	-0.21473372	0.168884682	-0.141627912	0.103031186	2.0566	0.0216	9.9012	1.2428	9.9015	1.4719	A+	A-	A+
ELA	5	731933	1	B-K	2	13645	0.612532063	0.187980945	0.128471968	0.612532063	0.068743129	0.001099304	0.377024226	-0.126643981	-0.242825736	0.377024226	-0.202395333	0.1398	0.0194	0.791	1.0062	2.431	1.0289	A-	A-	A-
ELA	5	907927	1	B-K	2	13645	0.644485159	0.644485159	0.092194943	0.145254672	0.114327593	0.001758886	0.403696241	0.403696241	-0.245829073	-0.167543373	-0.189187801	-0.0258	0.0197	-3.659	0.9701	-3.709	0.9528	A-	A-	A-
ELA	5	752946	1	B-V	2	13645	0.531916453	0.247929645	0.531916453	0.12319531	0.093953829	0.001245878	0.3779432	-0.218730671	0.3779432	-0.145650796	-0.15210639	0.5418	0.019	2.381	1.0172	2.231	1.0225	A-	A-	A-
ELA	5	504805	1	B-V	2	13645	0.772224258	0.070062294	0.061561011	0.772224258	0.095199707	0.000439722	0.487206109	-0.284274119	-0.259920263	0.487206109	-0.232947156	-0.7703	0.0221	-9.8992	0.8394	-9.8993	0.7283	A+	A-	A-
ELA	5	314147	1	B-V	2	13645	0.59333089	0.134041774	0.59333089	0.176328325	0.08728472	0.007914987	0.363895972	-0.212323881	0.363895972	-0.108974072	-0.214534768	0.2373	0.0192	4.011	1.0308	1.021	1.0114	A-	A-	A-
ELA	5	290266	1	D	2	13645	0.219714181	0.251813851	0.219714181	0.301282521	0.223525101	0.002931477	0.040283987	0.049735418	0.040283987	-0.015990664	-0.070422303	2.2189	0.0223	9.9012	1.2402	9.9018	1.8188	A-	A-	A-
ELA	5	290266	1	D	2	13592	0.220129488	0.234476162	0.220129488	0.315994703	0.22675103	0.002060035	0.023635639	0.062358377	0.023635639	-0.031474897	-0.046652648	2.2603	0.0225	9.9013	1.2857	9.9019	1.9181	A-	A+	A-
ELA	5	783557	1	D	2	13645	0.724441187	0.062440454	0.129717845	0.724441187	0.078636863	0.00381092	0.515618262	-0.27028761	-0.277556513	0.515618262	-0.255320417	-0.4711	0.0209	-9.8992	0.8378	-9.8992	0.7515	A+	A-	A-
ELA	5	783557	1	D	2	13592	0.725206004	0.058343143	0.130885815	0.725206004	0.081959976	0.003090053	0.51014506	-0.267807782	-0.26768107	0.51014506	-0.264369974	-0.4576	0.021	-9.8992	0.8455	-9.8992	0.7569	A+	A-	A-
ELA	5	567897	2	D	1	13567	0.469005676	0.469005676	0.147195401	0.216038918	0.16333751	0.001990123	0.157341295	0.157341295	-0.093857653	-0.088023472	-0.01850991	0.8664	0.019	9.9012	1.2326	9.9013	1.3219	A+	A-	A-
ELA	5	235924	2	B-K	2	13567	0.809464141	0.073634554	0.059851109	0.809464141	0.051595784	0.004864745	0.502582016	-0.275248122	-0.288792958	0.502582016	-0.237898065	-1.008	0.0234	-9.8992	0.8084	-9.8994	0.6317	A+	A-	A-
ELA	5	217467	2	B-K	3	13567	0.643546842	0.195400604	0.643546842	0.093314661	0.062504607	0.004496204	0.452664944	-0.179045307	0.452664944	-0.278859112	-0.260178313	-0.002	0.0196	-9.8991	0.9146	-9.8991	0.8782	A+	A-	A-
ELA	5	842906	2	B-V	2	13567	0.816245301	0.056902779	0.044151249	0.816245301	0.081742463	0.000294833	0.492166613	-0.28952543	-0.248927709	0.492166613	-0.259486238	-1.0591	0.0237	-9.8992	0.8137	-9.8994	0.6414	A+	A-	A-
ELA	5	520860	2	B-C	2	13567	0.651802167	0.157588266	0.100390654	0.087933957	0.651802167	0.001621582	0.54756309	-0.272954021	-0.264503836	-0.279637945	0.54756309	-0.0454	0.0197	-9.8992	0.8221	-9.8992	0.7639	A-	B-	A-
ELA	5	685162	2	B-K	2	13567	0.543672146	0.543672146	0.157293433	0.226874033	0.068843517	0.001916415	0.414875727	0.414875727	-0.199643971	-0.155455938	-0.261744962	0.5003	0.019	-5.109	0.9639	-3.709	0.9634	A+	A-	A-
ELA	5	513245	2	B-V	2	13567	0.289526056	0.289526056	0.452347608	0.178226579	0.078573008	0.000958207	0.083213058	0.083213058	0.064372448	-0.037850333	-0.199981484	1.7932	0.0206	9.9012	1.2477	9.9016	1.5704	B-	A-	A-
ELA	5	898357	2	B-V	2	13567	0.577135697	0.257241837	0.133411955	0.029483305	0.577135697	0.001400457	0.388894917	-0.214834909	-0.168326568	-0.23098411	0.388894917	0.3356	0.0191	-0.009	0.9999	-0.689	0.9927	A-	A+	A-
ELA	5	423884	2	B-V	1	13567	0.515220756	0.087860249	0.515220756	0.319672735	0.069728017	0.006560035	0.181493017	-0.174769693	0.181493017	0.027424266	-0.195559871	0.639	0.0189	9.9012	1.2048	9.9013	1.2697	A+	A+	A+
ELA	5	953355	2	D	2	13567	0.735755878	0.141446156	0.031031179	0.735755878	0.088376207	0.002284956	0.305226608	-0.149963169	-0.204086798	0.305226608	-0.159065661	-0.5174	0.0211	3.041	1.0313	5.2711	1.0948	A+	A-	A-
ELA	5	953355	2	D	2	13554	0.752914269	0.130072303	0.031503615	0.752914269	0.081968423	0.003024937	0.298221756	-0.131780587	-0.219265663	0.298221756	-0.1616212	-0.6162	0.0215	2.701	1.0292	6.3211	1.1266	A+	A-	A-
ELA	5	286928	2	D	2	13567	0.832977077	0.014889069	0.832977077	0.132674873	0.01569986	0.003243164	0.415181807	-0.150482523	0.415181807	-0.330233522	-0.174402065	-1.1908	0.0245	-8.5891	0.8798	-9.7192	0.7658	A+	B-	A-
ELA	5	286928	2	D	2	13554	0.843145935	0.016378929	0.843145935	0.123579755	0.014460676	0.001623137	0.404476811	-0.157042565	0.404476811	-0.322632194	-0.161336675	-1.2688	0.0251	-8.2991	0.8782	-8.9492	0.7681	A+	A-	A-
ELA	5	534745	3	D	2	13562	0.836086123	0.076979796	0.034729391	0.049329008	0.836086123	0.000884825	0.36472833	-0.208703114	-0.201173751	-0.186744798	0.36472833	-1.1893	0.0244	-7.0991	0.901	-5.6591	0.8584	B+	A-	A-
ELA	5	462813	3	B-C	2	13562	0.294646807	0.074767733	0.294646807	0.334758885	0.293024628	0.00176965	0.229801135	-0.258821284	0.229801135	-0.083700039	0.010029455	1.748	0.0205	9.9011	1.1015	9.9013	1.326	A-	A+	A-
ELA	5	184307	3	B-C	3	13562	0.506193777	0.087966377	0.506193777	0.194587819	0.209261171	0.00081109	0.344979115	-0.267467785	0.344979115	-0.133832541	-0.103414847	0.6657	0.0189	4.691	1.0332	5.4711	1.0542	A+	A-	A-

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
ELA	5	293185	3	B-K	2	13562	0.412844713	0.184191122	0.160890724	0.233446394	0.412844713	0.007742221	0.309829756	-0.221469484	-0.206698329	0.030693201	0.309829756	1.1227	0.0192	7.9211	1.0598	9.9011	1.1421	A-	A-	A-
ELA	5	595911	3	B-K	2	13562	0.563338741	0.18891019	0.117534287	0.126308804	0.563338741	0.002359534	0.551907697	-0.297646713	-0.184708657	-0.288383808	0.551907697	0.3871	0.019	-9.8992	0.823	-9.8992	0.7818	A+	A-	A-
ELA	5	662926	3	B-V	2	13562	0.382097036	0.220763899	0.353487686	0.382097036	0.039374723	0.003465566	0.11342311	-0.075928111	0.051314281	0.11342311	-0.23287197	1.2778	0.0194	9.9013	1.2633	9.9014	1.3718	A+	A+	A+
ELA	5	874707	3	B-V	2	13562	0.417121369	0.417121369	0.176891314	0.261170919	0.143489161	0.000737354	0.158321976	0.158321976	0.05349907	-0.131817895	-0.113006279	1.1013	0.0192	9.9012	1.2243	9.9013	1.3356	A+	A-	A+
ELA	5	816308	3	B-V	1	13562	0.705795605	0.705795605	0.033623359	0.10035393	0.159047338	0.000442413	0.438039541	0.438039541	-0.194338552	-0.186012583	-0.292858456	-0.3551	0.0205	-9.1991	0.9172	-8.4691	0.871	A-	A-	B-
ELA	5	148942	3	B-V	2	13562	0.814702846	0.049845156	0.051024923	0.814702846	0.080887775	0.001843386	0.490045123	-0.281027351	-0.259631058	0.490045123	-0.2550522	-1.057	0.0236	-9.8992	0.8151	-9.8994	0.6428	A+	B-	A-
ELA	5	163319	3	D	3	13562	0.549329008	0.549329008	0.228874797	0.135230792	0.08339478	0.002064592	0.345929362	0.345929362	-0.171546845	-0.221200509	-0.08187114	0.4558	0.019	5.251	1.0379	5.0411	1.0522	A+	A-	A-
ELA	5	163319	3	D	3	13625	0.551926606	0.551926606	0.214972477	0.133431193	0.096220183	0.002495413	0.35097502	0.35097502	-0.1724949	-0.200211976	-0.113709839	0.4382	0.0191	6.171	1.0457	5.0911	1.0552	A+	A-	A-
ELA	5	547992	3	D	2	13562	0.458486949	0.250995428	0.146954726	0.141277098	0.458486949	0.001474709	0.275031505	-0.092145432	-0.125278203	-0.144757858	0.275031505	0.8976	0.019	9.9011	1.1121	9.9011	1.1433	A+	A+	A+
ELA	5	547992	3	D	2	13625	0.456807339	0.240807339	0.150165138	0.147889908	0.456807339	0.003522936	0.262757595	-0.096894322	-0.105911085	-0.136369023	0.262757595	0.9059	0.019	9.9011	1.1406	9.9012	1.1935	A+	A+	A+
ELA	5	824369	4	D	2	13576	0.290807307	0.02946376	0.388185032	0.290807307	0.28793459	0.001399529	0.284827589	-0.21875321	-0.151610178	0.284827589	-0.035389057	1.7464	0.0206	4.951	1.0478	9.9012	1.203	A+	A-	A-
ELA	5	101337	4	B-V	2	13576	0.546037124	0.546037124	0.088980554	0.184811432	0.178108427	0.000957572	0.411933713	0.411933713	-0.213974553	-0.225292288	-0.14287832	0.4663	0.019	-3.699	0.9738	-1.699	0.9824	A-	A-	A-
ELA	5	461104	4	B-C	2	13576	0.7033736	0.072775486	0.7033736	0.094578668	0.127578079	0.000589275	0.429197181	-0.218425596	0.429197181	-0.252651583	-0.191755606	-0.3485	0.0204	-9.0491	0.9193	-7.0891	0.8901	A+	A-	A-
ELA	5	914949	4	B-C	2	13576	0.5293901	0.5293901	0.193503241	0.094431349	0.180760165	0.001399529	0.388117286	0.388117286	-0.110920399	-0.237616912	-0.205625106	0.5477	0.019	0.011	1.0001	1.671	1.017	A+	A-	A-
ELA	5	378617	4	B-K	2	13576	0.474440189	0.315998821	0.079846788	0.474440189	0.128020035	0.000662935	0.460332428	-0.179862568	-0.279756285	0.460332428	-0.205672812	0.8155	0.019	-9.8991	0.9277	-7.5491	0.9269	A-	A-	A-
ELA	5	568070	4	B-K	2	13576	0.580141426	0.188862699	0.16426046	0.580141426	0.06371538	0.001473188	0.425792964	-0.185085503	-0.228929267	0.425792964	-0.20751825	0.2981	0.0191	-5.879	0.9575	-6.3891	0.9307	A+	A-	A-
ELA	5	521693	4	B-V	2	13576	0.891278727	0.035430171	0.030126694	0.040291691	0.891278727	0.00117855	0.388007982	-0.214882088	-0.219123872	-0.213614806	0.388007982	-1.7575	0.0288	-7.3691	0.8598	-9.8994	0.6322	A+	A-	A-
ELA	5	610576	4	B-V	2	13576	0.312905127	0.378609311	0.138037714	0.170005893	0.312905127	0.000294638	0.388779348	-0.095787442	-0.147794219	-0.21926223	0.388779348	1.645	0.0203	-3.299	0.9703	2.021	1.029	A-	A-	A-
ELA	5	526197	4	B-V	1	13576	0.563273424	0.102018268	0.563273424	0.251473188	0.077047731	0.005303477	0.293833846	-0.246795695	0.293833846	-0.039513635	-0.193730136	0.3817	0.0191	9.9011	1.0884	9.9011	1.1254	A+	A-	A-
ELA	5	931680	4	D	2	13576	0.669858574	0.669858574	0.171700059	0.0685769	0.086255156	0.002062463	0.417436712	0.417436712	-0.257854365	-0.240375829	-0.12582645	-0.1635	0.0199	-5.739	0.9522	-7.2891	0.899	A+	A-	A-
ELA	5	959707	4	D	2	13576	0.2989835	0.2989835	0.305465527	0.176266942	0.215601061	0.003020035	0.270381185	0.270381185	-0.091234741	-0.084841363	-0.115963698	1.7236	0.0205	8.0611	1.0777	9.9012	1.2368	A-	A-	A-
ELA	5	183132	5	D	2	13591	0.656831727	0.656831727	0.216687514	0.059083217	0.065043043	0.000882937	0.357040039	0.357040039	-0.181382084	-0.207076652	-0.178461625	-0.0753	0.0198	1.131	1.0094	3.6611	1.0504	A-	A-	A-
ELA	5	385650	5	B-C	3	13591	0.478110514	0.478110514	0.085644912	0.267088514	0.15944375	0.006548451	0.270621149	0.270621149	-0.268555079	-0.032112295	-0.118478168	0.8097	0.019	9.9011	1.1268	9.9012	1.1832	A+	A-	A-
ELA	5	692202	5	B-C	3	13591	0.632771687	0.147671253	0.062982856	0.632771687	0.15554411	0.000515047	0.467121345	-0.246980076	-0.279351694	0.467121345	-0.189989371	0.0412	0.0195	-9.8991	0.9054	-9.8991	0.8773	A+	A-	A-
ELA	5	391806	5	B-C	3	13591	0.537561622	0.09388566	0.537561622	0.268118608	0.097564565	0.001397984	0.369138651	-0.263323996	0.369138651	-0.09282708	-0.212938092	0.5188	0.019	3.361	1.0244	3.931	1.0408	A+	A-	A-
ELA	5	392193	5	B-K	2	13591	0.470679126	0.213597233	0.196306379	0.116989184	0.470679126	0.001839453	0.304159971	-0.124726793	-0.147286092	-0.125375293	0.304159971	0.8461	0.019	9.9011	1.0892	9.9011	1.1361	A+	A+	A+
ELA	5	284009	5	B-K	2	13591	0.618939004	0.201088956	0.08961813	0.088146568	0.618939004	0.001030093	0.470832505	-0.20041635	-0.243204569	-0.271527632	0.470832505	0.1125	0.0194	-9.8991	0.8974	-9.8991	0.8788	B+	A-	A-
ELA	5	623308	5	B-K	2	13591	0.64160106	0.64160106	0.074608197	0.039511441	0.243102053	0.000441469	0.380292888	0.380292888	-0.241264619	-0.223268119	-0.174465285	-0.0048	0.0196	-0.599	0.9951	-1.709	0.9779	A+	A-	A-
ELA	5	638985	5	B-C	2	13591	0.259436392	0.270914576	0.352439114	0.259436392	0.103818704	0.012287543	0.254012612	-0.201745922	0.065565441	0.254012612	-0.154403722	1.9724	0.0213	5.8011	1.0621	9.9013	1.3486	A-	A-	A-
ELA	5	400693	5	B-V	2	13591	0.535795747	0.197410051	0.535795747	0.230446619	0.033478037	0.001765874	0.413606307	-0.264479238	0.413606307	-0.142624068	-0.210340907	0.5275	0.019	-3.179	0.9773	-2.779	0.9718	A+	A-	A-
ELA	5	185183	5	D	2	13591	0.50930763	0.152306674	0.50930763	0.208814657	0.125524244	0.002501656	0.453250776	-0.280458992	0.453250776	-0.198527456	-0.129240204	0.6571	0.019	-9.1391	0.9361	-8.1591	0.9209	A+	A-	A-
ELA	5	684119	5	D	2	13591	0.770730631	0.068942683	0.052093297	0.770730631	0.104922375	0.003237437	0.462322809	-0.274621528	-0.229046081	0.462322809	-0.234016281	-0.7505	0.022	-9.8991	0.8656	-9.8992	0.7666	A+	B-	B-
ELA	5	125239	6	B-C	2	54393	0.636478959	0.082492232	0.636478959	0.107293218	0.17151104	0.001121468	0.499504201	-0.272935827	0.499504201	-0.293310371	-0.192225	0.0403	0.0098	-9.8991	0.8782	-9.8992	0.8174	A+	A-	A-
ELA	5	197805	6	B-V	1	54393	0.48776497	0.48776497	0.15226224	0.229441288	0.129152648	0.000478003	0.326854958	0.326854958	-0.233203968	-0.07639296	-0.138096316	0.7692	0.0095	9.9011	1.0758	9.9011	1.1173	B-	A-	A-
ELA	5	912730	6	B-C	3	54393	0.373209788	0.151802622	0.134704833	0.373209788	0.337249278	0.000790543	0.371426715	-0.223028258	-0.110700179	0.371426715	-0.125635134	1.333	0.0098	-1.219	0.9952	9.9011	1.0721	A+	A-	A-
ELA	5	873192	6	B-K	3	54393	0.65565422	0.158384351	0.115180262	0.65565422	0.067894766	0.002463552	0.432532351	-0.273487223	-0.146666306	0.432532351	-0.228489006	-0.0586	0.0099	-9.8991	0.9389	-9.8991	0.916	A+	A-	A-
ELA	5	678432	6	B-K	3	54393	0.668137444	0.668137444	0.188259519	0.095563767	0.045483794	0.000937621	0.381364826	0.381364826	-0.220474013	-0.228554404	-0.118226925	-0.1226	0.01	-3.769	0.984	0.551	1.004	A+	A-	A-
ELA	5	408278	6	B-V	2	54393	0.873991139	0.025628298	0.053113452	0.046642031	0.873991139	0.000257386	0.342753255	-0.193841994	-0.182371158	-0.197716564	0.342753255	-1.5242	0.0134	-9.8991	0.8898	-9.8992	0.7939	B+	A-	A-
ELA	5	323299	6	D	2	13622	0.582073117	0.073630891	0.582073117	0.188371752	0.152253707	0.001908677	0.347649344	-0.215322679	0.347649344	-0.144326366	-0.156972097	0.3172	0.0192	6.8911	1.0526	5.1811	1.0602	A+	A-	A-
ELA	5	571280	6	A-C	3	13622	0.58236676	0.58236676	0.144545588	0.19373073	0.073190427	0.004551461	0.37384984	0.37384984	-0.111901924	-0.184025073	-0.263388598	0.3138	0.0192	1.591	1.012	4.001	1.0463	A+	A-	A-
ELA	5	140898	6	A-V	2	13622	0.780502129	0.08464249	0.087652327	0.042578182	0.780502129	0.003597122	0.399037659	-0.190219872	-0.214111465	-0.240498692	0.399037659	-0.8066	0.0223	-7.7991	0.9111	-2.079	0.9554	A+	A-	A-
ELA	5	150403	6	A-K	2	13622	0.70716488	0.120173249	0.100352371	0.068932609	0.70716488	0.002128909	0.58520957	-0.342915874	-0.291049708	-0.256545248	0.58520957	-0.3502	0.0206	-9.8992	0.7724	-9.8993	0.6692	A+	A-	A-
ELA	5	563679	6	A-K	3	13622	0.591102628	0.216928498	0.591102628	0.100572603	0.084789311	0.006019674	0.438707266	-0.120858231	0.438707266	-0.269957329	-0.290574711	0.2698	0.0193	-7.6691	0.9429	-4.7891	0.9452	A+	A-	A-
ELA	5	356069	6	A-K	3	13622	0.796652474	0.796652474	0.118411393	0.027675819	0.055865512	0.000734107	0.439384411	0.439384411	-0.254289795	-0.20574549	-0.260139545	-0.9191	0.0229	-9.3791	0.8876	-9.8993	0.737	A+	A-	A-
ELA	5	191716	6	A-V	2	13622	0.693363676	0.113419469	0.120026428	0.693363676	0.069813537	0.002349141	0.469692786	-0.203689644	-0.24704766	0.469692786	-0.266988633	-0.2716	0.0203	-9.8991	0.8984	-9.8992	0.8278	A-	A-	A-
ELA	5	689796	6	A-V	2	13622	0.414990457	0.039568345	0.416605491	0.414990457	0.126780208	0.001394803	0.282208519	-0.241929851	-0.078754834	0.282208519	-0.152421548	1.142	0.0192	9.9011	1.1223	9.9012	1.2016	C-	A-	A-
ELA	5	178318	6	A-V	2	13622	0.62252239	0.098957569	0.62252239	0.10138012	0.174937601	0.000954339	0.471320367	-0.286455162	0.471320367	-0.21708464	-0.200011472	0.1093	0.0195	-9.8991	0.9077	-9.2891	0.8871	A+	A-	A-
ELA	5	730087	6	D	2	13622	0.363235942	0.272573778	0.363235942	0.187344002	0.173102334	0.003009837	0.193515098	0.025617858	0.193515098	-0.136564199	-0.128629307	1.4079	0.0196	9.9012	1.1949	9.9013	1.327	A+	A-	A+
ELA	5	390733	6	D	2	13622	0.695198943	0.138966378	0.09352518	0.069886948	0.695198943	0.001982088	0.418552937	-0.168193937	-0.256034098	-0.227237463	0.418552937	-0.2819	0.0204	-5.449	0.9509	-5.2991	0.9182	B+	B-	A-
ELA	5	280488	7	D	2	13592	0.287963508	0.555400235	0.287963508	0.092113008	0.061359623	0.00110359	0.435835418	-0.274158924	0.435835418	-0.1033378	-0.118707457	1.8088	0.0207	-9.8891	0.9082	-2.559	0.9597	A-	A-	A-
ELA	5	674347	7	A-C	3	13592	0.656930547	0.065185403	0.656930547	0.149646851	0.126986463	0.000515009	0.515449093	-0.275248846	0.515449093	-0.247881591	-0.261333954	-0.0722	0.0199	-9.8991	0.8557	-9.8992	0.7877	A+	A-	A-
ELA	5	320342	7	A-K	2	13592	0.663993526	0.084167157	0.168040024	0.076368452	0.663993526	0.006695115	0.484384918	-0.277777271	-0.18915447	-0.291050547	0.484384918	-0.1103	0.02	-9.8991	0.8922	-9.8992	0.8411	A-	A-	A-
ELA	5	738566	7	A-V	1	13592	0.528472631	0.318275456	0.528472631	0.099396704	0.051721601	0.001030018	0.284802706	-0.085536256	0.284802706	-0.222109847	-0.149692422	0.5833	0.0191	9.9011	1.1238	9.9012	1.1578	B+	A-	A-
ELA	5	428362	7	A-K	2	13592	0.498234255	0.099911713	0.231974691	0.498234255	0.165538552	0.002575044	0.37619882	-0.271878745	-0.107404973	0.37619882	-0.155098958	0.7326	0.0191	3.081	1.0227	3.651	1.0378	A-	A-	A-
ELA	5	713340	7	A-K	3	13592	0.659284873	0.092333726	0.091156563	0.659284873	0.15398764	0.001839317	0.450146559	-0.266120198	-0.244983357	0.450146559	-0.173467985	-0.0849	0.0199	-9.3691	0.9225	-7.9891	0.8903	A+	A-	A-
ELA	5	811615	7	A-V	2	13592	0.668702178	0.177457328	0.06290465	0.087992937	0.668702178	0.002060035	0.353892994	-0.100886908	-0.237136403	-0.239226666	0.353892994	-0.136	0.02	1.941	1.0169	7.9111	1.1207	A-	A-	A-
ELA	5	670195	7	A-V	2	13592	0.906930547	0.906930547	0.032077693	0.031856975	0.021115362	0.007283696	0.357215587	0.357215587	-0.203497412	-0.202331635	-0.198754962	-1.9427	0.0308	-5.8291	0.8762	-8.4693	0.6912	A+	B-	A-
ELA	5	122473	7	A-V	2	13592	0.502133608	0.502133608	0.181283108	0.140818128	0.174735138	0.000441436	0.398663247	0.398663247	-0.365726128	-0.120329448	-0.040354181	0.7133	0.019	-0.449	0.9967	1.131	1.0117	A+	A-	A-
ELA	5	290266	7	D	2	13645	0.219714181	0.251813851	0.219714181	0.301282521	0.223525101	0.002931477	0.040283987	0.049735418	0.040283987	-0.015990664	-0.070422303	2.2189	0.0223	9.9012	1.2402	9.9018	1.8188	A-	A-	A-
ELA	5	290266	7	D	2	13592	0.220129488	0.234476162	0.220129488	0.315994703	0.22675103	0.002060035	0.023635639	0.062358377	0.023635639	-0.031474897	-0.046652648	2.2603	0.0225	9.9013	1.2857	9.9019	1.9181	A-	A+	A-
ELA	5	783557	7	D	2	13645	0.724441187	0.062440454	0.129717845	0.724441187	0.078636863	0.00381092	0.515618262	-0.27028761	-0.277556513	0.515618262	-0.255320417	-0.4711	0.0209	-9.8992	0.8378	-9.8992	0.7515	A+	A-	A-
ELA	5	783557	7	D	2	13592	0.725206004	0.058343143	0.130885815	0.725206004	0.081959976	0.003090053	0.51014506	-0.267807782	-0.26768107	0.51014506	-0.264369974	-0.4576	0.021	-9.8992	0.8455	-9.8992	0.7569	A+	A-	A-
ELA	5	813176	8	D	2	13554	0.680463332	0.680463332	0.095765088	0.072303379	0.148590822	0.000885347	0.340807304	0.340807304	-0.202622777	-0.134120626	-0.175712456	-0.1847	0.0201	3.581	1.0317	1.171	1.0174	A+	A-	A-
ELA	5	739171	8	A-K	3	13554	0.587575623	0.217205253	0.058580493	0.587575623	0.135089273	0.000885347	0.39753387	-0.176427655	-0.241013551	0.39753387	-0.190246123	0.2915	0.0192	-1.649	0.9877	-1.169	0.9868	A+	A-	A+
ELA	5	159295	8	A-V	2	13554	0.871034381	0.871034381	0.031651173	0.068540652	0.026707983	0.001180463	0.399083695	0.399083695	-0.172174765	-0.277428538	-0.193738623	-1.5243	0.027	-8.7991	0.8521	-9.8993	0.6864	A+	A-	A-
ELA	5	914579	8	A-K	2	13554	0.60336432	0.110889774	0.60336432	0.177881068	0.105430131	0.001549358	0.360463018	-0.212809154	0.360463018	-0.126980825	-0.192411472	0.2121	0.0193	2.061	1.0157	2.421	1.0286	A+	A-	A-
ELA	5	742976	8	A-V	2	13554	0.756308101	0.756308101	0.085804928	0.086100044	0.069204663	0.001328021	0.374778104	0.374778104	-0.210423079	-0.188007187	-0.182490783	-0.6377	0.0216	-4.349	0.9535	-3.3091	0.9367	A+	A-	A+
ELA	5	818383	8	A-V	2	13554	0.5028036	0.080492843	0.5028036	0.2833112	0.13243323	0.000516453	0.342245452	-0.201719937	0.342245452	-0.305296624	0.064739465	0.7083	0.019	7.0611	1.0506	8.6511	1.089	A-	A-	A-
ELA	5	129689	8	A-V	2	13554	0.478235207	0.170503172	0.225025823	0.125424229	0.478235207	0.000368895	0.335536003	-0.275448508	-0.08465163	-0.084149741	0.335536003	0.828	0.019	6.631	1.0476	7.5711	1.0777	A+	A-	A-
ELA	5	961835	8	A-K	2	13554	0.57791058	0.052456839	0.196547145	0.57791058	0.170945846	0.001254242	0.316196417	-0.165409028	-0.102843856	0.316196417	-0.202974266	0.3397	0.0192	7.5611	1.0567	8.9511	1.1022	A+	A-	A-
ELA	5	584235	8	A-V	2	13554	0.488564261	0.080197728	0.328095027	0.097093109	0.488564261	0.005312085	0.146507208	-0.243853955	0.185413905	-0.306643539	0.146507208	0.7776	0.019	9.9012	1.2455	9.9014	1.3666	A+	A-	A-
ELA	5	953355	8	D	2	13567	0.735755878	0.141446156	0.031031179	0.735755878	0.088376207	0.002284956	0.305226608	-0.149963169	-0.204086798	0.305226608	-0.159065661	-0.5174	0.0211	3.041	1.0313	5.2711	1.0948	A+	A-	A-
ELA	5	953355	8	D	2	13554	0.752914269	0.130072303	0.031503615	0.752914269	0.081968423	0.003024937	0.298221756	-0.131780587	-0.219265663	0.298221756	-0.1616212	-0.6162	0.0215	2.701	1.0292	6.3211	1.1266	A+	A-	A-
ELA	5	286928	8	D	2	13567	0.832977077	0.014889069	0.832977077	0.132674873	0.01569986	0.003243164	0.415181807	-0.150482523	0.415181807	-0.330233522	-0.174402065	-1.1908	0.0245	-8.5891	0.8798	-9.7192	0.7658	A+	B-	A-
ELA	5	286928	8	D	2	13554	0.843145935	0.016378929	0.843145935	0.123579755	0.014460676	0.001623137	0.404476811	-0.157042565	0.404476811	-0.322632194	-0.161336675	-1.2688	0.0251	-8.2991	0.8782	-8.9492	0.7681	A+	A-	A-
ELA	5	757548	9	D	3	13625	0.510678899	0.166825688	0.510678899	0.185100917	0.134238532	0.001981651	0.322104492	-0.142745636	0.322104492	-0.159370523	-0.12766253	0.6403	0.019	9.9011	1.0774	8.9411	1.0937	A+	A-	A-
ELA	5	194979	9	A-C	3	13625	0.564770642	0.564770642	0.180330275	0.136	0.117211009	0.001027523	0.192733253	0.192733253	-0.170385639	-0.096626616	0.013236394	0.3745	0.0191	9.9012	1.1995	9.9013	1.3308	A+	A-	A-
ELA	5	575030	9	A-C	3	13625	0.681100917	0.100036697	0.681100917	0.097761468	0.115155963	0.005431193	0.538311466	-0.268715625	0.538311466	-0.278665289	-0.263421752	-0.2295	0.0201	-9.8992	0.8255	-9.8993	0.7435	A-	B-	A-
ELA	5	188310	9	A-V	1	13625	0.748623853	0.070165138	0.094385321	0.748623853	0.080146789	0.006091743	0.45742955	-0.260327946	-0.231322851	0.45742955	-0.220163674	-0.6243	0.0214	-9.8991	0.8851	-9.8992	0.8031	A+	B-	B-
ELA	5	771038	9	A-K	2	13625	0.71493578	0.71493578	0.08946789	0.100330275	0.092550459	0.001981651	0.490965472	0.490965472	-0.300970929	-0.218674941	-0.233466907	-0.4212	0.0207	-9.8991	0.8545	-9.8992	0.7973	A-	A-	A+
ELA	5	487533	9	A-K	3	13625	0.617027523	0.224073394	0.079045872	0.617027523	0.07787156	0.001394495	0.425525925	-0.178228007	-0.284973287	0.425525925	-0.199058925	0.1108	0.0194	-5.969	0.954	-5.8291	0.9296	A+	A-	A-
ELA	5	649611	9	A-K	3	13625	0.570788991	0.086825688	0.165357798	0.174825688	0.570788991	0.001100917	0.530149532	-0.234743213	-0.240405305	-0.27714435	0.530149532	0.3445	0.0191	-9.8991	0.8511	-9.8992	0.8113	A+	A-	A-
ELA	5	533347	9	A-V	2	13625	0.730495413	0.083082569	0.050348624	0.133431193	0.730495413	0.00146789	0.471434886	-0.217478189	-0.250533386	-0.271282847	0.471434886	-0.5133	0.021	-9.8991	0.8637	-9.8992	0.8248	A-	A-	A-
ELA	5	440711	9	A-V	2	13625	0.208513761	0.06693578	0.208513761	0.045431193	0.678605505	0.000220183	0.152130299	-0.257817119	0.152130299	-0.212862374	0.101018511	2.304	0.0228	9.9011	1.1463	9.9016	1.6221	A-	A+	A+
ELA	5	163319	9	D	3	13562	0.549329008	0.549329008	0.228874797	0.135230792	0.08339478	0.002064592	0.345929362	0.345929362	-0.171546845	-0.221200509	-0.08187114	0.4558	0.019	5.251	1.0379	5.0411	1.0522	A+	A-	A-
ELA	5	163319	9	D	3	13625	0.551926606	0.551926606	0.214972477	0.133431193	0.096220183	0.002495413	0.35097502	0.35097502	-0.1724949	-0.200211976	-0.113709839	0.4382	0.0191	6.171	1.0457	5.0911	1.0552	A+	A-	A-
ELA	5	547992	9	D	2	13562	0.458486949	0.250995428	0.146954726	0.141277098	0.458486949	0.001474709	0.275031505	-0.092145432	-0.125278203	-0.144757858	0.275031505	0.8976	0.019	9.9011	1.1121	9.9011	1.1433	A+	A+	A+
ELA	5	547992	9	D	2	13625	0.456807339	0.240807339	0.150165138	0.147889908	0.456807339	0.003522936	0.262757595	-0.096894322	-0.105911085	-0.136369023	0.262757595	0.9059	0.019	9.9011	1.1406	9.9012	1.1935	A+	A+	A+
ELA	6	756609	0	D	2	120612	0.684011541	0.093597652	0.094385302	0.125874706	0.684011541	0.001533844	0.269392912	-0.12204847	-0.120919663	-0.158957248	0.269392912	-0.0012	0.0069	9.9011	1.1235	9.9012	1.2279			
ELA	6	903962	0	D	2	120612	0.491957682	0.115494312	0.212474712	0.178199516	0.491957682	0.001218784	0.285991252	-0.096771543	-0.111163788	-0.169706376	0.285991252	1.0635	0.0064	9.9011	1.1195	9.9012	1.1585			
ELA	6	882588	0	D	2	120612	0.724969323	0.724969323	0.035809041	0.034930189	0.202533745	0.000978344	0.422385675	0.422385675	-0.200089369	-0.196137919	-0.282753883	-0.1691	0.007	-9.8991	0.9431	-9.8991	0.8754			
ELA	6	336865	0	D	2	120612	0.773057407	0.032384837	0.773057407	0.01888701	0.174302723	0.000754485	0.284391404	-0.170520066	0.284391404	-0.061466118	-0.208116274	-0.4375	0.0074	6.151	1.0233	9.9012	1.1793			
ELA	6	828272	0	D	1	120612	0.624597884	0.107244719	0.214166086	0.053386064	0.624597884	0.000248731	0.352452043	-0.265740123	-0.057341095	-0.286306535	0.352452043	0.3978	0.0066	9.901	1.036	9.9011	1.1175			
ELA	6	402161	0	B-C	3	120612	0.418498988	0.114151162	0.403342951	0.418498988	0.059562896	0.003598315	0.232064335	-0.289320409	0.09243758	0.232064335	-0.267883121	1.4278	0.0065	9.9012	1.1771	9.9013	1.2845			

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
ELA	6	599040	0	B-K	2	120612	0.690387358	0.690387358	0.10678042	0.104890061	0.093921003	0.003490532	0.540775836	0.540775836	-0.257910789	-0.267836478	-0.289818298	-0.0698	0.0069	-9.8991	0.8734	-9.8992	0.7842			
ELA	6	147544	0	B-C	2	120612	0.574818426	0.113438132	0.574818426	0.165671741	0.141710609	0.003631479	0.492605522	-0.233941732	0.492605522	-0.196718168	-0.263590709	0.6414	0.0065	-9.8991	0.9092	-9.8991	0.8797			
ELA	6	338350	0	B-V	2	120612	0.446854376	0.294514642	0.094725235	0.160547873	0.446854376	0.002512188	0.395503751	-0.078272306	-0.255678397	-0.223996713	0.395503751	1.3455	0.0064	4.391	1.0111	9.901	1.0441			
ELA	6	718052	0	B-K	2	120612	0.601955029	0.148161045	0.161144828	0.601955029	0.08417902	0.004021159	0.476127787	-0.244003193	-0.195456671	0.476127787	-0.255027556	0.4824	0.0065	-9.8991	0.9257	-9.8991	0.8976			
ELA	6	562387	0	B-C	3	120612	0.690735582	0.690735582	0.098497662	0.11436673	0.092055517	0.002727755	0.499136133	0.499136133	-0.244261937	-0.281501819	-0.223542355	0.0168	0.0068	-9.8991	0.8845	-9.8992	0.8097			
ELA	6	958920	0	B-C	2	120612	0.650673233	0.072787119	0.650673233	0.170472258	0.103281597	0.002188837	0.409953817	-0.278404852	0.409953817	-0.12437217	-0.239354402	0.2638	0.0066	-9.899	0.971	0.671	1.003			
ELA	6	336230	0	A-C	2	120612	0.521017809	0.521017809	0.078333831	0.271929825	0.127234438	0.001094418	0.261949586	0.261949586	-0.19060899	-0.057559643	-0.158478855	0.945	0.0064	9.9011	1.1469	9.9012	1.2188			
ELA	6	328640	0	A-C	2	120612	0.780403277	0.034523928	0.070432461	0.780403277	0.113189401	0.001044672	0.341128848	-0.237542881	-0.257395996	0.341128848	-0.096432942	-0.5294	0.0075	-3.239	0.9873	5.791	1.0428			
ELA	6	702690	0	A-V	2	120612	0.662446523	0.093075316	0.662446523	0.087014559	0.156277982	0.00078765	0.426115703	-0.293019561	0.426115703	-0.225574492	-0.141714953	0.1479	0.0067	-9.899	0.9666	-4.779	0.977			
ELA	6	422303	0	A-V	2	120612	0.822314529	0.822314529	0.060035486	0.087885119	0.027418499	0.001998143	0.433653935	0.433653935	-0.244508339	-0.251074901	-0.212721463	-0.9043	0.0082	-9.8991	0.9252	-9.8992	0.7881			
ELA	6	374474	0	D	2	120612	0.829676981	0.073284582	0.829676981	0.029002089	0.066718071	0.000795941	0.415887405	-0.234507392	0.415887405	-0.21038371	-0.233385307	-0.9747	0.0084	-9.8991	0.9455	-9.8992	0.7954			
ELA	6	858982	0	D	2	120612	0.596408318	0.103397672	0.155332803	0.596408318	0.143509767	0.000762777	0.389398575	-0.215425954	-0.118346261	0.389398575	-0.232302447	0.4938	0.0065	4.431	1.0116	1.831	1.0073			
ELA	6	452999	0	D	2	120612	0.401096077	0.132698239	0.392846483	0.401096077	0.072223328	0.000456008	0.313151484	-0.172334394	-0.053967876	0.313151484	-0.260578466	1.5269	0.0065	9.9011	1.0737	9.9012	1.1573			
ELA	6	243564	0	B-C	1	120612	0.445884323	0.079801346	0.389306205	0.082156004	0.445884323	0.001857195	0.417956179	-0.24309802	-0.189359733	-0.175409324	0.417956179	1.3453	0.0064	-8.259	0.9794	3.071	1.0111			
ELA	6	947777	0	B-K	2	120612	0.597179385	0.232240573	0.597179385	0.083051438	0.085107618	0.001376314	0.518979194	-0.246330712	0.518979194	-0.297647423	-0.23883773	0.5062	0.0065	-9.8991	0.8742	-9.8992	0.8359			
ELA	6	437510	0	B-K	3	120612	0.753415912	0.06268033	0.054778961	0.753415912	0.125368952	0.002827248	0.408920011	-0.215068334	-0.270238372	0.408920011	-0.182893236	-0.328	0.0072	-9.8991	0.9293	-9.8991	0.9272			
ELA	6	641434	0	B-K	1	120612	0.367973336	0.353057739	0.367973336	0.155813684	0.1206928	0.001392896	0.228260004	0.025016854	0.228260004	-0.121953456	-0.234245474	1.6405	0.0066	9.9011	1.1389	9.9013	1.2672			
ELA	6	468948	0	B-V	1	120612	0.701746095	0.103256724	0.138535137	0.701746095	0.053435811	0.001616755	0.366062323	-0.185982608	-0.186204739	0.366062323	-0.197656557	-0.0521	0.0069	2.361	1.0075	6.221	1.0344			
ELA	6	409408	0	D	2	120612	0.424244685	0.144753424	0.424244685	0.272717474	0.157165125	0.000547209	0.340574152	-0.19347269	0.340574152	-0.102822211	-0.146250189	1.3164	0.0064	9.901	1.0485	9.9011	1.1042			
ELA	6	836352	0	A-C	2	120612	0.69704507	0.089991046	0.69704507	0.097792923	0.112691938	0.001600172	0.470541181	-0.203542594	0.470541181	-0.28093507	-0.226440436	-0.015	0.0069	-9.8991	0.909	-9.8991	0.8648			
ELA	6	199836	0	A-V	2	120612	0.430255696	0.430255696	0.129116506	0.202094319	0.233509104	0.003838756	0.376090169	0.376090169	-0.177006448	-0.233403432	-0.068300856	1.3501	0.0065	6.161	1.0156	9.9011	1.0601			
ELA	6	883669	0	A-C	2	120612	0.367285179	0.274292774	0.129978775	0.22312871	0.367285179	0.004203562	0.36439532	-0.118891737	-0.246336946	-0.084725061	0.36439532	1.6441	0.0066	3.051	1.0083	9.9011	1.0808			
ELA	6	577311	0	A-K	2	120612	0.46538487	0.295551023	0.173506782	0.062448181	0.46538487	0.002404404	0.336130492	-0.153698061	-0.06560805	-0.287677577	0.336130492	1.2144	0.0064	9.9011	1.0806	9.9011	1.1331			
ELA	6	176972	0	A-C	3	120612	0.501832322	0.114117998	0.113438132	0.501832322	0.267261964	0.002678009	0.308645884	-0.240469334	-0.316043421	0.308645884	0.057203223	1.0117	0.0064	9.9011	1.1053	9.9012	1.1537			
ELA	6	999533	0	A-K	2	120612	0.595836235	0.12669552	0.17917786	0.595836235	0.095338772	0.00245415	0.457109477	-0.198802994	-0.222738253	0.457109477	-0.237160562	0.5433	0.0065	-9.8991	0.9417	-9.8991	0.9294			
ELA	6	639552	0	A-C	3	120612	0.549621928	0.214555766	0.549621928	0.107709017	0.121298047	0.004651278	0.487512189	-0.204061379	0.487512189	-0.26420236	-0.221616874	0.7642	0.0064	-9.8991	0.9117	-9.8991	0.8859			
ELA	6	387203	1	B-K	1	66991	0.641772775	0.094042483	0.142720664	0.120329597	0.641772775	0.000298548	0.440915008	-0.245903693	-0.21595395	-0.194433567	0.440915008	0.2967	0.0089	-9.8991	0.9479	-9.8991	0.9347	A-	A-	A-
ELA	6	637210	1	B-V	2	66991	0.752220448	0.082757385	0.125822872	0.752220448	0.038497709	0.000313475	0.470270396	-0.236038107	-0.296097076	0.470270396	-0.203425137	-0.3405	0.0097	-9.8991	0.8869	-9.8992	0.7968	A-	B-	B-
ELA	6	686305	1	B-C	2	66991	0.617306802	0.151692018	0.129226314	0.099625323	0.617306802	0.001671866	0.420767923	-0.155706786	-0.239156836	-0.224944505	0.420767923	0.426	0.0088	-7.189	0.9743	-5.969	0.9665	A+	A-	A-
ELA	6	397827	1	B-C	2	66991	0.500410503	0.093818573	0.500410503	0.298502784	0.105327581	0.001000134	0.406778643	-0.178832972	0.406778643	-0.158485184	-0.250493991	1.0205	0.0086	-2.019	0.9933	1.431	1.0067	A-	A-	A-
ELA	6	701006	1	B-C	2	66991	0.728321715	0.728321715	0.11376155	0.041662313	0.115090087	0.000462749	0.302947663	0.302947663	-0.128787041	-0.196132685	-0.167532332	-0.1919	0.0095	9.901	1.0476	9.9012	1.1605	A+	A-	A-
ELA	6	910122	1	B-C	2	66991	0.716782851	0.716782851	0.11780687	0.093923064	0.069277963	0.001119553	0.504436562	0.504436562	-0.265242346	-0.2640038	-0.247551594	-0.1249	0.0094	-9.8991	0.8671	-9.8992	0.7704	A-	A-	A-
ELA	6	207027	1	D	2	13405	0.825065274	0.053412906	0.054979485	0.064005968	0.825065274	0.001118985	0.405565466	-0.212777101	-0.21408183	-0.226278185	0.405565466	-0.878	0.0244	-7.2391	0.9019	-5.0991	0.867	B+	A-	A-
ELA	6	363354	1	A-V	1	13405	0.524804178	0.524804178	0.220514733	0.115106304	0.138232003	0.001044386	0.376854201	0.376854201	-0.169854252	-0.161394167	-0.190803107	0.87	0.0193	4.781	1.0364	7.5011	1.0839	A-	A-	A-
ELA	6	314564	1	A-C	2	13405	0.388660947	0.234017158	0.137784409	0.232674375	0.388660947	0.005221932	0.264798943	0.129951853	-0.221970993	-0.2468075	0.264798943	1.5563	0.0197	9.9011	1.1465	9.9013	1.2543	A+	A-	A-
ELA	6	339208	1	A-C	2	13405	0.652741514	0.652741514	0.128161134	0.056023872	0.161357702	0.001118985	0.323813157	0.323813157	-0.195125014	-0.196449552	-0.115738073	0.2129	0.0201	7.7811	1.0681	9.9012	1.1652	A+	A-	A-
ELA	6	145549	1	A-K	3	13405	0.497202536	0.259306229	0.1461395	0.093770981	0.497202536	0.002536367	0.48015572	-0.16433583	-0.288613204	-0.216743276	0.48015572	1.0075	0.0193	-9.8991	0.9156	-7.5291	0.9213	A+	A-	A-
ELA	6	194972	1	A-K	2	13405	0.542409549	0.148004476	0.15233122	0.154121596	0.542409549	0.002237971	0.503626791	-0.218347734	-0.246892669	-0.225817584	0.503626791	0.782	0.0193	-9.8991	0.8932	-9.8991	0.879	A+	A-	A-
ELA	6	194452	1	A-V	2	13405	0.719433047	0.081014547	0.719433047	0.050727341	0.14688549	0.00156658	0.248512996	-0.174790795	0.248512996	-0.159780868	-0.077232541	-0.1638	0.0211	9.9011	1.1149	9.9013	1.289	A-	A+	A+
ELA	6	672318	1	A-V	2	13405	0.861618799	0.032599776	0.047221186	0.861618799	0.056695263	0.001491981	0.391271061	-0.255639464	-0.249593717	0.391271061	-0.150708908	-1.1969	0.0266	-7.1791	0.8845	-5.0292	0.8444	A+	A-	A-
ELA	6	654635	1	A-C	2	13405	0.543901529	0.150988437	0.543901529	0.172920552	0.126221559	0.005520328	0.337602497	-0.055098949	0.337602497	-0.186571366	-0.225840298	0.7746	0.0193	9.4811	1.0736	9.9011	1.1381	A+	A-	A-
ELA	6	984950	1	D	2	13405	0.747855278	0.100111899	0.747855278	0.070943678	0.078925774	0.001491981	0.441254668	-0.210904561	0.441254668	-0.237591191	-0.243947546	-0.3379	0.0217	-8.0291	0.9169	-6.4091	0.877	A+	A-	A-
ELA	6	984950	1	D	2	13428	0.738308013	0.094727435	0.738308013	0.071343461	0.093535895	0.00178731	0.452543792	-0.194161206	0.452543792	-0.261185882	-0.251541418	-0.2595	0.0214	-9.2891	0.9068	-8.3591	0.8561	A+	A-	A-
ELA	6	106704	1	D	2	13405	0.414845207	0.354419993	0.120477434	0.414845207	0.10690041	0.00305856	0.178492163	-0.01453077	-0.115231563	0.178492163	-0.134367606	1.4213	0.0195	9.9013	1.2535	9.9014	1.3674	A+	A-	A-
ELA	6	106704	1	D	2	13396	0.430128397	0.359211705	0.102567931	0.430128397	0.105852493	0.001642281	0.18373763	-0.005448711	-0.137559647	0.18373763	-0.144015806	1.3402	0.0192	9.9012	1.2088	9.9013	1.3001	A+	A-	A-
ELA	6	978507	2	D	2	13414	0.295064858	0.1715372	0.295064858	0.099075593	0.43208588	0.001118235	0.359506545	-0.265479128	0.359506545	-0.276355954	0.039896559	2.1062	0.0209	0.991	1.0096	7.8311	1.1342	B+	A+	A+
ELA	6	488407	2	A-C	2	13414	0.467571194	0.086476815	0.467571194	0.084016699	0.359549724	0.001565529	0.329041199	-0.264589276	0.329041199	-0.308464339	-0.005287397	1.1638	0.0193	9.9011	1.0813	9.9011	1.1403	A-	A-	A-
ELA	6	482886	2	A-V	2	13414	0.819144178	0.084538542	0.053153422	0.042418369	0.819144178	0.000521843	0.45429699	-0.245341675	-0.260904599	-0.235275954	0.45429699	-0.8228	0.0241	-9.8991	0.8594	-9.8993	0.7417	A+	B-	A-
ELA	6	600949	2	A-V	2	13414	0.703444163	0.05546444	0.171760847	0.703444163	0.067765022	0.001043686	0.402496494	-0.294023412	-0.180526447	0.402496494	-0.187663213	-0.0597	0.0208	-3.579	0.9665	-0.509	0.9914	A+	A-	A-
ELA	6	817474	2	A-K	3	13414	0.596466378	0.596466378	0.086253168	0.087893246	0.226927091	0.001267333	0.352166197	0.352166197	-0.186035918	-0.26428574	-0.105991101	0.518	0.0196	5.651	1.0452	8.2711	1.1027	A+	A+	A+
ELA	6	639917	2	A-V	2	13414	0.845609065	0.845609065	0.059937379	0.041300134	0.049053228	0.003503802	0.414815878	0.414815878	-0.201522139	-0.254163973	-0.22379827	-1.0399	0.0255	-8.3191	0.8772	-8.7892	0.7602	A+	A-	A-
ELA	6	340505	2	A-V	2	13414	0.536827195	0.203145967	0.536827195	0.159311167	0.094677203	0.005367526	0.380343759	-0.196993202	0.380343759	-0.089390545	-0.255364348	0.8191	0.0193	4.201	1.032	4.9311	1.0537	A+	A+	A-
ELA	6	307275	2	A-V	1	13414	0.253168332	0.345832712	0.112196213	0.253168332	0.287311764	0.001043686	0.056409288	0.179412941	-0.196629405	0.056409288	-0.102383954	2.3308	0.0217	9.9013	1.3034	9.9017	1.7081	A+	A+	A-
ELA	6	140592	2	A-K	2	13414	0.664380498	0.177948412	0.094080811	0.059713732	0.664380498	0.002758312	0.444805177	-0.173248094	-0.270091889	-0.264335309	0.444805177	0.1596	0.0202	-7.2291	0.9382	-2.839	0.9589	A+	A-	A-
ELA	6	649082	2	D	2	13414	0.548531385	0.149470702	0.548531385	0.170717161	0.128820635	0.001863724	0.404530622	-0.145987959	0.404530622	-0.220217143	-0.193299537	0.7605	0.0193	1.121	1.0085	1.431	1.0156	A-	A-	A-
ELA	6	649082	2	D	2	13405	0.553375606	0.149347258	0.553375606	0.174710929	0.120477434	0.001864976	0.41194191	-0.142741446	0.41194191	-0.229691933	-0.201081785	0.7168	0.0192	-1.989	0.9854	-2.729	0.9723	A+	A-	A-
ELA	6	462294	2	D	2	13414	0.359549724	0.359549724	0.152452661	0.05986283	0.426047413	0.001714627	0.181494035	0.181494035	-0.14459901	-0.156003433	0.006922704	1.7175	0.02	9.9012	1.2225	9.9014	1.3835	A-	A-	A-
ELA	6	462294	2	D	2	13392	0.369100956	0.369100956	0.153449821	0.059587814	0.414351852	0.003136201	0.182288429	0.182288429	-0.155036977	-0.136658545	0.006403347	1.6573	0.0198	9.9012	1.2147	9.9014	1.3713	A-	A-	A-
ELA	6	804523	3	D	2	13395	0.790593505	0.790593505	0.064053751	0.067263904	0.076446435	0.000671892	0.455636455	0.455636455	-0.21056689	-0.259322594	-0.253781877	-0.6165	0.023	-9.0591	0.8924	-9.8992	0.767	A+	A-	A-
ELA	6	232745	3	A-C	3	13395	0.412989922	0.412989922	0.144307577	0.147368421	0.290406868	0.004777902	0.297709977	0.297709977	-0.138164991	-0.185634959	-0.065102018	1.4367	0.0195	9.9011	1.1021	9.9012	1.1786	A+	A+	A+
ELA	6	906698	3	A-C	2	13395	0.582381486	0.129675252	0.093542367	0.192459873	0.582381486	0.001119821	0.447052437	-0.159597283	-0.231066509	-0.247460879	0.447052437	0.5913	0.0194	-6.5591	0.9502	-5.2691	0.9403	A+	A-	A+
ELA	6	128235	3	A-V	2	13395	0.272937663	0.194998134	0.380515118	0.272937663	0.150279955	0.000821202	0.100366978	-0.132697519	0.224060192	0.100366978	-0.280148047	2.2026	0.0213	9.9013	1.2714	9.9016	1.5975	A-	A+	A-
ELA	6	198290	3	A-C	2	13395	0.65502053	0.155505786	0.65502053	0.145875327	0.04285181	0.000447928	0.416428443	-0.248668411	0.416428443	-0.209301714	-0.164389947	0.2134	0.0201	-3.279	0.9722	-3.359	0.9532	A+	A-	A-
ELA	6	857346	3	A-K	2	13395	0.251138485	0.13281075	0.251138485	0.435087719	0.174692049	0.005449795	-0.073732397	-0.219699882	-0.073732397	0.290412598	-0.087125074	2.3377	0.0218	9.9014	1.4352	9.902	2.0103	A+	A+	A+
ELA	6	789067	3	A-K	2	13395	0.790817469	0.050690556	0.110414334	0.790817469	0.045987309	0.001119821	0.469318165	-0.252389592	-0.276240818	0.469318165	-0.227246555	-0.6082	0.0229	-9.8991	0.8637	-9.8993	0.7415	A+	A-	A-
ELA	6	303545	3	A-V	1	13395	0.751175812	0.751175812	0.153340799	0.056961553	0.036580814	0.001045166	0.264720544	0.264720544	-0.098795323	-0.182994933	-0.180370387	-0.3438	0.0218	6.1211	1.0673	9.9014	1.416	A-	A-	A-
ELA	6	980578	3	A-V	2	13395	0.39589399	0.243523703	0.255841732	0.103546099	0.39589399	0.000746547	0.217443386	-0.058458484	-0.054766461	-0.18710708	0.217443386	1.5242	0.0196	9.9012	1.1859	9.9013	1.2761	A-	A-	A-
ELA	6	538682	3	D	3	13395	0.668159761	0.065621501	0.668159761	0.111907428	0.152668906	0.001493094	0.420482108	-0.227808176	0.420482108	-0.262413046	-0.160250914	0.142	0.0202	-3.949	0.9658	-2.019	0.9705	A+	A-	A-
ELA	6	538682	3	D	3	13396	0.705583756	0.072260376	0.705583756	0.096446701	0.123768289	0.001642281	0.411876502	-0.243244754	0.411876502	-0.241783487	-0.159151689	-0.0596	0.0207	-5.039	0.9528	-4.5291	0.9301	A+	A-	A-
ELA	6	590410	3	D	2	13395	0.653378126	0.123180291	0.123777529	0.653378126	0.09533408	0.00410601	0.36368744	-0.187293029	-0.149612476	0.36368744	-0.206769708	0.2222	0.02	3.971	1.0342	1.321	1.0186	A+	A-	A-
ELA	6	961565	4	D	1	13427	0.670291204	0.046548	0.237804424	0.043643405	0.670291204	0.000819245	0.204447181	-0.176300147	-0.043412749	-0.192049461	0.204447181	0.1239	0.0202	9.9012	1.1792	9.9013	1.3148	A+	A-	A+
ELA	6	862443	4	A-V	2	13427	0.786996351	0.163923438	0.023385715	0.786996351	0.022417517	0.001787443	0.344415775	-0.216146519	-0.200672424	0.344415775	-0.190816701	-0.5664	0.0228	-2.729	0.9671	3.1511	1.0722	A+	A-	A-
ELA	6	356967	4	A-C	3	13427	0.130036494	0.130036494	0.130781262	0.457510985	0.279064571	0.001787443	0.018468616	0.018468616	-0.200848203	0.339726608	-0.235779189	3.2755	0.0273	9.9012	1.1964	9.9022	2.2282	A-	A+	A-
ELA	6	753916	4	A-C	2	13427	0.648916363	0.648916363	0.121546138	0.074625754	0.149325985	0.00394727	0.423388226	0.423388226	-0.145225588	-0.251968739	-0.240079587	0.2592	0.0199	-4.689	0.9609	-3.8291	0.9487	A+	A-	A-
ELA	6	820417	4	A-C	2	13427	0.762493483	0.035450957	0.762493483	0.052953005	0.147315111	0.000446861	0.30769511	-0.221605698	0.30769511	-0.25933653	-0.084633723	-0.4017	0.022	1.611	1.0182	8.0312	1.1724	A+	A-	A-
ELA	6	883378	4	A-K	2	13427	0.575258807	0.060102778	0.297534818	0.064645863	0.575258807	0.001117152	0.457533481	-0.290581538	-0.194386207	-0.267458239	0.457533481	0.6386	0.0193	-8.3391	0.9382	-7.5491	0.9179	A-	B-	B-
ELA	6	768142	4	A-K	3	13427	0.681388248	0.080285991	0.054665972	0.182766068	0.681388248	0.000521338	0.239663405	-0.232569831	-0.173900442	-0.020075128	0.239663405	0.0828	0.0203	9.9011	1.1208	9.9014	1.3979	A+	A-	A-
ELA	6	988136	4	A-V	2	13427	0.60102778	0.156103374	0.154986222	0.60102778	0.085573844	0.001415059	0.144727389	-0.046451262	-0.031350981	0.144727389	-0.144087282	0.5084	0.0195	9.9013	1.2638	9.9014	1.4311	C-	A-	A-
ELA	6	166910	4	A-V	2	13427	0.535413719	0.228867208	0.052878528	0.181276532	0.535413719	0.000893722	0.374491723	-0.135103712	-0.158417499	-0.242957652	0.374491723	0.8368	0.0192	3.621	1.0268	5.1011	1.0543	A-	A-	A-
ELA	6	258819	4	D	2	13427	0.778729426	0.778729426	0.063156327	0.125046548	0.030684442	0.002010874	0.394423831	0.394423831	-0.211423829	-0.215114514	-0.228142026	-0.5096	0.0225	-4.6491	0.946	-3.3691	0.9283	A+	A-	A-
ELA	6	304128	4	D	2	13427	0.757875922	0.069412378	0.119684218	0.051314516	0.757875922	0.001340582	0.387184584	-0.232329667	-0.162097831	-0.242445033	0.387184584	-0.3719	0.0219	-4.499	0.9511	2.101	1.0424	A+	A-	B-
ELA	6	304128	4	D	2	13392	0.757168459	0.063918757	0.122535842	0.055630227	0.757168459	0.000597372	0.372749854	-0.219010756	-0.138050805	-0.262855419	0.372749854	-0.3809	0.0219	-3.269	0.9646	4.3111	1.0897	A+	B-	B-
ELA	6	949621	5	D	2	13350	0.572209738	0.572209738	0.066142322	0.181198502	0.179026217	0.000674157	0.347489059	0.347489059	-0.199660706	-0.11353555	-0.201846537	0.6854	0.0194	7.5511	1.059	5.4811	1.0649	A+	A-	A-
ELA	6	923307	5	A-C	3	13350	0.802247191	0.064719101	0.050037453	0.08164794	0.802247191	0.000599251	0.463712317	-0.239131712	-0.273357303	-0.237389622	0.463712317	-0.6838	0.0235	-9.8991	0.8544	-9.8993	0.7288	B+	A+	A-
ELA	6	978978	5	A-C	2	13350	0.389962547	0.245992509	0.167640449	0.194157303	0.389962547	0.001573034	0.321440642	-0.052553851	-0.146577325	-0.196914644	0.321440642	1.5727	0.0197	9.5711	1.0786	9.9011	1.1462	A+	A-	A-
ELA	6	102626	5	A-V	2	13350	0.634531835	0.197677903	0.634531835	0.077228464	0.090187266	0.000224719	0.217996157	-0.111091552	0.217996157	-0.12597404	-0.093565227	0.3346	0.0199	9.9012	1.1821	9.9014	1.3633	A+	A-	A-
ELA	6	650423	5	A-C	2	13350	0.241273408	0.241273408	0.107640449	0.48741573	0.157902622	0.005318352	0.020517185	0.020517185	-0.132342164	0.2085969	-0.191118689	2.4233	0.0221	9.9013	1.3368	9.9019	1.876	A-	A-	A-
ELA	6	458948	5	A-K	2	13350	0.821872659	0.046516854	0.078726592	0.821872659	0.050861423	0.001498127	0.476637184	-0.259405333	-0.263932952	0.476637184	-0.249405177	-0.8331	0.0243	-9.8992	0.8378	-9.8993	0.6672	A+	A-	A-
ELA	6	864184	5	A-V	2	13350	0.789588015	0.069737828	0.789588015	0.08329588	0.056179775	0.000524345	0.413139078	-0.253488933	0.413139078	-0.171774847	-0.239437834	-0.5925	0.023	-6.8191	0.9184	-5.4691	0.8762	A-	A-	A-
ELA	6	648478	5	A-V	2	13350	0.735355805	0.735355805	0.198277154	0.027265918	0.037752809	0.000524345	0.282419059	0.282419059	-0.122085091	-0.227355246	-0.193373459	-0.2364	0.0215	6.5011	1.069	7.1411	1.1433	B+	A-	A-
ELA	6	505545	5	A-V	2	13350	0.746367041	0.092059925	0.087041199	0.746367041	0.070636704	0.003520599	0.503930329	-0.276678164	-0.225317173	0.503930329	-0.279837458	-0.3049	0.0217	-9.8991	0.8565	-9.8992	0.7715	A+	A-	A-
ELA	6	255595	5	D	3	13350	0.593632959	0.141123596	0.593632959	0.092883895	0.170636704	0.001573034	0.386756684	-0.242047645	0.386756684	-0.159891351	-0.154198465	0.5474	0.0196	2.481	1.0197	2.081	1.0258	A+	A-	B-
ELA	6	377448	5	D	2	13350	0.445842697	0.236104869	0.146816479	0.445842697	0.168838951	0.002097378	0.391546085	-0.140255275	-0.126146643	0.391546085	-0.236161639	1.2878	0.0194	1.591	1.0121	4.171	1.0468	A+	A-	A-
ELA	6	523249	6	D	2	13428	0.629356568	0.629356568	0.163538874	0.07067322	0.134941912	0.000670241	0.425531673	0.425531673	-0.221817239	-0.261389696	-0.161604355	0.3423	0.0197	-3.709	0.9699	-5.0091	0.9386	A+	A-	A-

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
ELA	6	688915	6	A-C	2	53621	0.407993137	0.227112512	0.147647377	0.407993137	0.215960165	0.000745976	0.301428358	-0.098640996	-0.210236438	0.301428358	-0.075842595	1.4488	0.0097	9.9011	1.0852	9.9011	1.1438	A+	A+	A+
ELA	6	140515	6	A-C	3	53621	0.410678652	0.209134481	0.191977024	0.185841368	0.410678652	0.001193562	0.262997464	-0.169239175	-0.01561566	-0.136254951	0.262997464	1.4368	0.0097	9.9011	1.1275	9.9012	1.1951	A-	A-	A-
ELA	6	194295	6	A-C	2	53621	0.651423882	0.651423882	0.097163425	0.157065329	0.09194159	0.001118965	0.434423909	0.434423909	-0.248625921	-0.146292381	-0.271168573	0.2201	0.01	-9.8991	0.9471	-7.339	0.9512	A+	B-	A-
ELA	6	662901	6	A-K	2	53621	0.666212864	0.094347364	0.142686634	0.094403312	0.666212864	0.001771694	0.471062229	-0.256372097	-0.190165134	-0.271504831	0.471062229	0.14	0.0101	-9.8991	0.9134	-9.8991	0.875	A-	A-	A-
ELA	6	389223	6	A-K	2	53621	0.719214487	0.081050335	0.101657933	0.719214487	0.096137707	0.001156263	0.422107546	-0.239595894	-0.22862642	0.422107546	-0.181259972	-0.1581	0.0105	-9.8991	0.9419	-9.8991	0.9118	A+	A-	A-
ELA	6	588318	6	A-V	2	53621	0.797709852	0.045374014	0.797709852	0.095149289	0.060573283	0.000615431	0.400369362	-0.212813133	0.400369362	-0.277569302	-0.141720501	-0.6666	0.0116	-9.8991	0.9289	-9.8991	0.8865	A+	B-	A-
ELA	6	883695	6	B-C	2	13428	0.726690497	0.726690497	0.104334227	0.123845696	0.03798034	0.006776884	0.461770633	0.461770633	-0.22885665	-0.243278559	-0.258279592	-0.189	0.0211	-9.8991	0.9021	-8.5991	0.8583	A+	A-	A-
ELA	6	942663	6	B-V	2	13428	0.773607388	0.114164433	0.072088174	0.03917188	0.773607388	0.000446828	0.524956025	-0.345978321	-0.270349085	-0.201086813	0.524956025	-0.4851	0.0223	-9.8992	0.8241	-9.8993	0.6774	A-	A-	A-
ELA	6	824938	6	B-C	2	13428	0.291406017	0.200327674	0.152517128	0.351578791	0.291406017	0.003053321	-0.034732847	-0.090107402	-0.152943321	0.227771661	-0.034732847	2.081	0.0208	9.9014	1.4026	9.9018	1.7571	A+	A-	A+
ELA	6	970721	6	B-C	3	13428	0.374813822	0.374813822	0.167262437	0.334003575	0.121611558	0.001266011	0.108907457	0.108907457	-0.15383543	0.124657004	-0.160669332	1.6263	0.0197	9.9013	1.2962	9.9014	1.4442	A-	A-	A-
ELA	6	425826	6	B-K	3	13428	0.295501936	0.206508788	0.218200775	0.295501936	0.275618111	0.003202264	0.059834031	-0.15545099	0.120512366	0.059834031	-0.025081933	2.0573	0.0207	9.9013	1.2984	9.9016	1.5915	A+	A-	A-
ELA	6	775858	6	B-K	2	13428	0.509085493	0.227733095	0.509085493	0.167634793	0.093386953	0.001563896	0.379260532	-0.06182986	0.379260532	-0.230795764	-0.261105629	0.9552	0.0191	3.121	1.0231	3.911	1.0394	A-	A-	A-
ELA	6	547248	6	B-V	1	13428	0.814492106	0.025692583	0.814492106	0.123324397	0.035001489	0.001117069	0.295938926	-0.184038185	0.295938926	-0.155905246	-0.180919042	-0.7758	0.0238	1.041	1.014	3.9511	1.1004	A+	A-	A-
ELA	6	671021	6	B-V	2	13428	0.600312779	0.102025618	0.248510575	0.600312779	0.047363718	0.001117069	0.425500817	-0.243054306	-0.195792247	0.425500817	-0.229811335	0.5008	0.0195	-3.489	0.9728	-3.629	0.9588	A-	A-	A-
ELA	6	984950	6	D	2	13405	0.747855278	0.100111899	0.747855278	0.070943678	0.078925774	0.001491981	0.441254668	-0.210904561	0.441254668	-0.237591191	-0.243947546	-0.3379	0.0217	-8.0291	0.9169	-6.4091	0.877	A+	A-	A-
ELA	6	984950	6	D	2	13428	0.738308013	0.094727435	0.738308013	0.071343461	0.093535895	0.00178731	0.452543792	-0.194161206	0.452543792	-0.261185882	-0.251541418	-0.2595	0.0214	-9.2891	0.9068	-8.3591	0.8561	A+	A-	A-
ELA	6	405802	6	D	2	13428	0.594876378	0.594876378	0.156538576	0.150506405	0.095397676	0.002308609	0.237860823	0.237860823	-0.111492961	-0.07084004	-0.16817496	0.5284	0.0194	9.9012	1.1649	9.9012	1.2252	A+	A+	A+
ELA	6	499984	7	D	2	13405	0.58306602	0.239089892	0.092726595	0.082879523	0.58306602	0.000895188	0.29482822	-0.139145662	-0.144149733	-0.154621808	0.29482822	0.574	0.0193	9.9011	1.09	9.9011	1.1287	A+	A-	A-
ELA	6	135255	7	B-C	2	13405	0.330175308	0.330175308	0.29078702	0.171577769	0.202909362	0.004177546	-0.004194716	-0.004194716	0.092832752	-0.130165145	0.031282749	1.8369	0.0201	9.9014	1.391	9.9016	1.615	A-	A+	A-
ELA	6	393827	7	B-C	2	13405	0.497277135	0.3615069	0.077806789	0.497277135	0.061917195	0.000969787	0.362274301	-0.10314882	-0.250577021	0.362274301	-0.262378323	0.9915	0.0191	3.911	1.0284	4.721	1.0466	A+	A-	A+
ELA	6	872288	7	B-V	2	13405	0.495113764	0.148228273	0.252666915	0.102424468	0.495113764	0.001193584	0.402727414	-0.321351001	-0.048326627	-0.21335773	0.402727414	1.002	0.0191	-1.469	0.9894	1.111	1.0108	A-	A-	A-
ELA	6	709130	7	B-C	2	13405	0.585602387	0.109884372	0.585602387	0.14151436	0.161432301	0.001044386	0.449507277	-0.189652371	0.449507277	-0.265740318	-0.184709875	0.5569	0.0193	-8.2191	0.939	-8.4991	0.9098	A-	A-	A-
ELA	6	975730	7	B-V	2	13405	0.799850802	0.0307348	0.102051473	0.062140992	0.799850802	0.004252145	0.442700122	-0.223583628	-0.239725706	-0.264167751	0.442700122	-0.6757	0.0231	-8.6991	0.8939	-9.8992	0.7682	A-	A-	A-
ELA	6	120213	7	B-V	2	13405	0.42230511	0.42230511	0.091383812	0.335173443	0.149645655	0.000969787	0.168113766	0.168113766	-0.235932534	0.124745377	-0.20250641	1.3602	0.0193	9.9012	1.2285	9.9013	1.3079	A+	A+	A+
ELA	6	870389	7	B-K	2	13405	0.32771354	0.275792615	0.116598284	0.32771354	0.276762402	0.002536367	-0.053468307	-0.079108355	-0.100037338	-0.053468307	0.211094023	1.8503	0.0202	9.9014	1.4116	9.9017	1.7315	A+	A+	A-
ELA	6	267449	7	B-C	3	13405	0.646027602	0.11615069	0.646027602	0.162849683	0.073703842	0.000447594	0.402078026	-0.274360031	0.402078026	-0.142803545	-0.193199367	0.2475	0.0198	-3.189	0.9739	-1.029	0.9867	A+	A+	A-
ELA	6	269366	7	D	2	13405	0.865647147	0.058709437	0.04461022	0.028571429	0.865647147	0.001864976	0.400628153	-0.253296314	-0.205556096	-0.198299215	0.400628153	-1.2153	0.0267	-6.9391	0.8853	-9.8993	0.7161	B+	A-	A-
ELA	6	649082	7	D	2	13414	0.548531385	0.149470702	0.548531385	0.170717161	0.128820635	0.001863724	0.404530622	-0.145987959	0.404530622	-0.220217143	-0.193299537	0.7605	0.0193	1.121	1.0085	1.431	1.0156	A-	A-	A-
ELA	6	649082	7	D	2	13405	0.553375606	0.149347258	0.553375606	0.174710929	0.120477434	0.001864976	0.41194191	-0.142741446	0.41194191	-0.229691933	-0.201081785	0.7168	0.0192	-1.989	0.9854	-2.729	0.9723	A+	A-	A-
ELA	6	963139	8	D	2	13396	0.698118841	0.064646163	0.116527322	0.118542849	0.698118841	0.001194386	0.409127027	-0.265690707	-0.079403818	-0.297117123	0.409127027	-0.0333	0.0206	-5.8091	0.9464	5.1211	1.0817	A+	A-	A-
ELA	6	410908	8	B-C	3	13396	0.503433861	0.503433861	0.282621678	0.102343983	0.107345476	0.003359212	0.174418503	0.174418503	0.064686133	-0.174402594	-0.197151577	0.981	0.0191	9.9012	1.2197	9.9013	1.3122	A+	A+	A+
ELA	6	735008	8	B-C	2	13396	0.440056733	0.193341296	0.131083906	0.440056733	0.231934906	0.003209913	0.127144644	-0.140465463	-0.152637746	0.127144644	0.108312983	1.2911	0.0192	9.9013	1.2683	9.9014	1.3671	A+	A+	A+
ELA	6	340871	8	B-C	3	13396	0.283816064	0.426097342	0.133248731	0.283816064	0.150492684	0.00522544	0.127776059	0.156817923	-0.20663456	0.127776059	-0.173630568	2.1144	0.0209	9.9012	1.1919	9.9015	1.4901	A+	A-	A-
ELA	6	195960	8	B-C	2	13396	0.545237384	0.102717229	0.545237384	0.254852195	0.095550911	0.00089579	0.344882805	-0.213104352	0.344882805	-0.068926332	-0.258539949	0.7765	0.0192	5.891	1.0436	7.9311	1.0826	A+	A-	A-
ELA	6	487656	8	B-K	2	13396	0.383771275	0.119961182	0.180203046	0.310764407	0.383771275	0.004777546	0.255349629	-0.248779503	-0.196030647	0.075309004	0.255349629	1.5731	0.0195	9.9011	1.1184	9.9012	1.2028	A-	A+	A-
ELA	6	723868	8	B-K	2	13396	0.592266348	0.155344879	0.151015228	0.592266348	0.099880561	0.000970439	0.447769	-0.218273706	-0.175618264	0.447769	-0.256725343	0.5431	0.0194	-8.1291	0.939	-6.5191	0.9293	A+	A-	A-
ELA	6	348173	8	B-K	2	13396	0.672514183	0.112570917	0.072558973	0.140937593	0.672514183	0.000821141	0.39056144	-0.136072663	-0.224491372	-0.232754065	0.39056144	0.125	0.0202	-3.169	0.9723	-1.169	0.9835	A+	A-	A-
ELA	6	869672	8	B-V	2	13396	0.685279188	0.230367274	0.685279188	0.033144222	0.050089579	0.000597193	0.366401762	-0.207894341	0.366401762	-0.232629635	-0.184206004	0.0548	0.0204	0.151	1.0013	2.741	1.0408	A+	A-	A-
ELA	6	538682	8	D	3	13395	0.668159761	0.065621501	0.668159761	0.111907428	0.152668906	0.001493094	0.420482108	-0.227808176	0.420482108	-0.262413046	-0.160250914	0.142	0.0202	-3.949	0.9658	-2.019	0.9705	A+	A-	A-
ELA	6	538682	8	D	3	13396	0.705583756	0.072260376	0.705583756	0.096446701	0.123768289	0.001642281	0.411876502	-0.243244754	0.411876502	-0.241783487	-0.159151689	-0.0596	0.0207	-5.039	0.9528	-4.5291	0.9301	A+	A-	A-
ELA	6	106704	8	D	2	13405	0.414845207	0.354419993	0.120477434	0.414845207	0.10690041	0.00305856	0.178492163	-0.01453077	-0.115231563	0.178492163	-0.134367606	1.4213	0.0195	9.9013	1.2535	9.9014	1.3674	A+	A-	A-
ELA	6	106704	8	D	2	13396	0.430128397	0.359211705	0.102567931	0.430128397	0.105852493	0.001642281	0.18373763	-0.005448711	-0.137559647	0.18373763	-0.144015806	1.3402	0.0192	9.9012	1.2088	9.9013	1.3001	A+	A-	A-
ELA	6	316298	9	D	2	13392	0.444145759	0.129554958	0.197954002	0.444145759	0.227075866	0.000597372	0.373667336	-0.26053605	-0.137399059	0.373667336	-0.10124406	1.2636	0.0193	3.371	1.0253	4.7711	1.0519	A+	A-	A-
ELA	6	866621	9	B-V	2	13392	0.558094385	0.069071087	0.205645161	0.558094385	0.166293309	0.000448029	0.382739322	-0.261396968	-0.197914718	0.382739322	-0.11530082	0.7109	0.0193	2.101	1.0158	1.341	1.0149	A-	A-	A+
ELA	6	811197	9	B-C	3	13392	0.590725806	0.590725806	0.106481481	0.086618877	0.211842891	0.003882915	0.430655471	0.430655471	-0.219914926	-0.255862892	-0.170529254	0.547	0.0195	-4.399	0.9663	-5.6291	0.9347	A+	A-	A-
ELA	6	187603	9	B-C	3	13392	0.300701912	0.368055556	0.300701912	0.110140382	0.218862007	0.000970729	0.213172322	0.029955909	0.213172322	-0.221871631	-0.09756318	2.0313	0.0207	9.9011	1.1436	9.9014	1.3658	A+	A-	A-
ELA	6	179418	9	B-C	2	13392	0.588933692	0.098715651	0.211693548	0.098416965	0.588933692	0.0015681	0.471639146	-0.250211556	-0.20821581	-0.237177564	0.471639146	0.556	0.0194	-9.8991	0.9211	-7.3891	0.9152	A+	A-	A-
ELA	6	738355	9	B-C	2	13392	0.53718638	0.072356631	0.123133214	0.266353047	0.53718638	0.0005227	0.324968822	-0.231346596	-0.144420693	-0.122460893	0.324968822	0.8147	0.0192	9.9011	1.0828	9.0311	1.1001	A+	A-	A-
ELA	6	378032	9	B-K	2	13392	0.574298088	0.574298088	0.218563321	0.054286141	0.152329749	0.000224014	0.252229559	0.252229559	-0.070530853	-0.220028544	-0.126496068	0.6299	0.0194	9.9012	1.1537	9.9012	1.2293	A+	A+	A-
ELA	6	406515	9	B-V	2	13392	0.82026583	0.068623059	0.82026583	0.07594086	0.033378136	0.0010454	0.465643852	-0.260838117	0.465643852	-0.274442335	-0.213284785	-0.8237	0.0241	-9.8991	0.8619	-9.8993	0.6974	A-	A-	A-
ELA	6	908520	9	B-V	2	13392	0.730585424	0.088709677	0.116412784	0.730585424	0.062201314	0.001344086	0.426735837	-0.232056397	-0.20442284	0.426735837	-0.229899161	-0.2157	0.0212	-7.5291	0.9257	-2.199	0.9601	A+	A-	A-
ELA	6	462294	9	D	2	13414	0.359549724	0.359549724	0.152452661	0.05986283	0.426047413	0.001714627	0.181494035	0.181494035	-0.14459901	-0.156003433	0.006922704	1.7175	0.02	9.9012	1.2225	9.9014	1.3835	A-	A-	A-
ELA	6	462294	9	D	2	13392	0.369100956	0.369100956	0.153449821	0.059587814	0.414351852	0.003136201	0.182288429	0.182288429	-0.155036977	-0.136658545	0.006403347	1.6573	0.0198	9.9012	1.2147	9.9014	1.3713	A-	A-	A-
ELA	6	304128	9	D	2	13427	0.757875922	0.069412378	0.119684218	0.051314516	0.757875922	0.001340582	0.387184584	-0.232329667	-0.162097831	-0.242445033	0.387184584	-0.3719	0.0219	-4.499	0.9511	2.101	1.0424	A+	A-	B-
ELA	6	304128	9	D	2	13392	0.757168459	0.063918757	0.122535842	0.055630227	0.757168459	0.000597372	0.372749854	-0.219010756	-0.138050805	-0.262855419	0.372749854	-0.3809	0.0219	-3.269	0.9646	4.3111	1.0897	A+	B-	B-
ELA	7	592538	0	D	2	119053	0.831764004	0.070414017	0.02235139	0.074034254	0.831764004	0.000823163	0.419026287	-0.193903626	-0.212913324	-0.28400145	0.419026287	-0.9553	0.0081	-9.8992	0.8435	-9.8993	0.7216			
ELA	7	944528	0	D	2	119053	0.714765693	0.096881221	0.714765693	0.136611425	0.050263328	0.000915559	0.392067093	-0.183775253	0.392067093	-0.255432612	-0.153753814	-0.2292	0.007	-9.899	0.9657	-9.8991	0.9262			
ELA	7	859473	0	D	2	119053	0.467296078	0.331096234	0.467296078	0.079233619	0.121256919	0.000772765	0.497687518	-0.277956532	0.497687518	-0.209417966	-0.183187473	0.9804	0.0064	-9.8991	0.8811	-9.8991	0.8731			
ELA	7	126509	0	D	2	119053	0.600606453	0.125406332	0.102164582	0.169857122	0.600606453	0.001402737	0.285935853	-0.143385899	-0.186866659	-0.092272756	0.285935853	0.3339	0.0065	9.9011	1.1051	9.9012	1.1605			
ELA	7	140326	0	A-V	2	119053	0.679294096	0.679294096	0.121492109	0.119560196	0.078057672	0.000940757	0.254477186	0.254477186	-0.242759943	-0.018838678	-0.117576998	-0.0274	0.0068	9.9011	1.1005	9.9012	1.2445			
ELA	7	134893	0	A-K	3	119053	0.567100367	0.567100367	0.163515409	0.200062157	0.066953374	0.001679924	0.289282122	0.289282122	-0.169723908	-0.046113546	-0.240134477	0.5467	0.0064	9.9011	1.1018	9.9011	1.1477			
ELA	7	570291	0	A-V	2	119053	0.740913711	0.127321445	0.740913711	0.098871931	0.03007904	0.00243589	0.429090604	-0.198150329	0.429090604	-0.271737508	-0.222466671	-0.3291	0.0071	-9.8991	0.9003	-9.8992	0.8468			
ELA	7	792100	0	A-C	2	119053	0.738410624	0.156123743	0.738410624	0.042628073	0.060158081	0.002192301	0.472745129	-0.276427675	0.472745129	-0.255294732	-0.222982061	-0.3213	0.0071	-9.8991	0.863	-9.8992	0.7877			
ELA	7	463873	0	A-K	3	119053	0.427364283	0.231375942	0.177383182	0.427364283	0.161029121	0.00176392	0.224102211	-0.066450283	-0.092075365	0.224102211	-0.123596978	1.2179	0.0065	9.9012	1.1612	9.9012	1.2416			
ELA	7	243870	0	D	2	119053	0.422232115	0.09601606	0.422232115	0.272903665	0.207537819	0.000848362	0.269507588	-0.142131161	0.269507588	-0.092665706	-0.12150719	1.3456	0.0065	9.9011	1.1231	9.9012	1.2239			
ELA	7	837750	0	D	3	119053	0.56549604	0.56549604	0.076159358	0.171814234	0.180785029	0.001007954	0.3424469	0.3424469	-0.240082844	-0.114190012	-0.150459398	0.5311	0.0064	9.901	1.0479	9.9011	1.0754			
ELA	7	296964	0	D	2	119053	0.472268653	0.211233652	0.180331449	0.472268653	0.135259086	0.000512377	0.343341581	-0.071168323	-0.202620304	0.343341581	-0.186676701	0.9893	0.0064	9.901	1.0412	9.9011	1.0694			
ELA	7	967148	0	D	2	119053	0.339747843	0.110950585	0.339747843	0.227570914	0.320495914	0.00066357	0.250984628	-0.209344503	0.250984628	-0.099030923	-0.022525546	1.6878	0.0067	9.9011	1.0963	9.9013	1.2589			
ELA	7	611452	0	B-C	3	119053	0.739141391	0.739141391	0.105910813	0.056159862	0.09624285	0.001814318	0.295311889	0.295311889	-0.24763314	-0.230038437	0.007558244	-0.3125	0.007	4.501	1.015	9.9011	1.1414			
ELA	7	481126	0	B-C	2	119053	0.546386903	0.197189487	0.546386903	0.1880507	0.060233677	0.007223673	0.358160051	-0.121712725	0.358160051	-0.184287952	-0.213861998	0.634	0.0064	9.901	1.0321	9.851	1.0338			
ELA	7	954098	0	B-C	2	119053	0.669231351	0.148933668	0.076344149	0.669231351	0.102164582	0.00243589	0.410428138	-0.094799086	-0.242869529	0.410428138	-0.300618409	0.0424	0.0067	-9.8991	0.9504	-9.899	0.9519			
ELA	7	212379	0	B-C	2	119053	0.309106028	0.117241901	0.309106028	0.226856946	0.342637313	0.002939867	0.253031651	-0.115769381	0.253031651	-0.233723411	0.046591797	1.7046	0.0067	9.9011	1.0547	9.9012	1.2083			
ELA	7	396011	0	B-K	2	119053	0.594609124	0.065836224	0.155149387	0.594609124	0.179953466	0.003511041	0.498784621	-0.246196807	-0.271868039	0.498784621	-0.210195275	0.3296	0.0065	-9.8991	0.8999	-9.8991	0.8555			
ELA	7	484637	0	B-V	2	119053	0.820953693	0.071421972	0.066692985	0.820953693	0.038377865	0.001688324	0.365375322	-0.174110916	-0.213771808	0.365375322	-0.202055395	-0.8718	0.0079	-9.8991	0.9038	-9.8991	0.8748			
ELA	7	592230	0	A-C	2	119053	0.503775629	0.30176476	0.120164969	0.503775629	0.071505968	0.001579129	0.316503945	-0.126119841	-0.143109769	0.316503945	-0.201886507	0.8112	0.0064	9.9011	1.0721	9.9011	1.1032			
ELA	7	604977	0	A-K	2	119053	0.566991172	0.120719343	0.224832638	0.566991172	0.08472697	0.001528731	0.465321075	-0.191486457	-0.223661954	0.465321075	-0.261701546	0.5918	0.0064	-9.8991	0.92	-9.8991	0.8974			
ELA	7	373300	0	A-K	2	119053	0.346375144	0.440316498	0.346375144	0.121055328	0.086331298	0.003889024	0.18500768	0.100362891	0.18500768	-0.23183881	-0.21180743	1.6019	0.0067	9.9012	1.1508	9.9013	1.3345			
ELA	7	266226	0	A-V	2	119053	0.800677009	0.074597028	0.049759351	0.069313667	0.800677009	0.004317405	0.464283899	-0.231669849	-0.259446841	-0.252686618	0.464283899	-0.7375	0.0077	-9.8992	0.8334	-9.8993	0.7072			
ELA	7	792035	0	A-C	2	119053	0.476611257	0.138459342	0.29558264	0.087280455	0.476611257	0.001142348	0.185370569	-0.099733745	0.004565337	-0.210044626	0.185370569	0.9055	0.0064	9.9012	1.2117	9.9013	1.2797			
ELA	7	805803	0	B-C	3	119053	0.431446499	0.189554232	0.431446499	0.163616205	0.212006417	0.002704678	0.305110534	-0.139708452	0.305110534	-0.206215285	-0.040825339	0.9756	0.0064	9.9011	1.0717	9.9011	1.1058			
ELA	7	605554	0	B-C	2	119053	0.616355741	0.115965158	0.143977892	0.12056815	0.616355741	0.002175502	0.533014618	-0.230914885	-0.258128055	-0.278963742	0.533014618	0.2591	0.0066	-9.8991	0.8581	-9.8992	0.8135			
ELA	7	172615	0	B-C	3	119053	0.419535837	0.183867689	0.139400099	0.253609737	0.419535837	0.002696278	0.327317046	-0.127531287	-0.244651932	-0.054934326	0.327317046	1.0722	0.0064	9.901	1.0399	9.9011	1.069			
ELA	7	682982	0	B-K	2	119053	0.692153915	0.124851957	0.115074799	0.692153915	0.064643478	0.002511486	0.516010066	-0.265837242	-0.234871787	0.516010066	-0.290311213	-0.0885	0.0068	-9.8992	0.849	-9.8992	0.7744			
ELA	7	171269	0	B-K	3	119053	0.585352742	0.12433118	0.585352742	0.191662537	0.096125255	0.002108305	0.355476029	-0.244435157	0.355476029	-0.131402102	-0.134495294	0.3801	0.0065	9.901	1.0375	9.9011	1.0706			
ELA	7	787365	0	B-K	2	119053	0.695244975	0.695244975	0.107061561	0.121962487	0.07234593	0.002402291	0.561695124	0.561695124	-0.309228324	-0.265936457	-0.276713446	-0.0797	0.0068	-9.8992	0.8011	-9.8993	0.7158			
ELA	7	854426	0	B-V	2	119053	0.642142575	0.122701654	0.15576256	0.642142575	0.076260153	0.002192301	0.324841618	-0.24860447	-0.094235269	0.324841618	-0.136691731	0.0802	0.0067	9.9011	1.0706	9.9011	1.0906			
ELA	7	945442	0	D	2	119053	0.521414832	0.094319337	0.322973802	0.521414832	0.060687257	0.000344384	0.229378792	-0.231139117	0.028121679	0.229378792	-0.250212129	0.7806	0.0064	9.9012	1.1669	9.9012	1.2224			
ELA	7	809588	1	A-C	3	66224	0.511581904	0.208096763	0.511581904	0.165861319	0.112345977	0.001600628	0.334153586	-0.15521932	0.334153586	-0.112028915	-0.192464077	0.7859	0.0086	9.901	1.0444	9.9011	1.0625	A+	A-	A-
ELA	7	476332	1	A-C	2	66224	0.730324354	0.055357574	0.730324354	0.162660063	0.050072481	0.000755013	0.339473519	-0.225085799	0.339473519	-0.112419533	-0.256956715	-0.3413	0.0095	-3.299	0.9852	6.271	1.048	A+	A-	A-
ELA	7	590801	1	A-K	3	66224	0.725144963	0.038520778	0.086267818	0.725144963	0.147997705	0.001208021	0.321832818	-0.227611423	-0.210968683	0.321832818	-0.108776983	-0.3095	0.0094	1.851	1.0083	8.1011	1.061	A+	A-	A-
ELA	7	590137	1	A-C	2	66224	0.742751872	0.742751872	0.085618507	0.071756463	0.098801039	0.000468108	0.379384171	0.379384171	-0.215402949	-0.163861762	-0.208329406	-0.4173	0.0096	-9.899	0.9511	-5.499	0.9571	A+	A-	A-
ELA	7	582997	1	A-V	2	66224	0.655910244	0.092745832	0.077524764	0.172656439	0.655910244	0.000453008	0.508162654	-0.19409025	-0.329834078	-0.254242843	0.508162654	0.0669	0.0089	-9.8991	0.8591	-9.8992	0.801	A+	B-	B-
ELA	7	726561	1	A-V	2	66224	0.615184827	0.11873339	0.164683498	0.615184827	0.09997886	0.000664412	0.323193425	-0.136934557	-0.174946642	0.323193425	-0.155899805	0.2816	0.0088	9.901	1.0468	9.9011	1.0644	A+	A-	A-
ELA	7	638240	1	D	3	13325	0.700863039	0.08195122	0.158574109	0.700863039	0.057711069	0.000600375	0.462591537	-0.216257603	-0.304259623	0.462591537	-0.17334725	-0.1746	0.0206	-9.8991	0.9082	-9.8992	0.8402	A+	A-	A-

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
ELA	7	670620	1	B-C	2	13325	0.771932458	0.051707317	0.771932458	0.083302064	0.091707317	0.000825516	0.455886868	-0.265539788	0.455886868	-0.250880488	-0.212575385	-0.6245	0.0223	-9.8991	0.8807	-9.3492	0.821	A+	A+	A+
ELA	7	481747	1	B-V	2	13325	0.751669794	0.751669794	0.088780488	0.085103189	0.072945591	0.001050657	0.465773838	0.465773838	-0.260948798	-0.212502958	-0.255101859	-0.4934	0.0218	-9.8991	0.8818	-9.8992	0.8119	A-	A-	A-
ELA	7	828721	1	B-C	2	13325	0.477523452	0.271144465	0.155196998	0.086529081	0.477523452	0.005178236	0.30583523	-0.026554622	-0.199851935	-0.235482424	0.30583523	0.9526	0.0192	9.9011	1.0913	9.9011	1.146	A+	A+	A+
ELA	7	344141	1	B-K	2	13325	0.252532833	0.215534709	0.156322702	0.252532833	0.373208255	0.001801126	0.117282786	-0.147113279	-0.124904415	0.117282786	0.118763605	2.1483	0.0216	9.9012	1.1871	9.9016	1.5822	A-	A+	A+
ELA	7	351651	1	B-V	2	13325	0.533133208	0.058236398	0.268517824	0.134409006	0.533133208	0.004577861	0.334235574	-0.248490931	-0.121101667	-0.154464845	0.334235574	0.6808	0.0192	8.9811	1.0669	8.4711	1.0877	A-	C-	C-
ELA	7	535358	1	B-C	2	13325	0.781763602	0.063414634	0.106791745	0.781763602	0.047654784	0.000225141	0.334240942	-0.14827477	-0.204796349	0.334240942	-0.179148252	-0.6907	0.0226	-0.899	0.9892	3.8011	1.0828	A+	A-	A-
ELA	7	341205	1	B-C	3	13325	0.217485929	0.217485929	0.519174484	0.105741088	0.153771107	0.002701689	-0.034383967	-0.034383967	0.229514208	-0.196126828	-0.103914481	2.3763	0.0226	9.9013	1.3221	9.9019	1.9417	A-	A-	A-
ELA	7	594261	1	B-V	2	13325	0.56945591	0.100037523	0.56945591	0.044577861	0.285028143	0.000375235	0.308877166	-0.309499445	0.308877166	-0.110037486	-0.080799762	0.5016	0.0193	9.9011	1.0857	9.9011	1.121	A-	A-	A-
ELA	7	851601	1	D	2	13325	0.687879925	0.098236398	0.175234522	0.037373358	0.687879925	0.00120075	0.515188569	-0.295592358	-0.281433139	-0.223106737	0.515188569	-0.1163	0.0205	-9.8991	0.8669	-9.8992	0.7741	A+	B-	A-
ELA	7	851601	1	D	2	13270	0.699773926	0.086209495	0.171740769	0.040241145	0.699773926	0.001733233	0.527404128	-0.289994464	-0.298099261	-0.234574963	0.527404128	-0.1734	0.0209	-9.8991	0.8576	-9.8992	0.7506	A+	B-	A-
ELA	7	309345	1	D	2	13325	0.86739212	0.037673546	0.058386492	0.86739212	0.034896811	0.001500938	0.393248027	-0.216812474	-0.234703796	0.393248027	-0.193663381	-1.3782	0.027	-5.8791	0.9007	-9.7693	0.7211	A+	A-	A-
ELA	7	309345	1	D	2	13270	0.868500377	0.03308214	0.056518463	0.868500377	0.039562924	0.002034665	0.393491337	-0.20451679	-0.245286372	0.393491337	-0.198303805	-1.3987	0.0273	-5.8691	0.9012	-7.2992	0.7671	A+	A-	A-
ELA	7	925827	2	D	2	13266	0.774310267	0.055404794	0.774310267	0.088195387	0.080431177	0.000904568	0.470627864	-0.237948252	0.470627864	-0.263989002	-0.242428964	-0.6137	0.0222	-9.8991	0.8656	-9.8993	0.7473	A+	A-	B-
ELA	7	862013	2	B-K	2	13266	0.435398764	0.251394542	0.435398764	0.067993367	0.243027288	0.001281471	0.181275281	-0.01649255	0.181275281	-0.287534207	-0.020370415	1.135	0.0191	9.9012	1.1791	9.9012	1.2483	A+	A-	A-
ELA	7	345978	2	B-C	3	13266	0.288180311	0.288180311	0.191542289	0.151289009	0.361676466	0.006935022	0.038777595	0.038777595	-0.004658554	-0.254202977	0.165673431	1.8959	0.0207	9.9013	1.2731	9.9015	1.5404	A+	A+	A-
ELA	7	335215	2	B-V	2	13266	0.510327152	0.510327152	0.182496608	0.163802201	0.142846374	0.000301523	0.107972277	0.107972277	-0.004395214	-0.138824296	-0.002691391	0.7752	0.019	9.9013	1.255	9.9013	1.3445	A-	A+	A-
ELA	7	363029	2	B-C	2	13266	0.386928991	0.442635308	0.086913915	0.082767978	0.386928991	0.000678426	0.280138354	-0.077276287	-0.153375381	-0.19748672	0.280138354	1.3734	0.0194	8.3211	1.0632	9.9011	1.1246	A+	A-	A-
ELA	7	424916	2	B-K	2	13266	0.377355646	0.377355646	0.189205488	0.115181667	0.317201869	0.000527665	0.245761755	0.245761755	-0.176047508	-0.194015406	0.026648796	1.4215	0.0195	9.9011	1.0965	9.9012	1.185	A-	A-	A-
ELA	7	511462	2	B-K	2	13266	0.357756671	0.107115935	0.365973164	0.168098899	0.357756671	0.000603045	0.308801094	-0.279682254	-0.037250415	-0.114241604	0.308801094	1.5212	0.0197	4.421	1.0352	7.3611	1.0906	A+	A-	A-
ELA	7	940723	2	B-V	2	13266	0.777853158	0.777853158	0.082466456	0.045228403	0.092265943	0.001281471	0.458708802	0.458708802	-0.25983854	-0.245696021	-0.227738972	-0.6545	0.0224	-9.8991	0.8729	-9.8992	0.7931	A+	A-	A-
ELA	7	701971	2	B-V	2	13266	0.327604402	0.081184984	0.207975275	0.327604402	0.379390924	0.002789085	0.258875834	-0.192824196	-0.034008311	0.258875834	-0.109048236	1.6791	0.0201	7.8211	1.0674	9.9012	1.177	A+	A-	A-
ELA	7	344627	2	D	2	13266	0.8295643	0.064525856	0.8295643	0.046886778	0.057515453	0.001206091	0.433557174	-0.242437536	0.433557174	-0.231872906	-0.229334192	-1.0292	0.0245	-9.0691	0.8735	-9.8993	0.7224	A+	A-	A-
ELA	7	344627	2	D	2	13242	0.854100589	0.050974173	0.854100589	0.043271409	0.050143483	0.001359311	0.42413484	-0.235313876	0.42413484	-0.237591637	-0.224052121	-1.2102	0.026	-8.2591	0.871	-9.8993	0.7124	B+	A-	A-
ELA	7	852379	2	D	2	13266	0.597617971	0.308156189	0.055254033	0.034976632	0.597617971	0.002110659	0.185073288	-0.015993639	-0.184716983	-0.205250187	0.185073288	0.352	0.0193	9.9012	1.1749	9.9012	1.2444	A+	A-	A-
ELA	7	852379	2	D	2	13242	0.63615768	0.274958465	0.052031415	0.032850023	0.63615768	0.002114484	0.217350899	-0.047603707	-0.179144416	-0.217166883	0.217350899	0.1869	0.0197	9.9011	1.1463	9.9012	1.2146	A+	A-	A-
ELA	7	313660	3	D	2	13266	0.491180461	0.491180461	0.274234886	0.084577114	0.149178351	0.000452284	0.12726563	0.12726563	0.077702614	-0.259866717	-0.069437488	0.8833	0.0191	9.9013	1.261	9.9013	1.3221	A-	A+	A+
ELA	7	694528	3	B-K	2	13266	0.359038143	0.044399216	0.159656264	0.359038143	0.428539123	0.007236545	0.047284752	-0.241958403	-0.120762547	0.047284752	0.156269791	1.5397	0.0198	9.9013	1.3245	9.9015	1.4789	A+	A-	A-
ELA	7	443824	3	B-K	3	13266	0.423262476	0.227423489	0.423262476	0.159279361	0.185134931	0.002110659	0.312543936	-0.089382797	0.312543936	-0.186774472	-0.116577551	1.2161	0.0193	6.251	1.046	9.4111	1.0997	A+	A-	A-
ELA	7	588992	3	B-V	2	13266	0.524574099	0.178426052	0.524574099	0.187471732	0.108171265	0.000979949	0.362785538	-0.137413085	0.362785538	-0.15188469	-0.218920716	0.7246	0.0191	3.101	1.022	3.551	1.0343	A+	A-	A-
ELA	7	589777	3	B-C	2	13266	0.613071009	0.613071009	0.249736168	0.055329414	0.081260365	0.000301523	0.358051692	0.358051692	-0.158703812	-0.209930193	-0.208931492	0.2892	0.0195	2.431	1.0189	0.061	1.0007	A+	A-	A-
ELA	7	258457	3	B-V	2	13266	0.62332278	0.098597919	0.057590834	0.62332278	0.218905473	0.001055329	0.2151283	-0.141548316	-0.251783493	0.2151283	-0.004341032	0.2372	0.0196	9.9011	1.1453	9.9013	1.2705	A-	A+	A+
ELA	7	417687	3	B-V	2	13266	0.702020202	0.101160862	0.10756822	0.086838535	0.702020202	0.001582994	0.497929962	-0.249278591	-0.270763487	-0.23503183	0.497929962	-0.1829	0.0206	-9.8991	0.8677	-9.8992	0.7915	A-	B-	A-
ELA	7	479623	3	B-K	2	13266	0.450927182	0.450927182	0.119629127	0.349314036	0.076436002	0.002939846	0.118326267	0.118326267	-0.077673433	0.065189348	-0.236067982	1.0808	0.0192	9.9013	1.2628	9.9014	1.3655	A+	A+	A-
ELA	7	996902	3	B-K	2	13266	0.393637871	0.149329112	0.195688226	0.259912558	0.393637871	0.000603045	0.473050981	-0.273911338	-0.164432124	-0.153319423	0.473050981	1.3634	0.0195	-9.8991	0.8902	-8.4491	0.9098	A-	A-	B-
ELA	7	201003	3	D	3	13266	0.445424393	0.445424393	0.19621589	0.125358058	0.231041761	0.001432233	0.348159101	0.348159101	-0.10130846	-0.278072634	-0.092798614	1.1076	0.0192	3.551	1.0254	7.0111	1.0707	A+	A-	A-
ELA	7	201003	3	D	3	13179	0.475605129	0.475605129	0.174140678	0.118977161	0.229987101	0.000834661	0.360623717	0.360623717	-0.130547493	-0.263875563	-0.103606416	0.974	0.0193	3.141	1.0228	4.101	1.0416	A+	A-	A-
ELA	7	901151	3	D	2	13266	0.604326851	0.208201417	0.604326851	0.09415046	0.088195387	0.002713704	0.434022349	-0.230183382	0.434022349	-0.224440472	-0.169184007	0.3333	0.0195	-6.6491	0.95	-7.5291	0.9186	A+	A-	A-
ELA	7	901151	3	D	2	13179	0.596327491	0.223689203	0.596327491	0.092040367	0.083238485	0.002731618	0.425623849	-0.221615646	0.425623849	-0.217936267	-0.175098339	0.38	0.0196	-4.279	0.9673	-5.0391	0.9432	A+	A-	A-
ELA	7	167477	4	D	2	13191	0.903418998	0.055719809	0.903418998	0.022515351	0.017132894	0.000682283	0.356977929	-0.222973194	0.356977929	-0.192337287	-0.18699304	-1.7479	0.0306	-5.4791	0.8854	-9.8994	0.6507	B+	A-	A-
ELA	7	418092	4	B-C	2	13191	0.390796755	0.390796755	0.057994087	0.125994997	0.424683496	0.000227428	0.145196878	0.145196878	-0.273134901	-0.179172198	0.106848326	1.3736	0.0196	9.9012	1.237	9.9014	1.3664	A-	A-	A-
ELA	7	890198	4	B-V	2	13191	0.783033887	0.121598059	0.066029869	0.783033887	0.026836479	0.001288757	0.420419595	-0.236372925	-0.234196478	0.420419595	-0.222586924	-0.699	0.0227	-7.8991	0.9074	-9.1592	0.8172	A+	A-	A-
ELA	7	955959	4	B-C	2	13191	0.59836252	0.130012888	0.59836252	0.129558032	0.139943901	0.001212948	0.357951043	-0.128021444	0.357951043	-0.246831462	-0.136814875	0.3519	0.0195	2.441	1.0189	6.1511	1.0705	A+	A-	A-
ELA	7	283956	4	B-C	2	13191	0.596088242	0.215980593	0.11227352	0.074975362	0.596088242	0.000379046	0.412796872	-0.136886876	-0.242944112	-0.261262041	0.412796872	0.3633	0.0195	-4.839	0.9632	-3.289	0.9637	A+	A-	A-
ELA	7	731576	4	B-C	3	13191	0.3027822	0.204457585	0.3027822	0.298385263	0.192707149	0.001212948	0.237373099	-0.211698605	0.237373099	-0.081895631	0.037955238	1.8406	0.0206	9.9011	1.0981	9.9013	1.325	A-	A+	A+
ELA	7	368915	4	B-K	2	13191	0.442726101	0.24918505	0.442726101	0.243575165	0.060495793	0.002350087	0.315891583	-0.188203561	0.315891583	-0.024748815	-0.262889467	1.1149	0.0193	9.3511	1.0694	9.9011	1.1188	A+	A+	A-
ELA	7	784674	4	B-K	2	13191	0.489652035	0.096505193	0.256311121	0.489652035	0.148131302	0.008718065	0.379656711	-0.173216022	-0.144408362	0.379656711	-0.203274192	0.886	0.0192	0.471	1.0033	1.591	1.0156	A+	A-	A+
ELA	7	207454	4	B-V	2	13191	0.694716094	0.694716094	0.172466075	0.051550299	0.080054583	0.000606474	0.413338852	0.413338852	-0.203913676	-0.239444543	-0.216702162	-0.1569	0.0206	-4.849	0.9556	-6.0891	0.9103	A-	A-	A-
ELA	7	516841	4	D	3	13191	0.680312334	0.056098855	0.680312334	0.060571602	0.201955879	0.000682283	0.281288492	-0.227332417	0.281288492	-0.241676569	-0.050120683	-0.0769	0.0204	7.3911	1.0679	9.9012	1.1854	A+	A-	A+
ELA	7	424304	4	D	2	13191	0.443256766	0.443256766	0.339928739	0.128875749	0.085209613	0.002501706	0.344877236	0.344877236	-0.155117576	-0.131637901	-0.184769686	1.1124	0.0193	5.751	1.0423	8.2511	1.0862	A-	A-	A-
ELA	7	311681	5	D	2	13176	0.34555252	0.34555252	0.346615058	0.229659988	0.075743777	0.000758956	0.262946136	0.262946136	-0.049324403	-0.074223127	-0.258893024	1.6013	0.02	8.1311	1.0688	9.9012	1.2114	A+	A-	A-
ELA	7	539778	5	B-V	1	13176	0.71660595	0.052064359	0.106633273	0.115437158	0.71660595	0.008196721	0.438277425	-0.249354183	-0.219999657	-0.215270033	0.438277425	-0.2724	0.021	-8.4391	0.9196	-7.7191	0.88	B-	B-	A-
ELA	7	831835	5	B-C	3	13176	0.482619915	0.482619915	0.130085003	0.227003643	0.159153005	0.00068306	0.276907202	0.276907202	-0.19270216	-0.079960966	-0.106310926	0.9268	0.0192	9.9011	1.1064	9.9012	1.1513	A-	A-	A-
ELA	7	607497	5	B-C	3	13176	0.339404979	0.180707347	0.341454159	0.339404979	0.137143291	0.000758956	0.153818732	-0.103062348	0.036072756	0.153818732	-0.142306263	1.6454	0.0201	9.9012	1.1943	9.9014	1.3826	A-	A-	A-
ELA	7	373548	5	B-C	3	13176	0.323846387	0.308667274	0.323846387	0.243776563	0.120218579	0.003035823	0.064224853	0.067626105	0.064224853	0.009278947	-0.193996233	1.729	0.0203	9.9013	1.3028	9.9015	1.4958	A-	A+	A-
ELA	7	123983	5	B-C	3	13176	0.528916211	0.528916211	0.104659988	0.18184578	0.182832423	0.000986642	0.36249587	0.36249587	-0.221835301	-0.14935274	-0.140472104	0.7021	0.0192	2.311	1.0167	3.311	1.0325	A-	A-	A-
ELA	7	242051	5	B-K	3	13176	0.436095932	0.272313297	0.164996964	0.436095932	0.126214329	7.58956E-05	0.251803305	0.047789579	-0.252662621	0.251803305	-0.156198527	1.1538	0.0193	9.9011	1.13	9.9012	1.1975	A+	A-	A-
ELA	7	342985	5	B-K	3	13176	0.611338798	0.115437158	0.611338798	0.15444748	0.118017608	0.000303582	0.384496005	-0.190057971	0.384496005	-0.16651868	-0.203479807	0.2944	0.0196	-1.339	0.9895	0.151	1.0017	A+	A-	A-
ELA	7	964548	5	B-C	3	13176	0.472449909	0.267152398	0.06815422	0.189738919	0.472449909	0.001290225	0.457246314	-0.134143188	-0.291772555	-0.237542077	0.457246314	0.9762	0.0192	-9.8991	0.9207	-7.5491	0.9287	A-	A-	A-
ELA	7	847627	5	D	2	13176	0.665300546	0.114374621	0.10891014	0.665300546	0.109517304	0.001669702	0.44227785	-0.2611175	-0.199857918	0.44227785	-0.198978346	0.0135	0.0202	-7.7591	0.9343	-8.4091	0.8907	A+	B-	B-
ELA	7	486458	5	D	2	13176	0.16712204	0.445051609	0.325440194	0.058060109	0.16712204	0.001062538	0.10733764	0.160612521	-0.133518925	-0.229781547	0.10733764	2.741	0.0249	7.6411	1.1181	9.9017	1.6952	A+	A-	A-
ELA	7	554373	6	B-C	2	52829	0.600200647	0.600200647	0.031668213	0.235060289	0.132086543	0.000246077	0.40845777	0.40845777	-0.236667218	-0.231353796	-0.176777197	0.3679	0.0098	-5.249	0.9797	-4.169	0.9755	A+	B-	B-
ELA	7	786087	6	B-K	2	52829	0.732400765	0.04737928	0.097711484	0.120691287	0.732400765	0.001533249	0.524187724	-0.26691086	-0.281813001	-0.277877671	0.524187724	-0.3497	0.0107	-9.8992	0.838	-9.8993	0.7164	A+	A+	A-
ELA	7	361752	6	B-K	2	52829	0.493024664	0.285127487	0.106437752	0.493024664	0.113195404	0.001003237	0.327570811	-0.092931048	-0.206689646	0.327570811	-0.178749144	0.8916	0.0096	9.9011	1.0633	9.9011	1.0899	A+	A-	A-
ELA	7	427772	6	B-K	3	52829	0.464650097	0.204679248	0.464650097	0.265687407	0.063203922	0.000605728	0.439571773	-0.136911669	0.439571773	-0.230610767	-0.249313204	1.0291	0.0097	-9.8991	0.941	-9.8991	0.9431	A+	A-	A-
ELA	7	384128	6	B-V	2	52829	0.64867781	0.133676579	0.172462095	0.64867781	0.043574552	0.000530012	0.479664043	-0.225810358	-0.272212653	0.479664043	-0.233971118	0.1164	0.01	-9.8991	0.9022	-9.8992	0.8393	A-	A-	B-
ELA	7	517405	6	B-V	2	52829	0.511063999	0.127448939	0.273183289	0.08608908	0.511063999	0.000416438	0.416856312	-0.169844788	-0.270038853	-0.109763193	0.416856312	0.8039	0.0096	-7.489	0.9729	-5.719	0.971	A+	A+	A-
ELA	7	520713	6	D	3	13138	0.486451515	0.210762673	0.172781245	0.12810169	0.486451515	0.000837266	0.353308688	-0.189235366	-0.089305533	-0.192083166	0.353308688	0.9018	0.0193	5.611	1.0411	6.7711	1.0696	A+	A-	A-
ELA	7	249554	6	A-C	2	13138	0.653980819	0.192418937	0.653980819	0.092023139	0.059521997	0.001446187	0.437705343	-0.231256606	0.437705343	-0.2178251	-0.22106619	0.0772	0.0201	-8.4491	0.9303	-6.9691	0.9071	A-	A-	A-
ELA	7	873670	6	A-C	2	13138	0.697823109	0.072385447	0.1059522	0.697823109	0.121860253	0.001522302	0.42216166	-0.275070157	-0.155409617	0.42216166	-0.223882795	-0.1624	0.0207	-7.9291	0.9281	-4.3791	0.9318	A+	A-	A-
ELA	7	340878	6	A-K	2	13138	0.289998478	0.289998478	0.353097884	0.076495661	0.279266251	0.000608921	0.173421053	0.173421053	0.075346266	-0.248735906	-0.107250985	1.9346	0.021	9.9012	1.1554	9.9014	1.3983	A+	A-	A-
ELA	7	766289	6	A-C	3	13138	0.682980667	0.142944132	0.059978688	0.112498097	0.682980667	0.001217841	0.454653859	-0.239446206	-0.271739962	-0.195619612	0.454653859	-0.0796	0.0205	-9.8991	0.9087	-9.5691	0.8621	A+	A-	A+
ELA	7	357199	6	A-V	2	13138	0.581519257	0.581519257	0.13677881	0.193712894	0.078931344	0.008144314	0.357986695	0.357986695	-0.110818112	-0.180036836	-0.230129009	0.4489	0.0195	3.031	1.023	2.081	1.0234	A+	A-	A-
ELA	7	556218	6	A-V	2	13138	0.852945654	0.031892221	0.033642868	0.080301416	0.852945654	0.000380575	0.464972414	-0.241102548	-0.251112494	-0.278804006	0.464972414	-1.2269	0.0261	-9.8992	0.8375	-9.8994	0.6207	A+	A-	A-
ELA	7	729223	6	A-V	2	13138	0.575658395	0.075506165	0.575658395	0.129928452	0.218602527	0.000228345	0.193827486	-0.254692336	0.193827486	-0.115638722	0.025159919	0.4781	0.0195	9.9012	1.1954	9.9013	1.2967	A-	A+	A-
ELA	7	248391	6	A-V	1	13138	0.523138986	0.388643629	0.046963008	0.523138986	0.038514234	0.001370072	0.164604117	0.011438735	-0.211141985	0.164604117	-0.216747146	0.7367	0.0193	9.9012	1.2404	9.9013	1.3258	A-	A-	A-
ELA	7	908048	6	D	2	13138	0.623001979	0.204292891	0.039427615	0.623001979	0.131526869	0.001446187	0.469594633	-0.237868564	-0.226981261	0.469594633	-0.255788282	0.239	0.0198	-9.8991	0.9094	-9.8991	0.8766	A+	B-	B-
ELA	7	422832	6	D	1	13138	0.506545897	0.506545897	0.05312833	0.368929822	0.068655808	0.002207337	0.301068627	0.301068627	-0.188108261	-0.102547669	-0.222313192	0.8177	0.0193	9.9011	1.0903	9.9011	1.1137	A+	A-	A-
ELA	7	980792	7	D	3	13270	0.733308214	0.733308214	0.058327054	0.077241899	0.129841748	0.000828937	0.423990996	0.423990996	-0.278051457	-0.229248381	-0.179015379	-0.3429	0.0215	-6.7491	0.9323	-5.4691	0.8981	A+	A-	A-
ELA	7	337665	7	A-V	2	13270	0.62057272	0.06616428	0.62057272	0.207385079	0.10369254	0.001808591	0.367251888	-0.237318319	0.367251888	-0.176589252	-0.151277847	0.2637	0.02	5.421	1.0461	8.9911	1.128	A-	A-	A-
ELA	7	620282	7	A-C	2	13270	0.512584778	0.238131123	0.189826677	0.058251696	0.512584778	0.001055011	0.573757208	-0.279152058	-0.277535757	-0.248413069	0.573757208	0.8167	0.0195	-9.8992	0.8193	-9.8992	0.7799	A+	A+	A-
ELA	7	772351	7	A-K	2	13270	0.537226827	0.110776187	0.537226827	0.20293896	0.146345139	0.001431801	0.386733173	-0.22078191	0.386733173	-0.195355851	-0.118657932	0.6926	0.0195	4.331	1.034	5.6511	1.0662	A-	A-	A-
ELA	7	343609	7	A-K	2	13270	0.753051997	0.753051997	0.131876413	0.06435569	0.048304446	0.001657875	0.474407551	0.474407551	-0.270503179	-0.255991207	-0.222498549	-0.499	0.0221	-9.8991	0.8768	-9.8992	0.7983	A+	A-	A-
ELA	7	253651	7	A-K	2	13270	0.826375283	0.052825923	0.058477769	0.826375283	0.057498116	0.004295403	0.455421066	-0.285419326	-0.262831552	0.455421066	-0.190019473	-1.024	0.0247	-9.8991	0.8519	-9.3192	0.758	A+	A-	A-
ELA	7	462168	7	A-V	2	13270	0.791635268	0.075960814	0.074001507	0.056292389	0.791635268	0.001582517	0.466518869	-0.277780943	-0.246453572	-0.217632571	0.466518869	-0.7605	0.0232	-9.8991	0.8691	-9.8992	0.7538	A+	A-	A-
ELA	7	131378	7	A-V	2	13270	0.766013564	0.062170309	0.048229088	0.766013564	0.12170309	0.000904295	0.476098007	-0.229989562	-0.239019231	0.476098007	-0.28422219	-0.584	0.0224	-9.8991	0.8795	-9.8992	0.7747	A-	A-	A-
ELA	7	272978	7	A-V	2	13270	0.713790505	0.713790505	0.066088922	0.102185381	0.116503391	0.001130369	0.485911523	0.485911523	-0.302297259	-0.210916063	-0.248742615	-0.256	0.0212	-9.8991	0.8815	-9.8992	0.8292	A+	A-	A-
ELA	7	851601	7	D	2	13325	0.687879925	0.098236398	0.175234522	0.037373358	0.687879925	0.00120075	0.515188569	-0.295592358	-0.281433139	-0.223106737	0.515188569	-0.1163	0.0205	-9.8991	0.8669	-9.8992	0.7741	A+	B-	A-
ELA	7	851601	7	D	2	13270	0.699773926	0.086209495	0.171740769	0.040241145	0.699773926	0.001733233	0.527404128	-0.289994464	-0.298099261	-0.234574963	0.527404128	-0.1734	0.0209	-9.8991	0.8576	-9.8992	0.7506	A+	B-	A-
ELA	7	309345	7	D	2	13325	0.86739212	0.037673546	0.058386492	0.86739212	0.034896811	0.001500938	0.393248027	-0.216812474	-0.234703796	0.393248027	-0.193663381	-1.3782	0.027	-5.8791	0.9007	-9.7693	0.7211	A+	A-	A-
ELA	7	309345	7	D	2	13270	0.868500377	0.03308214	0.056518463	0.868500377	0.039562924	0.002034665	0.393491337	-0.20451679	-0.245286372	0.393491337	-0.198303805	-1.3987	0.0273	-5.8691	0.9012	-7.2992	0.7671	A+	A-	A-
ELA	7	614617	8	D	2	13242	0.729194986	0.08510799	0.112747319	0.071061773	0.729194986	0.000981725	0.441923999	-0.209094666	-0.267659505	-0.204653963	0.441923999	-0.3287	0.0212	-9.1291	0.9109	-9.4892	0.8479	A+	A+	A-
ELA	7	749682	8	A-C	2	13242	0.408850627	0.315964356	0.131475608	0.408850627	0.138876303	0.004228968	0.294882029	-0.090228445	-0.173834631	0.294882029	-0.119894968	1.3023	0.0194	8.9111	1.0675	9.9011	1.1238	A-	A-	A-
ELA	7	357739	8	A-C	3	13242	0.624754569	0.624754569	0.068947289	0.162966319	0.13812113	0.004908624	0.432549608	0.432549608	-0.235883413	-0.233677452	-0.17553122	0.2454	0.0196	-7.5991	0.9414	-6.9891	0.92	A+	A-	A-
ELA	7	324741	8	A-K	3	13242	0.452273071	0.387479233	0.452273071	0.114484217	0.045310376	0.000302069	0.26792969	-0.09171675	0.26792969	-0.171914007	-0.161465524	1.0891	0.0192	9.9011	1.0972	9.9011	1.1367	A-	A+	A+

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
ELA	7	552113	8	A-K	3	13242	0.292553995	0.037909681	0.201480139	0.465337562	0.292553995	0.001434829	0.086943106	-0.236802448	-0.186404145	0.164313317	0.086943106	1.9149	0.0207	9.9012	1.2389	9.9015	1.45	A+	A+	A+
ELA	7	304558	8	A-V	2	13242	0.196495998	0.196495998	0.433544782	0.133967679	0.233952575	0.001283794	-0.072923834	-0.072923834	0.095337698	-0.145986724	0.07777833	2.526	0.0234	9.9013	1.2984	9.9021	2.1411	A-	A+	A+
ELA	7	802373	8	A-V	3	13242	0.377435433	0.213336354	0.227156019	0.377435433	0.180108745	0.001057242	0.294079318	-0.148497587	-0.020514384	0.294079318	-0.186324032	1.4602	0.0196	6.8711	1.0544	9.9011	1.1255	A-	A+	A-
ELA	7	684755	8	A-V	2	13242	0.6144087	0.150883552	0.6144087	0.130116297	0.10240145	0.001208277	0.365559219	-0.191490181	0.365559219	-0.186665515	-0.149062209	0.2979	0.0195	1.371	1.0106	0.331	1.0038	A+	B-	A-
ELA	7	251547	8	A-V	2	13242	0.659568041	0.065549011	0.066983839	0.205860142	0.659568041	0.001283794	0.334201287	-0.165981806	-0.245487806	-0.134096529	0.334201287	0.0647	0.02	2.351	1.0198	0.991	1.013	A+	A-	A-
ELA	7	344627	8	D	2	13266	0.8295643	0.064525856	0.8295643	0.046886778	0.057515453	0.001206091	0.433557174	-0.242437536	0.433557174	-0.231872906	-0.229334192	-1.0292	0.0245	-9.0691	0.8735	-9.8993	0.7224	A+	A-	A-
ELA	7	344627	8	D	2	13242	0.854100589	0.050974173	0.854100589	0.043271409	0.050143483	0.001359311	0.42413484	-0.235313876	0.42413484	-0.237591637	-0.224052121	-1.2102	0.026	-8.2591	0.871	-9.8993	0.7124	B+	A-	A-
ELA	7	852379	8	D	2	13266	0.597617971	0.308156189	0.055254033	0.034976632	0.597617971	0.002110659	0.185073288	-0.015993639	-0.184716983	-0.205250187	0.185073288	0.352	0.0193	9.9012	1.1749	9.9012	1.2444	A+	A-	A-
ELA	7	852379	8	D	2	13242	0.63615768	0.274958465	0.052031415	0.032850023	0.63615768	0.002114484	0.217350899	-0.047603707	-0.179144416	-0.217166883	0.217350899	0.1869	0.0197	9.9011	1.1463	9.9012	1.2146	A+	A-	A-
ELA	7	957593	9	D	2	13179	0.585932165	0.121253509	0.585932165	0.158357994	0.133242279	0.000379391	0.376974762	-0.200607973	0.376974762	-0.162557861	-0.175786345	0.4369	0.0195	1.691	1.0129	-0.179	0.9979	A+	A-	A-
ELA	7	906624	9	A-V	2	13179	0.723727142	0.042264208	0.126868503	0.723727142	0.105319068	0.001289931	0.334786574	-0.155568982	-0.194832097	0.334786574	-0.169424744	-0.3072	0.0212	1.261	1.0126	2.851	1.0496	A+	A+	A+
ELA	7	554311	9	A-C	2	13179	0.534410805	0.12345398	0.18961985	0.150846043	0.534410805	0.000910539	0.287215714	-0.145952378	-0.156339225	-0.091893039	0.287215714	0.6869	0.0193	9.9011	1.1052	9.9011	1.1365	A+	A-	A-
ELA	7	939983	9	A-C	3	13179	0.39562941	0.080279232	0.39562941	0.201760376	0.319371728	0.001593444	0.095803447	-0.216256173	0.095803447	-0.10752887	0.122728889	1.3703	0.0196	9.9013	1.2934	9.9014	1.4261	A-	A-	A-
ELA	7	473262	9	A-C	3	13179	0.526367706	0.175127096	0.526367706	0.151680704	0.140602474	0.005614994	0.371952229	-0.173127295	0.371952229	-0.16550317	-0.164094475	0.7263	0.0193	1.851	1.0134	2.881	1.0294	A+	A-	A-
ELA	7	803546	9	A-K	2	13179	0.545868427	0.111768723	0.076864709	0.263904697	0.545868427	0.001138174	0.343041046	-0.276125079	-0.201951949	-0.065707582	0.343041046	0.6307	0.0193	6.051	1.045	7.6511	1.0814	A+	A-	A-
ELA	7	676441	9	A-K	2	13179	0.691175355	0.691175355	0.055846422	0.12610972	0.124288641	0.001821079	0.501493742	0.501493742	-0.266917367	-0.279753142	-0.227873382	-0.1202	0.0206	-9.8991	0.8723	-9.8992	0.7907	A-	A-	A-
ELA	7	464673	9	A-V	2	13179	0.794142196	0.088398209	0.057439866	0.794142196	0.054101222	0.00531148	0.481499561	-0.261928149	-0.263523511	0.481499561	-0.245050789	-0.7598	0.0232	-9.8991	0.8511	-9.8993	0.7355	A+	B-	B-
ELA	7	340347	9	A-V	2	13179	0.822748312	0.822748312	0.079596327	0.065558844	0.031110099	0.000531148	0.255232058	0.255232058	-0.042251831	-0.24138259	-0.149121339	-0.9721	0.0244	0.861	1.0121	9.9014	1.3499	A+	A-	A-
ELA	7	201003	9	D	3	13266	0.445424393	0.445424393	0.19621589	0.125358058	0.231041761	0.001432233	0.348159101	0.348159101	-0.10130846	-0.278072634	-0.092798614	1.1076	0.0192	3.551	1.0254	7.0111	1.0707	A+	A-	A-
ELA	7	201003	9	D	3	13179	0.475605129	0.475605129	0.174140678	0.118977161	0.229987101	0.000834661	0.360623717	0.360623717	-0.130547493	-0.263875563	-0.103606416	0.974	0.0193	3.141	1.0228	4.101	1.0416	A+	A-	A-
ELA	7	901151	9	D	2	13266	0.604326851	0.208201417	0.604326851	0.09415046	0.088195387	0.002713704	0.434022349	-0.230183382	0.434022349	-0.224440472	-0.169184007	0.3333	0.0195	-6.6491	0.95	-7.5291	0.9186	A+	A-	A-
ELA	7	901151	9	D	2	13179	0.596327491	0.223689203	0.596327491	0.092040367	0.083238485	0.002731618	0.425623849	-0.221615646	0.425623849	-0.217936267	-0.175098339	0.38	0.0196	-4.279	0.9673	-5.0391	0.9432	A+	A-	A-
ELA	8	381100	0	D	2	119686	0.513585549	0.323421286	0.081630266	0.080076199	0.513585549	0.000785388	0.469552613	-0.315532171	-0.174365867	-0.140184447	0.469552613	0.6151	0.0064	-9.8991	0.9155	-9.8991	0.9028			
ELA	8	915097	0	D	2	119686	0.874187457	0.034014003	0.874187457	0.048744214	0.041909664	0.000818809	0.369245618	-0.220151483	0.369245618	-0.158695487	-0.235155704	-1.5563	0.009	-9.8991	0.8773	-9.8992	0.7611			
ELA	8	677767	0	D	2	119686	0.680413749	0.099192888	0.063532911	0.155765921	0.680413749	0.000768678	0.446091771	-0.196485669	-0.228525789	-0.254703294	0.446091771	-0.2571	0.0068	-9.8991	0.9364	-9.8991	0.8821			
ELA	8	517461	0	D	2	119686	0.63889678	0.184181943	0.084855372	0.63889678	0.091155189	0.000601574	0.285168011	-0.072668698	-0.22097861	0.285168011	-0.160450758	-0.0334	0.0066	9.9011	1.0935	9.9011	1.1288			
ELA	8	997844	0	D	2	119686	0.741966479	0.077887138	0.085974968	0.741966479	0.093360961	0.000467891	0.435707814	-0.234297593	-0.249112017	0.435707814	-0.196355418	-0.5395	0.0071	-9.8991	0.9046	-9.8992	0.8265			
ELA	8	340150	0	A-V	2	119686	0.748750898	0.079666795	0.125027154	0.748750898	0.0436559	0.002397941	0.43682845	-0.25492592	-0.203373938	0.43682845	-0.241433679	-0.6418	0.0072	-9.8991	0.9108	-9.8991	0.9129			
ELA	8	731086	0	A-V	2	119686	0.60800762	0.176612135	0.60800762	0.127182795	0.086334241	0.001437094	0.505069229	-0.218966042	0.505069229	-0.283877086	-0.233687612	0.0879	0.0065	-9.8991	0.8984	-9.8992	0.8486			
ELA	8	298279	0	A-V	2	119686	0.689813345	0.689813345	0.058686897	0.169894557	0.079374363	0.001545711	0.286222088	0.286222088	-0.209197396	-0.098390471	-0.159298409	-0.359	0.0069	9.9011	1.1066	9.9012	1.1574			
ELA	8	916102	0	A-K	2	119686	0.468216834	0.468216834	0.189011246	0.234488578	0.102585098	0.004737396	0.287505194	0.287505194	-0.16046433	-0.13619547	-0.058000564	0.866	0.0064	9.9011	1.0995	9.9011	1.1487			
ELA	8	906741	0	A-K	3	119686	0.474884281	0.126480959	0.474884281	0.23198202	0.161647979	0.003726417	0.39641505	-0.215545936	0.39641505	-0.185048141	-0.118029412	0.8309	0.0064	-5.079	0.988	5.371	1.0178			
ELA	8	885350	0	A-C	3	119686	0.516952693	0.076592083	0.236660929	0.166243337	0.516952693	0.002807346	0.242778064	-0.260153074	-0.069303216	-0.050361005	0.242778064	0.5554	0.0064	9.9012	1.1541	9.9013	1.2616			
ELA	8	494645	0	D	2	119686	0.543087746	0.297979714	0.074570125	0.543087746	0.083560316	0.000409405	0.360671726	-0.130308411	-0.237892537	0.360671726	-0.205067801	0.4396	0.0064	9.901	1.0308	9.451	1.0323			
ELA	8	695658	0	D	2	119686	0.369784269	0.126088264	0.275621209	0.369784269	0.226776732	0.000894006	0.298931009	-0.253784212	-0.098117511	0.298931009	-0.034908823	1.3139	0.0066	9.9011	1.0531	9.9012	1.1507			
ELA	8	152586	0	D	2	119686	0.469236168	0.13444346	0.469236168	0.186630015	0.208671023	0.000676771	0.348150718	-0.222052874	0.348150718	-0.186516424	-0.060495773	0.8633	0.0064	9.901	1.0302	9.9011	1.072			
ELA	8	531665	0	D	2	119686	0.454372274	0.109753856	0.454372274	0.201159701	0.234045753	0.000409405	0.367460198	-0.174778101	0.367460198	-0.168403991	-0.142272595	0.9763	0.0064	6.211	1.015	9.9011	1.061			
ELA	8	130090	0	A-V	2	119686	0.455759237	0.085540498	0.306602276	0.14893137	0.455759237	0.002381231	0.28554712	-0.296394811	0.095217356	-0.279917773	0.28554712	0.844	0.0064	9.9011	1.1	9.9011	1.1411			
ELA	8	838154	0	A-K	2	119686	0.561277008	0.152123055	0.111324633	0.561277008	0.171181258	0.003651221	0.439526497	-0.226143559	-0.182312152	0.439526497	-0.199295185	0.3752	0.0064	-9.899	0.9519	-9.8991	0.9369			
ELA	8	638805	0	A-K	2	119686	0.617632806	0.103278579	0.100705179	0.170913891	0.617632806	0.006943168	0.435527585	-0.126878825	-0.269673436	-0.225477205	0.435527585	0.0449	0.0066	-9.899	0.9588	-8.829	0.9647			
ELA	8	528690	0	A-C	2	119686	0.65851478	0.07454506	0.65851478	0.164614073	0.099343282	0.002473138	0.252770705	-0.246173003	0.252770705	-0.12212666	-0.021328137	-0.0613	0.0066	9.9011	1.0966	9.9013	1.2667			
ELA	8	791901	0	A-V	2	119686	0.743604097	0.743604097	0.058102034	0.133741624	0.061017997	0.00299116	0.326679277	0.326679277	-0.242151132	-0.094992788	-0.20709997	-0.4871	0.007	-6.849	0.9773	9.9011	1.0844			
ELA	8	472320	0	B-C	2	119686	0.65872366	0.116605117	0.049420985	0.172317564	0.65872366	0.002047023	0.413991696	-0.21736625	-0.26500813	-0.176926456	0.413991696	-0.1331	0.0067	-9.899	0.9573	-3.769	0.9832			
ELA	8	832045	0	B-C	2	119686	0.566499006	0.197867754	0.186972578	0.045477332	0.566499006	0.001771302	0.385699027	-0.167948975	-0.21237274	-0.188523096	0.385699027	0.3715	0.0064	-0.209	0.9995	3.321	1.0115			
ELA	8	218451	0	B-K	3	119686	0.45016961	0.141578798	0.45016961	0.169610481	0.235775279	0.001980181	0.335918981	-0.138536463	0.335918981	-0.172030317	-0.124202197	0.8916	0.0064	9.901	1.036	9.9011	1.0774			
ELA	8	335424	0	B-K	2	119686	0.513126013	0.513126013	0.056506191	0.062346473	0.364854703	0.002205772	0.365883826	0.365883826	-0.257890922	-0.250360744	-0.126840042	0.5934	0.0064	7.781	1.0186	9.901	1.0361			
ELA	8	306846	0	B-V	2	119686	0.399862975	0.192303193	0.198903798	0.399862975	0.206832879	0.001102886	0.267929427	-0.150934386	-0.138867271	0.267929427	-0.036115612	1.083	0.0064	9.9011	1.092	9.9012	1.1701			
ELA	8	438487	0	B-V	2	119686	0.768678041	0.181767291	0.768678041	0.029752853	0.017487425	0.001428739	0.37383683	-0.258921143	0.37383683	-0.181406999	-0.191278465	-0.6977	0.0073	-9.8991	0.9387	-9.8991	0.9374			
ELA	8	635263	0	B-C	2	119686	0.708704443	0.156960714	0.09605969	0.708704443	0.036704376	0.001111241	0.519658267	-0.30090541	-0.264390304	0.519658267	-0.248885346	-0.3631	0.0069	-9.8992	0.8456	-9.8992	0.7507			
ELA	8	622422	0	B-C	2	119686	0.769338101	0.769338101	0.085030831	0.100947479	0.042778604	0.001637618	0.369812773	0.369812773	-0.248109884	-0.160205884	-0.180361946	-0.8396	0.0075	-0.809	0.9968	0.281	1.002			
ELA	8	168975	0	B-C	3	119686	0.783065689	0.783065689	0.154404024	0.043363468	0.017829988	0.000885651	0.363800738	0.363800738	-0.180820385	-0.284763349	-0.189637807	-0.7904	0.0074	-9.8991	0.9372	-9.8991	0.9258			
ELA	8	435592	0	B-K	2	119686	0.636716074	0.116889193	0.636716074	0.146483298	0.098123423	0.001420383	0.296897642	-0.243267542	0.296897642	-0.123090073	-0.065186947	-0.0692	0.0066	9.9011	1.0863	9.9012	1.2019			
ELA	8	212727	0	B-C	3	119686	0.679402771	0.048184416	0.23453871	0.679402771	0.035718463	0.001813078	0.458640317	-0.259101417	-0.269895899	0.458640317	-0.225207898	-0.1568	0.0067	-9.8991	0.9033	-9.8992	0.8417			
ELA	8	299475	0	B-V	2	119686	0.392593954	0.180188159	0.392593954	0.144202329	0.280734589	0.001729526	0.336536996	-0.04885817	0.336536996	-0.168701788	-0.186806522	1.2188	0.0065	9.901	1.0397	9.9011	1.1011			
ELA	8	422467	1	B-C	2	66603	0.738435206	0.161238983	0.045253217	0.738435206	0.053511103	0.001216161	0.442605118	-0.233270778	-0.272225259	0.442605118	-0.227968768	-0.5731	0.0096	-9.8991	0.9081	-9.8992	0.8387	A+	A-	A-
ELA	8	113831	1	B-C	2	66603	0.569028422	0.569028422	0.209029623	0.114394247	0.106436647	0.000675645	0.408141048	0.408141048	-0.174651876	-0.246431941	-0.16945531	0.3462	0.0086	-6.139	0.9799	-7.269	0.9662	A-	A-	A-
ELA	8	238056	1	B-K	2	66603	0.767292765	0.119904509	0.767292765	0.042490579	0.069426302	0.000495473	0.356853546	-0.11446853	0.356853546	-0.249942182	-0.244950119	-0.7537	0.0099	-6.639	0.9665	2.071	1.0185	A+	A+	A-
ELA	8	176915	1	B-K	2	66603	0.690299236	0.121240785	0.057009444	0.690299236	0.130234374	0.00069066	0.448922364	-0.204856058	-0.230147154	0.448922364	-0.256183974	-0.2909	0.0091	-9.8991	0.9206	-9.8991	0.8759	A-	A-	A-
ELA	8	257223	1	B-K	2	66603	0.670600423	0.127787037	0.089320301	0.110580604	0.670600423	0.001231176	0.517253266	-0.252129657	-0.26152791	-0.264536108	0.517253266	-0.1842	0.009	-9.8991	0.8575	-9.8992	0.7861	A-	A-	A-
ELA	8	646521	1	B-V	2	66603	0.578667628	0.095160879	0.578667628	0.13589478	0.189135625	0.000480459	0.291763637	-0.195059512	0.291763637	-0.139937124	-0.097728179	0.2998	0.0086	9.9011	1.1049	9.9011	1.1109	A-	A-	A+
ELA	8	257322	1	D	2	13377	0.396800478	0.145623084	0.396800478	0.328623757	0.127457576	0.001196083	0.143921534	-0.121746218	0.143921534	0.057650701	-0.159482289	1.1761	0.0194	9.9012	1.2164	9.9013	1.3203	A-	A+	A+
ELA	8	322684	1	A-C	3	13377	0.634746206	0.090154743	0.222994692	0.050085968	0.634746206	0.000971817	0.360954529	-0.219566996	-0.130059539	-0.254156782	0.360954529	-0.012	0.0196	0.521	1.0042	1.701	1.0209	A+	A-	A-
ELA	8	156199	1	A-C	2	13377	0.560738581	0.191148987	0.560738581	0.165283696	0.080586081	0.001868879	0.309747524	-0.104083995	0.309747524	-0.154698076	-0.199517412	0.3587	0.0191	8.1411	1.0597	6.0811	1.063	A+	A-	A-
ELA	8	677514	1	A-V	2	13377	0.426627794	0.426627794	0.067503925	0.268744861	0.233161396	0.003139717	0.286665141	0.286665141	-0.181148868	-0.170441481	-0.045830189	1.0092	0.0192	9.9011	1.0778	9.9011	1.1377	A-	A-	A-
ELA	8	996123	1	A-C	3	13377	0.810645137	0.067952456	0.041788144	0.076325036	0.810645137	0.0021679	0.419342051	-0.19906371	-0.231874975	-0.245957658	0.419342051	-1.0688	0.0236	-8.7491	0.8874	-5.8891	0.8678	A+	A-	A-
ELA	8	345930	1	A-K	2	13377	0.766988114	0.766988114	0.077595874	0.060028407	0.093742992	0.000971817	0.467044628	0.467044628	-0.228261418	-0.263468702	-0.248481039	-0.7661	0.022	-9.8991	0.8716	-9.8992	0.7682	A+	A-	A-
ELA	8	293518	1	A-K	2	13377	0.660237721	0.190700456	0.09314495	0.660237721	0.053375196	0.001569859	0.390085903	-0.16147438	-0.220675092	0.390085903	-0.246603988	-0.1454	0.0199	-4.129	0.9654	-4.3591	0.9433	A+	A-	A-
ELA	8	601229	1	A-V	2	13377	0.615833146	0.310682515	0.615833146	0.049562682	0.022501308	0.000822307	0.380561277	-0.213170631	0.380561277	-0.252025345	-0.206798891	0.0848	0.0195	-0.419	0.9967	-1.339	0.9845	A-	B-	A-
ELA	8	274602	1	A-V	2	13377	0.824026314	0.052104358	0.067130149	0.824026314	0.055767362	0.000672797	0.4331097	-0.250107154	-0.282990952	0.4331097	-0.164392122	-1.1709	0.0242	-8.7991	0.8805	-9.8993	0.7451	A+	A+	A-
ELA	8	727948	1	D	2	13377	0.645137176	0.645137176	0.158779996	0.114524931	0.079240487	0.002093145	0.326480987	0.326480987	-0.172970878	-0.126321604	-0.189481198	-0.0659	0.0198	5.721	1.0476	5.1811	1.0668	A+	A+	A-
ELA	8	727948	1	D	2	13270	0.634363225	0.634363225	0.174529013	0.109118312	0.07905049	0.002336096	0.327128107	0.327128107	-0.180708211	-0.12528497	-0.174313709	0.0068	0.0198	6.9911	1.0585	5.7911	1.072	A+	A-	A-
ELA	8	590449	1	D	2	13377	0.560738581	0.2411602	0.080062794	0.11639381	0.560738581	0.001121328	0.259058459	-0.05785462	-0.200250384	-0.150931348	0.259058459	0.3587	0.0191	9.9011	1.1196	9.9012	1.1614	A+	A+	A+
ELA	8	590449	1	D	2	13270	0.580482291	0.215146948	0.0853052	0.117483044	0.580482291	0.001431801	0.269049888	-0.082830824	-0.191292309	-0.136495809	0.269049888	0.2799	0.0193	9.9011	1.1144	9.9011	1.1411	A+	A+	A+
ELA	8	597032	2	D	2	13304	0.564266386	0.262251954	0.083358388	0.088619964	0.564266386	0.000826819	0.413311177	-0.144052663	-0.269110074	-0.233361238	0.413311177	0.3483	0.0193	-2.869	0.9787	-3.239	0.9653	A+	A-	A-
ELA	8	525684	2	A-C	3	13304	0.744287432	0.744287432	0.123797354	0.079073963	0.052164762	0.000300661	0.406220761	0.406220761	-0.181633625	-0.219570288	-0.259022425	-0.6292	0.0216	-6.3791	0.9338	-3.7691	0.9306	A+	A-	A-
ELA	8	367836	2	A-V	2	13304	0.629735418	0.054419723	0.629735418	0.239101022	0.074789537	0.001503307	0.337059964	-0.239911244	0.337059964	-0.169984508	-0.128236339	0.0144	0.0198	4.571	1.0377	5.2311	1.0681	A+	A-	A-
ELA	8	523805	2	A-K	2	13304	0.701443175	0.060357787	0.152736019	0.081779916	0.701443175	0.002630788	0.561545396	-0.29972008	-0.304100142	-0.268037147	0.561545396	-0.3747	0.0207	-9.8992	0.8036	-9.8993	0.7052	A-	A-	A-
ELA	8	425887	2	A-V	2	13304	0.814491882	0.052991581	0.814491882	0.056449188	0.075691521	0.000300661	0.447414656	-0.279311724	0.447414656	-0.230505076	-0.218576455	-1.1082	0.0239	-9.3691	0.8781	-9.8993	0.7391	A+	C-	C-
ELA	8	526303	2	A-K	2	13304	0.463168972	0.102525556	0.289612147	0.136199639	0.463168972	0.007892363	0.303602765	-0.240344122	0.004624202	-0.215717749	0.303602765	0.8431	0.0192	9.9011	1.0854	9.9011	1.122	A+	A+	A+
ELA	8	275945	2	A-K	2	13304	0.76751353	0.76751353	0.079224293	0.062387252	0.08884546	0.00097715	0.485333917	0.485333917	-0.228339425	-0.292012194	-0.247824457	-0.7773	0.0222	-9.8991	0.8552	-9.8993	0.727	A+	A-	A-
ELA	8	783626	2	A-C	3	13304	0.527510523	0.192197835	0.148075767	0.527510523	0.12905893	0.002555622	0.272845791	-0.18306776	-0.045976828	0.272845791	-0.136327209	0.5277	0.0192	9.9011	1.117	9.9012	1.1812	A-	A-	A+
ELA	8	747743	2	A-V	2	13304	0.612297054	0.154840649	0.043144919	0.612297054	0.188439567	0.000751654	0.43994622	-0.271979226	-0.260510063	0.43994622	-0.158053158	0.1044	0.0196	-6.4191	0.95	-6.6691	0.9213	A-	A-	A-
ELA	8	505356	2	D	2	13304	0.546001203	0.106734817	0.201819002	0.546001203	0.143941672	0.001352977	0.336722183	-0.233482555	-0.077551372	0.336722183	-0.180992293	0.4367	0.0193	6.9711	1.0521	8.2011	1.0885	A+	A-	A-
ELA	8	505356	2	D	2	13278	0.530049706	0.100918813	0.216523573	0.530049706	0.151453532	0.000979063	0.33340054	-0.244662765	-0.074797856	0.33340054	-0.170460629	0.5204	0.0191	6.441	1.0464	6.8811	1.0694	A+	A-	A-
ELA	8	441992	2	D	2	13304	0.6095911	0.094107035	0.176939266	0.6095911	0.116355983	0.002705953	0.35015871	-0.140778262	-0.192989136	0.35015871	-0.169820532	0.1183	0.0196	5.421	1.0433	3.721	1.0453	A+	A-	A-
ELA	8	441992	2	D	2	13278	0.591580057	0.093688809	0.203343877	0.591580057	0.108676005	0.002485314	0.365937367	-0.157068518	-0.209283119	0.365937367	-0.154693078	0.2181	0.0194	2.621	1.0199	1.391	1.0153	A+	A-	A-
ELA	8	201887	3	D	2	13303	0.79170112	0.79170112	0.059460272	0.052995565	0.094715478	0.000526197	0.389590384	0.389590384	-0.283760385	-0.271783723	-0.099443876	-0.9349	0.023	-4.7491	0.9415	-4.7591	0.8996	A+	A-	A-
ELA	8	822317	3	A-C	3	13303	0.676238442	0.676238442	0.130196196	0.130647222	0.052770052	0.009847403	0.462275121	0.462275121	-0.222138642	-0.22435021	-0.271933189	-0.2262	0.0203	-9.8991	0.9088	-9.3691	0.8742	A-	A+	A-
ELA	8	733333	3	A-C	2	13303	0.711343306	0.08156055	0.711343306	0.083665339	0.122453582	0.000601368	0.512981743	-0.266993325	0.512981743	-0.275098156	-0.251556634	-0.4232	0.0208	-9.8991	0.8556	-9.8992	0.781	A+	A+	B-
ELA	8	795456	3	A-K	2	13303	0.547921521	0.091257611	0.238818312	0.117642637	0.547921521	0.002480643	0.235728356	-0.228258353	0.092113512	-0.273899108	0.235728356	0.4299	0.0192	9.9011	1.1443	9.9013	1.2563	A+	A-	A-
ELA	8	542749	3	A-K	3	13303	0.682477637	0.682477637	0.163496956	0.058483049	0.090731414	0.004660603	0.434583377	0.434583377	-0.15294623	-0.288541544	-0.257398693	-0.2604	0.0204	-8.6991	0.9232	-6.3591	0.9117	A+	A-	A-
ELA	8	262760	3	A-K	2	13303	0.233706683	0.224084793	0.233706683	0.218146283	0.322859505	0.000676539	0.282211494	-0.048841789	0.282211494	-0.194649032	-0.038408762	2.0778	0.0221	-0.639	0.9928	9.9013	1.3231	A+	A-	A+
ELA	8	402683	3	A-K	2	13303	0.477486281	0.477486281	0.069458017	0.115988875	0.334586184	0.001428249	0.256627375	0.256627375	-0.299899796	-0.240389921	0.05775844	0.7719	0.0191	9.9011	1.1295	9.9012	1.1864	A-	A-	A-
ELA	8	422688	3	A-V	2	13303	0.513117342	0.357588514	0.071337292	0.513117342	0.0570548	0.000826881	0.346857107	-0.129675812	-0.243942382	0.346857107	-0.20722344	0.5992	0.0191	5.771	1.0413	6.6311	1.0656	A-	A+	A-

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
ELA	8	103644	3	A-V	2	13303	0.896715027	0.030218748	0.896715027	0.052394197	0.01856724	0.001653762	0.405599269	-0.241571241	0.405599269	-0.241584257	-0.195175678	-1.8622	0.0298	-6.7191	0.8658	-9.8994	0.6068	A+	A-	B-
ELA	8	846359	3	D	3	13303	0.660377358	0.093738255	0.660377358	0.107269037	0.137337443	0.001127565	0.38876513	-0.153973293	0.38876513	-0.252612994	-0.174442021	-0.1405	0.02	-2.079	0.9822	-0.839	0.9888	A+	A-	A-
ELA	8	846359	3	D	3	13272	0.667721519	0.112040386	0.667721519	0.083257987	0.13584991	0.000828813	0.38917053	-0.194303296	0.38917053	-0.231646835	-0.168684137	-0.169	0.0201	-2.879	0.9751	-1.549	0.9792	A+	A-	A-
ELA	8	329483	3	D	2	13303	0.556415846	0.556415846	0.106066301	0.240547245	0.093738255	0.00293167	0.306394685	0.306394685	-0.23063845	-0.047739373	-0.202312695	0.3882	0.0192	9.9011	1.0798	9.2611	1.0968	A+	A+	A-
ELA	8	329483	3	D	2	13272	0.557037372	0.557037372	0.103149488	0.241787221	0.095238095	0.002637131	0.306252556	0.306252556	-0.221250268	-0.052803741	-0.204078261	0.3944	0.0192	9.9011	1.078	9.5111	1.0987	A+	A-	A-
ELA	8	820497	4	D	2	13300	0.514511278	0.514511278	0.074511278	0.273909774	0.135488722	0.000526316	0.435173758	0.435173758	-0.29895128	-0.163238819	-0.188773219	0.6317	0.0192	-6.679	0.9525	-4.599	0.9551	A-	A-	A-
ELA	8	486242	4	A-C	2	13300	0.562481203	0.048045113	0.272631579	0.562481203	0.113834586	0.002857143	0.333448293	-0.280811421	-0.061680518	0.333448293	-0.237932412	0.3782	0.0193	8.6711	1.0661	9.9011	1.1378	A-	A-	A-
ELA	8	854185	4	A-C	2	13300	0.243157895	0.243157895	0.040827068	0.05593985	0.659097744	0.000150376	0.093708708	0.093708708	-0.256041135	-0.126983999	0.08468245	2.0521	0.0219	9.9012	1.2131	9.9016	1.6444	A+	A-	A+
ELA	8	753915	4	A-C	2	13300	0.714736842	0.104887218	0.714736842	0.045789474	0.127518797	0.006240602	0.419477444	-0.217013083	0.419477444	-0.277080104	-0.181376677	-0.4283	0.021	-6.2191	0.9402	-4.8291	0.9225	A+	A-	A-
ELA	8	876387	4	A-K	2	13300	0.846992481	0.043007519	0.06962406	0.038195489	0.846992481	0.00112782	0.494824005	-0.266314937	-0.281946349	-0.263013276	0.494824005	-1.3498	0.0256	-9.8992	0.8101	-9.8994	0.5702	B+	A-	A-
ELA	8	190151	4	A-K	2	13300	0.700225564	0.700225564	0.085112782	0.083308271	0.129398496	0.001578947	0.455526792	0.455526792	-0.253260661	-0.238312286	-0.210031729	-0.3446	0.0207	-9.8991	0.9086	-9.8691	0.8535	A-	A-	A-
ELA	8	705445	4	A-K	2	13300	0.709924812	0.083383459	0.709924812	0.111879699	0.093458647	0.00075188	0.41399631	-0.241829057	0.41399631	-0.201243766	-0.194019258	-0.4003	0.0209	-6.3291	0.9399	-1.589	0.9744	A-	A-	A+
ELA	8	178849	4	A-V	2	13300	0.686541353	0.039548872	0.21112782	0.060601504	0.686541353	0.001578947	0.325853771	-0.251844709	-0.0872743	-0.26738934	0.325853771	-0.2675	0.0205	4.051	1.0375	8.7011	1.1351	A-	A-	A-
ELA	8	416990	4	A-V	2	13300	0.653082707	0.219172932	0.063609023	0.653082707	0.063684211	7.5188E-05	0.334765392	-0.13734356	-0.286741615	0.334765392	-0.132200593	-0.0852	0.02	4.561	1.0393	6.5111	1.0891	A-	A-	A-
ELA	8	620979	4	D	3	13300	0.631954887	0.13962406	0.109398496	0.631954887	0.117669173	0.00112782	0.503203021	-0.266254686	-0.262028061	0.503203021	-0.208782383	0.0262	0.0198	-9.8991	0.8828	-9.8992	0.8246	A+	A-	A-
ELA	8	620979	4	D	3	13263	0.642916384	0.133604765	0.107592551	0.642916384	0.114830732	0.000829375	0.493639147	-0.253841986	-0.266792868	0.493639147	-0.209778357	-0.044	0.02	-9.8991	0.8999	-9.8992	0.8476	A+	A+	A+
ELA	8	827517	4	D	2	13300	0.618421053	0.155263158	0.082406015	0.140902256	0.618421053	0.002255639	0.459257062	-0.190103401	-0.285023684	-0.210386039	0.459257062	0.0961	0.0197	-8.5491	0.933	-7.8791	0.9085	A-	A+	A-
ELA	8	827517	4	D	2	13263	0.622634396	0.159390786	0.077207268	0.139108799	0.622634396	0.001583352	0.470258621	-0.204572758	-0.271614217	-0.229776522	0.470258621	0.0623	0.0198	-8.8891	0.9289	-8.8891	0.8946	A-	A+	A-
ELA	8	899096	5	D	2	13319	0.630978302	0.152413845	0.630978302	0.136571815	0.078759667	0.000600646	0.467039379	-0.220932227	0.467039379	-0.247440379	-0.222081072	0.0474	0.0197	-9.8991	0.9141	-9.8991	0.8789	A+	A-	A-
ELA	8	380932	5	A-V	2	13319	0.742698401	0.742698401	0.086718222	0.108116225	0.061265861	0.000825888	0.29540902	0.29540902	-0.065629234	-0.205890796	-0.190645178	-0.5865	0.0215	3.621	1.0389	6.1211	1.1149	A+	A-	A-
ELA	8	564101	5	A-C	3	13319	0.728057662	0.728057662	0.08859524	0.055559727	0.126135596	0.000900969	0.352385076	0.352385076	-0.173823875	-0.253420613	-0.144691486	-0.4979	0.0212	-1.029	0.9896	0.261	1.0043	A+	A+	A-
ELA	8	682236	5	A-C	2	13319	0.848186801	0.040468504	0.048201817	0.848186801	0.061265861	0.000750807	0.412970282	-0.248607694	-0.232344133	0.412970282	-0.19743998	-1.3469	0.0256	-7.6891	0.8827	-9.8693	0.7456	A+	A-	A-
ELA	8	442035	5	A-K	2	13319	0.254673774	0.557774608	0.097454764	0.254673774	0.085742173	0.004129439	0.1820678	-0.000447271	-0.101178345	0.1820678	-0.166344559	1.9677	0.0215	9.9011	1.1135	9.9014	1.3875	A-	A-	A-
ELA	8	937562	5	A-V	2	13319	0.774382461	0.055634807	0.774382461	0.041895037	0.127111645	0.000525565	0.422247577	-0.205207838	0.422247577	-0.200551699	-0.264845427	-0.7889	0.0224	-6.8491	0.9216	-6.8991	0.865	A-	A-	A-
ELA	8	654676	5	A-K	2	13319	0.408814476	0.337788122	0.090997823	0.160447481	0.408814476	0.001201291	0.257567325	-0.032139337	-0.244849593	-0.108906969	0.257567325	1.1301	0.0193	9.9011	1.103	9.9012	1.1731	A+	A+	A-
ELA	8	219321	5	A-V	2	13319	0.321045124	0.382461146	0.321045124	0.18244613	0.113221713	0.000750807	0.177415485	0.017509943	0.177415485	-0.119664257	-0.140725399	1.5848	0.0202	9.9012	1.1529	9.9013	1.3486	A+	A-	A-
ELA	8	575145	5	A-V	2	13319	0.614235303	0.275846535	0.060515054	0.048201817	0.614235303	0.000675726	0.296939295	-0.048135827	-0.286538551	-0.249676765	0.296939295	0.1222	0.0195	8.9911	1.072	9.5911	1.117	A+	A-	A-
ELA	8	246140	5	D	3	13319	0.7384188	0.105638561	0.7384188	0.082063218	0.072377806	0.00105113	0.450056878	-0.156098355	0.450056878	-0.291362915	-0.26420398	-0.5603	0.0214	-9.7491	0.9013	-7.5391	0.8714	A+	A-	A-
ELA	8	400789	5	D	2	13319	0.488475111	0.197537353	0.488475111	0.085216608	0.226518507	0.001952099	0.372896848	-0.128625549	0.372896848	-0.244900841	-0.15530723	0.7404	0.0191	1.271	1.0089	2.801	1.0276	A+	A-	A+
ELA	8	607935	6	D	2	13270	0.716503391	0.716503391	0.188093444	0.039110776	0.055463451	0.000452148	0.388261288	0.388261288	-0.18899365	-0.237225022	-0.235997464	-0.4444	0.021	-3.009	0.9703	-1.859	0.9703	A+	A-	A-
ELA	8	823330	6	A-K	2	53083	0.815967447	0.05506471	0.815967447	0.059548255	0.067799484	0.001092629	0.486980357	-0.246829904	0.486980357	-0.270788044	-0.266185164	-1.1026	0.012	-9.8992	0.8371	-9.8993	0.6612	A+	A-	A-
ELA	8	624531	6	A-K	3	53083	0.651602208	0.036452348	0.087843566	0.222500612	0.651602208	0.001130305	0.335001379	-0.256066503	-0.252949301	-0.093414818	0.335001379	-0.0836	0.01	6.241	1.0267	9.9011	1.0961	A+	A-	A-
ELA	8	176858	6	A-C	2	53083	0.478194526	0.342256466	0.104421378	0.478194526	0.073771264	0.000621668	0.275524349	-0.081748202	-0.142418806	0.275524349	-0.207005979	0.7807	0.0096	9.9011	1.0999	9.9012	1.1513	A+	A-	A-
ELA	8	653062	6	A-C	2	53083	0.755232372	0.755232372	0.115328825	0.07190626	0.056477592	0.000583991	0.459987986	0.459987986	-0.304127299	-0.210872943	-0.194893077	-0.6793	0.0109	-9.8991	0.8941	-9.8992	0.8122	A-	A-	A-
ELA	8	506336	6	A-K	2	53083	0.808206017	0.068044383	0.083944012	0.039127404	0.808206017	0.000433284	0.394036049	-0.322386485	-0.147877448	-0.167279307	0.394036049	-1.044	0.0118	-9.8991	0.9101	-6.1091	0.9297	A+	A-	A-
ELA	8	491925	6	A-V	2	53083	0.59137577	0.59137577	0.116534484	0.160936646	0.129702541	0.000979598	0.259169265	0.259169265	-0.186696639	-0.178959556	-0.002679789	0.2277	0.0097	9.9011	1.123	9.9012	1.1635	A+	A+	A-
ELA	8	675206	6	B-V	2	13270	0.530670686	0.204672193	0.115674454	0.530670686	0.148229088	0.000452148	0.475928224	-0.1995732	-0.280314272	0.475928224	-0.187953236	0.5243	0.0191	-9.8991	0.9191	-9.7491	0.9079	B-	B-	B-
ELA	8	788598	6	B-C	2	13270	0.459306707	0.227354936	0.209042954	0.103089676	0.459306707	0.000828937	0.429855019	-0.084112006	-0.21397801	-0.299782944	0.429855019	0.8703	0.0191	-7.8991	0.9454	-4.169	0.9594	A-	A-	A-
ELA	8	814797	6	B-C	2	13270	0.476262246	0.203993971	0.476262246	0.17317257	0.134513941	0.011981914	0.219724726	-0.029223315	0.219724726	-0.173251792	-0.077343737	0.788	0.0191	9.9012	1.1584	9.9012	1.226	A-	A-	A-
ELA	8	830838	6	B-C	3	13270	0.68862095	0.68862095	0.147249435	0.104747551	0.058327054	0.000828937	0.47461599	0.47461599	-0.236814772	-0.234787782	-0.268308145	-0.2842	0.0205	-9.8991	0.8899	-9.1391	0.8728	A+	A-	A+
ELA	8	503057	6	B-K	2	13270	0.526375283	0.076940467	0.257874906	0.131650339	0.526375283	0.004295403	0.227037081	-0.197286848	0.081650762	-0.276114951	0.227037081	0.5452	0.0191	9.9012	1.1563	9.9012	1.2466	A-	A-	A-
ELA	8	900713	6	B-K	2	13270	0.653880934	0.092162773	0.104446119	0.147324793	0.653880934	0.001959307	0.376632976	-0.236579208	-0.236400354	-0.10666656	0.376632976	-0.0956	0.02	-1.059	0.991	-1.529	0.9803	A+	A+	A+
ELA	8	456093	6	B-V	2	13270	0.735719668	0.089449887	0.735719668	0.138432555	0.032328561	0.003391108	0.347174124	-0.33422194	0.347174124	-0.057461985	-0.200345545	-0.5574	0.0214	-0.829	0.9913	4.5511	1.0808	A+	A-	A-
ELA	8	681081	6	B-V	2	13270	0.905727204	0.905727204	0.025621703	0.044084401	0.024039186	0.00037679	0.397923544	0.397923544	-0.21156316	-0.256902235	-0.194826305	-1.9648	0.031	-6.4091	0.8635	-9.8994	0.5731	A+	A-	A-
ELA	8	727948	6	D	2	13377	0.645137176	0.645137176	0.158779996	0.114524931	0.079240487	0.002093145	0.326480987	0.326480987	-0.172970878	-0.126321604	-0.189481198	-0.0659	0.0198	5.721	1.0476	5.1811	1.0668	A+	A+	A-
ELA	8	727948	6	D	2	13270	0.634363225	0.634363225	0.174529013	0.109118312	0.07905049	0.002336096	0.327128107	0.327128107	-0.180708211	-0.12528497	-0.174313709	0.0068	0.0198	6.9911	1.0585	5.7911	1.072	A+	A-	A-
ELA	8	590449	6	D	2	13377	0.560738581	0.2411602	0.080062794	0.11639381	0.560738581	0.001121328	0.259058459	-0.05785462	-0.200250384	-0.150931348	0.259058459	0.3587	0.0191	9.9011	1.1196	9.9012	1.1614	A+	A+	A+
ELA	8	590449	6	D	2	13270	0.580482291	0.215146948	0.0853052	0.117483044	0.580482291	0.001431801	0.269049888	-0.082830824	-0.191292309	-0.136495809	0.269049888	0.2799	0.0193	9.9011	1.1144	9.9011	1.1411	A+	A+	A+
ELA	8	906452	7	D	2	13278	0.576442235	0.159737912	0.145955716	0.116809761	0.576442235	0.000753125	0.333498274	-0.085568587	-0.229611171	-0.159788096	0.333498274	0.2931	0.0193	6.501	1.0489	6.0511	1.0656	A-	A-	A-
ELA	8	553227	7	B-C	3	13278	0.537957524	0.537957524	0.112291008	0.128709143	0.21938545	0.001129688	0.255690349	0.255690349	-0.172989211	-0.071617921	-0.115741567	0.482	0.0191	9.9011	1.1194	9.9012	1.1864	A+	A+	A-
ELA	8	626884	7	B-V	2	13278	0.766606417	0.082617864	0.055731285	0.091052869	0.766606417	0.00353969	0.427335305	-0.267687115	-0.259347004	-0.158391739	0.427335305	-0.7549	0.0221	-8.0991	0.9103	-8.4892	0.8414	A+	A-	A-
ELA	8	630870	7	B-C	3	13278	0.469347793	0.125847266	0.194381684	0.20846513	0.469347793	0.001280313	0.401021839	-0.181041581	-0.141620909	-0.202985486	0.401021839	0.8146	0.0191	-3.969	0.9723	-1.199	0.9883	A-	A-	A-
ELA	8	736691	7	B-C	3	13278	0.614098509	0.072300045	0.175704172	0.614098509	0.135637897	0.001129688	0.443375516	-0.287094445	-0.268916246	0.443375516	-0.108469771	0.1048	0.0196	-9.1091	0.9304	-9.7891	0.8902	A+	A+	A-
ELA	8	837858	7	B-K	2	13278	0.580358488	0.580358488	0.178264799	0.161771351	0.077873174	0.001054376	0.343175306	0.343175306	-0.179111001	-0.126950147	-0.196829091	0.274	0.0193	4.331	1.0326	3.941	1.0428	A+	A-	A-
ELA	8	931602	7	B-K	3	13278	0.312170508	0.110106944	0.312170508	0.278807049	0.297710499	0.0006025	0.225372803	-0.237837732	0.225372803	-0.068493555	0.002439895	1.6148	0.0204	9.9011	1.0989	9.9013	1.3078	A-	A-	A-
ELA	8	338361	7	B-V	2	13278	0.497213436	0.237008586	0.497213436	0.150851032	0.113646634	0.0006025	0.364466469	-0.104067905	0.364466469	-0.209311486	-0.194369431	0.6795	0.0191	3.321	1.0235	4.091	1.0402	B-	A-	A-
ELA	8	839919	7	B-V	2	13278	0.810965507	0.090600994	0.059647537	0.810965507	0.037355023	0.001205001	0.355822466	-0.200763894	-0.154985177	0.355822466	-0.230401801	-1.0634	0.0237	-4.3791	0.9421	-1.239	0.9706	A+	A-	A-
ELA	8	505356	7	D	2	13304	0.546001203	0.106734817	0.201819002	0.546001203	0.143941672	0.001352977	0.336722183	-0.233482555	-0.077551372	0.336722183	-0.180992293	0.4367	0.0193	6.9711	1.0521	8.2011	1.0885	A+	A-	A-
ELA	8	505356	7	D	2	13278	0.530049706	0.100918813	0.216523573	0.530049706	0.151453532	0.000979063	0.33340054	-0.244662765	-0.074797856	0.33340054	-0.170460629	0.5204	0.0191	6.441	1.0464	6.8811	1.0694	A+	A-	A-
ELA	8	441992	7	D	2	13304	0.6095911	0.094107035	0.176939266	0.6095911	0.116355983	0.002705953	0.35015871	-0.140778262	-0.192989136	0.35015871	-0.169820532	0.1183	0.0196	5.421	1.0433	3.721	1.0453	A+	A-	A-
ELA	8	441992	7	D	2	13278	0.591580057	0.093688809	0.203343877	0.591580057	0.108676005	0.002485314	0.365937367	-0.157068518	-0.209283119	0.365937367	-0.154693078	0.2181	0.0194	2.621	1.0199	1.391	1.0153	A+	A-	A-
ELA	8	991912	8	D	2	13272	0.803270042	0.038200723	0.091922845	0.803270042	0.065777577	0.000527426	0.398579857	-0.195161063	-0.252575543	0.398579857	-0.191558243	-1.0011	0.0234	-6.2291	0.9206	-6.1791	0.8656	A+	A-	A-
ELA	8	967609	8	B-C	2	13272	0.213004822	0.09425859	0.174653406	0.516576251	0.213004822	0.001431585	0.136581238	-0.199625994	-0.153307974	0.122125656	0.136581238	2.2213	0.0227	9.9012	1.161	9.9014	1.442	A-	A-	A-
ELA	8	296547	8	B-C	3	13272	0.496835443	0.101793249	0.270042194	0.496835443	0.128465943	0.002787824	0.351209157	-0.234413334	-0.057983996	0.351209157	-0.23248954	0.6866	0.0191	2.901	1.0204	4.321	1.0419	A-	A-	A-
ELA	8	414961	8	B-V	2	13272	0.519062688	0.033077155	0.419981917	0.025542495	0.519062688	0.002034358	0.192510538	-0.24395793	-0.031448779	-0.220221567	0.192510538	0.5791	0.0191	9.9012	1.1937	9.9012	1.239	B-	A+	A+
ELA	8	905501	8	B-K	2	13272	0.853300181	0.853300181	0.052893309	0.048372514	0.043851718	0.000904159	0.493708472	0.493708472	-0.270552039	-0.287916316	-0.253249351	-1.4028	0.026	-9.8992	0.8079	-9.8994	0.5703	A+	A-	A-
ELA	8	207207	8	B-K	3	13272	0.727923448	0.727923448	0.116335142	0.120403858	0.034056661	0.000904159	0.421445328	0.421445328	-0.280000174	-0.163414653	-0.241009401	-0.5086	0.0212	-7.1791	0.9288	-6.0791	0.9012	A-	A-	A-
ELA	8	582269	8	B-K	3	13272	0.578586498	0.047845087	0.578586498	0.123191682	0.249095841	0.000678119	0.421975801	-0.252662836	0.421975801	-0.207144167	-0.197609386	0.2884	0.0193	-5.459	0.96	-4.9291	0.9491	A-	A-	A-
ELA	8	334250	8	B-V	2	13272	0.703435805	0.087703436	0.703435805	0.146850512	0.060729355	0.001130199	0.281125505	-0.159473239	0.281125505	-0.087182971	-0.217041844	-0.3664	0.0207	7.4811	1.0728	9.5712	1.1541	A-	A-	A-
ELA	8	860269	8	B-V	2	13272	0.79181736	0.064647378	0.101039783	0.79181736	0.041440627	0.000753466	0.45745361	-0.213186987	-0.299994733	0.45745361	-0.210324467	-0.919	0.023	-9.8091	0.8821	-9.8993	0.7393	A-	A-	A-
ELA	8	846359	8	D	3	13303	0.660377358	0.093738255	0.660377358	0.107269037	0.137337443	0.001127565	0.38876513	-0.153973293	0.38876513	-0.252612994	-0.174442021	-0.1405	0.02	-2.079	0.9822	-0.839	0.9888	A+	A-	A-
ELA	8	846359	8	D	3	13272	0.667721519	0.112040386	0.667721519	0.083257987	0.13584991	0.000828813	0.38917053	-0.194303296	0.38917053	-0.231646835	-0.168684137	-0.169	0.0201	-2.879	0.9751	-1.549	0.9792	A+	A-	A-
ELA	8	329483	8	D	2	13303	0.556415846	0.556415846	0.106066301	0.240547245	0.093738255	0.00293167	0.306394685	0.306394685	-0.23063845	-0.047739373	-0.202312695	0.3882	0.0192	9.9011	1.0798	9.2611	1.0968	A+	A+	A-
ELA	8	329483	8	D	2	13272	0.557037372	0.557037372	0.103149488	0.241787221	0.095238095	0.002637131	0.306252556	0.306252556	-0.221250268	-0.052803741	-0.204078261	0.3944	0.0192	9.9011	1.078	9.5111	1.0987	A+	A-	A-
ELA	8	523205	9	D	2	13263	0.360024127	0.321722084	0.155771696	0.360024127	0.161351127	0.000452386	0.228120101	-0.033921038	-0.107244848	0.228120101	-0.146799298	1.3726	0.0199	9.9011	1.145	9.9013	1.2959	A+	A-	A-
ELA	8	480512	9	B-C	2	13263	0.812184272	0.812184272	0.073361984	0.0827867	0.029028123	0.002035739	0.41632222	0.41632222	-0.23166043	-0.225635617	-0.221364088	-1.0862	0.0239	-7.6791	0.8995	-6.3791	0.8506	A-	A-	A-
ELA	8	723347	9	B-V	2	13263	0.678353314	0.085048632	0.094096358	0.139334992	0.678353314	0.003015909	0.539063076	-0.266804204	-0.296292743	-0.254204849	0.539063076	-0.2357	0.0204	-9.8992	0.8452	-9.8992	0.7551	A-	A-	A-
ELA	8	921317	9	B-C	3	13263	0.354143105	0.42682651	0.130362663	0.087310563	0.354143105	0.00098017	0.281512249	-0.063970303	-0.174910508	-0.154580703	0.281512249	1.4082	0.02	9.5611	1.0804	9.9012	1.1718	A-	A+	A+
ELA	8	336025	9	B-V	2	13263	0.631380532	0.073663575	0.631380532	0.061449144	0.231546407	0.001281761	0.39955447	-0.230763599	0.39955447	-0.265110902	-0.157427676	0.0168	0.0199	-0.569	0.9952	-1.009	0.9873	B-	B-	A-
ELA	8	427837	9	B-K	2	13263	0.558169343	0.172585388	0.147402548	0.558169343	0.117469652	0.003845284	0.48486968	-0.163611057	-0.308529618	0.48486968	-0.205183534	0.3889	0.0194	-9.8991	0.9123	-9.8991	0.8943	A-	A-	A-
ELA	8	600410	9	B-K	2	13263	0.853803815	0.853803815	0.064842042	0.044937043	0.035210737	0.00067858	0.485625986	0.485625986	-0.304428109	-0.252454923	-0.235220354	-1.4303	0.0262	-9.8992	0.8139	-9.8994	0.587	A+	A-	A-
ELA	8	389954	9	B-V	2	13263	0.844152907	0.042750509	0.031214657	0.844152907	0.08044937	0.000904773	0.444686017	-0.228647678	-0.242189505	0.444686017	-0.261101111	-1.3448	0.0255	-8.8791	0.8681	-9.8993	0.6779	B-	C-	C-
ELA	8	650067	9	B-V	2	13263	0.537661163	0.19369675	0.537661163	0.131719822	0.13541431	0.001130966	0.474907945	-0.216467153	0.474907945	-0.16521726	-0.274099667	0.4905	0.0193	-9.8991	0.921	-9.6491	0.9038	A-	B-	A-
ELA	8	620979	9	D	3	13300	0.631954887	0.13962406	0.109398496	0.631954887	0.117669173	0.00112782	0.503203021	-0.266254686	-0.262028061	0.503203021	-0.208782383	0.0262	0.0198	-9.8991	0.8828	-9.8992	0.8246	A+	A-	A-
ELA	8	620979	9	D	3	13263	0.642916384	0.133604765	0.107592551	0.642916384	0.114830732	0.000829375	0.493639147	-0.253841986	-0.266792868	0.493639147	-0.209778357	-0.044	0.02	-9.8991	0.8999	-9.8992	0.8476	A+	A+	A+
ELA	8	827517	9	D	2	13300	0.618421053	0.155263158	0.082406015	0.140902256	0.618421053	0.002255639	0.459257062	-0.190103401	-0.285023684	-0.210386039	0.459257062	0.0961	0.0197	-8.5491	0.933	-7.8791	0.9085	A-	A+	A-
ELA	8	827517	9	D	2	13263	0.622634396	0.159390786	0.077207268	0.139108799	0.622634396	0.001583352	0.470258621	-0.204572758	-0.271614217	-0.229776522	0.470258621	0.0623	0.0198	-8.8891	0.9289	-8.8891	0.8946	A-	A+	A-
MATH	3	659354	0	B-O	2	120314	0.474890703	0.474890703	0.336336586	0.10683711	0.072061439	0.0089682	0.238730173	0.238730173	-0.11276919	-0.071198362	-0.145904261	0.6984	0.0066	9.9012	1.2448	9.9013	1.3321			
MATH	3	427520	0	A-T	2	120314	0.387269977	0.507945875	0.067913958	0.387269977	0.026871353	0.009616503	0.506949303	-0.367414921	-0.135948831	0.506949303	-0.142567713	1.0317	0.0067	-9.8991	0.9	-9.8991	0.8824			
MATH	3	469853	0	D-M	2	120314	0.604817394	0.090828997	0.048340177	0.245590704	0.604817394	0.004031119	0.302393753	-0.047525688	-0.087298747	-0.253731751	0.302393753	0.0758	0.0066	9.9011	1.1484	9.9012	1.2032			
MATH	3	384267	0	B-O	1	120314	0.645535848	0.645535848	0.068520704	0.089066942	0.184417441	0.012159848	0.592066035	0.592066035	-0.154617129	-0.222050703	-0.450156268	-0.1659	0.0068	-9.8992	0.7955	-9.8993	0.7168			
MATH	3	505731	0	B-O	2	120314	0.590513157	0.590513157	0.118830726	0.098849677	0.177252855	0.013880346	0.562402401	0.562402401	-0.172721644	-0.277242085	-0.344495694	0.1566	0.0066	-9.8992	0.8452	-9.8992	0.7963			
MATH	3	626732	0	A-T	1	120314	0.721570225	0.032972056	0.075145037	0.721570225	0.162150706	0.007480426	0.544131	-0.194555653	-0.263461849	0.544131	-0.365681103	-0.6664	0.0072	-9.8992	0.8356	-9.8993	0.7294			
MATH	3	481066	0	D-M	2	120314	0.603919743	0.040219758	0.030071313	0.603919743	0.318358628	0.006624333	0.518990249	-0.186306	-0.158000368	0.518990249	-0.398367684	0.0857	0.0066	-9.8991	0.8921	-9.8992	0.8437			

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
MATH	3	148896	0	A-F	1	120314	0.314651661	0.274913975	0.275088518	0.314651661	0.12535532	0.009151055	0.412993653	-0.197964998	-0.060839691	0.412993653	-0.215199351	1.6274	0.007	2.051	1.0068	9.9011	1.0578			
MATH	3	600987	0	D-M	1	120314	0.56556178	0.276069285	0.070798078	0.56556178	0.081985471	0.004696045	0.309272916	-0.110973551	-0.218482511	0.309272916	-0.160704427	0.2725	0.0066	9.9012	1.1568	9.9012	1.1909			
MATH	3	815332	0	A-T	2	120314	0.565096331	0.565096331	0.177867912	0.11675283	0.131314726	0.007654969	0.421382564	0.421382564	-0.268758129	-0.052581249	-0.248445443	0.2774	0.0066	6.511	1.0179	9.901	1.0475			
MATH	3	440334	0	B-O	2	120314	0.56204598	0.56204598	0.154520671	0.188506741	0.084595309	0.009666373	0.388490963	0.388490963	-0.154902546	-0.180871507	-0.208963583	0.3975	0.0066	9.9011	1.0587	9.9011	1.0686			
MATH	3	825606	0	B-O	2	120314	0.552429476	0.140573832	0.164660804	0.552429476	0.130832655	0.010904799	0.396309455	-0.248257289	-0.189107631	0.396309455	-0.095630165	0.2934	0.0066	9.9011	1.0545	9.9011	1.0553			
MATH	3	714607	0	B-O	2	120314	0.557092275	0.240487391	0.557092275	0.143549379	0.046179165	0.011902189	0.450130963	-0.215580779	0.450130963	-0.239718065	-0.192079503	0.241	0.0066	-3.129	0.9915	-1.679	0.9927			
MATH	3	954642	0	A-T	1	120314	0.589017072	0.184550426	0.1292867	0.589017072	0.084171418	0.012126602	0.574463393	-0.397303792	-0.162357157	0.574463393	-0.248282154	0.1807	0.0066	-9.8992	0.8288	-9.8992	0.7824			
MATH	3	356143	0	C-G	1	120314	0.648245424	0.648245424	0.205894576	0.078037469	0.059095367	0.005726682	0.451452483	0.451452483	-0.267031893	-0.219958042	-0.178222402	-0.1931	0.0068	-9.899	0.9628	-9.8991	0.925			
MATH	3	994817	0	B-O	1	120314	0.698056752	0.04510697	0.698056752	0.120094087	0.130001496	0.006075768	0.537772643	-0.197724911	0.537772643	-0.319396898	-0.292499428	-0.5174	0.007	-9.8992	0.8478	-9.8992	0.7705			
MATH	3	940245	0	B-O	2	120314	0.700533604	0.090238875	0.148469837	0.700533604	0.049212893	0.01080506	0.548496149	-0.257519867	-0.351407273	0.548496149	-0.214230002	-0.4723	0.007	-9.8992	0.8254	-9.8993	0.7118			
MATH	3	312962	0	B-O	2	120314	0.529589241	0.529589241	0.138229965	0.116029722	0.206609372	0.008768722	0.402141734	0.402141734	-0.241231931	-0.186926098	-0.129280307	0.4432	0.0066	9.901	1.049	9.901	1.0458			
MATH	3	938118	0	D-M	1	120314	0.818242266	0.077879549	0.035365793	0.818242266	0.063184667	0.004953704	0.340487165	-0.149001722	-0.19170299	0.340487165	-0.216642714	-1.3254	0.0082	-1.909	0.9913	9.9011	1.1343			
MATH	3	195872	0	A-T	2	120314	0.551905846	0.144139502	0.551905846	0.141022657	0.150439683	0.011769204	0.557340207	-0.177003528	0.557340207	-0.237138567	-0.350899295	0.3059	0.0066	-9.8991	0.8609	-9.8992	0.8223			
MATH	3	789950	0	B-O	2	120314	0.685788853	0.077281114	0.685788853	0.103778446	0.124341307	0.008294962	0.558944379	-0.191381729	0.558944379	-0.257366624	-0.37938686	-0.458	0.007	-9.8992	0.8342	-9.8993	0.7391			
MATH	3	148005	0	D-M	2	120314	0.604651163	0.085260236	0.208662334	0.092233655	0.604651163	0.008137041	0.448475774	-0.180279311	-0.258476864	-0.200461978	0.448475774	0.0502	0.0067	-7.249	0.9799	-7.849	0.9631			
MATH	3	426777	0	A-F	2	120314	0.513389963	0.184251209	0.513389963	0.211064382	0.082018718	0.006782253	0.301811253	-0.145880974	0.301811253	-0.098007587	-0.180415807	0.5116	0.0066	9.9012	1.1706	9.9012	1.2103			
MATH	3	997898	0	A-T	1	120314	0.569883804	0.11014512	0.237129511	0.077139817	0.569883804	0.005103313	0.542581464	-0.113001135	-0.427658022	-0.179373861	0.542581464	0.1642	0.0066	-9.8991	0.881	-9.8992	0.8339			
MATH	3	246870	0	B-O	1	120314	0.677926093	0.677926093	0.146225709	0.034451519	0.126336087	0.013946839	0.50647294	0.50647294	-0.302547936	-0.19121224	-0.269922293	-0.2629	0.0068	-9.8991	0.8682	-9.8992	0.8037			
MATH	3	279099	0	A-F	2	120314	0.310836644	0.291794804	0.047068504	0.339869009	0.310836644	0.009782735	0.383674433	-0.402947824	-0.168718608	0.096636551	0.383674433	1.6283	0.007	6.101	1.0203	9.9012	1.1581			
MATH	3	583095	0	B-O	1	120314	0.663189654	0.663189654	0.092599365	0.097469954	0.134547933	0.01096298	0.483768119	0.483768119	-0.245368355	-0.204253342	-0.263369673	-0.3117	0.0069	-9.8991	0.9252	-9.8991	0.8855			
MATH	3	403248	0	C-G	1	120314	0.48331865	0.113228718	0.136966604	0.254725136	0.48331865	0.010846618	0.264813017	-0.151384103	-0.150513271	-0.058912277	0.264813017	0.7172	0.0066	9.9012	1.2195	9.9013	1.2903			
MATH	3	264739	0	C-G	1	120314	0.646549861	0.196610536	0.091394185	0.057383181	0.646549861	0.005261233	0.428806776	-0.257066961	-0.217895762	-0.148227718	0.428806776	-0.2356	0.0068	-2.079	0.9939	1.161	1.0064			
MATH	3	863791	0	A-T	2	120314	0.378675798	0.167362069	0.378675798	0.30992237	0.129295011	0.014071513	0.32940565	-0.251740923	0.32940565	-0.066276285	-0.082345836	1.2225	0.0067	9.9011	1.1101	9.9012	1.2148			
MATH	3	544304	0	A-T	2	120314	0.455533022	0.320195488	0.123551706	0.089515767	0.455533022	0.010688698	0.487852803	-0.215715127	-0.285967132	-0.150738168	0.487852803	0.8818	0.0066	-9.8991	0.9492	-9.269	0.9627			
MATH	3	947323	0	B-O	2	120314	0.608025666	0.094594145	0.608025666	0.173063816	0.114500391	0.008860149	0.497279596	-0.248804764	0.497279596	-0.207139793	-0.269992904	0.0058	0.0067	-9.8991	0.9207	-9.8991	0.9052			
MATH	3	773388	0	B-O	2	120314	0.590970294	0.141762388	0.590970294	0.137988929	0.117858271	0.010721944	0.440628348	-0.148388529	0.440628348	-0.214049724	-0.264647185	0.1845	0.0066	-4.809	0.9868	-4.199	0.9813			
MATH	3	895423	0	D-M	1	120314	0.521402331	0.185855345	0.190750869	0.086922553	0.521402331	0.006200442	0.326337683	-0.163522084	-0.160573156	-0.099685467	0.326337683	0.4797	0.0066	9.9011	1.1415	9.9012	1.184			
MATH	3	829274	0	D-M	2	120314	0.492536197	0.130159416	0.14476287	0.218021178	0.492536197	0.013730738	0.426382279	-0.127313441	-0.138126145	-0.279288471	0.426382279	0.658	0.0066	7.711	1.0212	7.461	1.0301			
MATH	3	773905	0	D-M	1	120314	0.373888326	0.383596256	0.115971541	0.373888326	0.117825025	0.007995744	0.362167691	-0.152997827	-0.238441917	0.362167691	-0.058815622	1.272	0.0068	9.9011	1.0811	9.9012	1.1572			
MATH	3	400614	0	D-M	1	120314	0.463611882	0.219882973	0.463611882	0.214920957	0.095375434	0.005061755	0.389572204	-0.205409164	0.389572204	-0.123000996	-0.185933024	0.7703	0.0066	9.9011	1.0611	9.9011	1.0821			
MATH	3	619188	0	D-M	1	120314	0.434055887	0.434055887	0.061098459	0.474574862	0.025076051	0.003964626	0.470056719	0.470056719	-0.14717365	-0.33548158	-0.16805627	0.9061	0.0066	-9.899	0.9673	-3.969	0.9838			
MATH	3	615858	0	B-O	2	120314	0.554474126	0.204115897	0.554474126	0.077796433	0.15734661	0.005410842	0.39553344	-0.144895614	0.39553344	-0.217371405	-0.208394619	0.2209	0.0066	9.9011	1.0616	9.9011	1.0947			
MATH	3	357902	0	A-F	1	120314	0.346036205	0.346036205	0.17087787	0.184292767	0.286192796	0.011968682	0.430664848	0.430664848	-0.040637758	-0.116787173	-0.303571388	1.4367	0.0069	-0.199	0.9994	7.281	1.0373			
MATH	3	381099	1	D-M	2	13864	0.41957588	0.081866705	0.41957588	0.130481823	0.360718407	0.005986728	0.574135649	-0.092029316	0.574135649	-0.119691935	-0.442934188	0.9189	0.0198	-9.8992	0.8478	-9.8992	0.8241	A-	A-	A-
MATH	3	583023	1	A-F	2	13864	0.284766301	0.298759377	0.190132718	0.219777842	0.284766301	0.005986728	0.46219175	-0.237431687	0.00319143	-0.235488616	0.46219175	1.7061	0.0214	-6.2591	0.9358	1.261	1.0237	A-	A-	A-
MATH	3	702252	1	A-T	1	13864	0.458237161	0.137261973	0.315204847	0.458237161	0.077971725	0.010098096	0.57333657	-0.162852082	-0.429807709	0.57333657	-0.088718742	0.7128	0.0196	-9.8991	0.8532	-9.8992	0.8199	A-	A-	A-
MATH	3	318990	1	D-M	2	13864	0.67152337	0.109708598	0.67152337	0.165248125	0.044070975	0.008439123	0.587936097	-0.308392258	0.587936097	-0.34866435	-0.220896303	-0.4339	0.0203	-9.8992	0.7905	-9.8993	0.7122	A+	B-	C-
MATH	3	677891	1	A-F	1	13864	0.86922966	0.86922966	0.032097519	0.049841316	0.029789383	0.011829198	0.343698299	0.343698299	-0.186614987	-0.23480426	-0.132745665	-1.8466	0.0268	-3.9291	0.9355	-2.7191	0.8979	A+	A-	A-
MATH	3	885023	1	B-O	2	13864	0.217109059	0.137189844	0.524379688	0.217109059	0.10949221	0.006130987	0.154435409	-0.189873572	0.078007463	0.154435409	-0.122225651	2.1602	0.0231	9.9012	1.232	9.9019	1.9227	A-	A+	A+
MATH	3	328979	1	B-O	2	13864	0.284694172	0.314050779	0.249927871	0.115478938	0.284694172	0.035054818	0.187148276	0.14017521	-0.130025045	-0.250044266	0.187148276	1.6997	0.0214	9.9013	1.2803	9.9016	1.6128	A+	A-	A+
MATH	3	868814	1	C-G	1	13864	0.25288517	0.473384305	0.112305251	0.143032314	0.25288517	0.015363531	0.142242812	0.091253415	-0.110365006	-0.186953962	0.142242812	1.9075	0.0221	9.9013	1.2993	9.9019	1.861	A-	A+	A+
MATH	3	484735	2	A-F	2	13317	0.490951415	0.106705715	0.260569197	0.490951415	0.138094165	0.003228955	0.377158123	-0.276381454	-0.101738493	0.377158123	-0.161676912	0.6459	0.0196	8.2711	1.0677	6.5011	1.0758	A+	A-	A-
MATH	3	529813	2	D-M	2	13317	0.29128182	0.29128182	0.159945934	0.14695502	0.379965458	0.020950665	0.314379416	0.314379416	-0.180042699	-0.171201583	-0.017191219	1.747	0.0214	6.6411	1.0693	9.9013	1.2644	A+	A-	A-
MATH	3	411252	2	A-T	2	13317	0.224149583	0.187354509	0.431703837	0.224149583	0.139821281	0.016445145	-0.001484789	-0.115547361	0.10683484	-0.001484789	0.00032592	2.1818	0.023	9.9014	1.4263	9.902	1.9889	A+	A-	A-
MATH	3	498593	2	D-M	2	13317	0.368626568	0.500337914	0.368626568	0.061800706	0.064053465	0.003979875	0.402275682	-0.208452984	0.402275682	-0.176485914	-0.186378875	1.3012	0.0203	1.661	1.0148	4.6611	1.0644	A-	A-	A-
MATH	3	304150	2	D-M	2	13317	0.310730645	0.310730645	0.225951791	0.160321394	0.294135316	0.006758279	0.127102692	0.127102692	0.140361959	-0.096304956	-0.172219429	1.6286	0.021	9.9013	1.3178	9.9016	1.6045	A-	A-	A-
MATH	3	192676	2	B-O	2	13317	0.473454982	0.101524367	0.151835999	0.473454982	0.264774349	0.008185027	0.436005198	-0.200498111	-0.232360766	0.436005198	-0.160080208	0.7495	0.0196	-0.909	0.9926	-0.089	0.9989	A-	A-	A+
MATH	3	458435	2	B-O	1	13317	0.15679207	0.395884959	0.182924082	0.256288954	0.15679207	0.007434107	0.061660025	0.276802056	-0.140048584	-0.22766939	0.061660025	2.7133	0.026	9.9012	1.2116	9.9023	2.3049	A+	A+	A+
MATH	3	767461	2	C-G	2	13317	0.442667267	0.068634077	0.442667267	0.205827138	0.268829316	0.012990914	0.373203953	-0.147590917	0.373203953	-0.145643818	-0.188390392	0.9083	0.0197	8.0211	1.0674	7.7211	1.0927	A+	A-	A-
MATH	3	298710	3	A-T	2	13325	0.229043152	0.399474672	0.278874296	0.229043152	0.08195122	0.009380863	0.341199863	-0.235316706	-0.01269855	0.341199863	-0.058663	2.1757	0.0232	1.401	1.0173	9.9013	1.3412	A-	A-	A+
MATH	3	855332	3	B-O	1	13325	0.371257036	0.298461538	0.371257036	0.089606004	0.214934334	0.025065666	0.261330331	0.064878584	0.261330331	-0.196415948	-0.223172065	1.3053	0.0205	9.9012	1.2313	9.9013	1.342	A+	A+	A-
MATH	3	473678	3	D-M	1	13325	0.479699812	0.185515947	0.104015009	0.223189493	0.479699812	0.006153846	0.538238332	-0.219364461	-0.247839175	-0.251643957	0.538238332	0.7211	0.0198	-9.8991	0.8922	-9.8991	0.8789	A-	A-	A-
MATH	3	203905	3	D-M	2	13325	0.352645403	0.091782364	0.352645403	0.316998124	0.230469043	0.007654784	0.297057511	-0.188948496	0.297057511	-0.071776034	-0.117589197	1.3973	0.0207	9.9011	1.128	9.9014	1.377	A-	A-	A-
MATH	3	646604	3	A-F	1	13325	0.772007505	0.772007505	0.138311445	0.051332083	0.031669794	0.005703565	0.373107178	0.373107178	-0.224983542	-0.201181782	-0.171769394	-0.9396	0.0227	0.161	1.0018	-1.899	0.9508	A+	A-	A-
MATH	3	297639	3	B-O	1	13325	0.774559099	0.774559099	0.101538462	0.072645403	0.040375235	0.01043152	0.489896924	0.489896924	-0.251721842	-0.290075315	-0.250941908	-0.9572	0.0228	-9.8991	0.8634	-9.8993	0.7254	A+	A-	A-
MATH	3	720765	3	B-O	2	13325	0.461013133	0.461013133	0.288780488	0.139587242	0.088105066	0.021988743	0.302986745	0.302986745	-0.006096701	-0.217227437	-0.234930276	0.8079	0.0199	9.9012	1.1816	9.9013	1.2514	A-	A+	A+
MATH	3	719144	3	C-G	2	13325	0.465816135	0.132157598	0.465816135	0.219437148	0.175459662	0.006454034	0.349139137	-0.075210342	0.349139137	-0.218495815	-0.141397001	0.7826	0.0199	9.9011	1.1277	9.9012	1.186	A+	A-	A-
MATH	3	219793	4	B-O	1	13326	0.737955876	0.052829056	0.079318625	0.737955876	0.109410176	0.019810896	0.500216826	-0.243465962	-0.264252306	0.500216826	-0.282061913	-0.7206	0.0217	-9.8991	0.8614	-9.8992	0.7867	A+	A-	A-
MATH	3	666716	4	C-G	1	13326	0.458051929	0.054029716	0.261593877	0.458051929	0.21874531	0.006303467	0.320493175	-0.230425348	-0.248918543	0.320493175	0.0159609	0.8099	0.0197	9.9011	1.1346	9.9012	1.1891	A-	A-	A-
MATH	3	301629	4	C-G	2	13326	0.209440192	0.333333333	0.209440192	0.270373706	0.173270299	0.010505778	0.091175509	-0.049787671	0.091175509	-0.003332954	-0.017326836	2.262	0.0235	9.9013	1.2531	9.9019	1.9313	A+	A-	A-
MATH	3	547665	4	D-M	2	13326	0.360948522	0.100030017	0.082845565	0.360948522	0.442743509	0.007504127	0.147960632	-0.240728444	-0.207218458	0.147960632	0.141316835	1.3163	0.0203	9.9013	1.3195	9.9015	1.5004	A-	A-	A-
MATH	3	337453	4	D-M	1	13326	0.400795437	0.315698634	0.108434639	0.400795437	0.167942368	0.006003302	0.353771865	-0.200062874	-0.192089026	0.353771865	-0.044955959	1.1007	0.02	9.8011	1.0856	9.9011	1.1423	A+	A-	A-
MATH	3	276404	4	A-T	2	13326	0.294687078	0.294687078	0.521161639	0.036920306	0.139876932	0.006153384	0.155951905	0.155951905	-0.06229025	-0.165602033	-0.012643025	1.6976	0.0213	9.9012	1.2481	9.9016	1.631	A-	A+	A-
MATH	3	579859	4	B-O	2	13326	0.473810596	0.473810596	0.180624343	0.229776377	0.110385712	0.004652559	0.233678181	0.233678181	-0.104690074	-0.124975931	-0.066525824	0.7198	0.0196	9.9012	1.2368	9.9013	1.3007	A-	A-	A-
MATH	3	681250	4	B-O	2	13326	0.369428186	0.377832808	0.133198259	0.369428186	0.110010506	0.008779829	0.445652098	-0.248928703	-0.17461652	0.445652098	-0.094311539	1.2698	0.0203	-4.049	0.9646	0.081	1.0011	A-	A-	A-
MATH	3	309112	5	A-T	2	13339	0.350700952	0.205712572	0.350700952	0.307744209	0.119574181	0.014468851	0.35192147	-0.203107187	0.35192147	-0.132525833	-0.050353233	1.399	0.0206	7.6711	1.0727	9.9012	1.1964	A+	A-	A-
MATH	3	850119	5	B-O	2	13339	0.609191094	0.095659345	0.172501687	0.609191094	0.110203164	0.011170253	0.477906181	-0.290562901	-0.16096022	0.477906181	-0.253625993	0.0322	0.02	-7.0291	0.9424	-6.9791	0.9028	A+	A+	A+
MATH	3	365757	5	C-G	2	13339	0.535122573	0.535122573	0.15585876	0.143039208	0.158782517	0.004123248	0.440182827	0.440182827	-0.171461982	-0.168464054	-0.259306078	0.4126	0.0197	0.211	1.0016	-0.989	0.9877	A+	A-	A-
MATH	3	201427	5	D-M	1	13339	0.573356324	0.208261489	0.573356324	0.144913412	0.049104131	0.023390059	0.414574303	-0.183883487	0.414574303	-0.211114781	-0.216506677	0.214	0.0198	2.691	1.0221	1.091	1.0145	A+	A-	A-
MATH	3	278553	5	A-T	1	13339	0.839343279	0.839343279	0.061398905	0.042057126	0.048279481	0.007871655	0.427216291	0.427216291	-0.24955514	-0.218586842	-0.216992997	-1.4428	0.0253	-8.7291	0.8767	-8.1292	0.7572	A+	A-	A-
MATH	3	983477	5	D-M	1	13339	0.38181273	0.283154659	0.050303621	0.38181273	0.259089887	0.024514581	0.246886813	-0.079091502	-0.228967649	0.246886813	-0.060974523	1.2159	0.0202	9.9012	1.2322	9.9013	1.3467	A+	A-	A-
MATH	3	163514	5	A-F	2	13339	0.443961316	0.131793988	0.282629882	0.443961316	0.125571632	0.0152935	0.220299021	-0.137977151	0.02655415	0.220299021	-0.204671116	0.8846	0.0198	9.9013	1.2576	9.9013	1.3436	A+	A+	A-
MATH	3	265147	5	B-O	2	13339	0.367643751	0.409401005	0.367643751	0.096858835	0.118599595	0.006522228	0.414242264	-0.166414917	0.414242264	-0.200805212	-0.171745763	1.2937	0.0204	0.941	1.0085	4.5711	1.0655	A-	A-	A-
MATH	3	589165	6	C-G	2	13275	0.367909605	0.367909605	0.248361582	0.193747646	0.175367232	0.007532957	0.267196357	0.267196357	-0.140186738	-0.086716129	-0.076995331	1.3164	0.0205	9.9012	1.203	9.9014	1.3624	A+	A-	A-
MATH	3	961621	6	A-F	2	13275	0.200753296	0.100188324	0.200753296	0.256346516	0.430583804	0.008888889	0.134271406	-0.083792174	0.134271406	-0.188872491	0.114306267	2.3941	0.0241	9.9012	1.2059	9.902	2.0154	A-	A+	A+
MATH	3	679559	6	B-O	2	13275	0.572580038	0.572580038	0.169265537	0.171977401	0.077363465	0.007532957	0.457630466	0.457630466	-0.172723764	-0.247772243	-0.236005518	0.241	0.02	-1.569	0.9868	-1.749	0.9763	A+	A-	A-
MATH	3	947766	6	A-T	2	13275	0.336120527	0.235555556	0.136271186	0.269679849	0.336120527	0.021770245	0.480098462	-0.441049527	-0.147385429	0.052393124	0.480098462	1.508	0.0209	-7.2691	0.9324	-2.739	0.9571	A-	A-	A+
MATH	3	213688	6	D-M	1	13275	0.793596987	0.047080979	0.101242938	0.793596987	0.046101695	0.011826742	0.322638468	-0.197808952	-0.160746615	0.322638468	-0.161550931	-1.0754	0.0234	2.661	1.033	3.8011	1.1083	A+	A-	A-
MATH	3	530516	6	D-M	1	13275	0.685649718	0.685649718	0.065536723	0.149378531	0.086553672	0.012429379	0.46497689	0.46497689	-0.308165966	-0.189168148	-0.237527963	-0.38	0.021	-6.9791	0.9357	-4.1491	0.9245	A-	C-	A-
MATH	3	991407	6	B-O	2	13275	0.581242938	0.121280603	0.101242938	0.181318267	0.581242938	0.014538606	0.54349557	-0.274314253	-0.271248352	-0.235194581	0.54349557	0.1966	0.02	-9.8991	0.882	-9.8992	0.8263	A+	A-	A-
MATH	3	354865	6	C-G	1	13275	0.888361582	0.049416196	0.018455744	0.888361582	0.038794727	0.003917137	0.373170849	-0.23514498	-0.157867873	0.373170849	-0.211286306	-1.9161	0.0292	-5.2491	0.9019	-9.1193	0.6592	B+	B-	B-
MATH	3	464067	7	D-M	2	13237	0.858804865	0.033920073	0.858804865	0.034524439	0.064062854	0.00740349	0.433149774	-0.212227964	0.433149774	-0.184946584	-0.297060101	-1.61	0.0265	-9.8392	0.8486	-9.8993	0.6727	A+	C-	A-
MATH	3	109318	7	B-O	1	13237	0.382866208	0.158344036	0.254664954	0.382866208	0.190148825	0.012616152	0.287574248	-0.196398388	-0.099852034	0.287574248	-0.045509581	1.2068	0.0202	9.9012	1.163	9.9013	1.2594	A-	A-	A-
MATH	3	211960	7	C-G	1	13237	0.506459167	0.161139231	0.506459167	0.103951046	0.215758858	0.011785148	0.319697481	-0.149333616	0.319697481	-0.130912048	-0.141220038	0.552	0.0197	9.9011	1.1403	9.9012	1.1841	A+	A-	A-
MATH	3	218198	7	D-M	1	13237	0.561380978	0.097151923	0.153584649	0.175719574	0.561380978	0.010349777	0.326875529	-0.149968516	-0.119426055	-0.1772657	0.326875529	0.2689	0.0198	9.9011	1.1254	9.9012	1.1558	A+	A-	A-
MATH	3	558695	7	A-T	2	13237	0.517186674	0.168164992	0.517186674	0.123517413	0.162196872	0.027951953	0.498376931	-0.211835076	0.498376931	-0.221669586	-0.241854861	0.4969	0.0197	-8.9191	0.9298	-7.7391	0.9105	A+	A-	A-
MATH	3	632048	7	A-T	2	13237	0.200271965	0.175115207	0.090126162	0.200271965	0.527234268	0.00649694	0.23376672	-0.350058425	-0.1161011	0.23376672	0.152486497	2.3357	0.024	7.6111	1.1044	9.9016	1.58	A+	A-	A-
MATH	3	123942	7	D-M	2	13237	0.535393216	0.180025686	0.174510841	0.103422226	0.535393216	0.00324847	0.42210665	-0.22597516	-0.216596325	-0.123909399	0.42210665	0.4032	0.0197	1.871	1.0152	3.361	1.0414	A-	A-	A-
MATH	3	420173	7	A-F	2	13237	0.376218176	0.376218176	0.249754476	0.240915615	0.123744051	0.008536677	0.352660631	0.352660631	-0.06009811	-0.173773049	-0.202335253	1.2345	0.0203	9.9011	1.0942	9.9011	1.1476	A-	A-	A-
MATH	3	267454	8	D-M	2	13292	0.800556726	0.083659344	0.060337045	0.800556726	0.047998796	0.007071923	0.483877273	-0.281465983	-0.263691093	0.483877273	-0.229833879	-1.1288	0.0236	-9.8992	0.8397	-9.8993	0.7363	A+	A-	A-
MATH	3	756718	8	A-T	2	13292	0.455838098	0.096223292	0.205160999	0.226000602	0.455838098	0.015422811	0.416811659	-0.231021284	-0.290986288	-0.029662388	0.416811659	0.8374	0.0198	3.871	1.0324	3.831	1.0471	A-	A-	A+
MATH	3	414206	8	A-F	1	13292	0.511360217	0.511360217	0.169349985	0.103897081	0.16784532	0.010382185	0.255970138	0.255970138	-0.205602106	-0.164552595	-0.034211931	0.5421	0.0197	9.9012	1.2241	9.9013	1.2965	A+	A+	A+
MATH	3	800251	8	D-M	1	13292	0.273096599	0.305973518	0.211405357	0.161826663	0.273096599	0.046569365	0.291564549	-0.043678835	-0.128385586	-0.113746997	0.291564549	1.8582	0.0219	8.6511	1.0959	9.9014	1.3919	A-	A-	A-
MATH	3	184551	8	A-T	1	13292	0.751730364	0.066205236	0.072223894	0.104649413	0.751730364	0.004739693	0.439098387	-0.266481143	-0.221339951	-0.20412841	0.439098387	-0.7961	0.0221	-6.9691	0.9269	-5.4891	0.8784	A+	A-	A-

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
MATH	3	231475	8	A-F	2	13292	0.190490521	0.478859464	0.190490521	0.199142341	0.114730665	0.007297623	-0.019727388	0.134452686	-0.019727388	-0.069206698	-0.0945485	2.4393	0.0244	9.9014	1.3861	9.9025	2.4649	A-	A-	A+
MATH	3	497592	8	B-O	2	13292	0.67950647	0.67950647	0.086217274	0.145576286	0.065001505	0.022720433	0.344863157	0.344863157	-0.16036541	-0.244144795	-0.065995319	-0.3575	0.0208	7.1211	1.067	7.1611	1.134	A+	A+	A+
MATH	3	860052	8	C-G	2	13292	0.561841709	0.109840506	0.041603972	0.561841709	0.278362925	0.006620524	0.419400722	-0.2664181	-0.150223037	0.419400722	-0.19928528	0.2803	0.0198	2.981	1.0246	1.281	1.0167	A+	A-	A-
MATH	3	989302	9	A-F	2	13339	0.648774271	0.075942724	0.134043032	0.132618637	0.648774271	0.007346878	0.423939408	-0.226966433	-0.134750083	-0.26891843	0.423939408	-0.1906	0.0204	-1.209	0.9894	2.311	1.038	A+	A-	A-
MATH	3	743330	9	A-T	1	13339	0.564135243	0.210135692	0.09221081	0.564135243	0.126096409	0.006522228	0.437718027	-0.206901375	-0.231945532	0.437718027	-0.181102644	0.2629	0.0198	0.071	1.0006	-0.029	0.9995	A-	A-	A-
MATH	3	479646	9	B-O	2	13339	0.310892871	0.291850963	0.166879076	0.210810406	0.310892871	0.014993628	0.269147145	-0.096233986	-0.106308244	-0.078825116	0.269147145	1.6245	0.0211	9.9012	1.1552	9.9014	1.3989	A-	A+	A+
MATH	3	749061	9	B-O	2	13339	0.334207962	0.336307069	0.334207962	0.229477472	0.093710173	0.005472674	0.335908582	-0.116979163	0.335908582	-0.129378453	-0.155750406	1.4881	0.0208	8.3611	1.0815	9.9012	1.2173	A-	A+	A-
MATH	3	741788	9	D-M	2	13339	0.681685284	0.055551391	0.079241322	0.169278057	0.681685284	0.003598471	0.479356947	-0.215462	-0.238863608	-0.258081575	0.479356947	-0.3735	0.0208	-8.9691	0.9198	-7.8791	0.8643	A+	A-	A-
MATH	3	263349	9	A-F	2	13339	0.186370792	0.234650274	0.186370792	0.524102257	0.042656871	0.010645476	-0.003829521	-0.155731493	-0.003829521	0.22332724	-0.1788407	2.4724	0.0246	9.9013	1.3423	9.9024	2.4407	A-	A+	A+
MATH	3	368653	9	B-O	2	13339	0.394782218	0.230901867	0.163355574	0.394782218	0.201814229	0.008171527	0.241316717	-0.067889725	-0.210762051	0.241316717	-0.017297831	1.1508	0.0201	9.9012	1.2262	9.9014	1.3715	A-	A+	A+
MATH	3	479120	9	C-G	1	13339	0.524177225	0.276482495	0.08861234	0.096708899	0.524177225	0.011170253	0.437471046	-0.248110918	-0.186572598	-0.161378906	0.437471046	0.4726	0.0197	1.081	1.0088	0.771	1.0095	A+	C-	A-
MATH	4	507859	0	A-F	2	123908	0.349525454	0.227612422	0.183224651	0.234496562	0.349525454	0.002639055	0.271438211	-0.008198009	-0.105397009	-0.193556259	0.271438211	0.8457	0.0068	9.9012	1.1978	9.9013	1.2847			
MATH	4	537653	0	A-F	2	123908	0.365383995	0.474481067	0.365383995	0.081334539	0.071214127	0.001840075	0.248828619	-0.078972769	0.248828619	-0.162502002	-0.128390658	0.7528	0.0067	9.9012	1.2067	9.9013	1.3278			
MATH	4	897523	0	D-M	2	123908	0.451819092	0.356264325	0.094441037	0.451819092	0.094570165	0.001170223	0.445632599	-0.169966201	-0.274486668	0.445632599	-0.197259992	0.2882	0.0065	-5.889	0.9843	-5.819	0.9777			
MATH	4	339879	0	A-F	2	123908	0.417955257	0.417955257	0.157390967	0.209833102	0.211600542	0.001258999	0.457209051	0.457209051	-0.089256202	-0.351602315	-0.117321368	0.461	0.0065	-8.239	0.9772	-6.369	0.9747			
MATH	4	920043	0	B-O	2	123908	0.609097072	0.106272396	0.609097072	0.195435323	0.085611906	0.002114472	0.429143099	-0.259559839	0.429143099	-0.2013412	-0.167455735	-0.6394	0.0065	-2.699	0.993	-6.429	0.968			
MATH	4	462685	0	B-O	2	123908	0.375108952	0.051449463	0.040029699	0.530232108	0.375108952	0.001549537	0.477930432	-0.263028892	-0.174970733	-0.273641546	0.477930432	0.5908	0.0066	-9.8991	0.9354	-9.8991	0.9183			
MATH	4	381264	0	B-O	2	123908	0.33488556	0.33488556	0.369346612	0.177849695	0.113479356	0.002283953	0.365744665	0.365744665	-0.091112481	-0.128302138	-0.239607813	0.9129	0.0068	9.9011	1.0612	9.9011	1.1351			
MATH	4	144189	0	A-T	2	123908	0.539271072	0.110630468	0.15454208	0.539271072	0.19073829	0.002574491	0.491228967	-0.16218403	-0.320995657	0.491228967	-0.188738227	-0.1446	0.0064	-9.8991	0.9226	-9.8991	0.8919			
MATH	4	283154	0	C-G	1	123908	0.412644866	0.096531297	0.412644866	0.209849243	0.275341382	0.003308907	0.369294673	-0.237846947	0.369294673	-0.245816703	-0.015893531	0.5041	0.0065	9.9011	1.0718	9.9011	1.1104			
MATH	4	107120	0	A-F	1	123908	0.519336927	0.241655099	0.12267166	0.519336927	0.1132211	0.001678665	0.51923452	-0.36936385	-0.172402088	0.51923452	-0.132692662	-0.0616	0.0064	-9.8991	0.8951	-9.8991	0.8607			
MATH	4	896459	0	D-M	2	123908	0.549391484	0.324159861	0.047446493	0.549391484	0.074934629	0.001735158	0.49536333	-0.378514093	-0.199341323	0.49536333	-0.090474823	-0.3003	0.0064	-9.8991	0.9212	-9.8991	0.9051			
MATH	4	455324	0	A-F	2	123908	0.491429125	0.241558253	0.491429125	0.156721116	0.105981858	0.002332376	0.462957464	-0.232247772	0.462957464	-0.242035457	-0.131348937	0.0836	0.0064	-9.899	0.9586	-9.8991	0.9393			
MATH	4	524151	0	D-M	1	123908	0.55668722	0.270918746	0.082528973	0.55668722	0.086071924	0.001331633	0.437186535	-0.145269236	-0.270522089	0.437186535	-0.268100652	-0.2842	0.0064	-8.299	0.9793	1.071	1.0045			
MATH	4	578050	0	C-G	2	123908	0.688123446	0.097830649	0.084385189	0.688123446	0.12508474	0.002332376	0.459223783	-0.244893953	-0.215966163	0.459223783	-0.229793369	-0.9877	0.0068	-9.8991	0.9203	-9.8991	0.8529			
MATH	4	688591	0	D-M	1	123908	0.521507893	0.521507893	0.271717726	0.125907932	0.076734351	0.001864286	0.405315211	0.405315211	-0.170042824	-0.210266487	-0.204482515	-0.0616	0.0064	9.411	1.024	9.721	1.0387			
MATH	4	700024	0	B-O	2	123908	0.721874294	0.721874294	0.089598735	0.054540466	0.128974723	0.002332376	0.500447369	0.500447369	-0.201922825	-0.202145749	-0.347889303	-1.2416	0.007	-9.8991	0.8799	-9.8992	0.7705			
MATH	4	382259	0	A-F	1	123908	0.682223908	0.091212835	0.682223908	0.163419634	0.059503825	0.001791652	0.427420433	-0.206630063	0.427420433	-0.265850666	-0.161274613	-0.9839	0.0068	-9.899	0.9633	-9.8991	0.9328			
MATH	4	659249	0	A-T	1	123908	0.633486135	0.11018659	0.140216935	0.113196888	0.633486135	0.001743229	0.47762583	-0.255072909	-0.226556313	-0.219603097	0.47762583	-0.6383	0.0065	-9.8991	0.91	-9.8991	0.856			
MATH	4	107807	0	D-M	1	123908	0.462544791	0.106716273	0.263590729	0.161676405	0.462544791	0.003655938	0.557375201	-0.112238217	-0.325592827	-0.260581882	0.557375201	0.2228	0.0064	-9.8991	0.8565	-9.8992	0.8227			
MATH	4	628747	0	C-G	2	123908	0.446581335	0.248095361	0.119048003	0.181465281	0.446581335	0.00127514	0.392007429	-0.140293298	-0.181451221	-0.187789124	0.392007429	0.3028	0.0065	9.901	1.0483	9.9011	1.0642			
MATH	4	764733	0	B-O	2	123908	0.42008587	0.054104658	0.42008587	0.231639604	0.288318753	0.00319592	0.533010583	-0.155485877	0.533010583	-0.189336166	-0.3165086	0.4074	0.0065	-9.8991	0.879	-9.8991	0.8511			
MATH	4	715435	0	B-O	2	123908	0.637682797	0.14157278	0.114116925	0.637682797	0.102898925	0.002195177	0.422334121	-0.164434033	-0.250771358	0.422334121	-0.207054177	-0.7117	0.0066	-9.899	0.9714	-0.769	0.9959			
MATH	4	204028	0	D-M	2	123908	0.681836524	0.108806534	0.084643445	0.681836524	0.119112567	0.003591374	0.390004634	-0.112890812	-0.248321037	0.390004634	-0.223511902	-0.8401	0.0067	-9.899	0.9618	2.751	1.0156			
MATH	4	622741	0	D-M	1	123908	0.588210608	0.121162475	0.115763308	0.170900991	0.588210608	0.002170966	0.548535888	-0.296078378	-0.205265504	-0.277890306	0.548535888	-0.4383	0.0065	-9.8991	0.8511	-9.8992	0.7887			
MATH	4	739708	0	A-T	1	123908	0.559850857	0.155817219	0.160013881	0.121340026	0.559850857	0.001856216	0.489493107	-0.26543069	-0.225181467	-0.190254123	0.489493107	-0.2608	0.0064	-9.8991	0.9192	-9.8991	0.8883			
MATH	4	396278	0	A-F	1	123908	0.753857701	0.149715918	0.054984343	0.753857701	0.039166156	0.001549537	0.412435699	-0.243821843	-0.243071284	0.412435699	-0.172050376	-1.3208	0.0071	-9.8991	0.9139	-9.8991	0.8542			
MATH	4	986611	0	D-M	2	123908	0.549867644	0.099420538	0.108306163	0.549867644	0.240032928	0.001041095	0.359276457	-0.177661362	-0.097754031	0.359276457	-0.21834686	-0.2446	0.0064	9.9011	1.0719	9.901	1.0485			
MATH	4	453825	0	A-T	2	123908	0.373067114	0.177421958	0.113237241	0.373067114	0.332980921	0.001315492	0.338027602	0.048439211	-0.06456984	0.338027602	-0.337547675	0.6208	0.0066	9.9011	1.083	9.9012	1.1501			
MATH	4	108657	0	B-O	2	123908	0.345223876	0.279747877	0.20851761	0.162297834	0.345223876	0.002090261	0.475967612	-0.22930841	-0.166331369	-0.142223706	0.475967612	0.9089	0.0068	-9.8991	0.9468	-5.199	0.975			
MATH	4	793465	0	C-G	1	123908	0.460059076	0.460059076	0.096490945	0.201835233	0.23734545	0.002001485	0.284503205	0.284503205	-0.14451877	-0.169961716	-0.065342071	0.2957	0.0065	9.9012	1.1757	9.9012	1.2341			
MATH	4	839905	0	A-T	2	123908	0.550408367	0.119766278	0.550408367	0.20131872	0.124342254	0.002380799	0.468874264	-0.192554739	0.468874264	-0.21842453	-0.243542372	-0.2628	0.0064	-9.8991	0.9481	-9.8991	0.9198			
MATH	4	313917	0	B-O	1	123908	0.522306873	0.071181845	0.522306873	0.271975982	0.130895503	0.00159796	0.386176285	-0.172522832	0.386176285	-0.137318988	-0.252429554	-0.1252	0.0064	9.901	1.0456	9.9011	1.0627			
MATH	4	467970	0	A-F	1	123908	0.516036091	0.287697324	0.100962004	0.090930368	0.516036091	0.001848145	0.395132776	-0.211410051	-0.197275766	-0.137500697	0.395132776	-0.0566	0.0064	9.901	1.0342	6.461	1.0256			
MATH	4	894379	0	A-F	2	123908	0.516253995	0.516253995	0.151281596	0.224585983	0.102648739	0.003413823	0.249450024	0.249450024	-0.094047882	-0.106628899	-0.139147355	-0.0321	0.0064	9.9012	1.2034	9.9013	1.2548			
MATH	4	921580	0	A-F	2	123908	0.321165704	0.247780611	0.351801336	0.074805501	0.321165704	0.002437292	0.533929795	-0.26153838	-0.225584629	-0.095190112	0.533929795	1.0342	0.0069	-9.8991	0.8738	-9.8991	0.8682			
MATH	4	923444	0	A-T	1	123908	0.296252058	0.171409433	0.137860348	0.390910998	0.296252058	0.001888498	0.310960688	-0.163932689	-0.104817745	-0.084619443	0.310960688	1.1397	0.007	9.9011	1.1167	9.9012	1.2379			
MATH	4	951019	0	A-F	2	123908	0.503139426	0.503139426	0.184733835	0.057558834	0.250080705	0.002090261	0.532380496	0.532380496	-0.153882326	-0.212291397	-0.355795849	0.0113	0.0064	-9.8991	0.8804	-9.8991	0.8558			
MATH	4	268658	0	B-O	1	123908	0.586757917	0.586757917	0.232430513	0.107491042	0.069527391	0.001791652	0.472934484	0.472934484	-0.335053746	-0.115781838	-0.205441075	-0.3576	0.0064	-9.8991	0.929	-9.8991	0.8942			
MATH	4	393055	0	D-M	1	123908	0.6165865	0.242413726	0.078937599	0.058260968	0.6165865	0.001727088	0.559755657	-0.390187302	-0.222004873	-0.18141058	0.559755657	-0.6183	0.0065	-9.8992	0.8325	-9.8992	0.7783			
MATH	4	279462	0	D-M	1	123908	0.410812861	0.410812861	0.187768344	0.213432547	0.18209478	0.003825419	0.347896321	0.347896321	-0.11844085	-0.127741571	-0.176471182	0.5134	0.0065	9.9011	1.0897	9.9012	1.1516			
MATH	4	902646	1	A-T	2	14326	0.36681558	0.187421471	0.224626553	0.36681558	0.213388245	0.005444646	0.275245523	-0.23554626	0.05388536	0.275245523	-0.141204995	0.6288	0.0196	9.9012	1.1692	9.9013	1.2902	A-	A-	A-
MATH	4	744942	1	C-G	1	14326	0.359137233	0.288147424	0.117339104	0.229442971	0.359137233	0.002931733	0.230931034	-0.048142401	-0.237317691	-0.022551591	0.230931034	0.6682	0.0197	9.9012	1.2346	9.9013	1.342	A+	A-	A-
MATH	4	762866	1	B-O	2	14326	0.370235935	0.051235516	0.370235935	0.314044395	0.257573642	0.005165433	0.148990689	-0.135244031	0.148990689	-0.011732487	-0.074768431	0.6055	0.0195	9.9013	1.3136	9.9015	1.4598	A-	A+	A+
MATH	4	803263	1	A-T	1	14326	0.623760994	0.1239006	0.169621667	0.623760994	0.079226581	0.002303504	0.492187853	-0.277550805	-0.24644833	0.492187853	-0.192622643	-0.7035	0.0192	-9.8991	0.9016	-9.8992	0.8425	A+	A-	A-
MATH	4	322281	1	B-O	2	14326	0.312020103	0.140374145	0.240751082	0.312020103	0.300711992	0.004676811	0.147941518	-0.108040793	-0.043700192	0.147941518	-0.01709793	0.9353	0.0203	9.9013	1.315	9.9015	1.4638	A+	A-	A-
MATH	4	946453	1	C-G	1	14326	0.712690214	0.108892922	0.059402485	0.712690214	0.105402764	0.012913584	0.42578392	-0.259652621	-0.222366826	0.42578392	-0.171843573	-1.1935	0.0202	-8.6491	0.925	-2.8691	0.9465	A+	A-	A-
MATH	4	711611	1	A-F	2	14326	0.111545442	0.566941226	0.222183443	0.090185676	0.111545442	0.006840709	0.091961233	0.197441001	-0.181488613	-0.161138485	0.091961233	2.5099	0.0288	6.8311	1.1382	9.9023	2.2939	A-	A+	A+
MATH	4	962327	1	D-M	2	14326	0.334775932	0.334775932	0.229233561	0.176252967	0.239006003	0.020522128	0.377997375	0.377997375	-0.133473839	-0.092811902	-0.193436191	0.8034	0.02	4.071	1.0382	7.9511	1.1153	A-	A-	A-
MATH	4	236540	2	A-T	2	13704	0.48795972	0.151123759	0.201838879	0.151780502	0.48795972	0.005618797	0.494746488	-0.287154209	-0.238845537	-0.118751165	0.494746488	0.0855	0.0193	-9.1091	0.9305	-6.2891	0.9286	A+	A-	A+
MATH	4	905249	2	B-O	2	13704	0.361135435	0.224460012	0.153677758	0.248102744	0.361135435	0.01204028	0.315599324	-0.127088959	-0.105660544	-0.120467146	0.315599324	0.7629	0.0202	9.9011	1.1258	9.9012	1.2196	A+	A-	A-
MATH	4	601276	2	C-G	2	13704	0.338587274	0.142221249	0.236646235	0.338587274	0.276634559	0.004013427	0.119944248	-0.071924858	-0.066972836	0.119944248	0.002529277	0.8846	0.0204	9.9014	1.3593	9.9016	1.5725	A+	A+	A+
MATH	4	424538	2	A-F	2	13704	0.543709866	0.201474022	0.09989784	0.148788675	0.543709866	0.003575598	0.192993139	-0.009518246	-0.133140067	-0.133039451	0.192993139	-0.197	0.0193	9.9013	1.2707	9.9013	1.3304	A+	A-	A-
MATH	4	255997	2	A-F	1	13704	0.49788383	0.201911851	0.250729714	0.045169294	0.49788383	0.002699942	0.560516286	-0.398149177	-0.222428224	-0.10200459	0.560516286	0.0366	0.0193	-9.8991	0.8581	-9.8992	0.8252	A-	B-	A-
MATH	4	329455	2	A-T	1	13704	0.819103911	0.056115003	0.819103911	0.055823117	0.062609457	0.004962055	0.415968523	-0.224440427	0.415968523	-0.210180454	-0.222325292	-1.8112	0.0237	-9.0391	0.8856	-8.5192	0.7702	A+	A-	A-
MATH	4	629990	2	B-O	1	13704	0.420023351	0.241827204	0.181187974	0.420023351	0.147183304	0.006421483	0.313638416	-0.156484252	-0.112267233	0.313638416	-0.108397425	0.4391	0.0196	9.9011	1.1398	9.9012	1.2037	A+	A+	A+
MATH	4	679293	2	D-M	2	13704	0.662580269	0.092089901	0.084573847	0.140323993	0.662580269	0.019994162	0.378596039	-0.190635247	-0.179322099	-0.193820433	0.378596039	-0.8203	0.02	1.441	1.0119	1.531	1.0259	A+	A-	A-
MATH	4	840461	3	A-F	1	13685	0.50390939	0.087029594	0.143953233	0.259261966	0.50390939	0.002995981	0.497002998	-0.120002703	-0.297550477	-0.239732794	0.497002998	-0.0019	0.0193	-9.8991	0.9211	-9.8291	0.8887	A-	A-	A+
MATH	4	334405	3	B-O	2	13685	0.44048228	0.44048228	0.285860431	0.172451589	0.094702229	0.004384362	0.376119292	0.376119292	-0.248013606	-0.111860567	-0.095222252	0.3284	0.0195	7.8111	1.0647	8.3311	1.1006	A-	A-	A-
MATH	4	933645	3	A-F	2	13685	0.312970406	0.312970406	0.311435879	0.223017903	0.145633906	0.005772744	0.259616247	0.259616247	-0.185964127	0.01352556	-0.099978608	1.0259	0.0208	9.9012	1.1597	9.9014	1.368	A+	A+	A+
MATH	4	845044	3	A-F	1	13685	0.675411034	0.076068688	0.675411034	0.167994154	0.076726343	0.002192181	0.419818471	-0.182680807	0.419818471	-0.187189151	-0.279736329	-0.8909	0.0201	-4.949	0.9591	-3.7891	0.9348	A+	A-	A-
MATH	4	848579	3	A-T	2	13685	0.401461454	0.140664962	0.338618926	0.103617099	0.401461454	0.014760687	0.257684265	-0.151587585	-0.077120746	-0.104684181	0.257684265	0.531	0.0197	9.9012	1.2013	9.9013	1.2876	A-	A+	A+
MATH	4	557249	3	B-O	2	13685	0.254877603	0.279283887	0.165217391	0.254877603	0.29499452	0.004165144	0.106650734	-0.10442682	-0.100885917	0.106650734	0.090756904	1.3898	0.0221	9.9013	1.3357	9.9017	1.7162	A-	A+	A-
MATH	4	378507	3	C-G	1	13685	0.557837048	0.166094264	0.106174644	0.557837048	0.164194373	0.003215199	0.37286257	-0.211081204	-0.211777112	0.37286257	-0.097934513	-0.2721	0.0193	7.1011	1.0543	5.5711	1.0727	A+	A-	A-
MATH	4	217193	3	D-M	2	13685	0.239313117	0.24048228	0.239313117	0.184654731	0.313847278	0.021337231	0.265073483	0.057104355	0.265073483	-0.18095399	-0.134704615	1.4954	0.0225	9.9011	1.1368	9.9014	1.365	A-	A-	A-
MATH	4	541506	4	A-F	2	13662	0.668130581	0.668130581	0.092007027	0.094642073	0.138779095	0.004098961	0.337006049	0.337006049	-0.139603654	-0.166699695	-0.186832915	-0.836	0.02	4.941	1.0411	3.0711	1.0512	A-	A-	A-
MATH	4	563509	4	B-O	2	13662	0.269067486	0.214536671	0.227931489	0.269067486	0.281217977	0.004391744	0.159355134	-0.177555315	-0.035306423	0.159355134	0.051184858	1.2849	0.0215	9.9012	1.2393	9.9016	1.5504	A-	A+	A-
MATH	4	504186	4	D-M	1	13662	0.385887864	0.140389401	0.299590104	0.385887864	0.166300688	0.003586591	0.344074599	-0.113917129	-0.156810332	0.344074599	-0.134563181	0.6271	0.0198	8.9111	1.0784	9.9011	1.1391	A-	A-	A-
MATH	4	891789	4	A-T	2	13662	0.423437271	0.104011126	0.297613819	0.423437271	0.167252232	0.005343288	0.251125955	-0.038491512	-0.146664681	0.251125955	-0.107406464	0.4162	0.0194	9.9012	1.1818	9.9013	1.2662	A-	A-	A-
MATH	4	775876	4	D-M	2	13662	0.401698141	0.215122237	0.15942029	0.218196457	0.401698141	0.003806178	0.390944346	-0.240812356	-0.151466307	-0.079903461	0.390944346	0.5294	0.0196	3.031	1.0254	4.3111	1.052	A+	A-	A-
MATH	4	399666	4	C-G	2	13662	0.367076563	0.138925487	0.21439028	0.262772654	0.367076563	0.016469038	0.176183546	-0.102815225	-0.092038634	-0.007866261	0.176183546	0.7141	0.0199	9.9013	1.2701	9.9014	1.3963	A-	A-	A-
MATH	4	241060	4	A-F	1	13662	0.870809545	0.044137022	0.870809545	0.042599912	0.039525692	0.001683502	0.331845211	-0.205387099	0.331845211	-0.171825957	-0.167232383	-2.2287	0.0268	-4.4791	0.9242	-3.7991	0.8701	A+	A-	A-
MATH	4	297696	4	A-F	2	13662	0.273605621	0.172156346	0.273605621	0.26130874	0.280559215	0.011491729	0.030812973	-0.010056938	0.030812973	-0.015390593	0.00425352	1.2562	0.0214	9.9014	1.4021	9.9018	1.7678	A-	A+	A-
MATH	4	279141	5	B-O	2	13694	0.655250475	0.099897765	0.080619249	0.655250475	0.149043377	0.014531912	0.492367286	-0.276940505	-0.261599981	0.492367286	-0.212635361	-0.7575	0.0199	-9.8991	0.8922	-9.8992	0.8392	A+	A-	A+
MATH	4	329901	5	C-G	2	13694	0.369212794	0.238571637	0.369212794	0.239228859	0.146341463	0.004746604	0.188139023	-0.064797629	0.188139023	-0.051051402	-0.101416387	0.7459	0.0201	9.9013	1.2903	9.9014	1.3935	A-	A-	A-
MATH	4	766908	5	A-T	2	13694	0.28961589	0.28961589	0.464071856	0.062290054	0.177669052	0.003651234	0.279366001	0.279366001	-0.182891878	-0.199874824	0.045391987	1.2093	0.0213	9.9011	1.1268	9.9014	1.3775	A+	A-	A-
MATH	4	955916	5	D-M	2	13694	0.449174821	0.220899664	0.206659851	0.449174821	0.114867825	0.005914999	0.437961969	-0.208818587	-0.190284754	0.437961969	-0.151486318	0.3083	0.0195	-1.479	0.988	-0.729	0.9915	A+	A-	A-
MATH	4	247964	5	A-F	2	13694	0.407258653	0.139477143	0.224331824	0.407258653	0.221848985	0.004819629	0.414705539	-0.189224488	-0.176158831	0.414705539	-0.146312107	0.5281	0.0197	1.031	1.0088	4.4911	1.0558	A-	A-	A-
MATH	4	123610	5	B-O	2	13694	0.251058858	0.182707755	0.251058858	0.449393895	0.096246531	0.020008763	0.311293208	-0.038243018	0.311293208	-0.157830583	-0.112433878	1.4451	0.0221	7.5711	1.0904	9.9013	1.2915	A+	A-	A-
MATH	4	651206	5	C-G	1	13694	0.226887688	0.243318242	0.226887688	0.193588433	0.32875712	0.005111728	0.09408086	-0.027349556	0.09408086	-0.151280315	0.077642206	1.6124	0.0228	9.9013	1.3175	9.9018	1.7932	A-	A-	A-
MATH	4	987667	5	A-F	1	13694	0.650357821	0.057178326	0.212428801	0.075507522	0.650357821	0.002044691	0.291662347	-0.196945421	-0.094048048	-0.197644404	0.291662347	-0.731	0.0199	9.9011	1.1115	9.9012	1.2018	A+	A-	A-
MATH	4	898005	6	B-O	2	13743	0.454704213	0.288874336	0.121007058	0.119479007	0.454704213	0.015353271	0.398834879	-0.184506551	-0.152586751	-0.183873453	0.398834879	0.2514	0.0192	2.491	1.0196	2.151	1.0239	A+	A+	A-
MATH	4	137067	6	A-F	2	13743	0.414174489	0.302626792	0.414174489	0.111038347	0.165393291	0.004729681	0.274998399	-0.05549043	0.274998399	-0.19356483	-0.119444554	0.4639	0.0195	9.9012	1.1578	9.9012	1.221	A-	A-	A+
MATH	4	884091	6	B-O	2	13743	0.439642	0.176890053	0.178781925	0.196318126	0.439642	0.005020738	0.236233523	-0.156192206	-0.163997422	0.026299063	0.236233523	0.3322	0.0193	9.9012	1.2088	9.9013	1.271	A+	A-	A+

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
MATH	4	440888	6	A-T	2	13743	0.370879721	0.157098159	0.370879721	0.17616241	0.288583279	0.004656916	0.241524203	-0.177267897	0.241524203	-0.115039852	-0.009299871	0.6899	0.0199	9.9012	1.19	9.9013	1.278	A-	A-	A-
MATH	4	796463	6	A-F	1	13743	0.369497199	0.390889908	0.128938369	0.369497199	0.106599723	0.00269228	0.399803421	-0.104475317	-0.245569122	0.399803421	-0.185102161	0.6974	0.0199	0.621	1.0055	5.0611	1.0655	A-	A-	A-
MATH	4	649906	6	A-T	1	13743	0.582987703	0.075238303	0.152586771	0.185985593	0.582987703	0.001819108	0.371614246	-0.191835019	-0.16118596	-0.185744917	0.371614246	-0.3956	0.0192	4.711	1.0355	4.2911	1.0561	A+	A-	A-
MATH	4	740378	6	D-M	2	13743	0.103761915	0.103761915	0.280360911	0.285818235	0.309612166	0.019355308	-0.007466461	-0.007466461	0.113836513	0.005950984	-0.098610121	2.6846	0.0303	9.9012	1.2362	9.9027	2.6793	A-	A+	A-
MATH	4	815621	6	C-G	2	13743	0.317980063	0.30764753	0.192316088	0.317980063	0.176453467	0.002983337	0.044102064	0.077010251	-0.148893855	0.044102064	0.014527641	0.9861	0.0206	9.9014	1.4076	9.9017	1.6653	A-	A+	A-
MATH	4	478339	7	B-O	2	13720	0.596137026	0.113848397	0.092638484	0.596137026	0.189795918	0.005830904	0.435025519	-0.287751219	-0.246809435	0.435025519	-0.115277314	-0.4589	0.0195	-1.719	0.9866	-2.149	0.9692	A-	A-	A-
MATH	4	494388	7	D-M	2	13720	0.464723032	0.464723032	0.180247813	0.151020408	0.184037901	0.0196793	0.238632446	0.238632446	-0.156766693	-0.011143518	-0.126388915	0.2158	0.0195	9.9012	1.24	9.9013	1.3123	A-	A-	A-
MATH	4	693035	7	C-G	2	13720	0.499854227	0.2803207	0.499854227	0.036661808	0.164067055	0.016763848	0.4039325	-0.33498312	0.4039325	-0.143124394	-0.044548658	0.0353	0.0194	5.601	1.0445	4.3411	1.0535	A-	A-	A-
MATH	4	236836	7	A-F	1	13720	0.451311953	0.098396501	0.283892128	0.451311953	0.161297376	0.003571429	0.467461804	-0.191449402	-0.242653978	0.467461804	-0.168750648	0.2866	0.0195	-4.089	0.967	-2.019	0.9758	A-	A-	A-
MATH	4	509018	7	A-T	1	13720	0.516472303	0.327478134	0.067274052	0.082215743	0.516472303	0.003717201	0.448057104	-0.236165462	-0.196441779	-0.217377574	0.448057104	-0.0501	0.0193	-1.919	0.9851	0.721	1.0089	A+	A-	A-
MATH	4	572876	7	A-T	1	13720	0.833746356	0.031632653	0.045991254	0.833746356	0.085568513	0.002113703	0.394956919	-0.163620751	-0.17421608	0.394956919	-0.282406778	-1.9321	0.0245	-7.2691	0.9009	-6.2592	0.8115	A+	A-	A-
MATH	4	106728	7	B-O	2	13720	0.500655977	0.119825073	0.198688047	0.500655977	0.173542274	0.005393586	0.394483816	-0.139701519	-0.217741359	0.394483816	-0.15632492	0.0312	0.0194	7.1211	1.0568	5.1511	1.0639	A-	A-	A-
MATH	4	437783	7	D-M	2	13720	0.597667638	0.158746356	0.069023324	0.597667638	0.168367347	0.004300292	0.483811758	-0.233569105	-0.217965203	0.483811758	-0.244699914	-0.4697	0.0195	-9.8091	0.9252	-5.9991	0.9156	A+	A-	A-
MATH	4	560546	8	A-F	2	13720	0.431632653	0.180758017	0.431632653	0.201457726	0.16909621	0.016326531	0.490807466	-0.095453729	0.490807466	-0.285784333	-0.225909464	0.3935	0.0195	-9.2891	0.9254	-6.0291	0.93	A-	A+	A-
MATH	4	973662	8	C-G	1	13720	0.579591837	0.579591837	0.111734694	0.107434402	0.194314869	0.004737609	0.367561886	0.367561886	-0.214400475	-0.213480908	-0.111504131	-0.3628	0.0194	7.3211	1.0564	6.9411	1.0969	A+	A-	A-
MATH	4	816462	8	A-T	2	13720	0.337244898	0.180029155	0.299489796	0.337244898	0.177186589	0.003061224	0.257312412	-0.150099353	-0.064306423	0.257312412	-0.078694743	0.9108	0.0205	9.9012	1.1954	9.9013	1.3405	A+	A+	A-
MATH	4	622451	8	B-O	2	13720	0.354883382	0.302915452	0.354883382	0.120408163	0.216253644	0.004008746	0.311854581	-0.240510195	0.311854581	-0.178726066	0.057678987	0.8106	0.0202	9.9011	1.1221	9.9013	1.2496	A-	A+	A+
MATH	4	334099	8	B-O	2	13720	0.282944606	0.441326531	0.165379009	0.103206997	0.282944606	0.005174927	0.422353523	-0.159151036	-0.153405135	-0.164142428	0.422353523	1.2363	0.0214	-4.309	0.9542	5.1411	1.0916	A-	A-	A-
MATH	4	984892	8	D-M	2	13720	0.431413994	0.101603499	0.184183673	0.431413994	0.276166181	0.004591837	0.369265232	-0.1917297	-0.281456907	0.369265232	-0.022448433	0.3975	0.0195	8.5611	1.0722	7.8311	1.0961	A-	A-	A-
MATH	4	841651	8	D-M	1	13720	0.417419825	0.160860058	0.180247813	0.224781341	0.417419825	0.01654519	0.410923078	-0.242083741	-0.264107995	-0.01546811	0.410923078	0.471	0.0196	2.721	1.023	4.4011	1.0542	A+	A-	A-
MATH	4	575398	8	A-F	1	13720	0.67696793	0.143221574	0.67696793	0.061005831	0.114723032	0.002478134	0.376081221	-0.14948074	0.376081221	-0.178299618	-0.242738155	-0.8783	0.0201	1.061	1.0089	1.301	1.0234	A+	A-	A-
MATH	4	202665	9	D-M	2	13654	0.42405156	0.143913871	0.42405156	0.262706899	0.158048923	0.009081588	0.341130828	-0.168678644	0.341130828	-0.099756911	-0.161984089	0.4393	0.0196	9.9011	1.1051	9.9012	1.1561	A-	A-	A-
MATH	4	757891	9	A-F	2	13654	0.360993116	0.303574044	0.209755383	0.360993116	0.120843709	0.003076022	0.520845298	-0.286227975	-0.209567196	0.520845298	-0.088970911	0.7837	0.0202	-9.8991	0.8803	-6.4891	0.9132	A-	A-	A-
MATH	4	562160	9	A-T	2	13654	0.147795518	0.147795518	0.179800791	0.190127435	0.47678336	0.003442215	0.186582284	0.186582284	-0.117860979	0.054578564	-0.077064231	2.2532	0.0266	7.9211	1.1367	9.9017	1.7137	A-	A+	A+
MATH	4	240180	9	B-O	2	13654	0.18514721	0.075728724	0.257506958	0.18514721	0.4736341	0.00578585	0.03731268	-0.214057305	-0.137518655	0.03731268	0.213617262	1.9227	0.0245	9.9013	1.3131	9.9022	2.2323	A-	A-	A-
MATH	4	151321	9	D-M	1	13654	0.472608759	0.180826132	0.122821151	0.472608759	0.19833016	0.025047605	0.340733469	-0.122946165	-0.217931098	0.340733469	-0.112783999	0.1813	0.0194	9.9011	1.1088	9.9012	1.1637	A+	A-	A-
MATH	4	380743	9	B-O	2	13654	0.737805771	0.099531273	0.737805771	0.085322982	0.069210488	0.006371759	0.446492433	-0.22460948	0.446492433	-0.254061598	-0.205380459	-1.2407	0.0213	-9.5591	0.9088	-7.8792	0.8368	A+	A-	A-
MATH	4	375974	9	A-F	1	13654	0.853596016	0.010180167	0.012377325	0.119525414	0.853596016	0.002416874	0.329270911	-0.100358133	-0.113129355	-0.279014585	0.329270911	-2.084	0.0257	-3.9891	0.9387	-0.629	0.9783	A+	B-	A-
MATH	4	784369	9	C-G	2	13654	0.519334993	0.108026952	0.149187051	0.519334993	0.207558225	0.015380108	0.411821613	-0.237790363	-0.151756655	0.411821613	-0.173902414	-0.0573	0.0193	2.741	1.0212	2.091	1.0255	A+	A-	A-
MATH	5	776787	0	B-O	1	122532	0.550346032	0.067884308	0.071638429	0.550346032	0.307764502	0.000816113	0.345619431	-0.269269713	-0.249436313	0.345619431	-0.082499558	0.1303	0.0065	9.9011	1.1103	9.9011	1.1405			
MATH	5	892351	0	D-M	2	122532	0.440219698	0.194455326	0.187420429	0.174158587	0.440219698	0.001558776	0.605425149	-0.273674819	-0.267929355	-0.225127429	0.605425149	0.5849	0.0066	-9.8992	0.8059	-9.8992	0.7743			
MATH	5	729171	0	B-O	1	122532	0.841649528	0.03550093	0.016110077	0.104070773	0.841649528	0.001158881	0.343651609	-0.170517618	-0.128135883	-0.246999069	0.343651609	-1.7593	0.0083	-9.8991	0.9334	-9.8991	0.8703			
MATH	5	201487	0	A-T	2	122532	0.479670617	0.065403323	0.479670617	0.233400255	0.217902262	0.001615904	0.462385443	-0.155662715	0.462385443	-0.198511824	-0.256948172	0.4122	0.0065	-5.229	0.9857	-5.349	0.9786			
MATH	5	311223	0	A-F	2	122532	0.450086508	0.262698724	0.188440571	0.094962948	0.450086508	0.001354748	0.438783844	-0.206684294	-0.190783301	-0.170966442	0.438783844	0.5158	0.0066	4.891	1.0137	2.991	1.0121			
MATH	5	384264	0	B-O	2	122532	0.432034081	0.432034081	0.112819508	0.362362485	0.090041785	0.001395554	0.3968317	0.3968317	-0.285249694	-0.093347913	-0.206875529	0.5855	0.0066	9.9011	1.0583	9.9011	1.0918			
MATH	5	816430	0	A-F	2	122532	0.700372148	0.700372148	0.093151177	0.143562498	0.060563771	0.000628407	0.557528829	0.557528829	-0.217794608	-0.383306952	-0.234514521	-0.8554	0.0069	-9.8992	0.8149	-9.8993	0.7026			
MATH	5	321958	0	A-F	2	122532	0.57877126	0.171000229	0.57877126	0.12687298	0.120074756	0.001991317	0.474721902	-0.275736418	0.474721902	-0.248959676	-0.139030444	-0.1129	0.0065	-9.8991	0.9465	-9.8991	0.9139			
MATH	5	739436	0	A-F	1	122532	0.68872621	0.046787778	0.145300819	0.68872621	0.116459374	0.000954853	0.500480231	-0.189420614	-0.327959055	0.500480231	-0.231714792	-0.7185	0.0068	-9.8991	0.8697	-9.8992	0.7863			
MATH	5	720830	0	A-F	1	122532	0.686318676	0.11268893	0.091657689	0.106364052	0.686318676	0.001640388	0.51398318	-0.315643001	-0.216692615	-0.239376192	0.51398318	-0.8354	0.0069	-9.8991	0.8914	-9.8992	0.8084			
MATH	5	266333	0	A-F	1	122532	0.385629876	0.0528515	0.385629876	0.069606307	0.489317076	0.001526132	0.401761581	-0.181137844	0.401761581	-0.195005548	-0.206555987	0.8457	0.0067	9.901	1.0328	9.9011	1.0936			
MATH	5	806874	0	A-T	2	122532	0.518778768	0.136119544	0.518778768	0.193337251	0.148312278	0.001281298	0.483340159	-0.171425982	0.483340159	-0.180748293	-0.306736558	0.182	0.0065	-9.899	0.952	-9.8991	0.9268			
MATH	5	337802	0	B-O	2	122532	0.388845363	0.167066562	0.388845363	0.243495577	0.196397676	0.001852577	0.281057529	-0.035522469	0.281057529	-0.150146749	-0.143040704	0.8643	0.0067	9.9012	1.1903	9.9013	1.3115			
MATH	5	329067	0	A-F	1	122532	0.590433519	0.170934939	0.156212255	0.590433519	0.079122188	0.001966833	0.414093362	-0.208827946	-0.259270024	0.414093362	-0.105391785	-0.2446	0.0066	6.681	1.0178	2.731	1.0133			
MATH	5	471353	0	C-G	2	122532	0.461226455	0.188554826	0.461226455	0.161272157	0.184155976	0.001011981	0.413423264	-0.196529209	0.413423264	-0.190030746	-0.151378161	0.4482	0.0065	9.901	1.0393	9.9011	1.0534			
MATH	5	828139	0	D-M	2	122532	0.372098717	0.20643587	0.171726569	0.372098717	0.24618059	0.001044625	0.491200251	-0.233084242	-0.00157468	0.491200251	-0.324980104	0.9809	0.0068	-9.8991	0.9463	-9.139	0.9581			
MATH	5	710381	0	B-O	2	122532	0.587552639	0.587552639	0.248816636	0.092963471	0.067304867	0.001909705	0.474496908	0.474496908	-0.262925009	-0.224093139	-0.208797858	-0.2087	0.0065	-9.8991	0.945	-9.329	0.9561			
MATH	5	972999	0	D-M	2	122532	0.630594457	0.101622433	0.113929423	0.630594457	0.151095224	0.001673032	0.44509652	-0.153077839	-0.291230269	0.44509652	-0.205177357	-0.4231	0.0066	-9.899	0.9672	-9.8991	0.9416			
MATH	5	889663	0	A-F	1	122532	0.459039271	0.120368557	0.333015049	0.085389939	0.459039271	0.001387393	0.455842359	-0.181864353	-0.23721222	-0.195460497	0.455842359	0.4964	0.0065	-3.259	0.991	-4.789	0.9808			
MATH	5	833609	0	A-T	1	122532	0.732094473	0.732094473	0.111946267	0.084435086	0.070071492	0.00086508	0.423649265	0.423649265	-0.227796171	-0.264539856	-0.161519201	-1.0811	0.0072	-9.899	0.9614	-9.8991	0.9099			
MATH	5	949913	0	A-F	2	122532	0.54593902	0.243356837	0.54593902	0.142746385	0.064138348	0.001052786	0.378914729	-0.129568012	0.378914729	-0.229034311	-0.206318927	-0.0039	0.0065	9.9011	1.0726	9.9011	1.0923			
MATH	5	651196	0	B-O	2	122532	0.452804165	0.452804165	0.164153038	0.27591976	0.103287305	0.002350406	0.397350091	0.397350091	-0.137154082	-0.183956759	-0.203033044	0.5095	0.0065	9.9011	1.0568	9.9011	1.0723			
MATH	5	863683	0	C-G	1	122532	0.741757255	0.113488721	0.066194953	0.741757255	0.075139555	0.001624066	0.387515666	-0.21344891	-0.182495599	0.387515666	-0.203246086	-1.0239	0.0071	-9.899	0.9578	-5.919	0.9563			
MATH	5	476216	0	D-M	2	122532	0.422477394	0.29428231	0.422477394	0.175374596	0.105572422	0.000628407	0.541439764	-0.457124994	0.541439764	-0.078999891	-0.088711521	0.6757	0.0066	-9.8991	0.8858	-9.8991	0.8609			
MATH	5	130754	0	C-G	1	122532	0.620295107	0.189321973	0.121062253	0.06674991	0.620295107	0.001028303	0.251408596	-0.016368724	-0.202214629	-0.190596152	0.251408596	-0.3934	0.0066	9.9012	1.1871	9.9014	1.4101			
MATH	5	511572	0	A-F	1	122532	0.533362713	0.077734796	0.057380929	0.533362713	0.329375184	0.001322104	0.529158069	-0.221824469	-0.165584197	0.529158069	-0.349883851	0.0927	0.0065	-9.8991	0.8928	-9.8992	0.844			
MATH	5	169656	0	D-M	2	122532	0.41834786	0.338327947	0.179087912	0.060710671	0.41834786	0.001885222	0.600513294	-0.340801916	-0.231071039	-0.183480233	0.600513294	0.6292	0.0066	-9.8992	0.8085	-9.8992	0.772			
MATH	5	265219	0	A-T	1	122532	0.733669572	0.079358861	0.733669572	0.098056018	0.085496034	0.001966833	0.428390339	-0.178133663	0.428390339	-0.240802285	-0.238971579	-0.9848	0.0071	-9.8991	0.9201	-9.8991	0.8952			
MATH	5	535555	0	A-F	2	122532	0.520394672	0.298526099	0.113252048	0.064970783	0.520394672	0.000848758	0.384109553	-0.145942414	-0.202814732	-0.239825648	0.384109553	0.1344	0.0065	9.9011	1.07	9.9011	1.0653			
MATH	5	325290	0	D-M	1	122532	0.552165965	0.113194921	0.27671139	0.552165965	0.055895603	0.000816113	0.511291231	-0.352511407	-0.217450852	0.511291231	-0.190339867	-0.0359	0.0065	-9.8991	0.9157	-9.8991	0.8678			
MATH	5	945350	0	A-T	1	122532	0.762102961	0.051153984	0.10389939	0.080028074	0.762102961	0.000726341	0.435841553	-0.226044327	-0.257375523	-0.203003786	0.435841553	-1.2009	0.0073	-9.8991	0.9097	-9.8992	0.8295			
MATH	5	571886	0	D-M	2	122532	0.676288643	0.047342735	0.091780106	0.182638005	0.676288643	0.00071818	0.541044952	-0.245861898	-0.30088263	-0.291069178	0.541044952	-0.6857	0.0068	-9.8992	0.8407	-9.8993	0.7401			
MATH	5	790872	0	A-T	2	122532	0.394549995	0.394549995	0.111374988	0.122196651	0.369413704	0.000710019	0.386641882	0.386641882	-0.253993747	-0.191635123	-0.092856942	0.8335	0.0067	9.9011	1.0718	9.9011	1.1171			
MATH	5	708262	0	A-T	1	122532	0.462507753	0.214833676	0.462507753	0.187893775	0.131459537	0.001338426	0.421648019	-0.182534772	0.421648019	-0.223452861	-0.135218087	0.496	0.0065	9.901	1.0319	9.9011	1.0646			
MATH	5	200913	0	A-T	1	122532	0.670812522	0.670812522	0.094636503	0.066260242	0.164267293	0.001387393	0.537752208	0.537752208	-0.268641112	-0.179363181	-0.341632284	-0.7129	0.0068	-9.8991	0.8561	-9.8992	0.7807			
MATH	5	567323	0	A-T	1	122532	0.476797898	0.476797898	0.264665557	0.170951262	0.085267522	0.000954853	0.492910842	0.492910842	-0.208448798	-0.308481677	-0.129128695	0.3931	0.0065	-9.8991	0.9431	-9.8991	0.9336			
MATH	5	756932	0	B-O	2	122532	0.61103222	0.182433976	0.076706493	0.61103222	0.127868638	0.000465185	0.365488365	-0.238979757	-0.110579464	0.365488365	-0.164708972	-0.3273	0.0066	9.9011	1.0589	9.9011	1.1356			
MATH	5	916324	0	C-G	1	122532	0.605066432	0.185943264	0.605066432	0.099288349	0.107188326	0.001330265	0.477576926	-0.205176307	0.477576926	-0.235772509	-0.261648418	-0.3036	0.0066	-9.8991	0.9371	-9.8991	0.9173			
MATH	5	545719	0	D-M	2	122532	0.37291483	0.260136128	0.162798289	0.37291483	0.201351484	0.001452682	0.271817607	-0.15375057	-0.009437764	0.271817607	-0.145658312	0.9525	0.0068	9.9012	1.2136	9.9013	1.3227			
MATH	5	468628	0	D-M	2	122532	0.461536578	0.461536578	0.117903894	0.127411615	0.290764861	0.001289459	0.307797682	0.307797682	-0.175747548	-0.255790511	-0.021088563	0.4643	0.0065	9.9012	1.1705	9.9012	1.2029			
MATH	5	645533	1	A-F	2	14153	0.522433406	0.522433406	0.195576909	0.124072635	0.153536353	0.003462163	0.548763079	0.548763079	-0.28890018	-0.24302808	-0.210692198	0.0475	0.0192	-9.8991	0.8795	-9.8992	0.8349	A+	A-	A+
MATH	5	479093	1	C-G	1	14153	0.522786688	0.187098142	0.115523211	0.522786688	0.164134812	0.009397301	0.410175588	-0.149470774	-0.173477372	0.410175588	-0.240537483	0.0438	0.0192	5.971	1.0478	5.7511	1.0737	A-	A-	A-
MATH	5	630151	1	A-F	2	14153	0.215784639	0.215784639	0.157775737	0.308839115	0.312371935	0.002331661	0.079963023	0.079963023	-0.16601256	-0.04423269	0.108639324	1.8488	0.0231	9.9014	1.3587	9.902	2.0195	A-	A+	A+
MATH	5	563845	1	B-O	2	14153	0.215007419	0.357168092	0.215007419	0.271532537	0.14456299	0.011163711	0.075866152	-0.18760083	0.075866152	0.256828137	-0.14224774	1.8547	0.0231	9.9014	1.3932	9.902	1.9636	A-	A-	A-
MATH	5	168815	1	A-F	1	14153	0.405143786	0.106055253	0.405143786	0.406344945	0.080124355	0.001271815	0.559692884	-0.024726085	0.559692884	-0.437226302	-0.186790594	0.6686	0.0196	-9.8991	0.8711	-9.8991	0.8637	A-	A-	A-
MATH	5	555695	1	D-M	2	14153	0.30855649	0.064791917	0.114887303	0.30855649	0.508584752	0.00098919	0.048778068	-0.207600093	-0.187337291	0.048778068	0.180417331	1.2236	0.0208	9.9015	1.4522	9.9019	1.8913	A-	A+	A+
MATH	5	601942	1	D-M	2	14153	0.348618667	0.272804352	0.225817848	0.348618667	0.148943687	0.002331661	0.273748599	-0.161573425	-0.172031462	0.273748599	0.044128917	0.9855	0.0202	9.9012	1.2177	9.9013	1.3475	A-	A-	A-
MATH	5	529270	1	A-T	1	14153	0.572599449	0.064579948	0.204055677	0.572599449	0.154030948	0.002684943	0.540537068	-0.199281986	-0.337586071	0.540537068	-0.218313736	-0.2125	0.0192	-9.8991	0.8739	-9.8992	0.8304	A-	A-	A-
MATH	5	195204	2	A-F	1	13541	0.437633853	0.437633853	0.050070157	0.450336017	0.059227531	0.001698545	0.463785829	0.463785829	-0.12541098	-0.330738859	-0.152730886	0.5959	0.0197	-2.659	0.9776	-2.369	0.9717	A+	A-	A-
MATH	5	694390	2	A-T	2	13541	0.440957093	0.440957093	0.205523964	0.188686212	0.160106344	0.002510893	0.417547307	0.417547307	-0.26369848	-0.088166178	-0.172179833	0.5784	0.0197	3.021	1.0257	3.851	1.047	A+	A-	A-
MATH	5	321360	2	A-T	1	13541	0.622036777	0.114910273	0.095561628	0.163503434	0.622036777	0.002510893	0.410821526	-0.224875834	-0.219605468	-0.161312983	0.410821526	-0.367	0.0198	0.981	1.0078	-1.669	0.9743	A+	A+	A-
MATH	5	432011	2	B-O	2	13541	0.357137582	0.357137582	0.243187357	0.268074736	0.127095488	0.002584743	0.248153986	0.248153986	-0.097784541	-0.021930612	-0.192499567	1.0436	0.0205	9.9012	1.2199	9.9014	1.3512	A+	A-	A-
MATH	5	637379	2	A-F	2	13541	0.219186175	0.349826453	0.247766044	0.169706816	0.219186175	0.012259065	0.107730724	0.082976389	-0.170521803	-0.013471256	0.107730724	1.9113	0.0234	9.9013	1.3154	9.9018	1.8495	A-	A+	A+
MATH	5	404470	2	B-O	2	13541	0.308249021	0.229008197	0.239642567	0.215936785	0.308249021	0.006720331	0.306837405	-0.070016302	-0.134569137	-0.12261489	0.306837405	1.3197	0.0212	9.9011	1.1115	9.9013	1.3158	A-	A-	A+
MATH	5	527366	2	D-M	2	13541	0.359722325	0.265637693	0.359722325	0.227531202	0.143342441	0.002289343	0.43560801	-0.266378131	0.43560801	-0.210256395	-0.001611643	1.0192	0.0204	-1.399	0.9868	4.0711	1.0576	A-	A-	A-
MATH	5	162108	2	C-G	2	13541	0.169042168	0.247839894	0.324717525	0.169042168	0.253526327	0.00354479	-0.114292965	-0.133383093	0.017517342	-0.114292965	0.219978803	2.3144	0.0255	9.9016	1.5556	9.9027	2.6643	A-	A-	A-
MATH	5	107412	3	A-F	1	13585	0.684946632	0.071696724	0.102024291	0.137210158	0.684946632	0.001545823	0.496433261	-0.246042245	-0.243629163	-0.26494863	0.496433261	-0.7537	0.0205	-9.8991	0.8787	-9.8992	0.807	B+	A-	A-
MATH	5	678068	3	A-T	2	13585	0.375340449	0.23923445	0.152668384	0.223113728	0.375340449	0.007581892	0.355708735	-0.11473527	-0.129552081	-0.173191127	0.355708735	0.9072	0.0202	9.9011	1.0943	9.9012	1.1727	A+	A+	A+
MATH	5	835243	3	C-G	2	13585	0.460875966	0.202281929	0.460875966	0.153551711	0.174825175	0.007802724	0.27399998	-0.077176201	0.27399998	-0.20104255	-0.078177212	0.4408	0.0196	9.9012	1.202	9.9013	1.2796	A+	A-	A+
MATH	5	543453	3	B-O	2	13585	0.355171145	0.2527788	0.355171145	0.285535517	0.101950681	0.003459698	0.082055158	-0.199385006	0.082055158	0.188178008	-0.110718978	1.0104	0.0204	9.9014	1.4359	9.9016	1.6145	A+	A+	A+
MATH	5	884000	3	D-M	2	13585	0.332646301	0.188369525	0.332646301	0.360839161	0.114758925	0.001619433	0.284601872	-0.096943943	0.284601872	-0.130476139	-0.098343577	1.1397	0.0207	9.9012	1.1629	9.9013	1.3046	A-	A-	A+
MATH	5	614770	3	A-F	2	13585	0.442694148	0.442694148	0.207729113	0.122193596	0.223555392	0.002061097	0.201251611	0.201251611	-0.136445611	-0.073267838	-0.044722629	0.5358	0.0197	9.9013	1.292	9.9014	1.3936	A-	A-	A-
MATH	5	473972	3	A-F	1	13585	0.248214943	0.271475893	0.395509753	0.081707766	0.248214943	0.001987486	0.465591563	-0.00641548	-0.395142705	-0.009973357	0.465591563	1.669	0.0224	-7.7991	0.9105	-1.249	0.9749	A-	A-	A-
MATH	5	329900	3	A-T	1	13585	0.433271991	0.179609864	0.146705926	0.235921973	0.433271991	0.002576371	0.447606881	-0.210992337	-0.230042469	-0.130928591	0.447606881	0.5853	0.0197	-0.729	0.9938	-0.149	0.9982	A+	A+	A-
MATH	5	806065	4	A-T	1	13602	0.677032789	0.140494045	0.092927511	0.677032789	0.086972504	0.001543891	0.46067668	-0.221791332	-0.232439807	0.46067668	-0.242520097	-0.6602	0.0204	-7.9091	0.9324	-5.6991	0.8983	A+	A-	A-

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
MATH	5	271630	4	A-F	1	13602	0.470886634	0.229451551	0.177400382	0.470886634	0.118364946	0.002352595	0.458464003	-0.274051823	-0.075197609	0.458464003	-0.254867667	0.4392	0.0196	-1.249	0.9896	-0.499	0.9939	A+	A-	A+
MATH	5	109082	4	B-O	2	13602	0.388913395	0.388913395	0.322599618	0.178870754	0.105278635	0.002720188	0.293503778	0.293503778	-0.040812876	-0.17159864	-0.179796466	0.873	0.0201	9.9012	1.1822	9.9013	1.2902	A+	A+	A-
MATH	5	656852	4	B-O	2	13602	0.468166446	0.228863402	0.468166446	0.141376268	0.157476842	0.003087781	0.317046202	-0.013012647	0.317046202	-0.216259413	-0.203411078	0.4527	0.0196	9.9012	1.1614	9.9012	1.2089	A-	A+	A+
MATH	5	718089	4	A-F	2	13602	0.635935892	0.098514924	0.129245699	0.123878841	0.635935892	0.01154242	0.478098784	-0.204995637	-0.240946537	-0.26118386	0.478098784	-0.4322	0.02	-7.7691	0.9368	-7.9491	0.8762	A+	A-	A-
MATH	5	902976	4	C-G	2	13602	0.535803558	0.176591678	0.167695927	0.535803558	0.11608587	0.001764446	0.511638908	-0.252232114	-0.272812617	0.511638908	-0.168578158	0.0972	0.0195	-9.8991	0.9182	-8.7091	0.8924	A-	A-	A-
MATH	5	690136	4	A-T	2	13602	0.188354654	0.265108072	0.319732392	0.221143949	0.188354654	0.00367593	0.072422976	-0.056265631	0.036684673	-0.043896179	0.072422976	2.1678	0.0245	9.9013	1.3172	9.9022	2.1507	A-	A-	A-
MATH	5	125688	4	D-M	2	13602	0.307454786	0.237023967	0.320541097	0.307454786	0.123805323	0.010072048	0.162843896	-0.165775352	0.065686521	0.162843896	-0.097139082	1.342	0.0211	9.9013	1.3143	9.9016	1.6018	A+	A+	A+
MATH	5	335522	5	A-F	1	13571	0.476899271	0.476899271	0.088497532	0.350747918	0.079213028	0.002284283	0.43548525	0.43548525	-0.258950589	-0.218575414	-0.133127914	0.4022	0.0197	2.871	1.024	1.411	1.0175	A-	A-	A-
MATH	5	805848	5	C-G	1	13571	0.693021885	0.072949672	0.100287377	0.128730381	0.693021885	0.002357969	0.379313689	-0.219228517	-0.147007754	-0.209377535	0.379313689	-0.764	0.0207	1.301	1.0116	4.9611	1.1025	A+	A-	A-
MATH	5	820135	5	A-T	1	13571	0.774592882	0.075528701	0.068086361	0.774592882	0.079728834	0.001326358	0.453574192	-0.261290951	-0.228108662	0.453574192	-0.226535563	-1.2687	0.0224	-9.8991	0.8858	-8.4692	0.7908	A+	A-	A-
MATH	5	206172	5	B-O	2	13571	0.317220544	0.24537617	0.163068307	0.266376833	0.317220544	0.006852848	0.239520791	-0.135245961	-0.226806028	0.076976182	0.239520791	1.2857	0.0211	9.9012	1.2325	9.9015	1.4604	A-	A-	A-
MATH	5	927857	5	A-F	2	13571	0.51307936	0.136320094	0.51307936	0.211996168	0.13492005	0.002873775	0.379079564	-0.132016085	0.379079564	-0.273960166	-0.087469232	0.2099	0.0196	9.9011	1.0915	8.6611	1.1144	A+	A+	A+
MATH	5	488837	5	C-G	2	13571	0.378748803	0.378748803	0.186058507	0.17110014	0.261439835	0.001547417	0.399875769	0.399875769	-0.089534949	-0.17677258	-0.206406437	0.9285	0.0203	6.5511	1.0619	8.6111	1.1236	A-	A-	A-
MATH	5	367208	5	A-T	2	13571	0.375653968	0.157099698	0.183332105	0.375653968	0.279271977	0.002947461	0.214218763	-0.07802581	-0.177202454	0.214218763	-0.007819971	0.9459	0.0203	9.9013	1.2834	9.9015	1.4542	A+	A+	A-
MATH	5	233267	5	D-M	1	13571	0.335863238	0.335863238	0.094097708	0.273598114	0.285682706	0.010610861	0.376303431	0.376303431	-0.217366404	0.009961297	-0.251919394	1.1744	0.0208	6.7211	1.068	9.9012	1.196	A-	A-	A-
MATH	5	894606	6	A-T	1	13508	0.708098904	0.096683447	0.708098904	0.101791531	0.091279242	0.001554634	0.473231759	-0.238958977	0.473231759	-0.236465984	-0.247177177	-0.8442	0.0209	-9.8991	0.897	-8.8592	0.8317	A+	A-	A-
MATH	5	254653	6	A-T	2	13508	0.490005922	0.155019248	0.165679597	0.490005922	0.185149541	0.001850755	0.369188495	-0.225496066	-0.201815541	0.369188495	-0.064560704	0.3259	0.0196	9.9011	1.0885	8.7411	1.1086	A+	A+	A+
MATH	5	943421	6	D-M	1	13508	0.627628072	0.116671602	0.078472017	0.627628072	0.163532721	0.013473497	0.557547216	-0.212783505	-0.262712348	0.557547216	-0.344559021	-0.4	0.0199	-9.8992	0.8393	-9.8992	0.7678	A-	A-	A-
MATH	5	969966	6	C-G	2	13508	0.247260882	0.362970092	0.203657092	0.247260882	0.178264732	0.00740302	0.025811125	0.102331763	-0.023186967	0.025811125	-0.128651082	1.7095	0.0225	9.9014	1.4413	9.902	1.979	A+	A+	A+
MATH	5	759113	6	D-M	2	13508	0.39843056	0.39843056	0.217056559	0.191738229	0.188184779	0.002368967	0.186221665	0.186221665	-0.130004937	-0.054057591	-0.034038768	0.8053	0.02	9.9013	1.3097	9.9014	1.4195	A+	A-	A-
MATH	5	363307	6	A-F	2	13508	0.468241042	0.221572402	0.17012141	0.135105123	0.468241042	0.003109269	0.354867254	0.021617745	-0.266224657	-0.243172388	0.354867254	0.4356	0.0196	9.9011	1.1061	9.9012	1.1525	A+	A-	A-
MATH	5	705680	6	B-O	1	13508	0.591871484	0.104382588	0.591871484	0.263251407	0.035534498	0.002591057	0.255403583	-0.306774504	0.255403583	0.021267372	-0.201639625	-0.2046	0.0197	9.9012	1.1907	9.9013	1.3216	A+	A-	A-
MATH	5	833358	6	A-T	2	13508	0.360230974	0.360230974	0.328323956	0.21009772	0.096165235	0.00370151	0.312178683	0.312178683	-0.017577573	-0.193180202	-0.204604556	1.0162	0.0204	9.9011	1.1351	9.9013	1.2765	A-	A+	A-
MATH	5	900790	7	A-T	1	13538	0.316885803	0.221524597	0.190648545	0.316885803	0.26200325	0.008568474	0.310338134	-0.052918838	-0.118692554	0.310338134	-0.162875553	1.287	0.0211	9.9011	1.1354	9.9013	1.2951	A-	A-	A-
MATH	5	873532	7	D-M	2	13538	0.465135175	0.1394593	0.132442015	0.258457675	0.465135175	0.002659182	0.497276467	-0.279990332	-0.237002579	-0.155028169	0.497276467	0.4476	0.0197	-7.5891	0.9386	-6.6091	0.9201	A+	A-	A-
MATH	5	146077	7	A-F	2	13538	0.345398139	0.185773379	0.345398139	0.155488255	0.309277589	0.002511449	0.272965562	0.004529132	0.272965562	-0.236120561	-0.09202011	1.0955	0.0207	9.9012	1.1781	9.9014	1.3662	A-	A-	A-
MATH	5	466875	7	A-F	1	13538	0.500221598	0.142192347	0.28468016	0.070320579	0.500221598	0.001329591	0.470704653	-0.176941452	-0.278227492	-0.181396535	0.470704653	0.2608	0.0196	-3.159	0.9749	-4.2491	0.9473	A+	A-	A-
MATH	5	859771	7	C-G	2	13538	0.164647658	0.467055695	0.122248486	0.164647658	0.241616191	0.002437583	0.032733175	0.102348311	-0.159905499	0.032733175	-0.018338621	2.3583	0.0259	9.9013	1.3184	9.9025	2.5418	A-	A-	A-
MATH	5	467170	7	A-F	1	13538	0.38129709	0.301743241	0.149209632	0.38129709	0.162210075	0.002954646	0.269507	0.03918295	-0.25168769	0.269507	-0.150025314	0.8926	0.0202	9.9012	1.2119	9.9013	1.3279	A-	A-	A-
MATH	5	939602	7	B-O	2	13538	0.29849313	0.29849313	0.260304329	0.27736741	0.152607475	0.010045797	0.246978626	0.246978626	-0.051815006	-0.093574301	-0.122599347	1.3757	0.0214	9.9012	1.2011	9.9014	1.4273	A-	A+	A+
MATH	5	818525	7	D-M	2	13538	0.431599941	0.095952135	0.169744423	0.297680603	0.431599941	0.003693308	0.491810008	-0.284403249	-0.247866047	-0.137433997	0.491810008	0.62	0.0198	-6.6991	0.9438	-4.9691	0.9386	A-	A-	A-
MATH	5	945660	8	A-T	1	13553	0.797904523	0.132516786	0.031137018	0.032981628	0.797904523	0.003246514	0.46030245	-0.369638273	-0.174051619	-0.144093669	0.46030245	-1.4221	0.0231	-9.8991	0.8564	-9.8993	0.7138	A-	A-	A-
MATH	5	657861	8	D-M	2	13553	0.306205268	0.119752084	0.391795175	0.306205268	0.176639858	0.002951376	0.351657154	-0.079739097	-0.211396521	0.351657154	-0.076975482	1.3469	0.0213	7.3411	1.0786	9.9012	1.2365	A-	A-	A-
MATH	5	131679	8	A-T	1	13553	0.477311296	0.092009149	0.477311296	0.115029883	0.312993433	0.001697041	0.257673358	-0.235778198	0.257673358	-0.227608607	0.030187002	0.3868	0.0196	9.9012	1.2352	9.9013	1.3061	A+	A-	A-
MATH	5	460282	8	C-G	2	13553	0.426990334	0.269460636	0.151553162	0.426990334	0.148232864	0.002582454	0.365289498	-0.047906917	-0.225851409	0.365289498	-0.211577626	0.6518	0.0198	9.9011	1.1029	9.9011	1.1489	A-	A-	A+
MATH	5	701702	8	A-F	2	13553	0.482697558	0.242307976	0.171622519	0.482697558	0.092156718	0.010772523	0.489687084	-0.260092351	-0.214508704	0.489687084	-0.168424506	0.3588	0.0196	-6.5491	0.9476	-5.3191	0.9363	A+	A-	A-
MATH	5	754860	8	D-M	2	13553	0.340367446	0.267247104	0.258835682	0.340367446	0.129712979	0.00184461	0.325209067	-0.08296618	-0.133320863	0.325209067	-0.166852595	1.1315	0.0207	9.9011	1.1131	9.9013	1.2783	A-	A-	A-
MATH	5	624200	8	A-T	2	13553	0.589463587	0.188592931	0.090828599	0.125949974	0.589463587	0.003098945	0.453095984	-0.21008812	-0.237884005	-0.207784797	0.453095984	-0.1952	0.0197	-3.399	0.9733	-2.279	0.9673	A+	A-	A-
MATH	5	684080	8	B-O	2	13553	0.206448757	0.261860843	0.35719029	0.166014904	0.206448757	0.0080425	0.189481177	-0.137706542	0.076568115	-0.129862385	0.189481177	2.0137	0.0239	9.9012	1.21	9.9018	1.7514	A-	A-	A+
MATH	5	393088	9	A-F	2	13481	0.313774943	0.342111119	0.313774943	0.180476226	0.158074327	0.002670425	0.303373431	-0.144163656	0.303373431	-0.090007415	-0.093212177	1.3001	0.0211	9.9011	1.1158	9.9013	1.2976	A-	A-	A-
MATH	5	845881	9	C-G	2	13481	0.478302797	0.211705363	0.151991692	0.154142868	0.478302797	0.002670425	0.34290001	-0.084477088	-0.14683937	-0.223251503	0.34290001	0.3878	0.0196	9.9011	1.1156	9.9012	1.1504	A+	A-	A-
MATH	5	158800	9	A-T	2	13481	0.290037831	0.184556042	0.1457607	0.375417254	0.290037831	0.002818782	0.278243379	-0.069311429	-0.206370707	-0.049504424	0.278243379	1.428	0.0214	9.9011	1.1355	9.9014	1.3625	A+	A-	A+
MATH	5	221788	9	A-T	1	13481	0.716415696	0.716415696	0.060677991	0.177879979	0.042578444	0.001409391	0.434624324	0.434624324	-0.219609802	-0.258029622	-0.212538863	-0.8826	0.021	-7.2091	0.9339	-4.9491	0.9024	A+	A-	A-
MATH	5	381480	9	D-M	3	13481	0.158519398	0.092352199	0.09910244	0.158519398	0.638157407	0.011571842	0.063886561	-0.191530417	-0.099805684	0.063886561	0.141393584	2.3948	0.026	9.9013	1.2557	9.9022	2.2446	A-	A+	A-
MATH	5	510618	9	A-F	2	13481	0.347600326	0.347600326	0.294488539	0.237445293	0.115940954	0.002596247	0.307349467	0.307349467	-0.14555073	-0.038328203	-0.188244924	1.0876	0.0205	9.9011	1.1317	9.9013	1.2595	A-	A-	A-
MATH	5	497962	9	C-G	2	13481	0.218010533	0.151249907	0.213188933	0.408204139	0.218010533	0.008678881	-0.009195626	-0.106076352	-0.010110646	0.100292853	-0.009195626	1.9109	0.0233	9.9015	1.4548	9.9021	2.1036	A-	A-	A+
MATH	5	662116	9	B-O	1	13481	0.520436169	0.186781396	0.119427342	0.520436169	0.169497812	0.003189674	0.257496832	-0.020351397	-0.137584669	0.257496832	-0.195634921	0.1716	0.0195	9.9012	1.212	9.9013	1.2965	A+	A-	A+
MATH	6	885354	0	B-E	2	121087	0.666801556	0.666801556	0.1462337	0.09522905	0.090042697	0.000701975	0.494136619	0.494136619	-0.278235771	-0.232270065	-0.228018562	-0.4216	0.0067	-9.8991	0.8792	-9.8992	0.7853			
MATH	6	670855	0	A-N	2	121087	0.507420285	0.186213219	0.507420285	0.217587355	0.08688794	0.00134614	0.3067056	-0.139112246	0.3067056	-0.161837315	-0.111359352	0.3454	0.0065	9.9011	1.1391	9.9012	1.151			
MATH	6	222146	0	B-E	2	121087	0.614087392	0.614087392	0.103974828	0.09097591	0.188657742	0.000817594	0.480218241	0.480218241	-0.204902675	-0.272390429	-0.233099805	-0.1604	0.0066	-9.8991	0.9149	-9.8991	0.874			
MATH	6	704699	0	B-E	2	121087	0.659938722	0.183083238	0.059519189	0.659938722	0.095931025	0.000660682	0.464488164	-0.314860132	-0.222535619	0.464488164	-0.150078199	-0.4339	0.0067	-9.8991	0.9201	-9.8991	0.8673			
MATH	6	864249	0	C-G	2	121087	0.545426016	0.145151833	0.140436215	0.166268881	0.545426016	0.001618671	0.426127835	-0.115412865	-0.227285118	-0.242318803	0.426127835	0.1569	0.0065	-1.959	0.995	-3.389	0.9859			
MATH	6	601614	0	B-E	2	121087	0.540330506	0.540330506	0.284159323	0.115057768	0.057528884	0.001924236	0.491282788	0.491282788	-0.271215243	-0.218656786	-0.215823397	0.2412	0.0065	-9.8991	0.9204	-9.8991	0.8901			
MATH	6	176455	0	A-R	2	121087	0.553544146	0.122779489	0.174717352	0.146613592	0.553544146	0.001445242	0.439169708	-0.143095548	-0.315794906	-0.139445892	0.439169708	0.1691	0.0065	-9.899	0.9734	-5.659	0.9766			
MATH	6	442431	0	A-N	1	121087	0.715089151	0.06410267	0.715089151	0.143103719	0.074970889	0.001271813	0.472319608	-0.198233786	0.472319608	-0.250699832	-0.282405119	-0.7484	0.007	-9.8991	0.8862	-9.8992	0.8057			
MATH	6	876338	0	A-R	2	121087	0.616523657	0.105172314	0.616523657	0.180423993	0.094774831	0.001701256	0.517482234	-0.265236989	0.517482234	-0.219942535	-0.283803532	-0.1786	0.0066	-9.8991	0.8725	-9.8992	0.8142			
MATH	6	242957	0	A-N	1	121087	0.797847828	0.064812903	0.11168829	0.797847828	0.024403941	0.000429443	0.439786706	-0.276496851	-0.264558921	0.439786706	-0.156883059	-1.278	0.0077	-9.8991	0.8749	-9.8992	0.7577			
MATH	6	837396	0	C-G	2	121087	0.692130452	0.692130452	0.089208586	0.13710803	0.079669989	0.000693716	0.478734185	0.478734185	-0.230173278	-0.269238971	-0.226703629	-0.6218	0.0069	-9.8991	0.9038	-9.8992	0.7843			
MATH	6	391069	0	A-N	1	121087	0.603896372	0.095278601	0.603896372	0.205769405	0.092982731	0.001247037	0.328915706	-0.22826303	0.328915706	-0.212167553	-0.021599037	-0.1488	0.0066	9.9011	1.0865	9.9012	1.1513			
MATH	6	459385	0	D-S	2	121087	0.408425347	0.154244469	0.204522368	0.230957906	0.408425347	0.001139676	0.2843302	-0.166492766	-0.202272371	0.008115291	0.2843302	0.8509	0.0066	9.9012	1.1712	9.9012	1.238			
MATH	6	393003	0	B-E	2	121087	0.548960665	0.183975158	0.157068884	0.548960665	0.107649872	0.001659963	0.425817138	-0.168556825	-0.263446891	0.425817138	-0.157294465	0.1392	0.0065	-1.659	0.9958	-5.469	0.9771			
MATH	6	211678	0	C-G	2	121087	0.449123358	0.208090051	0.199170844	0.141006053	0.449123358	0.001321364	0.463061821	-0.297921256	-0.1556681	-0.130257557	0.463061821	0.7321	0.0065	-9.899	0.9624	-9.899	0.9615			
MATH	6	848416	0	D-S	2	121087	0.750212657	0.091017203	0.750212657	0.095699786	0.061063533	0.000933213	0.426239691	-0.225011938	0.426239691	-0.213554048	-0.230936751	-0.8896	0.0072	-9.8991	0.8936	-9.8992	0.843			
MATH	6	766182	0	D-S	1	121087	0.583778605	0.583778605	0.091273217	0.202342118	0.119897264	0.001205745	0.542419415	0.542419415	-0.193990597	-0.329312955	-0.237495583	0.0069	0.0065	-9.8991	0.8526	-9.8992	0.7881			
MATH	6	728007	0	D-S	2	121087	0.523127999	0.209097591	0.523127999	0.142550398	0.122705162	0.001635188	0.449444997	-0.309972355	0.449444997	-0.163457183	-0.118617075	0.3001	0.0065	-9.899	0.9711	-9.899	0.9558			
MATH	6	769053	0	D-S	2	121087	0.771775665	0.04842799	0.118592417	0.059337501	0.771775665	0.001015799	0.373600381	-0.146398982	-0.232300393	-0.205571721	0.373600381	-1.0492	0.0074	-9.8991	0.9385	-7.7891	0.9385			
MATH	6	223714	0	D-S	1	121087	0.473766796	0.473766796	0.22287281	0.135348964	0.166045901	0.001180969	0.265925291	0.265925291	-0.096724401	-0.281759904	0.015107236	0.5982	0.0065	9.9012	1.1903	9.9012	1.2325			
MATH	6	614050	0	B-E	2	121087	0.358048345	0.290923055	0.358048345	0.225251266	0.123217191	0.001585637	0.27067103	0.064514216	0.27067103	-0.2050966	-0.215507781	1.2037	0.0068	9.9012	1.1794	9.9013	1.3255			
MATH	6	213658	0	B-E	2	121087	0.745150181	0.081610743	0.082122771	0.745150181	0.089150776	0.00128833	0.472235737	-0.254786607	-0.253739593	0.472235737	-0.226288408	-0.8579	0.0071	-9.8991	0.8513	-9.8993	0.7453			
MATH	6	867720	0	D-S	2	121087	0.485485643	0.485485643	0.159183067	0.175700116	0.177855591	0.00084237	0.269128103	0.269128103	-0.025878626	-0.240257402	-0.083312982	0.4609	0.0065	9.9012	1.1832	9.9012	1.2365			
MATH	6	483148	0	A-N	1	121087	0.582589378	0.08005814	0.132615392	0.582589378	0.203275331	0.000941472	0.394355051	-0.214454613	-0.185803725	0.394355051	-0.179579822	-0.0115	0.0065	9.661	1.0249	-0.679	0.9969			
MATH	6	148069	0	A-N	1	121087	0.534301783	0.127949326	0.162643389	0.173255593	0.534301783	0.001081867	0.458909855	-0.196361823	-0.223977694	-0.210288752	0.458909855	0.2429	0.0065	-9.899	0.9556	-9.8991	0.923			
MATH	6	609551	0	A-N	1	121087	0.381097888	0.19051591	0.381097888	0.235516612	0.190912319	0.000611131	0.353289953	-0.069349906	0.353289953	-0.252358511	-0.091266978	1.0078	0.0067	9.9011	1.0853	9.9011	1.1242			
MATH	6	292812	0	A-N	2	121087	0.618902112	0.146291509	0.125669973	0.618902112	0.106122044	0.001321364	0.431427657	-0.173545401	-0.257569478	0.431427657	-0.19748249	-0.1557	0.0066	-9.899	0.9586	-9.669	0.9541			
MATH	6	182023	0	A-R	2	121087	0.508667322	0.215902615	0.109433713	0.16420425	0.508667322	0.000933213	0.375315393	-0.05197613	-0.225098582	-0.25596286	0.375315393	0.2929	0.0065	9.9011	1.0603	9.9011	1.0625			
MATH	6	456692	0	C-G	2	121087	0.562248631	0.562248631	0.209138884	0.163394914	0.062962994	0.001387432	0.404680549	0.404680549	-0.241985067	-0.155042556	-0.177813929	0.1194	0.0065	6.621	1.0169	-1.929	0.9918			
MATH	6	464426	0	A-N	2	121087	0.699992567	0.077770529	0.100374111	0.699992567	0.12014502	0.000999282	0.247244109	-0.135749221	-0.114691359	0.247244109	-0.126322606	-0.63	0.0069	9.9011	1.1335	9.9012	1.2147			
MATH	6	870198	0	A-N	1	121087	0.781644603	0.085087582	0.066291179	0.064276099	0.781644603	0.00156912	0.483355612	-0.266229451	-0.263253654	-0.234426304	0.483355612	-1.205	0.0076	-9.8991	0.857	-9.8993	0.7125			
MATH	6	829145	0	A-R	2	121087	0.549414884	0.232122358	0.069057785	0.549414884	0.146613592	0.001048833	0.339243433	-0.071729195	-0.225207471	0.339243433	-0.223789049	0.1609	0.0065	9.9011	1.0907	9.9011	1.1397			
MATH	6	858358	0	D-S	2	121087	0.435331621	0.156209998	0.148959013	0.257054845	0.435331621	0.000924955	0.373236363	-0.187398296	-0.155696522	-0.136894129	0.373236363	0.7513	0.0066	9.9011	1.0655	9.9011	1.0945			
MATH	6	380439	0	B-E	1	121087	0.475385467	0.221064194	0.475385467	0.075722414	0.225606382	0.00134614	0.277504862	-0.248850399	0.277504862	-0.158192312	0.019828329	0.5374	0.0065	9.9012	1.1735	9.9012	1.2172			
MATH	6	306343	0	A-R	2	121087	0.588097814	0.091008944	0.588097814	0.050203573	0.268765433	0.001024057	0.544205389	-0.266874829	0.544205389	-0.209648266	-0.323595399	-0.044	0.0065	-9.8991	0.8556	-9.8992	0.7918			
MATH	6	991673	0	B-E	2	121087	0.644222749	0.644222749	0.1563091	0.138156862	0.059056711	0.000850628	0.462118377	0.462118377	-0.257712013	-0.225997981	-0.203403954	-0.248	0.0066	-9.8991	0.9079	-9.8991	0.8786			
MATH	6	224777	0	D-S	2	121087	0.42190326	0.13005525	0.42190326	0.159794198	0.285373327	0.001403949	0.350927159	-0.178597303	0.350927159	-0.201625301	-0.082146219	0.8359	0.0066	9.9011	1.0871	9.9011	1.13			
MATH	6	528841	0	A-R	2	121087	0.341679949	0.181646254	0.137256683	0.337129502	0.341679949	0.001024057	0.323936042	-0.135294526	-0.219674644	-0.050836006	0.323936042	1.2478	0.0068	9.9011	1.1021	9.9012	1.1946			
MATH	6	725336	0	B-E	2	121087	0.554576462	0.226432235	0.121218628	0.094807865	0.554576462	0.001255296	0.412087598	-0.107225995	-0.25258818	-0.257049499	0.412087598	0.1546	0.0065	1.631	1.0041	2.531	1.0106			
MATH	6	253813	0	B-E	2	121087	0.664728666	0.076498716	0.664728666	0.10721217	0.148711257	0.001321364	0.346517707	-0.170959991	0.346517707	-0.215768412	-0.138577662	-0.4613	0.0067	9.901	1.035	9.9011	1.1311			
MATH	6	691595	1	A-N	1	14122	0.824953973	0.053958363	0.062243308	0.824953973	0.055374593	0.002053533	0.426749853	-0.214671856	-0.231291933	0.426749853	-0.241726585	-1.5031	0.0235	-9.8991	0.854	-9.8993	0.7165	A+	A-	A-
MATH	6	636270	1	D-S	2	14122	0.385710239	0.156068546	0.385710239	0.346126611	0.104234528	0.007151961	0.351439422	-0.184282975	0.351439422	-0.066501973	-0.228565033	0.94	0.0195	9.8011	1.0864	9.9011	1.1312	A-	A-	A-
MATH	6	231102	1	D-S	2	14122	0.413255913	0.182906104	0.200042487	0.413255913	0.197280838	0.006089789	0.2870178	-0.097954691	-0.103807985	0.2870178	-0.151082756	0.8012	0.0193	9.9012	1.1618	9.9012	1.228	A-	A-	A-
MATH	6	511582	1	A-N	1	14122	0.844285512	0.017986121	0.092763065	0.043265826	0.844285512	0.000991361	0.33797568	-0.138691439	-0.216763436	-0.196637429	0.33797568	-1.6738	0.0246	-4.0091	0.9423	-6.1592	0.8145	A+	A-	A-
MATH	6	732901	1	B-E	2	14122	0.36071378	0.36071378	0.197068404	0.22709248	0.211230704	0.002549214	0.380236956	0.380236956	-0.148167033	-0.125715326	-0.169418579	1.0765	0.0198	3.831	1.0347	8.5211	1.1159	A-	A-	A-
MATH	6	760054	1	B-E	2	14122	0.137020252	0.294575839	0.19451919	0.369494406	0.137020252	0.003115706	0.169455628	-0.185037051	-0.099026136	0.140180097	0.169455628	2.6655	0.027	5.2611	1.094	9.9019	1.9434	A-	A+	A-
MATH	6	472871	1	A-R	2	14122	0.331964311	0.229712505	0.331964311	0.3035689	0.131284521	0.002336779	0.164617023	-0.156560928	0.164617023	0.042093417	-0.084810951	1.2385	0.0202	9.9013	1.2903	9.9015	1.4623	A-	A-	A-

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
MATH	6	652260	1	D-S	2	14122	0.418566775	0.152527971	0.137799179	0.418566775	0.287919558	0.001699476	0.391452232	-0.212014967	-0.235770637	0.391452232	-0.073785695	0.7656	0.0193	4.711	1.0389	5.3111	1.0635	A+	A-	A-
MATH	6	480220	2	A-R	2	13292	0.693951249	0.115859163	0.098555522	0.693951249	0.087496238	0.00233223	0.50669141	-0.2604945	-0.286848926	0.50669141	-0.216912742	-0.5858	0.0207	-9.8991	0.8592	-9.8993	0.7486	A+	A-	A-
MATH	6	818509	2	A-N	2	13292	0.657463136	0.067183268	0.657463136	0.170252784	0.10224195	0.001956064	0.373092352	-0.227365845	0.373092352	-0.169026565	-0.177773022	-0.3816	0.0203	3.221	1.0272	-0.049	0.999	A+	A+	A-
MATH	6	603202	2	A-N	1	13292	0.476226302	0.0905808	0.476226302	0.190565754	0.240445381	0.001203732	0.430399366	-0.245659106	0.430399366	-0.247505874	-0.10742946	0.5498	0.0196	0.191	1.0015	0.011	1.0001	A+	A-	A+
MATH	6	964214	2	A-R	1	13292	0.724119771	0.08869997	0.724119771	0.093740596	0.090355101	0.002181763	0.477208703	-0.249133478	0.477208703	-0.270257194	-0.215023338	-0.7698	0.0213	-9.8991	0.8749	-9.8992	0.7771	A+	A-	A-
MATH	6	478079	2	B-E	2	13292	0.671757448	0.135043635	0.671757448	0.101188685	0.088399037	0.002256997	0.475410553	-0.223335078	0.475410553	-0.276474516	-0.216663909	-0.468	0.0204	-9.8991	0.9063	-9.8992	0.8317	A-	A-	A-
MATH	6	537617	2	C-G	1	13292	0.594267228	0.594267228	0.136397833	0.162428528	0.099834487	0.006695757	0.542305792	0.542305792	-0.282875907	-0.26288117	-0.236919267	-0.0538	0.0198	-9.8991	0.855	-9.8992	0.7858	A+	A-	A+
MATH	6	147242	2	D-S	2	13292	0.394372555	0.25	0.142416491	0.394372555	0.205838098	0.007071923	0.196059901	-0.077317546	-0.104133106	0.196059901	-0.0573433	0.9769	0.0201	9.9013	1.2726	9.9014	1.386	A+	A-	A-
MATH	6	409830	2	B-E	1	13292	0.33892567	0.257071923	0.33892567	0.190415287	0.210427325	0.001880831	0.176579894	-0.041602604	0.176579894	-0.13330249	-0.025472193	1.2827	0.0207	9.9013	1.2788	9.9015	1.4746	A+	A+	A+
MATH	6	107357	3	A-N	1	13358	0.47117832	0.072166492	0.47117832	0.276313819	0.178993861	0.001122923	0.456633416	-0.172833276	0.456633416	-0.30094003	-0.124767013	0.5618	0.0195	-4.439	0.9655	-3.449	0.9605	A+	A-	A-
MATH	6	567896	3	B-E	2	13358	0.621051056	0.621051056	0.167540051	0.111693367	0.096496482	0.001946399	0.478175418	0.478175418	-0.223299938	-0.245282906	-0.230781116	-0.1987	0.0198	-9.8991	0.9095	-9.7091	0.8624	A-	A-	A-
MATH	6	648114	3	C-G	1	13358	0.309178021	0.309178021	0.307007037	0.165668513	0.20826471	0.009207965	0.279704729	0.279704729	0.01740291	-0.113082678	-0.227982406	1.4368	0.0211	9.9011	1.1245	9.9013	1.3334	A-	A-	A+
MATH	6	750318	3	C-G	2	13358	0.546488995	0.546488995	0.17195688	0.176673155	0.102185956	0.001422369	0.378373864	0.378373864	-0.211538004	-0.11575305	-0.203878659	0.1842	0.0195	5.431	1.0416	5.9711	1.0761	A-	A-	A-
MATH	6	642420	3	A-R	2	13358	0.471103459	0.094999251	0.227279533	0.203323851	0.471103459	0.002395568	0.382455949	-0.214497608	-0.195824031	-0.107348247	0.382455949	0.5622	0.0195	6.3211	1.0505	4.5611	1.0536	A-	A-	A-
MATH	6	172091	3	B-E	2	13358	0.316065279	0.195912562	0.316065279	0.322129061	0.161401407	0.002545291	0.216855498	0.002322563	0.216855498	-0.087638803	-0.154625722	1.3962	0.021	9.9012	1.206	9.9014	1.3932	A+	A+	A+
MATH	6	625611	3	C-G	2	13358	0.341742776	0.163946699	0.332085642	0.155187902	0.341742776	0.006662674	0.329620767	-0.234484722	-0.013620015	-0.164728585	0.329620767	1.2485	0.0206	9.2611	1.0901	9.9012	1.2047	A+	A-	A-
MATH	6	854441	3	D-S	2	13358	0.586764486	0.116634227	0.133328343	0.159230424	0.586764486	0.002769876	0.403810308	-0.187089996	-0.205513694	-0.182430161	0.403810308	-0.024	0.0196	-0.079	0.9994	0.941	1.0128	A+	A-	A-
MATH	6	893691	4	B-E	1	13432	0.860631328	0.068269803	0.860631328	0.038192376	0.03067302	0.001488982	0.325240804	-0.163087125	0.325240804	-0.191902412	-0.187596807	-1.7413	0.0263	-4.1791	0.9327	-2.2491	0.9247	A+	A-	A-
MATH	6	982846	4	D-S	2	13432	0.488088148	0.488088148	0.225134008	0.204958309	0.078618225	0.002531269	0.3311851	0.3311851	-0.104760216	-0.158281231	-0.205703808	0.4901	0.0194	9.9011	1.1	9.9011	1.1161	A-	A-	A+
MATH	6	383473	4	A-N	1	13432	0.782013103	0.782013103	0.105196546	0.071545563	0.039160214	0.001042287	0.430620404	0.430620404	-0.293820618	-0.181020171	-0.203001822	-1.1256	0.0225	-9.4091	0.8953	-9.8992	0.7682	A+	A-	A-
MATH	6	404946	4	C-G	2	13432	0.2983919	0.236748064	0.2983919	0.293254914	0.16855271	0.002084574	0.127143256	-0.065022193	0.127143256	-0.02030494	-0.050906049	1.5071	0.0211	9.9013	1.3049	9.9016	1.5653	A+	A+	A+
MATH	6	981427	4	A-N	2	13432	0.51771888	0.14435676	0.157162001	0.172721858	0.51771888	0.007593806	0.461578841	-0.24982638	-0.236407373	-0.143036396	0.461578841	0.3404	0.0194	-6.7191	0.9499	-4.6191	0.9483	A-	A-	A-
MATH	6	200433	4	D-S	2	13432	0.658204288	0.658204288	0.081075045	0.104749851	0.152992853	0.001712329	0.451472166	0.451472166	-0.268772828	-0.260072897	-0.16292384	-0.3841	0.0201	-9.1691	0.9257	-8.0091	0.8786	A+	A-	A-
MATH	6	565556	4	A-R	2	13432	0.354749851	0.21776355	0.221486004	0.354749851	0.19922573	0.006104824	0.146391945	-0.10028577	-0.098595984	0.146391945	0.03990374	1.1846	0.0202	9.9013	1.2961	9.9015	1.4723	A-	A-	A-
MATH	6	869261	4	B-E	2	13432	0.170413937	0.170413937	0.153365098	0.125	0.548615247	0.001414532	0.03846848	0.03846848	-0.108862753	-0.275717766	0.237388863	2.4016	0.0252	9.9013	1.2731	9.9021	2.1412	A-	A-	A-
MATH	6	447181	5	A-N	1	13408	0.502088305	0.502088305	0.144615155	0.174298926	0.176909308	0.001342482	0.45110669	0.45110669	-0.196804163	-0.224609423	-0.181828187	0.417	0.0195	-3.149	0.9756	-3.689	0.9574	A+	A-	A-
MATH	6	337005	5	C-G	2	13408	0.372240453	0.306235084	0.170569809	0.147896778	0.372240453	0.001789976	0.422811466	-0.182590062	-0.176992311	-0.144572637	0.422811466	1.0903	0.0202	-0.159	0.9985	2.821	1.0374	A-	A-	A-
MATH	6	828260	5	B-E	2	13408	0.167139021	0.585098449	0.099865752	0.167139021	0.14446599	0.001789976	-0.086928104	0.332347545	-0.237584599	-0.086928104	-0.163752319	2.4581	0.0256	9.9015	1.4559	9.9026	2.6244	A-	A-	A+
MATH	6	432775	5	A-N	1	13408	0.781175418	0.781175418	0.154534606	0.032070406	0.029236277	0.002461217	0.445027251	0.445027251	-0.320916751	-0.206761169	-0.170770322	-1.117	0.0225	-9.8991	0.8767	-9.8993	0.7423	A-	A-	A-
MATH	6	934041	5	C-G	2	13408	0.490229714	0.490229714	0.173180191	0.190110382	0.143421838	0.002386635	0.396091922	0.396091922	-0.219803862	-0.134316657	-0.169650332	0.4773	0.0195	5.341	1.0426	3.781	1.0445	A+	A-	A-
MATH	6	689812	5	A-R	2	13408	0.438991647	0.06824284	0.438991647	0.407070406	0.08099642	0.003952864	0.439996659	-0.161366343	0.439996659	-0.240021834	-0.212770218	0.7405	0.0197	-0.819	0.9932	-0.359	0.9958	A-	A+	A-
MATH	6	886090	5	B-E	2	13408	0.601581146	0.106428998	0.601581146	0.187947494	0.099343675	0.00447494	0.45871418	-0.207929767	0.45871418	-0.224615307	-0.232461193	-0.0914	0.0197	-7.3891	0.9436	-6.9291	0.9056	A+	A-	A-
MATH	6	343710	5	D-S	2	13408	0.571897375	0.257383652	0.099940334	0.571897375	0.068093675	0.001566229	0.446427968	-0.174838767	-0.296512379	0.446427968	-0.213355769	0.0617	0.0195	-4.159	0.9683	-4.0591	0.9478	A+	A-	A-
MATH	6	201556	6	A-R	2	13407	0.568210636	0.100992019	0.568210636	0.223838293	0.104199299	0.00179011	0.432517474	-0.227644705	0.432517474	-0.178122034	-0.229303886	0.0563	0.0196	-1.569	0.9879	-1.909	0.9746	A-	A-	A-
MATH	6	869400	6	A-N	2	13407	0.667785485	0.667785485	0.094428284	0.113522787	0.121130753	0.001491758	0.511187528	0.511187528	-0.264492244	-0.284496269	-0.215402418	-0.4649	0.0203	-9.8991	0.866	-9.8992	0.7918	A-	A-	A-
MATH	6	739320	6	B-E	1	13407	0.468039084	0.468039084	0.170135004	0.295442679	0.063772656	0.00179011	0.275054301	0.275054301	-0.281101395	0.039701102	-0.194395885	0.5688	0.0196	9.9012	1.194	9.9013	1.2517	A+	A-	A+
MATH	6	823983	6	A-N	1	13407	0.498694712	0.130528828	0.26874021	0.100171552	0.498694712	0.00141717	0.558866899	-0.267505011	-0.28948474	-0.199608534	0.558866899	0.4113	0.0195	-9.8991	0.8589	-9.8992	0.8129	A+	A-	A-
MATH	6	105381	6	A-R	2	13407	0.757067204	0.08353845	0.096665921	0.757067204	0.05333035	0.0092489	0.459883897	-0.246073987	-0.261862845	0.459883897	-0.213480351	-0.9995	0.0219	-9.8991	0.8744	-9.8992	0.7686	A+	A-	A-
MATH	6	852817	6	B-E	2	13407	0.401879615	0.268591035	0.115014545	0.209069889	0.401879615	0.005071977	0.378382737	-0.103065532	-0.190980181	-0.18832198	0.378382737	0.9161	0.02	7.3211	1.0653	9.2111	1.1204	A+	A+	A+
MATH	6	287819	6	C-G	2	13407	0.44260461	0.2459909	0.181696129	0.126351906	0.44260461	0.002610577	0.503460025	-0.193684821	-0.274269772	-0.179270276	0.503460025	0.7007	0.0197	-9.5191	0.923	-8.2491	0.9044	A+	A-	A-
MATH	6	977422	6	D-S	1	13407	0.333407921	0.333407921	0.15215932	0.148802864	0.36331767	0.001193406	0.319999341	0.319999341	-0.089573597	-0.110262981	-0.160793341	1.2967	0.0208	9.9011	1.1123	9.9013	1.2793	A+	A-	A-
MATH	6	827385	7	B-E	2	13352	0.417315758	0.258987418	0.417315758	0.205961654	0.112267825	0.00494308	0.337148247	-0.179769255	0.337148247	-0.100693435	-0.140956107	0.8567	0.0199	9.9011	1.1121	9.9012	1.1604	A+	A-	A+
MATH	6	266071	7	D-S	2	13352	0.769173158	0.097663271	0.07422109	0.055497304	0.769173158	0.001797484	0.424313579	-0.163794039	-0.270318028	-0.246396849	0.424313579	-1.0447	0.0222	-9.8991	0.8915	-2.7591	0.9336	A+	A-	A-
MATH	6	879283	7	A-N	1	13352	0.608073697	0.220940683	0.121105452	0.608073697	0.047783104	0.001198322	0.504950832	-0.363616265	-0.169428076	0.504950832	-0.182191946	-0.1308	0.0198	-9.8991	0.8957	-9.8992	0.8362	A-	A-	B-
MATH	6	920211	7	C-G	2	13352	0.49258538	0.083657879	0.12747154	0.49258538	0.292989814	0.002171959	0.421138708	-0.201144533	-0.20179128	0.421138708	-0.187643064	0.4611	0.0196	1.391	1.0109	-0.949	0.9888	A+	A-	A-
MATH	6	815423	7	A-R	2	13352	0.349910126	0.158777711	0.273891552	0.349910126	0.213226483	0.00247154	0.437878727	-0.095891885	-0.207052149	0.437878727	-0.189433341	1.2173	0.0206	-3.639	0.966	2.691	1.0385	A-	A-	A-
MATH	6	647876	7	B-E	2	13352	0.244982025	0.246030557	0.14799281	0.345641102	0.244982025	0.004119233	0.275630614	-0.165919953	-0.203423779	0.059001285	0.275630614	1.8625	0.0226	7.5811	1.0936	9.9014	1.4309	A-	A-	A-
MATH	6	626119	7	D-S	2	13352	0.548007789	0.084032355	0.548007789	0.178774715	0.18611444	0.001797484	0.348107775	-0.284808891	0.348107775	-0.163936891	-0.07297721	0.1788	0.0195	9.9011	1.0809	9.9012	1.2266	A+	A-	A-
MATH	6	748402	7	A-R	2	13352	0.272318754	0.099610545	0.402486519	0.223412223	0.272318754	0.001423008	0.432327684	-0.11301922	-0.154738006	-0.194418989	0.432327684	1.6818	0.0219	-5.5291	0.9395	5.3411	1.1007	B-	A-	A-
MATH	6	807602	8	A-R	1	13362	0.576335878	0.125879359	0.12004191	0.17467445	0.576335878	0.00164646	0.362834721	-0.202381408	-0.197808997	-0.120104119	0.362834721	0.0364	0.0195	6.021	1.0459	4.0111	1.0531	A-	A+	A+
MATH	6	580116	8	C-G	2	13362	0.350920521	0.199221673	0.246070947	0.199970064	0.350920521	0.002394851	0.300830503	-0.123344954	-0.087648688	-0.133753657	0.300830503	1.1876	0.0203	9.9011	1.1184	9.9012	1.1961	A-	A-	A+
MATH	6	605749	8	A-R	2	13362	0.522601407	0.068028738	0.109938632	0.522601407	0.288654393	0.010701991	0.430622712	-0.22064741	-0.226807256	0.430622712	-0.188385797	0.3065	0.0194	-2.129	0.9841	-3.809	0.9558	A+	A-	A-
MATH	6	501898	8	B-E	2	13362	0.323155216	0.195180362	0.196826822	0.279673702	0.323155216	0.00493938	0.296278243	-0.20444793	-0.18672927	0.04170674	0.296278243	1.3523	0.0208	9.9011	1.1158	9.9013	1.2688	A+	A+	A-
MATH	6	744862	8	A-N	1	13362	0.428528663	0.428528663	0.157985332	0.128723245	0.282218231	0.001347104	0.427486402	0.427486402	-0.220367968	-0.198618348	-0.139746869	0.7823	0.0196	-0.889	0.9928	0.601	1.007	A-	A-	A-
MATH	6	576693	8	D-S	2	13362	0.537344709	0.120191588	0.129321958	0.209848825	0.537344709	0.002095495	0.484026977	-0.222783302	-0.184273181	-0.257067785	0.484026977	0.2325	0.0194	-9.8991	0.926	-9.1091	0.8943	A+	A-	A-
MATH	6	206926	8	B-E	1	13362	0.503891633	0.503891633	0.196602305	0.217332735	0.079179764	0.001945816	0.216504223	0.216504223	-0.213720888	0.07029972	-0.183875178	0.4003	0.0194	9.9012	1.2221	9.9013	1.3231	A+	A+	A+
MATH	6	274356	8	D-S	2	13362	0.292770543	0.254078731	0.292770543	0.268747194	0.181709325	0.002170334	0.207266547	-0.005324909	0.207266547	-0.106496325	-0.110738938	1.5318	0.0213	9.9012	1.1973	9.9014	1.4228	A-	A-	A-
MATH	6	454248	9	D-S	2	13354	0.350082372	0.196345664	0.350082372	0.312265988	0.137412011	0.002995357	0.26193636	-0.083355755	0.26193636	-0.043514535	-0.198792048	1.2055	0.0205	9.9012	1.1927	9.9013	1.329	A-	A-	A-
MATH	6	567720	9	B-E	2	13354	0.419799311	0.121536618	0.129399431	0.325595327	0.419799311	0.001647446	0.38009657	-0.201200953	-0.228428189	-0.089709164	0.38009657	0.8292	0.0199	7.5211	1.0653	7.4411	1.094	A+	A-	A-
MATH	6	895051	9	B-E	2	13354	0.644451101	0.156282762	0.087015127	0.644451101	0.105436573	0.00629025	0.532523534	-0.282029325	-0.28181967	0.532523534	-0.230509422	-0.3259	0.0201	-9.8991	0.8521	-9.8992	0.7715	A+	A-	A-
MATH	6	394756	9	A-N	1	13354	0.681368878	0.049797813	0.142204583	0.681368878	0.124756627	0.001123259	0.364381335	-0.17772395	-0.096339789	0.364381335	-0.291955975	-0.5289	0.0205	1.691	1.0147	3.6911	1.0691	A-	A-	A-
MATH	6	251833	9	A-N	2	13354	0.410363936	0.149093904	0.19627078	0.236408567	0.410363936	0.007338625	0.381733836	-0.237528897	-0.0934862	-0.146899684	0.381733836	0.8883	0.02	7.4411	1.0655	8.1211	1.1046	A-	A-	A-
MATH	6	343152	9	A-R	2	13354	0.607533323	0.607533323	0.066796465	0.069117867	0.252808147	0.001797214	0.496882851	0.496882851	-0.228790796	-0.247719567	-0.275487297	-0.1298	0.0198	-9.8991	0.9017	-9.8992	0.8404	A-	A-	A-
MATH	6	524272	9	D-S	2	13354	0.690280066	0.154710199	0.074060207	0.690280066	0.077130448	0.002321402	0.469127998	-0.255910974	-0.267862781	0.469127998	-0.191471101	-0.5793	0.0206	-9.8991	0.902	-9.4792	0.8313	A+	A-	A-
MATH	6	180085	9	C-G	2	13354	0.489366482	0.115995207	0.259023514	0.131421297	0.489366482	0.003145125	0.505144335	-0.292080254	-0.153299144	-0.261732148	0.505144335	0.4774	0.0196	-9.8991	0.9163	-9.7891	0.8875	A+	A-	A-
MATH	7	982501	0	D-S	2	119582	0.671246509	0.078598786	0.671246509	0.118596444	0.13022863	0.000894783	0.45969261	-0.122898748	0.45969261	-0.242044991	-0.3070207	-0.9127	0.007	-9.899	0.9584	-1.359	0.9909			
MATH	7	380383	0	A-R	2	119582	0.558085665	0.152932716	0.558085665	0.170067401	0.116380392	0.001388169	0.427474639	-0.187746804	0.427474639	-0.178955426	-0.235548609	-0.3114	0.0067	9.9011	1.0505	6.051	1.0302			
MATH	7	540564	0	A-R	2	119582	0.76531585	0.101754445	0.76531585	0.070738071	0.059707983	0.001312907	0.4354049	-0.179233986	0.4354049	-0.24920847	-0.271358694	-1.4188	0.0075	-9.8991	0.9038	-9.8991	0.8742			
MATH	7	369044	0	D-S	2	119582	0.652096469	0.088173805	0.194711579	0.652096469	0.062718469	0.001580505	0.502507397	-0.226758823	-0.289759116	0.502507397	-0.239914711	-0.8273	0.0069	-9.8991	0.9271	-9.8991	0.8593			
MATH	7	297354	0	A-N	2	119582	0.49004867	0.169766353	0.176958071	0.49004867	0.160902142	0.001062033	0.440542586	-0.235003841	-0.260937827	0.440542586	-0.084108348	0.1853	0.0067	9.901	1.0403	9.9011	1.0541			
MATH	7	414003	0	A-R	2	119582	0.676966433	0.131240488	0.676966433	0.100884749	0.089001689	0.001112208	0.538720558	-0.304677525	0.538720558	-0.260073225	-0.242663031	-0.9106	0.007	-9.8991	0.8604	-9.8993	0.7505			
MATH	7	421899	0	D-S	1	119582	0.675946213	0.105910589	0.064491311	0.151519459	0.675946213	0.001003496	0.468448674	-0.277485913	-0.229210007	-0.211263594	0.468448674	-0.9636	0.007	-9.899	0.9513	-8.4691	0.9428			
MATH	7	961807	0	B-E	2	119582	0.629994481	0.057834791	0.629994481	0.145356325	0.165183723	0.001045308	0.521760302	-0.167668568	0.521760302	-0.20486437	-0.374853836	-0.636	0.0068	-9.8991	0.8979	-9.8992	0.8372			
MATH	7	650341	0	A-N	1	119582	0.723311201	0.079041996	0.121305882	0.723311201	0.073631483	0.001296182	0.515112905	-0.250189316	-0.310770405	0.515112905	-0.226082949	-1.1696	0.0072	-9.8991	0.8613	-9.8993	0.7173			
MATH	7	360788	0	B-E	2	119582	0.597506314	0.116229867	0.597506314	0.217934137	0.066239066	0.001379806	0.465034199	-0.149336969	0.465034199	-0.295635783	-0.225368881	-0.459	0.0067	-6.919	0.9805	-2.849	0.9851			
MATH	7	611004	0	D-S	2	119582	0.537037347	0.537037347	0.088725728	0.292334967	0.080279641	0.000593735	0.547778641	0.547778641	-0.167828264	-0.331406491	-0.270919403	-0.1805	0.0067	-9.8991	0.896	-9.8992	0.8497			
MATH	7	574974	0	A-N	1	119582	0.711369604	0.082261544	0.114749711	0.089545249	0.711369604	0.000777709	0.396935868	-0.227015189	-0.194710087	-0.188515681	0.396935868	-1.0794	0.0071	-2.959	0.9908	3.081	1.0228			
MATH	7	799454	0	B-E	2	119582	0.683915639	0.683915639	0.186365841	0.045817932	0.082487331	0.000735897	0.572535824	0.572535824	-0.358316125	-0.231174086	-0.279630822	-0.9374	0.007	-9.8992	0.8098	-9.8993	0.6948			
MATH	7	681223	0	B-E	2	119582	0.395669917	0.395669917	0.232225586	0.268853172	0.101152347	0.00163068	0.446556213	0.446556213	-0.101930429	-0.229436568	-0.239159447	0.6266	0.0069	6.511	1.0207	9.9011	1.0798			
MATH	7	616677	0	A-R	2	119582	0.675962938	0.098551621	0.081826696	0.675962938	0.141676841	0.001170745	0.421219421	-0.24005421	-0.262813373	0.421219421	-0.147661828	-0.8465	0.0069	-4.849	0.9857	0.971	1.0063			
MATH	7	212796	0	A-N	1	119582	0.327014099	0.271922196	0.115201284	0.284959275	0.327014099	0.000602097	0.553158134	0.004535313	-0.184902076	-0.447379382	0.553158134	1.0648	0.0071	-9.8991	0.8657	-9.8991	0.8549			
MATH	7	168174	0	C-G	2	119582	0.567342911	0.567342911	0.156135539	0.187386061	0.086785637	0.001580505	0.513557212	0.513557212	-0.234946974	-0.276412083	-0.210874056	-0.2573	0.0067	-9.8991	0.9303	-9.8991	0.8747			
MATH	7	255148	0	C-G	1	119582	0.404718101	0.186934488	0.160099346	0.404718101	0.246592296	0.000986771	0.37232046	-0.158383349	-0.184259453	0.37232046	-0.120199143	0.6047	0.0068	9.9011	1.1185	9.9012	1.2093			
MATH	7	317707	0	B-E	2	119582	0.576784131	0.128731749	0.145565386	0.576784131	0.14683648	0.000919871	0.492530985	-0.235416458	-0.246202235	0.492530985	-0.214952543	-0.3379	0.0067	-9.899	0.9585	-9.8991	0.9013			
MATH	7	524160	0	C-G	2	119582	0.402961984	0.275024669	0.402961984	0.200690739	0.119073105	0.001070395	0.223603125	-0.204553739	0.223603125	-0.082387672	0.049587444	0.6149	0.0068	9.9013	1.3337	9.9015	1.474			
MATH	7	807134	0	D-S	2	119582	0.724180897	0.068739442	0.724180897	0.114816611	0.091209379	0.000393036	0.454385642	-0.221565923	0.454385642	-0.223769964	-0.25976879	-1.2072	0.0072	-9.8991	0.9315	-9.8991	0.8977			
MATH	7	864759	0	B-E	2	119582	0.384355505	0.142094964	0.384355505	0.357328026	0.114808249	0.000911508	0.229513765	-0.195630421	0.229513765	0.07357103	-0.243772719	0.7279	0.0069	9.9013	1.3226	9.9015	1.4906			
MATH	7	832614	0	B-E	1	119582	0.468716027	0.110468131	0.092421936	0.325508856	0.468716027	0.001028583	0.45071398	-0.268563417	-0.244405142	-0.144720357	0.45071398	0.1999	0.0067	8.511	1.0252	7.101	1.0313			
MATH	7	173817	0	A-N	1	119582	0.462920841	0.462920841	0.138967403	0.11403054	0.282785035	0.000752622	0.224368993	0.224368993	-0.24597084	-0.184377016	0.072932284	0.2173	0.0067	9.9013	1.3248	9.9014	1.4396			
MATH	7	360090	0	A-N	2	119582	0.496838989	0.132570119	0.496838989	0.292360054	0.076767406	0.000535198	0.534514669	-0.209731018	0.534514669	-0.356786306	-0.122655594	0.0525	0.0067	-9.8991	0.9144	-9.8991	0.891			
MATH	7	801250	0	A-N	2	119582	0.610677192	0.133038417	0.610677192	0.118111421	0.136023816	0.001371444	0.55476458	-0.277529553	0.55476458	-0.248111585	-0.274378171	-0.5573	0.0068	-9.8991	0.8733	-9.8992	0.7891			
MATH	7	183015	0	A-R	2	119582	0.618838956	0.618838956	0.210892944	0.08604974	0.082704755	0.000961683	0.572228334	0.572228334	-0.374667157	-0.221189293	-0.224369046	-0.5693	0.0068	-9.8992	0.8383	-9.8992	0.7575			
MATH	7	735844	0	B-E	1	119582	0.548878594	0.174022846	0.062358883	0.548878594	0.212925022	0.001145657	0.474988222	-0.37864319	-0.195101878	0.474988222	-0.107198922	-0.1809	0.0067	-5.069	0.9857	-9.8991	0.9473			
MATH	7	521650	0	D-S	2	119582	0.413088926	0.147589102	0.152322256	0.285176699	0.413088926	0.000652272	0.23945071	-0.12038346	-0.155548452	-0.039690019	0.23945071	0.5083	0.0068	9.9013	1.2992	9.9014	1.4172			

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
MATH	7	122874	0	A-R	2	119582	0.886094897	0.042631834	0.034520246	0.035197605	0.886094897	0.000769347	0.3607871	-0.195009029	-0.199717591	-0.202899893	0.3607871	-2.2699	0.0091	-9.8992	0.8042	-9.8994	0.605			
MATH	7	165763	0	C-G	2	119582	0.584845545	0.116313492	0.083181415	0.214463715	0.584845545	0.000468298	0.411319819	-0.189783953	-0.259107618	-0.168988612	0.411319819	-0.4068	0.0067	9.9011	1.0512	9.9011	1.1043			
MATH	7	237794	0	D-S	2	119582	0.497842485	0.099279156	0.291197672	0.497842485	0.10951481	0.001647405	0.471430364	-0.261119982	-0.294037096	0.471430364	-0.072235329	0.0687	0.0067	-0.359	0.9989	-5.879	0.9743			
MATH	7	864511	0	A-R	2	119582	0.585815591	0.162700072	0.092154338	0.585815591	0.156745999	0.00115402	0.463873191	-0.178349732	-0.299164266	0.463873191	-0.203931549	-0.5026	0.0067	0.571	1.0016	-2.329	0.9875			
MATH	7	544559	0	C-G	2	119582	0.337391915	0.220401064	0.257547122	0.337391915	0.181983911	0.001705942	0.290182708	-0.169235233	-0.086715361	0.290182708	-0.069453839	1.0974	0.0072	9.9012	1.2237	9.9015	1.5138			
MATH	7	161479	0	A-R	2	119582	0.577444766	0.077160442	0.268593936	0.074919302	0.577444766	0.000719172	0.623024419	-0.247865557	-0.413163185	-0.216761865	0.623024419	-0.3526	0.0067	-9.8992	0.7928	-9.8993	0.7018			
MATH	7	727622	0	A-N	2	119582	0.556145574	0.556145574	0.111939924	0.227325183	0.103234601	0.000852971	0.462198251	0.462198251	-0.281988266	-0.190693777	-0.195563674	-0.2424	0.0067	1.241	1.0035	-7.559	0.9641			
MATH	7	753863	0	A-R	2	119582	0.493134418	0.235344784	0.110050008	0.159881922	0.493134418	0.000961683	0.615224741	-0.236337375	-0.301145604	-0.305025265	0.615224741	0.1203	0.0067	-9.8992	0.8126	-9.8992	0.7608			
MATH	7	776244	0	B-E	2	119582	0.669047181	0.127268318	0.669047181	0.086459501	0.114356676	0.001521968	0.537099977	-0.319154541	0.537099977	-0.262876154	-0.220214114	-0.8293	0.0069	-9.8991	0.8604	-9.8993	0.7469			
MATH	7	222805	0	B-E	2	119582	0.600441538	0.600441538	0.238514158	0.094587814	0.063354016	0.001262732	0.407045585	0.407045585	-0.144440728	-0.2765115	-0.225149917	-0.4521	0.0067	9.9011	1.0513	9.9011	1.0619			
MATH	7	771792	0	D-S	2	119582	0.711670653	0.11460755	0.057408306	0.711670653	0.113696041	0.001179107	0.544436289	-0.265401387	-0.25701391	0.544436289	-0.315070716	-1.1506	0.0072	-9.8992	0.842	-9.8993	0.7092			
MATH	7	179837	1	B-E	2	13903	0.694454434	0.11918291	0.694454434	0.084873768	0.099115299	0.001438538	0.538622902	-0.300871157	0.538622902	-0.254156525	-0.260586501	-1.083	0.0207	-9.8991	0.8506	-9.8993	0.7221	A+	A-	A-
MATH	7	997467	1	D-S	1	13903	0.441775156	0.104078256	0.441775156	0.154499029	0.296914335	0.001438538	0.176400273	-0.217139753	0.176400273	-0.118527286	0.05289071	0.3108	0.0199	9.9014	1.4321	9.9016	1.609	A-	A-	A-
MATH	7	462076	1	A-N	1	13903	0.482557721	0.165503848	0.482557721	0.140904841	0.206574121	0.003955981	0.423137836	-0.196214337	0.423137836	-0.240799993	-0.127360665	0.0936	0.0197	9.1111	1.0818	7.9111	1.108	A-	A+	A+
MATH	7	756321	1	C-G	2	13903	0.403438107	0.177947206	0.252679278	0.403438107	0.16219521	0.002373588	0.362231856	-0.210888433	-0.144165119	0.362231856	-0.086151103	0.5246	0.0202	9.9011	1.1498	9.9012	1.2249	A+	A-	A-
MATH	7	763080	1	B-E	2	13903	0.236855355	0.255412501	0.25052147	0.25426167	0.236855355	0.001798173	0.24277688	0.02852386	-0.127991692	-0.13411485	0.24277688	1.5736	0.0229	9.9012	1.2053	9.9017	1.7138	A-	A+	A-
MATH	7	295631	1	A-N	1	13903	0.363950227	0.234985255	0.363950227	0.179026109	0.220240236	0.001078904	0.24799839	-0.101909094	0.24799839	-0.019616285	-0.161776373	0.7519	0.0205	9.9013	1.2974	9.9015	1.4855	A-	A+	A-
MATH	7	680639	1	A-R	2	13903	0.377760196	0.294540747	0.377760196	0.201898871	0.122131914	0.00280515	0.355193216	0.101302842	0.355193216	-0.350806934	-0.226749546	0.6714	0.0204	9.9012	1.169	9.9013	1.2781	A+	A-	A-
MATH	7	332817	1	A-R	2	13903	0.483564698	0.483564698	0.169603683	0.139538229	0.202761994	0.003596346	0.423299661	0.423299661	-0.217045549	-0.186908052	-0.156273427	0.0827	0.0197	8.4011	1.0751	6.8511	1.0931	A-	A+	A+
MATH	7	171372	2	A-N	1	13212	0.528686043	0.170829549	0.067211626	0.528686043	0.230169543	0.001513775	0.509853455	-0.104290963	-0.213818013	0.509853455	-0.376869161	-0.0908	0.0202	-5.759	0.9505	-3.7891	0.9485	A+	A-	A-
MATH	7	742082	2	A-R	1	13212	0.438389343	0.075764457	0.438389343	0.123221314	0.358991826	0.001740842	0.423838344	-0.175035136	0.423838344	-0.226094364	-0.17980029	0.4043	0.0204	7.7711	1.0736	7.5111	1.1045	A-	A-	A-
MATH	7	395456	2	A-N	1	13212	0.474417196	0.071071753	0.35255828	0.474417196	0.100438995	0.000756888	0.586630542	-0.118733441	-0.499408675	0.586630542	-0.074367773	0.204	0.0203	-9.8991	0.8589	-9.8992	0.8191	A-	A-	A-
MATH	7	408392	2	B-E	2	13212	0.402058734	0.402058734	0.233878292	0.209657887	0.14925825	0.004389949	0.188546503	0.188546503	-0.006072337	-0.122082512	-0.105194511	0.6027	0.0207	9.9014	1.3915	9.9015	1.5374	A+	A-	A-
MATH	7	644534	2	A-R	2	13212	0.61239782	0.100060551	0.61239782	0.226233727	0.059037239	0.001589464	0.408463111	-0.213996745	0.408463111	-0.189805236	-0.224555696	-0.5422	0.0204	6.2911	1.0555	3.0611	1.0515	A-	A-	A-
MATH	7	387561	2	B-E	2	13212	0.176203451	0.193536179	0.177263094	0.450121102	0.176203451	0.001892219	-0.002157589	-0.190214902	-0.182399847	0.298302478	-0.002157589	2.1147	0.0257	9.9014	1.4331	9.9027	2.6567	A-	A+	A-
MATH	7	759378	2	D-S	2	13212	0.423175901	0.309264305	0.085755374	0.423175901	0.177414472	0.00431426	0.224515613	0.085158768	-0.24001559	0.224515613	-0.211647222	0.4846	0.0205	9.9014	1.353	9.9015	1.5008	A+	A-	A-
MATH	7	765808	2	C-G	2	13212	0.513699667	0.513699667	0.183318196	0.205949137	0.092643052	0.002497729	0.492119648	0.492119648	-0.237874047	-0.235056603	-0.190661166	-0.0079	0.0202	-2.089	0.9817	-3.259	0.9564	A+	A-	A-
MATH	7	349642	3	A-N	1	13207	0.331490876	0.331490876	0.296509427	0.185204816	0.185507685	0.000681457	0.243074439	0.243074439	-0.114358423	-0.09286878	-0.064375875	0.9939	0.0214	9.9013	1.2715	9.9015	1.4958	A+	A+	A+
MATH	7	223450	3	A-N	1	13207	0.766336034	0.086090709	0.766336034	0.083894904	0.06080109	0.001211479	0.458018606	-0.237771862	0.458018606	-0.232810639	-0.252300832	-1.4708	0.0226	-9.8991	0.8906	-6.9192	0.8234	A+	A-	A-
MATH	7	316548	3	A-R	2	13207	0.549859923	0.207541455	0.549859923	0.115090482	0.124479443	0.00234724	0.446136553	-0.183492548	0.446136553	-0.174472313	-0.272110628	-0.2152	0.0201	2.231	1.0191	-0.549	0.992	A-	A-	A-
MATH	7	431079	3	D-S	2	13207	0.201332627	0.201332627	0.251381843	0.425304763	0.119103506	0.001968653	0.23245127	0.23245127	-0.138313419	0.01739082	-0.121538414	1.8827	0.0246	8.8811	1.1264	9.9019	1.8689	A-	A+	A-
MATH	7	749187	3	B-E	2	13207	0.527523283	0.128189596	0.120087832	0.21973196	0.527523283	0.004240176	0.52774408	-0.29721526	-0.209687306	-0.226472772	0.52774408	-0.0937	0.0201	-9.4391	0.9212	-8.2991	0.8899	A-	A-	A-
MATH	7	637494	3	C-G	2	13207	0.425986219	0.301582494	0.180131748	0.425986219	0.09017945	0.001438631	0.458529101	-0.125452199	-0.291582239	0.458529101	-0.195143257	0.4526	0.0204	1.011	1.0094	3.531	1.0482	A-	A-	A-
MATH	7	996967	3	C-G	2	13207	0.314681608	0.402135231	0.161353828	0.314681608	0.118497766	0.001817218	0.131253602	0.174644668	-0.228258018	0.131253602	-0.186768268	1.0966	0.0216	9.9014	1.408	9.9018	1.7662	A+	A+	A+
MATH	7	988958	3	A-R	2	13207	0.308548497	0.211781631	0.308548497	0.207314303	0.268872568	0.002725827	0.157306895	-0.110046402	0.157306895	0.002457427	-0.059270642	1.1346	0.0217	9.9014	1.3973	9.9017	1.6881	A+	A-	A-
MATH	7	136594	4	B-E	2	13216	0.468144673	0.194536925	0.139376513	0.193250605	0.468144673	0.003934625	0.41570953	-0.200230462	-0.133098509	-0.202358161	0.41570953	0.2533	0.0202	8.4611	1.0778	7.1911	1.099	A+	A-	A-
MATH	7	438600	4	D-S	2	13216	0.464210048	0.153223366	0.184246368	0.464210048	0.19627724	0.00090799	0.503317294	-0.300865702	-0.167255479	0.503317294	-0.191968386	0.2801	0.0203	-4.799	0.9574	-2.569	0.966	A-	A-	A-
MATH	7	482995	4	A-R	2	13216	0.532460654	0.095338983	0.532460654	0.107748184	0.26187954	0.002118644	0.317552287	-0.223921757	0.317552287	-0.25754184	-0.02464104	-0.0867	0.0201	9.9012	1.2053	9.9013	1.3083	A+	A+	A-
MATH	7	819234	4	B-E	2	13216	0.410714286	0.339437046	0.410714286	0.1187954	0.127421308	0.001967312	0.192065053	0.133439568	0.192065053	-0.260233855	-0.214491519	0.5688	0.0206	9.9014	1.3819	9.9015	1.5465	A-	A-	A-
MATH	7	807145	4	C-G	2	13216	0.200892857	0.200892857	0.429782082	0.20687046	0.156401332	0.005599274	0.227995916	0.227995916	-0.015903102	-0.096287766	-0.113082456	1.9259	0.0247	9.9012	1.1551	9.9018	1.8455	A-	A+	A-
MATH	7	496847	4	A-N	1	13216	0.437121671	0.098365617	0.189542978	0.273910412	0.437121671	0.000680993	0.388981777	-0.178756294	-0.183179061	-0.150319686	0.388981777	0.4225	0.0204	9.9011	1.11	9.9012	1.1631	A+	A+	A-
MATH	7	386320	4	A-R	2	13216	0.639527845	0.109034504	0.145581114	0.639527845	0.102905569	0.001588983	0.552909728	-0.293420163	-0.27317409	0.552909728	-0.24785612	-0.6749	0.0206	-9.8991	0.8626	-9.8992	0.7632	A-	A-	A-
MATH	7	999419	4	D-S	2	13216	0.542978208	0.20066586	0.542978208	0.120762712	0.132415254	0.001967312	0.405525564	-0.150210102	0.405525564	-0.266675257	-0.15403902	-0.1489	0.0201	9.7311	1.0861	8.8911	1.1325	A+	A-	A-
MATH	7	896880	5	D-S	2	13216	0.449152542	0.449152542	0.200438862	0.234942494	0.112515133	0.00219431	0.500267778	0.500267778	-0.196641605	-0.241179335	-0.20719188	0.3563	0.0203	-4.439	0.9603	-2.639	0.9649	A+	A-	A-
MATH	7	922661	5	A-R	2	13216	0.431749395	0.183868039	0.206492131	0.431749395	0.174409806	0.002345642	0.271277074	-0.061166354	-0.127554633	0.271277074	-0.150078068	0.4514	0.0204	9.9013	1.2765	9.9014	1.4165	A+	A-	A-
MATH	7	761474	5	C-G	1	13216	0.302890436	0.226316586	0.337015738	0.130523608	0.302890436	0.001891646	0.276964338	-0.186760167	0.034362674	-0.187461059	0.276964338	1.1975	0.0219	9.9012	1.224	9.9015	1.4605	A-	A-	A-
MATH	7	502898	5	D-S	1	13216	0.655644673	0.096246973	0.655644673	0.114709443	0.128253632	0.004539952	0.476359075	-0.21297689	0.476359075	-0.251432985	-0.241461091	-0.7704	0.0207	-6.1991	0.9464	-5.4891	0.8987	A-	A-	A-
MATH	7	351564	5	A-N	1	13216	0.445671913	0.132036925	0.237515133	0.183792373	0.445671913	0.000529661	0.428947785	-0.20195905	-0.199816019	-0.153169301	0.428947785	0.3688	0.0203	6.2511	1.0579	5.6911	1.0783	A+	A-	A-
MATH	7	565506	5	A-N	1	13216	0.622200363	0.27776937	0.622200363	0.057506053	0.03964891	0.002042978	0.542847805	-0.392418169	0.542847805	-0.216029691	-0.180538015	-0.5835	0.0204	-9.8991	0.8851	-9.8992	0.8128	A-	A-	A-
MATH	7	793259	5	B-E	2	13216	0.341480024	0.196201574	0.341480024	0.260366223	0.198774213	0.002118644	0.16258318	-0.138266845	0.16258318	-0.040601401	-0.005299485	0.9604	0.0213	9.9014	1.3985	9.9017	1.6569	A-	A-	A-
MATH	7	583073	5	A-R	2	13216	0.337848063	0.137182203	0.393386804	0.126740315	0.337848063	0.004766949	0.225090005	-0.261517618	0.122162636	-0.222677524	0.225090005	0.9821	0.0213	9.9013	1.2977	9.9016	1.5668	A+	A+	A+
MATH	7	192500	6	B-E	2	13194	0.598378051	0.123844172	0.143853267	0.598378051	0.130589662	0.002425345	0.43764474	-0.141897315	-0.274747955	0.43764474	-0.204295374	-0.4449	0.0202	2.651	1.0226	-1.839	0.9714	A+	A+	A-
MATH	7	673042	6	C-G	2	13194	0.456646961	0.456646961	0.155297863	0.234424739	0.149992421	0.002122177	0.244079578	0.244079578	-0.159364908	-0.096032304	-0.056790852	0.3181	0.0202	9.9013	1.2969	9.9014	1.3827	A-	A-	A-
MATH	7	863948	6	A-R	2	13194	0.597316962	0.087615583	0.597316962	0.185766257	0.126496893	0.001440049	0.392256587	-0.184359011	0.392256587	-0.1898515	-0.192510093	-0.44	0.0202	8.0111	1.0694	3.5911	1.0573	A+	A-	A+
MATH	7	935973	6	D-S	2	13194	0.446339245	0.256480218	0.179627103	0.110883735	0.446339245	0.005684402	0.298293225	0.039633378	-0.228233821	-0.239833098	0.298293225	0.3656	0.0202	9.9012	1.2218	9.9013	1.3076	A+	A-	A-
MATH	7	672575	6	B-E	1	13194	0.454979536	0.454979536	0.183113536	0.216083068	0.144308019	0.000833712	0.483839977	0.483839977	-0.164807412	-0.208149473	-0.256272957	0.319	0.0202	-1.969	0.9825	-2.159	0.972	A+	A-	A-
MATH	7	245939	6	C-G	2	13194	0.250644232	0.426557526	0.154615734	0.250644232	0.165832954	0.001364256	0.127319023	0.004706209	-0.090394382	0.127319023	-0.062022777	1.5329	0.0229	9.9014	1.3608	9.9019	1.9419	A-	A+	A+
MATH	7	211662	6	A-R	2	13194	0.332120661	0.242003941	0.20418372	0.216689404	0.332120661	0.004168561	0.33453094	-0.205012768	-0.110156917	-0.054196655	0.33453094	1.0107	0.0213	9.9011	1.127	9.9013	1.3341	A+	A-	A-
MATH	7	878329	6	B-E	2	13194	0.391693194	0.151280885	0.227906624	0.225405487	0.391693194	0.002349553	0.326638382	-0.242518353	-0.140681313	-0.025154267	0.326638382	0.6661	0.0206	9.9012	1.1833	9.9013	1.2582	A-	A-	A-
MATH	7	168658	7	B-E	1	13250	0.655245283	0.103773585	0.146641509	0.655245283	0.091320755	0.001811321	0.471539558	-0.244754052	-0.238447066	0.471539558	-0.21465611	-0.7543	0.0206	-6.1091	0.9468	-6.8491	0.8831	B+	A+	A+
MATH	7	909728	7	C-G	2	13250	0.391773585	0.238943396	0.17154717	0.391773585	0.188679245	0.008301887	0.217595989	0.133053321	-0.189460602	0.217595989	-0.226922443	0.6799	0.0205	9.9013	1.3269	9.9014	1.4486	A+	A-	A-
MATH	7	237670	7	A-R	2	13250	0.682415094	0.102188679	0.682415094	0.089509434	0.122037736	0.002339623	0.429640634	-0.225297443	0.429640634	-0.209770435	-0.2108451	-0.9033	0.0209	-1.639	0.985	-2.309	0.956	A+	A-	A-
MATH	7	227452	7	B-E	1	13250	0.390792453	0.302037736	0.390792453	0.163396226	0.142113208	0.001207547	0.368711662	-0.105870381	0.368711662	-0.103867243	-0.262406628	0.6769	0.0205	9.9011	1.1174	9.9012	1.1644	A-	A-	A-
MATH	7	739747	7	C-G	2	13250	0.238867925	0.238867925	0.164830189	0.39290566	0.198188679	0.002566038	0.006235387	0.006235387	-0.237845863	0.299911402	-0.145003647	1.6107	0.023	9.9015	1.5175	9.9021	2.114	A+	A-	A-
MATH	7	978260	7	D-S	2	13250	0.516528302	0.314264151	0.085660377	0.516528302	0.079924528	0.001735849	0.301458762	-0.014783981	-0.265635566	0.301458762	-0.247454999	0.0006	0.02	9.9012	1.2071	9.9013	1.2703	A+	A-	A-
MATH	7	380519	7	B-E	2	13250	0.325660377	0.141433962	0.143245283	0.383622642	0.325660377	0.00490566	0.115287967	-0.191718477	-0.165197753	0.151274036	0.115287967	1.0516	0.0212	9.9014	1.4049	9.9017	1.7153	A-	A-	A-
MATH	7	980854	7	A-R	2	13250	0.380528302	0.380528302	0.310415094	0.119698113	0.185207547	0.002566038	0.321301	0.321301	-0.180345725	-0.159120924	-0.045190346	0.7343	0.0206	9.9012	1.1642	9.9013	1.2572	A-	A-	A-
MATH	7	902906	8	B-E	2	13192	0.49181322	0.192389327	0.49181322	0.177304427	0.134323833	0.003941783	0.47368903	-0.26119951	0.47368903	-0.184688971	-0.179678868	0.1033	0.02	-1.129	0.9903	-1.359	0.9825	A-	A-	A-
MATH	7	451725	8	C-G	1	13192	0.378486962	0.192010309	0.229912068	0.378486962	0.196179503	0.001364463	0.254455684	-0.031017209	-0.049872073	0.254455684	-0.220915821	0.7286	0.0207	9.9013	1.2717	9.9014	1.3908	A-	A-	A-
MATH	7	985529	8	B-E	2	13192	0.190266828	0.227107338	0.169799879	0.408050334	0.190266828	0.003032141	0.023118913	-0.180570229	-0.293396236	0.365636419	0.023118913	1.9643	0.0249	9.9014	1.4334	9.9023	2.2951	A-	A+	A+
MATH	7	610160	8	A-R	2	13192	0.216343238	0.330882353	0.207474227	0.216343238	0.241130988	0.002956337	0.081781698	0.008155043	-0.134585814	0.081781698	0.045883866	1.7597	0.0239	9.9013	1.3144	9.9023	2.2689	A-	A-	A+
MATH	7	370544	8	A-R	2	13192	0.430942996	0.430942996	0.20603396	0.17586416	0.183747726	0.002198302	0.429470079	0.429470079	-0.150434538	-0.272081265	-0.117330524	0.434	0.0203	4.101	1.0375	4.4011	1.0587	A+	A-	A-
MATH	7	512278	8	A-N	1	13192	0.5301698	0.106276531	0.23211037	0.5301698	0.130078836	0.001061249	0.37074016	-0.104438554	-0.168741028	0.37074016	-0.239700956	-0.0949	0.02	9.9011	1.1178	9.3611	1.1307	A+	A-	A-
MATH	7	223422	8	D-S	2	13192	0.578153426	0.080579139	0.578153426	0.251895088	0.087022438	0.001364463	0.368224295	-0.197793533	0.368224295	-0.136957661	-0.235352566	-0.3495	0.0201	9.9011	1.1021	9.9012	1.1619	A+	A-	A-
MATH	7	359323	8	C-G	2	13192	0.189963614	0.320421468	0.413811401	0.189963614	0.070800485	0.0043208	0.2529644	0.110659909	-0.238214749	0.2529644	-0.12063713	1.9668	0.0249	9.9011	1.1494	9.9015	1.5324	A+	A-	A-
MATH	7	683273	9	B-E	1	13192	0.787219527	0.045861128	0.105139478	0.058823529	0.787219527	0.00128866	0.429563029	-0.218727128	-0.230411558	-0.243359785	0.429563029	-1.6076	0.0233	-7.1891	0.9173	-7.5892	0.7934	C+	A-	A+
MATH	7	951186	9	D-S	2	13192	0.454366283	0.454366283	0.259248029	0.114918132	0.16896604	0.002046695	0.342263557	0.342263557	-0.076233285	-0.256583477	-0.140920284	0.3162	0.0202	9.9012	1.1654	9.9012	1.2201	A-	A-	A-
MATH	7	148113	9	A-R	2	13192	0.386673742	0.290858096	0.386673742	0.183671922	0.13447544	0.003790176	0.229550195	-0.22336873	0.229550195	0.00296845	-0.027520961	0.6836	0.0207	9.9013	1.2924	9.9015	1.4747	A-	A+	A+
MATH	7	960422	9	A-R	2	13192	0.415630685	0.210809582	0.415630685	0.214902971	0.154942389	0.003107944	0.307002433	-0.225879367	0.307002433	-0.145784135	0.005325893	0.5222	0.0204	9.9012	1.2068	9.9013	1.3037	A-	A-	A-
MATH	7	263518	9	A-N	1	13192	0.356807156	0.233778047	0.356807156	0.217783505	0.189887811	0.001061249	0.409306592	-0.094948404	0.409306592	-0.139996346	-0.247199835	0.8546	0.021	4.811	1.0484	9.9012	1.1652	A-	A-	A-
MATH	7	620952	9	D-S	2	13192	0.361582777	0.250530625	0.19223772	0.361582777	0.193223166	0.00151607	0.232577836	-0.098619223	-0.242080978	0.232577836	0.070296745	0.8269	0.0209	9.9013	1.2752	9.9015	1.4736	A+	A-	A-
MATH	7	422365	9	C-G	2	13192	0.303138266	0.290100061	0.156534263	0.246967859	0.303138266	0.002274106	0.162587955	0.143013715	-0.259039176	-0.099792803	0.162587955	1.1781	0.0218	9.9014	1.3896	9.9016	1.6232	A+	A+	A+
MATH	7	809803	9	B-E	2	13192	0.622801698	0.2305943	0.622801698	0.081716192	0.062462098	0.001137053	0.397533352	-0.159722255	0.397533352	-0.264684192	-0.208049991	-0.5895	0.0204	5.9911	1.0519	2.721	1.0471	A+	A-	A-
MATH	8	490524	0	B-E	2	119930	0.616059368	0.104586009	0.181722672	0.616059368	0.095547403	0.001192362	0.517155403	-0.265170776	-0.29601508	0.517155403	-0.184776102	-0.7152	0.0067	-9.8991	0.8913	-9.8992	0.8171			
MATH	8	772977	0	B-F	2	119930	0.764954557	0.764954557	0.132685733	0.049337113	0.051930293	0.000617027	0.469890367	0.469890367	-0.259742179	-0.254870099	-0.247559896	-1.6247	0.0075	-9.8991	0.9015	-9.8992	0.7826			
MATH	8	254985	0	B-E	2	119930	0.635429	0.099274577	0.177253398	0.635429	0.086200283	0.001292421	0.426796423	-0.236886962	-0.196003966	0.426796423	-0.205627196	-0.7728	0.0067	-9.899	0.9732	-5.109	0.9708			
MATH	8	212001	0	B-E	1	119930	0.714841991	0.10337697	0.103718836	0.714841991	0.07650296	0.001150671	0.460485298	-0.272014142	-0.266740582	0.460485298	-0.159006835	-1.2718	0.0071	-9.8991	0.9158	-9.8991	0.8659			
MATH	8	812661	0	C-G	1	119930	0.572100392	0.572100392	0.21799383	0.141057283	0.067080797	0.000808805	0.527320648	0.527320648	-0.356156284	-0.252749222	-0.097692049	-0.418	0.0066	-9.8991	0.8818	-9.8992	0.8233			
MATH	8	112650	0	B-F	2	119930	0.563770533	0.563770533	0.114099892	0.203301926	0.116734762	0.001167348	0.517035781	0.517035781	-0.298277851	-0.240756744	-0.196037373	-0.3337	0.0065	-9.8991	0.8942	-9.8991	0.8633			
MATH	8	600021	0	C-G	2	119930	0.537730343	0.537730343	0.22511465	0.151213208	0.084424247	0.001067289	0.417758347	0.417758347	-0.177626036	-0.214968785	-0.200439638	-0.2441	0.0065	5.771	1.0151	9.021	1.0424			
MATH	8	640707	0	A-N	1	119930	0.614666889	0.140073376	0.086533811	0.614666889	0.15763362	0.000541983	0.518866191	-0.390127867	-0.238710097	0.518866191	-0.13423655	-0.5843	0.0066	-9.8991	0.8683	-9.8992	0.8272			
MATH	8	110831	0	A-N	1	119930	0.653989827	0.07423497	0.138822647	0.653989827	0.131334945	0.000650379	0.446033788	-0.290036832	-0.189445817	0.446033788	-0.204951273	-0.8348	0.0067	-9.8991	0.9366	-9.8991	0.923			
MATH	8	281597	0	B-E	2	119930	0.650904694	0.092995914	0.152780789	0.650904694	0.100975569	0.001300759	0.513436461	-0.249787975	-0.264240081	0.513436461	-0.249402274	-0.8631	0.0067	-9.8991	0.88	-9.8992	0.7835			
MATH	8	566794	0	B-E	2	119930	0.631676811	0.045926791	0.631676811	0.157983824	0.162786626	0.000500292	0.435182875	-0.199771022	0.435182875	-0.264418661	-0.190693235	-0.7618	0.0067	-9.899	0.972	-9.8991	0.9219			

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
MATH	8	286995	0	B-F	2	119930	0.540648712	0.138964396	0.133611273	0.184741099	0.540648712	0.001234053	0.478646459	-0.28535447	-0.224881871	-0.15818093	0.478646459	-0.24	0.0065	-9.8991	0.9438	-9.8991	0.9256			
MATH	8	958173	0	D-S	2	119930	0.378921037	0.190110898	0.189352122	0.239598099	0.378921037	0.001467523	0.27329832	-0.103043024	-0.174234813	-0.05237667	0.27329832	0.4952	0.0067	9.9012	1.1738	9.9013	1.2682			
MATH	8	741478	0	C-G	2	119930	0.454298341	0.213007588	0.172058701	0.454298341	0.158367381	0.001625948	0.386518711	-0.198829731	-0.206109564	0.386518711	-0.085997772	0.2024	0.0066	9.9011	1.0602	9.9011	1.0731			
MATH	8	862395	0	A-N	1	119930	0.720153423	0.102092888	0.720153423	0.095905945	0.08071375	0.000500292	0.436021968	-0.24636589	0.436021968	-0.231957603	-0.190721935	-1.334	0.0071	-9.899	0.9516	-9.8991	0.8875			
MATH	8	356081	0	A-N	1	119930	0.370974735	0.215183857	0.370974735	0.204044026	0.20786292	0.001409155	0.241697368	-0.076459614	0.241697368	-0.144174418	-0.062878363	0.6476	0.0068	9.9012	1.2338	9.9014	1.3731			
MATH	8	325119	0	A-N	2	119930	0.694671892	0.085449846	0.122004503	0.095997665	0.694671892	0.000892187	0.441168573	-0.301416803	-0.147394383	-0.233992818	0.441168573	-1.124	0.0069	-9.8991	0.9246	-2.379	0.9839			
MATH	8	110496	0	C-G	2	119930	0.483682148	0.175727508	0.114683565	0.223880597	0.483682148	0.001033936	0.468475105	-0.241842899	-0.253671783	-0.142435289	0.468475105	0.012	0.0066	-9.899	0.9634	-9.899	0.9567			
MATH	8	166187	0	B-E	1	119930	0.371875261	0.130601184	0.371875261	0.283281914	0.212382223	0.000875511	0.243899001	-0.088371354	0.243899001	-0.151792907	-0.045124726	0.5792	0.0068	9.9012	1.2113	9.9013	1.334			
MATH	8	297872	0	C-G	2	119930	0.492020345	0.233427833	0.492020345	0.198457434	0.073017594	0.002009506	0.362732057	-0.14869417	0.362732057	-0.183261152	-0.16600939	-0.0258	0.0065	9.9011	1.0873	9.9011	1.083			
MATH	8	630539	0	B-F	2	119930	0.449995831	0.171616776	0.080863837	0.449995831	0.295814225	0.000767114	0.358112164	-0.214280061	-0.217574269	0.358112164	-0.080849295	0.1598	0.0066	9.9011	1.0936	9.9011	1.131			
MATH	8	431328	0	B-F	2	119930	0.609263737	0.609263737	0.138997749	0.12816643	0.121412491	0.00161761	0.44786036	0.44786036	-0.241314071	-0.236573518	-0.166110105	-0.6629	0.0066	-9.899	0.9655	-9.8991	0.946			
MATH	8	131261	0	B-E	2	119930	0.740715417	0.118344034	0.059334612	0.079679813	0.740715417	0.001008922	0.466276025	-0.243628002	-0.230498943	-0.255640715	0.466276025	-1.3656	0.0072	-9.8991	0.8728	-9.8992	0.8204			
MATH	8	269106	0	A-N	1	119930	0.498674227	0.498674227	0.341190695	0.097882098	0.06110231	0.000625365	0.398214042	0.398214042	-0.158671775	-0.263568963	-0.187171174	-0.0316	0.0065	9.901	1.0447	9.9011	1.0515			
MATH	8	398992	0	B-E	2	119930	0.563361961	0.18570833	0.124147419	0.563361961	0.12576503	0.00069207	0.344824895	-0.079395683	-0.16736532	0.344824895	-0.253987797	-0.4283	0.0066	9.9011	1.0973	9.9011	1.0954			
MATH	8	731475	0	A-N	1	119930	0.503710498	0.503710498	0.189302093	0.085249729	0.219661469	0.000850496	0.437401621	0.437401621	-0.279361294	-0.291512963	-0.062589113	-0.2472	0.0065	-0.589	0.9985	2.251	1.0105			
MATH	8	745747	0	D-S	2	119930	0.467472692	0.336621362	0.467472692	0.114216626	0.079963312	0.000883849	0.498923658	-0.311478155	0.498923658	-0.152306424	-0.190781497	0.1425	0.0066	-9.8991	0.9309	-9.8991	0.9239			
MATH	8	717838	0	B-E	2	119930	0.352072042	0.352072042	0.199783207	0.303201868	0.142616526	0.001976153	0.288082382	0.288082382	-0.090238157	-0.086213619	-0.172839574	0.6804	0.0069	9.9011	1.1387	9.9013	1.2719			
MATH	8	122259	0	B-F	2	119930	0.430092554	0.12035354	0.250812974	0.19560577	0.430092554	0.002276328	0.324919723	-0.165927873	-0.145623105	-0.104204017	0.324919723	0.3547	0.0067	9.9011	1.14	9.9012	1.1899			
MATH	8	699283	0	B-E	1	119930	0.424922872	0.424922872	0.123246894	0.323755524	0.126848995	0.000667056	0.423429671	0.423429671	-0.175247709	-0.186883077	-0.190853241	0.3633	0.0067	6.481	1.0187	9.9011	1.05			
MATH	8	182339	0	C-G	2	119930	0.607721171	0.098173935	0.190060869	0.102192946	0.607721171	0.001242391	0.24679935	-0.171732913	-0.014232619	-0.20605718	0.24679935	-0.594	0.0066	9.9012	1.184	9.9012	1.2489			
MATH	8	397286	0	C-G	2	119930	0.56595514	0.238564162	0.56595514	0.138939381	0.054390061	0.001567581	0.377183636	-0.244086282	0.377183636	-0.131132888	-0.156616052	-0.458	0.0066	9.9011	1.0628	9.9011	1.0753			
MATH	8	845232	0	D-S	2	119930	0.836613024	0.030209289	0.836613024	0.073442842	0.058492454	0.000783791	0.416088711	-0.177770129	0.416088711	-0.232680614	-0.261791559	-2.1067	0.0084	-9.8991	0.8976	-9.8992	0.7511			
MATH	8	971920	0	C-G	2	119930	0.521070625	0.203835571	0.521070625	0.153998166	0.11919453	0.000950554	0.360722801	-0.160505854	0.360722801	-0.176774718	-0.155175026	-0.1649	0.0065	9.9011	1.0844	9.9012	1.1509			
MATH	8	392724	0	C-G	2	119930	0.335695823	0.253364463	0.191344951	0.335695823	0.217710331	0.000808805	0.200227593	-0.08895813	-0.118517217	0.200227593	-0.019722939	0.7804	0.0069	9.9013	1.2509	9.9015	1.4706			
MATH	8	276880	0	B-F	2	119930	0.50212624	0.085850079	0.3283999	0.082564829	0.50212624	0.000350204	0.505670586	-0.27600397	-0.272965031	-0.16904495	0.505670586	-0.1102	0.0065	-9.8991	0.919	-9.8991	0.8974			
MATH	8	857998	0	B-E	2	119930	0.772033686	0.045860085	0.772033686	0.140198449	0.041032269	0.000333528	0.493004719	-0.22144591	0.493004719	-0.344185421	-0.202717791	-1.5502	0.0074	-9.8992	0.8313	-9.8993	0.6705			
MATH	8	104544	0	B-E	2	119930	0.514274994	0.103660469	0.217693655	0.16290336	0.514274994	0.001050613	0.478968112	-0.254026281	-0.176436261	-0.237109216	0.478968112	-0.1261	0.0065	-9.8991	0.9488	-9.8991	0.9333			
MATH	8	246173	0	B-E	1	119930	0.555065455	0.154756942	0.128016343	0.160051697	0.555065455	0.001025598	0.475647602	-0.14816159	-0.249684791	-0.266433358	0.475647602	-0.374	0.0065	-9.8991	0.945	-9.8991	0.922			
MATH	8	253876	0	D-S	2	119930	0.523613775	0.174860335	0.176136079	0.523613775	0.122921704	0.001475861	0.528823136	-0.221894405	-0.288450275	0.528823136	-0.206440601	-0.2577	0.0065	-9.8991	0.8916	-9.8992	0.8444			
MATH	8	323346	1	B-F	2	13946	0.322959989	0.32145418	0.206582533	0.146350208	0.322959989	0.001649218	0.259969136	-0.020747138	-0.104983576	-0.189882096	0.259969136	0.812	0.0206	9.9012	1.1955	9.9014	1.3505	A-	A-	A-
MATH	8	594289	1	B-E	2	13946	0.397031407	0.156245518	0.214254984	0.397031407	0.230245232	0.001577513	0.300741753	-0.193706148	-0.141423972	0.300741753	-0.039452198	0.3896	0.0197	9.9012	1.1573	9.9012	1.2418	A+	A+	A-
MATH	8	819133	1	B-E	2	13946	0.508891438	0.508891438	0.166355944	0.233758784	0.088269038	0.002007744	0.384873805	0.384873805	-0.196117634	-0.1561887	-0.180943731	-0.1815	0.0191	7.1311	1.0558	3.841	1.0487	A+	A+	A+
MATH	8	684961	1	C-G	2	13946	0.428151441	0.178474114	0.428151441	0.164419905	0.225154166	0.003441847	0.349201107	-0.156957357	0.349201107	-0.202171446	-0.085329186	0.224	0.0194	9.9011	1.106	9.9012	1.1609	A-	A-	A-
MATH	8	638672	1	B-E	1	13946	0.584468665	0.060877671	0.055141259	0.297719776	0.584468665	0.001290693	0.383726633	-0.235717059	-0.220527045	-0.176697578	0.383726633	-0.5803	0.0193	5.071	1.0391	2.071	1.0303	A+	A-	A-
MATH	8	812254	1	B-F	2	13946	0.448085473	0.201849993	0.208661982	0.138821167	0.448085473	0.002007744	0.450921844	-0.155433761	-0.210447137	-0.214297472	0.450921844	0.1197	0.0193	-2.179	0.9825	-2.179	0.9736	A+	A-	A-
MATH	8	218834	1	A-N	2	13946	0.309120895	0.107629428	0.309120895	0.338950237	0.241574645	0.001290693	0.306129247	-0.160678564	0.306129247	-0.176509936	-0.013113491	0.8876	0.0208	9.9011	1.1252	9.9013	1.2646	A-	A+	A-
MATH	8	105449	1	D-S	1	13946	0.407715474	0.12562742	0.320163488	0.141832784	0.407715474	0.003800373	0.451305586	-0.2588019	-0.104790239	-0.241743295	0.451305586	0.3322	0.0196	-2.409	0.9797	-0.079	0.999	A+	A-	A-
MATH	8	830031	2	C-G	2	13221	0.323122305	0.370168671	0.323122305	0.150745027	0.151047576	0.004613872	0.263713294	0.035396428	0.263713294	-0.18165972	-0.204795631	0.8855	0.0211	9.9012	1.1742	9.9013	1.3416	A-	A-	A-
MATH	8	423549	2	B-F	1	13221	0.584675894	0.131306255	0.584675894	0.12018758	0.161031692	0.001890931	0.419194105	-0.196374755	0.419194105	-0.245783339	-0.157421345	-0.5003	0.0198	0.501	1.0039	-0.119	0.9981	A+	A-	A-
MATH	8	255987	2	C-G	2	13221	0.715906512	0.075864156	0.064669843	0.140987822	0.715906512	0.001512745	0.492511143	-0.251984306	-0.273044377	-0.246490945	0.492511143	-1.2215	0.0212	-9.8991	0.8673	-9.8992	0.7813	A+	A-	A-
MATH	8	476412	2	A-N	2	13221	0.446562287	0.446562287	0.286816428	0.158460026	0.105211406	0.001815294	0.31710381	0.31710381	-0.062135229	-0.165510559	-0.216838572	0.2075	0.0199	9.9011	1.1465	9.9012	1.2054	A-	A-	A-
MATH	8	319617	2	B-E	2	13221	0.429997731	0.429997731	0.166704485	0.257469178	0.142046744	0.00355495	0.361460644	0.361460644	-0.142815138	-0.10049433	-0.228376715	0.2943	0.02	9.9011	1.0921	9.9011	1.1439	A-	A-	A-
MATH	8	790565	2	B-F	2	13221	0.396036608	0.172679828	0.197261932	0.23023977	0.396036608	0.002420392	0.435277475	-0.158808192	-0.194965685	-0.17278221	0.435277475	0.4753	0.0202	-1.119	0.9902	1.051	1.0146	A+	A-	A-
MATH	8	861623	2	A-N	1	13221	0.417820135	0.143105665	0.417820135	0.238181681	0.199757961	0.000756372	0.276358774	-0.144942618	0.276358774	-0.133871111	-0.068108398	0.3586	0.02	9.9012	1.187	9.9013	1.2637	A-	A+	A-
MATH	8	405357	2	D-S	2	13221	0.584827169	0.302246426	0.05816504	0.584827169	0.051887149	0.001815294	0.336796844	-0.11804377	-0.257383445	0.336796844	-0.224656404	-0.5039	0.0198	9.9011	1.0911	9.9012	1.1773	A-	A-	A+
MATH	8	185930	3	B-F	2	13281	0.631277765	0.631277765	0.136059032	0.11753633	0.112717416	0.001505911	0.482735046	0.482735046	-0.199273989	-0.286545841	-0.221126874	-0.7659	0.0201	-9.8991	0.9153	-8.9992	0.8505	A+	A-	A-
MATH	8	788128	3	B-E	2	13281	0.511783751	0.253595362	0.111060914	0.12107522	0.511783751	0.001731797	0.439493616	-0.138403354	-0.270038191	-0.221052037	0.439493616	-0.1542	0.0196	-0.799	0.9936	-1.009	0.986	A+	A-	A-
MATH	8	662273	3	A-N	2	13281	0.384383706	0.250884723	0.172577366	0.189518862	0.384383706	0.001656502	0.460693936	-0.07073463	-0.247311926	-0.249658823	0.460693936	0.5223	0.0203	-4.489	0.9601	-1.079	0.985	A-	A-	A-
MATH	8	831295	3	D-S	2	13281	0.328740306	0.107747911	0.24772231	0.328740306	0.313229425	0.001430615	0.206241494	-0.192742785	-0.145756804	0.206241494	0.059134713	0.8364	0.021	9.9013	1.2536	9.9015	1.4541	A+	A-	A-
MATH	8	241115	3	B-E	1	13281	0.420977336	0.420977336	0.28009939	0.145546269	0.152096981	0.000828251	0.47415248	0.47415248	-0.163270515	-0.182760443	-0.265179212	0.3254	0.02	-5.689	0.9521	-2.549	0.9663	A-	A-	A-
MATH	8	619129	3	C-G	2	13281	0.344025299	0.171222047	0.235599729	0.245915217	0.344025299	0.002635344	0.290984225	-0.173553663	-0.139267725	-0.028300926	0.290984225	0.7479	0.0208	9.9011	1.149	9.9013	1.3057	A+	A-	A-
MATH	8	462437	3	B-F	2	13281	0.614486861	0.050448008	0.270235675	0.060838792	0.614486861	0.00353889	0.479483254	-0.247847332	-0.278904561	-0.21837554	0.479483254	-0.6767	0.0199	-9.8991	0.9215	-5.3491	0.9119	A+	A-	A-
MATH	8	426151	3	B-E	2	13281	0.458700399	0.253068293	0.458700399	0.173029139	0.112491529	0.002334162	0.325524338	-0.035605722	0.325524338	-0.232739981	-0.180248025	0.1277	0.0198	9.9011	1.1328	9.9012	1.171	A-	A+	A-
MATH	8	646343	4	D-S	2	13276	0.398011449	0.235311841	0.23064176	0.398011449	0.13332329	0.001581802	0.322708368	-0.134988712	-0.128965454	0.322708368	-0.12789353	0.4607	0.0203	9.9011	1.1377	9.9012	1.2185	A+	A-	A-
MATH	8	434221	4	C-G	2	13276	0.489831274	0.135884303	0.489831274	0.198629105	0.172717686	0.002259717	0.471725662	-0.165507172	0.471725662	-0.245164112	-0.209687585	-0.0181	0.0198	-4.719	0.9622	-4.5591	0.9403	A-	A-	A-
MATH	8	420083	4	B-F	2	13276	0.502259717	0.502259717	0.141533594	0.239228683	0.112910515	0.003766195	0.494303951	0.494303951	-0.23638002	-0.19953006	-0.244268286	-0.089	0.0197	-8.1391	0.9359	-7.6491	0.9	A-	A-	A-
MATH	8	129979	4	A-N	2	13276	0.675429346	0.087526363	0.124133775	0.110274179	0.675429346	0.001807773	0.502795714	-0.242242839	-0.254826186	-0.258083861	0.502795714	-0.9982	0.0206	-9.8991	0.8865	-9.8992	0.7965	B+	A+	A-
MATH	8	563647	4	A-N	1	13276	0.415486592	0.415486592	0.190720096	0.248418198	0.144094607	0.000828563	0.478563345	0.478563345	-0.18851147	-0.277837746	-0.115776723	0.3662	0.0201	-4.079	0.9648	-2.939	0.9609	A-	A-	A-
MATH	8	711973	4	B-F	2	13276	0.310635734	0.209927689	0.174676107	0.30167219	0.310635734	0.002259717	0.359380042	-0.133110412	-0.206662085	-0.067037332	0.359380042	0.9605	0.0214	5.9711	1.0634	9.9012	1.2293	A+	A-	A-
MATH	8	830503	4	C-G	2	13276	0.340915939	0.217761374	0.194034348	0.244652004	0.340915939	0.001958421	0.323131984	-0.192109958	-0.241196446	0.055955498	0.323131984	0.7809	0.0209	9.9011	1.1385	9.9013	1.2596	A-	A-	A-
MATH	8	259154	4	B-E	2	13276	0.647710154	0.138821934	0.139650497	0.647710154	0.070352516	0.002786984	0.528323364	-0.236751822	-0.305824036	0.528323364	-0.244341301	-0.8517	0.0203	-9.8991	0.862	-9.8992	0.8093	A-	A-	A-
MATH	8	208793	5	B-E	2	13252	0.313084817	0.179369152	0.313084817	0.177935406	0.327271355	0.001584666	0.160052798	-0.09061267	0.160052798	-0.149781853	0.04246144	0.9431	0.0213	9.9013	1.2859	9.9015	1.5409	A-	A-	A-
MATH	8	728991	5	B-E	1	13252	0.41412617	0.069348023	0.41412617	0.273845457	0.241472985	0.000830063	0.30717107	-0.123339922	0.30717107	-0.162129067	-0.10974291	0.3761	0.02	9.9011	1.1437	9.9012	1.2146	A-	A+	A+
MATH	8	781994	5	C-G	2	13252	0.24766073	0.20110172	0.157410202	0.391035315	0.24766073	0.001660127	0.315109078	-0.167969086	-0.174353845	-0.00603112	0.315109078	1.3608	0.0227	4.1211	1.0505	9.9014	1.3513	A-	A-	A-
MATH	8	748161	5	B-E	2	13252	0.36771808	0.36771808	0.324554784	0.149939632	0.154014488	0.00233927	0.348786757	0.348786757	-0.047324975	-0.231427801	-0.16747475	0.6377	0.0205	9.9011	1.0954	9.9012	1.1856	A+	A-	A-
MATH	8	767775	5	D-S	2	13252	0.69355569	0.067461515	0.08579837	0.69355569	0.150316933	0.00256565	0.37119225	-0.249496121	-0.212044323	0.37119225	-0.13182627	-1.0829	0.0208	0.031	1.0002	6.6611	1.14	A+	A-	A-
MATH	8	471684	5	D-S	2	13252	0.419936613	0.224569876	0.222079686	0.419936613	0.131451856	0.001282825	0.331907261	-0.055658063	-0.212634191	0.331907261	-0.149022856	0.3453	0.02	9.9011	1.115	9.9012	1.1739	A-	A-	A-
MATH	8	113809	5	A-N	2	13252	0.425596136	0.177331724	0.425596136	0.152505282	0.241246604	0.002716571	0.401611143	-0.285280084	0.401611143	-0.259920182	0.014068406	0.3153	0.02	5.091	1.0437	3.551	1.0471	A+	A-	A-
MATH	8	101962	5	B-F	2	13252	0.543163296	0.14707214	0.159824932	0.543163296	0.1471476	0.001735587	0.399687475	-0.164999817	-0.218975395	0.399687475	-0.16119984	-0.2914	0.0197	4.461	1.0351	1.261	1.0178	A+	A-	A-
MATH	8	285922	6	D-S	2	13264	0.44526538	0.157117008	0.219843185	0.44526538	0.175361882	0.000904704	0.409392749	-0.209557351	-0.181386558	0.409392749	-0.131661687	0.2262	0.0198	3.451	1.0286	4.3811	1.0564	A+	A-	A+
MATH	8	841097	6	B-E	2	13264	0.572753317	0.572753317	0.18787696	0.122738239	0.11391737	0.002638721	0.533158792	0.533158792	-0.263660338	-0.220649291	-0.272195937	-0.4336	0.0197	-9.8991	0.8729	-9.8992	0.8333	A-	A-	A-
MATH	8	246795	6	B-E	1	13264	0.360901689	0.353965621	0.154779855	0.360901689	0.12907117	0.000678528	0.278414258	0.047864291	-0.193063389	0.278414258	-0.255071772	0.6678	0.0205	9.9012	1.1648	9.9013	1.2851	A+	A-	A-
MATH	8	213848	6	B-E	2	13264	0.287319059	0.225572979	0.265983112	0.287319059	0.217656815	0.002563329	0.137197656	-0.062681123	0.024995231	0.137197656	-0.107620381	1.0994	0.0217	9.9013	1.3134	9.9016	1.6304	A-	A-	A-
MATH	8	263755	6	B-F	2	13264	0.553302171	0.135102533	0.104041013	0.553302171	0.205292521	0.00075392	0.487381686	-0.221432409	-0.314788031	0.487381686	-0.169004033	-0.3362	0.0196	-8.5191	0.9357	-6.6291	0.9097	A-	A-	A-
MATH	8	177115	6	B-F	2	13264	0.230624246	0.230624246	0.134348613	0.480247286	0.152442702	0.001884801	0.043776316	0.043776316	-0.235018007	0.255343098	-0.179220149	1.4755	0.0232	9.9014	1.3883	9.902	1.9516	A-	A+	A-
MATH	8	626718	6	C-G	2	13264	0.44895959	0.239445115	0.183956574	0.44895959	0.125226176	0.001130881	0.295879747	-0.043577189	-0.134618127	0.295879747	-0.222855656	0.1972	0.0198	9.9012	1.1682	9.9012	1.2271	A+	A+	A+
MATH	8	148470	6	D-S	2	13264	0.577201448	0.106076598	0.577201448	0.160057298	0.154252111	0.001809409	0.329936488	-0.167677388	0.329936488	-0.194321058	-0.105070468	-0.4586	0.0197	9.9011	1.0972	8.8311	1.1364	A+	A-	A-
MATH	8	825212	7	C-G	2	13248	0.248188406	0.205766908	0.340428744	0.202370169	0.248188406	0.002038043	0.228678088	-0.18211845	0.10018765	-0.175355023	0.228678088	1.3507	0.0228	9.9012	1.1851	9.9015	1.5331	A-	A+	A-
MATH	8	803202	7	A-N	1	13248	0.555932971	0.334012681	0.555932971	0.04053442	0.067557367	0.001207729	0.510665472	-0.312526061	0.510665472	-0.177323926	-0.276647341	-0.3688	0.0197	-9.8991	0.9084	-9.2191	0.8686	A+	A-	A-
MATH	8	178738	7	B-F	2	13248	0.423384662	0.346542874	0.139794686	0.423384662	0.087333937	0.00196256	0.314369427	-0.066354764	-0.187308088	0.314369427	-0.197549274	0.3111	0.02	9.9011	1.1416	9.9012	1.1938	B-	A-	A-
MATH	8	654227	7	D-S	2	13248	0.351751208	0.216183575	0.351751208	0.248792271	0.179121377	0.003774155	0.295177072	-0.117845659	0.295177072	-0.043811138	-0.184224936	0.709	0.0207	9.9012	1.1521	9.9013	1.3104	A+	A-	A+
MATH	8	170841	7	A-N	1	13248	0.460975242	0.302083333	0.169082126	0.460975242	0.066953502	0.000679348	0.411284928	-0.245486535	-0.152418247	0.411284928	-0.138453264	0.1201	0.0198	3.751	1.031	3.551	1.0474	A-	A-	A-
MATH	8	419481	7	B-E	2	13248	0.398248792	0.149682971	0.213239734	0.235960145	0.398248792	0.00196256	0.445425859	-0.190426076	-0.140387578	-0.210663894	0.445425859	0.4515	0.0202	-2.079	0.9817	0.791	1.0108	A-	A-	A-
MATH	8	824312	7	B-E	2	13248	0.31468901	0.150739734	0.160854469	0.370697464	0.31468901	0.002264493	0.357558393	-0.178190544	-0.193796556	-0.057087126	0.357558393	0.9252	0.0213	5.6311	1.0592	9.9012	1.2148	A+	A-	A+
MATH	8	395539	7	B-F	2	13248	0.729091184	0.729091184	0.117225242	0.081823671	0.067783816	0.003094807	0.484305465	0.484305465	-0.213154878	-0.279141708	-0.265271411	-1.3126	0.0214	-9.8991	0.8714	-9.2492	0.8014	A+	B-	A-
MATH	8	740106	8	D-S	2	13210	0.449432248	0.148902347	0.219379258	0.449432248	0.179712339	0.001665405	0.418523764	-0.230924039	-0.280093086	0.418523764	-0.02037203	0.2021	0.0198	1.451	1.012	1.311	1.0168	A-	A-	A-
MATH	8	341562	8	B-E	2	13210	0.287509463	0.157456472	0.341332324	0.211960636	0.287509463	0.001059803	0.244106906	-0.16765939	-0.01156687	-0.104092339	0.244106906	1.1113	0.0218	9.9012	1.1623	9.9015	1.4553	A-	A-	A-
MATH	8	136072	8	B-E	2	13210	0.588190765	0.197199092	0.588190765	0.123012869	0.088796366	0.001665405	0.370049903	-0.059122806	0.370049903	-0.283441085	-0.223679095	-0.5081	0.0198	6.4611	1.0514	6.8911	1.11	A-	A-	A-
MATH	8	478730	8	B-F	2	13210	0.456926571	0.112187737	0.255942468	0.456926571	0.172747918	0.001665405	0.44312519	-0.193451088	-0.196982841	0.44312519	-0.190570083	0.1654	0.0198	-2.299	0.9813	-2.389	0.9697	A-	A-	A-
MATH	8	720226	8	C-G	2	13210	0.44322483	0.44322483	0.194171083	0.247993944	0.111960636	0.001816805	0.313895364	0.313895364	-0.098672702	-0.156075418	-0.149306254	0.2365	0.0199	9.9011	1.1459	9.9012	1.2229	A-	A-	A-
MATH	8	104396	8	A-N	1	13210	0.455336866	0.268508706	0.191672975	0.081680545	0.455336866	0.001135503	0.441763955	-0.341743432	-0.024919841	-0.206585835	0.441763955	0.1736	0.0198	-1.109	0.9909	-2.139	0.9728	A+	A+	A+
MATH	8	978490	8	B-E	2	13210	0.344890235	0.212717638	0.344890235	0.258970477	0.180847843	0.001514005	0.268095682	0.006771482	0.268095682	-0.20125048	-0.104954104	0.7695	0.0208	9.9012	1.1666	9.9013	1.3196	A-	A-	A-
MATH	8	291294	8	D-S	2	13210	0.510976533	0.510976533	0.139137017	0.131188494	0.214610144	0.003633611	0.418973879	0.418973879	-0.170883719	-0.243251075	-0.156713233	-0.1121	0.0197	1.601	1.0126	0.041	1.0004	A-	A-	A-
MATH	8	355184	9	B-E	2	13232	0.502796252	0.227554414	0.134068924	0.502796252	0.131499395	0.003929867	0.416122707	-0.122141783	-0.231993961	0.416122707	-0.222701568	-0.0895	0.0197	3.131	1.0251	0.621	1.0083	A+	A+	A-

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
MATH	8	499850	9	C-G	2	13232	0.42208283	0.312273277	0.42208283	0.191807739	0.071266626	0.001435913	0.339970053	-0.206701564	0.339970053	-0.079229188	-0.149726701	0.3301	0.02	9.9011	1.1141	9.9011	1.1496	A-	A-	A+
MATH	8	394723	9	B-E	1	13232	0.616384522	0.213422007	0.096281741	0.616384522	0.072626965	0.000604595	0.502830904	-0.377408722	-0.223444243	0.502830904	-0.089258712	-0.6759	0.02	-9.8991	0.9014	-9.0991	0.8535	A+	A+	A-
MATH	8	181716	9	A-N	2	13232	0.465160218	0.465160218	0.227403265	0.132633011	0.17261185	0.001058041	0.47985535	0.47985535	-0.191492251	-0.260314699	-0.183085005	0.1074	0.0198	-5.339	0.9569	-3.609	0.9533	A+	A+	A-
MATH	8	279383	9	B-F	2	13232	0.751662636	0.751662636	0.094619105	0.061744256	0.089706771	0.000906892	0.517357898	0.517357898	-0.302690328	-0.266250807	-0.241186924	-1.4514	0.022	-9.8992	0.8257	-9.8993	0.6794	A-	C-	C-
MATH	8	617103	9	B-E	2	13232	0.398276904	0.253249698	0.398276904	0.220374849	0.125453446	0.001964933	0.244022058	-0.025747167	0.244022058	-0.156133214	-0.125720999	0.461	0.0202	9.9012	1.238	9.9013	1.3451	A-	A-	A-
MATH	8	247443	9	C-G	2	13232	0.513301088	0.280229746	0.513301088	0.111925635	0.091974002	0.001813785	0.300848061	-0.046500534	0.300848061	-0.237980157	-0.179280746	-0.141	0.0197	9.9012	1.1643	9.9012	1.2298	A+	A+	A+
MATH	8	310482	9	D-S	1	13232	0.61721584	0.171931681	0.086457074	0.120163241	0.61721584	0.003400846	0.311064417	-0.136622093	-0.122196065	-0.192674212	0.311064417	-0.6803	0.02	9.9011	1.1064	9.9013	1.3111	A+	A+	A-
SCIENCE	4	999200	0	D	2	123102	0.428084028	0.100233952	0.092719858	0.37538789	0.428084028	0.001307859	0.313517061	-0.157856824	-0.067136746	-0.176426117	0.313517061	1.3612	0.0063	9.901	1.0453	9.9011	1.0653			
SCIENCE	4	259471	0	A	2	123102	0.382390213	0.274203506	0.26039382	0.081347176	0.382390213	0.000690484	0.409941947	-0.127680788	-0.189344846	-0.21199629	0.409941947	1.59	0.0064	-9.8991	0.9391	-9.899	0.9604			
SCIENCE	4	776166	0	A	2	123102	0.517546425	0.05855307	0.517546425	0.151118585	0.269443226	0.001592176	0.434899038	-0.136341953	0.434899038	-0.157505958	-0.283765289	0.9877	0.0062	-9.8991	0.9342	-9.8991	0.9224			
SCIENCE	4	282871	0	A	3	123102	0.491429871	0.491429871	0.203603516	0.153466231	0.14804796	0.001624669	0.321943926	0.321943926	-0.128232564	-0.169504883	-0.126821307	1.1901	0.0063	9.901	1.0476	9.9011	1.0595			
SCIENCE	4	805483	0	A	2	123102	0.48324154	0.260767494	0.160395444	0.48324154	0.093475329	0.000641744	0.41295223	-0.24932993	-0.093495378	0.41295223	-0.208753562	1.0751	0.0063	-9.899	0.9556	-9.8991	0.9495			
SCIENCE	4	989734	0	A	2	123102	0.487879969	0.065506653	0.301863495	0.142182905	0.487879969	0.001267242	0.323705948	-0.242637442	-0.081331919	-0.178302082	0.323705948	1.1223	0.0063	9.901	1.0425	9.901	1.0462			
SCIENCE	4	942743	0	A	2	123102	0.675236796	0.137000211	0.675236796	0.070908677	0.11499407	0.000568634	0.480549344	-0.26523744	0.480549344	-0.258471784	-0.206554519	0.1698	0.0066	-9.8991	0.8756	-9.8992	0.817			
SCIENCE	4	660514	0	A	2	123102	0.428075905	0.428075905	0.174863122	0.238842586	0.154246072	0.001437832	0.187844801	0.187844801	-0.167844734	0.00539163	-0.078728057	1.361	0.0063	9.9012	1.1617	9.9012	1.2161			
SCIENCE	4	511784	0	C	2	123102	0.559137951	0.20456207	0.095514289	0.138949814	0.559137951	0.000609251	0.400922175	-0.236551343	-0.133278567	-0.182017715	0.400922175	0.7932	0.0063	-9.899	0.9617	-9.899	0.9583			
SCIENCE	4	618687	0	C	2	123102	0.465630128	0.24621046	0.155521438	0.465630128	0.130387808	0.000885445	0.304953947	-0.148903841	-0.132820291	0.304953947	-0.113615424	1.1795	0.0063	9.9011	1.057	9.9011	1.0746			
SCIENCE	4	113147	0	D	2	123102	0.349831847	0.349831847	0.200411041	0.259516499	0.186365778	0.001649039	0.255752147	0.255752147	-0.149119007	-0.001448298	-0.151062534	1.8773	0.0066	9.9011	1.1048	9.9012	1.2006			
SCIENCE	4	380627	0	A	2	123102	0.42264951	0.13833244	0.324901301	0.42264951	0.111834089	0.000747348	0.369472962	-0.122262672	-0.168281812	0.369472962	-0.190021763	1.427	0.0063	-3.479	0.9916	2.101	1.0069			
SCIENCE	4	963674	0	B	2	123102	0.780490975	0.780490975	0.064345015	0.068431057	0.083897906	0.001104775	0.447751063	0.447751063	-0.239692838	-0.234280702	-0.234410832	-0.427	0.0073	-9.8991	0.8628	-9.8993	0.7425			
SCIENCE	4	615666	0	D	2	123102	0.368483047	0.247445208	0.202750565	0.177616936	0.368483047	0.001510942	0.260850443	-0.164295533	-0.001062607	-0.135939682	0.260850443	1.7008	0.0065	9.9011	1.0826	9.9012	1.1517			
SCIENCE	4	605022	0	C	2	123102	0.70402593	0.110347517	0.12189079	0.70402593	0.062094848	0.000430537	0.435675219	-0.162422731	-0.271517162	0.435675219	-0.239437307	0.0851	0.0067	-9.8991	0.8852	-9.8991	0.8539			
SCIENCE	4	766735	0	A	2	123102	0.643450147	0.147130022	0.102151062	0.105676593	0.643450147	0.000576757	0.403017291	-0.193139553	-0.204570317	-0.19873251	0.403017291	0.3314	0.0065	-9.899	0.9555	-9.8991	0.9265			
SCIENCE	4	313477	0	B	2	123102	0.640558236	0.640558236	0.05143702	0.170833943	0.132906045	0.001640916	0.280400195	0.280400195	-0.234548779	-0.137401645	-0.082586051	0.4124	0.0064	9.901	1.0467	9.9011	1.1003			
SCIENCE	4	452286	0	B	3	123102	0.508082728	0.187990447	0.199306266	0.508082728	0.102614092	0.001072282	0.308412605	-0.171431891	-0.08963774	0.308412605	-0.164085088	1.0512	0.0062	9.9011	1.0548	9.9011	1.0673			
SCIENCE	4	173742	0	C	2	123102	0.613856802	0.198583289	0.086432389	0.098763627	0.613856802	0.000779841	0.377423029	-0.190379355	-0.208869354	-0.159090076	0.377423029	0.4872	0.0064	-9.529	0.9765	-4.619	0.9829			
SCIENCE	4	272804	0	A	2	123102	0.670029731	0.164018456	0.670029731	0.083442998	0.080559211	0.000731101	0.392363078	-0.22878594	0.392363078	-0.16512678	-0.192749295	0.2449	0.0065	-9.8991	0.946	-9.8991	0.9142			
SCIENCE	4	573874	0	A	2	123102	0.645911521	0.111070494	0.147162516	0.645911521	0.092857955	0.001640916	0.516758883	-0.257753419	-0.266986035	0.516758883	-0.236493763	0.3127	0.0065	-9.8991	0.8522	-9.8992	0.7793			
SCIENCE	4	569919	0	A	2	123102	0.548805056	0.548805056	0.116586246	0.129242417	0.201775763	0.001275365	0.340030368	0.340030368	-0.181093656	-0.204341464	-0.098736893	0.6991	0.0063	9.901	1.0369	9.901	1.0411			
SCIENCE	4	455676	0	A	2	123102	0.552785495	0.135505516	0.107122549	0.20186512	0.552785495	0.001129145	0.388438613	-0.181349603	-0.19048408	-0.17413961	0.388438613	0.7677	0.0063	-9.009	0.9792	-8.869	0.9715			
SCIENCE	4	872481	0	B	2	123102	0.580185537	0.130306575	0.182718396	0.580185537	0.105246056	0.000657991	0.375104019	-0.193501345	-0.167472672	0.375104019	-0.175725665	0.6672	0.0063	-6.399	0.9849	-1.819	0.9938			
SCIENCE	4	856002	0	A	3	123102	0.450309499	0.121395266	0.112776397	0.450309499	0.311708989	0.001592176	0.259680802	-0.142130868	-0.159380978	0.259680802	-0.063511764	1.2844	0.0063	9.9011	1.1007	9.9011	1.1388			
SCIENCE	4	571122	0	A	2	123102	0.478416273	0.156203798	0.277046677	0.478416273	0.085376355	0.001510942	0.331635469	-0.224019661	-0.055408687	0.331635469	-0.20331368	1.2577	0.0063	9.901	1.0406	9.9011	1.058			
SCIENCE	4	818162	0	A	2	123102	0.649079625	0.649079625	0.062590372	0.165066368	0.120095531	0.000942308	0.407740096	0.407740096	-0.220824797	-0.167659853	-0.235712611	0.3431	0.0065	-9.8991	0.944	-9.8991	0.9057			
SCIENCE	4	191479	0	A	3	123102	0.56787867	0.232018976	0.56787867	0.099186041	0.099023574	0.000934185	0.383878535	-0.137247194	0.383878535	-0.240368594	-0.19666784	0.5274	0.0064	4.651	1.0115	5.281	1.0194			
SCIENCE	4	530301	0	D	2	123102	0.50267258	0.50267258	0.199184416	0.193359978	0.101785511	0.001177885	0.272173843	0.272173843	-0.077982823	-0.166938451	-0.122537468	0.9703	0.0063	9.9011	1.0924	9.9011	1.125			
SCIENCE	4	758423	0	D	2	123102	0.399603581	0.228160387	0.399603581	0.191873406	0.177438222	0.001510942	0.346346651	-0.088371339	0.346346651	-0.151037471	-0.184377824	1.5166	0.0064	1.511	1.0037	9.901	1.0398			
SCIENCE	4	221218	0	C	2	123102	0.601574304	0.237445371	0.601574304	0.079421943	0.077797274	0.001600299	0.339442523	-0.116085658	0.339442523	-0.227340379	-0.196065831	0.5752	0.0063	5.021	1.0122	5.111	1.0182			
SCIENCE	4	106226	0	C	3	123102	0.545222661	0.219712109	0.10100567	0.130607139	0.545222661	0.001137268	0.30259604	-0.063981141	-0.165448829	-0.213162219	0.30259604	0.807	0.0063	9.9011	1.0608	9.9011	1.0802			
SCIENCE	4	368640	0	A	2	123102	0.566050917	0.220630047	0.137032705	0.073207584	0.566050917	0.001299735	0.449014342	-0.177466699	-0.240096486	-0.245719057	0.449014342	0.7464	0.0063	-9.8991	0.9199	-9.8991	0.8849			
SCIENCE	4	952814	0	A	2	123102	0.380180663	0.392398174	0.162710598	0.380180663	0.061241897	0.001145392	0.344728483	-0.104982161	-0.178139891	0.344728483	-0.198748973	1.6283	0.0064	2.901	1.0074	9.901	1.0471			
SCIENCE	4	669584	0	B	2	123102	0.721986645	0.048626342	0.721986645	0.156528732	0.070388783	0.001177885	0.309156909	-0.211033397	0.309156909	-0.097821403	-0.216548975	-0.0825	0.0069	2.321	1.0074	8.001	1.0434			
SCIENCE	4	494167	0	B	2	123102	0.498220987	0.498220987	0.151142955	0.103759484	0.243042355	0.001153515	0.469856372	0.469856372	-0.251524319	-0.224497825	-0.171675189	1.0512	0.0062	-9.8991	0.9004	-9.8991	0.8828			
SCIENCE	4	686272	0	D	2	123102	0.301359848	0.301359848	0.096805901	0.393202385	0.20689347	0.000763594	0.215863955	0.215863955	-0.084641368	-0.047191553	-0.121934872	2.0662	0.0068	9.9011	1.1175	9.9012	1.2267			
SCIENCE	4	131057	0	A	2	123102	0.632036847	0.090591542	0.632036847	0.130664002	0.143230817	0.001779013	0.455460495	-0.201939056	0.455460495	-0.27712286	-0.186376231	0.4342	0.0064	-9.8991	0.8977	-9.8991	0.8656			
SCIENCE	4	876222	1	D	2	10845	0.447856155	0.128907331	0.201383126	0.447856155	0.211341632	0.009681881	0.236093184	-0.172992305	-0.076238259	0.236093184	-0.06320627	1.2456	0.0212	9.9011	1.135	9.9012	1.1807	A+	A-	A-
SCIENCE	4	431262	1	C	2	10845	0.439834025	0.439834025	0.119409866	0.090825265	0.337574919	0.011894882	0.137581754	0.137581754	-0.20285993	-0.21250914	0.130500444	1.2858	0.0213	9.9012	1.2422	9.9013	1.3129	A-	A-	A-
SCIENCE	4	313695	1	A	2	10845	0.64472107	0.081788843	0.205993545	0.062609497	0.64472107	0.003503919	0.500516377	-0.261846915	-0.266568539	-0.236243014	0.500516377	0.2786	0.0219	-9.8991	0.8638	-9.8992	0.8017	A+	B-	A-
SCIENCE	4	225773	1	A	2	10845	0.573905025	0.185615491	0.09626556	0.573905025	0.139880129	0.002950669	0.482804659	-0.257253129	-0.21903245	0.482804659	-0.204542577	0.6352	0.0213	-9.8991	0.8894	-9.8992	0.8489	A-	A-	A-
SCIENCE	4	480832	1	A	2	10845	0.416320885	0.144859382	0.151959428	0.281051176	0.416320885	0.003319502	0.292047591	-0.203729616	-0.141236297	-0.040862012	0.292047591	1.4035	0.0214	8.9511	1.0766	9.2711	1.1098	A+	A-	A-
SCIENCE	4	675612	1	A	2	10845	0.349377593	0.349377593	0.09857077	0.190779161	0.357123098	0.00230521	0.382363636	0.382363636	-0.21553626	-0.222623058	-0.057420931	1.7458	0.0221	-4.259	0.9606	3.021	1.0419	A-	A+	A+
SCIENCE	4	892656	1	D	1	10845	0.383310281	0.383310281	0.372798525	0.162010143	0.076717381	0.003964961	0.330981955	0.330981955	-0.075324291	-0.153217059	-0.243944856	1.5697	0.0217	3.361	1.0297	4.6011	1.058	A-	A-	A-
SCIENCE	4	496589	1	B	2	10845	0.654495159	0.654495159	0.085661595	0.178607653	0.076901798	0.002397418	0.438787212	0.438787212	-0.241001572	-0.197365339	-0.230419264	0.2276	0.022	-9.0291	0.921	-9.2891	0.8701	A-	A-	A-
SCIENCE	4	580203	2	A	2	10155	0.55745938	0.135105859	0.053471196	0.248645987	0.55745938	0.004234367	0.261588434	-0.078346709	-0.23429297	-0.110508936	0.261588434	0.7923	0.0219	9.9011	1.0981	9.9011	1.1414	A+	A-	A+
SCIENCE	4	881411	2	A	2	10155	0.519448548	0.182274742	0.089611029	0.200984737	0.519448548	0.007090103	0.381550999	-0.207959111	-0.271442405	-0.07096791	0.381550999	0.9682	0.0218	-2.209	0.9825	-0.249	0.9973	A+	A-	A-
SCIENCE	4	392099	2	A	2	10155	0.603052683	0.082127031	0.154308223	0.603052683	0.155686854	0.003052683	0.43581394	-0.248208371	-0.172068368	0.43581394	-0.218728561	0.5695	0.0221	-8.9391	0.926	-8.7491	0.8946	A+	A-	A-
SCIENCE	4	699525	2	B	2	10155	0.39783358	0.136681438	0.180502216	0.281142294	0.39783358	0.002658789	0.417851172	-0.171831119	-0.306659028	-0.055852664	0.417851172	1.5588	0.0222	-7.9091	0.9333	-3.899	0.9535	A-	A-	A+
SCIENCE	4	764204	2	D	2	10155	0.40295421	0.380994584	0.40295421	0.109995076	0.097784343	0.007582472	0.257017776	0.032532595	0.257017776	-0.210382339	-0.247116697	1.5333	0.0221	9.9011	1.0993	9.9011	1.1393	A+	A-	A+
SCIENCE	4	742761	2	A	2	10155	0.468833087	0.468833087	0.121319547	0.287936977	0.116395864	0.003348104	0.288920698	0.288920698	-0.256446467	0.057425805	-0.254021292	1.2115	0.0218	9.3611	1.0767	9.7711	1.1083	A-	A-	A-
SCIENCE	4	176816	2	C	2	10155	0.514327917	0.178926637	0.187986214	0.514327917	0.114623338	0.002264894	0.34579562	-0.191387033	-0.117879638	0.34579562	-0.157754454	0.9928	0.0218	2.441	1.0195	2.691	1.0289	A-	A-	A-
SCIENCE	4	211621	2	B	2	10155	0.591137371	0.124273757	0.10497292	0.591137371	0.175381585	0.002461841	0.365896328	-0.152657719	-0.141777135	0.365896328	-0.218937723	0.62	0.0221	-0.879	0.9926	-0.409	0.9949	A+	A-	A-
SCIENCE	4	807527	3	B	2	10179	0.57844582	0.235190097	0.092052264	0.087041949	0.57844582	0.006778662	0.35496658	-0.128984491	-0.258641418	-0.154961906	0.35496658	0.6687	0.022	1.011	1.0084	1.101	1.0132	A+	A-	A-
SCIENCE	4	102101	3	C	2	10179	0.704882601	0.113272424	0.130464682	0.047057668	0.704882601	0.003045486	0.474300137	-0.267272278	-0.242721328	-0.22303349	0.474300137	0.0148	0.0235	-9.8991	0.8657	-9.8992	0.801	A-	A-	A-
SCIENCE	4	653729	3	A	2	10179	0.806955497	0.051576776	0.806955497	0.072109245	0.065428824	0.002456037	0.423204875	-0.192877274	0.423204875	-0.257320467	-0.218409999	-0.6352	0.0267	-8.5391	0.8781	-9.8993	0.7394	A+	A-	A-
SCIENCE	4	169887	3	A	2	10179	0.457019354	0.182729148	0.457019354	0.207780725	0.147656941	0.003536693	0.343837484	-0.139815234	0.343837484	-0.089949912	-0.22158423	1.2558	0.0218	2.491	1.0204	3.411	1.0378	A-	A-	A-
SCIENCE	4	158745	3	A	2	10179	0.737498772	0.061990372	0.107476176	0.737498772	0.087926122	0.00334021	0.335084524	-0.186223406	-0.202447997	0.335084524	-0.127974165	-0.1797	0.0243	-2.079	0.976	0.451	1.0088	A+	A-	A-
SCIENCE	4	736353	3	A	2	10179	0.53590726	0.53590726	0.11838098	0.206700069	0.134394341	0.002849003	0.23393222	0.23393222	-0.050957066	-0.044901001	-0.231633235	0.8747	0.0218	9.9011	1.1287	9.9012	1.1645	A-	A-	A+
SCIENCE	4	974171	3	C	2	10179	0.726102761	0.041949111	0.149425287	0.077610767	0.726102761	0.00265252	0.444154694	-0.237218328	-0.241058148	-0.230770214	0.444154694	-0.1122	0.024	-9.8991	0.8868	-9.8992	0.8216	A+	B-	A-
SCIENCE	4	832131	3	D	2	10179	0.328421259	0.238333825	0.075842421	0.348659004	0.328421259	0.008055801	0.210623402	-0.115573299	-0.220632808	0.022129232	0.210623402	1.9072	0.023	9.9011	1.1213	9.9013	1.2627	A+	A-	A-
SCIENCE	4	479078	4	A	2	10201	0.572100774	0.089403	0.190275463	0.572100774	0.139300069	0.008430546	0.441946045	-0.214696716	-0.16810262	0.441946045	-0.254266578	0.674	0.0218	-9.8991	0.9219	-9.6891	0.893	A+	A-	A-
SCIENCE	4	825740	4	A	2	10201	0.513184982	0.513184982	0.055582786	0.190765611	0.231643956	0.007940398	0.315881652	0.315881652	-0.258452267	-0.140456395	-0.090705864	0.9568	0.0217	4.861	1.0384	3.931	1.0417	A-	A+	A+
SCIENCE	4	805936	4	A	2	10201	0.733751593	0.137143417	0.059994118	0.06460151	0.733751593	0.002352711	0.291601504	-0.102817768	-0.192079327	-0.179016117	0.291601504	-0.1666	0.0241	0.081	1.0009	6.4711	1.129	A+	A-	A-
SCIENCE	4	761813	4	A	2	10201	0.285560239	0.116459171	0.135084796	0.458876581	0.285560239	0.002744829	0.103589717	-0.26655244	-0.244982434	0.253104008	0.103589717	2.1196	0.0237	9.9012	1.2133	9.9014	1.3706	A+	A+	A-
SCIENCE	4	681004	4	C	2	10201	0.749632389	0.057543378	0.139692187	0.749632389	0.048426625	0.002940888	0.448089715	-0.261771094	-0.23345788	0.448089715	-0.220593161	-0.2619	0.0245	-9.8991	0.8713	-9.8992	0.8059	A+	A-	A-
SCIENCE	4	472069	4	B	1	10201	0.505538673	0.084599549	0.182629154	0.505538673	0.222723262	0.002744829	0.338307145	-0.213059726	-0.134137559	0.338307145	-0.131003862	1.0028	0.0217	2.691	1.0211	2.351	1.0247	A+	A-	A+
SCIENCE	4	725411	4	C	2	10201	0.547691403	0.547691403	0.111067542	0.226252328	0.107930595	0.003038918	0.325976831	0.325976831	-0.262457569	-0.077249055	-0.137339102	0.8007	0.0217	3.421	1.0272	3.251	1.0358	A-	A-	A-
SCIENCE	4	293705	4	D	2	10201	0.275757279	0.228016861	0.275757279	0.185570042	0.305558279	0.003234977	0.148120718	-0.061580759	0.148120718	-0.172348303	0.069098893	2.1765	0.024	9.9011	1.1425	9.9014	1.3701	A-	A+	A-
SCIENCE	4	892497	5	A	2	10237	0.590505031	0.07805021	0.253589919	0.590505031	0.073947446	0.002735176	0.306945158	-0.215543124	-0.11992205	0.306945158	-0.144043946	0.6098	0.0219	5.071	1.0423	3.901	1.0472	A+	A-	A-
SCIENCE	4	551636	5	C	2	10237	0.451499463	0.155807365	0.131776888	0.257692683	0.451499463	0.002051382	0.326155804	-0.159101123	-0.114452402	-0.145804228	0.326155804	1.2781	0.0217	3.761	1.0305	3.741	1.0402	A-	A-	A-
SCIENCE	4	688659	5	B	2	10237	0.626257693	0.114193611	0.626257693	0.114388981	0.142131484	0.001367588	0.430289057	-0.220104386	0.430289057	-0.217609029	-0.189491209	0.4384	0.0222	-8.7991	0.9259	-8.1491	0.8966	A+	A-	A-
SCIENCE	4	886940	5	A	2	10237	0.474748461	0.080296962	0.110872326	0.474748461	0.329881801	0.002344437	0.293610467	-0.172158181	-0.13129448	0.293610467	-0.120326601	1.1674	0.0217	7.7811	1.0628	6.9911	1.0745	A+	A-	A-
SCIENCE	4	629740	5	A	3	10237	0.357819674	0.124255153	0.166064277	0.348246557	0.357819674	0.002735176	0.267989255	-0.251647768	-0.215832209	0.077848076	0.267989255	1.7451	0.0225	8.4311	1.0801	8.4511	1.116	A+	A-	A-
SCIENCE	4	976687	5	C	2	10237	0.510696493	0.154146723	0.510696493	0.134805119	0.191266973	0.008693953	0.366708816	-0.203879433	0.366708816	-0.140652967	-0.151508202	0.9952	0.0216	-0.949	0.9925	-0.869	0.9909	A-	A-	A-
SCIENCE	4	416785	5	D	2	10237	0.318648041	0.298524958	0.318648041	0.265702843	0.109993162	0.006740256	0.228560072	-0.010960761	0.228560072	-0.07389039	-0.218777239	1.9528	0.0231	9.2111	1.0962	9.9012	1.1935	A-	A-	A-
SCIENCE	4	882137	5	B	2	10237	0.639152095	0.069551626	0.639152095	0.135098173	0.15229071	0.001758328	0.401215156	-0.232046111	0.401215156	-0.192612192	-0.178631921	0.3665	0.0223	-5.649	0.9508	-4.7591	0.9359	A+	A-	A-
SCIENCE	4	563644	6	A	2	10224	0.364241002	0.12079421	0.072280908	0.364241002	0.438967136	0.002053991	0.168055117	-0.189547273	-0.18658088	0.168055117	0.064074974	1.7055	0.0225	9.9012	1.1826	9.9013	1.2718	A-	A-	A-
SCIENCE	4	751965	6	D	2	10224	0.494620501	0.494620501	0.116784038	0.145735524	0.231905321	0.010465571	0.325400676	0.325400676	-0.141763764	-0.193889696	-0.106787787	1.0637	0.0217	4.771	1.0383	4.181	1.0448	A-	A-	A-
SCIENCE	4	315259	6	C	2	10224	0.459213615	0.138888889	0.129010172	0.459213615	0.269855243	0.002347418	0.214343186	-0.124300065	-0.17348492	0.214343186	-0.005625079	1.2301	0.0218	9.9011	1.1449	9.9012	1.1889	A-	A-	A-
SCIENCE	4	650787	6	B	2	10224	0.614143192	0.141040689	0.614143192	0.085289515	0.154733959	0.002053991	0.417883963	-0.176956459	0.417883963	-0.214258602	-0.218118913	0.4817	0.0221	-7.4091	0.9377	-6.8791	0.9134	A-	A-	A-
SCIENCE	4	933275	6	A	2	10224	0.627053991	0.170383412	0.10172144	0.627053991	0.097124413	0.002053991	0.424816792	-0.135442516	-0.259365129	0.424816792	-0.24519601	0.4165	0.0223	-8.1991	0.9298	-6.3691	0.9165	A+	A-	A-
SCIENCE	4	610375	6	A	2	10224	0.515942879	0.131259781	0.15571205	0.191118936	0.515942879	0.004597027	0.272582316	-0.193299991	-0.114595834	-0.061329197	0.272582316	0.9609	0.0217	9.9011	1.0859	8.2511	1.0906	A+	A-	A+
SCIENCE	4	559934	6	C	2	10224	0.629010172	0.13350939	0.629010172	0.093407668	0.134389671	0.008998435	0.463694428	-0.258257267	0.463694428	-0.219050757	-0.196923872	0.4066	0.0223	-9.8991	0.8938	-9.8991	0.8637	A-	A-	A-
SCIENCE	4	393609	6	D	2	10224	0.663341158	0.086169797	0.075704225	0.663341158	0.168916275	0.004499218	0.454459378	-0.266384375	-0.257944058	0.454459378	-0.182927511	0.2291	0.0227	-9.8991	0.8956	-9.8992	0.8449	A+	A-	A-
SCIENCE	4	793759	7	B	2	10162	0.52568392	0.52568392	0.07872466	0.158728597	0.226825428	0.009742177	0.318302851	0.318302851	-0.191829542	-0.133276175	-0.131608674	0.9283	0.0216	4.001	1.0313	3.501	1.0361	A+	A-	A+

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
SCIENCE	4	969268	7	D	2	10162	0.253493407	0.393524897	0.232336154	0.115823657	0.253493407	0.003739421	-0.00600631	0.12094913	-0.030310907	-0.125936753	-0.00600631	2.3145	0.0245	9.9013	1.2873	9.9016	1.5502	A-	A-	A-
SCIENCE	4	976855	7	A	2	10162	0.435052155	0.13648888	0.321491832	0.098799449	0.435052155	0.007872466	0.310423939	-0.208339378	-0.035486107	-0.212448621	0.310423939	1.3573	0.0218	4.211	1.0342	5.1711	1.0561	A+	A-	A+
SCIENCE	4	476670	7	A	2	10162	0.602932494	0.07872466	0.602932494	0.108935249	0.205471364	0.001476087	0.332127937	-0.229551032	0.332127937	-0.158664015	-0.118040693	0.5484	0.022	1.651	1.0138	1.811	1.0217	A+	A-	A-
SCIENCE	4	663778	7	A	2	10162	0.346388506	0.211769337	0.346388506	0.241291084	0.196024405	0.003936233	0.304507673	-0.136407121	0.304507673	-0.108585513	-0.101017196	1.7953	0.0226	1.491	1.0139	6.8911	1.0962	A-	A-	A-
SCIENCE	4	650035	7	A	2	10162	0.690120055	0.690120055	0.100964377	0.140129896	0.064751033	0.00236174	0.448875533	0.448875533	-0.278554616	-0.163266624	-0.261092608	0.1	0.0231	-9.8991	0.8873	-9.0091	0.8636	A+	A-	A-
SCIENCE	4	590448	7	C	2	10162	0.32956111	0.32956111	0.16502657	0.380830545	0.119858296	0.003641016	0.173083896	0.173083896	-0.049191427	-0.057988049	-0.099758804	1.8837	0.0229	9.9011	1.1416	9.9013	1.2522	A-	A+	A-
SCIENCE	4	466794	7	B	2	10162	0.316079512	0.316079512	0.389490258	0.151840189	0.13766975	0.00236174	0.079482851	0.079482851	0.174002892	-0.127838131	-0.208985566	1.956	0.0231	9.9012	1.2391	9.9014	1.3609	A-	A-	A-
SCIENCE	4	728156	8	A	2	10223	0.411327399	0.177345202	0.120610388	0.411327399	0.287097721	0.002347647	0.311869144	-0.175722398	-0.272778355	0.311869144	0.011791869	1.5054	0.0221	5.551	1.0483	7.0011	1.0865	A-	A+	A+
SCIENCE	4	730465	8	A	2	10223	0.541426196	0.541426196	0.268512178	0.112980534	0.072287978	0.003521471	0.455725716	0.455725716	-0.23484429	-0.214078523	-0.201903002	0.873	0.0218	-9.8991	0.916	-8.3491	0.9088	B-	A-	A-
SCIENCE	4	604299	8	A	2	10223	0.526264306	0.128338061	0.093123349	0.526264306	0.248752812	0.002054192	0.327439932	-0.219065819	-0.263243475	0.327439932	-0.027296799	0.9442	0.0218	5.121	1.042	4.201	1.0472	A+	A-	A+
SCIENCE	4	878187	8	A	2	10223	0.684143598	0.1385112	0.684143598	0.094003717	0.079233102	0.003032378	0.446771373	-0.176207581	0.446771373	-0.278036664	-0.230155273	0.1499	0.0231	-9.8991	0.8994	-8.2391	0.87	A-	A-	A-
SCIENCE	4	789544	8	C	2	10223	0.796048127	0.796048127	0.064658124	0.081189475	0.054191529	0.00215201	0.474756766	0.474756766	-0.281709907	-0.25178888	-0.221613346	-0.5423	0.0262	-9.8992	0.8352	-9.8993	0.6919	A+	A-	A-
SCIENCE	4	774217	8	A	2	10223	0.425608921	0.210896997	0.259317226	0.095079722	0.425608921	0.008705859	0.217149585	-0.054385952	-0.023644198	-0.240280906	0.217149585	1.4345	0.022	9.9011	1.1431	9.9012	1.2053	A-	A-	A-
SCIENCE	4	438579	8	D	2	10223	0.504939842	0.283087156	0.08588477	0.116697643	0.504939842	0.008412403	0.305877833	0.037144792	-0.251889686	-0.301402193	0.305877833	1.0476	0.0218	8.2311	1.0679	7.7811	1.0873	A-	A-	A-
SCIENCE	4	775022	8	B	3	10223	0.560011738	0.131859532	0.128729336	0.17529101	0.560011738	0.001858554	0.498107781	-0.238034297	-0.229992443	-0.229233032	0.498107781	0.7797	0.0219	-9.8991	0.8761	-9.8992	0.8433	A+	A-	A-
SCIENCE	4	315502	9	A	2	10224	0.41206964	0.41206964	0.245011737	0.199726135	0.139084507	0.002738654	0.315000306	0.315000306	-0.046912347	-0.155194052	-0.20281418	1.4718	0.0219	4.031	1.0338	5.3211	1.0621	A-	A-	A-
SCIENCE	4	769633	9	C	2	10224	0.78706964	0.07629108	0.084604851	0.047926448	0.78706964	0.001956182	0.433184651	-0.223637427	-0.246827315	-0.218177636	0.433184651	-0.4849	0.0257	-9.8991	0.8689	-9.4192	0.7942	A+	A-	A-
SCIENCE	4	147835	9	A	2	10224	0.604068858	0.146322379	0.604068858	0.07413928	0.169796557	0.003521127	0.45210317	-0.263267185	0.45210317	-0.209520986	-0.188401476	0.547	0.022	-9.8991	0.9093	-9.8991	0.8745	A+	A-	A-
SCIENCE	4	822001	9	D	2	10224	0.335582942	0.213908451	0.176056338	0.335582942	0.263693271	0.009780908	0.128126879	-0.104540793	-0.108528754	0.128126879	0.057290545	1.8589	0.0228	9.9012	1.1984	9.9013	1.3186	A+	A-	A+
SCIENCE	4	575169	9	A	2	10224	0.732981221	0.073161189	0.732981221	0.121576682	0.067586072	0.002738654	0.530920648	-0.238713616	0.530920648	-0.325138858	-0.247242114	-0.1442	0.024	-9.8992	0.8132	-9.8993	0.6954	A-	A-	B-
SCIENCE	4	351587	9	A	2	10224	0.348884977	0.235035211	0.218896714	0.348884977	0.192977308	0.001662754	0.194473337	-0.110198148	-0.132504872	0.194473337	0.030186815	1.789	0.0226	9.9011	1.1313	9.9012	1.2301	A-	A+	A-
SCIENCE	4	501217	9	A	2	10224	0.281201095	0.171263693	0.264671362	0.279733959	0.281201095	0.001858372	0.0375855	-0.115868035	-0.03827848	0.103679887	0.0375855	2.1589	0.0238	9.9013	1.2731	9.9015	1.4609	A+	A-	A-
SCIENCE	4	962532	9	B	2	10224	0.307609546	0.154342723	0.307609546	0.314064945	0.216353678	0.006846635	0.205918581	-0.184080911	0.205918581	0.034853096	-0.102089457	2.0099	0.0232	9.6111	1.1025	9.9012	1.2401	A-	A-	A-
SCIENCE	4	237648	10	D	2	10240	0.656347656	0.146777344	0.656347656	0.099609375	0.092285156	0.002929688	0.424909423	-0.225329766	0.424909423	-0.201696242	-0.197996776	0.2984	0.0227	-7.2991	0.9325	-8.3891	0.8796	A-	A-	A-
SCIENCE	4	573817	10	A	2	10240	0.432324219	0.274414063	0.150195313	0.136621094	0.432324219	0.004882813	0.417123133	-0.120104364	-0.167810846	-0.260512542	0.417123133	1.397	0.0219	-6.1091	0.9498	-4.4691	0.9491	A+	A-	A-
SCIENCE	4	249565	10	A	2	10240	0.74375	0.074511719	0.053320313	0.122753906	0.74375	0.003417969	0.409425437	-0.183423626	-0.24762499	-0.213736447	0.409425437	-0.2028	0.0244	-7.4591	0.914	-6.0191	0.8811	A+	A-	A-
SCIENCE	4	663290	10	A	2	10240	0.730664063	0.0765625	0.730664063	0.073046875	0.111621094	0.007910156	0.535401428	-0.274168873	0.535401428	-0.252239569	-0.305105232	-0.1239	0.0241	-9.8992	0.8066	-9.8993	0.6971	A+	A-	A-
SCIENCE	4	103839	10	B	2	10240	0.659960938	0.084570313	0.133789063	0.659960938	0.117382813	0.003320313	0.385150423	-0.261410775	-0.163411893	0.385150423	-0.158142588	0.2718	0.0228	-4.519	0.9574	-2.039	0.9691	A+	A-	A-
SCIENCE	4	142972	10	A	2	10240	0.587988281	0.072558594	0.587988281	0.109863281	0.224804688	0.002636719	0.314985916	-0.223873919	0.314985916	-0.141863126	-0.118251915	0.6404	0.022	5.9711	1.0516	4.6511	1.0584	A+	A-	A-
SCIENCE	4	358070	10	D	2	10240	0.649023438	0.649023438	0.101855469	0.12890625	0.115429688	0.003417969	0.422792619	0.422792619	-0.172517495	-0.29256889	-0.152184367	0.3295	0.0226	-7.5591	0.931	-5.9891	0.9146	A+	A-	A-
SCIENCE	4	434689	10	C	2	10240	0.206445313	0.200976563	0.206445313	0.109667969	0.472753906	0.009667969	-0.02196169	-0.205446798	-0.02196169	-0.223724212	0.331189094	2.6757	0.0263	9.9013	1.2932	9.9018	1.7946	A-	A-	A+
SCIENCE	4	195900	11	A	2	10165	0.370388588	0.359468765	0.370388588	0.078799803	0.186128874	0.003344811	0.248024543	0.008249998	0.248024543	-0.266059032	-0.123094808	1.6871	0.0224	9.0911	1.0848	9.9011	1.1498	A+	A-	A-
SCIENCE	4	700544	11	B	2	10165	0.239842597	0.215740285	0.231677324	0.239842597	0.307820954	0.003639941	0.175020669	-0.137394823	-0.120941252	0.175020669	0.081634825	2.4172	0.025	7.9011	1.1042	9.9013	1.3155	A+	A-	A-
SCIENCE	4	473413	11	D	2	10165	0.460993606	0.169995081	0.460993606	0.193605509	0.167830792	0.007181505	0.249279945	-0.183752578	0.249279945	-0.010584054	-0.124967955	1.2436	0.0218	9.9011	1.1125	9.9011	1.142	A-	A-	A-
SCIENCE	4	289213	11	A	2	10165	0.6055091	0.071913428	0.112936547	0.2055091	0.6055091	0.00275455	0.51202596	-0.241515219	-0.217707564	-0.282563493	0.51202596	0.545	0.0221	-9.8991	0.8522	-9.8992	0.8108	A+	A-	A-
SCIENCE	4	869571	11	A	2	10165	0.584751599	0.584751599	0.045941958	0.309099852	0.056468273	0.002361043	0.227108066	0.227108066	-0.215579709	-0.065886752	-0.142924986	0.6473	0.022	9.9011	1.1182	9.9012	1.1704	A+	A+	A-
SCIENCE	4	582315	11	C	2	10165	0.652139695	0.173831776	0.652139695	0.100245942	0.068863748	0.002164289	0.402094946	-0.162831141	0.402094946	-0.238204338	-0.217449307	0.3086	0.0226	-5.8991	0.9471	-5.3091	0.9248	A+	A-	A-
SCIENCE	4	339385	11	A	2	10165	0.298376783	0.298376783	0.060206591	0.549434333	0.088243974	0.001377275	0.129256719	0.129256719	-0.247855031	0.106656272	-0.178033376	2.0761	0.0235	9.9012	1.1784	9.9014	1.3514	A+	A-	A+
SCIENCE	4	836372	11	B	2	10165	0.598130841	0.136153468	0.130349238	0.126512543	0.598130841	0.008460403	0.4660088	-0.261263592	-0.226877235	-0.177601663	0.4660088	0.5815	0.022	-9.8991	0.901	-9.8991	0.8537	A-	A+	A-
SCIENCE	4	954672	12	A	2	10247	0.341758563	0.193324876	0.179076803	0.341758563	0.275690446	0.009661364	0.268900176	-0.113402033	-0.09421618	0.268900176	-0.097006859	1.8382	0.0227	6.6311	1.0648	9.9012	1.1525	A+	A+	A-
SCIENCE	4	740582	12	D	2	10247	0.452815458	0.175075632	0.147457793	0.215477701	0.452815458	0.008978238	0.308198343	-0.105876715	-0.175271353	-0.115066573	0.308198343	1.2844	0.0218	6.6311	1.055	7.3111	1.0824	A+	A-	A+
SCIENCE	4	744080	12	A	3	10247	0.659217332	0.659217332	0.115741193	0.145310823	0.074851176	0.002830097	0.450060113	0.450060113	-0.251801167	-0.220509638	-0.19315917	0.2715	0.0227	-9.8991	0.9033	-8.6191	0.8761	A-	A-	A-
SCIENCE	4	494111	12	A	2	10247	0.439543281	0.093490778	0.311017859	0.439543281	0.150483068	0.003220455	0.287624985	-0.21192527	0.003528358	0.287624985	-0.221540558	1.3562	0.0219	8.6811	1.0733	9.3811	1.1088	A-	A-	A+
SCIENCE	4	380252	12	A	2	10247	0.844442276	0.844442276	0.035229823	0.068800625	0.047916463	0.001854201	0.318335396	0.318335396	-0.220381222	-0.155746274	-0.152139645	-0.9174	0.0288	-3.2991	0.9429	-2.3591	0.9277	A+	A-	A-
SCIENCE	4	336781	12	C	2	10247	0.768615204	0.100224456	0.057675417	0.768615204	0.069190983	0.003318044	0.388280869	-0.20288719	-0.233015138	0.388280869	-0.184595812	-0.361	0.0251	-6.2891	0.9214	-5.8291	0.8747	A+	A-	A-
SCIENCE	4	304071	12	D	3	10247	0.608665951	0.608665951	0.092124524	0.096906412	0.198594711	0.003025276	0.423390599	0.423390599	-0.257496695	-0.250073546	-0.142857396	0.5314	0.0221	-7.5791	0.9359	-6.9691	0.9132	A+	A-	A-
SCIENCE	4	314044	12	B	2	10247	0.74207085	0.74207085	0.127061579	0.045867083	0.079340295	0.003513223	0.391178901	0.391178901	-0.251418917	-0.208717461	-0.14514052	-0.1948	0.0243	-5.5891	0.9358	-5.1591	0.8991	A-	A-	A-
SCIENCE	8	720617	0	D	2	117845	0.472086215	0.472086215	0.103305189	0.310687768	0.112350969	0.000687344	0.297025725	0.297025725	-0.114657486	-0.030810545	-0.309769705	0.6838	0.0064	9.9011	1.0589	9.9011	1.0723			
SCIENCE	8	623795	0	B	2	117845	0.474003988	0.122007722	0.474003988	0.192277992	0.210021639	0.001009801	0.348170278	-0.212149624	0.348170278	-0.143804686	-0.113576383	0.6899	0.0064	4.791	1.0111	5.711	1.0175			
SCIENCE	8	200896	0	C	2	117845	0.617794561	0.617794561	0.217183589	0.079154822	0.083957741	0.000958887	0.438695097	0.438695097	-0.170436626	-0.276285008	-0.24044069	0.0015	0.0065	-9.8991	0.9114	-9.8991	0.8724			
SCIENCE	8	354869	0	C	3	117845	0.428961772	0.428961772	0.122084094	0.324137638	0.123085409	0.000678858	0.288114244	0.288114244	-0.224728424	0.006002851	-0.214624652	0.9625	0.0065	9.9011	1.0733	9.9011	1.101			
SCIENCE	8	286520	0	A	2	117845	0.412524927	0.196351139	0.233094319	0.412524927	0.156536128	0.000907972	0.391023775	-0.173328619	-0.074380162	0.391023775	-0.249698101	0.9079	0.0064	-9.899	0.9561	-9.899	0.9649			
SCIENCE	8	653479	0	A	2	117845	0.374279774	0.202503288	0.129364844	0.292850779	0.374279774	0.000627943	0.240082406	-0.046970436	-0.224655681	-0.04647422	0.240082406	1.1434	0.0065	9.9011	1.104	9.9011	1.1343			
SCIENCE	8	910641	0	A	2	117845	0.513538971	0.185625186	0.233068862	0.513538971	0.066969324	0.000381858	0.288708372	-0.154219212	-0.065702249	0.288708372	-0.222958606	0.4882	0.0064	9.9011	1.0649	9.9011	1.0859			
SCIENCE	8	656543	0	D	2	117845	0.468454326	0.124527982	0.468454326	0.227968942	0.177597692	0.000602486	0.231028845	-0.161506651	0.231028845	-0.076089423	-0.076729594	0.6569	0.0064	9.9011	1.1199	9.9012	1.1501			
SCIENCE	8	923560	0	A	2	117845	0.488565489	0.090941491	0.240502355	0.177996521	0.488565489	0.000967372	0.423153491	-0.202307848	-0.151279159	-0.227757512	0.423153491	0.5933	0.0064	-9.8991	0.9396	-9.8991	0.9271			
SCIENCE	8	989687	0	A	3	117845	0.488590946	0.274054903	0.124621325	0.111027197	0.488590946	0.000449743	0.289041773	-0.138075162	-0.153682105	-0.098866577	0.289041773	0.6043	0.0064	9.9011	1.0682	9.9011	1.0793			
SCIENCE	8	676647	0	A	2	117845	0.335805507	0.335805507	0.254206797	0.135712164	0.271636472	0.001137087	0.240504888	0.240504888	-0.069697961	-0.193856534	-0.033827623	1.3269	0.0067	9.9011	1.078	9.9012	1.1548			
SCIENCE	8	153851	0	A	2	117845	0.515473715	0.344783402	0.082880054	0.515473715	0.054766855	0.00099283	0.345788626	-0.095646684	-0.269781768	0.345788626	-0.224957015	0.5254	0.0064	4.841	1.0111	0.241	1.0007			
SCIENCE	8	763233	0	B	2	117845	0.467079639	0.228520514	0.164852136	0.467079639	0.138045738	0.000653401	0.388803041	-0.141626309	-0.272585812	0.388803041	-0.092282569	0.724	0.0064	-9.899	0.9734	-7.809	0.9763			
SCIENCE	8	424081	0	D	3	117845	0.434435063	0.098638041	0.246637532	0.217887904	0.434435063	0.00117103	0.425100497	-0.20925408	-0.152451561	-0.195412322	0.425100497	0.8536	0.0064	-9.8991	0.9303	-9.8991	0.9282			
SCIENCE	8	659161	0	B	2	117845	0.396266282	0.181518096	0.261326318	0.158996988	0.396266282	0.000924944	0.291945135	-0.142181599	-0.000511281	-0.235098878	0.291945135	1.0321	0.0065	9.9011	1.0532	9.9011	1.0792			
SCIENCE	8	460561	0	D	2	117845	0.457974458	0.124281896	0.457974458	0.197021511	0.21878739	0.001154058	0.282590899	-0.168948192	0.282590899	-0.151528993	-0.056003898	0.6805	0.0064	9.9011	1.0668	9.9011	1.0827			
SCIENCE	8	106345	0	C	2	117845	0.55550087	0.55550087	0.156510671	0.185879757	0.100233357	0.001103144	0.404266204	0.404266204	-0.233114628	-0.187076477	-0.138719779	0.282	0.0064	-9.899	0.9545	-9.8991	0.9331			
SCIENCE	8	638087	0	A	2	117845	0.544698545	0.149272349	0.116347745	0.187975731	0.544698545	0.001128601	0.523481436	-0.245315241	-0.261096049	-0.225112103	0.523481436	0.2959	0.0064	-9.8992	0.8499	-9.8992	0.81			
SCIENCE	8	512013	0	A	2	117845	0.535041792	0.160184989	0.535041792	0.190640248	0.112257627	0.00093343	0.395419725	-0.208271847	0.395419725	-0.116157454	-0.233470179	0.3831	0.0064	-9.899	0.9636	-9.899	0.9688			
SCIENCE	8	452271	0	A	2	117845	0.602104459	0.113725657	0.602104459	0.099843014	0.182137554	0.000891001	0.436047328	-0.216595214	0.436047328	-0.211970871	-0.206848513	0.0294	0.0065	-9.8991	0.9239	-9.8991	0.9055			
SCIENCE	8	550366	0	A	2	117845	0.569256226	0.569256226	0.08741143	0.130773474	0.211065382	0.000483686	0.346808097	0.346808097	-0.235516657	-0.278591035	-0.024998724	0.2606	0.0064	0.661	1.0015	1.401	1.0046			
SCIENCE	8	579380	0	A	2	117845	0.350409436	0.192328907	0.259264288	0.350409436	0.195960796	0.001069201	0.192088274	-0.14830193	-0.068369298	0.192088274	-0.004035322	1.2354	0.0066	9.9011	1.1289	9.9012	1.2071			
SCIENCE	8	271272	0	A	3	117845	0.439288896	0.075344732	0.193355679	0.290568119	0.439288896	0.000865544	0.248597324	-0.253909732	-0.072975791	-0.057612914	0.248597324	0.8715	0.0064	9.9011	1.1086	9.9011	1.1296			
SCIENCE	8	260673	0	B	2	117845	0.526301498	0.526301498	0.120522721	0.173006916	0.178700836	0.000874029	0.297152826	0.297152826	-0.196935456	-0.101809978	-0.115663025	0.3634	0.0064	9.9011	1.0567	9.9011	1.0951			
SCIENCE	8	930499	0	B	2	117845	0.511451483	0.159472188	0.081378081	0.245661674	0.511451483	0.001018287	0.416377031	-0.219642976	-0.269394537	-0.122456997	0.416377031	0.5184	0.0064	-9.8991	0.9446	-9.8991	0.9354			
SCIENCE	8	175746	0	A	3	117845	0.68400017	0.090678434	0.68400017	0.138249395	0.085315457	0.000916458	0.393884533	-0.21974917	0.393884533	-0.191298301	-0.186405811	-0.2419	0.0067	-9.8991	0.9098	-9.8991	0.8885			
SCIENCE	8	869337	0	D	2	117845	0.549229921	0.081590224	0.14117697	0.549229921	0.226017226	0.001069201	0.307110945	-0.27960213	-0.243386475	0.307110945	0.023652674	0.2961	0.0064	9.901	1.0448	9.9011	1.0554			
SCIENCE	8	363334	0	C	2	117845	0.563341678	0.236878951	0.563341678	0.108413594	0.08969409	0.001103144	0.351240371	-0.126636934	0.351240371	-0.209555498	-0.187099572	0.271	0.0064	0.761	1.0018	-3.109	0.9899			
SCIENCE	8	272026	0	D	2	117845	0.440536298	0.440536298	0.223632738	0.230149773	0.104696848	0.000509143	0.274835012	0.274835012	-0.068464469	-0.13847784	-0.15939038	0.8067	0.0064	9.9011	1.0763	9.9011	1.0936			
SCIENCE	8	653316	0	B	2	117845	0.534269591	0.131011074	0.534269591	0.076965506	0.256268828	0.000704315	0.383301102	-0.146489654	0.383301102	-0.278558227	-0.152229076	0.4787	0.0064	-9.899	0.9751	-9.899	0.9615			
SCIENCE	8	799337	0	C	2	117845	0.752717553	0.07959608	0.752717553	0.05846663	0.106648564	0.00134923	0.515317216	-0.276588032	0.515317216	-0.245923281	-0.282167983	-0.734	0.0072	-9.8992	0.8053	-9.8993	0.6644			
SCIENCE	8	591677	0	B	2	117845	0.604056175	0.113012856	0.108091137	0.172107429	0.604056175	0.001654716	0.392102474	-0.146449142	-0.249419066	-0.173083908	0.392102474	0.0458	0.0065	-9.899	0.9558	-9.8991	0.9369			
SCIENCE	8	455555	0	A	2	117845	0.607255293	0.607255293	0.101014044	0.09679664	0.192871993	0.001043744	0.347613345	0.347613345	-0.246346322	-0.25393375	-0.046657675	0.0842	0.0065	-4.169	0.99	-3.349	0.9881			
SCIENCE	8	640692	0	A	2	117845	0.357851415	0.299147185	0.357851415	0.187525988	0.153150325	0.001374687	0.229287683	-0.085757394	0.229287683	-0.142775732	-0.035688865	1.2477	0.0066	9.9011	1.1012	9.9012	1.1826			
SCIENCE	8	785171	0	A	2	117845	0.680690738	0.202028088	0.04737579	0.068216725	0.680690738	0.000746744	0.327562352	-0.105553069	-0.239861566	-0.229950077	0.327562352	-0.3363	0.0067	-3.849	0.9891	4.451	1.0207			
SCIENCE	8	800050	0	C	2	117845	0.496177182	0.208825152	0.18192541	0.496177182	0.112206712	0.000432772	0.406731082	-0.129184111	-0.2400194	0.406731082	-0.181799416	0.6163	0.0064	-9.899	0.9564	-9.899	0.9518			
SCIENCE	8	882999	0	A	2	117845	0.662225805	0.082608511	0.121150664	0.662225805	0.132776104	0.0004752	0.282699499	-0.21600002	-0.125050355	0.282699499	-0.095742143	-0.2684	0.0067	9.901	1.039	9.9011	1.1303			
SCIENCE	8	139718	0	A	2	117845	0.640205354	0.640205354	0.124001867	0.144927659	0.089923204	0.000364886	0.42544287	0.42544287	-0.16615333	-0.256078197	-0.20425663	-0.0066	0.0065	-9.8991	0.9029	-9.8991	0.8639			
SCIENCE	8	690133	1	B	2	10406	0.301556794	0.198251009	0.301556794	0.325197002	0.171343456	0.003171247	0.1992127	-0.164424224	0.1992127	0.033378013	-0.103327171	1.4934	0.0232	9.6711	1.1051	9.9012	1.248	A+	A-	A+
SCIENCE	8	123943	1	A	2	10406	0.70180665	0.090812993	0.124255237	0.70180665	0.078416298	0.003747838	0.457825777	-0.28686223	-0.186898672	0.457825777	-0.230403918	-0.501	0.023	-9.8991	0.8732	-9.8992	0.8012	A+	B-	A-
SCIENCE	8	735465	1	B	3	10406	0.610513165	0.129156256	0.158946761	0.098596963	0.610513165	0.001441476	0.462349705	-0.229193297	-0.207989913	-0.232021476	0.462349705	-0.0416	0.0218	-9.8991	0.8881	-9.8991	0.8724	A+	A-	A-
SCIENCE	8	831599	1	A	3	10406	0.70123006	0.062367865	0.70123006	0.100422833	0.132904094	0.001537574	0.485051805	-0.250041062	0.485051805	-0.268597816	-0.230151402	-0.5134	0.023	-9.8991	0.855	-9.8992	0.7697	A+	A-	A-
SCIENCE	8	549769	1	A	3	10406	0.201998847	0.299154334	0.251393427	0.201998847	0.244282145	0.001249279	0.012603605	-0.045551086	-0.143693981	0.012603605	0.186821623	2.1091	0.0261	9.9012	1.221	9.9017	1.6603	A-	A-	A-
SCIENCE	8	101982	1	C	2	10406	0.34095714	0.34095714	0.136555833	0.238035749	0.28070344	0.002210263	0.300904566	0.300904566	-0.158734695	-0.093247047	-0.100529038	1.2762	0.0225	3.031	1.029	7.1011	1.1002	A-	A-	A-
SCIENCE	8	562487	1	B	2	10406	0.409571401	0.073323083	0.409571401	0.142994426	0.370267154	0.001441476	0.119029487	-0.175430491	0.119029487	-0.173197146	0.105091627	0.928	0.0218	9.9012	1.2261	9.9013	1.2839	A-	A-	A-
SCIENCE	8	782560	1	A	2	10406	0.653084759	0.100903325	0.127906977	0.653084759	0.114645397	0.001921968	0.5489641	-0.268314983	-0.290846138	0.5489641	-0.250008692	-0.2568	0.0223	-9.8992	0.8081	-9.8993	0.7251	A+	A-	B-
SCIENCE	8	454228	1	C	2	10406	0.558331732	0.131366519	0.188641169	0.558331732	0.118489333	0.001729771	0.429092779	-0.256296253	-0.24628032	0.429092779	-0.087585738	0.213	0.0215	-8.8391	0.9324	-8.7091	0.909	A-	A-	A-

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
SCIENCE	8	637635	1	D	3	10406	0.361522199	0.238227945	0.206707669	0.190659235	0.361522199	0.001729771	0.093159622	0.045618089	-0.07806746	-0.07541228	0.093159622	1.1693	0.0222	9.9012	1.241	9.9013	1.3165	A-	A-	A+
SCIENCE	8	417752	2	A	2	9678	0.404422401	0.120789419	0.195184956	0.275883447	0.404422401	0.002479851	0.280390091	-0.177376866	-0.158244081	-0.032696599	0.280390091	1.0235	0.0226	7.7011	1.0685	8.6611	1.1055	A+	A-	A-
SCIENCE	8	358653	2	C	2	9678	0.603327134	0.603327134	0.262244265	0.072845629	0.060136392	0.000929944	0.382114904	0.382114904	-0.256559577	-0.176168745	-0.113362813	0.0733	0.0226	-2.779	0.9765	-4.6191	0.9431	A-	A-	A-
SCIENCE	8	779609	2	A	2	9678	0.588448026	0.588448026	0.197354825	0.12688572	0.084314941	0.001239926	0.284317602	0.284317602	-0.048433685	-0.225381027	-0.155126733	0.1405	0.0225	7.1711	1.0612	6.8811	1.0854	A+	A-	A-
SCIENCE	8	154278	2	A	2	9678	0.566646001	0.566646001	0.224426534	0.14961769	0.057449886	0.000826617	0.509876007	0.509876007	-0.286181966	-0.211765319	-0.240984163	0.2465	0.0224	-9.8991	0.8541	-9.8992	0.821	A-	A-	A-
SCIENCE	8	962441	2	B	1	9678	0.471378384	0.117689605	0.471378384	0.268443893	0.139698285	0.00072329	0.265788663	-0.217463679	0.265788663	-0.022351815	-0.147207051	0.7027	0.0223	9.9011	1.085	9.9011	1.114	A+	A-	A-
SCIENCE	8	729564	2	B	2	9678	0.735275883	0.070055797	0.735275883	0.076358752	0.116759661	0.000619963	0.475798311	-0.258920059	0.475798311	-0.264465907	-0.223700889	-0.6349	0.0247	-9.8991	0.8511	-9.8993	0.7404	A+	A-	A-
SCIENCE	8	392542	2	A	2	9678	0.469518496	0.469518496	0.183405662	0.172969622	0.170283116	0.003513123	0.296289194	0.296289194	-0.049579594	-0.192073106	-0.142740184	0.7116	0.0223	7.4311	1.0614	5.9011	1.064	A+	A-	A-
SCIENCE	8	987637	2	A	2	9678	0.535751188	0.100537301	0.535751188	0.212440587	0.149101054	0.001653234	0.290944798	-0.261835201	0.290944798	-0.046097969	-0.127023426	0.3951	0.0222	7.0711	1.0579	6.1611	1.0684	A+	A-	A-
SCIENCE	8	341342	2	D	2	9678	0.491527175	0.187538748	0.161396983	0.156333953	0.491527175	0.001239926	0.334525965	-0.132861951	-0.144916741	-0.163892031	0.334525965	0.6063	0.0222	2.391	1.0193	3.931	1.042	A+	A-	A-
SCIENCE	8	514850	2	C	3	9678	0.730626162	0.730626162	0.085554867	0.117999587	0.062926224	0.001549907	0.495271893	0.495271893	-0.287847104	-0.25515845	-0.227297662	-0.6076	0.0246	-9.8992	0.8293	-9.8993	0.7324	A+	A-	A-
SCIENCE	8	201406	3	D	2	9784	0.375613246	0.202677841	0.375613246	0.312755519	0.105887163	0.0026574	0.269970295	-0.118731254	0.269970295	-0.019246407	-0.231410462	1.1576	0.0227	7.5911	1.07	8.1411	1.1055	A+	A-	A-
SCIENCE	8	215809	3	B	1	9784	0.41782502	0.41782502	0.178761243	0.086161079	0.314084219	0.001839738	0.141699058	0.141699058	-0.1753498	-0.213487896	0.12958174	0.9554	0.0223	9.9012	1.1995	9.9013	1.2589	A-	A-	A+
SCIENCE	8	456294	3	A	2	9784	0.428352412	0.159341783	0.139820114	0.428352412	0.26809076	0.002861815	0.371115301	-0.144016005	-0.212654589	0.371115301	-0.123710313	0.8968	0.0223	-2.759	0.9773	-1.199	0.9868	A-	A-	A-
SCIENCE	8	136458	3	A	2	9784	0.693683565	0.120298446	0.693683565	0.100674571	0.083197056	0.001022077	0.486065764	-0.229580179	0.486065764	-0.284096718	-0.228888949	-0.4012	0.0236	-9.8991	0.8521	-9.8992	0.7735	A+	B-	A-
SCIENCE	8	839721	3	A	2	9784	0.627350777	0.627350777	0.157093213	0.127350777	0.085956664	0.001124285	0.298903044	0.298903044	-0.10125561	-0.202548424	-0.137906756	-0.0553	0.0227	2.491	1.0219	6.7211	1.0915	A+	A-	A-
SCIENCE	8	615660	3	B	2	9784	0.401267375	0.401267375	0.095257563	0.386242845	0.113757155	0.001533115	0.401239302	0.401239302	-0.249378679	-0.155655488	-0.14355495	1.0367	0.0225	-5.8891	0.9499	-2.819	0.9672	A-	A-	A-
SCIENCE	8	617593	3	B	2	9784	0.584219133	0.136140638	0.097097302	0.584219133	0.18152085	0.000613246	0.427955942	-0.196574528	-0.280255253	0.427955942	-0.155632862	0.1576	0.0223	-9.8891	0.921	-9.3591	0.8943	A-	A-	A-
SCIENCE	8	268170	3	A	2	9784	0.553761243	0.553761243	0.317865904	0.067865904	0.057542927	0.001635323	0.312161653	0.312161653	-0.092982925	-0.249704294	-0.199914082	0.3046	0.0221	4.101	1.033	3.631	1.0403	A+	A-	A-
SCIENCE	8	269629	3	C	2	9784	0.563777596	0.275756337	0.563777596	0.077882257	0.080539657	0.001533115	0.431458923	-0.20648036	0.431458923	-0.254622284	-0.187692963	0.2565	0.0222	-8.6491	0.932	-9.2491	0.9001	B-	A+	A-
SCIENCE	8	465535	3	A	2	9784	0.36130417	0.284546198	0.36130417	0.15106296	0.198691742	0.002555192	0.254868562	-0.251515583	0.254868562	-0.007511758	-0.008508974	1.2376	0.0229	8.9411	1.0855	9.9011	1.1405	A-	A+	A-
SCIENCE	8	450675	4	A	1	9800	0.473061224	0.473061224	0.03377551	0.037857143	0.452653061	0.001836735	0.278637835	0.278637835	-0.204698844	-0.184189416	-0.130947533	0.7124	0.0222	9.9011	1.0854	9.4611	1.105	A-	A-	A-
SCIENCE	8	248694	4	A	2	9800	0.450714286	0.122653061	0.284081633	0.450714286	0.141020408	0.001020408	0.317647299	-0.191873137	-0.026834286	0.317647299	-0.234076068	0.8166	0.0222	4.861	1.0408	4.6811	1.052	A-	B-	A-
SCIENCE	8	926531	4	A	2	9800	0.33122449	0.33122449	0.395408163	0.139081633	0.132142857	0.001020408	0.304052243	0.304052243	-0.073744281	-0.175628574	-0.132903494	1.4179	0.0234	2.591	1.0264	7.4311	1.1137	A+	A+	A+
SCIENCE	8	455512	4	A	3	9800	0.413571429	0.228877551	0.099285714	0.255918367	0.413571429	0.001020408	0.204588931	-0.005598686	-0.181883471	-0.097286448	0.204588931	0.9962	0.0224	9.9012	1.1518	9.9012	1.1893	A+	A-	A-
SCIENCE	8	956084	4	B	2	9800	0.692755102	0.092653061	0.099285714	0.692755102	0.113061224	0.00122449	0.427332297	-0.228766487	-0.23648882	0.427332297	-0.186487351	-0.3847	0.0236	-9.5191	0.9065	-8.4791	0.8618	A+	A-	A-
SCIENCE	8	849824	4	B	2	9800	0.406326531	0.259285714	0.406326531	0.205204082	0.126428571	0.001326531	0.357247062	-0.148897182	0.357247062	-0.200083525	-0.083677484	1.0321	0.0225	-0.739	0.9935	1.881	1.0224	A-	A-	A-
SCIENCE	8	262099	4	A	3	9800	0.73622449	0.060816327	0.73622449	0.085918367	0.115102041	0.001122449	0.424691093	-0.239218635	0.424691093	-0.245210316	-0.186218763	-0.6315	0.0246	-8.8691	0.9011	-9.7392	0.8169	B+	A-	A+
SCIENCE	8	167606	4	A	2	9800	0.514693878	0.161428571	0.514693878	0.183061224	0.137346939	0.002653061	0.444481903	-0.193827265	0.444481903	-0.166490191	-0.244516896	0.5074	0.0221	-9.8991	0.9181	-8.8091	0.9079	A-	A-	A-
SCIENCE	8	117362	4	C	2	9800	0.629693878	0.129081633	0.629693878	0.106632653	0.132346939	0.001530612	0.500014139	-0.202039966	0.500014139	-0.301439988	-0.232676554	-0.0541	0.0227	-9.8991	0.8627	-9.8992	0.805	A+	A-	A-
SCIENCE	8	493874	4	B	2	9800	0.595918367	0.595918367	0.092244898	0.202857143	0.106938776	0.001020408	0.522974474	0.522974474	-0.272614621	-0.285801985	-0.195713274	0.1144	0.0224	-9.8992	0.8404	-9.8992	0.8107	A+	A-	A-
SCIENCE	8	865766	5	C	2	9770	0.731320368	0.115046059	0.086079836	0.064790174	0.731320368	0.001432958	0.402838498	-0.186341396	-0.220937905	-0.221328874	0.402838498	-0.6049	0.0244	-7.8991	0.9129	-8.2892	0.8498	A+	A-	A-
SCIENCE	8	847902	5	B	2	9770	0.418116684	0.418116684	0.121801433	0.283623337	0.173797339	0.001842375	0.259219631	0.259219631	-0.222824197	-0.072383888	-0.052509401	0.9618	0.0223	9.9011	1.0857	9.7211	1.1127	A-	A-	A-
SCIENCE	8	531234	5	A	2	9770	0.502456499	0.095394063	0.502456499	0.283111566	0.115148414	0.002763562	0.268815	-0.259057872	0.268815	-0.01720473	-0.151505094	0.5519	0.022	9.2211	1.0729	8.6611	1.092	A+	A-	A-
SCIENCE	8	925358	5	C	2	9770	0.247492323	0.205527124	0.289457523	0.253224156	0.247492323	0.002047083	0.202295613	-0.131100309	-0.049252491	-0.021346645	0.202295613	1.8692	0.0252	5.3911	1.0703	9.9013	1.2566	A-	A-	A-
SCIENCE	8	937209	5	A	3	9770	0.408904811	0.246468782	0.106345957	0.408904811	0.235516888	0.00122825	0.154285394	0.081254772	-0.279006357	0.154285394	-0.052918566	0.9987	0.0224	9.9012	1.1776	9.9012	1.2402	A+	A+	A-
SCIENCE	8	390542	5	C	2	9770	0.51136131	0.51136131	0.220368475	0.121084954	0.143909928	0.001330604	0.354956639	0.354956639	-0.206394263	-0.103206399	-0.157870364	0.5091	0.022	-1.009	0.9922	-0.619	0.9936	A+	A-	A-
SCIENCE	8	330754	5	A	2	9770	0.456090072	0.282292733	0.08618219	0.456090072	0.172569089	0.002149437	0.297651189	-0.079245827	-0.240806224	0.297651189	-0.112887065	0.7711	0.0221	5.741	1.0462	6.2611	1.0671	A+	A-	A-
SCIENCE	8	684173	5	A	2	9770	0.692630502	0.079119754	0.086079836	0.139099284	0.692630502	0.00174002	0.457178124	-0.267811243	-0.183971632	-0.242751386	0.457178124	-0.3882	0.0235	-9.8991	0.8678	-9.7092	0.8477	A-	A-	A-
SCIENCE	8	741347	5	A	2	9770	0.641146366	0.082599795	0.641146366	0.103070624	0.169293756	0.002251791	0.416588427	-0.226817795	0.416588427	-0.267189163	-0.14100097	-0.1192	0.0228	-9.0991	0.9212	-8.3291	0.8889	A+	B-	B-
SCIENCE	8	628675	5	D	2	9770	0.524974411	0.524974411	0.199078813	0.177379734	0.095701126	0.002149437	0.24623058	0.24623058	-0.02177902	-0.151753923	-0.182747126	0.4447	0.022	9.9011	1.0926	9.9011	1.1288	A-	A-	A-
SCIENCE	8	158793	6	D	2	9763	0.36156919	0.36156919	0.188569087	0.243162962	0.204138072	0.001741268	0.237820112	0.237820112	-0.076438047	-0.10326835	-0.095826398	1.255	0.0231	9.9011	1.1168	9.9012	1.2089	A+	A-	A-
SCIENCE	8	656458	6	A	2	9763	0.649595411	0.122093619	0.649595411	0.113182423	0.112260576	0.001331558	0.45633521	-0.266482372	0.45633521	-0.232400246	-0.171321103	-0.1498	0.0231	-9.8991	0.8897	-9.8992	0.8356	A+	A-	A-
SCIENCE	8	639405	6	A	2	9763	0.653282802	0.113694561	0.134180068	0.653282802	0.09546246	0.001433985	0.44765036	-0.216274974	-0.213344567	0.44765036	-0.235014191	-0.1908	0.0232	-9.8991	0.8998	-9.8992	0.8369	A+	A-	A-
SCIENCE	8	889471	6	C	2	9763	0.776912834	0.085424562	0.776912834	0.072928403	0.063197788	0.00081942	0.477874313	-0.298773915	0.477874313	-0.256069454	-0.19524307	-0.9068	0.026	-9.8992	0.8301	-9.8993	0.6915	A+	A-	A-
SCIENCE	8	838997	6	C	3	9763	0.658506607	0.14985148	0.658506607	0.085424562	0.10334938	0.001126703	0.368811546	-0.188254548	0.368811546	-0.215753697	-0.146955452	-0.2183	0.0232	-3.949	0.9626	-1.539	0.9759	A+	A+	A-
SCIENCE	8	804243	6	A	2	9763	0.665778961	0.133975213	0.113387279	0.665778961	0.083888149	0.001331558	0.470350809	-0.212963839	-0.262028145	0.470350809	-0.22966793	-0.2567	0.0233	-9.8991	0.8839	-9.8992	0.8171	A+	A-	A-
SCIENCE	8	479035	6	A	2	9763	0.380518283	0.249820752	0.243470245	0.122298474	0.380518283	0.003277681	0.374131372	-0.110192612	-0.158707158	-0.199906819	0.374131372	1.1584	0.0229	-2.009	0.9815	1.901	1.0251	B-	A-	A-
SCIENCE	8	848602	6	A	2	9763	0.736658814	0.736658814	0.075898802	0.086039127	0.097818294	0.001946123	0.499491377	0.499491377	-0.250045985	-0.273697209	-0.248811484	-0.6545	0.0247	-9.8992	0.8221	-9.8993	0.7112	A+	A-	A-
SCIENCE	8	311066	6	D	2	9763	0.548909147	0.281675714	0.548909147	0.075489091	0.089624091	0.003175254	0.288960764	-0.098969719	0.288960764	-0.168881509	-0.185149185	0.3325	0.0223	8.6311	1.0736	8.5211	1.103	A-	B-	A-
SCIENCE	8	281976	6	B	2	9763	0.492676431	0.492676431	0.12741985	0.210693434	0.165830175	0.002355833	0.389280166	0.389280166	-0.207613604	-0.201880257	-0.10673712	0.6048	0.0223	-2.389	0.9804	-2.079	0.9771	A+	A+	A-
SCIENCE	8	864640	7	B	2	9811	0.695341963	0.073081235	0.695341963	0.08826827	0.141779635	0.001121191	0.434942636	-0.177851884	0.434942636	-0.29590145	-0.195095967	-0.4253	0.0237	-9.6391	0.9034	-9.4792	0.8459	A-	B-	A-
SCIENCE	8	891936	7	C	2	9811	0.506268474	0.261747019	0.506268474	0.121394353	0.108653552	0.001630823	0.472608802	-0.19281142	0.472608802	-0.263633667	-0.207159058	0.5174	0.0221	-9.8991	0.9009	-9.8991	0.8839	A-	A-	A-
SCIENCE	8	727498	7	A	2	9811	0.607379472	0.136173683	0.099378249	0.154928142	0.607379472	0.001630823	0.317709044	-0.180130854	-0.239133753	-0.054283428	0.317709044	0.0388	0.0225	1.761	1.0153	6.8311	1.0902	A+	A-	A-
SCIENCE	8	960848	7	B	2	9811	0.429008256	0.429008256	0.143818163	0.196616043	0.227295892	0.001732749	0.333887128	0.333887128	-0.236186948	-0.152866651	-0.045819496	0.8968	0.0223	2.961	1.025	3.381	1.0389	A+	A+	A+
SCIENCE	8	521430	7	A	2	9811	0.677606768	0.677606768	0.086943227	0.198756498	0.033737641	0.00142697	0.431683831	0.431683831	-0.290372902	-0.200388813	-0.205497195	-0.3289	0.0234	-9.5291	0.9085	-8.4091	0.8704	A+	B-	A-
SCIENCE	8	790517	7	B	2	9811	0.68749363	0.68749363	0.101212924	0.128325349	0.079706452	0.001528896	0.498795274	0.498795274	-0.256509912	-0.26835915	-0.224978586	-0.3823	0.0236	-9.8992	0.8457	-9.8992	0.7668	A+	A-	A-
SCIENCE	8	190650	7	A	2	9811	0.401488126	0.164101519	0.26765875	0.162674549	0.401488126	0.001630823	0.288349859	-0.154456306	-0.056790144	-0.152252912	0.288349859	1.0325	0.0225	7.6611	1.0683	7.4511	1.0926	A+	A-	A-
SCIENCE	8	118738	7	A	2	9811	0.678014474	0.678014474	0.150239527	0.094587708	0.074406279	0.001732749	0.415003382	0.415003382	-0.219778403	-0.18102642	-0.22850252	-0.331	0.0234	-8.6291	0.9168	-7.2691	0.8871	A+	A-	A-
SCIENCE	8	998343	7	A	2	9811	0.548771787	0.548771787	0.08857405	0.271226175	0.08969524	0.001325043	0.406782234	0.406782234	-0.26116051	-0.13733593	-0.229965765	0.3198	0.0222	-5.539	0.9555	-5.5291	0.939	A-	A-	A-
SCIENCE	8	986613	7	D	2	9811	0.851900928	0.0578942	0.05024972	0.851900928	0.037712771	0.000917338	0.410110956	-0.223185141	-0.240153333	0.410110956	-0.20095015	-1.4753	0.0299	-8.1691	0.8546	-9.8993	0.6524	B+	B-	A-
SCIENCE	8	178204	8	D	2	9787	0.450189026	0.163788699	0.170021457	0.213037703	0.450189026	0.001839174	0.255856385	-0.163066109	-0.053461242	-0.110718517	0.255856385	0.7832	0.0222	9.9011	1.0979	9.9011	1.1295	A+	A-	A-
SCIENCE	8	105488	8	C	2	9787	0.406151017	0.265965056	0.180954327	0.406151017	0.144783897	0.001634822	0.279374369	-0.117963415	-0.114519258	0.279374369	-0.110884878	1.0006	0.0225	8.4211	1.0752	9.9011	1.1219	A-	A-	A-
SCIENCE	8	190977	8	A	2	9787	0.453356493	0.453356493	0.139981608	0.325840401	0.078471442	0.001430469	0.326391025	0.326391025	-0.253060148	-0.024911206	-0.2263324	0.7757	0.0222	3.431	1.0286	3.211	1.0352	A+	A-	A-
SCIENCE	8	723849	8	B	2	9787	0.613875549	0.105446	0.613875549	0.140696843	0.137733728	0.001328293	0.499491515	-0.263939303	0.499491515	-0.246825582	-0.214459772	-0.0006	0.0226	-9.8991	0.8537	-9.8992	0.7987	A-	A-	A-
SCIENCE	8	735488	8	C	3	9787	0.547460918	0.146010013	0.107182998	0.197609073	0.547460918	0.00112394	0.522217349	-0.215395812	-0.263759007	-0.251842031	0.522217349	0.3241	0.0222	-9.8992	0.8444	-9.8992	0.8008	A-	A-	A-
SCIENCE	8	978746	8	A	2	9787	0.59395116	0.121794217	0.142025135	0.59395116	0.139572903	0.001430469	0.493815272	-0.262096825	-0.246755481	0.493815272	-0.195850078	0.0981	0.0224	-9.8991	0.8613	-9.8992	0.8092	A-	A+	A+
SCIENCE	8	178452	8	C	2	9787	0.691938285	0.088076019	0.691938285	0.132216205	0.085930316	0.00112394	0.529604642	-0.255381606	0.529604642	-0.314181781	-0.227331202	-0.406	0.0236	-9.8992	0.8132	-9.8993	0.713	A+	A-	A-
SCIENCE	8	324445	8	A	2	9787	0.562480842	0.229079391	0.076427915	0.562480842	0.128946562	0.001839174	0.400330897	-0.154440616	-0.284062415	0.400330897	-0.166210141	0.2516	0.0222	-5.279	0.9574	-4.8791	0.9447	A+	A-	A-
SCIENCE	8	256378	8	A	2	9787	0.315316236	0.297128844	0.315316236	0.188924083	0.195769899	0.002145703	0.175464946	-0.030943255	0.175464946	-0.091912505	-0.073894669	1.4772	0.0237	9.9011	1.1489	9.9013	1.2788	A-	A-	A-
SCIENCE	8	328088	8	D	2	9787	0.561152549	0.129866149	0.158782058	0.561152549	0.147542659	0.002350056	0.3577391	-0.124541737	-0.103512597	0.3577391	-0.270839736	0.258	0.0222	0.381	1.0031	1.011	1.0116	A-	A-	A-
SCIENCE	8	455681	9	A	2	9787	0.632778175	0.168897517	0.632778175	0.117604986	0.078062736	0.001941351	0.421778224	-0.168988643	0.421778224	-0.237818731	-0.224030856	-0.0977	0.0227	-9.2591	0.9212	-8.1091	0.8943	A+	A-	A-
SCIENCE	8	961359	9	D	3	9787	0.396852968	0.396852968	0.320220701	0.185245734	0.096352304	0.000715234	0.362490873	0.362490873	-0.127900451	-0.131599886	-0.21921249	1.0406	0.0225	-2.109	0.9818	-0.539	0.9937	A-	A-	A+
SCIENCE	8	463166	9	A	2	9787	0.59395116	0.095432717	0.099417595	0.59395116	0.209155002	0.00112394	0.49460356	-0.258112342	-0.263369816	0.49460356	-0.212788391	0.0961	0.0223	-9.8991	0.8638	-9.8992	0.8144	A-	B-	A-
SCIENCE	8	185347	9	A	3	9787	0.406866251	0.406866251	0.237049147	0.175028098	0.178297742	0.002452233	0.204388134	0.204388134	-0.098835187	-0.035415264	-0.112832235	0.9913	0.0224	9.9011	1.1353	9.9012	1.1887	A+	A+	A+
SCIENCE	8	877293	9	B	2	9787	0.279145806	0.279145806	0.089608665	0.520997241	0.107285174	0.001736998	0.177395886	0.177395886	-0.233253025	0.150042721	-0.275897056	1.6636	0.0243	9.8711	1.1178	9.9013	1.2833	A-	A-	A-
SCIENCE	8	688458	9	C	2	9787	0.42147747	0.189639317	0.132624911	0.252988658	0.42147747	0.002554409	0.289654348	-0.271877278	-0.198096811	0.075346883	0.289654348	0.92	0.0223	6.4311	1.0545	6.2011	1.0701	A-	A-	A-
SCIENCE	8	762840	9	C	2	9787	0.669561663	0.106978645	0.131194442	0.669561663	0.089915194	0.001226116	0.366751584	-0.176574568	-0.192969136	0.366751584	-0.178170445	-0.2847	0.0231	-4.579	0.9572	-3.6191	0.9457	A+	A-	A-
SCIENCE	8	358755	9	A	3	9787	0.378461224	0.378461224	0.089915194	0.1732911	0.355880249	0.001328293	0.218282887	0.218282887	-0.270567826	-0.178100114	0.084657142	1.1322	0.0227	9.9011	1.1144	9.9012	1.154	A-	A-	A+
SCIENCE	8	481776	9	C	2	9787	0.439256156	0.1845305	0.215285583	0.439256156	0.158577705	0.001226116	0.291114643	-0.097141183	-0.12870833	0.291114643	-0.142693086	0.834	0.0222	6.041	1.05	5.7111	1.0624	A+	A-	A-
SCIENCE	8	896340	9	A	2	9787	0.455808726	0.455808726	0.247879841	0.227240217	0.065801574	0.00224788	0.342542317	0.342542317	-0.143172849	-0.126131094	-0.21698459	0.7547	0.0221	0.821	1.0065	1.321	1.0139	B-	A-	A-
SCIENCE	8	730854	10	C	2	9781	0.565586341	0.180860853	0.106124118	0.143339127	0.565586341	0.003476127	0.477819202	-0.280870554	-0.198499693	-0.1836536	0.477819202	0.24	0.0222	-9.8991	0.8883	-9.8992	0.8486	A-	A-	A-
SCIENCE	8	224369	10	C	2	9781	0.468050302	0.17268173	0.468050302	0.149575708	0.205091504	0.00214702	0.351941757	-0.095483747	0.351941757	-0.248177073	-0.120094917	0.7092	0.0222	0.311	1.0025	0.731	1.0077	A-	A-	A-
SCIENCE	8	777481	10	D	2	9781	0.457826398	0.064410592	0.079235252	0.395562826	0.457826398	0.002555976	0.286848753	-0.232686763	-0.265307058	-0.024437879	0.286848753	0.7527	0.0222	8.4911	1.0712	8.1111	1.0893	A+	A-	A-
SCIENCE	8	224081	10	A	2	9781	0.158163787	0.110929353	0.158163787	0.661384317	0.066353134	0.001840303	-0.085414365	-0.151834588	-0.085414365	0.291240838	-0.22034536	2.5159	0.0294	9.9013	1.2716	9.9021	2.0742	A-	A+	A+
SCIENCE	8	770933	10	A	2	9781	0.528371332	0.20018403	0.13771598	0.129843574	0.528371332	0.002658215	0.40483108	-0.193305728	-0.191949265	-0.167465745	0.40483108	0.4205	0.0221	-5.349	0.9576	-5.4991	0.942	A-	A-	A-
SCIENCE	8	964711	10	D	2	9781	0.595031183	0.175339945	0.595031183	0.150086903	0.076679276	0.001431346	0.36109448	-0.148723524	0.36109448	-0.176348037	-0.206463832	0.0979	0.0224	-1.519	0.9873	-2.199	0.9733	A-	A-	A-
SCIENCE	8	866332	10	D	2	9781	0.509252633	0.17799816	0.232082609	0.509252633	0.077394949	0.001635825	0.388319517	-0.233401356	-0.100419599	0.388319517	-0.221292466	0.5119	0.0221	-3.749	0.9702	-3.419	0.9642	A-	A-	A-
SCIENCE	8	414154	10	A	2	9781	0.662917902	0.108475616	0.122277886	0.102443513	0.662917902	0.002249259	0.518471108	-0.268118872	-0.236403996	-0.267827592	0.518471108	-0.2456	0.0231	-9.8992	0.8319	-9.8992	0.7603	A+	A-	A-
SCIENCE	8	968630	10	B	2	9781	0.580308762	0.068193436	0.580308762	0.228095287	0.121051017	0.001635825	0.361275786	-0.24895114	0.361275786	-0.092026429	-0.227478073	0.1699	0.0223	-0.759	0.9937	-0.169	0.998	A+	A-	A-
SCIENCE	8	274790	10	A	3	9781	0.502402617	0.079746447	0.264901339	0.502402617	0.149677947	0.002351498	0.427747525	-0.275688287	-0.134820557	0.427747525	-0.214976124	0.5447	0.0221	-8.4991	0.9333	-8.2291	0.9158	A-	A+	A+
SCIENCE	8	432696	11	A	2	9745	0.683632632	0.683632632	0.093381221	0.110107748	0.110210364	0.001949718	0.498070652	0.498070652	-0.26619943	-0.282737065	-0.200283684	-0.357	0.0234	-9.8992	0.8434	-9.8992	0.7678	A+	A-	A-
SCIENCE	8	275975	11	B	2	9745	0.538532581	0.106516162	0.232119035	0.120574654	0.538532581	0.001539251	0.47860026	-0.241747156	-0.165607822	-0.283743699	0.47860026	0.3635	0.0221	-9.8991	0.8882	-9.8991	0.859	A+	A-	A-
SCIENCE	8	477659	11	B	3	9745	0.43950744	0.108671113	0.250897896	0.43950744	0.198563366	0.001847101	0.29743309	-0.235542848	-0.061294677	0.29743309	-0.116283628	0.838	0.0222	5.231	1.0433	6.1111	1.0673	A+	A-	A+

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
SCIENCE	8	866016	11	D	2	9745	0.530323243	0.530323243	0.169420215	0.208517188	0.089276552	0.001539251	0.367551006	0.367551006	-0.129988285	-0.21861258	-0.15388057	0.4061	0.0221	-1.939	0.9849	-2.499	0.9734	A+	A-	A-
SCIENCE	8	217622	11	A	2	9745	0.454386865	0.454386865	0.273268343	0.153104156	0.116675218	0.001436634	0.309585299	0.309585299	-0.016649843	-0.257289381	-0.163049368	0.7666	0.0222	4.351	1.0353	3.631	1.0389	A+	A-	A+
SCIENCE	8	134620	11	A	2	9745	0.355361724	0.188301693	0.355361724	0.101077476	0.352693689	0.001026167	0.241066731	-0.143378814	0.241066731	-0.18057574	-0.00670406	1.2551	0.023	8.4511	1.0821	9.9012	1.1516	A-	A-	A-
SCIENCE	8	800168	11	C	2	9745	0.448127245	0.186249359	0.448127245	0.178245254	0.184299641	0.002257568	0.253391002	-0.102369068	0.253391002	-0.137747846	-0.081035057	0.7966	0.0222	9.9011	1.0888	9.9011	1.1133	A+	A+	A+
SCIENCE	8	715555	11	A	2	9745	0.688558235	0.082401231	0.128578758	0.688558235	0.09779374	0.001847101	0.454692532	-0.246366463	-0.234827143	0.454692532	-0.206988705	-0.3798	0.0235	-9.8991	0.8798	-9.8992	0.8083	A-	A-	A-
SCIENCE	8	660091	11	A	2	9745	0.319138019	0.179374038	0.186044125	0.311441765	0.319138019	0.003488969	0.195071667	-0.195134186	-0.067133217	0.024804617	0.195071667	1.4461	0.0236	9.9011	1.122	9.9012	1.2325	A-	A+	A+
SCIENCE	8	727144	11	C	2	9745	0.334120062	0.134120062	0.132683427	0.395792714	0.334120062	0.001949718	0.24786702	-0.217398319	-0.22689259	0.075946316	0.24786702	1.366	0.0233	7.5211	1.0767	8.6211	1.1275	A-	A-	A-
SCIENCE	8	656603	12	A	2	9733	0.535292305	0.10007192	0.535292305	0.140552759	0.222028152	0.001027432	0.299249409	-0.247620728	0.299249409	-0.189207114	-0.017297417	0.3912	0.0221	4.631	1.0364	6.3911	1.0676	A+	A-	A+
SCIENCE	8	508769	12	B	2	9733	0.406965992	0.406965992	0.376040275	0.122572691	0.090825028	0.002979554	0.273982235	0.273982235	0.048269617	-0.268208425	-0.234111106	0.9992	0.0224	7.0811	1.0614	8.5411	1.0992	A+	A-	A-
SCIENCE	8	298872	12	A	2	9733	0.428336587	0.428336587	0.130894894	0.303914518	0.134285421	0.001952122	0.362659462	0.362659462	-0.157304186	-0.143122627	-0.170806988	0.8947	0.0223	-2.189	0.9821	-0.819	0.9912	A-	A-	A-
SCIENCE	8	292474	12	A	2	9733	0.43224083	0.234871057	0.43224083	0.14661461	0.182882975	0.001438405	0.311444849	-0.136012584	0.311444849	-0.216007966	-0.045776608	0.8759	0.0222	3.201	1.0264	3.691	1.0398	A-	A-	A-
SCIENCE	8	291550	12	A	2	9733	0.426384465	0.152984691	0.308846193	0.426384465	0.109627042	0.001232919	0.281158572	-0.176434109	-0.039403867	0.281158572	-0.179519928	0.9041	0.0223	6.2811	1.0527	6.5311	1.072	A-	A-	A+
SCIENCE	8	445187	12	B	2	9733	0.440254803	0.168396178	0.150621597	0.238158841	0.440254803	0.001541149	0.358118226	-0.178779475	-0.232313082	-0.060693327	0.358118226	0.8374	0.0222	-2.159	0.9825	-1.369	0.9856	A-	A-	A-
SCIENCE	8	651693	12	D	2	9733	0.391965478	0.391965478	0.219459571	0.196034111	0.189972259	0.001335662	0.241289206	0.241289206	-0.030248314	-0.119779958	-0.144858409	1.0722	0.0225	9.9011	1.0922	9.9011	1.1387	A-	A-	A-
SCIENCE	8	685349	12	A	2	9733	0.382307613	0.220795233	0.196136854	0.382307613	0.198397205	0.001541149	0.085231849	0.036040787	-0.038385223	0.085231849	-0.09672581	1.1202	0.0226	9.9012	1.2377	9.9013	1.2992	A+	A-	A-
SCIENCE	8	663511	12	C	2	9733	0.573204562	0.573204562	0.110448988	0.218329395	0.094832015	0.002054865	0.44980739	0.44980739	-0.259102255	-0.162545087	-0.242680356	0.2061	0.0222	-9.8991	0.9015	-9.8991	0.8704	A+	A-	A-
SCIENCE	8	463446	12	D	2	9733	0.749717456	0.075927258	0.749717456	0.080550704	0.090414055	0.002363095	0.484868078	-0.274093978	0.484868078	-0.255717406	-0.23126097	-0.721	0.0249	-9.8992	0.8398	-9.8993	0.7254	B+	A-	B-

Multiple-Choice Paper/Pencil Item Statistics

Column Heading	Definition
ContArea	Content
FormGrade	Grade
PubID	Form ID
FormNumber	Form
Standard1	Standard
Depth	Depth of Knowledge
N	N
PValue	P-Value
ProportionA	Proportion A
ProportionB	Proportion B
ProportionC	Proportion C
ProportionD	Proportion D
ProportionOMITS	Proportion Omits
PtBiserial	Point Biserial
CorrelationA	Correlation A
CorrelationB	Correlation B
CorrelationC	Correlation C
CorrelationD	Correlation D
FinalB	IRT Difficulty Estimate
FinalBErr	IRT Difficulty Error
Infit	Infit
InfitMnSq	Infit Mean Square
Outfit	Outfit
OutfitMnSq	Outfit Mean Square
BiasCodeMALEFEMALE	Male/Female DIF Code
BiasCodeWHITEBLACK	White/Black DIF Code
BiasCodeWHITEHISPANIC	White/Hispanic DIF Code

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD
ELA	3	187899	0	D	2	2844	0.678270042	0.100914205	0.084388186	0.13466948	0.678270042	0.001758087	0.390374983	-0.206005959	-0.200936244	-0.186012291	0.390374983
ELA	3	667840	0	D	2	2844	0.614978903	0.211673699	0.034106892	0.137482419	0.614978903	0.001758087	0.439945421	-0.21800153	-0.164468694	-0.267385739	0.439945421
ELA	3	955477	0	D	2	2844	0.389240506	0.30907173	0.122714487	0.389240506	0.177918425	0.001054852	0.424560754	-0.143116431	-0.138399945	0.424560754	-0.247028272
ELA	3	404480	0	D	2	2844	0.408227848	0.110407876	0.287623066	0.191631505	0.408227848	0.002109705	0.220937916	-0.248585292	0.013041241	-0.090942181	0.220937916
ELA	3	628579	0	D	2	2844	0.85302391	0.85302391	0.038326301	0.079465541	0.028481013	0.000703235	0.379433405	0.379433405	-0.228892356	-0.20594539	-0.203434992
ELA	3	992688	0	B-K	2	2844	0.35021097	0.359704641	0.17862166	0.35021097	0.107594937	0.003867792	0.344528696	-0.104827849	-0.173010842	0.344528696	-0.137059577
ELA	3	980060	0	B-V	2	2844	0.457102672	0.457102672	0.164205345	0.279535865	0.095639944	0.003516174	0.366557359	0.366557359	-0.235302107	-0.046504728	-0.237354288
ELA	3	468168	0	B-C	3	2844	0.527074543	0.243670886	0.527074543	0.107243319	0.118846695	0.003164557	0.480499166	-0.177301088	0.480499166	-0.258772818	-0.245558844
ELA	3	382430	0	B-K	3	2844	0.39697609	0.29395218	0.132208158	0.172644163	0.39697609	0.004219409	0.323127911	0.000982737	-0.295864881	-0.140063967	0.323127911
ELA	3	344406	0	A-K	2	2844	0.491912799	0.491912799	0.097398031	0.074542897	0.334036568	0.002109705	0.395758119	0.395758119	-0.266819638	-0.258119732	-0.101851803
ELA	3	416388	0	A-K	2	2844	0.464838256	0.25140647	0.136427567	0.464838256	0.144514768	0.00281294	0.382310324	-0.231555693	-0.136307257	0.382310324	-0.112586894
ELA	3	556098	0	A-V	2	2844	0.813994374	0.813994374	0.052039381	0.063642757	0.068213783	0.002109705	0.519234148	0.519234148	-0.257513744	-0.256363495	-0.313163065
ELA	3	119311	0	A-V	2	2844	0.726441632	0.135021097	0.073488045	0.062939522	0.726441632	0.002109705	0.493482013	-0.276086629	-0.272790009	-0.216762313	0.493482013
ELA	3	656213	0	A-V	2	2844	0.682489451	0.148734177	0.096694796	0.682489451	0.068565401	0.003516174	0.532900982	-0.277922886	-0.285354913	0.532900982	-0.237987345
ELA	3	388917	0	A-V	2	2844	0.755274262	0.093881857	0.755274262	0.077004219	0.071729958	0.002109705	0.539794199	-0.307455899	0.539794199	-0.267777423	-0.262877292
ELA	3	927942	0	D	1	2844	0.558720113	0.179676512	0.558720113	0.165963432	0.095288326	0.000351617	0.359480926	-0.205511268	0.359480926	-0.118158091	-0.186809082
ELA	3	773981	0	D	2	2844	0.394514768	0.154008439	0.174050633	0.394514768	0.275668073	0.001758087	0.333548666	-0.231597801	-0.132603274	0.333548666	-0.058861351
ELA	3	370897	0	D	2	2844	0.25	0.234528833	0.25	0.302390999	0.212025316	0.001054852	0.166306158	-0.073446039	0.166306158	-0.02636923	-0.070994839
ELA	3	883708	0	D	2	2844	0.375879044	0.227144866	0.182841069	0.375879044	0.212728551	0.00140647	0.359466909	-0.154914387	-0.129003662	0.359466909	-0.14181758
ELA	3	116226	0	A-K	1	2844	0.588255977	0.207805907	0.588255977	0.096694796	0.106188467	0.001054852	0.389157314	-0.087308201	0.389157314	-0.253664576	-0.259837062
ELA	3	695097	0	B-V	2	2844	0.625527426	0.179324895	0.101265823	0.625527426	0.091772152	0.002109705	0.519730481	-0.250423493	-0.277260117	0.519730481	-0.243670176
ELA	3	788245	0	B-K	3	2844	0.473628692	0.261603376	0.183192686	0.473628692	0.079817159	0.001758087	0.281566944	-0.077703093	-0.160127028	0.281566944	-0.166107923
ELA	3	812298	0	B-K	2	2844	0.476441632	0.476441632	0.235935302	0.120604782	0.165260197	0.001758087	0.386106439	0.386106439	-0.072625737	-0.204496458	-0.253217439
ELA	3	308139	0	A-K	3	2844	0.702531646	0.169127989	0.055555556	0.070323488	0.702531646	0.002461322	0.460391565	-0.251614759	-0.241091815	-0.232314612	0.460391565
ELA	3	105278	0	A-K	2	2844	0.520042194	0.275668073	0.085794655	0.520042194	0.117440225	0.001054852	0.399279644	-0.101299704	-0.264078406	0.399279644	-0.245774842
ELA	3	402170	0	A-V	2	2844	0.340014065	0.224683544	0.20464135	0.340014065	0.229606188	0.001054852	0.217266635	-0.126621819	-0.094447345	0.217266635	-0.025563532
ELA	3	692095	0	A-V	2	2844	0.650492264	0.650492264	0.200070323	0.077707454	0.070675105	0.001054852	0.369819582	0.369819582	-0.086688727	-0.228540651	-0.309664996
ELA	3	125935	0	B-C	3	2844	0.475386779	0.146624473	0.103375527	0.272855134	0.475386779	0.001758087	0.31392272	-0.167216529	-0.245409821	-0.051078152	0.31392272
ELA	3	534284	0	B-C	2	2844	0.523206751	0.523206751	0.162798875	0.138185654	0.17440225	0.00140647	0.333841828	0.333841828	-0.203610104	-0.204623183	-0.054291963
ELA	3	277960	1	B-C	2	2844	0.690225035	0.116033755	0.13185654	0.690225035	0.060829817	0.001054852	0.473327642	-0.265774241	-0.226300317	0.473327642	-0.237973432
ELA	3	388070	1	B-V	2	2844	0.845639944	0.845639944	0.055203938	0.058720113	0.040436006	0	0.471733278	0.471733278	-0.267040103	-0.273139441	-0.229633109
ELA	3	523623	1	B-C	3	2844	0.476793249	0.297116737	0.476793249	0.13045007	0.093530239	0.002109705	0.465049308	-0.27627307	0.465049308	-0.165065539	-0.163171093
ELA	3	982780	1	B-K	2	2844	0.568213783	0.150140647	0.568213783	0.122714487	0.157172996	0.001758087	0.373923278	-0.281393151	0.373923278	-0.151839889	-0.091282735
ELA	3	510621	1	B-K	2	2844	0.552742616	0.180379747	0.129395218	0.552742616	0.135372714	0.002109705	0.359217864	-0.163812286	-0.154240772	0.359217864	-0.179484726
ELA	3	112665	1	B-V	2	2844	0.614627286	0.112517581	0.155414909	0.11673699	0.614627286	0.000703235	0.478686921	-0.365496408	-0.208195407	-0.129526805	0.478686921
ELA	3	779983	1	D	2	1353	0.423503326	0.203991131	0.205469327	0.165558019	0.423503326	0.001478197	0.292971912	-0.070555376	-0.214428923	-0.079371751	0.292971912
ELA	3	552649	1	A-C	3	1353	0.340724316	0.318551367	0.127864006	0.209164819	0.340724316	0.003695492	0.291689423	-0.024735145	-0.255115727	-0.101236666	0.291689423
ELA	3	111055	1	A-K	2	1353	0.272727273	0.283074649	0.170731707	0.272727273	0.273466371	0	0.032776336	0.066674399	-0.219327386	0.032776336	0.085013215
ELA	3	433682	1	A-V	2	1353	0.456762749	0.456762749	0.165558019	0.164079823	0.209903917	0.003695492	0.312541975	0.312541975	-0.224022456	-0.140463097	-0.052964292
ELA	3	537210	1	A-K	2	1353	0.499630451	0.181818182	0.159645233	0.155949741	0.499630451	0.002956393	0.49003222	-0.240869401	-0.198303579	-0.218020144	0.49003222
ELA	3	779678	1	A-K	1	1353	0.242424242	0.390983001	0.242424242	0.093865484	0.271988174	0.000739098	0.251667387	0.153620853	0.251667387	-0.244362755	-0.250194623
ELA	3	880351	1	A-V	2	1353	0.665927568	0.665927568	0.166297118	0.095343681	0.067257945	0.005173688	0.465143207	0.465143207	-0.282605652	-0.212705165	-0.212545488
ELA	3	597310	1	A-V	2	1353	0.486326681	0.112342942	0.200295639	0.486326681	0.200295639	0.000739098	0.354926971	-0.254429701	-0.12789501	0.354926971	-0.115062889
ELA	3	469914	1	A-V	2	1353	0.195121951	0.396156689	0.195121951	0.213599409	0.194382853	0.000739098	-0.0451698	-0.064418493	-0.0451698	0.061631648	0.058727732
ELA	3	602993	1	D	2	1353	0.91722099	0.022172949	0.015521064	0.042867701	0.91722099	0.002217295	0.209043531	-0.148002266	-0.109970823	-0.096179597	0.209043531
ELA	3	937427	1	D	2	1353	0.370288248	0.23059867	0.370288248	0.153732446	0.242424242	0.002956393	0.066699978	0.011431347	0.066699978	-0.185692282	0.068538551
ELA	3	215556	2	D	2	753	0.637450199	0.19123506	0.119521912	0.637450199	0.051792829	0	0.488987562	-0.262871039	-0.239702745	0.488987562	-0.243374523
ELA	3	772979	2	A-K	2	753	0.516600266	0.166002656	0.050464807	0.264276228	0.516600266	0.002656042	0.369169122	-0.241176164	-0.316541785	-0.048735123	0.369169122
ELA	3	389690	2	A-C	3	753	0.637450199	0.637450199	0.143426295	0.114209827	0.100929615	0.003984064	0.451394308	0.451394308	-0.204253983	-0.258455561	-0.193588054
ELA	3	182424	2	A-K	2	753	0.73439575	0.162018592	0.055776892	0.046480744	0.73439575	0.001328021	0.456629439	-0.270487673	-0.232901554	-0.224717575	0.456629439
ELA	3	383002	2	A-V	2	753	0.784860558	0.047808765	0.108897742	0.784860558	0.054448871	0.003984064	0.439439229	-0.219953493	-0.267713165	0.439439229	-0.199198079
ELA	3	657815	2	A-V	2	753	0.803452855	0.058432935	0.803452855	0.087649402	0.045152722	0.005312085	0.441117859	-0.225331577	0.441117859	-0.217888128	-0.251619591
ELA	3	665231	2	A-V	2	753	0.710491368	0.710491368	0.045152722	0.181938911	0.061088977	0.001328021	0.508252808	0.508252808	-0.277495696	-0.281593281	-0.263075211
ELA	3	295739	2	A-K	2	753	0.440903054	0.301460823	0.08499336	0.440903054	0.171314741	0.001328021	0.355953672	-0.065226579	-0.284964426	0.355953672	-0.175377679
ELA	3	130646	2	A-V	2	753	0.703851262	0.104913679	0.703851262	0.092961487	0.096945551	0.001328021	0.448673112	-0.216874786	0.448673112	-0.270330467	-0.189925216
ELA	3	676237	2	D	2	753	0.822045153	0.087649402	0.822045153	0.062416999	0.026560425	0.001328021	0.450046932	-0.310009104	0.450046932	-0.187538099	-0.229311147

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD
ELA	3	881286	2	D	2	753	0.539176627	0.539176627	0.25498008	0.062416999	0.139442231	0.003984064	0.270987636	0.270987636	-0.088635692	-0.163308842	-0.14838072
ELA	3	263426	3	D	2	738	0.472899729	0.139566396	0.199186992	0.472899729	0.18699187	0.001355014	0.194854315	-0.083335346	-0.00468172	0.194854315	-0.16438787
ELA	3	870994	3	A-C	3	738	0.467479675	0.277777778	0.120596206	0.131436314	0.467479675	0.002710027	0.396424201	-0.128390557	-0.21748125	-0.19014413	0.396424201
ELA	3	233500	3	A-K	2	738	0.540650407	0.154471545	0.540650407	0.146341463	0.158536585	0	0.310581747	-0.178857357	0.310581747	-0.075252365	-0.173965929
ELA	3	670992	3	A-K	1	738	0.754742547	0.066395664	0.077235772	0.101626016	0.754742547	0	0.474209559	-0.221156217	-0.256025856	-0.26678947	0.474209559
ELA	3	814139	3	A-K	2	738	0.497289973	0.497289973	0.262872629	0.149051491	0.090785908	0	0.293629248	0.293629248	-0.001591087	-0.163552719	-0.305823853
ELA	3	557153	3	A-V	2	738	0.811653117	0.811653117	0.082655827	0.044715447	0.06097561	0	0.478924601	0.478924601	-0.292219704	-0.243726887	-0.235764843
ELA	3	851330	3	A-V	2	738	0.795392954	0.100271003	0.795392954	0.052845528	0.051490515	0	0.378151138	-0.192995416	0.378151138	-0.205546888	-0.219901052
ELA	3	365612	3	A-V	2	738	0.913279133	0.029810298	0.048780488	0.913279133	0.006775068	0.001355014	0.329279879	-0.229478285	-0.193573436	0.329279879	-0.134338968
ELA	3	751909	3	A-V	2	738	0.758807588	0.12601626	0.069105691	0.758807588	0.044715447	0.001355014	0.362195599	-0.191577053	-0.130119056	0.362195599	-0.268980437
ELA	3	159926	3	D	2	738	0.796747967	0.044715447	0.077235772	0.079945799	0.796747967	0.001355014	0.530337579	-0.250243932	-0.323507407	-0.26690678	0.530337579
ELA	3	668900	3	D	2	738	0.544715447	0.544715447	0.214092141	0.150406504	0.086720867	0.004065041	0.280549718	0.280549718	-0.143866416	-0.171653067	-0.080402366
ELA	3	602993	7	D	2	1353	0.91722099	0.022172949	0.015521064	0.042867701	0.91722099	0.002217295	0.209043531	-0.148002266	-0.109970823	-0.096179597	0.209043531
ELA	3	937427	7	D	2	1353	0.370288248	0.23059867	0.370288248	0.153732446	0.242424242	0.002956393	0.066699978	0.011431347	0.066699978	-0.185692282	0.068538551
ELA	3	676237	8	D	2	753	0.822045153	0.087649402	0.822045153	0.062416999	0.026560425	0.001328021	0.450046932	-0.310009104	0.450046932	-0.187538099	-0.229311147
ELA	3	881286	8	D	2	753	0.539176627	0.539176627	0.25498008	0.062416999	0.139442231	0.003984064	0.270987636	0.270987636	-0.088635692	-0.163308842	-0.14838072
ELA	3	159926	9	D	2	738	0.796747967	0.044715447	0.077235772	0.079945799	0.796747967	0.001355014	0.530337579	-0.250243932	-0.323507407	-0.26690678	0.530337579
ELA	3	668900	9	D	2	738	0.544715447	0.544715447	0.214092141	0.150406504	0.086720867	0.004065041	0.280549718	0.280549718	-0.143866416	-0.171653067	-0.080402366
ELA	4	145770	0	D	2	3045	0.688998358	0.16683087	0.053530378	0.089326765	0.688998358	0.001313629	0.446019295	-0.236372929	-0.208705269	-0.246107049	0.446019295
ELA	4	183677	0	D	2	3045	0.56683087	0.173070608	0.56683087	0.085057471	0.171756979	0.003284072	0.296838477	-0.241572888	0.296838477	-0.124638573	-0.052936886
ELA	4	554826	0	D	2	3045	0.602298851	0.193103448	0.602298851	0.103119869	0.100164204	0.001313629	0.379082541	-0.176796032	0.379082541	-0.227025823	-0.151316118
ELA	4	423678	0	D	3	3045	0.587192118	0.587192118	0.157963875	0.151067323	0.099178982	0.004597701	0.4541198	0.4541198	-0.127115811	-0.296444073	-0.231979585
ELA	4	372865	0	A-V	2	3045	0.471264368	0.332019704	0.471264368	0.072906404	0.122824302	0.000985222	0.311111584	-0.084094728	0.311111584	-0.230111734	-0.166652637
ELA	4	164638	0	A-V	2	3045	0.625287356	0.07816092	0.040394089	0.625287356	0.254844007	0.001313629	0.332115464	-0.235679313	-0.249150838	0.332115464	-0.110645536
ELA	4	410676	0	A-K	2	3045	0.470935961	0.098850575	0.204926108	0.470935961	0.224630542	0.000656814	0.405078192	-0.274541673	-0.112621486	0.405078192	-0.178026054
ELA	4	708984	0	A-K	2	3045	0.624958949	0.129064039	0.097536946	0.148111658	0.624958949	0.000328407	0.488370235	-0.231447626	-0.262585914	-0.228904036	0.488370235
ELA	4	514501	0	A-C	2	3045	0.538916256	0.538916256	0.216420361	0.149425287	0.094909688	0.000328407	0.391134276	0.391134276	-0.149855958	-0.213461584	-0.196746623
ELA	4	887518	0	B-C	2	3045	0.508374384	0.051888342	0.508374384	0.229228243	0.204926108	0.005582923	0.336268642	-0.215492546	0.336268642	-0.125723553	-0.159362283
ELA	4	628366	0	B-V	2	3045	0.736617406	0.127422003	0.062068966	0.736617406	0.067651888	0.006239737	0.473963866	-0.29109901	-0.239308755	0.473963866	-0.189309377
ELA	4	438114	0	B-V	2	3045	0.613136289	0.181937603	0.103119869	0.094581281	0.613136289	0.007224959	0.320058092	-0.105423897	-0.15891764	-0.201291757	0.320058092
ELA	4	305930	0	B-K	2	3045	0.485714286	0.06863711	0.180295567	0.485714286	0.258784893	0.006568144	0.474620122	-0.224964973	-0.206768759	0.474620122	-0.212318694
ELA	4	616861	0	B-K	2	3045	0.444663383	0.322824302	0.444663383	0.172085386	0.05681445	0.003612479	0.244066851	-0.06964836	0.244066851	-0.098022709	-0.207681644
ELA	4	711879	0	B-K	2	3045	0.69589491	0.08998358	0.069950739	0.140558292	0.69589491	0.003612479	0.367151557	-0.155627166	-0.145966289	-0.241269629	0.367151557
ELA	4	369011	0	B-C	2	3045	0.698850575	0.698850575	0.077504105	0.059770115	0.16091954	0.002955665	0.406824502	0.406824502	-0.242599138	-0.254899048	-0.158159855
ELA	4	644977	0	B-V	2	3045	0.734646962	0.734646962	0.104433498	0.06863711	0.089655172	0.002627258	0.444336216	0.444336216	-0.25985483	-0.272498204	-0.151376294
ELA	4	179070	0	B-C	2	3045	0.553037767	0.213464696	0.089326765	0.13727422	0.553037767	0.006896552	0.507977417	-0.131241541	-0.263925246	-0.341331328	0.507977417
ELA	4	893974	0	B-C	3	3045	0.512972085	0.226929392	0.14679803	0.512972085	0.10410509	0.009195402	0.457298374	-0.111562566	-0.28710083	0.457298374	-0.237416701
ELA	4	195957	0	B-K	1	3045	0.436453202	0.436453202	0.142857143	0.255829228	0.161247947	0.003612479	0.337282113	0.337282113	-0.116849266	-0.15334107	-0.150265229
ELA	4	563603	0	B-C	3	3045	0.5136289	0.087027915	0.243349754	0.15270936	0.5136289	0.003284072	0.440040313	-0.219512332	-0.165901339	-0.228318996	0.440040313
ELA	4	154565	0	B-C	3	3045	0.487027915	0.182922824	0.163546798	0.487027915	0.163546798	0.002955665	0.308704019	-0.167523205	-0.124340378	0.308704019	-0.10580853
ELA	4	266657	0	D	2	3045	0.881116585	0.04729064	0.02134647	0.046962233	0.881116585	0.003284072	0.346964319	-0.204247001	-0.171167516	-0.194189272	0.346964319
ELA	4	315309	0	D	2	3045	0.357963875	0.246633826	0.154351396	0.357963875	0.236781609	0.004269294	0.425543922	-0.07894371	-0.094980277	0.425543922	-0.310599335
ELA	4	959806	0	D	2	3045	0.464696223	0.464696223	0.186863711	0.173070608	0.174384236	0.000985222	0.300724595	0.300724595	-0.145455408	-0.069108238	-0.176699019
ELA	4	365387	0	D	2	3045	0.597372742	0.597372742	0.136288998	0.19047619	0.075205255	0.000656814	0.392660136	0.392660136	-0.12358434	-0.24947001	-0.197466173
ELA	4	419418	0	A-K	2	3045	0.363218391	0.237438424	0.363218391	0.114285714	0.282430213	0.002627258	0.385315086	-0.079639094	0.385315086	-0.240972376	-0.158587786
ELA	4	117110	0	A-K	2	3045	0.31592775	0.257471264	0.148111658	0.31592775	0.272249589	0.006239737	0.193349008	-0.091684974	-0.233487748	0.193349008	0.081813132
ELA	4	563694	0	A-K	2	3045	0.456486043	0.456486043	0.223973727	0.195073892	0.11954023	0.004926108	0.357585863	0.357585863	-0.128319913	-0.141385578	-0.199774608
ELA	4	331122	0	A-V	2	3045	0.598686371	0.598686371	0.161576355	0.08998358	0.147783251	0.001970443	0.4746923	0.4746923	-0.172696557	-0.286975506	-0.236997967
ELA	4	719801	0	A-V	2	3045	0.353037767	0.133004926	0.353037767	0.284400657	0.227914614	0.001642036	0.409480419	-0.134365477	0.409480419	-0.102707121	-0.241000382
ELA	4	588781	0	D	2	3045	0.395402299	0.180295567	0.064696223	0.35862069	0.395402299	0.000985222	0.362844932	-0.150306139	-0.17640927	-0.158458933	0.362844932
ELA	4	242721	1	D	2	1407	0.662402274	0.196872779	0.071783937	0.662402274	0.067519545	0.001421464	0.336359829	-0.1978008	-0.21683463	0.336359829	-0.09209512
ELA	4	456958	1	B-K	3	3045	0.503776683	0.183579639	0.224302135	0.085385878	0.503776683	0.002955665	0.320779596	-0.108750875	-0.094363598	-0.275531684	0.320779596
ELA	4	183287	1	B-C	2	3045	0.697208539	0.081444992	0.126108374	0.697208539	0.093596059	0.001642036	0.4035942	-0.270929296	-0.226287219	0.4035942	-0.121075391
ELA	4	897884	1	B-V	2	3045	0.516912972	0.377996716	0.516912972	0.05681445	0.04729064	0.000985222	0.43210229	-0.243154037	0.43210229	-0.171992284	-0.273884775
ELA	4	873018	1	B-V	2	3045	0.466338259	0.228899836	0.206896552	0.466338259	0.096551724	0.001313629	0.258900072	-0.17447086	0.00224465	0.258900072	-0.189872459
ELA	4	939015	1	B-K	2	3045	0.693596059	0.10410509	0.693596059	0.144170772	0.058128079	0	0.468078111	-0.259711208	0.468078111	-0.247090353	-0.212300178

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD
ELA	4	152756	1	B-K	2	3045	0.585878489	0.585878489	0.139573071	0.127422003	0.146141215	0.000985222	0.421984047	0.421984047	-0.186831193	-0.214314195	-0.203971088
ELA	4	759551	1	A-K	2	1407	0.525230988	0.161336176	0.201137171	0.525230988	0.111584932	0.000710732	0.475694514	-0.235152698	-0.209217764	0.475694514	-0.211367407
ELA	4	742238	1	A-V	2	1407	0.560767591	0.560767591	0.218194741	0.10021322	0.120113717	0.000710732	0.427067554	0.427067554	-0.240837107	-0.239746671	-0.124489111
ELA	4	944380	1	A-C	3	1407	0.557924662	0.146410803	0.557924662	0.161336176	0.132196162	0.002132196	0.488077054	-0.204729894	0.488077054	-0.230153707	-0.24824536
ELA	4	192612	1	A-C	3	1407	0.515280739	0.228855721	0.154939588	0.098791756	0.515280739	0.002132196	0.439413624	-0.130729546	-0.244260808	-0.251429126	0.439413624
ELA	4	592124	1	A-K	2	1407	0.250177683	0.122245913	0.319118692	0.250177683	0.307036247	0.001421464	0.081442489	-0.190239156	-0.00699593	0.081442489	0.067396544
ELA	4	199217	1	A-K	2	1407	0.451314854	0.451314854	0.158493248	0.228144989	0.161336176	0.000710732	0.34126439	0.34126439	-0.288876189	-0.056500102	-0.112029416
ELA	4	378167	1	A-V	2	1407	0.58493248	0.150675195	0.098791756	0.163468372	0.58493248	0.002132196	0.525841766	-0.211177338	-0.236593058	-0.308273717	0.525841766
ELA	4	133567	1	A-V	2	1407	0.582800284	0.582800284	0.114427861	0.179104478	0.122956645	0.000710732	0.525284678	0.525284678	-0.28694068	-0.228143315	-0.245192086
ELA	4	648607	1	D	3	1407	0.625444208	0.198294243	0.133617626	0.042643923	0.625444208	0	0.477688899	-0.272680267	-0.248827616	-0.187189395	0.477688899
ELA	4	648607	1	D	3	821	0.758830694	0.130328867	0.084043849	0.025578563	0.758830694	0.001218027	0.479690268	-0.302128748	-0.265250676	-0.183344056	0.479690268
ELA	4	884771	1	D	2	1407	0.616915423	0.094527363	0.194029851	0.094527363	0.616915423	0	0.346298778	-0.15644097	-0.217660894	-0.124781704	0.346298778
ELA	4	235248	2	D	2	817	0.810281518	0.05875153	0.810281518	0.045287638	0.085679315	0	0.262979958	-0.163707773	0.262979958	-0.229256028	-0.060527989
ELA	4	989656	2	A-C	3	817	0.839657283	0.839657283	0.047735618	0.072215422	0.039167687	0.00122399	0.412647278	0.412647278	-0.161390149	-0.282472752	-0.221004332
ELA	4	385074	2	A-V	1	817	0.892288862	0.892288862	0.036719706	0.045287638	0.024479804	0.00122399	0.320037866	0.320037866	-0.134591352	-0.2057869	-0.193135943
ELA	4	911577	2	A-K	2	817	0.58996328	0.29620563	0.06119951	0.048959608	0.58996328	0.003671971	0.360465231	-0.122239581	-0.260659265	-0.265915827	0.360465231
ELA	4	508792	2	A-V	2	817	0.695226438	0.111383109	0.05630355	0.137086903	0.695226438	0	0.327727166	-0.166216161	-0.128714429	-0.200309904	0.327727166
ELA	4	279432	2	A-K	3	817	0.634026928	0.11750306	0.634026928	0.077111383	0.167686659	0.003671971	0.365564517	-0.248671411	0.365564517	-0.237727656	-0.076046883
ELA	4	757052	2	A-V	2	817	0.444308446	0.307221542	0.444308446	0.1750306	0.072215422	0.00122399	0.292076018	0.001827609	0.292076018	-0.258351393	-0.19118369
ELA	4	713204	2	A-V	2	817	0.46878825	0.23378213	0.210526316	0.46878825	0.086903305	0	0.302302075	0.003271244	-0.229539172	0.302302075	-0.208246576
ELA	4	490789	2	A-V	2	817	0.761321909	0.075887393	0.069767442	0.761321909	0.091799266	0.00122399	0.365645667	-0.222083302	-0.221100916	0.365645667	-0.134438283
ELA	4	479345	2	D	3	817	0.496940024	0.184822521	0.496940024	0.210526316	0.106487148	0.00122399	0.267810027	-0.194346356	0.267810027	-0.168743207	0.035091696
ELA	4	485812	2	D	2	817	0.511627907	0.511627907	0.324357405	0.030599755	0.132190942	0.00122399	0.262882269	0.262882269	-0.211675928	-0.189956468	0.006450421
ELA	4	481200	3	D	2	821	0.615103532	0.615103532	0.181485993	0.119366626	0.084043849	0	0.319361518	0.319361518	-0.160163773	-0.164789441	-0.145010534
ELA	4	260067	3	A-C	3	821	0.466504263	0.341047503	0.088915956	0.466504263	0.102314251	0.001218027	0.237993793	0.019686341	-0.188484542	0.237993793	-0.240691104
ELA	4	764707	3	A-V	1	821	0.825822168	0.031668697	0.825822168	0.107186358	0.031668697	0.00365408	0.372234318	-0.179125904	0.372234318	-0.225026375	-0.219896051
ELA	4	821922	3	A-K	3	821	0.320341048	0.261875761	0.320341048	0.299634592	0.116930572	0.001218027	0.219372597	-0.032623116	0.219372597	-0.059733706	-0.182157339
ELA	4	314505	3	A-K	2	821	0.604141291	0.239951279	0.096224117	0.057247259	0.604141291	0.002436054	0.316689032	-0.175846127	-0.111925245	-0.194243185	0.316689032
ELA	4	988574	3	A-K	2	821	0.457978076	0.457978076	0.41047503	0.073081608	0.057247259	0.001218027	-0.002352167	-0.002352167	0.193146953	-0.137630371	-0.247326009
ELA	4	793956	3	A-V	2	821	0.756394641	0.756394641	0.049939099	0.074299635	0.118148599	0.001218027	0.508495365	0.508495365	-0.264979729	-0.3075163	-0.243004668
ELA	4	382140	3	A-V	2	821	0.707673569	0.164433618	0.080389769	0.047503045	0.707673569	0	0.446026807	-0.290280579	-0.22531861	-0.159868514	0.446026807
ELA	4	978740	3	A-V	2	821	0.644336175	0.035322777	0.1863581	0.644336175	0.132764921	0.001218027	0.21180446	-0.170630323	-0.13196987	0.21180446	-0.050591232
ELA	4	648607	3	D	3	1407	0.625444208	0.198294243	0.133617626	0.042643923	0.625444208	0	0.477688899	-0.272680267	-0.248827616	-0.187189395	0.477688899
ELA	4	648607	3	D	3	821	0.758830694	0.130328867	0.084043849	0.025578563	0.758830694	0.001218027	0.479690268	-0.302128748	-0.265250676	-0.183344056	0.479690268
ELA	4	894824	3	D	2	821	0.713763703	0.160779537	0.093788063	0.713763703	0.031668697	0	0.351272494	-0.2031609	-0.186834795	0.351272494	-0.169489324
ELA	4	479345	4	D	3	817	0.496940024	0.184822521	0.496940024	0.210526316	0.106487148	0.00122399	0.267810027	-0.194346356	0.267810027	-0.168743207	0.035091696
ELA	4	485812	4	D	2	817	0.511627907	0.511627907	0.324357405	0.030599755	0.132190942	0.00122399	0.262882269	0.262882269	-0.211675928	-0.189956468	0.006450421
ELA	5	872828	0	D	1	4802	0.583090379	0.147022074	0.583090379	0.14785506	0.121407747	0.00062474	0.2858283	-0.131373438	0.2858283	-0.108969864	-0.171000631
ELA	5	116345	0	D	2	4802	0.477301125	0.477301125	0.200333195	0.182215743	0.137650979	0.002498959	0.223553708	0.223553708	-0.100837517	-0.038236007	-0.160421391
ELA	5	727862	0	D	2	4802	0.592044981	0.147022074	0.146397334	0.113077884	0.592044981	0.001457726	0.369500207	-0.182362587	-0.19980899	-0.142822757	0.369500207
ELA	5	689447	0	D	3	4802	0.629321116	0.629321116	0.073302791	0.097042899	0.199916701	0.000416493	0.424389679	0.424389679	-0.135009263	-0.257494155	-0.232624647
ELA	5	322234	0	D	3	4802	0.541857559	0.070387339	0.051436901	0.541857559	0.332778009	0.003540192	0.455507322	-0.271190939	-0.198998619	0.455507322	-0.235222915
ELA	5	947399	0	B-V	2	4802	0.771553519	0.771553519	0.061432736	0.062473969	0.103290296	0.001249479	0.487675416	0.487675416	-0.272296034	-0.306603812	-0.213993151
ELA	5	892496	0	B-K	2	4802	0.450020825	0.090170762	0.283423574	0.450020825	0.171386922	0.004997918	0.302986242	-0.155610638	-0.200805561	0.302986242	-0.034653385
ELA	5	751478	0	B-K	2	4802	0.665139525	0.137026239	0.082882132	0.112661391	0.665139525	0.002290712	0.502988864	-0.288168656	-0.309756918	-0.160850258	0.502988864
ELA	5	188313	0	B-C	3	4802	0.468138276	0.255102041	0.10787172	0.468138276	0.165347772	0.003540192	0.394652796	-0.078032598	-0.228105097	0.394652796	-0.238270873
ELA	5	890783	0	B-C	3	4802	0.551020408	0.551020408	0.131611828	0.230112453	0.084964598	0.002290712	0.316987714	0.316987714	-0.144710653	-0.06017012	-0.294104173
ELA	5	791897	0	A-C	3	4802	0.392544773	0.182007497	0.258017493	0.392544773	0.166597251	0.000832986	0.230741701	-0.157529749	-0.014748171	0.230741701	-0.119309904
ELA	5	703710	0	A-V	2	4802	0.695335277	0.094127447	0.695335277	0.12786339	0.08121616	0.001457726	0.381158709	-0.116696645	0.381158709	-0.240444381	-0.218209019
ELA	5	459051	0	A-V	2	4802	0.68304873	0.68304873	0.082465639	0.116201583	0.116409829	0.001874219	0.464506235	0.464506235	-0.235568505	-0.266681231	-0.202687386
ELA	5	819381	0	A-V	2	4802	0.364431487	0.273635985	0.364431487	0.070595585	0.290503957	0.000832986	0.073175483	-0.012773507	0.073175483	-0.218785208	0.060470573
ELA	5	273805	0	A-K	2	4802	0.455226989	0.184298209	0.147438567	0.455226989	0.20970429	0.003331945	0.262237239	-0.004223202	-0.198593397	0.262237239	-0.136888721
ELA	5	861348	0	A-K	3	4802	0.425239484	0.187630154	0.11391087	0.272386506	0.425239484	0.000832986	0.367180586	-0.160152991	-0.200263967	-0.122705846	0.367180586
ELA	5	682937	0	A-V	2	4802	0.481674302	0.481674302	0.177217826	0.14181591	0.197001249	0.002290712	0.388084799	0.388084799	-0.153745708	-0.238378695	-0.127728982
ELA	5	182742	0	A-V	2	4802	0.765930862	0.142024157	0.05331112	0.037484382	0.765930862	0.001249479	0.426762939	-0.2191743	-0.26423926	-0.233344194	0.426762939
ELA	5	752417	0	A-C	3	4802	0.57517701	0.120158267	0.178883798	0.123698459	0.57517701	0.002082466	0.436675114	-0.221836739	-0.118083229	-0.298855417	0.436675114

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD
ELA	5	605176	0	A-K	2	4802	0.605789254	0.045189504	0.605789254	0.144106622	0.2030404	0.001874219	0.503302818	-0.212081798	0.503302818	-0.297466909	-0.238446929
ELA	5	447431	0	A-K	2	4802	0.56851312	0.11391087	0.56851312	0.178259059	0.137650979	0.001665973	0.459958711	-0.242240117	0.459958711	-0.173963052	-0.24319689
ELA	5	879681	0	B-V	2	4802	0.588296543	0.072678051	0.588296543	0.082257393	0.254477301	0.002290712	0.363101333	-0.223851879	0.363101333	-0.279197424	-0.096698145
ELA	5	196402	0	D	2	4802	0.645564348	0.145772595	0.645564348	0.059558517	0.147230321	0.001874219	0.338020232	-0.196644692	0.338020232	-0.220317354	-0.112589323
ELA	5	482887	0	D	2	4802	0.59516868	0.59516868	0.049354436	0.250104123	0.103706789	0.001665973	0.325406808	0.325406808	-0.235674388	-0.097529636	-0.214969299
ELA	5	863449	0	D	2	4802	0.375676801	0.226364015	0.375676801	0.180758017	0.214285714	0.002915452	0.236423895	-0.058846479	0.236423895	-0.126657299	-0.096932353
ELA	5	773582	0	B-C	3	4802	0.502498959	0.130778842	0.158267389	0.20366514	0.502498959	0.004789671	0.475655858	-0.156064261	-0.219967701	-0.251887203	0.475655858
ELA	5	112240	0	B-C	2	4802	0.489171179	0.186588921	0.203873386	0.116409829	0.489171179	0.003956685	0.440504392	-0.101432798	-0.279853881	-0.20743863	0.440504392
ELA	5	728430	0	B-C	3	4802	0.440233236	0.440233236	0.079758434	0.3242399	0.154935444	0.000832986	0.23690683	0.23690683	-0.194590735	-0.108896567	-0.035624894
ELA	5	508762	0	B-C	3	4802	0.428571429	0.428571429	0.20366514	0.198667222	0.167846731	0.001249479	0.366926377	0.366926377	-0.19995626	-0.104733826	-0.156126718
ELA	5	248276	0	B-C	3	4802	0.451478551	0.278425656	0.174302374	0.451478551	0.093710954	0.002082466	0.419267792	-0.069405214	-0.303587321	0.419267792	-0.205900352
ELA	5	589036	0	B-K	3	4802	0.501249479	0.239483549	0.074760516	0.501249479	0.178883798	0.005622657	0.291457331	-0.06296103	-0.271260161	0.291457331	-0.115136258
ELA	5	274620	0	D	2	4802	0.355060392	0.083715119	0.159725115	0.355060392	0.400666389	0.000832986	0.220100498	-0.159013194	-0.028673936	0.220100498	-0.102798691
ELA	5	388105	1	A-C	3	4802	0.543523532	0.543523532	0.236151603	0.159933361	0.058100791	0.002290712	0.277514676	0.277514676	-0.115602647	-0.130322518	-0.171777871
ELA	5	866397	1	A-V	2	4802	0.45876718	0.45876718	0.099125364	0.156184923	0.284048313	0.001874219	0.169323829	0.169323829	-0.216306923	-0.141701717	0.072988499
ELA	5	338316	1	A-K	2	4802	0.487505206	0.26301541	0.154310704	0.093294461	0.487505206	0.001874219	0.438452415	-0.179249355	-0.176227945	-0.258705843	0.438452415
ELA	5	274614	1	A-K	2	4802	0.623906706	0.092461474	0.15639317	0.623906706	0.125156185	0.002082466	0.47417442	-0.240396049	-0.21002741	0.47417442	-0.251662575
ELA	5	984958	1	A-V	2	4802	0.617867555	0.134735527	0.078300708	0.168263224	0.617867555	0.000832986	0.515416749	-0.209716883	-0.264345056	-0.288321173	0.515416749
ELA	5	319544	1	D	2	2194	0.232452142	0.393801276	0.179124886	0.193710119	0.232452142	0.000911577	0.263180748	-0.169972079	0.008354147	-0.080420011	0.263180748
ELA	5	100421	1	A-K	2	4802	0.661391087	0.127446897	0.661391087	0.049562682	0.160974594	0.00062474	0.480551514	-0.300195218	0.480551514	-0.221965089	-0.213649558
ELA	5	403847	1	B-C	3	2194	0.490428441	0.490428441	0.176845943	0.149042844	0.182315406	0.001367366	0.400499119	0.400499119	-0.199481234	-0.301340344	-0.043191636
ELA	5	620485	1	B-V	1	2194	0.778030994	0.059252507	0.059252507	0.102096627	0.778030994	0.001367366	0.406409902	-0.178959651	-0.198110094	-0.261307644	0.406409902
ELA	5	903092	1	B-K	2	2194	0.25159526	0.194621696	0.386964448	0.164083865	0.25159526	0.002734731	0.111705402	-0.169670449	0.156466412	-0.152829713	0.111705402
ELA	5	731933	1	B-K	2	2194	0.525068368	0.202825889	0.176390155	0.525068368	0.094348222	0.001367366	0.393362152	-0.091807169	-0.247795496	0.393362152	-0.22191504
ELA	5	907927	1	B-K	2	2194	0.53372835	0.53372835	0.137192343	0.191886964	0.136280766	0.000911577	0.426910879	0.426910879	-0.255342096	-0.171418311	-0.165016036
ELA	5	752946	1	B-V	2	2194	0.419781222	0.327711942	0.419781222	0.136280766	0.115314494	0.000911577	0.35422056	-0.190336761	0.35422056	-0.128941625	-0.127545225
ELA	5	504805	1	B-V	2	2194	0.674567001	0.098450319	0.097538742	0.674567001	0.128988149	0.000455789	0.504512129	-0.274798088	-0.268406158	0.504512129	-0.221972178
ELA	5	314147	1	B-V	2	2194	0.534184139	0.155423883	0.534184139	0.210574294	0.097994531	0.001823154	0.366742893	-0.196693718	0.366742893	-0.135908919	-0.188195975
ELA	5	290266	1	D	2	2194	0.227438469	0.251139471	0.227438469	0.27620784	0.244758432	0.000455789	-0.043549895	0.122353372	-0.043549895	-0.016449771	-0.063159673
ELA	5	783557	1	D	2	2194	0.57976299	0.100273473	0.210118505	0.57976299	0.109389243	0.000455789	0.547166247	-0.273306429	-0.272394605	0.547166247	-0.244922731
ELA	5	567897	2	D	1	1309	0.486631016	0.486631016	0.143621085	0.223834989	0.143621085	0.002291826	0.076598827	0.076598827	-0.033238005	-0.056310567	-0.003593955
ELA	5	235924	2	B-K	2	1309	0.837280367	0.07868602	0.036669213	0.837280367	0.044308633	0.003055768	0.46805867	-0.323593491	-0.224502238	0.46805867	-0.203748609
ELA	5	217467	2	B-K	3	1309	0.660809778	0.20855615	0.660809778	0.077158136	0.052711994	0.000763942	0.403607266	-0.171846796	0.403607266	-0.291045183	-0.188507129
ELA	5	842906	2	B-V	2	1309	0.854087089	0.030557678	0.046600458	0.854087089	0.067990833	0.000763942	0.437044626	-0.17499337	-0.260447279	0.437044626	-0.275006776
ELA	5	520860	2	B-C	2	1309	0.653934301	0.138273491	0.100840336	0.10618793	0.653934301	0.000763942	0.514737255	-0.188917207	-0.273633148	-0.316391529	0.514737255
ELA	5	685162	2	B-K	2	1309	0.502673797	0.502673797	0.180290298	0.243697479	0.071810542	0.001527884	0.397230877	0.397230877	-0.149536166	-0.162083385	-0.270243999
ELA	5	513245	2	B-V	2	1309	0.286478228	0.286478228	0.479755539	0.174178762	0.059587471	0	0.12743609	0.12743609	-0.033952851	0.004846075	-0.179499406
ELA	5	898357	2	B-V	2	1309	0.589763178	0.25974026	0.130634072	0.01986249	0.589763178	0	0.368021276	-0.225221658	-0.162698328	-0.196619454	0.368021276
ELA	5	423884	2	B-V	1	1309	0.533231474	0.065699007	0.533231474	0.351413293	0.048892284	0.000763942	0.216767452	-0.132568547	0.216767452	-0.071781567	-0.18459214
ELA	5	953355	2	D	2	1309	0.79144385	0.105423988	0.022918258	0.79144385	0.080213904	0	0.251319194	-0.149651876	-0.187245461	0.251319194	-0.103551759
ELA	5	286928	2	D	2	1309	0.867074102	0.006875477	0.867074102	0.112299465	0.012987013	0.000763942	0.377469189	-0.123104854	0.377469189	-0.294227952	-0.217410642
ELA	5	534745	3	D	2	1299	0.872209392	0.062355658	0.032332564	0.032332564	0.872209392	0.000769823	0.293257672	-0.17885013	-0.171271995	-0.133392248	0.293257672
ELA	5	462813	3	B-C	2	1299	0.349499615	0.063895304	0.349499615	0.324865281	0.2617398	0	0.276418494	-0.233354218	0.276418494	-0.120448906	-0.041675713
ELA	5	184307	3	B-C	3	1299	0.576597383	0.085450346	0.576597383	0.153964588	0.18321786	0.000769823	0.382414366	-0.253659009	0.382414366	-0.205802222	-0.113133857
ELA	5	293185	3	B-K	2	1299	0.404157044	0.197844496	0.153194765	0.244803695	0.404157044	0	0.367523458	-0.242125712	-0.221019168	-0.009981725	0.367523458
ELA	5	595911	3	B-K	2	1299	0.591224018	0.186297152	0.103926097	0.118552733	0.591224018	0	0.496111174	-0.25887584	-0.160656738	-0.291012083	0.496111174
ELA	5	662926	3	B-V	2	1299	0.391070054	0.272517321	0.317936875	0.391070054	0.017705928	0.000769823	0.120761975	-0.09662172	0.014763694	0.120761975	-0.159759652
ELA	5	874707	3	B-V	2	1299	0.429561201	0.429561201	0.167051578	0.273287144	0.128560431	0.001539646	0.202270504	0.202270504	0.044640091	-0.182884569	-0.10207293
ELA	5	816308	3	B-V	1	1299	0.749807544	0.749807544	0.030792918	0.10469592	0.113163972	0.001539646	0.375581701	0.375581701	-0.258929022	-0.142448863	-0.23519028
ELA	5	148942	3	B-V	2	1299	0.864511162	0.037721324	0.034642032	0.864511162	0.063125481	0	0.426545768	-0.261258383	-0.21916719	0.426545768	-0.230801986
ELA	5	163319	3	D	3	1299	0.576597383	0.576597383	0.217859892	0.127020785	0.076982294	0.001539646	0.349729979	0.349729979	-0.195416665	-0.249911855	-0.027341031
ELA	5	547992	3	D	2	1299	0.474980754	0.257120862	0.141647421	0.126250962	0.474980754	0	0.258106245	-0.088339923	-0.090951783	-0.176342499	0.258106245
ELA	5	290266	7	D	2	2194	0.227438469	0.251139471	0.227438469	0.27620784	0.244758432	0.000455789	-0.043549895	0.122353372	-0.043549895	-0.016449771	-0.063159673
ELA	5	783557	7	D	2	2194	0.57976299	0.100273473	0.210118505	0.57976299	0.109389243	0.000455789	0.547166247	-0.273306429	-0.272394605	0.547166247	-0.244922731
ELA	5	953355	8	D	2	1309	0.79144385	0.105423988	0.022918258	0.79144385	0.080213904	0	0.251319194	-0.149651876	-0.187245461	0.251319194	-0.103551759
ELA	5	286928	8	D	2	1309	0.867074102	0.006875477	0.867074102	0.112299465	0.012987013	0.000763942	0.377469189	-0.123104854	0.377469189	-0.294227952	-0.217410642

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD
ELA	5	163319	9	D	3	1299	0.576597383	0.576597383	0.217859892	0.127020785	0.076982294	0.001539646	0.349729979	0.349729979	-0.195416665	-0.249911855	-0.027341031
ELA	5	547992	9	D	2	1299	0.474980754	0.257120862	0.141647421	0.126250962	0.474980754	0	0.258106245	-0.088339923	-0.090951783	-0.176342499	0.258106245
ELA	6	756609	0	D	2	5341	0.675903389	0.086500655	0.107470511	0.126755289	0.675903389	0.003370155	0.275456665	-0.09686265	-0.115381976	-0.190992631	0.275456665
ELA	6	903962	0	D	2	5341	0.460775136	0.115708669	0.23853211	0.182175623	0.460775136	0.002808463	0.205477672	-0.104628459	-0.067038167	-0.101501617	0.205477672
ELA	6	882588	0	D	2	5341	0.671409848	0.671409848	0.035386632	0.039131249	0.250702116	0.003370155	0.432126037	0.432126037	-0.184499843	-0.169522688	-0.308884341
ELA	6	336865	0	D	2	5341	0.756599888	0.036697248	0.756599888	0.018535855	0.186107471	0.002059539	0.273878932	-0.17732699	0.273878932	-0.056604884	-0.193296293
ELA	6	828272	0	D	1	5341	0.588279348	0.12244898	0.22748549	0.061411721	0.588279348	0.000374462	0.346754617	-0.271890774	-0.042106406	-0.267430742	0.346754617
ELA	6	402161	0	B-C	3	5341	0.401235724	0.105598203	0.40254634	0.401235724	0.084628347	0.005991387	0.147977317	-0.249525936	0.171151821	0.147977317	-0.274160147
ELA	6	599040	0	B-K	2	5341	0.613929976	0.613929976	0.123946826	0.123759596	0.131623292	0.006740311	0.56025246	0.56025246	-0.242713671	-0.26271911	-0.302318632
ELA	6	147544	0	B-C	2	5341	0.517131623	0.117393746	0.517131623	0.184796855	0.174124696	0.00655308	0.48735808	-0.209296357	0.48735808	-0.192878298	-0.256541332
ELA	6	338350	0	B-V	2	5341	0.389065718	0.296573675	0.138925295	0.168882232	0.389065718	0.00655308	0.381799614	-0.004383696	-0.270332647	-0.230038966	0.381799614
ELA	6	718052	0	B-K	2	5341	0.569181801	0.163078075	0.171690695	0.569181801	0.092117581	0.003931848	0.428516074	-0.194203319	-0.182619462	0.428516074	-0.237787992
ELA	6	562387	0	B-C	3	5341	0.614491668	0.614491668	0.116832054	0.159333458	0.106534357	0.002808463	0.526583589	0.526583589	-0.223311358	-0.294744171	-0.240271476
ELA	6	958920	0	B-C	2	5341	0.604193971	0.081819884	0.604193971	0.173001311	0.134244523	0.006740311	0.433073947	-0.248370178	0.433073947	-0.144630951	-0.24446358
ELA	6	336230	0	A-C	2	5341	0.473506834	0.473506834	0.111215128	0.263433814	0.150346377	0.001497847	0.258882929	0.258882929	-0.202305083	-0.02837709	-0.145602669
ELA	6	328640	0	A-C	2	5341	0.712413406	0.054109717	0.107470511	0.712413406	0.124134057	0.001872309	0.411047673	-0.257438008	-0.282875108	0.411047673	-0.115319678
ELA	6	702690	0	A-V	2	5341	0.629095675	0.117206516	0.629095675	0.114023591	0.138363602	0.001310616	0.446101931	-0.284726146	0.446101931	-0.24406798	-0.13030767
ELA	6	422303	0	A-V	2	5341	0.763527429	0.763527429	0.077513574	0.115146976	0.042501404	0.001310616	0.476252396	0.476252396	-0.259984977	-0.263393746	-0.235808506
ELA	6	374474	0	D	2	5341	0.774199588	0.079198652	0.774199588	0.041378019	0.102602509	0.002621232	0.432716641	-0.212270377	0.432716641	-0.207312768	-0.26466825
ELA	6	858982	0	D	2	5341	0.527242089	0.094364351	0.214941022	0.527242089	0.162890844	0.000561693	0.328978412	-0.200387802	-0.057739053	0.328978412	-0.220273602
ELA	6	452999	0	D	2	5341	0.359296012	0.126568058	0.432128815	0.359296012	0.080696499	0.001310616	0.295777002	-0.15633693	-0.039776486	0.295777002	-0.255806696
ELA	6	243564	0	B-C	1	5341	0.418648193	0.081258191	0.404980341	0.093802659	0.418648193	0.001310616	0.422025527	-0.22383198	-0.164698897	-0.221530959	0.422025527
ELA	6	947777	0	B-K	2	5341	0.573862573	0.220745179	0.573862573	0.10934282	0.095487736	0.000561693	0.508890471	-0.203244059	0.508890471	-0.318356256	-0.229596704
ELA	6	437510	0	B-K	3	5341	0.734132185	0.055982026	0.065156338	0.734132185	0.144167759	0.000561693	0.408077415	-0.195382404	-0.263494686	0.408077415	-0.201336605
ELA	6	641434	0	B-K	1	5341	0.40479311	0.287024902	0.40479311	0.173188541	0.133682831	0.001310616	0.270462841	0.013535322	0.270462841	-0.155823474	-0.231899885
ELA	6	468948	0	B-V	1	5341	0.645010298	0.106347126	0.176745928	0.645010298	0.070773263	0.001123385	0.385436495	-0.177098949	-0.183883596	0.385436495	-0.232274716
ELA	6	409408	0	D	2	5341	0.421082194	0.147163453	0.421082194	0.272046433	0.158771766	0.000936154	0.338636607	-0.154504598	0.338636607	-0.119930894	-0.16181698
ELA	6	836352	0	A-C	2	5341	0.633401985	0.115521438	0.633401985	0.119078824	0.130125445	0.001872309	0.457122043	-0.187011384	0.457122043	-0.277659993	-0.202361922
ELA	6	199836	0	A-V	2	5341	0.424826811	0.424826811	0.155963303	0.190601011	0.226549335	0.002059539	0.370632208	0.370632208	-0.195653629	-0.234549007	-0.043759314
ELA	6	883669	0	A-C	2	5341	0.348062161	0.27354428	0.143606066	0.232915184	0.348062161	0.001872309	0.327686286	-0.039551091	-0.253942096	-0.112698323	0.327686286
ELA	6	577311	0	A-K	2	5341	0.397865568	0.308181988	0.188354241	0.099232353	0.397865568	0.006365849	0.300198191	-0.056853891	-0.070472192	-0.28938267	0.300198191
ELA	6	176972	0	A-C	3	5341	0.478187605	0.12244898	0.125257442	0.478187605	0.267178431	0.006927542	0.280854984	-0.207810922	-0.284100236	0.280854984	0.056504199
ELA	6	999533	0	A-K	2	5341	0.533795169	0.146227298	0.214192099	0.533795169	0.102040816	0.003744617	0.445513246	-0.210910471	-0.229119035	0.445513246	-0.167489844
ELA	6	639552	0	A-C	3	5341	0.525931474	0.203145478	0.525931474	0.140235911	0.128814829	0.001872309	0.471157492	-0.180786214	0.471157492	-0.268952808	-0.200860333
ELA	6	387203	1	B-K	1	5341	0.557386257	0.098670661	0.173750234	0.16850777	0.557386257	0.001685078	0.47625855	-0.236214271	-0.226845478	-0.211458327	0.47625855
ELA	6	637210	1	B-V	2	5341	0.709604943	0.093428197	0.145852837	0.709604943	0.051114024	0	0.473882182	-0.219133275	-0.295374687	0.473882182	-0.21380598
ELA	6	686305	1	B-C	2	5341	0.495787306	0.214192099	0.172065156	0.115334207	0.495787306	0.002621232	0.4047512	-0.079132199	-0.254877697	-0.226394581	0.4047512
ELA	6	397827	1	B-C	2	5341	0.448792361	0.112338513	0.448792361	0.310990451	0.124134057	0.003744617	0.397249369	-0.191028318	0.397249369	-0.120239059	-0.245622844
ELA	6	701006	1	B-C	2	5341	0.636584909	0.636584909	0.1334956	0.085190039	0.141546527	0.003182925	0.371872138	0.371872138	-0.1785355	-0.207683323	-0.168623439
ELA	6	910122	1	B-C	2	5341	0.654559071	0.654559071	0.135929601	0.117580977	0.088372964	0.003557386	0.518466795	0.518466795	-0.256932313	-0.26201352	-0.254274225
ELA	6	207027	1	D	2	2479	0.770068576	0.06817265	0.066559096	0.093989512	0.770068576	0.001210165	0.373247446	-0.209642828	-0.173198986	-0.20916079	0.373247446
ELA	6	363354	1	A-V	1	2479	0.444534086	0.444534086	0.241226301	0.131101251	0.179911255	0.003227108	0.360038607	0.360038607	-0.105879761	-0.181647406	-0.183743658
ELA	6	314564	1	A-C	2	2479	0.303751513	0.215409439	0.200887455	0.27833804	0.303751513	0.001613554	0.284097076	0.095006494	-0.197685782	-0.201924407	0.284097076
ELA	6	339208	1	A-C	2	2479	0.572004841	0.572004841	0.156111335	0.098023397	0.173457039	0.000403388	0.362778945	0.362778945	-0.219713527	-0.191126106	-0.113694969
ELA	6	145549	1	A-K	3	2479	0.338039532	0.30455829	0.237192416	0.117789431	0.338039532	0.002420331	0.555262453	-0.170264388	-0.279933574	-0.202648996	0.555262453
ELA	6	194972	1	A-K	2	2479	0.386042759	0.200887455	0.212182332	0.200080678	0.386042759	0.000806777	0.478444623	-0.163098377	-0.216636877	-0.194935409	0.478444623
ELA	6	194452	1	A-V	2	2479	0.649858814	0.107301331	0.649858814	0.092375958	0.14965712	0.000806777	0.303496787	-0.163713093	0.303496787	-0.231745426	-0.072940391
ELA	6	672318	1	A-V	2	2479	0.761597418	0.066559096	0.077853973	0.761597418	0.092779347	0.001210165	0.427369314	-0.270133209	-0.246011897	0.427369314	-0.168353203
ELA	6	654635	1	A-C	2	2479	0.450181525	0.166599435	0.450181525	0.235982251	0.144816458	0.002420331	0.297412956	-0.073188754	0.297412956	-0.176939565	-0.126908989
ELA	6	984950	1	D	2	2479	0.652279145	0.12061315	0.652279145	0.113755547	0.11294877	0.000403388	0.446322178	-0.19646233	0.446322178	-0.253449069	-0.215056402
ELA	6	106704	1	D	2	2479	0.371520775	0.376764825	0.123840258	0.371520775	0.127470754	0.000403388	0.212995094	-0.045647126	-0.120183767	0.212995094	-0.12240961
ELA	6	978507	2	D	2	1425	0.322807018	0.163508772	0.322807018	0.08	0.432982456	0.000701754	0.333788776	-0.254884755	0.333788776	-0.245611721	0.008664909
ELA	6	488407	2	A-C	2	1425	0.458245614	0.082105263	0.458245614	0.063157895	0.395789474	0.000701754	0.287362292	-0.256947601	0.287362292	-0.252946331	-0.024134375
ELA	6	482886	2	A-V	2	1425	0.842105263	0.064561404	0.049122807	0.043508772	0.842105263	0.000701754	0.452667831	-0.159655575	-0.285628151	-0.312814892	0.452667831
ELA	6	600949	2	A-V	2	1425	0.73754386	0.046315789	0.148070175	0.73754386	0.068070175	0	0.406550357	-0.297967424	-0.208875208	0.406550357	-0.166994484
ELA	6	817474	2	A-K	3	1425	0.580350877	0.580350877	0.084912281	0.079298246	0.254035088	0.001403509	0.313138369	0.313138369	-0.20537282	-0.23478108	-0.073888573

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD
ELA	6	639917	2	A-V	2	1425	0.871578947	0.871578947	0.058245614	0.034385965	0.033684211	0.002105263	0.383065194	0.383065194	-0.208064435	-0.220706303	-0.211418329
ELA	6	340505	2	A-V	2	1425	0.591578947	0.165614035	0.591578947	0.147368421	0.094736842	0.000701754	0.352340102	-0.195168645	0.352340102	-0.08017121	-0.243356462
ELA	6	307275	2	A-V	1	1425	0.245614035	0.384561404	0.101754386	0.245614035	0.267368421	0.000701754	0.037397419	0.170142419	-0.187219565	0.037397419	-0.097401633
ELA	6	140592	2	A-K	2	1425	0.61754386	0.224561404	0.101052632	0.055438596	0.61754386	0.001403509	0.40427551	-0.151879636	-0.256745561	-0.241327536	0.40427551
ELA	6	649082	2	D	2	1425	0.592982456	0.124210526	0.592982456	0.174736842	0.108070175	0	0.412653769	-0.165373646	0.412653769	-0.294694257	-0.116843403
ELA	6	462294	2	D	2	1425	0.360701754	0.360701754	0.155789474	0.052631579	0.428070175	0.002807018	0.17236748	0.17236748	-0.135240686	-0.158319008	0.007974977
ELA	6	804523	3	D	2	1437	0.804453723	0.804453723	0.071677105	0.064718163	0.058455115	0.000695894	0.440033637	0.440033637	-0.258550865	-0.237655619	-0.205557729
ELA	6	232745	3	A-C	3	1437	0.447459986	0.447459986	0.1565762	0.118997912	0.274878219	0.002087683	0.304837171	0.304837171	-0.180768331	-0.133397531	-0.089860856
ELA	6	906698	3	A-C	2	1437	0.629088379	0.118302018	0.073068894	0.176757133	0.629088379	0.002783577	0.448693968	-0.160435492	-0.215097593	-0.283422573	0.448693968
ELA	6	128235	3	A-V	2	1437	0.264439805	0.192066806	0.392484342	0.264439805	0.150313152	0.000695894	0.100134247	-0.139441759	0.198186773	0.100134247	-0.238068853
ELA	6	198290	3	A-C	2	1437	0.646485734	0.160751566	0.646485734	0.141266527	0.04940849	0.002087683	0.427041667	-0.244477797	0.427041667	-0.222553305	-0.166220994
ELA	6	857346	3	A-K	2	1437	0.249826026	0.119693807	0.249826026	0.432846207	0.19763396	0	-0.076840834	-0.14760219	-0.076840834	0.281036752	-0.145820326
ELA	6	789067	3	A-K	2	1437	0.806541406	0.046624913	0.099512874	0.806541406	0.045929019	0.001391788	0.423938123	-0.256848007	-0.221490306	0.423938123	-0.220042026
ELA	6	303545	3	A-V	1	1437	0.752261656	0.752261656	0.157967989	0.055671538	0.032707029	0.001391788	0.237835418	0.237835418	-0.072757544	-0.189544516	-0.177235597
ELA	6	980578	3	A-V	2	1437	0.395963814	0.220598469	0.279749478	0.103688239	0.395963814	0	0.237505307	-0.090919091	-0.054562761	-0.177008443	0.237505307
ELA	6	538682	3	D	3	1437	0.729993041	0.048712596	0.729993041	0.09881698	0.121781489	0.000695894	0.368839755	-0.232518638	0.368839755	-0.234134972	-0.133327763
ELA	6	590410	3	D	2	1437	0.582463466	0.124565066	0.181628392	0.582463466	0.109951287	0.001391788	0.357354268	-0.17241072	-0.169767808	0.357354268	-0.170453562
ELA	6	984950	6	D	2	2479	0.652279145	0.12061315	0.652279145	0.113755547	0.11294877	0.000403388	0.446322178	-0.19646233	0.446322178	-0.253449069	-0.215056402
ELA	6	649082	7	D	2	1425	0.592982456	0.124210526	0.592982456	0.174736842	0.108070175	0	0.412653769	-0.165373646	0.412653769	-0.294694257	-0.116843403
ELA	6	538682	8	D	3	1437	0.729993041	0.048712596	0.729993041	0.09881698	0.121781489	0.000695894	0.368839755	-0.232518638	0.368839755	-0.234134972	-0.133327763
ELA	6	106704	8	D	2	2479	0.371520775	0.376764825	0.123840258	0.371520775	0.127470754	0.000403388	0.212995094	-0.045647126	-0.120183767	0.212995094	-0.12240961
ELA	6	462294	9	D	2	1425	0.360701754	0.360701754	0.155789474	0.052631579	0.428070175	0.002807018	0.17236748	0.17236748	-0.135240686	-0.158319008	0.007974977
ELA	7	592538	0	D	2	6005	0.786011657	0.089758535	0.033805162	0.089758535	0.786011657	0.000666112	0.443722843	-0.209904344	-0.232699286	-0.277407048	0.443722843
ELA	7	944528	0	D	2	6005	0.657951707	0.104246461	0.657951707	0.169691923	0.064446295	0.003663614	0.417599913	-0.194017262	0.417599913	-0.278211672	-0.129179946
ELA	7	859473	0	D	2	6005	0.412822648	0.354038301	0.412822648	0.078434638	0.15337219	0.001332223	0.488939713	-0.234551938	0.488939713	-0.213521249	-0.195152884
ELA	7	126509	0	D	2	6005	0.591507077	0.135387177	0.111906744	0.157868443	0.591507077	0.003330558	0.272552277	-0.162205623	-0.152886093	-0.080640018	0.272552277
ELA	7	140326	0	A-V	2	6005	0.617318901	0.617318901	0.157535387	0.144046628	0.079267277	0.001831807	0.289165126	0.289165126	-0.256931488	-0.060529752	-0.091784213
ELA	7	134893	0	A-K	3	6005	0.494754371	0.494754371	0.217985012	0.202164863	0.082431307	0.002664446	0.300274676	0.300274676	-0.127018231	-0.075507206	-0.237120053
ELA	7	570291	0	A-V	2	6005	0.715903414	0.136219817	0.715903414	0.104912573	0.040133222	0.002830974	0.434878709	-0.199855932	0.434878709	-0.269819893	-0.22030725
ELA	7	792100	0	A-C	2	6005	0.692589509	0.158701082	0.692589509	0.071273938	0.076436303	0.000999167	0.482353758	-0.238618946	0.482353758	-0.293712961	-0.223621794
ELA	7	463873	0	A-K	3	6005	0.365695254	0.263613655	0.204329725	0.365695254	0.162531224	0.003830142	0.170857126	-0.031343906	-0.082051405	0.170857126	-0.088203636
ELA	7	243870	0	D	2	6005	0.411157369	0.089092423	0.411157369	0.29009159	0.208492923	0.001165695	0.258927518	-0.101479346	0.258927518	-0.102909492	-0.126685753
ELA	7	837750	0	D	3	6005	0.583680266	0.583680266	0.082764363	0.154204829	0.178018318	0.001332223	0.309843709	0.309843709	-0.220305957	-0.089834953	-0.154026654
ELA	7	296964	0	D	2	6005	0.49958368	0.18101582	0.185678601	0.49958368	0.132722731	0.000999167	0.357869624	-0.09332196	-0.211745848	0.357869624	-0.178007899
ELA	7	967148	0	D	2	6005	0.298917569	0.113238968	0.298917569	0.272439634	0.313738551	0.001665279	0.163482602	-0.194918487	0.163482602	-0.027347358	-0.000488422
ELA	7	611452	0	B-C	3	6005	0.648293089	0.648293089	0.113572023	0.109408826	0.125228976	0.003497086	0.375248542	0.375248542	-0.236036551	-0.26691213	-0.059129388
ELA	7	481126	0	B-C	2	6005	0.525562032	0.197335554	0.525562032	0.206827644	0.067110741	0.00316403	0.377102801	-0.100879474	0.377102801	-0.223416997	-0.220383526
ELA	7	954098	0	B-C	2	6005	0.64979184	0.142048293	0.097751873	0.64979184	0.108076603	0.002331391	0.391517914	-0.079624371	-0.255804013	0.391517914	-0.26618813
ELA	7	212379	0	B-C	2	6005	0.263613655	0.10907577	0.263613655	0.326894255	0.296752706	0.003663614	0.236526676	-0.113672744	0.236526676	-0.229362352	0.088162942
ELA	7	396011	0	B-K	2	6005	0.521065779	0.084263114	0.186011657	0.521065779	0.207327227	0.001332223	0.396235069	-0.216273145	-0.213770895	0.396235069	-0.131973392
ELA	7	484637	0	B-V	2	6005	0.809159034	0.075603664	0.072273106	0.809159034	0.039800167	0.00316403	0.339525388	-0.144953244	-0.210604372	0.339525388	-0.195538812
ELA	7	592230	0	A-C	2	6005	0.459950042	0.306078268	0.143713572	0.459950042	0.088759367	0.001498751	0.324738982	-0.104778752	-0.14239269	0.324738982	-0.219564222
ELA	7	604977	0	A-K	2	6005	0.499250624	0.123064113	0.256452956	0.499250624	0.119900083	0.001332223	0.447636099	-0.164938698	-0.206029554	0.447636099	-0.242896908
ELA	7	373300	0	A-K	2	6005	0.381182348	0.380849292	0.381182348	0.116069942	0.120066611	0.001831807	0.146106473	0.158221236	0.146106473	-0.215255208	-0.240878987
ELA	7	266226	0	A-V	2	6005	0.776186511	0.081765196	0.065278934	0.075770192	0.776186511	0.000999167	0.474388574	-0.230149184	-0.260721579	-0.260897893	0.474388574
ELA	7	792035	0	A-C	2	6005	0.41815154	0.137885096	0.319567027	0.122897585	0.41815154	0.001498751	0.195423693	-0.115027158	0.050282397	-0.24169046	0.195423693
ELA	7	805803	0	B-C	3	6005	0.384845962	0.182014988	0.384845962	0.238134888	0.193005828	0.001998335	0.241165921	-0.078119466	0.241165921	-0.211216266	0.010761039
ELA	7	605554	0	B-C	2	6005	0.512905912	0.141548709	0.194837635	0.14937552	0.512905912	0.001332223	0.535951522	-0.205574391	-0.242892761	-0.278006913	0.535951522
ELA	7	172615	0	B-C	3	6005	0.40316403	0.173022481	0.15253955	0.269442132	0.40316403	0.001831807	0.323469403	-0.100520887	-0.206180621	-0.101182669	0.323469403
ELA	7	682982	0	B-K	2	6005	0.65928393	0.121565362	0.129225645	0.65928393	0.08692756	0.002997502	0.496780581	-0.2205122	-0.233983443	0.496780581	-0.292743477
ELA	7	171269	0	B-K	3	6005	0.52572856	0.138884263	0.52572856	0.22131557	0.10990841	0.004163197	0.367451032	-0.243305489	0.367451032	-0.124066076	-0.14283246
ELA	7	787365	0	B-K	2	6005	0.578351374	0.578351374	0.126061615	0.171190674	0.123064113	0.001332223	0.583146484	0.583146484	-0.26621762	-0.247727579	-0.320886188
ELA	7	854426	0	B-V	2	6005	0.666777685	0.115736886	0.137718568	0.666777685	0.07826811	0.001498751	0.319664788	-0.209137753	-0.137142872	0.319664788	-0.130226098
ELA	7	945442	0	D	2	6005	0.488759367	0.110241465	0.329059117	0.488759367	0.07110741	0.000832639	0.196042276	-0.235174295	0.078429794	0.196042276	-0.237236289
ELA	7	809588	1	A-C	3	6005	0.482764363	0.199333888	0.482764363	0.202830974	0.113572023	0.001498751	0.311466923	-0.133762601	0.311466923	-0.129140325	-0.158716642
ELA	7	476332	1	A-C	2	6005	0.673771857	0.058451291	0.673771857	0.199333888	0.066278102	0.002164863	0.340423724	-0.179376369	0.340423724	-0.130854967	-0.256064101

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD
ELA	7	590801	1	A-K	3	6005	0.720566195	0.043130724	0.079933389	0.720566195	0.154870941	0.001498751	0.301674205	-0.205557714	-0.171997504	0.301674205	-0.126262368
ELA	7	590137	1	A-C	2	6005	0.702081599	0.702081599	0.108909242	0.074937552	0.112739384	0.001332223	0.3851854	0.3851854	-0.249666004	-0.141993242	-0.189915245
ELA	7	582997	1	A-V	2	6005	0.645129059	0.065778518	0.091590341	0.197169026	0.645129059	0.000333056	0.498295494	-0.140469741	-0.305924461	-0.289094403	0.498295494
ELA	7	726561	1	A-V	2	6005	0.523230641	0.149875104	0.191174022	0.523230641	0.134221482	0.001498751	0.281665444	-0.104948081	-0.14487023	0.281665444	-0.132523777
ELA	7	638240	1	D	3	2629	0.637504755	0.08254089	0.219855458	0.637504755	0.059338151	0.000760746	0.465052375	-0.216203635	-0.315938416	0.465052375	-0.141897538
ELA	7	670620	1	B-C	2	2629	0.65195892	0.085203499	0.65195892	0.13617345	0.124762267	0.001901864	0.473318827	-0.251372927	0.473318827	-0.260883709	-0.192807616
ELA	7	481747	1	B-V	2	2629	0.622670217	0.622670217	0.134651959	0.116774439	0.124001521	0.001901864	0.48329304	0.48329304	-0.272748527	-0.201043143	-0.232483081
ELA	7	828721	1	B-C	2	2629	0.384176493	0.282616965	0.228604032	0.103081019	0.384176493	0.001521491	0.329060188	-0.058722697	-0.174688713	-0.196238021	0.329060188
ELA	7	344141	1	B-K	2	2629	0.273488018	0.199315329	0.202738684	0.273488018	0.321795359	0.002662609	0.028551172	-0.040638939	-0.159855421	0.028551172	0.149078601
ELA	7	351651	1	B-V	2	2629	0.483834157	0.073411944	0.298972994	0.142639787	0.483834157	0.001141118	0.33583041	-0.224103934	-0.132828259	-0.137321824	0.33583041
ELA	7	535358	1	B-C	2	2629	0.685431723	0.083301636	0.149106124	0.685431723	0.080258653	0.001901864	0.360663988	-0.16397036	-0.168118321	0.360663988	-0.222929261
ELA	7	341205	1	B-C	3	2629	0.192848992	0.192848992	0.499809814	0.141879041	0.164701407	0.000760746	-0.004423568	-0.004423568	0.257564957	-0.223821917	-0.131518789
ELA	7	594261	1	B-V	2	2629	0.496006086	0.132369722	0.496006086	0.087866109	0.282236592	0.001521491	0.296889828	-0.253933536	0.296889828	-0.197000893	-0.015192598
ELA	7	851601	1	D	2	2629	0.573982503	0.150247242	0.220235831	0.054773678	0.573982503	0.000760746	0.538929635	-0.317896518	-0.25072082	-0.213847235	0.538929635
ELA	7	309345	1	D	2	2629	0.78128566	0.060098897	0.107645493	0.78128566	0.050209205	0.000760746	0.416871457	-0.225819043	-0.251469461	0.416871457	-0.186074379
ELA	7	925827	2	D	2	1675	0.809552239	0.040597015	0.809552239	0.075223881	0.074029851	0.000597015	0.419152163	-0.225742978	0.419152163	-0.241489124	-0.212706475
ELA	7	862013	2	B-K	2	1675	0.402985075	0.265671642	0.402985075	0.072835821	0.257910448	0.000597015	0.154557975	-0.014330233	0.154557975	-0.254893575	-0.005031706
ELA	7	345978	2	B-C	3	1675	0.298507463	0.298507463	0.185074627	0.148059701	0.367761194	0.000597015	0.029507685	0.029507685	-0.012621292	-0.246561589	0.165243244
ELA	7	335215	2	B-V	2	1675	0.450746269	0.450746269	0.208955224	0.166567164	0.172537313	0.00119403	0.162912119	0.162912119	-0.003334981	-0.167699658	-0.043721606
ELA	7	363029	2	B-C	2	1675	0.40358209	0.417910448	0.087164179	0.090149254	0.40358209	0.00119403	0.242902003	-0.006164978	-0.179289573	-0.224161822	0.242902003
ELA	7	424916	2	B-K	2	1675	0.366567164	0.366567164	0.185074627	0.112835821	0.334328358	0.00119403	0.252267864	0.252267864	-0.250265335	-0.142083952	0.046380403
ELA	7	511462	2	B-K	2	1675	0.397014925	0.134328358	0.308059701	0.160597015	0.397014925	0	0.281627131	-0.213579248	-0.029773875	-0.139493843	0.281627131
ELA	7	940723	2	B-V	2	1675	0.794029851	0.794029851	0.078208955	0.050149254	0.077014925	0.000597015	0.433729059	0.433729059	-0.263711982	-0.254834861	-0.183501467
ELA	7	701971	2	B-V	2	1675	0.300895522	0.105074627	0.192835821	0.300895522	0.40119403	0	0.218429289	-0.205856532	-0.01288369	0.218429289	-0.065232899
ELA	7	344627	2	D	2	1675	0.869850746	0.047164179	0.869850746	0.029850746	0.051343284	0.001791045	0.368212008	-0.204914874	0.368212008	-0.200376706	-0.19945108
ELA	7	852379	2	D	2	1675	0.626268657	0.27641791	0.062089552	0.034029851	0.626268657	0.00119403	0.245015914	-0.062970233	-0.192192022	-0.230812738	0.245015914
ELA	7	313660	3	D	2	1701	0.502645503	0.502645503	0.274544386	0.092886537	0.129335685	0.000587889	0.109763529	0.109763529	0.078472542	-0.243088664	-0.056267618
ELA	7	694528	3	B-K	2	1701	0.392122281	0.0335097	0.129923574	0.392122281	0.443856555	0.000587889	0.01361214	-0.195306352	-0.13427557	0.01361214	0.150726025
ELA	7	443824	3	B-K	3	1701	0.368018812	0.223398001	0.368018812	0.210464433	0.195767196	0.002351558	0.279707058	-0.054948242	0.279707058	-0.203959554	-0.067962644
ELA	7	588992	3	B-V	2	1701	0.577895356	0.144032922	0.577895356	0.175778954	0.100529101	0.001763668	0.321291729	-0.124714856	0.321291729	-0.135807713	-0.206688291
ELA	7	589777	3	B-C	2	1701	0.591416814	0.591416814	0.235155791	0.070546737	0.101704879	0.001175779	0.367889556	0.367889556	-0.144391315	-0.249209969	-0.180053311
ELA	7	258457	3	B-V	2	1701	0.60728983	0.094650206	0.062316285	0.60728983	0.232216343	0.003527337	0.178736348	-0.117615945	-0.250903888	0.178736348	0.022043515
ELA	7	417687	3	B-V	2	1701	0.699588477	0.097001764	0.121693122	0.079952969	0.699588477	0.001763668	0.482424981	-0.247276341	-0.260037928	-0.226840151	0.482424981
ELA	7	479623	3	B-K	2	1701	0.445032334	0.445032334	0.115814227	0.371546149	0.065843621	0.001763668	0.126475967	0.126475967	-0.135566891	0.099398066	-0.268214974
ELA	7	996902	3	B-K	2	1701	0.331569665	0.172251617	0.216931217	0.275132275	0.331569665	0.004115226	0.420321983	-0.195207518	-0.145029728	-0.139484968	0.420321983
ELA	7	201003	3	D	3	1701	0.473838918	0.473838918	0.212228101	0.120517343	0.192239859	0.001175779	0.347541853	0.347541853	-0.074112977	-0.292456426	-0.119522817
ELA	7	901151	3	D	2	1701	0.639035861	0.195179306	0.639035861	0.082304527	0.082304527	0.001175779	0.42825955	-0.211539597	0.42825955	-0.253472654	-0.184881298
ELA	7	851601	7	D	2	2629	0.573982503	0.150247242	0.220235831	0.054773678	0.573982503	0.000760746	0.538929635	-0.317896518	-0.25072082	-0.213847235	0.538929635
ELA	7	309345	7	D	2	2629	0.78128566	0.060098897	0.107645493	0.78128566	0.050209205	0.000760746	0.416871457	-0.225819043	-0.251469461	0.416871457	-0.186074379
ELA	7	344627	8	D	2	1675	0.869850746	0.047164179	0.869850746	0.029850746	0.051343284	0.001791045	0.368212008	-0.204914874	0.368212008	-0.200376706	-0.19945108
ELA	7	852379	8	D	2	1675	0.626268657	0.27641791	0.062089552	0.034029851	0.626268657	0.00119403	0.245015914	-0.062970233	-0.192192022	-0.230812738	0.245015914
ELA	7	201003	9	D	3	1701	0.473838918	0.473838918	0.212228101	0.120517343	0.192239859	0.001175779	0.347541853	0.347541853	-0.074112977	-0.292456426	-0.119522817
ELA	7	901151	9	D	2	1701	0.639035861	0.195179306	0.639035861	0.082304527	0.082304527	0.001175779	0.42825955	-0.211539597	0.42825955	-0.253472654	-0.184881298
ELA	8	381100	0	D	2	6188	0.476729153	0.357627666	0.088881707	0.074660633	0.476729153	0.00210084	0.502536758	-0.350416305	-0.182848092	-0.115519358	0.502536758
ELA	8	915097	0	D	2	6188	0.841952165	0.040885585	0.841952165	0.06302521	0.052844215	0.001292825	0.375169528	-0.223611974	0.375169528	-0.163116867	-0.232885997
ELA	8	677767	0	D	2	6188	0.65416936	0.104557207	0.07918552	0.160795087	0.65416936	0.001292825	0.487783866	-0.216310655	-0.247765252	-0.267737798	0.487783866
ELA	8	517461	0	D	2	6188	0.566257272	0.206367162	0.11716225	0.566257272	0.108758888	0.001454428	0.284676813	-0.053070121	-0.226045896	0.284676813	-0.147541239
ELA	8	997844	0	D	2	6188	0.752424047	0.079347123	0.083225598	0.752424047	0.084195217	0.000808016	0.43480194	-0.231938081	-0.256589535	0.43480194	-0.193213394
ELA	8	340150	0	A-V	2	6188	0.699095023	0.095507434	0.149321267	0.699095023	0.054460246	0.001616031	0.448746015	-0.230059431	-0.219923031	0.448746015	-0.259106298
ELA	8	731086	0	A-V	2	6188	0.559308339	0.170976083	0.559308339	0.155138979	0.113122172	0.001454428	0.492255746	-0.180231082	0.492255746	-0.2796286	-0.234044567
ELA	8	298279	0	A-V	2	6188	0.639786684	0.639786684	0.070620556	0.202650291	0.084841629	0.00210084	0.322509977	0.322509977	-0.225986555	-0.121744508	-0.166660312
ELA	8	916102	0	A-K	2	6188	0.387685844	0.387685844	0.201357466	0.289754363	0.117970265	0.003232062	0.278616964	0.278616964	-0.143380106	-0.138323478	-0.036804274
ELA	8	906741	0	A-K	3	6188	0.415319974	0.138170653	0.415319974	0.289754363	0.153684551	0.003070459	0.384920105	-0.164371058	0.384920105	-0.194101503	-0.114564248
ELA	8	885350	0	A-C	3	6188	0.42970265	0.102779573	0.277149321	0.189237233	0.42970265	0.001131222	0.304640464	-0.259055442	-0.072775158	-0.096399586	0.304640464
ELA	8	494645	0	D	2	6188	0.53539108	0.277310924	0.092275372	0.53539108	0.093891403	0.001131222	0.3225149	-0.068655185	-0.232649602	0.3225149	-0.214815929
ELA	8	695658	0	D	2	6188	0.335326438	0.151098901	0.3177117	0.335326438	0.192146089	0.003716871	0.277977944	-0.274020614	-0.047590127	0.277977944	-0.024947755

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD
ELA	8	152586	0	D	2	6188	0.406593407	0.134130575	0.406593407	0.241273432	0.21719457	0.000808016	0.268295299	-0.205667589	0.268295299	-0.160669594	0.018964128
ELA	8	531665	0	D	2	6188	0.405623788	0.1354234	0.405623788	0.211861668	0.245959922	0.001131222	0.360690862	-0.16231874	0.360690862	-0.172675685	-0.116814593
ELA	8	130090	0	A-V	2	6188	0.444570136	0.085972851	0.312378798	0.155785391	0.444570136	0.001292825	0.291128719	-0.285095578	0.104394057	-0.30885965	0.291128719
ELA	8	838154	0	A-K	2	6188	0.520200388	0.171622495	0.142857143	0.520200388	0.164350356	0.000969619	0.408139757	-0.16253873	-0.20227955	0.408139757	-0.189595235
ELA	8	638805	0	A-K	2	6188	0.579993536	0.104072398	0.128474467	0.182126697	0.579993536	0.005332902	0.440424923	-0.127059613	-0.244919605	-0.237740686	0.440424923
ELA	8	528690	0	A-C	2	6188	0.648351648	0.078700711	0.648351648	0.164027149	0.10730446	0.001616031	0.263481591	-0.218549687	0.263481591	-0.116801612	-0.07174291
ELA	8	791901	0	A-V	2	6188	0.678409825	0.678409825	0.0885585	0.157239819	0.073367809	0.002424047	0.379730354	0.379730354	-0.283880239	-0.130171089	-0.177771977
ELA	8	472320	0	B-C	2	6188	0.593083387	0.15416936	0.076599871	0.17501616	0.593083387	0.001131222	0.446872452	-0.217305138	-0.301996348	-0.157896776	0.446872452
ELA	8	832045	0	B-C	2	6188	0.458952812	0.28070459	0.198610213	0.060116354	0.458952812	0.001616031	0.359423924	-0.096072909	-0.205208861	-0.219839054	0.359423924
ELA	8	218451	0	B-K	3	6188	0.40206852	0.154815772	0.40206852	0.18956044	0.250808016	0.002747253	0.292285065	-0.097591869	0.292285065	-0.181296205	-0.082223421
ELA	8	335424	0	B-K	2	6188	0.487233355	0.487233355	0.083548804	0.07708468	0.350355527	0.001777634	0.397438482	0.397438482	-0.251161583	-0.264052688	-0.119511649
ELA	8	306846	0	B-V	2	6188	0.393018746	0.187782805	0.205074337	0.393018746	0.213154493	0.000969619	0.27132055	-0.15197277	-0.135926883	0.27132055	-0.04336701
ELA	8	438487	0	B-V	2	6188	0.76405947	0.182126697	0.76405947	0.028603749	0.023755656	0.001454428	0.41073385	-0.280806296	0.41073385	-0.192027893	-0.213040256
ELA	8	635263	0	B-C	2	6188	0.636231416	0.172753717	0.131383323	0.636231416	0.05575307	0.003878474	0.531046597	-0.277070112	-0.248743963	0.531046597	-0.272774965
ELA	8	622422	0	B-C	2	6188	0.731738849	0.731738849	0.101648352	0.11247576	0.052359405	0.001777634	0.408240025	0.408240025	-0.266449651	-0.186868457	-0.179741767
ELA	8	168975	0	B-C	3	6188	0.704589528	0.704589528	0.18697479	0.078215902	0.027795734	0.002424047	0.379155673	0.379155673	-0.127440752	-0.317183772	-0.219042727
ELA	8	435592	0	B-K	2	6188	0.58387201	0.128151261	0.58387201	0.187459599	0.099385908	0.001131222	0.28454599	-0.235210943	0.28454599	-0.131707192	-0.029399556
ELA	8	212727	0	B-C	3	6188	0.659340659	0.05833872	0.220103426	0.659340659	0.059954751	0.002262443	0.455234691	-0.24322832	-0.232226572	0.455234691	-0.259792739
ELA	8	299475	0	B-V	2	6188	0.372979961	0.179217841	0.372979961	0.176955398	0.267937944	0.002908856	0.320250207	-0.023965973	0.320250207	-0.181584809	-0.166473347
ELA	8	422467	1	B-C	2	6188	0.67970265	0.177763413	0.069489334	0.67970265	0.070620556	0.002424047	0.461067647	-0.206711657	-0.298350485	0.461067647	-0.228568037
ELA	8	113831	1	B-C	2	6188	0.517937944	0.517937944	0.234324499	0.14221073	0.104557207	0.000969619	0.394588665	0.394588665	-0.152034795	-0.250786103	-0.142884703
ELA	8	238056	1	B-K	2	6188	0.744990304	0.121687136	0.744990304	0.055591467	0.075953458	0.001777634	0.374798764	-0.136121761	0.374798764	-0.25625901	-0.219573693
ELA	8	176915	1	B-K	2	6188	0.642857143	0.125727214	0.095992243	0.642857143	0.132514544	0.002908856	0.452029988	-0.16626783	-0.279591194	0.452029988	-0.225783573
ELA	8	257223	1	B-K	2	6188	0.597123465	0.144149968	0.108274079	0.14689722	0.597123465	0.003555268	0.486881128	-0.218775912	-0.252081329	-0.231482916	0.486881128
ELA	8	646521	1	B-V	2	6188	0.590659341	0.095669037	0.590659341	0.128959276	0.183581125	0.001131222	0.28727572	-0.153242881	0.28727572	-0.140764699	-0.123640191
ELA	8	257322	1	D	2	2697	0.345569151	0.149054505	0.345569151	0.34074898	0.164256581	0.000370782	0.157584155	-0.137676186	0.157584155	0.09921567	-0.196415154
ELA	8	322684	1	A-C	3	2697	0.479050797	0.145346681	0.263255469	0.109010011	0.479050797	0.003337041	0.43385905	-0.213249386	-0.119891146	-0.279818387	0.43385905
ELA	8	156199	1	A-C	2	2697	0.47311828	0.189098999	0.47311828	0.221727846	0.114200964	0.001853912	0.321935102	-0.069033334	0.321935102	-0.166304297	-0.198693815
ELA	8	677514	1	A-V	2	2697	0.395624768	0.395624768	0.106043752	0.294401187	0.202447164	0.001483129	0.311568322	0.311568322	-0.228517022	-0.161956965	-0.016189951
ELA	8	996123	1	A-C	3	2697	0.70819429	0.096403411	0.070448647	0.124953652	0.70819429	0	0.476068054	-0.203325544	-0.271939415	-0.262552868	0.476068054
ELA	8	345930	1	A-K	2	2697	0.60882462	0.60882462	0.119391917	0.112717835	0.157582499	0.001483129	0.485718104	0.485718104	-0.204594551	-0.246623988	-0.251373222
ELA	8	293518	1	A-K	2	2697	0.557656656	0.200593252	0.145717464	0.557656656	0.094920282	0.001112347	0.398608387	-0.115058096	-0.22125328	0.398608387	-0.250672902
ELA	8	601229	1	A-V	2	2697	0.560622914	0.312569522	0.560622914	0.084538376	0.040415276	0.001853912	0.386922393	-0.177420227	0.386922393	-0.25177372	-0.197830609
ELA	8	274602	1	A-V	2	2697	0.780126066	0.065999258	0.083796811	0.780126066	0.068594735	0.001483129	0.411388145	-0.222132878	-0.239724741	0.411388145	-0.188675991
ELA	8	727948	1	D	2	2697	0.571746385	0.571746385	0.197626993	0.141268076	0.088246199	0.001112347	0.329605892	0.329605892	-0.157983771	-0.136875616	-0.182019619
ELA	8	590449	1	D	2	2697	0.486095662	0.22395254	0.112717835	0.17500927	0.486095662	0.002224694	0.299744549	-0.031225591	-0.224454169	-0.166702171	0.299744549
ELA	8	597032	2	D	2	1749	0.567181246	0.255574614	0.083476272	0.092052601	0.567181246	0.001715266	0.429933227	-0.153617934	-0.30752179	-0.211667081	0.429933227
ELA	8	525684	2	A-C	3	1749	0.646083476	0.646083476	0.163522013	0.108633505	0.079473985	0.002287021	0.430171483	0.430171483	-0.164242457	-0.252542519	-0.239543477
ELA	8	367836	2	A-V	2	1749	0.612349914	0.045740423	0.612349914	0.275014294	0.066323613	0.000571755	0.324148024	-0.218607084	0.324148024	-0.180617469	-0.123317423
ELA	8	523805	2	A-K	2	1749	0.631217839	0.072041166	0.174385363	0.121783877	0.631217839	0.000571755	0.596804164	-0.275641942	-0.308523999	-0.301760508	0.596804164
ELA	8	425887	2	A-V	2	1749	0.843339051	0.03030303	0.843339051	0.062893082	0.062893082	0.000571755	0.457644937	-0.216383088	0.457644937	-0.297974565	-0.234352413
ELA	8	526303	2	A-K	2	1749	0.440823328	0.135506003	0.266437965	0.156089194	0.440823328	0.001143511	0.281931653	-0.189612575	0.003796825	-0.205747158	0.281931653
ELA	8	275945	2	A-K	2	1749	0.727844483	0.727844483	0.08004574	0.085191538	0.104059463	0.002858776	0.502503945	0.502503945	-0.196974164	-0.323849641	-0.251745655
ELA	8	783626	2	A-C	3	1749	0.492281304	0.197255575	0.143510577	0.492281304	0.164665523	0.002287021	0.191605362	-0.139076569	0.023249973	0.191605362	-0.127589812
ELA	8	747743	2	A-V	2	1749	0.636363636	0.131503716	0.045168668	0.636363636	0.185248714	0.001715266	0.426676515	-0.254582526	-0.24992359	0.426676515	-0.167542123
ELA	8	505356	2	D	2	1749	0.570611778	0.068038879	0.213264723	0.570611778	0.147512864	0.000571755	0.280405703	-0.220428308	-0.099319716	0.280405703	-0.118234337
ELA	8	441992	2	D	2	1749	0.586620926	0.08976558	0.217838765	0.586620926	0.104059463	0.001715266	0.302839511	-0.128442202	-0.157029603	0.302839511	-0.146638541
ELA	8	201887	3	D	2	1742	0.800229621	0.800229621	0.053386912	0.052812859	0.090126292	0.003444317	0.401156345	0.401156345	-0.259174699	-0.290285678	-0.1179152
ELA	8	822317	3	A-C	3	1742	0.66130884	0.66130884	0.150401837	0.134328358	0.052238806	0.001722158	0.486147099	0.486147099	-0.287052882	-0.229531666	-0.225709403
ELA	8	733333	3	A-C	2	1742	0.708381171	0.088404133	0.708381171	0.087256028	0.11423651	0.001722158	0.492037154	-0.268085136	0.492037154	-0.275750018	-0.214812008
ELA	8	795456	3	A-K	2	1742	0.475315729	0.090126292	0.277267509	0.156716418	0.475315729	0.000574053	0.268917168	-0.214301002	0.115743824	-0.346338972	0.268917168
ELA	8	542749	3	A-K	3	1742	0.610792193	0.610792193	0.175660161	0.090700344	0.122273249	0.000574053	0.47162995	0.47162995	-0.143895862	-0.335195724	-0.23922688
ELA	8	262760	3	A-K	2	1742	0.21641791	0.240528129	0.21641791	0.203788749	0.33869116	0.000574053	0.296614281	-0.01193692	0.296614281	-0.221099777	-0.057807093
ELA	8	402683	3	A-K	2	1742	0.420780712	0.420780712	0.093570608	0.139494834	0.345005741	0.001148106	0.264370372	0.264370372	-0.291432782	-0.234118532	0.074129205
ELA	8	422688	3	A-V	2	1742	0.538461538	0.317451206	0.079793341	0.538461538	0.064293915	0	0.327292904	-0.09854186	-0.222587659	0.327292904	-0.232296101
ELA	8	103644	3	A-V	2	1742	0.91216992	0.020665901	0.91216992	0.049368542	0.017221584	0.000574053	0.401924045	-0.213587291	0.401924045	-0.261878452	-0.213779175

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD
ELA	8	846359	3	D	3	1742	0.652123995	0.083811711	0.652123995	0.141216992	0.122273249	0.000574053	0.412374435	-0.130934777	0.412374435	-0.304614058	-0.163832939
ELA	8	329483	3	D	2	1742	0.528128588	0.528128588	0.117680827	0.259471871	0.093570608	0.001148106	0.292954943	0.292954943	-0.264694185	-0.033860706	-0.155737388
ELA	8	727948	6	D	2	2697	0.571746385	0.571746385	0.197626993	0.141268076	0.088246199	0.001112347	0.329605892	0.329605892	-0.157983771	-0.136875616	-0.182019619
ELA	8	590449	6	D	2	2697	0.486095662	0.22395254	0.112717835	0.17500927	0.486095662	0.002224694	0.299744549	-0.031225591	-0.224454169	-0.166702171	0.299744549
ELA	8	505356	7	D	2	1749	0.570611778	0.068038879	0.213264723	0.570611778	0.147512864	0.000571755	0.280405703	-0.220428308	-0.099319716	0.280405703	-0.118234337
ELA	8	441992	7	D	2	1749	0.586620926	0.08976558	0.217838765	0.586620926	0.104059463	0.001715266	0.302839511	-0.128442202	-0.157029603	0.302839511	-0.146638541
ELA	8	846359	8	D	3	1742	0.652123995	0.083811711	0.652123995	0.141216992	0.122273249	0.000574053	0.412374435	-0.130934777	0.412374435	-0.304614058	-0.163832939
ELA	8	329483	8	D	2	1742	0.528128588	0.528128588	0.117680827	0.259471871	0.093570608	0.001148106	0.292954943	0.292954943	-0.264694185	-0.033860706	-0.155737388
MATH	3	659354	0	B-O	2	2934	0.392638037	0.392638037	0.346625767	0.145194274	0.110770279	0.004771643	0.278986834	0.278986834	-0.056321061	-0.094678311	-0.229022995
MATH	3	427520	0	A-T	2	2934	0.348670757	0.543626449	0.076687117	0.348670757	0.028970688	0.00204499	0.499464422	-0.345385368	-0.168371716	0.499464422	-0.125024978
MATH	3	469853	0	D-M	2	2934	0.586571234	0.085889571	0.055896387	0.269597819	0.586571234	0.00204499	0.256647289	-0.005768247	-0.120769719	-0.212757622	0.256647289
MATH	3	384267	0	B-O	1	2934	0.615882754	0.615882754	0.078050443	0.085207907	0.218473074	0.002385821	0.63217856	0.63217856	-0.178434233	-0.216725927	-0.475166584
MATH	3	505731	0	B-O	2	2934	0.583162918	0.583162918	0.134628494	0.101908657	0.173483299	0.006816633	0.565425561	0.565425561	-0.192947255	-0.286550123	-0.317972414
MATH	3	626732	0	A-T	1	2934	0.695296524	0.039877301	0.08997955	0.695296524	0.172119973	0.002726653	0.543387732	-0.196869064	-0.285666769	0.543387732	-0.336582773
MATH	3	481066	0	D-M	2	2934	0.537832311	0.034764826	0.038513974	0.537832311	0.387184731	0.001704158	0.519317158	-0.190570274	-0.19383234	0.519317158	-0.377849636
MATH	3	148896	0	A-F	1	2934	0.30129516	0.298909339	0.283571915	0.30129516	0.112474438	0.003749148	0.389611192	-0.152058829	-0.070154631	0.389611192	-0.241800435
MATH	3	600987	0	D-M	1	2934	0.526925699	0.281867757	0.087593729	0.526925699	0.099522836	0.00408998	0.31367975	-0.0714667	-0.245443808	0.31367975	-0.169790836
MATH	3	815332	0	A-T	2	2934	0.534764826	0.534764826	0.170415815	0.129856851	0.162576687	0.002385821	0.443450432	0.443450432	-0.221946841	-0.100334797	-0.275193682
MATH	3	440334	0	B-O	2	2934	0.535446489	0.535446489	0.18200409	0.19665985	0.078391275	0.007498296	0.390615443	0.390615443	-0.160742425	-0.184172675	-0.204441016
MATH	3	825606	0	B-O	2	2934	0.524199046	0.156100886	0.185071575	0.524199046	0.130538514	0.00408998	0.384037151	-0.255960098	-0.13880986	0.384037151	-0.131235276
MATH	3	714607	0	B-O	2	2934	0.54396728	0.281186094	0.54396728	0.129516019	0.042263122	0.003067485	0.433600381	-0.26047121	0.433600381	-0.183600646	-0.175169311
MATH	3	954642	0	A-T	1	2934	0.583503749	0.192910702	0.148261759	0.583503749	0.072597137	0.002726653	0.558364556	-0.39404617	-0.152243575	0.558364556	-0.241890047
MATH	3	356143	0	C-G	1	2934	0.609747785	0.609747785	0.221199727	0.094751193	0.070892979	0.003408316	0.508417248	0.508417248	-0.287498621	-0.248951531	-0.208430203
MATH	3	994817	0	B-O	1	2934	0.68609407	0.051806408	0.68609407	0.128493524	0.131220177	0.002385821	0.559666373	-0.228871103	0.559666373	-0.308145171	-0.311330065
MATH	3	940245	0	B-O	2	2934	0.660872529	0.094410361	0.187116564	0.660872529	0.055214724	0.002385821	0.572609227	-0.242863656	-0.386565686	0.572609227	-0.208742771
MATH	3	312962	0	B-O	2	2934	0.476141786	0.476141786	0.154396728	0.113156101	0.25528289	0.001022495	0.377502008	0.377502008	-0.255710992	-0.160984926	-0.10177292
MATH	3	938118	0	D-M	1	2934	0.787321063	0.091683708	0.050783913	0.787321063	0.068847989	0.001363327	0.381353797	-0.165992835	-0.215738283	0.381353797	-0.235788235
MATH	3	195872	0	A-T	2	2934	0.531015678	0.16325835	0.531015678	0.152010907	0.150988412	0.002726653	0.527621855	-0.145274258	0.527621855	-0.245933386	-0.333213702
MATH	3	789950	0	B-O	2	2934	0.659850034	0.067484663	0.659850034	0.116905249	0.151329243	0.004430811	0.590708431	-0.17014939	0.590708431	-0.262975757	-0.413134497
MATH	3	148005	0	D-M	2	2934	0.582481254	0.10463531	0.21131561	0.096455351	0.582481254	0.005112474	0.457455946	-0.22000307	-0.251588574	-0.176262126	0.457455946
MATH	3	426777	0	A-F	2	2934	0.466939332	0.165985003	0.466939332	0.26141786	0.101908657	0.003749148	0.346445867	-0.094078281	0.346445867	-0.146377725	-0.229596351
MATH	3	997898	0	A-T	1	2934	0.528970688	0.12542604	0.271642808	0.07123381	0.528970688	0.002726653	0.525801834	-0.07888211	-0.429171277	-0.165970797	0.525801834
MATH	3	246870	0	B-O	1	2934	0.65064758	0.65064758	0.164962509	0.042603954	0.140763463	0.001022495	0.518811312	0.518811312	-0.304044226	-0.198633577	-0.268473074
MATH	3	279099	0	A-F	2	2934	0.3200409	0.309134288	0.049420586	0.3200409	0.3200409	0.001363327	0.378604698	-0.406540245	-0.162814246	0.100849672	0.378604698
MATH	3	583095	0	B-O	1	2934	0.633605999	0.633605999	0.105316973	0.109406953	0.144171779	0.007498296	0.502826719	0.502826719	-0.248223028	-0.20794685	-0.269068802
MATH	3	403248	0	C-G	1	2934	0.448875256	0.137355147	0.138718473	0.27198364	0.448875256	0.003067485	0.224311907	-0.145056477	-0.161313717	-0.007723479	0.224311907
MATH	3	264739	0	C-G	1	2934	0.640422631	0.19870484	0.099522836	0.059986367	0.640422631	0.001363327	0.424854049	-0.248117243	-0.231023546	-0.148336885	0.424854049
MATH	3	863791	0	A-T	2	2934	0.384798909	0.188139059	0.384798909	0.294137696	0.130879346	0.00204499	0.294067341	-0.26342045	0.294067341	-0.0320832	-0.074245985
MATH	3	544304	0	A-T	2	2934	0.401158828	0.371847307	0.130197682	0.093387866	0.401158828	0.003408316	0.444464223	-0.174489637	-0.273481866	-0.132330198	0.444464223
MATH	3	947323	0	B-O	2	2934	0.613837764	0.094410361	0.613837764	0.173142468	0.118268575	0.000340832	0.495398904	-0.237742407	0.495398904	-0.201344755	-0.293995966
MATH	3	773388	0	B-O	2	2934	0.581458759	0.143830948	0.581458759	0.156782549	0.114519427	0.003408316	0.464651164	-0.168650207	0.464651164	-0.244174702	-0.248836016
MATH	3	895423	0	D-M	1	2934	0.499318337	0.207225631	0.197341513	0.09406953	0.499318337	0.00204499	0.360757542	-0.185628287	-0.195975975	-0.091041719	0.360757542
MATH	3	829274	0	D-M	2	2934	0.46864349	0.144853442	0.156100886	0.229720518	0.46864349	0.000681663	0.430696457	-0.123614998	-0.146203302	-0.279321357	0.430696457
MATH	3	773905	0	D-M	1	2934	0.326175869	0.416496251	0.126448534	0.326175869	0.128152693	0.002726653	0.341315981	-0.077441248	-0.229531092	0.341315981	-0.128166165
MATH	3	400614	0	D-M	1	2934	0.408657123	0.249147921	0.408657123	0.249829584	0.088957055	0.003408316	0.414529294	-0.226408436	0.414529294	-0.141625925	-0.148991173
MATH	3	619188	0	D-M	1	2934	0.392638037	0.392638037	0.056918882	0.508520791	0.039536469	0.002385821	0.445182585	0.445182585	-0.108678125	-0.309970205	-0.190719063
MATH	3	615858	0	B-O	2	2934	0.518064076	0.203817314	0.518064076	0.092365372	0.18200409	0.003749148	0.414737175	-0.147270657	0.414737175	-0.246122666	-0.194354059
MATH	3	357902	0	A-F	1	2934	0.336400818	0.336400818	0.198364008	0.19461486	0.268575324	0.00204499	0.405178905	0.405178905	-0.042444879	-0.126177892	-0.281141611
MATH	3	381099	1	D-M	2	1437	0.359777314	0.105080028	0.359777314	0.137787056	0.394572025	0.002783577	0.550957697	-0.031923407	0.550957697	-0.14359544	-0.413376532
MATH	3	583023	1	A-F	2	1437	0.250521921	0.316631872	0.191370912	0.235908142	0.250521921	0.005567154	0.394502483	-0.123953458	-0.060768359	-0.205925827	0.394502483
MATH	3	702252	1	A-T	1	1437	0.383437717	0.137091162	0.381350035	0.383437717	0.088378566	0.009742519	0.512785216	-0.103210358	-0.379868498	0.512785216	-0.074779004
MATH	3	318990	1	D-M	2	1437	0.538622129	0.191370912	0.538622129	0.216423104	0.045233125	0.008350731	0.583895935	-0.330695153	0.583895935	-0.30256991	-0.158563712
MATH	3	677891	1	A-F	1	1437	0.817675713	0.817675713	0.065414057	0.073764788	0.042449548	0.000695894	0.384118805	0.384118805	-0.24277184	-0.239352998	-0.124926463
MATH	3	885023	1	B-O	2	1437	0.22407794	0.151009047	0.468336813	0.22407794	0.152400835	0.004175365	0.097081957	-0.142084112	0.152586954	0.097081957	-0.175987857
MATH	3	328979	1	B-O	2	1437	0.243562978	0.300626305	0.295755045	0.153096729	0.243562978	0.006958942	0.032898127	0.217098544	-0.06348107	-0.226820956	0.032898127
MATH	3	868814	1	C-G	1	1437	0.251217815	0.427974948	0.171885873	0.146137787	0.251217815	0.002783577	0.01318403	0.169503498	-0.11510987	-0.121046338	0.01318403

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD
MATH	3	484735	2	A-F	2	763	0.572739187	0.05242464	0.233289646	0.572739187	0.138925295	0.002621232	0.313808526	-0.179305423	-0.102270644	0.313808526	-0.192744889
MATH	3	529813	2	D-M	2	763	0.327653997	0.327653997	0.157273919	0.119266055	0.393184797	0.002621232	0.302558557	0.302558557	-0.172735638	-0.198027603	-0.029975064
MATH	3	411252	2	A-T	2	763	0.216251638	0.183486239	0.452162516	0.216251638	0.141546527	0.00655308	0.012158724	-0.053302854	0.026460625	0.012158724	0.023695817
MATH	3	498593	2	D-M	2	763	0.439056356	0.461336828	0.439056356	0.05242464	0.043250328	0.003931848	0.425319378	-0.28338122	0.425319378	-0.154519754	-0.135254776
MATH	3	304150	2	D-M	2	763	0.314547837	0.314547837	0.28440367	0.120576671	0.275229358	0.005242464	0.072634686	0.072634686	0.125652375	-0.064364959	-0.138109016
MATH	3	192676	2	B-O	2	763	0.508519004	0.094364351	0.136304063	0.508519004	0.247706422	0.01310616	0.43194602	-0.268907955	-0.218427398	0.43194602	-0.114362423
MATH	3	458435	2	B-O	1	763	0.133682831	0.431192661	0.182175623	0.243774574	0.133682831	0.009174312	0.106352654	0.274226932	-0.153551503	-0.237395865	0.106352654
MATH	3	767461	2	C-G	2	763	0.513761468	0.055045872	0.513761468	0.187418087	0.237221494	0.00655308	0.365942007	-0.163657137	0.365942007	-0.127510408	-0.211881292
MATH	3	298710	3	A-T	2	734	0.223433243	0.384196185	0.309264305	0.223433243	0.080381471	0.002724796	0.370598668	-0.274016123	0.011078501	0.370598668	-0.091526958
MATH	3	855332	3	B-O	1	734	0.450953678	0.268392371	0.450953678	0.073569482	0.207084469	0	0.200894302	0.066639527	0.200894302	-0.170323484	-0.209828633
MATH	3	473678	3	D-M	1	734	0.5	0.21253406	0.09400545	0.19346049	0.5	0	0.525592149	-0.249151603	-0.215148508	-0.248296632	0.525592149
MATH	3	203905	3	D-M	2	734	0.302452316	0.073569482	0.302452316	0.351498638	0.267029973	0.005449591	0.305182999	-0.086740822	0.305182999	-0.108230174	-0.141449306
MATH	3	646604	3	A-F	1	734	0.750681199	0.750681199	0.153950954	0.058583106	0.034059946	0.002724796	0.348225576	0.348225576	-0.180626547	-0.192428717	-0.207759541
MATH	3	297639	3	B-O	1	734	0.828337875	0.828337875	0.084468665	0.054495913	0.03133515	0.001362398	0.434699694	0.434699694	-0.218864981	-0.259509892	-0.241999508
MATH	3	720765	3	B-O	2	734	0.495912807	0.495912807	0.310626703	0.130790191	0.0626703	0	0.266589458	0.266589458	-0.037384483	-0.248045776	-0.13350229
MATH	3	719144	3	C-G	2	734	0.467302452	0.13760218	0.467302452	0.231607629	0.159400545	0.004087193	0.284536377	-0.09842797	0.284536377	-0.16761881	-0.089186686
MATH	4	507859	0	A-F	2	3112	0.30559126	0.23811054	0.195372751	0.258997429	0.30559126	0.001928021	0.286015639	-0.00336335	-0.089667767	-0.216055484	0.286015639
MATH	4	537653	0	A-F	2	3112	0.372750643	0.462082262	0.372750643	0.07937018	0.082583548	0.003213368	0.233108232	-0.045290108	0.233108232	-0.149292819	-0.180990469
MATH	4	897523	0	D-M	2	3112	0.49903599	0.329691517	0.085475578	0.49903599	0.07937018	0.006426735	0.442600357	-0.182505388	-0.267376963	0.442600357	-0.212085033
MATH	4	339879	0	A-F	2	3112	0.419023136	0.419023136	0.161953728	0.214652956	0.202763496	0.001606684	0.473169313	0.473169313	-0.146962145	-0.356586909	-0.077965028
MATH	4	920043	0	B-O	2	3112	0.619537275	0.111182519	0.619537275	0.182840617	0.084511568	0.001928021	0.426875113	-0.275274365	0.426875113	-0.209824528	-0.1383814
MATH	4	462685	0	B-O	2	3112	0.373714653	0.050128535	0.03374036	0.541773779	0.373714653	0.000642674	0.526290497	-0.269450858	-0.181363706	-0.325653149	0.526290497
MATH	4	381264	0	B-O	2	3112	0.302377892	0.302377892	0.401670951	0.172236504	0.121465296	0.002249357	0.367241449	0.367241449	-0.068006879	-0.107355327	-0.284660583
MATH	4	144189	0	A-T	2	3112	0.50996144	0.127570694	0.168380463	0.50996144	0.191195373	0.002892031	0.48139316	-0.120953576	-0.348426574	0.48139316	-0.170103569
MATH	4	283154	0	C-G	1	3112	0.410989717	0.094151671	0.410989717	0.218508997	0.273136247	0.003213368	0.374380816	-0.232891597	0.374380816	-0.282100891	0.005025186
MATH	4	107120	0	A-F	1	3112	0.520244216	0.265745501	0.108933162	0.520244216	0.100257069	0.004820051	0.534271539	-0.396857893	-0.171826294	0.534271539	-0.113560489
MATH	4	896459	0	D-M	2	3112	0.517352185	0.367287918	0.046272494	0.517352185	0.067159383	0.001928021	0.552765724	-0.423594524	-0.211753513	0.552765724	-0.100447231
MATH	4	455324	0	A-F	2	3112	0.497750643	0.258354756	0.497750643	0.13688946	0.10122108	0.005784062	0.461773935	-0.250422357	0.461773935	-0.232730604	-0.126407756
MATH	4	524151	0	D-M	1	3112	0.514138817	0.320694087	0.082904884	0.514138817	0.080976864	0.001285347	0.381727481	-0.088929492	-0.27788969	0.381727481	-0.266222583
MATH	4	578050	0	C-G	2	3112	0.653920308	0.091580977	0.097043702	0.653920308	0.155526992	0.001928021	0.483667745	-0.240324909	-0.222118162	0.483667745	-0.25957979
MATH	4	688591	0	D-M	1	3112	0.526028278	0.526028278	0.258354756	0.152313625	0.060411311	0.002892031	0.420505248	0.420505248	-0.196018369	-0.215585007	-0.191136636
MATH	4	700024	0	B-O	2	3112	0.700514139	0.700514139	0.095758355	0.044023136	0.159061697	0.000642674	0.527559993	0.527559993	-0.200664541	-0.174196236	-0.402018735
MATH	4	382259	0	A-F	1	3112	0.678984576	0.085154242	0.678984576	0.181233933	0.053341902	0.001285347	0.443714603	-0.221342871	0.443714603	-0.273629744	-0.173033117
MATH	4	659249	0	A-T	1	3112	0.598650386	0.105719794	0.154562982	0.126606684	0.598650386	0.014460154	0.49826421	-0.240751656	-0.243252429	-0.22593352	0.49826421
MATH	4	107807	0	D-M	1	3112	0.421915167	0.096401028	0.303984576	0.172879177	0.421915167	0.004820051	0.60610357	-0.102242663	-0.354810828	-0.267123716	0.60610357
MATH	4	628747	0	C-G	2	3112	0.424485861	0.271529563	0.093830334	0.208226221	0.424485861	0.001928021	0.346421122	-0.113246032	-0.174491144	-0.171347739	0.346421122
MATH	4	764733	0	B-O	2	3112	0.408419023	0.050449871	0.408419023	0.238431877	0.299807198	0.002892031	0.548669309	-0.177944855	0.548669309	-0.182231753	-0.330254472
MATH	4	715435	0	B-O	2	3112	0.645886889	0.13785347	0.118251928	0.645886889	0.093187661	0.004820051	0.433216092	-0.171736989	-0.257335424	0.433216092	-0.218512146
MATH	4	204028	0	D-M	2	3112	0.650385604	0.112789203	0.080655527	0.650385604	0.148457584	0.007712082	0.402697829	-0.138922243	-0.231976243	0.402697829	-0.232053098
MATH	4	622741	0	D-M	1	3112	0.551092545	0.128213368	0.148136247	0.16966581	0.551092545	0.002892031	0.555733506	-0.297956253	-0.211659018	-0.265027751	0.555733506
MATH	4	739708	0	A-T	1	3112	0.502892031	0.168380463	0.177056555	0.144280206	0.502892031	0.007390746	0.490546422	-0.251843147	-0.220694835	-0.184101792	0.490546422
MATH	4	396278	0	A-F	1	3112	0.737467866	0.151349614	0.062339332	0.737467866	0.043059126	0.005784062	0.430186424	-0.215603063	-0.276753877	0.430186424	-0.207906308
MATH	4	986611	0	D-M	2	3112	0.539524422	0.094151671	0.098650386	0.539524422	0.265745501	0.001928021	0.339017782	-0.150684043	-0.095634426	0.339017782	-0.213938651
MATH	4	453825	0	A-T	2	3112	0.372107969	0.148457584	0.1031491	0.372107969	0.374357326	0.001928021	0.32355726	0.117277272	-0.078720921	0.32355726	-0.358716028
MATH	4	108657	0	B-O	2	3112	0.31844473	0.307840617	0.200514139	0.171915167	0.31844473	0.001285347	0.488714901	-0.225437667	-0.169851716	-0.14476157	0.488714901
MATH	4	793465	0	C-G	1	3112	0.436375321	0.436375321	0.115359897	0.205012853	0.241645244	0.001606684	0.287814281	0.287814281	-0.154178731	-0.149576986	-0.075682938
MATH	4	839905	0	A-T	2	3112	0.539203085	0.117287918	0.539203085	0.219151671	0.120179949	0.004177378	0.461761711	-0.192281323	0.461761711	-0.205825146	-0.2523356
MATH	4	313917	0	B-O	1	3112	0.498393316	0.056233933	0.498393316	0.304948586	0.139460154	0.00096401	0.404714112	-0.128418602	0.404714112	-0.163459075	-0.279417079
MATH	4	467970	0	A-F	1	3112	0.490359897	0.290167095	0.100578406	0.115359897	0.490359897	0.003534704	0.418586633	-0.193132316	-0.208230368	-0.173592039	0.418586633
MATH	4	894379	0	A-F	2	3112	0.531491003	0.531491003	0.145244216	0.228470437	0.094473008	0.000321337	0.193437115	0.193437115	-0.083082636	-0.071678615	-0.126015476
MATH	4	921580	0	A-F	2	3112	0.301092545	0.262210797	0.367930591	0.065231362	0.301092545	0.003534704	0.530786574	-0.293306791	-0.199394178	-0.059241918	0.530786574
MATH	4	923444	0	A-T	1	3112	0.267030848	0.180269923	0.151670951	0.399421594	0.267030848	0.001606684	0.302780152	-0.180437072	-0.127024863	-0.036028254	0.302780152
MATH	4	951019	0	A-F	2	3112	0.508033419	0.508033419	0.187017995	0.053663239	0.249678663	0.001606684	0.534996724	0.534996724	-0.161111794	-0.236143248	-0.350487372
MATH	4	268658	0	B-O	1	3112	0.557840617	0.557840617	0.266066838	0.108290488	0.06651671	0.001285347	0.469444309	0.469444309	-0.378917084	-0.056641561	-0.195711717
MATH	4	393055	0	D-M	1	3112	0.55751928	0.29562982	0.076156812	0.06651671	0.55751928	0.004177378	0.595059707	-0.41208676	-0.20352791	-0.202888994	0.595059707
MATH	4	279462	0	D-M	1	3112	0.39781491	0.39781491	0.199871465	0.214010283	0.185089974	0.003213368	0.345045584	0.345045584	-0.12542773	-0.134642763	-0.161637939

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD
MATH	4	902646	1	A-T	2	1532	0.364882507	0.187989556	0.199738903	0.364882507	0.245430809	0.001958225	0.218730151	-0.107474196	0.078244079	0.218730151	-0.215391754
MATH	4	744942	1	C-G	1	1532	0.313968668	0.315274151	0.131853786	0.233028721	0.313968668	0.005874674	0.212496766	-0.069193462	-0.190864543	0.003368029	0.212496766
MATH	4	762866	1	B-O	2	1532	0.34464752	0.044386423	0.34464752	0.316579634	0.289164491	0.005221932	0.143837226	-0.093426295	0.143837226	0.009463886	-0.109757033
MATH	4	803263	1	A-T	1	1532	0.553524804	0.159921671	0.178198433	0.553524804	0.092036554	0.016318538	0.453804708	-0.281211708	-0.169785643	0.453804708	-0.170564736
MATH	4	322281	1	B-O	2	1532	0.270887728	0.161879896	0.254569191	0.270887728	0.310052219	0.002610966	0.110445079	-0.094188103	0.000422394	0.110445079	-0.026168646
MATH	4	946453	1	C-G	1	1532	0.660574413	0.138381201	0.090078329	0.660574413	0.109007833	0.001958225	0.450394638	-0.251173842	-0.243749868	0.450394638	-0.176930279
MATH	4	711611	1	A-F	2	1532	0.114229765	0.537859008	0.227806789	0.118798956	0.114229765	0.001305483	0.058621036	0.230050945	-0.153855337	-0.211385163	0.058621036
MATH	4	962327	1	D-M	2	1532	0.302219321	0.302219321	0.276762402	0.187336815	0.231070496	0.002610966	0.368749296	0.368749296	-0.082373651	-0.134885598	-0.185451733
MATH	4	236540	2	A-T	2	786	0.512722646	0.148854962	0.208651399	0.129770992	0.512722646	0	0.542812651	-0.333326043	-0.282939432	-0.112190101	0.542812651
MATH	4	905249	2	B-O	2	786	0.376590331	0.211195929	0.161577608	0.249363868	0.376590331	0.001272265	0.302439595	-0.115509642	-0.13911172	-0.111084328	0.302439595
MATH	4	601276	2	C-G	2	786	0.348600509	0.134860051	0.195928753	0.348600509	0.320610687	0	-0.045952068	0.028541714	0.036651516	-0.045952068	-0.005140639
MATH	4	424538	2	A-F	2	786	0.488549618	0.276081425	0.083969466	0.142493639	0.488549618	0.008905852	0.079537025	0.043146039	-0.08444703	-0.079965854	0.079537025
MATH	4	255997	2	A-F	1	786	0.595419847	0.12086514	0.259541985	0.019083969	0.595419847	0.005089059	0.502789269	-0.351126321	-0.269992633	-0.11732005	0.502789269
MATH	4	329455	2	A-T	1	786	0.910941476	0.027989822	0.910941476	0.021628499	0.038167939	0.001272265	0.365678376	-0.232497845	0.365678376	-0.14280868	-0.223603439
MATH	4	629990	2	B-O	1	786	0.46437659	0.227735369	0.161577608	0.46437659	0.146310433	0	0.353961956	-0.224705694	-0.143457344	0.353961956	-0.083456222
MATH	4	679293	2	D-M	2	786	0.72519084	0.077608142	0.077608142	0.119592875	0.72519084	0	0.345492163	-0.155074645	-0.190089204	-0.190714569	0.345492163
MATH	4	840461	3	A-F	1	794	0.542821159	0.084382872	0.086901763	0.283375315	0.542821159	0.002518892	0.526597217	-0.202573238	-0.231859611	-0.304150839	0.526597217
MATH	4	334405	3	B-O	2	794	0.494962217	0.494962217	0.256926952	0.16372796	0.083123426	0.001259446	0.409173302	0.409173302	-0.273999759	-0.139570868	-0.120961777
MATH	4	933645	3	A-F	2	794	0.335012594	0.335012594	0.327455919	0.19395466	0.143576826	0	0.234088249	0.234088249	-0.20607311	0.001606511	-0.041112769
MATH	4	845044	3	A-F	1	794	0.714105793	0.071788413	0.714105793	0.147355164	0.056675063	0.010075567	0.419582934	-0.174244251	0.419582934	-0.191162645	-0.315061191
MATH	4	848579	3	A-T	2	794	0.426952141	0.137279597	0.335012594	0.098236776	0.426952141	0.002518892	0.286595396	-0.137616984	-0.144161127	-0.094289008	0.286595396
MATH	4	557249	3	B-O	2	794	0.268261965	0.288413098	0.172544081	0.268261965	0.267002519	0.003778338	0.119347307	-0.11348664	-0.134161401	0.119347307	0.12314572
MATH	4	378507	3	C-G	1	794	0.599496222	0.151133501	0.09697733	0.599496222	0.14861461	0.003778338	0.392619418	-0.230317195	-0.259475583	0.392619418	-0.081751593
MATH	4	217193	3	D-M	2	794	0.244332494	0.248110831	0.244332494	0.183879093	0.322418136	0.001259446	0.201664562	0.07944778	0.201664562	-0.144735871	-0.135425402
MATH	5	776787	0	B-O	1	5087	0.555140554	0.069392569	0.067230195	0.555140554	0.305681148	0.002555534	0.323812054	-0.253760327	-0.247403373	0.323812054	-0.071797755
MATH	5	892351	0	D-M	2	5087	0.413406723	0.207981128	0.198741891	0.175938667	0.413406723	0.00393159	0.631873808	-0.322033396	-0.262638197	-0.190530213	0.631873808
MATH	5	729171	0	B-O	1	5087	0.841753489	0.043247494	0.015726361	0.098486338	0.841753489	0.000786318	0.347411744	-0.188891835	-0.138701209	-0.237938675	0.347411744
MATH	5	201487	0	A-T	2	5087	0.444269707	0.053469628	0.444269707	0.248673088	0.249852565	0.003735011	0.497643738	-0.127017321	0.497643738	-0.208929519	-0.289947483
MATH	5	311223	0	A-F	2	5087	0.451936308	0.266365245	0.179673678	0.097306861	0.451936308	0.004717908	0.407625725	-0.173971592	-0.161855119	-0.201901168	0.407625725
MATH	5	384264	0	B-O	2	5087	0.440534696	0.440534696	0.112640063	0.35777472	0.088067623	0.000982898	0.42699146	0.42699146	-0.299815558	-0.123288583	-0.202841073
MATH	5	816430	0	A-F	2	5087	0.658934539	0.658934539	0.114409279	0.153921761	0.071554944	0.001179477	0.577415961	0.577415961	-0.23303912	-0.378311827	-0.240437181
MATH	5	321958	0	A-F	2	5087	0.576371142	0.169648123	0.576371142	0.107135836	0.142913308	0.00393159	0.41630253	-0.226518646	0.41630253	-0.194283207	-0.166487674
MATH	5	739436	0	A-F	1	5087	0.659131119	0.034794574	0.176921565	0.659131119	0.126990368	0.002162375	0.520623143	-0.1488539	-0.368734237	0.520623143	-0.232306096
MATH	5	720830	0	A-F	1	5087	0.675447218	0.110084529	0.100058974	0.112836642	0.675447218	0.001572636	0.492788668	-0.298617377	-0.216364552	-0.228110594	0.492788668
MATH	5	266333	0	A-F	1	5087	0.392569294	0.054059367	0.392569294	0.076272852	0.47572243	0.001376057	0.432156803	-0.187443191	0.432156803	-0.224722245	-0.215479735
MATH	5	806874	0	A-T	2	5087	0.505602516	0.136622764	0.505602516	0.207784549	0.148810694	0.001179477	0.490076214	-0.14833225	0.490076214	-0.184686874	-0.332083724
MATH	5	337802	0	B-O	2	5087	0.399449577	0.151955966	0.399449577	0.250049145	0.196186357	0.002358954	0.262581574	-0.016947654	0.262581574	-0.144122649	-0.147208605
MATH	5	329067	0	A-F	1	5087	0.563396894	0.185374484	0.163554158	0.563396894	0.084136033	0.003538431	0.416664039	-0.210636551	-0.247228731	0.416664039	-0.109368002
MATH	5	471353	0	C-G	2	5087	0.454491842	0.201100845	0.454491842	0.16650285	0.173776293	0.00412817	0.401549052	-0.193367086	0.401549052	-0.200556181	-0.118844773
MATH	5	828139	0	D-M	2	5087	0.367210537	0.203459799	0.151366228	0.367210537	0.276783959	0.001179477	0.513046844	-0.229701092	0.034863025	0.513046844	-0.371247478
MATH	5	710381	0	B-O	2	5087	0.568901121	0.568901121	0.264596029	0.092785532	0.072144683	0.001572636	0.492361759	0.492361759	-0.271292434	-0.22472855	-0.225089868
MATH	5	972999	0	D-M	2	5087	0.622960488	0.091409475	0.131511696	0.622960488	0.153135443	0.000982898	0.459490054	-0.14475549	-0.31184914	0.459490054	-0.206843285
MATH	5	889663	0	A-F	1	5087	0.391782976	0.147238058	0.368783173	0.085708669	0.391782976	0.006487124	0.479447134	-0.199650431	-0.253944983	-0.130270582	0.479447134
MATH	5	833609	0	A-T	1	5087	0.687241989	0.687241989	0.147238058	0.090033419	0.069392569	0.006093965	0.447369447	0.447369447	-0.243747983	-0.2525732	-0.17222104
MATH	5	949913	0	A-F	2	5087	0.545508158	0.216827207	0.545508158	0.168272066	0.066640456	0.002752113	0.388105746	-0.09478522	0.388105746	-0.274862588	-0.201936944
MATH	5	651196	0	B-O	2	5087	0.466876351	0.466876351	0.169648123	0.272852369	0.086494987	0.00412817	0.406027021	0.406027021	-0.147805166	-0.214865405	-0.171202055
MATH	5	863683	0	C-G	1	5087	0.744446629	0.119716925	0.057990957	0.744446629	0.076469432	0.001376057	0.379149675	-0.205284667	-0.167324219	0.379149675	-0.219892044
MATH	5	476216	0	D-M	2	5087	0.441517594	0.276783959	0.441517594	0.17063102	0.110674268	0.000393159	0.562728423	-0.451325885	0.562728423	-0.095235367	-0.130979581
MATH	5	130754	0	C-G	1	5087	0.641635542	0.182229212	0.10988795	0.065657558	0.641635542	0.000589739	0.23803105	0.014895613	-0.224865398	-0.199250224	0.23803105
MATH	5	511572	0	A-F	1	5087	0.516021231	0.078631807	0.064084922	0.516021231	0.334185178	0.007076863	0.529956461	-0.225789297	-0.204776144	0.529956461	-0.319591788
MATH	5	169656	0	D-M	2	5087	0.397090623	0.34539021	0.187340279	0.065854138	0.397090623	0.004324749	0.586378737	-0.318899377	-0.218161592	-0.18885074	0.586378737
MATH	5	265219	0	A-T	1	5087	0.730882642	0.07332416	0.730882642	0.107332416	0.087084726	0.001376057	0.435610172	-0.172684026	0.435610172	-0.244194884	-0.254747068
MATH	5	535555	0	A-F	2	5087	0.501670926	0.281305288	0.143896206	0.069785728	0.501670926	0.003341852	0.428164052	-0.136728044	-0.239965425	-0.261604449	0.428164052
MATH	5	325290	0	D-M	1	5087	0.545114999	0.131118537	0.267151563	0.545114999	0.055238844	0.001376057	0.527020324	-0.365873966	-0.220631947	0.527020324	-0.175446473
MATH	5	945350	0	A-T	1	5087	0.748181639	0.05287989	0.10575978	0.091606055	0.748181639	0.001572636	0.433995029	-0.221208129	-0.252387311	-0.208344225	0.433995029
MATH	5	571886	0	D-M	2	5087	0.659524278	0.064478081	0.098879497	0.175938667	0.659524278	0.001179477	0.561992596	-0.280966495	-0.307390292	-0.274111977	0.561992596

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD
MATH	5	790872	0	A-T	2	5087	0.403381168	0.403381168	0.120503244	0.147434637	0.327894633	0.000786318	0.431669387	0.431669387	-0.258700193	-0.228552751	-0.098489883
MATH	5	708262	0	A-T	1	5087	0.467859249	0.225280126	0.467859249	0.17888736	0.12600747	0.001965795	0.438207704	-0.172401669	0.438207704	-0.241766752	-0.155320399
MATH	5	200913	0	A-T	1	5087	0.661883232	0.661883232	0.100058974	0.080597602	0.153528602	0.00393159	0.559612613	0.559612613	-0.277516935	-0.224305698	-0.327139802
MATH	5	567323	0	A-T	1	5087	0.436996265	0.436996265	0.270296835	0.200314527	0.091409475	0.000982898	0.518978438	0.518978438	-0.200358676	-0.321006613	-0.135495942
MATH	5	756932	0	B-O	2	5087	0.562413996	0.224100649	0.078238648	0.562413996	0.134460389	0.000786318	0.397193149	-0.287404461	-0.082761102	0.397193149	-0.16078769
MATH	5	916324	0	C-G	1	5087	0.576174563	0.19107529	0.576174563	0.100255553	0.129152742	0.003341852	0.473022933	-0.179764246	0.473022933	-0.232674548	-0.269397166
MATH	5	545719	0	D-M	2	5087	0.363082367	0.246117555	0.17888736	0.363082367	0.210340083	0.001572636	0.270093628	-0.141911918	-0.024605136	0.270093628	-0.140329957
MATH	5	468628	0	D-M	2	5087	0.47139768	0.47139768	0.109298211	0.133477492	0.281895027	0.00393159	0.31051122	0.31051122	-0.164230903	-0.28121746	-0.014373706
MATH	5	645533	1	A-F	2	2392	0.4590301	0.4590301	0.241638796	0.142558528	0.153846154	0.002926421	0.546828516	0.546828516	-0.324234932	-0.186155413	-0.184326902
MATH	5	479093	1	C-G	1	2392	0.506270903	0.169732441	0.140886288	0.506270903	0.181856187	0.001254181	0.401741619	-0.113141803	-0.185095678	0.401741619	-0.240961711
MATH	5	630151	1	A-F	2	2392	0.224916388	0.224916388	0.177257525	0.309782609	0.285117057	0.002926421	0.180925874	0.180925874	-0.192541266	-0.08812854	0.091770051
MATH	5	563845	1	B-O	2	2392	0.258361204	0.352424749	0.258361204	0.252508361	0.134615385	0.002090301	0.029651588	-0.132819598	0.029651588	0.238218553	-0.151542262
MATH	5	168815	1	A-F	1	2392	0.373745819	0.106187291	0.373745819	0.424749164	0.085284281	0.010033445	0.524865324	-0.047248639	0.524865324	-0.389416082	-0.15601958
MATH	5	555695	1	D-M	2	2392	0.339882943	0.068143813	0.098662207	0.339882943	0.488712375	0.004598662	-0.057494289	-0.1737712	-0.13771381	-0.057494289	0.229693347
MATH	5	601942	1	D-M	2	2392	0.325668896	0.308110368	0.224916388	0.325668896	0.139214047	0.002090301	0.300029021	-0.20720266	-0.161661937	0.300029021	0.067349048
MATH	5	529270	1	A-T	1	2392	0.505852843	0.073578595	0.233277592	0.505852843	0.184364548	0.002926421	0.532897987	-0.182320022	-0.319318342	0.532897987	-0.20938307
MATH	5	195204	2	A-F	1	1337	0.486910995	0.486910995	0.043380703	0.412864622	0.052356021	0.004487659	0.466899305	0.466899305	-0.116211298	-0.330429381	-0.206886952
MATH	5	694390	2	A-T	2	1337	0.423335826	0.423335826	0.198204936	0.21091997	0.167539267	0	0.438339612	0.438339612	-0.228028287	-0.161256141	-0.160363947
MATH	5	321360	2	A-T	1	1337	0.672400898	0.096484667	0.082273747	0.145100972	0.672400898	0.003739716	0.394924251	-0.213392347	-0.228925126	-0.160374212	0.394924251
MATH	5	432011	2	B-O	2	1337	0.318623785	0.318623785	0.268511593	0.314136126	0.094988781	0.003739716	0.227418619	0.227418619	-0.06570881	-0.067458881	-0.151148199
MATH	5	637379	2	A-F	2	1337	0.221391174	0.375467464	0.222139117	0.179506358	0.221391174	0.001495886	0.164958174	0.056870128	-0.192834872	-0.038802933	0.164958174
MATH	5	404470	2	B-O	2	1337	0.29618549	0.23934181	0.257292446	0.205684368	0.29618549	0.001495886	0.39627053	-0.120566558	-0.149819808	-0.15845618	0.39627053
MATH	5	527366	2	D-M	2	1337	0.36499626	0.222887061	0.36499626	0.252056844	0.157816006	0.002243829	0.480122328	-0.262894337	0.480122328	-0.263255313	-0.012811877
MATH	5	162108	2	C-G	2	1337	0.154824233	0.248317128	0.350037397	0.154824233	0.245325355	0.001495886	-0.10418646	-0.173334623	-0.037414517	-0.10418646	0.306879957
MATH	5	107412	3	A-F	1	1358	0.726067747	0.059646539	0.09646539	0.115611193	0.726067747	0.002209131	0.503814068	-0.214654608	-0.265718266	-0.289594235	0.503814068
MATH	5	678068	3	A-T	2	1358	0.364506627	0.222385862	0.164212077	0.248895434	0.364506627	0	0.402150683	-0.12742794	-0.17669606	-0.173694247	0.402150683
MATH	5	835243	3	C-G	2	1358	0.524300442	0.178939617	0.524300442	0.131811487	0.162002946	0.002945508	0.260528385	-0.032566122	0.260528385	-0.243644022	-0.08795645
MATH	5	543453	3	B-O	2	1358	0.38365243	0.241531664	0.38365243	0.279086892	0.092783505	0.002945508	0.039451569	-0.23308481	0.039451569	0.213815461	-0.050034536
MATH	5	884000	3	D-M	2	1358	0.36377025	0.200294551	0.36377025	0.34167894	0.091310751	0.002945508	0.290015952	-0.115189694	0.290015952	-0.174769037	-0.032856512
MATH	5	614770	3	A-F	2	1358	0.509572901	0.509572901	0.196612666	0.090574374	0.201030928	0.002209131	0.177112443	0.177112443	-0.137670861	-0.088148588	-0.015556277
MATH	5	473972	3	A-F	1	1358	0.273932253	0.264359352	0.379970545	0.075110457	0.273932253	0.006627393	0.518889306	-0.031844128	-0.431623505	-0.016658568	0.518889306
MATH	5	329900	3	A-T	1	1358	0.441089838	0.17820324	0.136966127	0.243004418	0.441089838	0.000736377	0.460633811	-0.178661731	-0.262173721	-0.163695809	0.460633811
MATH	6	885354	0	B-E	2	5244	0.625095347	0.625095347	0.157704043	0.137109077	0.07761251	0.002479024	0.472365707	0.472365707	-0.263001192	-0.242126794	-0.180851719
MATH	6	670855	0	A-N	2	5244	0.480739893	0.169717773	0.480739893	0.248855835	0.090770404	0.009916095	0.31632707	-0.142061886	0.31632707	-0.145666062	-0.12101377
MATH	6	222146	0	B-E	2	5244	0.589816934	0.589816934	0.113463005	0.105644546	0.189740656	0.001334859	0.46770808	0.46770808	-0.213349134	-0.289916342	-0.185065804
MATH	6	704699	0	B-E	2	5244	0.632341724	0.199466056	0.071319603	0.632341724	0.095347063	0.001525553	0.472012691	-0.294152408	-0.246702708	0.472012691	-0.155080095
MATH	6	864249	0	C-G	2	5244	0.521548436	0.130816171	0.158276125	0.185926773	0.521548436	0.003432494	0.450749457	-0.1101215	-0.249474089	-0.245277509	0.450749457
MATH	6	601614	0	B-E	2	5244	0.483028223	0.483028223	0.313501144	0.145881007	0.05453852	0.003051106	0.485569703	0.485569703	-0.243606907	-0.229345275	-0.206923184
MATH	6	176455	0	A-R	2	5244	0.50228833	0.123188406	0.212242563	0.159610984	0.50228833	0.002669718	0.45018345	-0.120229954	-0.317379807	-0.150020801	0.45018345
MATH	6	442431	0	A-N	1	5244	0.663043478	0.064836003	0.663043478	0.169336384	0.101067887	0.001716247	0.525861972	-0.170622872	0.525861972	-0.290405941	-0.317562106
MATH	6	876338	0	A-R	2	5244	0.587909992	0.090770404	0.587909992	0.206903127	0.111556064	0.002860412	0.544426304	-0.220102475	0.544426304	-0.26227991	-0.30748364
MATH	6	242957	0	A-N	1	5244	0.782990084	0.071510297	0.112700229	0.782990084	0.031083143	0.001716247	0.45897069	-0.273432916	-0.276315117	0.45897069	-0.172962096
MATH	6	837396	0	C-G	2	5244	0.646453089	0.646453089	0.097254005	0.173913043	0.080663616	0.001716247	0.479193142	0.479193142	-0.211185	-0.289328817	-0.20927947
MATH	6	391069	0	A-N	1	5244	0.575705568	0.104309687	0.575705568	0.228070175	0.09057971	0.001334859	0.306634592	-0.228827102	0.306634592	-0.19033205	-0.002162975
MATH	6	459385	0	D-S	2	5244	0.362128146	0.153318078	0.226926011	0.2564836	0.362128146	0.001144165	0.306321762	-0.164410024	-0.206376797	-0.002858537	0.306321762
MATH	6	393003	0	B-E	2	5244	0.541380625	0.170861937	0.178680397	0.541380625	0.105453852	0.003623188	0.396755757	-0.135059128	-0.244127532	0.396755757	-0.166769699
MATH	6	211678	0	C-G	2	5244	0.400457666	0.198321892	0.190312738	0.208047292	0.400457666	0.002860412	0.460405502	-0.265532589	-0.163340521	-0.134660779	0.460405502
MATH	6	848416	0	D-S	2	5244	0.680587338	0.106216629	0.680587338	0.125858124	0.085621663	0.001716247	0.466421131	-0.22807227	0.466421131	-0.210663485	-0.271963771
MATH	6	766182	0	D-S	1	5244	0.529366895	0.529366895	0.103356217	0.24122807	0.124141876	0.001906941	0.577398455	0.577398455	-0.203049612	-0.359177742	-0.213821361
MATH	6	728007	0	D-S	2	5244	0.525171625	0.20194508	0.525171625	0.128337147	0.14187643	0.002669718	0.391700399	-0.264360334	0.391700399	-0.100757124	-0.158530799
MATH	6	769053	0	D-S	2	5244	0.723112128	0.051487414	0.146262395	0.076086957	0.723112128	0.003051106	0.413001274	-0.142159028	-0.259336204	-0.229464584	0.413001274
MATH	6	223714	0	D-S	1	5244	0.488749047	0.488749047	0.174294432	0.170099161	0.163996949	0.002860412	0.234881737	0.234881737	-0.076749952	-0.287117629	0.059550455
MATH	6	614050	0	B-E	2	5244	0.328184592	0.266399695	0.328184592	0.257627765	0.143401983	0.004385965	0.242361778	0.11810561	0.242361778	-0.222328663	-0.188952665
MATH	6	213658	0	B-E	2	5244	0.727116705	0.086765828	0.096872616	0.727116705	0.086193745	0.003051106	0.47197694	-0.251177755	-0.276648648	0.47197694	-0.195145461
MATH	6	867720	0	D-S	2	5244	0.464340198	0.464340198	0.169717773	0.198321892	0.165331808	0.00228833	0.28525273	0.28525273	-0.075476902	-0.242153635	-0.043405765
MATH	6	483148	0	A-N	1	5244	0.58504958	0.085621663	0.139206712	0.58504958	0.185736079	0.004385965	0.351344316	-0.179421695	-0.190301913	0.351344316	-0.13839067

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD
MATH	6	148069	0	A-N	1	5244	0.524980931	0.124141876	0.169717773	0.172959573	0.524980931	0.008199847	0.485200832	-0.182111861	-0.239358934	-0.229758791	0.485200832
MATH	6	609551	0	A-N	1	5244	0.374713959	0.207093822	0.374713959	0.24122807	0.176010679	0.000953471	0.353682348	-0.090847114	0.353682348	-0.235624039	-0.085549953
MATH	6	292812	0	A-N	2	5244	0.600686499	0.132532418	0.156369184	0.600686499	0.10907704	0.001334859	0.44094964	-0.160323499	-0.287025237	0.44094964	-0.183664011
MATH	6	182023	0	A-R	2	5244	0.467009916	0.188215103	0.120327994	0.221777269	0.467009916	0.002669718	0.38867819	-0.023061844	-0.230505123	-0.25987595	0.38867819
MATH	6	456692	0	C-G	2	5244	0.500953471	0.500953471	0.221205187	0.201182304	0.075133486	0.001525553	0.442389793	0.442389793	-0.233193225	-0.187794965	-0.182514468
MATH	6	464426	0	A-N	2	5244	0.716056445	0.070747521	0.09706331	0.716056445	0.114225782	0.001906941	0.222601554	-0.113228266	-0.090791962	0.222601554	-0.138092497
MATH	6	870198	0	A-N	1	5244	0.74122807	0.089816934	0.08504958	0.081617086	0.74122807	0.00228833	0.481359932	-0.230646202	-0.270271571	-0.247584996	0.481359932
MATH	6	829145	0	A-R	2	5244	0.514492754	0.254767353	0.077803204	0.514492754	0.150839054	0.002097635	0.325693057	-0.031715092	-0.231775394	0.325693057	-0.242063682
MATH	6	858358	0	D-S	2	5244	0.394355454	0.178871091	0.148550725	0.277078566	0.394355454	0.001144165	0.39926877	-0.153510547	-0.182211543	-0.158056423	0.39926877
MATH	6	380439	0	B-E	1	5244	0.460144928	0.236270023	0.460144928	0.077803204	0.223684211	0.002097635	0.279270927	-0.264613245	0.279270927	-0.1576724	0.041069137
MATH	6	306343	0	A-R	2	5244	0.54252479	0.109267735	0.54252479	0.055873379	0.290236461	0.002097635	0.552871693	-0.277098093	0.552871693	-0.221473913	-0.300896081
MATH	6	991673	0	B-E	2	5244	0.587909992	0.587909992	0.173340961	0.175819985	0.060640732	0.00228833	0.50103176	0.50103176	-0.283104382	-0.254036014	-0.179388747
MATH	6	224777	0	D-S	2	5244	0.360411899	0.121281465	0.360411899	0.207856598	0.306064073	0.004385965	0.33448725	-0.133730518	0.33448725	-0.229224325	-0.045633728
MATH	6	528841	0	A-R	2	5244	0.338482075	0.18020595	0.136346301	0.341723875	0.338482075	0.0032418	0.355614767	-0.115906865	-0.219835832	-0.0989557	0.355614767
MATH	6	725336	0	B-E	2	5244	0.529366895	0.212051869	0.143974066	0.112890923	0.529366895	0.001716247	0.424817721	-0.081339796	-0.24690291	-0.287353386	0.424817721
MATH	6	253813	0	B-E	2	5244	0.648169336	0.070938215	0.648169336	0.12890923	0.150266972	0.001716247	0.374593179	-0.11863473	0.374593179	-0.268459774	-0.159151631
MATH	6	691595	1	A-N	1	2510	0.785657371	0.043824701	0.058964143	0.785657371	0.10876494	0.002788845	0.418473025	-0.164229861	-0.184067625	0.418473025	-0.297315898
MATH	6	636270	1	D-S	2	2510	0.353386454	0.176095618	0.353386454	0.355776892	0.113944223	0.000796813	0.323399392	-0.172893676	0.323399392	-0.046071807	-0.207142079
MATH	6	231102	1	D-S	2	2510	0.394422311	0.207968127	0.229083665	0.394422311	0.166533865	0.001992032	0.208112004	-0.097043221	-0.07391437	0.208112004	-0.079978895
MATH	6	511582	1	A-N	1	2510	0.789243028	0.016733068	0.123904382	0.058167331	0.789243028	0.011952191	0.318200616	-0.102357223	-0.202217794	-0.182802996	0.318200616
MATH	6	732901	1	B-E	2	2510	0.29123506	0.29123506	0.238645418	0.288047809	0.1812749	0.000796813	0.356689897	0.356689897	-0.211431522	-0.093382138	-0.076966679
MATH	6	760054	1	B-E	2	2510	0.139442231	0.303187251	0.185657371	0.368525896	0.139442231	0.003187251	0.092033202	-0.146926984	-0.087511965	0.149106733	0.092033202
MATH	6	472871	1	A-R	2	2510	0.328685259	0.262151394	0.328685259	0.28247012	0.124302789	0.002390438	0.133549682	-0.16682983	0.133549682	0.059312226	-0.043816956
MATH	6	652260	1	D-S	2	2510	0.356175299	0.154581673	0.23625498	0.356175299	0.250996016	0.001992032	0.329996276	-0.173138659	-0.236099916	0.329996276	0.015416581
MATH	6	480220	2	A-R	2	1365	0.734065934	0.106959707	0.091575092	0.734065934	0.065201465	0.002197802	0.483381837	-0.274336232	-0.259185998	0.483381837	-0.210977549
MATH	6	818509	2	A-N	2	1365	0.693040293	0.043223443	0.693040293	0.170695971	0.092307692	0.000732601	0.33829974	-0.177815856	0.33829974	-0.203230941	-0.151171139
MATH	6	603202	2	A-N	1	1365	0.509157509	0.063736264	0.509157509	0.184615385	0.237362637	0.005128205	0.414229347	-0.179386757	0.414229347	-0.269750162	-0.124682626
MATH	6	964214	2	A-R	1	1365	0.772161172	0.059340659	0.772161172	0.091575092	0.075457875	0.001465201	0.46469666	-0.237189832	0.46469666	-0.303538642	-0.188837933
MATH	6	478079	2	B-E	2	1365	0.758241758	0.114285714	0.758241758	0.087912088	0.038095238	0.001465201	0.431156842	-0.256985633	0.431156842	-0.224966429	-0.195857585
MATH	6	537617	2	C-G	1	1365	0.594871795	0.594871795	0.163369963	0.167032967	0.073260073	0.001465201	0.610039167	0.610039167	-0.371507038	-0.285039657	-0.214867
MATH	6	147242	2	D-S	2	1365	0.402930403	0.244688645	0.177289377	0.402930403	0.173626374	0.001465201	0.182571776	-0.100046596	-0.115841313	0.182571776	-0.000530872
MATH	6	409830	2	B-E	1	1365	0.362637363	0.236630037	0.362637363	0.214652015	0.184615385	0.001465201	0.219127068	-0.048629988	0.219127068	-0.199125005	-0.004639944
MATH	6	107357	3	A-N	1	1369	0.544192841	0.051132213	0.544192841	0.236669102	0.161431702	0.006574142	0.423978027	-0.169868185	0.423978027	-0.303396795	-0.104666538
MATH	6	567896	3	B-E	2	1369	0.598246896	0.598246896	0.180423667	0.11687363	0.103725347	0.00073046	0.473958502	0.473958502	-0.211524129	-0.249473353	-0.23363859
MATH	6	648114	3	C-G	1	1369	0.304601899	0.304601899	0.34623813	0.167275383	0.181154127	0.00073046	0.254644157	0.254644157	0.009792457	-0.073368065	-0.24167877
MATH	6	750318	3	C-G	2	1369	0.547845142	0.547845142	0.202337473	0.168005844	0.080350621	0.00146092	0.371960461	0.371960461	-0.228146112	-0.099075713	-0.203092425
MATH	6	642420	3	A-R	2	1369	0.481373265	0.07596786	0.227173119	0.214755296	0.481373265	0.00073046	0.418562599	-0.17660558	-0.244848707	-0.146871112	0.418562599
MATH	6	172091	3	B-E	2	1369	0.336742148	0.198685172	0.336742148	0.349890431	0.112490869	0.002191381	0.179275304	0.072580145	0.179275304	-0.132712096	-0.151412046
MATH	6	625611	3	C-G	2	1369	0.341855369	0.133674215	0.379108839	0.145361578	0.341855369	0	0.419650112	-0.207555352	-0.103533974	-0.221839448	0.419650112
MATH	6	854441	3	D-S	2	1369	0.593133674	0.106647188	0.119065011	0.179693207	0.593133674	0.00146092	0.415709809	-0.207916875	-0.190421215	-0.199756318	0.415709809
MATH	7	982501	0	D-S	2	5833	0.66278073	0.076118635	0.66278073	0.123435625	0.135607749	0.00205726	0.459755687	-0.094601465	0.459755687	-0.257320073	-0.309904589
MATH	7	380383	0	A-R	2	5833	0.536944968	0.124807132	0.536944968	0.196125493	0.138350763	0.003771644	0.443182408	-0.164636927	0.443182408	-0.207315625	-0.234880975
MATH	7	540564	0	A-R	2	5833	0.768043888	0.096862678	0.768043888	0.075090005	0.058289045	0.001714384	0.410776943	-0.166550703	0.410776943	-0.236482804	-0.257495242
MATH	7	369044	0	D-S	2	5833	0.622835591	0.096005486	0.23212755	0.622835591	0.046974113	0.00205726	0.500375424	-0.214116139	-0.321842918	0.500375424	-0.20052092
MATH	7	297354	0	A-N	2	5833	0.500600034	0.154980285	0.214812275	0.500600034	0.126864392	0.002743014	0.401897572	-0.187023017	-0.277889004	0.401897572	-0.05431166
MATH	7	414003	0	A-R	2	5833	0.640150866	0.099434253	0.640150866	0.146408366	0.111949254	0.00205726	0.558575026	-0.261941615	0.558575026	-0.301807267	-0.260333295
MATH	7	421899	0	D-S	1	5833	0.663980799	0.099262815	0.070118292	0.164237956	0.663980799	0.002400137	0.462804923	-0.259656365	-0.22396306	-0.223665324	0.462804923
MATH	7	961807	0	B-E	2	5833	0.610834905	0.041659523	0.610834905	0.163552203	0.183096177	0.000857192	0.510285304	-0.110529018	0.510285304	-0.215336714	-0.379192079
MATH	7	650341	0	A-N	1	5833	0.698611349	0.073375621	0.146922681	0.698611349	0.079890279	0.001200069	0.493044146	-0.203634474	-0.308401641	0.493044146	-0.231853584
MATH	7	360788	0	B-E	2	5833	0.603634493	0.105606035	0.603634493	0.230927482	0.057260415	0.002571576	0.416567159	-0.10019275	0.416567159	-0.293040039	-0.205909898
MATH	7	611004	0	D-S	2	5833	0.500428596	0.500428596	0.099605692	0.321618378	0.07663295	0.001714384	0.561728736	0.561728736	-0.149281178	-0.358604619	-0.252423149
MATH	7	574974	0	A-N	1	5833	0.656437511	0.088805075	0.143836791	0.108691925	0.656437511	0.002228699	0.446427811	-0.214678883	-0.235286996	-0.217664811	0.446427811
MATH	7	799454	0	B-E	2	5833	0.651808675	0.651808675	0.203840219	0.059146237	0.084347677	0.000857192	0.571981707	0.571981707	-0.350788324	-0.247018065	-0.261804764
MATH	7	681223	0	B-E	2	5833	0.370649751	0.370649751	0.243442482	0.273615635	0.110577747	0.001714384	0.481083669	0.481083669	-0.112808909	-0.240987571	-0.239706417
MATH	7	616677	0	A-R	2	5833	0.6764958	0.104063089	0.09240528	0.6764958	0.124464255	0.002571576	0.413453279	-0.225566136	-0.266242679	0.413453279	-0.139131067
MATH	7	212796	0	A-N	1	5833	0.294531116	0.298474199	0.128235899	0.274815704	0.294531116	0.003943082	0.542666942	-0.001319031	-0.177904277	-0.417417564	0.542666942

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD
MATH	7	168174	0	C-G	2	5833	0.516029487	0.516029487	0.166809532	0.233841934	0.081090348	0.002228699	0.568043375	0.568043375	-0.215033373	-0.329741587	-0.231274773
MATH	7	255148	0	C-G	1	5833	0.416595234	0.182238985	0.182067547	0.416595234	0.217898166	0.001200069	0.318793759	-0.092596214	-0.192045841	0.318793759	-0.112767878
MATH	7	317707	0	B-E	2	5833	0.582204697	0.112635008	0.154808846	0.582204697	0.148465627	0.001885822	0.466537614	-0.232653517	-0.237873239	0.466537614	-0.196119282
MATH	7	524160	0	C-G	2	5833	0.449511401	0.270358306	0.449511401	0.187553574	0.090005143	0.002571576	0.194887562	-0.179620386	0.194887562	-0.10335868	0.08478107
MATH	7	807134	0	D-S	2	5833	0.710612035	0.068918224	0.710612035	0.115892337	0.103205897	0.001371507	0.492470234	-0.222954577	0.492470234	-0.262508702	-0.269517963
MATH	7	864759	0	B-E	2	5833	0.379050231	0.143665352	0.379050231	0.352305846	0.118806789	0.006171781	0.249875027	-0.175512098	0.249875027	0.057627062	-0.256367064
MATH	7	832614	0	B-E	1	5833	0.424481399	0.11760672	0.105948911	0.350934339	0.424481399	0.00102863	0.472446825	-0.251276718	-0.242017847	-0.161328202	0.472446825
MATH	7	173817	0	A-N	1	5833	0.449511401	0.449511401	0.169895423	0.124292817	0.253557346	0.002743014	0.218775676	0.218775676	-0.264172401	-0.173746959	0.112234213
MATH	7	360090	0	A-N	2	5833	0.500428596	0.11657809	0.500428596	0.297617007	0.084347677	0.00102863	0.555388137	-0.183521986	0.555388137	-0.377436068	-0.16495381
MATH	7	801250	0	A-N	2	5833	0.596262644	0.139550831	0.596262644	0.127035831	0.135950626	0.001200069	0.528899232	-0.245298864	0.528899232	-0.248203413	-0.266328363
MATH	7	183015	0	A-R	2	5833	0.564546546	0.564546546	0.25835762	0.092233842	0.083147608	0.001714384	0.590927223	0.590927223	-0.408012263	-0.194036519	-0.206910125
MATH	7	735844	0	B-E	1	5833	0.492028116	0.186010629	0.072346991	0.492028116	0.24789988	0.001714384	0.413514761	-0.327009601	-0.191250272	0.413514761	-0.068038127
MATH	7	521650	0	D-S	2	5833	0.398937082	0.132693297	0.174695697	0.293159609	0.398937082	0.000514315	0.252261137	-0.069258544	-0.194814535	-0.057902019	0.252261137
MATH	7	122874	0	A-R	2	5833	0.87605006	0.037716441	0.036344934	0.048002743	0.87605006	0.001885822	0.352481288	-0.170844275	-0.181769985	-0.223532334	0.352481288
MATH	7	165763	0	C-G	2	5833	0.560432025	0.115892337	0.096176924	0.226298646	0.560432025	0.001200069	0.438052471	-0.189178536	-0.257557363	-0.193769257	0.438052471
MATH	7	237794	0	D-S	2	5833	0.486199211	0.097205555	0.311846391	0.486199211	0.102520144	0.002228699	0.477959152	-0.244359603	-0.291397864	0.477959152	-0.097793927
MATH	7	864511	0	A-R	2	5833	0.557689011	0.175552889	0.110577747	0.557689011	0.154465969	0.001714384	0.467574931	-0.171779428	-0.314743663	0.467574931	-0.18469442
MATH	7	544559	0	C-G	2	5833	0.369278244	0.211554946	0.268129607	0.369278244	0.147436996	0.003600206	0.216173852	-0.107081354	-0.075627355	0.216173852	-0.066741329
MATH	7	161479	0	A-R	2	5833	0.55357449	0.075090005	0.28047317	0.089147951	0.55357449	0.001714384	0.608304753	-0.239226726	-0.36664931	-0.258598271	0.608304753
MATH	7	727622	0	A-N	2	5833	0.480713184	0.480713184	0.133207612	0.274815704	0.108863364	0.002400137	0.522072296	0.522072296	-0.276363218	-0.229861478	-0.202271971
MATH	7	753863	0	A-R	2	5833	0.451911538	0.217555289	0.160980627	0.167495285	0.451911538	0.00205726	0.637878038	-0.191776287	-0.361843105	-0.279508258	0.637878038
MATH	7	776244	0	B-E	2	5833	0.645808332	0.126692954	0.645808332	0.115206583	0.110406309	0.001885822	0.523450676	-0.298516844	0.523450676	-0.281376894	-0.192456836
MATH	7	222805	0	B-E	2	5833	0.56197497	0.56197497	0.239842277	0.132521858	0.063260758	0.002400137	0.432260368	0.432260368	-0.122910166	-0.318318303	-0.215704304
MATH	7	771792	0	D-S	2	5833	0.715583748	0.111777816	0.051602949	0.715583748	0.120006858	0.00102863	0.520953692	-0.248352075	-0.246640106	0.520953692	-0.312691995
MATH	7	179837	1	B-E	2	2645	0.635160681	0.133459357	0.635160681	0.115689981	0.110018904	0.005671078	0.49512269	-0.228607123	0.49512269	-0.265573252	-0.228001269
MATH	7	997467	1	D-S	1	2645	0.441965974	0.102835539	0.441965974	0.178827977	0.273345936	0.003024575	0.183083948	-0.1709238	0.183083948	-0.139603859	0.036600775
MATH	7	462076	1	A-N	1	2645	0.46805293	0.164461248	0.46805293	0.151606805	0.212098299	0.003780718	0.415717466	-0.187722996	0.415717466	-0.204888204	-0.152258257
MATH	7	756321	1	C-G	2	2645	0.375047259	0.182608696	0.279395085	0.375047259	0.161058601	0.001890359	0.293144668	-0.184444349	-0.086743172	0.293144668	-0.084426029
MATH	7	763080	1	B-E	2	2645	0.170888469	0.212476371	0.337996219	0.277126654	0.170888469	0.001512287	0.304688669	-0.019192498	-0.174481399	-0.051291835	0.304688669
MATH	7	295631	1	A-N	1	2645	0.368241966	0.240831758	0.368241966	0.175047259	0.207183365	0.008695652	0.21678174	-0.060275149	0.21678174	-0.104136417	-0.083928461
MATH	7	680639	1	A-R	2	2645	0.343667297	0.257466919	0.343667297	0.265784499	0.130434783	0.002646503	0.326613159	0.111403095	0.326613159	-0.310328483	-0.19536912
MATH	7	332817	1	A-R	2	2645	0.417769376	0.417769376	0.246502836	0.173534972	0.160302457	0.001890359	0.360215585	0.360215585	-0.233512969	-0.142830927	-0.06047305
MATH	7	171372	2	A-N	1	1600	0.5775	0.17	0.05125	0.5775	0.200625	0.000625	0.434577894	-0.057508862	-0.193106185	0.434577894	-0.373904911
MATH	7	742082	2	A-R	1	1600	0.46625	0.050625	0.46625	0.14375	0.3375	0.001875	0.431129365	-0.12333824	0.431129365	-0.264755562	-0.196963781
MATH	7	395456	2	A-N	1	1600	0.499375	0.066875	0.33375	0.499375	0.096875	0.003125	0.556918527	-0.104297035	-0.515373015	0.556918527	-0.023165055
MATH	7	408392	2	B-E	2	1600	0.365	0.365	0.219375	0.295	0.120625	0	0.241938673	0.241938673	0.007248167	-0.180612495	-0.113939334
MATH	7	644534	2	A-R	2	1600	0.65875	0.085	0.65875	0.223125	0.030625	0.0025	0.345668175	-0.219253623	0.345668175	-0.168170737	-0.180839758
MATH	7	387561	2	B-E	2	1600	0.16875	0.164375	0.18125	0.484375	0.16875	0.00125	-0.084606554	-0.125494754	-0.164388986	0.285297684	-0.084606554
MATH	7	759378	2	D-S	2	1600	0.483125	0.2825	0.0825	0.483125	0.15125	0.000625	0.237676553	0.082523292	-0.267200911	0.237676553	-0.227936047
MATH	7	765808	2	C-G	2	1600	0.50875	0.50875	0.225625	0.198125	0.065625	0.001875	0.496081597	0.496081597	-0.243877303	-0.217540493	-0.231571358
MATH	7	349642	3	A-N	1	1588	0.334382872	0.334382872	0.307934509	0.198992443	0.154911839	0.003778338	0.272539768	0.272539768	-0.11883051	-0.178828658	0.000544163
MATH	7	223450	3	A-N	1	1588	0.801007557	0.062972292	0.801007557	0.084382872	0.048488665	0.003148615	0.408589021	-0.188937021	0.408589021	-0.23384917	-0.233161832
MATH	7	316548	3	A-R	2	1588	0.573047859	0.212846348	0.573047859	0.108942065	0.103904282	0.001259446	0.460910372	-0.261752877	0.460910372	-0.120532219	-0.273235783
MATH	7	431079	3	D-S	2	1588	0.199622166	0.199622166	0.274559194	0.440176322	0.083753149	0.001889169	0.284152654	0.284152654	-0.166958396	-0.040102611	-0.067528154
MATH	7	749187	3	B-E	2	1588	0.522040302	0.113350126	0.130982368	0.232367758	0.522040302	0.001259446	0.59171813	-0.299798836	-0.26181911	-0.263092311	0.59171813
MATH	7	637494	3	C-G	2	1588	0.471032746	0.253148615	0.197732997	0.471032746	0.077455919	0.000629723	0.420816088	-0.08766191	-0.290440144	0.420816088	-0.209476451
MATH	7	996967	3	C-G	2	1588	0.310453401	0.386020151	0.217884131	0.310453401	0.083123426	0.002518892	0.176913538	0.169157065	-0.283755617	0.176913538	-0.160851802
MATH	7	988958	3	A-R	2	1588	0.292821159	0.170654912	0.292821159	0.274559194	0.258816121	0.003148615	0.158168865	-0.005555518	0.158168865	-0.033420798	-0.119589215
MATH	8	490524	0	B-E	2	6086	0.588070983	0.112060467	0.202267499	0.588070983	0.095793625	0.001807427	0.497148108	-0.259235855	-0.290849486	0.497148108	-0.151190909
MATH	8	772977	0	B-F	2	6086	0.711633257	0.711633257	0.147551758	0.08248439	0.05783766	0.000492935	0.503158169	0.503158169	-0.264862181	-0.289071075	-0.235568506
MATH	8	254985	0	B-E	2	6086	0.592343082	0.104337825	0.214590864	0.592343082	0.085934933	0.002793296	0.422725063	-0.217350693	-0.212526709	0.422725063	-0.182054205
MATH	8	212001	0	B-E	1	6086	0.6638186	0.117482747	0.136707197	0.6638186	0.080841275	0.001150181	0.459299183	-0.2619902	-0.287955625	0.459299183	-0.121765964
MATH	8	812661	0	C-G	1	6086	0.520703253	0.520703253	0.275550444	0.150016431	0.052744003	0.000985869	0.52476183	0.52476183	-0.375924417	-0.253262874	-0.014983881
MATH	8	112650	0	B-F	2	6086	0.485869208	0.485869208	0.132435097	0.250246467	0.129477489	0.001971738	0.565214462	0.565214462	-0.277418308	-0.275442228	-0.202583821
MATH	8	600021	0	C-G	2	6086	0.475024647	0.475024647	0.23233651	0.198159711	0.091850148	0.002628985	0.451674506	0.451674506	-0.179601834	-0.232180071	-0.190271005
MATH	8	640707	0	A-N	1	6086	0.553072626	0.211797568	0.096286559	0.553072626	0.135721328	0.003121919	0.5342508	-0.43321761	-0.228742232	0.5342508	-0.053448594

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD
MATH	8	110831	0	A-N	1	6086	0.634571147	0.081169898	0.140322051	0.634571147	0.142129477	0.001807427	0.435230677	-0.283745941	-0.148732428	0.435230677	-0.227156736
MATH	8	281597	0	B-E	2	6086	0.641965166	0.080184029	0.171869865	0.641965166	0.103351955	0.002628985	0.45394281	-0.191796224	-0.240244952	0.45394281	-0.242628822
MATH	8	566794	0	B-E	2	6086	0.646401577	0.042720999	0.646401577	0.161353927	0.147880381	0.001643115	0.425193546	-0.176014687	0.425193546	-0.287649953	-0.170569736
MATH	8	286995	0	B-F	2	6086	0.508379888	0.134571147	0.152645416	0.202760434	0.508379888	0.001643115	0.498007873	-0.227008366	-0.222741663	-0.222714255	0.498007873
MATH	8	958173	0	D-S	2	6086	0.345382846	0.190437069	0.211140322	0.25156096	0.345382846	0.001478804	0.255262574	-0.073721313	-0.206241075	-0.016187839	0.255262574
MATH	8	741478	0	C-G	2	6086	0.432632271	0.197831088	0.203089057	0.432632271	0.163489977	0.002957608	0.336628437	-0.163851517	-0.209347104	0.336628437	-0.041645546
MATH	8	862395	0	A-N	1	6086	0.644101216	0.12093329	0.644101216	0.121754847	0.112224778	0.000985869	0.425014382	-0.251295981	0.425014382	-0.211819516	-0.163289115
MATH	8	356081	0	A-N	1	6086	0.331580677	0.206046664	0.331580677	0.241866579	0.219027276	0.001478804	0.189028625	-0.015682489	0.189028625	-0.156004772	-0.035294691
MATH	8	325119	0	A-N	2	6086	0.650837989	0.101380217	0.123397963	0.123233651	0.650837989	0.001150181	0.48155936	-0.310135302	-0.162998084	-0.247558379	0.48155936
MATH	8	110496	0	C-G	2	6086	0.415215248	0.181728557	0.144594151	0.257311863	0.415215248	0.001150181	0.473815512	-0.214887223	-0.280051579	-0.11920386	0.473815512
MATH	8	166187	0	B-E	1	6086	0.344396977	0.091357213	0.344396977	0.352448242	0.210483076	0.001314492	0.220607627	-0.028602878	0.220607627	-0.163108846	-0.042126742
MATH	8	297872	0	C-G	2	6086	0.495070654	0.22806441	0.495070654	0.212454814	0.062931318	0.001478804	0.289144951	-0.118450447	0.289144951	-0.157770242	-0.124992529
MATH	8	630539	0	B-F	2	6086	0.432139336	0.169569504	0.115839632	0.432139336	0.281137036	0.001314492	0.329021079	-0.171984542	-0.237233581	0.329021079	-0.047940786
MATH	8	431328	0	B-F	2	6086	0.543049622	0.543049622	0.1638186	0.150016431	0.140322051	0.002793296	0.475448352	0.475448352	-0.255572593	-0.237813638	-0.157743672
MATH	8	131261	0	B-E	2	6086	0.71311206	0.130791982	0.071146895	0.081498521	0.71311206	0.003450542	0.456610698	-0.253867508	-0.199633844	-0.244041912	0.456610698
MATH	8	269106	0	A-N	1	6086	0.447420309	0.447420309	0.354091357	0.126519882	0.066217548	0.005750904	0.397327674	0.397327674	-0.13951798	-0.265840445	-0.157141441
MATH	8	398992	0	B-E	2	6086	0.560302333	0.179428196	0.112553401	0.560302333	0.143115347	0.004600723	0.314643031	-0.018563443	-0.154025672	0.314643031	-0.278666637
MATH	8	731475	0	A-N	1	6086	0.397469602	0.397469602	0.211797568	0.107295432	0.282780151	0.000657246	0.45428709	0.45428709	-0.272027159	-0.31147425	-0.032314033
MATH	8	745747	0	D-S	2	6086	0.439697667	0.348833388	0.439697667	0.133749589	0.075418994	0.002300361	0.430353604	-0.24795021	0.430353604	-0.148410558	-0.166480839
MATH	8	717838	0	B-E	2	6086	0.295103516	0.295103516	0.190108446	0.353434111	0.159217877	0.00213605	0.328123216	0.328123216	-0.089143692	-0.091856547	-0.189152587
MATH	8	122259	0	B-F	2	6086	0.469602366	0.07492606	0.308084128	0.144758462	0.469602366	0.002628985	0.238380097	-0.159894131	-0.1285847	-0.046031246	0.238380097
MATH	8	699283	0	B-E	1	6086	0.38218863	0.38218863	0.137693066	0.33831745	0.137857378	0.003943477	0.421106293	0.421106293	-0.21579234	-0.141703105	-0.178513666
MATH	8	182339	0	C-G	2	6086	0.579362471	0.11452514	0.197173842	0.107459744	0.579362471	0.001478804	0.227527417	-0.152086409	-0.007390018	-0.19320189	0.227527417
MATH	8	397286	0	C-G	2	6086	0.596450871	0.226421295	0.596450871	0.131284916	0.044035491	0.001807427	0.310935643	-0.206278821	0.310935643	-0.11983963	-0.116043903
MATH	8	845232	0	D-S	2	6086	0.823036477	0.023167926	0.823036477	0.085934933	0.066217548	0.001643115	0.418295929	-0.149917863	0.418295929	-0.251790504	-0.261249866
MATH	8	971920	0	C-G	2	6086	0.488662504	0.170391061	0.488662504	0.208182714	0.130299047	0.002464673	0.363151668	-0.081438067	0.363151668	-0.226017711	-0.172109961
MATH	8	392724	0	C-G	2	6086	0.331252054	0.226256983	0.233486691	0.331252054	0.206703911	0.002300361	0.10184742	-0.0125908	-0.08218256	0.10184742	-0.015954542
MATH	8	276880	0	B-F	2	6086	0.459250739	0.082813013	0.387939533	0.067696352	0.459250739	0.002300361	0.490979249	-0.262055583	-0.293748515	-0.108491931	0.490979249
MATH	8	857998	0	B-E	2	6086	0.737265856	0.052086756	0.737265856	0.155438712	0.05241538	0.002793296	0.524467153	-0.224765728	0.524467153	-0.352411441	-0.227649363
MATH	8	104544	0	B-E	2	6086	0.452185343	0.101544528	0.221491949	0.222149195	0.452185343	0.002628985	0.465455789	-0.201244789	-0.135699672	-0.271007639	0.465455789
MATH	8	246173	0	B-E	1	6086	0.485376273	0.156095958	0.163982912	0.19273743	0.485376273	0.001807427	0.503983641	-0.137703109	-0.268921999	-0.259702108	0.503983641
MATH	8	253876	0	D-S	2	6086	0.48389747	0.176141965	0.228393033	0.48389747	0.110581663	0.000985869	0.523882336	-0.193587137	-0.330717599	0.523882336	-0.155316625
MATH	8	323346	1	B-F	2	2714	0.280766396	0.265291083	0.232129698	0.220707443	0.280766396	0.00110538	0.266907639	0.043188692	-0.128919968	-0.202124857	0.266907639
MATH	8	594289	1	B-E	2	2714	0.437361828	0.121223287	0.192704495	0.437361828	0.244657332	0.004053058	0.189250885	-0.116661071	-0.111620256	0.189250885	-0.025256157
MATH	8	819133	1	B-E	2	2714	0.425202653	0.425202653	0.18275608	0.268607222	0.120854827	0.002579219	0.351728074	0.351728074	-0.167814873	-0.123880657	-0.158682101
MATH	8	684961	1	C-G	2	2714	0.400147384	0.157700811	0.400147384	0.221812822	0.216654385	0.003684598	0.27231158	-0.11649777	0.27231158	-0.221817586	0.009703662
MATH	8	638672	1	B-E	1	2714	0.52173913	0.078481945	0.077008106	0.315033161	0.52173913	0.007737657	0.325277379	-0.22329286	-0.215289164	-0.089097447	0.325277379
MATH	8	812254	1	B-F	2	2714	0.400147384	0.202284451	0.216285925	0.179071481	0.400147384	0.002210759	0.439932119	-0.110825861	-0.192647232	-0.232185251	0.439932119
MATH	8	218834	1	A-N	2	2714	0.256816507	0.117170228	0.256816507	0.352247605	0.270449521	0.003316139	0.212263626	-0.16062768	0.212263626	-0.112623215	0.032127486
MATH	8	105449	1	D-S	1	2714	0.327560796	0.11459101	0.362196021	0.194915254	0.327560796	0.00073692	0.502910355	-0.213880808	-0.138221974	-0.255666023	0.502910355
MATH	8	830031	2	C-G	2	1686	0.327995255	0.3742586	0.327995255	0.170225386	0.127520759	0	0.213845829	0.046201887	0.213845829	-0.212290954	-0.128824365
MATH	8	423549	2	B-F	1	1686	0.573546856	0.112099644	0.573546856	0.131079478	0.182087782	0.00118624	0.412821742	-0.204039768	0.412821742	-0.222242616	-0.167788071
MATH	8	255987	2	C-G	2	1686	0.723606168	0.055160142	0.065836299	0.154211151	0.723606168	0.00118624	0.485836579	-0.186700146	-0.274305321	-0.289836738	0.485836579
MATH	8	476412	2	A-N	2	1686	0.399762752	0.399762752	0.336298932	0.160735469	0.100830368	0.002372479	0.327246442	0.327246442	-0.009077935	-0.234644178	-0.226201881
MATH	8	319617	2	B-E	2	1686	0.418149466	0.418149466	0.176749703	0.236061684	0.166073547	0.002965599	0.361189564	0.361189564	-0.202314068	-0.062515125	-0.19777294
MATH	8	790565	2	B-F	2	1686	0.371886121	0.142348754	0.24970344	0.233689205	0.371886121	0.002372479	0.437223773	-0.115032137	-0.239518638	-0.152932022	0.437223773
MATH	8	861623	2	A-N	1	1686	0.363582444	0.18623962	0.363582444	0.295373665	0.149466192	0.005338078	0.101611561	0.004160216	0.101611561	-0.04630151	-0.076853492
MATH	8	405357	2	D-S	2	1686	0.576512456	0.31198102	0.055160142	0.576512456	0.053380783	0.002965599	0.271649836	-0.048661333	-0.242307617	0.271649836	-0.242998654
MATH	8	185930	3	B-F	2	1686	0.632265718	0.632265718	0.12514828	0.120996441	0.118030842	0.003558719	0.501540343	0.501540343	-0.216923309	-0.300655287	-0.223079368
MATH	8	788128	3	B-E	2	1686	0.494661922	0.255634638	0.12514828	0.123368921	0.494661922	0.00118624	0.428638462	-0.125675019	-0.285591222	-0.192238832	0.428638462
MATH	8	662273	3	A-N	2	1686	0.359430605	0.259786477	0.18683274	0.190391459	0.359430605	0.003558719	0.3969694	0.022266436	-0.269341798	-0.243631035	0.3969694
MATH	8	831295	3	D-S	2	1686	0.359430605	0.078291815	0.206998814	0.359430605	0.354092527	0.00118624	0.134479089	-0.103006817	-0.143229173	0.134479089	0.043184238
MATH	8	241115	3	B-E	1	1686	0.450771056	0.450771056	0.295373665	0.132265718	0.118623962	0.002965599	0.457213169	0.457213169	-0.215532206	-0.181127355	-0.19982098
MATH	8	619129	3	C-G	2	1686	0.292408066	0.168446026	0.267497034	0.271648873	0.292408066	0	0.338447899	-0.19352479	-0.174951813	-0.00916648	0.338447899
MATH	8	462437	3	B-F	2	1686	0.619810202	0.026690391	0.294780546	0.058125741	0.619810202	0.00059312	0.484785018	-0.168464791	-0.340113001	-0.228874545	0.484785018
MATH	8	426151	3	B-E	2	1686	0.448398577	0.234282325	0.448398577	0.206998814	0.107947805	0.002372479	0.263819885	0.005724246	0.263819885	-0.239892693	-0.117516456

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD
SCIENCE	4	999200	0	D	2	3828	0.462643678	0.107889237	0.101358412	0.326802508	0.462643678	0.001306165	0.289359272	-0.137622631	-0.13181372	-0.128905128	0.289359272
SCIENCE	4	259471	0	A	2	3828	0.381400209	0.273510972	0.268286311	0.075757576	0.381400209	0.001044932	0.396413922	-0.101060169	-0.193505165	-0.229692985	0.396413922
SCIENCE	4	776166	0	A	2	3828	0.558254963	0.054336468	0.558254963	0.118861024	0.267241379	0.001306165	0.450030262	-0.16508578	0.450030262	-0.160490768	-0.298860149
SCIENCE	4	282871	0	A	3	3828	0.485893417	0.485893417	0.21630094	0.136363636	0.160135841	0.001306165	0.323697015	0.323697015	-0.14061274	-0.159423585	-0.131463506
SCIENCE	4	805483	0	A	2	3828	0.516718913	0.223876698	0.176071055	0.516718913	0.081765935	0.001567398	0.410208695	-0.241148033	-0.086843148	0.410208695	-0.256512356
SCIENCE	4	989734	0	A	2	3828	0.506530825	0.064524556	0.307210031	0.117816092	0.506530825	0.003918495	0.326787065	-0.245538575	-0.080104096	-0.197086609	0.326787065
SCIENCE	4	942743	0	A	2	3828	0.697753396	0.133751306	0.697753396	0.06138976	0.105799373	0.001306165	0.475518536	-0.278719063	0.475518536	-0.249376559	-0.206409626
SCIENCE	4	660514	0	A	2	3828	0.44200627	0.44200627	0.157262278	0.22492163	0.174503657	0.001306165	0.201509083	0.201509083	-0.133459203	-0.006333475	-0.126730301
SCIENCE	4	511784	0	C	2	3828	0.533176594	0.211337513	0.096133751	0.157523511	0.533176594	0.001828631	0.399514843	-0.217399408	-0.13840684	-0.183838261	0.399514843
SCIENCE	4	618687	0	C	2	3828	0.483803553	0.247126437	0.142110763	0.483803553	0.122779519	0.004179728	0.334465316	-0.169713535	-0.153852718	0.334465316	-0.114215465
SCIENCE	4	113147	0	D	2	3828	0.366248694	0.366248694	0.183646813	0.274294671	0.174503657	0.001306165	0.257027573	0.257027573	-0.152733507	-0.002862647	-0.163612243
SCIENCE	4	380627	0	A	2	3828	0.390020899	0.131922675	0.367293626	0.390020899	0.106844305	0.003918495	0.354062356	-0.059370685	-0.172725138	0.354062356	-0.214727535
SCIENCE	4	963674	0	B	2	3828	0.776123302	0.776123302	0.056687565	0.073667712	0.091431557	0.002089864	0.467273589	0.467273589	-0.21495552	-0.236712681	-0.279705268
SCIENCE	4	615666	0	D	2	3828	0.374869383	0.232758621	0.209508882	0.179467085	0.374869383	0.003396029	0.269536502	-0.124325005	0.002794942	-0.194165979	0.269536502
SCIENCE	4	605022	0	C	2	3828	0.721786834	0.118077325	0.110501567	0.721786834	0.049111808	0.000522466	0.405165444	-0.150560515	-0.271625198	0.405165444	-0.217586025
SCIENCE	4	766735	0	A	2	3828	0.657784744	0.135579937	0.098223615	0.106844305	0.657784744	0.001567398	0.393879824	-0.182707223	-0.183958636	-0.220372149	0.393879824
SCIENCE	4	313477	0	B	2	3828	0.658568443	0.658568443	0.039707419	0.181295716	0.119644723	0.000783699	0.304356783	0.304356783	-0.24133185	-0.145014746	-0.123439373
SCIENCE	4	452286	0	B	3	3828	0.520898642	0.193051202	0.200104493	0.520898642	0.084378265	0.001567398	0.297346195	-0.178277952	-0.090031414	0.297346195	-0.149943806
SCIENCE	4	173742	0	C	2	3828	0.58646813	0.21630094	0.086729363	0.105799373	0.58646813	0.004702194	0.375701813	-0.188660181	-0.193122656	-0.161272441	0.375701813
SCIENCE	4	272804	0	A	2	3828	0.69984326	0.157262278	0.69984326	0.068181818	0.072100313	0.00261233	0.400998523	-0.255990026	0.400998523	-0.152882949	-0.192691866
SCIENCE	4	573874	0	A	2	3828	0.668234065	0.093260188	0.151253918	0.668234065	0.083855799	0.003396029	0.492336304	-0.233358328	-0.270436331	0.492336304	-0.232313919
SCIENCE	4	569919	0	A	2	3828	0.545715778	0.545715778	0.108672936	0.140543365	0.204022989	0.001044932	0.33857108	0.33857108	-0.159167133	-0.229197319	-0.097702325
SCIENCE	4	455676	0	A	2	3828	0.559822362	0.130355277	0.105276907	0.202194357	0.559822362	0.002351097	0.432136912	-0.217797841	-0.220108872	-0.181051791	0.432136912
SCIENCE	4	872481	0	B	2	3828	0.574451411	0.133751306	0.181034483	0.574451411	0.108934169	0.001828631	0.357300184	-0.218884861	-0.131752754	0.357300184	-0.16237324
SCIENCE	4	856002	0	A	3	3828	0.465517241	0.134273772	0.126436782	0.465517241	0.271943574	0.001828631	0.254333207	-0.114536846	-0.218566744	0.254333207	-0.031875134
SCIENCE	4	571122	0	A	2	3828	0.482497388	0.153343783	0.291013584	0.482497388	0.071316614	0.001828631	0.330771717	-0.245265471	-0.068980101	0.330771717	-0.170079012
SCIENCE	4	818162	0	A	2	3828	0.658568443	0.658568443	0.059822362	0.154127482	0.125653083	0.001828631	0.429877953	0.429877953	-0.249770286	-0.160906508	-0.259293298
SCIENCE	4	191479	0	A	3	3828	0.593782654	0.221786834	0.593782654	0.095872518	0.087513062	0.001044932	0.411714843	-0.157826669	0.411714843	-0.250744605	-0.217765026
SCIENCE	4	530301	0	D	2	3828	0.479362591	0.479362591	0.201671891	0.204806688	0.111285266	0.002873563	0.274387459	0.274387459	-0.071567302	-0.175957559	-0.107989174
SCIENCE	4	758423	0	D	2	3828	0.425287356	0.227011494	0.425287356	0.187042842	0.155956113	0.004702194	0.348478491	-0.088962202	0.348478491	-0.183987241	-0.167477429
SCIENCE	4	221218	0	C	2	3828	0.60292581	0.248955068	0.60292581	0.081765935	0.063740857	0.00261233	0.340963116	-0.166657989	0.340963116	-0.233695623	-0.118114655
SCIENCE	4	106226	0	C	3	3828	0.549111808	0.212382445	0.122257053	0.11415883	0.549111808	0.002089864	0.268127689	-0.085885599	-0.125113691	-0.175030524	0.268127689
SCIENCE	4	368640	0	A	2	3828	0.575496343	0.220219436	0.134273772	0.065569488	0.575496343	0.004440961	0.454786184	-0.16651568	-0.27013183	-0.241306787	0.454786184
SCIENCE	4	952814	0	A	2	3828	0.351358412	0.419801463	0.172675026	0.351358412	0.053552769	0.00261233	0.279286293	-0.036732885	-0.184615098	0.279286293	-0.193262283
SCIENCE	4	669584	0	B	2	3828	0.738505747	0.049895507	0.738505747	0.151515152	0.05799373	0.002089864	0.323082903	-0.232284618	0.323082903	-0.115682239	-0.205547182
SCIENCE	4	494167	0	B	2	3828	0.521943574	0.521943574	0.138714734	0.103709509	0.234326019	0.001306165	0.437311821	0.437311821	-0.258021584	-0.196996706	-0.159878013
SCIENCE	4	686272	0	D	2	3828	0.306948798	0.306948798	0.092737722	0.382706374	0.21630094	0.001306165	0.250463433	0.250463433	-0.086267376	-0.095923652	-0.105384095
SCIENCE	4	131057	0	A	2	3828	0.627220481	0.096656217	0.627220481	0.139759666	0.135318704	0.001044932	0.455959984	-0.190836458	0.455959984	-0.298218076	-0.1769078
SCIENCE	4	876222	1	D	2	1789	0.486305198	0.115148127	0.177752935	0.486305198	0.216321968	0.004471772	0.201910352	-0.162190227	-0.056204778	0.201910352	-0.058387627
SCIENCE	4	431262	1	C	2	1789	0.40078256	0.40078256	0.155953046	0.099496926	0.342649525	0.001117943	0.131823492	0.131823492	-0.247393931	-0.206184593	0.186118952
SCIENCE	4	313695	1	A	2	1789	0.631637786	0.073225266	0.223588597	0.067635551	0.631637786	0.0039128	0.447203108	-0.232537871	-0.21618429	-0.245147458	0.447203108
SCIENCE	4	225773	1	A	2	1789	0.548910006	0.210732253	0.088876467	0.548910006	0.147009503	0.004471772	0.466147656	-0.253685559	-0.209053717	0.466147656	-0.18267676
SCIENCE	4	480832	1	A	2	1789	0.384572387	0.154276132	0.135830073	0.321408608	0.384572387	0.0039128	0.280880917	-0.160236501	-0.15441473	-0.046261398	0.280880917
SCIENCE	4	675612	1	A	2	1789	0.316377865	0.316377865	0.126327557	0.205701509	0.346562325	0.005030743	0.376328167	0.376328167	-0.2330554	-0.174341804	-0.050363224
SCIENCE	4	892656	1	D	1	1789	0.332588038	0.332588038	0.400223589	0.177193963	0.087199553	0.002794857	0.368586347	0.368586347	-0.08425708	-0.146010184	-0.262490639
SCIENCE	4	496589	1	B	2	1789	0.630519843	0.630519843	0.093907211	0.196757965	0.072666294	0.006148686	0.385229982	0.385229982	-0.241918632	-0.151145722	-0.196766552
SCIENCE	4	580203	2	A	2	1022	0.564579256	0.141878669	0.031311155	0.261252446	0.564579256	0.000978474	0.224770934	-0.055833595	-0.197674147	-0.126506191	0.224770934
SCIENCE	4	881411	2	A	2	1022	0.545009785	0.168297456	0.07925636	0.203522505	0.545009785	0.003913894	0.398198321	-0.188134937	-0.305657381	-0.108339596	0.398198321
SCIENCE	4	392099	2	A	2	1022	0.675146771	0.058708415	0.14481409	0.675146771	0.119373777	0.001956947	0.419896338	-0.164347608	-0.25936882	0.419896338	-0.19374268
SCIENCE	4	699525	2	B	2	1022	0.378669276	0.125244618	0.179060665	0.315068493	0.378669276	0.001956947	0.470999537	-0.21453862	-0.343771953	-0.047250121	0.470999537
SCIENCE	4	764204	2	D	2	1022	0.454011742	0.371819961	0.454011742	0.105675147	0.066536204	0.001956947	0.229601833	0.054618158	0.229601833	-0.265399273	-0.221502173
SCIENCE	4	742761	2	A	2	1022	0.539138943	0.539138943	0.093933464	0.285714286	0.078277886	0.002935421	0.26905133	0.26905133	-0.272723307	0.041617726	-0.257822478
SCIENCE	4	176816	2	C	2	1022	0.566536204	0.138943249	0.17221135	0.566536204	0.119373777	0.002935421	0.317188281	-0.217984387	-0.093354212	0.317188281	-0.131929213
SCIENCE	4	211621	2	B	2	1022	0.667318982	0.107632094	0.09295499	0.667318982	0.129158513	0.002935421	0.345940543	-0.174596302	-0.112727524	0.345940543	-0.210209815
SCIENCE	4	807527	3	B	2	1017	0.619469027	0.212389381	0.080629302	0.086529007	0.619469027	0.000983284	0.366124615	-0.132323657	-0.254865189	-0.191266803	0.366124615
SCIENCE	4	102101	3	C	2	1017	0.774827925	0.075712881	0.123893805	0.024582104	0.774827925	0.000983284	0.467387666	-0.264613163	-0.264366183	-0.235298433	0.467387666

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD
SCIENCE	4	653729	3	A	2	1017	0.879056047	0.022615536	0.879056047	0.049164208	0.049164208	0	0.382141033	-0.150897058	0.382141033	-0.254170664	-0.218364541
SCIENCE	4	169887	3	A	2	1017	0.498525074	0.176007866	0.498525074	0.192723697	0.130776794	0.001966568	0.318061633	-0.097673124	0.318061633	-0.079179968	-0.262296269
SCIENCE	4	158745	3	A	2	1017	0.764995084	0.049164208	0.105211406	0.764995084	0.078662734	0.001966568	0.333403206	-0.194834803	-0.211900951	0.333403206	-0.130159419
SCIENCE	4	736353	3	A	2	1017	0.571288102	0.571288102	0.133726647	0.184857424	0.109144543	0.000983284	0.224345064	0.224345064	-0.068080677	-0.04302414	-0.225599104
SCIENCE	4	974171	3	C	2	1017	0.826941986	0.012782694	0.116027532	0.043264503	0.826941986	0.000983284	0.394800199	-0.151489256	-0.250419591	-0.25391778	0.394800199
SCIENCE	4	832131	3	D	2	1017	0.336283186	0.235988201	0.065880039	0.357915438	0.336283186	0.003933137	0.268297992	-0.166565451	-0.231808637	0.010278121	0.268297992
SCIENCE	8	720617	0	D	2	7829	0.445395325	0.445395325	0.091071657	0.342189296	0.119683229	0.001660493	0.269640629	0.269640629	-0.068882967	-0.016700983	-0.321456455
SCIENCE	8	623795	0	B	2	7829	0.480521139	0.108570699	0.480521139	0.219696002	0.189168476	0.002043684	0.322823407	-0.190750736	0.322823407	-0.155886418	-0.093456929
SCIENCE	8	200896	0	C	2	7829	0.605569038	0.605569038	0.211393537	0.089155703	0.089922085	0.003959637	0.45670575	0.45670575	-0.177297305	-0.289785945	-0.227514102
SCIENCE	8	354869	0	C	3	7829	0.40963086	0.40963086	0.12581428	0.33899604	0.123898327	0.001660493	0.249628766	0.249628766	-0.235443431	0.030644044	-0.17775029
SCIENCE	8	286520	0	A	2	7829	0.436837399	0.176778644	0.224805211	0.436837399	0.159662792	0.001915954	0.308271002	-0.114100077	-0.065004055	0.308271002	-0.219944637
SCIENCE	8	653479	0	A	2	7829	0.36633031	0.202963341	0.12019415	0.307063482	0.36633031	0.003448716	0.243490994	-0.036740972	-0.199350126	-0.076279926	0.243490994
SCIENCE	8	910641	0	A	2	7829	0.50798314	0.207050709	0.2239111	0.50798314	0.059011368	0.002043684	0.258305748	-0.103282247	-0.091694857	0.258305748	-0.202416152
SCIENCE	8	656543	0	D	2	7829	0.411930004	0.10371695	0.411930004	0.290969472	0.19133989	0.002043684	0.22727446	-0.151071739	0.22727446	-0.074642321	-0.077896985
SCIENCE	8	923560	0	A	2	7829	0.492144591	0.079320475	0.246391621	0.18035509	0.492144591	0.001788223	0.434262545	-0.133308514	-0.176698184	-0.270452137	0.434262545
SCIENCE	8	989687	0	A	3	7829	0.471196832	0.259420105	0.154042662	0.114318559	0.471196832	0.001021842	0.272745821	-0.154286925	-0.102545018	-0.097270404	0.272745821
SCIENCE	8	676647	0	A	2	7829	0.313322263	0.313322263	0.261846979	0.150466215	0.273725891	0.000638651	0.224895842	0.224895842	-0.045946263	-0.219362863	-0.012762816
SCIENCE	8	153851	0	A	2	7829	0.522416656	0.32213565	0.081491889	0.522416656	0.072933963	0.001021842	0.302032911	-0.032018902	-0.250071163	0.302032911	-0.257762785
SCIENCE	8	763233	0	B	2	7829	0.478349725	0.229148039	0.160173713	0.478349725	0.129646187	0.002682335	0.377050701	-0.112023252	-0.282935277	0.377050701	-0.103870202
SCIENCE	8	424081	0	D	3	7829	0.422531613	0.073189424	0.233618598	0.268488951	0.422531613	0.002171414	0.416665076	-0.166482931	-0.153476861	-0.21679721	0.416665076
SCIENCE	8	659161	0	B	2	7829	0.367479882	0.156341806	0.303487035	0.171286243	0.367479882	0.001405033	0.284651768	-0.125830223	0.050525505	-0.301915985	0.284651768
SCIENCE	8	460561	0	D	2	7829	0.462000255	0.105377443	0.462000255	0.190956699	0.239621919	0.002043684	0.261848562	-0.136592279	0.261848562	-0.172231908	-0.046032361
SCIENCE	8	106345	0	C	2	7829	0.527909056	0.527909056	0.174479499	0.19696002	0.09809682	0.002554605	0.353586703	0.353586703	-0.206963021	-0.173652945	-0.088726799
SCIENCE	8	638087	0	A	2	7829	0.510282284	0.135394048	0.137693192	0.213564951	0.510282284	0.003065526	0.53844691	-0.210590681	-0.275688303	-0.241926964	0.53844691
SCIENCE	8	512013	0	A	2	7829	0.526376293	0.148933453	0.526376293	0.19683229	0.12594201	0.001915954	0.410808967	-0.179987434	0.410808967	-0.158128052	-0.233274728
SCIENCE	8	452271	0	A	2	7829	0.606207689	0.095542215	0.606207689	0.110742113	0.18584749	0.001660493	0.445734668	-0.188972884	0.445734668	-0.211974552	-0.243089259
SCIENCE	8	550366	0	A	2	7829	0.554093754	0.554093754	0.090049815	0.133733555	0.220462383	0.001660493	0.31328886	0.31328886	-0.227245117	-0.270404264	0.006690256
SCIENCE	8	579380	0	A	2	7829	0.348064887	0.206667518	0.24026057	0.348064887	0.203601993	0.001405033	0.166147603	-0.130665868	-0.093129102	0.166147603	0.036065674
SCIENCE	8	271272	0	A	3	7829	0.446417167	0.078681824	0.215736365	0.257376421	0.446417167	0.001788223	0.229325369	-0.247933617	-0.103296779	-0.007171952	0.229325369
SCIENCE	8	260673	0	B	2	7829	0.515008302	0.515008302	0.112530336	0.182654234	0.188018904	0.001788223	0.326758898	0.326758898	-0.191573021	-0.14730269	-0.114011079
SCIENCE	8	930499	0	B	2	7829	0.503384851	0.141014178	0.086473368	0.265167965	0.503384851	0.003959637	0.415792767	-0.174865754	-0.273729911	-0.154118239	0.415792767
SCIENCE	8	175746	0	A	3	7829	0.664963597	0.085579257	0.664963597	0.135521778	0.112019415	0.001915954	0.38748468	-0.212743715	0.38748468	-0.15161286	-0.222406703
SCIENCE	8	869337	0	D	2	7829	0.520372972	0.060416401	0.134499936	0.520372972	0.282028356	0.002682335	0.236393161	-0.21965615	-0.237114086	0.236393161	0.037860876
SCIENCE	8	363334	0	C	2	7829	0.583854898	0.224549751	0.583854898	0.093498531	0.095159024	0.002937795	0.319228472	-0.119983509	0.319228472	-0.170457902	-0.190436324
SCIENCE	8	272026	0	D	2	7829	0.455102823	0.455102823	0.211521267	0.228381658	0.103206029	0.001788223	0.29989938	0.29989938	-0.081216697	-0.156726253	-0.159130443
SCIENCE	8	653316	0	B	2	7829	0.529441819	0.123642866	0.529441819	0.089922085	0.254821816	0.002171414	0.385344664	-0.105503455	0.385344664	-0.303243574	-0.158718638
SCIENCE	8	799337	0	C	2	7829	0.728956444	0.079959126	0.728956444	0.047387917	0.141780559	0.001915954	0.517165781	-0.253922919	0.517165781	-0.234101533	-0.314203421
SCIENCE	8	591677	0	B	2	7829	0.577212926	0.10946481	0.113935369	0.197598672	0.577212926	0.001788223	0.361399394	-0.106926407	-0.240760634	-0.168618152	0.361399394
SCIENCE	8	455555	0	A	2	7829	0.567760889	0.567760889	0.101290075	0.108315238	0.220206923	0.002426874	0.35575485	0.35575485	-0.213107071	-0.285765602	-0.050488274
SCIENCE	8	640692	0	A	2	7829	0.348703538	0.283816579	0.348703538	0.211521267	0.154553583	0.001405033	0.235014845	-0.051410412	0.235014845	-0.17966294	-0.039132412
SCIENCE	8	785171	0	A	2	7829	0.690381913	0.190318048	0.045471963	0.072933963	0.690381913	0.000894112	0.335973283	-0.107239873	-0.233948361	-0.246369151	0.335973283
SCIENCE	8	800050	0	C	2	7829	0.533656917	0.187380253	0.162983778	0.533656917	0.11495721	0.001021842	0.398053265	-0.142550321	-0.225686066	0.398053265	-0.183484206
SCIENCE	8	882999	0	A	2	7829	0.651807383	0.086345638	0.129390727	0.651807383	0.131434411	0.001021842	0.26487043	-0.187040859	-0.138478199	0.26487043	-0.077834449
SCIENCE	8	139718	0	A	2	7829	0.611316899	0.611316899	0.135521778	0.156980457	0.094903564	0.001277302	0.425198596	0.425198596	-0.162312592	-0.259167728	-0.195116959
SCIENCE	8	690133	1	B	2	3335	0.304947526	0.177511244	0.304947526	0.345427286	0.169715142	0.002398801	0.162452015	-0.144961222	0.162452015	0.02134368	-0.074501899
SCIENCE	8	123943	1	A	2	3335	0.715742129	0.073463268	0.140329835	0.715742129	0.068965517	0.00149925	0.388741479	-0.242919045	-0.17527632	0.388741479	-0.192914907
SCIENCE	8	735465	1	B	3	3335	0.609295352	0.116341829	0.144827586	0.126236882	0.609295352	0.003298351	0.4451413	-0.197676103	-0.194503013	-0.247698139	0.4451413
SCIENCE	8	831599	1	A	3	3335	0.642278861	0.065667166	0.642278861	0.126836582	0.16191904	0.003298351	0.486127917	-0.22512521	0.486127917	-0.253929678	-0.244983617
SCIENCE	8	549769	1	A	3	3335	0.250374813	0.262968516	0.245877061	0.250374813	0.23808096	0.002698651	-0.047000039	-0.01597855	-0.051027876	-0.047000039	0.121838717
SCIENCE	8	101982	1	C	2	3335	0.297751124	0.297751124	0.171814093	0.245577211	0.28005997	0.004797601	0.296667932	0.296667932	-0.166095122	-0.105556811	-0.053321689
SCIENCE	8	562487	1	B	2	3335	0.397001499	0.057271364	0.397001499	0.133133433	0.411094453	0.00149925	0.098350905	-0.121075269	0.098350905	-0.2171637	0.11306822
SCIENCE	8	782560	1	A	2	3335	0.596701649	0.129535232	0.16041979	0.596701649	0.110644678	0.002698651	0.516189777	-0.26317816	-0.283414806	0.516189777	-0.193215116
SCIENCE	8	454228	1	C	2	3335	0.574212894	0.107346327	0.187106447	0.574212894	0.127736132	0.003598201	0.401966354	-0.23921321	-0.217215965	0.401966354	-0.110786484
SCIENCE	8	637635	1	D	3	3335	0.380209895	0.2011994	0.228185907	0.187706147	0.380209895	0.002698651	0.10526831	0.047464356	-0.07948937	-0.093755121	0.10526831
SCIENCE	8	417752	2	A	2	2244	0.398395722	0.106060606	0.196524064	0.297682709	0.398395722	0.001336898	0.310378957	-0.143522674	-0.192742766	-0.066049902	0.310378957
SCIENCE	8	358653	2	C	2	2244	0.610516934	0.610516934	0.309269162	0.04456328	0.034313725	0.001336898	0.351012821	0.351012821	-0.29904007	-0.123806239	-0.040872095

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	PValue	ProportionA	ProportionB	ProportionC	ProportionD	ProportionOMITS	PtBiserial	CorrelationA	CorrelationB	CorrelationC	CorrelationD
SCIENCE	8	779609	2	A	2	2244	0.521390374	0.521390374	0.218805704	0.143493761	0.114973262	0.001336898	0.295201382	0.295201382	-0.002967815	-0.243009974	-0.190694467
SCIENCE	8	154278	2	A	2	2244	0.58912656	0.58912656	0.251336898	0.120320856	0.036096257	0.00311943	0.503774297	0.503774297	-0.341146508	-0.189933639	-0.203053583
SCIENCE	8	962441	2	B	1	2244	0.528966132	0.096256684	0.528966132	0.232620321	0.139037433	0.00311943	0.241224859	-0.217437324	0.241224859	-0.000934906	-0.160644929
SCIENCE	8	729564	2	B	2	2244	0.750891266	0.0557041	0.750891266	0.083778966	0.108734403	0.000891266	0.502895649	-0.207583261	0.502895649	-0.313292027	-0.267420436
SCIENCE	8	392542	2	A	2	2244	0.517825312	0.517825312	0.209001783	0.141265597	0.130124777	0.001782531	0.297674814	0.297674814	-0.052796368	-0.238816482	-0.128277485
SCIENCE	8	987637	2	A	2	2244	0.575311943	0.076203209	0.575311943	0.206773619	0.140819964	0.000891266	0.244106149	-0.269792737	0.244106149	-0.057072644	-0.07206921
SCIENCE	8	341342	2	D	2	2244	0.473262032	0.185383244	0.189839572	0.150178253	0.473262032	0.001336898	0.328079983	-0.077967449	-0.135499373	-0.222253239	0.328079983
SCIENCE	8	514850	2	C	3	2244	0.778520499	0.778520499	0.082887701	0.108734403	0.027183601	0.002673797	0.445411246	0.445411246	-0.280274795	-0.264519964	-0.143869382
SCIENCE	8	201406	3	D	2	2250	0.421777778	0.189333333	0.421777778	0.312444444	0.076	0.000444444	0.161081573	-0.077904828	0.161081573	0.000853813	-0.18334528
SCIENCE	8	215809	3	B	1	2250	0.395555556	0.395555556	0.216444444	0.059555556	0.328	0.000444444	0.033340341	0.033340341	-0.153447379	-0.196887673	0.19993879
SCIENCE	8	456294	3	A	2	2250	0.463555556	0.158222222	0.135111111	0.463555556	0.241777778	0.001333333	0.327233761	-0.097298073	-0.206102352	0.327233761	-0.134506716
SCIENCE	8	136458	3	A	2	2250	0.659111111	0.128888889	0.659111111	0.108444444	0.101333333	0.002222222	0.495168843	-0.228889702	0.495168843	-0.266146065	-0.241228454
SCIENCE	8	839721	3	A	2	2250	0.659111111	0.659111111	0.129777778	0.119555556	0.088888889	0.002666667	0.330089023	0.330089023	-0.133200648	-0.212285003	-0.140835742
SCIENCE	8	615660	3	B	2	2250	0.428444444	0.428444444	0.092888889	0.352444444	0.123555556	0.002666667	0.43729533	0.43729533	-0.234312896	-0.189709963	-0.166837016
SCIENCE	8	617593	3	B	2	2250	0.576888889	0.163555556	0.098666667	0.576888889	0.160444444	0.000444444	0.38888319	-0.174084037	-0.280884448	0.38888319	-0.120296694
SCIENCE	8	268170	3	A	2	2250	0.589333333	0.589333333	0.329777778	0.04	0.036888889	0.004	0.259326072	0.259326072	-0.126995069	-0.172908476	-0.1677191
SCIENCE	8	269629	3	C	2	2250	0.586222222	0.272444444	0.586222222	0.058666667	0.081333333	0.001333333	0.412141535	-0.221767481	0.412141535	-0.193520373	-0.214888213
SCIENCE	8	465535	3	A	2	2250	0.387111111	0.315555556	0.387111111	0.143555556	0.152	0.001777778	0.306904338	-0.246790385	0.306904338	-0.071659329	-0.022820347

Multiple-Choice Paper/Pencil Item Statistics

Column Heading	Definition
ContArea	Content
FormGrade	Grade
PubID	Form ID
FormNumber	Form
Standard1	Standard
Depth	Depth of Knowledge
N	N
PValue	P-Value
ProportionA	Proportion A
ProportionB	Proportion B
ProportionC	Proportion C
ProportionD	Proportion D
ProportionOMITS	Proportion Omits
PtBiserial	Point Biserial
CorrelationA	Correlation A
CorrelationB	Correlation B
CorrelationC	Correlation C
CorrelationD	Correlation D
FinalB	IRT Difficulty Estimate
FinalBErr	IRT Difficulty Error
Infit	Infit
InfitMnSq	Infit Mean Square
Outfit	Outfit
OutfitMnSq	Outfit Mean Square
BiasCodeMALEFEMALE	Male/Female DIF Code
BiasCodeWHITEBLACK	White/Black DIF Code
BiasCodeWHITEHISPANIC	White/Hispanic DIF Code

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	Mean	Proportion0	Proportion1	Proportion2	Proportion3	Proportion4	PtBiserial	Correlation0	Correlation1	Correlation2	Correlation3	Correlation4	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
ELA	3	766094	0	B-K	3	119890	1.266152306	0.171540579	0.470506297	0.278213362	0.079739761		0.569554037	-0.442699089	-0.128043447	0.340730624	0.28835092		1.2198	0.0043	-9.899	0.9596	-9.899	0.9539			
ELA	3	790678	0	A-K	3	119890	1.361131037	0.139102511	0.467795479	0.285970473	0.107131537		0.486647337	-0.326119475	-0.195635251	0.265443765	0.292685166		0.9822	0.0042	9.9011	1.104	9.9011	1.0943			
ELA	3	402134	1	A-K	3	1090	1.265137615	0.231192661	0.367889908	0.305504587	0.095412844		0.681672308	-0.526901868	-0.16361325	0.426526871	0.355946893		1.2231	0.0417	-6.1092	0.7787	-6.3492	0.7684	A+	A+	A-
ELA	3	123141	2	A-K	3	1089	1.285583104	0.259871442	0.317722681	0.299357208	0.123048669		0.701939645	-0.564721809	-0.121545367	0.360058073	0.424236906		1.1614	0.0404	-6.3392	0.77	-6.6192	0.7521	A+	A+	A+
ELA	3	183122	3	A-K	3	1092	1.275641026	0.224358974	0.375457875	0.3003663	0.09981685		0.562656808	-0.448833888	-0.112203047	0.33208772	0.29802231		1.2433	0.0418	0.311	1.0117	0.121	1.0041	B+	A-	A-
ELA	3	232117	4	A-K	3	1088	1.236213235	0.246323529	0.356617647	0.311580882	0.085477941		0.634018104	-0.548046373	-0.060089814	0.396207073	0.291211108		1.3236	0.0423	-2.4391	0.9065	-2.8291	0.8906	C+	A-	A-
ELA	3	278851	5	A-C	3	1091	1.222731439	0.186984418	0.491292392	0.233730522	0.087992667		0.621610646	-0.556031403	-0.013655944	0.320088731	0.311209004		1.2872	0.0441	-3.0291	0.8803	-2.8891	0.8853	B+	A-	A-
ELA	3	183800	6	B-C	3	1090	1.355045872	0.202752294	0.411926606	0.212844037	0.172477064		0.664255809	-0.561466166	-0.106150246	0.303694956	0.406767457		0.9942	0.0401	-3.4091	0.8703	-3.3391	0.8672	A+	A-	A+
ELA	3	646234	7	B-K	3	1089	1.174471993	0.193755739	0.507805326	0.228650138	0.069788797		0.543672665	-0.387355804	-0.120429672	0.319844474	0.309991389		1.3654	0.0451	-1.3291	0.9454	-1.3791	0.9432	A+	B-	A-
ELA	3	633712	8	B-K	3	1090	1.234862385	0.217431193	0.417431193	0.277981651	0.087155963		0.599321261	-0.45849417	-0.126061682	0.35581295	0.325769966		1.293	0.0429	-2.4491	0.9049	-2.5391	0.9015	A+	B-	A-
ELA	3	182934	9	B-K	3	1084	0.883763838	0.368081181	0.420664207	0.170664207	0.040590406		0.595261815	-0.514615559	0.105332843	0.39066434	0.249405455		2.0332	0.0456	-2.3591	0.9036	-3.0991	0.8728	A+	B-	A-
MATH	3	343967	0	C-G	2	120314	1.795152684	0.117741909	0.317735259	0.286957461	0.206758981	0.07080639	0.662338445	-0.38015082	-0.359688944	0.111264849	0.383398912	0.329020517	0.8842	0.0036	-5.569	0.9785	-7.829	0.9698			
MATH	3	917971	0	D-M	3	120314	1.701655668	0.172249281	0.285087355	0.300422229	0.153240687	0.089000449	0.677132917	-0.463984016	-0.281601412	0.181057798	0.323725195	0.360720379	0.9786	0.0035	-5.159	0.9801	-8.439	0.9674			
MATH	3	914478	0	A-F	2	120314	1.450321658	0.278529514	0.297621224	0.210258158	0.122180295	0.091410808	0.688312906	-0.522642316	-0.153436628	0.203937878	0.340319195	0.381291259	1.2577	0.0034	-7.239	0.9708	-9.8991	0.9327			
MATH	3	426002	1	B-O	2	1100	1.635454545	0.22	0.186363636	0.350909091	0.223636364	0.019090909	0.738591011	-0.531376015	-0.255666085	0.134862553	0.552297391	0.184013313	1.4139	0.0381	-6.0792	0.7739	-5.0392	0.7998	A-	A-	A-
MATH	3	530729	2	B-O	2	1099	1.2211101	0.301182894	0.330300273	0.238398544	0.106460419	0.023657871	0.643927419	-0.545812861	-0.032977445	0.303713208	0.340369594	0.207403696	1.8762	0.0388	-0.569	0.9756	-1.2791	0.9447	B+	A-	A-
MATH	3	841385	3	A-T	2	1100	1.988181818	0.087272727	0.304545455	0.258181818	0.232727273	0.117272727	0.706345524	-0.343593562	-0.472958243	0.053822715	0.405755045	0.371790308	0.6145	0.037	-1.7291	0.9303	-1.4691	0.9392	A+	A-	A-
MATH	3	346456	4	B-O	2	1086	1.426335175	0.26335175	0.268876611	0.26335175	0.186924494	0.017495396	0.713302599	-0.562632428	-0.16049104	0.242545668	0.49643513	0.141904848	1.6816	0.0376	-4.4092	0.8303	-4.5392	0.8148	A+	A-	B-
MATH	3	333233	5	B-O	2	1086	1.713627993	0.223756906	0.258747698	0.211786372	0.191528545	0.114180479	0.737103225	-0.51215959	-0.310975238	0.176764599	0.384277979	0.396824958	0.9849	0.0347	-2.8691	0.8843	-3.4491	0.8543	A+	B-	A-
MATH	3	413735	6	D-M	2	1100	1.764545455	0.095454545	0.260909091	0.466363636	0.138181818	0.039090909	0.581953583	-0.338312351	-0.304041103	0.129915084	0.353739186	0.237558406	1.0711	0.0421	0.341	1.0139	0.511	1.0214	A+	B-	A+
MATH	3	165775	7	B-O	3	1082	0.99168207	0.337338262	0.367837338	0.26987061	0.015711645	0.009242144	0.664661365	-0.604733841	0.086522279	0.475215433	0.159157114	0.140657292	2.3771	0.045	-3.6291	0.8523	-4.4192	0.8163	A+	A-	A+
MATH	3	473856	8	B-O	2	1087	1.30450782	0.274149034	0.27598896	0.331186753	0.108555658	0.010119595	0.718871261	-0.605988536	-0.100895722	0.390903424	0.373769528	0.151631811	2.0513	0.0406	-4.9792	0.8103	-5.1592	0.7951	A+	A-	A-
MATH	3	848159	9	D-M	2	1100	1.145454545	0.308181818	0.38	0.186363636	0.109090909	0.016363636	0.603300338	-0.503401362	-0.015946189	0.287498829	0.349055705	0.152995274	2.0401	0.0405	2.5911	1.114	1.6611	1.0733	A-	A-	A-
MATH	4	738417	0	B-O	2	123908	2.391718049	0.142331407	0.118717113	0.195144785	0.292515415	0.251291281	0.624049408	-0.334723231	-0.323405844	-0.177526359	0.170591259	0.494073239	-0.3698	0.003	9.9011	1.0535	9.9012	1.1791			
MATH	4	506676	0	A-T	3	123908	1.343779256	0.284162443	0.288843335	0.295332021	0.062376925	0.069285276	0.701953434	-0.560425314	-0.089310478	0.275275798	0.291310688	0.382804673	0.8714	0.0035	-9.8991	0.8918	-9.8991	0.8624			
MATH	4	672554	0	C-G	2	123908	1.78123285	0.167616296	0.283379604	0.250976531	0.196210091	0.101817477	0.649714099	-0.400245667	-0.282044772	0.052234577	0.341885033	0.39080321	0.3156	0.0033	9.901	1.0457	9.611	1.0378			
MATH	4	332803	1	B-O	2	1100	1.449090909	0.21	0.365454545	0.237272727	0.14	0.047272727	0.61992036	-0.487167695	-0.144728033	0.231467397	0.340185373	0.243206215	0.8157	0.0378	2.2211	1.0948	1.8111	1.0766	A+	C-	A-
MATH	4	397973	2	A-F	2	1100	0.844545455	0.487272727	0.290909091	0.134545455	0.064545455	0.022727273	0.659690322	-0.580901087	0.11951305	0.347562913	0.333981384	0.237583607	1.6943	0.0409	-2.1691	0.899	-2.7091	0.857	A+	A-	A+
MATH	4	641652	3	B-O	2	1092	0.691391941	0.507326007	0.347069597	0.097985348	0.042124542	0.005494505	0.637348596	-0.582987292	0.248946675	0.34921702	0.293080143	0.138822079	2.2943	0.0466	-2.4491	0.8849	-3.6992	0.8174	A-	A+	A-
MATH	4	300005	4	B-O	2	1089	1.137741047	0.422405877	0.271808999	0.1359045	0.085399449	0.084481175	0.720528124	-0.616092097	0.001906559	0.2996841	0.308554866	0.411834552	0.9673	0.0351	-2.8191	0.8721	-3.4592	0.8211	A+	A-	A-
MATH	4	508483	5	A-F	2	1086	0.894106814	0.363720074	0.430939227	0.157458564	0.043278085	0.004604052	0.673858481	-0.599631425	0.158858109	0.390305606	0.294632699	0.113476639	2.191	0.0466	-3.6492	0.8476	-4.6392	0.8129	A+	A-	A-
MATH	4	275196	6	D-M	2	1093	1.262580055	0.335773102	0.298261665	0.221408966	0.056724611	0.087831656	0.682121261	-0.607077115	0.02547681	0.264326622	0.239261376	0.388449849	0.8194	0.0351	-0.459	0.9792	-1.7991	0.9165	A-	B-	A-
MATH	4	309157	7	B-O	2	1100	1.3	0.268181818	0.350909091	0.232727273	0.109090909	0.039090909	0.71599395	-0.522045232	-0.16711358	0.311579659	0.375279918	0.321805453	1.1162	0.0392	-2.8891	0.8836	-3.4291	0.8624	A+	A-	A+
MATH	4	579387	8	B-O	3	1090	0.595412844	0.496330275	0.417431193	0.081651376	0.003669725	0.000917431	0.58635777	-0.521126001	0.290190562	0.400051888	0.100907851	0.05958134	3.1505	0.0557	-2.8291	0.883	-3.4491	0.8558	A+	A-	A-
MATH	4	703585	9	B-O	2	1089	0.780532599	0.486685032	0.321395776	0.125803489	0.056932966	0.009182736	0.648322708	-0.552979388	0.114092932	0.391620337	0.34364582	0.142672906	2.0299	0.0437	-2.8291	0.8711	-3.5292	0.8222	A+	A-	A+
MATH	5	128970	0	A-F	2	122532	1.707194855	0.181201645	0.20225737	0.450559854	0.060106748	0.105874384	0.610139431	-0.401192179	-0.186924931	0.081161477	0.253771529	0.419006067	0.6529	0.0035	9.9011	1.1157	9.9011	1.1153			
MATH	5	822864	0	A-T	2	122532	1.449303039	0.328265269	0.232453563	0.190864427	0.158546339	0.089870401	0.690703957	-0.552344263	-0.122702432	0.184909849	0.359324314	0.375143505	0.9813	0.0033	9.9011	1.0642	2.651	1.012			
MATH	5	430323	0	C-G	2	122532	1.329473117	0.285598864	0.345444455	0.185274051	0.121249959	0.062432671	0.748982878	-0.58648314	-0.11499732	0.264770674	0.394729609	0.363236654	1.173	0.0036	-9.8992	0.822	-9.8992	0.7964			
MATH	5	404685	1	A-F	3	1083	1.102493075	0.34810711	0.360110803	0.158818098	0.10710988	0.025854109	0.741002854	-0.612496918	-0.007078346	0.337461582	0.431251208	0.242363394	1.6573	0.0407	-4.2692	0.8218	-4.6792	0.8013	A+	A-	A-
MATH	5	497675	2	A-F	2	1079	1.528266914	0.294717331	0.188137164	0.258572753	0.211306766	0.047265987	0.623275302	-0.455850771	-0.081090366	-0.025497071	0.426325579	0.361175295	1.0816	0.0356	3.6812	1.1591	3.2012	1.1515	A+	A-	A-
MATH	5	386943	3	A-F	2	1084	1.600553506	0.195571956	0.281365314	0.281365314	0.210332103	0.031365314	0.661910638	-0.442358828	-0.230974099	0.08923322	0.481230605	0.247100944	1.0263	0.0379	-1.009	0.9596	-1.179	0.952	B+	A-	A-
MATH	5	774603	4	D-M	3	1094	0.772394881	0.494515539	0.330895795	0.104204753	0.048446069	0.021937843	0.676421089	-0.620262743	0.215069831	0.346397959	0.326137029	0.225676646	2.0804	0.0432	-4.2992	0.7963	-5.3193	0.7353	A+	A-	A-
MATH	5	887847	5	A-F	2	1088	0.683823529	0.458639706	0.420955882	0.102022059	0.014705882	0.003676471	0.605628524	-0.533168631	0.234266838	0.402399578	0.181917401	0.104342775	2.9036	0.052	-2.4291	0.8915	-2.6191	0.8856	A+	A-	A+
MATH	5	207530	6	A-F	3	1092	1.354395604	0.216117216	0.450549451	0.10989011	0.20970696	0.013736264	0.680562335	-0.465537676	-0.198518603	0.193346663	0.510779377	0.188824172	1.4846	0.0395	-1.3491	0.9422	-1.3891	0.9354	A+	A-	A-
MATH	5	844960	7	B-O	2	1098	1.150273224	0.255919854	0.496357013	0.131147541	0.074681239	0.041894353	0.654929778	-0.502023761	-0.055104235	0.31815786	0.289724096	0.314770296	1.4175	0.0412	-1.4591	0.9323	-1.6091	0.9268	A-	A-	A-
MATH	5	801542	8	A-F	2	1100	1.827272727	0.161818182	0.261818182	0.261818182	0.216363636	0.098181818	0.706439722	-0.442491864	-0.329243079	0.094398365	0.343009931	0.419970558	0.5945	0.0358	-1.7891	0.9288	-1.8191	0.9267	B+	A-	A-
MATH	5	424551	9	D-M	2	1099	0.971792539	0.383075523	0.392174704	0.12010919	0.079162875	0.025477707	0.705761158	-0.595275464	0.070921454	0.352383082	0.377533992	0.242883452	1.7559	0.041	-3.8492	0.8307	-4.8292	0.7901	A+	A-	A-
MATH	6	527167	0	A-R	3	121087	1.238250184	0.41025874	0.21884265	0.173486832	0.117213243	0.080198535	0.697118543	-0.566712745	-0.061360079	0.207667563	0.373750564	0.387562657	1.323	0.0033	-9.899	0.9512	-9.8991	0.9071			
MATH	6	799397	0	B-E	2	121087	0.976273258	0.509790481	0.223293995	0.111390983	0.091900865	0.063623676	0.678614853	-0.581705679	0.045377359	0.255545057	0.338826127	0.383556173	1.631	0.0035	-9.8991	0.923	-9.8992	0.8455			
MATH	6	202693	0	C-G	2	121087	1.458191218	0.290848729	0.290477095	0.181431533	0.144119517	0.093123126	0.739487064	-0.542569991	-0.177403045	0.176507349	0.38040885	0.43124823	1.0598	0.0033	-9.8992	0.8348	-9.8992	0.8103			
MATH	6	291538	1	A-N	2	1090	2.003669725	0.232110092	0.175229358	0.212844037	0.116513761	0.263302752	0.75738903	-0.5428385	-0.255279467	0.003864868	0.195450279	0.594726476	0.3629	0.031	-4.2092	0.8288	-2.4191	0.8686	A+	A-	B-
MATH	6	144260	2	A-N	3	1089	1.072543618	0.285583104	0.510560147	0.074380165	0.104683196	0.024793388	0.691522328	-0.582829532	0.08409621	0.21267081	0.408236198	0.260064869	1.7837	0.0421	-3.2191	0.8527	-3.4892	0.8419	A-	A-	C-
MATH	6	633873	3	A-N	2	1100	1.014545455	0.390909091	0.335454545	0.149090909	0.117272727	0.007272727	0.751535317	-0.656808188	0.071894706	0.359698975	0.450459646	0.158847281	2.2769	0.0404	-7.0093	0.7248	-7.3893	0.6846	A+	A-	A-
MATH	6	580601	4	B-E	2	1098	0.631147541	0.575591985	0.293260474	0.071038251	0.044626594	0.015482696	0.701069675	-0.697247389	0.36614068	0.347823873	0.298319342	0.21851714	2.4429	0.045	-5.2293	0.739	-6.9694	0.6279	A-	A-	A-
MATH	6	364175	5	A-N	2	1090	0.818348624	0.510091743	0.299082569	0.093577982	0.056880734	0.040366972	0.633878587	-0.55304409	0.146363072	0.262398801	0.29718299	0.326185821	1.9304	0.04	-0.639	0.966	-1.8391	0.8953	A-	A-	A-
MATH	6	570448	6	D-S	3	1093	0.765782251	0.406221409	0.461116194	0.101555352	0.022872827	0.008234218	0.642803835	-0.568760322	0.226795098	0.393795582	0.232314616	0.139405296	2.4516	0.0486	-3.1391	0.8526	-4.6892	0.803	A+	A-	A-
MATH	6	496073	7	A-N	2	1094	0.34095064	0.744058501	0.18190128	0.063985375	0.009140768	0.000914077	0.501719573	-0.474364104	0.275872076	0.346231143	0.15483806	0.036999916	3.6917	0.0584	-0.569	0.9645	-1.7592	0.8436	A+	A-	A-
MATH	6	521412	8	A-N	2	1091	1.033913841	0.406966086	0.309807516	0.1604033	0.087992667	0.034830431	0.749294215	-0.648134397	0.064153023	0.326864844	0.399462015	0.303401316	1.7568	0.0388	-5.6892	0.7623	-5.9593	0.7318	A-	A-	A-
MATH	6	459088	9	B-E	3	1090	0.950458716	0.411009174	0.331192661	0.157798165	0.096330275	0.003669725	0.722461916	-0.592980267	0.023212078	0.39268607	0.444098461	0.109959941	2.4689	0.042	-5.2492	0.7866	-5.5892	0.7545	A+	B-	A-
MATH	7	894580	0	A-R	2	119582	1.271203024	0.21611112	0.466525062	0.179884933	0.105007443	0.032471442	0.746334876	-0.526370192	-0.200369725	0.362424842	0.420430804	0.27371971	1.2303	0.0041	-9.8992	0.7719	-9.8992	0.7552			
MATH	7	700098	0	B-E	2	119582	1.346072151	0.379455102	0.216303457	0.158861702	0.169473667	0.075906073	0.771661688	-0.675217369	-0.05110331	0.245768897	0.438820944	0.355744617	0.986	0.0035	-9.8991	0.8615	-9.8992	0.8005			
MATH	7	731850	0	C-G	3	119582	0.865498152	0.486770584	0.292493854	0.129208409	0.051521132	0.040006021	0.627595962	-0.559400053	0.112541925	0.341255454	0.265862357	0.281504542	1.6926	0.004	9.9011	1.0856	-1.139	0.994			
MATH	7	116965	1	A-N	2	1100	1.155454545	0.406363636	0.21	0.236363636	0.116363636	0.030909091	0.755348624	-0.688128061	0.026850021	0.366524268	0.393165726	0.261457197	1.4234	0.0392	-2.9791	0.8738	-3.9992	0.8036	A+	B-	A-
MATH	7	840055	2	A-N	3	1090	0.429357798	0.705504587	0.210091743	0.044036697	0.030275229	0.010091743	0.617171107	-0.617827688	0.374366187	0.313538358	0.281026016	0.166342489	2.7004	0.0528	-4.2593	0.7458	-5.5694	0.5797	A+	A-	A-
MATH	7	294236	3	B-E	2	1086	0.475138122	0.663904236	0.228360958	0.08747698	0.009208103	0.011049724	0.650447052	-0.622575799	0.326919903	0.424998879	0.163060951	0.202832316	2.634	0.0533	-4.8793	0.7427	-4.7493	0.6779	B+	A+	A-
MATH	7	938960	4	A-N	3	1092	1.001831502	0.381868132	0.323260073	0.224358974	0.052197802	0.018315018	0.708855441	-0.612312692	0.047868448	0.421777565	0.311174892	0.223270344	1.7513	0.0429	-3.8192	0.8405	-4.1692	0.8183	A+	A-	A-
MATH	7	764211	5	B-E	2	1095	0.826484018	0.582648402	0.152511416	0.16803653	0.049315068	0.047488584	0.700528394	-0.66491806	0.112336951	0.4247989	0.278100904	0.321848331	1.6262	0.0399	-1.3591	0.9307	-3.0592	0.774	A+	A+	A+
MATH	7	816940	6	D-S	3	1088	0.636948529	0.572610294	0.272058824	0.108455882	0.039522059	0.007352941	0.643435714	-0.633092472	0.303187404	0.367353631	0.275233626	0.121859598	2.4218	0.0466	-2.2491	0.8877	-3.3892	0.797	A+	A-	A-
MATH	7	887105	7	D-S	2	1093	0.909423605	0.420860018	0.366880146	0.118023788	0.070448307	0.02378774	0.674191512	-0.590937694	0.136334548	0.304449617	0.352934565	0.246047621	1.7537	0.0422	-2.6491	0.8776	-3.6492	0.8299	A+	A-	A-
MATH	7	827361	8	D-S	3	1088	0.457720588	0.668198529	0.252757353	0.047794118	0.015625	0.015625	0.589887324	-0.603486285	0.410962097	0.263397929	0.178031722	0.220015084	2.3674	0.0512	-2.2091	0.8603	-3.6492	0.7512	A-	A-	A+
MATH	7	417600	9	A-N	2	1100	1.044545455	0.415454545	0.286363636	0.171818182	0.090909091	0.035454545	0.709927923	-0.569353769	-0.02495456	0.320842886	0.398889129	0.303673258	1.4655	0.0396	-3.3391	0.856	-3.5792	0.8302	A+	A-	A-
MATH	8	146652	0	D-S	2	119930	1.241649295	0.238172267	0.407671141	0.232327191	0.11799383	0.003835571	0.626090589	-0.474709788	-0.123386489	0.315888776	0.38393534	0.090258776	1.7163	0.0041	2.591	1.0101	-0.869	0.9966			
MATH	8	758896	0	B-E	3	119930	1.424130743	0.298757609	0.302001167	0.16101059	0.152814142	0.085416493	0.752498399	-0.572883114	-0.158655332	0.216247173	0.386152256	0.417310853	0.6473	0.0034	-9.8992	0.8135	-9.8992	0.7866			
MATH	8	767488	0	B-F	2	119930	1.77210873	0.229016927	0.270149254	0.163845577	0.173684649	0.163303594	0.777657321	-0.542947286	-0.266869246	0.079591069	0.317069767	0.533133365	0.1522	0.0032	-9.8992	0.7809	-9.8992	0.7656			
MATH	8	174624	1	C-G	2	1089	0.641873278	0.60697888	0.250688705	0.066115702	0.045913682	0.03030303	0.614335542	-0.561351692	0.215417384	0.287181674	0.282764339	0.293257471	1.6667	0.0432	-1.6991	0.9036	-2.8092	0.8146	A+	A-	A-
MATH	8	782012	2	B-E	2	1090	1.077981651	0.253211009	0.501834862	0.177981651	0.047706422	0.019266055	0.686228556	-0.523078873	-0.041157055	0.382223404	0.326098664	0.235228085	1.4388	0.0453	-4.7292	0.798	-5.5892	0.7739	A-	A-	A-
MATH	8	148630	3	C-G	3	1090	0.706422018	0.495412844	0.372477064	0.076146789	0.042201835	0.013761468	0.669369594	-0.627742334	0.299737667	0.318413553	0.305207711	0.198541117	1.9578	0.0466	-3.9792	0.8073	-5.5293	0.7421	A+	B-	A-
MATH	8	144966	4	B-E	2	1088	0.677389706	0.637867647	0.167279412	0.114889706	0.039522059	0.040441176	0.633894625	-0.584117678	0.140333901	0.360752958	0.255911933	0.322147532	1.7719	0.0424	-1.2491	0.9301	-1.8392	0.8471	A+	A-	A-
MATH	8	162214	5	C-G	2	1100	1.617272727	0.200909091	0.317272727	0.228181818	0.170909091	0.082727273	0.735962834	-0.497876878	-0.249415212	0.12466377	0.391488011	0.420688243	0.4512	0.0353	-5.1192	0.8034	-5.0892	0.8002	A+	B-	B-
MATH	8	180063	6	C-G	2	1088	0.829963235	0.607536765	0.189338235	0.047794118	0.076286765	0.079044118	0.698407754	-0.64604984	0.167149356	0.190438463	0.335074013	0.446267322	1.287	0.0377	-3.5192	0.8076	-4.2993	0.6763	A-	A-	A+
MATH	8	469241	7	C-G	2	1086	0.660220994	0.50092081	0.385819521	0.073664825	0.031307551	0.008287293	0.648481242	-0.555785958	0.236592264	0.356657731	0.306138794	0.179149073	2.2029	0.0496	-5.2692	0.7581	-5.2292	0.763	A-	A-	A-
MATH	8	647856	8	C-G	2	1100	0.964545455	0.570909091	0.112727273	0.154545455	0.104545455	0.057272727	0.687839275	-0.617862794	0.040611736	0.242473915	0.404518565	0.350953471	1.2948	0.0361	-1.6691	0.919	-1.5791	0.8704	A+	A-	A+
MATH	8	330490	9	B-E	3	1084	0.967712177	0.40498155	0.341328413	0.157749077	0.072878229	0.023062731	0.713958959	-0.613454431	0.063658831	0.395342032	0.348001956	0.242438872	1.6405	0.0416	-5.1592	0.7807	-5.5292	0.754	A+	A-	A+
SCIENCE	4	854991	0	A	3	123102	1.019910318	0.235373918	0.509341847	0.255284236			0.572798477	-0.49553018	0.038754369	0.43769947			0.9905	0.0047	-9.8991	0.8542	-9.8991	0.8522			
SCIENCE	4	985603	0	B	2	123102	1.106521421	0.214854348	0.463769882	0.32137577			0.377338213	-0.3055755	-0.04484671	0.316636575			0.772	0.0046	9.9011	1.1169	9.9011	1.1282			
SCIENCE	4	175520	0	C	3	123102	0.85224448	0.387962828	0.371829865	0.240207308			0.391983771	-0.291080285	-0.044590271	0.382457844			1.3838	0.0044	9.9011	1.1397	9.9011	1.1411			
SCIENCE	4	824405	0	A	2	123102	1.435468148	0.147186886	0.27015808	0.582655034			0.529211889	-0.431822007	-0.186880938	0.478531795			0.0606	0.0046	-9.8991	0.8683	-9.8991	0.8632			
SCIENCE	4	522423	0	D	2	123102	0.606562038	0.499861903	0.393714156	0.106423941			0.533595076	-0.525796303	0.342337471	0.310141892			2.0957	0.0049	-9.8991	0.8939	-9.8991	0.8569			
SCIENCE	4	839437	1	A	2	1100	1.099090909	0.224545455	0.451818182	0.323636364			0.528840952	-0.523466107	0.09813478	0.362486973			0.782	0.0483	-1.9691	0.9308	-1.6791	0.937	A+	C-	A-
SCIENCE	4	858799	2	A	2	1089	0.988980716	0.359044995	0.292929293	0.348025712			0.62429709	-0.566527275	0.040954596	0.531414051			1.0975	0.0441	-4.8792	0.8355	-4.4192	0.8141	A+	A-	A-
SCIENCE	4	841636	3	A	2	1089	1.075298439	0.305785124	0.313131313	0.381083563			0.548147376	-0.450698789	-0.080003504	0.503976234			0.8667	0.0442	-2.0091	0.9311	-1.4791	0.9364	A+	A-	A-
SCIENCE	4	292644	4	B	3	1100	0.650909091	0.54	0.269090909	0.190909091			0.425580662	-0.424692405	0.205648451	0.306508246			1.7724	0.0459	1.9211	1.0743	2.0411	1.11	A-	A-	A+
SCIENCE	4	190980	5	D	2	1100	0.768181818	0.469090909	0.293636364	0.237272727			0.580023122	-0.579154888	0.24037796	0.422060039			1.5468	0.0447	-3.7391	0.8704	-4.0292	0.8242	A-	A-	B-
SCIENCE	4	888970	6	D	3	1091	0.303391384	0.759853346	0.176901925	0.06324473			0.461214484	-0.437278262	0.276509939	0.333936261			2.7518	0.0599	-1.7691	0.9013	-2.6892	0.7811	A+	A-	A-

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	Mean	Proportion0	Proportion1	Proportion2	Proportion3	Proportion4	PtBiserial	Correlation0	Correlation1	Correlation2	Correlation3	Correlation4	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
SCIENCE	4	399258	7	D	2	1100	0.520909091	0.591818182	0.295454545	0.112727273			0.499494155	-0.491188898	0.303732491	0.325179386			2.1746	0.0504	-1.7491	0.9285	-2.4891	0.8716	A+	A-	A-
SCIENCE	4	282173	8	C	2	1100	0.709090909	0.431818182	0.427272727	0.140909091			0.342184242	-0.309215069	0.13597151	0.246892064			1.8433	0.0504	4.7112	1.1864	3.8012	1.1607	A+	B-	A-
SCIENCE	4	530226	9	C	2	1090	0.58440367	0.66146789	0.09266055	0.24587156			0.413789058	-0.392911251	0.059323167	0.391842796			1.8419	0.0431	3.2911	1.14	2.1612	1.1995	A-	A-	A-
SCIENCE	4	634504	10	A	2	1090	0.833944954	0.362385321	0.441284404	0.196330275			0.521830079	-0.44982215	0.105011638	0.413075013			1.5355	0.0491	-1.359	0.9508	-1.8591	0.93	A+	A-	A-
SCIENCE	4	409416	11	A	2	1083	1.158818098	0.221606648	0.397968606	0.380424746			0.500763456	-0.455874864	-0.003359319	0.393378452			0.6653	0.0471	-1.199	0.9574	-0.349	0.9857	A-	C-	C-
SCIENCE	4	690782	12	D	2	1100	0.740909091	0.439090909	0.380909091	0.18			0.477061075	-0.445745587	0.181209419	0.346746811			1.6822	0.0477	-0.099	0.996	-0.879	0.9632	A+	C-	A-
SCIENCE	8	816122	0	A	3	117845	0.832440918	0.425932369	0.315694344	0.258373287			0.56547358	-0.516468507	0.11336587	0.4630455			0.9011	0.0043	-9.8991	0.8953	-9.8991	0.8676			
SCIENCE	8	428888	0	C	3	117845	0.78256184	0.277975307	0.661487547	0.060537146			0.308614568	-0.211058185	0.047678473	0.301882236			1.4731	0.0059	9.9011	1.0575	9.9011	1.0737			
SCIENCE	8	464900	0	D	2	117845	0.547753405	0.577809835	0.296626925	0.12556324			0.504941691	-0.480933887	0.259269672	0.359425932			1.6139	0.0048	-9.8991	0.9273	-9.8991	0.8873			
SCIENCE	8	364332	0	B	3	117845	1.269022869	0.116644745	0.497687641	0.385667614			0.34542766	-0.316188771	-0.047010579	0.256805042			-0.221	0.0051	9.9011	1.0834	9.9011	1.1055			
SCIENCE	8	870914	0	A	3	117845	0.869328355	0.38256184	0.365547966	0.251890195			0.613014095	-0.535744864	0.081173677	0.509761862			0.8377	0.0044	-9.8992	0.8157	-9.8992	0.7914			
SCIENCE	8	338253	1	D	2	1094	0.087751371	0.919561243	0.073126143	0.007312614			0.359551928	-0.365468122	0.338634483	0.13187181			3.751	0.1036	-1.2491	0.8685	-3.7995	0.5077	A+	A-	A-
SCIENCE	8	407702	2	A	3	1090	0.155963303	0.852293578	0.139449541	0.008256881			0.441235199	-0.446865386	0.425124381	0.124677715			3.6599	0.0847	-2.1191	0.8575	-4.4594	0.5959	A+	A-	A-
SCIENCE	8	475201	3	C	3	1100	0.241818182	0.781818182	0.194545455	0.023636364			0.409266402	-0.414075171	0.367553447	0.168001248			2.8803	0.0688	-0.9891	0.9422	-2.7792	0.7882	A+	A-	A+
SCIENCE	8	124890	4	B	2	1099	0.363967243	0.659690628	0.316651501	0.023657871			0.361081344	-0.351078749	0.305331961	0.159983292			2.7496	0.0635	0.701	1.0297	-0.179	0.9896	A+	A-	B-
SCIENCE	8	603862	5	C	3	1091	0.70944088	0.398716774	0.493125573	0.108157654			0.556325872	-0.519199601	0.293718722	0.345716508			1.4033	0.0527	-4.4892	0.8399	-4.6992	0.8318	A-	B-	A-
SCIENCE	8	353762	6	C	3	1100	0.656363636	0.49	0.363636364	0.146363636			0.577168887	-0.581863482	0.3455691	0.352615163			1.3759	0.0494	-3.8191	0.8602	-4.3792	0.8174	A+	B-	A-
SCIENCE	8	857162	7	B	3	1100	1.360909091	0.157272727	0.324545455	0.518181818			0.42217596	-0.35645105	-0.111462143	0.364152561			-0.2344	0.0479	0.771	1.0292	2.6411	1.1328	A+	A-	A-
SCIENCE	8	508885	8	A	2	1100	0.454545455	0.640909091	0.263636364	0.095454545			0.526166481	-0.513613659	0.32735855	0.347677873			1.865	0.0531	-2.5091	0.8912	-2.9292	0.8294	A+	B-	A-
SCIENCE	8	944324	9	A	3	1099	0.712465878	0.505914468	0.275705187	0.218380346			0.536186966	-0.511995447	0.184545973	0.419976399			1.1495	0.0448	-2.0591	0.9258	-2.5991	0.8786	A+	A-	A-
SCIENCE	8	300173	10	A	2	1100	0.568181818	0.551818182	0.328181818	0.12			0.397444645	-0.390680011	0.237860914	0.254184621			1.6313	0.0504	2.1711	1.0887	1.8411	1.0936	A+	A-	A-
SCIENCE	8	572467	11	D	3	1091	0.404216315	0.6131989	0.369385885	0.017415215			0.286014759	-0.262821751	0.219276722	0.169459168			2.8158	0.0633	2.4511	1.0945	1.5711	1.0693	A+	A-	A-
SCIENCE	8	178563	12	A	2	1092	0.737179487	0.408424908	0.445970696	0.145604396			0.63940726	-0.597417836	0.285748507	0.429868567			1.2854	0.0502	-6.6592	0.7732	-6.8692	0.7578	A-	A-	A-

Multiple-Choice Paper/Pencil Item Statistics

Column Heading	Definition
ContArea	Content
FormGrade	Grade
PubID	Form ID
FormNumber	Form
Standard1	Standard
Depth	Depth of Knowledge
N	N
PValue	P-Value
ProportionA	Proportion A
ProportionB	Proportion B
ProportionC	Proportion C
ProportionD	Proportion D
ProportionOMITS	Proportion Omits
PtBiserial	Point Biserial
CorrelationA	Correlation A
CorrelationB	Correlation B
CorrelationC	Correlation C
CorrelationD	Correlation D
FinalB	IRT Difficulty Estimate
FinalBErr	IRT Difficulty Error
Infit	Infit
InfitMnSq	Infit Mean Square
Outfit	Outfit
OutfitMnSq	Outfit Mean Square
BiasCodeMALEFEMALE	Male/Female DIF Code
BiasCodeWHITEBLACK	White/Black DIF Code
BiasCodeWHITEHISPANIC	White/Hispanic DIF Code

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	Mean	Proportion0	Proportion1	Proportion2	Proportion3	Proportion4	PtBiserial	Correlation0	Correlation1	Correlation2	Correlation3	Correlation4
ELA	3	766094	0	B-K	3	2844	0.939170183	0.310126582	0.478551336	0.173347398	0.037974684		0.57420352	-0.509160474	0.109768642	0.371148249	0.210211418	
ELA	3	790678	0	A-K	3	2844	1.168424754	0.197609001	0.497538678	0.243670886	0.061181435		0.432526739	-0.336080456	-0.056046179	0.248698729	0.229835492	
MATH	3	343967	0	C-G	2	2934	1.773006135	0.144512611	0.286980232	0.290388548	0.207225631	0.070892979	0.697417575	-0.438504778	-0.33590049	0.124207488	0.402906763	0.336802099
MATH	3	917971	0	D-M	3	2934	1.379004772	0.279141104	0.2866394	0.26993865	0.10463531	0.059645535	0.703924105	-0.558335248	-0.13783038	0.303754304	0.320063722	0.337674629
MATH	3	914478	0	A-F	2	2934	1.480572597	0.237900477	0.325153374	0.239604635	0.113156101	0.084185412	0.734749941	-0.571826352	-0.152562677	0.218017344	0.364175031	0.383641449
MATH	4	738417	0	B-O	2	3112	2.151028278	0.17062982	0.138174807	0.219794344	0.312339332	0.159061697	0.719153808	-0.483738959	-0.307960199	-0.076060814	0.34377351	0.438635559
MATH	4	506676	0	A-T	3	3112	1.15874036	0.351863753	0.313303342	0.21722365	0.059447301	0.058161954	0.715346036	-0.620623579	0.036086149	0.294308423	0.318684126	0.35430924
MATH	4	672554	0	C-G	2	3112	1.547236504	0.221722365	0.315874036	0.22718509	0.163881748	0.071336761	0.659570682	-0.451614274	-0.219259223	0.153723732	0.361884845	0.354167424
MATH	5	128970	0	A-F	2	5087	1.617063102	0.254373894	0.149793592	0.432868095	0.050324356	0.112640063	0.677241597	-0.504195591	-0.163130774	0.16931513	0.227857043	0.455774722
MATH	5	822864	0	A-T	2	5087	1.348928642	0.365441321	0.230391193	0.17495577	0.148220955	0.080990761	0.730673077	-0.615738062	-0.07336503	0.232988345	0.387641297	0.370750014
MATH	5	430323	0	C-G	2	5087	1.137998821	0.372911343	0.321407509	0.153921761	0.098289758	0.053469628	0.763908233	-0.644678026	0.006032285	0.307866095	0.397242588	0.353708689
MATH	6	527167	0	A-R	3	5244	1.030129672	0.485888635	0.209954233	0.151601831	0.093249428	0.059305873	0.716702863	-0.614184226	0.025523706	0.275797035	0.373152989	0.377475116
MATH	6	799397	0	B-E	2	5244	0.832951945	0.559115179	0.217009916	0.101639969	0.076277651	0.045957285	0.709784123	-0.640742459	0.13526379	0.303077359	0.364997115	0.352923436
MATH	6	202693	0	C-G	2	5244	1.210526316	0.395690313	0.268878719	0.140350877	0.119374523	0.075705568	0.769939964	-0.614884342	-0.070086285	0.244240813	0.422798489	0.415200482
MATH	7	894580	0	A-R	2	5833	1.071661238	0.323161324	0.409566261	0.16286645	0.081261786	0.02314418	0.75992433	-0.607124619	-0.028434644	0.409772848	0.401815758	0.244931733
MATH	7	700098	0	B-E	2	5833	1.167152409	0.447282702	0.212755015	0.126864392	0.151722956	0.061374936	0.786705356	-0.705404544	0.023280585	0.269778429	0.466612836	0.350068853
MATH	7	731850	0	C-G	3	5833	0.794959712	0.482427567	0.336362078	0.112463569	0.041316647	0.027430139	0.632796557	-0.567292082	0.170093907	0.346080913	0.263763146	0.252695409
MATH	8	146652	0	D-S	2	6086	1.093493263	0.294774893	0.42293789	0.181728557	0.095136379	0.005422281	0.662059011	-0.532172358	-0.021685608	0.339807768	0.387007528	0.119376591
MATH	8	758896	0	B-E	3	6086	1.207525468	0.389582649	0.277522182	0.138186001	0.125205389	0.069503779	0.776857768	-0.633982923	-0.062130005	0.291361284	0.401817102	0.406813543
MATH	8	767488	0	B-F	2	6086	1.556358856	0.301018732	0.271442655	0.139829116	0.14558002	0.142129477	0.797468046	-0.59151397	-0.193064591	0.135678207	0.348795361	0.535865992
SCIENCE	4	854991	0	A	3	3828	1.026907001	0.268025078	0.437042842	0.294932079			0.612823057	-0.537488011	0.033530167	0.485597306		
SCIENCE	4	985603	0	B	2	3828	1.068704284	0.246342738	0.43861024	0.315047022			0.424203521	-0.365976877	-0.002246742	0.341862944		
SCIENCE	4	175520	0	C	3	3828	0.799634274	0.420323929	0.359717868	0.219958203			0.400945781	-0.318082891	0.007109511	0.370812436		
SCIENCE	4	824405	0	A	2	3828	1.353970742	0.178683386	0.288662487	0.532654127			0.57160646	-0.473554812	-0.164979206	0.513439058		
SCIENCE	4	522423	0	D	2	3828	0.578631139	0.501828631	0.417711599	0.08045977			0.531734343	-0.541167808	0.411370432	0.248899386		
SCIENCE	8	816122	0	A	3	7829	0.757184826	0.467364925	0.308085324	0.224549751			0.557613052	-0.517705987	0.158053184	0.444126536		
SCIENCE	8	428888	0	C	3	7829	0.75973943	0.317792822	0.604674927	0.077532252			0.374951169	-0.272484494	0.073403412	0.340216077		
SCIENCE	8	464900	0	D	2	7829	0.591007792	0.558436582	0.292119045	0.149444373			0.494592815	-0.46497201	0.215798459	0.37237473		
SCIENCE	8	364332	0	B	3	7829	1.195299527	0.159407332	0.485885809	0.354706859			0.40643687	-0.351480954	-0.046179895	0.317170876		
SCIENCE	8	870914	0	A	3	7829	0.786307319	0.432239111	0.349214459	0.21854643			0.625897099	-0.562231018	0.147175376	0.50418692		

Multiple-Choice Paper/Pencil Item Statistics

Column Heading	Definition
ContArea	Content
FormGrade	Grade
PubID	Form ID
FormNumber	Form
Standard1	Standard
Depth	Depth of Knowledge
N	N
PValue	P-Value
ProportionA	Proportion A
ProportionB	Proportion B
ProportionC	Proportion C
ProportionD	Proportion D
ProportionOMITS	Proportion Omits
PtBiserial	Point Biserial
CorrelationA	Correlation A
CorrelationB	Correlation B
CorrelationC	Correlation C
CorrelationD	Correlation D
FinalB	IRT Difficulty Estimate
FinalBErr	IRT Difficulty Error
Infit	Infit
InfitMnSq	Infit Mean Square
Outfit	Outfit
OutfitMnSq	Outfit Mean Square
BiasCodeMALEFEMALE	Male/Female DIF Code
BiasCodeWHITEBLACK	White/Black DIF Code
BiasCodeWHITEHISPANIC	White/Hispanic DIF Code

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	Mean	Proportion0	Proportion1	Proportion2	Proportion3	PtBiserial	Correlation0	Correlation1	Correlation2	Correlation3	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
ELA	3	396611	0	B-V	3	119890	2.099891567	0.062248728	0.19769789	0.317966469	0.422086913	0.563419965	-0.253248329	-0.388419495	-0.062669177	0.496188818	-0.2571	0.004	-3.219	0.9873	-3.209	0.9852			
ELA	3	408742	0	A-C	3	119890	1.497464342	0.175193928	0.348194178	0.280565518	0.196046376	0.520643397	-0.3061913	-0.242143787	0.136248661	0.429559864	0.7586	0.0038	9.9011	1.1007	9.9011	1.1002			
ELA	3	817831	0	A-C	3	119890	1.120602219	0.25425807	0.370881642	0.374860289		0.447288141	-0.287063495	-0.208368682	0.466136361		0.5024	0.0045	9.9011	1.1282	9.9012	1.1704			
ELA	3	643141	0	B-K	3	119890	1.184193844	0.261598132	0.292609892	0.445791976		0.57798162	-0.444280198	-0.184175594	0.561421233		0.3812	0.0044	-9.8991	0.921	-9.8991	0.94			
ELA	3	580473	1	A-K	3	13411	1.720677056	0.113190664	0.296100216	0.347550518	0.243158601	0.603246397	-0.329525707	-0.350045228	0.117807797	0.48511891	0.382	0.0115	-8.6091	0.9073	-8.7491	0.9033	A+	A-	A-
ELA	3	910488	1	A-K	3	13411	0.784505257	0.468496011	0.278502722	0.253001268		0.479757334	-0.373566671	-0.047636813	0.477917748		1.2517	0.0129	3.441	1.0368	7.5611	1.1111	A+	A-	A+
ELA	3	434170	2	A-K	3	13315	1.035899362	0.345099512	0.273901615	0.380998873		0.359129766	-0.236748012	-0.180840524	0.397827021		0.7011	0.0129	9.9014	1.3831	9.9015	1.5191	A+	A+	A+
ELA	3	359133	2	A-K	3	13315	1.240105145	0.161321817	0.437776943	0.400375516	0.000525723	0.380583292	-0.24953461	-0.176249035	0.366290709	-0.010815556	2.9131	0.0146	9.9012	1.1673	9.9012	1.1538	A+	A-	A+
ELA	3	925033	3	A-K	3	13335	1.606674166	0.230446194	0.253693288	0.194600675	0.321259843	0.497933951	-0.168896386	-0.423687611	0.013267013	0.535869426	0.6031	0.0103	9.9013	1.3018	9.9014	1.3733	A-	A-	A-
ELA	3	155832	3	A-K	3	13335	0.552755906	0.607049119	0.233145857	0.159805024		0.375942991	-0.309317579	0.045184511	0.360147293		1.8196	0.014	9.9011	1.1281	9.9016	1.5787	A+	A-	A-
ELA	3	962199	4	A-K	3	13355	1.464395358	0.115237739	0.394608761	0.400673905	0.089479596	0.385641837	-0.24245233	-0.220499639	0.275358869	0.176062889	0.8921	0.0131	9.9012	1.224	9.9012	1.2233	A-	A-	A-
ELA	3	288960	4	A-K	3	13355	0.923324598	0.423736428	0.229202546	0.347061026		0.533256152	-0.422117035	-0.117067497	0.541545413		0.9367	0.0125	0.191	1.002	2.681	1.0415	A+	A-	A-
ELA	3	989009	5	A-C	3	13368	1.978156792	0.080041891	0.236535009	0.308647516	0.374775583	0.626451618	-0.298510878	-0.387359554	-0.069756249	0.573965015	-0.0337	0.0115	-9.8991	0.8755	-9.8991	0.8619	A-	A-	A-
ELA	3	825483	5	A-K	3	13368	1.125972472	0.281343507	0.311340515	0.407315978		0.456563908	-0.324444782	-0.178633693	0.465269432		0.5169	0.013	9.9011	1.1249	9.9012	1.157	A-	A-	A+
ELA	3	183853	6	B-C	3	13352	1.088526064	0.287147993	0.337177951	0.375674056		0.54950693	-0.415187201	-0.146029703	0.530416117		0.603	0.0132	-3.529	0.9636	-3.319	0.9591	A+	A-	A-
ELA	3	684900	6	B-C	3	13352	1.623352307	0.097438586	0.340248652	0.403834632	0.158478131	0.508968633	-0.285296089	-0.32553989	0.24967998	0.318560984	0.5618	0.0124	4.4311	1.051	4.251	1.0486	A+	A-	A-
ELA	3	329257	7	B-K	3	13265	0.576781003	0.510139465	0.402940068	0.086920467		0.118070654	-0.09948645	0.047166882	0.094413982		2.0118	0.0156	9.9014	1.4176	9.9016	1.625	A-	A-	A-
ELA	3	800199	7	B-C	3	13265	1.613569544	0.130418394	0.309762533	0.375650207	0.184168865	0.485015159	-0.271707841	-0.297876385	0.203502242	0.337142406	0.604	0.0117	9.4511	1.1093	9.6511	1.1128	A-	A-	A-
ELA	3	294677	8	B-K	3	13212	1.669769906	0.084544354	0.338934302	0.398728429	0.177792916	0.40964352	-0.249582505	-0.191705627	0.073545714	0.324757303	0.4588	0.0126	9.9012	1.2384	9.9013	1.2508	A+	A-	A-
ELA	3	519177	8	B-K	3	13212	1.503178928	0.117090524	0.262640024	0.620269452		0.490899699	-0.317938516	-0.311604728	0.493187398		-0.4286	0.015	-1.879	0.9766	5.2411	1.1044	A+	A-	A-
ELA	3	828952	9	B-C	3	13277	1.062363486	0.286284552	0.36506741	0.348648038		0.525265116	-0.416485427	-0.084616495	0.480544823		0.6703	0.0133	-1.259	0.987	-1.149	0.9862	A+	A-	A-
ELA	3	172392	9	B-C	3	13277	1.499058522	0.192136778	0.352489267	0.21955261	0.235821345	0.442600392	-0.16487092	-0.270046299	-0.030331294	0.486500027	0.7551	0.0109	9.9013	1.2826	9.9013	1.2861	A-	A-	A-
ELA	4	213070	0	A-K	3	123378	1.45144191	0.146144369	0.256269351	0.59758628		0.55901981	-0.359073675	-0.359806366	0.578983658		-0.3433	0.0047	-9.8991	0.9119	-7.559	0.9552			
ELA	4	600454	0	B-K	3	123378	1.785601971	0.120694127	0.233955811	0.384404027	0.260946036	0.521861047	-0.292084865	-0.313643569	0.097213131	0.411345145	0.2658	0.0038	9.9011	1.1335	9.9012	1.1795			
ELA	4	570630	0	B-V	3	123378	1.183849633	0.20319668	0.409757007	0.387046313		0.419899204	-0.336485382	-0.086288382	0.365097948		0.2521	0.0046	9.9012	1.1581	9.9012	1.2134			
ELA	4	838290	0	B-C	3	123378	1.761756553	0.16237903	0.246097359	0.258911637	0.332611973	0.508151302	-0.222277793	-0.349415987	-0.00697392	0.499919492	0.3097	0.0035	9.9013	1.2629	9.9013	1.3067			
ELA	4	434304	0	A-C	3	123378	1.950996126	0.098518374	0.206495485	0.34045778	0.35452836	0.596040903	-0.291525518	-0.401432735	0.008136968	0.513240611	-0.0135	0.0038	-0.539	0.9979	5.761	1.0247			
ELA	4	632959	0	A-K	3	123378	1.154541328	0.258271329	0.328916014	0.4128165 7		0.536482513	-0.42961586	-0.118176919	0.494694591		0.3648	0.0044	7.181	1.0252	9.051	1.0394			
ELA	4	110106	1	A-K	3	13836	1.475209598	0.100751662	0.443914426	0.334706563	0.120627349	0.393030334	-0.278657833	-0.122626594	0.098536498	0.301829817	0.6824	0.0126	9.9012	1.2412	9.9013	1.2644	A+	A-	A-
ELA	4	191287	1	A-K	3	13836	1.337669847	0.237207285	0.187915583	0.574877132		0.553553982	-0.399473268	-0.313960981	0.5918164		0.0079	0.0127	-0.199	0.9977	-0.429	0.9914	A-	A-	A-
ELA	4	189842	2	A-K	3	13708	1.415815582	0.115115261	0.460096294	0.318646046	0.106142399	0.434593974	-0.271269042	-0.184314267	0.179544249	0.307716513	0.8033	0.0127	9.9012	1.1564	9.9012	1.1738	A+	A-	A-
ELA	4	487787	2	A-K	3	13708	1.51437117	0.1426904	0.20024803	0.65706157		0.597037121	-0.439600473	-0.322998825	0.596204217		-0.4689	0.0141	-9.8992	0.832	-7.9292	0.834	A+	B-	B-
ELA	4	875727	3	A-C	3	13668	1.908033363	0.076455956	0.216710565	0.429177641	0.277655838	0.57428606	-0.293565418	-0.370540351	0.057289988	0.451756561	0.0022	0.012	-1.579	0.982	-1.609	0.9813	A-	A-	A-
ELA	4	426562	3	A-K	3	13668	1.377011999	0.18546971	0.252048581	0.562481709		0.551521543	-0.416522062	-0.242947915	0.538981556		-0.1349	0.0135	-3.269	0.9631	-0.299	0.9948	A-	A-	A-
ELA	4	826174	4	A-K	3	13667	0.762932611	0.386990561	0.463086266	0.149923173		0.256034736	-0.219544334	0.072889798	0.197722447		1.3645	0.0145	9.9013	1.3274	9.9014	1.4366	A-	A-	A-
ELA	4	169612	4	A-K	3	13667	1.917831272	0.0834126	0.252798712	0.326333504	0.337455184	0.549598664	-0.299954513	-0.303527541	-0.02919204	0.483342122	-0.0488	0.0115	4.9711	1.0569	6.3211	1.0801	A-	B-	A-
ELA	4	792839	5	A-C	3	13722	2.298498761	0.057134528	0.128552689	0.272992275	0.541320507	0.625896307	-0.337654	-0.398446203	-0.137454234	0.547806581	-0.6069	0.0124	-9.8991	0.873	-5.9091	0.8997	A+	B-	A-
ELA	4	633018	5	A-K	3	13722	1.418233494	0.170456202	0.240854103	0.588689695		0.62102663	-0.485507839	-0.256186734	0.593639517		-0.2287	0.014	-9.8991	0.8541	-8.4592	0.8485	A+	A-	A-
ELA	4	571075	6	B-C	3	13704	0.897548161	0.371643316	0.359165207	0.269191477		0.436018777	-0.343282724	-0.030001984	0.406463923		0.9678	0.0132	9.9012	1.1534	9.9013	1.2639	A-	A-	A-
ELA	4	249363	6	B-K	3	13704	1.998029772	0.067279626	0.179217747	0.441695855	0.311806772	0.582112768	-0.279241479	-0.423799233	0.055211439	0.442707099	-0.1562	0.0123	-4.139	0.9521	-2.849	0.9661	A+	A-	A-
ELA	4	436999	7	B-C	3	13688	0.838033314	0.408459965	0.345046756	0.246493279		0.291044575	-0.182193007	-0.108672466	0.32767523		1.0991	0.0131	9.9014	1.3681	9.9015	1.5009	A-	A-	A-
ELA	4	239295	7	B-K	3	13688	1.186952075	0.257378726	0.386981297	0.266949153	0.088690824	0.206815076	-0.085198483	-0.125644889	0.099738911	0.191079637	1.2855	0.0117	9.9016	1.621	9.9017	1.7039	A+	A+	A-
ELA	4	966383	8	B-K	3	13701	1.01306474	0.379096416	0.228742428	0.392161156		0.374114076	-0.210315528	-0.296272122	0.463873943		0.6938	0.0124	9.9014	1.3702	9.9017	1.6653	A-	A-	A-
ELA	4	503653	8	B-K	3	13701	1.753010729	0.091161229	0.298007445	0.377490694	0.233340632	0.556219505	-0.317718077	-0.330903715	0.141911099	0.411408941	0.231	0.0119	2.421	1.0271	3.011	1.0345	A-	A-	A-
ELA	4	253227	9	B-C	3	13684	1.900394621	0.102090032	0.222741888	0.347851505	0.327316574	0.591876604	-0.320287596	-0.382809004	0.069384361	0.475684046	0.0644	0.0113	-1.709	0.9807	-1.809	0.9778	A+	A-	A-
ELA	4	327703	9	B-C	3	13684	1.153463899	0.265566624	0.315404852	0.419029524		0.509527516	-0.344328316	-0.237014648	0.531419093		0.3757	0.0129	5.0411	1.0532	5.8711	1.0786	A-	A-	A-
ELA	5	907667	0	B-K	3	122334	1.2790557	0.290107411	0.140729478	0.569163111		0.55890749	-0.435062629	-0.285219735	0.598997313		0.169	0.0041	-3.949	0.9853	-5.069	0.9652			
ELA	5	184561	0	A-K	3	122334	1.33946409	0.228538264	0.364052512	0.246816094	0.16059313	0.390181134	-0.190032398	-0.188948314	0.070836957	0.381762099	0.9268	0.0037	9.9014	1.3569	9.9014	1.4099			
ELA	5	295996	0	A-K	3	122334	1.189023493	0.204701882	0.401572743	0.393725375		0.461004388	-0.304962759	-0.203418342	0.45595127		0.2404	0.0046	9.9011	1.0554	9.9011	1.1009			
ELA	5	155707	0	A-K	3	122334	1.940776889	0.04847385	0.209287688	0.495226184	0.247012278	0.552341071	-0.234191792	-0.423735323	0.102933395	0.396980878	-0.1261	0.0043	-9.8991	0.92	-9.8991	0.9326			
ELA	5	288854	0	B-C	3	122334	0.835769287	0.457002959	0.250224794	0.292772246		0.426929818	-0.274443521	-0.206721079	0.497221564		1.0409	0.0042	9.9012	1.188	9.9013	1.2775			
ELA	5	234493	0	B-K	3	122334	1.471357104	0.182279661	0.34505534	0.291693233	0.180971766	0.5667845	-0.326388058	-0.273303803	0.171666824	0.462098081	0.7278	0.0037	3.631	1.0133	5.371	1.0204			
ELA	5	881831	1	B-C	3	13645	1.093514108	0.25635764	0.393770612	0.349871748		0.54524613	-0.43730525	-0.08102121	0.483347702		0.4726	0.0133	-4.639	0.9536	-3.439	0.9614	A-	A-	A-
ELA	5	249808	1	B-K	3	13645	1.940710883	0.057090509	0.262513741	0.362990106	0.317405643	0.540467415	-0.270135558	-0.365541974	0.05169347	0.426790498	-0.1657	0.0119	0.431	1.0047	2.291	1.0274	A+	B-	A-
ELA	5	891082	2	B-C	3	13567	0.658804452	0.592835557	0.155524434	0.251640009		0.275891232	-0.135399153	-0.282456971	0.389178032		1.3826	0.0124	9.9014	1.4004	9.9019	1.9131	A+	A-	A-
ELA	5	386553	2	B-K	3	13567	2.199012309	0.059335151	0.150954522	0.321073192	0.468637134	0.5600495	-0.262118825	-0.395866225	-0.079457214	0.482440832	-0.4263	0.0119	-5.8591	0.9292	-5.8291	0.9166	A+	A-	A-
ELA	5	204221	3	B-K	3	13562	1.422725262	0.196209999	0.184854741	0.61893526		0.578308945	-0.448086531	-0.27169175	0.583577461		-0.1822	0.0131	-9.8991	0.8529	-9.8992	0.805	A-	A-	A-
ELA	5	141896	3	B-C	3	13562	1.92066067	0.124244212	0.207417785	0.291771125	0.376566878	0.603238828	-0.305139769	-0.380082251	-0.033393525	0.557124178	0.0684	0.0107	-3.029	0.9657	-4.5291	0.9395	A-	B-	A-
ELA	5	241318	4	B-K	3	13576	0.834119034	0.503093695	0.159693577	0.337212728		0.442782657	-0.325161032	-0.202104606	0.500494119		1.0045	0.012	9.9012	1.1925	9.9014	1.4443	A-	B-	A-
ELA	5	804834	4	B-K	3	13576	1.684001179	0.088464938	0.328299941	0.394004125	0.189230996	0.463687097	-0.297242244	-0.235562057	0.137467684	0.326416908	0.3242	0.012	9.9011	1.1265	9.9011	1.141	A+	A-	A-
ELA	5	377406	5	B-C	3	13591	1.857111324	0.086527849	0.289676992	0.303951144	0.319844014	0.593152722	-0.288664238	-0.368276701	0.008607752	0.523676944	0.0414	0.0113	-4.8191	0.9474	-4.009	0.9514	A+	A-	A-
ELA	5	869534	5	B-K	3	13591	1.085939224	0.42086675	0.072327275	0.506805975		0.470657993	-0.383392988	-0.281624304	0.524507205		0.5442	0.0115	9.9012	1.2269	9.9014	1.3812	A-	A-	A-
ELA	5	750718	6	A-K	3	13622	1.528409925	0.147555425	0.176479225	0.67596535		0.421760301	-0.256486787	-0.338987449	0.470492402		-0.4478	0.014	5.7611	1.0755	9.9016	1.5951	A+	A-	A-
ELA	5	770028	6	A-K	3	13622	1.416091617	0.189105858	0.324475114	0.367640581	0.118778447	0.489619161	-0.251804069	-0.321279268	0.296430381	0.327925431	0.9345	0.0117	9.9011	1.135	9.9011	1.1457	A+	A-	A-
ELA	5	515269	7	A-K	3	13592	1.363743378	0.232636845	0.170982931	0.596380224		0.629832718	-0.504690308	-0.263587562	0.636898881		-0.0292	0.0128	-9.8992	0.8131	-9.8993	0.7364	A-	A-	A-
ELA	5	811076	7	A-K	3	13592	1.95732784	0.088213655	0.21880518	0.340420836	0.35256033	0.591896303	-0.31008053	-0.367426103	-0.001753256	0.503756859	-0.0436	0.0114	-4.7791	0.9461	-4.7291	0.9407	A+	A-	A-
ELA	5	410285	8	A-K	3	13554	1.603290542	0.09487974	0.206949978	0.698170282		0.366276976	-0.331080555	-0.113261077	0.311309104		-0.7342	0.0153	2.801	1.0388	9.9013	1.2772	A+	A-	A-
ELA	5	210428	8	A-K	3	13554	1.848015346	0.090379224	0.255127638	0.370591707	0.283901431	0.535565437	-0.261454456	-0.332400547	0.026977665	0.458738641	0.116	0.0115	3.431	1.0388	5.9811	1.0721	A+	A-	A-
ELA	5	899868	9	A-C	3	13625	1.718678899	0.139963303	0.232513761	0.39640367	0.231119266	0.522679101	-0.336161284	-0.299369878	0.193999642	0.351561203	0.3818	0.0113	7.8611	1.0903	8.2411	1.0987	A+	A-	A-
ELA	5	733474	9	A-V	3	13625	1.522422018	0.131816514	0.213944954	0.654238532		0.471206887	-0.374161139	-0.205783269	0.443561183		-0.5089	0.0142	-2.249	0.9721	2.9911	1.0651	A-	A-	A-
ELA	6	243519	0	B-C	3	120612	1.82461115	0.099335058	0.233069678	0.411244321	0.256350944	0.618228189	-0.33744797	-0.362324338	0.075577878	0.496845162	0.459	0.004	-9.8991	0.9292	-9.8991	0.9253			
ELA	6	815762	0	B-K	3	120612	1.120037807	0.267336583	0.345289026	0.387374391		0.414734208	-0.252407404	-0.228093717	0.451929877		0.7187	0.0044	9.9012	1.213	9.9013	1.3268			
ELA	6	192952	0	A-K	3	120612	1.363471296	0.205327828	0.225873047	0.568799124		0.566928247	-0.414197664	-0.286097547	0.579400799		0.2009	0.0044	-9.899	0.9571	-8.5891	0.9486			
ELA	6	371684	0	B-C	3	120612	1.920298146	0.149155971	0.191282791	0.249668358	0.40989288	0.532829866	-0.289748951	-0.307860931	-0.068779986	0.516608964	0.3835	0.0036	9.9012	1.1847	9.9013	1.2802			
ELA	6	109505	0	A-K	3	120612	0.950187378	0.426947567	0.195917487	0.377134945		0.346317467	-0.256715993	-0.141354607	0.377752529		1.0981	0.0041	9.9014	1.4327	9.9017	1.6724			
ELA	6	508994	0	A-C	3	120612	1.915008457	0.13626339	0.217789275	0.240622824	0.405324512	0.541006471	-0.211498155	-0.392977094	-0.095556224	0.561362502	0.3615	0.0036	9.9012	1.1691	9.9013	1.279			
ELA	6	513364	1	A-K	3	13405	1.905930623	0.058784036	0.227452443	0.462812383	0.250951138	0.488117452	-0.267408348	-0.299983415	0.061055908	0.364898559	0.2183	0.0127	6.9311	1.083	7.1711	1.0866	A+	A-	A-
ELA	6	806135	1	A-K	3	13405	1.22849683	0.195076464	0.381350242	0.423573294		0.549951013	-0.443430401	-0.128629765	0.482047322		0.4189	0.0139	-4.199	0.9559	-4.6091	0.9427	A+	A-	A-
ELA	6	435671	2	A-K	3	13414	2.036901744	0.07298345	0.199418518	0.345310869	0.382287163	0.625362791	-0.315433678	-0.399790852	-0.038777393	0.535504646	0.0777	0.0118	-9.3391	0.894	-8.6891	0.8895	A+	A-	A-
ELA	6	566722	2	A-C	3	13414	1.367601014	0.168257045	0.295884896	0.535858059		0.49090516	-0.398303489	-0.15837543	0.443726365		0.1242	0.0139	2.861	1.0327	5.5511	1.0904	A+	A-	A-
ELA	6	112855	3	A-K	3	13395	1.744008959	0.2	0.222471071	0.211048899	0.36648003	0.523089909	-0.257678335	-0.32704565	-0.050258446	0.538764276	0.6417	0.0103	9.9013	1.2813	9.9013	1.332	A-	B-	A-
ELA	6	461889	3	A-K	3	13395	1.627398283	0.121388578	0.129824561	0.748786861		0.476743554	-0.338390057	-0.321577983	0.504014441		-0.4159	0.0149	-2.829	0.9597	3.9811	1.1299	A+	A+	A+
ELA	6	129460	4	A-K	3	13427	1.098383853	0.257838683	0.38593878	0.356222537		0.345230909	-0.269452083	-0.067065592	0.314313318		0.7737	0.0134	9.9013	1.2804	9.9014	1.354	A+	A-	A-
ELA	6	143670	4	A-K	3	13427	2.205407016	0.053176436	0.153496686	0.328070306	0.465256573	0.606691327	-0.305808381	-0.371911225	-0.138462922	0.53667697	-0.1928	0.0122	-9.8991	0.8818	-6.8991	0.9016	A+	B-	A-
ELA	6	372649	5	A-K	3	13350	2.214307116	0.049513109	0.155355805	0.326441948	0.468689139	0.607127384	-0.303594431	-0.393606714	-0.111187205	0.52218326	-0.2383	0.0124	-9.8991	0.8764	-7.2791	0.8939	A+	A-	A-
ELA	6	429891	5	A-K	3	13350	1.621498127	0.125093633	0.128314607	0.74659176		0.546190579	-0.425405724	-0.296241039	0.551333918		-0.3919	0.0149	-9.8992	0.8251	-3.2991	0.898	A+	A-	A-
ELA	6	101828	6	B-C	3	13428	1.712987787	0.177762884	0.245755139	0.262213286	0.314268692	0.523034842	-0.176546563	-0.43549082	0.016423367	0.533720937	0.6732	0.0106	9.9012	1.2079	9.9013	1.2528	A-	A-	A-
ELA	6	811989	6	B-K	3	13428	1.005436402	0.219541257	0.555481084	0.224977659		0.375252763	-0.397886537	0.159420198	0.204713302		0.9826	0.0151	9.9011	1.1375	9.9011	1.1494	A-	A-	A-

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	Mean	Proportion0	Proportion1	Proportion2	Proportion3	PtBiserial	Correlation0	Correlation1	Correlation2	Correlation3	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
ELA	6	456364	7	B-K	3	13405	1.871913465	0.168817605	0.197463633	0.226706453	0.407012309	0.614346008	-0.313514233	-0.380905158	-0.083427551	0.618802184	0.4541	0.0103	1.291	1.0153	-1.789	0.9727	A+	A-	A-
ELA	6	226752	7	B-K	3	13405	0.841327863	0.292577396	0.573517344	0.133905259		0.274738432	-0.305475192	0.210095866	0.102975961		1.4943	0.0156	9.9012	1.2231	9.9012	1.2388	A-	A+	A-
ELA	6	867195	8	B-C	3	13396	1.41579576	0.134741714	0.439160944	0.301657211	0.124440131	0.42372743	-0.251303128	-0.153364548	0.087017644	0.369544011	1.0801	0.0122	9.9012	1.1635	9.9012	1.1714	A+	A-	A-
ELA	6	653736	8	B-K	3	13396	1.309793968	0.187070767	0.316064497	0.496864736		0.58294142	-0.412506851	-0.269418546	0.572266526		0.2783	0.0136	-9.2091	0.9026	-8.6991	0.882	A-	A-	A-
ELA	6	346058	9	B-K	3	13392	1.197356631	0.30167264	0.199298088	0.499029271		0.353935287	-0.220688172	-0.266162121	0.415234387		0.5953	0.0125	9.9014	1.3825	9.9019	1.9038	A-	A-	A-
ELA	6	320609	9	B-K	3	13392	2.364545998	0.046072282	0.114919355	0.267398447	0.571609916	0.635904854	-0.298619332	-0.423340005	-0.199778079	0.578036571	-0.4294	0.0125	-9.8992	0.7764	-9.8993	0.7385	A+	A-	A-
ELA	7	109857	0	A-K	3	119053	1.898599783	0.200616532	0.138887722	0.221775176	0.43872057	0.561238961	-0.321598509	-0.340675749	-0.083931712	0.567220502	0.3416	0.0034	9.9012	1.1697	9.9012	1.2356			
ELA	7	904805	0	B-K	3	119053	1.10021587	0.264420048	0.370944033	0.364635918		0.468683342	-0.351125551	-0.122217684	0.444380897		0.6113	0.0045	9.9011	1.0876	9.9011	1.125			
ELA	7	174967	0	B-K	3	119053	1.618716034	0.077898079	0.33518685	0.47721603	0.109699042	0.445780663	-0.345180947	-0.22952085	0.291804042	0.176339183	0.6517	0.0045	9.9011	1.1085	9.9011	1.1059			
ELA	7	330794	0	A-C	3	119053	1.816527093	0.093487774	0.289064534	0.324880515	0.292567176	0.549205	-0.331851174	-0.290134226	0.054542235	0.445307866	0.262	0.0038	9.901	1.0382	9.9011	1.0593			
ELA	7	575513	0	A-V	3	119053	1.129664939	0.134755109	0.600824843	0.264420048		0.411943145	-0.333687245	-0.054813908	0.319223973		0.4109	0.0054	9.901	1.049	9.9011	1.0535			
ELA	7	590219	0	B-C	3	119053	1.21350155	0.25287057	0.28075731	0.46637212		0.535426251	-0.402880865	-0.198568002	0.529890757		0.3838	0.0043	0.991	1.0035	1.201	1.0057			
ELA	7	117574	1	B-K	3	13325	1.796697936	0.062514071	0.316998124	0.381763602	0.238724203	0.476692476	-0.28821239	-0.273451007	0.096763616	0.351865039	0.1957	0.0122	9.1111	1.1049	9.9011	1.1174	A+	B-	A-
ELA	7	587506	1	B-K	3	13325	0.744615385	0.453133208	0.349118199	0.197748593		0.284945971	-0.236390225	0.036259755	0.252045305		1.4474	0.0136	9.9013	1.3349	9.9015	1.5073	A-	A-	A-
ELA	7	905756	2	B-C	3	13266	0.806422433	0.506558118	0.18046133	0.312980552		0.276865182	-0.160813867	-0.218540409	0.354630288		1.193	0.012	9.9014	1.3901	9.9017	1.7334	A-	A-	A-
ELA	7	668895	2	B-K	3	13266	1.946856626	0.061133725	0.224935926	0.419870345	0.294060003	0.421742143	-0.31852599	-0.241298975	0.126839137	0.25122554	0.025	0.0121	9.9011	1.142	9.9012	1.1823	A+	A-	A-
ELA	7	186363	3	B-C	3	13266	1.765792251	0.073345394	0.258480326	0.497210915	0.170963365	0.52947813	-0.247385292	-0.384031321	0.194001338	0.360243788	0.3868	0.0128	-2.449	0.9714	-1.809	0.9787	A+	A-	A-
ELA	7	292463	3	B-C	3	13266	1.033770541	0.229157244	0.507914971	0.262927785		0.46195598	-0.37192534	-0.022097283	0.38017955		0.7499	0.0144	1.011	1.0106	1.771	1.0188	A+	A-	A-
ELA	7	137621	4	B-C	3	13191	1.016753847	0.279811993	0.423622167	0.29656584		0.252125814	-0.158600857	-0.099107514	0.263099984		0.7942	0.0137	9.9014	1.3767	9.9015	1.5022	A+	A+	A-
ELA	7	495672	4	B-K	3	13191	1.927677962	0.055947237	0.243423546	0.417633235	0.282995982	0.493910251	-0.297910621	-0.289045393	0.055112517	0.367027969	0.0125	0.0124	3.901	1.0454	6.6711	1.0799	A+	A-	A-
ELA	7	727624	5	B-K	3	13176	2.273299939	0.052216151	0.143290832	0.283469945	0.521023072	0.609230094	-0.294905804	-0.382955207	-0.175795581	0.558512358	-0.4181	0.0122	-9.8991	0.8593	-9.8992	0.8304	A-	B-	A-
ELA	7	114970	5	B-V	3	13176	1.584471767	0.109820886	0.19588646	0.694292653		0.391116346	-0.314530863	-0.174619447	0.363890033		-0.5147	0.015	4.1611	1.0578	9.9014	1.4253	A-	A-	A-
ELA	7	672325	6	A-K	3	13138	1.567742427	0.146673771	0.353021769	0.286192723	0.214111737	0.506770988	-0.288206258	-0.254855613	0.113160818	0.420797533	0.6829	0.0113	9.2111	1.1059	9.5411	1.1154	A+	A-	A-
ELA	7	828130	6	A-K	3	13138	0.820596742	0.420992541	0.337418176	0.241589283		0.457157287	-0.347056439	-0.042880592	0.447669282		1.2599	0.0133	3.841	1.0407	8.2411	1.1085	A+	A-	A-
ELA	7	795806	7	A-C	3	13270	2.082516956	0.101733233	0.166314996	0.279653353	0.452298417	0.621315694	-0.332433079	-0.377453879	-0.099211513	0.57376207	-0.0369	0.0114	-3.849	0.953	-4.9891	0.9222	A-	B-	A-
ELA	7	973836	7	A-K	3	13270	1.177392615	0.31544838	0.191710625	0.492840995		0.543365845	-0.399535156	-0.27330485	0.586554526		0.5091	0.0127	5.2911	1.0609	4.9211	1.0932	A-	A-	A-
ELA	7	231390	8	A-C	3	13242	1.759401903	0.092131098	0.268463978	0.427276846	0.212128077	0.458846348	-0.233092467	-0.321090476	0.159049545	0.320507585	0.4174	0.012	9.9011	1.1213	9.9011	1.1289	A+	A-	A-
ELA	7	425594	8	A-K	3	13242	0.481800332	0.653149071	0.211901525	0.134949403		0.038766444	0.037481056	-0.155688144	0.133997995		2.0153	0.0143	9.9016	1.6022	9.9025	2.4649	A+	A-	A+
ELA	7	889492	9	A-C	3	13179	1.900599439	0.068669854	0.259959026	0.373472949	0.297898171	0.513409916	-0.276389776	-0.325074455	0.060340715	0.400778535	0.1039	0.012	5.6211	1.0652	7.7511	1.0951	A+	A-	A-
ELA	7	529162	9	A-K	3	13179	1.034828136	0.266256924	0.432658017	0.30108506		0.234787762	-0.149946382	-0.08902166	0.240624552		0.7674	0.0138	9.9014	1.4018	9.9015	1.4659	A+	A+	A+
ELA	8	933619	0	A-K	3	119686	1.685000752	0.145330281	0.291905486	0.295197433	0.2675668	0.489153656	-0.276886425	-0.264352382	0.074331831	0.415332888	0.3514	0.0036	9.9012	1.1816	9.9012	1.2302			
ELA	8	675505	0	A-C	3	119686	1.673520713	0.167212539	0.266163127	0.292515415	0.274108918	0.569341428	-0.312536206	-0.345859892	0.126993495	0.474615875	0.3969	0.0036	9.901	1.0463	9.901	1.0411			
ELA	8	485942	0	A-K	3	119686	1.301346858	0.24646993	0.205713283	0.547816787		0.510235386	-0.366513763	-0.277199912	0.542489106		0.0598	0.0043	9.9011	1.0614	9.9011	1.1144			
ELA	8	203946	0	B-C	3	119686	1.043630834	0.271084337	0.414200491	0.314715171		0.308745843	-0.266213814	0.001527213	0.253196317		0.5615	0.0045	9.9013	1.3019	9.9014	1.3708			
ELA	8	943260	0	B-C	3	119686	2.051284194	0.085941547	0.287351904	0.116187357	0.510519192	0.470264477	-0.272181259	-0.250052853	-0.145782636	0.472420569	-0.2495	0.0036	9.9013	1.2752	9.9016	1.5708			
ELA	8	871729	0	B-V	3	119686	1.026009725	0.349497853	0.274994569	0.375507578		0.316556431	-0.19714966	-0.182317588	0.362227722		0.6164	0.0042	9.9014	1.388	9.9015	1.5311			
ELA	8	338688	1	A-K	3	13377	1.232787621	0.270838006	0.225536368	0.503625626		0.393603578	-0.239103826	-0.290799271	0.45559434		0.1843	0.0125	9.9012	1.231	9.9014	1.3952	A-	A-	A-
ELA	8	281350	1	A-K	3	13377	2.220453016	0.07191448	0.127382821	0.309037901	0.491664798	0.564381713	-0.265923646	-0.425738011	-0.071035023	0.487001775	-0.4396	0.0117	-5.0191	0.937	-1.169	0.9816	A+	A-	A-
ELA	8	795293	2	A-K	3	13304	2.255938064	0.071707757	0.149729405	0.229479856	0.549082983	0.544087774	-0.258419656	-0.333831871	-0.198964518	0.541516711	-0.5103	0.0116	1.251	1.0163	8.3312	1.1649	A+	A-	A-
ELA	8	774383	2	A-C	3	13304	1.300962117	0.25	0.199037883	0.550962117		0.590329475	-0.452672775	-0.264299991	0.60624093		0.044	0.0128	-8.6491	0.9053	-9.1792	0.8402	A-	A+	A-
ELA	8	738674	3	A-C	3	13303	2.069458017	0.069458017	0.180936631	0.36029467	0.389310682	0.587489793	-0.308074839	-0.383171715	-0.019793763	0.482641241	-0.2816	0.0118	-6.3991	0.9257	-3.859	0.9504	A+	B-	B-
ELA	8	768669	3	A-V	3	13303	0.875667143	0.348943847	0.426445163	0.22461099		0.315278381	-0.302408174	0.106652359	0.218995937		0.9724	0.0137	9.9013	1.2542	9.9013	1.316	A-	A+	A-
ELA	8	895661	4	A-C	3	13300	1.338947368	0.179022556	0.303007519	0.517969925		0.4735874	-0.362927202	-0.180730697	0.44467159		-0.1027	0.0137	3.661	1.0413	8.7411	1.1351	A-	A-	A-
ELA	8	524056	4	A-K	3	13300	1.982105263	0.068646617	0.277969925	0.256015038	0.397368421	0.634843074	-0.291563973	-0.411398899	-0.066126759	0.586260158	-0.2115	0.0114	-9.8991	0.884	-9.8991	0.8686	A+	A-	A-
ELA	8	461329	5	A-K	3	13319	2.205045424	0.05803739	0.148509648	0.32382311	0.469629852	0.577791631	-0.293237262	-0.340595978	-0.152852945	0.523377303	-0.4675	0.0121	-5.6391	0.9309	-4.5091	0.9344	A+	A-	A-
ELA	8	780802	5	A-V	3	13319	0.829041219	0.448156769	0.274645244	0.277197988		0.278559436	-0.140078099	-0.208567324	0.36359925		1.0455	0.0126	9.9014	1.3834	9.9016	1.5725	A-	A-	A-
ELA	8	484827	6	B-C	3	13270	1.800979653	0.069706104	0.21250942	0.564883195	0.152901281	0.561888912	-0.321955733	-0.373675666	0.231509851	0.333640583	0.1944	0.0133	-7.0291	0.9149	-7.7091	0.9046	A+	A-	A-
ELA	8	521819	6	B-K	3	13270	1.684777694	0.096156745	0.122908817	0.780934439		0.509531711	-0.397095024	-0.278372602	0.504009124		-0.9022	0.0159	-9.8992	0.8464	-5.6092	0.8298	A+	A-	A-
ELA	8	423735	7	B-C	3	13278	2.00858563	0.065823166	0.253803284	0.286338304	0.394035246	0.590298066	-0.255099187	-0.393438533	-0.069073096	0.543753757	-0.2491	0.0115	-4.8391	0.9458	-5.1591	0.9326	A-	A-	A-
ELA	8	779543	7	B-K	3	13278	1.447130592	0.158532912	0.235803585	0.605663504		0.557605361	-0.456513088	-0.201149766	0.51590121		-0.3283	0.0139	-9.6091	0.8888	-7.4791	0.8678	A+	A+	A+
ELA	8	946260	8	B-C	3	13272	2.182338758	0.053345389	0.178948162	0.299728752	0.467977697	0.644979684	-0.299196874	-0.420660323	-0.136136419	0.582892999	-0.4871	0.012	-9.8992	0.8158	-9.8992	0.7818	A-	A-	A-
ELA	8	504274	8	B-C	3	13272	0.836347197	0.47189572	0.219861362	0.308242917		0.35474165	-0.234566362	-0.177969233	0.413203997		0.9993	0.0123	9.9013	1.2705	9.9015	1.5108	A-	A+	A+
ELA	8	896161	9	B-C	3	13263	1.39568725	0.138807208	0.326698334	0.534494458		0.446842187	-0.387704367	-0.113249928	0.375217627		-0.31	0.0144	4.6711	1.0546	7.4811	1.1145	A+	A-	A-
ELA	8	841837	9	B-K	3	13263	2.361305889	0.083314484	0.105933801	0.176883058	0.633868657	0.614981148	-0.314295485	-0.407584671	-0.224337989	0.618362586	-0.5782	0.0118	-8.3191	0.8842	-5.1591	0.8809	A+	B-	A-

Multiple-Choice Online Item Statistics

Column Heading	Definition
ContArea	Content
FormGrade	Grade
PubID	Form ID
FormNumber	Form
Standard1	Standard
Depth	Depth of Knowledge
N	N
PValue	P-Value
ProportionA	Proportion A
ProportionB	Proportion B
ProportionC	Proportion C
ProportionD	Proportion D
ProportionOMITS	Proportion Omits
PtBiserial	Point Biserial
CorrelationA	Correlation A
CorrelationB	Correlation B
CorrelationC	Correlation C
CorrelationD	Correlation D

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	Mean	Proportion0	Proportion1	Proportion2	Proportion3	PtBiserial	Correlation0	Correlation1	Correlation2	Correlation3
ELA	3	396611	0	B-V	3	2844	1.975035162	0.083684951	0.22116737	0.331575246	0.363572433	0.608758144	-0.309612742	-0.398738207	0.009878815	0.51260076
ELA	3	408742	0	A-C	3	2844	1.443037975	0.19374121	0.325949367	0.323839662	0.156469761	0.531407362	-0.33587932	-0.228640259	0.203884955	0.397779707
ELA	3	817831	0	A-C	3	2844	1.097046414	0.260196906	0.382559775	0.357243319		0.505802427	-0.336804774	-0.203415984	0.514690138	
ELA	3	643141	0	B-K	3	2844	1.065752461	0.287271449	0.359704641	0.35302391		0.601880637	-0.464911969	-0.123462795	0.564163017	
ELA	3	580473	1	A-K	3	1353	1.318551367	0.201034738	0.395417591	0.287509239	0.116038433	0.612515456	-0.362119917	-0.275057573	0.307645671	0.438298181
ELA	3	910488	1	A-K	3	1353	0.596452328	0.566149298	0.271249076	0.162601626		0.505036099	-0.405656126	0.049865025	0.484753662	
ELA	3	434170	2	A-K	3	753	1.090305445	0.317397078	0.274900398	0.407702523		0.338082853	-0.204599741	-0.214566162	0.388740169	
ELA	3	359133	2	A-K	3	753	1.826029216	0.077025232	0.257636122	0.427622842	0.237715803	0.473866925	-0.290083779	-0.248549239	0.066212497	0.360094624
ELA	3	925033	3	A-K	3	738	1.436314363	0.317073171	0.192411924	0.227642276	0.262872629	0.400447943	-0.177934581	-0.327876264	0.076529393	0.408812993
ELA	3	155832	3	A-K	3	738	0.497289973	0.649051491	0.204607046	0.146341463		0.378478416	-0.323829785	0.075095471	0.351561108	
ELA	4	213070	0	A-K	3	3045	1.355993432	0.183579639	0.276847291	0.539573071		0.562017608	-0.382057547	-0.308904839	0.574054056	
ELA	4	600454	0	B-K	3	3045	1.609852217	0.141215107	0.300492611	0.365517241	0.192775041	0.555175762	-0.307208057	-0.326002454	0.189923438	0.418233467
ELA	4	570630	0	B-V	3	3045	1.078817734	0.25090312	0.419376026	0.329720854		0.442822917	-0.362371222	-0.043399174	0.379729876	
ELA	4	838290	0	B-C	3	3045	1.531034483	0.220689655	0.278817734	0.249261084	0.251231527	0.503500128	-0.207609019	-0.352690206	0.057054194	0.506245701
ELA	4	434304	0	A-C	3	3045	1.705418719	0.133990148	0.275205255	0.342200328	0.248604269	0.578740934	-0.284530447	-0.380159205	0.125342606	0.47949691
ELA	4	632959	0	A-K	3	3045	0.904761905	0.394417077	0.306403941	0.299178982		0.521288048	-0.393404645	-0.101431314	0.522007801	
ELA	4	110106	1	A-K	3	1407	1.299218195	0.172707889	0.422885572	0.336886994	0.067519545	0.369262164	-0.279481841	-0.056141644	0.138865275	0.269980748
ELA	4	191287	1	A-K	3	1407	1.034825871	0.356076759	0.253020611	0.39090263		0.61643485	-0.43325757	-0.270088067	0.665800529	
ELA	4	189842	2	A-K	3	817	1.443084455	0.11505508	0.436964504	0.337821297	0.110159119	0.375735128	-0.230936272	-0.184779211	0.191644159	0.238591444
ELA	4	487787	2	A-K	3	817	1.559363525	0.121175031	0.198286414	0.680538556		0.543012366	-0.360931398	-0.361384171	0.561630012	
ELA	4	875727	3	A-C	3	821	1.850182704	0.075517661	0.232643118	0.457978076	0.233861145	0.541742295	-0.218433122	-0.386959067	0.064606842	0.446561999
ELA	4	426562	3	A-K	3	821	1.360535932	0.181485993	0.276492083	0.542021924		0.549223546	-0.390534957	-0.272957051	0.547143173	
ELA	5	907667	0	B-K	3	4802	1.208038317	0.315493544	0.160974594	0.523531862		0.580894175	-0.439060874	-0.29961373	0.628991419	
ELA	5	184561	0	A-K	3	4802	1.319658476	0.228862974	0.370054144	0.253644315	0.147438567	0.374650241	-0.148091928	-0.221533133	0.072532144	0.388149291
ELA	5	295996	0	A-K	3	4802	1.145147855	0.231361933	0.39212828	0.376509788		0.479145448	-0.334662361	-0.173657607	0.466269162	
ELA	5	155707	0	A-K	3	4802	1.848604748	0.063931695	0.234069138	0.491461891	0.210537276	0.575735194	-0.268882468	-0.406025754	0.134633812	0.417933962
ELA	5	288854	0	B-C	3	4802	0.758017493	0.510204082	0.221574344	0.268221574		0.45978165	-0.324285793	-0.158640153	0.514618656	
ELA	5	234493	0	B-K	3	4802	1.323198667	0.219700125	0.386922116	0.243856726	0.149521033	0.566663769	-0.312841857	-0.261310729	0.206636051	0.471308784
ELA	5	881831	1	B-C	3	2194	0.871467639	0.371011851	0.38650866	0.24247949		0.580433948	-0.473259362	0.018018939	0.512959847	
ELA	5	249808	1	B-K	3	2194	1.659981768	0.095259799	0.359161349	0.335916135	0.209662716	0.570064888	-0.268400564	-0.354568691	0.118387743	0.474086911
ELA	5	891082	2	B-C	3	1309	0.629488159	0.618792972	0.132925898	0.248281131		0.264916519	-0.158487415	-0.213151038	0.345677943	
ELA	5	386553	2	B-K	3	1309	2.233766234	0.055767762	0.136745607	0.325439267	0.482047364	0.573965913	-0.263470697	-0.397439935	-0.116897725	0.503889501
ELA	5	204221	3	B-K	3	1299	1.479599692	0.173979985	0.172440339	0.653579677		0.536917319	-0.385634817	-0.324700836	0.565016047	
ELA	5	141896	3	B-C	3	1299	1.946882217	0.102386451	0.220939184	0.304080062	0.372594303	0.57827813	-0.24362855	-0.415949715	-0.025308484	0.533756458
ELA	6	243519	0	B-C	3	5341	1.593334582	0.133308369	0.328964613	0.348811084	0.188915933	0.61980371	-0.339962366	-0.335041723	0.164034486	0.497629484
ELA	6	815762	0	B-K	3	5341	1.043063097	0.307620296	0.341696312	0.350683393		0.375884857	-0.234999038	-0.184785326	0.410939443	
ELA	6	192952	0	A-K	3	5341	1.185358547	0.264931661	0.284778131	0.450290208		0.564147096	-0.401931721	-0.24542118	0.579133061	
ELA	6	371684	0	B-C	3	5341	1.711290021	0.186294701	0.242463958	0.244897959	0.326343381	0.535546633	-0.276086928	-0.322171466	0.010520719	0.514088031
ELA	6	109505	0	A-K	3	5341	0.829432691	0.471447295	0.22767272	0.300879985		0.340338482	-0.225149736	-0.163658516	0.394684029	
ELA	6	508994	0	A-C	3	5341	1.776633589	0.148099607	0.248829807	0.281407976	0.32166261	0.565260964	-0.224347893	-0.388189999	-0.048083981	0.576173508
ELA	6	513364	1	A-K	3	2479	1.622428399	0.106494554	0.315449778	0.427188382	0.150867285	0.492148274	-0.277470987	-0.297088051	0.215794294	0.326608757
ELA	6	806135	1	A-K	3	2479	1.056877773	0.262605889	0.417910448	0.319483663		0.550234872	-0.424825215	-0.090718331	0.496889672	
ELA	6	435671	2	A-K	3	1425	1.990175439	0.073684211	0.210526316	0.367719298	0.348070175	0.568416471	-0.277381879	-0.377638389	0.000550466	0.474766224
ELA	6	566722	2	A-C	3	1425	1.352280702	0.154385965	0.338947368	0.506666667		0.475331885	-0.378316938	-0.158281706	0.423269219	
ELA	6	112855	3	A-K	3	1437	1.789839944	0.183020181	0.222686152	0.215727209	0.378566458	0.540792619	-0.251791851	-0.367366599	-0.039500563	0.549355681
ELA	6	461889	3	A-K	3	1437	1.682672234	0.103688239	0.109951287	0.786360473		0.454479553	-0.309462284	-0.342856706	0.49184939	
ELA	7	109857	0	A-K	3	6005	1.718234804	0.232139883	0.180682764	0.223980017	0.363197336	0.588634309	-0.331380335	-0.342463294	-0.027576687	0.588806675
ELA	7	904805	0	B-K	3	6005	0.995004163	0.297085762	0.410824313	0.292089925		0.459288726	-0.330027218	-0.103467373	0.443606562	
ELA	7	174967	0	B-K	3	6005	1.517735221	0.097085762	0.379850125	0.431307244	0.091756869	0.437200043	-0.333584693	-0.207004669	0.304780142	0.167278814
ELA	7	330794	0	A-C	3	6005	1.647293922	0.125562032	0.339716903	0.296586178	0.238134888	0.55280521	-0.323099489	-0.274671467	0.089625303	0.460654362
ELA	7	575513	0	A-V	3	6005	1.119900083	0.152039967	0.576019983	0.27194005		0.392008905	-0.33021275	-0.027833153	0.297377521	
ELA	7	590219	0	B-C	3	6005	1.092256453	0.302581182	0.302581182	0.394837635		0.540443683	-0.371227687	-0.234024132	0.568798792	

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	Mean	Proportion0	Proportion1	Proportion2	Proportion3	PtBiserial	Correlation0	Correlation1	Correlation2	Correlation3
ELA	7	117574	1	B-K	3	2629	1.577786231	0.104982883	0.367440091	0.372384937	0.155192088	0.465873686	-0.303029788	-0.209551065	0.151891382	0.332747919
ELA	7	587506	1	B-K	3	2629	0.647014074	0.486496767	0.379992393	0.133510841		0.297512201	-0.241674798	0.066301862	0.260525288	
ELA	7	905756	2	B-C	3	1675	0.826865672	0.489552239	0.194029851	0.31641791		0.281520147	-0.15389832	-0.238026249	0.367809879	
ELA	7	668895	2	B-K	3	1675	1.921791045	0.044179104	0.254925373	0.435820896	0.265074627	0.389087302	-0.252644427	-0.243208512	0.089538979	0.257180304
ELA	7	186363	3	B-C	3	1701	1.711934156	0.0781893	0.26925338	0.514991182	0.137566138	0.473452913	-0.194506356	-0.383038556	0.237534422	0.300223757
ELA	7	292463	3	B-C	3	1701	1.054673721	0.220458554	0.504409171	0.275132275		0.420620834	-0.369087694	0.021600366	0.318436614	
ELA	8	933619	0	A-K	3	6188	1.459922431	0.191499677	0.339851325	0.285875889	0.182773109	0.479844628	-0.253340714	-0.252406679	0.130699257	0.414472494
ELA	8	675505	0	A-C	3	6188	1.530542986	0.194731739	0.289754363	0.30575307	0.209760827	0.536278683	-0.283369503	-0.310939192	0.145697953	0.457198684
ELA	8	485942	0	A-K	3	6188	1.205559147	0.280542986	0.23335488	0.486102133		0.494226676	-0.311474342	-0.332823763	0.561632134	
ELA	8	203946	0	B-C	3	6188	0.935358759	0.325307046	0.414027149	0.260665805		0.31363921	-0.250591494	-0.008995494	0.27751895	
ELA	8	943260	0	B-C	3	6188	1.805914674	0.126535229	0.332417582	0.149644473	0.391402715	0.481556093	-0.257609559	-0.23158959	-0.142124132	0.502882165
ELA	8	871729	0	B-V	3	6188	0.935681965	0.380252101	0.303813833	0.315934066		0.314639195	-0.182297099	-0.184288778	0.372673299	
ELA	8	338688	1	A-K	3	2697	1.091212458	0.312198739	0.284390063	0.403411198		0.397690473	-0.225008031	-0.279140306	0.469225016	
ELA	8	281350	1	A-K	3	2697	1.808676307	0.139784946	0.222098628	0.327771598	0.310344828	0.604999416	-0.29558667	-0.41852946	0.072470757	0.524054101
ELA	8	795293	2	A-K	3	1749	2.1189251	0.072612922	0.186963979	0.289308176	0.451114923	0.540861086	-0.230710781	-0.367643863	-0.112267224	0.510674633
ELA	8	774383	2	A-C	3	1749	1.163522013	0.319611206	0.197255575	0.483133219		0.593434132	-0.453037467	-0.251897207	0.623354367	
ELA	8	738674	3	A-C	3	1742	1.920206659	0.086681975	0.219862227	0.380022962	0.313432836	0.566534314	-0.310565288	-0.368938592	0.078713309	0.435392263
ELA	8	768669	3	A-V	3	1742	0.822617681	0.378874856	0.419632606	0.201492537		0.331302348	-0.291489658	0.075688251	0.259405817	

Multiple-Choice Online Item Statistics

Column Heading	Definition
ContArea	Content
FormGrade	Grade
PubID	Form ID
FormNumber	Form
Standard1	Standard
Depth	Depth of Knowledge
N	N
PValue	P-Value
ProportionA	Proportion A
ProportionB	Proportion B
ProportionC	Proportion C
ProportionD	Proportion D
ProportionOMITS	Proportion Omits
PtBiserial	Point Biserial
CorrelationA	Correlation A
CorrelationB	Correlation B
CorrelationC	Correlation C
CorrelationD	Correlation D

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	Mean	Proportion0	Proportion1	Proportion2	Proportion3	Proportion4	PtBiserial	Correlation0	Correlation1	Correlation2	Correlation3	Correlation4	FinalB	FinalBErr	Infit	InfitMnSq	Outfit	OutfitMnSq	BiasCodeMALEFEMALE	BiasCodeWHITEBLACK	BiasCodeWHITEHISPANIC
ELA	4	877999	0	E	3	123378	1.631611795	0.056914523	0.377790206	0.455964597	0.095430304	0.013900371	0.565145304	-0.327850325	-0.368736196	0.312141327	0.285738064	0.130817548	1.3543	0.0044	-9.8992	0.7644	-9.8992	0.7642			
ELA	4	809761	1	E	3	1489	1.575554063	0.081262592	0.386836803	0.419744795	0.099395567	0.012760242	0.62375395	-0.386956012	-0.363552709	0.351581027	0.307159936	0.15484431	1.4876	0.0387	-9.8993	0.6735	-9.8993	0.6751	B+	A-	A-
ELA	4	107479	2	E	3	1488	1.568548387	0.084005376	0.402553763	0.38844086	0.110887097	0.014112903	0.633293094	-0.384408184	-0.371634152	0.338784277	0.336862218	0.152539974	1.4707	0.0381	-9.8993	0.6643	-9.8993	0.661	B+	A-	A-
ELA	4	588576	3	E	3	1484	1.387466307	0.111185984	0.479110512	0.330862534	0.068733154	0.010107817	0.640625854	-0.447884358	-0.29107127	0.438697108	0.264804929	0.127899449	1.7482	0.0394	-9.8993	0.6526	-9.8993	0.6526	B+	A-	A-
ELA	4	504626	4	E	3	1485	1.683501684	0.059259259	0.364309764	0.427609428	0.131313131	0.017508418	0.644672016	-0.337812816	-0.445915544	0.310431569	0.341419635	0.194113155	1.2475	0.0383	-9.8993	0.6586	-9.8993	0.6566	B+	B-	C-
ELA	4	319216	5	E	3	1485	1.721212121	0.065993266	0.325252525	0.452525253	0.134006734	0.022222222	0.602170226	-0.360201583	-0.385939654	0.275824495	0.321410031	0.15906869	1.2807	0.0382	-8.6893	0.7112	-8.7093	0.7115	B+	A-	A+
ELA	4	374263	6	E	3	1485	1.571043771	0.086868687	0.425589226	0.336026936	0.132659933	0.018855219	0.649488236	-0.395709937	-0.369613584	0.305144046	0.3711358	0.177713861	1.3914	0.0367	-9.8994	0.6486	-9.8994	0.6467	B+	B-	B-
ELA	4	117966	7	E	3	1486	1.565948856	0.076043069	0.405114401	0.404441454	0.105652759	0.008748318	0.640591153	-0.346239274	-0.435437336	0.390540672	0.338424128	0.105655613	1.5864	0.039	-9.8993	0.663	-9.8993	0.6626	B+	C-	B-
ELA	4	762654	8	E	3	1486	1.397039031	0.104979812	0.474427995	0.347240915	0.065275908	0.00807537	0.599509337	-0.374581873	-0.310031625	0.399611256	0.275233006	0.127313633	1.8717	0.0404	-8.2493	0.7237	-8.3993	0.7218	B+	B-	A-
ELA	4	151504	9	E	3	1490	1.438255034	0.120805369	0.436912752	0.336241611	0.095302013	0.010738255	0.641463222	-0.441939479	-0.284409811	0.372729187	0.321101053	0.142874675	1.7632	0.0377	-9.8993	0.6664	-9.8993	0.6665	B+	B-	A-
ELA	5	288366	0	E	3	122334	1.680121634	0.051874377	0.35034414	0.473997417	0.113353606	0.010430461	0.61821232	-0.310582705	-0.441088155	0.317594734	0.33617655	0.139312979	1.3519	0.0044	-9.8993	0.6908	-9.8993	0.6907			
ELA	5	156497	1	E	3	1489	1.505708529	0.104096709	0.419744795	0.352585628	0.113498993	0.010073875	0.65536653	-0.421969678	-0.331624371	0.33661399	0.37481582	0.128256063	1.6536	0.0375	-9.8994	0.6434	-9.8994	0.6439	A+	B-	A-
ELA	5	591847	2	E	3	1485	1.393939394	0.105050505	0.468686869	0.357575758	0.064646465	0.004040404	0.614710563	-0.417781299	-0.271784172	0.384865683	0.297896491	0.094756247	2.0134	0.0402	-9.8693	0.6821	-9.8593	0.6843	C+	A-	C-
ELA	5	575929	3	E	3	1489	1.657488247	0.067830759	0.366689053	0.423102754	0.124916051	0.017461383	0.618189303	-0.366726931	-0.339977799	0.223672485	0.352250547	0.222035571	1.3527	0.0378	-9.8993	0.6774	-9.8993	0.68	C+	C-	A-
ELA	5	258321	4	E	3	1485	1.453198653	0.081481481	0.486195286	0.337373737	0.087542088	0.007407407	0.608534749	-0.379848423	-0.325587405	0.34729616	0.326657766	0.118010607	1.6807	0.0397	-8.9393	0.7039	-8.9993	0.7005	B+	A-	B-
ELA	5	283032	5	E	3	1481	1.716407833	0.064145847	0.308575287	0.484132343	0.133018231	0.010128292	0.625460068	-0.329244028	-0.415941369	0.263013429	0.379020799	0.12624432	1.3699	0.0389	-9.8993	0.6656	-9.8993	0.6673	C+	B-	A-
ELA	5	580066	6	E	3	1487	1.558170814	0.07195696	0.400134499	0.436449227	0.080699395	0.010759919	0.664751045	-0.352335983	-0.425672309	0.375252985	0.351320807	0.172550266	1.5462	0.04	-9.8994	0.6242	-9.8994	0.6229	B+	B-	A-
ELA	5	254576	7	E	3	1481	1.59756921	0.07359892	0.364618501	0.461850101	0.090479406	0.009453072	0.674193123	-0.401715383	-0.428140649	0.41391612	0.320508169	0.130940212	1.6005	0.0404	-9.8994	0.6262	-9.8994	0.6277	B+	B-	C-
ELA	5	336383	8	E	3	1482	1.732118758	0.056005398	0.329959514	0.45951417	0.134952767	0.019568151	0.641704312	-0.310634907	-0.45153067	0.253288255	0.395204311	0.162260559	1.1855	0.0382	-9.8993	0.6585	-9.8993	0.6588	C+	A-	A-
ELA	5	695465	9	E	3	1485	1.551515152	0.064646465	0.441750842	0.381818182	0.101010101	0.010774411	0.65364625	-0.345453744	-0.427153655	0.350504924	0.369408507	0.149797995	1.4978	0.0394	-9.8993	0.6523	-9.8994	0.6483	B+	A-	A-
ELA	6	916343	0	E	3	120612	1.662330448	0.036704474	0.389389116	0.455062515	0.112559281	0.006284615	0.574528416	-0.259216279	-0.44349098	0.313996442	0.31989084	0.095257217	1.7423	0.0047	-9.8992	0.7625	-9.8992	0.7618			
ELA	6	205090	1	E	3	1490	1.50738255	0.054362416	0.510067114	0.320805369	0.103355705	0.011409396	0.631608222	-0.316320101	-0.44460318	0.371390803	0.341892861	0.155702205	1.8562	0.0406	-9.8993	0.662	-9.8993	0.6527	A+	C-	B-
ELA	6	280993	2	E	3	1493	1.634963161	0.054253182	0.401875419	0.409912927	0.122572003	0.01138647	0.680005146	-0.371693311	-0.447334122	0.318640918	0.400941585	0.144322175	1.7346	0.0395	-9.8994	0.6067	-9.8994	0.6065	A+	C-	B-
ELA	6	224574	3	E	3	1484	1.842991914	0.045822102	0.268867925	0.507412399	0.152291105	0.025606469	0.65564299	-0.326814908	-0.483711715	0.242758552	0.3686773	0.183388975	1.2632	0.0386	-9.8994	0.6379	-9.8994	0.6333	B+	A-	A-
ELA	6	516452	4	E	3	1483	1.804450438	0.025623736	0.328388402	0.476062036	0.155765341	0.014160486	0.630782681	-0.24987522	-0.499166664	0.231209449	0.384958872	0.159404828	1.3518	0.0406	-9.8993	0.659	-9.8993	0.6592	C+	B-	B-
ELA	6	407821	5	E	3	1493	1.689216343	0.033489618	0.389819156	0.440053583	0.127260549	0.009377093	0.643414206	-0.282882218	-0.505377447	0.327517246	0.368522373	0.124278652	1.6304	0.0411	-9.8994	0.6443	-9.8994	0.6441	B+	A-	A-
ELA	6	436903	6	E	3	1486	1.52422611	0.109017497	0.390309556	0.374831763	0.119111709	0.006729475	0.66288754	-0.397065637	-0.379851079	0.368660607	0.374818201	0.112243203	2.0163	0.0375	-9.8994	0.6478	-9.8994	0.6494	A+	A-	A-
ELA	6	479905	7	E	3	1487	1.513786147	0.047074647	0.46133154	0.424344317	0.065232011	0.002017485	0.598860759	-0.291926009	-0.44104464	0.421692356	0.292999419	0.020527326	2.1185	0.0436	-8.9193	0.7061	-8.9593	0.7041	A+	C-	A-
ELA	6	778655	8	E	3	1489	1.535258563	0.065815984	0.440564137	0.388851578	0.102081934	0.002686367	0.634806578	-0.347105917	-0.418076092	0.381664415	0.339655422	0.091463499	2.1132	0.0403	-9.8993	0.6607	-9.8993	0.6599	C+	A-	A-
ELA	6	370873	9	E	3	1478	1.660351827	0.035859269	0.389039242	0.458728011	0.111637348	0.00473613	0.570066712	-0.274056737	-0.430514939	0.313600135	0.314634202	0.080084483	1.7999	0.042	-8.0193	0.7361	-8.0093	0.7357	C+	B-	C-
ELA	7	207740	0	E	3	119053	1.934054581	0.034094059	0.280572518	0.432588847	0.222673935	0.030070641	0.611308719	-0.241672948	-0.475798913	0.12376801	0.39111832	0.196641124	0.9217	0.0041	-9.8993	0.7143	-9.8993	0.7157			
ELA	7	942206	1	E	3	1485	1.839057239	0.051178451	0.302356902	0.43030303	0.188552189	0.027609428	0.696776685	-0.36656887	-0.480194721	0.207750227	0.418200112	0.212876657	1.1391	0.0368	-9.8994	0.5865	-9.8994	0.5899	B+	A-	B-
ELA	7	944900	2	E	3	1483	1.898853675	0.049888854	0.269049225	0.439649359	0.215104518	0.026298045	0.650117092	-0.322349376	-0.44609112	0.128028673	0.422104688	0.193889111	1.0362	0.0361	-9.8994	0.6248	-9.8994	0.6281	C+	A-	C-
ELA	7	178341	3	E	3	1481	1.752869683	0.064821067	0.315327481	0.441593518	0.15867657	0.019581364	0.682293236	-0.341698482	-0.492563337	0.291226541	0.390810981	0.184679431	1.2796	0.037	-9.8994	0.5976	-9.8994	0.599	B+	C-	B-
ELA	7	295471	4	E	3	1477	1.837508463	0.028436019	0.315504401	0.45971564	0.182802979	0.013540961	0.654316738	-0.283892136	-0.486060579	0.176704026	0.431775922	0.156773921	1.1528	0.0389	-9.8994	0.6275	-9.8994	0.6306	C+	B-	A-
ELA	7	448268	5	E	3	1482	1.593792173	0.043859649	0.423751687	0.435222672	0.089068826	0.008097166	0.647807304	-0.287076349	-0.500866568	0.402131346	0.337162695	0.121434902	1.5602	0.0415	-9.8994	0.6372	-9.8994	0.6339	A+	B-	B-
ELA	7	899908	6	E	3	1488	1.875672043	0.033602151	0.291666667	0.473790323	0.16733871	0.033602151	0.66496212	-0.269156287	-0.508687324	0.182323102	0.386680591	0.246059562	0.9809	0.0375	-9.8994	0.605	-9.8994	0.6047	B+	A-	B-
ELA	7	887244	7	E	3	1479	1.757268425	0.045977011	0.359026369	0.411764706	0.15821501	0.025016903	0.654180964	-0.303756168	-0.488618336	0.257451069	0.38534825	0.196441481	1.2238	0.0382	-9.8994	0.6375	-9.8994	0.6401	C+	B-	A-
ELA	7	596554	8	E	3	1486	1.699192463	0.047779273	0.371467026	0.434724092	0.125841184	0.020188425	0.660735021	-0.325392269	-0.48001624	0.311262357	0.363371184	0.188628523	1.3111	0.0383	-9.8994	0.6127	-9.8994	0.613	C+	B-	B-
ELA	7	942867	9	E	3	1478	1.668470907	0.064952639	0.376184032	0.401217862	0.140730717	0.01691475	0.665992342	-0.352945276	-0.44861953	0.30464465	0.375242468	0.189961227	1.4485	0.0374	-9.8994	0.609	-9.8994	0.6132	B+	B-	B-
ELA	8	488975	0	E	3	119686	1.947186805	0.049771903	0.255075782	0.418929532	0.250639173	0.02553361	0.585900195	-0.288379364	-0.414593118	0.102160098	0.384769977	0.166454229	0.8512	0.004	-9.8993	0.7342	-9.8993	0.7349			
ELA	8	452528	1	E	3	1490	1.830872483	0.047651007	0.283892617	0.470469799	0.18590604	0.012080537	0.667000539	-0.317521145	-0.491553883	0.227100784	0.407909547	0.15774888	1.1727	0.0382	-9.8994	0.6039	-9.8994	0.6073	C+	B-	A-
ELA	8	824685	2	E	3	1492	1.903485255	0.042225201	0.268096515	0.441018767	0.241286863	0.007372654	0.660278839	-0.324262237	-0.47759768	0.154451953	0.444831052	0.114049302	1.2115	0.0381	-9.8994	0.6311	-9.8994	0.634	B+	A-	B-
ELA	8	212484	3	E	3	1485	1.862626263	0.074074074	0.258585859	0.416835017	0.231649832	0.018855219	0.680262975	-0.384799406	-0.428170303	0.15231582	0.452082572	0.164900315	1.0862	0.0356	-9.8994	0.5882	-9.8994	0.594	B+	C-	A-
ELA	8	947148	4	E	3	1485	1.960942761	0.046464646	0.247811448	0.418855219	0.272053872	0.014814815	0.662594054	-0.324130316	-0.453498375	0.070746223	0.4753279	0.145571746	1.0352	0.037	-9.8994	0.6332	-9.8994	0.6375	C+	A-	A-
ELA	8	753749	5	E	3	1487	1.843308675	0.043712172	0.280430397	0.477471419	0.185608608	0.012777404	0.642391375	-0.326717872	-0.45666234	0.20622944	0.390363808	0.152752902	1.1532	0.0387	-9.8994	0.6387	-9.8994	0.6415	C+	B-	B-
ELA	8	963547	6	E	3	1478	1.648849797	0.086603518	0.343707713	0.414749662	0.144113667	0.01082544	0.644806091	-0.406040607	-0.369446364	0.295331713	0.376424986	0.115585973	1.4609	0.037	-9.8994	0.6224	-9.8994	0.6264	C+	A-	B-
ELA	8	319420	7	E	3	1488	1.870967742	0.057795699	0.286290323	0.403897849	0.231182796	0.020833333	0.668850769	-0.333001374	-0.45072318	0.12726322	0.458295046	0.180566932	1.0655	0.0359	-9.8994	0.6011	-9.8994	0.6061	A+	B-	A-
ELA	8	661325	8	E	3	1480	1.768243243	0.072972973	0.282432432	0.455405405	0.181756757	0.007432432	0.660472624	-0.38095083	-0.417305243	0.235134135	0.416456317	0.107619338	1.4406	0.0374	-9.8994	0.6248	-9.8994	0.6302	B+	A-	A-
ELA	8	143933	9	E	3	1488	1.90188172	0.051075269	0.262768817	0.434811828	0.235887097	0.015456989	0.678156971	-0.337337219	-0.464847416	0.120481988	0.475986502	0.13824701	1.0585	0.0372	-9.8994	0.5937	-9.8994	0.5991	B+	B-	A-

Multiple-Choice Online Item Statistics

Column Heading	Definition
ContArea	Content
FormGrade	Grade
PubID	Form ID
FormNumber	Form
Standard1	Standard
Depth	Depth of Knowledge
N	N
PValue	P-Value
ProportionA	Proportion A
ProportionB	Proportion B
ProportionC	Proportion C
ProportionD	Proportion D
ProportionOMITS	Proportion Omits
PtBiserial	Point Biserial
CorrelationA	Correlation A
CorrelationB	Correlation B
CorrelationC	Correlation C
CorrelationD	Correlation D

ContArea	FormGrade	PubID	FormNumber	Standard1	Depth	N	Mean	Proportion0	Proportion1	Proportion2	Proportion3	Proportion4	PtBiserial	Correlation0	Correlation1	Correlation2	Correlation3	Correlation4
ELA	4	877999	0	E	3	3045	1.563546798	0.101149425	0.367159278	0.415106732	0.100164204	0.016420361	0.629020124	-0.387434272	-0.358742442	0.351099033	0.320973977	0.160390822
ELA	5	288366	0	E	3	4802	1.606205748	0.082673886	0.355268638	0.447105373	0.103082049	0.011870054	0.65281825	-0.355856006	-0.430432924	0.370876066	0.336460554	0.159720443
ELA	6	916343	0	E	3	5341	1.516944392	0.053360794	0.477625913	0.373525557	0.08968358	0.005804157	0.608656731	-0.271667645	-0.453388229	0.383123813	0.326148217	0.118516825
ELA	7	207740	0	E	3	6005	1.843796836	0.056619484	0.312073272	0.403830142	0.185845129	0.041631973	0.646524574	-0.294469521	-0.46167788	0.167877518	0.378911832	0.261373214
ELA	8	488975	0	E	3	6188	1.860051713	0.07967033	0.287330317	0.362960569	0.23335488	0.036683904	0.630872102	-0.328448549	-0.417170438	0.137256869	0.401594478	0.222642561

Multiple-Choice Online Item Statistics

Column Heading	Definition
ContArea	Content
FormGrade	Grade
PubID	Form ID
FormNumber	Form
Standard1	Standard
Depth	Depth of Knowledge
N	N
PValue	P-Value
ProportionA	Proportion A
ProportionB	Proportion B
ProportionC	Proportion C
ProportionD	Proportion D
ProportionOMITS	Proportion Omits
PtBiserial	Point Biserial
CorrelationA	Correlation A
CorrelationB	Correlation B
CorrelationC	Correlation C
CorrelationD	Correlation D

Open-Ended Paper/Pencil Item Statistics

Column Heading	Definition
ContArea	Content
FormGrade	Grade
PubID	Form ID
FormNumber	Form
Standard1	Standard
Depth	Depth of Knowledge
N	N
Mean	Mean
Proportion0	Proportion 0
Proportion1	Proportion 1
Proportion2	Proportion 2
Proportion3	Proportion 3
Proportion4	Proportion 4
PtBiserial	Point Biserial
Correlation0	Correlation 0
Correlation1	Correlation 1
Correlation2	Correlation 2
Correlation3	Correlation 3
Correlation4	Correlation 4
FinalB	IRT Difficulty Estimate
FinalBErr	IRT Difficulty Error
Infit	Infit
InfitMnSq	Infit Mean Square
Outfit	Outfit
OutfitMnSq	Outfit Mean Square
BiasCodeMALEFEMALE	Male/Female DIF Code
BiasCodeWHITEBLACK	White/Black DIF Code
BiasCodeWHITEHISPANIC	White/Hispanic DIF Code

APPENDIX G: 2018 TEST BOOK SECTION LAYOUT PLANS

ENGLISH LANGUAGE ARTS TEST/ANSWER BOOKLET SECTION LAYOUT FOR GRADES 4, 5, 6, 7, AND 8

English Language Arts Core	
Core/common standalone MC items	9
Core/common passage-based MC items	23
3 core 2 pt EBSR items	6
3 core 3 pt EBSR items	9
1 core 4 pt TDA	16 (weighted x 4)
Total	63 points

The estimated testing time for English language arts is approximately 225–246 minutes (including placeholder items and embedded field test items). [Timing assumes 30 min per TDA; 3 to 5 min per EBSR; 1½ to 2 min per MC, and 7 min per reading passage set.]

Section	Content	Number of MC/EBSR	MC/EBSR Item Breakdown	Number of WP/ TDA	WP/ TDA Item Breakdown	Estimated Number of Passages	Section Time (in minutes)
1	Conventions of Standard English (Writing) and Reading	21–24 MC 4–5 EBSR	4-5 core MC language items, 0-1 (EB) MC language item, 1 FT MC language item, 15-18 core MC reading items, 2-3 2pt EBSR reading items, 2-3 3pt EBSR reading items	0	N/A	3	67–78
2	Reading and Text Dependent Analysis (Reading/ Writing)	14 MC 2 EBSR	6 MC (EB) reading items, 8 FT MC reading items, 2 EBSR FT reading items	1	1–field test TDA	2	88
3	Conventions of Standard English (Writing), Reading and Text Dependent Analysis (Reading/ Writing)	11–14 MC	6–placeholder items, 10–field test items	1	1–field test TDA	2	70–80

Notes. 1) There were nine forms per grade.

English Language Arts Test/Answer Booklet Section Layout for Grade 3

English Language Arts Core	
Core/common standalone MC items	9
Core/common passage-based MC items	20
2 core 2 pt EBSR items	4
2 core 3 pt EBSR items	6
2 core 3 pt SA items	6
Total	45 points

The estimated testing time for reading is approximately 134–166 minutes (including equating block items and embedded field test items). [Timing assumes 5 to 10 min per SA, 3 to 5 min per EBSR, 1½ to 2 min per MC, and 7 min per reading passage set.]

Section	Content	Nbr of MC/EBSR	MC/EBSR Item Breakdown	Nbr of SA	SA Item Breakdown	Estimated Nbr of Passages	Section Time (in min)
1	Conventions of Standard English (Writing) and Reading	14–18 MC 1–3 EBSR	4-5 core MC language items, 0-1 (EB) MC language item, 1 FT MC language item, 8-12 core MC reading items, 0-2 2pt EBSR reading items, 0-2 3pt EBSR reading items	1	1 core	2	43–59
2	Reading	14 MC 2 EBSR	12 (EB) MC reading items, 8 MC FT reading items, 2 EBSR FT reading items	1	1 field test	2	48
3	Conventions of Standard English (Writing) and Reading	14–18 MC 1–3 EBSR	4-5 core MC language items, 0-1 (EB) MC language item, 1 FT MC language item, 8-12 core MC reading items, 0-2 2pt EBSR reading items, 0-2 3pt EBSR reading items	1	1 core	2	43–59

Notes. 1) There were nine forms per grade.

MATHEMATICS TEST/ANSWER BOOK SECTION LAYOUT FOR GRADES 3, 4, 5, 6, 7, AND 8

Mathematics Core	
Core/common MC items	40
3 core 4 pt OE items	12
Total	52 points

The estimated testing time for mathematics is approximately 156 minutes. [Timing assumes 5 to 10 min per OE and 1½ to 2 min per MC.]

Section	Content	Number of MC	MC Item Breakdown	Number of OE	OE Item Breakdown	Section Time (in minutes)
1	Mathematics	24	20–common (core) items (includes 3 non–calc in Grades 4–8) , 1 psychometric use/placeholder, 3–embedded field test items	2	2–common (core) items	78
2	Mathematics	24	20–common (core) items, 1– psychometric use/placeholder, 3–embedded field test items	2	2–common (core) item, 1–embedded field test item	78

Notes. 1) There were nine forms per grade. 2) The ruler items in Grade 3 and the protractor items in Grade 4 may fall in Section 1, 2, or 3. 3) Calculators are not allowed on the Grade 3 test. In Grades 4–8, a portion of section 1 is considered "non-calc."

SCIENCE TEST/ANSWER BOOK SECTION LAYOUT

General Information (see grade level page for specifics)

- Timing Key: MC = 1 to 1½ min; 2 pt OE = 5 min; 4 pt OE = 10 min; G8 Scenario stimulus = 3 min
- There are 12 forms per grade.
- Within a section at Grade 4, MC *most likely* will precede OE items.
- Within a section at Grade 8, non-scenario MC items *most likely* will precede scenario-based MC items which will precede OE items.
- Grade 4 and 8 will have both Test Booklets and scannable Answer Booklets.
- *Generally*, core items will precede equating block items, which will precede field test items.

Science: Grade 4

Core/common MC items	38 (16 core linking)
5 core 2 pt OE items	5 (2 core linking)
Total	48 points

The estimated Grade 4 testing time for science is approximately 76 minutes. [Timing assumes 5 min per 2 pt OE and 1 min per MC.]

Grade	Section	Number of MC	Estimated MC Item Breakdown	Number of OE	Estimated OE Item Breakdown	Testing Time
4	1	23	19–core items, 1–equating block item, 3–embedded field-test items	3	3-common (core) items	38
4	2	23	29-common (core) items, 1-equating block item, 4-embedded field test items	3	2-common (core) items, 1-embedded field test item	38

Science: Grade 8

Core/common MC items	38 (16 core linking)
5 core 2 pt OE items	10 (2 core linking)
Total	48 points

The estimated grade 8 testing time is 90 minutes per grade for science. [Timing assumes 5 min per 2 pt OE, 1 min per MC, and 3 min per grade 8 scenario.]

Grade	Section	Number of MC	Estimated MC Item Breakdown	Number of OE	Estimated OE Item Breakdown	Testing Time
8	1	24	17–core items, 4–embedded field test scenario-based items, 1–equating block item, 2–embedded field-test items	3	3-common (core) items	45
8	2	24	17–core items, 4–core scenario-based items, 1–equating block item, 2–embedded field-test items	3	2-common (core) items, 1-embedded field test item	45

APPENDIX H: MEAN RAW SCORES BY FORM

GRADE 3 ENGLISH LANGUAGE ARTS

Mode	Form	N	N Items	Total Points	Min	Max	Mean	Median	STD
All	00	122397	35	45	0	45	24.85	25	8.90
All	01	14745	35	45	2	45	24.39	25	9.05
All	02	14054	35	45	2	45	24.78	25	8.92
All	03	14051	35	45	3	45	24.81	25	8.90
All	04	13348	35	45	0	45	24.71	25	8.89
All	05	13314	35	45	3	45	24.91	25	8.77
All	06	13277	35	45	2	45	24.98	26	8.89
All	07	13196	35	45	3	45	24.87	25	8.82
All	08	13187	35	45	1	45	25.13	26	8.93
All	09	13225	35	45	3	45	25.10	26	8.86
PPT	00	119543	35	45	0	45	24.89	25	8.89
PPT	01	13376	35	45	2	45	24.78	25	8.94
PPT	02	13305	35	45	2	45	24.73	25	8.96
PPT	03	13315	35	45	3	45	24.78	25	8.94
PPT	04	13348	35	45	0	45	24.71	25	8.89
PPT	05	13314	35	45	3	45	24.91	25	8.77
PPT	06	13277	35	45	2	45	24.98	26	8.89
PPT	07	13196	35	45	3	45	24.87	25	8.82
PPT	08	13187	35	45	1	45	25.13	26	8.93
PPT	09	13225	35	45	3	45	25.10	26	8.86
CBT	00	2854	35	45	3	45	23.15	23	9.00
CBT	01	1369	35	45	4	45	20.57	19	9.19
CBT	02	749	35	45	3	42	25.65	27	8.16
CBT	03	736	35	45	4	44	25.43	26	8.08

GRADE 4 ENGLISH LANGUAGE ARTS

Mode	Form	N	N Items	Total Points	Min	Max	Mean	Median	STD
All	00	126223	39	63	0	63	34.17	35	11.69
All	01	15229	39	63	2	63	33.64	35	11.78
All	02	14482	39	63	1	63	34.19	35	11.68
All	03	14476	39	63	0	62	34.19	35	11.72
All	04	13650	39	63	4	63	33.99	35	11.55
All	05	13704	39	63	2	63	34.60	36	11.83
All	06	13679	39	63	3	63	34.19	35	11.61
All	07	13655	39	63	4	63	34.33	35	11.77
All	08	13675	39	63	2	63	34.23	35	11.67
All	09	13673	39	63	2	63	34.23	35	11.60
PPT	00	123181	39	63	0	63	34.23	35	11.68
PPT	01	13812	39	63	2	63	34.20	35	11.58
PPT	02	13670	39	63	1	63	34.13	35	11.70
PPT	03	13663	39	63	0	62	34.16	35	11.75
PPT	04	13650	39	63	4	63	33.99	35	11.55
PPT	05	13704	39	63	2	63	34.60	36	11.83
PPT	06	13679	39	63	3	63	34.19	35	11.61
PPT	07	13655	39	63	4	63	34.33	35	11.77
PPT	08	13675	39	63	2	63	34.23	35	11.67
PPT	09	13673	39	63	2	63	34.23	35	11.60
CBT	00	3042	39	63	4	62	31.77	32	12.19
CBT	01	1417	39	63	6	62	28.24	26	12.37
CBT	02	812	39	63	4	61	35.10	36	11.20
CBT	03	813	39	63	7	62	34.61	35	11.12

GRADE 5 ENGLISH LANGUAGE ARTS

Mode	Form	N	N Items	Total Points	Min	Max	Mean	Median	STD
All	00	126761	39	63	1	63	32.49	33	11.32
All	01	15793	39	63	2	63	31.80	32	11.54
All	02	14832	39	63	2	62	32.72	33	11.26
All	03	14804	39	63	5	62	32.62	33	11.15
All	04	13538	39	63	4	62	32.37	33	11.34
All	05	13543	39	63	2	63	32.50	33	11.33
All	06	13567	39	63	4	62	32.71	33	11.30
All	07	13566	39	63	1	63	32.71	33	11.27
All	08	13532	39	63	3	62	32.64	33	11.32
All	09	13586	39	63	2	62	32.39	33	11.34
PPT	00	121976	39	63	1	63	32.54	33	11.31
PPT	01	13604	39	63	2	63	32.46	33	11.34
PPT	02	13534	39	63	2	62	32.62	33	11.31
PPT	03	13506	39	63	5	62	32.45	33	11.19
PPT	04	13538	39	63	4	62	32.37	33	11.34
PPT	05	13543	39	63	2	63	32.50	33	11.33
PPT	06	13567	39	63	4	62	32.71	33	11.30
PPT	07	13566	39	63	1	63	32.71	33	11.27
PPT	08	13532	39	63	3	62	32.64	33	11.32
PPT	09	13586	39	63	2	62	32.39	33	11.34
CBT	00	4785	39	63	5	62	31.15	31	11.68
CBT	01	2189	39	63	5	61	27.66	26	11.92
CBT	02	1298	39	63	7	61	33.83	34	10.62
CBT	03	1298	39	63	5	62	34.36	35	10.61

GRADE 6 ENGLISH LANGUAGE ARTS

Mode	Form	N	N Items	Total Points	Min	Max	Mean	Median	STD
All	00	125341	39	63	3	63	34.49	35	11.64
All	01	15816	39	63	3	62	33.63	34	11.82
All	02	14762	39	63	5	62	34.60	35	11.53
All	03	14731	39	63	4	63	34.57	36	11.74
All	04	13381	39	63	3	63	34.68	36	11.59
All	05	13296	39	63	3	63	34.75	36	11.50
All	06	13356	39	63	3	63	34.63	36	11.80
All	07	13337	39	63	5	63	34.41	35	11.58
All	08	13323	39	63	3	62	34.64	36	11.54
All	09	13339	39	63	4	63	34.60	36	11.62
PPT	00	120072	39	63	3	63	34.60	36	11.63
PPT	01	13371	39	63	3	62	34.49	35	11.65
PPT	02	13353	39	63	5	62	34.58	35	11.59
PPT	03	13316	39	63	4	63	34.60	36	11.77
PPT	04	13381	39	63	3	63	34.68	36	11.59
PPT	05	13296	39	63	3	63	34.75	36	11.50
PPT	06	13356	39	63	3	63	34.63	36	11.80
PPT	07	13337	39	63	5	63	34.41	35	11.58
PPT	08	13323	39	63	3	62	34.64	36	11.54
PPT	09	13339	39	63	4	63	34.60	36	11.62
CBT	00	5269	39	63	5	62	31.93	32	11.73
CBT	01	2445	39	63	6	61	28.94	27	11.64
CBT	02	1409	39	63	6	60	34.80	36	10.89
CBT	03	1415	39	63	5	62	34.25	35	11.47

GRADE 7 ENGLISH LANGUAGE ARTS

Mode	Form	N	N Items	Total Points	Min	Max	Mean	Median	STD
All	00	124226	39	63	0	63	34.95	36	11.46
All	01	15814	39	63	0	63	34.23	35	11.79
All	02	14843	39	63	4	63	34.83	36	11.37
All	03	14859	39	63	3	63	35.06	36	11.28
All	04	13101	39	63	1	62	34.91	36	11.51
All	05	13114	39	63	3	62	34.97	36	11.40
All	06	13065	39	63	3	63	35.07	36	11.36
All	07	13162	39	63	4	62	35.33	36	11.50
All	08	13167	39	63	4	63	35.21	36	11.45
All	09	13101	39	63	3	63	35.12	36	11.42
PPT	00	118282	39	63	0	63	35.06	36	11.44
PPT	01	13220	39	63	0	63	35.01	36	11.58
PPT	02	13186	39	63	4	63	34.83	36	11.42
PPT	03	13166	39	63	3	63	35.06	36	11.30
PPT	04	13101	39	63	1	62	34.91	36	11.51
PPT	05	13114	39	63	3	62	34.97	36	11.40
PPT	06	13065	39	63	3	63	35.07	36	11.36
PPT	07	13162	39	63	4	62	35.33	36	11.50
PPT	08	13167	39	63	4	63	35.21	36	11.45
PPT	09	13101	39	63	3	63	35.12	36	11.42
CBT	00	5944	39	63	6	62	32.86	33	11.72
CBT	01	2594	39	63	6	62	30.21	29	12.04
CBT	02	1657	39	63	7	61	34.79	35	10.97
CBT	03	1693	39	63	8	61	35.03	35	11.13

GRADE 8 ENGLISH LANGUAGE ARTS

Mode	Form	N	N Items	Total Points	Min	Max	Mean	Median	STD
All	00	124907	39	63	1	63	35.62	37	11.65
All	01	15948	39	63	4	62	34.70	36	11.83
All	02	14911	39	63	5	63	35.61	37	11.65
All	03	14927	39	63	1	63	35.63	37	11.55
All	04	13167	39	63	1	63	35.91	37	11.60
All	05	13226	39	63	5	63	35.92	37	11.70
All	06	13166	39	63	4	62	35.78	37	11.55
All	07	13190	39	63	4	63	35.71	37	11.59
All	08	13198	39	63	5	62	35.76	37	11.60
All	09	13174	39	63	5	63	35.72	37	11.68
PPT	00	118818	39	63	1	63	35.74	37	11.62
PPT	01	13297	39	63	4	62	35.54	37	11.57
PPT	02	13189	39	63	5	63	35.64	37	11.65
PPT	03	13211	39	63	1	63	35.68	37	11.59
PPT	04	13167	39	63	1	63	35.91	37	11.60
PPT	05	13226	39	63	5	63	35.92	37	11.70
PPT	06	13166	39	63	4	62	35.78	37	11.55
PPT	07	13190	39	63	4	63	35.71	37	11.59
PPT	08	13198	39	63	5	62	35.76	37	11.60
PPT	09	13174	39	63	5	63	35.72	37	11.68
CBT	00	6089	39	63	4	61	33.23	34	12.05
CBT	01	2651	39	63	4	60	30.50	29	12.21
CBT	02	1722	39	63	6	61	35.42	37	11.67
CBT	03	1716	39	63	4	59	35.25	36	11.30

GRADE 3 MATHEMATICS

Mode	Form	N	N Items	Total Points	Min	Max	Mean	Median	STD
All	00	122563	43	52	0	52	26.98	27	11.70
All	01	15099	43	52	0	52	25.84	25	11.91
All	02	14018	43	52	2	52	27.37	28	11.62
All	03	13985	43	52	2	52	27.20	27	11.79
All	04	13258	43	52	1	52	26.99	27	11.70
All	05	13307	43	52	1	52	27.04	27	11.57
All	06	13186	43	52	2	52	27.31	28	11.65
All	07	13206	43	52	2	52	26.95	27	11.48
All	08	13231	43	52	1	52	27.13	27	11.67
All	09	13273	43	52	2	52	27.11	27	11.76
PPT	00	119594	43	52	0	52	27.02	27	11.69
PPT	01	13610	43	52	0	52	26.31	26	11.85
PPT	02	13265	43	52	2	52	27.26	27	11.64
PPT	03	13258	43	52	2	52	27.11	27	11.83
PPT	04	13258	43	52	1	52	26.99	27	11.70
PPT	05	13307	43	52	1	52	27.04	27	11.57
PPT	06	13186	43	52	2	52	27.31	28	11.65
PPT	07	13206	43	52	2	52	26.95	27	11.48
PPT	08	13231	43	52	1	52	27.13	27	11.67
PPT	09	13273	43	52	2	52	27.11	27	11.76
CBT	00	2969	43	52	4	52	25.32	25	11.90
CBT	01	1489	43	52	4	51	21.56	19	11.61
CBT	02	753	43	52	5	52	29.39	30	11.09
CBT	03	727	43	52	4	51	28.79	29	10.83

GRADE 4 MATHEMATICS

Mode	Form	N	N Items	Total Points	Min	Max	Mean	Median	STD
All	00	126481	43	52	0	52	25.82	25	11.69
All	01	15667	43	52	0	52	24.68	23	11.81
All	02	14467	43	52	0	52	25.98	25	11.70
All	03	14439	43	52	3	52	25.92	25	11.68
All	04	13635	43	52	1	52	25.88	25	11.58
All	05	13657	43	52	2	52	26.11	25	11.77
All	06	13667	43	52	0	52	25.89	25	11.67
All	07	13646	43	52	1	52	25.98	25	11.70
All	08	13687	43	52	1	52	26.06	25	11.60
All	09	13616	43	52	0	52	26.04	25	11.62
PPT	00	123348	43	52	0	52	25.86	25	11.69
PPT	01	14105	43	52	0	52	25.09	24	11.76
PPT	02	13684	43	52	0	52	25.86	25	11.72
PPT	03	13651	43	52	3	52	25.84	25	11.70
PPT	04	13635	43	52	1	52	25.88	25	11.58
PPT	05	13657	43	52	2	52	26.11	25	11.77
PPT	06	13667	43	52	0	52	25.89	25	11.67
PPT	07	13646	43	52	1	52	25.98	25	11.70
PPT	08	13687	43	52	1	52	26.06	25	11.60
PPT	09	13616	43	52	0	52	26.04	25	11.62
CBT	00	3133	43	52	2	51	24.40	23	11.89
CBT	01	1562	43	52	2	51	21.00	18	11.57
CBT	02	783	43	52	2	51	28.18	29	11.17
CBT	03	788	43	52	3	51	27.37	27	11.30

GRADE 5 MATHEMATICS

Mode	Form	N	N Items	Total Points	Min	Max	Mean	Median	STD
All	00	126868	43	52	0	52	26.48	26	11.80
All	01	16328	43	52	1	52	25.35	24	12.04
All	02	14826	43	52	2	52	26.81	26	11.75
All	03	14876	43	52	0	52	26.47	25	11.69
All	04	13521	43	52	3	52	26.72	26	11.77
All	05	13461	43	52	3	52	26.71	26	11.87
All	06	13440	43	52	2	52	26.63	26	11.75
All	07	13464	43	52	1	52	26.55	26	11.80
All	08	13521	43	52	2	52	26.59	26	11.65
All	09	13431	43	52	1	52	26.68	26	11.76
PPT	00	121794	43	52	0	52	26.51	26	11.78
PPT	01	13926	43	52	1	52	25.81	25	11.96
PPT	02	13502	43	52	2	52	26.63	26	11.76
PPT	03	13528	43	52	0	52	26.31	25	11.70
PPT	04	13521	43	52	3	52	26.72	26	11.77
PPT	05	13461	43	52	3	52	26.71	26	11.87
PPT	06	13440	43	52	2	52	26.63	26	11.75
PPT	07	13464	43	52	1	52	26.55	26	11.80
PPT	08	13521	43	52	2	52	26.59	26	11.65
PPT	09	13431	43	52	1	52	26.68	26	11.76
CBT	00	5074	43	52	4	52	25.65	24	12.14
CBT	01	2402	43	52	4	52	22.68	19	12.14
CBT	02	1324	43	52	4	52	28.66	28	11.52
CBT	03	1348	43	52	5	51	27.98	28	11.49

GRADE 6 MATHEMATICS

Mode	Form	N	N Items	Total Points	Min	Max	Mean	Median	STD
All	00	125385	43	52	2	52	26.59	26	11.35
All	01	16364	43	52	4	52	25.54	24	11.43
All	02	14589	43	52	3	52	26.85	26	11.33
All	03	14608	43	52	2	52	26.75	26	11.31
All	04	13339	43	52	2	52	26.80	26	11.33
All	05	13331	43	52	3	52	26.78	26	11.36
All	06	13304	43	52	3	52	26.60	26	11.36
All	07	13299	43	52	3	52	26.74	26	11.37
All	08	13289	43	52	2	52	26.72	26	11.24
All	09	13262	43	52	3	52	26.76	26	11.33
PPT	00	120214	43	52	2	52	26.66	26	11.34
PPT	01	13886	43	52	4	52	26.18	25	11.39
PPT	02	13247	43	52	3	52	26.75	26	11.33
PPT	03	13257	43	52	2	52	26.67	26	11.32
PPT	04	13339	43	52	2	52	26.80	26	11.33
PPT	05	13331	43	52	3	52	26.78	26	11.36
PPT	06	13304	43	52	3	52	26.60	26	11.36
PPT	07	13299	43	52	3	52	26.74	26	11.37
PPT	08	13289	43	52	2	52	26.72	26	11.24
PPT	09	13262	43	52	3	52	26.76	26	11.33
CBT	00	5171	43	52	4	52	24.94	23	11.46
CBT	01	2478	43	52	4	51	21.99	19	10.98
CBT	02	1342	43	52	5	52	27.81	27	11.26
CBT	03	1351	43	52	5	52	27.49	27	11.20

GRADE 7 MATHEMATICS

Mode	Form	N	N Items	Total Points	Min	Max	Mean	Median	STD
All	00	124225	43	52	1	52	26.44	26	11.93
All	01	16240	43	52	1	52	25.45	24	12.14
All	02	14670	43	52	2	52	26.65	26	11.98
All	03	14670	43	52	3	52	26.57	26	11.82
All	04	13110	43	52	2	52	26.64	26	11.91
All	05	13111	43	52	3	52	26.60	26	11.94
All	06	13090	43	52	3	52	26.61	26	11.86
All	07	13158	43	52	1	52	26.66	26	11.89
All	08	13083	43	52	2	52	26.47	26	11.84
All	09	13093	43	52	2	52	26.50	26	11.91
PPT	00	118460	43	52	1	52	26.49	26	11.93
PPT	01	13638	43	52	1	52	26.04	25	12.13
PPT	02	13085	43	52	2	52	26.50	26	12.01
PPT	03	13092	43	52	3	52	26.42	26	11.87
PPT	04	13110	43	52	2	52	26.64	26	11.91
PPT	05	13111	43	52	3	52	26.60	26	11.94
PPT	06	13090	43	52	3	52	26.61	26	11.86
PPT	07	13158	43	52	1	52	26.66	26	11.89
PPT	08	13083	43	52	2	52	26.47	26	11.84
PPT	09	13093	43	52	2	52	26.50	26	11.91
CBT	00	5765	43	52	3	52	25.35	24	11.90
CBT	01	2602	43	52	3	52	22.36	19	11.73
CBT	02	1585	43	52	4	51	27.84	27	11.63
CBT	03	1578	43	52	4	52	27.78	28	11.31
PPT	12	10106	63	68	STD	68	47.99	51	13.43
CBT	01	1003	63	68	9	68	44.02	47	25.33
CBT	03	27.32	63	68	8	67	49.87	52	11.93

GRADE 8 MATHEMATICS

Mode	Form	N	N Items	Total Points	Min	Max	Mean	Median	STD
All	00	124780	43	52	0	52	26.66	26	11.48
All	01	16402	43	52	3	52	25.61	24	11.55
All	02	14775	43	52	0	52	26.81	26	11.45
All	03	14832	43	52	3	52	26.70	26	11.38
All	04	13176	43	52	2	52	26.77	26	11.42
All	05	13130	43	52	3	52	26.83	26	11.62
All	06	13128	43	52	1	52	26.93	26	11.50
All	07	13130	43	52	1	52	26.74	26	11.43
All	08	13079	43	52	3	52	26.99	26	11.44
All	09	13128	43	52	3	52	26.81	26	11.49
PPT	00	118800	43	52	0	52	26.75	26	11.48
PPT	01	13754	43	52	3	52	26.19	25	11.50
PPT	02	13110	43	52	0	52	26.85	26	11.49
PPT	03	13165	43	52	3	52	26.69	26	11.42
PPT	04	13176	43	52	2	52	26.77	26	11.42
PPT	05	13130	43	52	3	52	26.83	26	11.62
PPT	06	13128	43	52	1	52	26.93	26	11.50
PPT	07	13130	43	52	1	52	26.74	26	11.43
PPT	08	13079	43	52	3	52	26.99	26	11.44
PPT	09	13128	43	52	3	52	26.81	26	11.49
CBT	00	5980	43	52	3	52	24.85	24	11.40
CBT	01	2648	43	52	3	52	22.62	20	11.35
CBT	02	1665	43	52	5	51	26.51	26	11.13
CBT	03	1667	43	52	4	51	26.75	26	11.12

GRADE 4 SCIENCE

Mode	Form	N	N Items	Total Points	Min	Max	Mean	Median	STD
All	00	126353	43	48	1	48	25.25	25	9.38
All	01	12490	43	48	2	48	24.60	24	9.54
All	02	11143	43	48	2	48	25.56	26	9.34
All	03	11174	43	48	3	48	25.40	26	9.33
All	04	10163	43	48	1	47	25.06	25	9.35
All	05	10189	43	48	3	47	25.23	25	9.30
All	06	10185	43	48	1	48	25.15	25	9.36
All	07	10116	43	48	1	48	25.20	25	9.38
All	08	10164	43	48	2	48	25.49	26	9.43
All	09	10183	43	48	2	48	25.26	25	9.34
All	10	10217	43	48	1	47	25.44	26	9.42
All	11	10134	43	48	2	47	25.31	25	9.39
All	12	10195	43	48	2	47	25.37	26	9.37
PPT	00	122531	43	48	1	48	25.24	25	9.38
PPT	01	10687	43	48	2	48	24.88	25	9.50
PPT	02	10132	43	48	2	48	25.35	26	9.37
PPT	03	10166	43	48	3	48	25.21	25	9.36
PPT	04	10163	43	48	1	47	25.06	25	9.35
PPT	05	10189	43	48	3	47	25.23	25	9.30
PPT	06	10185	43	48	1	48	25.15	25	9.36
PPT	07	10116	43	48	1	48	25.20	25	9.38
PPT	08	10164	43	48	2	48	25.49	26	9.43
PPT	09	10183	43	48	2	48	25.26	25	9.34
PPT	10	10217	43	48	1	47	25.44	26	9.42
PPT	11	10134	43	48	2	47	25.31	25	9.39
PPT	12	10195	43	48	2	47	25.37	26	9.37
CBT	00	3822	43	48	3	47	25.33	26	9.47
CBT	01	1803	43	48	3	47	22.90	22	9.58
CBT	02	1011	43	48	6	45	27.67	29	8.79
CBT	03	1008	43	48	4	47	27.32	28	8.88

GRADE 8 SCIENCE

Mode	Form	N	N Items	Total Points	Min	Max	Mean	Median	STD
All	00	124417	43	48	0	48	23.85	24	9.17
All	01	13520	43	48	2	48	23.00	22	9.28
All	02	11838	43	48	3	48	24.10	24	9.11
All	03	11933	43	48	3	47	24.07	24	9.12
All	04	9704	43	48	2	48	24.12	24	9.19
All	05	9689	43	48	1	47	23.95	24	9.16
All	06	9653	43	48	3	48	24.06	24	9.28
All	07	9711	43	48	3	48	23.89	24	9.07
All	08	9707	43	48	2	47	23.85	24	9.15
All	09	9679	43	48	3	47	23.82	24	9.17
All	10	9671	43	48	0	47	23.91	24	9.22
All	11	9662	43	48	3	48	23.85	24	9.09
All	12	9650	43	48	2	48	23.89	24	9.09
PPT	00	116709	43	48	0	48	23.88	24	9.17
PPT	01	10255	43	48	2	48	23.38	23	9.29
PPT	02	9619	43	48	3	48	23.99	24	9.16
PPT	03	9709	43	48	3	47	23.94	24	9.20
PPT	04	9704	43	48	2	48	24.12	24	9.19
PPT	05	9689	43	48	1	47	23.95	24	9.16
PPT	06	9653	43	48	3	48	24.06	24	9.28
PPT	07	9711	43	48	3	48	23.89	24	9.07
PPT	08	9707	43	48	2	47	23.85	24	9.15
PPT	09	9679	43	48	3	47	23.82	24	9.17
PPT	10	9671	43	48	0	47	23.91	24	9.22
PPT	11	9662	43	48	3	48	23.85	24	9.09
PPT	12	9650	43	48	2	48	23.89	24	9.09
CBT	00	7708	43	48	3	48	23.41	23	9.06
CBT	01	3265	43	48	3	47	21.81	20	9.15
CBT	02	2219	43	48	3	48	24.54	25	8.86
CBT	03	2224	43	48	4	47	24.63	25	8.77

APPENDIX I: DEMOGRAPHIC CHARACTERISTICS OF STUDENTS

Demographic Characteristics of Students Taking the 2018 PSSA: English Language Arts

Demographic or Educational Characteristic	Gr 3 PPT	Gr 3 CBT	Gr 3 Total	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 5 PPT	Gr 5 CBT	Gr 5 Total	Gr 6 PPT	Gr 6 CBT	Gr 6 Total	Gr 7 PPT	Gr 7 CBT	Gr 7 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Female (Number)	58,747	1,330	60,077	60,327	1,375	61,702	59,870	2,230	62,100	58,950	2,438	61,388	57,838	2,742	60,580	57,805	2,853	60,658
Female (Percent)	49.1	46.6	49.1	49	45.2	48.9	49.1	46.6	49	49.1	46.3	49	48.9	46.1	48.8	48.7	46.9	48.6
Male (Number)	60,796	1,524	62,320	62,854	1,667	64,521	62,106	2,555	64,661	61,122	2,831	63,953	60,444	3,202	63,646	61,013	3,236	64,249
Male (Percent)	50.9	53.4	50.9	51	54.8	51.1	50.9	53.4	51	50.9	53.7	51	51.1	53.9	51.2	51.3	53.1	51.4
American Indian/Alaskan Native (not Hispanic) (Number)	164	9	173	179	7	186	183	8	191	162	6	168	186	10	196	151	15	166
American Indian/Alaskan Native (not Hispanic) (Percent)	.1	.3	.1	.1	.2	.1	.2	.2	.2	.1	.1	.1	.2	.2	.2	.1	.2	.1
Asian (not Hispanic) (Number)	4,852	91	4,943	4,765	109	4,874	4,856	184	5,040	4,711	199	4,910	4,763	134	4,897	4,953	139	5,092
Asian (not Hispanic) (Percent)	4.1	3.2	4	3.9	3.6	3.9	4	3.8	4	3.9	3.8	3.9	4	2.3	3.9	4.2	2.3	4.1
Black or African American (not Hispanic) (Number)	18,153	331	18,484	18,513	368	18,881	18,213	477	18,690	17,363	612	17,975	17,274	436	17,710	16,784	487	17,271
Black or African American (not Hispanic) (Percent)	15.2	11.6	15.1	15	12.1	15	14.9	10	14.7	14.5	11.6	14.3	14.6	7.3	14.3	14.1	8	13.8
Hispanic (any race) (Number)	14,633	262	14,895	14,755	267	15,022	14,510	519	15,029	13,682	723	14,405	13,218	705	13,923	12,791	756	13,547
Hispanic (any race) (Percent)	12.2	9.2	12.2	12	8.8	11.9	11.9	10.8	11.9	11.4	13.7	11.5	11.2	11.9	11.2	10.8	12.4	10.8
Multi-Racial (not Hispanic) (Number)	5,722	139	5,861	5,739	140	5,879	5,415	207	5,622	4,851	203	5,054	4,346	160	4,506	3,843	178	4,021
Multi-Racial (not Hispanic) (Percent)	4.8	4.9	4.8	4.7	4.6	4.7	4.4	4.3	4.4	4	3.9	4	3.7	2.7	3.6	3.2	2.9	3.2
White (not Hispanic) (Number)	75,926	2,020	77,946	79,139	2,148	81,287	78,689	3,386	82,075	79,201	3,523	82,724	78,423	4,495	82,918	80,204	4,512	84,716
White (not Hispanic) (Percent)	63.5	70.8	63.7	64.2	70.6	64.4	64.5	70.8	64.7	66	66.9	66	66.3	75.6	66.7	67.5	74.1	67.8
Native Hawaiian or Other Pacific Islander (not Hispanic) (Number)	93	2	95	91	3	94	110	4	114	102	3	105	72	4	76	92	2	94
Native Hawaiian or Other Pacific Islander (not Hispanic) (Percent)	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	0	.1
IEP (not gifted) (Number)	19,465	753	20,218	20,950	899	21,849	20,729	1,254	21,983	19,758	1,544	21,302	19,134	1,645	20,779	18,861	1,731	20,592
IEP (not gifted) (Percent)	16.3	26.4	16.5	17	29.6	17.3	17	26.2	17.3	16.5	29.3	17	16.2	27.7	16.7	15.9	28.4	16.5
Student exited IEP in last 2 years (Number)	2,328	68	2,396	2,774	64	2,838	3,037	131	3,168	3,047	130	3,177	2,676	128	2,804	2,387	99	2,486

Demographic or Educational Characteristic	Gr 3 PPT	Gr 3 CBT	Gr 3 Total	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 5 PPT	Gr 5 CBT	Gr 5 Total	Gr 6 PPT	Gr 6 CBT	Gr 6 Total	Gr 7 PPT	Gr 7 CBT	Gr 7 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Student exited IEP in last 2 years (Percent)	1.9	2.4	2	2.3	2.1	2.2	2.5	2.7	2.5	2.5	2.5	2.5	2.3	2.2	2.3	2	1.6	2
Title I (Number)	62,055	1,008	63,063	62,614	1,004	63,618	56,931	1,852	58,783	43,528	2,125	45,653	33,529	1,621	35,150	32,614	1,543	34,157
Title I (Percent)	51.9	35.3	51.5	50.8	33	50.4	46.7	38.7	46.4	36.3	40.3	36.4	28.3	27.3	28.3	27.4	25.3	27.3
Title III served (Number)	4,968	82	5,050	4,758	76	4,834	3,908	115	4,023	3,480	132	3,612	3,164	126	3,290	3,029	133	3,162
Title III served (Percent)	4.2	2.9	4.1	3.9	2.5	3.8	3.2	2.4	3.2	2.9	2.5	2.9	2.7	2.1	2.6	2.5	2.2	2.5
Title III not served (Number)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Title III not served (Percent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Migrant student (Number)	198	2	200	201	0	201	202	2	204	191	13	204	167	6	173	146	8	154
Migrant student (Percent)	.2	.1	.2	.2	0	.2	.2	0	.2	.2	.2	.2	.1	.1	.1	.1	.1	.1
EL enrolled first year (Number)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EL enrolled first year (Percent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EL enrolled not first year (Number)	5,263	95	5,358	5,019	83	5,102	4,052	126	4,178	3,618	145	3,763	3,320	137	3,457	3,148	141	3,289
EL enrolled not first year (Percent)	4.4	3.3	4.4	4.1	2.7	4	3.3	2.6	3.3	3	2.8	3	2.8	2.3	2.8	2.6	2.3	2.6
Exited ESL/bilingual program and in first year of monitoring (Number)	91	5	96	163	1	164	264	7	271	287	26	313	231	7	238	248	19	267
Exited ESL/bilingual program and in first year of monitoring (Percent)	.1	.2	.1	.1	0	.1	.2	.1	.2	.2	.5	.2	.2	.1	.2	.2	.3	.2
Exited ESL/bilingual program and in 2nd year of monitoring (Number)	426	12	438	860	18	878	1,294	49	1,343	898	28	926	547	14	561	332	7	339
Exited ESL/bilingual program and in 2nd year of monitoring (Percent)	.4	.4	.4	.7	.6	.7	1.1	1	1.1	.7	.5	.7	.5	.2	.5	.3	.1	.3
Former EL no longer monitored (Number)	18	1	19	147	7	154	347	28	375	726	65	791	1,570	79	1,649	2,155	92	2,247
Former EL no longer monitored (Percent)	0	0	0	.1	.2	.1	.3	.6	.3	.6	1.2	.6	1.3	1.3	1.3	1.8	1.5	1.8
LIFE first year (Number)	1	0	1	0	0	0	1	0	1	2	0	2	0	0	0	1	0	1
LIFE first year (Percent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LIFE not first year (Number)	7	0	7	7	0	7	10	0	10	18	0	18	18	0	18	37	0	37
LIFE not first year (Percent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Former EL exited and in 3rd year of monitoring (Number)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Demographic or Educational Characteristic	Gr 3 PPT	Gr 3 CBT	Gr 3 Total	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 5 PPT	Gr 5 CBT	Gr 5 Total	Gr 6 PPT	Gr 6 CBT	Gr 6 Total	Gr 7 PPT	Gr 7 CBT	Gr 7 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Former EL exited and in 3rd year of monitoring (Percent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Former EL exited and in 4th year of monitoring (Number)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Former EL exited and in 4th year of monitoring (Percent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Economically disadvantaged (Number)	60,992	1,250	62,242	62,656	1,355	64,011	60,414	2,062	62,476	57,683	2,276	59,959	55,589	2,503	58,092	54,058	2,605	56,663
Economically disadvantaged (Percent)	51	43.8	50.9	50.9	44.5	50.7	49.5	43.1	49.3	48	43.2	47.8	47	42.1	46.8	45.5	42.8	45.4
Historically Underperforming Subgroup (Number)	69,305	1,578	70,883	71,075	1,681	72,756	68,471	2,565	71,036	65,343	2,924	68,267	63,086	3,208	66,294	61,537	3,321	64,858
Historically Underperforming Subgroup (Percent)	58	55.3	57.9	57.7	55.3	57.6	56.1	53.6	56	54.4	55.5	54.5	53.3	54	53.4	51.8	54.5	51.9
Enrollment in school of residence after Oct 1 (Number)	3,118	100	3,218	2,995	99	3,094	2,684	153	2,837	2,584	204	2,788	2,670	257	2,927	2,698	300	2,998
Enrollment in school of residence after Oct 1 (Percent)	2.6	3.5	2.6	2.4	3.3	2.5	2.2	3.2	2.2	2.2	3.9	2.2	2.3	4.3	2.4	2.3	4.9	2.4
Enrollment in district of residence after Oct 1 (Number)	1,610	84	1,694	1,506	79	1,585	1,404	121	1,525	1,365	167	1,532	1,451	207	1,658	1,511	231	1,742
Enrollment in district of residence after Oct 1 (Percent)	1.3	2.9	1.4	1.2	2.6	1.3	1.2	2.5	1.2	1.1	3.2	1.2	1.2	3.5	1.3	1.3	3.8	1.4
Enrollment as PA resident after Oct 1 (Number)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Enrollment in school of residence after previous Oct 1 but on/before current Oct 1 (Number)	25,916	479	26,395	27,284	457	27,741	28,275	1,183	29,458	40,152	1,020	41,172	29,674	1,581	31,255	19,721	712	20,433
Enrollment in school of residence after previous Oct 1 but on/before current Oct 1 (Percent)	21.7	16.8	21.6	22.1	15	22	23.2	24.7	23.2	33.4	19.4	32.8	25.1	26.6	25.2	16.6	11.7	16.4
Enrollment in district of residence after previous Oct 1 but on/before current Oct 1 (Number)	10,240	332	10,572	9,738	319	10,057	9,643	474	10,117	10,516	719	11,235	9,114	655	9,769	7,413	603	8,016

Demographic or Educational Characteristic	Gr 3 PPT	Gr 3 CBT	Gr 3 Total	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 5 PPT	Gr 5 CBT	Gr 5 Total	Gr 6 PPT	Gr 6 CBT	Gr 6 Total	Gr 7 PPT	Gr 7 CBT	Gr 7 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Enrollment in district of residence after previous Oct 1 but on/before current Oct 1 (Percent)	8.6	11.6	8.6	7.9	10.5	8	7.9	9.9	8	8.8	13.6	9	7.7	11	7.9	6.2	9.9	6.4
Court/agency placed (Number)	45	0	45	42	2	44	41	2	43	58	9	67	101	30	131	198	49	247
Court/agency placed (Percent)	0	0	0	0	.1	0	0	0	0	0	.2	.1	.1	.5	.1	.2	.8	.2
Military family (Number)	302	7	309	323	9	332	279	21	300	298	18	316	278	14	292	368	19	387
Military family (Percent)	.3	.2	.3	.3	.3	.3	.2	.4	.2	.2	.3	.3	.2	.2	.2	.3	.3	.3
Homeless (Number)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Homeless (Percent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Foster (Number)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Foster (Percent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Students with scores used in state summaries (Number)	119,543	2,854	122,397	123,181	3,042	126,223	121,976	4,785	126,761	120,072	5,269	125,341	118,282	5,944	124,226	118,818	6,089	124,907

Demographic Characteristics of Students Taking the 2018 PSSA: Mathematics

Demographic or Educational Characteristic	Gr 3 PPT	Gr 3 CBT	Gr 3 Total	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 5 PPT	Gr 5 CBT	Gr 5 Total	Gr 6 PPT	Gr 6 CBT	Gr 6 Total	Gr 7 PPT	Gr 7 CBT	Gr 7 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Female (Number)	58,740	1,374	60,114	60,392	1,406	61,798	59,784	2,345	62,129	59,016	2,387	61,403	57,874	2,677	60,551	57,754	2,803	60,557
Female (Percent)	49.1	46.3	49	49	44.9	48.9	49.1	46.2	49	49.1	46.2	49	48.9	46.4	48.7	48.6	46.9	48.5
Male (Number)	60,854	1,595	62,449	62,956	1,727	64,683	62,010	2,729	64,739	61,198	2,784	63,982	60,586	3,088	63,674	61,046	3,177	64,223
Male (Percent)	50.9	53.7	51	51	55.1	51.1	50.9	53.8	51	50.9	53.8	51	51.1	53.6	51.3	51.4	53.1	51.5
American Indian/Alaskan Native (not Hispanic) (Number)	163	9	172	183	6	189	184	8	192	166	4	170	185	11	196	150	14	164
American Indian/Alaskan Native (not Hispanic) (Percent)	.1	.3	.1	.1	.2	.1	.2	.2	.2	.1	.1	.1	.2	.2	.2	.1	.2	.1
Asian (not Hispanic) (Number)	4,842	108	4,950	4,755	127	4,882	4,831	217	5,048	4,724	200	4,924	4,778	126	4,904	4,962	135	5,097
Asian (not Hispanic) (Percent)	4	3.6	4	3.9	4.1	3.9	4	4.3	4	3.9	3.9	3.9	4	2.2	3.9	4.2	2.3	4.1
Black or African American (not Hispanic) (Number)	18,210	357	18,567	18,606	390	18,996	18,203	521	18,724	17,378	615	17,993	17,287	427	17,714	16,824	475	17,299
Black or African American (not Hispanic) (Percent)	15.2	12	15.1	15.1	12.4	15	14.9	10.3	14.8	14.5	11.9	14.4	14.6	7.4	14.3	14.2	7.9	13.9
Hispanic (any race) (Number)	14,649	286	14,935	14,783	293	15,076	14,491	555	15,046	13,729	714	14,443	13,279	677	13,956	12,815	730	13,545
Hispanic (any race) (Percent)	12.2	9.6	12.2	12	9.4	11.9	11.9	10.9	11.9	11.4	13.8	11.5	11.2	11.7	11.2	10.8	12.2	10.9
Multi-Racial (not Hispanic) (Number)	5,714	155	5,869	5,735	146	5,881	5,379	236	5,615	4,845	201	5,046	4,349	157	4,506	3,831	180	4,011
Multi-Racial (not Hispanic) (Percent)	4.8	5.2	4.8	4.6	4.7	4.6	4.4	4.7	4.4	4	3.9	4	3.7	2.7	3.6	3.2	3	3.2
White (not Hispanic) (Number)	75,923	2,052	77,975	79,194	2,169	81,363	78,598	3,531	82,129	79,269	3,435	82,704	78,507	4,364	82,871	80,126	4,445	84,571
White (not Hispanic) (Percent)	63.5	69.1	63.6	64.2	69.2	64.3	64.5	69.6	64.7	65.9	66.4	66	66.3	75.7	66.7	67.4	74.3	67.8
Native Hawaiian or Other Pacific Islander (not Hispanic) (Number)	93	2	95	92	2	94	108	6	114	103	2	105	75	3	78	92	1	93
Native Hawaiian or Other Pacific Islander (not Hispanic) (Percent)	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	0	.1	.1	.1	.1	.1	0	.1
IEP (not gifted) (Number)	19,462	809	20,271	20,924	989	21,913	20,636	1,369	22,005	19,756	1,576	21,332	19,137	1,608	20,745	18,856	1,691	20,547
IEP (not gifted) (Percent)	16.3	27.2	16.5	17	31.6	17.3	16.9	27	17.3	16.4	30.5	17	16.2	27.9	16.7	15.9	28.3	16.5
Student exited IEP in last 2 years (Number)	2,330	67	2,397	2,777	63	2,840	3,026	147	3,173	3,051	126	3,177	2,683	122	2,805	2,382	104	2,486
Student exited IEP in last 2 years (Percent)	1.9	2.3	2	2.3	2	2.2	2.5	2.9	2.5	2.5	2.4	2.5	2.3	2.1	2.3	2	1.7	2
Title I (Number)	62,083	1,103	63,186	62,637	1,175	63,812	56,789	2,064	58,853	43,578	2,117	45,695	33,642	1,546	35,188	32,696	1,469	34,165

Demographic or Educational Characteristic	Gr 3 PPT	Gr 3 CBT	Gr 3 Total	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 5 PPT	Gr 5 CBT	Gr 5 Total	Gr 6 PPT	Gr 6 CBT	Gr 6 Total	Gr 7 PPT	Gr 7 CBT	Gr 7 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Title I (Percent)	51.9	37.2	51.6	50.8	37.5	50.5	46.6	40.7	46.4	36.3	40.9	36.4	28.4	26.8	28.3	27.5	24.6	27.4
Title III served (Number)	4,989	99	5,088	4,755	92	4,847	3,910	131	4,041	3,518	131	3,649	3,199	117	3,316	3,064	126	3,190
Title III served (Percent)	4.2	3.3	4.2	3.9	2.9	3.8	3.2	2.6	3.2	2.9	2.5	2.9	2.7	2	2.7	2.6	2.1	2.6
Title III not served (Number)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Title III not served (Percent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Migrant student (Number)	201	2	203	204	0	204	206	1	207	195	11	206	171	3	174	153	5	158
Migrant student (Percent)	.2	.1	.2	.2	0	.2	.2	0	.2	.2	.2	.2	.1	.1	.1	.1	.1	.1
EL enrolled first year (Number)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EL enrolled first year (Percent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EL enrolled not first year (Number)	5,284	112	5,396	5,015	99	5,114	4,052	142	4,194	3,655	144	3,799	3,351	129	3,480	3,183	134	3,317
EL enrolled not first year (Percent)	4.4	3.8	4.4	4.1	3.2	4	3.3	2.8	3.3	3	2.8	3	2.8	2.2	2.8	2.7	2.2	2.7
Exited ESL/bilingual program and in first year of monitoring (Number)	90	5	95	164	1	165	262	8	270	288	27	315	230	8	238	247	19	266
Exited ESL/bilingual program and in first year of monitoring (Percent)	.1	.2	.1	.1	0	.1	.2	.2	.2	.2	.5	.3	.2	.1	.2	.2	.3	.2
Exited ESL/bilingual program and in 2nd year of monitoring (Number)	426	12	438	860	19	879	1,292	54	1,346	901	28	929	549	12	561	332	7	339
Exited ESL/bilingual program and in 2nd year of monitoring (Percent)	.4	.4	.4	.7	.6	.7	1.1	1.1	1.1	.7	.5	.7	.5	.2	.5	.3	.1	.3
Former EL no longer monitored (Number)	18	1	19	148	6	154	345	30	375	730	63	793	1,577	72	1,649	2,156	87	2,243
Former EL no longer monitored (Percent)	0	0	0	.1	.2	.1	.3	.6	.3	.6	1.2	.6	1.3	1.2	1.3	1.8	1.5	1.8
LIFE first year (Number)	2	0	2	2	0	2	4	0	4	7	0	7	2	0	2	2	0	2
LIFE first year (Percent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LIFE not first year (Number)	9	0	9	8	0	8	10	0	10	18	0	18	18	0	18	37	0	37
LIFE not first year (Percent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Former EL exited and in 3rd year of monitoring (Number)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Former EL exited and in 3rd year of monitoring (Percent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Demographic or Educational Characteristic	Gr 3 PPT	Gr 3 CBT	Gr 3 Total	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 5 PPT	Gr 5 CBT	Gr 5 Total	Gr 6 PPT	Gr 6 CBT	Gr 6 Total	Gr 7 PPT	Gr 7 CBT	Gr 7 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Former EL exited and in 4th year of monitoring (Number)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Former EL exited and in 4th year of monitoring (Percent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Economically disadvantaged (Number)	61,066	1,301	62,367	62,776	1,426	64,202	60,340	2,200	62,540	57,739	2,250	59,989	55,666	2,420	58,086	54,028	2,578	56,606
Economically disadvantaged (Percent)	51.1	43.8	50.9	50.9	45.5	50.8	49.5	43.4	49.3	48	43.5	47.8	47	42	46.8	45.5	43.1	45.4
Historically Underperforming Subgroup (Number)	69,361	1,658	71,019	71,178	1,786	72,964	68,355	2,753	71,108	65,416	2,908	68,324	63,181	3,107	66,288	61,523	3,269	64,792
Historically Underperforming Subgroup (Percent)	58	55.8	57.9	57.7	57	57.7	56.1	54.3	56	54.4	56.2	54.5	53.3	53.9	53.4	51.8	54.7	51.9
Enrollment in school of residence after Oct 1 (Number)	3,163	107	3,270	3,062	101	3,163	2,727	158	2,885	2,632	203	2,835	2,716	255	2,971	2,737	302	3,039
Enrollment in school of residence after Oct 1 (Percent)	2.6	3.6	2.7	2.5	3.2	2.5	2.2	3.1	2.3	2.2	3.9	2.3	2.3	4.4	2.4	2.3	5.1	2.4
Enrollment in district of residence after Oct 1 (Number)	1,648	85	1,733	1,550	75	1,625	1,432	124	1,556	1,398	167	1,565	1,487	204	1,691	1,541	232	1,773
Enrollment in district of residence after Oct 1 (Percent)	1.4	2.9	1.4	1.3	2.4	1.3	1.2	2.4	1.2	1.2	3.2	1.2	1.3	3.5	1.4	1.3	3.9	1.4
Enrollment as PA resident after Oct 1 (Number)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Enrollment as PA resident after Oct 1 (Percent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Enrollment in school of residence after previous Oct 1 but on/before current Oct 1 (Number)	25,978	504	26,482	27,361	480	27,841	28,268	1,207	29,475	40,213	978	41,191	29,677	1,560	31,237	19,699	709	20,408
Enrollment in school of residence after previous Oct 1 but on/before current Oct 1 (Percent)	21.7	17	21.6	22.2	15.3	22	23.2	23.8	23.2	33.5	18.9	32.9	25.1	27.1	25.1	16.6	11.9	16.4
Enrollment in district of residence after previous Oct 1 but on/before current Oct 1 (Number)	10,245	354	10,599	9,761	331	10,092	9,629	502	10,131	10,576	707	11,283	9,135	640	9,775	7,421	597	8,018

Demographic or Educational Characteristic	Gr 3 PPT	Gr 3 CBT	Gr 3 Total	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 5 PPT	Gr 5 CBT	Gr 5 Total	Gr 6 PPT	Gr 6 CBT	Gr 6 Total	Gr 7 PPT	Gr 7 CBT	Gr 7 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Enrollment in district of residence after previous Oct 1 but on/before current Oct 1 (Percent)	8.6	11.9	8.6	7.9	10.6	8	7.9	9.9	8	8.8	13.7	9	7.7	11.1	7.9	6.2	10	6.4
Court/agency placed (Number)	33	0	33	42	3	45	40	2	42	48	8	56	90	28	118	181	48	229
Court/agency placed (Percent)	0	0	0	0	.1	0	0	0	0	0	.2	0	.1	.5	.1	.2	.8	.2
Military family (Number)	301	8	309	324	9	333	278	22	300	299	18	317	279	13	292	367	19	386
Military family (Percent)	.3	.3	.3	.3	.3	.3	.2	.4	.2	.2	.3	.3	.2	.2	.2	.3	.3	.3
Homeless (Number)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Homeless (Percent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Foster (Number)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Foster (Percent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Students with scores used in state summaries (Number)	119,594	2,969	122,563	123,348	3,133	126,481	121,794	5,074	126,868	120,214	5,171	125,385	118,460	5,765	124,225	118,800	5,980	124,780

Demographic Characteristics of Students Taking the 2018 PSSA: Science

Demographic or Educational Characteristic	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Female (Number)	59,983	1,753	61,736	56,731	3,648	60,379
Female (Percent)	49	45.9	48.9	48.6	47.3	48.5
Male (Number)	62,548	2,069	64,617	59,978	4,060	64,038
Male (Percent)	51	54.1	51.1	51.4	52.7	51.5
American Indian/Alaskan Native (not Hispanic) (Number)	180	7	187	146	16	162
American Indian/Alaskan Native (not Hispanic) (Percent)	.1	.2	.1	.1	.2	.1
Asian (not Hispanic) (Number)	4,740	143	4,883	4,740	345	5,085
Asian (not Hispanic) (Percent)	3.9	3.7	3.9	4.1	4.5	4.1
Black or African American (not Hispanic) (Number)	18,544	414	18,958	16,533	663	17,196
Black or African American (not Hispanic) (Percent)	15.1	10.8	15	14.2	8.6	13.8
Hispanic (any race) (Number)	14,623	437	15,060	12,654	860	13,514
Hispanic (any race) (Percent)	11.9	11.4	11.9	10.8	11.2	10.9
Multi-Racial (not Hispanic) (Number)	5,714	166	5,880	3,770	214	3,984
Multi-Racial (not Hispanic) (Percent)	4.7	4.3	4.7	3.2	2.8	3.2
White (not Hispanic) (Number)	78,640	2,651	81,291	78,775	5,609	84,384
White (not Hispanic) (Percent)	64.2	69.4	64.3	67.5	72.8	67.8
Native Hawaiian or Other Pacific Islander (not Hispanic) (Number)	90	4	94	91	1	92
Native Hawaiian or Other Pacific Islander (not Hispanic) (Percent)	.1	.1	.1	.1	0	.1
IEP (not gifted) (Number)	20,830	1,046	21,876	18,498	1,934	20,432
IEP (not gifted) (Percent)	17	27.4	17.3	15.8	25.1	16.4
Student exited IEP in last 2 years (Number)	2,749	92	2,841	2,340	136	2,476
Student exited IEP in last 2 years (Percent)	2.2	2.4	2.2	2	1.8	2
Title I (Number)	62,379	1,336	63,715	32,297	1,700	33,997
Title I (Percent)	50.9	35	50.4	27.7	22.1	27.3
Title III served (Number)	4,709	146	4,855	3,038	147	3,185
Title III served (Percent)	3.8	3.8	3.8	2.6	1.9	2.6
Title III not served (Number)	0	0	0	0	0	0
Title III not served (Percent)	0	0	0	0	0	0
Migrant student (Number)	200	4	204	155	5	160

Demographic or Educational Characteristic	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Migrant student (Percent)	.2	.1	.2	.1	.1	.1
EL enrolled first year (Number)	0	0	0	0	0	0
EL enrolled first year (Percent)	0	0	0	0	0	0
EL enrolled not first year (Number)	4,964	153	5,117	3,160	152	3,312
EL enrolled not first year (Percent)	4.1	4	4	2.7	2	2.7
Exited ESL/bilingual program and in first year of monitoring (Number)	163	2	165	245	21	266
Exited ESL/bilingual program and in first year of monitoring (Percent)	.1	.1	.1	.2	.3	.2
Exited ESL/bilingual program and in 2nd year of monitoring (Number)	849	29	878	330	10	340
Exited ESL/bilingual program and in 2nd year of monitoring (Percent)	.7	.8	.7	.3	.1	.3
Former EL no longer monitored (Number)	144	10	154	2,077	163	2,240
Former EL no longer monitored (Percent)	.1	.3	.1	1.8	2.1	1.8
LIFE first year (Number)	2	0	2	2	0	2
LIFE first year (Percent)	0	0	0	0	0	0
LIFE not first year (Number)	8	0	8	33	4	37
LIFE not first year (Percent)	0	0	0	0	.1	0
Former EL exited and in 3rd year of monitoring (Number)	0	0	0	0	0	0
Former EL exited and in 3rd year of monitoring (Percent)	0	0	0	0	0	0
Former EL exited and in 4th year of monitoring (Number)	0	0	0	0	0	0
Former EL exited and in 4th year of monitoring (Percent)	0	0	0	0	0	0
Economically disadvantaged (Number)	62,433	1,690	64,123	53,099	3,281	56,380
Economically disadvantaged (Percent)	51	44.2	50.7	45.5	42.6	45.3
Historically Underperforming Subgroup (Number)	70,789	2,071	72,860	60,459	4,074	64,533
Historically Underperforming Subgroup (Percent)	57.8	54.2	57.7	51.8	52.9	51.9
Enrollment in school of residence after Oct 1 (Number)	3,055	119	3,174	2,713	314	3,027
Enrollment in school of residence after Oct 1 (Percent)	2.5	3.1	2.5	2.3	4.1	2.4
Enrollment in district of residence after Oct 1 (Number)	1,543	93	1,636	1,530	233	1,763
Enrollment in district of residence after Oct 1 (Percent)	1.3	2.4	1.3	1.3	3	1.4
Enrollment as PA resident after Oct 1 (Number)	0	0	0	0	0	0
Enrollment as PA resident after Oct 1 (Percent)	0	0	0	0	0	0
Enrollment in school of residence after previous Oct 1 but on/before current Oct 1 (Number)	27,236	561	27,797	19,479	838	20,317

Demographic or Educational Characteristic	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Enrollment in school of residence after previous Oct 1 but on/before current Oct 1 (Percent)	22.2	14.7	22	16.7	10.9	16.3
Enrollment in district of residence after previous Oct 1 but on/before current Oct 1 (Number)	9,664	407	10,071	7,233	727	7,960
Enrollment in district of residence after previous Oct 1 but on/before current Oct 1 (Percent)	7.9	10.6	8	6.2	9.4	6.4
Court/agency placed (Number)	40	4	44	179	48	227
Court/agency placed (Percent)	0	.1	0	.2	.6	.2
Military family (Number)	320	10	330	360	25	385
Military family (Percent)	.3	.3	.3	.3	.3	.3
Homeless (Number)	0	0	0	0	0	0
Homeless (Percent)	0	0	0	0	0	0
Foster (Number)	0	0	0	0	0	0
Foster (Percent)	0	0	0	0	0	0
Students with scores used in state summaries (Number)	122,531	3,822	126,353	116,709	7,708	124,417

APPENDIX J: INCIDENCE OF ACCOMMODATIONS RECEIVED

Incidence of Presentation Accommodations Received on the 2018 PSSA: English Language Arts

Type of Presentation Accommodation	Gr 3 PPT	Gr 3 CBT	Gr 3 Total	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 5 PPT	Gr 5 CBT	Gr 5 Total	Gr 6 PPT	Gr 6 CBT	Gr 6 Total	Gr 7 PPT	Gr 7 CBT	Gr 7 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Braille format (Number)	10	N/A	10	11	N/A	11	7	N/A	7	6	N/A	6	2	N/A	2	1	N/A	1
Braille format (Percent)	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0
Large print format (Number)	103	N/A	103	128	N/A	128	88	N/A	88	63	N/A	63	86	N/A	86	65	N/A	65
Large print format (Percent)	.1	N/A	.1	.1	N/A	.1	.1	N/A	.1	.1	N/A	.1	.1	N/A	.1	.1	N/A	.1
Computer Assistive Technology (Number)	16	N/A	16	10	N/A	10	6	N/A	6	7	N/A	7	10	N/A	10	12	N/A	12
Computer Assistive Technology (Percent)	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0
Some conventions questions/text-dependent analysis prompts read aloud (Number)	3,790	34	3,824	5,694	37	5,731	5,096	71	5,167	3,024	103	3,127	1,943	88	2,031	1,413	96	1,509
Some conventions questions/text-dependent analysis prompts read aloud (Percent)	3.2	1.2	3.1	4.6	1.2	4.5	4.2	1.5	4.1	2.5	2	2.5	1.6	1.5	1.6	1.2	1.6	1.2
All conventions questions/text-dependent analysis prompts read aloud (Number)	3,447	127	3,574	3,719	179	3,898	2,821	278	3,099	1,875	303	2,178	1,010	214	1,224	823	190	1,013
All conventions questions/text-dependent analysis prompts read aloud (Percent)	2.9	4.4	2.9	3	5.9	3.1	2.3	5.8	2.4	1.6	5.8	1.7	.9	3.6	1	.7	3.1	.8
Conventions questions/text-dependent analysis prompts signed (Number)	0	1	1	17	0	17	17	3	20	9	2	11	6	2	8	2	0	2
Conventions questions/text-dependent analysis prompts signed (Percent)	0	0	0	0	0	0	0	.1	0	0	0	0	0	0	0	0	0	0
Conventions questions/text-dependent analysis prompts interpreted for EL student (Number)	0	1	1	36	0	36	36	0	36	40	0	40	27	1	28	37	0	37
Conventions questions/text-dependent analysis prompts interpreted for EL student (Percent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amplification device (Number)	60	3	63	69	5	74	55	4	59	34	4	38	23	2	25	16	4	20
Amplification device (Percent)	.1	.1	.1	.1	.2	.1	0	.1	0	0	.1	0	0	0	0	0	.1	0
Magnification device (Number)	21	0	21	16	2	18	12	3	15	12	5	17	5	2	7	5	2	7
Magnification device (Percent)	0	0	0	0	.1	0	0	.1	0	0	.1	0	0	0	0	0	0	0
Color overlay (Number)	173	N/A	173	160	N/A	160	109	N/A	109	52	N/A	52	17	N/A	17	15	N/A	15
Color overlay (Percent)	.1	N/A	.1	.1	N/A	.1	.1	N/A	.1	0	N/A	0	0	N/A	0	0	N/A	0

Type of Presentation Accommodation	Gr 3 PPT	Gr 3 CBT	Gr 3 Total	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 5 PPT	Gr 5 CBT	Gr 5 Total	Gr 6 PPT	Gr 6 CBT	Gr 6 Total	Gr 7 PPT	Gr 7 CBT	Gr 7 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Other (per Accommodations Guidelines) (Number)	672	33	705	667	27	694	599	28	627	161	18	179	202	13	215	111	10	121
Other (per Accommodations Guidelines) (Percent)	.6	1.2	.6	.5	.9	.5	.5	.6	.5	.1	.3	.1	.2	.2	.2	.1	.2	.1
Audio (Number)	N/A	609	609	N/A	611	611	N/A	861	861	N/A	1,043	1,043	N/A	941	941	N/A	939	939
Audio (Percent)	N/A	21.3	.5	N/A	20.1	.5	N/A	18	.7	N/A	19.8	.8	N/A	15.8	.8	N/A	15.4	.8
Color Chooser (Number)	N/A	3	3	N/A	6	6	N/A	10	10	N/A	29	29	N/A	13	13	N/A	17	17
Color Chooser (Percent)	N/A	.1	0	N/A	.2	0	N/A	.2	0	N/A	.6	0	N/A	.2	0	N/A	.3	0
Contrasting Text Chooser (Number)	N/A	2	2	N/A	4	4	N/A	6	6	N/A	6	6	N/A	7	7	N/A	4	4
Contrasting Text Chooser (Percent)	N/A	.1	0	N/A	.1	0	N/A	.1	0	N/A	.1	0	N/A	.1	0	N/A	.1	0
Reverse Contrast (Number)	N/A	2	2	N/A	3	3	N/A	4	4	N/A	2	2	N/A	3	3	N/A	0	0
Reverse Contrast (Percent)	N/A	.1	0	N/A	.1	0	N/A	.1	0	N/A	0	0	N/A	.1	0	N/A	0	0
Refreshable Braille (Number)	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0
Refreshable Braille (Percent)	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0

Incidence of Presentation Accommodations Received on the 2018 PSSA: Mathematics

Type of Presentation Accommodation	Gr 3 PPT	Gr 3 CBT	Gr 3 Total	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 5 PPT	Gr 5 CBT	Gr 5 Total	Gr 6 PPT	Gr 6 CBT	Gr 6 Total	Gr 7 PPT	Gr 7 CBT	Gr 7 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Braille format (Number)	12	N/A	12	11	N/A	11	6	N/A	6	7	N/A	7	2	N/A	2	2	N/A	2
Braille format (Percent)	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0
Large print format (Number)	89	N/A	89	123	N/A	123	79	N/A	79	53	N/A	53	68	N/A	68	56	N/A	56
Large print format (Percent)	.1	N/A	.1	.1	N/A	.1	.1	N/A	.1	0	N/A	0	.1	N/A	.1	0	N/A	0
Computer Assistive Technology (Number)	4	N/A	4	4	N/A	4	3	N/A	3	3	N/A	3	2	N/A	2	5	N/A	5
Computer Assistive Technology (Percent)	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0
Some test items/questions read aloud (Number)	8,310	40	8,350	8,459	41	8,500	6,488	110	6,598	3,804	157	3,961	2,179	86	2,265	1,553	88	1,641
Some test items/questions read aloud (Percent)	6.9	1.3	6.8	6.9	1.3	6.7	5.3	2.2	5.2	3.2	3	3.2	1.8	1.5	1.8	1.3	1.5	1.3
All test items/questions read aloud (Number)	5,961	271	6,232	5,615	250	5,865	4,030	318	4,348	2,460	306	2,766	1,426	228	1,654	1,154	201	1,355
All test items/questions read aloud (Percent)	5	9.1	5.1	4.6	8	4.6	3.3	6.3	3.4	2	5.9	2.2	1.2	4	1.3	1	3.4	1.1
Test items/questions signed (Number)	20	7	27	21	6	27	33	10	43	17	6	23	12	5	17	5	8	13
Test items/questions signed (Percent)	0	.2	0	0	.2	0	0	.2	0	0	.1	0	0	.1	0	0	.1	0
Test items/questions interpreted for EL student (Number)	119	0	119	120	0	120	93	0	93	112	0	112	92	0	92	112	0	112
Test items/questions interpreted for EL student (Percent)	.1	0	.1	.1	0	.1	.1	0	.1	.1	0	.1	.1	0	.1	.1	0	.1
Amplification device (Number)	58	3	61	61	5	66	47	6	53	30	4	34	22	2	24	11	5	16
Amplification device (Percent)	0	.1	0	0	.2	.1	0	.1	0	0	.1	0	0	0	0	0	.1	0
Magnification device (Number)	14	0	14	15	2	17	11	2	13	10	5	15	5	2	7	3	2	5
Magnification device (Percent)	0	0	0	0	.1	0	0	0	0	0	.1	0	0	0	0	0	0	0
Color overlay (Number)	31	N/A	31	35	N/A	35	42	N/A	42	14	N/A	14	6	N/A	6	4	N/A	4
Color overlay (Percent)	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0
Other (per Accommodations Guidelines) (Number)	330	42	372	337	31	368	216	23	239	114	17	131	108	7	115	133	5	138
Other (per Accommodations Guidelines) (Percent)	.3	1.4	.3	.3	1	.3	.2	.5	.2	.1	.3	.1	.1	.1	.1	.1	.1	.1
Spanish version (Number)	311	N/A	311	362	N/A	362	406	N/A	406	479	N/A	479	469	N/A	469	487	N/A	487
Spanish version (Percent)	.3	N/A	.3	.3	N/A	.3	.3	N/A	.3	.4	N/A	.4	.4	N/A	.4	.4	N/A	.4
Audio (Number)	N/A	725	725	N/A	751	751	N/A	1,004	1,004	N/A	1,109	1,109	N/A	986	986	N/A	975	975
Audio (Percent)	N/A	24.4	.6	N/A	24	.6	N/A	19.8	.8	N/A	21.4	.9	N/A	17.1	.8	N/A	16.3	.8
Video sign language (Number)	N/A	20	20	N/A	16	16	N/A	17	17	N/A	14	14	N/A	12	12	N/A	21	21

Type of Presentation Accommodation	Gr 3 PPT	Gr 3 CBT	Gr 3 Total	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 5 PPT	Gr 5 CBT	Gr 5 Total	Gr 6 PPT	Gr 6 CBT	Gr 6 Total	Gr 7 PPT	Gr 7 CBT	Gr 7 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Video sign language (Percent)	N/A	.7	0	N/A	.5	0	N/A	.3	0	N/A	.3	0	N/A	.2	0	N/A	.4	0
Color Chooser (Number)	N/A	2	2	N/A	6	6	N/A	11	11	N/A	15	15	N/A	13	13	N/A	17	17
Color Chooser (Percent)	N/A	.1	0	N/A	.2	0	N/A	.2	0	N/A	.3	0	N/A	.2	0	N/A	.3	0
Contrasting Text Chooser (Number)	N/A	2	2	N/A	3	3	N/A	8	8	N/A	7	7	N/A	7	7	N/A	4	4
Contrasting Text Chooser (Percent)	N/A	.1	0	N/A	.1	0	N/A	.2	0	N/A	.1	0	N/A	.1	0	N/A	.1	0
Reverse Contrast (Number)	N/A	2	2	N/A	3	3	N/A	4	4	N/A	2	2	N/A	3	3	N/A	0	0
Reverse Contrast (Percent)	N/A	.1	0	N/A	.1	0	N/A	.1	0	N/A	0	0	N/A	.1	0	N/A	0	0
Refreshable Braille (Number)	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0
Refreshable Braille (Percent)	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0

Incidence of Presentation Accommodations Received on the 2018 PSSA: Science

Type of Presentation Accommodation	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Braille format (Number)	9	N/A	9	1	N/A	1
Braille format (Percent)	0	N/A	0	0	N/A	0
Large print format (Number)	112	N/A	112	54	N/A	54
Large print format (Percent)	.1	N/A	.1	0	N/A	0
Computer Assistive Technology (Number)	1	N/A	1	4	N/A	4
Computer Assistive Technology (Percent)	0	N/A	0	0	N/A	0
Some test items/questions read aloud (Number)	8,007	60	8,067	1,226	109	1,335
Some test items/questions read aloud (Percent)	6.5	1.6	6.4	1.1	1.4	1.1
All test items/questions read aloud (Number)	5,917	251	6,168	1,250	192	1,442
All test items/questions read aloud (Percent)	4.8	6.6	4.9	1.1	2.5	1.2
Test items/questions signed (Number)	25	6	31	7	8	15
Test items/questions signed (Percent)	0	.2	0	0	.1	0
Test items/questions interpreted for EL student (Number)	113	1	114	96	0	96
Test items/questions interpreted for EL student (Percent)	.1	0	.1	.1	0	.1
Amplification device (Number)	46	5	51	12	4	16
Amplification device (Percent)	0	.1	0	0	.1	0
Magnification device (Number)	11	2	13	3	2	5
Magnification device (Percent)	0	.1	0	0	0	0
Color overlay (Number)	28	N/A	28	7	N/A	7
Color overlay (Percent)	0	N/A	0	0	N/A	0
Other (per Accommodations Guidelines) (Number)	280	30	310	110	2	112
Other (per Accommodations Guidelines) (Percent)	.2	.8	.2	.1	0	.1
Spanish version (Number)	362	N/A	362	481	N/A	481
Spanish version (Percent)	.3	N/A	.3	.4	N/A	.4
Audio (Number)	N/A	771	771	N/A	1,011	1,011
Audio (Percent)	N/A	20.2	.6	N/A	13.1	.8
Video sign language (Number)	N/A	17	17	N/A	21	21
Video sign language (Percent)	N/A	.4	0	N/A	.3	0
Color Chooser (Number)	N/A	7	7	N/A	17	17

Type of Presentation Accommodation	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Color Chooser (Percent)	N/A	.2	0	N/A	.2	0
Contrasting Text Chooser (Number)	N/A	3	3	N/A	4	4
Contrasting Text Chooser (Percent)	N/A	.1	0	N/A	.1	0
Reverse Contrast (Number)	N/A	3	3	N/A	0	0
Reverse Contrast (Percent)	N/A	.1	0	N/A	0	0
Refreshable Braille (Number)	N/A	0	0	N/A	0	0
Refreshable Braille (Percent)	N/A	0	0	N/A	0	0

Incidence of Response Accommodations Received on the 2018 PSSA: English Language Arts

Type of Response Accommodation	Gr 3 PPT	Gr 3 CBT	Gr 3 Total	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 5 PPT	Gr 5 CBT	Gr 5 Total	Gr 6 PPT	Gr 6 CBT	Gr 6 Total	Gr 7 PPT	Gr 7 CBT	Gr 7 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Assessment Coordinator marked multiple-choice responses at student's direction (Number)	121	2	123	294	1	295	178	2	180	100	1	101	96	1	97	70	0	70
Assessment Coordinator marked multiple-choice responses at student's direction (Percent)	.1	.1	.1	.2	0	.2	.1	0	.1	.1	0	.1	.1	0	.1	.1	0	.1
Assessment Coordinator transcribed student responses (Number)	315	1	316	504	3	507	547	0	547	535	4	539	446	3	449	417	5	422
Assessment Coordinator transcribed student responses (Percent)	.3	0	.3	.4	.1	.4	.4	0	.4	.4	.1	.4	.4	.1	.4	.4	.1	.3
Keyboard, word processor, or computer (Number)	54	N/A	54	188	N/A	188	272	N/A	272	331	N/A	331	337	N/A	337	330	N/A	330
Keyboard, word processor, or computer (Percent)	0	N/A	0	.2	N/A	.1	.2	N/A	.2	.3	N/A	.3	.3	N/A	.3	.3	N/A	.3
Brailler/Notetaker (Number)	3	N/A	3	6	N/A	6	4	N/A	4	6	N/A	6	3	N/A	3	2	N/A	2
Brailler/Notetaker (Percent)	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0
Augmentative communication device (Number)	2	N/A	2	2	N/A	2	2	N/A	2	2	N/A	2	3	N/A	3	0	N/A	0
Augmentative communication device (Percent)	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0
Computer Assistive Technology (Number)	3	N/A	3	7	N/A	7	13	N/A	13	8	N/A	8	7	N/A	7	12	N/A	12
Computer Assistive Technology (Percent)	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0
Other (per Accommodations Guidelines) (Number)	108	1	109	172	1	173	146	3	149	80	8	88	65	5	70	43	2	45
Other (per Accommodations Guidelines) (Percent)	.1	0	.1	.1	0	.1	.1	.1	.1	.1	.2	.1	.1	.1	.1	0	0	0
Mixed-Mode (Number)	N/A	46	46	N/A	40	40	N/A	36	36	N/A	6	6	N/A	35	35	N/A	29	29
Mixed-Mode (Percent)	N/A	1.6	0	N/A	1.3	0	N/A	.8	0	N/A	.1	0	N/A	.6	0	N/A	.5	0

Incidence of Response Accommodations Received on the 2018 PSSA: Mathematics

Type of Response Accommodation	Gr 3 PPT	Gr 3 CBT	Gr 3 Total	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 5 PPT	Gr 5 CBT	Gr 5 Total	Gr 6 PPT	Gr 6 CBT	Gr 6 Total	Gr 7 PPT	Gr 7 CBT	Gr 7 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Assessment Coordinator marked multiple-choice responses at student's direction (Number)	107	3	110	289	1	290	175	2	177	86	1	87	74	1	75	68	0	68
Assessment Coordinator marked multiple-choice responses at student's direction (Percent)	.1	.1	.1	.2	0	.2	.1	0	.1	.1	0	.1	.1	0	.1	.1	0	.1
Assessment Coordinator scribed open-ended responses at student's direction (Number)	312	9	321	237	3	240	177	7	184	96	7	103	74	4	78	57	3	60
Assessment Coordinator scribed open-ended responses at student's direction (Percent)	.3	.3	.3	.2	.1	.2	.1	.1	.1	.1	.1	.1	.1	.1	.1	0	.1	0
Assessment Coordinator transcribed student responses (Number)	230	1	231	332	12	344	263	7	270	223	4	227	192	2	194	176	4	180
Assessment Coordinator transcribed student responses (Percent)	.2	0	.2	.3	.4	.3	.2	.1	.2	.2	.1	.2	.2	0	.2	.1	.1	.1
Qualified interpreter translated, transcribed, and/or scribed student's signed responses (Number)	12	1	13	16	0	16	16	0	16	14	0	14	13	0	13	13	0	13
Qualified interpreter translated, transcribed, and/or scribed student's signed responses (Percent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Qualified interpreter translated, transcribed, and/or scribed EL student responses (Number)	29	0	29	16	0	16	34	0	34	12	0	12	13	0	13	7	0	7
Qualified interpreter translated, transcribed, and/or scribed EL student responses (Percent)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Keyboard, word processor, or computer (Number)	27	N/A	27	55	N/A	55	58	N/A	58	77	N/A	77	80	N/A	80	72	N/A	72
Keyboard, word processor, or computer (Percent)	0	N/A	0	0	N/A	0	0	N/A	0	.1	N/A	.1	.1	N/A	.1	.1	N/A	.1
Brailler/Notetaker (Number)	4	N/A	4	2	N/A	2	6	N/A	6	7	N/A	7	2	N/A	2	2	N/A	2
Brailler/Notetaker (Percent)	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0
Augmentative communication device (Number)	1	N/A	1	2	N/A	2	3	N/A	3	0	N/A	0	1	N/A	1	1	N/A	1
Augmentative communication device (Percent)	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0
Computer Assistive Technology (Number)	3	N/A	3	1	N/A	1	7	N/A	7	1	N/A	1	4	N/A	4	2	N/A	2
Computer Assistive Technology (Percent)	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	0
Translation dictionary for EL student (Number)	21	0	21	30	0	30	42	1	43	95	7	102	70	7	77	82	10	92
Translation dictionary for EL student (Percent)	0	0	0	0	0	0	0	0	0	.1	.1	.1	.1	.1	.1	.1	.2	.1
Other (per Accommodations Guidelines) (Number)	167	2	169	163	3	166	181	4	185	93	8	101	69	8	77	105	8	113
Other (per Accommodations Guidelines) (Percent)	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.2	.1	.1	.1	.1	.1	.1	.1
Mixed-Mode (Number)	N/A	73	73	N/A	63	63	N/A	47	47	N/A	12	12	N/A	29	29	N/A	24	24
Mixed-Mode (Percent)	N/A	2.5	.1	N/A	2	0	N/A	.9	0	N/A	.2	0	N/A	.5	0	N/A	.4	0

Incidence of Response Accommodations Received on the 2018 PSSA: Science

Type of Response Accommodation	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Assessment Coordinator marked multiple-choice responses at student's direction (Number)	299	1	300	67	0	67
Assessment Coordinator marked multiple-choice responses at student's direction (Percent)	.2	0	.2	.1	0	.1
Assessment Coordinator scribed open-ended responses at student's direction (Number)	279	2	281	83	4	87
Assessment Coordinator scribed open-ended responses at student's direction (Percent)	.2	.1	.2	.1	.1	.1
Assessment Coordinator transcribed student responses (Number)	342	11	353	180	5	185
Assessment Coordinator transcribed student responses (Percent)	.3	.3	.3	.2	.1	.1
Qualified interpreter translated, transcribed, and/or scribed student's signed responses (Number)	15	0	15	18	0	18
Qualified interpreter translated, transcribed, and/or scribed student's signed responses (Percent)	0	0	0	0	0	0
Qualified interpreter translated, transcribed, and/or scribed EL student responses (Number)	20	0	20	27	0	27
Qualified interpreter translated, transcribed, and/or scribed EL student responses (Percent)	0	0	0	0	0	0
Keyboard, word processor, or computer (Number)	61	N/A	61	95	N/A	95
Keyboard, word processor, or computer (Percent)	0	N/A	0	.1	N/A	.1
Brailler/Notetaker (Number)	4	N/A	4	5	N/A	5
Brailler/Notetaker (Percent)	0	N/A	0	0	N/A	0
Augmentative communication device (Number)	3	N/A	3	2	N/A	2
Augmentative communication device (Percent)	0	N/A	0	0	N/A	0
Computer Assistive Technology (Number)	1	N/A	1	4	N/A	4
Computer Assistive Technology (Percent)	0	N/A	0	0	N/A	0
Translation dictionary for EL student (Number)	33	0	33	84	10	94
Translation dictionary for EL student (Percent)	0	0	0	.1	.1	.1
Other (per Accommodations Guidelines) (Number)	90	0	90	62	2	64
Other (per Accommodations Guidelines) (Percent)	.1	0	.1	.1	0	.1
Mixed-Mode (Number)	N/A	43	43	N/A	27	27
Mixed-Mode (Percent)	N/A	1.1	0	N/A	.4	0

Incidence of Setting Accommodations Received on the 2018 PSSA: English Language Arts

Type of Setting Accommodation	Gr 3 PPT	Gr 3 CBT	Gr 3 Total	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 5 PPT	Gr 5 CBT	Gr 5 Total	Gr 6 PPT	Gr 6 CBT	Gr 6 Total	Gr 7 PPT	Gr 7 CBT	Gr 7 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Hospital/home setting (Number)	18	0	18	8	2	10	21	2	23	20	2	22	18	1	19	42	3	45
Hospital/home setting (Percent)	0	0	0	0	.1	0	0	0	0	0	0	0	0	0	0	0	0	0
One-on-one setting (Number)	708	18	726	709	13	722	575	14	589	456	12	468	347	18	365	299	18	317
One-on-one setting (Percent)	.6	.6	.6	.6	.4	.6	.5	.3	.5	.4	.2	.4	.3	.3	.3	.3	.3	.3
Small group setting (Number)	15,621	539	16,160	17,021	609	17,630	16,070	757	16,827	14,313	977	15,290	12,682	1,071	13,753	12,587	1,099	13,686
Small group setting (Percent)	13.1	18.9	13.2	13.8	20	14	13.2	15.8	13.3	11.9	18.5	12.2	10.7	18	11.1	10.6	18	11
Other (per Accommodations Guidelines) (Number)	182	13	195	175	10	185	258	19	277	301	55	356	164	12	176	209	16	225
Other (per Accommodations Guidelines) (Percent)	.2	.5	.2	.1	.3	.1	.2	.4	.2	.3	1	.3	.1	.2	.1	.2	.3	.2

Incidence of Setting Accommodations Received on the 2018 PSSA: Mathematics

Type of Setting Accommodation	Gr 3 PPT	Gr 3 CBT	Gr 3 Total	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 5 PPT	Gr 5 CBT	Gr 5 Total	Gr 6 PPT	Gr 6 CBT	Gr 6 Total	Gr 7 PPT	Gr 7 CBT	Gr 7 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Hospital/home setting (Number)	14	0	14	11	2	13	21	2	23	17	2	19	25	1	26	42	3	45
Hospital/home setting (Percent)	0	0	0	0	.1	0	0	0	0	0	0	0	0	0	0	0	.1	0
One-on-one setting (Number)	605	15	620	591	14	605	514	14	528	414	11	425	297	20	317	298	12	310
One-on-one setting (Percent)	.5	.5	.5	.5	.4	.5	.4	.3	.4	.3	.2	.3	.3	.3	.3	.3	.2	.2
Small group setting (Number)	15,762	594	16,356	17,000	670	17,670	16,024	811	16,835	14,140	960	15,100	12,332	1,033	13,365	12,326	1,070	13,396
Small group setting (Percent)	13.2	20	13.3	13.8	21.4	14	13.2	16	13.3	11.8	18.6	12	10.4	17.9	10.8	10.4	17.9	10.7
Other (per Accommodations Guidelines) (Number)	107	12	119	101	11	112	213	20	233	273	58	331	171	13	184	201	15	216
Other (per Accommodations Guidelines) (Percent)	.1	.4	.1	.1	.4	.1	.2	.4	.2	.2	1.1	.3	.1	.2	.1	.2	.3	.2

Incidence of Setting Accommodations Received on the 2018 PSSA: Science

Type of Setting Accommodation	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Hospital/home setting (Number)	12	2	14	37	2	39
Hospital/home setting (Percent)	0	.1	0	0	0	0
One-on-one setting (Number)	646	16	662	308	14	322
One-on-one setting (Percent)	.5	.4	.5	.3	.2	.3
Small group setting (Number)	16,441	669	17,110	11,692	1,135	12,827
Small group setting (Percent)	13.4	17.5	13.5	10	14.7	10.3
Other (per Accommodations Guidelines) (Number)	89	13	102	196	11	207
Other (per Accommodations Guidelines) (Percent)	.1	.3	.1	.2	.1	.2

Incidence of Timing Accommodations Received on the 2018 PSSA: English Language Arts

Type of Timing Accommodation	Gr 3 PPT	Gr 3 CBT	Gr 3 Total	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 5 PPT	Gr 5 CBT	Gr 5 Total	Gr 6 PPT	Gr 6 CBT	Gr 6 Total	Gr 7 PPT	Gr 7 CBT	Gr 7 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Extended time (Number)	7,284	282	7,566	12,875	404	13,279	13,256	578	13,834	11,429	652	12,081	9,751	601	10,352	7,679	610	8,289
Extended time (Percent)	6.1	9.9	6.2	10.5	13.3	10.5	10.9	12.1	10.9	9.5	12.4	9.6	8.2	10.1	8.3	6.5	10	6.6
Frequent breaks (Number)	3,797	199	3,996	4,321	287	4,608	3,709	307	4,016	2,494	437	2,931	1,960	283	2,243	1,578	266	1,844
Frequent breaks (Percent)	3.2	7	3.3	3.5	9.4	3.7	3	6.4	3.2	2.1	8.3	2.3	1.7	4.8	1.8	1.3	4.4	1.5
Changed test schedule (Number)	361	0	361	367	1	368	363	16	379	242	6	248	257	12	269	358	22	380
Changed test schedule (Percent)	.3	0	.3	.3	0	.3	.3	.3	.3	.2	.1	.2	.2	.2	.2	.3	.4	.3
Other (per Accommodations Guidelines) (Number)	48	2	50	79	2	81	67	0	67	57	1	58	23	0	23	42	0	42
Other (per Accommodations Guidelines) (Percent)	0	.1	0	.1	.1	.1	.1	0	.1	0	0	0	0	0	0	0	0	0

Incidence of Timing Accommodations Received on the 2018 PSSA: Mathematics

Type of Timing Accommodation	Gr 3 PPT	Gr 3 CBT	Gr 3 Total	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 5 PPT	Gr 5 CBT	Gr 5 Total	Gr 6 PPT	Gr 6 CBT	Gr 6 Total	Gr 7 PPT	Gr 7 CBT	Gr 7 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Extended time (Number)	7,024	377	7,401	9,006	441	9,447	8,656	621	9,277	8,749	664	9,413	5,752	558	6,310	5,146	573	5,719
Extended time (Percent)	5.9	12.7	6	7.3	14.1	7.5	7.1	12.2	7.3	7.3	12.8	7.5	4.9	9.7	5.1	4.3	9.6	4.6
Frequent breaks (Number)	3,612	231	3,843	3,848	313	4,161	3,426	327	3,753	2,318	441	2,759	1,784	288	2,072	1,455	260	1,715
Frequent breaks (Percent)	3	7.8	3.1	3.1	10	3.3	2.8	6.4	3	1.9	8.5	2.2	1.5	5	1.7	1.2	4.3	1.4
Changed test schedule (Number)	300	0	300	328	2	330	340	8	348	202	9	211	250	6	256	362	12	374
Changed test schedule (Percent)	.3	0	.2	.3	.1	.3	.3	.2	.3	.2	.2	.2	.2	.1	.2	.3	.2	.3
Other (per Accommodations Guidelines) (Number)	63	3	66	99	1	100	90	0	90	111	1	112	56	0	56	43	0	43
Other (per Accommodations Guidelines) (Percent)	.1	.1	.1	.1	0	.1	.1	0	.1	.1	0	.1	0	0	0	0	0	0

Incidence of Timing Accommodations Received on the 2018 PSSA: Science

Type of Timing Accommodation	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Extended time (Number)	4,281	363	4,644	3,101	532	3,633
Extended time (Percent)	3.5	9.5	3.7	2.7	6.9	2.9
Frequent breaks (Number)	3,501	295	3,796	1,261	249	1,510
Frequent breaks (Percent)	2.9	7.7	3	1.1	3.2	1.2
Changed test schedule (Number)	284	0	284	215	6	221
Changed test schedule (Percent)	.2	0	.2	.2	.1	.2
Other (per Accommodations Guidelines) (Number)	26	1	27	17	0	17
Other (per Accommodations Guidelines) (Percent)	0	0	0	0	0	0

APPENDIX K: ACCOMMODATION RATE FOR NON-IEP AND IEP STUDENTS

Accommodation Rate for Non-IEP and IEP Students on the 2018 PSSA: English Language Arts

Student	Gr 3 PPT	Gr 3 CBT	Gr 3 Total	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 5 PPT	Gr 5 CBT	Gr 5 Total	Gr 6 PPT	Gr 6 CBT	Gr 6 Total	Gr 7 PPT	Gr 7 CBT	Gr 7 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Non-IEP Students (Number)	100,078	2,101	102,179	102,231	2,143	104,374	101,247	3,531	104,778	100,314	3,725	104,039	99,148	4,299	103,447	99,957	4,358	104,315
Non-Accommodated (Number)	89,718	1,844	91,562	87,156	1,875	89,031	87,185	3,161	90,346	89,186	3,452	92,638	89,992	4,037	94,029	92,542	4,113	96,655
Non-Accommodated (Percent)	89.6	87.8	89.6	85.3	87.5	85.3	86.1	89.5	86.2	88.9	92.7	89	90.8	93.9	90.9	92.6	94.4	92.7
Accommodated (Number)	10,360	257	10,617	15,075	268	15,343	14,062	370	14,432	11,128	273	11,401	9,156	262	9,418	7,415	245	7,660
Accommodated (Percent)	10.4	12.2	10.4	14.7	12.5	14.7	13.9	10.5	13.8	11.1	7.3	11	9.2	6.1	9.1	7.4	5.6	7.3
IEP Students (Number)	19,465	753	20,218	20,950	899	21,849	20,729	1,254	21,983	19,758	1,544	21,302	19,134	1,645	20,779	18,861	1,731	20,592
Non-Accommodated (Number)	7,447	162	7,609	6,733	209	6,942	6,543	246	6,789	6,402	267	6,669	6,983	366	7,349	6,900	398	7,298
Non-Accommodated (Percent)	38.3	21.5	37.6	32.1	23.2	31.8	31.6	19.6	30.9	32.4	17.3	31.3	36.5	22.2	35.4	36.6	23	35.4
Accommodated (Number)	12,018	591	12,609	14,217	690	14,907	14,186	1,008	15,194	13,356	1,277	14,633	12,151	1,279	13,430	11,961	1,333	13,294
Accommodated (Percent)	61.7	78.5	62.4	67.9	76.8	68.2	68.4	80.4	69.1	67.6	82.7	68.7	63.5	77.8	64.6	63.4	77	64.6

Accommodation Rate for Non-IEP and IEP Students on the 2018 PSSA: Mathematics

Student	Gr 3 PPT	Gr 3 CBT	Gr 3 Total	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 5 PPT	Gr 5 CBT	Gr 5 Total	Gr 6 PPT	Gr 6 CBT	Gr 6 Total	Gr 7 PPT	Gr 7 CBT	Gr 7 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Non-IEP Students (Number)	100,132	2,160	102,292	102,424	2,144	104,568	101,158	3,705	104,863	100,458	3,595	104,053	99,323	4,157	103,480	99,944	4,289	104,233
Non-Accommodated (Number)	86,966	1,793	88,759	88,977	1,867	90,844	90,513	3,312	93,825	91,366	3,330	94,696	93,545	3,927	97,472	94,601	4,059	98,660
Non-Accommodated (Percent)	86.9	83	86.8	86.9	87.1	86.9	89.5	89.4	89.5	90.9	92.6	91	94.2	94.5	94.2	94.7	94.6	94.7
Accommodated (Number)	13,166	367	13,533	13,447	277	13,724	10,645	393	11,038	9,092	265	9,357	5,778	230	6,008	5,343	230	5,573
Accommodated (Percent)	13.1	17	13.2	13.1	12.9	13.1	10.5	10.6	10.5	9.1	7.4	9	5.8	5.5	5.8	5.3	5.4	5.3
IEP Students (Number)	19,462	809	20,271	20,924	989	21,913	20,636	1,369	22,005	19,756	1,576	21,332	19,137	1,608	20,745	18,856	1,691	20,547
Non-Accommodated (Number)	7,443	163	7,606	6,982	204	7,186	6,737	264	7,001	6,655	259	6,914	7,419	329	7,748	7,295	383	7,678
Non-Accommodated (Percent)	38.2	20.1	37.5	33.4	20.6	32.8	32.6	19.3	31.8	33.7	16.4	32.4	38.8	20.5	37.3	38.7	22.6	37.4
Accommodated (Number)	12,019	646	12,665	13,942	785	14,727	13,899	1,105	15,004	13,101	1,317	14,418	11,718	1,279	12,997	11,561	1,308	12,869
Accommodated (Percent)	61.8	79.9	62.5	66.6	79.4	67.2	67.4	80.7	68.2	66.3	83.6	67.6	61.2	79.5	62.7	61.3	77.4	62.6

Accommodation Rate for Non-IEP and IEP Students on the 2018 PSSA: Science

Student	Gr 4 PPT	Gr 4 CBT	Gr 4 Total	Gr 8 PPT	Gr 8 CBT	Gr 8 Total
Non-IEP Students (Number)	101,701	2,776	104,477	98,211	5,774	103,985
Non-Accommodated (Number)	92,113	2,562	94,675	94,873	5,600	100,473
Non-Accommodated (Percent)	90.6	92.3	90.6	96.6	97	96.6
Accommodated (Number)	9,588	214	9,802	3,338	174	3,512
Accommodated (Percent)	9.4	7.7	9.4	3.4	3	3.4
IEP Students (Number)	20,830	1,046	21,876	18,498	1,934	20,432
Non-Accommodated (Number)	7,333	221	7,554	7,514	523	8,037
Non-Accommodated (Percent)	35.2	21.1	34.5	40.6	27	39.3
Accommodated (Number)	13,497	825	14,322	10,984	1,411	12,395
Accommodated (Percent)	64.8	78.9	65.5	59.4	73	60.7

APPENDIX L: INCIDENCE OF ACCOMMODATIONS RECEIVED BY IEP AND EL STUDENTS

Incidence of IEP and EL Students Receiving Selected Accommodations on the 2018 PSSA: English Language Arts Grade 3

Accommodation Received by Administration Mode	General Education (non-IEP or EL)	IEP and non-EL	EL and non-IEP	Both IEP and EL
PPT - Some conventions questions/ text-dependent analysis prompts read aloud (Number)	1,255	2,134	290	111
PPT - Some conventions questions/ text-dependent analysis prompts read aloud (Percent)	1.3	11.4	6.5	13.9
PPT - All conventions questions/ text-dependent analysis prompts read aloud (Number)	394	2,833	108	112
PPT - All conventions questions/ text-dependent analysis prompts read aloud (Percent)	.4	15.2	2.4	14
PPT - Small group setting (Number)	3,600	10,295	1,218	508
PPT - Small group setting (Percent)	3.8	55.2	27.3	63.4
PPT - Extended time (Number)	4,558	2,420	231	75
PPT - Extended time (Percent)	4.8	13	5.2	9.4
PPT - Frequent breaks (Number)	524	3,095	67	111
PPT - Frequent breaks (Percent)	.5	16.6	1.5	13.9
PPT - Number assessed (Number)	95,616	18,664	4,462	801
CBT - Some conventions questions/ text-dependent analysis prompts read aloud (Number)	0	34	0	0
CBT - Some conventions questions/ text-dependent analysis prompts read aloud (Percent)	0	4.6	0	0
CBT - All conventions questions/ text-dependent analysis prompts read aloud (Number)	7	116	1	3
CBT - All conventions questions/ text-dependent analysis prompts read aloud (Percent)	.3	15.6	1.2	33.3
CBT - Small group setting (Number)	71	433	28	7
CBT - Small group setting (Percent)	3.5	58.2	32.6	77.8
CBT - Extended time (Number)	77	200	4	1
CBT - Extended time (Percent)	3.8	26.9	4.7	11.1
CBT - Frequent breaks (Number)	19	169	8	3
CBT - Frequent breaks (Percent)	.9	22.7	9.3	33.3
CBT - Number assessed (Number)	2,015	744	86	9
Total - Some conventions questions/ text-dependent analysis prompts read aloud (Number)	1,255	2,168	290	111
Total - Some conventions questions/ text-dependent analysis prompts read aloud (Percent)	1.3	11.2	6.4	13.7

Accommodation Received by Administration Mode	General Education (non-IEP or EL)	IEP and non-EL	EL and non-IEP	Both IEP and EL
Total - All conventions questions/ text-dependent analysis prompts read aloud (Number)	401	2,949	109	115
Total - All conventions questions/ text-dependent analysis prompts read aloud (Percent)	.4	15.2	2.4	14.2
Total - Small group setting (Number)	3,671	10,728	1,246	515
Total - Small group setting (Percent)	3.8	55.3	27.4	63.6
Total - Extended time (Number)	4,635	2,620	235	76
Total - Extended time (Percent)	4.7	13.5	5.2	9.4
Total - Frequent breaks (Number)	543	3,264	75	114
Total - Frequent breaks (Percent)	.6	16.8	1.6	14.1
Total - Number assessed (Number)	97,631	19,408	4,548	810

Incidence of IEP and EL Students Receiving Selected Accommodations on the 2018 PSSA: English Language Arts Grade 4

Accommodation Received by Administration Mode	General Education (non-IEP or EL)	IEP and non-EL	EL and non-IEP	Both IEP and EL
PPT - Some conventions questions/ text-dependent analysis prompts read aloud (Number)	1,801	3,370	347	176
PPT - Some conventions questions/ text-dependent analysis prompts read aloud (Percent)	1.8	16.8	8.4	19.6
PPT - All conventions questions/ text-dependent analysis prompts read aloud (Number)	301	3,167	122	129
PPT - All conventions questions/ text-dependent analysis prompts read aloud (Percent)	.3	15.8	3	14.3
PPT - Small group setting (Number)	3,202	12,108	1,090	621
PPT - Small group setting (Percent)	3.3	60.4	26.5	69.1
PPT - Extended time (Number)	9,278	3,052	401	144
PPT - Extended time (Percent)	9.5	15.2	9.7	16
PPT - Frequent breaks (Number)	497	3,561	103	160
PPT - Frequent breaks (Percent)	.5	17.8	2.5	17.8
PPT - Number assessed (Number)	98,111	20,051	4,120	899
CBT - Some conventions questions/ text-dependent analysis prompts read aloud (Number)	0	37	0	0
CBT - Some conventions questions/ text-dependent analysis prompts read aloud (Percent)	0	4.3	0	0
CBT - All conventions questions/ text-dependent analysis prompts read aloud (Number)	8	161	3	7
CBT - All conventions questions/ text-dependent analysis prompts read aloud (Percent)	.4	18.6	5.9	21.9
CBT - Small group setting (Number)	89	475	20	25
CBT - Small group setting (Percent)	4.3	54.8	39.2	78.1
CBT - Extended time (Number)	135	255	10	4
CBT - Extended time (Percent)	6.5	29.4	19.6	12.5
CBT - Frequent breaks (Number)	43	229	3	12
CBT - Frequent breaks (Percent)	2.1	26.4	5.9	37.5
CBT - Number assessed (Number)	2,092	867	51	32
Total - Some conventions questions/ text-dependent analysis prompts read aloud (Number)	1,801	3,407	347	176
Total - Some conventions questions/ text-dependent analysis prompts read aloud (Percent)	1.8	16.3	8.3	18.9
Total - All conventions questions/ text-dependent analysis prompts read aloud (Number)	309	3,328	125	136
Total - All conventions questions/ text-dependent analysis prompts read aloud (Percent)	.3	15.9	3	14.6

Accommodation Received by Administration Mode	General Education (non-IEP or EL)	IEP and non-EL	EL and non-IEP	Both IEP and EL
Total - Small group setting (Number)	3,291	12,583	1,110	646
Total - Small group setting (Percent)	3.3	60.2	26.6	69.4
Total - Extended time (Number)	9,413	3,307	411	148
Total - Extended time (Percent)	9.4	15.8	9.9	15.9
Total - Frequent breaks (Number)	540	3,790	106	172
Total - Frequent breaks (Percent)	.5	18.1	2.5	18.5
Total - Number assessed (Number)	100,203	20,918	4,171	931

Incidence of IEP and EL Students Receiving Selected Accommodations on the 2018 PSSA: English Language Arts Grade 5

Accommodation Received by Administration Mode	General Education (non-IEP or EL)	IEP and non-EL	EL and non-IEP	Both IEP and EL
PPT - Some conventions questions/ text-dependent analysis prompts read aloud (Number)	1,350	3,424	169	153
PPT - Some conventions questions/ text-dependent analysis prompts read aloud (Percent)	1.4	17.3	5.3	17.2
PPT - All conventions questions/ text-dependent analysis prompts read aloud (Number)	214	2,456	51	100
PPT - All conventions questions/ text-dependent analysis prompts read aloud (Percent)	.2	12.4	1.6	11.3
PPT - Small group setting (Number)	2,557	12,195	706	612
PPT - Small group setting (Percent)	2.6	61.5	22.3	69
PPT - Extended time (Number)	9,726	3,080	303	147
PPT - Extended time (Percent)	9.9	15.5	9.6	16.6
PPT - Frequent breaks (Number)	359	3,166	50	134
PPT - Frequent breaks (Percent)	.4	16	1.6	15.1
PPT - Number assessed (Number)	98,082	19,842	3,165	887
CBT - Some conventions questions/ text-dependent analysis prompts read aloud (Number)	3	58	4	6
CBT - Some conventions questions/ text-dependent analysis prompts read aloud (Percent)	.1	4.8	4.8	14.3
CBT - All conventions questions/ text-dependent analysis prompts read aloud (Number)	10	259	3	6
CBT - All conventions questions/ text-dependent analysis prompts read aloud (Percent)	.3	21.4	3.6	14.3
CBT - Small group setting (Number)	68	640	19	30
CBT - Small group setting (Percent)	2	52.8	22.6	71.4
CBT - Extended time (Number)	249	309	12	8
CBT - Extended time (Percent)	7.2	25.5	14.3	19
CBT - Frequent breaks (Number)	21	269	6	11
CBT - Frequent breaks (Percent)	.6	22.2	7.1	26.2
CBT - Number assessed (Number)	3,447	1,212	84	42
Total - Some conventions questions/ text-dependent analysis prompts read aloud (Number)	1,353	3,482	173	159
Total - Some conventions questions/ text-dependent analysis prompts read aloud (Percent)	1.3	16.5	5.3	17.1
Total - All conventions questions/ text-dependent analysis prompts read aloud (Number)	224	2,715	54	106
Total - All conventions questions/ text-dependent analysis prompts read aloud (Percent)	.2	12.9	1.7	11.4
Total - Small group setting (Number)	2,625	12,835	725	642

Accommodation Received by Administration Mode	General Education (non-IEP or EL)	IEP and non-EL	EL and non-IEP	Both IEP and EL
Total - Small group setting (Percent)	2.6	61	22.3	69.1
Total - Extended time (Number)	9,975	3,389	315	155
Total - Extended time (Percent)	9.8	16.1	9.7	16.7
Total - Frequent breaks (Number)	380	3,435	56	145
Total - Frequent breaks (Percent)	.4	16.3	1.7	15.6
Total - Number assessed (Number)	101,529	21,054	3,249	929

Incidence of IEP and EL Students Receiving Selected Accommodations on the 2018 PSSA: English Language Arts Grade 6

Accommodation Received by Administration Mode	General Education (non-IEP or EL)	IEP and non-EL	EL and non-IEP	Both IEP and EL
PPT - Some conventions questions/ text-dependent analysis prompts read aloud (Number)	474	2,358	110	82
PPT - Some conventions questions/ text-dependent analysis prompts read aloud (Percent)	.5	12.4	3.9	10.6
PPT - All conventions questions/ text-dependent analysis prompts read aloud (Number)	88	1,708	22	57
PPT - All conventions questions/ text-dependent analysis prompts read aloud (Percent)	.1	9	.8	7.3
PPT - Small group setting (Number)	1,799	11,593	499	422
PPT - Small group setting (Percent)	1.8	61.1	17.6	54.4
PPT - Extended time (Number)	8,433	2,688	196	112
PPT - Extended time (Percent)	8.7	14.2	6.9	14.4
PPT - Frequent breaks (Number)	155	2,220	23	96
PPT - Frequent breaks (Percent)	.2	11.7	.8	12.4
PPT - Number assessed (Number)	97,472	18,982	2,842	776
CBT - Some conventions questions/ text-dependent analysis prompts read aloud (Number)	2	84	1	16
CBT - Some conventions questions/ text-dependent analysis prompts read aloud (Percent)	.1	5.7	1.3	23.9
CBT - All conventions questions/ text-dependent analysis prompts read aloud (Number)	7	285	0	11
CBT - All conventions questions/ text-dependent analysis prompts read aloud (Percent)	.2	19.3	0	16.4
CBT - Small group setting (Number)	71	853	8	45
CBT - Small group setting (Percent)	1.9	57.8	10.3	67.2
CBT - Extended time (Number)	169	453	2	28
CBT - Extended time (Percent)	4.6	30.7	2.6	41.8
CBT - Frequent breaks (Number)	21	402	0	14
CBT - Frequent breaks (Percent)	.6	27.2	0	20.9
CBT - Number assessed (Number)	3,647	1,477	78	67
Total - Some conventions questions/ text-dependent analysis prompts read aloud (Number)	476	2,442	111	98
Total - Some conventions questions/ text-dependent analysis prompts read aloud (Percent)	.5	11.9	3.8	11.6
Total - All conventions questions/ text-dependent analysis prompts read aloud (Number)	95	1,993	22	68
Total - All conventions questions/ text-dependent analysis prompts read aloud (Percent)	.1	9.7	.8	8.1

Accommodation Received by Administration Mode	General Education (non-IEP or EL)	IEP and non-EL	EL and non-IEP	Both IEP and EL
Total - Small group setting (Number)	1,870	12,446	507	467
Total - Small group setting (Percent)	1.8	60.8	17.4	55.4
Total - Extended time (Number)	8,602	3,141	198	140
Total - Extended time (Percent)	8.5	15.4	6.8	16.6
Total - Frequent breaks (Number)	176	2,622	23	110
Total - Frequent breaks (Percent)	.2	12.8	.8	13
Total - Number assessed (Number)	101,119	20,459	2,920	843

Incidence of IEP and EL Students Receiving Selected Accommodations on the 2018 PSSA: English Language Arts Grade 7

Accommodation Received by Administration Mode	General Education (non-IEP or EL)	IEP and non-EL	EL and non-IEP	Both IEP and EL
PPT - Some conventions questions/ text-dependent analysis prompts read aloud (Number)	286	1,533	69	55
PPT - Some conventions questions/ text-dependent analysis prompts read aloud (Percent)	.3	8.3	2.6	7.9
PPT - All conventions questions/ text-dependent analysis prompts read aloud (Number)	22	948	14	26
PPT - All conventions questions/ text-dependent analysis prompts read aloud (Percent)	0	5.1	.5	3.7
PPT - Small group setting (Number)	1,149	10,800	373	360
PPT - Small group setting (Percent)	1.2	58.6	14.2	51.8
PPT - Extended time (Number)	7,211	2,264	182	94
PPT - Extended time (Percent)	7.5	12.3	6.9	13.5
PPT - Frequent breaks (Number)	111	1,767	22	60
PPT - Frequent breaks (Percent)	.1	9.6	.8	8.6
PPT - Number assessed (Number)	96,523	18,439	2,625	695
CBT - Some conventions questions/ text-dependent analysis prompts read aloud (Number)	6	73	0	9
CBT - Some conventions questions/ text-dependent analysis prompts read aloud (Percent)	.1	4.6	0	17
CBT - All conventions questions/ text-dependent analysis prompts read aloud (Number)	5	204	0	5
CBT - All conventions questions/ text-dependent analysis prompts read aloud (Percent)	.1	12.8	0	9.4
CBT - Small group setting (Number)	72	953	8	38
CBT - Small group setting (Percent)	1.7	59.9	9.5	71.7
CBT - Extended time (Number)	146	429	3	23
CBT - Extended time (Percent)	3.5	26.9	3.6	43.4
CBT - Frequent breaks (Number)	13	263	0	7
CBT - Frequent breaks (Percent)	.3	16.5	0	13.2
CBT - Number assessed (Number)	4,215	1,592	84	53
Total - Some conventions questions/ text-dependent analysis prompts read aloud (Number)	292	1,606	69	64
Total - Some conventions questions/ text-dependent analysis prompts read aloud (Percent)	.3	8	2.5	8.6
Total - All conventions questions/ text-dependent analysis prompts read aloud (Number)	27	1,152	14	31
Total - All conventions questions/ text-dependent analysis prompts read aloud (Percent)	0	5.8	.5	4.1
Total - Small group setting (Number)	1,221	11,753	381	398

Accommodation Received by Administration Mode	General Education (non-IEP or EL)	IEP and non-EL	EL and non-IEP	Both IEP and EL
Total - Small group setting (Percent)	1.2	58.7	14.1	53.2
Total - Extended time (Number)	7,357	2,693	185	117
Total - Extended time (Percent)	7.3	13.4	6.8	15.6
Total - Frequent breaks (Number)	124	2,030	22	67
Total - Frequent breaks (Percent)	.1	10.1	.8	9
Total - Number assessed (Number)	100,738	20,031	2,709	748

Incidence of IEP and EL Students Receiving Selected Accommodations on the 2018 PSSA: English Language Arts Grade 8

Accommodation Received by Administration Mode	General Education (non-IEP or EL)	IEP and non-EL	EL and non-IEP	Both IEP and EL
PPT - Some conventions questions/ text-dependent analysis prompts read aloud (Number)	80	1,250	45	38
PPT - Some conventions questions/ text-dependent analysis prompts read aloud (Percent)	.1	6.9	1.8	5.9
PPT - All conventions questions/ text-dependent analysis prompts read aloud (Number)	17	773	5	28
PPT - All conventions questions/ text-dependent analysis prompts read aloud (Percent)	0	4.2	.2	4.4
PPT - Small group setting (Number)	1,101	10,781	383	322
PPT - Small group setting (Percent)	1.1	59.2	15.3	50.1
PPT - Extended time (Number)	5,578	1,845	173	83
PPT - Extended time (Percent)	5.7	10.1	6.9	12.9
PPT - Frequent breaks (Number)	77	1,431	14	56
PPT - Frequent breaks (Percent)	.1	7.9	.6	8.7
PPT - Number assessed (Number)	97,452	18,218	2,505	643
CBT - Some conventions questions/ text-dependent analysis prompts read aloud (Number)	3	85	0	8
CBT - Some conventions questions/ text-dependent analysis prompts read aloud (Percent)	.1	5.1	0	12.1
CBT - All conventions questions/ text-dependent analysis prompts read aloud (Number)	4	170	0	16
CBT - All conventions questions/ text-dependent analysis prompts read aloud (Percent)	.1	10.2	0	24.2
CBT - Small group setting (Number)	67	973	14	45
CBT - Small group setting (Percent)	1.6	58.4	18.7	68.2
CBT - Extended time (Number)	109	466	3	32
CBT - Extended time (Percent)	2.5	28	4	48.5
CBT - Frequent breaks (Number)	14	241	0	11
CBT - Frequent breaks (Percent)	.3	14.5	0	16.7
CBT - Number assessed (Number)	4,283	1,665	75	66
Total - Some conventions questions/ text-dependent analysis prompts read aloud (Number)	83	1,335	45	46
Total - Some conventions questions/ text-dependent analysis prompts read aloud (Percent)	.1	6.7	1.7	6.5
Total - All conventions questions/ text-dependent analysis prompts read aloud (Number)	21	943	5	44
Total - All conventions questions/ text-dependent analysis prompts read aloud (Percent)	0	4.7	.2	6.2

Accommodation Received by Administration Mode	General Education (non-IEP or EL)	IEP and non-EL	EL and non-IEP	Both IEP and EL
Total - Small group setting (Number)	1,168	11,754	397	367
Total - Small group setting (Percent)	1.1	59.1	15.4	51.8
Total - Extended time (Number)	5,687	2,311	176	115
Total - Extended time (Percent)	5.6	11.6	6.8	16.2
Total - Frequent breaks (Number)	91	1,672	14	67
Total - Frequent breaks (Percent)	.1	8.4	.5	9.4
Total - Number assessed (Number)	101,735	19,883	2,580	709

Incidence of IEP and EL Students Receiving Selected Accommodations on the 2018 PSSA: Mathematics Grade 3

Accommodation Received by Administration Mode	General Education (non-IEP or EL)	IEP and non-EL	EL and non-IEP	Both IEP and EL
PPT - Some test items/questions read aloud (Number)	4,238	3,172	708	192
PPT - Some test items/questions read aloud (Percent)	4.4	17	15.8	23.9
PPT - All test items/questions read aloud (Number)	981	4,586	218	176
PPT - All test items/questions read aloud (Percent)	1	24.6	4.9	21.9
PPT - Small group setting (Number)	3,775	10,233	1,262	492
PPT - Small group setting (Percent)	3.9	54.8	28.2	61.3
PPT - Extended time (Number)	4,714	1,999	236	75
PPT - Extended time (Percent)	4.9	10.7	5.3	9.3
PPT - Frequent breaks (Number)	522	2,926	55	109
PPT - Frequent breaks (Percent)	.5	15.7	1.2	13.6
PPT - Number assessed (Number)	95,651	18,659	4,481	803
CBT - Some test items/questions read aloud (Number)	5	35	0	0
CBT - Some test items/questions read aloud (Percent)	.2	4.4	0	0
CBT - All test items/questions read aloud (Number)	24	233	8	6
CBT - All test items/questions read aloud (Percent)	1.2	29.3	8.1	46.2
CBT - Small group setting (Number)	84	464	37	9
CBT - Small group setting (Percent)	4.1	58.3	37.4	69.2
CBT - Extended time (Number)	151	213	11	2
CBT - Extended time (Percent)	7.3	26.8	11.1	15.4
CBT - Frequent breaks (Number)	25	194	8	4
CBT - Frequent breaks (Percent)	1.2	24.4	8.1	30.8
CBT - Number assessed (Number)	2,061	796	99	13
Total - Some test items/questions read aloud (Number)	4,243	3,207	708	192
Total - Some test items/questions read aloud (Percent)	4.3	16.5	15.5	23.5
Total - All test items/questions read aloud (Number)	1,005	4,819	226	182
Total - All test items/questions read aloud (Percent)	1	24.8	4.9	22.3
Total - Small group setting (Number)	3,859	10,697	1,299	501
Total - Small group setting (Percent)	3.9	55	28.4	61.4
Total - Extended time (Number)	4,865	2,212	247	77
Total - Extended time (Percent)	5	11.4	5.4	9.4
Total - Frequent breaks (Number)	547	3,120	63	113
Total - Frequent breaks (Percent)	.6	16	1.4	13.8
Total - Number assessed (Number)	97,712	19,455	4,580	816

Incidence of IEP and EL Students Receiving Selected Accommodations on the 2018 PSSA: Mathematics Grade 4

Accommodation Received by Administration Mode	General Education (non-IEP or EL)	IEP and non-EL	EL and non-IEP	Both IEP and EL
PPT - Some test items/questions read aloud (Number)	3,592	4,046	574	247
PPT - Some test items/questions read aloud (Percent)	3.7	20.2	13.9	28
PPT - All test items/questions read aloud (Number)	584	4,663	178	190
PPT - All test items/questions read aloud (Percent)	.6	23.3	4.3	21.6
PPT - Small group setting (Number)	3,252	12,050	1,100	598
PPT - Small group setting (Percent)	3.3	60.1	26.6	67.9
PPT - Extended time (Number)	6,214	2,367	306	119
PPT - Extended time (Percent)	6.3	11.8	7.4	13.5
PPT - Frequent breaks (Number)	451	3,163	78	156
PPT - Frequent breaks (Percent)	.5	15.8	1.9	17.7
PPT - Number assessed (Number)	98,290	20,043	4,134	881
CBT - Some test items/questions read aloud (Number)	1	38	0	2
CBT - Some test items/questions read aloud (Percent)	0	4	0	4.5
CBT - All test items/questions read aloud (Number)	12	224	2	12
CBT - All test items/questions read aloud (Percent)	.6	23.7	3.6	27.3
CBT - Small group setting (Number)	94	527	18	31
CBT - Small group setting (Percent)	4.5	55.8	32.7	70.5
CBT - Extended time (Number)	144	280	9	8
CBT - Extended time (Percent)	6.9	29.6	16.4	18.2
CBT - Frequent breaks (Number)	43	254	3	13
CBT - Frequent breaks (Percent)	2.1	26.9	5.5	29.5
CBT - Number assessed (Number)	2,089	945	55	44
Total - Some test items/questions read aloud (Number)	3,593	4,084	574	249
Total - Some test items/questions read aloud (Percent)	3.6	19.5	13.7	26.9
Total - All test items/questions read aloud (Number)	596	4,887	180	202
Total - All test items/questions read aloud (Percent)	.6	23.3	4.3	21.8
Total - Small group setting (Number)	3,346	12,577	1,118	629
Total - Small group setting (Percent)	3.3	59.9	26.7	68
Total - Extended time (Number)	6,358	2,647	315	127
Total - Extended time (Percent)	6.3	12.6	7.5	13.7
Total - Frequent breaks (Number)	494	3,417	81	169
Total - Frequent breaks (Percent)	.5	16.3	1.9	18.3
Total - Number assessed (Number)	100,379	20,988	4,189	925

Incidence of IEP and EL Students Receiving Selected Accommodations on the 2018 PSSA: Mathematics Grade 5

Accommodation Received by Administration Mode	General Education (non-IEP or EL)	IEP and non-EL	EL and non-IEP	Both IEP and EL
PPT - Some test items/questions read aloud (Number)	2,035	3,937	314	202
PPT - Some test items/questions read aloud (Percent)	2.1	19.9	9.9	23
PPT - All test items/questions read aloud (Number)	321	3,485	88	136
PPT - All test items/questions read aloud (Percent)	.3	17.6	2.8	15.5
PPT - Small group setting (Number)	2,585	12,100	767	572
PPT - Small group setting (Percent)	2.6	61.2	24.2	65
PPT - Extended time (Number)	5,785	2,516	246	109
PPT - Extended time (Percent)	5.9	12.7	7.8	12.4
PPT - Frequent breaks (Number)	316	2,946	41	123
PPT - Frequent breaks (Percent)	.3	14.9	1.3	14
PPT - Number assessed (Number)	97,986	19,756	3,172	880
CBT - Some test items/questions read aloud (Number)	4	86	4	16
CBT - Some test items/questions read aloud (Percent)	.1	6.5	4.3	32.7
CBT - All test items/questions read aloud (Number)	14	291	5	8
CBT - All test items/questions read aloud (Percent)	.4	22	5.4	16.3
CBT - Small group setting (Number)	73	684	22	32
CBT - Small group setting (Percent)	2	51.8	23.7	65.3
CBT - Extended time (Number)	266	329	18	8
CBT - Extended time (Percent)	7.4	24.9	19.4	16.3
CBT - Frequent breaks (Number)	20	291	6	10
CBT - Frequent breaks (Percent)	.6	22	6.5	20.4
CBT - Number assessed (Number)	3,612	1,320	93	49
Total - Some test items/questions read aloud (Number)	2,039	4,023	318	218
Total - Some test items/questions read aloud (Percent)	2	19.1	9.7	23.5
Total - All test items/questions read aloud (Number)	335	3,776	93	144
Total - All test items/questions read aloud (Percent)	.3	17.9	2.8	15.5
Total - Small group setting (Number)	2,658	12,784	789	604
Total - Small group setting (Percent)	2.6	60.7	24.2	65
Total - Extended time (Number)	6,051	2,845	264	117
Total - Extended time (Percent)	6	13.5	8.1	12.6
Total - Frequent breaks (Number)	336	3,237	47	133
Total - Frequent breaks (Percent)	.3	15.4	1.4	14.3
Total - Number assessed (Number)	101,598	21,076	3,265	929

Incidence of IEP and EL Students Receiving Selected Accommodations on the 2018 PSSA: Mathematics Grade 6

Accommodation Received by Administration Mode	General Education (non-IEP or EL)	IEP and non-EL	EL and non-IEP	Both IEP and EL
PPT - Some test items/questions read aloud (Number)	669	2,867	155	113
PPT - Some test items/questions read aloud (Percent)	.7	15.1	5.4	14.5
PPT - All test items/questions read aloud (Number)	168	2,174	39	79
PPT - All test items/questions read aloud (Percent)	.2	11.5	1.4	10.1
PPT - Small group setting (Number)	1,741	11,464	491	444
PPT - Small group setting (Percent)	1.8	60.4	17.1	56.8
PPT - Extended time (Number)	6,241	2,230	200	78
PPT - Extended time (Percent)	6.4	11.8	7	10
PPT - Frequent breaks (Number)	162	2,063	12	81
PPT - Frequent breaks (Percent)	.2	10.9	.4	10.4
PPT - Number assessed (Number)	97,585	18,974	2,873	782
CBT - Some test items/questions read aloud (Number)	7	130	1	19
CBT - Some test items/questions read aloud (Percent)	.2	8.6	1.3	28.4
CBT - All test items/questions read aloud (Number)	9	284	2	11
CBT - All test items/questions read aloud (Percent)	.3	18.8	2.6	16.4
CBT - Small group setting (Number)	52	850	10	48
CBT - Small group setting (Percent)	1.5	56.3	13	71.6
CBT - Extended time (Number)	177	451	7	29
CBT - Extended time (Percent)	5	29.9	9.1	43.3
CBT - Frequent breaks (Number)	18	409	0	14
CBT - Frequent breaks (Percent)	.5	27.1	0	20.9
CBT - Number assessed (Number)	3,518	1,509	77	67
Total - Some test items/questions read aloud (Number)	676	2,997	156	132
Total - Some test items/questions read aloud (Percent)	.7	14.6	5.3	15.5
Total - All test items/questions read aloud (Number)	177	2,458	41	90
Total - All test items/questions read aloud (Percent)	.2	12	1.4	10.6
Total - Small group setting (Number)	1,793	12,314	501	492
Total - Small group setting (Percent)	1.8	60.1	17	58
Total - Extended time (Number)	6,418	2,681	207	107
Total - Extended time (Percent)	6.3	13.1	7	12.6
Total - Frequent breaks (Number)	180	2,472	12	95
Total - Frequent breaks (Percent)	.2	12.1	.4	11.2
Total - Number assessed (Number)	101,103	20,483	2,950	849

Incidence of IEP and EL Students Receiving Selected Accommodations on the 2018 PSSA: Mathematics Grade 7

Accommodation Received by Administration Mode	General Education (non-IEP or EL)	IEP and non-EL	EL and non-IEP	Both IEP and EL
PPT - Some test items/questions read aloud (Number)	292	1,720	96	71
PPT - Some test items/questions read aloud (Percent)	.3	9.3	3.6	10.1
PPT - All test items/questions read aloud (Number)	30	1,329	19	48
PPT - All test items/questions read aloud (Percent)	0	7.2	.7	6.8
PPT - Small group setting (Number)	1,176	10,447	369	340
PPT - Small group setting (Percent)	1.2	56.7	13.9	48.5
PPT - Extended time (Number)	3,822	1,710	143	77
PPT - Extended time (Percent)	4	9.3	5.4	11
PPT - Frequent breaks (Number)	94	1,626	15	49
PPT - Frequent breaks (Percent)	.1	8.8	.6	7
PPT - Number assessed (Number)	96,673	18,436	2,650	701
CBT - Some test items/questions read aloud (Number)	2	74	0	10
CBT - Some test items/questions read aloud (Percent)	0	4.7	0	20
CBT - All test items/questions read aloud (Number)	6	217	0	5
CBT - All test items/questions read aloud (Percent)	.1	13.9	0	10
CBT - Small group setting (Number)	68	919	9	37
CBT - Small group setting (Percent)	1.7	59	11.4	74
CBT - Extended time (Number)	129	404	3	22
CBT - Extended time (Percent)	3.2	25.9	3.8	44
CBT - Frequent breaks (Number)	14	267	0	7
CBT - Frequent breaks (Percent)	.3	17.1	0	14
CBT - Number assessed (Number)	4,078	1,558	79	50
Total - Some test items/questions read aloud (Number)	294	1,794	96	81
Total - Some test items/questions read aloud (Percent)	.3	9	3.5	10.8
Total - All test items/questions read aloud (Number)	36	1,546	19	53
Total - All test items/questions read aloud (Percent)	0	7.7	.7	7.1
Total - Small group setting (Number)	1,244	11,366	378	377
Total - Small group setting (Percent)	1.2	56.8	13.9	50.2
Total - Extended time (Number)	3,951	2,114	146	99
Total - Extended time (Percent)	3.9	10.6	5.3	13.2
Total - Frequent breaks (Number)	108	1,893	15	56
Total - Frequent breaks (Percent)	.1	9.5	.5	7.5
Total - Number assessed (Number)	100,751	19,994	2,729	751

Incidence of IEP and EL Students Receiving Selected Accommodations on the 2018 PSSA: Mathematics Grade 8

Accommodation Received by Administration Mode	General Education (non-IEP or EL)	IEP and non-EL	EL and non-IEP	Both IEP and EL
PPT - Some test items/questions read aloud (Number)	98	1,311	91	53
PPT - Some test items/questions read aloud (Percent)	.1	7.2	3.6	8.1
PPT - All test items/questions read aloud (Number)	32	1,070	13	39
PPT - All test items/questions read aloud (Percent)	0	5.9	.5	6
PPT - Small group setting (Number)	1,104	10,527	397	298
PPT - Small group setting (Percent)	1.1	57.8	15.7	45.7
PPT - Extended time (Number)	3,483	1,450	155	58
PPT - Extended time (Percent)	3.6	8	6.1	8.9
PPT - Frequent breaks (Number)	76	1,331	4	44
PPT - Frequent breaks (Percent)	.1	7.3	.2	6.7
PPT - Number assessed (Number)	97,413	18,204	2,531	652
CBT - Some test items/questions read aloud (Number)	1	77	0	10
CBT - Some test items/questions read aloud (Percent)	0	4.7	0	15.6
CBT - All test items/questions read aloud (Number)	3	181	0	17
CBT - All test items/questions read aloud (Percent)	.1	11.1	0	26.6
CBT - Small group setting (Number)	69	944	14	43
CBT - Small group setting (Percent)	1.6	58	20	67.2
CBT - Extended time (Number)	99	438	4	32
CBT - Extended time (Percent)	2.3	26.9	5.7	50
CBT - Frequent breaks (Number)	13	237	0	10
CBT - Frequent breaks (Percent)	.3	14.6	0	15.6
CBT - Number assessed (Number)	4,219	1,627	70	64
Total - Some test items/questions read aloud (Number)	99	1,388	91	63
Total - Some test items/questions read aloud (Percent)	.1	7	3.5	8.8
Total - All test items/questions read aloud (Number)	35	1,251	13	56
Total - All test items/questions read aloud (Percent)	0	6.3	.5	7.8
Total - Small group setting (Number)	1,173	11,471	411	341
Total - Small group setting (Percent)	1.2	57.8	15.8	47.6
Total - Extended time (Number)	3,582	1,888	159	90
Total - Extended time (Percent)	3.5	9.5	6.1	12.6
Total - Frequent breaks (Number)	89	1,568	4	54
Total - Frequent breaks (Percent)	.1	7.9	.2	7.5
Total - Number assessed (Number)	101,632	19,831	2,601	716

Incidence of IEP and EL Students Receiving Selected Accommodations on the 2018 PSSA: Science Grade 4

Accommodation Received by Administration Mode	General Education (non-IEP or EL)	IEP and non-EL	EL and non-IEP	Both IEP and EL
PPT - Some test items/questions read aloud (Number)	3,614	3,613	553	227
PPT - Some test items/questions read aloud (Percent)	3.7	18.1	13.5	25.9
PPT - All test items/questions read aloud (Number)	608	4,893	222	194
PPT - All test items/questions read aloud (Percent)	.6	24.5	5.4	22.1
PPT - Small group setting (Number)	3,004	11,813	1,056	568
PPT - Small group setting (Percent)	3.1	59.2	25.8	64.8
PPT - Extended time (Number)	2,352	1,703	137	89
PPT - Extended time (Percent)	2.4	8.5	3.4	10.1
PPT - Frequent breaks (Number)	398	2,911	66	126
PPT - Frequent breaks (Percent)	.4	14.6	1.6	14.4
PPT - Number assessed (Number)	97,614	19,953	4,087	877
CBT - Some test items/questions read aloud (Number)	17	37	1	5
CBT - Some test items/questions read aloud (Percent)	.6	3.7	1	10.4
CBT - All test items/questions read aloud (Number)	12	224	2	13
CBT - All test items/questions read aloud (Percent)	.4	22.4	1.9	27.1
CBT - Small group setting (Number)	74	540	22	33
CBT - Small group setting (Percent)	2.8	54.1	21	68.8
CBT - Extended time (Number)	59	287	9	8
CBT - Extended time (Percent)	2.2	28.8	8.6	16.7
CBT - Frequent breaks (Number)	24	255	3	13
CBT - Frequent breaks (Percent)	.9	25.6	2.9	27.1
CBT - Number assessed (Number)	2,671	998	105	48
Total - Some test items/questions read aloud (Number)	3,631	3,650	554	232
Total - Some test items/questions read aloud (Percent)	3.6	17.4	13.2	25.1
Total - All test items/questions read aloud (Number)	620	5,117	224	207
Total - All test items/questions read aloud (Percent)	.6	24.4	5.3	22.4
Total - Small group setting (Number)	3,078	12,353	1,078	601
Total - Small group setting (Percent)	3.1	59	25.7	65
Total - Extended time (Number)	2,411	1,990	146	97
Total - Extended time (Percent)	2.4	9.5	3.5	10.5
Total - Frequent breaks (Number)	422	3,166	69	139
Total - Frequent breaks (Percent)	.4	15.1	1.6	15
Total - Number assessed (Number)	100,285	20,951	4,192	925

Incidence of IEP and EL Students Receiving Selected Accommodations on the 2018 PSSA: Science Grade 8

Accommodation Received by Administration Mode	General Education (non-IEP or EL)	IEP and non-EL	EL and non-IEP	Both IEP and EL
PPT - Some test items/questions read aloud (Number)	113	1,018	49	46
PPT - Some test items/questions read aloud (Percent)	.1	5.7	1.9	7.1
PPT - All test items/questions read aloud (Number)	31	1,153	20	46
PPT - All test items/questions read aloud (Percent)	0	6.5	.8	7.1
PPT - Small group setting (Number)	1,054	10,012	336	290
PPT - Small group setting (Percent)	1.1	56.1	13.4	44.8
PPT - Extended time (Number)	1,607	1,325	108	61
PPT - Extended time (Percent)	1.7	7.4	4.3	9.4
PPT - Frequent breaks (Number)	64	1,137	7	53
PPT - Frequent breaks (Percent)	.1	6.4	.3	8.2
PPT - Number assessed (Number)	95,698	17,851	2,513	647
CBT - Some test items/questions read aloud (Number)	2	97	0	10
CBT - Some test items/questions read aloud (Percent)	0	5.2	0	15.2
CBT - All test items/questions read aloud (Number)	3	172	0	17
CBT - All test items/questions read aloud (Percent)	.1	9.2	0	25.8
CBT - Small group setting (Number)	57	1,022	14	42
CBT - Small group setting (Percent)	1	54.7	16.3	63.6
CBT - Extended time (Number)	61	438	2	31
CBT - Extended time (Percent)	1.1	23.4	2.3	47
CBT - Frequent breaks (Number)	13	226	0	10
CBT - Frequent breaks (Percent)	.2	12.1	0	15.2
CBT - Number assessed (Number)	5,688	1,868	86	66
Total - Some test items/questions read aloud (Number)	115	1,115	49	56
Total - Some test items/questions read aloud (Percent)	.1	5.7	1.9	7.9
Total - All test items/questions read aloud (Number)	34	1,325	20	63
Total - All test items/questions read aloud (Percent)	0	6.7	.8	8.8
Total - Small group setting (Number)	1,111	11,034	350	332
Total - Small group setting (Percent)	1.1	56	13.5	46.6
Total - Extended time (Number)	1,668	1,763	110	92
Total - Extended time (Percent)	1.6	8.9	4.2	12.9
Total - Frequent breaks (Number)	77	1,363	7	63
Total - Frequent breaks (Percent)	.1	6.9	.3	8.8
Total - Number assessed (Number)	101,386	19,719	2,599	713

APPENDIX M: CUT SCORES AND SCALE TRANSFORMATIONS

Subject	Grade	Scaling Intercept	Scaling slope	LOSS	Scaled Score Cut: Basic	Scaled Score Cut: Prof.	Scaled Score Cut: Adv.
Mathematics	3	956.31	100	600	923	1000	1110
Mathematics	4	981.92	100	600	908	1000	1107
Mathematics	5	961.69	100	600	901	1000	1113
Mathematics	6	931.41	100	600	897	1000	1105
Mathematics	7	956.16	100	600	904	1000	1109
Mathematics	11	951.76	100	600	906	1000	1108
ELA	3	962.47	100	600	905	1000	1143
ELA	4	957.49	100	600	887	1000	1107
ELA	5	958.32	100	600	893	1000	1139
ELA	6	940.78	100	600	875	1000	1115
ELA	7	947.65	100	600	845	1000	1130
ELA	11	961.11	100	600	886	1000	1130
Science	7	1225.65	176.75	1050	1150	1275	1483
Science	8	1196.64	191.54	925	1150	1275	1464

APPENDIX N: RAW-TO-SCALED SCORE CONVERSION TABLES

Grade 3 English Language Arts

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
0	-4.9005	1.8379	600	184	2	0.00	2	0.00	1
1	-3.6653	1.0221	600	102	1	0.00	3	0.00	1
2	-2.9274	0.7380	670	74	11	0.01	14	0.01	1
3	-2.4772	0.6149	715	61	29	0.02	43	0.04	1
4	-2.1447	0.5431	748	54	93	0.08	136	0.11	1
5	-1.8766	0.4951	775	50	257	0.21	393	0.32	1
6	-1.6490	0.4604	798	46	474	0.39	867	0.71	1
7	-1.4495	0.4341	818	43	841	0.69	1708	1.40	1
8	-1.2702	0.4134	835	41	1258	1.03	2966	2.42	2
9	-1.1064	0.3967	852	40	1788	1.46	4754	3.88	3
10	-0.9546	0.3830	867	38	2270	1.85	7024	5.74	5
11	-0.8124	0.3716	881	37	2649	2.16	9673	7.90	7
12	-0.6779	0.3620	895	36	3036	2.48	12709	10.38	9
13	-0.5499	0.3539	907	35	3197	2.61	15906	13.00	12
14	-0.4271	0.3471	920	35	3272	2.67	19178	15.67	14
15	-0.3086	0.3414	932	34	3308	2.70	22486	18.37	17
16	-0.1937	0.3366	943	34	3545	2.90	26031	21.27	20
17	-0.0818	0.3326	954	33	3593	2.94	29624	24.20	23
18	0.0278	0.3294	965	33	3583	2.93	33207	27.13	26
19	0.1354	0.3269	976	33	3640	2.97	36847	30.10	29
20	0.2417	0.3251	987	33	3843	3.14	40690	33.24	32
21	0.3469	0.3238	997	32	3924	3.21	44614	36.45	35
22	0.4515	0.3232	1008	32	4075	3.33	48689	39.78	38
23	0.5559	0.3231	1018	32	4297	3.51	52986	43.29	42
24	0.6605	0.3236	1029	32	4279	3.50	57265	46.79	45
25	0.7656	0.3248	1039	32	4561	3.73	61826	50.51	49
26	0.8716	0.3265	1050	33	4546	3.71	66372	54.23	52
27	0.9789	0.3288	1060	33	4731	3.87	71103	58.09	56
28	1.0880	0.3319	1071	33	4714	3.85	75817	61.94	60
29	1.1994	0.3357	1082	34	4687	3.83	80504	65.77	64
30	1.3135	0.3403	1094	34	4785	3.91	85289	69.68	68
31	1.4312	0.3458	1106	35	4711	3.85	90000	73.53	72
32	1.5530	0.3525	1118	35	4606	3.76	94606	77.29	75
33	1.6800	0.3603	1130	36	4360	3.56	98966	80.86	79
34	1.8131	0.3697	1144	37	4095	3.35	103061	84.20	83

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
35	1.9539	0.3810	1158	38	3741	3.06	106802	87.26	86
36	2.1041	0.3946	1173	39	3366	2.75	110168	90.01	89
37	2.2662	0.4112	1189	41	3096	2.53	113264	92.54	91
38	2.4436	0.4319	1207	43	2673	2.18	115937	94.72	94
39	2.6412	0.4582	1227	46	2179	1.78	118116	96.50	96
40	2.8667	0.4930	1249	49	1725	1.41	119841	97.91	97
41	3.1328	0.5412	1276	54	1186	0.97	121027	98.88	98
42	3.4634	0.6133	1309	61	768	0.63	121795	99.51	99
43	3.9116	0.7368	1354	74	400	0.33	122195	99.84	99
44	4.6477	1.0213	1427	102	157	0.13	122352	99.96	99
45	5.8818	1.8375	1551	184	45	0.04	122397	100.00	99

Grade 4 English Language Arts

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
0	-5.4770	1.8391	600	184	1	0.00	1	0.00	1
1	-4.2391	1.0237	600	102	1	0.00	2	0.00	1
2	-3.4987	0.7394	608	74	6	0.00	8	0.01	1
3	-3.0472	0.6153	653	62	11	0.01	19	0.02	1
4	-2.7149	0.5422	686	54	23	0.02	42	0.03	1
5	-2.4484	0.4927	713	49	40	0.03	82	0.07	1
6	-2.2240	0.4563	735	46	85	0.07	167	0.13	1
7	-2.0289	0.4281	755	43	163	0.13	330	0.26	1
8	-1.8554	0.4056	772	41	284	0.23	614	0.49	1
9	-1.6986	0.3870	788	39	450	0.36	1064	0.84	1
10	-1.5549	0.3714	802	37	609	0.48	1673	1.33	1
11	-1.4220	0.3582	815	36	785	0.62	2458	1.95	2
12	-1.2978	0.3468	828	35	1058	0.84	3516	2.79	2
13	-1.1810	0.3369	839	34	1326	1.05	4842	3.84	3
14	-1.0705	0.3283	850	33	1551	1.23	6393	5.06	4
15	-0.9652	0.3208	861	32	1741	1.38	8134	6.44	6
16	-0.8644	0.3142	871	31	1963	1.56	10097	8.00	7
17	-0.7676	0.3084	881	31	2086	1.65	12183	9.65	9
18	-0.6741	0.3033	890	30	2360	1.87	14543	11.52	11
19	-0.5834	0.2989	899	30	2521	2.00	17064	13.52	13
20	-0.4952	0.2950	908	30	2558	2.03	19622	15.55	15
21	-0.4092	0.2917	917	29	2628	2.08	22250	17.63	17
22	-0.3250	0.2888	925	29	2591	2.05	24841	19.68	19
23	-0.2423	0.2864	933	29	2724	2.16	27565	21.84	21
24	-0.1608	0.2844	941	28	2671	2.12	30236	23.95	23
25	-0.0804	0.2828	949	28	2813	2.23	33049	26.18	25
26	-0.0009	0.2815	957	28	2862	2.27	35911	28.45	27
27	0.0781	0.2806	965	28	2888	2.29	38799	30.74	30
28	0.1567	0.2801	973	28	2863	2.27	41662	33.01	32
29	0.2350	0.2798	981	28	2959	2.34	44621	35.35	34
30	0.3134	0.2800	989	28	3085	2.44	47706	37.80	37
31	0.3919	0.2804	997	28	3052	2.42	50758	40.21	39
32	0.4707	0.2812	1005	28	3256	2.58	54014	42.79	42
33	0.5501	0.2824	1013	28	3467	2.75	57481	45.54	44
34	0.6302	0.2838	1021	28	3432	2.72	60913	48.26	47
35	0.7113	0.2857	1029	29	3460	2.74	64373	51.00	50
36	0.7935	0.2879	1037	29	3599	2.85	67972	53.85	52

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
37	0.8772	0.2906	1045	29	3639	2.88	71611	56.73	55
38	0.9625	0.2936	1054	29	3841	3.04	75452	59.78	58
39	1.0497	0.2971	1062	30	3718	2.95	79170	62.72	61
40	1.1392	0.3011	1071	30	3838	3.04	83008	65.76	64
41	1.2311	0.3056	1081	31	3862	3.06	86870	68.82	67
42	1.3260	0.3106	1090	31	3839	3.04	90709	71.86	70
43	1.4243	0.3163	1100	32	3883	3.08	94592	74.94	73
44	1.5262	0.3225	1110	32	3810	3.02	98402	77.96	76
45	1.6325	0.3295	1121	33	3738	2.96	102140	80.92	79
46	1.7436	0.3372	1132	34	3613	2.86	105753	83.78	82
47	1.8601	0.3457	1144	35	3322	2.63	109075	86.41	85
48	1.9829	0.3551	1156	36	3102	2.46	112177	88.87	88
49	2.1127	0.3655	1169	37	2774	2.20	114951	91.07	90
50	2.2503	0.3767	1183	38	2572	2.04	117523	93.11	92
51	2.3969	0.3890	1197	39	2124	1.68	119647	94.79	94
52	2.5534	0.4024	1213	40	1612	1.28	121259	96.07	95
53	2.7212	0.4169	1230	42	1339	1.06	122598	97.13	97
54	2.9016	0.4328	1248	43	1048	0.83	123646	97.96	98
55	3.0966	0.4505	1267	45	831	0.66	124477	98.62	98
56	3.3085	0.4707	1288	47	599	0.47	125076	99.09	99
57	3.5413	0.4951	1312	50	474	0.38	125550	99.47	99
58	3.8014	0.5264	1338	53	275	0.22	125825	99.68	99
59	4.1005	0.5698	1368	57	168	0.13	125993	99.82	99
60	4.4612	0.6361	1404	64	107	0.08	126100	99.90	99
61	4.9360	0.7532	1451	75	77	0.06	126177	99.96	99
62	5.6942	1.0309	1527	103	33	0.03	126210	99.99	99
63	6.9409	1.8419	1652	184	13	0.01	126223	100.00	99

Grade 5 English Language Arts

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
0	-5.4234	1.8402	600	184	0	0.00	0	0.00	0
1	-4.1826	1.0258	600	103	1	0.00	1	0.00	1
2	-3.4377	0.7424	615	74	4	0.00	5	0.00	1
3	-2.9816	0.6192	660	62	5	0.00	10	0.01	1
4	-2.6443	0.5468	694	55	15	0.01	25	0.02	1
5	-2.3728	0.4979	721	50	52	0.04	77	0.06	1
6	-2.1431	0.4620	744	46	91	0.07	168	0.13	1
7	-1.9427	0.4343	764	43	154	0.12	322	0.25	1
8	-1.7639	0.4120	782	41	303	0.24	625	0.49	1
9	-1.6018	0.3937	798	39	456	0.36	1081	0.85	1
10	-1.4530	0.3783	813	38	644	0.51	1725	1.36	1
11	-1.3150	0.3651	827	37	903	0.71	2628	2.07	2
12	-1.1859	0.3537	840	35	1186	0.94	3814	3.01	3
13	-1.0644	0.3437	852	34	1336	1.05	5150	4.06	4
14	-0.9493	0.3349	863	33	1737	1.37	6887	5.43	5
15	-0.8398	0.3272	874	33	2029	1.60	8916	7.03	6
16	-0.7350	0.3203	885	32	2347	1.85	11263	8.89	8
17	-0.6344	0.3142	895	31	2573	2.03	13836	10.92	10
18	-0.5373	0.3088	905	31	2783	2.20	16619	13.11	12
19	-0.4435	0.3041	914	30	2838	2.24	19457	15.35	14
20	-0.3523	0.2998	923	30	2982	2.35	22439	17.70	17
21	-0.2635	0.2961	932	30	3092	2.44	25531	20.14	19
22	-0.1768	0.2929	941	29	3078	2.43	28609	22.57	21
23	-0.0919	0.2901	949	29	3090	2.44	31699	25.01	24
24	-0.0084	0.2877	957	29	3115	2.46	34814	27.46	26
25	0.0738	0.2857	966	29	3222	2.54	38036	30.01	29
26	0.1549	0.2841	974	28	3189	2.52	41225	32.52	31
27	0.2353	0.2829	982	28	3290	2.60	44515	35.12	34
28	0.3151	0.2820	990	28	3440	2.71	47955	37.83	36
29	0.3944	0.2815	998	28	3499	2.76	51454	40.59	39
30	0.4736	0.2812	1006	28	3497	2.76	54951	43.35	42
31	0.5527	0.2813	1014	28	3536	2.79	58487	46.14	45
32	0.6319	0.2818	1022	28	3655	2.88	62142	49.02	48
33	0.7115	0.2825	1029	28	3668	2.89	65810	51.92	50
34	0.7916	0.2836	1037	28	3760	2.97	69570	54.88	53
35	0.8724	0.2850	1046	29	3839	3.03	73409	57.91	56
36	0.9541	0.2868	1054	29	3827	3.02	77236	60.93	59

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
37	1.0370	0.2889	1062	29	3824	3.02	81060	63.95	62
38	1.1211	0.2914	1070	29	3791	2.99	84851	66.94	65
39	1.2069	0.2944	1079	29	3792	2.99	88643	69.93	68
40	1.2945	0.2978	1088	30	3713	2.93	92356	72.86	71
41	1.3843	0.3016	1097	30	3635	2.87	95991	75.73	74
42	1.4766	0.3061	1106	31	3416	2.69	99407	78.42	77
43	1.5718	0.3111	1116	31	3354	2.65	102761	81.07	80
44	1.6703	0.3167	1125	32	3241	2.56	106002	83.62	82
45	1.7726	0.3231	1136	32	3026	2.39	109028	86.01	85
46	1.8792	0.3303	1146	33	2779	2.19	111807	88.20	87
47	1.9910	0.3383	1157	34	2574	2.03	114381	90.23	89
48	2.1085	0.3474	1169	35	2279	1.80	116660	92.03	91
49	2.2327	0.3577	1182	36	2043	1.61	118703	93.64	93
50	2.3648	0.3692	1195	37	1825	1.44	120528	95.08	94
51	2.5059	0.3823	1209	38	1426	1.13	121954	96.21	96
52	2.6576	0.3970	1224	40	1236	0.98	123190	97.18	97
53	2.8218	0.4138	1241	41	983	0.78	124173	97.96	98
54	3.0009	0.4329	1258	43	757	0.60	124930	98.56	98
55	3.1978	0.4549	1278	45	635	0.50	125565	99.06	99
56	3.4162	0.4804	1300	48	419	0.33	125984	99.39	99
57	3.6613	0.5107	1324	51	298	0.24	126282	99.62	99
58	3.9408	0.5478	1352	55	196	0.15	126478	99.78	99
59	4.2667	0.5961	1385	60	108	0.09	126586	99.86	99
60	4.6619	0.6653	1425	67	79	0.06	126665	99.92	99
61	5.1780	0.7820	1476	78	56	0.04	126721	99.97	99
62	5.9828	1.0543	1557	105	35	0.03	126756	100.00	99
63	7.2644	1.8557	1685	186	5	0.00	126761	100.00	99

Grade 6 English Language Arts

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
0	-5.4566	1.8466	600	185	0	0.00	0	0.00	0
1	-4.1996	1.0369	600	104	0	0.00	0	0.00	0
2	-3.4324	0.7567	600	76	0	0.00	0	0.00	0
3	-2.9559	0.6347	645	63	5	0.00	5	0.00	1
4	-2.6004	0.5622	681	56	11	0.01	16	0.01	1
5	-2.3130	0.5123	709	51	28	0.02	44	0.04	1
6	-2.0700	0.4750	734	48	51	0.04	95	0.08	1
7	-1.8585	0.4457	755	45	109	0.09	204	0.16	1
8	-1.6707	0.4217	774	42	167	0.13	371	0.30	1
9	-1.5014	0.4017	791	40	301	0.24	672	0.54	1
10	-1.3470	0.3846	806	38	432	0.34	1104	0.88	1
11	-1.2047	0.3700	820	37	579	0.46	1683	1.34	1
12	-1.0726	0.3572	834	36	800	0.64	2483	1.98	2
13	-0.9490	0.3461	846	35	1063	0.85	3546	2.83	2
14	-0.8327	0.3363	858	34	1331	1.06	4877	3.89	3
15	-0.7225	0.3277	869	33	1722	1.37	6599	5.26	5
16	-0.6177	0.3200	879	32	2067	1.65	8666	6.91	6
17	-0.5174	0.3133	889	31	2273	1.81	10939	8.73	8
18	-0.4212	0.3073	899	31	2467	1.97	13406	10.70	10
19	-0.3284	0.3020	908	30	2605	2.08	16011	12.77	12
20	-0.2386	0.2974	917	30	2742	2.19	18753	14.96	14
21	-0.1514	0.2934	926	29	2786	2.22	21539	17.18	16
22	-0.0664	0.2898	934	29	2788	2.22	24327	19.41	18
23	0.0168	0.2868	942	29	2858	2.28	27185	21.69	21
24	0.0983	0.2843	951	28	2812	2.24	29997	23.93	23
25	0.1785	0.2822	959	28	2742	2.19	32739	26.12	25
26	0.2576	0.2805	967	28	2806	2.24	35545	28.36	27
27	0.3359	0.2792	974	28	2835	2.26	38380	30.62	29
28	0.4136	0.2783	982	28	2784	2.22	41164	32.84	32
29	0.4909	0.2779	990	28	2917	2.33	44081	35.17	34
30	0.5681	0.2777	998	28	2930	2.34	47011	37.51	36
31	0.6453	0.2780	1005	28	2926	2.33	49937	39.84	39
32	0.7227	0.2786	1013	28	3109	2.48	53046	42.32	41
33	0.8006	0.2797	1021	28	3217	2.57	56263	44.89	44
34	0.8792	0.2811	1029	28	3162	2.52	59425	47.41	46
35	0.9587	0.2829	1037	28	3400	2.71	62825	50.12	49
36	1.0394	0.2851	1045	29	3440	2.74	66265	52.87	51

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
37	1.1214	0.2878	1053	29	3589	2.86	69854	55.73	54
38	1.2051	0.2909	1061	29	3657	2.92	73511	58.65	57
39	1.2908	0.2945	1070	29	3681	2.94	77192	61.59	60
40	1.3787	0.2987	1079	30	3740	2.98	80932	64.57	63
41	1.4693	0.3034	1088	30	3925	3.13	84857	67.70	66
42	1.5630	0.3088	1097	31	3779	3.02	88636	70.72	69
43	1.6601	0.3148	1107	31	3888	3.10	92524	73.82	72
44	1.7614	0.3216	1117	32	3832	3.06	96356	76.88	75
45	1.8672	0.3293	1128	33	3704	2.96	100060	79.83	78
46	1.9785	0.3379	1139	34	3591	2.87	103651	82.70	81
47	2.0959	0.3477	1150	35	3400	2.71	107051	85.41	84
48	2.2206	0.3587	1163	36	3212	2.56	110263	87.97	87
49	2.3537	0.3711	1176	37	2903	2.32	113166	90.29	89
50	2.4966	0.3853	1190	39	2608	2.08	115774	92.37	91
51	2.6513	0.4016	1206	40	2271	1.81	118045	94.18	93
52	2.8200	0.4203	1223	42	1891	1.51	119936	95.69	95
53	3.0057	0.4419	1241	44	1524	1.22	121460	96.90	96
54	3.2121	0.4673	1262	47	1207	0.96	122667	97.87	97
55	3.4442	0.4970	1285	50	943	0.75	123610	98.62	98
56	3.7086	0.5321	1312	53	701	0.56	124311	99.18	99
57	4.0136	0.5731	1342	57	473	0.38	124784	99.56	99
58	4.3692	0.6203	1378	62	268	0.21	125052	99.77	99
59	4.7874	0.6738	1420	67	129	0.10	125181	99.87	99
60	5.2846	0.7389	1469	74	64	0.05	125245	99.92	99
61	5.9011	0.8411	1531	84	56	0.04	125301	99.97	99
62	6.7947	1.0920	1620	109	32	0.03	125333	99.99	99
63	8.1288	1.8742	1754	187	8	0.01	125341	100.00	99

Grade 7 English Language Arts

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
0	-5.5631	1.8424	600	184	1	0.00	1	0.00	1
1	-4.3167	1.0297	600	103	1	0.00	2	0.00	1
2	-3.5640	0.7476	600	75	1	0.00	3	0.00	1
3	-3.1004	0.6250	638	63	4	0.00	7	0.01	1
4	-2.7562	0.5529	672	55	6	0.00	13	0.01	1
5	-2.4782	0.5040	700	50	12	0.01	25	0.02	1
6	-2.2426	0.4680	723	47	34	0.03	59	0.05	1
7	-2.0369	0.4401	744	44	89	0.07	148	0.12	1
8	-1.8533	0.4175	762	42	148	0.12	296	0.24	1
9	-1.6870	0.3987	779	40	248	0.20	544	0.44	1
10	-1.5344	0.3829	794	38	363	0.29	907	0.73	1
11	-1.3931	0.3692	808	37	554	0.45	1461	1.18	1
12	-1.2612	0.3574	822	36	693	0.56	2154	1.73	1
13	-1.1372	0.3469	834	35	975	0.78	3129	2.52	2
14	-1.0201	0.3377	846	34	1232	0.99	4361	3.51	3
15	-0.9089	0.3294	857	33	1515	1.22	5876	4.73	4
16	-0.8028	0.3221	867	32	1799	1.45	7675	6.18	5
17	-0.7013	0.3155	878	32	2002	1.61	9677	7.79	7
18	-0.6036	0.3096	887	31	2137	1.72	11814	9.51	9
19	-0.5094	0.3043	897	30	2346	1.89	14160	11.40	10
20	-0.4183	0.2996	906	30	2495	2.01	16655	13.41	12
21	-0.3298	0.2954	915	30	2487	2.00	19142	15.41	14
22	-0.2436	0.2917	923	29	2640	2.13	21782	17.53	16
23	-0.1595	0.2885	932	29	2622	2.11	24404	19.64	19
24	-0.0771	0.2858	940	29	2587	2.08	26991	21.73	21
25	0.0039	0.2835	948	28	2644	2.13	29635	23.86	23
26	0.0837	0.2816	956	28	2805	2.26	32440	26.11	25
27	0.1626	0.2801	964	28	2808	2.26	35248	28.37	27
28	0.2407	0.2790	972	28	2896	2.33	38144	30.71	30
29	0.3184	0.2784	979	28	2983	2.40	41127	33.11	32
30	0.3958	0.2781	987	28	3021	2.43	44148	35.54	34
31	0.4731	0.2781	995	28	3143	2.53	47291	38.07	37
32	0.5506	0.2786	1003	28	3214	2.59	50505	40.66	39
33	0.6284	0.2794	1010	28	3379	2.72	53884	43.38	42
34	0.7067	0.2805	1018	28	3383	2.72	57267	46.10	45
35	0.7858	0.2821	1026	28	3467	2.79	60734	48.89	47
36	0.8659	0.2839	1034	28	3674	2.96	64408	51.85	50

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
37	0.9471	0.2862	1042	29	3774	3.04	68182	54.89	53
38	1.0298	0.2887	1051	29	3726	3.00	71908	57.88	56
39	1.1140	0.2917	1059	29	3827	3.08	75735	60.97	59
40	1.2000	0.2951	1068	30	3916	3.15	79651	64.12	63
41	1.2882	0.2989	1076	30	3934	3.17	83585	67.28	66
42	1.3788	0.3031	1086	30	4002	3.22	87587	70.51	69
43	1.4721	0.3078	1095	31	3821	3.08	91408	73.58	72
44	1.5684	0.3131	1104	31	3771	3.04	95179	76.62	75
45	1.6682	0.3189	1114	32	3700	2.98	98879	79.60	78
46	1.7720	0.3254	1125	33	3418	2.75	102297	82.35	81
47	1.8802	0.3327	1136	33	3314	2.67	105611	85.02	84
48	1.9935	0.3408	1147	34	3162	2.55	108773	87.56	86
49	2.1127	0.3499	1159	35	2814	2.27	111587	89.83	89
50	2.2387	0.3601	1172	36	2547	2.05	114134	91.88	91
51	2.3725	0.3717	1185	37	2198	1.77	116332	93.65	93
52	2.5155	0.3849	1199	38	1909	1.54	118241	95.18	94
53	2.6695	0.4001	1215	40	1534	1.23	119775	96.42	96
54	2.8365	0.4176	1231	42	1303	1.05	121078	97.47	97
55	3.0193	0.4380	1250	44	1035	0.83	122113	98.30	98
56	3.2216	0.4623	1270	46	701	0.56	122814	98.86	99
57	3.4488	0.4918	1293	49	517	0.42	123331	99.28	99
58	3.7086	0.5289	1319	53	366	0.29	123697	99.57	99
59	4.0136	0.5779	1349	58	221	0.18	123918	99.75	99
60	4.3873	0.6490	1386	65	176	0.14	124094	99.89	99
61	4.8822	0.7686	1436	77	86	0.07	124180	99.96	99
62	5.6671	1.0452	1514	105	35	0.03	124215	99.99	99
63	6.9360	1.8510	1641	185	11	0.01	124226	100.00	99

Grade 8 English Language Arts

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
0	-5.4982	1.8365	600	184	0	0.00	0	0.00	0
1	-4.2666	1.0195	600	102	2	0.00	2	0.00	1
2	-3.5342	0.7342	608	73	0	0.00	2	0.00	1
3	-3.0899	0.6100	652	61	1	0.00	3	0.00	1
4	-2.7637	0.5370	685	54	9	0.01	12	0.01	1
5	-2.5023	0.4878	711	49	24	0.02	36	0.03	1
6	-2.2822	0.4520	733	45	46	0.04	82	0.07	1
7	-2.0906	0.4244	752	42	88	0.07	170	0.14	1
8	-1.9201	0.4023	769	40	181	0.14	351	0.28	1
9	-1.7656	0.3842	785	38	307	0.25	658	0.53	1
10	-1.6239	0.3690	799	37	433	0.35	1091	0.87	1
11	-1.4926	0.3560	812	36	635	0.51	1726	1.38	1
12	-1.3699	0.3448	824	34	784	0.63	2510	2.01	2
13	-1.2545	0.3350	836	34	989	0.79	3499	2.80	2
14	-1.1452	0.3263	847	33	1226	0.98	4725	3.78	3
15	-1.0412	0.3186	857	32	1461	1.17	6186	4.95	4
16	-0.9419	0.3118	867	31	1663	1.33	7849	6.28	6
17	-0.8466	0.3057	876	31	1926	1.54	9775	7.83	7
18	-0.7549	0.3002	886	30	1930	1.55	11705	9.37	9
19	-0.6662	0.2953	894	30	2104	1.68	13809	11.06	10
20	-0.5804	0.2909	903	29	2263	1.81	16072	12.87	12
21	-0.4969	0.2870	911	29	2295	1.84	18367	14.70	14
22	-0.4156	0.2835	920	28	2331	1.87	20698	16.57	16
23	-0.3361	0.2804	928	28	2433	1.95	23131	18.52	18
24	-0.2583	0.2777	935	28	2487	1.99	25618	20.51	20
25	-0.1818	0.2754	943	28	2485	1.99	28103	22.50	22
26	-0.1065	0.2734	950	27	2583	2.07	30686	24.57	24
27	-0.0322	0.2718	958	27	2698	2.16	33384	26.73	26
28	0.0413	0.2706	965	27	2736	2.19	36120	28.92	28
29	0.1143	0.2697	973	27	2856	2.29	38976	31.20	30
30	0.1868	0.2691	980	27	2933	2.35	41909	33.55	32
31	0.2592	0.2689	987	27	3059	2.45	44968	36.00	35
32	0.3315	0.2690	994	27	3063	2.45	48031	38.45	37
33	0.4039	0.2694	1002	27	3175	2.54	51206	41.00	40
34	0.4767	0.2702	1009	27	3275	2.62	54481	43.62	42
35	0.5500	0.2714	1016	27	3436	2.75	57917	46.37	45
36	0.6241	0.2729	1024	27	3423	2.74	61340	49.11	48

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
37	0.6991	0.2749	1031	27	3596	2.88	64936	51.99	51
38	0.7753	0.2772	1039	28	3711	2.97	68647	54.96	53
39	0.8528	0.2800	1046	28	3828	3.06	72475	58.02	56
40	0.9321	0.2832	1054	28	3833	3.07	76308	61.09	60
41	1.0133	0.2869	1062	29	3949	3.16	80257	64.25	63
42	1.0968	0.2911	1071	29	3874	3.10	84131	67.35	66
43	1.1829	0.2959	1079	30	3986	3.19	88117	70.55	69
44	1.2720	0.3013	1088	30	3996	3.20	92113	73.75	72
45	1.3646	0.3074	1098	31	3886	3.11	95999	76.86	75
46	1.4613	0.3144	1107	31	3728	2.98	99727	79.84	78
47	1.5625	0.3222	1117	32	3677	2.94	103404	82.78	81
48	1.6692	0.3311	1128	33	3461	2.77	106865	85.56	84
49	1.7821	0.3411	1139	34	3280	2.63	110145	88.18	87
50	1.9023	0.3526	1151	35	2978	2.38	113123	90.57	89
51	2.0313	0.3658	1164	37	2661	2.13	115784	92.70	92
52	2.1706	0.3810	1178	38	2203	1.76	117987	94.46	94
53	2.3225	0.3987	1193	40	1823	1.46	119810	95.92	95
54	2.4896	0.4193	1210	42	1641	1.31	121451	97.23	97
55	2.6755	0.4436	1229	44	1189	0.95	122640	98.19	98
56	2.8849	0.4724	1250	47	827	0.66	123467	98.85	99
57	3.1243	0.5070	1274	51	614	0.49	124081	99.34	99
58	3.4025	0.5490	1301	55	343	0.27	124424	99.61	99
59	3.7327	0.6022	1334	60	234	0.19	124658	99.80	99
60	4.1380	0.6749	1375	67	148	0.12	124806	99.92	99
61	4.6690	0.7926	1428	79	70	0.06	124876	99.98	99
62	5.4915	1.0629	1510	106	24	0.02	124900	99.99	99
63	6.7859	1.8606	1640	186	7	0.01	124907	100.00	99

Grade 3 Mathematics

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
0	-4.9548	1.8347	600	183	1	0.00	1	0.00	1
1	-3.7279	1.0162	600	102	5	0.00	6	0.00	1
2	-3.0021	0.7299	656	73	8	0.01	14	0.01	1
3	-2.5638	0.6051	700	61	50	0.04	64	0.05	1
4	-2.2432	0.5319	732	53	135	0.11	199	0.16	1
5	-1.9871	0.4828	758	48	370	0.30	569	0.46	1
6	-1.7715	0.4473	779	45	762	0.62	1331	1.09	1
7	-1.5838	0.4201	798	42	1173	0.96	2504	2.04	2
8	-1.4165	0.3988	815	40	1902	1.55	4406	3.59	3
9	-1.2645	0.3815	830	38	2445	1.99	6851	5.59	5
10	-1.1245	0.3672	844	37	2973	2.43	9824	8.02	7
11	-0.9941	0.3553	857	36	3308	2.70	13132	10.71	9
12	-0.8715	0.3452	869	35	3543	2.89	16675	13.61	12
13	-0.7553	0.3367	881	34	3466	2.83	20141	16.43	15
14	-0.6445	0.3294	892	33	3369	2.75	23510	19.18	18
15	-0.5381	0.3232	903	32	3293	2.69	26803	21.87	21
16	-0.4354	0.3178	913	32	3208	2.62	30011	24.49	23
17	-0.3359	0.3132	923	31	3014	2.46	33025	26.95	26
18	-0.2390	0.3094	932	31	2893	2.36	35918	29.31	28
19	-0.1443	0.3061	942	31	3007	2.45	38925	31.76	31
20	-0.0515	0.3034	951	30	2860	2.33	41785	34.09	33
21	0.0399	0.3012	960	30	2832	2.31	44617	36.40	35
22	0.1301	0.2995	969	30	2874	2.34	47491	38.75	38
23	0.2193	0.2982	978	30	2862	2.34	50353	41.08	40
24	0.3079	0.2973	987	30	2950	2.41	53303	43.49	42
25	0.3962	0.2968	996	30	2988	2.44	56291	45.93	45
26	0.4842	0.2967	1005	30	3087	2.52	59378	48.45	47
27	0.5723	0.2970	1014	30	3057	2.49	62435	50.94	50
28	0.6607	0.2977	1022	30	3194	2.61	65629	53.55	52
29	0.7496	0.2987	1031	30	3244	2.65	68873	56.19	55
30	0.8392	0.3001	1040	30	3240	2.64	72113	58.84	58
31	0.9298	0.3020	1049	30	3244	2.65	75357	61.48	60
32	1.0217	0.3042	1058	30	3313	2.70	78670	64.19	63
33	1.1150	0.3069	1068	31	3277	2.67	81947	66.86	66
34	1.2102	0.3101	1077	31	3180	2.59	85127	69.46	68
35	1.3075	0.3139	1087	31	3198	2.61	88325	72.07	71
36	1.4074	0.3183	1097	32	3256	2.66	91581	74.72	73

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
37	1.5103	0.3234	1107	32	3158	2.58	94739	77.30	76
38	1.6167	0.3293	1118	33	3137	2.56	97876	79.86	79
39	1.7273	0.3362	1129	34	2995	2.44	100871	82.30	81
40	1.8430	0.3442	1141	34	2907	2.37	103778	84.67	83
41	1.9647	0.3538	1153	35	2845	2.32	106623	86.99	86
42	2.0938	0.3651	1166	37	2708	2.21	109331	89.20	88
43	2.2320	0.3789	1180	38	2463	2.01	111794	91.21	90
44	2.3818	0.3956	1194	40	2257	1.84	114051	93.06	92
45	2.5464	0.4166	1211	42	2033	1.66	116084	94.71	94
46	2.7308	0.4433	1229	44	1806	1.47	117890	96.19	95
47	2.9427	0.4787	1251	48	1521	1.24	119411	97.43	97
48	3.1947	0.5279	1276	53	1255	1.02	120666	98.45	98
49	3.5109	0.6014	1307	60	860	0.70	121526	99.15	99
50	3.9446	0.7269	1351	73	612	0.50	122138	99.65	99
51	4.6663	1.0143	1423	101	325	0.27	122463	99.92	99
52	5.8907	1.8338	1545	183	100	0.08	122563	100.00	99

Grade 4 Mathematics

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
0	-5.2479	1.8328	600	183	4	0.00	4	0.00	1
1	-4.0260	1.0127	600	101	4	0.00	8	0.01	1
2	-3.3073	0.7249	651	72	26	0.02	34	0.03	1
3	-2.8765	0.5989	694	60	88	0.07	122	0.10	1
4	-2.5636	0.5246	726	52	218	0.17	340	0.27	1
5	-2.3152	0.4746	750	47	519	0.41	859	0.68	1
6	-2.1076	0.4382	771	44	962	0.76	1821	1.44	1
7	-1.9280	0.4103	789	41	1516	1.20	3337	2.64	2
8	-1.7688	0.3884	805	39	2184	1.73	5521	4.37	4
9	-1.6250	0.3706	819	37	2830	2.24	8351	6.60	5
10	-1.4932	0.3561	833	36	3222	2.55	11573	9.15	8
11	-1.3708	0.3440	845	34	3670	2.90	15243	12.05	11
12	-1.2559	0.3339	856	33	3838	3.03	19081	15.09	14
13	-1.1473	0.3255	867	33	3776	2.99	22857	18.07	17
14	-1.0437	0.3185	878	32	3832	3.03	26689	21.10	20
15	-0.9442	0.3126	888	31	3734	2.95	30423	24.05	23
16	-0.8481	0.3076	897	31	3647	2.88	34070	26.94	25
17	-0.7547	0.3036	906	30	3571	2.82	37641	29.76	28
18	-0.6636	0.3002	916	30	3533	2.79	41174	32.55	31
19	-0.5743	0.2975	924	30	3409	2.70	44583	35.25	34
20	-0.4865	0.2954	933	30	3444	2.72	48027	37.97	37
21	-0.3997	0.2938	942	29	3392	2.68	51419	40.65	39
22	-0.3138	0.2926	951	29	3428	2.71	54847	43.36	42
23	-0.2284	0.2919	959	29	3438	2.72	58285	46.08	45
24	-0.1433	0.2916	968	29	3357	2.65	61642	48.74	47
25	-0.0583	0.2916	976	29	3377	2.67	65019	51.41	50
26	0.0269	0.2920	985	29	3147	2.49	68166	53.89	53
27	0.1123	0.2928	993	29	3256	2.57	71422	56.47	55
28	0.1984	0.2939	1002	29	3153	2.49	74575	58.96	58
29	0.2852	0.2954	1010	30	3192	2.52	77767	61.49	60
30	0.3730	0.2973	1019	30	3070	2.43	80837	63.91	63
31	0.4621	0.2996	1028	30	3033	2.40	83870	66.31	65
32	0.5527	0.3023	1037	30	3168	2.50	87038	68.82	68
33	0.6450	0.3055	1046	31	2953	2.33	89991	71.15	70
34	0.7394	0.3091	1056	31	2930	2.32	92921	73.47	72
35	0.8362	0.3132	1066	31	2867	2.27	95788	75.73	75
36	0.9357	0.3180	1075	32	2760	2.18	98548	77.92	77

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
37	1.0385	0.3234	1086	32	2748	2.17	101296	80.09	79
38	1.1450	0.3295	1096	33	2698	2.13	103994	82.22	81
39	1.2559	0.3364	1108	34	2626	2.08	106620	84.30	83
40	1.3717	0.3444	1119	34	2506	1.98	109126	86.28	85
41	1.4934	0.3536	1131	35	2383	1.88	111509	88.16	87
42	1.6222	0.3643	1144	36	2340	1.85	113849	90.01	89
43	1.7595	0.3771	1158	38	2248	1.78	116097	91.79	91
44	1.9074	0.3926	1173	39	2007	1.59	118104	93.38	93
45	2.0689	0.4119	1189	41	1854	1.47	119958	94.84	94
46	2.2485	0.4367	1207	44	1634	1.29	121592	96.13	95
47	2.4533	0.4700	1227	47	1487	1.18	123079	97.31	97
48	2.6957	0.5171	1251	52	1215	0.96	124294	98.27	98
49	2.9989	0.5891	1282	59	929	0.73	125223	99.01	99
50	3.4162	0.7141	1324	71	698	0.55	125921	99.56	99
51	4.1174	1.0032	1394	100	396	0.31	126317	99.87	99
52	5.3251	1.8269	1514	183	164	0.13	126481	100.00	99

Grade 5 Mathematics

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
0	-5.2436	1.8350	600	184	1	0.00	1	0.00	1
1	-4.0161	1.0167	600	102	3	0.00	4	0.00	1
2	-3.2894	0.7304	633	73	9	0.01	13	0.01	1
3	-2.8506	0.6055	677	61	38	0.03	51	0.04	1
4	-2.5295	0.5323	709	53	103	0.08	154	0.12	1
5	-2.2730	0.4832	734	48	273	0.22	427	0.34	1
6	-2.0572	0.4475	756	45	627	0.49	1054	0.83	1
7	-1.8692	0.4204	775	42	1108	0.87	2162	1.70	1
8	-1.7017	0.3991	792	40	1713	1.35	3875	3.05	2
9	-1.5494	0.3818	807	38	2454	1.93	6329	4.99	4
10	-1.4092	0.3676	821	37	3024	2.38	9353	7.37	6
11	-1.2784	0.3558	834	36	3613	2.85	12966	10.22	9
12	-1.1554	0.3459	846	35	3904	3.08	16870	13.30	12
13	-1.0387	0.3375	858	34	4032	3.18	20902	16.48	15
14	-0.9273	0.3304	869	33	4027	3.17	24929	19.65	18
15	-0.8202	0.3243	880	32	3883	3.06	28812	22.71	21
16	-0.7167	0.3191	890	32	3866	3.05	32678	25.76	24
17	-0.6163	0.3147	900	31	3732	2.94	36410	28.70	27
18	-0.5185	0.3109	910	31	3550	2.80	39960	31.50	30
19	-0.4229	0.3078	919	31	3575	2.82	43535	34.32	33
20	-0.3290	0.3051	929	31	3359	2.65	46894	36.96	36
21	-0.2365	0.3030	938	30	3385	2.67	50279	39.63	38
22	-0.1452	0.3013	947	30	3207	2.53	53486	42.16	41
23	-0.0549	0.3000	956	30	3371	2.66	56857	44.82	43
24	0.0349	0.2992	965	30	3288	2.59	60145	47.41	46
25	0.1242	0.2987	974	30	3157	2.49	63302	49.90	49
26	0.2133	0.2985	983	30	3159	2.49	66461	52.39	51
27	0.3025	0.2988	992	30	3054	2.41	69515	54.79	54
28	0.3920	0.2994	1001	30	3069	2.42	72584	57.21	56
29	0.4819	0.3004	1010	30	3106	2.45	75690	59.66	58
30	0.5725	0.3018	1019	30	3021	2.38	78711	62.04	61
31	0.6641	0.3036	1028	30	3023	2.38	81734	64.42	63
32	0.7569	0.3058	1037	31	2994	2.36	84728	66.78	66
33	0.8512	0.3084	1047	31	2898	2.28	87626	69.07	68
34	0.9472	0.3115	1056	31	2870	2.26	90496	71.33	70
35	1.0454	0.3152	1066	32	2718	2.14	93214	73.47	72
36	1.1461	0.3194	1076	32	2742	2.16	95956	75.63	75

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
37	1.2496	0.3242	1087	32	2950	2.33	98906	77.96	77
38	1.3565	0.3298	1097	33	2775	2.19	101681	80.15	79
39	1.4673	0.3362	1108	34	2650	2.09	104331	82.24	81
40	1.5827	0.3436	1120	34	2632	2.07	106963	84.31	83
41	1.7037	0.3522	1132	35	2570	2.03	109533	86.34	85
42	1.8313	0.3625	1145	36	2515	1.98	112048	88.32	87
43	1.9670	0.3749	1158	37	2500	1.97	114548	90.29	89
44	2.1131	0.3901	1173	39	2261	1.78	116809	92.07	91
45	2.2727	0.4094	1189	41	2092	1.65	118901	93.72	93
46	2.4503	0.4345	1207	43	1952	1.54	120853	95.26	94
47	2.6533	0.4684	1227	47	1803	1.42	122656	96.68	96
48	2.8944	0.5163	1251	52	1485	1.17	124141	97.85	97
49	3.1974	0.5894	1281	59	1181	0.93	125322	98.78	98
50	3.6158	0.7155	1323	72	866	0.68	126188	99.46	99
51	4.3201	1.0053	1394	101	497	0.39	126685	99.86	99
52	5.5314	1.8286	1515	183	183	0.14	126868	100.00	99

Grade 6 Mathematics

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
0	-5.1015	1.8348	600	183	0	0.00	0	0.00	0
1	-3.8741	1.0166	600	102	0	0.00	0	0.00	0
2	-3.1472	0.7306	617	73	5	0.00	5	0.00	1
3	-2.7078	0.6062	661	61	21	0.02	26	0.02	1
4	-2.3857	0.5334	693	53	76	0.06	102	0.08	1
5	-2.1279	0.4847	719	48	157	0.13	259	0.21	1
6	-1.9105	0.4494	740	45	380	0.30	639	0.51	1
7	-1.7209	0.4225	759	42	707	0.56	1346	1.07	1
8	-1.5515	0.4014	776	40	1228	0.98	2574	2.05	2
9	-1.3973	0.3843	792	38	1891	1.51	4465	3.56	3
10	-1.2552	0.3702	806	37	2426	1.93	6891	5.50	5
11	-1.1225	0.3584	819	36	3021	2.41	9912	7.91	7
12	-0.9977	0.3485	832	35	3604	2.87	13516	10.78	9
13	-0.8793	0.3399	843	34	3848	3.07	17364	13.85	12
14	-0.7663	0.3326	855	33	3946	3.15	21310	17.00	15
15	-0.6578	0.3263	866	33	4057	3.24	25367	20.23	19
16	-0.5531	0.3209	876	32	4013	3.20	29380	23.43	22
17	-0.4517	0.3161	886	32	3938	3.14	33318	26.57	25
18	-0.3531	0.3120	896	31	3870	3.09	37188	29.66	28
19	-0.2568	0.3085	906	31	3858	3.08	41046	32.74	31
20	-0.1626	0.3054	915	31	3760	3.00	44806	35.73	34
21	-0.0701	0.3028	924	30	3584	2.86	48390	38.59	37
22	0.0209	0.3006	934	30	3759	3.00	52149	41.59	40
23	0.1107	0.2988	942	30	3543	2.83	55692	44.42	43
24	0.1995	0.2973	951	30	3530	2.82	59222	47.23	46
25	0.2875	0.2961	960	30	3413	2.72	62635	49.95	49
26	0.3749	0.2953	969	30	3341	2.66	65976	52.62	51
27	0.4620	0.2948	978	29	3336	2.66	69312	55.28	54
28	0.5488	0.2946	986	29	3198	2.55	72510	57.83	57
29	0.6356	0.2947	995	29	3267	2.61	75777	60.44	59
30	0.7226	0.2952	1004	30	3135	2.50	78912	62.94	62
31	0.8100	0.2961	1012	30	3152	2.51	82064	65.45	64
32	0.8980	0.2973	1021	30	3094	2.47	85158	67.92	67
33	0.9869	0.2990	1030	30	2898	2.31	88056	70.23	69
34	1.0769	0.3012	1039	30	2895	2.31	90951	72.54	71
35	1.1684	0.3040	1048	30	2820	2.25	93771	74.79	74
36	1.2619	0.3074	1058	31	2749	2.19	96520	76.98	76

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
37	1.3576	0.3116	1067	31	2698	2.15	99218	79.13	78
38	1.4563	0.3168	1077	32	2627	2.10	101845	81.23	80
39	1.5586	0.3230	1087	32	2580	2.06	104425	83.28	82
40	1.6653	0.3306	1098	33	2485	1.98	106910	85.27	84
41	1.7776	0.3398	1109	34	2443	1.95	109353	87.21	86
42	1.8967	0.3510	1121	35	2332	1.86	111685	89.07	88
43	2.0247	0.3648	1134	36	2231	1.78	113916	90.85	90
44	2.1638	0.3819	1148	38	2084	1.66	116000	92.52	92
45	2.3177	0.4033	1163	40	1965	1.57	117965	94.08	93
46	2.4912	0.4309	1181	43	1830	1.46	119795	95.54	95
47	2.6922	0.4673	1201	47	1594	1.27	121389	96.81	96
48	2.9334	0.5176	1225	52	1382	1.10	122771	97.92	97
49	3.2388	0.5924	1255	59	1161	0.93	123932	98.84	98
50	3.6619	0.7195	1298	72	817	0.65	124749	99.49	99
51	4.3728	1.0089	1369	101	458	0.37	125207	99.86	99
52	5.5894	1.8307	1490	183	178	0.14	125385	100.00	99

Grade 7 Mathematics

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
0	-5.5624	1.8364	600	184	0	0.00	0	0.00	0
1	-4.3311	1.0192	600	102	2	0.00	2	0.00	1
2	-3.5993	0.7338	600	73	7	0.01	9	0.01	1
3	-3.1556	0.6095	641	61	43	0.03	52	0.04	1
4	-2.8297	0.5368	673	54	111	0.09	163	0.13	1
5	-2.5684	0.4881	699	49	312	0.25	475	0.38	1
6	-2.3478	0.4528	721	45	678	0.55	1153	0.93	1
7	-2.1552	0.4260	741	43	1209	0.97	2362	1.90	1
8	-1.9829	0.4049	758	40	1886	1.52	4248	3.42	3
9	-1.8260	0.3879	774	39	2607	2.10	6855	5.52	4
10	-1.6810	0.3739	788	37	3097	2.49	9952	8.01	7
11	-1.5457	0.3623	802	36	3761	3.03	13713	11.04	10
12	-1.4180	0.3525	814	35	4052	3.26	17765	14.30	13
13	-1.2967	0.3442	826	34	4087	3.29	21852	17.59	16
14	-1.1807	0.3372	838	34	4029	3.24	25881	20.83	19
15	-1.0691	0.3312	849	33	3905	3.14	29786	23.98	22
16	-0.9611	0.3261	860	33	3766	3.03	33552	27.01	25
17	-0.8562	0.3217	871	32	3473	2.80	37025	29.80	28
18	-0.7539	0.3181	881	32	3403	2.74	40428	32.54	31
19	-0.6538	0.3150	891	32	3284	2.64	43712	35.19	34
20	-0.5554	0.3124	901	31	3199	2.58	46911	37.76	36
21	-0.4584	0.3104	910	31	3036	2.44	49947	40.21	39
22	-0.3626	0.3088	920	31	2955	2.38	52902	42.59	41
23	-0.2676	0.3077	929	31	2987	2.40	55889	44.99	44
24	-0.1732	0.3069	939	31	2890	2.33	58779	47.32	46
25	-0.0791	0.3066	948	31	2897	2.33	61676	49.65	48
26	0.0149	0.3067	958	31	2796	2.25	64472	51.90	51
27	0.1091	0.3071	967	31	2940	2.37	67412	54.27	53
28	0.2036	0.3080	977	31	2888	2.32	70300	56.59	55
29	0.2989	0.3093	986	31	2840	2.29	73140	58.88	58
30	0.3951	0.3111	996	31	2736	2.20	75876	61.08	60
31	0.4926	0.3134	1005	31	2853	2.30	78729	63.38	62
32	0.5916	0.3161	1015	32	2793	2.25	81522	65.62	65
33	0.6926	0.3194	1025	32	2761	2.22	84283	67.85	67
34	0.7958	0.3233	1036	32	2735	2.20	87018	70.05	69
35	0.9018	0.3278	1046	33	2956	2.38	89974	72.43	71
36	1.0109	0.3330	1057	33	2792	2.25	92766	74.68	74

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
37	1.1238	0.3389	1069	34	2859	2.30	95625	76.98	76
38	1.2409	0.3456	1080	35	2805	2.26	98430	79.24	78
39	1.3629	0.3532	1092	35	2894	2.33	101324	81.56	80
40	1.4906	0.3617	1105	36	2830	2.28	104154	83.84	83
41	1.6250	0.3714	1119	37	2881	2.32	107035	86.16	85
42	1.7670	0.3826	1133	38	2729	2.20	109764	88.36	87
43	1.9182	0.3955	1148	40	2694	2.17	112458	90.53	89
44	2.0807	0.4110	1164	41	2496	2.01	114954	92.54	92
45	2.2573	0.4301	1182	43	2382	1.92	117336	94.45	93
46	2.4526	0.4547	1201	45	1982	1.60	119318	96.05	95
47	2.6738	0.4876	1224	49	1681	1.35	120999	97.40	97
48	2.9337	0.5345	1250	53	1289	1.04	122288	98.44	98
49	3.2564	0.6065	1282	61	953	0.77	123241	99.21	99
50	3.6966	0.7317	1326	73	569	0.46	123810	99.67	99
51	4.4271	1.0198	1399	102	316	0.25	124126	99.92	99
52	5.6612	1.8384	1522	184	99	0.08	124225	100.00	99

Grade 8 Mathematics

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
0	-5.6128	1.8355	600	184	1	0.00	1	0.00	1
1	-4.3840	1.0176	600	102	2	0.00	3	0.00	1
2	-3.6553	0.7318	600	73	5	0.00	8	0.01	1
3	-3.2144	0.6073	630	61	21	0.02	29	0.02	1
4	-2.8911	0.5344	663	53	86	0.07	115	0.09	1
5	-2.6323	0.4855	689	49	245	0.20	360	0.29	1
6	-2.4141	0.4501	710	45	468	0.38	828	0.66	1
7	-2.2240	0.4231	729	42	889	0.71	1717	1.38	1
8	-2.0542	0.4017	746	40	1488	1.19	3205	2.57	2
9	-1.8999	0.3844	762	38	2089	1.67	5294	4.24	3
10	-1.7577	0.3701	776	37	2744	2.20	8038	6.44	5
11	-1.6252	0.3581	789	36	3283	2.63	11321	9.07	8
12	-1.5006	0.3480	802	35	3520	2.82	14841	11.89	10
13	-1.3826	0.3393	814	34	3779	3.03	18620	14.92	13
14	-1.2701	0.3318	825	33	3851	3.09	22471	18.01	16
15	-1.1622	0.3253	836	33	3876	3.11	26347	21.11	20
16	-1.0583	0.3196	846	32	3748	3.00	30095	24.12	23
17	-0.9577	0.3147	856	31	3617	2.90	33712	27.02	26
18	-0.8601	0.3105	866	31	3624	2.90	37336	29.92	28
19	-0.7648	0.3068	875	31	3504	2.81	40840	32.73	31
20	-0.6717	0.3036	885	30	3569	2.86	44409	35.59	34
21	-0.5804	0.3009	894	30	3456	2.77	47865	38.36	37
22	-0.4905	0.2987	903	30	3372	2.70	51237	41.06	40
23	-0.4019	0.2968	912	30	3341	2.68	54578	43.74	42
24	-0.3142	0.2954	920	30	3252	2.61	57830	46.35	45
25	-0.2273	0.2944	929	29	3192	2.56	61022	48.90	48
26	-0.1408	0.2937	938	29	3229	2.59	64251	51.49	50
27	-0.0546	0.2935	946	29	3141	2.52	67392	54.01	53
28	0.0316	0.2937	955	29	3113	2.49	70505	56.50	55
29	0.1180	0.2944	964	29	3097	2.48	73602	58.99	58
30	0.2050	0.2955	972	30	3177	2.55	76779	61.53	60
31	0.2928	0.2972	981	30	3174	2.54	79953	64.08	63
32	0.3817	0.2994	990	30	3099	2.48	83052	66.56	65
33	0.4721	0.3022	999	30	2982	2.39	86034	68.95	68
34	0.5645	0.3056	1008	31	3024	2.42	89058	71.37	70
35	0.6591	0.3099	1018	31	2992	2.40	92050	73.77	73
36	0.7567	0.3150	1027	32	3024	2.42	95074	76.19	75

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
37	0.8578	0.3211	1038	32	2919	2.34	97993	78.53	77
38	0.9631	0.3283	1048	33	2790	2.24	100783	80.77	80
39	1.0737	0.3368	1059	34	2789	2.24	103572	83.00	82
40	1.1904	0.3469	1071	35	2754	2.21	106326	85.21	84
41	1.3149	0.3590	1083	36	2445	1.96	108771	87.17	86
42	1.4489	0.3735	1097	37	2481	1.99	111252	89.16	88
43	1.5948	0.3910	1111	39	2244	1.80	113496	90.96	90
44	1.7560	0.4126	1127	41	2245	1.80	115741	92.76	92
45	1.9373	0.4399	1145	44	2032	1.63	117773	94.38	94
46	2.1460	0.4753	1166	48	1786	1.43	119559	95.82	95
47	2.3942	0.5233	1191	52	1625	1.30	121184	97.12	96
48	2.7034	0.5930	1222	59	1393	1.12	122577	98.23	98
49	3.1192	0.7050	1264	71	1155	0.93	123732	99.16	99
50	3.7598	0.9169	1328	92	656	0.53	124388	99.69	99
51	5.0212	1.3595	1454	136	354	0.28	124742	99.97	99
52	6.8619	2.0480	1638	205	38	0.03	124780	100.00	99

Grade 4 Science

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
0	-4.3135	1.8331	1050	324	0	0.00	0	0.00	0
1	-3.0906	1.0135	1050	179	4	0.00	4	0.00	1
2	-2.3700	0.7264	1050	128	11	0.01	15	0.01	1
3	-1.9367	0.6012	1050	106	28	0.02	43	0.03	1
4	-1.6207	0.5278	1050	93	83	0.07	126	0.10	1
5	-1.3687	0.4787	1050	85	233	0.18	359	0.28	1
6	-1.1569	0.4432	1050	78	462	0.37	821	0.65	1
7	-0.9727	0.4162	1054	74	814	0.64	1635	1.29	1
8	-0.8084	0.3951	1083	70	1279	1.01	2914	2.31	2
9	-0.6592	0.3781	1109	67	1717	1.36	4631	3.67	3
10	-0.5216	0.3641	1133	64	2242	1.77	6873	5.44	5
11	-0.3933	0.3526	1156	62	2629	2.08	9502	7.52	6
12	-0.2725	0.3429	1177	61	3049	2.41	12551	9.93	9
13	-0.1577	0.3348	1198	59	3325	2.63	15876	12.56	11
14	-0.0480	0.3279	1217	58	3607	2.85	19483	15.42	14
15	0.0576	0.3222	1236	57	3713	2.94	23196	18.36	17
16	0.1598	0.3173	1254	56	3764	2.98	26960	21.34	20
17	0.2592	0.3132	1271	55	3999	3.16	30959	24.50	23
18	0.3562	0.3099	1289	55	3962	3.14	34921	27.64	26
19	0.4513	0.3071	1305	54	3986	3.15	38907	30.79	29
20	0.5450	0.3050	1322	54	4055	3.21	42962	34.00	32
21	0.6375	0.3034	1338	54	4086	3.23	47048	37.24	36
22	0.7292	0.3023	1355	53	4103	3.25	51151	40.48	39
23	0.8204	0.3017	1371	53	4173	3.30	55324	43.79	42
24	0.9114	0.3016	1387	53	4223	3.34	59547	47.13	45
25	1.0025	0.3020	1403	53	4297	3.40	63844	50.53	49
26	1.0939	0.3029	1419	54	4269	3.38	68113	53.91	52
27	1.1860	0.3042	1435	54	4421	3.50	72534	57.41	56
28	1.2791	0.3061	1452	54	4294	3.40	76828	60.80	59
29	1.3735	0.3085	1468	55	4297	3.40	81125	64.21	63
30	1.4695	0.3114	1485	55	4325	3.42	85450	67.63	66
31	1.5676	0.3151	1503	56	4183	3.31	89633	70.94	69
32	1.6682	0.3194	1521	56	4206	3.33	93839	74.27	73
33	1.7719	0.3246	1539	57	4136	3.27	97975	77.54	76
34	1.8791	0.3307	1558	58	3931	3.11	101906	80.65	79
35	1.9908	0.3378	1578	60	3873	3.07	105779	83.72	82
36	2.1077	0.3462	1598	61	3530	2.79	109309	86.51	85

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
37	2.2309	0.3561	1620	63	3330	2.64	112639	89.15	88
38	2.3619	0.3680	1643	65	3057	2.42	115696	91.57	90
39	2.5024	0.3821	1668	68	2678	2.12	118374	93.69	93
40	2.6549	0.3994	1695	71	2161	1.71	120535	95.40	95
41	2.8228	0.4207	1725	74	1929	1.53	122464	96.92	96
42	3.0109	0.4478	1758	79	1416	1.12	123880	98.04	97
43	3.2270	0.4834	1796	85	1082	0.86	124962	98.90	98
44	3.4838	0.5325	1841	94	671	0.53	125633	99.43	99
45	3.8050	0.6057	1898	107	415	0.33	126048	99.76	99
46	4.2440	0.7305	1976	129	220	0.17	126268	99.93	99
47	4.9708	1.0168	2104	180	71	0.06	126339	99.99	99
48	6.1985	1.8350	2321	324	14	0.01	126353	100.00	99

Grade 8 Science

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
0	-4.7094	1.8354	925	352	1	0.00	1	0.00	1
1	-3.4809	1.0173	925	195	2	0.00	3	0.00	1
2	-2.7530	0.7311	925	140	7	0.01	10	0.01	1
3	-2.3131	0.6064	925	116	41	0.03	51	0.04	1
4	-1.9912	0.5331	925	102	106	0.09	157	0.13	1
5	-1.7338	0.4839	925	93	240	0.19	397	0.32	1
6	-1.5173	0.4482	925	86	474	0.38	871	0.70	1
7	-1.3288	0.4210	942	81	912	0.73	1783	1.43	1
8	-1.1608	0.3995	974	77	1480	1.19	3263	2.62	2
9	-1.0083	0.3821	1004	73	2049	1.65	5312	4.27	3
10	-0.8678	0.3678	1030	70	2718	2.18	8030	6.45	5
11	-0.7371	0.3558	1055	68	3336	2.68	11366	9.14	8
12	-0.6142	0.3457	1079	66	3732	3.00	15098	12.14	11
13	-0.4977	0.3371	1101	65	4082	3.28	19180	15.42	14
14	-0.3866	0.3297	1123	63	4105	3.30	23285	18.72	17
15	-0.2800	0.3235	1143	62	4337	3.49	27622	22.20	20
16	-0.1771	0.3182	1163	61	4337	3.49	31959	25.69	24
17	-0.0773	0.3137	1182	60	4311	3.47	36270	29.15	27
18	0.0198	0.3099	1200	59	4288	3.45	40558	32.60	31
19	0.1149	0.3068	1219	59	4281	3.44	44839	36.04	34
20	0.2082	0.3043	1237	58	4122	3.31	48961	39.35	38
21	0.3002	0.3023	1254	58	4180	3.36	53141	42.71	41
22	0.3912	0.3009	1272	58	4269	3.43	57410	46.14	44
23	0.4814	0.3001	1289	57	4277	3.44	61687	49.58	48
24	0.5713	0.2997	1306	57	4209	3.38	65896	52.96	51
25	0.6612	0.2999	1323	57	4303	3.46	70199	56.42	55
26	0.7513	0.3005	1341	58	4244	3.41	74443	59.83	58
27	0.8419	0.3017	1358	58	4320	3.47	78763	63.31	62
28	0.9335	0.3035	1375	58	4264	3.43	83027	66.73	65
29	1.0263	0.3059	1393	59	4247	3.41	87274	70.15	68
30	1.1207	0.3088	1411	59	4138	3.33	91412	73.47	72
31	1.2172	0.3125	1430	60	3963	3.19	95375	76.66	75
32	1.3162	0.3170	1449	61	3681	2.96	99056	79.62	78
33	1.4184	0.3223	1468	62	3617	2.91	102673	82.52	81
34	1.5242	0.3286	1489	63	3499	2.81	106172	85.34	84
35	1.6346	0.3361	1510	64	3202	2.57	109374	87.91	87
36	1.7505	0.3450	1532	66	2922	2.35	112296	90.26	89

Raw Score	IRT Difficulty Estimate	IRT Difficulty SE	Scale Score	Scale Score SE	Frequency	Percent	Cumulative Frequency	Cumulative Percent	Percentile
37	1.8731	0.3555	1555	68	2624	2.11	114920	92.37	91
38	2.0038	0.3680	1580	70	2227	1.79	117147	94.16	93
39	2.1447	0.3831	1607	73	1964	1.58	119111	95.74	95
40	2.2983	0.4014	1637	77	1553	1.25	120664	96.98	96
41	2.4684	0.4242	1669	81	1232	0.99	121896	97.97	97
42	2.6603	0.4530	1706	87	909	0.73	122805	98.70	98
43	2.8823	0.4908	1749	94	674	0.54	123479	99.25	99
44	3.1479	0.5426	1800	104	455	0.37	123934	99.61	99
45	3.4824	0.6189	1864	119	262	0.21	124196	99.82	99
46	3.9412	0.7467	1952	143	163	0.13	124359	99.95	99
47	4.6974	1.0340	2096	198	45	0.04	124404	99.99	99
48	5.9534	1.8475	2337	354	13	0.01	124417	100.00	99

APPENDIX O: LINKING ITEM STATISTICS

Grade 3 English Language Arts

ID	Type	Form	Item Sequence	Previous Form	Previous Item Sequence	Previous Year	Previous P-Value	P-Value	Previous IRT Difficulty Estimate	IRT Difficulty Estimate
773981	MC	0	1	0	6	2017	0.41	0.41	1.2505	1.2774
628579	MC	0	4	0	8	2017	0.82	0.82	-1.1017	-0.9786
187899	MC	0	5	0	9	2017	0.73	0.72	-0.4360	-0.2786
992688	MC	0	14	0	29	2017	0.34	0.35	1.5839	1.5643
980060	MC	0	16	0	31	2017	0.46	0.48	0.9766	0.9164
382430	MC	0	17	0	32	2017	0.43	0.43	1.1425	1.1892
468168	MC	0	18	0	33	2017	0.56	0.56	0.4814	0.4841
370897	MC	0	39	0	13	2017	0.30	0.29	1.8937	1.8843
112665	MC	1-5	20	6	41	2017	0.65	0.67	0.0218	-0.1081
649153	MC	6-9	20	1	42	2017	0.50	0.50	0.7221	0.8237
982780	MC	1-5	21	6	43	2017	0.63	0.64	0.0957	0.0697
157124	MC	6-9	21	1	45	2017	0.62	0.67	0.1178	-0.0659
388070	MC	1-5	22	6	48	2017	0.84	0.88	-1.2676	-1.5767
543682	MC	6-9	22	1	46	2017	0.57	0.59	0.3935	0.3835
277960	MC	1-5	23	6	47	2017	0.74	0.75	-0.4903	-0.5779
237696	MC	6-9	23	1	47	2017	0.44	0.42	1.0297	1.2029
523623	MC	1-5	24	6	49	2017	0.55	0.59	0.4939	0.3466
351390	MC	6-9	24	1	48	2017	0.73	0.80	-0.5025	-0.8422
510621	MC	1-5	25	6	50	2017	0.55	0.59	0.5419	0.3580
997116	MC	6-9	25	1	50	2017	0.60	0.65	0.2417	0.0265
987326	MC	7	41	6	7	2017	0.55	0.54	0.5302	0.5774
271209	MC	9	41	7	7	2017	0.56	0.51	0.4641	0.7800
379728	MC	8	41	9	7	2017	0.88	0.87	-1.5763	-1.3988
215556	MC	2	41	6	14	2017	0.62	0.60	0.1702	0.3016
334612	MC	4	41	9	14	2017	0.42	0.42	1.1858	1.1901
917141	MC	6	41	5	14	2017	0.58	0.59	0.3214	0.3682
564655	MC	5	41	3	14	2017	0.36	0.34	1.4847	1.6217
263426	MC	3	41	7	14	2017	0.44	0.44	1.0202	1.0743
779983	MC	1	41	1	14	2017	0.49	0.47	0.7719	0.9359
396611	ESR	0	15	0	30	2017	0.68	0.70	-0.1953	-0.2571
766094	OE	0	19	0	34	2017	0.44	0.42	1.1546	1.2198

Grade 4 English Language Arts

ID	Type	Form	Item Sequence	Previous Form	Previous Item Sequence	Previous Year	Previous P-Value	P-Value	Previous IRT Difficulty Estimate	IRT Difficulty Estimate
145770	MC	0	1	0	2	2017	0.70	0.70	-0.3145	-0.2920
315309	MC	0	2	0	6	2017	0.38	0.39	1.3022	1.2602
266657	MC	0	5	0	8	2017	0.86	0.86	-1.3897	-1.3698
369011	MC	0	7	0	22	2017	0.74	0.73	-0.6231	-0.5235
711879	MC	0	8	0	23	2017	0.74	0.72	-0.6116	-0.4991
438114	MC	0	10	0	25	2017	0.65	0.65	-0.1690	-0.1808
628366	MC	0	11	0	26	2017	0.78	0.77	-0.8677	-0.7451
305930	MC	0	12	0	27	2017	0.55	0.53	0.4924	0.5600
887518	MC	0	14	0	29	2017	0.59	0.57	0.4000	0.4439
616861	MC	0	15	0	30	2017	0.43	0.42	1.2154	1.2734
365387	MC	0	47	0	10	2017	0.62	0.63	0.0994	0.0598
991977	MC	6-9	30	3	52	2017	0.89	0.91	-1.7680	-1.9870
939015	MC	1-5	30	7	51	2017	0.74	0.75	-0.5389	-0.6280
752294	MC	6-9	31	3	53	2017	0.55	0.56	0.4613	0.4138
152756	MC	1-5	31	7	52	2017	0.60	0.63	0.2557	0.0490
157955	MC	6-9	32	3	55	2017	0.62	0.63	0.1445	0.0969
873018	MC	1-5	32	7	53	2017	0.46	0.47	0.9511	0.8836
308009	MC	6-9	33	3	56	2017	0.54	0.58	0.5296	0.3351
897884	MC	1-5	33	7	57	2017	0.52	0.53	0.6268	0.5735
511906	MC	6-9	34	3	57	2017	0.57	0.61	0.3586	0.1863
183287	MC	1-5	34	7	58	2017	0.65	0.71	-0.0101	-0.3476
531992	MC	6-9	35	3	59	2017	0.54	0.52	0.5420	0.6247
456958	MC	1-5	35	7	60	2017	0.61	0.58	0.1577	0.3238
336962	MC	7	51	3	7	2017	0.44	0.44	1.0287	1.0015
327526	MC	8	51	0	16	2017	0.51	0.52	0.5750	0.6008
105756	MC	6	51	6	14	2016	0.69	0.72	-0.3226	-0.4348
235248	MC	2	51	2	14	2017	0.77	0.76	-0.7501	-0.6756
481200	MC	3	51	3	14	2017	0.61	0.58	0.1840	0.3119
930248	MC	4	51	4	14	2017	0.78	0.79	-0.8767	-0.8922
242721	MC	1	51	1	14	2017	0.77	0.73	-0.7854	-0.4731
157551	MC	5	51	5	14	2017	0.69	0.67	-0.2513	-0.1229
723065	MC	9	51	8	14	2017	0.69	0.70	-0.2836	-0.3119
570630	ESR	0	9	0	24	2017	0.61	0.59	0.1515	0.2521
600454	ESR	0	13	0	28	2017	0.60	0.60	0.2510	0.2658

Grade 5 English Language Arts

ID	Type	Form	Item Sequence	Previous Form	Previous Item Sequence	Previous Year	Previous P-Value	P-Value	Previous IRT Difficulty Estimate	IRT Difficulty Estimate
482887	MC	0	1	0	2	2017	0.64	0.62	-0.0103	0.0555
863449	MC	0	2	0	4	2017	0.42	0.40	1.1140	1.1435
188313	MC	0	7	0	22	2017	0.51	0.51	0.6315	0.6797
751478	MC	0	9	0	24	2017	0.73	0.71	-0.5213	-0.2925
947399	MC	0	10	0	25	2017	0.83	0.83	-1.1975	-1.0574
892496	MC	0	11	0	26	2017	0.47	0.46	0.8117	0.8662
890783	MC	0	12	0	27	2017	0.57	0.57	0.3917	0.4330
727862	MC	0	46	0	11	2017	0.59	0.60	0.2350	0.1096
689447	MC	0	47	0	13	2017	0.64	0.65	-0.0763	-0.0321
408278	MC	6-9	29	6	52	2017	0.85	0.87	-1.3604	-1.5242
100421	MC	1-5	29	1	52	2017	0.69	0.71	-0.3145	-0.3809
984958	MC	1-5	30	1	53	2017	0.62	0.63	0.0855	0.0575
197805	MC	6-9	30	6	55	2017	0.46	0.49	0.8836	0.7692
866397	MC	1-5	31	1	54	2017	0.49	0.49	0.7621	0.7319
678432	MC	6-9	31	6	57	2017	0.67	0.67	-0.1557	-0.1226
338316	MC	1-5	32	1	57	2017	0.48	0.50	0.8045	0.7160
912730	MC	6-9	32	6	58	2017	0.34	0.37	1.5060	1.3330
274614	MC	1-5	33	1	58	2017	0.62	0.68	0.0686	-0.2158
125239	MC	6-9	33	6	59	2017	0.63	0.64	0.0216	0.0403
388105	MC	1-5	34	1	60	2017	0.62	0.56	0.1046	0.3997
873192	MC	6-9	34	6	60	2017	0.61	0.66	0.1217	-0.0586
757548	MC	9	50	8	7	2017	0.55	0.51	0.4701	0.6403
319544	MC	1	50	1	14	2017	0.25	0.28	2.0292	1.8412
567897	MC	2	50	2	14	2017	0.43	0.47	1.0270	0.8664
534745	MC	3	50	3	14	2017	0.82	0.84	-1.1312	-1.1893
813176	MC	8	50	4	14	2017	0.73	0.68	-0.5091	-0.1847
824369	MC	4	50	5	14	2017	0.30	0.29	1.7430	1.7464
183132	MC	5	50	7	14	2017	0.61	0.66	0.1617	-0.0753
323299	MC	6	50	8	14	2017	0.59	0.58	0.2762	0.3172
280488	MC	7	50	9	14	2017	0.32	0.29	1.6356	1.8088
907667	ESR	0	8	0	23	2017	0.66	0.64	0.0752	0.1690

Grade 6 English Language Arts

ID	Type	Form	Item Sequence	Previous Form	Previous Item Sequence	Previous Year	Previous P-Value	P-Value	Previous IRT Difficulty Estimate	IRT Difficulty Estimate
374474	MC	0	1	0	2	2017	0.85	0.83	-1.1256	-0.9747
599040	MC	0	21	0	35	2017	0.71	0.69	-0.2125	-0.0698
718052	MC	0	22	0	36	2017	0.62	0.60	0.3306	0.4824
338350	MC	0	23	0	37	2017	0.47	0.45	1.0622	1.3455
958920	MC	0	24	0	38	2017	0.65	0.65	0.1500	0.2638
402161	MC	0	25	0	39	2017	0.44	0.42	1.1947	1.4278
147544	MC	0	26	0	40	2017	0.58	0.57	0.5748	0.6414
562387	MC	0	29	0	43	2017	0.71	0.69	-0.1917	0.0168
828272	MC	0	47	0	11	2017	0.64	0.62	0.1652	0.3978
858982	MC	0	48	0	12	2017	0.58	0.60	0.4893	0.4938
452999	MC	0	50	0	20	2017	0.43	0.40	1.3410	1.5269
637210	MC	1-5	30	8	50	2017	0.75	0.75	-0.3707	-0.3405
688915	MC	6-9	30	3	50	2017	0.39	0.41	1.4746	1.4488
387203	MC	1-5	31	8	52	2017	0.60	0.64	0.4675	0.2967
588318	MC	6-9	31	3	51	2017	0.76	0.80	-0.4518	-0.6666
701006	MC	1-5	32	8	54	2017	0.67	0.73	0.1008	-0.1919
194295	MC	6-9	32	3	53	2017	0.60	0.65	0.4014	0.2201
397827	MC	1-5	33	8	56	2017	0.43	0.50	1.3035	1.0205
140515	MC	6-9	33	3	54	2017	0.41	0.41	1.3487	1.4368
910122	MC	1-5	34	8	58	2017	0.69	0.72	-0.0052	-0.1249
389223	MC	6-9	34	3	56	2017	0.67	0.72	0.0674	-0.1581
686305	MC	1-5	35	8	59	2017	0.56	0.62	0.6465	0.4260
662901	MC	6-9	35	3	58	2017	0.61	0.67	0.3874	0.1400
523249	MC	6	51	0	10	2017	0.65	0.63	0.2386	0.3423
499984	MC	7	51	0	19	2017	0.57	0.58	0.6596	0.5740
316298	MC	9	51	0	17	2017	0.43	0.44	1.3927	1.2636
961565	MC	4	51	4	14	2017	0.67	0.67	0.0766	0.1239
207027	MC	1	51	1	14	2017	0.78	0.83	-0.5692	-0.8780
804523	MC	3	51	3	14	2017	0.79	0.79	-0.6362	-0.6165
978507	MC	2	51	2	14	2017	0.29	0.30	1.9995	2.1062
949621	MC	5	51	5	14	2017	0.49	0.57	0.9526	0.6854
963139	MC	8	51	9	14	2017	0.66	0.70	0.1127	-0.0333
243519	ESR	0	27	0	41	2017	0.63	0.61	0.2692	0.4590
815762	ESR	0	28	0	42	2017	0.57	0.56	0.6299	0.7187

Grade 7 English Language Arts

ID	Type	Form	Item Sequence	Previous Form	Previous Item Sequence	Previous Year	Previous P-Value	P-Value	Previous IRT Difficulty Estimate	IRT Difficulty Estimate
837750	MC	0	1	0	3	2017	0.58	0.57	0.4191	0.5311
944528	MC	0	3	0	9	2017	0.68	0.71	-0.1353	-0.2292
592538	MC	0	5	0	8	2017	0.81	0.83	-1.0659	-0.9553
792100	MC	0	7	0	22	2017	0.75	0.74	-0.4551	-0.3213
140326	MC	0	8	0	23	2017	0.70	0.68	-0.1901	-0.0274
570291	MC	0	9	0	24	2017	0.76	0.74	-0.4963	-0.3291
134893	MC	0	11	0	26	2017	0.57	0.57	0.4905	0.5467
463873	MC	0	12	0	27	2017	0.42	0.43	1.2342	1.2179
967148	MC	0	49	0	18	2017	0.38	0.34	1.3319	1.6878
582997	MC	1-5	29	3	50	2017	0.64	0.66	0.1533	0.0669
554373	MC	6-9	29	6	50	2017	0.60	0.60	0.3340	0.3679
590137	MC	1-5	30	3	51	2017	0.73	0.74	-0.3552	-0.4173
517405	MC	6-9	30	6	51	2017	0.49	0.51	0.8929	0.8039
726561	MC	1-5	31	3	52	2017	0.59	0.62	0.3980	0.2816
384128	MC	6-9	31	6	52	2017	0.63	0.65	0.1862	0.1164
476332	MC	1-5	32	3	53	2017	0.70	0.73	-0.2252	-0.3413
427772	MC	6-9	32	6	56	2017	0.45	0.46	1.1031	1.0291
590801	MC	1-5	33	3	56	2017	0.68	0.73	-0.0897	-0.3095
361752	MC	6-9	33	6	57	2017	0.48	0.49	0.9466	0.8916
809588	MC	1-5	34	3	58	2017	0.54	0.51	0.6404	0.7859
786087	MC	6-9	34	6	58	2017	0.69	0.73	-0.1819	-0.3497
614617	MC	8	50	0	16	2017	0.67	0.73	-0.0463	-0.3287
957593	MC	9	50	0	12	2017	0.58	0.59	0.3765	0.4369
311681	MC	5	50	7	14	2017	0.36	0.35	1.5476	1.6013
520713	MC	6	50	8	14	2017	0.48	0.49	0.9135	0.9018
167477	MC	4	50	6	14	2017	0.88	0.90	-1.5195	-1.7479
980792	MC	7	50	9	14	2017	0.70	0.73	-0.2474	-0.3429
638240	MC	1	50	2	14	2017	0.72	0.70	-0.3244	-0.1746
925827	MC	2	50	4	14	2017	0.79	0.77	-0.7560	-0.6137
313660	MC	3	50	5	14	2017	0.43	0.49	1.1780	0.8833
109857	ESR	0	10	0	25	2017	0.65	0.63	0.2103	0.3416

Grade 8 English Language Arts

ID	Type	Form	Item Sequence	Previous Form	Previous Item Sequence	Previous Year	Previous P-Value	P-Value	Previous IRT Difficulty Estimate	IRT Difficulty Estimate
677767	MC	0	1	0	3	2017	0.68	0.68	-0.3424	-0.2571
517461	MC	0	2	0	4	2017	0.64	0.64	0.0015	-0.0334
695658	MC	0	3	0	13	2017	0.31	0.37	1.7864	1.3139
298279	MC	0	15	0	29	2017	0.68	0.69	-0.3701	-0.3590
731086	MC	0	16	0	30	2017	0.61	0.61	-0.0003	0.0879
340150	MC	0	17	0	31	2017	0.77	0.75	-0.8068	-0.6418
885350	MC	0	18	0	32	2017	0.52	0.52	0.5162	0.5554
916102	MC	0	20	0	34	2017	0.47	0.47	0.8180	0.8660
906741	MC	0	21	0	35	2017	0.48	0.47	0.7477	0.8309
152586	MC	0	46	0	9	2017	0.50	0.47	0.5207	0.8633
113831	MC	1-5	29	7	50	2017	0.49	0.57	0.6793	0.3462
506336	MC	6-9	29	1	49	2017	0.78	0.81	-0.9280	-1.0440
646521	MC	1-5	30	7	51	2017	0.59	0.58	0.1793	0.2998
491925	MC	6-9	30	1	51	2017	0.57	0.59	0.3120	0.2277
238056	MC	1-5	31	7	53	2017	0.76	0.77	-0.7345	-0.7537
653062	MC	6-9	31	1	52	2017	0.75	0.76	-0.7200	-0.6793
176915	MC	1-5	32	7	55	2017	0.64	0.69	-0.0500	-0.2909
176858	MC	6-9	32	1	55	2017	0.43	0.48	0.9914	0.7807
257223	MC	1-5	33	7	56	2017	0.65	0.67	-0.1196	-0.1842
823330	MC	6-9	33	1	56	2017	0.78	0.82	-0.8962	-1.1026
422467	MC	1-5	34	7	58	2017	0.71	0.74	-0.4608	-0.5731
624531	MC	6-9	34	1	57	2017	0.69	0.65	-0.3201	-0.0836
991912	MC	8	50	0	8	2017	0.84	0.80	-1.3496	-1.0011
607935	MC	6	50	0	15	2017	0.68	0.72	-0.3289	-0.4444
906452	MC	7	50	0	17	2017	0.57	0.58	0.3037	0.2931
523205	MC	9	50	0	19	2017	0.36	0.36	1.3604	1.3726
257322	MC	1	50	3	14	2017	0.36	0.40	1.3342	1.1761
597032	MC	2	50	4	14	2017	0.58	0.56	0.2081	0.3483
201887	MC	3	50	6	14	2017	0.79	0.79	-0.9865	-0.9349
820497	MC	4	50	7	14	2017	0.54	0.51	0.4594	0.6317
899096	MC	5	50	8	14	2017	0.64	0.63	-0.0669	0.0474
933619	ESR	0	19	0	33	2017	0.56	0.56	0.3243	0.3514
0.2658	ESR	0	42	0	43	2016	0.36	0.37	1.4249	1.4345

Grade 3 Mathematics

ID	Type	Form	Item Sequence	Previous Form	Previous Item Sequence	Previous Year	Previous P-Value	P-Value	Previous IRT Difficulty Estimate	IRT Difficulty Estimate
997898	MC	0	3	0	3	2017	0.58	0.57	0.2027	0.1642
427520	MC	0	7	0	7	2017	0.39	0.39	1.2361	1.0317
469853	MC	0	9	0	9	2017	0.57	0.60	0.1807	0.0758
815332	MC	0	14	0	14	2017	0.58	0.57	0.2512	0.2774
825606	MC	0	15	0	15	2017	0.54	0.55	0.3670	0.2934
279099	MC	0	16	0	16	2017	0.33	0.31	1.5718	1.6283
384267	MC	0	18	0	18	2017	0.64	0.65	-0.2782	-0.1659
505731	MC	0	19	0	19	2017	0.59	0.59	0.0512	0.1566
600987	MC	0	20	0	22	2017	0.58	0.57	0.1603	0.2725
994817	MC	0	28	0	28	2017	0.67	0.70	-0.3846	-0.5174
148896	MC	0	31	0	31	2017	0.36	0.31	1.3849	1.6274
246870	MC	0	33	0	58	2017	0.70	0.68	-0.5159	-0.2629
789950	MC	0	37	0	62	2017	0.70	0.69	-0.4742	-0.4580
954642	MC	0	44	0	72	2017	0.60	0.59	0.1201	0.1807
426777	MC	0	45	0	73	2017	0.56	0.51	0.2337	0.5116
940245	MC	0	46	0	24	2017	0.69	0.70	-0.3547	-0.4723
381099	MC	1	21	6	44	2017	0.49	0.42	0.6853	0.9189
666716	MC	4	21	2	46	2017	0.36	0.46	1.3970	0.8099
484735	MC	2	21	6	45	2017	0.48	0.49	0.7178	0.6459
309112	MC	5	21	8	44	2017	0.38	0.35	1.2700	1.3990
756718	MC	8	21	9	45	2017	0.47	0.46	0.7308	0.8374
473678	MC	3	21	1	45	2017	0.43	0.48	0.9581	0.7211
989302	MC	9	22	4	48	2017	0.60	0.65	0.0551	-0.1906
464067	MC	7	24	5	50	2017	0.86	0.86	-1.6830	-1.6100
589165	MC	6	24	6	50	2017	0.38	0.37	1.2435	1.3164
743330	MC	9	47	7	46	2017	0.59	0.56	0.1324	0.2629
850119	MC	5	47	9	47	2017	0.59	0.61	0.1134	0.0322
855332	MC	3	47	6	46	2017	0.37	0.37	1.3150	1.3053
529813	MC	2	47	4	42	2017	0.33	0.29	1.5649	1.7470
219793	MC	4	48	7	48	2017	0.75	0.74	-0.7934	-0.7206
267454	MC	8	48	1	48	2017	0.77	0.80	-1.0058	-1.1288
583023	MC	1	48	3	48	2017	0.29	0.28	1.7633	1.7061
109318	MC	7	50	8	50	2017	0.33	0.38	1.5328	1.2068
679559	MC	6	50	9	50	2017	0.56	0.57	0.2692	0.2410
343967	OE	0	25	0	76	2017	0.46	0.45	0.8300	0.8842
917971	OE	0	51	0	25	2017	0.43	0.43	0.9894	0.9786

Grade 4 Mathematics

ID	Type	Form	Item Sequence	Previous Form	Previous Item Sequence	Previous Year	Previous P-Value	P-Value	Previous IRT Difficulty Estimate	IRT Difficulty Estimate
659249	MC	0	1	0	1	2017	0.65	0.63	-0.6985	-0.6383
715435	MC	0	5	0	55	2017	0.60	0.64	-0.5045	-0.7117
793465	MC	0	7	0	57	2017	0.49	0.46	0.0882	0.2957
382259	MC	0	8	0	8	2017	0.69	0.68	-0.9379	-0.9839
537653	MC	0	13	0	64	2017	0.36	0.37	0.8991	0.7528
107807	MC	0	19	0	19	2017	0.48	0.46	0.2114	0.2228
204028	MC	0	21	0	72	2017	0.69	0.68	-0.9807	-0.8401
313917	MC	0	29	0	29	2017	0.52	0.52	-0.0272	-0.1252
628747	MC	0	30	0	30	2017	0.46	0.45	0.2796	0.3028
524151	MC	0	32	0	32	2017	0.58	0.56	-0.3448	-0.2842
896459	MC	0	37	0	37	2017	0.54	0.55	-0.1677	-0.3003
107120	MC	0	38	0	38	2017	0.55	0.52	-0.1737	-0.0616
578050	MC	0	41	0	66	2017	0.72	0.69	-1.0945	-0.9877
455324	MC	0	43	0	68	2017	0.49	0.49	0.1318	0.0836
381264	MC	0	45	0	70	2017	0.36	0.33	0.8381	0.9129
507859	MC	0	46	0	71	2017	0.37	0.35	0.8200	0.8457
329901	MC	5	22	1	42	2017	0.38	0.37	0.6283	0.7459
541506	MC	4	22	1	45	2017	0.68	0.67	-0.9124	-0.8360
902646	MC	1	22	6	46	2017	0.39	0.37	0.6501	0.6288
236540	MC	2	22	1	46	2017	0.47	0.49	0.1496	0.0855
334405	MC	3	22	6	45	2017	0.43	0.44	0.4692	0.3284
202665	MC	9	23	6	49	2017	0.41	0.42	0.5797	0.4393
884091	MC	6	23	2	49	2017	0.42	0.44	0.4706	0.3322
478339	MC	7	23	4	48	2017	0.61	0.60	-0.4841	-0.4589
560546	MC	8	24	6	50	2017	0.44	0.43	0.4276	0.3935
840461	MC	3	47	9	47	2017	0.55	0.50	-0.1513	-0.0019
757891	MC	9	47	4	45	2017	0.36	0.36	0.8049	0.7837
744942	MC	1	47	2	47	2017	0.40	0.36	0.5790	0.6682
504186	MC	4	47	6	41	2017	0.37	0.39	0.8033	0.6271
766908	MC	5	48	8	48	2017	0.30	0.29	1.1970	1.2093
137067	MC	6	49	4	49	2017	0.41	0.41	0.5510	0.4639
973662	MC	8	49	9	49	2017	0.59	0.58	-0.3687	-0.3628
905249	MC	2	50	4	50	2017	0.38	0.36	0.7275	0.7629
494388	MC	7	50	8	50	2017	0.49	0.46	0.1377	0.2158
738417	OE	0	26	0	26	2017	0.60	0.60	-0.3083	-0.3698
506676	OE	0	51	0	76	2017	0.36	0.34	0.7879	0.8714

Grade 5 Mathematics

ID	Type	Form	Item Sequence	Previous Form	Previous Item Sequence	Previous Year	Previous P-Value	P-Value	Previous IRT Difficulty Estimate	IRT Difficulty Estimate
511572	MC	0	3	0	4	2017	0.52	0.53	0.1597	0.0927
130754	MC	0	5	0	5	2017	0.63	0.62	-0.3590	-0.3934
384264	MC	0	7	0	7	2017	0.46	0.43	0.4053	0.5855
729171	MC	0	8	0	8	2017	0.84	0.84	-1.7483	-1.7593
720830	MC	0	12	0	12	2017	0.69	0.69	-0.7688	-0.8354
710381	MC	0	16	0	16	2017	0.62	0.59	-0.3478	-0.2087
863683	MC	0	19	0	19	2017	0.76	0.74	-1.1980	-1.0239
265219	MC	0	20	0	21	2017	0.71	0.73	-0.8864	-0.9848
651196	MC	0	21	0	22	2017	0.46	0.45	0.4460	0.5095
571886	MC	0	27	0	27	2017	0.64	0.68	-0.3886	-0.6857
325290	MC	0	32	0	57	2017	0.57	0.55	-0.0694	-0.0359
471353	MC	0	36	0	36	2017	0.50	0.46	0.2658	0.4482
201487	MC	0	37	0	37	2017	0.47	0.48	0.4576	0.4122
828139	MC	0	41	0	66	2017	0.39	0.37	0.8336	0.9809
311223	MC	0	43	0	68	2017	0.40	0.45	0.7419	0.5158
892351	MC	0	46	0	71	2017	0.46	0.44	0.4984	0.5849
945660	MC	8	22	2	48	2017	0.80	0.80	-1.4257	-1.4221
321360	MC	2	22	7	46	2017	0.57	0.62	-0.1264	-0.3670
656852	MC	4	22	4	48	2017	0.47	0.47	0.4305	0.4527
845881	MC	9	22	1	46	2017	0.43	0.48	0.5592	0.3878
805848	MC	5	22	8	48	2017	0.71	0.69	-0.8433	-0.7640
645533	MC	1	23	8	49	2017	0.52	0.52	0.1843	0.0475
900790	MC	7	24	1	50	2017	0.32	0.32	1.1950	1.2870
678068	MC	3	24	8	50	2017	0.37	0.38	0.9598	0.9072
943421	MC	6	24	5	50	2017	0.64	0.63	-0.4811	-0.4000
254653	MC	6	47	4	47	2017	0.47	0.49	0.3923	0.3259
107412	MC	3	47	1	47	2017	0.70	0.68	-0.8360	-0.7537
393088	MC	9	47	7	45	2017	0.33	0.31	1.1304	1.3001
271630	MC	4	47	5	47	2017	0.47	0.47	0.4259	0.4392
432011	MC	2	47	8	46	2017	0.35	0.36	1.0234	1.0436
873532	MC	7	47	6	47	2017	0.43	0.47	0.6176	0.4476
335522	MC	5	49	9	49	2017	0.44	0.48	0.5701	0.4022
657861	MC	8	49	1	49	2017	0.34	0.31	1.0695	1.3469
479093	MC	1	50	7	50	2017	0.53	0.52	0.0962	0.0438
822864	OE	0	26	0	26	2017	0.34	0.36	1.0513	0.9813
128970	OE	0	51	0	76	2017	0.44	0.43	0.5686	0.6529

Grade 6 Mathematics

ID	Type	Form	Item Sequence	Previous Form	Previous Item Sequence	Previous Year	Previous P-Value	P-Value	Previous IRT Difficulty Estimate	IRT Difficulty Estimate
148069	MC	0	3	0	4	2017	0.55	0.53	0.1437	0.2429
391069	MC	0	6	0	6	2017	0.64	0.60	-0.3072	-0.1488
867720	MC	0	7	0	58	2017	0.45	0.49	0.7254	0.4609
213658	MC	0	8	0	59	2017	0.73	0.75	-0.7276	-0.8579
223714	MC	0	9	0	60	2017	0.49	0.47	0.4688	0.5982
459385	MC	0	13	0	13	2017	0.42	0.41	0.8779	0.8509
614050	MC	0	17	0	17	2017	0.35	0.36	1.2497	1.2037
176455	MC	0	18	0	18	2017	0.55	0.55	0.1115	0.1691
864249	MC	0	21	0	24	2017	0.54	0.55	0.1441	0.1569
837396	MC	0	28	0	28	2017	0.69	0.69	-0.5681	-0.6218
242957	MC	0	29	0	53	2017	0.81	0.80	-1.3804	-1.2780
885354	MC	0	30	0	54	2017	0.67	0.67	-0.4839	-0.4216
609551	MC	0	32	0	32	2017	0.39	0.38	0.9519	1.0078
211678	MC	0	35	0	35	2017	0.43	0.45	0.7241	0.7321
442431	MC	0	42	0	67	2017	0.71	0.72	-0.6489	-0.7484
848416	MC	0	43	0	68	2017	0.74	0.75	-0.8175	-0.8896
567896	MC	3	22	5	44	2017	0.62	0.62	-0.1891	-0.1987
818509	MC	2	22	6	48	2017	0.62	0.66	-0.2237	-0.3816
580116	MC	8	22	9	46	2017	0.37	0.35	1.0770	1.1876
432775	MC	5	22	1	48	2017	0.77	0.78	-1.0912	-1.1170
454248	MC	9	23	8	49	2017	0.39	0.35	0.9748	1.2055
982846	MC	4	23	9	49	2017	0.49	0.49	0.4557	0.4901
201556	MC	6	23	5	49	2017	0.56	0.57	0.1192	0.0563
827385	MC	7	24	5	50	2017	0.42	0.42	0.8565	0.8567
231102	MC	1	24	7	50	2017	0.41	0.41	0.8355	0.8012
480220	MC	2	47	9	43	2017	0.69	0.69	-0.5969	-0.5858
893691	MC	4	47	2	43	2017	0.85	0.86	-1.6727	-1.7413
337005	MC	5	47	6	45	2017	0.39	0.37	0.9709	1.0903
869400	MC	6	47	8	43	2017	0.68	0.67	-0.4912	-0.4649
567720	MC	9	47	7	47	2017	0.41	0.42	0.8679	0.8292
807602	MC	8	47	2	45	2017	0.54	0.58	0.2134	0.0364
266071	MC	7	47	4	45	2017	0.78	0.77	-1.1257	-1.0447
750318	MC	3	47	7	44	2017	0.56	0.55	0.0905	0.1842
691595	MC	1	48	9	48	2017	0.83	0.82	-1.5193	-1.5031
799397	OE	0	26	0	26	2017	0.24	0.24	1.6635	1.6310
527167	OE	0	51	0	76	2017	0.31	0.31	1.3260	1.3230

Grade 7 Mathematics

ID	Type	Form	Item Sequence	Previous Form	Previous Item Sequence	Previous Year	Previous P-Value	P-Value	Previous IRT Difficulty Estimate	IRT Difficulty Estimate
212796	MC	0	2	0	2	2017	0.34	0.33	0.8980	1.0648
799454	MC	0	5	0	5	2017	0.67	0.68	-0.8898	-0.9374
982501	MC	0	7	0	58	2017	0.67	0.67	-0.8225	-0.9127
681223	MC	0	9	0	60	2017	0.42	0.40	0.4861	0.6266
961807	MC	0	11	0	11	2017	0.63	0.63	-0.5301	-0.6360
168174	MC	0	17	0	17	2017	0.58	0.57	-0.4124	-0.2573
360788	MC	0	19	0	19	2017	0.58	0.60	-0.3903	-0.4590
616677	MC	0	20	0	20	2017	0.67	0.68	-0.8190	-0.8465
807134	MC	0	27	0	27	2017	0.73	0.72	-1.1876	-1.2072
611004	MC	0	30	0	30	2017	0.55	0.54	-0.2118	-0.1805
317707	MC	0	34	0	34	2017	0.58	0.58	-0.3380	-0.3379
297354	MC	0	35	0	35	2017	0.49	0.49	0.1946	0.1853
414003	MC	0	36	0	36	2017	0.70	0.68	-0.9411	-0.9106
540564	MC	0	37	0	62	2017	0.76	0.77	-1.3987	-1.4188
574974	MC	0	39	0	64	2017	0.73	0.71	-1.1376	-1.0794
832614	MC	0	42	0	67	2017	0.40	0.47	0.5989	0.1999
171372	MC	2	22	6	45	2017	0.57	0.53	-0.3081	-0.0908
168658	MC	7	22	9	48	2017	0.68	0.66	-0.8899	-0.7543
316548	MC	3	22	3	48	2017	0.53	0.55	-0.0778	-0.2152
951186	MC	9	22	9	46	2017	0.45	0.45	0.3592	0.3162
896880	MC	5	23	6	49	2017	0.44	0.45	0.3871	0.3563
192500	MC	6	23	3	49	2017	0.60	0.60	-0.4300	-0.4449
482995	MC	4	23	5	49	2017	0.53	0.53	-0.1014	-0.0867
902906	MC	8	24	7	50	2017	0.52	0.49	-0.0044	0.1033
462076	MC	1	24	1	50	2017	0.50	0.48	-0.0057	0.0936
223450	MC	3	47	9	43	2017	0.77	0.77	-1.4276	-1.4708
179837	MC	1	47	1	46	2017	0.69	0.69	-1.0173	-1.0830
451725	MC	8	47	1	47	2017	0.40	0.38	0.5596	0.7286
683273	MC	9	47	3	46	2017	0.79	0.79	-1.5663	-1.6076
742082	MC	2	47	9	45	2017	0.44	0.44	0.4132	0.4043
438600	MC	4	47	2	46	2017	0.49	0.46	0.1021	0.2801
922661	MC	5	47	7	42	2017	0.47	0.43	0.2122	0.4514
673042	MC	6	47	6	47	2017	0.45	0.46	0.3380	0.3181
909728	MC	7	50	5	50	2017	0.44	0.39	0.3614	0.6799
731850	OE	0	26	0	26	2017	0.21	0.22	1.7804	1.6926
894580	OE	0	51	0	76	2017	0.29	0.32	1.3600	1.2303

Grade 8 Mathematics

ID	Type	Form	Item Sequence	Previous Form	Previous Item Sequence	Previous Year	Previous P-Value	P-Value	Previous IRT Difficulty Estimate	IRT Difficulty Estimate
269106	MC	0	2	0	2	2017	0.50	0.50	-0.0476	-0.0316
772977	MC	0	5	0	5	2017	0.78	0.76	-1.6536	-1.6247
600021	MC	0	9	0	60	2017	0.54	0.54	-0.2698	-0.2441
640707	MC	0	10	0	61	2017	0.64	0.61	-0.7375	-0.5843
286995	MC	0	16	0	16	2017	0.53	0.54	-0.1712	-0.2400
254985	MC	0	17	0	17	2017	0.65	0.64	-0.7692	-0.7728
122259	MC	0	21	0	21	2017	0.45	0.43	0.2161	0.3547
862395	MC	0	27	0	52	2017	0.77	0.72	-1.5737	-1.3340
566794	MC	0	31	0	56	2017	0.66	0.63	-0.8353	-0.7618
630539	MC	0	32	0	57	2017	0.48	0.45	0.0909	0.1598
112650	MC	0	36	0	36	2017	0.55	0.56	-0.3023	-0.3337
281597	MC	0	37	0	37	2017	0.66	0.65	-0.8089	-0.8631
812661	MC	0	38	0	38	2017	0.58	0.57	-0.3906	-0.4180
325119	MC	0	40	0	65	2017	0.73	0.69	-1.2755	-1.1240
297872	MC	0	42	0	67	2017	0.49	0.49	-0.0213	-0.0258
110496	MC	0	46	0	71	2017	0.50	0.48	-0.0012	0.0120
434221	MC	4	22	7	45	2017	0.51	0.49	-0.0756	-0.0181
788128	MC	3	22	3	48	2017	0.48	0.51	0.0573	-0.1542
803202	MC	7	22	8	47	2017	0.64	0.56	-0.7145	-0.3688
740106	MC	8	23	1	49	2017	0.42	0.45	0.3326	0.2021
255987	MC	2	23	5	49	2017	0.74	0.72	-1.2802	-1.2215
819133	MC	1	23	2	49	2017	0.48	0.51	0.0603	-0.1815
355184	MC	9	24	7	50	2017	0.51	0.50	-0.0806	-0.0895
767775	MC	5	24	6	50	2017	0.69	0.69	-1.0478	-1.0829
841097	MC	6	24	8	50	2017	0.56	0.57	-0.2932	-0.4336
323346	MC	1	47	8	46	2017	0.34	0.32	0.8207	0.8120
423549	MC	2	47	3	47	2017	0.56	0.58	-0.3351	-0.5003
185930	MC	3	47	9	46	2017	0.66	0.63	-0.8509	-0.7659
136072	MC	8	47	6	46	2017	0.57	0.59	-0.4290	-0.5081
748161	MC	5	47	4	45	2017	0.37	0.37	0.6620	0.6377
178738	MC	7	47	5	46	2017	0.41	0.42	0.4662	0.3111
499850	MC	9	47	4	46	2017	0.42	0.42	0.3994	0.3301
129979	MC	4	47	9	47	2017	0.69	0.68	-0.9934	-0.9982
285922	MC	6	49	8	49	2017	0.44	0.45	0.2887	0.2262
146652	OE	0	26	0	26	2017	0.32	0.31	1.5701	1.7163
758896	OE	0	51	0	76	2017	0.34	0.36	0.7754	0.6473

Grade 4 Science

ID	Type	Form	Item Sequence	Previous Form	Previous Item Sequence	Previous Year	Previous P-Value	P-Value	Previous IRT Difficulty Estimate	IRT Difficulty Estimate
818162	MC	0	3	0	4	2017	0.65	0.65	0.2729	0.3431
605022	MC	0	4	0	6	2017	0.70	0.70	0.0731	0.0851
106226	MC	0	5	0	8	2017	0.52	0.55	0.8337	0.8070
999200	MC	0	6	0	9	2017	0.44	0.43	1.2677	1.3612
173742	MC	0	12	0	18	2017	0.57	0.61	0.6352	0.4872
380627	MC	0	13	0	19	2017	0.41	0.42	1.4562	1.4270
530301	MC	0	14	0	20	2017	0.48	0.50	1.0325	0.9703
313477	MC	0	17	0	24	2017	0.64	0.64	0.2879	0.4124
766735	MC	0	27	0	38	2017	0.64	0.64	0.2557	0.3314
872481	MC	0	29	0	41	2017	0.57	0.58	0.6751	0.6672
455676	MC	0	34	0	49	2017	0.54	0.55	0.8086	0.7677
452286	MC	0	38	0	54	2017	0.48	0.51	1.1749	1.0512
259471	MC	0	39	0	55	2017	0.41	0.38	1.4668	1.5900
191479	MC	0	40	0	57	2017	0.53	0.57	0.8335	0.5274
573874	MC	0	42	0	60	2017	0.63	0.65	0.3590	0.3127
571122	MC	0	44	0	62	2017	0.47	0.48	1.1353	1.2577
688659	MC	5	21	2	30	2017	0.61	0.63	0.4811	0.4384
195900	MC	11	22	7	68	2017	0.35	0.37	1.7817	1.6871
392099	MC	2	22	11	32	2017	0.60	0.60	0.5073	0.5695
730465	MC	8	22	9	69	2017	0.50	0.54	1.0332	0.8730
573817	MC	10	22	10	69	2017	0.46	0.43	1.2209	1.3970
102101	MC	3	22	3	69	2017	0.66	0.70	0.1913	0.0148
147835	MC	9	22	2	32	2017	0.58	0.60	0.6048	0.5470
876222	MC	1	23	3	70	2017	0.49	0.45	1.0363	1.2456
954672	MC	12	23	3	33	2017	0.33	0.34	1.8464	1.8382
976855	MC	7	23	12	71	2017	0.43	0.44	1.3747	1.3573
825740	MC	4	23	11	70	2017	0.50	0.51	1.0182	0.9568
751965	MC	6	23	5	34	2017	0.46	0.49	1.2139	1.0637
551636	MC	5	47	8	67	2017	0.42	0.45	1.4328	1.2781
237648	MC	10	47	7	30	2017	0.62	0.66	0.4141	0.2984
315259	MC	6	47	5	67	2017	0.43	0.46	1.3330	1.2301
580203	MC	2	48	9	31	2017	0.54	0.56	0.7959	0.7923
315502	MC	9	48	8	68	2017	0.42	0.41	1.4077	1.4718
700544	MC	11	48	2	69	2017	0.34	0.24	1.7925	2.4172
878187	MC	8	48	3	31	2017	0.67	0.68	0.1144	0.1499

ID	Type	Form	Item Sequence	Previous Form	Previous Item Sequence	Previous Year	Previous P-Value	P-Value	Previous IRT Difficulty Estimate	IRT Difficulty Estimate
479078	MC	4	49	2	33	2017	0.57	0.57	0.6598	0.6740
793759	MC	7	49	12	34	2017	0.48	0.53	1.1032	0.9283
431262	MC	1	49	1	70	2017	0.43	0.44	1.2937	1.2858
807527	MC	3	49	7	71	2017	0.54	0.58	0.8487	0.6687
740582	MC	12	49	12	33	2017	0.44	0.45	1.3241	1.2844
985603	SCR	0	25	0	36	2017	0.55	0.55	0.7258	0.7720
824405	SCR	0	51	0	72	2017	0.75	0.72	-0.1594	0.0606

Grade 8 Science

ID	Type	Form	Item Sequence	Previous Form	Previous Item Sequence	Previous Year	Previous P-Value	P-Value	Previous IRT Difficulty Estimate	IRT Difficulty Estimate
550366	MC	0	5	0	7	2017	0.57	0.57	0.1664	0.2606
354869	MC	0	6	0	8	2017	0.42	0.43	0.9364	0.9625
452271	MC	0	7	0	9	2017	0.58	0.60	0.1002	0.0294
512013	MC	0	9	0	13	2017	0.51	0.54	0.5573	0.3831
200896	MC	0	11	0	15	2017	0.62	0.62	0.0371	0.0015
676647	MC	0	15	0	21	2017	0.35	0.34	1.2013	1.3269
424081	MC	0	16	0	23	2017	0.42	0.43	0.9236	0.8536
153851	MC	0	17	0	25	2017	0.50	0.52	0.4955	0.5254
623795	MC	0	35	0	49	2017	0.47	0.47	0.6440	0.6899
363334	MC	0	37	0	52	2017	0.54	0.56	0.3115	0.2710
286520	MC	0	38	0	53	2017	0.40	0.41	0.9221	0.9079
638087	MC	0	39	0	55	2017	0.53	0.54	0.3737	0.2959
260673	MC	0	40	0	56	2017	0.51	0.53	0.4564	0.3634
460561	MC	0	42	0	62	2017	0.44	0.46	0.8342	0.6805
659161	MC	0	43	0	63	2017	0.40	0.40	0.9965	1.0321
175746	MC	0	44	0	64	2017	0.66	0.68	-0.1945	-0.2419
178204	MC	8	23	3	33	2017	0.38	0.45	1.1245	0.7832
656603	MC	12	23	6	32	2017	0.52	0.54	0.4397	0.3912
158793	MC	6	23	8	32	2017	0.41	0.36	0.9657	1.2550
777481	MC	10	23	4	33	2017	0.43	0.46	0.8424	0.7527
432696	MC	11	23	1	33	2017	0.64	0.68	-0.2027	-0.3570
463166	MC	9	23	4	32	2017	0.63	0.59	-0.0996	0.0961
450675	MC	4	24	11	35	2017	0.47	0.47	0.6782	0.7124
417752	MC	2	24	8	34	2017	0.39	0.40	1.0675	1.0235
123943	MC	1	24	3	35	2017	0.70	0.70	-0.4637	-0.5010
727498	MC	7	24	8	73	2017	0.54	0.61	0.3338	0.0388
531234	MC	5	24	12	35	2017	0.49	0.50	0.5762	0.5519
456294	MC	3	24	5	35	2017	0.42	0.43	0.8816	0.8968
358653	MC	2	50	12	32	2017	0.56	0.60	0.2479	0.0733
455681	MC	9	50	5	70	2017	0.63	0.63	-0.0846	-0.0977
275975	MC	11	50	1	71	2017	0.53	0.54	0.3135	0.3635
105488	MC	8	50	7	70	2017	0.43	0.41	0.8870	1.0006
847902	MC	5	50	2	71	2017	0.39	0.42	1.0562	0.9618
656458	MC	6	50	2	70	2017	0.64	0.65	-0.1526	-0.1498
248694	MC	4	50	1	70	2017	0.53	0.45	0.3239	0.8166
730854	MC	10	51	1	72	2017	0.52	0.57	0.3777	0.2400

ID	Type	Form	Item Sequence	Previous Form	Previous Item Sequence	Previous Year	Previous P-Value	P-Value	Previous IRT Difficulty Estimate	IRT Difficulty Estimate
690133	MC	1	51	4	73	2017	0.33	0.30	1.3741	1.4934
201406	MC	3	51	1	73	2017	0.41	0.38	0.8969	1.1576
891936	MC	7	51	2	73	2017	0.52	0.51	0.4254	0.5174
508769	MC	12	51	6	72	2017	0.43	0.41	0.8739	0.9992
464900	SCR	0	26	0	36	2017	0.29	0.27	1.4910	1.6139
870914	SCR	0	53	0	75	2017	0.41	0.43	0.9191	0.8377

APPENDIX P: RELIABILITIES

Grade 3 English Language Arts

	Overall	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	All	45	35	122397	24.85	8.90	0.89	2.92	MC*OE
A	All	19	14	122397	11.10	4.01	0.77	1.92	MC*OE
B	All	17	12	122397	9.11	3.82	0.76	1.87	MC*OE
D	All	9	9	122397	4.63	2.08	0.61	1.30	MC

	Gender	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Male	45	35	62320	24.06	8.86	0.89	2.91	MC*OE
Total	Female	45	35	60077	25.66	8.86	0.89	2.91	MC*OE
A	Male	19	14	62320	10.76	4.06	0.78	1.92	MC*OE
A	Female	19	14	60077	11.46	3.92	0.76	1.92	MC*OE
B	Male	17	12	62320	8.81	3.77	0.76	1.86	MC*OE
B	Female	17	12	60077	9.43	3.84	0.76	1.87	MC*OE
D	Male	9	9	62320	4.49	2.05	0.59	1.31	MC
D	Female	9	9	60077	4.78	2.11	0.62	1.30	MC

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	White	45	35	77946	26.78	8.35	0.88	2.90	MC*OE
Total	African American	45	35	18484	19.39	7.99	0.86	2.96	MC*OE
Total	Hispanic	45	35	14895	20.41	8.26	0.87	2.97	MC*OE
Total	Asian	45	35	4943	28.98	8.66	0.89	2.83	MC*OE
Total	American Indian	45	35	173	23.90	8.95	0.90	2.88	MC*OE
Total	Pacific Islander	45	35	95	24.89	8.22	0.87	2.96	MC*OE
Total	Multiple Ethnicities	45	35	5861	24.13	8.74	0.89	2.93	MC*OE
A	White	19	14	77946	11.93	3.73	0.74	1.91	MC*OE
A	African American	19	14	18484	8.76	3.82	0.75	1.93	MC*OE
A	Hispanic	19	14	14895	9.23	3.88	0.75	1.94	MC*OE
A	Asian	19	14	4943	12.69	3.75	0.74	1.89	MC*OE
A	American Indian	19	14	173	10.71	4.14	0.80	1.87	MC*OE
A	Pacific Islander	19	14	95	11.14	3.61	0.72	1.92	MC*OE
A	Multiple Ethnicities	19	14	5861	10.81	3.98	0.77	1.93	MC*OE
B	White	17	12	77946	9.85	3.64	0.74	1.84	MC*OE
B	African American	17	12	18484	6.99	3.48	0.70	1.89	MC*OE
B	Hispanic	17	12	14895	7.46	3.59	0.72	1.90	MC*OE
B	Asian	17	12	4943	10.79	3.69	0.76	1.81	MC*OE
B	American Indian	17	12	173	8.83	3.82	0.77	1.85	MC*OE
B	Pacific Islander	17	12	95	9.06	3.60	0.71	1.95	MC*OE
B	Multiple Ethnicities	17	12	5861	8.83	3.77	0.75	1.89	MC*OE
D	White	9	9	77946	5.00	2.03	0.59	1.29	MC
D	African American	9	9	18484	3.65	1.83	0.48	1.32	MC
D	Hispanic	9	9	14895	3.71	1.92	0.53	1.32	MC
D	Asian	9	9	4943	5.49	2.16	0.66	1.26	MC
D	American Indian	9	9	173	4.36	2.00	0.55	1.34	MC
D	Pacific Islander	9	9	95	4.69	1.92	0.51	1.35	MC
D	Multiple Ethnicities	9	9	5861	4.49	2.04	0.59	1.30	MC

	IEP	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	45	35	20218	18.13	8.36	0.88	2.93	MC*OE
A	Y	19	14	20218	8.14	4.01	0.77	1.92	MC*OE
B	Y	17	12	20218	6.54	3.53	0.72	1.86	MC*OE
D	Y	9	9	20218	3.45	1.89	0.51	1.33	MC

	EL	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	45	35	5358	17.42	7.14	0.83	2.97	MC*OE
A	Y	19	14	5358	7.95	3.52	0.70	1.94	MC*OE
B	Y	17	12	5358	6.33	3.13	0.64	1.88	MC*OE
D	Y	9	9	5358	3.15	1.72	0.40	1.33	MC

	Low Income	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	45	35	62242	21.49	8.43	0.88	2.96	MC*OE
A	Y	19	14	62242	9.71	3.93	0.76	1.93	MC*OE
B	Y	17	12	62242	7.80	3.65	0.73	1.89	MC*OE
D	Y	9	9	62242	3.98	1.94	0.54	1.32	MC

Grade 4 English Language Arts

	Overall	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	All	63	39	126223	34.17	11.69	0.87	4.23	MC*OE
A	All	17	13	126223	9.79	3.96	0.77	1.90	MC*OE
B	All	21	16	126223	12.55	4.49	0.77	2.16	MC*OE
D	All	9	9	126223	5.32	2.20	0.66	1.28	MC
E	All	16	1	126223	6.51	3.16			OE

	Gender	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Male	63	39	64521	32.74	11.65	0.87	4.16	MC*OE
Total	Female	63	39	61702	35.66	11.56	0.86	4.25	MC*OE
A	Male	17	13	64521	9.47	3.97	0.77	1.91	MC*OE
A	Female	17	13	61702	10.13	3.92	0.77	1.88	MC*OE
B	Male	21	16	64521	12.16	4.52	0.77	2.16	MC*OE
B	Female	21	16	61702	12.95	4.42	0.76	2.15	MC*OE
D	Male	9	9	64521	5.06	2.20	0.65	1.30	MC
D	Female	9	9	61702	5.59	2.17	0.66	1.26	MC
E	Male	16	1	64521	6.05	3.06			OE
E	Female	16	1	61702	6.99	3.20			OE

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	White	63	39	81287	36.78	10.85	0.85	4.16	MC*OE
Total	African American	63	39	18881	26.57	10.52	0.84	4.18	MC*OE
Total	Hispanic	63	39	15022	28.41	11.14	0.86	4.20	MC*OE
Total	Asian	63	39	4874	39.48	11.11	0.86	4.23	MC*OE
Total	American Indian	63	39	186	32.01	11.32	0.85	4.32	MC*OE
Total	Pacific Islander	63	39	94	35.29	12.77	0.88	4.43	MC*OE
Total	Multiple Ethnicities	63	39	5879	32.85	11.63	0.87	4.25	MC*OE
A	White	17	13	81287	10.56	3.77	0.75	1.87	MC*OE
A	African American	17	13	18881	7.51	3.62	0.71	1.95	MC*OE
A	Hispanic	17	13	15022	8.13	3.80	0.74	1.94	MC*OE
A	Asian	17	13	4874	11.24	3.69	0.76	1.82	MC*OE
A	American Indian	17	13	186	9.06	3.94	0.76	1.91	MC*OE

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
A	Pacific Islander	17	13	94	10.49	4.10	0.79	1.86	MC*OE
A	Multiple Ethnicities	17	13	5879	9.47	3.94	0.76	1.91	MC*OE
B	White	21	16	81287	13.49	4.20	0.74	2.13	MC*OE
B	African American	21	16	18881	9.84	4.18	0.73	2.18	MC*OE
B	Hispanic	21	16	15022	10.49	4.33	0.74	2.19	MC*OE
B	Asian	21	16	4874	14.20	4.22	0.76	2.07	MC*OE
B	American Indian	21	16	186	11.74	4.28	0.74	2.18	MC*OE
B	Pacific Islander	21	16	94	12.70	4.89	0.80	2.19	MC*OE
B	Multiple Ethnicities	21	16	5879	12.03	4.48	0.77	2.17	MC*OE
D	White	9	9	81287	5.72	2.09	0.64	1.26	MC
D	African American	9	9	18881	4.16	2.04	0.57	1.34	MC
D	Hispanic	9	9	15022	4.40	2.14	0.62	1.32	MC
D	Asian	9	9	4874	6.29	2.05	0.67	1.19	MC
D	American Indian	9	9	186	4.95	2.24	0.67	1.29	MC
D	Pacific Islander	9	9	94	5.33	2.21	0.66	1.28	MC
D	Multiple Ethnicities	9	9	5879	5.10	2.21	0.66	1.29	MC
E	White	16	1	81287	7.00	3.05			OE
E	African American	16	1	18881	5.06	2.97			OE
E	Hispanic	16	1	15022	5.38	3.05			OE
E	Asian	16	1	4874	7.75	3.27			OE
E	American Indian	16	1	186	6.26	3.19			OE
E	Pacific Islander	16	1	94	6.77	3.52			OE
E	Multiple Ethnicities	16	1	5879	6.25	3.18			OE

	IEP	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	63	39	21849	24.54	10.65	0.85	4.08	MC*OE
A	Y	17	13	21849	7.02	3.63	0.72	1.92	MC*OE
B	Y	21	16	21849	9.22	4.24	0.74	2.16	MC*OE
D	Y	9	9	21849	3.75	2.06	0.59	1.33	MC
E	Y	16	1	21849	4.56	2.88			OE

	EL	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	63	39	5102	23.33	9.48	0.80	4.22	MC*OE
A	Y	17	13	5102	6.47	3.13	0.61	1.95	MC*OE
B	Y	21	16	5102	8.59	3.74	0.67	2.16	MC*OE
D	Y	9	9	5102	3.62	1.92	0.51	1.34	MC
E	Y	16	1	5102	4.65	3.02			OE

	Low Income	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	63	39	64011	29.56	11.08	0.86	4.20	MC*OE
A	Y	17	13	64011	8.44	3.81	0.74	1.94	MC*OE
B	Y	21	16	64011	10.92	4.34	0.74	2.19	MC*OE
D	Y	9	9	64011	4.59	2.13	0.62	1.32	MC
E	Y	16	1	64011	5.61	3.02			OE

Grade 5 English Language Arts

	Overall	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	All	63	39	126761	32.49	11.32	0.86	4.24	MC*OE
A	All	19	14	126761	10.79	3.82	0.73	1.99	MC*OE
B	All	19	15	126761	9.99	4.30	0.76	2.09	MC*OE
D	All	9	9	126761	5.01	2.10	0.58	1.36	MC
E	All	16	1	126761	6.70	3.14			OE

	Gender	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Male	63	39	64661	31.29	11.38	0.87	4.18	MC*OE
Total	Female	63	39	62100	33.73	11.12	0.85	4.24	MC*OE
A	Male	19	14	64661	10.43	3.89	0.74	2.00	MC*OE
A	Female	19	14	62100	11.17	3.70	0.71	1.98	MC*OE
B	Male	19	15	64661	9.83	4.35	0.77	2.08	MC*OE
B	Female	19	15	62100	10.15	4.24	0.76	2.09	MC*OE
D	Male	9	9	64661	4.83	2.11	0.58	1.37	MC
D	Female	9	9	62100	5.20	2.08	0.59	1.34	MC
E	Male	16	1	64661	6.20	3.05			OE
E	Female	16	1	62100	7.22	3.15			OE

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	White	63	39	82075	34.92	10.63	0.85	4.16	MC*OE
Total	African American	63	39	18690	25.08	9.75	0.82	4.16	MC*OE
Total	Hispanic	63	39	15029	26.98	10.38	0.83	4.23	MC*OE
Total	Asian	63	39	5040	38.61	11.33	0.86	4.24	MC*OE
Total	American Indian	63	39	191	30.76	11.14	0.84	4.41	MC*OE
Total	Pacific Islander	63	39	114	32.45	11.36	0.85	4.36	MC*OE
Total	Multiple Ethnicities	63	39	5622	30.95	11.33	0.86	4.28	MC*OE
A	White	19	14	82075	11.53	3.61	0.70	1.97	MC*OE
A	African American	19	14	18690	8.54	3.54	0.68	2.00	MC*OE
A	Hispanic	19	14	15029	9.20	3.62	0.70	2.00	MC*OE
A	Asian	19	14	5040	12.42	3.67	0.71	1.97	MC*OE
A	American Indian	19	14	191	10.26	3.69	0.69	2.04	MC*OE

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
A	Pacific Islander	19	14	114	10.54	3.57	0.67	2.04	MC*OE
A	Multiple Ethnicities	19	14	5622	10.34	3.83	0.73	2.00	MC*OE
B	White	19	15	82075	10.82	4.17	0.75	2.08	MC*OE
B	African American	19	15	18690	7.46	3.58	0.67	2.04	MC*OE
B	Hispanic	19	15	15029	8.09	3.84	0.71	2.07	MC*OE
B	Asian	19	15	5040	12.07	4.31	0.78	2.02	MC*OE
B	American Indian	19	15	191	9.41	4.19	0.75	2.09	MC*OE
B	Pacific Islander	19	15	114	10.01	4.43	0.77	2.11	MC*OE
B	Multiple Ethnicities	19	15	5622	9.41	4.26	0.76	2.08	MC*OE
D	White	9	9	82075	5.36	2.02	0.56	1.34	MC
D	African American	9	9	18690	3.92	1.93	0.48	1.39	MC
D	Hispanic	9	9	15029	4.16	2.00	0.52	1.39	MC
D	Asian	9	9	5040	6.00	2.07	0.63	1.26	MC
D	American Indian	9	9	191	4.73	2.04	0.54	1.39	MC
D	Pacific Islander	9	9	114	5.05	2.28	0.66	1.32	MC
D	Multiple Ethnicities	9	9	5622	4.84	2.09	0.57	1.37	MC
E	White	16	1	82075	7.21	3.00			OE
E	African American	16	1	18690	5.15	2.93			OE
E	Hispanic	16	1	15029	5.52	3.06			OE
E	Asian	16	1	5040	8.13	3.26			OE
E	American Indian	16	1	191	6.37	3.36			OE
E	Pacific Islander	16	1	114	6.84	3.27			OE
E	Multiple Ethnicities	16	1	5622	6.37	3.19			OE

	IEP	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	63	39	21983	22.88	9.78	0.83	4.08	MC*OE
A	Y	19	14	21983	7.93	3.52	0.68	1.98	MC*OE
B	Y	19	15	21983	6.92	3.63	0.69	2.02	MC*OE
D	Y	9	9	21983	3.60	1.93	0.49	1.38	MC
E	Y	16	1	21983	4.43	2.86			OE

	EL	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	63	39	4178	20.25	7.57	0.70	4.11	MC*OE
A	Y	19	14	4178	7.09	2.82	0.51	1.97	MC*OE
B	Y	19	15	4178	5.97	2.69	0.46	1.97	MC*OE
D	Y	9	9	4178	3.20	1.71	0.36	1.37	MC
E	Y	16	1	4178	3.99	2.86			OE

	Low Income	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	63	39	62476	27.89	10.42	0.84	4.20	MC*OE
A	Y	19	14	62476	9.44	3.66	0.70	2.01	MC*OE
B	Y	19	15	62476	8.38	3.91	0.72	2.08	MC*OE
D	Y	9	9	62476	4.34	2.02	0.53	1.39	MC
E	Y	16	1	62476	5.72	3.00			OE

Grade 6 English Language Arts

	Overall	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	All	63	39	125341	34.49	11.64	0.87	4.15	MC*OE
A	All	18	14	125341	10.57	4.09	0.75	2.04	MC*OE
B	All	20	15	125341	11.76	4.58	0.79	2.08	MC*OE
D	All	9	9	125341	5.53	2.02	0.59	1.30	MC
E	All	16	1	125341	6.62	3.00			OE

	Gender	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Male	63	39	63953	32.65	11.56	0.88	4.07	MC*OE
Total	Female	63	39	61388	36.40	11.42	0.87	4.15	MC*OE
A	Male	18	14	63953	10.12	4.15	0.75	2.06	MC*OE
A	Female	18	14	61388	11.04	3.98	0.74	2.02	MC*OE
B	Male	20	15	63953	11.19	4.58	0.79	2.11	MC*OE
B	Female	20	15	61388	12.35	4.49	0.79	2.05	MC*OE
D	Male	9	9	63953	5.33	2.03	0.58	1.31	MC
D	Female	9	9	61388	5.75	1.99	0.59	1.28	MC
E	Male	16	1	63953	6.01	2.84			OE
E	Female	16	1	61388	7.26	3.02			OE

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	White	63	39	82724	36.87	10.90	0.86	4.11	MC*OE
Total	African American	63	39	17975	26.95	10.39	0.85	4.09	MC*OE
Total	Hispanic	63	39	14405	28.68	10.99	0.86	4.14	MC*OE
Total	Asian	63	39	4910	40.60	11.10	0.86	4.11	MC*OE
Total	American Indian	63	39	168	31.38	11.62	0.87	4.22	MC*OE
Total	Pacific Islander	63	39	105	37.37	9.78	0.82	4.09	MC*OE
Total	Multiple Ethnicities	63	39	5054	32.94	11.47	0.87	4.16	MC*OE
A	White	18	14	82724	11.32	3.88	0.73	2.03	MC*OE
A	African American	18	14	17975	8.25	3.79	0.71	2.05	MC*OE
A	Hispanic	18	14	14405	8.72	3.94	0.72	2.07	MC*OE
A	Asian	18	14	4910	12.33	3.86	0.74	1.96	MC*OE
A	American Indian	18	14	168	9.61	4.04	0.74	2.06	MC*OE

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
A	Pacific Islander	18	14	105	11.43	3.55	0.66	2.07	MC*OE
A	Multiple Ethnicities	18	14	5054	10.12	4.04	0.74	2.06	MC*OE
B	White	20	15	82724	12.63	4.34	0.78	2.05	MC*OE
B	African American	20	15	17975	8.97	4.12	0.73	2.13	MC*OE
B	Hispanic	20	15	14405	9.67	4.31	0.75	2.14	MC*OE
B	Asian	20	15	4910	13.93	4.23	0.79	1.96	MC*OE
B	American Indian	20	15	168	10.29	4.82	0.81	2.11	MC*OE
B	Pacific Islander	20	15	105	12.68	4.11	0.74	2.10	MC*OE
B	Multiple Ethnicities	20	15	5054	11.16	4.55	0.79	2.10	MC*OE
D	White	9	9	82724	5.89	1.91	0.56	1.27	MC
D	African American	9	9	17975	4.43	1.95	0.51	1.36	MC
D	Hispanic	9	9	14405	4.68	1.99	0.54	1.34	MC
D	Asian	9	9	4910	6.37	1.89	0.58	1.22	MC
D	American Indian	9	9	168	5.22	1.94	0.52	1.34	MC
D	Pacific Islander	9	9	105	6.03	1.70	0.43	1.28	MC
D	Multiple Ethnicities	9	9	5054	5.30	2.00	0.57	1.32	MC
E	White	16	1	82724	7.02	2.92			OE
E	African American	16	1	17975	5.30	2.77			OE
E	Hispanic	16	1	14405	5.61	2.88			OE
E	Asian	16	1	4910	7.98	3.10			OE
E	American Indian	16	1	168	6.26	2.99			OE
E	Pacific Islander	16	1	105	7.24	2.83			OE
E	Multiple Ethnicities	16	1	5054	6.36	2.98			OE

	IEP	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	63	39	21302	23.80	9.63	0.83	3.94	MC*OE
A	Y	18	14	21302	7.32	3.58	0.68	2.03	MC*OE
B	Y	20	15	21302	8.01	3.86	0.70	2.10	MC*OE
D	Y	9	9	21302	4.00	1.91	0.49	1.37	MC
E	Y	16	1	21302	4.47	2.53			OE

	EL	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	63	39	3763	20.63	7.75	0.73	4.02	MC*OE
A	Y	18	14	3763	6.17	2.87	0.53	1.98	MC*OE
B	Y	20	15	3763	6.95	3.05	0.54	2.06	MC*OE
D	Y	9	9	3763	3.48	1.72	0.37	1.36	MC
E	Y	16	1	3763	4.04	2.64			OE

	Low Income	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	63	39	59959	29.78	11.00	0.86	4.12	MC*OE
A	Y	18	14	59959	9.12	3.95	0.73	2.07	MC*OE
B	Y	20	15	59959	10.06	4.38	0.76	2.13	MC*OE
D	Y	9	9	59959	4.86	1.99	0.55	1.34	MC
E	Y	16	1	59959	5.75	2.83			OE

Grade 7 English Language Arts

	Overall	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	All	63	39	124226	34.95	11.46	0.85	4.45	MC*OE
A	All	18	13	124226	10.65	3.74	0.70	2.04	MC*OE
B	All	20	16	124226	11.65	4.29	0.79	1.97	MC*OE
D	All	9	9	124226	4.93	2.07	0.59	1.33	MC
E	All	16	1	124226	7.73	3.49			OE

	Gender	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Male	63	39	63646	32.78	11.45	0.86	4.35	MC*OE
Total	Female	63	39	60580	37.23	11.02	0.84	4.40	MC*OE
A	Male	18	13	63646	10.20	3.81	0.71	2.05	MC*OE
A	Female	18	13	60580	11.12	3.59	0.69	2.01	MC*OE
B	Male	20	16	63646	11.01	4.38	0.79	2.00	MC*OE
B	Female	20	16	60580	12.32	4.09	0.77	1.94	MC*OE
D	Male	9	9	63646	4.70	2.06	0.58	1.34	MC
D	Female	9	9	60580	5.16	2.06	0.59	1.32	MC
E	Male	16	1	63646	6.87	3.32			OE
E	Female	16	1	60580	8.62	3.44			OE

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	White	63	39	82918	37.07	10.74	0.84	4.36	MC*OE
Total	African American	63	39	17710	28.01	10.50	0.82	4.41	MC*OE
Total	Hispanic	63	39	13923	29.22	10.94	0.83	4.44	MC*OE
Total	Asian	63	39	4897	41.95	10.79	0.84	4.38	MC*OE
Total	American Indian	63	39	196	33.84	11.12	0.83	4.58	MC*OE
Total	Pacific Islander	63	39	76	36.47	11.44	0.85	4.46	MC*OE
Total	Multiple Ethnicities	63	39	4506	33.32	11.52	0.85	4.53	MC*OE
A	White	18	13	82918	11.32	3.51	0.67	2.01	MC*OE
A	African American	18	13	17710	8.55	3.57	0.66	2.07	MC*OE
A	Hispanic	18	13	13923	8.89	3.66	0.68	2.06	MC*OE
A	Asian	18	13	4897	12.34	3.45	0.69	1.92	MC*OE
A	American Indian	18	13	196	10.54	3.55	0.66	2.07	MC*OE

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
A	Pacific Islander	18	13	76	10.89	3.60	0.67	2.07	MC*OE
A	Multiple Ethnicities	18	13	4506	10.21	3.81	0.71	2.04	MC*OE
B	White	20	16	82918	12.32	4.09	0.77	1.95	MC*OE
B	African American	20	16	17710	9.36	4.07	0.75	2.04	MC*OE
B	Hispanic	20	16	13923	9.85	4.14	0.76	2.03	MC*OE
B	Asian	20	16	4897	14.16	3.88	0.79	1.80	MC*OE
B	American Indian	20	16	196	11.29	4.12	0.76	2.00	MC*OE
B	Pacific Islander	20	16	76	12.42	4.23	0.79	1.92	MC*OE
B	Multiple Ethnicities	20	16	4506	11.15	4.29	0.78	2.00	MC*OE
D	White	9	9	82918	5.26	2.02	0.57	1.32	MC
D	African American	9	9	17710	3.88	1.84	0.45	1.36	MC
D	Hispanic	9	9	13923	4.09	1.94	0.51	1.36	MC
D	Asian	9	9	4897	5.77	2.02	0.60	1.28	MC
D	American Indian	9	9	196	4.77	2.09	0.59	1.33	MC
D	Pacific Islander	9	9	76	5.26	2.13	0.61	1.33	MC
D	Multiple Ethnicities	9	9	4506	4.62	2.07	0.59	1.33	MC
E	White	16	1	82918	8.18	3.36			OE
E	African American	16	1	17710	6.21	3.32			OE
E	Hispanic	16	1	13923	6.40	3.41			OE
E	Asian	16	1	4897	9.69	3.54			OE
E	American Indian	16	1	196	7.24	3.58			OE
E	Pacific Islander	16	1	76	7.89	3.52			OE
E	Multiple Ethnicities	16	1	4506	7.34	3.56			OE

	IEP	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	63	39	20779	24.10	9.33	0.80	4.15	MC*OE
A	Y	18	13	20779	7.58	3.42	0.64	2.04	MC*OE
B	Y	20	16	20779	8.06	3.68	0.69	2.06	MC*OE
D	Y	9	9	20779	3.43	1.77	0.41	1.36	MC
E	Y	16	1	20779	5.03	2.88			OE

	EL	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	63	39	3457	21.49	8.08	0.71	4.31	MC*OE
A	Y	18	13	3457	6.47	2.80	0.50	1.98	MC*OE
B	Y	20	16	3457	7.35	3.15	0.58	2.05	MC*OE
D	Y	9	9	3457	3.10	1.57	0.25	1.36	MC
E	Y	16	1	3457	4.57	3.13			OE

	Low Income	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	63	39	58092	30.46	10.92	0.84	4.42	MC*OE
A	Y	18	13	58092	9.37	3.69	0.68	2.07	MC*OE
B	Y	20	16	58092	10.13	4.16	0.76	2.03	MC*OE
D	Y	9	9	58092	4.26	1.96	0.52	1.36	MC
E	Y	16	1	58092	6.69	3.36			OE

Grade 8 English Language Arts

	Overall	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	All	63	39	124907	35.62	11.65	0.84	4.62	MC*OE
A	All	19	14	124907	11.15	4.19	0.75	2.11	MC*OE
B	All	19	15	124907	11.40	3.92	0.72	2.09	MC*OE
D	All	9	9	124907	5.27	2.15	0.64	1.28	MC
E	All	16	1	124907	7.79	3.61			OE

	Gender	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Male	63	39	64249	33.24	11.65	0.85	4.57	MC*OE
Total	Female	63	39	60658	38.13	11.10	0.83	4.52	MC*OE
A	Male	19	14	64249	10.43	4.21	0.75	2.11	MC*OE
A	Female	19	14	60658	11.93	4.02	0.73	2.10	MC*OE
B	Male	19	15	64249	10.93	4.03	0.73	2.10	MC*OE
B	Female	19	15	60658	11.90	3.73	0.69	2.06	MC*OE
D	Male	9	9	64249	4.93	2.12	0.62	1.30	MC
D	Female	9	9	60658	5.63	2.13	0.65	1.26	MC
E	Male	16	1	64249	6.95	3.52			OE
E	Female	16	1	60658	8.67	3.48			OE

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	White	63	39	84716	37.75	10.90	0.83	4.52	MC*OE
Total	African American	63	39	17271	28.51	10.83	0.82	4.60	MC*OE
Total	Hispanic	63	39	13547	29.45	11.26	0.83	4.68	MC*OE
Total	Asian	63	39	5092	42.04	10.35	0.82	4.35	MC*OE
Total	American Indian	63	39	166	33.48	12.17	0.86	4.51	MC*OE
Total	Pacific Islander	63	39	94	37.02	10.63	0.81	4.65	MC*OE
Total	Multiple Ethnicities	63	39	4021	33.86	11.82	0.84	4.68	MC*OE
A	White	19	14	84716	11.78	4.00	0.72	2.10	MC*OE
A	African American	19	14	17271	9.11	4.09	0.74	2.10	MC*OE
A	Hispanic	19	14	13547	9.30	4.06	0.73	2.12	MC*OE
A	Asian	19	14	5092	13.02	3.82	0.73	2.00	MC*OE
A	American Indian	19	14	166	10.46	4.41	0.76	2.14	MC*OE
A	Pacific Islander	19	14	94	11.68	3.79	0.68	2.14	MC*OE
A	Multiple Ethnicities	19	14	4021	10.70	4.25	0.75	2.11	MC*OE
B	White	19	15	84716	12.12	3.70	0.69	2.07	MC*OE
B	African American	19	15	17271	9.09	3.69	0.67	2.14	MC*OE
B	Hispanic	19	15	13547	9.47	3.79	0.69	2.13	MC*OE
B	Asian	19	15	5092	12.91	3.45	0.67	1.99	MC*OE
B	American Indian	19	15	166	10.80	3.91	0.70	2.15	MC*OE
B	Pacific Islander	19	15	94	11.54	3.48	0.63	2.13	MC*OE
B	Multiple Ethnicities	19	15	4021	10.83	3.96	0.72	2.10	MC*OE
D	White	9	9	84716	5.61	2.09	0.63	1.27	MC
D	African American	9	9	17271	4.16	1.91	0.51	1.34	MC
D	Hispanic	9	9	13547	4.29	2.01	0.56	1.33	MC
D	Asian	9	9	5092	6.31	2.04	0.66	1.19	MC
D	American Indian	9	9	166	4.84	2.24	0.67	1.28	MC
D	Pacific Islander	9	9	94	5.54	2.27	0.71	1.23	MC
Total	Y	63	39	20592	24.35	9.47	0.78	4.40	MC*OE

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
A	Y	19	14	20592	7.61	3.55	0.66	2.06	MC*OE
B	Y	19	15	20592	8.06	3.54	0.65	2.10	MC*OE
D	Y	9	9	20592	3.62	1.79	0.43	1.35	MC
E	Y	16	1	20592	5.06	3.17			OE
E	American Indian	16	1	166	7.37	3.44			OE
E	Pacific Islander	16	1	94	8.26	3.56			OE
E	Multiple Ethnicities	16	1	4021	7.34	3.68			OE

	IEP	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	63	39	20592	24.35	9.47	0.78	4.40	MC*OE
A	Y	19	14	20592	7.61	3.55	0.66	2.06	MC*OE
B	Y	19	15	20592	8.06	3.54	0.65	2.10	MC*OE
D	Y	9	9	20592	3.62	1.79	0.43	1.35	MC
E	Y	16	1	20592	5.06	3.17			OE

	EL	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	63	39	3289	21.32	7.94	0.67	4.55	MC*OE
A	Y	19	14	3289	6.52	2.79	0.49	2.00	MC*OE
B	Y	19	15	3289	6.86	2.95	0.52	2.05	MC*OE
D	Y	9	9	3289	3.18	1.57	0.27	1.34	MC
E	Y	16	1	3289	4.75	3.41			OE

	Low Income	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	63	39	56663	30.94	11.25	0.83	4.64	MC*OE
A	Y	19	14	56663	9.76	4.14	0.74	2.12	MC*OE
B	Y	19	15	56663	9.93	3.83	0.69	2.13	MC*OE
D	Y	9	9	56663	4.53	2.03	0.57	1.33	MC
E	Y	16	1	56663	6.72	3.58			OE

Grade 3 Mathematics

	Overall	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	All	52	43	122563	26.98	11.70	0.92	3.27	MC*OE
A	All	16	13	122563	7.15	4.05	0.79	1.84	MC*OE
B	All	15	15	122563	9.09	3.93	0.83	1.63	MC
C	All	7	4	122563	3.57	1.79	0.53	1.23	MC*OE
D	All	14	11	122563	7.17	3.23	0.71	1.75	MC*OE

	Gender	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Male	52	43	62449	27.06	11.83	0.92	3.26	MC*OE
Total	Female	52	43	60114	26.90	11.55	0.92	3.27	MC*OE
A	Male	16	13	62449	7.25	4.07	0.80	1.84	MC*OE
A	Female	16	13	60114	7.05	4.03	0.79	1.84	MC*OE
B	Male	15	15	62449	9.12	3.97	0.83	1.62	MC
B	Female	15	15	60114	9.06	3.89	0.82	1.64	MC
C	Male	7	4	62449	3.53	1.82	0.54	1.23	MC*OE
C	Female	7	4	60114	3.61	1.76	0.51	1.24	MC*OE
D	Male	14	11	62449	7.16	3.26	0.71	1.74	MC*OE
D	Female	14	11	60114	7.19	3.20	0.70	1.76	MC*OE

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	White	52	43	77975	29.74	11.03	0.91	3.24	MC*OE
Total	African American	52	43	18567	18.88	9.49	0.89	3.20	MC*OE
Total	Hispanic	52	43	14935	20.89	10.28	0.90	3.23	MC*OE
Total	Asian	52	43	4950	34.00	11.11	0.92	3.16	MC*OE
Total	American Indian	52	43	172	25.84	12.21	0.93	3.29	MC*OE
Total	Pacific Islander	52	43	95	27.88	10.76	0.91	3.19	MC*OE
Total	Multiple Ethnicities	52	43	5869	25.51	11.41	0.92	3.27	MC*OE
A	White	16	13	77975	8.07	3.91	0.77	1.86	MC*OE
A	African American	16	13	18567	4.49	3.11	0.70	1.70	MC*OE
A	Hispanic	16	13	14935	5.11	3.42	0.74	1.74	MC*OE
A	Asian	16	13	4950	9.45	4.12	0.80	1.85	MC*OE
A	American Indian	16	13	172	6.87	4.13	0.80	1.85	MC*OE

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
A	Pacific Islander	16	13	95	7.22	3.84	0.78	1.81	MC*OE
A	Multiple Ethnicities	16	13	5869	6.66	3.95	0.79	1.82	MC*OE
B	White	15	15	77975	9.85	3.70	0.81	1.60	MC
B	African American	15	15	18567	6.83	3.63	0.77	1.73	MC
B	Hispanic	15	15	14935	7.30	3.80	0.80	1.71	MC
B	Asian	15	15	4950	11.46	3.31	0.82	1.42	MC
B	American Indian	15	15	172	8.60	4.14	0.85	1.62	MC
B	Pacific Islander	15	15	95	9.89	3.67	0.81	1.59	MC
B	Multiple Ethnicities	15	15	5869	8.72	3.92	0.82	1.66	MC
C	White	7	4	77975	3.93	1.69	0.48	1.22	MC*OE
C	African American	7	4	18567	2.50	1.63	0.49	1.16	MC*OE
C	Hispanic	7	4	14935	2.84	1.71	0.51	1.20	MC*OE
C	Asian	7	4	4950	4.35	1.75	0.51	1.23	MC*OE
C	American Indian	7	4	172	3.47	1.80	0.48	1.30	MC*OE
C	Pacific Islander	7	4	95	3.64	1.60	0.46	1.17	MC*OE
C	Multiple Ethnicities	7	4	5869	3.39	1.77	0.52	1.22	MC*OE
D	White	14	11	77975	7.90	3.09	0.69	1.73	MC*OE
D	African American	14	11	18567	5.06	2.65	0.57	1.74	MC*OE
D	Hispanic	14	11	14935	5.65	2.83	0.63	1.73	MC*OE
D	Asian	14	11	4950	8.73	3.19	0.70	1.74	MC*OE
D	American Indian	14	11	172	6.90	3.41	0.73	1.77	MC*OE
D	Pacific Islander	14	11	95	7.13	2.86	0.62	1.75	MC*OE
D	Multiple Ethnicities	14	11	5869	6.74	3.13	0.69	1.76	MC*OE

	IEP	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	52	43	20271	19.48	10.61	0.91	3.21	MC*OE
A	Y	16	13	20271	4.94	3.54	0.76	1.73	MC*OE
B	Y	15	15	20271	6.55	3.82	0.80	1.70	MC
C	Y	7	4	20271	2.57	1.73	0.53	1.19	MC*OE
D	Y	14	11	20271	5.42	2.93	0.65	1.72	MC*OE

	EL	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	52	43	5396	18.87	9.47	0.89	3.21	MC*OE
A	Y	16	13	5396	4.52	3.14	0.70	1.70	MC*OE
B	Y	15	15	5396	6.75	3.60	0.77	1.73	MC
C	Y	7	4	5396	2.45	1.63	0.48	1.17	MC*OE
D	Y	14	11	5396	5.15	2.66	0.58	1.73	MC*OE

	Low Income	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	52	43	62367	22.30	10.66	0.91	3.25	MC*OE
A	Y	16	13	62367	5.61	3.59	0.76	1.77	MC*OE
B	Y	15	15	62367	7.71	3.84	0.80	1.70	MC
C	Y	7	4	62367	2.99	1.72	0.51	1.21	MC*OE
D	Y	14	11	62367	5.98	2.95	0.65	1.74	MC*OE

Grade 4 Mathematics

	Overall	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	All	52	43	126481	25.82	11.69	0.92	3.35	MC*OE
A	All	21	18	126481	9.72	4.85	0.82	2.06	MC*OE
B	All	13	10	126481	6.94	3.35	0.72	1.76	MC*OE
C	All	8	5	126481	3.78	2.07	0.53	1.42	MC*OE
D	All	10	10	126481	5.38	2.72	0.75	1.37	MC

	Gender	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Male	52	43	64683	26.06	11.90	0.92	3.35	MC*OE
Total	Female	52	43	61798	25.58	11.46	0.91	3.34	MC*OE
A	Male	21	18	64683	9.90	4.95	0.83	2.05	MC*OE
A	Female	21	18	61798	9.54	4.74	0.81	2.07	MC*OE
B	Male	13	10	64683	7.02	3.38	0.73	1.77	MC*OE
B	Female	13	10	61798	6.85	3.32	0.72	1.75	MC*OE
C	Male	8	5	64683	3.77	2.10	0.54	1.42	MC*OE
C	Female	8	5	61798	3.78	2.05	0.52	1.41	MC*OE
D	Male	10	10	64683	5.36	2.77	0.76	1.36	MC
D	Female	10	10	61798	5.41	2.67	0.74	1.37	MC

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	White	52	43	81363	28.56	11.11	0.91	3.31	MC*OE
Total	African American	52	43	18996	17.54	8.97	0.87	3.27	MC*OE
Total	Hispanic	52	43	15076	19.85	9.99	0.89	3.33	MC*OE
Total	Asian	52	43	4882	33.23	11.71	0.92	3.21	MC*OE
Total	American Indian	52	43	189	22.42	11.28	0.91	3.29	MC*OE
Total	Pacific Islander	52	43	94	26.37	12.54	0.93	3.38	MC*OE
Total	Multiple Ethnicities	52	43	5881	23.96	11.37	0.91	3.36	MC*OE
A	White	21	18	81363	10.74	4.71	0.81	2.06	MC*OE
A	African American	21	18	18996	6.65	3.73	0.71	1.99	MC*OE
A	Hispanic	21	18	15076	7.41	4.11	0.76	2.02	MC*OE
A	Asian	21	18	4882	12.83	4.99	0.83	2.04	MC*OE
A	American Indian	21	18	189	8.41	4.55	0.79	2.07	MC*OE
A	Pacific Islander	21	18	94	10.11	5.22	0.83	2.13	MC*OE

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
A	Multiple Ethnicities	21	18	5881	8.98	4.69	0.81	2.06	MC*OE
B	White	13	10	81363	7.63	3.17	0.71	1.71	MC*OE
B	African American	13	10	18996	4.82	2.93	0.64	1.77	MC*OE
B	Hispanic	13	10	15076	5.41	3.12	0.67	1.80	MC*OE
B	Asian	13	10	4882	8.86	3.17	0.74	1.62	MC*OE
B	American Indian	13	10	189	6.21	3.32	0.75	1.67	MC*OE
B	Pacific Islander	13	10	94	7.01	3.58	0.75	1.80	MC*OE
B	Multiple Ethnicities	13	10	5881	6.51	3.34	0.72	1.77	MC*OE
C	White	8	5	81363	4.22	2.01	0.52	1.40	MC*OE
C	African American	8	5	18996	2.49	1.66	0.38	1.30	MC*OE
C	Hispanic	8	5	15076	2.85	1.80	0.44	1.35	MC*OE
C	Asian	8	5	4882	4.76	2.13	0.56	1.41	MC*OE
C	American Indian	8	5	189	3.13	1.94	0.49	1.39	MC*OE
C	Pacific Islander	8	5	94	3.78	2.19	0.62	1.35	MC*OE
C	Multiple Ethnicities	8	5	5881	3.51	2.03	0.52	1.40	MC*OE
D	White	10	10	81363	5.98	2.61	0.73	1.36	MC
D	African American	10	10	18996	3.58	2.23	0.61	1.39	MC
D	Hispanic	10	10	15076	4.18	2.44	0.67	1.40	MC
D	Asian	10	10	4882	6.77	2.59	0.76	1.26	MC
D	American Indian	10	10	189	4.68	2.67	0.73	1.38	MC
D	Pacific Islander	10	10	94	5.48	2.73	0.75	1.37	MC
D	Multiple Ethnicities	10	10	5881	4.97	2.68	0.73	1.38	MC

	IEP	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	52	43	21913	18.08	10.11	0.89	3.29	MC*OE
A	Y	21	18	21913	6.75	4.12	0.77	1.98	MC*OE
B	Y	13	10	21913	4.80	3.12	0.67	1.78	MC*OE
C	Y	8	5	21913	2.70	1.85	0.47	1.34	MC*OE
D	Y	10	10	21913	3.83	2.44	0.68	1.39	MC

	EL	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	52	43	5114	17.07	8.70	0.86	3.23	MC*OE
A	Y	21	18	5114	6.44	3.61	0.71	1.95	MC*OE
B	Y	13	10	5114	4.57	2.82	0.61	1.76	MC*OE
C	Y	8	5	5114	2.36	1.61	0.38	1.27	MC*OE
D	Y	10	10	5114	3.70	2.25	0.61	1.40	MC

	Low Income	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	52	43	64202	21.07	10.36	0.90	3.35	MC*OE
A	Y	21	18	64202	7.89	4.28	0.77	2.04	MC*OE
B	Y	13	10	64202	5.73	3.17	0.68	1.79	MC*OE
C	Y	8	5	64202	3.05	1.86	0.46	1.37	MC*OE
D	Y	10	10	64202	4.40	2.51	0.69	1.40	MC

Grade 5 Mathematics

	Overall	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	All	52	43	126868	26.48	11.80	0.92	3.29	MC*OE
A	All	28	22	126868	14.52	6.66	0.87	2.45	MC*OE
B	All	7	7	126868	3.86	1.73	0.55	1.17	MC
C	All	8	5	126868	3.75	2.07	0.57	1.36	MC*OE
D	All	9	9	126868	4.35	2.55	0.75	1.27	MC

	Gender	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Male	52	43	64739	26.41	12.08	0.93	3.28	MC*OE
Total	Female	52	43	62129	26.55	11.50	0.92	3.29	MC*OE
A	Male	28	22	64739	14.39	6.83	0.87	2.44	MC*OE
A	Female	28	22	62129	14.65	6.47	0.86	2.45	MC*OE
B	Male	7	7	64739	3.89	1.78	0.57	1.16	MC
B	Female	7	7	62129	3.83	1.68	0.52	1.17	MC
C	Male	8	5	64739	3.71	2.08	0.58	1.35	MC*OE
C	Female	8	5	62129	3.80	2.05	0.56	1.36	MC*OE
D	Male	9	9	64739	4.42	2.58	0.76	1.26	MC
D	Female	9	9	62129	4.27	2.52	0.75	1.27	MC

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	White	52	43	82129	29.07	11.30	0.92	3.27	MC*OE
Total	African American	52	43	18724	18.01	8.88	0.87	3.18	MC*OE
Total	Hispanic	52	43	15046	20.92	10.02	0.90	3.24	MC*OE
Total	Asian	52	43	5048	34.70	11.67	0.93	3.14	MC*OE
Total	American Indian	52	43	192	24.55	11.27	0.91	3.30	MC*OE
Total	Pacific Islander	52	43	114	26.74	12.02	0.92	3.31	MC*OE
Total	Multiple Ethnicities	52	43	5615	24.34	11.51	0.92	3.28	MC*OE
A	White	28	22	82129	15.88	6.40	0.85	2.44	MC*OE
A	African American	28	22	18724	10.01	5.33	0.80	2.36	MC*OE
A	Hispanic	28	22	15046	11.60	5.80	0.83	2.41	MC*OE
A	Asian	28	22	5048	19.07	6.35	0.87	2.30	MC*OE
A	American Indian	28	22	192	13.39	6.32	0.85	2.48	MC*OE
A	Pacific Islander	28	22	114	14.66	6.95	0.88	2.44	MC*OE

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
A	Multiple Ethnicities	28	22	5615	13.34	6.53	0.86	2.43	MC*OE
B	White	7	7	82129	4.16	1.69	0.53	1.15	MC
B	African American	7	7	18724	2.92	1.52	0.37	1.21	MC
B	Hispanic	7	7	15046	3.22	1.58	0.42	1.20	MC
B	Asian	7	7	5048	4.79	1.71	0.61	1.07	MC
B	American Indian	7	7	192	3.63	1.71	0.51	1.20	MC
B	Pacific Islander	7	7	114	3.87	1.69	0.53	1.15	MC
B	Multiple Ethnicities	7	7	5615	3.63	1.73	0.54	1.18	MC
C	White	8	5	82129	4.19	1.97	0.53	1.35	MC*OE
C	African American	8	5	18724	2.35	1.66	0.49	1.19	MC*OE
C	Hispanic	8	5	15046	2.83	1.84	0.53	1.26	MC*OE
C	Asian	8	5	5048	4.94	2.15	0.57	1.42	MC*OE
C	American Indian	8	5	192	3.49	1.93	0.53	1.32	MC*OE
C	Pacific Islander	8	5	114	3.90	2.03	0.50	1.44	MC*OE
C	Multiple Ethnicities	8	5	5615	3.41	2.03	0.57	1.33	MC*OE
D	White	9	9	82129	4.84	2.51	0.74	1.27	MC
D	African American	9	9	18724	2.73	1.92	0.57	1.26	MC
D	Hispanic	9	9	15046	3.27	2.21	0.67	1.27	MC
D	Asian	9	9	5048	5.89	2.53	0.78	1.18	MC
D	American Indian	9	9	192	4.04	2.40	0.71	1.29	MC
D	Pacific Islander	9	9	114	4.31	2.50	0.74	1.28	MC
D	Multiple Ethnicities	9	9	5615	3.96	2.48	0.74	1.27	MC

	IEP	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	52	43	22005	17.80	9.60	0.89	3.16	MC*OE
A	Y	28	22	22005	9.63	5.58	0.82	2.35	MC*OE
B	Y	7	7	22005	2.87	1.57	0.42	1.20	MC
C	Y	8	5	22005	2.44	1.75	0.53	1.20	MC*OE
D	Y	9	9	22005	2.86	2.10	0.65	1.25	MC

	EL	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	52	43	4194	16.34	7.72	0.84	3.11	MC*OE
A	Y	28	22	4194	9.16	4.72	0.76	2.31	MC*OE
B	Y	7	7	4194	2.68	1.41	0.27	1.20	MC
C	Y	8	5	4194	2.02	1.50	0.44	1.13	MC*OE
D	Y	9	9	4194	2.48	1.78	0.52	1.24	MC

	Low Income	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	52	43	62540	21.75	10.43	0.90	3.26	MC*OE
A	Y	28	22	62540	11.98	6.03	0.84	2.42	MC*OE
B	Y	7	7	62540	3.33	1.62	0.46	1.20	MC
C	Y	8	5	62540	3.00	1.89	0.54	1.27	MC*OE
D	Y	9	9	62540	3.44	2.27	0.68	1.28	MC

Grade 6 Mathematics

	Overall	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	All	52	43	125385	26.59	11.35	0.91	3.39	MC*OE
A	All	20	17	125385	10.61	4.60	0.79	2.09	MC*OE
B	All	15	12	125385	7.44	3.60	0.74	1.82	MC*OE
C	All	8	5	125385	3.70	2.28	0.62	1.41	MC*OE
D	All	9	9	125385	4.85	2.16	0.62	1.33	MC

	Gender	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Male	52	43	63982	26.00	11.59	0.91	3.39	MC*OE
Total	Female	52	43	61403	27.20	11.06	0.91	3.38	MC*OE
A	Male	20	17	63982	10.52	4.67	0.80	2.09	MC*OE
A	Female	20	17	61403	10.70	4.53	0.79	2.10	MC*OE
B	Male	15	12	63982	7.23	3.70	0.76	1.83	MC*OE
B	Female	15	12	61403	7.66	3.47	0.73	1.80	MC*OE
C	Male	8	5	63982	3.55	2.30	0.63	1.40	MC*OE
C	Female	8	5	61403	3.85	2.26	0.61	1.41	MC*OE
D	Male	9	9	63982	4.70	2.18	0.63	1.33	MC
D	Female	9	9	61403	5.00	2.12	0.61	1.32	MC

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	White	52	43	82704	28.93	10.92	0.90	3.39	MC*OE
Total	African American	52	43	17993	18.78	8.57	0.86	3.20	MC*OE
Total	Hispanic	52	43	14443	20.87	9.55	0.88	3.28	MC*OE
Total	Asian	52	43	4924	34.62	11.46	0.92	3.32	MC*OE
Total	American Indian	52	43	170	24.16	11.00	0.91	3.36	MC*OE
Total	Pacific Islander	52	43	105	28.03	10.72	0.90	3.40	MC*OE
Total	Multiple Ethnicities	52	43	5046	24.69	10.96	0.91	3.37	MC*OE
A	White	20	17	82704	11.50	4.42	0.78	2.09	MC*OE
A	African American	20	17	17993	7.60	3.72	0.71	2.01	MC*OE
A	Hispanic	20	17	14443	8.43	4.06	0.75	2.05	MC*OE
A	Asian	20	17	4924	13.80	4.53	0.81	2.00	MC*OE
A	American Indian	20	17	170	9.72	4.43	0.78	2.08	MC*OE
A	Pacific Islander	20	17	105	11.29	4.34	0.76	2.12	MC*OE

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
A	Multiple Ethnicities	20	17	5046	9.90	4.49	0.78	2.10	MC*OE
B	White	15	12	82704	8.08	3.50	0.73	1.83	MC*OE
B	African American	15	12	17993	5.30	2.90	0.67	1.67	MC*OE
B	Hispanic	15	12	14443	5.83	3.14	0.70	1.72	MC*OE
B	Asian	15	12	4924	9.84	3.66	0.74	1.87	MC*OE
B	American Indian	15	12	170	6.64	3.35	0.73	1.75	MC*OE
B	Pacific Islander	15	12	105	7.88	3.35	0.69	1.86	MC*OE
B	Multiple Ethnicities	15	12	5046	6.92	3.53	0.74	1.79	MC*OE
C	White	8	5	82704	4.13	2.24	0.60	1.42	MC*OE
C	African American	8	5	17993	2.26	1.73	0.49	1.23	MC*OE
C	Hispanic	8	5	14443	2.67	1.94	0.55	1.29	MC*OE
C	Asian	8	5	4924	5.07	2.32	0.64	1.40	MC*OE
C	American Indian	8	5	170	3.30	2.34	0.61	1.45	MC*OE
C	Pacific Islander	8	5	105	3.92	2.23	0.64	1.35	MC*OE
C	Multiple Ethnicities	8	5	5046	3.31	2.20	0.60	1.39	MC*OE
D	White	9	9	82704	5.23	2.11	0.61	1.31	MC
D	African American	9	9	17993	3.62	1.81	0.42	1.38	MC
D	Hispanic	9	9	14443	3.94	1.93	0.49	1.37	MC
D	Asian	9	9	4924	5.92	2.11	0.65	1.25	MC
D	American Indian	9	9	170	4.50	2.10	0.59	1.35	MC
D	Pacific Islander	9	9	105	4.94	2.10	0.59	1.34	MC
D	Multiple Ethnicities	9	9	5046	4.56	2.11	0.59	1.35	MC

	IEP	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	52	43	21332	17.45	8.43	0.86	3.17	MC*OE
A	Y	20	17	21332	7.06	3.65	0.70	1.98	MC*OE
B	Y	15	12	21332	4.74	2.81	0.65	1.67	MC*OE
C	Y	8	5	21332	2.19	1.73	0.51	1.21	MC*OE
D	Y	9	9	21332	3.46	1.81	0.43	1.37	MC

	EL	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	52	43	3799	16.06	6.88	0.80	3.11	MC*OE
A	Y	20	17	3799	6.49	3.10	0.61	1.95	MC*OE
B	Y	15	12	3799	4.36	2.38	0.54	1.62	MC*OE
C	Y	8	5	3799	1.95	1.56	0.45	1.16	MC*OE
D	Y	9	9	3799	3.25	1.62	0.28	1.38	MC

	Low Income	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	52	43	59989	21.92	9.92	0.89	3.30	MC*OE
A	Y	20	17	59989	8.82	4.16	0.76	2.05	MC*OE
B	Y	15	12	59989	6.11	3.22	0.71	1.73	MC*OE
C	Y	8	5	59989	2.87	2.01	0.57	1.32	MC*OE
D	Y	9	9	59989	4.12	1.98	0.52	1.37	MC

Grade 7 Mathematics

	Overall	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	All	52	43	124225	26.44	11.93	0.93	3.17	MC*OE
A	All	21	18	124225	11.49	5.10	0.86	1.89	MC*OE
B	All	14	11	124225	6.90	3.73	0.77	1.78	MC*OE
C	All	9	6	124225	3.17	2.11	0.57	1.39	MC*OE
D	All	8	8	124225	4.89	2.19	0.71	1.18	MC

	Gender	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Male	52	43	63674	26.17	12.11	0.93	3.16	MC*OE
Total	Female	52	43	60551	26.72	11.74	0.93	3.18	MC*OE
A	Male	21	18	63674	11.40	5.18	0.87	1.88	MC*OE
A	Female	21	18	60551	11.58	5.02	0.86	1.90	MC*OE
B	Male	14	11	63674	6.80	3.76	0.78	1.77	MC*OE
B	Female	14	11	60551	7.00	3.69	0.76	1.79	MC*OE
C	Male	9	6	63674	3.10	2.13	0.58	1.38	MC*OE
C	Female	9	6	60551	3.24	2.09	0.56	1.39	MC*OE
D	Male	8	8	63674	4.87	2.22	0.72	1.17	MC
D	Female	8	8	60551	4.91	2.16	0.70	1.18	MC

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	White	52	43	82871	28.90	11.40	0.92	3.16	MC*OE
Total	African American	52	43	17714	18.18	9.11	0.89	3.08	MC*OE
Total	Hispanic	52	43	13956	19.96	10.16	0.91	3.13	MC*OE
Total	Asian	52	43	4904	35.51	11.46	0.93	3.03	MC*OE
Total	American Indian	52	43	196	24.50	11.04	0.92	3.17	MC*OE
Total	Pacific Islander	52	43	78	27.41	11.98	0.93	3.19	MC*OE
Total	Multiple Ethnicities	52	43	4506	23.93	11.61	0.92	3.18	MC*OE
A	White	21	18	82871	12.48	4.86	0.85	1.87	MC*OE
A	African American	21	18	17714	8.11	4.15	0.79	1.91	MC*OE
A	Hispanic	21	18	13956	8.87	4.49	0.82	1.92	MC*OE
A	Asian	21	18	4904	15.35	4.71	0.86	1.75	MC*OE
A	American Indian	21	18	196	10.70	4.94	0.85	1.92	MC*OE

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
A	Pacific Islander	21	18	78	12.13	5.08	0.86	1.91	MC*OE
A	Multiple Ethnicities	21	18	4506	10.45	5.04	0.86	1.92	MC*OE
B	White	14	11	82871	7.58	3.62	0.76	1.77	MC*OE
B	African American	14	11	17714	4.59	2.95	0.68	1.67	MC*OE
B	Hispanic	14	11	13956	5.11	3.26	0.72	1.72	MC*OE
B	Asian	14	11	4904	9.55	3.47	0.77	1.68	MC*OE
B	American Indian	14	11	196	6.17	3.41	0.74	1.73	MC*OE
B	Pacific Islander	14	11	78	7.04	3.99	0.80	1.78	MC*OE
B	Multiple Ethnicities	14	11	4506	6.22	3.64	0.76	1.78	MC*OE
C	White	9	6	82871	3.49	2.12	0.55	1.42	MC*OE
C	African American	9	6	17714	2.04	1.52	0.38	1.19	MC*OE
C	Hispanic	9	6	13956	2.27	1.72	0.47	1.25	MC*OE
C	Asian	9	6	4904	4.64	2.39	0.60	1.50	MC*OE
C	American Indian	9	6	196	2.98	1.92	0.51	1.35	MC*OE
C	Pacific Islander	9	6	78	3.40	1.98	0.50	1.40	MC*OE
C	Multiple Ethnicities	9	6	4506	2.79	2.00	0.55	1.33	MC*OE
D	White	8	8	82871	5.35	2.04	0.69	1.14	MC
D	African American	8	8	17714	3.43	1.95	0.57	1.28	MC
D	Hispanic	8	8	13956	3.72	2.07	0.62	1.27	MC
D	Asian	8	8	4904	5.98	1.99	0.72	1.04	MC
D	American Indian	8	8	196	4.64	2.10	0.66	1.23	MC
D	Pacific Islander	8	8	78	4.85	2.09	0.67	1.20	MC
D	Multiple Ethnicities	8	8	4506	4.46	2.19	0.69	1.22	MC

	IEP	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	52	43	20745	16.20	8.47	0.87	3.02	MC*OE
A	Y	21	18	20745	7.26	3.88	0.76	1.91	MC*OE
B	Y	14	11	20745	3.93	2.70	0.66	1.58	MC*OE
C	Y	9	6	20745	1.86	1.47	0.39	1.15	MC*OE
D	Y	8	8	20745	3.16	1.92	0.56	1.27	MC

	EL	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	52	43	3480	14.65	7.19	0.83	2.97	MC*OE
A	Y	21	18	3480	6.74	3.41	0.69	1.89	MC*OE
B	Y	14	11	3480	3.59	2.48	0.61	1.55	MC*OE
C	Y	9	6	3480	1.64	1.35	0.35	1.09	MC*OE
D	Y	8	8	3480	2.69	1.65	0.40	1.28	MC

	Low Income	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	52	43	58086	21.36	10.59	0.91	3.14	MC*OE
A	Y	21	18	58086	9.43	4.66	0.83	1.91	MC*OE
B	Y	14	11	58086	5.47	3.38	0.74	1.73	MC*OE
C	Y	9	6	58086	2.44	1.79	0.49	1.27	MC*OE
D	Y	8	8	58086	4.03	2.11	0.65	1.25	MC

Grade 8 Mathematics

	Overall	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	All	52	43	124780	26.66	11.48	0.92	3.32	MC*OE
A	All	7	7	124780	4.05	1.90	0.64	1.13	MC
B	All	28	22	124780	14.59	6.84	0.86	2.53	MC*OE
C	All	9	9	124780	4.57	2.24	0.63	1.36	MC
D	All	8	5	124780	3.45	1.82	0.58	1.18	MC*OE

	Gender	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Male	52	43	64223	25.82	11.69	0.92	3.31	MC*OE
Total	Female	52	43	60557	27.55	11.20	0.91	3.31	MC*OE
A	Male	7	7	64223	3.90	1.94	0.66	1.14	MC
A	Female	7	7	60557	4.21	1.83	0.62	1.12	MC
B	Male	28	22	64223	14.05	6.92	0.87	2.52	MC*OE
B	Female	28	22	60557	15.18	6.71	0.86	2.53	MC*OE
C	Male	9	9	64223	4.49	2.26	0.64	1.36	MC
C	Female	9	9	60557	4.65	2.20	0.62	1.36	MC
D	Male	8	5	64223	3.38	1.85	0.59	1.18	MC*OE
D	Female	8	5	60557	3.52	1.80	0.57	1.18	MC*OE

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	White	52	43	84571	28.75	10.98	0.91	3.30	MC*OE
Total	African American	52	43	17299	18.96	9.15	0.88	3.21	MC*OE
Total	Hispanic	52	43	13545	20.68	9.86	0.89	3.26	MC*OE
Total	Asian	52	43	5097	35.87	11.07	0.92	3.04	MC*OE
Total	American Indian	51	43	164	24.36	10.67	0.90	3.35	MC*OE
Total	Pacific Islander	51	43	93	28.80	11.30	0.91	3.31	MC*OE
Total	Multiple Ethnicities	52	43	4011	24.36	11.29	0.91	3.32	MC*OE
A	White	7	7	84571	4.32	1.82	0.62	1.12	MC
A	African American	7	7	17299	3.05	1.81	0.57	1.18	MC
A	Hispanic	7	7	13545	3.33	1.82	0.58	1.18	MC
A	Asian	7	7	5097	5.24	1.66	0.65	0.99	MC
A	American Indian	7	7	164	3.66	1.97	0.67	1.14	MC

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
A	Pacific Islander	7	7	93	4.42	1.77	0.60	1.12	MC
A	Multiple Ethnicities	7	7	4011	3.74	1.91	0.63	1.15	MC
B	White	28	22	84571	15.78	6.56	0.85	2.51	MC*OE
B	African American	28	22	17299	10.21	5.57	0.82	2.39	MC*OE
B	Hispanic	28	22	13545	11.10	5.96	0.83	2.44	MC*OE
B	Asian	28	22	5097	20.08	6.45	0.87	2.33	MC*OE
B	American Indian	28	22	164	13.25	6.34	0.84	2.54	MC*OE
B	Pacific Islander	28	22	93	15.90	6.87	0.86	2.54	MC*OE
B	Multiple Ethnicities	28	22	4011	13.29	6.76	0.86	2.52	MC*OE
C	White	9	9	84571	4.88	2.20	0.62	1.35	MC
C	African American	9	9	17299	3.38	1.83	0.43	1.38	MC
C	Hispanic	9	9	13545	3.68	1.98	0.51	1.38	MC
C	Asian	9	9	5097	6.04	2.29	0.71	1.23	MC
C	American Indian	9	9	164	4.32	2.18	0.61	1.37	MC
C	Pacific Islander	9	9	93	4.76	2.15	0.59	1.37	MC
C	Multiple Ethnicities	9	9	4011	4.24	2.19	0.61	1.37	MC
D	White	8	5	84571	3.77	1.77	0.55	1.18	MC*OE
D	African American	8	5	17299	2.32	1.52	0.46	1.11	MC*OE
D	Hispanic	8	5	13545	2.57	1.60	0.49	1.14	MC*OE
D	Asian	8	5	5097	4.52	1.80	0.61	1.13	MC*OE
D	American Indian	7	5	164	3.12	1.76	0.55	1.18	MC*OE
D	Pacific Islander	7	5	93	3.71	1.77	0.59	1.14	MC*OE
D	Multiple Ethnicities	8	5	4011	3.10	1.78	0.57	1.17	MC*OE

	IEP	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	52	43	20547	16.73	8.13	0.85	3.15	MC*OE
A	Y	7	7	20547	2.66	1.68	0.50	1.18	MC
B	Y	28	22	20547	8.73	4.88	0.78	2.31	MC*OE
C	Y	9	9	20547	3.18	1.75	0.39	1.38	MC
D	Y	8	5	20547	2.16	1.46	0.42	1.11	MC*OE

	EL	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	51	43	3317	16.03	7.50	0.83	3.09	MC*OE
A	Y	7	7	3317	2.74	1.70	0.51	1.19	MC
B	Y	28	22	3317	8.32	4.51	0.75	2.25	MC*OE
C	Y	9	9	3317	3.05	1.69	0.34	1.37	MC
D	Y	7	5	3317	1.92	1.32	0.35	1.06	MC*OE

	Low Income	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	52	43	56606	21.88	10.27	0.90	3.29	MC*OE
A	Y	7	7	56606	3.45	1.86	0.60	1.17	MC
B	Y	28	22	56606	11.80	6.17	0.84	2.47	MC*OE
C	Y	9	9	56606	3.85	2.03	0.54	1.38	MC
D	Y	8	5	56606	2.78	1.67	0.52	1.16	MC*OE

Grade 4 Science

	Overall	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	All	48	43	126353	25.25	9.38	0.89	3.13	MC*OE
A	All	24	22	126353	13.12	5.27	0.83	2.19	MC*OE
B	All	8	7	126353	4.83	1.88	0.55	1.26	MC*OE
C	All	8	7	126353	4.34	1.96	0.55	1.32	MC*OE
D	All	8	7	126353	2.96	1.79	0.49	1.28	MC*OE

	Gender	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Male	48	43	64617	25.35	9.65	0.90	3.12	MC*OE
Total	Female	48	43	61736	25.14	9.10	0.88	3.13	MC*OE
A	Male	24	22	64617	13.13	5.38	0.84	2.18	MC*OE
A	Female	24	22	61736	13.11	5.15	0.82	2.19	MC*OE
B	Male	8	7	64617	4.78	1.91	0.56	1.27	MC*OE
B	Female	8	7	61736	4.89	1.84	0.53	1.26	MC*OE
C	Male	8	7	64617	4.40	2.01	0.57	1.31	MC*OE
C	Female	8	7	61736	4.27	1.90	0.52	1.32	MC*OE
D	Male	8	7	64617	3.04	1.82	0.51	1.27	MC*OE
D	Female	8	7	61736	2.87	1.76	0.47	1.28	MC*OE

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	White	48	43	81291	27.68	8.69	0.87	3.11	MC*OE
Total	African American	48	43	18958	18.20	7.61	0.83	3.14	MC*OE
Total	Hispanic	48	43	15060	20.24	8.44	0.86	3.16	MC*OE
Total	Asian	48	43	4883	29.21	9.25	0.89	3.03	MC*OE
Total	American Indian	48	43	187	23.21	8.65	0.87	3.16	MC*OE
Total	Pacific Islander	48	43	94	25.17	9.62	0.90	3.11	MC*OE
Total	Multiple Ethnicities	48	43	5880	23.86	9.16	0.88	3.14	MC*OE
A	White	24	22	81291	14.46	4.88	0.81	2.15	MC*OE
A	African American	24	22	18958	9.26	4.35	0.73	2.26	MC*OE
A	Hispanic	24	22	15060	10.33	4.79	0.78	2.25	MC*OE
A	Asian	24	22	4883	15.35	5.18	0.84	2.09	MC*OE
A	American Indian	24	22	187	12.07	4.97	0.80	2.25	MC*OE

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
A	Pacific Islander	24	22	94	13.09	5.35	0.83	2.18	MC*0E
A	Multiple Ethnicities	24	22	5880	12.38	5.19	0.82	2.21	MC*0E
B	White	8	7	81291	5.21	1.76	0.50	1.25	MC*0E
B	African American	8	7	18958	3.73	1.79	0.48	1.29	MC*0E
B	Hispanic	8	7	15060	4.10	1.86	0.51	1.30	MC*0E
B	Asian	8	7	4883	5.44	1.76	0.53	1.21	MC*0E
B	American Indian	8	7	187	4.58	1.69	0.42	1.29	MC*0E
B	Pacific Islander	8	7	94	4.78	1.98	0.61	1.23	MC*0E
B	Multiple Ethnicities	8	7	5880	4.66	1.87	0.53	1.28	MC*0E
C	White	8	7	81291	4.72	1.87	0.50	1.32	MC*0E
C	African American	8	7	18958	3.23	1.79	0.47	1.30	MC*0E
C	Hispanic	8	7	15060	3.57	1.88	0.51	1.31	MC*0E
C	Asian	8	7	4883	4.95	1.87	0.52	1.30	MC*0E
C	American Indian	8	7	187	3.96	1.88	0.52	1.31	MC*0E
C	Pacific Islander	8	7	94	4.36	1.97	0.56	1.31	MC*0E
C	Multiple Ethnicities	8	7	5880	4.11	1.93	0.53	1.32	MC*0E
D	White	8	7	81291	3.30	1.79	0.47	1.30	MC*0E
D	African American	8	7	18958	1.98	1.40	0.30	1.17	MC*0E
D	Hispanic	8	7	15060	2.24	1.55	0.39	1.21	MC*0E
D	Asian	8	7	4883	3.47	1.89	0.53	1.29	MC*0E
D	American Indian	8	7	187	2.60	1.68	0.46	1.23	MC*0E
D	Pacific Islander	8	7	94	2.95	1.91	0.55	1.28	MC*0E
D	Multiple Ethnicities	8	7	5880	2.71	1.71	0.45	1.26	MC*0E

	IEP	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	48	43	21876	19.24	8.68	0.87	3.15	MC*0E
A	Y	24	22	21876	9.86	4.90	0.79	2.24	MC*0E
B	Y	8	7	21876	3.83	1.91	0.53	1.31	MC*0E
C	Y	8	7	21876	3.34	1.91	0.54	1.30	MC*0E
D	Y	8	7	21876	2.21	1.55	0.40	1.20	MC*0E

	EL	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	48	43	5117	16.77	6.89	0.79	3.13	MC*0E
A	Y	24	22	5117	8.36	3.93	0.67	2.25	MC*0E
B	Y	8	7	5117	3.57	1.77	0.44	1.32	MC*0E
C	Y	8	7	5117	3.00	1.71	0.43	1.29	MC*0E
D	Y	8	7	5117	1.84	1.32	0.24	1.15	MC*0E

	Low Income	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	48	43	64123	21.46	8.67	0.87	3.17	MC*0E
A	Y	24	22	64123	11.01	4.89	0.79	2.25	MC*0E
B	Y	8	7	64123	4.27	1.87	0.52	1.30	MC*0E
C	Y	8	7	64123	3.75	1.90	0.52	1.32	MC*0E
D	Y	8	7	64123	2.43	1.61	0.41	1.24	MC*0E

Grade 8 Science

	Overall	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	All	48	43	124417	23.85	9.17	0.88	3.15	MC*OE
A	All	23	21	124417	11.50	4.81	0.79	2.22	MC*OE
B	All	9	8	124417	4.78	2.08	0.57	1.36	MC*OE
C	All	8	7	124417	4.20	1.83	0.57	1.20	MC*OE
D	All	8	7	124417	3.37	1.88	0.51	1.32	MC*OE

	Gender	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Male	48	43	64038	23.76	9.55	0.89	3.14	MC*OE
Total	Female	48	43	60379	23.96	8.75	0.87	3.15	MC*OE
A	Male	23	21	64038	11.45	4.96	0.80	2.21	MC*OE
A	Female	23	21	60379	11.56	4.65	0.77	2.22	MC*OE
B	Male	9	8	64038	4.62	2.11	0.58	1.36	MC*OE
B	Female	9	8	60379	4.95	2.04	0.56	1.36	MC*OE
C	Male	8	7	64038	4.22	1.89	0.61	1.19	MC*OE
C	Female	8	7	60379	4.18	1.77	0.53	1.21	MC*OE
D	Male	8	7	64038	3.48	1.95	0.54	1.32	MC*OE
D	Female	8	7	60379	3.26	1.80	0.47	1.31	MC*OE

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	White	48	43	84384	25.70	8.72	0.87	3.15	MC*OE
Total	African American	48	43	17196	17.50	7.32	0.82	3.09	MC*OE
Total	Hispanic	48	43	13514	18.82	7.99	0.85	3.12	MC*OE
Total	Asian	48	43	5085	29.34	9.12	0.89	3.07	MC*OE
Total	American Indian	48	43	162	22.46	8.77	0.87	3.15	MC*OE
Total	Pacific Islander	48	43	92	25.52	8.77	0.87	3.16	MC*OE
Total	Multiple Ethnicities	48	43	3984	22.36	9.16	0.88	3.14	MC*OE
A	White	23	21	84384	12.41	4.61	0.77	2.22	MC*OE
A	African American	23	21	17196	8.37	3.96	0.70	2.16	MC*OE
A	Hispanic	23	21	13514	8.99	4.25	0.73	2.19	MC*OE
A	Asian	23	21	5085	14.36	4.71	0.79	2.15	MC*OE
A	American Indian	23	21	162	11.07	4.66	0.77	2.22	MC*OE

	Ethnicity	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
A	Pacific Islander	23	21	92	12.14	4.74	0.78	2.21	MC*0E
A	Multiple Ethnicities	23	21	3984	10.75	4.78	0.79	2.21	MC*0E
B	White	9	8	84384	5.11	2.01	0.55	1.35	MC*0E
B	African American	9	8	17196	3.67	1.87	0.46	1.38	MC*0E
B	Hispanic	9	8	13514	3.89	1.95	0.50	1.38	MC*0E
B	Asian	9	8	5085	5.69	2.01	0.57	1.31	MC*0E
B	American Indian	9	8	162	4.56	1.97	0.52	1.37	MC*0E
B	Pacific Islander	9	8	92	5.17	1.88	0.46	1.38	MC*0E
B	Multiple Ethnicities	9	8	3984	4.53	2.10	0.58	1.36	MC*0E
C	White	8	7	84384	4.51	1.75	0.54	1.19	MC*0E
C	African American	8	7	17196	3.12	1.65	0.44	1.23	MC*0E
C	Hispanic	8	7	13514	3.35	1.72	0.49	1.23	MC*0E
C	Asian	8	7	5085	5.06	1.78	0.59	1.14	MC*0E
C	American Indian	8	7	162	3.81	1.82	0.57	1.20	MC*0E
C	Pacific Islander	8	7	92	4.53	1.71	0.53	1.17	MC*0E
C	Multiple Ethnicities	8	7	3984	3.95	1.82	0.56	1.21	MC*0E
D	White	8	7	84384	3.67	1.86	0.48	1.34	MC*0E
D	African American	8	7	17196	2.34	1.51	0.36	1.21	MC*0E
D	Hispanic	8	7	13514	2.58	1.65	0.43	1.25	MC*0E
D	Asian	8	7	5085	4.24	1.98	0.54	1.34	MC*0E
D	American Indian	8	7	162	3.02	1.84	0.51	1.29	MC*0E
D	Pacific Islander	8	7	92	3.67	1.90	0.49	1.36	MC*0E
D	Multiple Ethnicities	8	7	3984	3.13	1.86	0.52	1.29	MC*0E

	IEP	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	48	43	20432	16.63	7.32	0.82	3.08	MC*OE
A	Y	23	21	20432	7.86	3.89	0.69	2.15	MC*OE
B	Y	9	8	20432	3.39	1.84	0.44	1.37	MC*OE
C	Y	8	7	20432	3.02	1.66	0.46	1.23	MC*OE
D	Y	8	7	20432	2.36	1.58	0.40	1.22	MC*OE

	EL	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	48	43	3312	13.92	5.36	0.69	3.00	MC*OE
A	Y	23	21	3312	6.69	3.02	0.53	2.08	MC*OE
B	Y	9	8	3312	2.85	1.59	0.25	1.38	MC*OE
C	Y	8	7	3312	2.48	1.44	0.27	1.22	MC*OE
D	Y	8	7	3312	1.90	1.29	0.21	1.15	MC*OE

	Low Income	Total Points	N Items	N	Mean	STD	r	SEM	Item Type(s)
Total	Y	48	43	56380	20.10	8.35	0.86	3.14	MC*OE
A	Y	23	21	56380	9.64	4.45	0.75	2.21	MC*OE
B	Y	9	8	56380	4.12	2.00	0.52	1.38	MC*OE
C	Y	8	7	56380	3.57	1.75	0.51	1.22	MC*OE
D	Y	8	7	56380	2.77	1.71	0.45	1.27	MC*OE

APPENDIX Q: HISTORICAL STATISTICS

Grade 3 English Language Arts

		All	Paper Overall	Paper Master	Online
Raw Score	Mean	24.85	24.89	13.15	23.32
Raw Score	SD	8.90	8.89	4.85	8.96
Raw Score	Max	45	45	27	45
Scaled Score	Mean	1042.06	1042.55	904.57	1023.34
Scaled Score	SD	108.34	108.32	58.96	107.10
Scaled Score	Max	1551	1551	1060	1551
Raw Cuts	Bel. Basic/Basic	13	13	13	13
Raw Cuts	Basic/Prof.	22	22	22	22
Raw Cuts	Prof./Adv.	34	34	34	34
Theta Cuts	Bel. Basic/Basic	-0.55	-0.55	-0.55	-0.55
Theta Cuts	Basic/Prof.	0.45	0.45	0.45	0.45
Theta Cuts	Prof./Adv.	1.81	1.81	1.81	1.81
Impact Pct	Below Basic	10.38	10.27	58.70	14.53
Impact Pct	Basic	26.07	26.01	32.61	28.53
Impact Pct	Proficient	44.41	44.47	8.70	42.09
Impact Pct	Advanced	19.14	19.25		14.85
Impact Pct	Prof. + Adv.	63.55	63.73		56.94
Demographics	N	122397	119543	46	2808
Demographics	Pct City	9.68	9.91	0.00	0.00
Demographics	Pct White	63.68	63.51	56.52	71.01
Demographics	Pct Black	15.10	15.19	4.35	11.72
Demographics	Pct Hispanic	12.17	12.24	28.26	8.87

Grade 4 English Language Arts

		All	Paper Overall	Paper Master	Online
Raw Score	Mean	34.17	34.23	17.55	31.96
Raw Score	SD	11.69	11.68	6.77	12.14
Raw Score	Max	63	63	39	62
Scaled Score	Mean	1029.60	1030.12	880.95	1010.14
Scaled Score	SD	109.89	109.72	60.50	114.03
Scaled Score	Max	1652	1652	1062	1527
Raw Cuts	Bel. Basic/Basic	18	18	18	18
Raw Cuts	Basic/Prof.	32	32	32	32
Raw Cuts	Prof./Adv.	44	44	44	44
Theta Cuts	Bel. Basic/Basic	-0.67	-0.67	-0.67	-0.67
Theta Cuts	Basic/Prof.	0.47	0.47	0.47	0.47
Theta Cuts	Prof./Adv.	1.53	1.53	1.53	1.53
Impact Pct	Below Basic	9.65	9.53	70.00	13.66
Impact Pct	Basic	30.56	30.45	22.50	35.34
Impact Pct	Proficient	34.73	34.83	7.50	30.88
Impact Pct	Advanced	25.06	25.19		20.12
Impact Pct	Prof. + Adv.	59.79	60.02		51.00
Demographics	N	126223	123181	40	3002
Demographics	Pct City	9.52	9.75	0.00	0.03
Demographics	Pct White	64.40	64.25	22.50	71.25
Demographics	Pct Black	14.96	15.03	50.00	11.59
Demographics	Pct Hispanic	11.90	11.98	22.50	8.59

Grade 5 English Language Arts

		All	Paper Overall	Paper Master	Online
Raw Score	Mean	32.49	32.54	16.36	31.27
Raw Score	SD	11.32	11.31	6.45	11.64
Raw Score	Max	63	63	29	62
Scaled Score	Mean	1029.17	1029.64	880.00	1018.25
Scaled Score	SD	104.53	104.37	69.12	107.27
Scaled Score	Max	1685	1685	998	1557
Raw Cuts	Bel. Basic/Basic	17	17	17	17
Raw Cuts	Basic/Prof.	30	30	30	30
Raw Cuts	Prof./Adv.	46	46	46	46
Theta Cuts	Bel. Basic/Basic	-0.63	-0.63	-0.63	-0.63
Theta Cuts	Basic/Prof.	0.47	0.47	0.47	0.47
Theta Cuts	Prof./Adv.	1.88	1.88	1.88	1.88
Impact Pct	Below Basic	8.89	8.77	61.11	11.52
Impact Pct	Basic	31.71	31.63	38.89	33.48
Impact Pct	Proficient	45.42	45.56		42.26
Impact Pct	Advanced	13.99	14.04		12.74
Impact Pct	Prof. + Adv.	59.41	59.60		55.00
Demographics	N	126761	121976	36	4749
Demographics	Pct City	9.00	9.35	0.00	0.00
Demographics	Pct White	64.75	64.51	27.78	71.09
Demographics	Pct Black	14.74	14.93	11.11	9.96
Demographics	Pct Hispanic	11.86	11.90	47.22	10.57

Grade 6 English Language Arts

		All	Paper Overall	Paper Master	Online
Raw Score	Mean	34.49	34.60	16.83	31.95
Raw Score	SD	11.64	11.63	5.12	11.73
Raw Score	Max	63	63	25	62
Scaled Score	Mean	1041.36	1042.38	883.00	1018.27
Scaled Score	SD	110.45	110.41	52.20	108.70
Scaled Score	Max	1754	1754	959	1620
Raw Cuts	Bel. Basic/Basic	16	16	16	16
Raw Cuts	Basic/Prof.	31	31	31	31
Raw Cuts	Prof./Adv.	44	44	44	44
Theta Cuts	Bel. Basic/Basic	-0.62	-0.62	-0.62	-0.62
Theta Cuts	Basic/Prof.	0.65	0.65	0.65	0.65
Theta Cuts	Prof./Adv.	1.76	1.76	1.76	1.76
Impact Pct	Below Basic	5.26	5.17	33.33	7.35
Impact Pct	Basic	32.24	31.91	66.67	39.77
Impact Pct	Proficient	36.31	36.48		32.60
Impact Pct	Advanced	26.18	26.44		20.27
Impact Pct	Prof. + Adv.	62.49	62.92		52.88
Demographics	N	125341	120072	6	5263
Demographics	Pct City	7.91	8.25	0.00	0.15
Demographics	Pct White	66.00	65.96	16.67	66.92
Demographics	Pct Black	14.34	14.46	0.00	11.63
Demographics	Pct Hispanic	11.49	11.39	66.67	13.66

Grade 7 English Language Arts

		All	Paper Overall	Paper Master	Online
Raw Score	Mean	34.95	35.06	19.89	32.94
Raw Score	SD	11.46	11.44	7.66	11.70
Raw Score	Max	63	63	44	62
Scaled Score	Mean	1032.49	1033.41	897.91	1014.89
Scaled Score	SD	105.77	105.58	72.79	107.58
Scaled Score	Max	1641	1641	1104	1514
Raw Cuts	Bel. Basic/Basic	14	14	14	14
Raw Cuts	Basic/Prof.	32	32	32	32
Raw Cuts	Prof./Adv.	47	47	47	47
Theta Cuts	Bel. Basic/Basic	-1.02	-1.02	-1.02	-1.02
Theta Cuts	Basic/Prof.	0.55	0.55	0.55	0.55
Theta Cuts	Prof./Adv.	1.88	1.88	1.88	1.88
Impact Pct	Below Basic	2.52	2.46	20.00	3.52
Impact Pct	Basic	35.55	35.19	71.43	42.60
Impact Pct	Proficient	44.28	44.51	8.57	39.92
Impact Pct	Advanced	17.65	17.84		13.96
Impact Pct	Prof. + Adv.	61.93	62.35		53.88
Demographics	N	124226	118282	35	5909
Demographics	Pct City	7.76	8.13	0.00	0.42
Demographics	Pct White	66.75	66.30	40.00	75.83
Demographics	Pct Black	14.26	14.60	5.71	7.34
Demographics	Pct Hispanic	11.21	11.17	51.43	11.63

Grade 8 English Language Arts

		All	Paper Overall	Paper Master	Online
Raw Score	Mean	35.62	35.74	20.03	33.30
Raw Score	SD	11.65	11.62	6.85	12.03
Raw Score	Max	63	63	41	61
Scaled Score	Mean	1027.49	1028.51	899.14	1007.98
Scaled Score	SD	101.42	101.21	56.55	103.34
Scaled Score	Max	1640	1640	1062	1428
Raw Cuts	Bel. Basic/Basic	18	18	18	18
Raw Cuts	Basic/Prof.	33	33	33	33
Raw Cuts	Prof./Adv.	49	49	49	49
Theta Cuts	Bel. Basic/Basic	-0.75	-0.75	-0.75	-0.75
Theta Cuts	Basic/Prof.	0.40	0.40	0.40	0.40
Theta Cuts	Prof./Adv.	1.78	1.78	1.78	1.78
Impact Pct	Below Basic	7.83	7.63	48.28	11.44
Impact Pct	Basic	30.63	30.40	44.83	35.05
Impact Pct	Proficient	47.10	47.34	6.90	42.64
Impact Pct	Advanced	14.44	14.63		10.87
Impact Pct	Prof. + Adv.	61.55	61.97		53.51
Demographics	N	124907	118818	29	6060
Demographics	Pct City	7.33	7.68	0.00	0.61
Demographics	Pct White	67.82	67.50	24.14	74.34
Demographics	Pct Black	13.83	14.13	6.90	8.00
Demographics	Pct Hispanic	10.85	10.77	65.52	12.16

Grade 3 Mathematics

		All	Paper Overall	Paper Master	Online
Raw Score	Mean	26.98	25.65	12.10	27.02
Raw Score	SD	11.70	11.84	4.95	11.69
Raw Score	Max	52	52	26	52
Scaled Score	Mean	1017.38	1003.06	863.71	1017.82
Scaled Score	SD	123.06	124.19	57.14	122.99
Scaled Score	Max	1545	1545	1005	1545
Raw Cuts	Bel. Basic/Basic	17	17	17	17
Raw Cuts	Basic/Prof.	26	26	26	26
Raw Cuts	Prof./Adv.	38	38	38	38
Theta Cuts	Bel. Basic/Basic	-0.34	-0.34	-0.34	-0.34
Theta Cuts	Basic/Prof.	0.48	0.48	0.48	0.48
Theta Cuts	Prof./Adv.	1.62	1.62	1.62	1.62
Impact Pct	Below Basic	24.49	28.42	84.93	24.35
Impact Pct	Basic	21.44	21.65	12.33	21.44
Impact Pct	Proficient	31.37	30.39	2.74	31.41
Impact Pct	Advanced	22.70	19.54		22.79
Impact Pct	Prof. + Adv.	54.07	49.93		54.20
Demographics	N	122563	2896	73	119594
Demographics	Pct City	9.72	0.00	0.00	9.96
Demographics	Pct White	63.62	69.58	50.68	63.48
Demographics	Pct Black	15.15	12.26	2.74	15.23
Demographics	Pct Hispanic	12.19	8.98	35.62	12.25

Grade 4 Mathematics

		All	Paper Overall	Paper Master	Online
Raw Score	Mean	25.82	25.86	11.76	24.66
Raw Score	SD	11.69	11.69	4.56	11.86
Raw Score	Max	52	52	28	51
Scaled Score	Mean	987.88	988.26	847.75	975.22
Scaled Score	SD	120.51	120.46	51.33	121.00
Scaled Score	Max	1514	1514	1002	1394
Raw Cuts	Bel. Basic/Basic	18	18	18	18
Raw Cuts	Basic/Prof.	28	28	28	28
Raw Cuts	Prof./Adv.	39	39	39	39
Theta Cuts	Bel. Basic/Basic	-0.66	-0.66	-0.66	-0.66
Theta Cuts	Basic/Prof.	0.20	0.20	0.20	0.20
Theta Cuts	Prof./Adv.	1.26	1.26	1.26	1.26
Impact Pct	Below Basic	29.76	29.62	92.06	33.97
Impact Pct	Basic	26.71	26.76	6.35	25.15
Impact Pct	Proficient	25.75	25.77	1.59	25.47
Impact Pct	Advanced	17.78	17.85		15.41
Impact Pct	Prof. + Adv.	43.53	43.62		40.88
Demographics	N	126481	123348	63	3070
Demographics	Pct City	9.56	9.80	0.00	0.03
Demographics	Pct White	64.33	64.20	22.22	70.20
Demographics	Pct Black	15.02	15.08	36.51	11.95
Demographics	Pct Hispanic	11.92	11.98	36.51	8.79

Grade 5 Mathematics

		All	Paper Overall	Paper Master	Online
Raw Score	Mean	26.48	26.51	13.36	25.76
Raw Score	SD	11.80	11.78	5.90	12.13
Raw Score	Max	52	52	40	52
Scaled Score	Mean	991.83	992.17	856.15	984.81
Scaled Score	SD	126.15	125.94	63.81	130.56
Scaled Score	Max	1515	1515	1120	1515
Raw Cuts	Bel. Basic/Basic	18	18	18	18
Raw Cuts	Basic/Prof.	28	28	28	28
Raw Cuts	Prof./Adv.	40	40	40	40
Theta Cuts	Bel. Basic/Basic	-0.52	-0.52	-0.52	-0.52
Theta Cuts	Basic/Prof.	0.39	0.39	0.39	0.39
Theta Cuts	Prof./Adv.	1.58	1.58	1.58	1.58
Impact Pct	Below Basic	28.70	28.53	87.23	32.25
Impact Pct	Basic	26.09	26.15	10.64	24.91
Impact Pct	Proficient	27.44	27.52		25.76
Impact Pct	Advanced	17.76	17.80	2.13	17.09
Impact Pct	Prof. + Adv.	45.21	45.32		42.85
Demographics	N	126868	121794	47	5027
Demographics	Pct City	9.01	9.39	0.00	0.00
Demographics	Pct White	64.74	64.53	25.53	70.00
Demographics	Pct Black	14.76	14.95	6.38	10.30
Demographics	Pct Hispanic	11.86	11.90	53.19	10.54

Grade 6 Mathematics

		All	Paper Overall	Paper Master	Online
Raw Score	Mean	26.59	26.66	18.33	24.95
Raw Score	SD	11.35	11.34	7.43	11.47
Raw Score	Max	52	52	30	52
Scaled Score	Mean	976.34	977.07	894.17	959.60
Scaled Score	SD	117.60	117.55	72.14	117.58
Scaled Score	Max	1490	1490	1004	1490
Raw Cuts	Bel. Basic/Basic	19	19	19	19
Raw Cuts	Basic/Prof.	30	30	30	30
Raw Cuts	Prof./Adv.	41	41	41	41
Theta Cuts	Bel. Basic/Basic	-0.26	-0.26	-0.26	-0.26
Theta Cuts	Basic/Prof.	0.72	0.72	0.72	0.72
Theta Cuts	Prof./Adv.	1.78	1.78	1.78	1.78
Impact Pct	Below Basic	29.66	29.34	66.67	37.02
Impact Pct	Basic	30.78	30.89	25.00	28.14
Impact Pct	Proficient	24.83	24.94	8.33	22.29
Impact Pct	Advanced	14.73	14.83		12.54
Impact Pct	Prof. + Adv.	39.56	39.77		34.83
Demographics	N	125385	120214	12	5159
Demographics	Pct City	7.92	8.25	0.00	0.16
Demographics	Pct White	65.96	65.94	58.33	66.45
Demographics	Pct Black	14.35	14.46	0.00	11.92
Demographics	Pct Hispanic	11.52	11.42	33.33	13.76

Grade 7 Mathematics

		All	Paper Overall	Paper Master	Online
Raw Score	Mean	26.44	26.49	13.34	25.41
Raw Score	SD	11.93	11.93	4.98	11.89
Raw Score	Max	52	52	27	52
Scaled Score	Mean	967.32	967.89	825.72	956.11
Scaled Score	SD	134.16	134.20	55.84	132.88
Scaled Score	Max	1522	1522	967	1522
Raw Cuts	Bel. Basic/Basic	21	21	21	21
Raw Cuts	Basic/Prof.	31	31	31	31
Raw Cuts	Prof./Adv.	41	41	41	41
Theta Cuts	Bel. Basic/Basic	-0.46	-0.46	-0.46	-0.46
Theta Cuts	Basic/Prof.	0.49	0.49	0.49	0.49
Theta Cuts	Prof./Adv.	1.63	1.63	1.63	1.63
Impact Pct	Below Basic	37.76	37.57	89.66	41.41
Impact Pct	Basic	23.32	23.31	10.34	23.43
Impact Pct	Proficient	22.76	22.88		20.38
Impact Pct	Advanced	16.16	16.23		14.78
Impact Pct	Prof. + Adv.	38.92	39.11		35.16
Demographics	N	124225	118460	29	5736
Demographics	Pct City	7.77	8.12	0.00	0.45
Demographics	Pct White	66.71	66.27	31.03	75.92
Demographics	Pct Black	14.26	14.59	6.90	7.41
Demographics	Pct Hispanic	11.23	11.21	58.62	11.51

Grade 8 Mathematics

		All	Paper Overall	Paper Master	Online
Raw Score	Mean	26.66	26.75	13.13	24.90
Raw Score	SD	11.48	11.48	6.58	11.39
Raw Score	Max	52	52	31	52
Scaled Score	Mean	948.41	949.38	805.88	929.57
Scaled Score	SD	123.41	123.52	72.57	119.40
Scaled Score	Max	1638	1638	981	1638
Raw Cuts	Bel. Basic/Basic	23	23	23	23
Raw Cuts	Basic/Prof.	34	34	34	34
Raw Cuts	Prof./Adv.	43	43	43	43
Theta Cuts	Bel. Basic/Basic	-0.40	-0.40	-0.40	-0.40
Theta Cuts	Basic/Prof.	0.56	0.56	0.56	0.56
Theta Cuts	Prof./Adv.	1.59	1.59	1.59	1.59
Impact Pct	Below Basic	41.06	40.73	87.50	47.46
Impact Pct	Basic	27.89	27.97	12.50	26.33
Impact Pct	Proficient	20.21	20.34		17.66
Impact Pct	Advanced	10.84	10.96		8.55
Impact Pct	Prof. + Adv.	31.05	31.30		26.21
Demographics	N	124780	118800	24	5956
Demographics	Pct City	7.35	7.68	0.00	0.71
Demographics	Pct White	67.78	67.45	12.50	74.58
Demographics	Pct Black	13.86	14.16	8.33	7.94
Demographics	Pct Hispanic	10.86	10.79	75.00	11.95

Grade 4 Science

		All	Paper Overall	Paper Master	Online
Raw Score	Mean	25.25	25.24	14.21	25.45
Raw Score	SD	9.38	9.38	4.65	9.44
Raw Score	Max	48	48	30	47
Scaled Score	Mean	1412.60	1412.57	1214.93	1416.00
Scaled Score	SD	173.56	173.50	86.67	174.70
Scaled Score	Max	2321	2321	1485	2104
Raw Cuts	Bel. Basic/Basic	11	11	11	11
Raw Cuts	Basic/Prof.	18	18	18	18
Raw Cuts	Prof./Adv.	30	30	30	30
Theta Cuts	Bel. Basic/Basic	-0.39	-0.39	-0.39	-0.39
Theta Cuts	Basic/Prof.	0.36	0.36	0.36	0.36
Theta Cuts	Prof./Adv.	1.47	1.47	1.47	1.47
Impact Pct	Below Basic	5.44	5.41	18.60	6.09
Impact Pct	Basic	19.06	19.09	65.12	17.60
Impact Pct	Proficient	39.70	39.73	13.95	39.06
Impact Pct	Advanced	35.79	35.76	2.33	37.26
Impact Pct	Prof. + Adv.	75.50	75.49	16.28	76.32
Demographics	N	126353	122531	43	3779
Demographics	Pct City	9.56	9.85	0.00	0.03
Demographics	Pct White	64.34	64.18	18.60	69.94
Demographics	Pct Black	15.00	15.13	44.19	10.45
Demographics	Pct Hispanic	11.92	11.93	30.23	11.22

Grade 8 Science

		All	Paper Overall	Paper Master	Online
Raw Score	Mean	23.85	23.88	15.56	23.44
Raw Score	SD	9.17	9.17	7.28	9.05
Raw Score	Max	48	48	37	48
Scaled Score	Mean	1305.20	1305.76	1144.15	1297.21
Scaled Score	SD	180.89	181.02	139.96	178.64
Scaled Score	Max	2337	2337	1555	2337
Raw Cuts	Bel. Basic/Basic	16	16	16	16
Raw Cuts	Basic/Prof.	23	23	23	23
Raw Cuts	Prof./Adv.	33	33	33	33
Theta Cuts	Bel. Basic/Basic	-0.18	-0.18	-0.18	-0.18
Theta Cuts	Basic/Prof.	0.48	0.48	0.48	0.48
Theta Cuts	Prof./Adv.	1.42	1.42	1.42	1.42
Impact Pct	Below Basic	22.20	22.11	70.37	23.47
Impact Pct	Basic	23.94	23.93	11.11	24.15
Impact Pct	Proficient	33.47	33.45	14.81	33.84
Impact Pct	Advanced	20.38	20.51	3.70	18.54
Impact Pct	Prof. + Adv.	53.86	53.96	18.52	52.38
Demographics	N	124417	116709	27	7681
Demographics	Pct City	7.35	7.80	0.00	0.44
Demographics	Pct White	67.82	67.50	25.93	72.93
Demographics	Pct Black	13.82	14.17	7.41	8.61
Demographics	Pct Hispanic	10.86	10.84	66.67	10.96

APPENDIX R: PSSA SCORE-REPORT DEVELOPMENT

PENNSYLVANIA SYSTEM OF SCHOOL ASSESSMENT (PSSA)

BACKGROUND

An important aspect of the PSSA transition to the Pennsylvania Core Standard (PCS) is the need to produce revised score reports to support the newly-aligned assessments, specifically the introduction of an English Language Arts assessment with dual reporting of the reading scores and a desire to provide greater detail for the new score reporting categories. PDE also determined that the transition represented an opportunity to reevaluate the score reports as a whole. To that end, PDE and DRC developed a plan to utilize parent and educator focus groups to guide the development of revised PSSA individual student score reports.

This document provides a high-level summary of the focus-group approach that was followed, the feedback that DRC and PDE received, and the direction in which the reports were developed as an output of the process.

THE FOCUS GROUP APPOACH

DRC facilitated seven focus groups at four different locations across the Commonwealth, chosen to provide an opportunity for "geographically-representative" participation.

- A total of 56 educators and 22 parents participated in the seven focus groups.

Prior to the focus groups, DRC collaborated with PDE to select the number and design of the score-report mock-ups that were presented at the focus group meetings.

- Two mock-up designs were selected to give participants an opportunity to visualize key differences ("Sample Student #1" and "Sample Student #2"):
    - Use of the Strength Profile versus a Just-Proficient Mean
    - Reading "Text Types" reported between Reading and Writing versus after Writing
    - ELA dual reporting footnote versions

Focus groups were scheduled for 90 minutes (with the exception of a 120-minute session with the Harrisburg educator group).

- PDE opened each focus group with an overview of the purpose.
- DRC facilitated each session using a survey-question approach (see attached).
    - Participants used the survey to record their individual feedback on particular elements of the report and were also encouraged to share their feedback during the subsequent group discussions.
    - The survey approach ultimately allowed participants to compare and contrast all elements of the two mock-up designs.
    - All written survey feedback was collected and all verbal feedback was recorded by DRC staff.

Some of the main themes of the feedback included (see table on page 4 for additional detail):

- Favorable opinion of the first page with some requests to make information easier to read (larger font, more white space)
    - There were recurring comments against the use of "superior," "satisfactory," "marginal," and "inadequate" in the Performance Level descriptors.

- Consistent input that the information became "overwhelming" with the reporting category definitions appearing within the Score reporting tables
    - There were multiple requests to rewrite the descriptions or move them away from the student's score.
- Majority of the participants preferred the Strength Profile to the Just Proficient Mean
    - Those who preferred the Just Proficient Mean were often still misinterpreting its meaning.
- Majority of the participants preferred to have the Reading Text Types reported after Writing
    - This location was perceived to provide better delineation that the text type score is additional information rather than a direct element of the total ELA score.

After the focus groups were completed, DRC compiled the feedback for PDE to review and make recommendations. A summary of the feedback is found in the table below.

Focus Group	Strength Profile	Just Proficient Mean	Other, Both, or NR	Text Types Table Placed Directly After the Reading Table	Text Types Table Placed After the Entire ELA Reporting Table	Neither, Other, or NR	ELA Dual Reporting Footnote – Version 1	ELA Dual Reporting Footnote – Version 2	Neither, Other, or NR
IU #4 – Educators (13)	11	2	0	1	8	4	2	9	2
IU #4 – Parents (4)	1	3	0	0	4	0	0	4	0
IU #10 – Educators (12)	9	2	1	1	8	3	1	8	3
IU #10 – Parents (10)	8	2	0	2	8	0	2	7	1
Philadelphia – Educators (8)	4	4	0	3	5	0	3	5	0
Philadelphia – Parents (8)	3	2	3	0	5	3	0	4	4
Harrisburg – Educators (23)	17	4	2	0	22	1	0	21	2
Total	53	19	6	7	60	11	8	58	12

A single, revised mock-up was produced to reflect the following PDE recommendations ("Sample Student 3"):

- Minor changes to Page 1 (re-arrangement, spacing, font size)
- Just Proficient Mean eliminated
- Reading Text Types reported after Writing
- All subjects reported on pages 2 and 3 with Reporting Category definitions moved to page 4

The educator focus group participants were invited to a WebEx to view the revised mock-up, provide input, and respond to a survey question about removing the Strength Profile altogether.

- DRC highlighted the changes on the revised mock up and reviewed an alternate design with the Strength Profile removed.
    - All final changes were viewed favorably by the WebEx attendees (especially the new placement of the Reporting Category definitions on page 4).
    - All-but one attendee voted to retain the Strength Profile.

The final mock-up reviewed at the WebEx was used as a basis for the development and production of the 2015 student reports. The following materials are found on the next several pages of this appendix.

- The Focus Group Survey (Parent version – Educator differed only in the "Participant Information")
- Student 1 Score Report (reviewed at the focus groups)
- Student 2 Score Report (reviewed at the focus groups)
- Student 3 Score Report (reviewed with the educators at the follow-up WebEx)

SURVEY QUESTIONS FROM PARENT FOCUS GROUP

PARTICIPANT INFORMATION

Name of student's school _____

Is this school ____ rural _____ urban ____ suburban?

Grade(s) of your student(s) _____

STUDENT REPORT VERSION 1–PAGE 1

After reviewing page 1 of the PSSA Student Report version 1, please respond to questions 1–2. A group discussion will follow.

1. How easy/difficult is it to determine how the sample student performed on the PSSA for Mathematics, English Language Arts (ELA), and Science?

   _____ very difficult
   _____ somewhat difficult
   _____ somewhat easy
   _____ very easy

   Please briefly explain why you rated this item as you did.
   _____

   _____

   _____

2. How would you rate the **readability** of page 1 of the PSSA report (e.g., font size, placement of student information, performance level definitions)?

   _____ not readable
   _____ somewhat readable
   _____ mostly readable
   _____ very readable

   Please briefly explain why you rated this item as you did.
   _____

   _____

   _____

REPORTING TABLES VERSION 1–PAGES 2, 3, AND 4

After reviewing pages 2–4 of the PSSA Student Report version 1, please respond to questions 3–7. A group discussion will follow.

3. Overall, how easy/difficult is it to understand the information in the tables (e.g., descriptions of reporting categories, the student's points, total points possible, strength profile)?

   _____ very difficult
   _____ somewhat difficult
   _____ somewhat easy
   _____ very easy

   Please briefly explain why you rated this item as you did.
   _____
   _____
   _____

4. How well did you understand the Strength Profile (high, medium, or low) ratings and the footnote information for the Strength Profile?

   _____ not understandable
   _____ somewhat understandable
   _____ mostly understandable
   _____ very understandable

   Please briefly explain why you rated this item as you did.
   _____
   _____
   _____

5. In the ELA table on page 3, points are reported for both the Reading Reporting Categories and the Reading Text Types Reporting Categories. How clear is this section of dual reporting?

   _____ not clear
   _____ somewhat clear
   _____ mostly clear
   _____ very clear

   Please briefly explain why you rated this item as you did.
   _____
   _____

OVERALL REPORT FEEDBACK VERSION 1

6. How easy/difficult was it to read and move through the report, find the next section, and find supporting material to understand the student-score information?

   _____ very difficult
   _____ somewhat difficult
   _____ somewhat easy
   _____ very easy

   Please briefly explain why you rated this item as you did.

   _____

   _____

   _____

7. How well did you understand the contents of the report (e.g., performance levels, footnotes, graphics)?

   _____ not understandable
   _____ somewhat understandable
   _____ mostly understandable
   _____ very understandable

   Please briefly explain why you rated this item as you did.

   _____

   _____

   _____

STUDENT REPORT VERSION 2–PAGES 2, 3, AND 4

After reviewing the PSSA Student Report version 2, please respond to questions 1–5. A group discussion will follow.

1. How well did you understand the Just Proficient Mean results on pages 2–4 and the footnote information for the Just Proficient Mean?

   _____ not understandable
   _____ somewhat understandable
   _____ mostly understandable
   _____ very understandable

   Please briefly explain why you rated this item as you did.

   _____

   _____

   _____

2. The reporting tables on pages 2–4 include a Just Proficient Mean for each reporting category. Now look at pages 2–4 of version 1. The reporting tables include a Strength Profile (high, medium, or low) for each reporting category. Which version of the information do you prefer and why?

   _____ version 1
   _____ version 2

   Please explain.

   _____

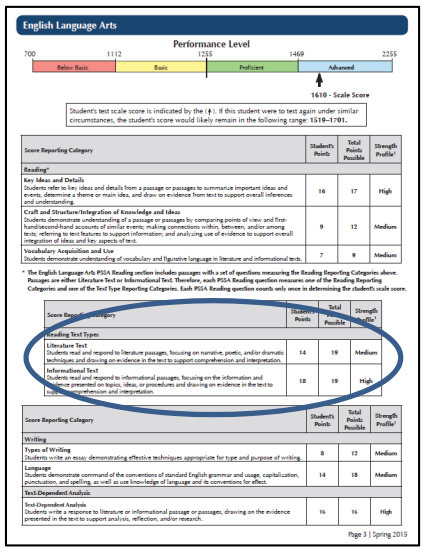
   _____

   _____

ELA REPORT TABLE–PAGE 3 OF VERSION 1 OR VERSION 2?

3. Look at version 1. The Text Types Reporting Category information follows the Reading Reporting Category information. Now look at version 2. The Text Types Reporting Category information is placed at the end of the ELA table. Which version of the order of information do you prefer and why?

_____ version 1 _____ version 2


English Language Arts

Performance Level

700 1112 1255 1469 2255

Below Basic | Basic | Proficient | Advanced

1610 - Scale Score

Student's test scale score is indicated by the (▲). If this student were to test again under similar circumstances, the student's score would likely remain in the following range: 1519–1701.

Score Reporting Category	Student's Points	Total Points Possible	Strength Profile*
Reading*			
Key Ideas and Details Students refer to key ideas and details from a passage or passages to summarize important ideas and events, determine a theme or main idea, and draw on evidence from text to support overall inferences and understanding.	16	17	High
Craft and Structure/Integration of Knowledge and Ideas Students demonstrate understanding of a passage or passages by: comparing points of view and first-hand/second-hand accounts of similar events; making connections within, between, and/or among texts; referring to text features to support information; and analyzing use of evidence to support overall integration of ideas and key aspects of text.	9	12	Medium
Vocabulary Acquisition and Use Students demonstrate understanding of vocabulary and figurative language in literature and informational texts.	7	9	Medium
Reading Text Types			
Literature Text Students read and respond to literature passages, focusing on narrative, poetic, and/or dramatic techniques and drawing on evidence in the text to support comprehension and interpretation.	14	19	Medium
Informational Text Students read and respond to informational passages, focusing on the information and evidence presented on topics, ideas, or procedures and drawing on evidence in the text to support comprehension and interpretation.	18	19	High
Writing			
Types of Writing Students write an essay demonstrating effective techniques appropriate for type and purpose of writing.	8	12	Medium
Language Students demonstrate command of the conventions of standard English grammar and usage, capitalization, punctuation, and spelling, as well as use knowledge of language and its conventions for effect.	14	18	Medium
Text-Dependent Analysis			
Text-Dependent Analysis Students write a response to literature or informational passage or passages, drawing on the evidence presented in the text to support analysis, reflection, and/or research.	16	16	High

* The English Language Arts PSSA Reading section includes passages with a set of questions measuring the Reading Reporting Categories above. Passages are either Literature Text or Informational Text. Therefore, each PSSA Reading question measures one of the Reading Reporting Categories and one of the Text Type Reporting Categories. Each PSSA Reading question counts only once in determining the student's scale score.

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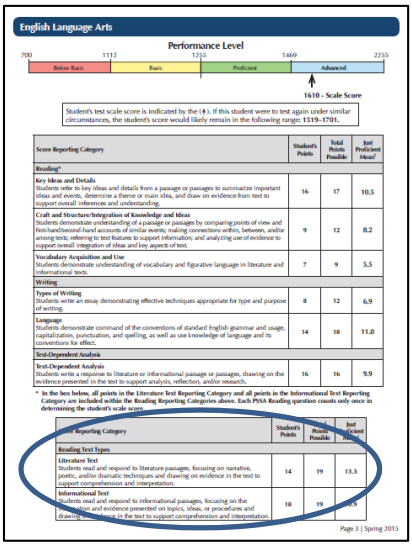
English Language Arts

Performance Level

700 1112 1255 1469 2255

Below Basic | Basic | Proficient | Advanced

1610 - Scale Score

Student's test scale score is indicated by the (▲). If this student were to test again under similar circumstances, the student's score would likely remain in the following range: 1519–1701.

Score Reporting Category	Student's Points	Total Points Possible	Just Proficient Mean*
Reading*			
Key Ideas and Details Students refer to key ideas and details from a passage or passages to summarize important ideas and events, determine a theme or main idea, and draw on evidence from text to support overall inferences and understanding.	16	17	10.5
Craft and Structure/Integration of Knowledge and Ideas Students demonstrate understanding of a passage or passages by comparing points of view and first-hand/second-hand accounts of similar events; making connections within, between, and/or among texts; referring to text features to support information; and analyzing use of evidence to support overall integration of ideas and key aspects of text.	9	12	8.2
Vocabulary Acquisition and Use Students demonstrate understanding of vocabulary and figurative language in literature and informational texts.	7	9	5.5
Writing			
Types of Writing Students write an essay demonstrating effective techniques appropriate for type and purpose of writing.	8	12	6.9
Language Students demonstrate command of the conventions of standard English grammar and usage, capitalization, punctuation, and spelling, as well as use knowledge of language and its conventions for effect.	14	18	11.0
Text-Dependent Analysis			
Text-Dependent Analysis Students write a response to literature or informational passage or passages, drawing on the evidence presented in the text to support analysis, reflection, and/or research.	16	16	9.9
Reading Text Types			
Literature Text Students read and respond to literature passages, focusing on narrative, poetic, and/or dramatic techniques and drawing on evidence in the text to support comprehension and interpretation.	14	19	13.3
Informational Text Students read and respond to informational passages, focusing on the information and evidence presented on topics, ideas, or procedures and drawing on evidence in the text to support comprehension and interpretation.	18	19	13.3

* In the box below, all points in the Literature Text Reporting Category and all points in the Informational Text Reporting Category are included within the Reading Reporting Categories above. Each PSSA Reading question counts only once in determining the student's scale score.

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Please explain.

_____

_____

_____

_____

_____

_____

_____

_____

_____

4. Which version of the ELA dual reporting footnote do you prefer and why?

_____ version 1

The English Language Arts PSSA Reading section includes passages with a set of questions measuring the Reading Reporting Categories above. Passages are either Literature Text or Informational Text. Therefore, each PSSA Reading question measures one of the Reading Reporting Categories and one of the Text Type Reporting Categories. Each PSSA Reading question counts only once in determining the student's scale score.

_____ version 2

In the box below, all points in the Literature Text Reporting Category and all points in the Informational Text Reporting Category are included within the Reading Reporting Categories above. Each PSSA Reading question counts only once in determining the student's scale score.

Please explain.

_____

_____

_____

REPORT OPTIONS–VERSION 1 OR VERSION 2?

5. Now that you have reviewed the two reports, please select the preferred option from each group below.

_____ Strength Profile information
_____ Just Proficient Mean information

_____ Reading Text Type table placement directly after the Reading score reporting table
_____ Reading Text Type table placement directly after the entire ELA score reporting table

_____ ELA dual reporting footnote – version 1
_____ ELA dual reporting footnote – version 2

Additional Comments and Recommendations

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APPENDIX S: MODE STUDY

The PSSA tests in mathematics, English language arts, and science are administered in both paper- and computer-based formats. In the Standards for Educational and Psychological Testing (AERA et al., 2014) comparability of scores across testing conditions is emphasized as means to support fairness in testing, stating that, "Comparability of scores enables test users to make comparable inferences based on the scores for all test takers" (AERA et al., 2014, p. 59). As PSSA scores are intended be interpreted in the same manner across test modes, it is important to assess the invariance of measurement across modes and subgroups of examinees.

An important consideration in evaluating mode effects is sample size. Online participation rates in the PSSAs remain mostly under 5%, making it challenging to assess score comparability across modes due to likely limitations in the generalizability of results of to the full population of examinees. Table 22 displays the counts and percentages of paper-based and online test administration in 2018. Percentages increased from 2017 by roughly 1-2 percentage points.

Table 1. Final N-Counts and Percent by Mode, 2018

Subject	Grade	N-Counts Paper	N-Counts CBT	Proportion (%) Paper	Proportion (%) CBT
Mathematics	3	119935	2925	97.62	2.38
Mathematics	4	123495	3073	97.57	2.43
Mathematics	5	122064	5009	96.06	3.94
Mathematics	6	120357	5126	95.91	4.09
Mathematics	7	118532	5707	95.41	4.59
Mathematics	8	118657	5884	95.28	4.72
ELA	3	119564	2808	97.71	2.29
ELA	4	123037	2982	97.63	2.37
ELA	5	121934	4710	96.28	3.72
ELA	6	120076	5218	95.84	4.16
ELA	7	118180	5886	95.26	4.74
ELA	8	118147	5992	95.19	4.81
Science	4	122490	3769	97.01	2.99
Science	8	116361	7643	93.84	6.16

Until online participation reaches sufficiently large sample sizes, any true population differences between scores on the paper- and computer-based modes may be difficult to distinguish from differences that are attributable to sampling and random error. In the interim, however, this analysis of person fit statistics was conducted to gain some insight into whether evidence of mode or examinee subgroup effects exist, in addition to assessing the main effects for each condition and group. The questions investigated here are, 1) are there differences in model person fit for Male/Female, IEP/Non-IEP, EL/Non-EL, Black/Non-Black, Hispanic/Non-Hispanic, and White/Non-White examinees, and 2) are there differences in model person fit for online/paper for test takers by gender, IEP, EL, and ethnicity? Results of these analyses do not suggest that mode effects are present for online versus paper, overall, or for any identified student group. However, for some tests, results show small to midsized main effects for IEP, EL, Black, and Hispanic students, noting that mean person fit values for all groups are well within acceptable fit ranges.

METHOD

The data used in this study are from the final calibration samples for the 2018 administration of the PSSAs. Case counts for each of the 14 assessments, for online and paper are provided in Table 1.

Englehard (2009) provides a framework and methods for defining measurement quality in terms of measurement invariance across conditions and sub-populations as measured by model fit (by item—differential item function or "DIF," and by person—differential person functioning or "DPF"). The method employed used residual analysis to explore differences between observed and expected responses by individuals and groups, under different conditions, and given a specified item response theory (IRT) model. Although they are not exact tests of fit, these methods allow for insight into the invariance properties of an assessment through these types of fit analyses. In this study, the preliminary focus is on person fit at the test level. Item level analyses were conducted for each of these tests, but are not reported here in detail as no item showed a mode interaction effect size greater than 0.00.

The IRT model used for the PSSA is based on the work of Georg Rasch. The Rasch partial credit model (RPCM; Wright and Masters, 1982) was used to calibrate PSSA items because both multiple-choice (MC) and open-ended (OE) items were part of the assessment. The RPCM extends the Rasch model (Rasch, 1960) for dichotomous (0, 1) items so that it accommodates the polytomous OE item data. Under the RPCM, for a given item i with mi score categories, the probability of person n scoring x (x = 0, 1, 2,... m_i) is given by:

$$P_{ni}(X = x) = \frac{\exp \sum_{j=0}^{x} (\theta_n - D_{ij})}{\sum_{k=0}^{m_i} \exp \sum_{j=0}^{k} (\theta_n - D_{ij})},$$

where θ_n represents a student's proficiency (ability) level, and D_{ij} is the step difficulty of the j^{th} step on item i. For dichotomous MC items, the RPCM reduces to the standard Rasch model and the single step difficulty is referred to as the item's difficulty. The Rasch model predicts the probability of person n getting item i correct as follows:

$$P_{ni}(X = 1) = \frac{\exp(\theta_n - D_{ij})}{1 + \exp(\theta_n - D_{ij})}.$$

The Rasch model places both student ability and item difficulty (estimated in terms of log-odds or logits) on the same continuum. When the model assumptions are met, the Rasch model provides estimates of a person's ability which are independent of the items employed in the assessment, and conversely, estimates item difficulty independently of the sample of examinees. Item calibration was implemented via WINSTEPS 3.81.00 computer program (Wright and Linacre, 2014), which employs unconditional (UCON), joint-maximum-likelihood estimation (JMLE).

To produce person fit values, residuals of IRT model (essentially the differences between observed and expected responses) are summarized to create the mean square error statistics (MSE) of Infit and Outfit for items and persons. In this study, we use the unstandardized measures of Infit and Outfit, which are essentially MSE residuals and have expected values of 1.0 and a standard deviation of about 0.2 (Bond, & Fox, 2007). Such values represent adequate fit, whereas values greater than 2.0 represent more variability than expected, and less than 1.0 can mean students did not independently respond to items. In this study, Infit and Outfit values for persons were produced in WINSTEPS and the main, and interaction effects by condition (mode and item) and group (student groups) were produced by SAS® PROC GLM. The student groups examined are by:

- Gender (male or female)
- Ethnicity (dummy variables created for: Black, Hispanic, and White)
- English language learner status (EL, yes or no)
- Individualized education plan (IEP, yes or no)

The proportion of variance (η^2) explained by condition, group, and condition by group interaction in the person fit measure was also computed.

RESULTS

A summary of person fit means, standard deviations, effect sizes is provided in this section. Findings suggest that group effects are present in most tests for IEP students, and in some tests for EL Black, and Hispanic students. All mode and subgroup mean fit statistics are reported in Appendix B, but due to table lengths if all effect sizes are included, only mode and subgroup statistics are provided. Regarding effects sizes, only significant effects with => 0.01 are provided in this report. Effect sizes for small to moderate effects are noted in Tables 2 (Infit) and 3 (Outfit).

Summary of Means and Standard Deviations

Summary statistics for both Infit and Outfit values are provide by mode and examinee subgroups in Tables 2 and 3. As there were no interaction effects, > 0.01, these cells are omitted from the tables. Across all conditions and groups, Infit mean values ranged from 0.96 to 1.04, falling very close to 1. Standard deviations for Infit range from 0.12 to 0.23. Outfit means ranged from 0.97 1.21 and the standard deviations ranged from 0.14 to 0.40.

Summary of Fixed Effects by Mode, Mode and Subgroup

Person Infit and Outfit main effect sizes for mode and group effects with => 0.01 are also summarized in Tables 2 and 3. Although many of the between groups main and interaction effects were statistically significant, the overwhelming majority of effect sizes were <.0001. The absence of interactions effects between mode and subgroups provides some evidence that measurement invariance across the two modes appears to hold for each of the subgroups included in the model. In other words, there are only negligible differences in model fit between modes for all subgroups.

There is, however, some consistency to the pattern of significant, small to medium effects sizes between subgroups overall, in that the IEP group more often than not shows small to medium effect sizes, particular for Outfit values. This means that the calibration model is fitting slightly differently for IEP students, however mean fit values for all groups are well within acceptable ranges. Additionally, a similar, but slightly less consistent pattern is noted for EL, Black, and Hispanic students, particularly in Mathematics.

Refer to Tables 2 and 3 for the mode and group effects for factors with $\eta 2$ => 0.01, and corresponding infit and outfit means and standard deviations. All interaction effects and item level effects were < 0.01 so are not included in the table.

Table 2. Significant Infit Group Effects Equal to or Greater than 0.01

Content	Grade	Subgroup	Subgroup N	Infit Mean	Infit Std. Dev.	η^2
ELA	3	IEP (non-IEP)	18501 (103871)	1.04 (1.00)	0.22 (0.22)	0.01
ELA	3	Black (non-Black)	18579 (103793)	1.02 (1.00)	0.22 (0.22)	0.01
Mathematics	3	IEP (non-IEP)	18558 (104302)	1.03 (0.99)	0.17 (0.20)	0.01
Mathematics	6	IEP (non-IEP)	20588 (104895)	1.03 (0.97)	0.15 (0.21)	0.01
Mathematics	7	IEP (non-IEP)	19189 (104420)	1.04 (0.97)	0.15 (0.23)	0.01
Mathematics	8	IEP (non-IEP)	19662 (104879)	1.04 (0.96)	0.15 (0.20)	0.01
Mathematics	8	Black (non-Black)	17100 (107441)	1.01 (0.97)	0.16 (0.20)	0.01
Science	4	IEP (non-IEP)	20795 (105464)	1.03 (0.99)	0.13 (0.13)	0.01
Science	8	IEP (non-IEP)	19522 (104482)	1.02 (0.99)	0.12 (0.12)	0.01

Table 3. Significant Outfit Effects Equal to or Greater than 0.01

Content	Grade	Subgroup	N	Outfit Mean	Outfit Std. Dev.	η^2
ELA	3	EL (non-EL)	3726 (118646)	1.12 (0.99)	0.31 (0.27)	0.01
ELA	3	IEP (non-IEP)	18501 (103871)	1.12 (0.98)	0.33 (0.26)	0.04
ELA	3	Black (non-Black)	18579 (103793)	1.07 (0.99)	0.31 (0.27)	0.01
ELA	3	Hispanic (non-Hisp.)	14340 (108032)	1.06 (0.99)	0.29 (0.27)	0.01
ELA	5	IEP (non-IEP)	21164 (105480)	1.12 (1.00)	0.34 (0.32)	0.02
ELA	7	EL (non-EL)	2498 (121568)	1.21 (1.01)	0.40 (0.32)	0.01
ELA	7	IEP (non-IEP)	19855 (104211)	1.12 (1.00)	0.33 (0.32)	0.02
Mathematics	3	IEP (non-IEP)	18558 (104302)	1.08 (0.99)	0.24 (0.23)	0.02
Mathematics	3	Black (non-Black)	18681 (104179)	1.06 (0.99)	0.23 (0.23)	0.01
Mathematics	4	IEP (non-IEP)	20824 (105744)	1.08 (0.99)	0.23 (0.20)	0.02
Mathematics	4	Black (non-Black)	19030 (107538)	1.07 (0.99)	0.23 (0.21)	0.02
Mathematics	5	EL (non-EL)	2852 (124221)	1.07 (1.00)	0.21 (0.24)	0.02
Mathematics	5	IEP (non-IEP)	21213 (105860)	1.07 (0.98)	0.23 (0.24)	0.02
Mathematics	6	IEP (non-IEP)	20588 (104895)	1.07 (0.97)	0.19 (0.22)	0.03
Mathematics	6	Black (non-Black)	17960 (107523)	1.05 (0.98)	0.18 (0.22)	0.01
Mathematics	7	EL (non-EL)	2489 (121750)	1.15 (0.98)	0.16 (0.25)	0.01
Mathematics	7	IEP (non-IEP)	19819 (104420)	1.12 (0.96)	0.26 (0.28)	0.04
Mathematics	7	Black (non-Black)	17578 (106661)	1.08 (0.97)	0.25 (0.29)	0.02
Mathematics	7	Hispanic (non-Hisp.)	13757 (110482)	1.06 (0.98)	0.25 (0.29)	0.01
Mathematics	8	EL (non-EL)	2394 (122147)	1.16 (0.99)	0.24 (0.25)	0.01
Mathematics	8	IEP (non-IEP)	19662 (104879)	1.13 (0.97)	0.25 (0.25)	0.05
Mathematics	8	Black (non-Black)	17100 (107441)	1.09 (0.98)	0.24 (0.25)	0.02
Mathematics	8	Hispanic (non-Hisp.)	13312 (111229)	1.07 (0.99)	0.24 (0.26)	0.01
Science	4	EL (non-EL)	3463 (122796)	1.07 (1.00)	0.18 (0.16)	0.01
Science	4	IEP (non-IEP)	20795 (105464)	1.06 (0.99)	0.18(0.15)	0.02
Science	4	Black (non-Black)	18967 (107292)	1.05 (0.99)	0.18 (0.15)	0.02
Science	4	Hispanic (non-Hisp.)	14608 (111651)	1.03 (1.00)	0.17 (0.16)	0.01
Science	8	EL (non-EL)	2372 (121632)	1.08 (1.00)	0.15 (0.13)	0.01
Science	8	IEP (non-IEP)	19522 (104482)	1.04 (0.99)	0.15 (0.13)	0.02
Science	8	Black (non-Black)	16959 (107045)	1.03 (1.00)	0.14 (0.13)	0.01

APPENDIX T: SUPPLEMENTAL VALIDITY EVIDENCE SUBMITTED FOR PEER REVIEW

As defined in the Standards (AERA, APA, & NCME, 2014), validity is defined as, "the degree to which evidence and theory support the interpretations of test scores for proposed uses of tests." The 2015 and 2016 Pennsylvania System of School Assessment (PSSA) tests in mathematics, English language arts (ELA) Technical Reports Chapter Nineteen document detailed validity arguments based on 5 sources of evidence—evidence related to 1) content, 2) response processes, 3) internal test structure, 4) relation to other variables, and 5) testing consequences.

As multiple measures to provide ongoing evidence within these five sources are desired, several additional analyses were conducted, including 1) an analysis of how well the PSSA scores predict performance (predictive validity) on high school exams in Algebra I and Literature (Keystone exams), and 2) multiple comparisons of PSSA mathematics and ELA results with other external criteria. These studies provide additional evidence in support of arguments for the convergent and discriminant validity of the PSSA test results detailed in the 2015 and 2016 PSSA Technical Reports referenced above. This report provides a summary of these seven additional analyses and results:

- Keystone predictions
- PSSA relation to other variables:
    - PSSA mathematics and ELA relationship with NAEP
    - PSSA mathematics and ELA relationship with Classroom Diagnostic Tools (CDT)
    - PSSA ELA relationship with GRADE (Group Reading Assessment and Diagnostic Evaluation) literacy assessments
    - PSSA mathematics and ELA relationship with Terra Nova Complete Battery ELA and mathematics
    - PSSA mathematics and ELA relationship with teacher ratings of student proficiency
    - PSSA mathematics and ELA subscore correlations

The results of these analyses provide reasonably strong evidence of the convergent and discriminant validity of the PSSA, as well its relationship with college and career readiness expectations.

KEYSTONE PREDICTIONS

Predictive validity indicates the extent to which an individual's future level on a criterion is predicted from prior test performance. The predictive validity of the PSSA assessments of future high school and college and career readiness was evaluated using grade 8 PSSA scores from 2015 matched at the student level to their respective Keystone scores for Algebra I and Literature from 2016 to construct and validate an empirical link between the grade 8 PSSA tests and Keystone performance. The total matched sample size for ELA and literature was 7,143 and was 92,885 for mathematics and algebra I.

First, correlations between PSSA and Keystone scores to assess the nature and strength of the relationship between these variables were examined. Correlations between ELA and Literature and mathematics and algebra I were both 0.83, showing strong relationships between the PSSA and Keystone scores. Second, simple linear regression models for each content area (mathematics and ELA) using corresponding Keystone scores as the criterion, and PSSA grade 8 scores as the predictor variables were constructed using a random split half procedure (SAS® Survey Procedure) to establish training and validation data sets.

The amount of variability in the Keystone scores explained by the PSSA scores was 0.68 for both algebra I and literature. The regression constants (intercept and slope, noted in Tables 1 and 2) were used to predict scores for the validation set, and correlations between observed and predicted Keystone scores were evaluated. Correlations between the observed and predicted Keystone scores in the validation data set was 0.83 for both algebra I and literature. Figures 1 and 2 show scatter plots for observed versus predicted scores, where predictions along most of the score range are very good, with some degradation of predictability at higher score levels. The total sample size for the training model for ELA was 3,572 and 46,443 for mathematics to Algebra.

Table 1. Parameter Estimates of Prediction Model for ELA to Literature

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	1107.89	4.71	235.28	<.0001
Slope	1	0.40	0.00	86.79	<.0001

Table 2. Parameter Estimates of Prediction Model for Mathematics to Algebra I

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	1017.40	1.55	658.48	<.0001
Slope	1	0.51	0.00	317.12	<.0001

Figure 1. Relationship of Observed v. Predicted Scores – Keystone Algebra I

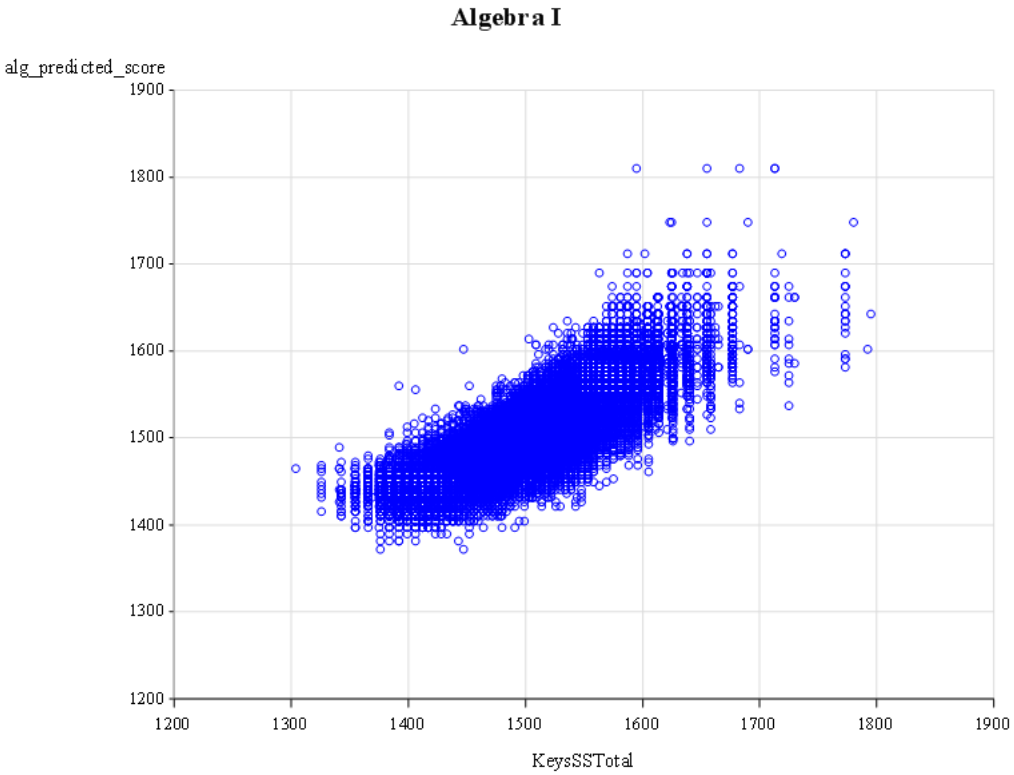
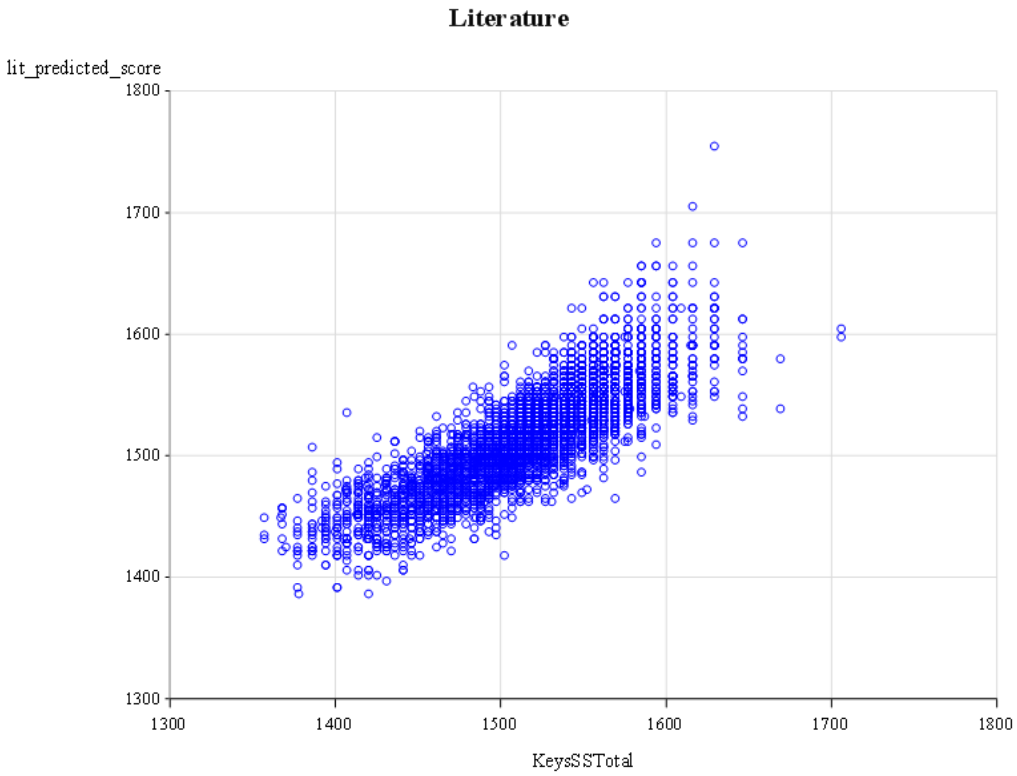


Figure 2. Relationship of Observed v. Predicted Scores – Keystone Literature



Both prediction models showed good fit. Figures 3 and 4 display residual plots for Keystone Algebra and Literature, respectively.

Figure 3. Model Fit Residual Plot – Keystone Algebra I

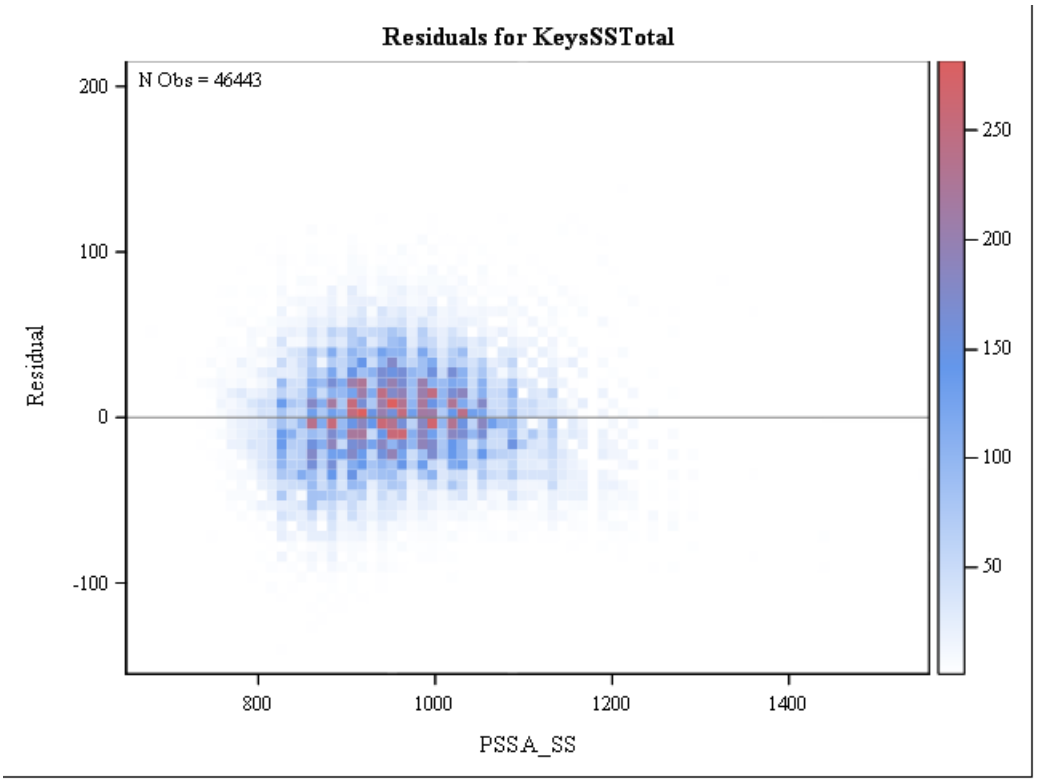
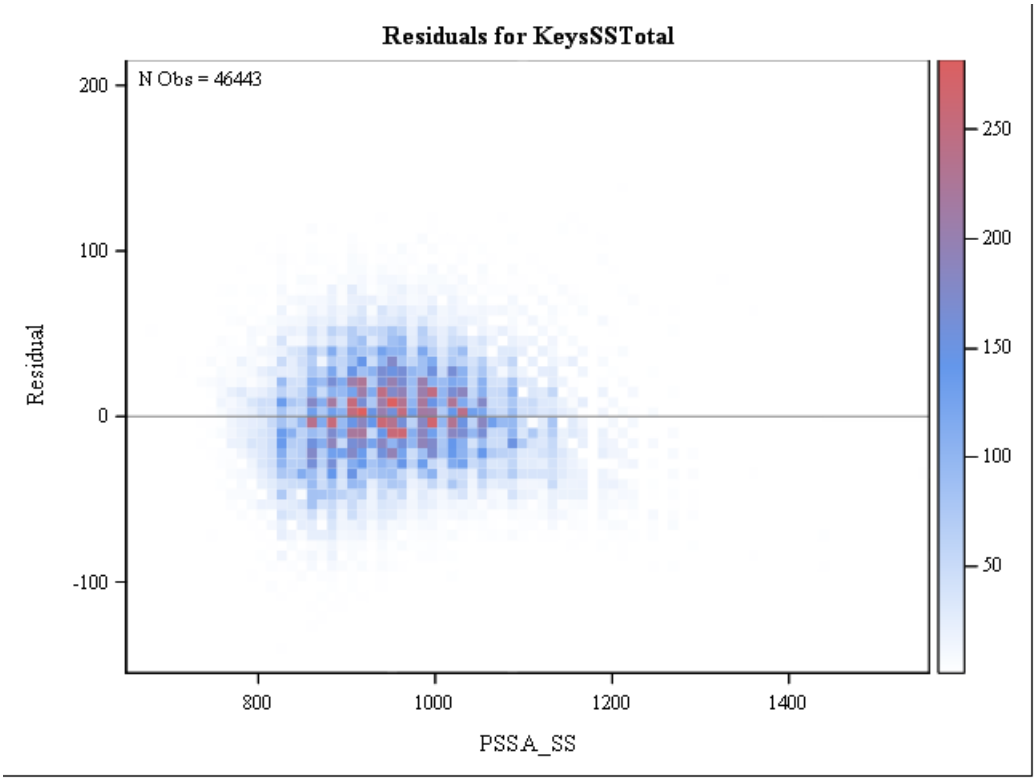


Figure 4. Model Fit Residual Plot – Keystone Literature



As longitudinal data to track post-secondary performance of PSSA and Keystone examinees is not available, the empirical prediction results provided here rely on both the content based articulation of performance expectations in grades 3-8 ELA and mathematics, as well as the participation of experts on college and career readiness during the Keystone standard setting process.

Although the grades 3-8 PSSA tests are not scaled on a common vertical scale, they are constructed to be closely aligned with the construct embodied in the Pennsylvania Core Standards which is well articulated from grade to grade. Refer to the Pennsylvania Core Standards and Chapters Two and Three of the 2015 and 2016 technical reports which describe this articulation and corresponding content development procedures in detail. The PSSA Standard Setting 2015 Report provides a detailed description of the articulation of performance level descriptors across grades 3 through 8 as well. Refer to the PSSA 2015 Standard Setting Report for details.

Additionally, learning progressions were developed by PDE and its curriculum consultants to show the developmental sequences or building blocks of content/skills students need to master as they progress toward career and college readiness. The progressions were developed for each content area (i.e., English language arts, mathematics, and science.) They served and continue to serve as roadmaps or the pathways (K-12) that students travel as they progress toward mastery of the skills needed for career and college readiness. As such, each learning progression was developed to provide teachers with the opportunity to determine whether students have navigated successfully through the building blocks and are able to move forward along the road to career and college readiness for a given content area. Each progression also provides teachers with the opportunity to identify students who may need additional instruction in a given content area, as well as to identify students who have navigated successfully beyond the building blocks or mileposts for each grade and/or course and are in need of accelerated curriculum. The learning progressions are based upon the Pennsylvania Core Standards, the Assessment Anchors, and the Eligible Contents and as such also provide evidence of the linkage between PSSA and Keystone addressing career and college readiness success with interpretations.

The learning progressions were developed by PDE and its curriculum experts in 2009. Upon the initial development of the learning progression, the progressions were reviewed by Pennsylvania educators to confirm alignment to the Pennsylvania Standards and to confirm that the progressions, do, in fact, serve to show the development sequences of content/skills students need to master as they progress toward career and college readiness. At this meeting with educators, PDE and its vendor provided information about the development of the learning

progressions, the purpose of the progressions, and the actual progressions for each content area. The committees of Pennsylvania educators reviewed the progressions, which serve to show the vertical articulation of the Pennsylvania Standards, Assessment Anchors and Eligible Content across grades within a given subject area. Pennsylvania educators were asked to confirm that the progressions were an accurate representation of how the content/skills included in the Pennsylvania Standards progressed across grades and provided a broad description of the essential content and general sequencing for student learning and skill development as each student progresses toward college and career readiness.

Beginning 2010, the learning progressions have continued to be used during item reviews. For example, during each subsequent review of items for potential use on the PSSA assessments, Pennsylvania educators, in addition to reviewing items for alignment to the standards, cognitive complexity, technical quality, etc. also review items for alignment to the learning progressions. The learning progressions demonstrate the content/skills linkage between the PSSA and Keystone and to show their relationship with career and college readiness success.

Last, during the Keystone Standard Setting in 2011, Pennsylvania students' performance on the PSSA, NAEP, and SAT, was investigated. The results were presented to panelists during the Keystone Standard Setting process before making their final cut score judgments. The results presented were as follows:

- PSSA and NAEP results were based on students' performance in 2009. The PSSA results were from grades 6–8 and 11. The NAEP results were from grade 8.
- All students in grades 6–8 and 11 in Pennsylvania took the PSSA. A sample that represents the Pennsylvania grade 8 students took the NAEP tests.
- The SAT results were based on the performance of students who took the SAT in 2010 or prior years.
- About 99% of students in the 2010 SAT data file indicated their expected graduation dates were in 2010; most of these students were in grade 11 in 2009. Therefore, the 2010 SAT data and the 2009 PSSA data were matched.
- Based on the matched sample, it was found that students with higher PSSA scores were more likely to take the SAT. To represent the full population in terms of demographics and PSSA scores, the matched sample was weighted by students' demographics and PSSA scores when calculating the impacts.

While discussing the external data, panelists were reminded that all these tests were created for different purposes and might cover different content standards. Before panelists provided their final judgments, they were instructed to fill out the readiness form to make sure they understood how to adjust their placements (if they desired to do so) based on external impact data. Final cut scores were established through application of the Bookmark Standard Setting Method (Lewis, Mitzel, Green, & Patz, 1999) on the Keystone tests by panelists that included CCR experts from colleges and universities, providing a non-empirical link between panelist expectations when evaluating college student performance and their respective decisions about PSSA performance expectations. Full details on method and results are documented in the Keystone Standard Setting Technical report: Algebra I, Biology, and Literature. Refer to Spring 2011 Keystone Standard-Setting Report.

RELATIONSHIP BETWEEN PSSA MATHEMATICS AND NAEP PERFORMANCE

To provide evidence of the convergent validity of PSSA mathematics and ELA performance level classifications with a rigorous established measure, the percentages of proficient and above as established by the PSSA cut scores for mathematics and ELA were compared to the NAEP Pennsylvania State and US Nation level results using 2015 test results. Tables 3 through 6 show these comparisons.

Although the percentages in each performance level vary somewhat between the PSSA and NAEP Pennsylvania-specific results, the percent of proficient and above in mathematics is nearly identical in grade 4 with 44% of students classified as proficient and above on the PSSA, and 45% with the same classification on NAEP. In grade 8, 59% of students were classified as proficient and above, compared with 42% on NAEP.

The correspondence between PSSA and NAEP percentages of proficient and above for ELA is not as strong as mathematics, but this might be expected due to the differences in the constructs measured. The PSSA ELA tests target both reading and writing domains, where NAEP assesses reading only. The percent proficient for grade 4 was 59% for PSSA ELA, and 42 for NAEP reading in Pennsylvania, showing reasonable alignment given the difference in constructs measured.

Writing was not tested in the 2015 NAEP administration, so the 2011 percentages are included for the national level as reference only. The 2011 NAEP administration pre-dates the development of the current PSSA tests in ELA and mathematics.

These results show reasonably strong support for the convergent validity of PSSA performance classifications, considering the good construct alignment between PSSA and NAEP mathematics and the weaker alignment between PSSA ELA and NAEP reading.

Table 3. PSSA and NAEP Mathematics Grade 4 Comparison, 2015 (% Impact)

Performance Level	PSSA	NAEP PA*	NAEP Nation*
Below Basic	25	17	19
Basic	31	38	42
Proficient	28	35	32
Advanced	17	10	7
Prof. + Adv.	44	45	41

*Retrieved at: http://www.education.pa.gov/K-12/Assessment%20and%20Accountability/Pages/National-Assessment.aspx#tab-1

Table 4. PSSA and NAEP Mathematics Grade 8 Comparison, 2015 (% Impact)

Performance Level	PSSA	NAEP PA*	NAEP Nation*
Below Basic	38	28	30
Basic	33	36	38
Proficient	22	27	24
Advanced	8	10	8
Prof. + Adv.	30	37	32

*Retrieved at: http://www.education.pa.gov/K-12/Assessment%20and%20Accountability/Pages/National-Assessment.aspx#tab-1

Table 5. PSSA ELA and NAEP Grade 4 Comparison (% Impact)

Performance Level	PSSA	NAEP PA (Reading, 2015)*	NAEP Nation (Reading, 2015)*
Below Basic	13	26	32
Basic	29	32	33
Proficient	37	31	27
Advanced	22	11	8
Prof. + Adv.	59	42	35

*Retrieved at: http://www.education.pa.gov/K-12/Assessment%20and%20Accountability/Pages/National-Assessment.aspx#tab-1

Table 6. PSSA ELA and NAEP Grade 8 Comparison (% Impact)

Performance Level	PSSA	NAEP PA (Reading, 2015)*	NAEP Nation (Reading, 2015)*	NAEP Nation (Writing, 2011)*
Below Basic	11	22	25	20
Basic	31	38	42	53
Proficient	44	35	29	24
Advanced	15	5	3	3
Prof. + Adv.	59	40	32	27

*Retrieved at: http://www.education.pa.gov/K-12/Assessment%20and%20Accountability/Pages/National-Assessment.aspx#tab-1

RELATIONSHIP BETWEEN PSSA ELA AND MATHEMATICS AND CLASSROOM DIAGNOSTIC TOOLS (CDT)

The relationship between the 2015 and 2016 PSSA and Classroom Diagnostic Tools (CDT) was examined in terms of concurrent validity. The relationship between the 2017 PSSA and Classroom Diagnostic Tools (CDT) was examined in terms of both concurrent and discriminant validity The CDT is a set of online assessments (literacy, mathematics, and science) and is designed to provide diagnostic information to guide instruction in support of intervention and enrichment. Both the PSSA and the CDT testing programs are constructed to be explicitly aligned to the same Pennsylvania Core Standards and Assessment Anchors and Eligible Content, making the CDT a good candidate with which to assess the strength of the PSSA's relationship to other established measures over time, with the caveat that current CDT participation rates may not yet be fully representative of student populations in the Commonwealth of Pennsylvania as the CDT is optional.

For each content area, PSSA results for the Spring 2015, 2016, and 2017 administrations were matched to CDT results from the 2014–2015, 2015-2016, and 2016-2017 school years, respectively. The correlations between students' total scale scores on the CDT and the PSSA are presented in Tables 7 through 9.

Table 7. Correlation between CDT and PSSA Exams Scores, Within Subjects

Student Grade	CDT Test	PSSA Test	*N*	Correlation of Total Scale Scores
3	Mathematics Lower Grades	PSSA Mathematics Grade 3	25,615	0.785
4	Mathematics Lower Grades	PSSA Mathematics Grade 4	26,535	0.797
5	Mathematics Lower Grades	PSSA Mathematics Grade 5	27,661	0.811
6	Mathematics	PSSA Mathematics Grade 6	33,762	0.832
7	Mathematics	PSSA Mathematics Grade 7	32,577	0.812
8	Mathematics	PSSA Mathematics Grade 8	24,986	0.770
3	Reading Lower Grades	PSSA ELA Grade 3	25,589	0.789
4	Reading Lower Grades	PSSA ELA Grade 4	27,096	0.816
5	Reading Lower Grades	PSSA ELA Grade 5	27,220	0.821
6	Reading/Literature	PSSA ELA Grade 6	31,539	0.815
7	Reading/Literature	PSSA ELA Grade 7	33,154	0.804
8	Reading/Literature	PSSA ELA Grade 8	33,626	0.783
4	Science Lower Grades	PSSA Science Grade 4	9,233	0.782
8	Science	PSSA Science Grade 8	26,227	0.801
3	Writing Lower Grades	PSSA ELA Grade 3	3,261	0.771
4	Writing Lower Grades	PSSA ELA Grade 4	3,314	0.799
5	Writing Lower Grades	PSSA ELA Grade 5	5,075	0.796
6	Writing/English Composition	PSSA ELA Grade 6	6,288	0.797
7	Writing/English Composition	PSSA ELA Grade 7	6,907	0.786
8	Writing/English Composition	PSSA ELA Grade 8	7,584	0.767

Table 8. Correlation between CDT and PSSA Exams Scores 2016, Within Subjects

Student Grade	CDT	PSSA Test	*N*	Correlation of Total Scale Scores
3	Math Grades 3-5	PSSA Math Grade 3	26,490	0.801
4	Math Grades 3-5	PSSA Math Grade 4	28,700	0.819
5	Math Grades 3-5	PSSA Math Grade 5	30,542	0.821
6	Math Grades 6-8	PSSA Math Grade 6	32,675	0.840
7	Math Grades 6-8	PSSA Math Grade 7	32,557	0.832
8	Math Grades 6-8	PSSA Math Grade 8	26,795	0.807
3	Reading Grades 3-5	PSSA ELA Grade 3	23,381	0.804
4	Reading Grades 3-5	PSSA ELA Grade 4	25,180	0.808
5	Reading Grades 3-5	PSSA ELA Grade 5	26,057	0.830
6	Reading/Lit Grades 6-HS	PSSA ELA Grade 6	31,607	0.808
7	Reading/Lit Grades 6-HS	PSSA ELA Grade 7	33,000	0.796
8	Reading/Lit Grades 6-HS	PSSA ELA Grade 8	32,151	0.782
4	Science Grades 3-5	PSSA Science Grade 4	8,969	0.799
8	Science Grades 6-HS	PSSA Science Grade 8	25,068	0.782
3	Writing Grades 3-5	PSSA ELA Grade 3	3,727	0.795
4	Writing Grades 3-5	PSSA ELA Grade 4	4,031	0.788
5	Writing Grades 3-5	PSSA ELA Grade 5	4,100	0.793
6	Writing/Eng Comp Gr 6-HS	PSSA ELA Grade 6	7,061	0.792
7	Writing/Eng Comp Gr 6-HS	PSSA ELA Grade 7	7,535	0.780
8	Writing/Eng Comp Gr 6-HS	PSSA ELA Grade 8	7,713	0.749

Table 9. Correlation between CDT and PSSA Exams Scores 2017, Within and Across Subjects

Student Grade	CDT	PSSA Test	*N*	Correlation of Total Scale Scores
3	Mathematics - Lower Grades	PSSA ELA Grade 3	22755	0.721
4	Mathematics - Lower Grades	PSSA ELA Grade 4	26002	0.732
5	Mathematics - Lower Grades	PSSA ELA Grade 5	28034	0.741
6	Mathematics	PSSA ELA Grade 6	35516	0.744
7	Mathematics	PSSA ELA Grade 7	34642	0.747
8	Mathematics	PSSA ELA Grade 8	29887	0.732
3	Reading - Lower Grades	PSSA ELA Grade 3	19668	0.808
4	Reading - Lower Grades	PSSA ELA Grade 4	21778	0.815
5	Reading - Lower Grades	PSSA ELA Grade 5	24070	0.819
6	Reading/Literature	PSSA ELA Grade 6	30280	0.808
7	Reading/Literature	PSSA ELA Grade 7	32426	0.799
8	Reading/Literature	PSSA ELA Grade 8	31568	0.783
3	Science - Lower Grades	PSSA ELA Grade 3	2457	0.774
4	Science - Lower Grades	PSSA ELA Grade 4	11830	0.755
5	Science - Lower Grades	PSSA ELA Grade 5	2312	0.737
6	Science	PSSA ELA Grade 6	10358	0.736
7	Science	PSSA ELA Grade 7	16817	0.724
8	Science	PSSA ELA Grade 8	26724	0.704
3	Writing - Lower Grades	PSSA ELA Grade 3	3193	0.789
4	Writing - Lower Grades	PSSA ELA Grade 4	3486	0.806
5	Writing - Lower Grades	PSSA ELA Grade 5	4788	0.802
6	Writing - English Comp	PSSA ELA Grade 6	7538	0.821
7	Writing - English Comp	PSSA ELA Grade 7	9531	0.796
8	Writing - English Comp	PSSA ELA Grade 8	9792	0.773
3	Mathematics - Lower Grades	PSSA Math Grade 3	22784	0.800
4	Mathematics - Lower Grades	PSSA Math Grade 4	26058	0.816
5	Mathematics - Lower Grades	PSSA Math Grade 5	28062	0.822
6	Mathematics	PSSA Math Grade 6	35481	0.836
7	Mathematics	PSSA Math Grade 7	34653	0.839
8	Mathematics	PSSA Math Grade 8	29835	0.815
3	Reading - Lower Grades	PSSA Math Grade 3	19693	0.712
4	Reading - Lower Grades	PSSA Math Grade 4	21824	0.724
5	Reading - Lower Grades	PSSA Math Grade 5	24109	0.719
6	Reading/Literature	PSSA Math Grade 6	30244	0.737
7	Reading/Literature	PSSA Math Grade 7	32417	0.719
8	Reading/Literature	PSSA Math Grade 8	31486	0.700
3	Science - Lower Grades	PSSA Math Grade 3	2462	0.700

Student Grade	CDT	PSSA Test	*N*	Correlation of Total Scale Scores
4	Science - Lower Grades	PSSA Math Grade 4	11860	0.699
5	Science - Lower Grades	PSSA Math Grade 5	2312	0.678
6	Science	PSSA Math Grade 6	10358	0.694
7	Science	PSSA Math Grade 7	16819	0.701
8	Science	PSSA Math Grade 8	26667	0.677
3	Writing - Lower Grades	PSSA Math Grade 3	3195	0.691
4	Writing - Lower Grades	PSSA Math Grade 4	3492	0.710
5	Writing - Lower Grades	PSSA Math Grade 5	4797	0.707
6	Writing - English Comp	PSSA Math Grade 6	7524	0.734
7	Writing - English Comp	PSSA Math Grade 7	9522	0.712
8	Writing - English Comp	PSSA Math Grade 8	9778	0.685
4	Mathematics - Lower Grades	PSSA Science	25984	0.738
8	Mathematics	PSSA Science	29763	0.751
4	Reading - Lower Grades	PSSA Science	21747	0.779
8	Reading/Literature	PSSA Science	31421	0.754
4	Science - Lower Grades	PSSA Science	11782	0.778
8	Science	PSSA Science	26591	0.779
4	Writing - Lower Grades	PSSA Science	3487	0.727
8	Writing - English Comp	PSSA Science	9753	0.724

Note. Similar subject correlations are shaded in grey

The within subject correlations are strong, ranging from 0.749 to 0.840 across all three years. This illustrates a strong positive relationship between the PSSA and the CDT where the subjects are the same or similar. Conversely, the correlations between different content areas in 2017 are noticeable lower, ranging from 0.677 to 0.779, where most cross-subject correlations fall below 0.75. These patterns demonstrate reasonable convergent and discriminant validity of PSSA scores.

RELATIONSHIP BETWEEN PSSA ELA AND GRADE ASSESSMENTS

To provide additional evidence of convergent validity for the ELA assessments, PSSA 2016 scores were merged with data from the GRADE, which was administered to a self-selected sample participating in a literacy improvement program in Pennsylvania schools in 2016. About 8,000 to 9,000 examinees participated in the GRADE in each of grades 3-8 in 2016. The total sample size for analysis included all merged records for students who took both the GRADE and the PSSA. Final case counts (N) for merged records are noted in Table 10.

The GRADE is a norm referenced assessment with content that is similar to the PSSA ELA assessments (although not formally aligned to the Pennsylvania State Standards), and is intended to provide information about the reading strengths and needs of each student. Please refer to the GRADE technical manual for details regarding GRADE. Both Pearson Correlation Coefficients and disattenuated correlations of total test scores (in scale score units) are provided in Table 10. These results show strong evidence of the convergent validity between the PSSA ELA and GRADE test scores, with correlations ranging from 0.81 and 0.85.

Table 10. Correlation between PSSA and GRADE Scores

Grade	*N*	Correlation	Disattenuated Correlation
3	6777	0.85	0.91
4	7577	0.85	0.90
5	7795	0.85	0.91
6	8059	0.84	0.89
7	5810	0.82	0.88
8	5148	0.81	0.87

RELATIONSHIP BETWEEN PSSA ELA AND MATHEMATICS AND TERRA NOVA™, THIRD EDITION

To provide additional evidence of convergent and discriminant validity, PSSA 2016 scores were merged with data from two Pennsylvania School Districts (Hempfield Area School District and Upper Mooreland School District) that administered Terra Nova™, Third Edition Complete Battery assessments in mathematics and reading in grades 3, 5, and 7. Correlations were run between similar content areas to provide convergent validity evidence. Discriminant validity evidence can be found in correlations between different content areas that are lower than the correlations between the same or similar content areas, so these correlations were also computed.

Terra Nova™, Third Edition Complete Battery is a norm referenced assessment with content that is similar to the PSSA mathematics and ELA assessments (although not formally aligned to the Pennsylvania State Standards), and is intended to provide information about examinees' mathematics and reading achievement. Please refer to the Terra Nova 3 technical manual for details regarding the assessment.

Both Pearson Correlation Coefficients and disattenuated correlations of total test scores (in scale score units) are provided in Table 11. As the districts participating in Terra Nova assessments tended to be higher performing, showing some range restriction, interpretation of the disattenuated correlations may be more appropriate in this case. Results provide strong evidence of convergent validity between the PSSA and Terra Nova scores with disattenuated correlations ranging from 0.81 to 0.86. Discriminant validity evidence is provided by the systematically lower correlations and disattenuated correlations for cross content correlations, with disattenuated correlations ranging from 0.71 to 0.76.

Table 11. Correlation of PSSA and Terra Nova™, Third Edition Scores

Content	Grade	*N*	Correlation	Disattenuated Correlation
Mathematics	3	449	0.76	0.81
Mathematics	5	504	0.75	0.80
Mathematics	7	331	0.80	0.86
ELA/Reading	3	448	0.75	0.81
ELA/Reading	5	504	0.75	0.81
ELA/Reading	7	332	0.74	0.81
PSSA Mathematics/TN Reading	3	448	0.67	0.72
PSSA Mathematics/TN Reading	5	504	0.65	0.71
PSSA Mathematics/TN Reading	7	332	0.69	0.75
PSSA ELA/TN Mathematics	3	448	0.66	0.72
PSSA ELA/TN Mathematics	5	504	0.71	0.76
PSSA ELA/TN Mathematics	7	332	0.66	0.72

RELATIONSHIP BETWEEN PSSA ELA AND MATHEMATICS AND TEACHER RATINGS OF STUDENT PROFICIENCY

To better understand the strength of the relationship between PSSA test performance classifications and student performance in the classroom, a special study was conducted where teacher ratings of student performance were compared to PSSA results for 2017. In this case, classroom performance, as represented by teacher classifications, is an additional external criteria on which the PSSA relationship with other variables was measured.

In this study, a representative sample of at least 800 examinees was identified for each test, with a target of at least 100 students in the lowest and highest proficiency levels. Sampling occurred at the school level to reduce the potential burden on schools that may occur when sampling occurs at the student or teacher level. A random sample of 32 schools was drawn, followed by an additional selection of eight schools based on the following:

- Two elementary schools with highest percent of basic students
- Two elementary schools with highest percent of advanced students
- Two middle/high schools with highest percent of basic students
- Two middle/high schools with highest percent of advanced students

This extra layer of sampling was implemented to ensure a sufficiently robust sample of students at the highest and lowest levels of achievement. A list of 40 schools was ultimately generated in the manner described, and all teachers were invited to provide their ratings of performance for all students with whom they were sufficiently familiar. Assuming an average of two teachers per grade and content area (with elementary teachers rating both ELA and mathematics), the targeted number of teacher participants was approximately 30 for each PSSA test.

Four weeks prior to the first day of the Spring 2017 PSSA administration cycle, participating teachers attended training via Webex and then had three weeks prior to administration of the PSSA to respond to a brief online survey where they classified each eligible student in their respective classrooms into one of the four Pennsylvania performance categories (below basic, basic, proficient, and advanced) using the PSSA Performance Level Descriptors. Students in a teacher's classroom less than one-quarter of the school year were excluded from the study, as were any students who were ineligible to take the PSSA due to Pennsylvania State Policy, e.g. English language learners not in Pennsylvania schools for a sufficient period of time. Teachers were instructed to make classification decisions based on their observations of the in-class performance of each student. Data were then merged by the examinees' Pennsylvania secure IDs with their corresponding PSSA test scores.

A total of 101 teachers across 19 school districts provided a total of 7,698 ratings across mathematics and ELA, grades 3-8. Tables 12-19 provide demographic details for the participating teachers, as well as their feedback on the process itself.

Table 12. Frequency of Teachers by Gender

Gender	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Female	74	73.27	74	73.27
Male	25	24.75	99	98.02
Prefer Not to Answer	2	1.98	101	100.00

Table 13. Frequency of Teachers by Ethnicity

Ethnicity	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Black/African American (not Hispanic)	1	0.99	1	0.99
No ethnicity marked	3	2.97	4	3.96
White/Caucasian (not Hispanic)	97	96.04	101	100.00

Table 14. Frequency of Teachers by Role

Role	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Classroom Teacher	94	93.07	94	93.07
Special Education Instructor	7	6.93	101	100.00

Table 15. Frequency of Teachers by Geography

Geo	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Rural	50	49.50	50	49.50
Suburban	17	16.83	67	66.34
Urban	34	33.66	101	100.00

Table 16. Frequency of Teachers by Years of Experience

Years of Teaching	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0-5 years	30	29.70	30	29.70
11-15 years	20	19.80	50	49.50
16-20 years	21	20.79	71	70.30
20 or more years	15	14.85	86	85.15
6-10 years	15	14.85	101	100.00

Table 17. Frequency of Teachers Responding to Question of Process Clarity

Was the study process clear to you as you conducted your ratings?	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	11	10.89	11	10.89
Yes	90	89.11	101	100.00

Table 18. Frequency of Teachers Responding to Question of Consistency of Performance Level Descriptors and Classroom Performance Expectations

Did you find the Performance Level Descriptors to be consistent with classroom performance expectations?	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Consistent	52	51.49	52	51.49
Not consistent	6	5.94	58	57.43
Somewhat consistent	43	42.57	101	100.00

Table 19. Frequency of Teachers Responding to Question of How Well Performance Level Descriptors Describe Students

Overall, how well do the Performance Level Descriptors describe your students?	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1-Not at all	1	0.99	1	0.99
2	14	13.86	15	14.85
3-Satisfactory	65	64.36	80	79.21
4	17	16.83	97	96.04
5-Very well	4	3.96	101	100.00

Teacher performance level classifications were then compared to PSSA classifications based on the cut scores for each of the PSSA exams, noting that any correspondence was affected not only by the examinees earned scaled scores, but also by the established cut scores on the PSSAs. Table 20 provides the percentages of perfect, perfect +adjacent, and discrepant agreement, as well as the quadratic weighted kappa values between teacher ratings and PSSA classifications for each test. QWK is used here as a measure beyond basic percentages of agreement as it takes both chance and degree of disagreement into account. Generally, the rates of perfect and perfect +adjacent agreement are slightly higher for ELA than for mathematics. The quadratic weighted kappas range from 0.46 to 0.62.

Table 20. Rates of Agreement and Quadratic Weighted Kappa

Content	Grade	*N*	Percent Perfect Agreement	Percent Perfect +Adjacent Agreement	Percent Discrepant Agreement	Quadratic Weighted Kappa
Mathematics	3	505	52.67	92.67	7.33	0.53
Mathematics	4	516	50.00	94.96	5.04	0.51
Mathematics	5	532	47.37	91.92	8.08	0.47
Mathematics	6	708	59.46	97.60	2.40	0.60
Mathematics	7	923	59.26	97.50	2.49	0.62
Mathematics	8	762	50.92	94.62	5.38	0.53
ELA	3	493	55.17	96.95	3.04	0.53
ELA	4	547	57.40	97.25	2.74	0.56
ELA	5	457	47.05	96.94	3.06	0.46
ELA	6	855	60.00	98.71	1.29	0.54
ELA	7	705	60.14	98.72	7.28	0.54
ELA	8	695	60.86	98.70	1.29	0.54

As the rates of perfect and adjacent agreement are quite close, inspection of the direction of disagreement is important. The contingency tables (Tables 21-32) for mathematics show an overall pattern of teachers classifying students into higher performance levels than the PSSA classifications, where the opposite tends to be true for ELA. This shows a tendency for teachers to be generally more lenient in their mathematics ratings than the PSSA standards, and stricter than the PSSA standards for ELA.

Generally, the results show a moderate correspondence between teacher ratings and PSSA performance levels as might be expected due given natural differences in classroom practices and teacher relationships with students. Such circumstances can be expected to influence teacher ratings of the students with whom they work on a daily basis. Attrition of the targeted sample can also introduce some inconsistency of the results by reducing the number of teachers participating and, consequently, increasing the weight of any one teacher's ratings on the overall results. In this case, attrition from the targeted sample size ranged from about 30-50% for students rated, and about 50-60% for the number of teachers participating.

Table 21. Contingency Table – PSSA Performance by Teacher Rating of Performance, Math Grade 3

	Teacher Rating 1	Teacher Rating 2	Teacher Rating 3	Teacher Rating 4	Total
PSSA Performance 1	94	62	24	2	182
Frequency Percent	18.61	12.28	4.75	0.40	36.04
PSSA Performance 2	15	44	39	7	105
Frequency Percent	2.97	8.71	7.72	1.39	20.79
PSSA Performance 3	3	23	91	9	126
Frequency Percent	0.59	4.55	18.02	1.78	24.95
PSSA Performance 4	0	1	54	37	92
Frequency Percent	0.00	0.20	10.69	7.33	18.22
Total	112	130	208	55	505
Frequency Percent	22.18	25.74	41.19	10.89	100.00

Note. Frequency Missing = 2

Table 22. Contingency Table – PSSA Performance by Teacher Rating of Performance, Math Grade 4

	Teacher Rating 1	Teacher Rating 2	Teacher Rating 3	Teacher Rating 4	Total
PSSA Performance 1	104	74	20	0	198
Frequency Percent	20.16	14.34	3.88	0.00	38.37
PSSA Performance 2	19	65	78	6	168
Frequency Percent	3.68	12.60	15.12	1.16	32.56
PSSA Performance 3	0	15	60	34	109
Frequency Percent	0.00	2.91	11.63	6.59	21.12
PSSA Performance 4	0	0	12	29	41
Frequency Percent	0.00	0.00	2.33	5.62	7.95
Total	123	154	170	69	516
Frequency Percent	23.84	29.84	32.95	13.37	100.00

Note. Frequency Missing = 4

Table 23. Contingency Table – PSSA Performance by Teacher Rating of Performance, Math Grade 5

	Teacher Rating 1	Teacher Rating 2	Teacher Rating 3	Teacher Rating 4	Total
PSSA Performance 1	71	74	28	0	173
Frequency Percent	13.35	13.91	5.26	0.00	32.52
PSSA Performance 2	15	69	72	15	171
Frequency Percent	2.82	12.97	13.53	2.82	32.14
PSSA Performance 3	0	16	72	43	131
Frequency Percent	0.00	3.01	13.53	8.08	24.62
PSSA Performance 4	0	0	17	40	57
Frequency Percent	0.00	0.00	3.20	7.52	10.71
Total	86	159	189	98	532
Frequency Percent	16.17	29.89	35.53	18.42	100.00

Note. Frequency Missing = 6

Table 24. Contingency Table – PSSA Performance by Teacher Rating of Performance, Math Grade 6

	Teacher Rating 1	Teacher Rating 2	Teacher Rating 3	Teacher Rating 4	Total
PSSA Performance 1	71	53	12	0	136
Frequency Percent	10.03	7.49	1.69	0.00	19.21
PSSA Performance 2	23	130	65	2	220
Frequency Percent	3.25	18.36	9.18	0.28	31.07
PSSA Performance 3	0	33	135	67	235
Frequency Percent	0.00	4.66	19.07	9.46	33.19
PSSA Performance 4	0	3	29	85	117
Frequency Percent	0.00	0.42	4.10	12.01	16.53
Total	94	219	241	154	708
Frequency Percent	13.28	30.93	34.04	21.75	100.00

Note. Frequency Missing = 12

Table 25. Contingency Table – PSSA Performance by Teacher Rating of Performance, Math Grade 7

	Teacher Rating 1	Teacher Rating 2	Teacher Rating 3	Teacher Rating 4	Total
PSSA Performance 1	165	103	15	0	283
Frequency Percent	17.88	11.16	1.63	0.00	30.66
PSSA Performance 2	30	142	96	2	file:///C:/Program%20Files/Adobe/Adobe%20InDesign%20CC%202019/Resources/CEP/extensions/CommentsReview/assets/svg/resolveICON.svg270
Frequency Percent	3.25	15.38	10.40	0.22	29.25
PSSA Performance 3	2	41	146	31	220
Frequency Percent	0.22	4.44	15.82	3.36	23.84
PSSA Performance 4	0	4	52	94	150
Frequency Percent	0.00	0.43	5.63	10.18	16.25
Total	197	290	309	127	923
Frequency Percent	21.34	31.42	33.48	13.76	100.00

Note. Frequency Missing = 29

Table 26. Contingency Table – PSSA Performance by Teacher Rating of Performance, Math Grade 8

	Teacher Rating 1	Teacher Rating 2	Teacher Rating 3	Teacher Rating 4	Total
PSSA Performance 1	117	91	24	1	233
Frequency Percent	15.35	11.94	3.15	0.13	30.58
PSSA Performance 2	15	80	117	16	228
Frequency Percent	1.97	10.50	15.35	2.10	29.92
PSSA Performance 3	0	21	121	57	199
Frequency Percent	0.00	2.76	15.88	7.48	26.12
PSSA Performance 4	0	0	32	70	102
Frequency Percent	0.00	0.00	4.20	9.19	13.39
Total	132	192	294	144	762
Frequency Percent	17.32	25.20	38.58	18.90	100.00

Note. Frequency Missing = 15

Table 27. Contingency Table – PSSA Performance by Teacher Rating of Performance, ELA Grade 3

	Teacher Rating 1	Teacher Rating 2	Teacher Rating 3	Teacher Rating 4	Total
PSSA Performance 1	56	26	6	0	88
Frequency Percent	11.36	5.27	1.22	0.00	17.85
PSSA Performance 2	44	70	37	3	154
Frequency Percent	8.92	14.20	7.51	0.61	31.24
PSSA Performance 3	6	37	125	36	204
Frequency Percent	1.22	7.51	25.35	7.30	41.38
PSSA Performance 4	0	0	26	21	47
Frequency Percent	0.00	0.00	5.27	4.26	9.53
Total	106	133	194	60	493
Frequency Percent	21.50	26.98	39.35	12.17	100.00

Note. Frequency Missing = 4

Table 28. Contingency Table – PSSA Performance by Teacher Rating of Performance, ELA Grade 4

	Teacher Rating 1	Teacher Rating 2	Teacher Rating 3	Teacher Rating 4	Total
PSSA Performance 1	62	12	3	0	77
Frequency Percent	11.33	2.19	0.55	0.00	14.08
PSSA Performance 2	52	91	64	6	213
Frequency Percent	9.51	16.64	11.70	1.10	38.94
PSSA Performance 3	5	36	118	20	179
Frequency Percent	0.91	6.58	21.57	3.66	32.72
PSSA Performance 4	0	1	34	43	78
Frequency Percent	0.00	0.18	6.22	7.86	14.26
Total	119	140	219	69	547
Frequency Percent	21.76	25.59	40.04	12.61	100.00

Note. Frequency Missing = 12

Table 29. Contingency Table – PSSA Performance by Teacher Rating of Performance, ELA Grade 5

	Teacher Rating 1	Teacher Rating 2	Teacher Rating 3	Teacher Rating 4	Total
PSSA Performance 1	35	24	9	0	68
Frequency Percent	7.66	5.25	1.97	0.00	14.88
PSSA Performance 2	35	70	66	3	174
Frequency Percent	7.66	15.32	14.44	0.66	38.07
PSSA Performance 3	1	26	75	57	159
Frequency Percent	0.22	5.69	16.41	12.47	34.79
PSSA Performance 4	0	1	20	35	56
Frequency Percent	0.00	0.22	4.38	7.66	12.25
Total	71	121	170	95	457
Frequency Percent	15.54	26.48	37.20	20.79	100.00

Note. Frequency Missing = 11

Table 30. Contingency Table – PSSA Performance by Teacher Rating of Performance, ELA Grade 6

	Teacher Rating 1	Teacher Rating 2	Teacher Rating 3	Teacher Rating 4	Total
PSSA Performance 1	28	10	0	0	38
Frequency Percent	3.27	1.17	0.00	0.00	4.44
PSSA Performance 2	42	115	45	0	202
Frequency Percent	4.91	13.45	5.26	0.00	23.63
PSSA Performance 3	8	96	259	39	402
Frequency Percent	0.94	11.23	30.29	4.56	47.02
PSSA Performance 4	0	3	99	111	213
Frequency Percent	0.00	0.35	11.58	12.98	24.91
Total	78	224	403	150	855
Frequency Percent	9.12	26.20	47.13	17.54	100.00

Note. Frequency Missing = 13

Table 31. Contingency Table – PSSA Performance by Teacher Rating of Performance, ELA Grade 7

	Teacher Rating 1	Teacher Rating 2	Teacher Rating 3	Teacher Rating 4	Total
PSSA Performance 1	8	4	1	0	13
Frequency Percent	1.13	0.57	0.14	0.00	1.84
PSSA Performance 2	56	143	67	4	270
Frequency Percent	7.94	20.28	9.50	0.57	38.30
PSSA Performance 3	3	45	193	45	286
Frequency Percent	0.43	6.38	27.38	6.38	40.57
PSSA Performance 4	0	1	55	80	136
Frequency Percent	0.00	0.14	7.80	11.35	19.29
Total	67	193	316	129	705
Frequency Percent	9.50	27.38	44.82	18.30	100.00

Note. Frequency Missing = 12

Table 32. Contingency Table – PSSA Performance by Teacher Rating of Performance, ELA Grade 8

	Teacher Rating 1	Teacher Rating 2	Teacher Rating 3	Teacher Rating 4	Total
PSSA Performance 1	35	28	6	0	69
Frequency Percent	5.04	4.03	0.86	0.00	9.93
PSSA Performance 2	28	128	94	1	251
Frequency Percent	4.03	18.42	13.53	0.14	36.12
PSSA Performance 3	2	53	207	30	292
Frequency Percent	0.29	7.63	29.78	4.32	42.01
PSSA Performance 4	0	0	30	53	83
Frequency Percent	0.00	0.00	4.32	7.63	11.94
Total	65	209	337	84	695
Frequency Percent	9.35	30.07	48.49	12.09	100.00

Note. Frequency Missing = 16

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