

TECHNICAL REPORT



**for the
Pennsylvania
System of School Assessment**

**2006 Reading and Mathematics
Grades 5, 8, and 11**

**Provided by
Data Recognition Corporation**

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PREFACE: An Overview of Recent and Future Assessments

The period from 2003 through 2006 brought significant structural changes in 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 in the operational assessment. Included in this process was the development and implementation of assessments in additional grade levels.

For reading and mathematics, 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, review of open-ended tasks and multiple-choice items, field testing, selection of items, statistical analysis of assessment data, reliability, validity, standards 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 *Technical Report for 2006 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.

Changes in the writing assessment 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 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 contributed to a more valid conventions score. An account of the development of writing prompts and stimulus-based, multiple-choice items, review processes, field testing and item analysis, standards setting, and other technical characteristics of the operational 2006 PSSA may be found in the *Technical Report for 2006 PSSA Writing*.

To assist the reader in navigating through the year-to-year changes in all aspects of the PSSA, tables are presented along with explanatory text. Provided is an overview of 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). [Please note that the grade 3 mathematics and reading assessment is not addressed in this technical report because CTB/McGraw-Hill, the scoring contractor for grade 3, is responsible for preparing that technical report.]

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 grade 6 and grade 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 of the subject areas, 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
4	No assessment	
5	Operational Mathematics and Reading	April
	Standalone field test in Mathematics and Reading	April/May
6	Operational Writing	October
7	No assessment	
8	Operational Mathematics and Reading	April
	Standalone field test in Mathematics and Reading	April/May
9	Operational Writing	October
11	Operational Mathematics and Reading	April
	Standalone field test in Mathematics and Reading	April/May
	Operational Writing	February
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

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 through 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 abandoned 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. The writing assessment also 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
4	Standalone field test for Mathematics and Reading	April
5	Operational Mathematics and Reading with embedded field test	April
	Standalone field test in Writing	February
6	Standalone field test for Mathematics and Reading	April
7	Standalone field test for Mathematics and Reading	April
8	Operational Mathematics and Reading with embedded field test	April
	Standalone field test in Writing	February
9	No assessment	
11	Operational Mathematics and Reading with embedded field test	April
	Operational Writing with embedded field test	February
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

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 from grades 3 through 8 and at 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 process 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 this year while the grade 11 writing assessment continued in the same February test window. New this year 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 *Technical Report for 2006 PSSA Writing* 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
4	Operational Mathematics and Reading with embedded field test	March
5	Operational Mathematics and Reading with embedded field test	March
	Operational Writing with embedded field test	February
6	Operational Mathematics and Reading with embedded field test	March
7	Operational Mathematics and Reading with embedded field test	March
8	Operational Mathematics and Reading with embedded field test	March
	Operational Writing with embedded field test	February
9	No assessment	
11	Operational Mathematics and Reading with embedded field test	March
	Operational Writing with embedded field test	February
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

ASSESSMENT ACTIVITIES PLANNED FOR THE 2006–07 SCHOOL YEAR

Table P–4 shows the assessment plan for the 2006–07 school year. Note that again the mathematics and reading assessments will be operational consecutively from grades 3 through 8 and at grade 11. For grades 4, 6, and 7, it will be the second year for operational assessments and the first year in which these grade levels will be included in the AYP calculations. Field testing for mathematics and reading will continue to be embedded as part of the operational assessments at each grade level. This is the first year in which DRC will be responsible for the grade 3 assessment as the transition from CTB/McGraw-Hill is completed. As in the previous years, the retest opportunity at grade 12 will continue.

The operational assessment for writing at grades 5, 8, and 11 continues in the same February test 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 will be field tested in 2007. However, new multiple-choice items will be field tested in the 2007 writing assessment.

Following the spring operational assessments, a separate, “standalone” field test in science is planned 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 (Planned)**

Grade	Assessment Activity	Date
3	Operational Mathematics and Reading with embedded field test	March
4	Operational Mathematics and Reading with embedded field test	March
	Standalone field test in Science	April/May
5	Operational Mathematics and Reading with embedded field test	March
	Operational Writing with embedded field test	February
6	Operational Mathematics and Reading with embedded field test	March
7	Operational Mathematics and Reading with embedded field test	March
8	Operational Mathematics and Reading with embedded field test	March
	Operational Writing with embedded field test	February
	Standalone field test in Science	April/May
9	No assessment	
11	Operational Mathematics and Reading with embedded field test	March
	Operational Writing with embedded field test	February
	Standalone field test in Science	April/May
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

Chapter One: Background of Pennsylvania System of School Assessment (PSSA)

This brief overview of assessment in Pennsylvania describes the original and subsequent legislative mandates, previous assessment programs, 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.

THE ORIGIN OF STATE ASSESSMENT IN PENNSYLVANIA

State assessment of student achievement came about as a result of legislation enacted in 1963. Generally known as the School District Reorganization Act (Act 299), the issue of whether large or small district size provided a better quality education led to the development of Section 299.1 of Act 299, which required the State Board of Education to

... develop or cause to be developed an evaluation procedure designed to measure objectively the adequacy and efficiency of the educational program offered by the public schools of the Commonwealth . . . The evaluation procedure shall be so constructed and developed as to provide each school district with relevant comparative data to enable directors and administrators to more readily appraise the educational performance and to effectuate without delay the strengthening of the district's educational program. Tests developed . . . shall be used for the purpose of providing a uniform evaluation of each school district . . .

In response to the legislative mandate, the State Board of Education contracted with Educational Testing Service of Princeton, New Jersey, to engage in a two-year process of surveying and interviewing stakeholders in business, industry, education, and the general public as to what constituted a quality education. This led to the State Board adoption of *The Goals of Quality Education* in 1965. In 1967, the Department of Education formed an organizational unit along with staff to begin developing appropriate measures and engaging in extensive field testing during the 1967-68 and 1968-69 school years.

EDUCATIONAL QUALITY ASSESSMENT (EQA) PROGRAM

The first state assessment of students in Pennsylvania took place in the 1969-70 school year. Initially, state assessment was a purely school-based evaluation in the form of the *Educational Quality Assessment (EQA)* program, which reported grade 5 and 11 school-level results in ten goal areas. Grade 8 was added in 1974. Measuring both cognitive and non-cognitive areas, the program operated from 1970 through 1988. As the program evolved, a matrix sampling design was used in measuring and reporting school results in subject areas such as reading, language arts, mathematics, science, health, social studies, and analytical thinking. Initially, it operated as a voluntary program, but in 1974 it became mandatory on a cyclical basis.

TESTING FOR ESSENTIAL LEARNING AND LITERACY SKILLS (TELLS)

The next major revision in state assessment was the advent of the state's first mandated competency testing program, *Testing for Essential Learning and Literacy Skills (TELLS)* in the 1984–85 school year. The impetus for a statewide essential skills test evolved from an October 1983 document entitled *Turning the Tide: An Agenda for Excellence in Pennsylvania Public Schools*. A two-pronged approach was advocated, calling for:

1. competency testing in grades 3, 5, and 8 as an “early warning system” to identify students with reading and mathematics difficulties and
2. state-funded remedial instruction to provide needed additional help.

In response to this and other recommendations, the State Board of Education added *Chapter 3: Student Testing* to its regulations on June 14, 1984. It required all public school students in grades 3, 5, and 8 to be given criterion-referenced tests in reading and mathematics. The second part of the program, remedial instruction, was mandated by Act 93-1984, and required districts to provide remedial instruction programs to students identified by the tests given under the State Board regulation. Subsequently, funds were distributed to districts and intermediate units for this part of the program. The *TELLS* and *EQA* testing programs coexisted until the *EQA* was concluded in 1988. The *TELLS* program continued through the spring of 1991.

THE PENNSYLVANIA SYSTEM OF SCHOOL ASSESSMENT (PSSA)

The Pennsylvania System of School Assessment (PSSA) program was instituted in 1992. The PSSA returned to 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. Reading and mathematics were assessed at grades 5, 8, and 11; districts could choose to participate in the writing assessment at grades 6 and 9. State Board revisions to Chapter 5 in November 1994 brought major changes to the PSSA, beginning with the Spring 1995 assessment. These changes included

1. all districts were required to participate in the reading and mathematics assessment each year,
2. student-level reports were generated in addition to school reports, and
3. the grades 6 and 9 writing assessment became mandatory on a three-year cycle corresponding to the district's strategic planning cycle.

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). 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. Reading and mathematics 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 standards.

ASSESSMENT ANCHOR CONTENT STANDARDS, CONTENT STRUCTURE, AND NEW GRADE LEVELS

Assessment in 2005 was marked by major structural changes in 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. Year 3 calculations for AYP were conducted and reported.

The 2006 operational reading and mathematics assessment incorporated grades 4, 6, and 7 for the first time. The assessed grade levels for 2006 included grades 3 through 8 and 11. Year 4 calculations for AYP were conducted and reported for grades 5, 8, and 11. AYP calculations for grades 4, 6, and 7 will take place in 2007 when they are assessed for the second time.

PURPOSES OF THE PSSA

As outlined in Chapter 4 of the State Board Regulations, the purposes of the statewide assessment component of the PSSA are as follows:

1. Provide students, parents, educators, and citizens with an understanding of student and school performance.
2. Determine the degree to which school programs enable students to attain proficiency of academic standards.
3. Provide results to school districts (including charter schools) and Area Vocational Technical Schools (AVTSs) for consideration in the development of strategic plans.
4. Provide information to state policymakers, including the State Senate, the General Assembly, and the State Board, on how effective schools are in promoting and demonstrating student proficiency of academic standards.
5. Provide information to the general public on school performance.
6. Provide results to school districts (including charter schools and AVTSs) based upon the aggregate performance of all students, for students with an Individualized Education Program (IEP), and for those without an IEP.

The broad purpose of the state assessments is to provide information to teachers and schools to guide the improvement of curricula and instructional strategies to enable students to reach proficiency in the academic standards.

THE PENNSYLVANIA WRITING ASSESSMENT

In 1990 the state initiated an on-demand writing assessment in which students wrote an essay in response to a particular topic or prompt. Offered to school districts on a voluntary basis, the writing assessment consisted of three modes of writing: narrative, informational, and persuasive. The test administration for grades 6 and 9 used a matrix sampling design; nine prompts (three per mode) were administered to students within a school, although each student responded to just one randomly distributed prompt. Scoring was based on a six-point holistic scale. Student results were aggregated and reported at the school level only. In 1992 the writing assessment was incorporated as part of the PSSA. Beginning in 1995, districts were required to participate in the writing assessment every third year in accordance with their strategic planning cycle. However, districts were also given the choice to participate more frequently. As a result, participation rose dramatically from the expected 167 districts (one-third) in any given year to

235 (47%) in 1995, 306 (61%) in 1996, 412 (82%) in 1997, 445 (89%) in 1998, and 449 (90%) in 1999.

With the advent of the Pennsylvania Academic Standards in 1999, major changes took place in the writing assessment, including alignment to the Academic Standards as well as changes in scoring method, prompts, testing date, and reporting. These changes, which are summarized below, were implemented in the 2000–01 school year and were followed by performance level reporting in the 2001–02 school year.

- The writing assessment became mandatory for all districts every year.
- Administration of the grades 6 and 9 writing assessment was changed from February to October.
- Scoring changed to a 4-point scale for each of five domains (focus, content, organization, style, and conventions).
- Prompts were different for grade 6 and grade 9 rather than being identical at the two grade levels.
- Within a grade level all students responded to two common prompts.
- The reporting model was greatly revised, and individual student reports were issued for the first time.
- A writing assessment for grade 11 was administered for the first time in February 2001.
- In 2002, performance levels were adopted for writing and implemented in the reporting of total writing results for the February grade 11 and Fall 2002 grades 6 and 9 writing assessment.

The 2006 PSSA operational writing assessment featured additional revisions in the writing assessment that included the following enhancements:

- A shift from grades 6 and 9 to grades 5 and 8, to provide better alignment to the end of elementary school and middle school.
- Grades 5 and 8 joined grade 11 in a February test window rather than the October window used previously for grades 6 and 9.
- Students responded to two writing prompts, which were evaluated in terms of (1) a mode-specific scoring guideline and (2) a conventions scoring guideline instead of the former domain scoring.
- Stimulus-based revising/editing multiple-choice items were incorporated to provide a more reliable and valid measure of the conventions academic standard.

Chapter Two: New Test Development Required by NCLB

Spurred by PL 107-110, the *No Child Left Behind* Act of 2001 (NCLB), the Pennsylvania Department of Education (PDE) began to develop plans to expand testing into other grade levels and to design a standards-based assessment for science. Although grade 3 reading and mathematics tests were developed and administered statewide in 2003 and 2004, reporting results in terms of proficiency levels occurred for the first time in 2005. Reading and mathematics test development in the new grade levels of 4, 6, and 7 took place in 2004, with field testing occurring in 2005 and full implementation occurring in 2006. A field test for science is planned for 2007 with full implementation in 2008.

ASSESSMENT ANCHOR CONTENT STANDARDS AND ELIGIBLE CONTENT

Educator concerns regarding the number and breadth of Academic Standards led to an initiative by the Pennsylvania Department of Education (PDE) to develop a clear document to explicate what students should know and be able to do. Based on recommendations from teachers, subject-area supervisors, and other curriculum experts, Assessment Anchor Content Standards (Assessment Anchors) (PDE, 2004) were designed as a tool to improve the articulation of curricular, instructional, and assessment practices. The Anchors do not replace the Academic Standards; rather they serve to clarify the standards assessed on the PSSA. See Appendix A for examples of anchor integration for mathematics and reading. They also serve to communicate Eligible Content, also called “assessment limits,” or the range of knowledge and skills from which the PSSA would be designed.

A draft version of the Assessment Anchors and Eligible Content was submitted to Achieve, Inc., Washington, D.C., to conduct a special analysis to evaluate the degree of alignment with the Academic Standards. Preliminary feedback enabled PDE to make adjustments to improve the alignment as the Anchors took final form.

Since the Assessment Anchors encompass grades 3 through 8 and grade 11, the document informs test design for the grades undergoing new test development as well as the grade levels currently assessed.

OVERVIEW OF THE 2006 PSSA

The 2006 PSSA reading and mathematics tests contain items designed to reflect the new Assessment Anchors. They were extensively reviewed and field tested in 2005.

MATHEMATICS ASSESSMENT MEASURES

The 2006 PSSA mathematics assessment has five major reporting categories: Numbers and Operations, Measurement, Geometry, Algebraic Concepts, and Data Analysis and Probability. By organizing the Assessment Anchors into a five-category reporting structure, there is a similarity to the categories used by the National Council of Teachers of Mathematics (NCTM) and the National Assessment of Educational Progress (NAEP).

The 2006 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 are less efficient in the sense that they generally generate fewer scorable points in the same amount of testing time. They do, however, provide

tasks that are more realistic and better sample higher-level skills. The design of the 2006 PSSA attempts to achieve a reasonable balance between the two item types. 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.

MULTIPLE-CHOICE ITEMS

The majority of the mathematics items included on the 2006 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 computation 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 2006 open-ended items require about ten minutes per task. Most of the open-ended items are designed to be scaffolded, which means that they 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 math 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 answer document, 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 with an item-specific scoring guideline. The item-specific scoring guideline outlines the requirements at 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 B or the grade-specific *Mathematics Item and Scoring Sampler*, PDE, 2006, available on the PDE website.

READING ASSESSMENT MEASURES

The 2006 PSSA reading assessment has two major reporting categories, Comprehension and Reading Skills and Interpretation and Analysis of Fiction and Nonfiction Text. These two reporting categories are derived from Reading Academic Standards 1.1, 1.2, and 1.3. Standards

1.6, 1.7, and 1.8 are not addressed on the PSSA because they are not specific to reading comprehension and can be more accurately evaluated at the school level. [Standards 1.4 and 1.5 are addressed on the writing portion of the PSSA.]

The reading assessment employs two types of test items: multiple-choice and open-ended. They are designed to measure students' comprehension of the information contained in the reading passages.

MULTIPLE-CHOICE ITEMS

Multiple-choice (selected-response) items measure such concepts as 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 important information from a story. Such information may include setting, central idea, or main events and their sequence.

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.

OPEN-ENDED TASKS FOR READING

Open-ended (constructed-response) tasks are designed to address comprehension of text in ways that multiple-choice items cannot. A short written response, requiring about ten minutes per item, allows students to prepare an answer and summarize using supporting details or examples derived from the text.

The reading open-ended items are scored on a 0–3 point scale with 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 guide reflecting the task requirements. All item-specific scoring guidelines are based on the General Scoring Guidelines for Open-Ended Reading Items. The general guidelines describe a hierarchy of responses, which represent the four score levels. (See Appendix C or the grade-specific *Reading Item and Scoring Sampler*, PDE, 2006, available on the PDE website.)

MATRIX SAMPLING ASSESSMENT DESIGN

The PSSA was originally designed as a complex matrix-sampling scheme for both mathematics and reading, which was very efficient for measuring *school-level* performance, but less efficient for providing *student-level* assessments and diagnostics. In the present design, all forms contain a *common* core of items to which all students respond and *matrix* items that vary by form. Both the *common* and *matrix* sections of the 2006 PSSA use traditional multiple-choice items and open-ended performance tasks. The forms are *spiraled* so that all forms are distributed uniformly within each testing room. This ensures that each matrix section is administered to an unbiased and sequentially random sample of students in each school. Since multiple forms are administered, the blocks of matrix items expand the number of items available to more broadly measure the Assessment Anchors for school-level reporting.

The design changes that began to take effect with the Spring 2000 administration shifted the measurement focus toward the student and away from the school. Beginning in 2000, student-level results were reported on an individual student report with diagnostic results at the *academic*

content standard level. All student-level results were based on the common items only and presented in the raw-score, percent-correct metric. In order to accommodate this change in focus, the common section was expanded to better reflect the curriculum. To administer the tests in a reasonable length of time, enhancing the common sections required a compensatory reduction of the matrix sections.

The PSSA design from 2000 through 2005, as well as the 2006 PSSA, is an attempt to have the best of both worlds:

- All student-level results are based on the common core of items that all students in a grade are administered. This ensures that all students are evaluated using the same set of items.
- School-level content area total score results are based on the mean of the student-level scaled scores. This ensures that the results used for school accountability directly reflect the student-level results.
- School-level results at the content standard (academic standards category) level are based on the common items together with all embedded operational items on the matrix forms (embedded field-test items are not included in school-level results). This ensures that decisions regarding potential strengths and weaknesses at the school level better sample the entire curriculum.

Chapter Three: Item Development Process

A series of major activities took place in 2003 and 2004, which culminated in the implementation of changes to the structure of the operational PSSA in the 2005 assessment and continued into the 2006 administration. These key activities included the development of the Pennsylvania Assessment Anchor Content Standards (Assessment Anchors); test item development; content review; bias, fairness, and sensitivity review; field-test of new reading and mathematics items in spring 2005; item review with data; and final selection of items to compose the 2006 PSSA. The table below provides a timeline of these major activities, which are described in some detail in this chapter as well as in Chapters Four and Five. It should also be noted that test items for the 2005 field test were developed by Data Recognition Corporation (DRC) and WestEd.

Table 3–1. General Timeline Associated with 2005 Field Test and 2006 Operational Assessment of Mathematics and Reading at Grades 5, 8, and 11

Time Frame	Activity
January-July 2004	Item Development for 2005 Embedded Field Test
August 9-13, 2004	Item Review and Bias, Fairness, and Sensitivity Review of Newly Developed Items for 2005 Embedded Field Test
September 2004-January 2005	Forms Construction for 2005 Embedded Field Test
January-July 2005	Item Development for Newly Developed Items to Embed on 2006 Operational Assessment
April 4-15, 2005	2005 Embedded Field Test in 2005 Operational Test
August 8–10, 2005	Statistical Review of 2005 Field-Tested Items
August 8–12, 2005	Item Review and Bias, Fairness, and Sensitivity Review of Newly Developed Items for the Embedded Field Test in 2006 Operational Assessment
September 2005–January 2006	Forms Construction for 2006 Operational Assessment
March 20-31, 2006	2006 Operational Assessment

TEST CONTENT BLUEPRINT FOR 2006

The PSSA is based on the Pennsylvania Academic Standards. The PSSA test for 2006 reflects the new Assessment Anchors, which were designed as a means of improving the articulation of curricular, instructional, and assessment practices. The Anchors serve to clarify the Academic Standards assessed on the PSSA and to communicate “assessment limits,” or the range of knowledge and skills from which the PSSA would be designed. Relevant to item development and the Spring 2004 field test are the refinement and clarification embodied in the Assessment Anchors (PDE, 2004). Since the Assessment Anchors encompass grades 3 through 8 and grade 11, the document informs test design for the grades undergoing new test development as well as the grades currently assessed.

The PSSA test for grades 3, 5, 8, and 11 in 2005 and again in 2006 followed a new blueprint and testing plan to reflect the new assessment anchors and item distribution. (The first operational

administration of the PSSA for grades 4, 6, and 7 took place in 2006.)

2006 OPERATIONAL LAYOUT FOR READING AND MATHEMATICS: GRADES 5, 8, AND 11

The mathematics and reading PSSA plan was developed through the collaborative efforts of Data Recognition Corporation (DRC) and National Center for Improvement of Educational Assessment (NCIEA). The plan was subsequently evaluated and approved by PDE. The reading and mathematics tests are combined in one test booklet and one separate answer booklet. The test booklet contains reading passages and reading and mathematics multiple-choice items. The answer booklet contains scannable pages for multiple-choice (MC) responses, open-ended (OE) items with response spaces, and demographic data collection areas. All MC items are worth 1 point. Reading OE items receive a maximum of 3 points (scale of 0-3) and mathematics OE items receive a maximum of 4 points (scale of 0-4). Each test form contains common items (identical on all forms) along with matrix/embedded field-test items. The common items consist of a set of “core” items taken by all students. The matrix items and the embedded field-test items are unique, in most instances, to a form. That is, there are several instances in which a matrix or embedded field-test OE item appears on more than one form.

At these grades, the 2006 PSSA is comprised of 20 forms per grade. All of the forms contain the common items identical for all students and sets of generally unique (“matrix”) items that fulfill several purposes. These purposes include:

1. Expanding the total pool of items for school-level reporting,
2. Field testing new items,
3. Using items from the previous year’s assessment for the purpose of linking.

The following two tables display the design for reading and mathematics for forms 1 through 20. The column entries for these tables denote

- the grade level (Grade),
- number of common or core MC items (Core MC),
- number of matrix MC items included in school-level reporting (Matrix MC),
- number of embedded MC field-test items (Embedded FT MC),
- number of common or core OE items (Core 3-pt. or Core 4-pt. OE),
- number of matrix OE items included in school-level reporting (Matrix OE),
- number of embedded OE field-test items (Embedded FT OE),
- total number of MC and OE items in the form (Total Items MC/OE), and
- the total number of operational points (derived from Core MC and Core OE only) for producing a student score (Total Operational Points).

Table 3–2. Reading Test Plan 2006 per Operational Form (20 Forms: Forms 1–20)

Grade	No. of Core MC per Op. Form	No. of Matrix MC per Op. Form	No. of Embedded FT MC per Op. Form	No. of Core 3-pt. OE per Op. Form	No. of Matrix OE per Op. Form	No. of Embedded FT OE per Op. Form	Total No. of Items per Op. Form MC/OE	Total No. of Core Points per Op. Test
5	40	8	8	4	1	1	56/6	52
8	40	8	8	4	1	1	56/6	52
11	40	8	8	4	1	1	56/6	52

Table 3–3. Mathematics Test Plan 2006 per Operational Form (20 Forms: Forms 1–20)

Grade	No. of Core MC per Op. Form	No. of Matrix MC per Op. Form	No. of Embedded FT MC per Op. Form	No. of Core 4-pt. OE per Op. Form	No. of Matrix OE per Op. Form	No. of Embedded FT OE per Op. Form	Total No. of Items per Op. Form MC/OE	Total No. of Core Points per Op. Test
5	54	6	6	3	1	1	66/5	66
8	54	6	6	3	1	1	66/5	66
11	54	6	6	3	1	1	66/5	66

Since an individual student’s score is based solely on the common, or core, items the total number of operational points is 52 for reading and 66 for mathematics. The total score is obtained by combining the points from the core MC and OE portions of the test as follows:

Student’s Score	MC Items	OE Items	Total Score
Reading	40	4 items X 3-points=12 points	52
Mathematics	54	3 items X 4-points=12 points	66

School-level reporting relies on the matrix items to expand the pool of items available to produce a more extensive content breakdown of results than is possible for student-level reporting.

For more information concerning the process used to convert the operational layout into forms (form construction), see chapter 6. For more information about operational layout across forms and across years (form equivalency) see chapter 10.

LINKING

Linking provides a statistical bridge between assessment administrations. The 2006 administration is linked back to the 2005 administration through the use of linking items in the core and the matrix sections. Mathematics used 10 core-linking MC items and 20 matrix-linking MC items per grade. Reading used 31 or 32 matrix-linking MC items per grade. The matter of linking will be treated more fully in Chapter 11.

TEST SESSIONS AND TIMING

The test window for the 2006 operational assessment extended from March 20 through March 31, 2006, including make-ups. The reading and mathematics assessments consisted of six sections. Test administration recommendations called for each section to be scheduled as one assessment session, although schools were permitted to combine multiple sections in a single session. Administration guidelines stipulated that the sections be administered in the sequence in which they are printed in the test booklets. The following tables outline the assessment schedule

and estimated times for each section (“MC” refers to multiple-choice and “OE” refers to open-ended items). The estimated testing times do not include time for administrative tasks that occur during the pre- and post- administration activities.

Table 3–4. Reading and Mathematics – Grade 5, 8, & 11

Section	Suggested Testing Time (Minutes)	Subject/Contents	
1	55	Mathematics	22 MC, 2 OE
2	60	Grade 5 Reading	22 MC, 2 OE
		Grade 8 Reading	20 MC, 2 OE
		Grade 11 Reading	24 MC, 2OE
3	55	Mathematics	22 MC, 2 OE
4	50	Reading	16 MC, 2 OE
5	45	Mathematics	22 MC, 1 OE
6	50	Grade 5 Reading	18 MC, 2 OE
		Grade 8 Reading	20 MC, 2 OE
		Grade 11 Reading	16 MC, 2OE

During the assessment, students may request an extended assessment period if they indicate that they have not completed the task. Such requests are granted if the assessment administrator finds the request to be educationally valid.

REPORTING CATEGORIES AND POINTS DISTRIBUTIONS

The **reading assessment** results will be reported in two broad categories:

- A. Comprehension and Reading Skills
- B. Interpretation and Analysis of Fiction and Nonfiction Text

Assessment Anchors associated with Comprehension and Reading Skills are coded with an initial letter “A” and those related to Interpretation and Analysis of Fiction and Nonfiction Text are coded with an initial letter “B.” The distribution of items into these two categories across genres is shown on the following table.

Table 3–5. Reading Reporting Categories and Genre

Grade	Comprehension and Reading Skills % range	Interpretation and Analysis of Fiction and Nonfiction Text % range	% of Passages (Genre) Fiction	% Passages (Genre) Nonfiction
Grade 5	60-80%	20-40%	50-70%	30-50%
Grade 8	40-60%	40-60%	40-60%	40-60%
Grade 11	40-60%	40-60%	30-50%	50-70%

The **mathematics assessment** results will be reported in five categories that approximately correspond to those advocated by the National Council of Teachers of Mathematics (NCTM). The code letters for these Assessment Anchor categories are A–E and correspond to:

- A. Numbers and Operations
- B. Measurement
- C. Geometry
- D. Algebraic Concepts
- E. Data Analysis and Probability

The distribution of mathematics items into these five categories is shown in the following table.

Table 3–6. Mathematics Reporting Categories and Point Distribution

Grade	Category A Numbers and Operations % (number of points)	Category B Measurement % (number of points)	Category C Geometry % (number of points)	Category D Algebraic Concepts % (number of points)	Category E Data Analysis and Probability % (number of points)	Total Points
5	41–45% (27–30)	12–15% (8–10)	12–15% (8–10)	13–17% (9–11)	12–15% (8–10)	60–71
8	18–22% (12–15)	12–15% (8–10)	15–20% (10–13)	25–30% (17–20)	15–20% (10–13)	57–71
11	12–15% (8–10)	12–15% (8–10)	12–18% (8–12)	38–42% (25–28)	12–18% (8–12)	57–72

Both the reading and mathematics content area reporting categories are further subdivided for specificity and Eligible Content or limits. Each subdivision is coded by adding an additional numeral, e.g., A.1. These subdivisions are called “Assessment Anchors” and “Eligible Content.”

ASSESSMENT ANCHOR CONTENT STANDARDS SUBSUMED WITHIN REPORTING CATEGORIES

For mathematics there are 16 Assessment Anchor Content Standards (Assessment Anchors) that occur at all grade levels (grades 3 through 8 and 11), although they are not all assessed at each grade level. More specifically, the number targeted for assessment by grade level are 10 at grade 3, 12 at grade 4, 13 at grade 5, 12 at grade 6, 14 at grade 7, 13 at grade 8, and 13 at grade 11.

For reading there are five Assessment Anchors that vary to reflect grade-level appropriateness. Within the Comprehension and Reading Skills Reporting Category, two Assessment Anchors pertain to understanding fiction text and understanding nonfiction text. Within the Interpretation and Analysis of Fiction and Nonfiction Text Reporting Category, three Assessment Anchors pertain to Components of Text, Literary Devices and Concepts, and Organization of Nonfiction Text.

Total reading and mathematics scores reported at the student level are based on the core (common) sections. Also reported are the student’s reading and mathematics performance levels. School and district-level scores are reported at the Eligible Content level under the Assessment Anchors and are based on the core (common) and matrix sections, excluding the

embedded field-test items. (See Appendix D for a summary by grade and subject.)

TEST DEVELOPMENT CONSIDERATIONS

Alignment to the PSSA Assessment Anchors and Eligible Content, 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 were major considerations in the item development process. *The Standards for Educational and Psychological Testing* (AERA, APA, NCME, 1999) and the *Principles of Universal Design* (Thompson, Johnstone, & Thurlow, 2002) guided the development process. In addition, DRC's *Bias, Fairness, and Sensitivity Guidelines** were used for developing items free of bias, fairness, and sensitivity issues. 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) and 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

At every stage of the item and test development process, DRC employs procedures that are designed to ensure that items and tests meet Standard 7.4 of the *Standards for Educational and Psychological Testing* (AERA, APA, NCME, 1999).

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.

In meeting Standard 7.4, DRC employs a series of internal quality steps. DRC provides specific training for our 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). Our 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 includes 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, experiential, and biases against a particular age group (ageism)

* A printed copy of DRC's current edition of the *Bias, Fairness, and Sensitivity Guidelines* may be obtained by writing to:

ATTN: *Bias, Fairness, and Sensitivity Guidelines* Document Request
Test Development
Data Recognition Corporation
13490 Bass Lake Road
Maple Grove, MN 55311

and against 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

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:

1. Items measure what they are intended to measure.
2. Items respect the diversity of the assessment population.
3. Items have a clear format for text.
4. Stimuli and items have clear pictures and graphics.
5. Items have concise and readable text.
6. Items allow changes to format, such as Braille, without changing meaning or difficulty.
7. 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 Universal Design principles is described in Chapter Four.

DEPTH OF KNOWLEDGE

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 dealing with content. Within the content category is a useful set of levels for evaluating depth of knowledge. According to Webb (1999, p.7–8) "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." The four levels of cognitive complexity (depth of knowledge) are:

- Level 1: Recall
- Level 2: 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.

TEST ITEM WRITERS AND ITEM WRITER TRAINING

DRC and WestEd selected and trained item writers. 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 multiple-choice and open-ended

response items. Prior to developing items for the PSSA, the cadre of item writers was trained with regard to:

- Pennsylvania Academic Standards, Assessment Anchors, and Eligible Content
- 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
- 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 and WestEd professionals with classroom experience in reading/language arts. They had also undergone 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, i.e., 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. All passages acquired for the 2005 field test were “authentic” in that they were culled from published materials. Approval to reprint was secured from the publisher. 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 vocabulary and language characteristics.
- Passages are free of bias/fairness/sensitivity issues.
- Passages represent different cultures.
- Passages are from a variety of sources.
- Passages should be able to stand the test of time.
- Passages are sufficiently “rich” to generate a variety of MC and OE items.
- Passages are complete with all necessary permissions documentation.
- Passages avoid dated subject matter unless a relevant historical context is provided. (Students should not have to have extensive background knowledge in a certain discipline or area to understand a text.)

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

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 preceding section on reading passage selection. 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

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. The issue of readability was addressed for all items during the final editing of items and at the item content review. 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 issues of fairness or sensitivity.

PROCESS OF ITEM CONSTRUCTION

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, at WestEd, or at both companies (depending on the grade). Content specialists and editors evaluated each item to make sure that it measured the intended eligible content and/or assessment anchor (Assessment Anchor Content Standards). They also assessed each item to make certain that it was appropriate to the intended grade and that it provided and cued only one correct answer. In addition, the difficulty level, Depth of Knowledge, graphics, language demand, and distractors were also evaluated. Other elements considered in this process include, but is not limited to: Universal Design, bias, source of challenge, grammar/punctuation, and PSSA style.

A flow chart summarizing the item and test development processes used appears in Appendix E.

ITEM CONTENT REVIEW IN AUGUST 2004

Prior to field testing, all newly developed test items were submitted to content committees for review. The content committees consisted of Pennsylvania teachers and subject-area supervisors 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. 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 August 9-13, 2004. Committee members were approved by PDE, and PDE-approved invitations were sent to them by DRC. PDE also selected internal PDE 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. DRC also provided training on the procedures and forms to be used for item content review.

DRC assessment specialists in mathematics and reading facilitated the reviews and were assisted by representatives of PDE and WestEd. 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:

1. Anchor Alignment (classified as Full, Partial, or No)
2. Content Limits (classified as Yes or No)
3. Grade-Level Appropriateness (classified as at grade level, below, or above grade level)
4. Difficulty Level (classified as Easy, Medium, or Hard)
5. Depth of Knowledge (classified as Recall, Application, Strategic Thinking)
6. Appropriate Source of Challenge (classified as Yes or No)
7. Correct Answer (classified as Yes or No)
8. Quality of Distractors (classified as Yes or No)
9. Graphics (classified as Yes or No)
10. Appropriate Language Demand (classified as Yes or No)
11. Freedom from Bias (classified as Yes or No)

The members then came to 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 the master rating sheet was collected. Committee facilitators recorded the committee consensus on the Item Review Tally Form, which may be found in Appendix F.

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 for which there were only keys assigned to DRC personnel. Secure materials that did not need to be retained after the meetings were deposited in secure barrels and their contents were shredded.

BIAS, FAIRNESS, AND SENSITIVITY REVIEWS

Prior to field testing, all newly developed test items for grades 5, 8, and 11 were also submitted to a Bias, Fairness, and Sensitivity Committee for review. This took place on August 9-13,

2004. The committee's primary responsibility was to evaluate items as to acceptability with regard to bias, fairness, and sensitivity issues. They also made recommendations for changes 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 director to review items for bias, fairness, and sensitivity issues. Training materials included a manual developed by DRC (DRC, 2003-2006). Members of the committee also had expertise with special needs students and English Language Learners. PDE staff members were also trained and participated in the review. All reading and mathematics 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. The committee then discussed each of the issues as a group and came to consensus as to which issues should represent the view of the committee. All consensus comments were then compiled, and the actions taken 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.

ITEM AUTHORING AND TRACKING

Initially, items are prepared on PSSA Item Cards and used for preliminary sorting and review. Although very similar, the PSSA Item Card for Multiple-Choice Items differs from the PSSA Item Card for Open-Ended Items in that the former has a location at the bottom of the card for comments regarding the distractors. Blank examples of these two cards are shown in Appendix G. In both instances a column against the right margin provides for codes to identify the subject area, grade, content categories, passage information (in the case of reading), item type, depth of knowledge (cognitive complexity), estimated difficulty, answer key (MC items), and calculator use (mathematics).

All items undergoing field-testing were entered into the DRC Item Viewer and Authoring Network™ (IVAN), which is a comprehensive, secure, online item banking system. It accommodates item writing, item viewing and reviewing, and item tracking and versioning. IVAN 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 IVAN Item Card is presented in Appendix G.

Chapter Four: Universal Design Procedures Applied in the PSSA 2006 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 2005 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 students with limited English proficiency. 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 the team leaders. Committees involved in content review included some members who were familiar with the unique needs of students with disabilities and students with limited English proficiency. 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 2006 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 every student 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 Anchor Content Standards (Assessment Anchors) 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 that accessibility was woven into the fabric of the test rather than being added after the fact.

- **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 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. Knowledge questions that are posed within 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 that text is maximally readable and comprehensible. These features go beyond what is measured by readability formulas. Readability and comprehensibility are affected by many characteristics, 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 results 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,

2004-2006) was utilized, with PDE approval, that 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.

- 1. Items measure what they are intended to measure.** Item writing training included assuring that writers and reviewers had a clear understanding of Pennsylvania's Academic Standards 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. 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 difficulties. 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 assessed.
 - Technical terms and abbreviations were used only if related to the content being measured.

- Definitions and examples were clear and understandable.
- 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. A Spanish version for the PSSA mathematics test was available for use by English Language Learners who would benefit from this accommodation.
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 manner consistent with an academic English framework with a left-right, top-bottom flow.

ITEM DEVELOPMENT

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

- Test directions are carefully worded to allow for alternate responses to open-ended questions.
- During item and bias reviews, test committee members are made aware of the Principles of Universal Design and of issues that may adversely affect students with disabilities with the goal of ensuring that PSSA tests are bias free for all students.
- DRC special education content specialists review items with the goal of ensuring that they are universally designed and accessible.
- With the goal of ensuring that the PSSA tests are accessible to the widest range of diverse student populations, PDE instructs DRC and WestEd to limit item types that are difficult to format in Braille, and that may become distorted when published in large print. DRC and WestEd are instructed to limit the following on the PSSA.
 - Mathematics: complicated tessellations, a chart or graph that extends beyond one page,
 - Reading: graphics and illustrations that are not germane to the content presented,
 - Both content areas: unnecessary boxes and framing of text, unless enclosing the text provides necessary context for the student; use of italics (limited to only when it is absolutely necessary; e.g. variables)..

ITEM FORMATTING

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

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

- High contrast and clarity is used to convey detailed information.
- Typically, shading is avoided; when necessary for content purposes, 10% screens are used as the standard.
- Overlaid print on diagrams, charts, and graphs is avoided.
- Charts, graphs, diagrams, and tables are clearly labeled with titles and with short descriptions where applicable.
- Only relevant information is included in diagrams, pictures, and graphics.
- Symbols used in keys and legends are meaningful and provide reasonable representations of the topic they depict.
- Pictures that require physical measurement are 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. An accommodations manual for the PSSA entitled *2006 Accommodations Guidelines* (PDE, December 2005) was developed for use with the 2006 PSSA.

Chapter Five: Field-Test Procedures

EMBEDDED FIELD-TEST ITEMS

The 2005 PSSA test forms contained common items (identical on all forms) along with matrix/embedded field-test items. The common items consist of a set of “core” items taken by all students. The matrix and field-test items were embedded and were unique, in most instances, to a form; however, there are instances in which a matrix or embedded field-test item appeared on more than one form. 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 2005 PSSA were selected for use as common or matrix items in the 2006 PSSA.

STATISTICAL ANALYSIS OF ITEM DATA

All field-tested items were analyzed statistically following conventional item analysis methods. For MC items, indices known as traditional or classical item statistics included the point-biserial correlation (Pt Bis) for the correct and incorrect responses, percent correct (P-Value), and the percent responding to incorrect responses (distractors). For OE items 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-scorable 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 would 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 (OE) 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 OE 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 a MC item to be flagged, the criteria included any of the following:

- Point-biserial correlation for the correct response of less than 0.25
- Point-biserial correlation for any incorrect response greater than 0.0
- Percent correct less than 30% or greater than 90%
- Percent responding to any incorrect responses greater than the percent correct

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

- Item-test correlation less than 0.40
- Percent in any score category less than 10% or greater than 40%
- Non-scorable responses greater than 10 percent

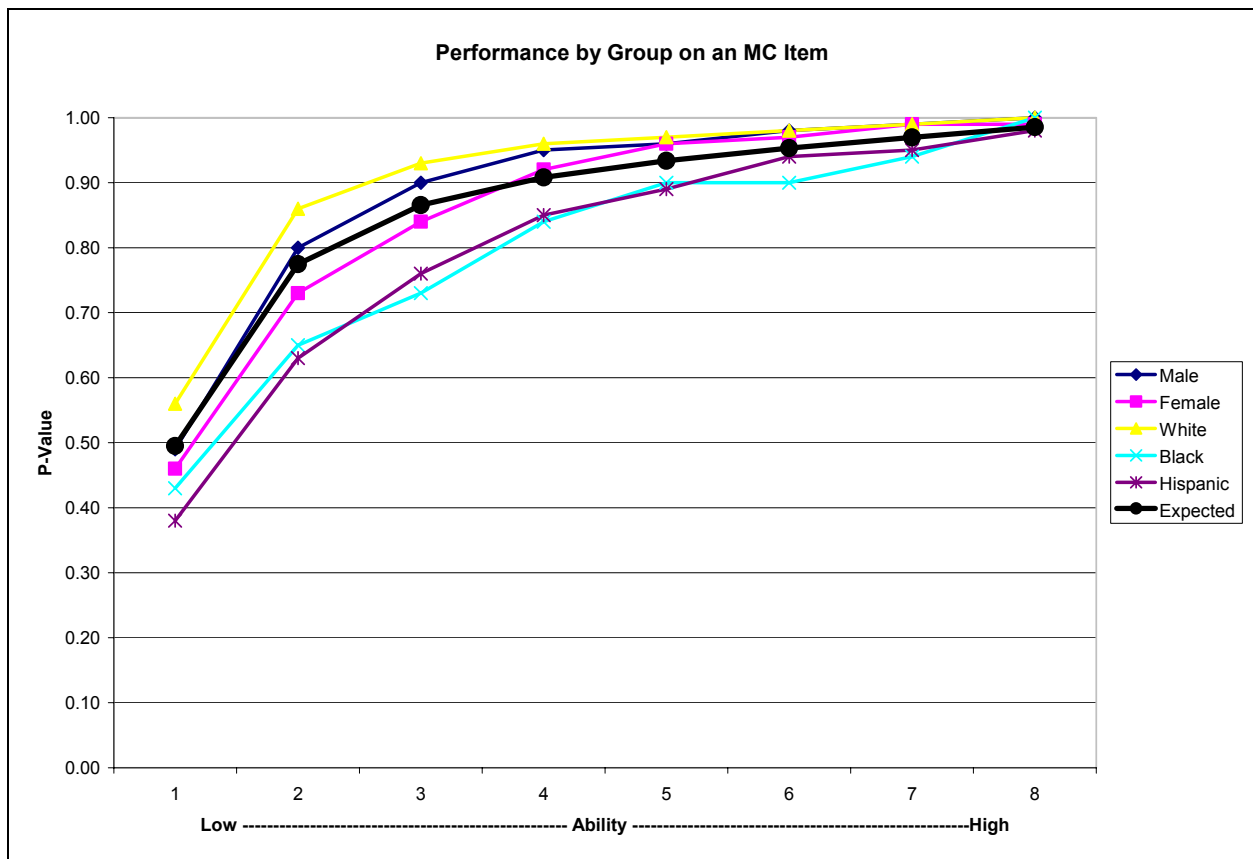
Item analysis results for multiple-choice and open-ended field test items are presented in Appendices H through S.

DIFFERENTIAL ITEM FUNCTIONING

Bias can present itself in a variety of ways in test items: through the language, the format, the content, or the behaviors required. It can result from membership in a specific subpopulation or from factors correlated with the subpopulation. It can affect all members of the subpopulation, or it may affect only those in specific ranges of ability. Understanding how bias arises and how it presents itself has an impact on how best to detect and correct it.

A sample plot of a multiple-choice item showing possible (non-uniform) bias is shown in Figure 5.1.

Figure 5.1. Plot of a Multiple-Choice Item Showing Potential Bias



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 to organize the review so the effort is concentrated on the most problematic cases; however, no items should be automatically rejected simply because a statistical method flagged them or accepted because they were not flagged.

Statistical detection of item bias is an inexact science. There have been a variety of methods proposed for detecting bias, but no one statistic can be considered either necessary or sufficient. Different methods are more or less successful depending on the situation. No analysis can guarantee that a test is free of bias, but almost any thoughtful analysis will uncover the most flagrant problems.

A fundamental shortcoming of all of the 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 biased items, any method will locate the problems. If, however, all items on the test are consistently biased against a subpopulation, a statistical analysis of the items will not be able to separate bias effects from true differences in achievement.

MANTEL-HAENSZEL PROCEDURE FOR DIFFERENTIAL ITEM FUNCTIONING

The *Mantel-Haenszel* procedure 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 total score to organize the analysis.

Differential item functioning is present when examinees of equal ability but different subgroup membership do not have the same probability of answering the item correctly. If this inequity is associated with gender or ethnic groups, the item could be described as potentially biased.

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 or the group most apt to be disadvantaged by a biased measurement is typically defined as the focal group. The Mantel-Haenszel (MH) statistic (Mantel & Haenszel, 1959) 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 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 constructed-response items, a comparable statistic is computed based on the standardized mean difference (SMD) (Dorans, Schmitt & Bleistein, 1992), 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 differential item functioning. Items classified as B+ or B- have some indication of DIF and may not require revision. Items classified as C+ or C- have strong evidence of DIF and should be reviewed and revised if they are to be used again. The plus sign indicates that the item favors the focal group and a minus sign indicates that the item favors the reference group.

Counts of the number of items from each grade and content area that were assigned to each severity code are shown below in Table 5-1.

Table 5-1. 2006 DIF Summary

2006 Multiple Choice Item DIF Summary

Multiple Choice Item Male/Female DIF Counts						
Math	A	B-	B+	C-	C+	Total
5	143	3	2	0	1	149
8	114	2	6	1	0	123
11	114	5	1	0	0	120
Reading						
5	159	1	0	0	0	160
8	152	5	4	1	0	162
11	153	4	6	0	1	164

2006 Constructed Response Item DIF Summary

Constructed Response Item Male/Female DIF Counts						
Math	A	B-	B+	C-	C+	Total
5	21	0	0	0	0	21
8	20	0	0	0	0	20
11	25	0	0	0	0	25
Reading						
5	20	0	0	0	0	20
8	20	0	0	0	0	20
11	20	0	0	0	0	20

Multiple Choice Item White/Black DIF Counts						
Math	A	B-	B+	C-	C+	Total
5	134	10	3	2	0	149
8	115	5	1	2	0	123
11	116	2	2	0	0	120
Reading						
5	145	9	1	5	0	160
8	148	14	0	0	0	162
11	150	9	2	3	0	164

Constructed Response Item White/Black DIF Counts						
Math	A	B-	B+	C-	C+	Total
5	21	0	0	0	0	21
8	20	0	0	0	0	20
11	25	0	0	0	0	25
Reading						
5	20	0	0	0	0	20
8	20	0	0	0	0	20
11	20	0	0	0	0	20

Multiple Choice Item White/Hispanic DIF Counts						
Math	A	B-	B+	C-	C+	Total
5	135	10	0	4	0	149
8	112	5	2	4	0	123
11	113	7	0	0	0	120
Reading						
5	138	16	1	5	0	160
8	147	14	0	1	0	162
11	147	13	0	4	0	164

Constructed Response Item White/Hispanic DIF Counts						
Math	A	B-	B+	C-	C+	Total
5	20	1	0	0	0	21
8	19	1	0	0	0	20
11	23	2	0	0	0	25
Reading						
5	20	0	0	0	0	20
8	20	0	0	0	0	20
11	20	0	0	0	0	20

Multiple Choice Item White/Asian DIF Counts						
Math	A	B-	B+	C-	C+	Total
5	137	2	3	5	2	149
8	109	1	6	5	2	123
11	102	3	6	3	6	120
Reading						
5	149	7	0	3	1	160
8	136	10	5	8	3	162
11	127	13	8	15	1	164

Constructed Response Item White/Asian DIF Counts						
Math	A	B-	B+	C-	C+	Total
5	21	0	0	0	0	21
8	20	0	0	0	0	20
11	25	0	0	0	0	25
Reading						
5	20	0	0	0	0	20
8	20	0	0	0	0	20
11	20	0	0	0	0	20

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 2005 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, which DRC content-area test development 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 subject-area content committees composed of eight teachers and PDE staff for reading and ten teachers and PDE staff for mathematics. The review took place on August 8-10, 2005. In this session, committee members were first trained by Dr. Ronald Mead, DRC Senior Psychometrician, 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.

Chapter Six: Operational Forms Construction for 2006

FINAL SELECTION OF ITEMS AND 2006 PSSA FORMS CONSTRUCTION

When the final selection of items for the operational 2006 test was ready to begin, the candidate items that emerged from the Spring 2005 field test had undergone multiple reviews, including:

- Reviews by DRC and WestEd content-area test development specialists and curriculum specialists
- Formal bias, fairness, and sensitivity review by the Bias, Fairness, and Sensitivity Committee consisting of an expert, multi-ethnic group of men and women with members also having expertise with special needs students and English Language Learners
- Formal review by the content committees consisting of Pennsylvania educators, including teachers as well as district personnel
- PDE review
- Content review by the PDE subject-area teacher advisory committee
- Item data review by members of the PDE subject-area teacher committees

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” were candidates to be selected for the 2006 PSSA. To have an item status code of “Acceptable” 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 race)
- Free of major psychometric flaws, including a special review of flagged items

Next, all relevant information regarding the acceptable items, including associated graphics, was entered into the IVAN system. From the IVAN system, Excel files were created for reading and mathematics at grades 5, 8, and 11. These files contained all relevant content codes and statistical characteristics. The IVAN system also created for each acceptable item a card displaying the 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 matrix sections according to test blueprint requirements and psychometric guidelines. No changes were made to any item since even slight

alterations could affect how an item performs on subsequent testing.

For the common items, this meant that the combination of MC and OE 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., math 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 the items, as a collection, had a correct answer distribution of approximately 25 percent in each of the four positions. Selected items that were psychometrically problematic 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.

The process for selecting operational matrix items was a little different. The chief consideration was that items in the matrix section of the various forms, together with the common items, would yield a greater overall pool of items from which reliable sub-category results could be generated for school-level reporting. Once again the cardinal principle was the selection of an appropriate number of items to properly cover the sub-categories. The subject-area test development specialist’s task was to distribute these items in matrix sections across the 20 forms so that the OE item and set of 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.

In the case of the 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.

Once the recommendations were finalized for the common/core, matrix, and linking 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.

SPECIAL FORMS USED IN THE 2006 PSSA

BRAILLE AND LARGE PRINT

Students with visual impairments were able to respond to test materials that were available in either **Braille** or **large print**. At each grade level assessed, one form was selected for the creation of a Braille and a large-print edition. School district personnel ordered Braille or large-print assessment materials directly from the Pennsylvania Training and Technical Assistance

Network (PaTTAN) in Harrisburg. They could also contact PaTTAN for technical assistance regarding students with visual impairments.

School personnel were directed to transcribe all student answers (MC and OE) into scannable answer documents exactly as the student responded. No alterations or corrections of student work were permitted, and the answer document had to have the identical form designation.

SPANISH TRANSLATION OF THE MATHEMATICS ASSESSMENT

Starting with the 2005 assessment and continuing with the 2006 assessment, school personnel had the option of having their Spanish-speaking students who had been enrolled in schools in the United States for less than three years respond to a **Spanish** version of the PSSA for mathematics only. The original translation of the items and the *Directions for Test Administrators* was initiated by Second Language Testing Incorporated and completed by Data Recognition Corporation. After discussions with the PDE and Second Language Testing Incorporated, the mathematics sections of the test booklet were designed with a “side-by-side” format with the English text and Spanish translated text on facing pages. The original English text was on the right-hand side. The Spanish translated text was on the left-hand side.

The mathematics sections of the answer booklet were also presented in Spanish and English. Each open-ended item covered a total of 4 pages in the answer booklet. 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, with the highest possible score from those combinations recorded for the student.

1,303 students used a Spanish translated version at grades 5, 8, and 11 in 2006.

Instructions for the appropriate use of these special forms are detailed in the *2006 Accommodations Guidelines* (PDE, December 2005).

Chapter Seven: Test Administration Procedures

TEST SESSIONS, TIMING, AND LAYOUT

The test window for the 2006 operational assessment was from March 20 through March 31, 2006, including make-ups. The reading and mathematics assessments consisted of six sections. Additional information concerning testing time and test layouts can be found in Chapter 3.

SHIPPING, PACKAGING, AND DELIVERY OF MATERIALS

There were two shipments sent out by Data Recognition Corporation (DRC). Shipment one was delivered by February 17, 2006, and contained the *Handbook for Assessment Coordinators and Administrators* and the *Directions for Administration* for each grade tested at a school. Shipment two was delivered by March 6, 2006, and contained the administrative materials (e.g., return shipping labels and student precode labels) and secure materials (e.g., test booklets and answer booklets). 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 district 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 the box being sealed for shipment 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 the items from the point of shipment 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.

The assessments for grades 4-8 and 11 were shipped together. DRC packed 2,036,115 assessment booklets, 139,301 manuals, and 185,145 non-secure materials for over 3,168 schools. DRC used UPS, Yellow Freight, and Diamond Transportation Group, Inc. to deliver 26,399 boxes of materials to the testing sites.

MATERIALS RETURN

The materials return window was March 31, 2006 – April 5, 2006. DRC used UPS, Yellow Freight, and Diamond Transportation Group, Inc. for all returns.

TEST SECURITY MEASURES

Test security is essential to obtaining reliable and valid scores for accountability purposes. The 2006 PSSA included a Test Security Affidavit that was to be signed and returned by every principal or director where testing materials were shipped. 3,178 of the Test Security Affidavits for the Reading and Mathematics assessments that were sent to a total of 3,201 testing sites were signed and returned to DRC. The purpose of the affidavit 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 affidavit attested that all security measures were followed concerning the handling of secure materials. Some of the security measures included:

- The contents of the test were not discussed, disseminated, described, or otherwise revealed to anyone.
- The contents of the test were not kept, copied, or reproduced.
- All booklets were kept in a locked, secure storage area at both the district and school levels.

SAMPLE MANUALS

Copies of the *Handbook for Assessment Coordinators and Administrators* and the *Directions for Administration* can be found on the Pennsylvania Department of Education website at www.pde.state.pa.us.

ASSESSMENT ACCOMMODATIONS

An accommodations manual entitled *2006 Accommodations Guidelines* (PDE, December 2005) was developed for use with the 2006 PSSA. Additional information regarding assessment accommodations can be found in Chapter 4 of this report.

Chapter Eight: Processing and Scoring

RECEIPT OF MATERIALS

Receipt of PSSA test materials began on March 31, 2006, and concluded on April 19, 2006. DRC's Operations Material Management System (Ops MMS) was utilized to securely, accurately, and efficiently receive secure materials. This system features advanced automation and cutting-edge 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 contained on the return label and identified the district and school. If the label could not be read automatically, a floor operator entered the information into the system manually. 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. A "three way match" among the district box count, the carrier box count, and the DRC return box count was conducted to verify a box return accuracy rate of 100%.

Once the box receipt process was completed, the materials separation phase began. Warehouse personnel opened the district boxes and sorted the contents by grade, subject, and status (used/unused) into new boxes. Once filled, a sorted box's documents were loaded into an automated counter, which recorded a booklet count for each box. An on-demand DRC box label was produced that contained a description of each box's contents and quantity in both barcode and human-readable format. This count remained correlated to the box as an essential quality control step throughout secure booklet processing and provided a target number for all steps of the check-in process.

Once labeled, the sorted and counted boxes proceeded to booklet check-in. This system used streamfeeder automation to carry documents past oscillating scanners that captured data from up to two representative barcodes and stored it in the Ops MMS database.

The secure booklet check-in operator used a hand scanner to scan the counted box label. This procedure input material type and quantity parameters for what the Ops MMS should expect within a box. It then loaded the box's contents into the streamfeeder.

The documents were fed past oscillating scanners that captured either a security code or both a security code and a pre-code, depending upon material type. A human operator monitored an Ops MMS screen, which displayed scan errors, an ordered accounting of what was successfully scanned, and the document count for each box.

When all materials were scanned and the correct document count was reached, the box was sealed and placed on a pallet. If the correct document count was not reached, 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 immediate feedback to districts and schools regarding any missing materials based on actual receipts versus expected receipts.

Upon completion of secure booklet check-in, DRC produced a Missing Materials Report that listed all schools in each participating district and any booklets not returned to DRC listed by

school and security number.

After scannable materials were processed through Book Receipt, the materials became available to the DRC Document Processing Center Log-In staff for document log-in. Based on a pre-determined sampling and calibration plan, the staff prioritized answer documents using the following process:

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

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

After a quality check in 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

DRC used its image scanning system to capture constructed-response items as images. These were then loaded into the image scoring system for both the handscoring of constructed-response items and for the capture of multiple-choice and demographic data.

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 standard. 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.

Customized scanning programs for all scannable documents were prepared to read the answer documents and to electronically format the scanned information. 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 read selected-response, demographic, and identification information. The image scanners also used barcode readers to read pre-printed barcodes from a label on the booklet.

The scannable documents were automatically fed into the image scanners where pre-defined processing criteria determined which fields were to be captured electronically. Constructed-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 answer documents.

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 process and 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 pre-defined portions of the answer documents were represented in their entirety in the image files. If a page was missing, the entire answer document was flagged for resolution.

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

Experienced DRC Document Processing Center Editing staff reviewed all potential errors detected during scanning and made necessary corrections to the data file. 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 answer documents 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 answer documents assigned to the box during book receipt. Count discrepancies between book receipt and answer documents scanned were resolved at this time.

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

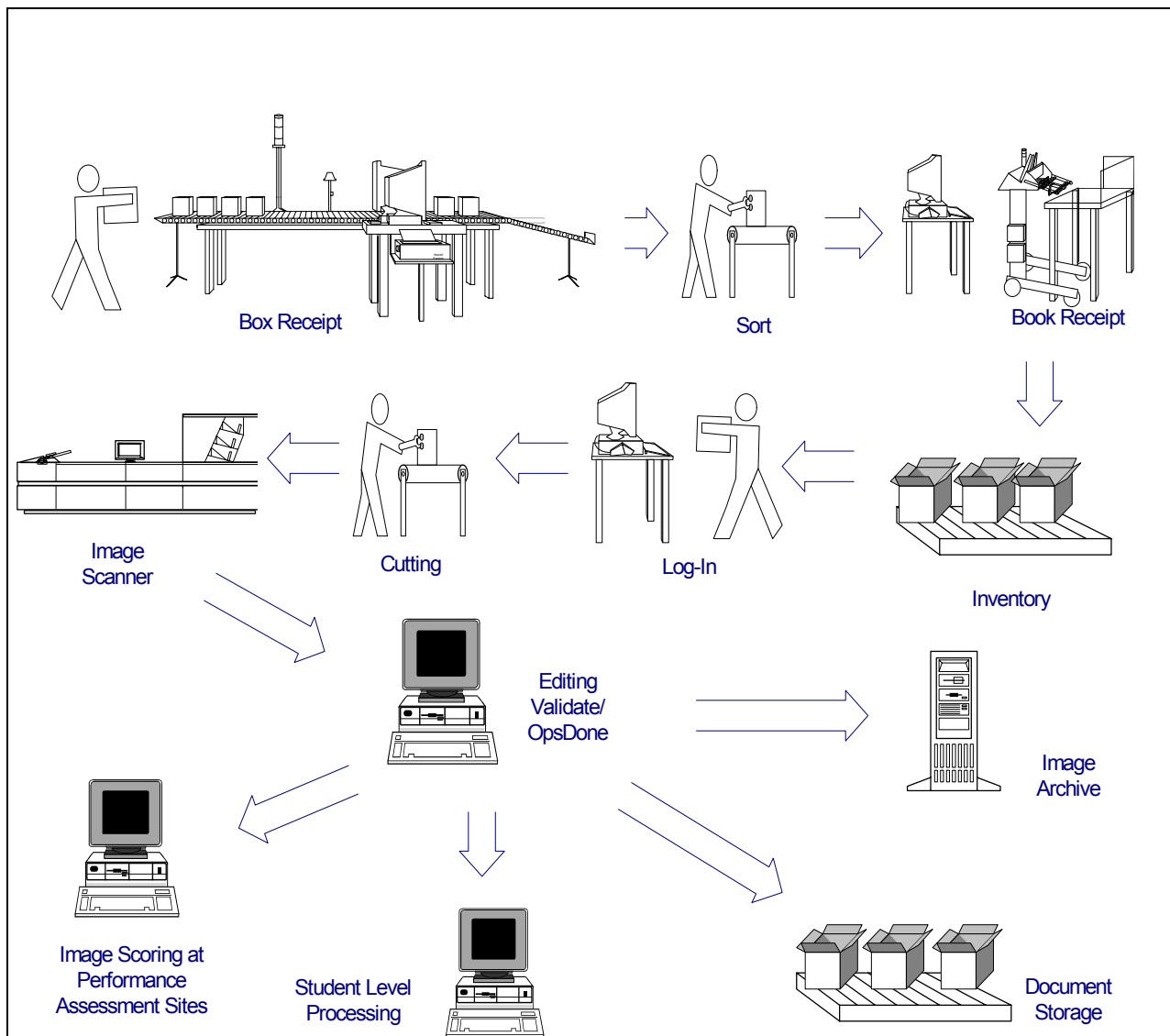
Table 8-1 shows the number of answer booklets received through booklet check in, the number of booklets that contained student responses that were scanned and scored, the number of test booklets received, and the total number of booklets received.

Table 8-1. Counts of 2006 PSSA Materials Received – Grades 5, 8, and 11

	Answer Booklets Received	Used Answer Booklets Scanned	Test Booklets Received	Total Booklets Received
Grade 5	167,950	135,650	167,845	335,795
Grade 8	175,656	148,783	175,636	351,292
Grade 11	170,039	138,730	170,142	340,181

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 answer materials are boxed for security purposes and final storage:

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

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 constructed 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 finalized 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 began to assemble groups of responses that exemplified the different score points represented in the 0–4 item-specific scoring guidelines for math and the 0–3 item-specific scoring guidelines for reading. Papers were pulled to supplement the training materials for the common and matrix items that were moved forward from the 2005 field test, and for all the new 2006 field test items.

Once examples for all the score points were identified, sets were put together for each item. These sets were copied for use at rangefinding, held April 11–13, 2006, at the Holiday Inn, Grantville, Pennsylvania. The rangefinding committees consisted of Pennsylvania educators, PDE staff members, DRC Test Development staff, and DRC Performance Assessment Services staff.

The joint session began with a review of the history of the 2006 assessment and then broke into mathematics and reading grade-level groups. Copies of the student example sets were presented to the committees, one item at a time. The committees reviewed and scored the student samples together to ensure that everyone was interpreting the scoring guidelines consistently. Committee members then went on to score responses independently and those scores were discussed until a consensus was reached. Only responses for which a good agreement rate was attained were used in training the readers. Discussions of the responses used the language of the scoring guidelines, assuring PDE and all involved that the score point examples clearly illustrated the specific requirements of each score level. DRC PAS staff made notes of how and why the committees arrived at score point decisions, and this information was used by the individual scoring directors in reader training.

DRC and PDE discussed scoring guideline edits that the committees suggested. Changes approved by PDE were then made by DRC Test Development and the scoring guidelines were used by PAS staff in the preparation of materials and training of readers.

READER RECRUITMENT/QUALIFICATIONS

DRC retains a number of experienced readers from year to year, and those readers made up approximately 60% of the reader pool (N=450) for 2006. To complete the reader staff for this project, DRC placed advertisements in local papers, minority publications, teacher newsletters, and at regional colleges and universities. Open houses were held and applications for reader positions were screened by the DRC recruiting staff. Candidates were personally interviewed and a mandatory, on-demand writing sample, plus a math sample for those applying to score

mathematics, were collected, along with 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 with degrees emphasizing expertise in mathematics and reading. Since readers had to have a strong content-specific background, the reader pool consisted of educators, writers, editors, and other professionals who were valued for their experience, but who were also required to set aside their own biases about student performance and accept the scoring standards. All readers on this assessment held at least a four-year degree.

LEADERSHIP RECRUITMENT/QUALIFICATIONS

Scoring directors and team leaders were chosen by the project director from a pool consisting of experienced individuals who were successful readers and leaders on previous DRC contracts and had strong backgrounds in scoring mathematics and/or reading. Those selected demonstrated organization, leadership, and management skills. The scoring directors and a majority of the team leaders had at least five years of leadership experience on the PSSA. All scoring directors, team leaders, and readers were required to sign confidentiality forms before any training or handling of secure materials began.

Each room of readers was assigned a scoring director. This individual was monitored by the project manager and project content coordinator and led the hand scoring for the duration of the project. The scoring director assisted in rangefinding, worked with supervisors to create training materials, conducted the team leader training, and was responsible for training the readers. The scoring director also made sure that reports were available and interpreted reports for the readers. The scoring director supervised the team leaders.

Team leaders assisted the scoring director with reader training and monitoring by working with their teams in small group discussions and answering individual questions that readers may not have felt comfortable asking in a large group. Once readers had qualified, the team leaders were responsible for maintaining the accuracy and workload of team members. The ongoing monitoring identified those readers who were having difficulty scoring accurately and resulted in the reader receiving one-on-one retraining or in pairing that reader with a stronger reader. This process corrected any inaccuracies in scoring and, if not, that reader was released from the project.

TRAINING

After rangefinding was completed, DRC's PAS staff compiled the approved scoring guidelines and the scored student examples from the committees into packets used for training the readers. Responses that were relevant in terms of the scoring concepts they illustrated were annotated for use in a scoring guide. The item-specific scoring guidelines served as the reader's constant reference. Readers were instructed how to apply the guidelines and were required to demonstrate a clear comprehension of each anchor set by performing well on the training materials that were presented for each grade and item. Training and qualifying sets consisted entirely of examples of student responses reviewed by the rangefinding committee.

Team leaders assisted the scoring directors with the training and monitoring of readers. The scoring director conducted the team leader training before the reader training. This training followed the same procedures as the reader training, but qualifying standards were more stringent because of the responsibilities required of the team leaders. During their training, all materials were reviewed and discussed, and anticipated reader questions and concerns were addressed. Team leaders were required to annotate all of their training responses with the

official annotations received from the content committee members at the rangefinding meetings. To facilitate scoring consistency, it was imperative that each team leader imparted the same rationale for each response that other team leaders used. Once the team leaders qualified, leadership responsibilities were reviewed and team assignments were given. A ratio of one team leader for each 8–10 readers ensured adequate monitoring of the readers.

The 2006 assessment included the opportunity for students to respond to the mathematics section in Spanish. The scoring director responsible for this was a bilingual Hispanic with a strong mathematics background who had also worked with the PSSA for over 8 years. All of the readers were bilingual and were hired specifically to score the Spanish portion of the assessment. They were required to meet the same stringent training and scoring standards that were set for the English readers.

Reader training began with the scoring director providing an intensive review of the scoring guidelines and anchor papers to all readers. Next, the readers “practiced” by independently scoring the responses in the training sets. Afterwards, the scoring director and team leaders led a thorough discussion of each set in either a small group or room-wide setting.

Once the scoring guidelines and all the training sets were discussed, readers were required to apply the scoring criteria by qualifying (i.e., scoring with acceptable agreement to the “true” scores) on at least one of the qualifying sets. Readers who failed to achieve the level of agreement determined by PDE were given additional training to acquire the highest degree of accuracy possible. Readers who did not perform at the required level of agreement by the end of the qualifying process were not allowed to score “live” student work and were released from the project.

HANDSCORING PROCESS

Student responses were scored independently and by multiple readers. All responses were read once with a 10% double read or read behind to ensure reliability. The 10% read behinds were randomly chosen by the imaging system at the item level. The PDE determined the required number of reads.

Readers scored the imaged student responses on PC monitors at the DRC Scoring Centers in Harrisburg, Pennsylvania; Minnetonka, Minnesota; Cincinnati, Ohio; and Woodbury, Minnesota. Readers were seated at tables with two imaging stations at each table. Image distribution was controlled, thus ensuring that they were sent to designated groups of readers qualified to score those items. Imaged student responses were electronically separated for routing to individual readers by item, and readers were only provided with student responses that they were qualified to score. Readers read each response and keyed in the scores.

To handle possible alerts (i.e., student responses indicating potential issues related to the student’s safety and well-being that may require attention at the state or local level), the imaging system allowed readers to forward responses needing attention to the scoring director. These alerts were reviewed by the project director, who then notified that student’s school and the PDE of this occurrence. However, PDE did not receive the student’s responses or any other identifying information on that student. Also, at no time did the reader know anything about the student’s personal identity.

Once handscoring was completed, PAS compiled anecdotal reviews of the field-test items for all grade levels in both subjects. This information was handed on to DRC Test Development.

QUALITY CONTROL

Reader accuracy was monitored throughout the scoring session by producing both daily and on-demand reports, ensuring that an acceptable level of scoring accuracy was maintained. Inter-reader reliability was tracked and monitored with multiple quality control reports that were reviewed by quality assurance analysts. These reports were generated at the handscoring center and were reviewed by the scoring directors, team leaders, project coordinators, and project directors. The following reports were used during the scoring of the constructed responses:

The Reader Monitor Report monitored how often readers were in exact agreement and ensured that an acceptable agreement rate was maintained. This report provided daily and cumulative exact and adjacent inter-reader agreement and the percentage of responses requiring resolution. (see Tables 8-2, 8-3, and 8-4)

The Score Point Distribution Report monitored the percentage of responses given each of the score points. For example, the mathematics daily and cumulative report showed how many 0s, 1s, 2s, 3s, and 4s a reader had given to all the responses he or she had scored at the time the report was produced. It also indicated the number of responses read by each reader 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., “needs second reading,” “complete”). This report ensured that all discrepancies were resolved by the end of the project.

The Response Read by Reader Report identified all responses scored by an individual reader. This report was useful if any responses needed rescoring because of reader drift.

The Read-Behind Log was used by the team leader/scoring director to monitor reader reliability. Student responses were randomly selected and team leaders read scored items from each team member. If the team leader disagreed with the reader’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 reader.

Recalibration sets were used throughout the scoring sessions to monitor scoring by comparing each reader’s scores with the true scores and to refocus readers on Pennsylvania scoring standards. This check made sure there was no change in the scoring pattern as the project progressed. Readers failing to achieve a certain percent of agreement with the recalibration true scores were given additional training to achieve the highest degree of accuracy possible. Readers who were unable to recalibrate were released from the project. The procedure for creating and reading recalibration sets was similar to the one used for the training sets.

Tables 8-2, 8-3, and 8-4 show the exact and adjacent agreement rates of the readers for the common constructed responses of the mathematics and reading items for grades 5, 8, and 11.

**Table 8–2. Inter-rater Agreement for
2006 Grade 5 PSSA Constructed-Response Items**

	Common Item	% Exact Agreement	% Adjacent Agreement	% Exact + Adjacent Agreement
Reading	1	74	25	99
	2	70	29	99
	3	70	29	99
	4	71	27	98
Mathematics	1	79	21	100
	2	96	4	100
	3	90	10	100

**Table 8–3. Inter-rater Agreement for
2006 Grade 8 PSSA Constructed-Response Items**

	Common Item	% Exact Agreement	% Adjacent Agreement	% Exact + Adjacent Agreement
Reading	1	73	26	99
	2	71	29	100
	3	72	27	99
	4	76	24	100
Mathematics	1	83	17	100
	2	92	8	100
	3	86	14	100

**Table 8–4. Inter-rater Agreement for
2006 Grade 11 PSSA Constructed-Response Items**

	Common Item	% Exact Agreement	% Adjacent Agreement	% Exact + Adjacent Agreement
Reading	1	75	24	99
	2	83	17	100
	3	74	25	99
	4	80	20	100
Mathematics	1	86	14	100
	2	78	22	100
	3	77	22	99

MATCH-BACK RULES

In order to create a single student record in the central student file, it was necessary to establish match-back rules to combine separate student records into one student record. Match-back rules were applied to link multiple-choice and constructed responses. They were also used to merge student responses captured on different subjects and to link test results with student demographic information.

DATA EXCHANGE, STORAGE, AND RECOVERY POLICIES

DATA EXCHANGE PROCEDURES

The exchange of data between DRC, PDE, and other contractors is a critical and essential component in the success of the PSSA program. To support this process, DRC used the following data exchange procedures to ensure that all data files were successfully and accurately transferred.

- Files were posted to DRC’s secure Pennsylvania FTP site with a standard and logical folder structure.
- Standard file naming conventions were established and used.
- The information necessary to perform these quality control procedures accompanied each data exchange.

Data Exchange Quality Control Procedures

Record Count Check – Confirm the expected record count and provide the record count in files sent and received.

File Count Check– Confirm that the number of files sent and received matches the number of files expected.

Duplicate File Check – Verify that duplicate files were not sent or received.

File Date – Verify that the version of the file received matches the file creation date.

File Type Verification Check – Verify that data sent and received matches the format expected (e.g., Excel, CSV, PDF, Text file [delimited/fixed field length]).

File Log – A log of files sent and received will be maintained.

Data Validation – Data checking procedures will be used to verify that the data is in the specified file layout and matches the expected values.

IMAGES

As part of the scanning process, the multi-page TIFF images were archived to tape before being separated into single page TIFFs and transmitted to the scoring centers. If any of the images were lost/deleted/corrupted at a scoring center, they could be restored from the archived multi-page TIFF images. In addition to archiving the images, the scoring center servers used RAID (Redundant Array of Independent Disks) 5 disk management technology to mirror the images to redundant disk drives. If a disk drive failed in a scoring center server, the images could be quickly restored from the redundant disk drive. In the event that the disk drive and the multi-page TIFF images could not be restored, the original documents would be rescanned. Images are stored for a PDE-specified period.

DATA

Once a reader submitted a score for a constructed-response item, the data were electronically transmitted to our SQL Servers. The log files documenting the changes were backed up hourly. Full back-ups were done nightly (Monday–Friday) and two additional full back-ups were run

over the weekend on the handscoring SQL Servers with the backup tapes being rotated off-site. All data are stored for a PDE specified period.

STORAGE

All physical servers are housed in secure server rooms in DRC's corporate headquarters in Maple Grove, or the Brooklyn Park or Woodbury locations. The server rooms are constructed of concrete floors, walls, and ceilings and designed to be fire and crush proof. They have fire suppression systems to minimize the effect of any fire started within the server room. Access to the server rooms is controlled through a card access system and is restricted to authorized technology support staff only. A log is maintained documenting each time a server room is entered, by whom, and for what purpose. In case of a disaster at any of the locations, another server can take over full operations.

DRC maintains backup servers that can be used to replace a failed server within 24 hours. Every server's configuration is documented in the event a rebuild is required. Each server has an assigned primary and secondary network analyst responsible for its operation.

The servers utilize load-sharing, redundant power supplies and implement RAID subsystems to minimize the effect of a failed disk. The server rooms all have Uninterruptible Power Supply (UPS) systems. For longer periods of power failure, an on-site diesel power generator will automatically start and supply needed power. The computing environment, both servers and communications hardware, will continue to function without interruption when the utility power is disrupted.

Two copies of complete system and data backup are created each weekend. One of these copies is stored in a secure room at the Maple Grove location. The second copy is stored in a secure room at the Woodbury location. These backups are stored indefinitely. Incremental backups of all files on the network are made each day. The incremental backups are kept for 6 weeks.

DRC utilizes a storage area network (SAN) for maximum speed, flexibility, and redundancy in our data storage solution. Servers are connected to the SAN via redundant connections to ensure minimum interruptions due to hardware failures. The SAN allows disk space to be reallocated with ease for availability to those applications or servers as needed. The SAN currently houses 13 Terabytes of storage and is expandable to 26 Terabytes.

Chapter Nine: Summary Demographic, Program, and Accommodation Data for the 2006 PSSA

ASSESSED STUDENTS

The total number of answer documents processed by grade level for the 2006 PSSA is presented on the first line of Table 9-1. Also shown is the number and percent of students with PSSA scores in reading and mathematics, followed by those having a score in each subject area, those with a score in reading or in mathematics, and finally those not having a score in either subject area. As noted in the table, the vast majority of students had scores in both reading and mathematics.

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 1000 per grade level) that elected to participate. Also included were home-schooled students who numbered fewer than 100 per grade.

Table 9-1. Students Assessed on the 2006 PSSA

	Grade 5		Grade 8		Grade 11	
	Number	Percent	Number	Percent	Number	Percent
Number of answer documents processed	135,639		148,762		138,628	
Students with reading scores	133,440	98.4	145,140	97.6	134,083	96.7
Students with mathematics scores	133,871	98.7	145,655	97.9	134,411	97.0
Students with both reading and mathematics scores	133,340	98.3	144,980	97.5	133,886	96.6
Students with a reading score or a mathematics score	133,971	98.8	145,815	98.0	134,608	97.1
Number processed but not assessed in either subject area	1,668	1.2	2,947	2.0	4,020	2.9

As may be observed from Table 9-1, not all students were assessed. Although there are a variety of reasons for this, the major ones pertain to (1) excusal due to significant cognitive disability, (2) absenteeism, and (3) a situation in which there was a non-attempt on the part of the student and no exclusion code was marked by school personnel. The number of students without scores for these three reasons is presented in Table 9-2.

Students in an assessed grade who met each of the following criteria were excused from the PSSA: (1) had a significant cognitive disability, (2) required intensive instruction, (3) required adaptation and support to perform or participate meaningfully, (4) required substantial modification of the general education curriculum, (5) participation in the general education curriculum differed markedly in form and substance from that of other students (see *PSSA Handbook for Assessment Coordinators and Administrators: Grades 4-8 and 11 Reading and Mathematics*, PDE, March, 2006 p. 9). Instead, these students participated in the Pennsylvania Alternate System of Assessment (PASA). Two categories of absenteeism, (1) extended absence from school that continued beyond the assessment window and (2) being absent without makeup for at least one section of a subject area, are combined to form a single absent category in Table

9-2. The non-attempt categorization pertains to a situation in which the student did not meet the criteria for having attempted one or more of the sections of a test and no exclusion code was marked.

Table 9-2. Counts of Students without Scores on the 2006 PSSA

Reason for Non-Assessment	Grade 5		Grade 8		Grade 11	
	N	Pct	N	Pct	N	Pct
Alternate Assessment (PASA)	1000	59.9	1135	38.5	1073	26.5
Absent Reading	427	25.6	1108	37.6	1702	42.0
Absent Mathematics	317	19.0	950	32.2	1605	39.6
Non-Attempt Reading	349	20.9	867	29.4	1005	25.0
Non-Attempt Mathematics	240	14.4	642	21.8	851	21.2

COMPOSITION OF SAMPLE USED IN SUBSEQUENT TABLES

Rather than present data tables separately for reading and mathematics, redundancy was reduced by basing results on the group of students having a score in reading or in mathematics. Analyses were conducted using the individual student data file of July 13, 2006. Because some student file updates may occur subsequent to these analyses, there could be small differences in the counts although percentages would likely differ by only a fraction of a percentage point.

COLLECTION OF STUDENT DEMOGRAPHIC INFORMATION

Data for these analyses were obtained primarily from information supplied by school district personnel through the DRC Student Precode System, a multi-phase process by which student data may be imported, verified, corrected, and updated. Some data such as accommodation information is marked directly on the student answer document at the time the PSSA is administered.

DEMOGRAPHIC CHARACTERISTICS

Frequency data for each category is presented in Table 9-3. Percentages are based on all students with a score in reading or mathematics as shown at the bottom of the table.

Table 9-3. Demographic Characteristics of 2006 PSSA

Demographic or Educational Characteristic	Grade 5		Grade 8		Grade 11	
	Number	Percent	Number	Percent	Number	Percent
Gender						
Female	65,205	48.7	70,552	48.4	66,162	49.2
Male	68,566	51.2	74,934	51.4	68,099	50.6
Race/Ethnicity						
American Indian or Alaskan Native	170	0.1	251	0.2	208	0.2
Asian or Pacific Islander	3,452	2.6	3,203	2.2	3,266	2.4
Black/African American non-Hispanic	21,104	15.8	22,688	15.6	16,674	12.4
Latino/Hispanic	8,869	6.6	8,615	5.9	5,561	4.2
White non-Hispanic	99,285	74.1	110,052	75.5	107,742	80.0
Multi-Racial/Ethnic	841	0.6	586	0.4	661	0.5
Educational Category and Other Demographic Groups						
IEP (not gifted)	21,230	15.8	21,801	15.0	16,935	12.6
Student exited IEP in last 2 years	902	0.7	377	0.3	243	0.2
Gifted and has an IEP	6,719	5.0	8,573	5.9	7,528	5.6
504 Plan / Chapter 15	1,041	0.8	1,056	0.7	839	0.6
Title I	40,042	29.9	28,547	19.6	16,234	12.1
Title III (3 categories below)						
Served	2,056	1.5	1,617	1.1	882	0.7
Not Served	8,330	6.2	9,145	6.3	8918	6.6
Formerly served (2 yr monitoring)	671	0.5	499	0.3	298	0.2
Migrant Student	405	0.3	364	0.2	208	0.2
LEP (not 1 st year of enrollment)	2,953	2.2	2,270	1.6	1,340	1.0
LEP in 1 st year of enrollment	532	0.4	409	0.3	342	0.3
Exited ESL/bilingual program within last 2 years	1,036	0.8	761	0.5	492	0.4
Foreign Exchange Student	11	0.0	7	0.0	134	0.1
Economically Disadvantaged	49,007	36.6	48,550	33.3	31,674	23.5
Hurricane Katrina displacement	10	0.0	10	0.0	11	0.0
Enrollment						
Current Enrollment in school of residence after Oct 1, 2005	5,551	4.1	5,683	3.9	4,111	3.1
Current Enrollment in district of residence after Oct 1, 2005	3,665	2.7	3,930	2.7	3,108	2.3
Current Enrollment as PA resident after Oct 1, 2005	1,372	1.0	1,310	0.9	1,091	0.8
Current Enrollment in district of residence after Oct 1, 2003	19,245	14.4	16,830	11.5	11,840	8.8
Enrolled in district of residence after Oct 1, 2002 but before Oct 1, 2003	5,976	4.5	6,405	4.4	6,776	5.0
Homeless as defined by McKinney-Vento Act	177	0.1	185	0.1	73	0.1
Number Scored	133,971		145,815		134,608	

EDUCATION IN NON-TRADITIONAL SETTINGS

For each category the number and percent are presented for all students with a score in reading or mathematics. Table 9-4 reveals an incidence of less than one percent for the majority of these settings. Also shown are home schooled students assessed by parental request.

Table 9-4. Participation in 2006 PSSA by Students in Non-Traditional Settings

Non-Traditional Educational Settings	Grade 5		Grade 8		Grade 11	
	Number	Percent	Number	Percent	Number	Percent
Court / agency placed	160	0.1	603	0.4	749	0.6
Homebound instruction	5	0.0	13	0.0	14	0.0
Special education student placed in program outside the district of residence	67	0.1	148	0.1	152	0.1
Special education student placed in program located in one building/site within the district of residence	447	0.3	110	0.1	61	0.0
Student placed in Approved Public Alternative Education Program	214	0.2	427	0.3	624	0.5
Special education student placed in Approved Public Alternative Education Program	15	0.0	87	0.1	76	0.1
Student placed in Approved Private School (APS)	157	0.1	231	0.2	238	0.2
Student attends an intermediate unit (IU) program/classroom	307	0.2	516	0.4	466	0.3
Home schooled student assessed by parental request	81	0.1	85	0.1	26	0.0

PARTICIPATION IN PSSA BY CAREER AND VOCATIONAL EDUCATION STUDENTS

Table 9-5 summarizes the total number of students receiving a score on the PSSA who were enrolled in an approved CTE program. Some of these students are dually coded as enrolled in a tech prep program.

Table 9-5. Participation in 2006 PSSA by Grade 11 Career and Vocational Education Students

Career and Vocational Education Categories	Number	Percent of CTE Students	Percent of all Assessed Students
Students enrolled in a CTE program approved by Career & Technical Education System	13,744	80.5	10.2
Students enrolled in a tech prep program who are dually coded as CTE	3,334	19.5	2.5
Number scored classified as CTE	17,078	100	12.7
Students enrolled in a tech prep program but NOT dually coded as CTE	788		0.6
Number Scored classified as CTE or as tech prep only	17,866		13.3

Table 9-6 provides data regarding the type of school setting in which the grade 11 students receive their career and vocational education. Table 9-6 also presents information regarding the student’s career cluster. In this table the totals are based on the summation of assessed students across type of school settings and across program areas. The associated percents relate to the total numbers of career and vocational education (CTE) students with a score in reading or mathematics.

Table 9-6. School Setting and Career Cluster Categories of Grade 11 CTE Students

Student Attends:	Number	Percent
Comprehensive CTE for full day	2,473	14.5
District High School with CTE classes	3,567	20.9
Charter School with an Approved CTE	104	0.6
Career and Technical Center part time	9,304	54.5
Not coded	1,630	9.5
Totals	17,078	100 %
Career Cluster Program Area Student is Enrolled in:		
Agriculture	959	5.6
Architecture and Construction	2,720	15.9
Arts and Communication	823	4.8
Business Management	1,015	5.9
Education and Training	415	2.4
Finance	41	0.2
Government and Public Administration	11	0.1
Health Science	1,320	7.7
Hospitality and Tourism	972	5.7
Human Services	1,494	8.7
Information Technology	760	4.5
Law and Public Safety	419	2.5
Manufacturing	1,092	6.4
Marketing, Sales and Service	726	4.3
Science and Technology	704	4.1
Transportation and Logistics	1,972	11.5
Not coded	1,635	9.6
Totals	17,078	100 %

PRIMARY DISABILITY OF IEP STUDENTS ASSESSED ON THE PSSA

School personnel supplied the primary disability information for those students who had an IEP (not gifted) through the DRC Student Precode System. Beginning with 2006, the disability categories are presented in a sequence that matches a Department of Education numbering system and two previously separate categories were combined. In Table 9-7, for each disability category, the number and percent are presented for all students with a score in reading or mathematics who were coded with a disability. For example, if 20,000 students statewide had a coded disability and 10,000 students were classified as having a specific learning disability, the table entries will show 10,000 followed by 50%. Uniformly, specific learning disability is the category with the highest incidence of occurrence. The last row of Table 9-7 presents the percent of all assessed students who have a coded primary disability.

Table 9-7. Incidence of Primary Disabilities among IEP Students Assessed on the 2006 PSSA

Primary Disability of Students Having an IEP	Grade 5		Grade 8		Grade 11	
	Number	Percent	Number	Percent	Number	Percent
Traumatic Brain Injury	28	0.1	46	0.2	35	0.2
Hearing Impairment incl. Deafness	194	1.0	195	1.0	168	1.1
Specific Learning Disability	11,955	60.5	14,092	70.5	11,179	73.4
Mental Retardation	792	4.0	1,061	5.3	929	6.1
Orthopedic Impairment	41	0.2	36	0.2	34	0.2
Emotional Disturbance	1,534	7.8	2,263	11.3	1,858	12.2
Speech or Language Impairment	3,671	18.6	888	4.4	214	1.4
Visual Impairment incl. Blindness	55	0.3	51	0.3	51	0.3
Deaf/Blind	6	0.0	11	0.1	7	0.0
Multiple Disabilities	122	0.6	72	0.4	50	0.3
Autism	366	1.8	297	1.5	121	0.8
Other Health Impairment	1000	5.1	978	4.9	580	3.8
Number Scored	19,764	100	19,990	100	15,226	100
Percent of Total Assessed Students with a Coded Disability		14.8		13.7		11.3

TEST ACCOMMODATIONS PROVIDED

School personnel supplied information regarding accommodations of various types that a student may have received while taking the PSSA. These included changes in test environment, modified test formats, and special arrangements and assistive devices. The frequency with which these accommodations were utilized is summarized in Tables 9-8, 9-9, and 9-10. The values in the table are based on all students with a score in reading or mathematics. Please note that a glossary of accommodation terms as applied to the PSSA is provided in Table 9-13 at the end of this chapter.

CHANGES IN TEST ENVIRONMENT

There were seven categories of test environment changes on the 2006 PSSA. As depicted in Table 9-8, the most common accommodations were small group testing, testing in a separate room, scheduled extended time and requested extended time.

Table 9-8. Incidence of Changes in Test Environment on the 2006 PSSA

Type of Change in Test Environment	Grade 5		Grade 8		Grade 11	
	Number	Percent	Number	Percent	Number	Percent
Scheduled Extended Time	11,284	8.4	8,159	5.6	6,088	4.5
Requested Extended Time	6,163	4.6	8,894	6.1	11,266	8.4
Separate Room	12,270	9.2	7,489	5.1	4,842	3.6
Hospital/Home Testing	37	0.0	98	0.1	118	0.1
Multiple Test Sessions	2,689	2.0	1,971	1.4	1,366	1.0
Small Group Testing	15,695	11.7	12,161	8.3	7,848	5.8
Other	368	0.3	296	0.2	151	0.1

MODIFIED TEST FORMATS

There were seven categories of test format modifications in the 2006 PSSA. As depicted in Table 9-9, the actual frequencies are quite low, generally representing less than a tenth of one percent of assessed students statewide. The largest frequency occurred for the use of the Spanish mathematics version utilized for LEP students whose first language is Spanish and who have been enrolled in U.S. schools for fewer than three years (see *2006 Accommodations Guidelines*, PDE, December 2005, p. 16). Also see Chapter 6 of the present technical report under the heading “Special Forms Used in the 2006 PSSA” for a description of the Spanish version of the PSSA mathematics sections.

Table 9-9. Incidence of Test Format Modifications on the 2006 PSSA

Type of Test Format Modification	Grade 5		Grade 8		Grade 11	
	Number	Percent	Number	Percent	Number	Percent
Braille Edition	5	0.0	9	0.0	12	0.0
Large Print Edition	87	0.1	71	0.0	49	0.0
Word Processor	23	0.0	40	0.0	19	0.0
Spanish Math Version	402	0.3	546	0.4	302	0.2
Signed Version	29	0.0	20	0.0	23	0.0
Audiotape	1	0.0	1	0.0	3	0.0
Other	75	0.1	44	0.0	41	0.0

SPECIAL ARRANGEMENTS/ASSISTIVE DEVICES

On the 2006 PSSA, there were twelve possible categories of accommodations in the form of special arrangements or assistive devices. The frequency with which these accommodations were utilized is summarized in Table 9-10. At all grade levels the largest frequency corresponded to the accommodation in which the test administrator read the mathematics test aloud to the student, although this tendency diminished from lower to higher grade levels. Frequencies of other accommodations are quite low, generally representing less than four-tenths of one percent of assessed students statewide.

Table 9-10. Incidence of Special Arrangements/Assistive Devices on the 2006 PSSA

Type of Arrangement or Assistive Device	Grade 5		Grade 8		Grade 11	
	Number	Percent	Number	Percent	Number	Percent
Braille Writer	12	0.0	4	0.0	9	0.0
Test Administrator transcribed illegible writing	456	0.3	163	0.1	71	0.1
Dictation to test administrator	645	0.5	137	0.1	61	0.0
Interpreter signed directions	45	0.0	55	0.0	72	0.1
Magnification device	26	0.0	12	0.0	9	0.0
Test administrator read math test aloud	8,604	6.4	2,385	1.6	612	0.5
Test administrator marked test at student direction (MC only)	520	0.4	100	0.1	57	0.0
Typewriter, word processor or computer	120	0.1	139	0.1	52	0.0
Qualified interpreter for LEP student	379	0.3	237	0.2	102	0.1
Translation dictionary for LEP student	233	0.2	304	0.2	353	0.3
Cranmer Abacus	2	0.0	0	0.0	0	0.0
Other	399	0.3	288	0.2	79	0.1

THE INCIDENCE OF ACCOMMODATIONS AND IEP AND LEP STATUS

It is reasonable to expect that students with an IEP would receive the majority of accommodations; however, certain accommodations are specific to particular disabilities or to students classified as limited English proficient (LEP). A cross-tabulation between each of the accommodations and IEP and LEP status revealed a much greater incidence for the categorical students. This is most clearly depicted in the frequently occurring accommodations. To illustrate, several of these results were selected for display in Table 9-11.

For the IEP analysis, the column headings refer to students classified as IEP (IEP) and non-IEP (NIEP). In each instance there is a considerably larger percent of IEP students receiving the accommodation than NIEP students. There is a general tendency to observe a decrease in the percentage of IEP and NIEP students receiving these accommodations in the progression from lower to higher grade levels.

The analysis for students with limited English proficiency was based on the formation of a new variable by combining two separate items dealing with a student’s LEP status. The two items differentiated between those LEP students who were in their first year of enrollment in U.S. schools and those who were not. The constructed variable, labeled LEPC in Table 9-11, was assigned a value of one if either of the two items was marked and was zero otherwise. Non-LEP is labeled as NLEPC. The accommodations most frequently received by LEPC students are presented. In each instance there is a considerably larger percent of LEPC students receiving the

accommodation than NLEPC students. There was a decrease in the percentage of LEPC students receiving these accommodations in the progression from lower to higher grade levels, including reading the mathematics test to the student. An exception occurred with the increased use of a translation dictionary across grade levels.

Table 9-11. Percent of IEP and LEP Students Receiving Selected Accommodations

Accommodation Received	Grade 5		Grade 8		Grade 11	
	IEP	NIEP	IEP	NIEP	IEP	NIEP
Scheduled extended time	35.6	3.3	25.6	2.1	24.1	1.7
Test in separate room	41.7	3.0	27.6	1.2	24.0	0.7
Test in small group setting	54.2	3.7	46.2	1.7	37.8	1.2
Accommodation Received	LEPC	NLEPC	LEPC	NLEPC	LEPC	NLEPC
Test administrator read math test aloud	17.3	6.1	3.8	1.6	1.8	0.4
Translation dictionary	5.8	0.0	10.6	0.0	18.3	0.0
Scheduled extended time	28.4	7.9	19.4	5.3	16.9	4.4
Test in small group setting	33.3	11.1	22.2	8.1	20.5	5.6

THE INCIDENCE OF ACCOMMODATIONS AND PRIMARY DISABILITY CLASSIFICATION

To further delineate the use of commonly employed accommodations, a grade level breakdown by major primary disability is presented in Table 9-12. A selection was made based on the more frequently occurring categories of disability and accommodations rather than displaying data for all of them. As may be seen from a perusal of Tables 9-8, 9-9, and 9-10, the accommodations with the larger frequencies are those that involve a change in test environment or that necessitate special arrangements. Selected for incorporation in Table 9-12 are the five test environment accommodations with frequencies in excess of 1,000 at all grade levels and the four special arrangement accommodations with the largest frequencies at grade 5. Accommodations concerned with test format modifications tended to be highly specific to particular and infrequent disability categories or to students classified as limited English proficient (LEP) and were not included in Table 9-12. Seven Primary Disability categories were selected that had a minimum of 100 students so classified at each grade level.

The entries for Table 9-12 represent the number and percent of students with a particular disability (columns) who received the listed accommodation (rows). For example, if 200 students out of 500 classified with a particular disability received scheduled extended time, the table entries will show 200 followed by 40%.

The most prominent and consistent findings from Table 9-12 are (1) the heavy use of scheduled extended time, a separate room, and small group settings for all disability categories except speech and language impairment and that (2) in each instance the percent of 5th grade students receiving these three accommodations exceeded that of 8th and 11th grade students by about 10 to 20 percent.

Table 9-12. Incidence of Test Accommodations Received for Selected Primary Disability Classifications on the 2006 PSSA

Type of Accommodation Received	Grade Level	Primary Disability of Assessed Student with an IEP: Number and Percent													
		Autism		Emotional Disturbance		Deafness / Hearing Impairment		Mental Retardation		Other Health Impairment		Specific Learning Disability		Speech or Language Impairment	
Scheduled extended time	5	151	41%	589	38%	42	22%	374	47%	416	42%	4909	41%	252	7%
	8	75	25%	652	29%	52	27%	354	33%	215	22%	3392	24%	38	4%
	11	29	24%	517	28%	44	26%	250	27%	142	24%	2474	22%	22	10%
Student-requested extended time	5	30	8%	102	7%	16	8%	64	8%	78	8%	849	7%	188	5%
	8	34	11%	144	6%	18	9%	127	12%	115	12%	1545	11%	59	7%
	11	16	13%	144	8%	13	8%	88	9%	47	8%	1134	10%	16	7%
Separate room	5	188	51%	509	33%	45	23%	368	46%	553	55%	6056	51%	339	9%
	8	81	27%	496	22%	28	14%	348	33%	331	34%	4125	29%	45	5%
	11	29	24%	422	23%	33	20%	282	30%	137	24%	2632	24%	21	10%
Multiple test sessions	5	71	19%	238	16%	5	3%	130	16%	109	11%	1321	11%	54	1%
	8	31	10%	299	13%	20	10%	101	10%	48	5%	755	5%	10	1%
	11	7	6%	196	11%	11	6%	76	8%	29	5%	474	4%	7	3%
Small group testing	5	235	64%	797	52%	63	32%	532	67%	654	65%	7822	65%	418	11%
	8	133	45%	1043	46%	63	32%	555	52%	471	48%	6524	46%	83	9%
	11	45	37%	797	43%	57	34%	402	43%	203	35%	3989	36%	32	15%
Dictation to test administrator	5	24	7%	29	2%	24	12%	24	3%	32	3%	367	3%	13	0%
	8	4	1%	10	0%	8	4%	10	1%	9	1%	40	0%	5	1%
	11	0	0%	2	0%	15	9%	2	0%	1	0%	14	0%	0	0%
Test admin. marked test at student direction	5	26	7%	37	2%	2	1%	24	3%	36	4%	300	2%	8	0%
	8	8	3%	9	0%	0	0%	4	0%	8	1%	16	0%	1	0%
	11	0	0%	6	0%	0	0%	2	0%	3	0%	9	0%	1	0%
Test admin. read math test aloud	5	123	34%	406	26%	53	27%	408	51%	404	40%	4964	42%	175	5%
	8	24	8%	162	7%	20	10%	199	19%	85	9%	1485	11%	16	2%
	11	2	2%	46	2%	16	10%	60	6%	15	3%	346	3%	3	1%
Test admin. transcribed illegible writing	5	18	5%	24	2%	0	0%	14	2%	31	3%	212	2%	19	1%
	8	8	3%	2	0%	0	0%	10	1%	16	2%	68	0%	1	0%
	11	2	2%	2	0%	1	1%	3	0%	2	0%	23	0%	1	0%

Note: Results displayed are for most frequently occurring accommodations and disability classifications

GLOSSARY OF ACCOMMODATIONS TERMS

Table 9-13 provides a brief description of accommodations terms as used in the PSSA. School personnel identified the accommodations that a student received by marking a bubble in the student answer document as seen in the left column. The right column contains an explanation abstracted from the *2006 Accommodations Guidelines* (PDE, December 2005, pages 4-14).

Table 9-13. Glossary of Accommodations Terms as Applied in the PSSA

Type of Testing Accommodation	Explanation
Student was given the following changes in test environment (mark all that apply)	
Scheduled extended time	Extended time may be allotted for each section of the test to enable students to finish.
Student-requested extended time	A student may request extended time if working productively.
Tested in a separate room	A separate room may be used to reduce distraction.
Hospital/home testing	A student who is confined to a hospital or to home during the testing window may be tested in that environment.
Multiple test sessions	Multiple test sessions may be scheduled for the completion of each test section; however, a test section must be completed within one school day.
Small group testing	Some students may require a test setting with fewer students or a setting apart from all other students.
Other	Other accommodations may be appropriate and available if they do not compromise the integrity of the assessment. Questions may be directed to PDE.
Student used the following modified test format(s) (mark all that apply)	
Braille edition	Students may use a Braille edition of the test. Answers must then be transcribed into the answer booklet without alteration.
Large print edition	Students with visual impairments may use a large print edition. Answers must then be transcribed into the answer booklet without alteration.
Word processor	Students with an identified need may use a word processor or a typewriter. Answers must then be transcribed into the answer booklet without alteration.
Spanish mathematics version	This version may be taken by students whose first language is Spanish and who have been enrolled in U.S. schools for fewer than 3 years.
Signed version	Qualified interpreters may sign directions for all assessments. Mathematics questions may be signed. On the writing assessment only the writing prompt may be signed. Signing the passage and/or questions on the reading test is not permitted.

Audiotape	Students may respond to the mathematics and reading test on an audiotape, which must then be transcribed into the answer booklet without alteration.
Other	Other accommodations may be appropriate and available if they do not compromise the integrity of the assessment. Questions may be directed to PDE.
Student used the following special arrangements / assistive devices (mark all that apply)	
Braille writer (<i>with no thesaurus, spell- or grammar checker</i>)	Students using this device as part of their regular program may use it on the PSSA.
Cranmer Abacus	An adaptive calculator or a Cranmer Abacus may be used for the calculator portion of the test only.
Dictation to a test administrator	Students who are unable to use a pencil or have illegible handwriting may answer questions orally. Answers must be recorded in the answer booklet without alteration during the testing period.
Interpreter signed directions	Deaf/hearing impaired students may receive test directions from a qualified interpreter.
Magnification devices	Devices to magnify print may be used for students with visual impairments.
Test administrator read math test aloud	Mathematics test questions may be read aloud; however, words may not be defined.
Test administrator marked test at student's direction (<i>rewrote answers into answer booklet verbatim due to student's poor penmanship</i>)	A test administrator may mark an answer booklet at the direction of a student. (e.g., a student may point to a multiple-choice answer with the test administrator marking the response in the answer booklet).
Typewriter, word processor or computer (<i>with thesaurus, spell- or grammar-checker turned off</i>)	An allowable accommodation as a typing function only for students with identified need. Supports such as dictionaries, thesauri, spell checkers and grammar checkers must be turned off.
Translation dictionary for LEP student	A word-to-word dictionary that translates native language to English (or vice versa) but not word definitions or pictures is allowed on any portion of the mathematics test and open-ended section of the reading test (but not for the reading passage or multiple-choice items).
Qualified interpreter for LEP student	An interpreter may translate directions or clarify instructions for the assessments. They may translate, but not define specific words or test questions on the mathematics test. On the reading test interpreters may only translate directions and may not translate or define words in the passage or test questions.
Other	Other accommodations may be appropriate and available if they do not compromise the integrity of the assessment. Questions may be directed to PDE.

Chapter Ten: Form Analysis and Item Calibration

TEST FORM STATISTICS

Table 10-1 contains an overview of the form-level data based on the complete set of common items in each subject area. Test length in total number of points (L), mean number of points received (P), standard deviations (SD), test reliabilities (R), and traditional standard errors of measurement (SEM) are shown by grade and content area. These statistics are based on the total test using both multiple-choice and open-ended tasks for the common sections of each form. For each grade level, the common Reading section is comprised of 40 MC items and four (3-point) CR items for a maximum of 52 points. Mathematics is comprised of 54 MC items and three (4-point) CR items for a maximum of 66 points. Detailed item-level statistics for the common items can be found in Appendices T through EE.

Test reliability refers to the expected consistency of test scores. As indicated below, the reliability coefficient expresses the consistency of test scores as the ratio of true score variance to total score variance (true score variance plus error variance). If all test score variance were true, the index would equal 1.0. Conversely, the index will be 0.0 if none of the test score variance were true. Clearly, a larger coefficient is better as it indicates the test scores are influenced less by random sources of error.

$$R = \frac{\sigma_T^2}{\sigma_T^2 + \sigma_e^2} = \frac{\sigma_O^2 - \sigma_e^2}{\sigma_O^2}$$

Although a number of reliability indices exist, a frequently reported index for achievement tests is Coefficient Alpha. Consequently, this index is the one reported for the PSSA's. Alpha indicates the internal consistency over the responses to a set of items measuring an underlying trait, in this case Reading and Mathematics achievement. From this perspective, Alpha can be thought of as the correlation between scores if the students could be tested twice with the same instrument without the second testing being affected by the first. It can also be conceptualized as the extent to which an exchangeable set of items from the same domain would result in similar ordering of students.

While sensitive to random errors associated with content sampling variability, the index is not sensitive to other types of errors that can affect test scores, such as temporal stability or variability in performance that might occur across testing occasions. It is also not sensitive to rater error. Consequently, this index might be positively biased by these factors. In other words, because it is not sensitive to other sources of random error, it is often considered an “upper bound” estimate of reliability. On the other hand, there are also factors that might negatively bias this estimate. These include tests that are comprised of mixed item types (e.g., multiple choice and constructed response items) and tests that include strata (sub-domains) that are homogeneous enough for the average covariance within strata to exceed the average covariance between strata. Although both are potential influences for the PSSA's, the reliabilities reported in Table 10.1 are all above 0.90, indicating highly consistent test scores for these instruments.

The reliability coefficient is a “unitless” index, which can be compared from test to test. The *standard error of measurement (SEM)* is another indicator of precision. If everyone being tested had the same *true score*², there would still be some variation in observed scores due to

² True score is the score the person would receive if the measurement process were perfect.

imperfections in the measurement process, such as random differences in attention during instruction or concentration during testing. 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 important information for test score users.

Generally speaking, reliabilities go up with an increase in test length and population heterogeneity and go down with shorter tests and more homogeneous populations.

Table 10-1. 2006 Summary of Common Item Performances

Grade	Reading					Mathematics				
	L	P	SD	R	SEM	L	P	SD	R	SEM
5	52	35.1	9.9	0.90	3.1	66	44.6	13.0	0.93	4.1
8	52	34.9	9.8	0.90	3.1	66	42.2	13.8	0.93	4.4
11	52	34.7	9.2	0.88	3.0	66	43.3	14.3	0.94	4.5

The standard deviation shown in the table is the standard deviation 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 $\hat{\sigma}_T = \sqrt{\sigma_x^2 - \sigma_x^2(1 - \rho_{xx})}$. As an example, for grade 5 mathematics, this would be $\sqrt{13.0^2 - 4.1^2} = 12.34$. The reliability can also be computed from these data.

Again, using grade 5 mathematics as an example, $R = \frac{13.0^2 - 4.1^2}{13.0^2} = .90$

The conditional standard error of measurement (CSEM) also indicates the degree of measurement error in score units, however, does so as a function of one's actual test 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. The CSEMs for Reading and Mathematics are documented in Appendix FF in the column labeled “Scale Score SE.”

TRADITIONAL ITEM STATISTICS

Although all items were previously reviewed for both content and statistical quality, a thorough item analysis was conducted in the spring to ensure that the items and forms performed as expected. With any psychometric model, an item analysis is a search for unexpected results. For example, *more able*⁴ students are expected to pass easy items and *less able* students are expected to fail difficult items. If either of these situations does not occur, the item should be reviewed to determine the nature of the problem and the characteristics of the students affected.

The most familiar indices of item performance are *proportion correct* (P-Value) and item discrimination. Discrimination for dichotomous items is typically represented by the *point-biserial correlation* coefficient. The correlation will have a positive value when the mean score

³ The standard deviation of a distribution is a measure of the dispersion of the observations. For the normal distribution about 16% of the observations are more than one standard deviation above the mean and the same percentage are more than one standard deviation below the mean. Using the data in table 10.1, about 68% of students with true scores of 70 for grade 5 math will have observed scores between 66 and 74.

⁴ Following the Rasch literature, *ability* is used in this discussion as a generic term for the construct that is being measured by the exam. *Competence*, *achievement*, *learning* and *status* are among the alternatives that are sometimes used, but are all subject to some degree of misinterpretation.

of the students answering correctly is higher than the mean score of the students answering incorrectly. This indicates that students who did well on the total test tended to do well on this item. The index will take its maximum theoretical value of 1.0 if every student who answered the item correctly scored better on the test than any student who answered incorrectly⁵.

The P-Value is a subtler indicator of item quality. If there is a *more able* way to miss an item, the item will appear more difficult than expected. Conversely, if there is a *less able* way to pass the item, it may appear surprisingly easy.

Table 10-2 provides some distributional indices for the P-Value and point-biserial correlation (PtBis) for the multiple-choice items on the common form in each grade and content area.

In general, with the mean P-Values in the range of 0.67 – 0.70, the PSSA was reasonably challenging to most students. With the average point biserial correlations ranging from .37 to .45, the overall item quality was quite good.

Table 10-2. Common Form Statistics by Grade and Content for Multiple-Choice Items

		Reading		Mathematics	
Grade 5	P-Value	PtBis	P-Value	PtBis	
Average	0.70	0.41	0.69	0.42	
Minimum	0.40	0.21	0.40	0.17	
Maximum	0.93	0.53	0.89	0.53	
Median	0.72	0.41	0.69	0.42	
		Reading		Mathematics	
Grade 8	P-Value	PtBis	P-Value	PtBis	
Average	0.70	0.40	0.67	0.42	
Minimum	0.31	0.12	0.38	0.26	
Maximum	0.91	0.54	0.89	0.58	
Median	0.72	0.42	0.68	0.42	
		Reading		Mathematics	
Grade 11	P-Value	PtBis	P-Value	PtBis	
Average	0.69	0.37	0.68	0.45	
Minimum	0.30	0.18	0.41	0.26	
Maximum	0.94	0.50	0.92	0.63	
Median	0.70	0.40	0.69	0.45	

RASCH ITEM STATISTICS AND EQUATING

WINSTEPS[®] software implementing the Rasch model was used to obtain estimates of logit

⁵ It is legitimate to view the point biserial correlations as standardized means. A positive value means students who chose that response had a higher mean score than the average student; a negative value means students who chose that response had a lower than average mean score.

difficulties for both dichotomously- and polytomously-scored items. The parameters estimated for polytomous items are the *step difficulties* associated with the Masters Partial Credit model. This software is capable of handling all the item types currently in use with the PSSA. WINSTEPS[®] version 3.54 was used for all calibrations. See Wright and Masters (1982) and Rasch (1960) for further information about the models used for these analyses.

The Rasch model expresses item difficulty (and student ability) in units referred to as *logits*, rather than in percent correct. In the simplest case, a logit is a transformed P-Value with the average P-Value becoming a logit of zero. In this form, logits resemble z-scores or standard normal deviates; a very difficult item might have a logit of +4 and a very easy item might have a logit of -4. However, they have no formal relationship to the normal distribution.

The logit metric has several mathematical advantages over P-Values. It is an interval scale, meaning that two items with logits of zero and one (respectively) are the *same distance* apart as items with logits of +3 and +4. Logits are not dependent on the ability level of the students. For example, a form can have a mean logit of zero, whether the average P-Value of the 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 a common 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 reading test or a high school science test, relate to an arbitrary origin defined by the center of items on that form. The average third grade reading item will have a logit of zero; the average high school 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 any 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 a common block of items. The items on all forms can then be easily adjusted to a single (but still arbitrary) origin by defining the origin as the mean of the **common** items. With this done, the origins for all the forms will be statistically equal. Items on forms A and F that are equally difficult will now have *statistically* equal logit difficulties.

Note that test forms were spiraled within classrooms. In effect, students are administered the exact same set of common items but different field test or matrix sets. As a result, there are cross checks that are made to ensure the calibrations and links are reasonable across forms. The goal of spiraling is to achieve randomly equivalent samples of students across forms with equal standard deviations and arbitrary means. Any differences in performance observed among the groups should be due only to differences in form difficulty. After linking, the mean of the logit abilities should be statistically equal for each sample of students.

Winsteps' Outfit (outlier-sensitive fit) index is sensitive to outliers—e.g., aberrant responses to items with difficulty far from a person's ability—and indicates overfit for imputed responses and underfit for lucky guesses and careless mistakes. Outfit values for items are reported beginning in Appendix H. Here, Outfit is expressed on a standardized metric (*t*), which is more oriented toward statistical significance. Specifically, *t* shows the degree of improbability in the data (i.e., its statistical significance) if the data actually did fit the model. The expected value is 0.0 with values significantly less than 0.0 indicating too much predictability and values significantly

greater than 0.0 indicating lack of predictability.

Because of the equivalent samples, common items should have the same P-Values regardless of which form and sample is being considered. Finally, for all items, both common and matrix, a plot of the relationship between the P-Value and the logit should fall along a single, curved line. Figure 10.1 through 10.6 plot this relationship for common multiple-choice items. The curves are nearly linear in the center, but curve towards asymptotes of one and zero, respectively, on the left and right. The graphs show that items with low P-values (indicating a more difficult item that fewer students answered correctly) also showed higher logit difficulty, and items with high P-values had lower logit difficulties (i.e., the two scales are inversely related). The spread of the graph points is indicative of the dispersion of item difficulties in the common items. The dispersion and coordinates of items are very similar across grades for both reading and math (i.e., for all grades in reading a P-Value of .90 corresponded to a logit of about -2.0, and a P-Value of .30 corresponded to a logit of about +2.0), with the exception of Grade 11 mathematics, which is shifted toward the low-ability end of the scale and represents a (comparatively) slightly easier item set.

Figure 10.1. 2006 Grade 5 Reading Logit Difficulties versus P-Values

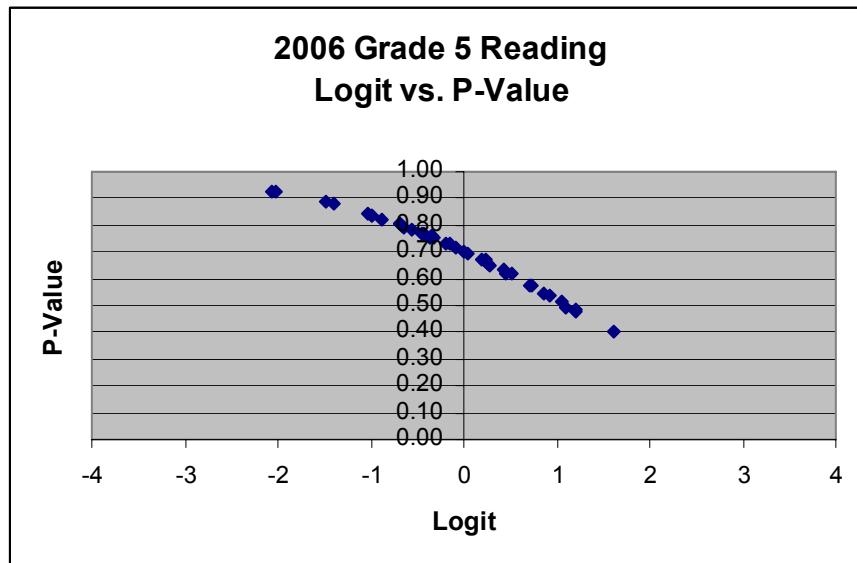


Figure 10.2. 2006 Grade 5 Mathematics Logit Difficulties versus P-Values

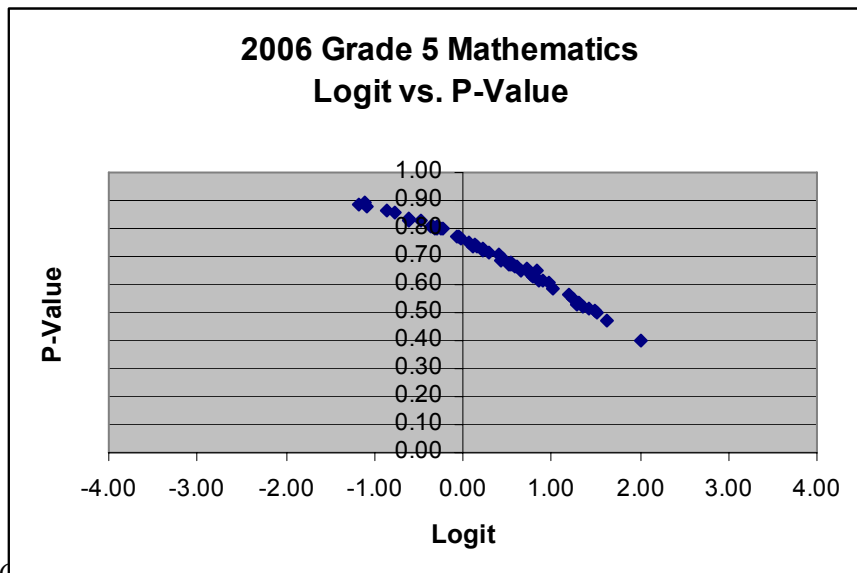


Figure 10.3. 2006 Grade 8 Reading Logit Difficulties versus P-Values

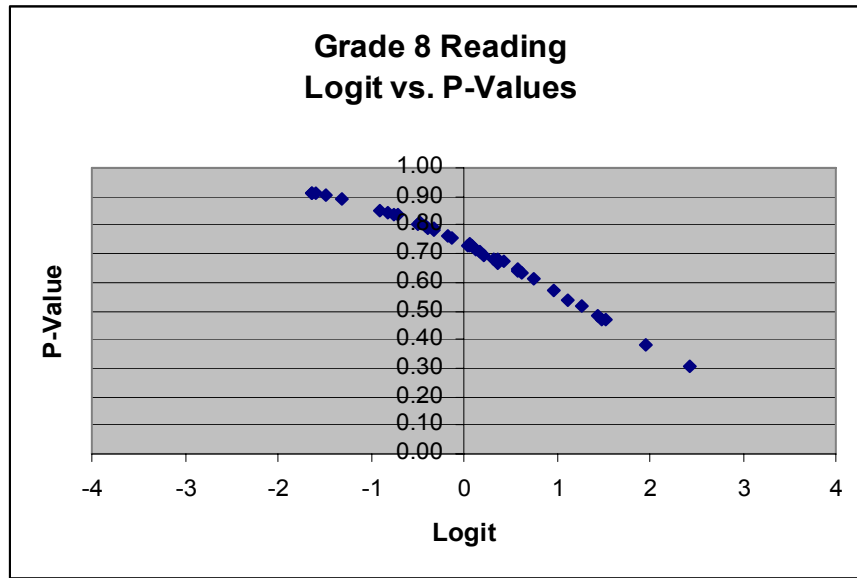


Figure 10.4. 2006 Grade 8 Mathematics Logit Difficulties versus P-Values

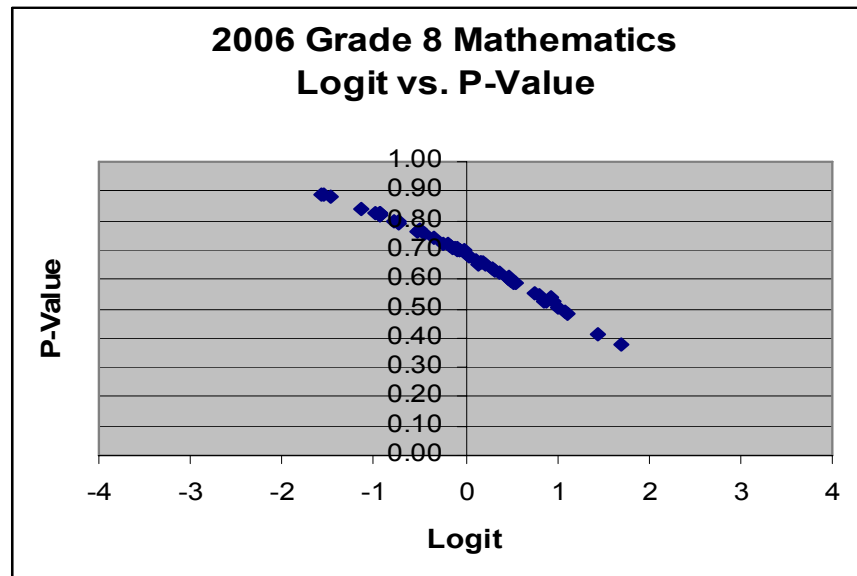


Figure 10.5. 2006 Grade 11 Reading Logit Difficulties versus P-Values

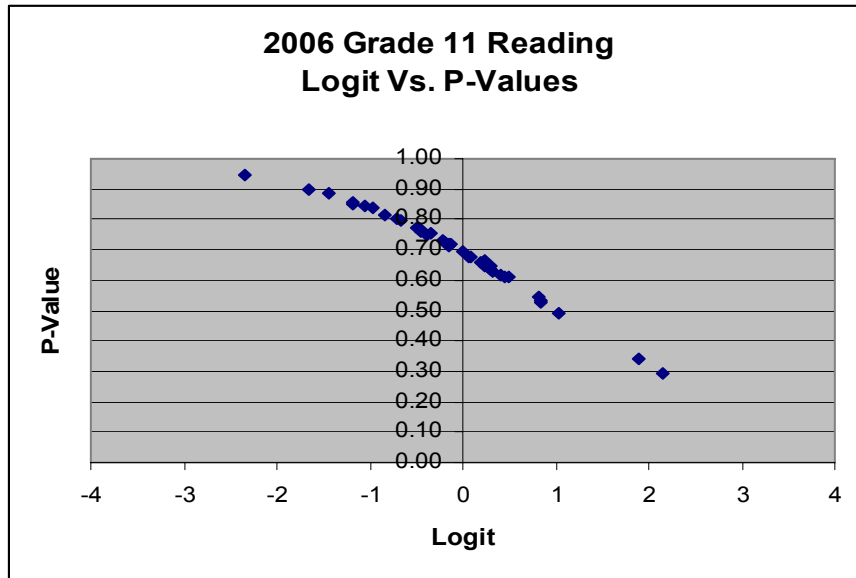
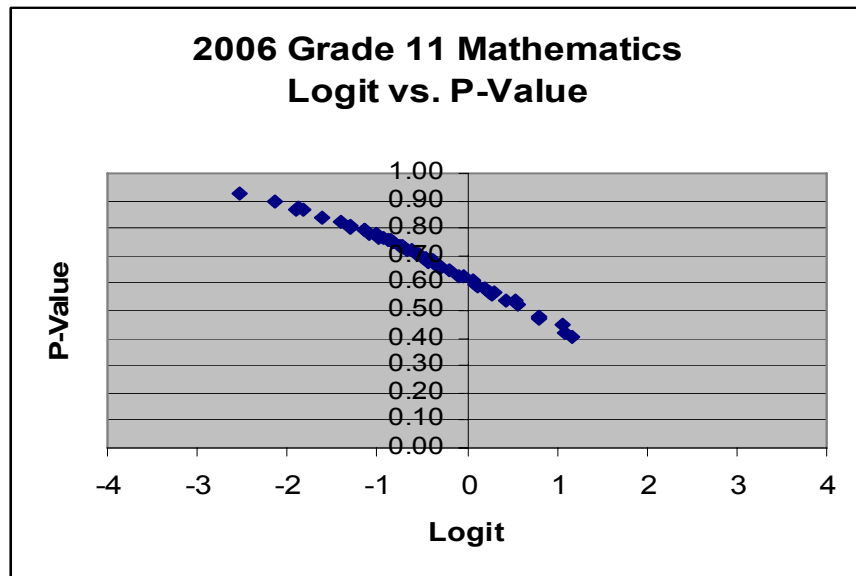


Figure 10.6. 2006 Grade 11 Mathematics Logit Difficulties versus P-Values



Below are the mean P-Values by form for the common multiple-choice items. The extent to which the mean P-values across forms are similar indicates the extent to which the student populations taking each form are of approximately equal ability. This equivalence of ability distributions across forms is the desired outcome of spiraling and allows for optimum analysis of the embedded field-test items.

Table 10-3. 2006 Mean P-Values by Form for Common Multiple-Choice Items

Form	Grade 5 Reading		Form	Grade 5 Mathematics	
	Mean P-Value	Std. Dev.		Mean P-Value	Std. Dev.
1 ⁶	0.682	0.130	1	0.664	0.119
2	0.697	0.132	2	0.687	0.122
3	0.699	0.133	3	0.687	0.122
4	0.702	0.131	4	0.689	0.122
5	0.701	0.132	5	0.688	0.119
6	0.705	0.132	6	0.691	0.120
7	0.703	0.133	7	0.688	0.120
8	0.706	0.133	8	0.694	0.121
9	0.705	0.133	9	0.693	0.120
10	0.703	0.131	10	0.690	0.122
11	0.705	0.132	11	0.694	0.119
12	0.703	0.132	12	0.692	0.120
13	0.708	0.129	13	0.694	0.120
14	0.708	0.134	14	0.697	0.121
15	0.705	0.132	15	0.694	0.120
16	0.708	0.132	16	0.699	0.120
17	0.706	0.133	17	0.697	0.120
18	0.704	0.131	18	0.693	0.121
19	0.705	0.132	19	0.689	0.120
20	0.706	0.130	20	0.695	0.122
Avg	0.703	0.132	Avg	0.691	0.121

⁶ For both reading and mathematics in all grades, form 1 was used to generate modified versions (e.g., Large Print and Braille) of the common form; thus, the mean P-Values for these forms are somewhat lower.

Grade 8 Reading			Grade 8 Mathematics		
Form	Mean P-Value	Std. Dev.	Form	Mean P-Value	Std. Dev.
1	0.679	0.142	1	0.648	0.118
2	0.705	0.146	2	0.673	0.120
3	0.700	0.150	3	0.669	0.119
4	0.703	0.152	4	0.672	0.122
5	0.698	0.151	5	0.666	0.124
6	0.705	0.149	6	0.672	0.121
7	0.704	0.150	7	0.672	0.122
8	0.708	0.150	8	0.676	0.121
9	0.709	0.152	9	0.675	0.124
10	0.706	0.149	10	0.674	0.120
11	0.706	0.148	11	0.676	0.120
12	0.710	0.150	12	0.675	0.123
13	0.704	0.148	13	0.673	0.120
14	0.705	0.152	14	0.676	0.122
15	0.706	0.150	15	0.672	0.120
16	0.707	0.147	16	0.679	0.118
17	0.705	0.150	17	0.676	0.123
18	0.713	0.148	18	0.682	0.122
19	0.707	0.148	19	0.674	0.120
20	0.711	0.148	20	0.675	0.121
Avg	0.705	0.149	Avg	0.673	0.121

Grade 11 Reading			Grade 11 Mathematics		
Form	Mean P-Value	Std. Dev.	Form	Mean P-Value	Std. Dev.
1 ⁷	0.679	0.138	1	0.668	0.125
2	0.695	0.138	2	0.684	0.124
3	0.693	0.140	3	0.681	0.124
4	0.697	0.138	4	0.682	0.125
5	0.695	0.138	5	0.681	0.125
6	0.694	0.136	6	0.682	0.123
7	0.692	0.138	7	0.683	0.124
8	0.693	0.136	8	0.686	0.125
9	0.698	0.138	9	0.686	0.127
10	0.695	0.138	10	0.686	0.127
11	0.693	0.137	11	0.681	0.125
12	0.697	0.140	12	0.686	0.125
13	0.696	0.136	13	0.685	0.124
14	0.698	0.137	14	0.685	0.124
15	0.693	0.138	15	0.680	0.126
16	0.695	0.138	16	0.687	0.125
17	0.695	0.137	17	0.682	0.125
18	0.691	0.138	18	0.678	0.126
19	0.693	0.137	19	0.681	0.124
20	0.694	0.138	20	0.682	0.126
Avg	0.694	0.138	Avg	0.682	0.125

⁷ For both reading and mathematics in all grades, form 1 was used to generate modified versions (e.g., Large Print and Braille) of the common form; thus, the mean P-Values for these forms are somewhat lower.

Chapter Eleven: Linking

Rasch model linking of the exam for the current year to the exam for previous years is just as straightforward as linking forms within year. However, the student samples are not equivalent across years and identical items can have different properties in different years because of changes in the item's context or changes in the students' experiences. Consequently, between-year linking requires more scrutiny than within-year linking.

The link between years is based on items that are used in both years in approximately the same context. The *same context* in this situation means the items are not altered in any way, they appear in about the same position in the booklet, and they are administered at about the same time of year.

A transitional matrix-to-matrix section linking plan was used to measure growth from 2005 to 2006. This was based on the recommendation of the national technical advisory committee in collaboration with PDE and DRC staff. This link was accomplished via intact matrix sections. For Reading, those sections were in forms 17-20; for Grade 5 Mathematics, forms 10-12, 14, and 15, with a subset of linking items present on all forms; for Grade 8 Mathematics, forms 1, 3, 5, 7, and 13, with a subset of linking items present on all forms; and for Grade 11 Mathematics, forms 4, 8-10, and 13, with a subset of linking items present on all forms. Item level statistics for the linking items can be found in Appendix GG.

For *within-year* linking, the procedure is to link forms via the common section. The result is a bank of items with comparable logit difficulties. For *between-year* linking, the procedure is to link the current year's bank to the previous years' banks.

- (1) Overlapping items are identified.
- (2) The logit difficulties of all items are adjusted in the current year's bank so that the mean 2006 logit difficulty for the overlapping items is equal to the mean 2005 logit difficulty for the same items.
- (3) The validity of the link is assessed by identifying any items that do not maintain their relative position across years.

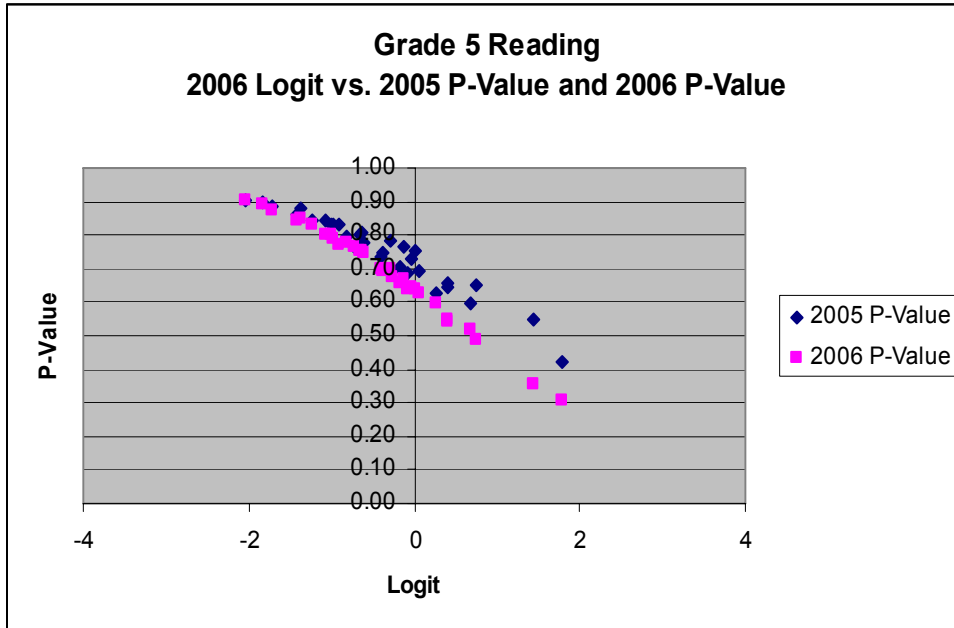
Since the equating process forces the current logit difficulties for the linking items to have the same mean as the previous logit difficulties for these same items, the 2006 logits will be *displaced* from their estimates obtained from an independent calibration. The size of the displacements reflect the difference, if any, in the origins. The variation among the displacements corresponds to the approximate size of the standard errors for the items.

Plotting P-Values against logit difficulties across year is not as reliable as it is within year. Using spiraled forms within year, a given P-Value will translate to a given logit regardless of the form it is used on, within the limits of statistical precision. Within year, the P-Value-to-logit plot should be a single curved line; between years, the plot could have separate lines for each year. The difference between the two lines is a reflection of the adjustment (positive or negative) that is required to equate the two item banks. The following sections show the equating results by grade and subject. The number of between-year linking items on the grades 5 and 8 2006 operational assessment was 32 for reading and 30 for mathematics. There were 31 between-year linking items for reading and 30 for mathematics on the grade 11 assessment.

GRADE 5: READING

In Figure 11.1, the two lines sloping downward toward the right relate item P-Values for the two years to the 2006 logit difficulties. They show the curvilinear relationship required by the model, with low P-Values being translated into high logit difficulties and high P-Values into low difficulties. The smoothness of this line indicates good agreement among the forms. Because the forms were spiraled within classroom, the samples generated are randomly equivalent and one would expect the same P-Value to translate into the same logit. This is the case with these data.

Figure 11.1



In Figure 11.2, the trend, rising from left to right, describes the item P-Values for the two years (the clusters of points reflect items which were used on multiple matrix forms). If the P-Values for both years are correlated at 1.0, one would expect the relationship to fall on a straight line with a slope of one. The extent to which the trend does not pass through the origin indicates a change in student performance.

Figure 11.2

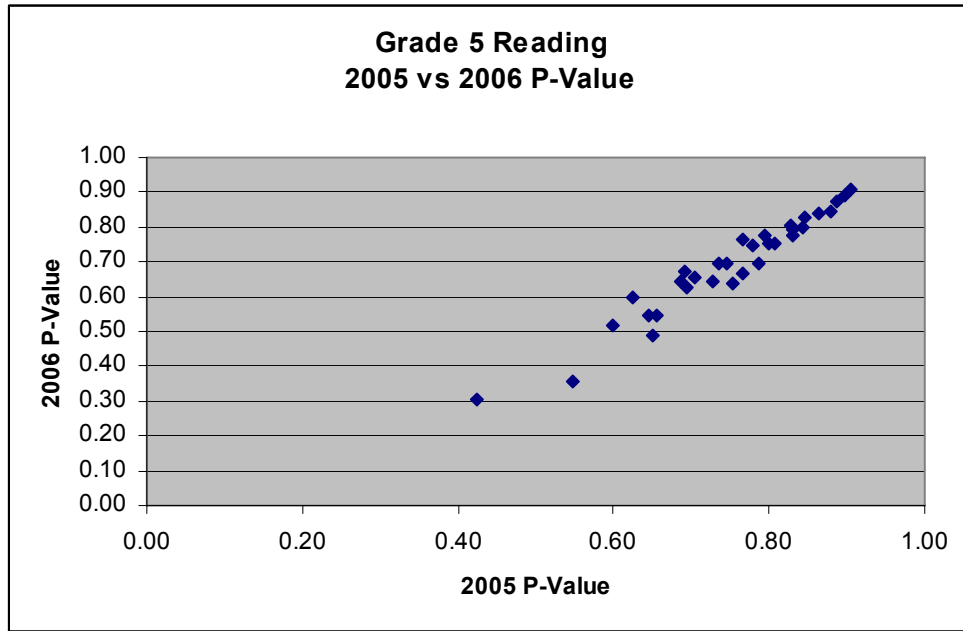
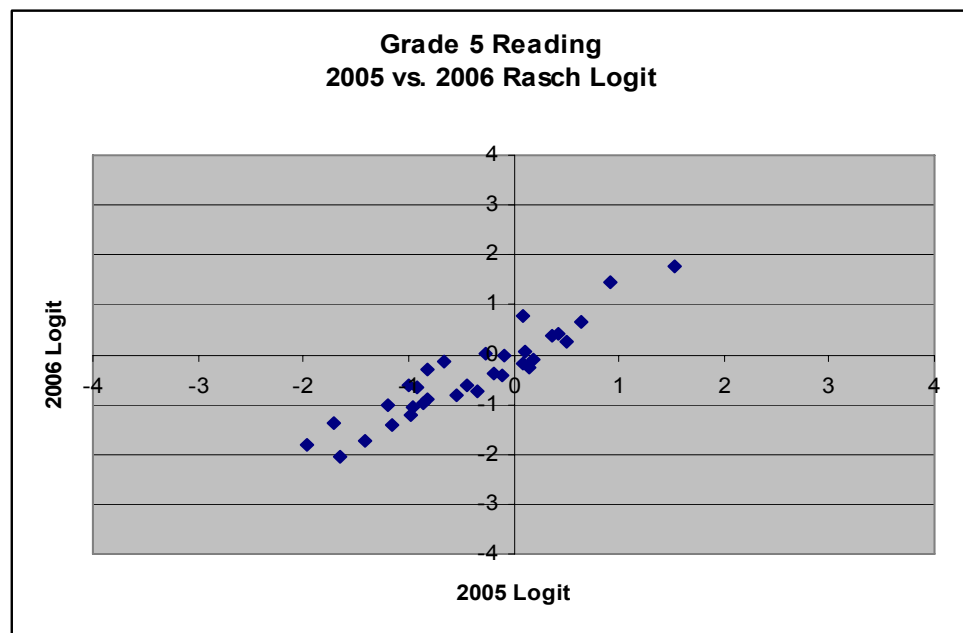


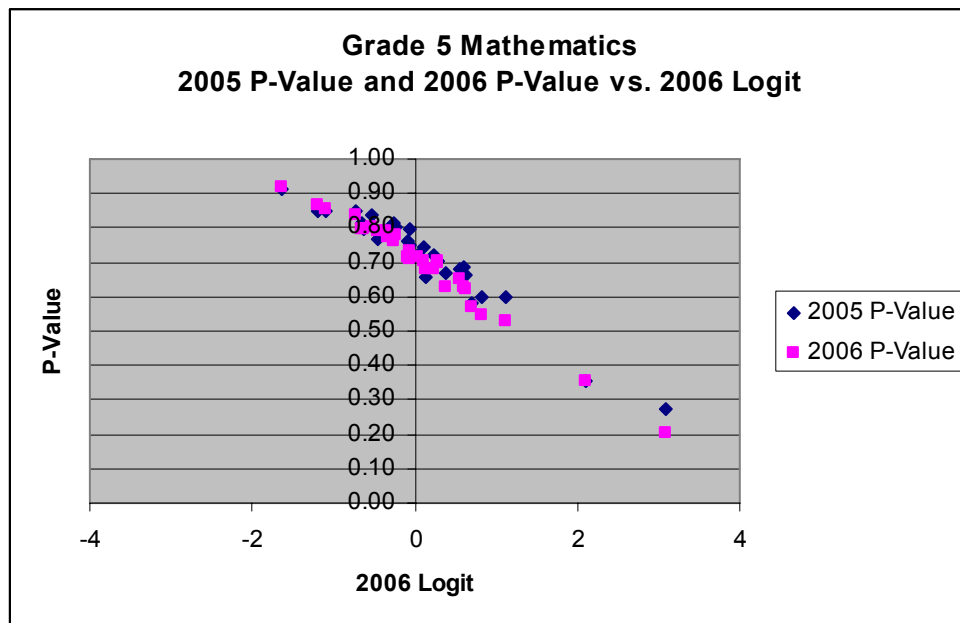
Figure 11.3 below uses the same data as Figure 11.1 and 11.2, but focuses entirely on logit difficulties. It shows more clearly the relationship between 2005 logits and 2006 logits. There is a more defined trend with a few outliers.

Figure 11.3



GRADE 5: MATHEMATICS

In Figure 11.4, the two lines sloping downward toward the right relate item P-Values for the two years to the 2006 logit difficulties. They show the curvilinear relationship required by the model, with low P-Values being translated into high logit difficulties and high P-Values into low difficulties. The smoothness of this line indicates good agreement among the forms. Because the forms were spiraled within classroom, the samples generated are randomly equivalent and one would expect the same P-Value to translate into the same logit. This was the case with these data.

Figure 11.4

The trend, rising from left to right in Figure 11.5, describes the relationship between item P-Values in the two years. If the P-Values for both years are correlated at 1.0, one would expect the relationship to form a straight line with a slope of one. The extent to which the line does not pass through the origin indicates a change in student performance.

Figure 11.5

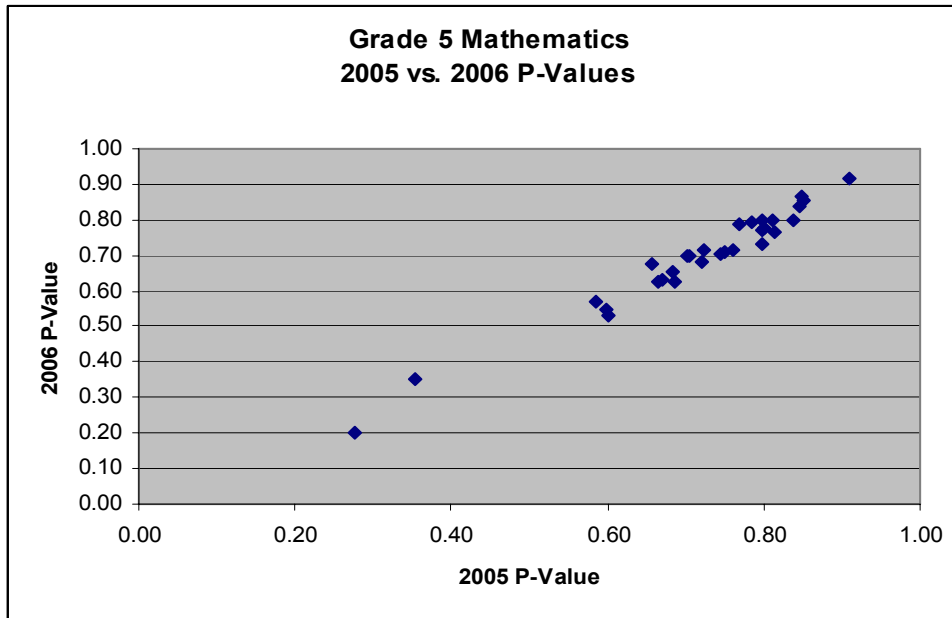
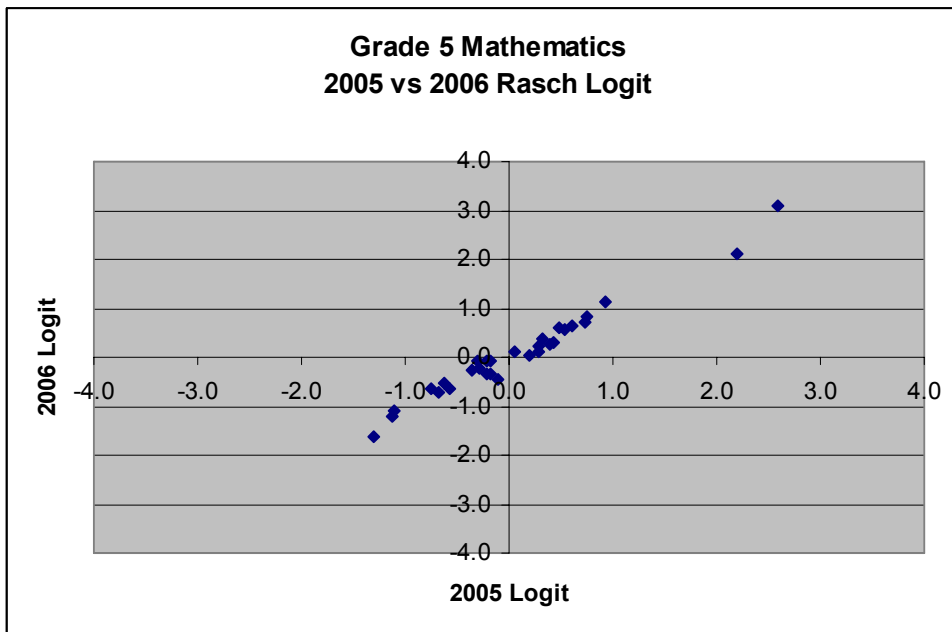


Figure 11.6 below uses the same data as Figure 11.4 and 11.5, but focuses entirely on logit difficulties. It shows more clearly the relationship between 2005 logits and 2006 logits. There is a more defined trend with few outliers.

Figure 11.6



GRADES 8 AND 11

Similar cross-year linking analyses were performed for grades 8 and 11 and are shown in the plots below. Again, the graphs show the curvilinear relationship required by the model, with low P-Values being translated into high logit difficulties and high P-Values into low difficulties. The smoothness of this line indicates good agreement among the forms. The results were similar to grade 5 in the amount of noise present in the links, with the exception of Figure 11.9, which represents a slightly – though not significantly – less linear relationship between 2005 and 2006 logits. There are several possible reasons why the logit rank ordering of items might differ across years (e.g., changing emphasis in the curriculum). Because Reading tests are comprised of “testlets” (a set of items associated with a common passage stimulus), it is not unusual to see slightly more scatter in such plots. This is because any factor impacting item stability can affect all items associated with a passage (as opposed to tests comprised solely of stand-alone items, like Mathematics).

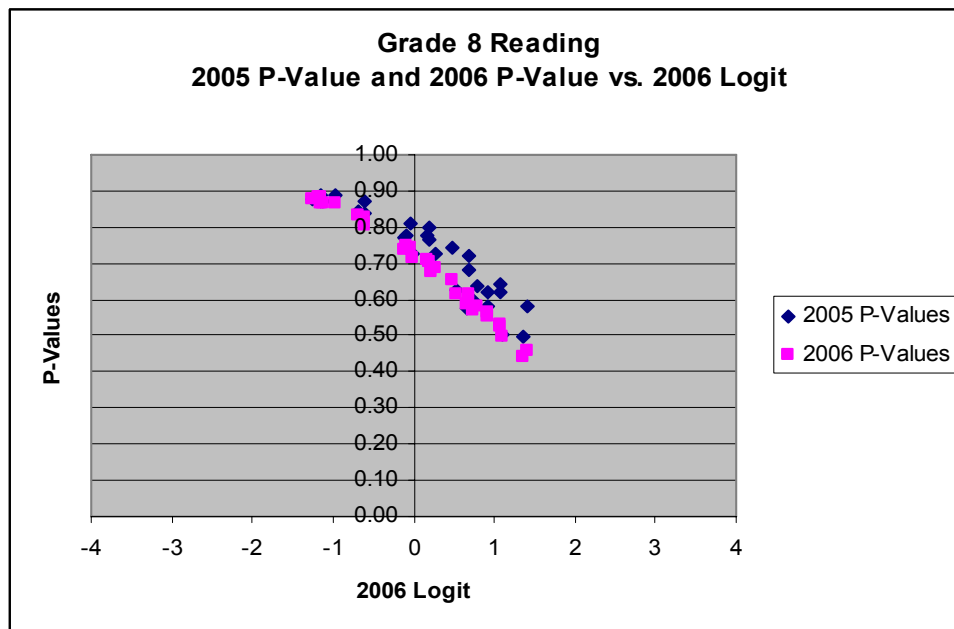
Figure 11.7

Figure 11.8

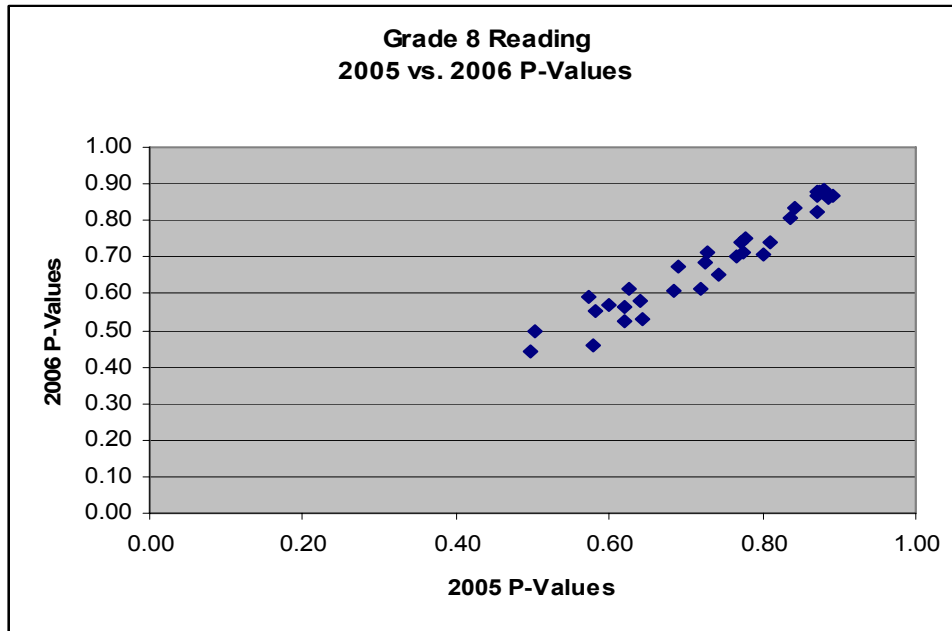


Figure 11.9

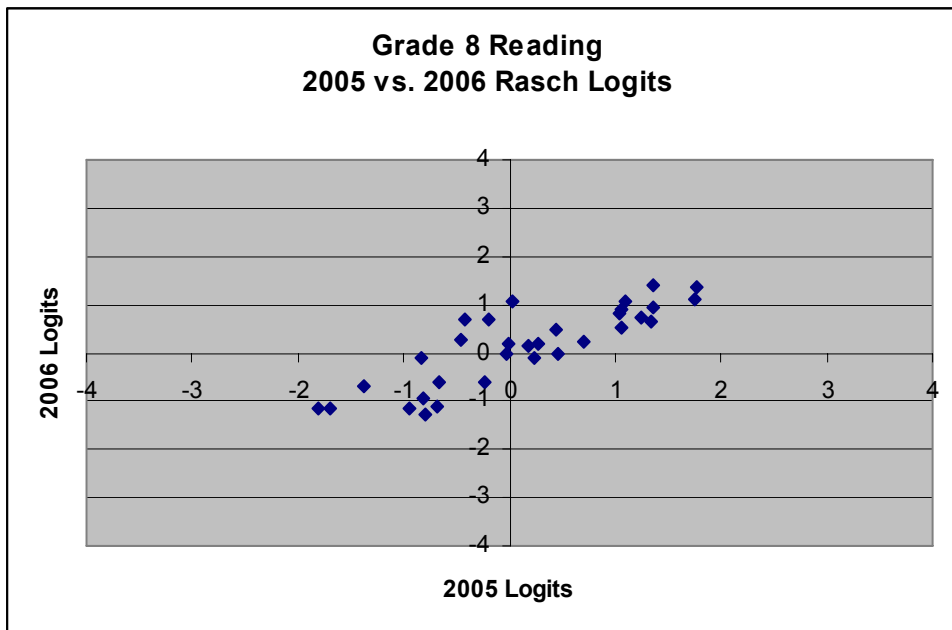


Figure 11.10

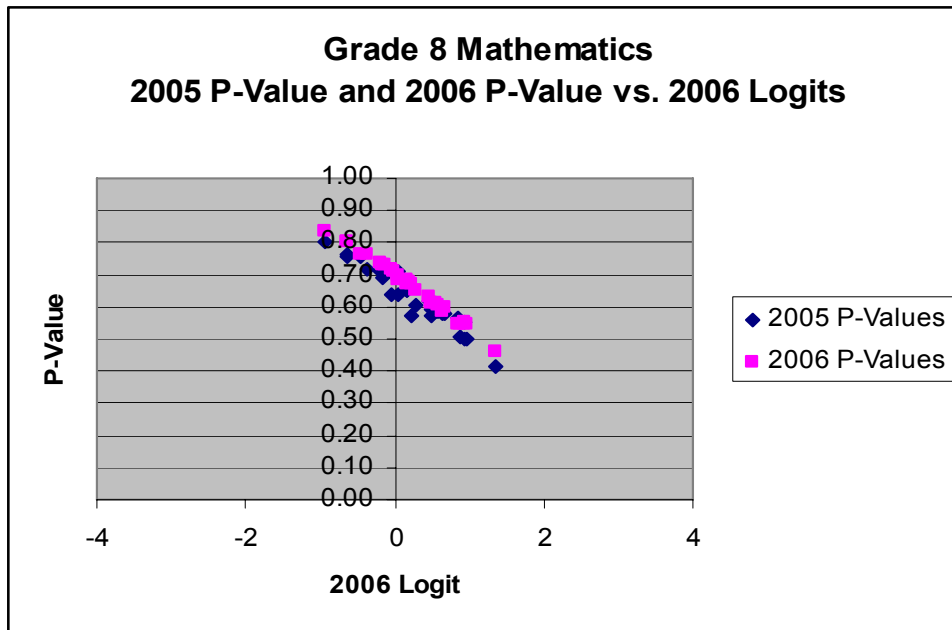


Figure 11.11

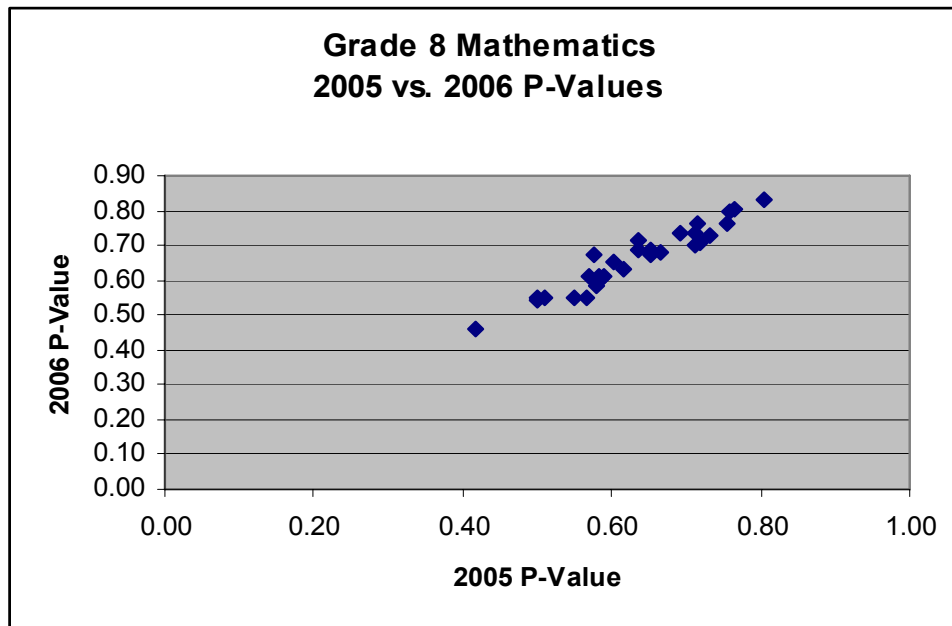


Figure 11.12

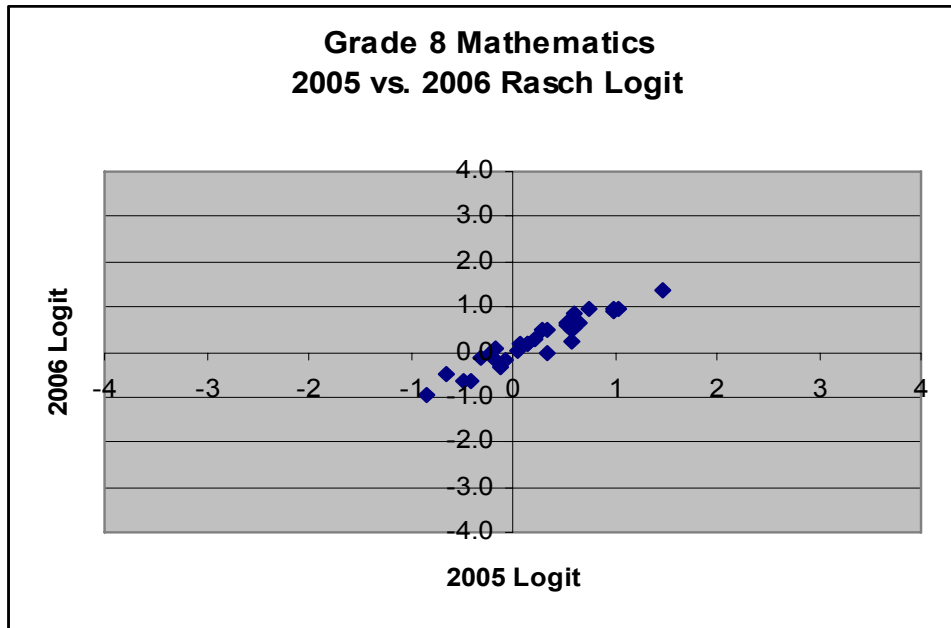


Figure 11.13

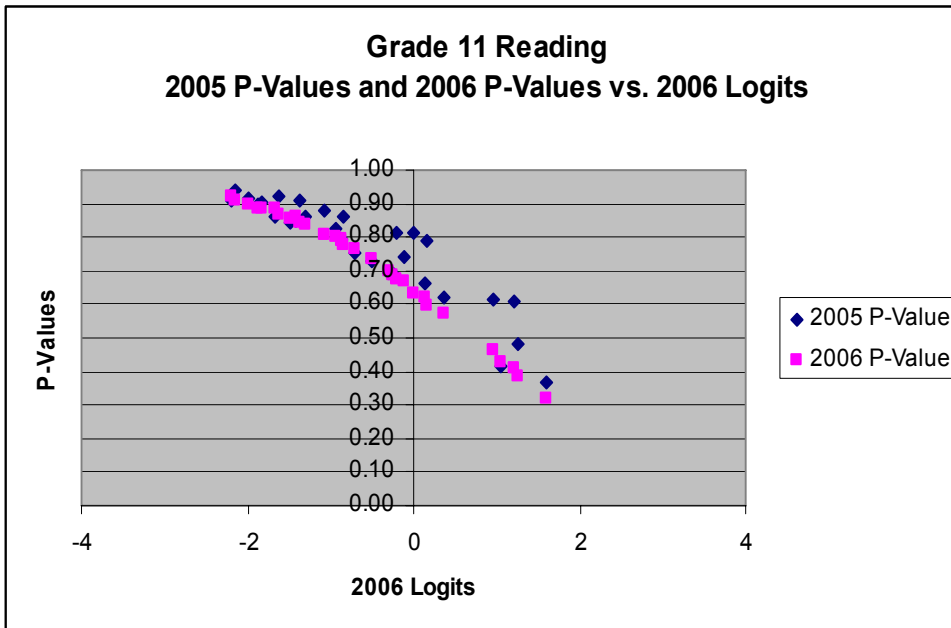


Figure 11.14

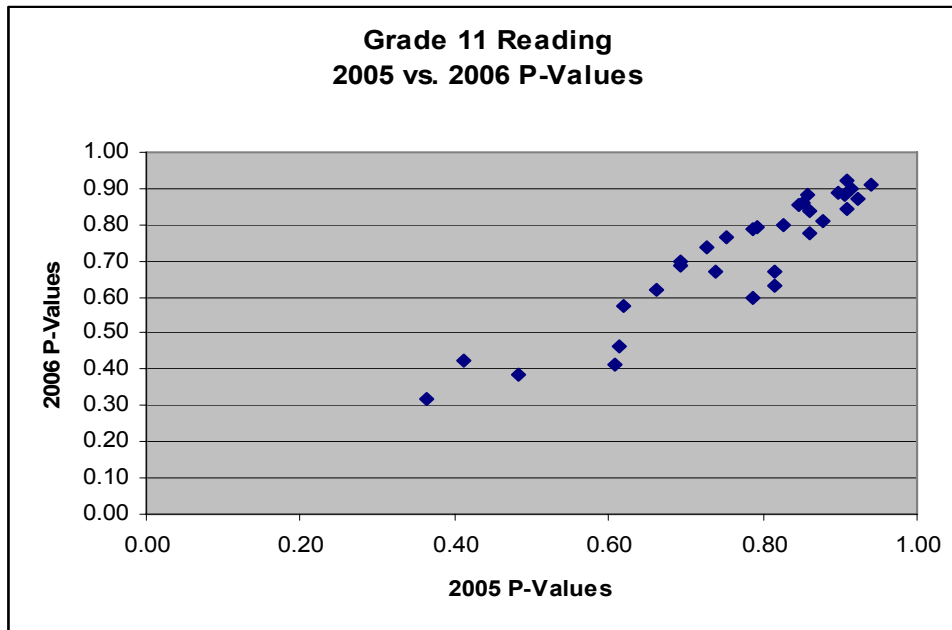


Figure 11.15

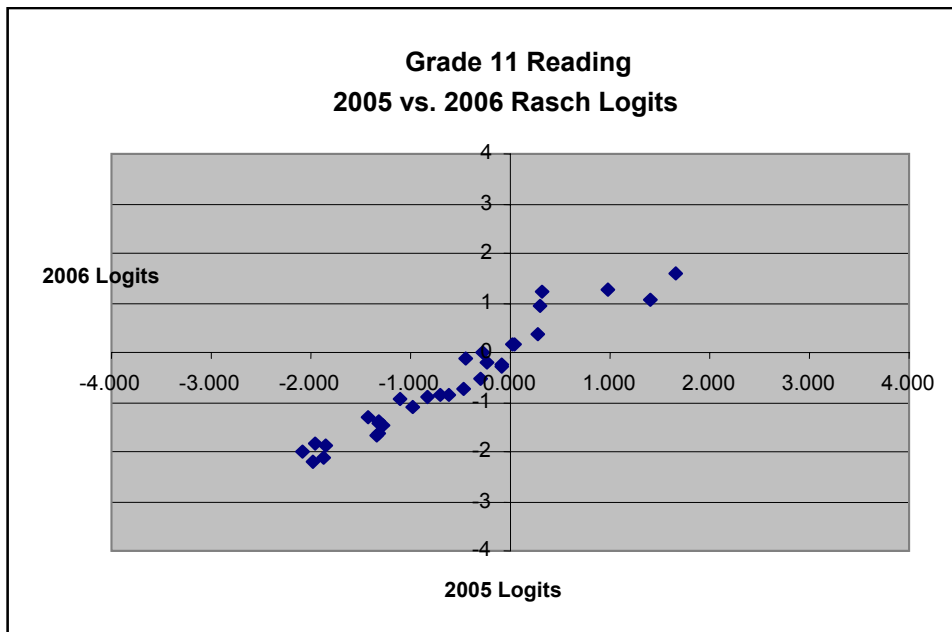


Figure 11.16

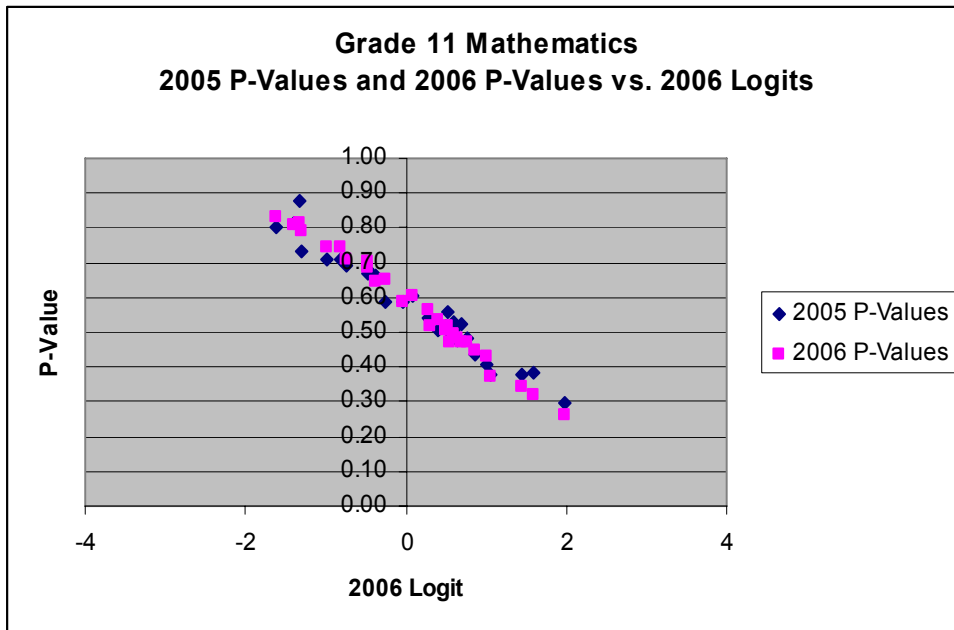


Figure 11.17

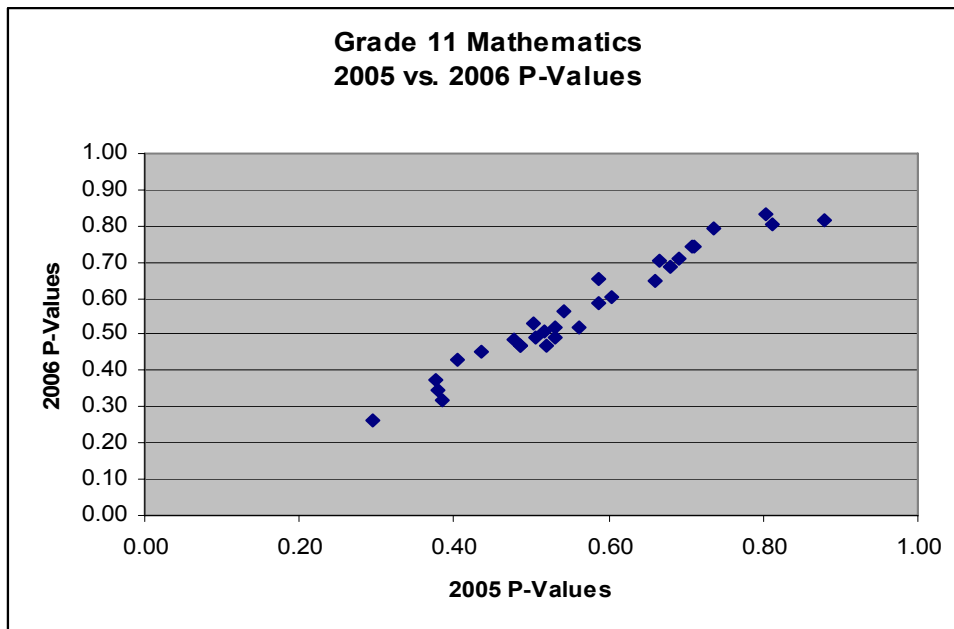
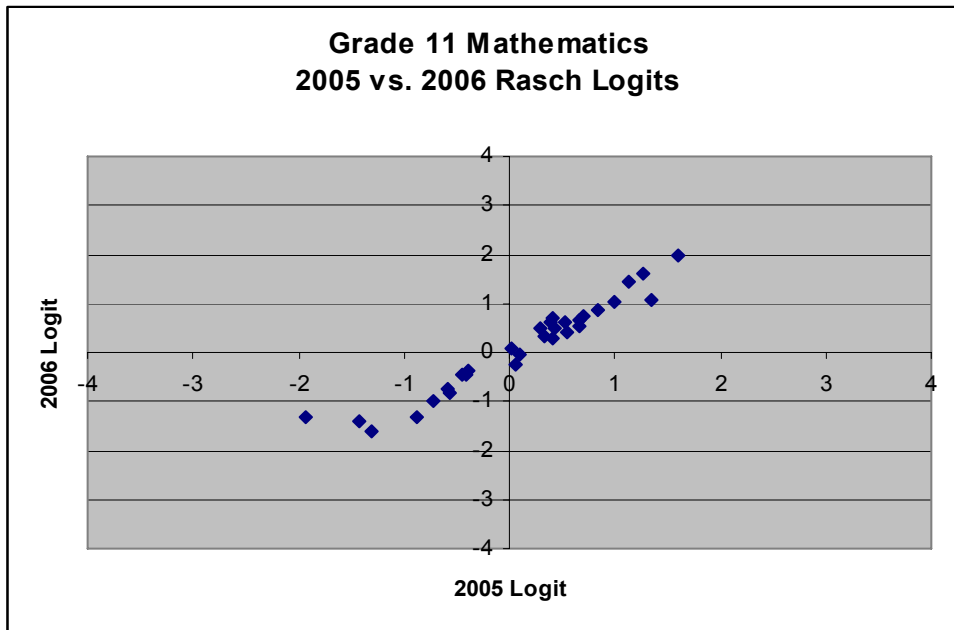


Figure 11.18



The 2005 vs. 2006 Test Characteristic Curves by grade and subject are shown in the figures below. This shows the similarity between the 2005 and 2006 tests in terms of form difficulty in the logit metric. Assuming equal numbers of items for the two years, curves that are close will translate into similar raw score cutpoints. With extreme differences in form difficulties, some loss of precision and reliability may result. However, with only two exceptions (Figure 11.21 and 11.23) this is generally not evidenced in the figures below, which display close matches across years.

Figure 11.19

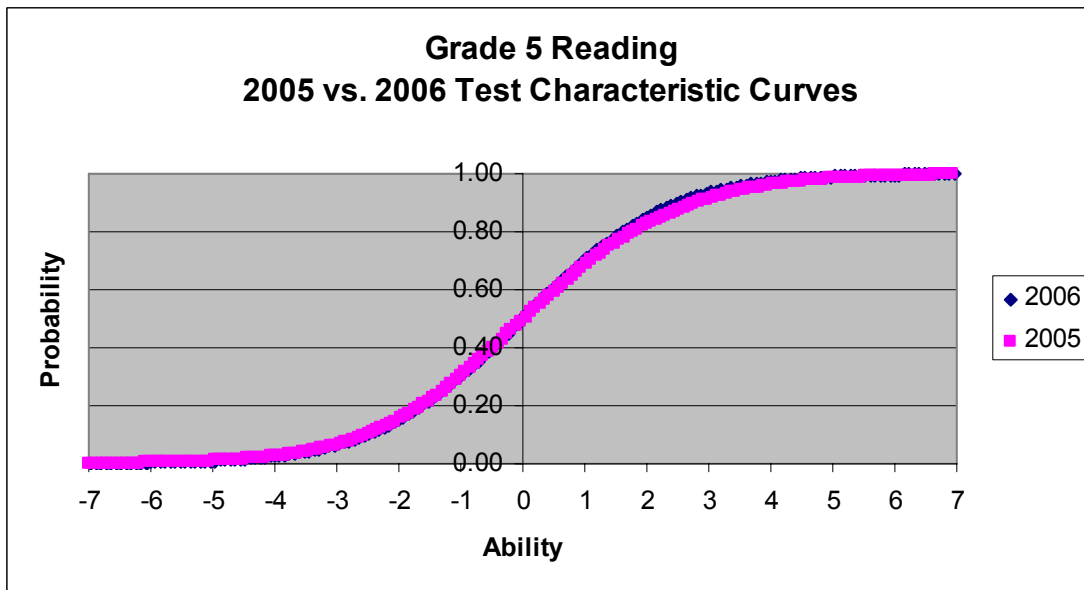


Figure 11.20

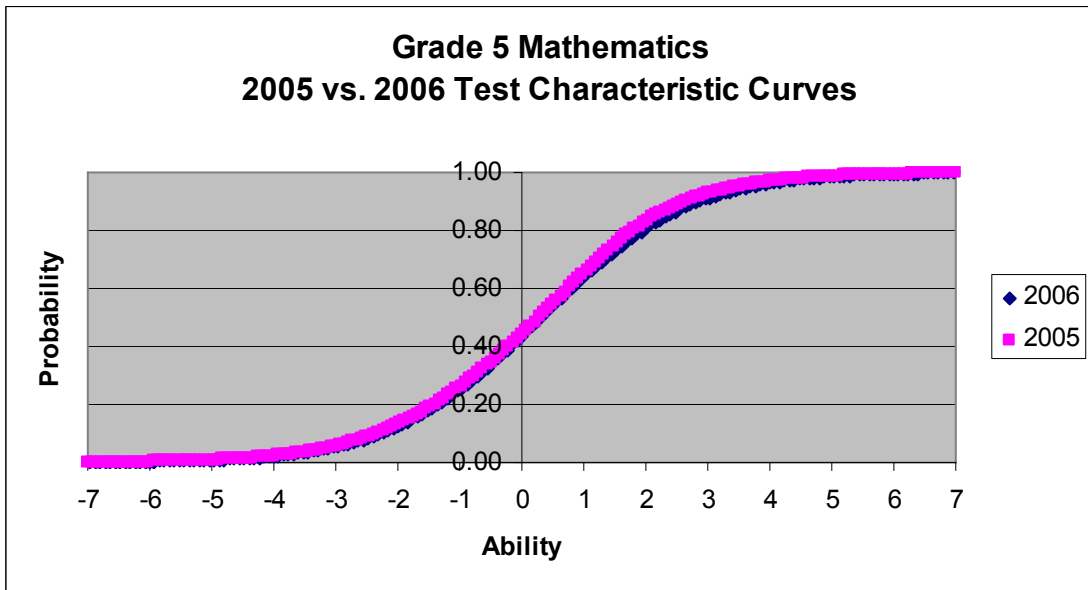


Figure 11.21

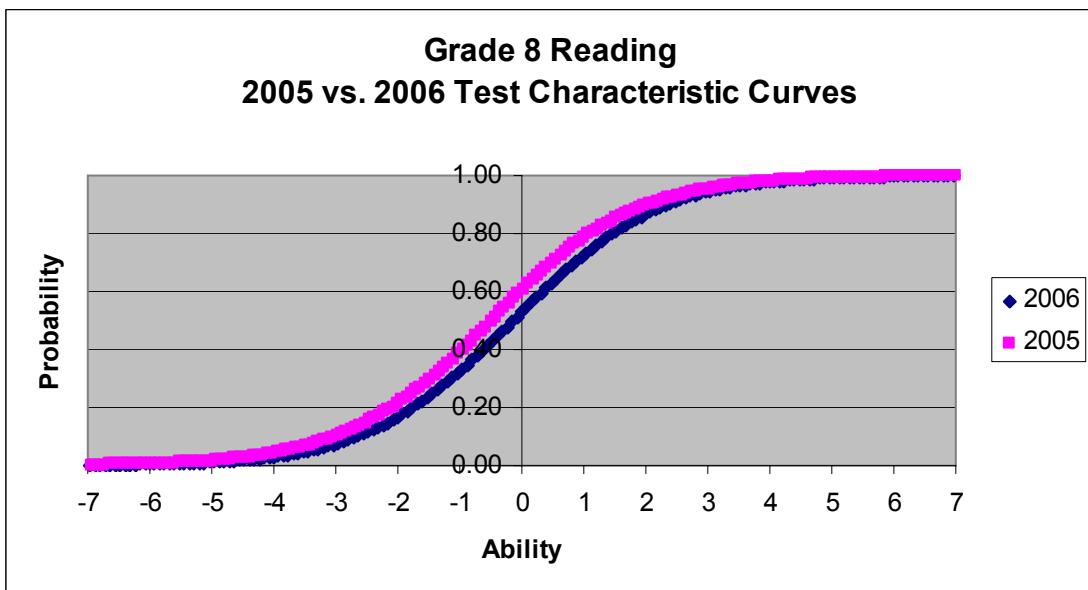


Figure 11.22

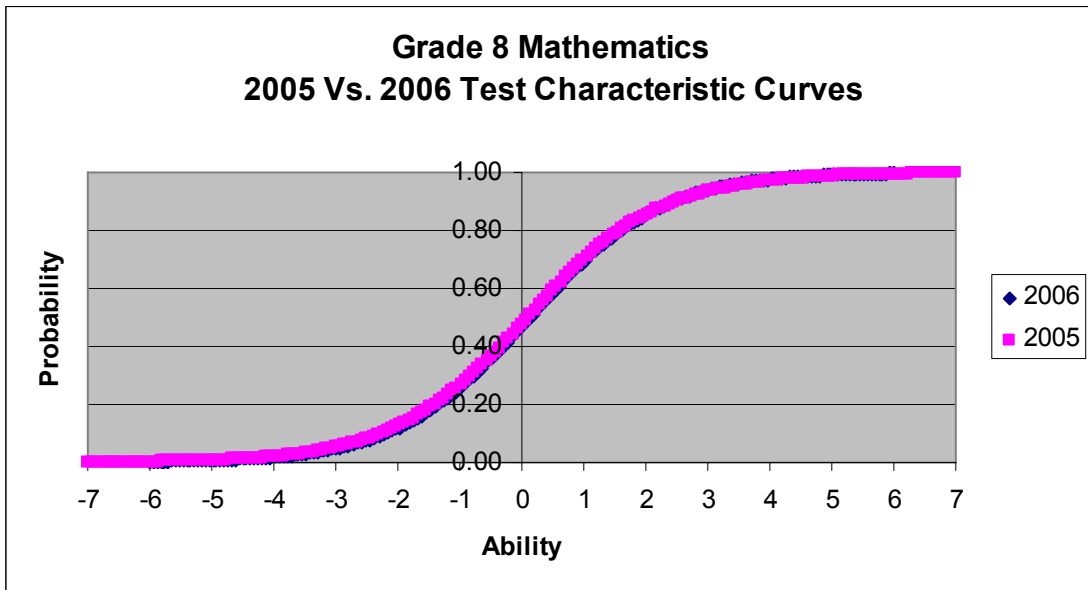


Figure 11.23

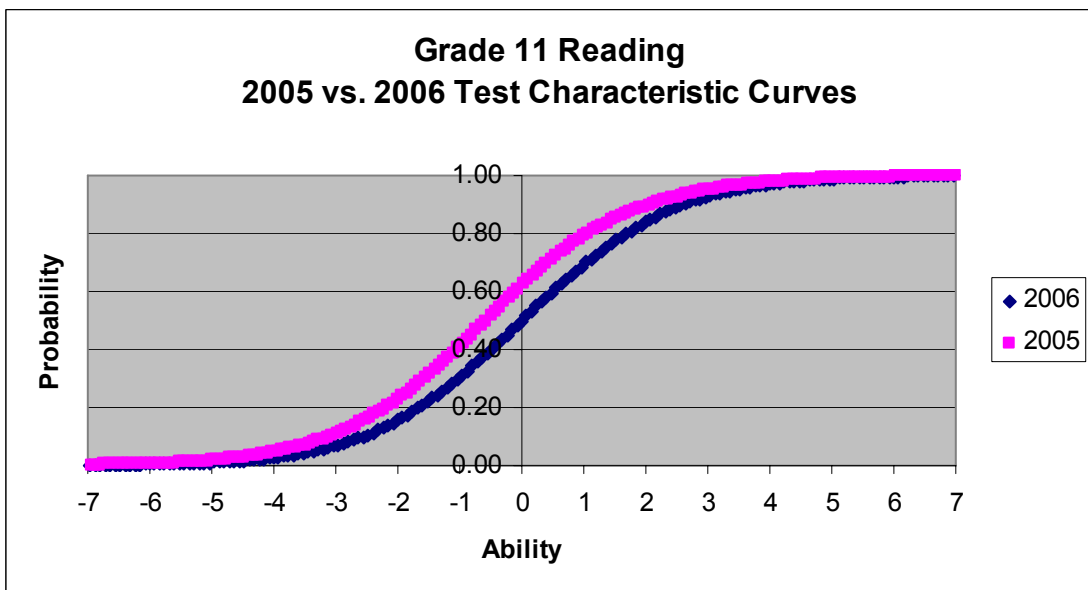
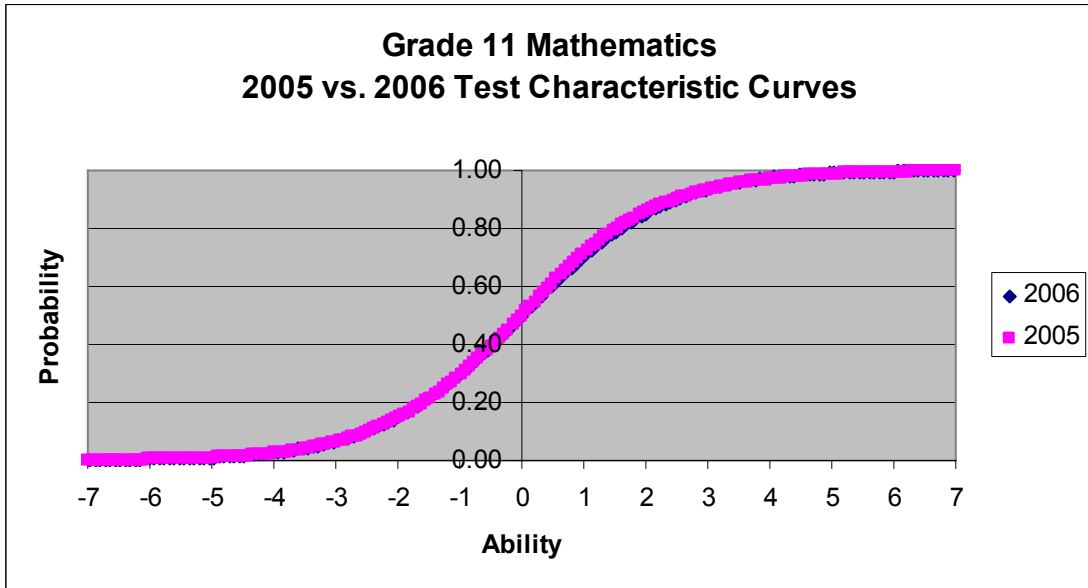


Figure 11.24



Chapter Twelve: Scaled Scores and Performance Levels

Prior to 2000, when the PSSA design was heavily matrix sampling, estimating school-level scaled scores presented some statistical and psychometric challenges. The statistically correct method to compute the school-level scaled score often gave an answer different from what would be obtained by averaging student ability estimates. To avoid this source of misunderstanding, the school-level scores were made to equal the average of the appropriate students. The matrix sampling component of the design, together with items from the common section, was used at the academic standard category level to estimate relative strengths and weaknesses for the school.

The adoption of the Pennsylvania Academic Standards in 1999 brought structural changes to the PSSA that were fully implemented in 2000. Beginning with the new reporting design in 2000, content area total scores for students and for schools were based exclusively on the common sections. Thus, greater emphasis was placed on the common sections possessing optimal balance at the content standard level and yielding reliable estimates of student-level abilities, as indicated by the standard errors. It was then possible to aggregate all scaled scores to the school, district, and state levels without resorting to any complex algorithms, making the results simpler to understand.

Because the original design of the PSSA was intended to produce school-level estimates only, the reporting metric was defined at the school level. For the 1996 base year, the mean of all schools in the *norming* sample was set at 1300 and the standard deviation at 100. The distribution to which these applied was the content area scaled score with all schools weighted equally. Consequently, the expectation in the base year was for state-level means near 1300 and standard deviations near 100. The state mean of student level scaled scores was, in general, somewhat different. This difference occurred because the mean of the school-level scores counted schools equally, regardless of size, while the mean of the student-level scores counted students equally.

A minimum scale score of 700 was implemented for all PSSA reading, mathematics, and writing exams beginning in 2002. This minimum is applied to all the PSSA scales. Although it affects very few students, many administrators believed that their schools were being penalized by the presence of extremely low scoring special needs students who took the regular assessment. The change was made to reduce the impact of these students on the overall school score. Note that there is no maximum scale score or upper bound.

Table 12-1 gives the linear transformations that were used to convert 2006 logits (X) into the scaled scores. These translation constants included the adjustments to equate 2006 to prior years as well as the rescaling needed to convert to the appropriate metric. These transformations are used for all scaled score calculations.

Table 12-1: Transformation to Scaled Scores

Grade	Reading	Mathematics
5	$198.8X + 1094.6$	$189.8X + 1134.1$
8	$234.82X + 1113.7$	$177.53X + 1182.3$
11	$245.45X + 1115.2$	$206.42X + 1203.1$

COMMON ITEMS AND MATRIX SAMPLED ITEMS

Beginning with the design changes implemented for the 2000 PSSA, student-level scores were based on the common items only. This ensures that any decision made about students will be done in the most equitable manner. School-level scaled scores for the content areas are based on the mean of the student-level scaled scores. This ensures that the scaled scores used for school accountability directly reflect the student-level results. It is a simple matter to aggregate up to the school, district, and state levels.

For the purpose of providing school-level results at the content standard (academic standards category) level, all items on all matrix forms plus the common items are utilized. This ensures that decisions about potential school-level strengths and weaknesses are based on broad sampling of the curriculum.

SCALED SCORES FOR CONTENT STANDARDS

As of 2003, school-level scaled scores are no longer reported for the academic content standards (academic standards categories). Instead, school results are presented as the percent of total points achieved as compared to district and state level results.

INTERPRETING SCALED SCORES AND PERFORMANCE LEVELS

A *Scaled Score*, in the simplest sense, is a transformed number correct score⁸. When all students take the same items, as in the common sections of the PSSA, the more points the student earns, the higher the associated scaled score. The value of switching to the more abstract scaled score metric lies in the achievement of a more general and equitable result.

To illustrate, a raw score of 30 is meaningless unless the reader is also told how many points were possible. The same score has quite different meanings if it is based on a thirty-item test as opposed to a sixty-item test. *Number correct scores are transformed to percent correct scores to remove the effect of test length.* In the same way, a score based on sixty *difficult* items is quite different from the same score based on sixty *easy* items. *Number correct scores are transformed to scaled scores to remove the effects of test length and item difficulty.* As a result, scale scores lend themselves to interpretations at what is referred to as an interval level, while raw scores do not. Interval-level scales, in the testing industry, allow one to interpret a scale score difference of 5 points the same whether the scores are 1295 vs. 1300 or 1445 vs. 1450. Raw score differences, in this context, cannot be interpreted in this manner and are thus neither generalizable nor equitable.

The PSSA scaled score metric was originally anchored to the *mean school level scaled score* for a base year and arbitrarily labeled as 1300. In the base year, the standard deviation of the school-level scaled scores was set to a value of 100. If school scores are approximately normally distributed, a scaled score of 1400, one standard deviation above the base year mean, means the school did better than about 5/6 of the schools in the base year. About two thirds of the schools will have scaled scores between 1200 and 1400. About 16% of the schools will be below 1200. Scaled scores of 1000 and 1600 are three standard deviations from the mean and so are extreme scores.

These labels of 1300, 1200, etc. are completely arbitrary; they could have been called zero and one, or 100 and 110, or any other ordered pair without affecting any of the relationships among

⁸ This is done in two steps. First, there is a nonlinear transformation that converts number correct scores to logits, and then a linear transformation to convert logits to scaled scores.

schools, years, students, or items. Changing the scale would simply be changing the labels on the axis of a graph without moving any of the points.

Setting the mean at 1300 and the standard deviation at 100 was originally chosen so as to not produce negative scores and so that scores on the PSSA would not be confused with the results from any other testing program. Like the temperature scales of Fahrenheit and Celsius, the new scale will acquire meaning to users only with experience.

A scaled score of 1300, or any other value, should have the same absolute meaning in the current year as it had in previous years, when properly equated across years. A school with a scaled score above 1300 performed better than did the average school in the base year.

More importantly, an increase in the scaled score from last year to the current year means the students' performance has improved; it does not say anything about whether the exam is easier or harder. 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.

Raw to scale score tables for the Spring 2006 assessment can be found in Appendix FF.

PSSA PERFORMANCE LEVELS FOR READING AND MATHEMATICS

Performance levels are another way to attach meaning to the scaled score metric. They 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.

- **Advanced:** The Advanced Level reflects superior academic performance. Advanced work indicates an in-depth understanding and exemplary display of the skills included in the Pennsylvania Academic Content Standards.
- **Proficient:** The Proficient Level reflects satisfactory academic performance. Proficient work indicates a solid understanding and adequate display of the skills included in the Pennsylvania Academic Content Standards.
- **Basic:** The Basic Level reflects marginal academic performance. Basic work indicates a partial understanding and limited display of the skills included in the Pennsylvania Academic Content Standards. This work is approaching satisfactory performance, but has not been reached. There is a need for additional instructional opportunities and/or increased student academic commitment to achieve the Proficient Level.
- **Below Basic:** The Below Basic Level reflects inadequate academic performance. Below Basic work indicates little understanding and minimal display of the skills included in the Pennsylvania Academic Content Standards. There is a major need for additional instructional opportunities and/or increased student academic commitment to achieve the Proficient Level.

The quantitative definition of the performance levels, established through the Performance Levels Validation process, is shown in Chapter 14.

Chapter Thirteen: Test Validity and Reliability

CALIBRATION

In order to expedite the analysis process, a sample of students was selected for use in calibrating item difficulties. The sample was aimed to cover roughly 50% of the student population while preserving ethnic representation. This was done using random sampling without replacement at the district level for approximately 85% of the sample and at the school level for Pittsburgh and Philadelphia districts for approximately 15% of the sample based on 2005-2006 enrollment counts.

VALIDITY

As noted in the *Standards for Educational and Psychological Testing*, “validity refers to the degree to which evidence and theory support the interpretation of test scores entailed by the proposed uses of the tests” (AERA, APA, & NCME, 1999, p. 9). Thus, the validity of the PSSA must be judged in relation to its primary purposes as delineated in Chapter 1. Validity evidence related to test content is presented in terms of how the 2005 PSSA assessments were assembled to reflect the state content standards (more information on this, including information about content and bias and sensitivity reviews, is presented in Chapter 3). This section is followed by a summary of the item-development procedures, and a presentation of the correlations among strands.

The PDE commitment to validity is also evidenced by the fact that the Pennsylvania State Board of Education commissioned an independent study of an earlier version of the PSSA. That study, conducted by HumRRO, included an extensive evaluation of the items (Thacker and Dickinson, 2004) and of statistical relationships of the PSSA, including convergent and discriminant validity (Thacker, Dickinson and Koger, 2004).

ITEM DEVELOPMENT

PDE commissioned Achieve, Inc. to conduct a series of reviews during the period in which PDE was in the process of developing and refining the Assessment Anchor Content Standards (Assessment Anchors) and Eligible Content for reading and mathematics. Through an iterative process of successive refinement in which each version underwent review and modification in accordance with Achieve’s recommendations, final documents for reading and mathematics emerged. Similarly, PDE submitted sets of items designed to measure these anchors (see Chapter 2 for additional details). The item development process also benefited from an evaluation of how well test items aligned with the Assessment Anchors and Eligible Content. The reviews conducted by Achieve (2005) focused on:

- Assessment Anchors and Eligible Content for reading and mathematics.
- Alignment of assessments to the Assessment Anchors and Eligible Content and, subsequently, in developing items tailored toward these anchors.

Achieve, Inc. (2005). *Measuring Up 2005: A Report on Assessment Anchors and Tests in Reading and Mathematics for Pennsylvania*.

RELIABILITY

This chapter provides reliability indices and standard errors of measurement (SEM) for the 2006 PSSA assessments. For the Rasch model, raw scores are sufficient statistics for abilities and scale scores; performance levels set on scale scores are identical to those based on raw scores.

RELIABILITY INDICES

The Cronbach's Alpha reliability indices (Cronbach, 1951) were calculated using the traditional formula. Please refer to Chapter 10 for additional information about this reliability index.

Tables 13-1 through 13-6 provide reliability information on the reading and mathematics tests by strand for the total student population and for students in each gender group and the ethnicity groups of White and Black, Hispanic, Asian, and Indian. Other groups such as LEP, IEP, and Economically Disadvantaged were also included for reliability estimation. The contents of the table include total number of points (K), number of students tested (N), mean points received, standard deviation (SD), mean P-Value, reliability, traditional standard errors of measurement, and item type.

Across grades and subjects, reliabilities for the substrands trended slightly higher for boys than for girls. Reliabilities showed a slight tendency toward dispersion among ethnic groups, though trends among ethnicity were harder to identify. Across grades, reading strand A had marginally higher reliability than reading strand B.

Table 13-1. GRADE 5 READING

Overall

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	52	133440	35.05	9.85	0.69	0.91	2.96	MC,CR
A) Comprehension and Reading Skills	39	133440	26.00	7.44	0.68	0.88	2.58	MC,CR
B) Interpretation and Analysis of Fiction and Nonfiction	13	133440	9.06	2.81	0.71	0.73	1.46	MC,CR

By gender

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall								
Male	52	68267	34.19	10.23	0.68	0.92	2.97	MC,CR
Female	52	64976	35.98	9.35	0.71	0.90	2.94	MC,CR
A) Comprehension and Reading Skills								
Male	39	68267	25.44	7.73	0.67	0.89	2.59	MC,CR
Female	39	64976	26.60	7.08	0.70	0.87	2.57	MC,CR
B) Interpretation and Analysis of Fiction and Nonfiction								
Male	13	68267	8.76	2.89	0.69	0.74	1.47	MC,CR
Female	13	64976	9.38	2.68	0.73	0.71	1.43	MC,CR

Table 13-1. GRADE 5 READING CONTINUED

By ethnicity

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall								
White non-Hispanic	52	99087	36.81	8.97	0.73	0.90	2.89	MC,CR
Black/African-American non-Hispanic	52	21015	29.00	10.15	0.57	0.90	3.15	MC,CR
Latino/Hispanic	52	8705	29.06	10.64	0.57	0.91	3.15	MC,CR
Asian or Pacific Islander	52	3380	37.99	9.04	0.74	0.90	2.84	MC,CR
American Indian or Alaskan Native	52	169	32.86	10.14	0.65	0.91	3.03	MC,CR
Multi-Racial/Ethnic	52	837	32.35	10.02	0.64	0.91	3.07	MC,CR
A) Comprehension and Reading Skills								
White non-Hispanic	39	99087	27.29	6.82	0.72	0.86	2.52	MC,CR
Black/African-American non-Hispanic	39	21015	21.51	7.60	0.57	0.87	2.72	MC,CR
Latino/Hispanic	39	8705	21.56	7.95	0.57	0.88	2.73	MC,CR
Asian or Pacific Islander	39	3380	28.21	6.85	0.74	0.87	2.48	MC,CR
American Indian or Alaskan Native	39	169	24.31	7.75	0.64	0.88	2.64	MC,CR
Multi-Racial/Ethnic	39	837	24.01	7.51	0.63	0.87	2.67	MC,CR
B) Interpretation and Analysis of Fiction and Nonfiction								
White non-Hispanic	13	99087	9.51	2.56	0.75	0.70	1.41	MC,CR
Black/African-American non-Hispanic	13	21015	7.49	3.00	0.59	0.72	1.59	MC,CR
Latino/Hispanic	13	8705	7.50	3.10	0.58	0.74	1.58	MC,CR
Asian or Pacific Islander	13	3380	9.78	2.58	0.76	0.71	1.39	MC,CR
American Indian or Alaskan Native	13	169	8.56	2.83	0.68	0.73	1.48	MC,CR
Multi-Racial/Ethnic	13	837	8.34	2.92	0.65	0.73	1.53	MC,CR

Table 13-1. GRADE 5 READING CONTINUED

LEP

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	52	326	21.48	11.35	0.43	0.92	3.19	MC,CR
A) Comprehension and Reading Skills	39	326	16.17	8.47	0.43	0.89	2.78	MC,CR
B) Interpretation and Analysis of Fiction and Nonfiction	13	326	5.32	3.22	0.42	0.76	1.58	MC,CR

IEP

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	52	21123	25.45	10.74	0.51	0.91	3.20	MC,CR
A) Comprehension and Reading Skills	39	21123	18.96	8.08	0.50	0.88	2.76	MC,CR
B) Interpretation and Analysis of Fiction and Nonfiction	13	21123	6.49	3.09	0.51	0.73	1.61	MC,CR

ECO

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	52	48715	30.33	10.24	0.60	0.91	3.13	MC,CR
A) Comprehension and Reading Skills	39	48715	22.50	7.68	0.59	0.88	2.71	MC,CR
B) Interpretation and Analysis of Fiction and Nonfiction	13	48715	7.83	2.99	0.61	0.73	1.56	MC,CR

Table 13-2. GRADE 5 MATH

Overall

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	66	133871	44.59	13.03	0.69	0.93	3.53	MC,CR
A) Numbers and Operations	29	133871	19.22	6.46	0.68	0.87	2.34	MC,CR
B) Measurement	9	133871	5.88	1.96	0.65	0.59	1.26	MC,CR
C) Geometry	9	133871	5.65	2.28	0.67	0.56	1.52	MC,CR
D) Algebra	10	133871	7.06	2.33	0.71	0.71	1.25	MC,CR
E) Data Analysis and Probability	9	133871	6.77	1.84	0.74	0.57	1.21	MC,CR

By gender

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall								
Male	66	68508	45.00	13.27	0.69	0.93	3.51	MC,CR
Female	66	65166	44.18	12.76	0.68	0.92	3.54	MC,CR
A) Numbers and Operations								
Male	29	68508	19.42	6.54	0.69	0.88	2.31	MC,CR
Female	29	65166	19.02	6.36	0.67	0.86	2.36	MC,CR
B) Measurement								
Male	9	68508	6.03	1.98	0.67	0.61	1.24	MC,CR
Female	9	65166	5.72	1.92	0.64	0.57	1.26	MC,CR
C) Geometry								
Male	9	68508	5.63	2.32	0.67	0.57	1.53	MC,CR
Female	9	65166	5.68	2.24	0.67	0.55	1.51	MC,CR
D) Algebra								
Male	10	68508	7.18	2.36	0.72	0.73	1.23	MC,CR
Female	10	65166	6.94	2.30	0.69	0.69	1.28	MC,CR
E) Data Analysis and Probability								
Male	9	68508	6.74	1.86	0.74	0.57	1.22	MC,CR
Female	9	65166	6.81	1.82	0.73	0.57	1.19	MC,CR

Table 13-2. GRADE 5 MATH CONTINUED

By ethnicity

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall								
White non-Hispanic	66	99236	46.82	12.06	0.72	0.92	3.45	MC,CR
Black/African-American non-Hispanic	66	21070	36.23	12.84	0.56	0.92	3.70	MC,CR
Latino/Hispanic	66	8858	37.65	13.36	0.58	0.92	3.70	MC,CR
Asian or Pacific Islander	66	3450	50.94	11.85	0.79	0.93	3.23	MC,CR
American Indian or Alaskan Native	66	170	41.85	12.57	0.65	0.91	3.68	MC,CR
Multi-Racial/Ethnic	66	840	41.03	13.05	0.63	0.92	3.63	MC,CR
A) Numbers and Operations								
White non-Hispanic	29	99236	20.25	6.05	0.72	0.86	2.28	MC,CR
Black/African-American non-Hispanic	29	21070	15.41	6.34	0.56	0.85	2.45	MC,CR
Latino/Hispanic	29	8858	15.86	6.59	0.57	0.86	2.45	MC,CR
Asian or Pacific Islander	29	3450	22.47	5.78	0.79	0.87	2.10	MC,CR
American Indian or Alaskan Native	29	170	17.96	6.44	0.64	0.86	2.40	MC,CR
Multi-Racial/Ethnic	29	840	17.62	6.56	0.63	0.87	2.39	MC,CR
B) Measurement								
White non-Hispanic	9	99236	6.17	1.85	0.69	0.56	1.23	MC,CR
Black/African-American non-Hispanic	9	21070	4.81	1.92	0.53	0.53	1.32	MC,CR
Latino/Hispanic	9	8858	4.95	2.00	0.55	0.57	1.32	MC,CR
Asian or Pacific Islander	9	3450	6.63	1.89	0.74	0.61	1.17	MC,CR
American Indian or Alaskan Native	9	170	5.72	1.87	0.64	0.54	1.27	MC,CR
Multi-Racial/Ethnic	9	840	5.43	1.97	0.60	0.57	1.29	MC,CR
C) Geometry								
White non-Hispanic	9	99236	6.00	2.19	0.71	0.53	1.50	MC,CR
Black/African-American non-Hispanic	9	21070	4.31	2.15	0.54	0.55	1.45	MC,CR
Latino/Hispanic	9	8858	4.79	2.23	0.58	0.55	1.50	MC,CR
Asian or Pacific Islander	9	3450	6.38	2.20	0.76	0.54	1.49	MC,CR
American Indian or Alaskan Native	9	170	5.14	2.31	0.62	0.53	1.59	MC,CR
Multi-Racial/Ethnic	9	840	5.13	2.27	0.62	0.56	1.50	MC,CR
D) Algebra								
White non-Hispanic	10	99236	7.34	2.21	0.73	0.69	1.22	MC,CR
Black/African-American non-Hispanic	10	21070	6.01	2.43	0.60	0.68	1.37	MC,CR
Latino/Hispanic	10	8858	6.08	2.49	0.61	0.70	1.36	MC,CR
Asian or Pacific Islander	10	3450	8.12	2.03	0.81	0.72	1.08	MC,CR
American Indian or Alaskan Native	10	170	6.69	2.25	0.67	0.65	1.34	MC,CR
Multi-Racial/Ethnic	10	840	6.57	2.35	0.66	0.68	1.32	MC,CR
E) Data Analysis and Probability								
White non-Hispanic	9	99236	7.06	1.67	0.77	0.52	1.16	MC,CR
Black/African-American non-Hispanic	9	21070	5.69	2.04	0.60	0.56	1.36	MC,CR
Latino/Hispanic	9	8858	5.97	2.01	0.63	0.56	1.33	MC,CR
Asian or Pacific Islander	9	3450	7.35	1.64	0.81	0.55	1.10	MC,CR
American Indian or Alaskan Native	9	170	6.35	1.82	0.69	0.48	1.32	MC,CR
Multi-Racial/Ethnic	9	840	6.27	1.92	0.68	0.54	1.30	MC,CR

Table 13-2. GRADE 5 MATH CONTINUED

LEP

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	66	531	32.08	14.43	0.50	0.93	3.74	MC,CR
A) Numbers and Operations	29	531	13.63	6.97	0.49	0.88	2.44	MC,CR
B) Measurement	9	531	4.38	2.18	0.49	0.63	1.32	MC,CR
C) Geometry	9	531	3.77	2.27	0.45	0.57	1.48	MC,CR
D) Algebra	10	531	5.36	2.71	0.54	0.75	1.35	MC,CR
E) Data Analysis and Probability	9	531	4.93	2.16	0.51	0.53	1.48	MC,CR

IEP

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	66	21194	33.56	13.44	0.52	0.92	66	MC,CR
A) Numbers and Operations	29	21194	13.91	6.59	0.50	0.86	29	MC,CR
B) Measurement	9	21194	4.62	2.05	0.51	0.58	9	MC,CR
C) Geometry	9	21194	4.16	2.20	0.51	0.55	9	MC,CR
D) Algebra	10	21194	5.33	2.51	0.53	0.69	10	MC,CR
E) Data Analysis and Probability	9	21194	5.53	2.10	0.58	0.55	9	MC,CR

ECO

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	66	48950	38.81	13.08	0.60	0.92	66	MC,CR
A) Numbers and Operations	29	48950	16.45	6.46	0.59	0.86	29	MC,CR
B) Measurement	9	48950	5.16	1.96	0.57	0.56	9	MC,CR
C) Geometry	9	48950	4.85	2.25	0.59	0.55	9	MC,CR
D) Algebra	10	48950	6.26	2.42	0.63	0.69	10	MC,CR
E) Data Analysis and Probability	9	48950	6.08	1.98	0.65	0.56	9	MC,CR

Table 13-3. GRADE 8 READING

Overall

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	52	145140	34.91	9.82	0.69	0.91	2.95	MC,CR
A) Comprehension and Reading Skills	26	145140	18.56	5.07	0.71	0.85	1.97	MC,CR
B) Interpretation and Analysis of Fiction and Nonfiction	26	145140	16.35	5.19	0.66	0.83	2.17	MC,CR

By gender

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall								
Male	52	74549	33.92	10.17	0.68	0.92	2.96	MC,CR
Female	52	70278	35.99	9.29	0.71	0.90	2.91	MC,CR
A) Comprehension and Reading Skills								
Male	26	74549	18.21	5.31	0.70	0.86	1.99	MC,CR
Female	26	70278	18.94	4.77	0.73	0.83	1.95	MC,CR
B) Interpretation and Analysis of Fiction and Nonfiction								
Male	26	74549	15.71	5.30	0.64	0.83	2.18	MC,CR
Female	26	70278	17.05	4.97	0.68	0.81	2.14	MC,CR

Table 13-3. GRADE 8 READING CONTINUED

By ethnicity

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall								
White non-Hispanic	52	109819	36.71	9.02	0.73	0.90	2.86	MC,CR
Black/African-American non-Hispanic	52	22483	28.46	9.63	0.57	0.89	3.16	MC,CR
Latino/Hispanic	52	8439	28.31	10.05	0.56	0.90	52	MC,CR
Asian or Pacific Islander	52	3163	37.71	9.31	0.74	0.91	52	MC,CR
American Indian or Alaskan Native	52	249	33.27	10.48	0.66	0.92	52	MC,CR
Multi-Racial/Ethnic	52	584	31.27	10.41	0.62	0.91	3.10	MC,CR
A) Comprehension and Reading Skills								
White non-Hispanic	26	109819	19.45	4.67	0.75	0.83	1.90	MC,CR
Black/African-American non-Hispanic	26	22483	15.42	5.06	0.59	0.82	2.18	MC,CR
Latino/Hispanic	26	8439	15.25	5.28	0.59	0.83	26	MC,CR
Asian or Pacific Islander	26	3163	19.75	4.78	0.76	0.85	26	MC,CR
American Indian or Alaskan Native	26	249	17.70	5.44	0.68	0.86	26	MC,CR
Multi-Racial/Ethnic	26	584	16.74	5.36	0.64	0.85	2.11	MC,CR
B) Interpretation and Analysis of Fiction and Nonfiction								
White non-Hispanic	26	109819	17.26	4.81	0.70	0.81	2.12	MC,CR
Black/African-American non-Hispanic	26	22483	13.04	5.09	0.53	0.80	2.28	MC,CR
Latino/Hispanic	26	8439	13.06	5.27	0.53	0.81	26	MC,CR
Asian or Pacific Islander	26	3163	17.96	4.96	0.71	0.82	26	MC,CR
American Indian or Alaskan Native	26	249	15.57	5.47	0.63	0.83	26	MC,CR
Multi-Racial/Ethnic	26	584	14.52	5.49	0.59	0.83	2.25	MC,CR

Table 13-3. GRADE 8 READING CONTINUED

LEP

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	52	251	18.84	8.60	0.38	0.86	3.27	MC,CR
A) Comprehension and Reading Skills	26	251	10.73	4.40	0.41	0.72	2.33	MC,CR
B) Interpretation and Analysis of Fiction and Nonfiction	26	251	8.11	4.66	0.34	0.76	2.28	MC,CR

IEP

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	52	21640	24.26	9.70	0.49	0.89	3.20	MC,CR
A) Comprehension and Reading Skills	26	21640	13.34	5.23	0.51	0.82	2.25	MC,CR
B) Interpretation and Analysis of Fiction and Nonfiction	26	21640	10.92	5.02	0.45	0.80	2.26	MC,CR

ECO

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	52	48150	29.75	9.93	0.59	0.90	3.12	MC,CR
A) Comprehension and Reading Skills	26	48150	16.05	5.21	0.62	0.83	2.14	MC,CR
B) Interpretation and Analysis of Fiction and Nonfiction	26	48150	13.71	5.21	0.56	0.81	2.25	MC,CR

Table 13-4. GRADE 8 MATH

Overall

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	66	145655	42.22	13.75	0.66	0.93	3.64	MC,CR
A) Numbers and Operations	13	145655	8.43	3.10	0.65	0.77	1.50	MC,CR
B) Measurement	10	145655	4.87	2.59	0.56	0.66	1.52	MC,CR
C) Geometry	12	145655	7.63	2.86	0.67	0.66	1.68	MC,CR
D) Algebra	19	145655	12.49	4.39	0.66	0.79	2.01	MC,CR
E) Data Analysis and Probability	12	145655	8.81	2.61	0.73	0.74	1.34	MC,CR

By gender

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall								
Male	66	74838	42.34	14.08	0.67	0.93	3.62	MC,CR
Female	66	70490	42.16	13.36	0.66	0.92	3.66	MC,CR
A) Numbers and Operations								
Male	13	74838	8.54	3.16	0.66	0.78	1.48	MC,CR
Female	13	70490	8.32	3.02	0.64	0.75	1.51	MC,CR
B) Measurement								
Male	10	74838	4.99	2.57	0.58	0.66	1.50	MC,CR
Female	10	70490	4.74	2.60	0.54	0.65	1.53	MC,CR
C) Geometry								
Male	12	74838	7.69	2.91	0.68	0.67	1.68	MC,CR
Female	12	70490	7.58	2.80	0.66	0.64	1.67	MC,CR
D) Algebra								
Male	19	74838	12.33	4.50	0.66	0.80	1.99	MC,CR
Female	19	70490	12.66	4.26	0.67	0.78	2.02	MC,CR
E) Data Analysis and Probability								
Male	12	74838	8.78	2.69	0.73	0.75	1.34	MC,CR
Female	12	70490	8.85	2.52	0.74	0.72	1.34	MC,CR

Table 13-4. GRADE 8 MATH CONTINUED

By ethnicity

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall								
White non-Hispanic	66	109983	44.64	12.86	0.70	0.92	3.57	MC,CR
Black/African-American non-Hispanic	66	22613	32.74	12.74	0.52	0.91	3.77	MC,CR
Latino/Hispanic	66	8604	34.39	13.14	0.54	0.92	3.80	MC,CR
Asian or Pacific Islander	66	3202	49.94	12.37	0.78	0.93	3.34	MC,CR
American Indian or Alaskan Native	66	250	39.31	14.40	0.62	0.93	3.71	MC,CR
Multi-Racial/Ethnic	66	585	36.64	13.66	0.58	0.92	3.79	MC,CR
A) Numbers and Operations								
White non-Hispanic	13	109983	8.88	2.98	0.68	0.76	1.47	MC,CR
Black/African-American non-Hispanic	13	22613	6.67	2.86	0.51	0.68	1.62	MC,CR
Latino/Hispanic	13	8604	6.88	2.95	0.53	0.70	1.61	MC,CR
Asian or Pacific Islander	13	3202	10.05	2.76	0.77	0.78	1.31	MC,CR
American Indian or Alaskan Native	13	250	7.80	3.28	0.60	0.79	1.52	MC,CR
Multi-Racial/Ethnic	13	585	7.36	2.95	0.57	0.70	1.61	MC,CR
B) Measurement								
White non-Hispanic	10	109983	5.29	2.49	0.61	0.62	1.53	MC,CR
Black/African-American non-Hispanic	10	22613	3.16	2.19	0.38	0.60	1.39	MC,CR
Latino/Hispanic	10	8604	3.53	2.29	0.42	0.60	1.44	MC,CR
Asian or Pacific Islander	10	3202	6.28	2.59	0.69	0.64	1.55	MC,CR
American Indian or Alaskan Native	10	250	4.50	2.55	0.53	0.66	1.49	MC,CR
Multi-Racial/Ethnic	10	585	3.99	2.39	0.48	0.63	1.45	MC,CR
C) Geometry								
White non-Hispanic	12	109983	8.10	2.67	0.70	0.63	1.63	MC,CR
Black/African-American non-Hispanic	12	22613	5.77	2.80	0.52	0.62	1.73	MC,CR
Latino/Hispanic	12	8604	6.27	2.84	0.55	0.62	1.74	MC,CR
Asian or Pacific Islander	12	3202	8.90	2.63	0.76	0.64	1.57	MC,CR
American Indian or Alaskan Native	12	250	7.16	3.06	0.63	0.68	1.72	MC,CR
Multi-Racial/Ethnic	12	585	6.66	2.96	0.59	0.65	1.74	MC,CR
D) Algebra								
White non-Hispanic	19	109983	13.13	4.16	0.70	0.78	1.96	MC,CR
Black/African-American non-Hispanic	19	22613	9.99	4.28	0.54	0.76	2.10	MC,CR
Latino/Hispanic	19	8604	10.27	4.37	0.55	0.77	2.11	MC,CR
Asian or Pacific Islander	19	3202	14.82	3.79	0.79	0.78	1.77	MC,CR
American Indian or Alaskan Native	19	250	11.62	4.52	0.62	0.79	2.07	MC,CR
Multi-Racial/Ethnic	19	585	10.80	4.55	0.58	0.78	2.11	MC,CR
E) Data Analysis and Probability								
White non-Hispanic	12	109983	9.24	2.40	0.77	0.71	1.29	MC,CR
Black/African-American non-Hispanic	12	22613	7.16	2.71	0.60	0.70	1.49	MC,CR
Latino/Hispanic	12	8604	7.43	2.76	0.62	0.71	1.48	MC,CR
Asian or Pacific Islander	12	3202	9.91	2.24	0.83	0.73	1.17	MC,CR
American Indian or Alaskan Native	12	250	8.22	2.78	0.69	0.74	1.40	MC,CR
Multi-Racial/Ethnic	12	585	7.82	2.82	0.65	0.74	1.44	MC,CR

Table 13-4. GRADE 8 MATH CONTINUED

LEP

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	66	409	26.13	12.95	0.42	0.91	3.80	MC,CR
A) Numbers and Operations	13	409	5.49	3.05	0.42	0.73	1.58	MC,CR
B) Measurement	10	409	2.72	2.21	0.33	0.62	1.37	MC,CR
C) Geometry	12	409	4.50	2.71	0.40	0.59	1.73	MC,CR
D) Algebra	19	409	8.01	4.32	0.45	0.75	2.16	MC,CR
E) Data Analysis and Probability	12	409	5.42	2.68	0.45	0.66	1.56	MC,CR

IEP

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	66	21739	28.01	12.32	0.45	0.91	3.77	MC,CR
A) Numbers and Operations	13	21739	5.64	2.80	0.43	0.66	1.64	MC,CR
B) Measurement	10	21739	2.89	2.05	0.36	0.59	1.31	MC,CR
C) Geometry	12	21739	5.10	2.76	0.46	0.62	1.71	MC,CR
D) Algebra	19	21739	8.12	4.09	0.44	0.73	2.11	MC,CR
E) Data Analysis and Probability	12	21739	6.27	2.75	0.52	0.69	1.53	MC,CR

ECO

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	66	48452	35.46	13.34	0.56	0.92	3.77	MC,CR
A) Numbers and Operations	13	48452	7.10	2.99	0.55	0.71	1.60	MC,CR
B) Measurement	10	48452	3.71	2.36	0.44	0.63	1.44	MC,CR
C) Geometry	12	48452	6.41	2.89	0.57	0.64	1.73	MC,CR
D) Algebra	19	48452	10.60	4.37	0.57	0.77	2.10	MC,CR
E) Data Analysis and Probability	12	48452	7.64	2.74	0.64	0.72	1.46	MC,CR

Table 13-5. GRADE 11 READING

Overall

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	52	134083	34.69	9.17	0.68	0.90	2.87	MC,CR
A) Comprehension and Reading Skills	29	134083	19.23	5.59	0.67	0.84	2.22	MC
B) Interpretation and Analysis of Fiction and Nonfiction	23	134083	15.47	4.05	0.71	0.80	1.82	MC,CR

By gender

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall								
Male	52	67815	33.73	9.55	0.67	0.91	2.90	MC,CR
Female	52	65929	35.72	8.62	0.70	0.89	2.82	MC,CR
A) Comprehension and Reading Skills								
Male	29	67815	18.92	5.74	0.66	0.85	2.23	MC
Female	29	65929	19.57	5.39	0.67	0.83	2.19	MC
B) Interpretation and Analysis of Fiction and Nonfiction								
Male	23	67815	14.82	4.24	0.69	0.81	1.86	MC,CR
Female	23	65929	16.16	3.71	0.74	0.77	1.76	MC,CR

Table 13-5. GRADE 11 READING CONTINUED

By ethnicity

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall								
White non-Hispanic	52	107472	36.09	8.45	0.71	0.89	2.80	MC,CR
Black/African-American non-Hispanic	52	16538	27.91	9.38	0.55	0.89	3.14	MC,CR
Latino/Hispanic	52	5584	28.22	9.38	0.56	0.89	3.13	MC,CR
Asian or Pacific Islander	52	3237	36.11	9.23	0.71	0.91	2.84	MC,CR
American Indian or Alaskan Native	52	208	32.34	9.08	0.64	0.89	2.98	MC,CR
Multi-Racial/Ethnic	52	657	30.90	10.08	0.61	0.91	3.05	MC,CR
A) Comprehension and Reading Skills								
White non-Hispanic	29	107472	20.04	5.25	0.69	0.83	2.17	MC
Black/African-American non-Hispanic	29	16538	15.20	5.41	0.52	0.80	2.41	MC
Latino/Hispanic	29	5584	15.44	5.47	0.53	0.81	2.39	MC
Asian or Pacific Islander	29	3237	20.18	5.55	0.70	0.85	2.16	MC
American Indian or Alaskan Native	29	208	17.68	5.65	0.61	0.83	2.32	MC
Multi-Racial/Ethnic	29	657	17.07	5.84	0.59	0.84	2.34	MC
B) Interpretation and Analysis of Fiction and Nonfiction								
White non-Hispanic	23	107472	16.04	3.69	0.74	0.77	1.76	MC,CR
Black/African-American non-Hispanic	23	16538	12.71	4.50	0.59	0.80	2.01	MC,CR
Latino/Hispanic	23	5584	12.78	4.44	0.59	0.80	2.01	MC,CR
Asian or Pacific Islander	23	3237	15.93	4.14	0.72	0.80	1.83	MC,CR
American Indian or Alaskan Native	23	208	14.66	3.98	0.68	0.78	1.86	MC,CR
Multi-Racial/Ethnic	23	657	13.83	4.70	0.65	0.83	1.94	MC,CR

Table 13-5. GRADE 11 READING CONTINUED

LEP

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	52	256	23.63	8.32	0.47	0.85	3.26	MC,CR
A) Comprehension and Reading Skills	29	256	13.05	4.90	0.45	0.75	2.44	MC
B) Interpretation and Analysis of Fiction and Nonfiction	23	256	10.58	4.08	0.50	0.72	2.15	MC,CR

IEP

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	52	16786	23.85	9.03	0.48	0.88	3.18	MC,CR
A) Comprehension and Reading Skills	29	16786	13.18	5.18	0.46	0.78	2.44	MC
B) Interpretation and Analysis of Fiction and Nonfiction	23	16786	10.66	4.40	0.51	0.79	2.03	MC,CR

ECO

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	52	31441	29.36	9.50	0.58	0.89	3.09	MC,CR
A) Comprehension and Reading Skills	29	31441	16.07	5.56	0.55	0.82	2.37	MC
B) Interpretation and Analysis of Fiction and Nonfiction	23	31441	13.29	4.45	0.62	0.80	1.97	MC,CR

Table 13-6. GRADE 11 MATH

Overall

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	66	134411	43.30	14.27	0.67	0.94	3.49	MC,CR
A) Numbers and Operations	9	134411	6.05	2.24	0.67	0.71	1.21	MC,CR
B) Measurement	9	134411	4.88	2.41	0.64	0.63	1.46	MC,CR
C) Geometry	11	134411	7.61	2.77	0.69	0.77	1.33	MC,CR
D) Algebra	26	134411	16.54	5.97	0.64	0.86	2.20	MC,CR
E) Data Analysis and Probability	11	134411	8.21	2.41	0.79	0.66	1.40	MC,CR

By gender

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall								
Male	66	67991	43.45	14.60	0.68	0.94	3.45	MC,CR
Female	66	66078	43.20	13.90	0.67	0.94	3.51	MC,CR
A) Numbers and Operations								
Male	9	67991	6.11	2.28	0.68	0.73	1.19	MC,CR
Female	9	66078	6.00	2.20	0.67	0.69	1.22	MC,CR
B) Measurement								
Male	9	67991	4.92	2.43	0.64	0.65	1.44	MC,CR
Female	9	66078	4.85	2.38	0.64	0.62	1.47	MC,CR
C) Geometry								
Male	11	67991	7.71	2.80	0.70	0.78	1.30	MC,CR
Female	11	66078	7.52	2.73	0.68	0.75	1.35	MC,CR
D) Algebra								
Male	26	67991	16.55	6.10	0.64	0.87	2.19	MC,CR
Female	26	66078	16.55	5.84	0.64	0.86	2.21	MC,CR
E) Data Analysis and Probability								
Male	11	67991	8.15	2.47	0.79	0.69	1.38	MC,CR
Female	11	66078	8.29	2.33	0.78	0.64	1.40	MC,CR

Table 13-6. GRADE 11 MATH CONTINUED

By ethnicity

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall								
White non-Hispanic	66	107638	45.33	13.41	0.70	0.94	3.41	MC,CR
Black/African-American non-Hispanic	66	16606	32.35	13.41	0.51	0.92	3.69	MC,CR
Latino/Hispanic	66	5648	33.90	13.47	0.54	0.93	3.69	MC,CR
Asian or Pacific Islander	66	3265	50.82	13.00	0.79	0.94	3.16	MC,CR
American Indian or Alaskan Native	66	208	39.75	14.35	0.62	0.94	3.58	MC,CR
Multi-Racial/Ethnic	66	657	37.85	14.61	0.59	0.94	3.64	MC,CR
A) Numbers and Operations								
White non-Hispanic	9	107638	6.29	2.15	0.70	0.69	1.19	MC,CR
Black/African-American non-Hispanic	9	16606	4.77	2.28	0.53	0.67	1.31	MC,CR
Latino/Hispanic	9	5648	4.89	2.28	0.54	0.67	1.30	MC,CR
Asian or Pacific Islander	9	3265	7.12	1.95	0.79	0.71	1.05	MC,CR
American Indian or Alaskan Native	9	208	5.80	2.17	0.64	0.66	1.27	MC,CR
Multi-Racial/Ethnic	9	657	5.33	2.32	0.59	0.69	1.28	MC,CR
B) Measurement								
White non-Hispanic	9	107638	5.17	2.34	0.67	0.62	1.45	MC,CR
Black/African-American non-Hispanic	9	16606	3.32	2.09	0.47	0.60	1.32	MC,CR
Latino/Hispanic	9	5648	3.50	2.12	0.49	0.60	1.35	MC,CR
Asian or Pacific Islander	9	3265	6.06	2.27	0.75	0.62	1.41	MC,CR
American Indian or Alaskan Native	9	208	4.38	2.43	0.58	0.66	1.41	MC,CR
Multi-Racial/Ethnic	9	657	4.09	2.40	0.55	0.66	1.40	MC,CR
C) Geometry								
White non-Hispanic	11	107638	7.97	2.63	0.72	0.76	1.30	MC,CR
Black/African-American non-Hispanic	11	16606	5.68	2.68	0.52	0.69	1.49	MC,CR
Latino/Hispanic	11	5648	6.00	2.70	0.55	0.70	1.48	MC,CR
Asian or Pacific Islander	11	3265	8.93	2.41	0.81	0.79	1.11	MC,CR
American Indian or Alaskan Native	11	208	6.94	2.91	0.63	0.77	1.39	MC,CR
Multi-Racial/Ethnic	11	657	6.75	2.84	0.61	0.75	1.42	MC,CR
D) Algebra								
White non-Hispanic	26	107638	17.32	5.68	0.67	0.86	2.15	MC,CR
Black/African-American non-Hispanic	26	16606	12.29	5.58	0.48	0.82	2.35	MC,CR
Latino/Hispanic	26	5648	12.94	5.62	0.50	0.83	2.35	MC,CR
Asian or Pacific Islander	26	3265	19.77	5.52	0.77	0.87	1.96	MC,CR
American Indian or Alaskan Native	26	208	15.05	5.88	0.58	0.85	2.28	MC,CR
Multi-Racial/Ethnic	26	657	14.42	5.92	0.56	0.85	2.32	MC,CR
E) Data Analysis and Probability								
White non-Hispanic	11	107638	8.59	2.16	0.82	0.63	1.32	MC,CR
Black/African-American non-Hispanic	11	16606	6.29	2.64	0.62	0.65	1.55	MC,CR
Latino/Hispanic	11	5648	6.55	2.58	0.65	0.64	1.54	MC,CR
Asian or Pacific Islander	11	3265	8.94	2.15	0.86	0.60	1.36	MC,CR
American Indian or Alaskan Native	11	208	7.59	2.55	0.74	0.68	1.44	MC,CR
Multi-Racial/Ethnic	11	657	7.27	2.68	0.71	0.68	1.51	MC,CR

Table 13-6. GRADE 11 MATH CONTINUED

LEP

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	66	342	34.17	15.46	0.55	0.95	3.62	MC,CR
A) Numbers and Operations	9	342	5.15	2.49	0.57	0.75	1.25	MC,CR
B) Measurement	9	342	3.62	2.39	0.49	0.67	1.37	MC,CR
C) Geometry	11	342	6.31	3.00	0.57	0.78	1.41	MC,CR
D) Algebra	26	342	13.15	6.35	0.52	0.87	2.25	MC,CR
E) Data Analysis and Probability	11	342	5.93	2.72	0.61	0.64	1.62	MC,CR

IEP

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	66	16881	27.06	11.99	0.43	0.91	3.68	MC,CR
A) Numbers and Operations	9	16881	3.77	2.14	0.42	0.62	1.33	MC,CR
B) Measurement	9	16881	2.72	1.90	0.40	0.56	1.25	MC,CR
C) Geometry	11	16881	4.90	2.48	0.45	0.63	1.51	MC,CR
D) Algebra	26	16881	10.12	4.92	0.39	0.77	2.34	MC,CR
E) Data Analysis and Probability	11	16881	5.54	2.55	0.56	0.63	1.54	MC,CR

ECO

Strand	K	N	Mean	SD	Mean P-Value	Reliability	SEM	Item Types In Strand
Overall	66	31579	35.32	14.04	0.56	0.93	3.68	MC,CR
A) Numbers and Operations	9	31579	5.07	2.32	0.56	0.69	1.29	MC,CR
B) Measurement	9	31579	3.74	2.25	0.52	0.62	1.38	MC,CR
C) Geometry	11	31579	6.22	2.79	0.57	0.73	1.46	MC,CR
D) Algebra	26	31579	13.38	5.80	0.52	0.84	2.33	MC,CR
E) Data Analysis and Probability	11	31579	6.90	2.63	0.67	0.66	1.53	MC,CR

PSSA CONSTRUCT VALIDITY

Information regarding the PSSA’s internal structure is an important source of construct-related evidence of validity. Correlations by reporting category were calculated using Pearson’s Correlation Coefficient. These correlations are presented in Tables 13-7 through 13-9. They generally display the expected pattern and magnitude of correlations. For example, the reading total should correlate higher with the reading part or subscores than with the math total or subscores. Note that the correlation between the reading and math total scores is .777 for grade 5. When this value is squared, the resulting value of .60 translates into the shared variance between the two assessments across the student population. Recent research indicates that this is a fairly typical outcome.

Table 13-7. Grade 5 Correlations

M	1								
MA	.961	1							
MB	.802	.712	1						
MC	.796	.691	.582	1					
MD	.852	.773	.644	.600	1				
ME	.786	.696	.578	.588	.617	1			
R	.777	.742	.616	.601	.661	.655	1		
RA	.764	.731	.608	.590	.650	.643	.986	1	
RB	.699	.668	.550	.543	.594	.594	.896	.808	1
	M	MA	MB	MC	MD	ME	R	RA	RB

Table 13-8. Grade 8 Correlations

M	1								
MA	.887	1							
MB	.860	.723	1						
MC	.857	.691	.692	1					
MD	.924	.768	.732	.724	1				
ME	.865	.719	.685	.691	.750	1			
R	.796	.678	.677	.678	.749	.714	1		
RA	.757	.646	.643	.643	.711	.679	.955	1	
RB	.766	.651	.652	.653	.721	.686	.958	.830	1
	M	MA	MB	MC	MD	ME	R	RA	RB

Table 13-9. Grade 11 Correlations

M	1								
MA	.844	1							
MB	.875	.688	1						
MC	.893	.705	.769	1					
MD	.959	.761	.791	.805	1				
ME	.859	.684	.696	.721	.777	1			
R	.790	.653	.682	.685	.749	.745	1		
RA	.774	.640	.676	.676	.735	.714	.965	1	
RB	.720	.595	.612	.617	.681	.701	.932	.805	1
	M	MA	MB	MC	MD	ME	R	RA	RB

Below are the correlations corrected for attenuation for the non-confounding pairs; that is, those without shared items. Correcting for attenuation adjusts the correlation between the two measures to account for the unreliability of both. Although the theoretical upper bound for a correlation is 1.0, disattenuated correlations can be greater. This is often seen in practice when the correlations are relatively high and the reliabilities relatively low. However, two underlying factors should be noted. The first is that sample statistics are being used to estimate population parameters. The second, and likely more prevailing issue, is that something akin to a “design misspecification” occurs. As noted in Chapter 10, the reliability indices used for the PSSA’s (Coefficient Alpha) do not capture all sources of random error, and as such, might be upper bound estimates of reliability. To complicate matters, two potential downward biases were also noted in Chapter 10. Thus, it is possible that the tabled disattenuated correlations are actually not as high, or low, as they might really be, depending on which bias prevails.

Given that none of these tests have perfect reliabilities (equal to one), the correlations are somewhat higher than those shown in Tables 13-7 to 13-9 above. Disattenuated correlations less than 1.0 suggest that the different strands are measuring slightly different aspects of the Reading and Mathematics constructs. Values around 1.0 suggest that the same or very similar constructs are being measured. Results indicate that strands generally correlate more highly within the same content area (Reading or Mathematics) than across content areas. These within content area strand correlations are close to, or exceed 1.0 in many cases.

Table 13-10. Grade 5 Disattenuated Correlations

M	-								
MA	-	-							
MB	-	0.995	-						
MC	-	0.992	1.016	-					
MD	-	0.984	0.995	0.953	-				
ME	-	0.989	0.998	1.043	0.970	-			
R	0.846	0.835	0.842	0.843	0.822	0.910	-		
RA	0.847	0.835	0.845	0.843	0.823	0.908	-	-	
RB	0.850	0.838	0.838	0.850	0.824	0.921	-	1.008	-
	M	MA	MB	MC	MD	ME	R	RA	RB

Table 13-11. Grade 8 Disattenuated Correlations

M	-								
MA	-	-							
MB	-	1.020	-						
MC	-	0.974	1.055	-					
MD	-	0.986	1.017	1.004	-				
ME	-	0.957	0.985	0.993	0.982	-			
R	0.866	0.812	0.876	0.877	0.883	0.871	-		
RA	0.852	0.801	0.862	0.862	0.868	0.859	-	-	
RB	0.875	0.819	0.887	0.888	0.892	0.879	-	0.991	-
	M	MA	MB	MC	MD	ME	R	RA	RB

Table 13-12. Grade 11 Disattenuated Correlations

M	-								
MA	-	-							
MB	-	1.025	-						
MC	-	0.953	1.101	-					
MD	-	0.971	1.069	0.987	-				
ME	-	0.996	1.074	1.010	1.027	-			
R	0.858	0.815	0.902	0.822	0.848	0.963	-		
RA	0.870	0.827	0.925	0.840	0.861	0.955	-	-	
RB	0.831	0.790	0.861	0.787	0.821	0.965	-	0.982	-
	M	MA	MB	MC	MD	ME	R	RA	RB

Reported in Chapter 5, differential item functioning (DIF) with respect to gender and ethnicity helps address construct-irrelevant variance, which represents an important threat to the validity of achievement tests. 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.

PSSA RELIABILITY OF PERFORMANCE LEVELS

In a standards-based testing program there is also interest in knowing how accurately students are classified into the various performance categories. Classification consistency refers to the degree with which the achievement level for each student can be replicated upon retesting using the same form or an equivalent form (Huynh, 1976). 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 in order to project the consistency of classifications solely using data from the available administration (Hambleton and Novick, 1973). Although a number of procedures are available, two well known methods were developed by Hanson and Brennan (1990) and Livingston and Lewis (1995) utilizing specific True Score Models.

Hanson and Brennan (1990) utilized a four parameter beta binomial and a four parameter beta compound binomial model for estimating single administration estimates of classification consistency. The models are given by:

$$\Pr(X = i) = \int_l^u \Pr(X = i | \tau, k) g(\tau | \alpha, \beta, l, u) d\tau,$$

where l and u are, respectively, the lower and upper bounds of the distribution. If $k \leq 0$, then the conditional error distribution is binomial. If $k > 0$, then the conditional error distribution is compound binomial using Lord's (1965) two-term approximation to the compound binomial distribution. Parameters for the true score density are estimated using the method of moments.

In order to use this method, the test must consist of purely dichotomous items. A simple way to satisfy this requirement is to dichotomize the assessment. For any polychotomous item with a maximum score of u , create a set S of u dichotomous items to replace it. For example, $S_{1(x)} = \{u_1, u_2, u_3, u_4\}$ is a set created for a polychotomous item with a maximum score of 4 for examinee x . Then, for an examinee y with a score of 3, $S_{1(y)} = \{1, 1, 1, 0\}$. Local independence of these newly created dichotomous items within the set is sacrificed due to the fact that to get the

3rd item in the set correct, you must get the 1st and 2nd items in the same set correct (the same goes for getting an item incorrect). Artificial local independence cannot be manufactured for these items within each set.

To solve the problem of a complex assessment, Livingston and Lewis (1995) proposed an effective test length,

$$n = \frac{(\mu_x - X_{\min})(X_{\max} - \mu_x) - r\sigma_x^2}{\sigma_x^2(1-r)},$$

which transforms the original raw score random variable from $X = 0, \dots, K$ into a new random variable $X' = 0, \dots, n$, where n is the number of dichotomous, locally independent, equally difficult items required to produce a raw score of the same reliability. Then, using the transformed observed distribution X' , parameters are estimated for a four parameter beta-binomial model where the conditional error distribution is assumed to be binomial. The X' distribution is then converted back onto the original X scale using interpolation. This method is designed only to estimate a contingency table, not a full bivariate distribution.

Stearns and Smith (2007) found that results from the Hanson and Brennan (1990) method on a dichotomized version of a complex assessment yields similar results to the Livingston and Lewis (1995) method. The results of the consistency analyses are presented in Table 13-14. The results—derived using the program *BB-Class* (Brennan, 2004)—showed that the consistency index values cross methods were very similar. It should be noted that consistency indices for the four performance levels should be lower than those based on two categories, as seen below. This is not surprising since classification using four levels would allow more opportunity to change the achievement levels. Hence there would be more classification errors in the four achievement levels, resulting in lower consistency indices.

Table 13-14. Decision Consistency
Consistency Index

	Overall	Below Basic/ Basic	Basic/ Proficient	Proficient/ Advanced
Math Grade 5				
<i>Hanson and Brennan (1990)</i>	0.732	0.936	0.901	0.892
<i>Livingston and Lewis (1995)</i>	0.727	0.934	0.898	0.890
Reading Grade 5				
<i>Hanson and Brennan (1990)</i>	0.660	0.918	0.883	0.855
<i>Livingston and Lewis (1995)</i>	0.654	0.917	0.881	0.849
Math Grade 8				
<i>Hanson and Brennan (1990)</i>	0.733	0.924	0.903	0.900
<i>Livingston and Lewis (1995)</i>	0.723	0.921	0.899	0.895
Reading Grade 8				
<i>Hanson and Brennan (1990)</i>	0.711	0.928	0.899	0.869
<i>Livingston and Lewis (1995)</i>	0.708	0.927	0.898	0.867
Math Grade 11				
<i>Hanson and Brennan (1990)</i>	0.741	0.917	0.908	0.910
<i>Livingston and Lewis (1995)</i>	0.738	0.916	0.907	0.907
Reading Grade 11				
<i>Hanson and Brennan (1990)</i>	0.668	0.919	0.883	0.857
<i>Livingston and Lewis (1995)</i>	0.666	0.917	0.881	0.855

Chapter Fourteen: Performance Level Validation Report

BACKGROUND

The initial standards setting for the PSSA was held in Grantville, Pennsylvania, in the spring of 2001. It included grades 5, 8, and 11 in reading and mathematics. Cutpoints were established for placing students into four performance levels: Advanced, Proficient, Basic, and Below Basic. In addition, Performance Level Descriptors (PLDs) were established at the end of the standards setting meeting, written by the panelists, and subsequently used in score reports and other state materials. The meeting was conducted by CTB/McGraw-Hill using the Bookmark procedure (see Lewis, Mitzel, & Green, 1996). Data Recognition Corporation conducted a Performance Level Validation meeting in summer 2005, also using the Bookmark procedure.

No Performance Level Validation meeting was conducted for these grade/subject pairs in 2006. For details of the previous meeting, see the 2005 Reading and Mathematics Technical Report.

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Appendix A:

Assessment Anchor Content Standard Integration

Pennsylvania

Assessment Anchor

Content Standards

Grade 5

2007

** Assessed at the local level.*

Understanding the 2007 Pennsylvania Assessment Anchor Content Standards For Grades 3-11

Summary Statement: The Summary Statements are the very general content performance standards statements that describe in the very broadest terms the knowledge and skills needed at a particular grade level.

Narrative Description of Summary Statement

Focus Stem: This is a statement that is meant to communicate instructional focus (further defines the Summary Statement).

Learning to Read Independently

Pennsylvania's public schools shall teach, challenge and support every student to realize his or her maximum potential and to acquire the knowledge and skills needed to:

Establish the purpose for reading a type of text (literature, information) before reading.

- R5.A.1** Understand fiction appropriate to grade level.
 - R5.A.1.6** Identify and describe genre of text.
 - R5.A.1.6.1** Identify the author's intended purpose of text.
 - R5.A.1.6.2** Identify and/or describe examples of text that support its intended purpose.
- Note: narrative and poetic text*

Assessment Anchor Content Standard: The Assessment Anchor Content Standards are the specific descriptions as to what students should know and be able to do by grade level. They are the overarching goals that describe in the broad terms what students should know and be able to do.

Sub Assessment Anchor Content Standard: These are the more specific statements of what all students should know and be able to do at a specified time in their schooling; used to measure student progress toward meeting the Assessment Anchor Content Standard. They serve to further define the Assessment Anchor Content Standard.

Eligible Content Statement: The Eligible Content statements are the most specific statements of the knowledge and/or skills that students are expected to demonstrate at each grade level and for each content area. They serve as the checkpoints that monitor progress toward meeting the Assessment Anchor Content Standards. They show progression across the years by identifying when specific concepts, processes, and skills should be mastered. These statements define specifically what students should know and be able to do.

* Assessed at the local level.

Grade 5

Learning to Read Independently

Pennsylvania's public schools shall teach, challenge and support every student to realize his or her maximum potential and to acquire the knowledge and skills needed to:

Establish the purpose for reading a type of text (literature, information) before reading.

R5.A.1 Understand fiction appropriate to grade level.

R5.A.1.6 Identify and describe genre of text.

R5.A.1.6.1 Identify the author's intended purpose of text.

R5.A.1.6.2 Identify and/or describe examples of text that support the author's intended purpose.

Note: narrative and poetic text

R5.A.2 Understand nonfiction appropriate to grade level.

R5.A.2.6 Identify and describe genre of text.

R5.A.2.6.1 Identify the author's intended purpose of text.

R5.A.2.6.2 Identify and/or describe examples of text that support the author's intended purpose.

Note: informational, persuasive, biographical, instructional (practical/how-to/advertisement), and editorial/essay text

*Select texts for a particular purpose using the format of the text as a guide.

Use knowledge of phonics, syllabication, prefixes, suffixes, the dictionary or context clues to decode and understand new words during reading. Use these words accurately in writing and speaking.

R5.A.1 Understand fiction appropriate to grade level.

R5.A.1.2 Identify and apply word recognition skills.

R5.A.1.2.1 Identify how the meaning of a word is changed when an affix is added; identify the meaning of a word from the text with an affix.

Note: Affixes will be limited to prefixes: pre-, dis-, mis-, non-, inter-, extra-, post-, super-, sub-; suffixes: -less, -ble, -ly, -or, -ness, -ment, -er, -ship, -tion, -en.

R5.A.1.2.2 Define and/or apply how the meaning of words or phrases changes when using context clues given in explanatory sentences.

* Assessed at the local level.

R5.A.2 Understand nonfiction appropriate to grade level.

R5.A.2.2 Identify and apply word recognition skills.

R5.A.2.2.1 Identify how the meaning of a word is changed when an affix is added; identify the meaning of a word from the text with an affix.

Note: Affixes will be limited to prefixes: pre-, dis-, mis-, non-, inter-, extra-, post-, super-, sub-; suffixes: -less, -ble, -ly, -or, -ness, -ment, -er, -ship, -tion, -en.

R5.A.2.2.2 Define and/or apply how the meaning of words or phrases changes when using context clues given in explanatory sentences.

*Identify the basic ideas and facts in text using strategies (e.g., prior knowledge, illustrations and headings) and information from other sources to make predictions about text.

Acquire a reading vocabulary by correctly identifying and using words (e.g., synonyms, homophones, homographs, words with roots, suffixes, prefixes). Use a dictionary or related reference.

R5.A.1 Understand fiction appropriate to grade level.

R5.A.1.1 Identify and interpret the meaning of vocabulary.

R5.A.1.1.1 Identify and/or interpret the meaning of multiple-meaning words used in text.

R5.A.1.1.2 Identify and/or interpret a synonym or antonym of a word used in text.

R5.A.2 Understand nonfiction appropriate to grade level.

R5.A.2.1 Identify and interpret the meaning of vocabulary in nonfiction.

R5.A.2.1.1 Identify and/or interpret the meaning of multiple-meaning words used in text.

R5.A.2.1.2 Identify and/or interpret the meaning of content-specific words used in text.

Identify, understand the meaning of and use correctly key vocabulary from various subject areas.

R5.A.1 Understand fiction appropriate to grade level.

R5.A.1.1 Identify and interpret the meaning of vocabulary.

R5.A.1.1.1 Identify and/or interpret the meaning of multiple-meaning words used in text.

R5.A.1.1.2 Identify and/or interpret a synonym or antonym of a word used in text.

R5.A.1.2 Identify and apply word recognition skills.

R5.A.1.2.1 Identify how the meaning of a word is changed when an affix is added; identify the meaning of a word from the text with an affix.

Note: Affixes will be limited to prefixes: pre-, dis-, mis-, non-, inter-, extra-, post-, super-, sub-; suffixes: -less, -ble, -ly, -or, -ness, -ment, -er, -ship, -tion, -en.

* Assessed at the local level.

Appendix A: Assessment Anchor Content Standard Integration

R5.A.1.2.2 Define and/or apply how the meaning of words or phrases changes when using context clues given in explanatory sentences.

R5.A.2 Understand nonfiction appropriate to grade level.

R5.A.2.1 Identify and interpret the meaning of vocabulary in nonfiction.

R5.A.2.1.1 Identify and/or interpret the meaning of multiple-meaning words used in text.

R5.A.2.1.2 Identify and/or interpret the meaning of content-specific words used in text.

R5.A.2.2 Identify and apply word recognition skills.

R5.A.2.2.1 Identify how the meaning of a word is changed when an affix is added; identify the meaning of a word from the text with an affix.

Note: Affixes will be limited to prefixes: pre-, dis-, mis-, non-, inter-, extra-, post-, super-, sub-; suffixes: -less, -ble, -ly, -or, -ness, -ment, -er, -ship, -tion, -en.

R5.A.2.2.2 Define and/or apply how the meaning of words or phrases changes when using context clues given in explanatory sentences.

Demonstrate after reading understanding and interpretation of both fiction and nonfiction text.

Summarize the major ideas, themes or procedures of the text; *Relate new information or ideas from the text to that learned through additional reading and media (e.g., film, audiotape); Clarify ideas and understandings through rereading and discussion; Make responsible assertions about the ideas from the text by citing evidence; Extend ideas found in the text.

R5.A.1 Understand fiction appropriate to grade level.

R5.A.1.3 Make inferences, draw conclusions, and make generalizations based on text.

R5.A.1.3.1 Make inferences and/or draw conclusions based on information from text.

R5.A.1.3.2 Cite evidence from text to support generalizations.

R5.A.1.4 Identify and explain main ideas and relevant details.

R5.A.1.4.1 Identify and/or explain stated or implied main ideas and relevant supporting details from text.

Note: Items may target specific paragraphs.

R5.A.1.5 Summarize a fictional text as a whole.

R5.A.1.5.1 Summarize the key details and/or events of a fictional text as a whole.

R5.A.1.6 Identify and describe genre of text.

R5.A.1.6.1 Identify the author's intended purpose of text.

R5.A.1.6.2 Identify and/or describe examples of text that support the author's intended purpose.

Note: narrative and poetic text

R5.A.2 Understand nonfiction appropriate to grade level.

R5.A.2.3 Make inferences, draw conclusions, and make generalizations based on

** Assessed at the local level.*

Appendix A: Assessment Anchor Content Standard Integration

text.

R5.A.2.3.1 Make inferences and/or draw conclusions based on information from text.

R5.A.2.3.2 Cite evidence from text to support generalizations.

R5.A.2.4 Identify and explain main ideas and relevant details.

R5.A.2.4.1 Identify and/or explain stated or implied main ideas and relevant supporting details from text.

Note: Items may target specific paragraphs.

R5.A.2.5 Summarize a nonfictional text as a whole.

R5.A.2.5.1 Summarize the major points, processes, and/or events of a nonfictional text as a whole.

R5.A.2.6 Identify and describe genre of text.

R5.A.2.6.1 Identify the author's intended purpose of text.

R5.A.2.6.2 Identify and/or describe examples of text that support the author's intended purpose.

Note: informational, persuasive, biographical, instructional (practical/how-to/advertisement), and editorial/essay text

R5.B.1 Understand components within and between texts.

R5.B.1.1 Identify, interpret, compare, describe, and analyze components of fiction and literary nonfiction.

R5.B.1.1.1 Identify, interpret, compare, describe, and/or analyze components of fiction and literary nonfiction.

Character (may also be called narrator, speaker, subject of a biography):

- Identify, interpret, compare, describe, and/or analyze character actions, motives, dialogue, emotions/feelings, traits, and relationships among characters within fictional or literary nonfictional text.
- Identify, interpret, compare, describe, and/or analyze the relationship between characters and other components of text.

Setting:

- Identify, interpret, compare, describe, and/or explain the setting of fiction or literary nonfiction.
- Identify, interpret, compare, describe, and/or analyze the relationship between setting and other components of text.

Plot (may also be called action):

- Identify, interpret, compare, describe, and/or analyze elements of the plot (conflict, rising action, climax, and/or resolution).
- Identify, interpret, compare, describe, and/or analyze the relationship between elements of the plot and other components of text.

Theme:

- Identify, interpret, compare, describe, and/or analyze the theme of fiction or literary nonfiction.
- Identify, interpret, compare, describe, and/or analyze the relationship between the theme and other components of text.

R5.B.1.2 Make connections between texts.

R5.B.1.2.1 Identify, interpret, compare, describe, and/or analyze connections between texts.

***Demonstrate fluency and comprehension in reading.**

** Assessed at the local level.*

Read familiar materials aloud with accuracy; Self-correct mistakes; Use appropriate rhythm, flow, meter and pronunciation; Read a variety of genres and types of text; Demonstrate comprehension (Standard 1.1.5.G.); (Recommend: 25 books/year).

Reading Critically in All Content Areas

Pennsylvania's public schools shall teach, challenge and support every student to realize his or her maximum potential and to acquire the knowledge and skills needed to:

Read and understand essential content of informational texts and documents in all academic areas.

Differentiate fact from opinion across texts; Distinguish between essential and nonessential information across a variety of texts, identifying stereotypes and exaggeration where present; Make inferences about similar concepts in multiple texts and draw conclusions; Evaluate text organization and content to determine the author's purpose and effectiveness.

R5.A.1 Understand fiction appropriate to grade level.

R5.A.1.3 Make inferences, draw conclusions, and make generalizations based on text.

R5.A.1.3.1 Make inferences and/or draw conclusions based on information from text.

R5.A.1.3.2 Cite evidence from text to support generalizations.

R5.A.2 Understand nonfiction appropriate to grade level.

R5.A.2.3 Make inferences, draw conclusions, and make generalizations based on text.

R5.A.2.3.1 Make inferences and/or draw conclusions based on information from text.

R5.A.2.3.2 Cite evidence from text to support generalizations.

R5.A.2.4 Identify and explain main ideas and relevant details.

R5.A.2.4.1 Identify and/or explain stated or implied main ideas and relevant supporting details from text.

Note: Items may target specific paragraphs.

R5.A.2.5 Summarize a nonfictional text as a whole.

R5.A.2.5.1 Summarize the major points, processes, and/or events of a nonfictional text as a whole.

R5.A.2.6 Identify and describe genre of text.

R5.A.2.6.1 Identify the author's intended purpose of text.

R5.A.2.6.2 Identify and/or describe examples of text that support the author's intended purpose.

Note: informational, persuasive, biographical, instructional (practical/how-to/advertisement), and editorial/essay text

** Assessed at the local level.*

R5.B.3 Understand concepts and organization of nonfictional text.

R5.B.3.1 Differentiate fact from opinion in nonfictional text.

R5.B.3.1.1 Identify and/or interpret statements of fact and opinion in nonfictional text.

Note: Items focusing on opinion will be worded, “Which of these is an opinion?”

R5.B.3.2 Distinguish between essential and nonessential information within or between texts.

R5.B.3.2.1 Identify and/or interpret how the author uses exaggeration (bias) in nonfictional text.

R5.B.3.3 Identify, compare, explain, interpret, describe, and analyze how text organization clarifies meaning of nonfictional text.

R5.B.3.3.1 Identify and/or interpret text organization, including sequence, question/answer, comparison/contrast, cause/effect, or problem/solution.

R5.B.3.3.2 Use headings to locate information in a passage, or identify content that would best fit in a specific section of text.

R5.B.3.3.3 Interpret graphics and charts and/or make connections between text and the content of graphics and charts.

R5.B.3.3.4 Identify, compare, explain, interpret, describe, and/or analyze the sequence of steps in a list of directions.

*Use and understand a variety of media and evaluate the quality of material produced.

Use a variety of media (e.g., computerized card catalogues, encyclopedias) for research; Evaluate the role of media as a source of both entertainment and information; Use established criteria to design and develop a media project (e.g., script, play, audiotape) for a targeted audience.

*Produce work in at least one literary genre that follows the conventions of the genre.

Reading, Analyzing and Interpreting Literature

Pennsylvania’s public schools shall teach, challenge and support every student to realize his or her maximum potential and to acquire the knowledge and skills needed to:

*Read and understand works of literature.

Compare the use of literary elements within and among texts including characters, setting, plot, theme and point of view.

R5.B.1 Understand components within and between texts.

* Assessed at the local level.

R5.B.1.1 Identify, interpret, compare, describe, and analyze components of fiction and literary nonfiction.

R5.B.1.1.1 Identify, interpret, compare, describe, and/or analyze components of fiction and literary nonfiction.

Character (may also be called narrator, speaker, subject of a biography):

- Identify, interpret, compare, describe, and/or analyze character actions, motives, dialogue, emotions/feelings, traits, and relationships among characters within fictional or literary nonfictional text.
- Identify, interpret, compare, describe, and/or analyze the relationship between characters and other components of text.

Setting:

- Identify, interpret, compare, describe, and/or explain the setting of fiction or literary nonfiction.
- Identify, interpret, compare, describe, and/or analyze the relationship between setting and other components of text.

Plot (may also be called action):

- Identify, interpret, compare, describe, and/or analyze elements of the plot (conflict, rising action, climax, and/or resolution).
- Identify, interpret, compare, describe, and/or analyze the relationship between elements of the plot and other components of text.

Theme:

- Identify, interpret, compare, describe, and/or analyze the theme of fiction or literary nonfiction.
- Identify, interpret, compare, describe, and/or analyze the relationship between the theme and other components of text.

R5.B.1.2 Make connections between texts.

R5.B.1.2.1 Identify, interpret, compare, describe, and/or analyze connections between texts.

Describe how the author uses literary devices to convey meaning.

Sound techniques (e.g., rhyme, rhythm, meter, alliteration); Figurative language (e.g., personification, simile, metaphor, hyperbole).

R5.B.2 Understand literary devices in fictional and nonfictional text.

R5.B.2.1 Identify, interpret, and describe figurative language in fiction and nonfiction.

R5.B.2.1.1 Identify, interpret, and/or describe examples of personification in text.

R5.B.2.1.2 Identify, interpret, and/or describe examples of similes in text.

R5.B.2.1.3 Identify, interpret, and/or describe examples of alliteration in text when its use is presumed intentional.

R5.B.2.1.4 Identify, interpret, and/or describe examples of metaphors in text.

R5.B.2.2 Identify, interpret, and describe the point of view of the narrator in fictional and nonfictional text.

R5.B.2.2.1 Identify, interpret, and/or describe the point of view of the narrator as first person or third person point of view.

R5.B.2.2.2 Interpret and/or describe the effectiveness of the point of view used by the author.

* Assessed at the local level.

Identify and respond to the effects of sound and structure in poetry (e.g., alliteration, rhyme, verse form).

R5.B.2 Understand literary devices in fictional and nonfictional text.

R5.B.2.1 Identify, interpret, and describe figurative language in fiction and nonfiction.

R5.B.2.1.1 Identify, interpret, and/or describe examples of personification in text.

R5.B.2.1.2 Identify, interpret, and/or describe examples of similes in text.

R5.B.2.1.3 Identify, interpret, and/or describe examples of alliteration in text when its use is presumed intentional.

R5.B.2.1.4 Identify, interpret, and/or describe examples of metaphors in text.

*Analyze drama as information source, entertainment, persuasion or transmitter of culture.

Read and respond to nonfiction and fiction including poetry and drama.

R5.A.1 Understand fiction appropriate to grade level.

R5.A.1.6 Identify and describe genre of text.

R5.A.1.6.1 Identify the author's intended purpose of text.

R5.A.1.6.2 Identify and/or describe examples of text that support its intended purpose.

Note: narrative and poetic text

R5.A.2 Understand nonfiction appropriate to grade level.

R5.A.2.6 Identify and describe genre of text.

R5.A.2.6.1 Identify the author's intended purpose of text.

R5.A.2.6.2 Identify and/or describe examples of text that support the author's intended purpose.

Note: informational, persuasive, biographical, instructional (practical/how-to/advertisement), and editorial/essay text

R5.B.1 Understand components within and between texts.

R5.B.1.1 Identify, interpret, compare, describe, and analyze components of fiction and literary nonfiction.

R5.B.1.1.1 Identify, interpret, compare, describe, and/or analyze components of fiction and literary nonfiction.

Character (may also be called narrator, speaker, subject of a biography):

- Identify, interpret, compare, describe, and/or analyze character actions, motives, dialogue, emotions/feelings, traits, and relationships among characters within fictional or literary nonfictional text.

- Identify, interpret, compare, describe, and/or analyze the relationship between characters and other components of text.

* Assessed at the local level.

Appendix A: Assessment Anchor Content Standard Integration

Setting:

- Identify, interpret, compare, describe, and/or explain the setting of fiction or literary nonfiction.
- Identify, interpret, compare, describe, and/or analyze the relationship between setting and other components of text.

Plot (may also be called action):

- Identify, interpret, compare, describe, and/or analyze elements of the plot (conflict, rising action, climax, and/or resolution).
- Identify, interpret, compare, describe, and/or analyze the relationship between elements of the plot and other components of text.

Theme:

- Identify, interpret, compare, describe, and/or analyze the theme of fiction or literary nonfiction.
- Identify, interpret, compare, describe, and/or analyze the relationship between the theme and other components of text.

R5.B.1.2 Make connections between texts.

R5.B.1.2.1 Identify, interpret, compare, describe, and/or analyze connections between texts.

** Assessed at the local level.*

Assessment Anchor Math Content Standards

Grade 11 2007

** Assessed at the local level.*

Understanding the 2007 Pennsylvania Assessment Anchor Content Standards For Grades 3-11

Summary Statement: The Summary Statements are the very general content performance standards statements that describe in the very broadest terms the knowledge and skills needed at a particular grade level.

Narrative Description of Summary Statement

Academic Standard

2.1 Numbers, Number Systems and Number Relationships *Types of numbers (e.g., whole, prime, irrational, complex)* *Equivalent forms (e.g., fractions, decimals, percents)*

G. Apply estimation strategies to a variety of problems including time and money

- Reporting Category**
- A. Numbers and Operations
 - B. Measurement
 - C. Geometry
 - D. Algebraic Concepts
 - E. Data Analysis and Probability

ASSESSMENT ANCHOR

M4.A. Numbers and Operations

M4.A.3 Compute accurately and fluently and make reasonable estimates

M4.A.3.1 Apply rounding and/or estimation strategies to solve problems

M4.A.3.1.2 Round amounts of money to the nearest dollar.

Assessment Anchor Content Standard: The Assessment Anchors are the specific descriptions as to what students should know and be able to do by grade level. They are the overarching goals that describe in the broad terms what students should know and be able to do.
M4 identifies: Math Grade 4

Sub Assessment Anchor Content Standard: These are the more specific statements of what all students should know and be able to do at a specified time in their schooling; used to measure student progress toward meeting the Assessment Anchor Content Standard. They serve to further define the Assessment Anchor Content Standard.

Eligible Content Statement: The Eligible Content statements are the most specific statements of the knowledge and/or skills that students are expected to demonstrate at each grade level and for each content area. They serve as the checkpoints that monitor progress toward meeting the Assessment Anchor Content Standards. They show progression across the years by identifying when specific concepts, processes, and skills should be mastered. These statements define specifically what students should know and be able to do.

* Assessed at the local level.

Standards / Anchor Alignment - Math Grade 11

2.1. Numbers, Number Systems and Number Relationships

2.1.8.A. Represent and use numbers in equivalent forms (e.g., integers, fractions, decimals, percents, exponents, scientific notation, square roots). (8th grade standard)

ASSESSMENT ANCHOR

M11.A.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.

M11.A.1.1 Represent and/or use numbers in equivalent forms (e.g., integers, fractions, decimals, percents, square roots, exponents and scientific notation).

M11.A.1.1.1 Find the square root of an integer to the nearest tenth using either a calculator or estimation.

M11.A.1.1.2 Express numbers and/or simplify expressions using scientific notation (including numbers less than 1).

2.1.8.E Simplify and expand algebraic expressions using exponential forms.

(8th grade standard)

ASSESSMENT ANCHOR

M11.A.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.

M11.A.1.2 Apply number theory concepts to show relationships between real numbers in problem solving settings.

M11.A.1.2.1 Find the Greatest Common Factor (GCF) and/or the Least Common Multiple (LCM) for sets of monomials.

ASSESSMENT ANCHOR

M11.D.2 Represent and/or analyze mathematical situations using numbers, symbols, words, tables and/or graphs.

M11.D.2.2 Simplify expressions involving polynomials.

M11.D.2.2.1 Add, subtract and/or multiply polynomial expressions (express answers in simplest form – nothing larger than a binomial multiplied by a trinomial).

M11.D.2.2.2 Factor algebraic expressions, including difference of squares and trinomials (trinomials limited to the form ax^2+bx+c where a is not equal to 0).

M11.D.2.2.3 Simplify algebraic fractions.

ASSESSMENT ANCHOR

M11.A.2 Understand the meanings of operations, use operations and understand how they relate to each other.

** Assessed at the local level.*

Appendix A: Assessment Anchor Content Standard Integration

M11.A.2.2 Use exponents, roots and/or absolute value to solve problems.

M11.A.2.2.1 Simplify/evaluate expressions involving positive and negative exponents, roots and/or absolute value (may contain all types of real numbers - exponents should not exceed power of 10).

M11.A.2.2.2 Simplify/evaluate expressions involving multiplying with exponents (e.g. $x^6 * x^7 = x^{13}$), powers of powers (e.g., $(x^6)^7 = x^{42}$) and powers of products $(2x^2)^3 = 8x^6$ (positive exponents only).

ASSESSMENT ANCHOR

M11.A.3 Compute accurately and fluently and make reasonable estimates.

M11.A.3.1 Apply the order of operations in computation and in problem-solving situations.

M11.A.3.1.1 Simplify/evaluate expressions using the order of operations to solve problems (any rational numbers may be used).

A. Use operations (e.g., opposite, reciprocal, absolute value, raising to a power, finding roots, finding logarithms).

ASSESSMENT ANCHOR

M11.A.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.

M11.A.1.1 Represent and/or use numbers in equivalent forms (e.g., integers, fractions, decimals, percents, square roots, exponents and scientific notation).

M11.A.1.1.1 Find the square root of an integer to the nearest tenth using either a calculator or estimation.

M11.A.1.1.2 Express numbers and/or simplify expressions using scientific notation (including numbers less than 1).

M11.A.1.1.3 Simplify square roots. (e.g., $\sqrt{24} = 2\sqrt{6}$)

ASSESSMENT ANCHOR

M11.A.2 Understand the meanings of operations, use operations and understand how they relate to each other.

M11.A.2.2 Use exponents, roots and/or absolute value to solve problems

M11.A.2.2.1 Simplify/evaluate expressions involving positive and negative exponents, roots and/or absolute value (may contain all types of real numbers - exponents should not exceed power of 10).

M11.A.2.2.2 Simplify/evaluate expressions involving multiplying with exponents (e.g. $x^6 * x^7 = x^{13}$), powers of powers (e.g., $(x^6)^7 = x^{42}$) and powers of products $(2x^2)^3 = 8x^6$ (positive exponents only).

* Assessed at the local level.

2.2 Computation and Estimation

2.2.8.A. Complete calculations by applying the order of operations. (8th grade standard)

ASSESSMENT ANCHOR

M11.A.3 Compute accurately and fluently and make reasonable estimates.

M11.A.3.1 Apply the order of operations in computation and in problem-solving situations.

M11.A.3.1.1 Simplify/evaluate expressions using the order of operations to solve problems (any rational numbers may be used).

2.2.8.C Estimate the value of irrational numbers (8th grade standard)

ASSESSMENT ANCHOR

M11.A.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.

M11.A.1.3 Estimate the value of an irrational number.

M11.A.1.3.1 Locate/identify irrational numbers at the approximate location on a number line.

M11.A.1.3.2 Compare and/or order any real numbers (rational and irrational may be mixed).

Develop and use computation concepts, operations and procedures with real numbers in problem-solving situations.

ASSESSMENT ANCHOR

M11.A.2 Understand the meanings of operations, use operations and understand how they relate to each other.

M11.A.2.1 Apply ratio and/or proportion in problem-solving situations.

M11.A.2.1.1 Solve problems using operations with rational numbers including rates and percents (single and multi-step and multiple procedure operations) (e.g., distance, work and mixture problems, etc.).

M11.A.2.2 Use exponents, roots and/or absolute value to solve problems.

M11.A.2.2.1 Simplify/evaluate expressions involving positive and negative exponents, roots and/or absolute value (may contain all types of real numbers - exponents should not exceed power of 10).

M11.A.2.2.2 Simplify/evaluate expressions involving multiplying with exponents (e.g. $x^6 \cdot x^7 = x^{13}$), powers of powers (e.g., $(x^6)^7 = x^{42}$) and powers of products $(2x^2)^3 = 8x^6$ (positive exponents only).

ASSESSMENT ANCHOR

M11.A.3 Compute accurately and fluently and make reasonable estimates.

M11.A.3.1 Apply the order of operations in computation and in problem-solving situations.

* Assessed at the local level.

Appendix A: Assessment Anchor Content Standard Integration

M11.A.3.1.1 Simplify/evaluate expressions using the order of operations to solve problems (any rational numbers may be used).

M11.A.3.2 Use estimation strategies in problem-solving situations.

M11.A.3.2.1 Use estimation to solve problems.

Use estimation to solve problems for which an exact answer is not needed.

ASSESSMENT ANCHOR

M11.A.3 Compute accurately and fluently and make reasonable estimates.

M11.A.3.2 Use estimation strategies in problem-solving situations.

M11.A.3.2.1 Use estimation to solve problems.

Construct and apply mathematical models, including lines and curves of best fit, to estimate values of related quantities.

Describe and explain the amount of error that may exist in a computation using estimates.

ASSESSMENT ANCHOR

M11.A.3 Compute accurately and fluently and make reasonable estimates.

M11.A.3.2 Use estimation strategies in problem-solving situations.

M11.A.3.2.1 Use estimation to solve problems.

Recognize that the degree of precision needed in calculating a number depends on how the results will be used and the instruments used to generate the measure.

Demonstrate skills for using computer spreadsheets and scientific and graphing calculators.

** Assessed at the local level.*

2.3 Measurement and Estimation

2.3.8.A Develop formulas and procedures for determining measurements (e.g., area, volume, distance). (8th grade standard)

ASSESSMENT ANCHOR

M11.B.2 Apply appropriate techniques, tools and formulas to determine measurements.

M11.B.2.2 Use and/or develop procedures to determine or describe measures of perimeter, circumference, area, surface area and/or volume. (May require conversions within the same system.)

M11.B.2.2.1 Calculate the surface area of prisms, cylinders, cones, pyramids and/or spheres. Formulas are provided on the reference sheet.

M11.B.2.2.2 Calculate the volume of prisms, cylinders, cones, pyramids and/or spheres. Formulas are provided on the reference sheet.

M11.B.2.2.3 Estimate area, perimeter or circumference of an irregular figure.

M11.B.2.2.4 Find the measurement of a missing length given the perimeter, circumference, area or volume.

2.3.8.E. Describe how a change in linear dimension of an object affects its perimeter, area and volume. (8th grade standard)

ASSESSMENT ANCHOR

M11.B.2 Apply appropriate techniques, tools and formulas to determine measurements.

M11.B.2.3 Describe how a change in one dimension of a figure (2 or 3 dimensional) affects other measurements of that figure.

M11.B.2.3.1 Describe how a change in the linear dimension of a figure affects its perimeter, circumference, area or volume.

- How does changing the length of the radius of a circle affect the circumference of the circle?
- How does changing the length of the edge of a cube affect the volume of the cube?
- How does changing the length of the base of a triangle affect the area of the triangle?

M11.B.2.2.1 Calculate the surface area of prisms, cylinders, cones, pyramids and/or spheres. Formulas are provided on the reference sheet.

M11.B.2.2.2 Calculate the volume of prisms, cylinders, cones, pyramids and/or spheres. Formulas are provided on the reference sheet.

M11.B.2.2.3 Estimate area, perimeter or circumference of an irregular figure.

A. Select and use appropriate units and tools to measure to the degree of accuracy required in particular measurement situations.

* Assessed at the local level.

ASSESSMENT ANCHOR

M11.B.2 Apply appropriate techniques, tools and formulas to determine measurements.

M11.B.2.1 Use and/or compare measurements of angles.

M11.B.2.1.1 Measure and/or compare angles in degrees (up to 360°) (protractor must be provided or drawn).

B. Measure and compare angles in degrees and radians.

ASSESSMENT ANCHOR

M11.B.2 Apply appropriate techniques, tools and formulas to determine measurements.

M11.B.2.1 Use and/or compare measurements of angles.

M11.B.2.1.1 Measure and/or compare angles in degrees (up to 360°) (protractor must be provided or drawn).

C. Demonstrate the ability to produce measures with specified levels of precision.

** Assessed at the local level.*

.2.4. Mathematical Reasoning and Connections (embedded in all anchors)

Use direct proofs, indirect proofs or proof by contradiction to validate conjectures.

Construct valid arguments from stated facts.

Determine the validity of an argument.

Use truth tables to reveal the logic of mathematical statements.

Demonstrate mathematical solutions to problems (e.g., in the physical sciences).

** Assessed at the local level.*

2.5. Mathematical Problem Solving and Communication (embedded in all anchors)

- A. **Select and use appropriate mathematical concepts and techniques from different areas of mathematics and apply them to solving non-routine and multi-step problems.**

- B. **Use symbols, mathematical terminology, standard notation, mathematical rules, graphing and other types of mathematical representations to communicate observations, predictions, concepts, procedures, generalizations, ideas and results.**

- C. **Present mathematical procedures and results clearly, systematically, succinctly and correctly.**

- D. **Conclude a solution process with a summary of results and evaluate the degree to which the results obtained represent an acceptable response to the initial problem and why the reasoning is valid.**

** Assessed at the local level.*

2.6 Statistics and Data Analysis

2.6.8.A. Compare and contrast different plots of data using values of mean, median, mode, quartiles and range. (8th grade standard)

ASSESSMENT ANCHOR

M11.E.2 Select and/or use appropriate statistical methods to analyze data.

M11.E.2.1 Use measures of central tendency to describe a set of data.

M11.E.2.1.1 Calculate or select the appropriate measure of central tendency (mean, mode or median) of a set of data given or represented on a table, line plot or stem-and-leaf plot.

M11.E.2.1.2 Calculate and/or interpret the range, quartiles and interquartile range of data.

M11.E.2.1.3 Describe how outliers affect measures of central tendency.

2.6.8.E. Analyze and display data in stem-and-leaf and box-and-whisker plots. (8th grade standard)

ASSESSMENT ANCHOR

M11.E.1 Formulate or answer questions that can be addressed with data and/or organize, display, interpret or analyze data.

M11.E.1.1 Appropriately display and/or use data in problem-solving settings.

M11.E.1.1.1 Create and/or use appropriate graphical representations of data, including box-and-whisker plots, stem-and-leaf plots or scatter plots.

M11.E.1.1.2 Analyze data and/or answer questions based on displayed data (box-and-whisker plots, stem-and-leaf plots or scatter plots).

A. Design and conduct an experiment using random sampling. Describe the data as an example of a distribution using statistical measures of center and spread. Organize and represent the results with graphs. (Use standard deviation, variance and t-tests.)

ASSESSMENT ANCHOR

M11.E.1 Formulate or answer questions that can be addressed with data and/or organize, display, interpret or analyze data.

M11.E.1.1 Appropriately display and/or use data in problem-solving settings.

M11.E.1.1.1 Create and/or use appropriate graphical representations of data, including box-and-whisker plots, stem-and-leaf plots or scatter plots.

M11.E.1.1.2 Analyze data and/or answer questions based on displayed data (box-and-whisker plots, stem-and-leaf plots or scatter plots).

** Assessed at the local level.*

ASSESSMENT ANCHOR

M11.E.2 Select and/or use appropriate statistical methods to analyze data.

M11.E.2.1 Use measures of central tendency to describe a set of data.

M11.E.2.1.1 Calculate or select the appropriate measure of central tendency (mean, mode or median) of a set of data given or represented on a table, line plot or stem-and-leaf plot.

M11.E.2.1.2 Calculate and/or interpret the range, quartiles and interquartile range of data.

M11.E.2.1.3 Describe how outliers affect measures of central tendency.

B. Use appropriate technology to organize and analyze data taken from the local community.

C. Determine the regression equation of best fit (e.g., linear, quadratic, exponential).

ASSESSMENT ANCHOR

M11.E.4 Develop and evaluate inferences and predictions or draw conclusions based on data or data displays

M11.E.4.2 Analyze and/or interpret data on a scatter plot and/or use a scatter plot to make predictions.

M11.E.4.2.1 Draw, find and/or write an equation for a line of best fit for a scatter plot.

D. Make predictions using interpolation, extrapolation, regression and estimation using technology to verify them.

ASSESSMENT ANCHOR

M11.E.4 Develop and evaluate inferences and predictions or draw conclusions based on data or data displays.

M11.E.4.1 Make predictions using data displays and probability.

M11.E.4.1.1 Estimate or calculate to make predictions based on a circle, line, bar graph or given situation.

M11.E.4.1.2 Use probability to predict outcomes.

M11.E.4.2 Analyze and/or interpret data on a scatter plot and/or use a scatter plot to make predictions.

M11.E.4.2.2 Make predictions using the equations or graphs of best-fit lines of scatter plots.

E. Determine the validity of the sampling method described in a given study.

** Assessed at the local level.*

- F. Determine the degree of dependence of two quantities specified by a two-way table.**
- G. Describe questions of experimental design, control groups, treatment groups, cluster sampling and reliability.**
- H. Use sampling techniques to draw inferences about large populations.**
- I. Describe the normal curve and use its properties to answer questions about sets of data that are assumed to be normally distributed.**

** Assessed at the local level.*

2.7. Probability and Predictions

2.7.8.A. Determine the number of combinations and permutations for an event.

(8th grade standard)

ASSESSMENT ANCHOR

M11.E.3 Understand and/or apply basic concepts of probability or outcomes.

M11.E.3.2 Apply counting techniques in problem-solving settings.

M11.E.3.2.1 Determine the number of permutations and/or combinations or apply the fundamental counting principle. (Formula provided on the reference sheet).

2.7.8.E. Make valid inferences, predictions and arguments based on probability.

(8th grade standard)

ASSESSMENT ANCHOR

M11.E.4 Develop and/or evaluate inferences and predictions or draw conclusions based on data or data displays.

M11.E.4.1 Make predictions using data displays and probability.

M11.E.4.1.1 Estimate or calculate to make predictions based on a circle, line, bar graph or given situation.

M11.E.4.1.2 Use probability to predict outcomes.

A. Compare odds and probability.

ASSESSMENT ANCHOR

M11.E.3 Understand and/or apply basic concepts of probability or outcomes.

M11.E.3.1 Apply probability and/or odds to practical situations.

M11.E.3.1.2 Find, convert and/or compare the probability and/or odds of a simple event.

B. Apply probability and statistics to perform an experiment involving a sample and generalize its results to the entire population.

C. Draw and justify a conclusion regarding the validity of a probability or statistical argument.

D. Use experimental and theoretical probability distributions to make judgments about the likelihood of various outcomes in uncertain situations.

* Assessed at the local level.

E. Solve problems involving independent simple and compound events.

ASSESSMENT ANCHOR

M11.E.3 Understand and/or apply basic concepts of probability or outcomes.

M11.E.3.1 Apply probability and/or odds to practical situations.

M11.E.3.1.1 Find probabilities for independent, dependent or compound events and represent as a fraction, decimal or percent).

** Assessed at the local level.*

2.8. Algebra and Functions

2.8.8.F. Solve and graph equations and inequalities using scientific and graphing calculators and computer spreadsheets. (8th grade standard)

ASSESSMENT ANCHOR

M11.D.2 Represent and/or analyze mathematical situations using numbers, symbols, words, tables and/or graphs.

M11.D.2.1 Write, solve and/or graph linear equations and inequalities using various methods.

M11.D.2.1.1 Solve compound inequalities and/or graph their solution sets on a number line (may include absolute value inequalities).

2.8.8.J. Show that an equality relationship between two quantities remains the same as long as the same change is made to both quantities; explain how a change in one quantity determines another quantity in a functional relationship. (8th grade standard)

ASSESSMENT ANCHOR

M11.D.3 Analyze change in various contexts.

M11.D.3.1 Describe and/or determine change.

M11.D.3.1.2 Determine how a change in one variable relates to a change in a second variable (e.g., $y=4/x$, if x doubles, what happens to y ?).

A. Analyze a given set of data for the existence of a pattern and represent the pattern algebraically and graphically.

ASSESSMENT ANCHOR

M11.D.1 Demonstrate an understanding of patterns, relations and functions.

M11.D.1.1 Analyze and/or use patterns or relations.

M11.D.1.1.1 Analyze a set of data for the existence of a pattern and represent the pattern algebraically and/or graphically.

M11.D.1.1.2 Determine if a relation is a function given a set of points or a graph.

ASSESSMENT ANCHOR

M11.D.2 Represent and/or analyze mathematical situations using numbers, symbols, words, tables and/or graphs.

M11.D.2.2 Simplify expressions involving polynomials.

M11.D.2.2.1 Add, subtract and/or multiply polynomial expressions (express answers in simplest form – nothing larger than a binomial multiplied by a trinomial).

M11.D.2.2.2 Factor algebraic expressions, including difference of squares and trinomials (trinomials limited to the form ax^2+bx+c where a is not equal to 0).

* Assessed at the local level.

M11.D.2.2.3 Simplify algebraic fractions.

- B. Give examples of patterns that occur in data from other disciplines.**
- C. Use patterns, sequences and series to solve routine and non-routine problems.**
- D. Formulate expressions, equations, inequalities, systems of equations, systems of inequalities and matrices to model routine and non-routine problem situations.**

ASSESSMENT ANCHOR

M11.D.2 Represent and/or analyze mathematical situations using numbers, symbols, words, tables and/or graphs.

M11.D.2.1 Write, solve and/or graph linear equations and inequalities using various methods.

M11.D.2.1.4 Write and/or solve systems of equations using graphing, substitution and/or elimination (limit systems to 2 equations).

- E. Use equations to represent curves (e.g., lines, circles, ellipses, parabolas, hyperbolas).**
- F. Identify whether systems of equations and inequalities are consistent or inconsistent.**
- G. Analyze and explain systems of equations, systems of inequalities and matrices.**

ASSESSMENT ANCHOR

M11.D.2 Represent and/or analyze mathematical situations using numbers, symbols, words, tables and/or graphs.

M11.D.2.1 Write, solve and/or graph linear equations and inequalities using various methods.

M11.D.2.1.1 Solve compound inequalities and/or graph their solution sets on a number line (may include absolute value inequalities).

M11.D.2.1.4 Write and/or solve systems of equations using graphing, substitution and/or elimination (limit systems to 2 equations).

- H. Select and use an appropriate strategy to solve systems of equations and inequalities using graphing calculators, symbol manipulators, spreadsheets and other software.**
- I. Use matrices to organize and manipulate data, including matrix addition, subtraction, multiplication and scalar multiplication.**

** Assessed at the local level.*

J. Demonstrate the connection between algebraic equations and inequalities and the geometry of relations in the coordinate plane.

ASSESSMENT ANCHOR

M11.C.3 Locate points or describe relationships using the coordinate plane.

M11.C.3.1 Solve problems using analytic geometry.

M11.C.3.1.1 Calculate the distance and/or midpoint between 2 points on a number line or on a coordinate plane (formula provided on the reference sheet).

M11.C.3.1.2 Relate slope to perpendicularity and/or parallelism (limit to linear algebraic expressions; slope formula provided on the reference sheet).

ASSESSMENT ANCHOR

M11.D.3 Analyze change in various contexts.

M11.D.3.2 Compute and/or use the slope of a line.

M11.D.3.2.1 Apply the formula for the slope of a line to solve problems (formula given on reference sheet).

M11.D.3.2.2 Given the graph of the line, 2 points on the line, or the slope and a point on a line, write or identify the linear equation in point-slope, standard and/or slope-intercept form.

M11.D.3.2.3 Compute the slope and/or y-intercept represented by a linear equation or graph.

K. Select, justify and apply an appropriate technique to graph a linear function in two variables, including slope-intercept, x- and y-intercepts, graphing by transformations and the use of a graphing calculator.

ASSESSMENT ANCHOR

M11.D.2 Represent and/or analyze mathematical situations using numbers, symbols, words, tables and/or graphs.

M11.D.2.1 Write, solve and/or graph linear equations and inequalities using various methods.

M11.D.2.1.2 Identify or graph functions, linear equations or linear inequalities on a coordinate plane.

L. Write the equation of a line when given the graph of the line, two points on the line, or the slope of the line and a point on the line.

ASSESSMENT ANCHOR

M11.D.2 Represent and/or analyze mathematical situations using numbers, symbols, words, tables and/or graphs.

M11.D.2.1 Write, solve and/or graph linear equations and inequalities using various methods.

M11.D.2.1.2 Identify or graph functions, linear equations or linear inequalities on a coordinate plane.

* Assessed at the local level.

Appendix A: Assessment Anchor Content Standard Integration

M11.D.2.1.3 Write, solve and/or apply a linear equation (including problem situations).

ASSESSMENT ANCHOR

M11.D.3 Analyze change in various contexts.

M11.D.3.2 Compute and/or use the slope of a line.

M11.D.3.2.1 Apply the formula for the slope of a line to solve problems (formula given on reference sheet).

M11.D.3.2.2 Given the graph of the line, 2 points on the line, or the slope and a point on a line, write or identify the linear equation in point-slope, standard and/or slope-intercept form.

M11.D.3.2.3 Compute the slope and/or y-intercept represented by a linear equation or graph.

M. Given a set of data points, write an equation for a line of best fit.

ASSESSMENT ANCHOR

M11.E.4 Develop and evaluate inferences and predictions or draw conclusions based on data or data displays.

M11.E.4.2 Analyze and/or interpret data on a scatter plot and/or use a scatter plot to make predictions.

M11.E.4.2.1 Draw, find and/or write an equation for a line of best fit for a scatter plot.

M11.E.4.2.2 Make predictions using the equations or graphs of best-fit lines of scatter plots.

N. Solve linear, quadratic and exponential equations both symbolically and graphically.

ASSESSMENT ANCHOR

M11.D.2 Represent and/or analyze mathematical situations using numbers, symbols, words, tables and/or graphs.

M11.D.2.1 Write, solve and/or graph linear equations and inequalities using various methods.

M11.D.2.1.3 Write, solve and/or apply a linear equation (including problem situations).

M11.D.2.1.4 Write and/or solve systems of equations using graphing, substitution and/or elimination (limit systems to 2 equations).

M11.D.2.1.5 Solve quadratic equations using factoring (integers only – not including completing the square or the Quadratic Formula).

O. Determine the domain and range of a relation, given a graph or set of ordered pairs.

ASSESSMENT ANCHOR

M11.D.1 Demonstrate an understanding of patterns, relations and functions.

** Assessed at the local level.*

M11.D.1.1 Analyze and/or use patterns or relations.

M11.D.1.1.1 Analyze a set of data for the existence of a pattern and represent the pattern algebraically and/or graphically.

M11.D.1.1.2 Determine if a relation is a function given a set of points or a graph.

P. Analyze a relation to determine whether a direct or inverse variation exists and represent it algebraically and graphically.

ASSESSMENT ANCHOR

M11.A.2 Understand the meanings of operations, use operations and understand how they relate to each other.

M11.A.2.1 Apply ratio and/or proportion in problem-solving situations.

M11.A.2.1.2 Solve problems using direct and inverse proportions.

M11.A.2.1.3 Identify and/or use proportional relationships in problem solving settings.

Q. Represent functional relationships in tables, charts and graphs.

ASSESSMENT ANCHOR

M11.D.1 Demonstrate an understanding of patterns, relations and functions.

M11.D.1.1 Analyze and/or use patterns or relations.

M11.D.1.1.1 Analyze a set of data for the existence of a pattern and represent the pattern algebraically and/or graphically.

M11.D.1.1.2 Determine if a relation is a function given a set of points or a graph.

M11.D.1.1.3 Identify the domain, range or inverse of a relation (may be presented as ordered pairs or a table).

ASSESSMENT ANCHOR

M11.D.4 Describe or use models to represent quantitative relationships.

M11.D.4.1 Interpret and/or use linear, quadratic and/or exponential functions and their equations, graphs or tables.

M11.D.4.1.1 Match the graph of a given function to its table or equation.

R. Create and interpret functional models.

ASSESSMENT ANCHOR

M11.D.1 Demonstrate an understanding of patterns, relations and functions.

M11.D.1.1 Analyze and/or use patterns or relations.

** Assessed at the local level.*

Appendix A: Assessment Anchor Content Standard Integration

M11.D.1.1.1 Analyze a set of data for the existence of a pattern and represent the pattern algebraically and/or graphically.

M11.D.1.1.2 Determine if a relation is a function given a set of points or a graph.

M11.D.1.1.3 Identify the domain, range or inverse of a relation (may be presented as ordered pairs or a table).

S. Analyze properties and relationships of functions (e.g., linear, polynomial, rational, trigonometric, exponential, logarithmic).

ASSESSMENT ANCHOR

M11.D.2 Represent and/or analyze mathematical situations using numbers, symbols, words, tables and/or graphs.

M11.D.2.2 Simplify expressions involving polynomials.

M11.D.2.2.1 Add, subtract and/or multiply polynomial expressions (express answers in simplest form – nothing larger than a binomial multiplied by a trinomial).

M11.D.2.2.2 Factor algebraic expressions, including difference of squares and trinomials (trinomials limited to the form ax^2+bx+c where a is not equal to 0).

M11.D.2.2.3 Simplify algebraic fractions.

T. Analyze and categorize functions by their characteristics.

ASSESSMENT ANCHOR

M11.D.1 Demonstrate an understanding of patterns, relations and functions.

M11.D.1.1 Analyze and/or use patterns or relations.

M11.D.1.1.1 Analyze a set of data for the existence of a pattern and represent the pattern algebraically and/or graphically.

M11.D.1.1.2 Determine if a relation is a function given a set of points or a graph.

M11.D.1.1.3 Identify the domain, range or inverse of a relation (may be presented as ordered pairs or a table).

** Assessed at the local level.*

2.9. Geometry

2.9.8.E. Identify, name, draw and list all properties of squares, cubes, pyramids, parallelograms, quadrilaterals, trapezoids, polygons, rectangles, rhombi, circles, spheres, triangles, prisms and cylinders. (8th grade standard)

ASSESSMENT ANCHOR

M11.C.1 Analyze characteristics and properties of two- and three- dimensional geometric shapes and demonstrate understanding of geometric relationships.

M11.C.1.2 Recognize and/or apply properties of angles, triangles and quadrilaterals.

M11.C.1.2.1 Identify and/or use properties of triangles (e.g., medians, altitudes, angle bisectors, side/angle relationships, Triangle Inequality Theorem).

M11.C.1.2.2 Identify and/or use properties of quadrilaterals (e.g., parallel sides, diagonals, bisectors, congruent sides/angles and supplementary angles).

M11.C.1.2.3 Identify and/or use properties of isosceles and equilateral triangles.

A. Construct geometric figures using dynamic geometry tools (e.g., Geometer's Sketchpad, Cabri Geometry).

B. Prove that two triangles or two polygons are congruent or similar using algebraic, coordinate and deductive proofs.

ASSESSMENT ANCHOR

M11.C.1 Analyze characteristics and properties of two- and three- dimensional geometric shapes and demonstrate understanding of geometric relationships.

M11.C.1.3 Use properties of congruence, correspondence and similarity in problem-solving settings involving two- and three- dimensional figures.

M11.C.1.3.1 Identify and/or use properties of congruent and similar polygons or solids.

C. Identify and prove the properties of quadrilaterals involving opposite sides and angles, consecutive sides and angles and diagonals using deductive proofs.

ASSESSMENT ANCHOR

M11.C.1 Analyze characteristics and properties of two- and three- dimensional geometric shapes and demonstrate understanding of geometric relationships.

M11.C.1.2 Recognize and/or apply properties of angles, triangles and quadrilaterals.

M11.C.1.2.2 Identify and/or use properties of quadrilaterals (e.g., parallel sides, diagonals, bisectors, congruent sides/angles and supplementary angles).

D. Identify corresponding parts in congruent triangles to solve problems.

* Assessed at the local level.

E. Solve problems involving inscribed and circumscribed polygons.

ASSESSMENT ANCHOR

M11.B.2 Apply appropriate techniques, tools and formulas to determine measurements.

M11.B.2.2 Use and/or develop procedures to determine or describe measures of perimeter, circumference, area, surface area and/or volume. (May require conversions within the same system.)

M11.B.2.2.3 Estimate area, perimeter or circumference of an irregular figure.

M11.B.2.2.4 Find the measurement of a missing length given the perimeter, circumference, area or volume.

ASSESSMENT ANCHOR

M11.C.1 Analyze characteristics and properties of two- and three- dimensional geometric shapes and demonstrate understanding of geometric relationships.

M11.C.1.1 Identify and/or use parts of circles and segments associated with circles.

M11.C.1.1.2 Identify and/or use the properties of arcs, semicircles, inscribed angles and/or central angles.

F. Use the properties of angles, arcs, chords, tangents and secants to solve problems involving circles.

ASSESSMENT ANCHOR

M11.C.1 Analyze characteristics and properties of two- and three- dimensional geometric shapes and demonstrate understanding of geometric relationships.

M11.C.1.1 Identify and/or use parts of circles and segments associated with circles.

M11.C.1.1.1 Identify and/or use the properties of a radius, diameter and/or tangent of a circle (given numbers should be whole).

M11.C.1.1.2 Identify and/or use the properties of arcs, semicircles, inscribed angles and/or central angles.

G. Solve problems using analytic geometry.

ASSESSMENT ANCHOR

M11.C.3 Locate points or describe relationships using the coordinate plane.

M11.C.3.1 Solve problems using analytic geometry.

M11.C.3.1.1 Calculate the distance and/or midpoint between 2 points on a number line or on a coordinate plane (formula provided on the reference sheet).

M11.C.3.1.2 Relate slope to perpendicularity and/or parallelism (limit to linear algebraic expressions; slope formula provided on the reference sheet).

* Assessed at the local level.

H. Construct a geometric figure and its image using various transformations.

(Not tested in 11th grade)

I. Model situations geometrically to formulate and solve problems.

J. Analyze figures in terms of the kinds of symmetries they have.

** Assessed at the local level.*

2.10. Trigonometry

2.10.8.A. Compute measures of sides and angles using proportions, the Pythagorean Theorem and right triangle relationships.

(tested in 11th grade)

ASSESSMENT ANCHOR

M11.C.1 Analyze characteristics and properties of two- and three- dimensional geometric shapes and demonstrate understanding of geometric relationships.

M11.C.1.4 Solve problems involving right triangles using the Pythagorean Theorem.

M11.C.1.4.1 Find the measure of a side of a right triangle using the Pythagorean Theorem (Pythagorean Theorem included on the reference sheet).

A. Use graphing calculators to display periodic and circular functions; describe properties of the graphs.

B. Identify, create and solve practical problems involving right triangles using the trigonometric functions and the Pythagorean Theorem.

ASSESSMENT ANCHOR

M11.C.1 Analyze characteristics and properties of two- and three- dimensional geometric shapes and demonstrate understanding of geometric relationships.

M11.C.1.4 Solve problems involving right triangles using the Pythagorean Theorem.

M11.C.1.4.1 Find the measure of a side of a right triangle using the Pythagorean Theorem (Pythagorean Theorem included on the reference sheet).

* Assessed at the local level.

2.11. Concepts of Calculus

A. Describe the concept of unit rate, ratio and slope in the context of rate of change.

(8th grade standard)

ASSESSMENT ANCHOR

M11.D.3 Analyze change in various contexts.

M11.D.3.1 Describe and/or determine change.

M11.D.3.1.2 Determine how a change in one variable relates to a change in a second variable (e.g., $y=4/x$, if x doubles, what happens to y ?).

A. Determine maximum and minimum values of a function over a specified interval.

B. Interpret maximum and minimum values in problem situations.

C. Graph and interpret rates of growth/decay.

D. Determine sums of finite sequences of numbers and infinite geometric series.

E. Estimate areas under curves using sequences of areas.

* Assessed at the local level.

Appendix B:

2005-2006 Mathematics General Scoring Guideline

GENERAL DESCRIPTION OF MATHEMATICS SCORING GUIDELINES:

- 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” (e.g., missing \$) 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 a *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 as required by the task.**

- 0 – The response has no correct answer and *insufficient* evidence to demonstrate any understanding of the mathematical concepts and procedures as 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, entirely erased, or written refusal to respond

OT – Off task

IL – Illegible

LOE – Response in a language other than English

Appendix C:

2005-2006 Reading General Scoring Guideline

GENERAL SCORING GUIDELINES FOR OPEN-ENDED READING ITEMS

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

Appendix D:

Assessment Anchor Content Standards (Assessment Anchors) within Reporting Categories Summary

Tally Summary Sheet

Grade 5

The number of items at each anchor/eligible content level will change yearly.

Mathematics

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Student Score (Core Points)		District Level Scores (Matrix Points)		Total Points (Core & Matrix)			Number of Items				Total Number of Items (Core & Matrix)			
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total	
					A: Numbers and Operations														
	1			Understand relationships and representations of numbers and number systems				12		12	12				3			3	3
	1	1	1	Use expanded notation	1		2		3	3	3	1		2			3		3
	1	2	1	Read/write decimals	2		1		3	3	3	2		1			3		3
	1	2	2	Identify number with place value	1		2		3	3	3	1		2			3		3
	1	3	1	Compare whole numbers			3		3	3	3			3			3		3
	1	3	2	Compare and/or order decimals	1		3		4	4	4	1		3			4		4
	1	3	3	Compare proper fractions	2		2		4	4	4	2		2			4		4
	1	4	1	Identify negative numbers on number line	1		2		3	3	3	1		2			3		3
	1	4	2	Identify negative numbers on thermometer	1		1		2	2	2	1		1			2		2
	1	5	1	Model fractions/mixed numbers	2		3		5	5	5	2		3			5		5
	1	6	1	Name/identify prime and composite numbers	1		2		3	3	3	1		2			3		3
	1	6	2	List/identify factors, multiples	2		2		4	4	4	2		2			4		4
Total For Assessment Anchor A.1																			
Understand relationships among and representations of numbers and number systems					14		23	12	37	12	49	14		23	3	37	3	40	
	2			Understand meanings, uses and relations of operations		4		12		16	16		1		3		4	4	
	2	1	1	Solve problems involving all operations (whole numbers)	2		1		3	3	3	2		1			3		3
	2	1	2	Solve problems involving addition/subtraction (fractions)	2				2	2	2	2					2		2
	2	1	3	Choose correct operation	2		2		4	4	4	2		2			4		4
Total For Assessment Anchor A.2																			
Understand meanings, uses of operations and how they relate to each other					6	4	3	12	9	16	25	6	1	3	3	9	4	13	
	3			Compute accurately/fluently and make reasonable estimates				4		4	4				1		1	1	
	3	1	1	Round whole numbers	2		1		3	3	3	2		1			3		3
	3	1	2	Estimate to solve	2				2	2	2	2					2		2
	3	2	1	Compute without calculator	1				1	1	1	1					1		1
Total For Assessment Anchor A.3																			
Compute accurately and fluently and make reasonable estimates					5		1	4	6	4	10	5		1	1	6	1	7	
Total For Reporting Category A					25	4	27	28	52	32	84	25	1	27	7	52	8	60	

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The number of items at each anchor/eligible content level will change yearly.

Mathematics

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Student Score (Core Points)		District Level Scores (Matrix Points)		Total Points (Core & Matrix)			Number of Items				Total Number of Items (Core & Matrix)				
					MC	OE	MC	OE	MC	OE	Total	Core	Matrix		MC	OE	Total			
B: Measurement	1			Understand measurable attributes and units, systems, processes of measurement				8		8	8				2			2	2	
	1	1	1	Select appropriate unit	1		3		4		4	1		3			4		4	
	1	2	1	Convert measurements	1		3		4		4	1		3			4		4	
	1	2	2	Add/subtract measurements	1		2		3		3	1		2			3		3	
	1	3	1	Estimate polygon perimeter/area	1		1		2		2	1		1			2		2	
	1	3	2	Estimate area of irregular figure	1		1		2		2	1		1			2		2	
	Total For Assessment Anchor B.1																			
	Understand measurable attributes and units, systems, processes of measurement					5		10	8	15	8	23	5		10	2		15	2	17
	2				Apply techniques, tools & formulas to determine measurements				4		4	4				1			1	1
	2	1	1		Use a ruler to nearest 1/8 in. or mm	1		2		3		3	1		2			3		3
	2	2	1		Find perimeter or area of square or rectangle	1		1		2		2	1		1			2		2
	2	2	2		Solve measurement problems	2		2		4		4	2		2			4		4
Total For Assessment Anchor B.2																				
Apply appropriate techniques, tools and formulas to determine measurements					4		5	4	9	4	13	4		5	1		9	1	10	
Total For Reporting Category B					9		15	12	24	12	36	9		15	3		24	3	27	

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The number of items at each anchor/eligible content level will change yearly.

Mathematics

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Student Score (Core Points)		District Level Scores (Matrix Points)		Total Points (Core & Matrix)			Number of Items				Total Number of Items (Core & Matrix)			
					MC	OE	MC	OE	MC	OE	Total	Core	Matrix	Core	Matrix	Core	Matrix	Total	
												MC	OE	MC	OE	MC	OE	MC	OE
C: Geometry	1			Analyze characteristics & properties of 2-D & 3-D shapes		4		8		12	12		1		2		3	3	
	1	1	1	Identify/classify/compare 3-D figures			1		1		1				1		1	1	
	1	1	2	Identify/classify/compare triangles and quadrilaterals			2		2		2				2		2	2	
	1	1	3	Identify/compare right triangles	1		2		3		3		1		2		3	3	
	1	1	4	Identify/determine measure of diameter and radii	1		2		3		3		1		2		3	3	
	1	2	1	Identify/draw/label points, lines, segments, rays, planes			2		2		2				2		2	2	
	Total For Assessment Anchor C.1																		
	Analyze characteristics and properties of two- and three-dimensional geometric shapes					2	4	9	8	11	12	23	2	1	9	2	11	3	14
	2			Identify and/or apply concepts of transformations or symmetry				4		4	4					1		1	1
	2	1	1	Draw or identify translation, reflection, rotation	1		2		3		3		1		2		3	3	
	2	1	2	Draw/identify lines of symmetry	1		2		3		3		1		2		3	3	
	Total For Assessment Anchor C.2																		
	Identify and/or apply concepts of transformations or symmetry					2		4	4	6	4	10	2		4	1	6	1	7
	3			Locate points/describe relationships using the coordinate plane															
	3	1	1	Locate/plot/identify points in Quadrant I and on axes	1		2		3		3		1		2		3	3	
Total For Assessment Anchor C.3																			
Locate points or describe relationships using the coordinate plane					1		2		3		3	1		2		3		3	
Total For Reporting Category C					5	4	15	12	20	16	36	5	1	15	3	20	4	24	

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Mathematics

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Student Score (Core Points)		District Level Scores (Matrix Points)		Total Points (Core & Matrix)			Number of Items				Total Number of Items (Core & Matrix)			
					MC	OE	MC	OE	MC	OE	Total	Core		Matrix		MC	OE	Total	
D: Algebraic Concepts	1			Understand patterns, relations and functions				4		4	4				1		1	1	
	1	1	1	Extend or find a missing element in a numerical or geometric pattern	2		5		7		7	2		5		7		7	
	1	1	2	Create numerical or geometric pattern															
	1	2	1	Form/illustrate pattern rule	2		2		4		4	2		2		4		4	
	Total For Assessment Anchor D.1					4		7	4	11	4	15	4		7	1	11	1	12
		2			Represent/analyze mathematical situations				4		4	4				1		1	1
		2	1	1	Solve for missing number	1		1		2		2	1		1		2		2
		2	1	2	Choose operation to solve	1		2		3		3	1		2		3		3
		2	1	3	Match number sentence to story	1		3		4		4	1		3		4		4
	Total For Assessment Anchor D.2					3		6	4	9	4	13	3		6	1	9	1	10
		3			Analyze change in various contexts				4		4	4				1		1	1
		3	1	1	Solve rate of change problems	3		5		8		8	3		5		8		8
	Total For Assessment Anchor D.3					3		5	4	8	4	12	3		5	1	8	1	9
	Total For Reporting Category D					10		18	12	28	12	40	10		18	3	28	3	31

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The number of items at each anchor/eligible content level will change yearly.

Mathematics

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Student Score (Core Points)		District Level Scores (Matrix Points)		Total Points (Core & Matrix)			Number of Items				Total Number of Items (Core & Matrix)				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total		
					E: Data Analysis and Probability	1			Formulate/answer questions; organize, display, interpret or analyze data		4		4	8	8			1		1
1	1	1	Interpret/display data	2			3		5	5	2		3				5		5	
Total For Assessment Anchor E.1																				
Formulate or answer questions about data and/or organize, display, interpret or analyze data				2		4	3	4	5	8	13	2	1	3	1	5	2	7		
2			Select and/or use appropriate statistical methods to analyze data					4	4	4					1			1	1	
2	1	1	Determine the mean, median, range	1			4		5	5	1		4				5		5	
2	1	2	Identify the mode in set of data				2		2	2			2				2		2	
Total For Assessment Anchor E.2																				
Select and/or use appropriate statistical methods to analyze data				1			6	4	7	4	11	1		6	1	7	1	8		
3			Understand/apply basic concepts of probability or outcomes					4	4	4					1			1	1	
3	1	1	Predict/determine likelihood of outcomes	1			3		4	4	1		3				4		4	
3	1	2	Determine probability of outcome				2		2	2			2				2		2	
3	1	3	Find all possible combinations	1			2		3	3	1		2				3		3	
Total For Assessment Anchor E.3																				
Understand and/or apply basic concepts of probability or outcomes				2			7	4	9	4	13	2		7	1	9	1	10		
Total For Reporting Category E					5	4	16	12	21	16	37	5	1	16	3	21	4	25		

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The number of items at each anchor/eligible content level will change yearly.

Reading

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Student Score (Core Points)		District Level Scores (Matrix Points)				Total Points (Core & Matrix)			Number of Items				Total Number of Items (Core & Matrix)		
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total		
					A: Comprehension and Reading Skills	1	1	1	Identify meaning of multiple-meaning words											
1	1	2	Identify synonym/antonym	2			3		5		5		2		3		5		5	
1	2	1	Identify meaning of unfamiliar word/root/affix				1		1		1				1		1		1	
1	2	2	Define words from context clues				6		6		6				6		6		6	
1	3	1	Make inferences/draw conclusions	7		6	33	6	40	12	52		7	2	33	2	40	4	44	
1	3	2	Cite evidence to support generalizations																	
1	4	1	Identify and/or interpret main ideas/relevant details	8			20	3	28	3	31		8		20	1	28	1	29	
1	5	1	Summarize main ideas/themes and important details	1				3	1	3	4		1			1	1	1	2	
1	6	1	Identify text as narrative/poetic	1			2		3		3		1		2		3		3	
Total For Assessment Anchor A.1 Understanding fiction text appropriate to grade level.						19	6	65	12	84	18	102	19	2	65	4	84	6	90	
2	1	1	Identify meaning of multiple-meaning words																	
2	1	2	Identify meaning of content-specific words				1		1		1				1		1		1	
2	2	1	Identify meaning of unfamiliar word/root/affix				1		1		1				1		1		1	
2	2	2	Define words from context clues	2			7		9		9		2		7		9		9	
2	3	1	Make inferences/draw conclusions	6		3	18	12	24	15	39		6	1	18	4	24	5	29	
2	3	2	Cite evidence to support generalizations				2		2		2				2		2		2	
2	4	1	Identify and/or interpret main ideas/relevant details	2			19	3	21	3	24		2		19	1	21	1	22	
2	5	1	Summarize main ideas/important details					3		3	3					1		1	1	
2	6	1	Identify text as informational/persuasive	1			1		2		2		1		1		2		2	
Total For Assessment Anchor A.2 Understanding nonfiction text appropriate to grade level.					11	3	49	18	60	21	81	11	1	49	6	60	7	67		
Total For Reporting Category A					30	9	114	30	144	39	183	30	3	114	10	144	13	157		

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The number of items at each anchor/eligible content level will change yearly.

Reading

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Student Score (Core Points)		District Level Scores (Matrix Points)		Total Points (Core & Matrix)			Number of Items				Total Number of Items (Core & Matrix)				
					MC	OE	MC	OE	MC	OE	Total	Core	Matrix	MC	OE	MC	OE	Total		
						1	1	1	Identify in fiction and literary nonfiction (character/narrator/ speaker/subject, setting, plot, theme); identify in nonfiction (content, topic)	3	3	17	24	20	27	47	3	1	17	8
Total For Assessment Anchor B.1					3	3	17	24	20	27	47	3	1	17	8	20	9	29		
Identify/compare components within and across text.																				
B: Interpretation and Analysis of Literature	2	1	1	Identify examples of alliteration			1		1		1			1		1		1		
	2	1	2	Identify meter (poetry)																
	2	1	3	Describe how sound techniques add meaning																
	2	2	1	Identify/interpret examples of simile	1		6		7		7		1		6		7		7	
	2	2	2	Identify/interpret examples of personification	1				1		1		1				1		1	
	2	2	3	Identify/interpret examples of metaphor	1				1		1		1				1		1	
	2	3	1	Identify author's use of point of view (first/third)																
	2	3	2	Describe author's point of view																
	Total For Assessment Anchor B.2					3		7		10		10		3		7		10		10
	Identify and describe how the author uses literary devices to convey meaning.																			
	3	1	1	Identify fact/opinion	2		5		7		7		2		5		7		7	
	3	2	2	Identify stereotypes																
	3	3	1	Identify text organization (sequence, question/answer, comparison/contrast, cause/effect, problem/solution)	1		1		2		2		1		1		2		2	
	3	3	2	Use headings to locate information or identify content that fits into a specific section	1				1		1		1				1		1	
	3	3	3	Interpret and make connections between graphics/charts/texts																
Total For Assessment Anchor B.3					4		6		10		10		4		6		10		10	
Identify and interpret concepts and organization of nonfiction text.																				
Total For Reporting Category B					10	3	30	24	40	27	67	10	1	30	8	40	9	49		

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Grade 8

The number of items at each anchor/eligible content level will change yearly.

Mathematics

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Student Score (Core Points)		District Level Scores (Matrix Points)		Total Points (Core & Matrix)			Number of Items				Total Number of Items (Core & Matrix)					
					MC	OE	MC	OE	MC	OE	Total	Core	Matrix	Core	Matrix	MC	OE	Total			
A: Numbers and Operations	1			Understand relationships and representations of numbers and number systems				8		8	8				2				2	2	
	1	1	1	Convert fractions, decimals, percents	1		3		4		4	1		3				4		4	
	1	1	2	Use scientific notation or exponential forms	1		5		6		6	1		5				6		6	
	1	1	3	Find the square/cube/square root	1				1		1	1						1		1	
	1	2	1	Locate/plot on number line	1		2		3		3	1		2				3		3	
	1	2	2	Order from least to greatest	1		2		3		3	1		2				3		3	
	1	3	1	Use divisibility rules																	
	1	3	2	Find and/or use GCF and/or LCM	1		3		4		4	1		3				4		4	
	Total For Assessment Anchor A.1																				
	Understand relationships among and representations of numbers and number systems					6		15	8	21	8	29	6		15	2			21	2	23
	2				Understand meanings, uses and relations of operations				8		8	8				2				2	2
	2	1	1		Use order of operations to simplify	1		3		4		4	1		3				4		4
	2	2	1		Use ratios, proportions, percents to solve problems	1		2		3		3	1		2				3		3
	2	2	2		Represent or solve rate problems	2		1		3		3	2		1				3		3
	Total For Assessment Anchor A.2																				
	Understand meanings, uses of operations and how they relate to each other					4		6	8	10	8	18	4		6	2			10	2	12
	3				Compute accurately/fluently and make reasonable estimates																
	3	1	1		Explain when to round up or down	1				1		1	1						1		1
	3	1	2		Explain when to estimate																
	3	2	1		Estimate percent problems	2				2		2	2						2		2
	3	3	1		Compute with/without calculator																
	Total For Assessment Anchor A.3																				
	Compute accurately and fluently and make reasonable estimates					3				3		3	3						3		3
Total For Reporting Category A					13		21	16	34	16	50	13		21	4			34	4	38	

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Grade 8

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Mathematics

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Student Score (Core Points)		District Level Scores (Matrix Points)		Total Points (Core & Matrix)			Number of Items				Total Number of Items (Core & Matrix)				
					MC	OE	MC	OE	MC	OE	Total	Core		Matrix		MC	OE	Total		
B: Measurement	1			Understand measurable attributes and units, systems, processes of measurement				4		4	4				1			1	1	
	1	1	1	Convert metric measurements			1		1		1			1				1	1	
	1	1	2	Convert customary measurements			1		1		1			1				1	1	
	1	1	3	Convert time	1				1		1	1						1	1	
	1	1	4	Convert temperature	1		1		2		2	1		1				2	2	
	Total For Assessment Anchor B.1																			
	Understand measurable attributes and units, systems, processes of measurement					2		3	4	5	4	9	2		3	1		5	1	6
	2			Apply techniques, tools & formulas to determine measurements		4		8		12	12			1		2			3	3
	2	1	1	Determine degrees of interior angles			1		1		1			1				1		1
	2	1	2	Find angle measure in triangle			1		1		1			1				1		1
	2	1	3	Use proportions in similar figures			1		1		1			1				1		1
	2	2	1	Use protractor to measure angles	1				1		1	1						1		1
	2	2	2	Define/identify/use angle properties			2		2		2			2				2		2
	2	2	3	Identify/find measure of angles	1		1		2		2	1		1				2		2
	2	3	1	Find circumference, perimeter, area			2		2		2			2				2		2
	2	3	2	Determine surface area, volume			2		2		2			2				2		2
	2	3	3	Determine appropriate measure	1		1		2		2	1		1				2		2
	2	4	1	Interpret/apply scales	1				1		1	1						1		1
	2	4	2	Determine/apply appropriate scale			1		1		1			1				1		1
	2	5	1	Determine effect of length change			1		1		1			1				1		1
Total For Assessment Anchor B.2																				
Apply appropriate techniques, tools and formulas to determine measurements					4	4	13	8	17	12	29	4	1	13	2			17	3	20
Total For Reporting Category B					6	4	16	12	22	16	38	6	1	16	3			22	4	26

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Grade 8

The number of items at each anchor/eligible content level will change yearly.

Mathematics

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Student Score (Core Points)		District Level Scores (Matrix Points)		Total Points (Core & Matrix)			Number of Items				Total Number of Items (Core & Matrix)			
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total	
					C: Geometry	1			Analyze characteristics & properties of 2-D & 3-D shapes		4		8		12	12		1	
1	1	1	Identify properties of quadrilaterals	1			4		5		5	1		4		5		5	
1	1	2	Identify properties of triangles				2		2		2			2		2		2	
1	1	3	Identify properties of 3-D shapes	1			6		7		7	1		6		7		7	
1	2	1	Use the Pythagorean Theorem	1			6		7		7	1		6		7		7	
Total For Assessment Anchor C.1																			
Analyze characteristics and properties of two- and three-dimensional geometric shapes						3	4	18	8	21	12	33	3	1	18	2	21	3	24
2			Identify and/or apply concepts of transformations or symmetry					4		4	4				1			1	1
2	1	1	Draw/identify a rotation	1			2		3		3	1		2		3		3	
2	1	2	Draw/identify a reflection	1			2		3		3	1		2		3		3	
2	1	3	Draw/identify a translation	1			1		2		2	1		1		2		2	
Total For Assessment Anchor C.2																			
Identify and/or apply concepts of transformations or symmetry						3		5	4	8	4	12	3		5	1	8	1	9
3			Locate points/describe relationships using the coordinate plane																
3	1	1	Plot/locate/identify ordered pairs	2			3		5		5	2		3		5		5	
Total For Assessment Anchor C.3																			
Locate points or describe relationships using the coordinate plane					2		3		5		5	2		3		5		5	
Total For Reporting Category C					8	4	26	12	34	16	50	8	1	26	3	34	4	38	

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Mathematics

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Student Score (Core Points)		District Level Scores (Matrix Points)			Total Points (Core & Matrix)			Number of Items				Total Number of Items (Core & Matrix)		
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total	
					D: Algebraic Concepts														
	1			Understand patterns, relations and functions				4		4	4				1		1	1	
	1	1	1	Continue numeric/algebraic pattern	1		1		2		2	1		1		2		2	
	1	1	2	Find missing element in pattern	2		3		5		5	2		3		5		5	
	1	1	3	Write/state rule of function	1		5		6		6	1		5		6		6	
Total For Assessment Anchor D.1					4		9	4	13	4	17	4		9	1	13	1	14	
Understand patterns, relations and functions																			
	2			Represent/analyze mathematical situations		4		20		24	24		1		5		6	6	
	2	1	1	Solve equations/inequalities	2		2		4		4	2		2		4		4	
	2	1	2	Use substitution to check solution			1		1		1			1		1		1	
	2	1	3	Simplify/substitute for expression	1		1		2		2	1		1		2		2	
	2	2	1	Match written situation to expression, equation, or inequality	3		7		10		10	3		7		10		10	
	2	2	2	Write/solve equation for a situation	1		2		3		3	1		2		3		3	
Total For Assessment Anchor D.2					7	4	13	20	20	24	44	7	1	13	5	20	6	26	
Represent/analyze mathematical situations using numbers, symbols, words, tables and/or graphs																			
Total For Assessment Anchor D.3					Not assessed at grade 8.														
Analyze change in various contexts																			
	4			Describe/use models to represent quantitative relationships															
	4	1	1	Graph linear function from x/y table															
	4	1	2	Match linear graph to x/y table	1		3		4		4	1		3		4		4	
	4	1	3	Match inequality to graph	2		3		5		5	2		3		5		5	
	4	1	4	Match linear equation to x/y table	1		4		5		5	1		4		5		5	
Total For Assessment Anchor D.4					4		10		14		14	4		10		14		14	
Describe/use models to represent quantitative relationships																			
Total For Reporting Category D					15	4	32	24	47	28	75	15	1	32	6	47	7	54	

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The number of items at each anchor/eligible content level will change yearly.

Mathematics

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Student Score (Core Points)		District Level Scores (Matrix Points)			Total Points (Core & Matrix)			Number of Items				Total Number of Items (Core & Matrix)			
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total		
					E: Data Analysis and Probability	1			Formulate/answer questions; organize, display, interpret or analyze data				4		4	4				1
1	1	1	Choose correct data representation	1			1		2		2	1			1			2	2	
1	1	2	Display and/or interpret data	2			4		6		6	2			4			6	6	
1	1	3	Interpret stem-and-leaf, box-and-whisker plots	1			3		4		4	1			3			4	4	
Total For Assessment Anchor E.1						4		8	4	12	4	16	4		8	1		12	1	13
2			Select and/or use appropriate statistical methods to analyze data					4		4	4				1				1	1
2	1	1	Determine mean, median, mode, range and/or quartiles	2			4		6		6	2			4			6	6	
2	1	2	Choose appropriate measure of central tendency				1		1		1				1			1	1	
Total For Assessment Anchor E.2						2		5	4	7	4	11	2		5	1		7	1	8
3	1		Understand/apply basic concepts of probability or outcomes					8		8	8				2				2	2
3	1	1	Find probability				4		4		4				4			4	4	
3	2	1	Calculate show number of permutations/combinations	2			1		3		3	2			1			3	3	
Total For Assessment Anchor E.3						2		5	8	7	8	15	2		5	2		7	2	9
4			Develop/evaluate inferences & predictions based on data																	
4	1	1	Fit line to scatter plot; describe correlation	1			3		4		4	1			3			4	4	
4	1	2	Make predictions based on data	3			1		4		4	3			1			4	4	
Total For Assessment Anchor E.4						4		4		8		8	4		4			8		8
Total For Reporting Category E						12		22	16	34	16	50	12		22	4		34	4	38

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Grade 8

The number of items at each anchor/eligible content level will change yearly.

Reading

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Student Score (Core Points)		District Level Scores (Matrix Points)				Total Points (Core & Matrix)			Number of Items				Total Number of Items (Core & Matrix)			
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total			
					A: Comprehension and Reading Skills	1	1	1	Identify meaning of multiple-meaning words			1		1		1				1	
1	1	2	Identify synonym/antonym	1			3		4		4		1		3			4		4	
1	2	1	Identify meaning of unfamiliar word/root/affix																		
1	2	2	Define words from context clues				6		6		6				6			6		6	
1	3	1	Make inferences/draw conclusions	1			13		14		14		1		13			14		14	
1	3	2	Cite evidence to support generalizations																		
1	4	1	Identify and/or interpret main ideas/relevant details	10			14	3	24	3	27		10		14	1		24	1	25	
1	5	1	Summarize main ideas/themes and important details																		
1	6	1	Determine author's purpose				4		4		4				4			4		4	
1	6	2	Identify text that supports narrative or poetic purpose				1		1		1				1			1		1	
Total For Assessment Anchor A.1						12		42	3	54	3	57		12		42	1		54	1	55
Understanding fiction text appropriate to grade level.																					
2	1	1	Apply meaning of multiple-meaning words in context																		
2	1	2	Identify meaning of content-specific words																		
2	2	1	Identify meaning of unfamiliar word/root/affix																		
2	2	2	Define words from context clues	3		8		11		11		3		8			11		11		
2	3	1	Make inferences/draw conclusions	5		8	6	13	6	19		5		8	2		13	2	15		
2	3	2	Cite evidence to support generalizations																		
2	4	1	Identify and/or interpret main ideas/relevant details	5		15	3	20	3	23		5		15	1		20	1	21		
2	5	1	Summarize main ideas/important details	1		1		2		2		1		1			2		2		
2	6	1	Determine author's purpose			3		3		3				3			3		3		
2	6	2	Identify text that supports narrative, informational, persuasive, or instructional purpose																		
Total For Assessment Anchor A.2					14		35	9	49	9	58		14		35	3		49	3	52	
Understanding nonfiction text appropriate to grade level.																					
Total For Reporting Category A					26		77	12	103	12	115		26		77	4		103	4	107	

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The number of items at each anchor/eligible content level will change yearly.

Reading

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Student Score		District Level Scores		Total Points			Number of Items				Total Number of Items		
					(Core Points)		(Matrix Points)		(Core & Matrix)		Core		Matrix		(Core & Matrix)			
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total
B: Interpretation and Analysis of Literature	1	1	1	Describe/interpret relationships in fiction and literary nonfiction (character/narrator/speaker/subject, setting, plot, theme); identify/compare in nonfiction (content, topic)	7	9	15	27	22	36	58	7	3	15	9	22	12	34
	Total For Assessment Anchor B.1																	
	Identify/compare components within and across text.																	
	2	1	1	Interpret/analyze effect of simile, metaphor, hyperbole, and imagery	1	3	4		5	3	8	1	1	4		5	1	6
	2	1	2	Identify author's purpose/effectiveness of figurative language	1		1		2		2	1		1		2		2
	2	2	1	Identify if poem/story is written in first or third person point of view	2		3		5		5	2		3		5		5
	2	2	2	Analyze the effectiveness of the point of view as used by the author														
	Total For Assessment Anchor B.2																	
	Identify and analyze how the author uses literary devices to convey meaning.																	
	3	1	1	Identify a fact that supports an assertion; identify an opinion			1		1		1				1			1
	3	1	2	Analyze positions/arguments for evidence of fact/opinion														
	3	2	1	Identify bias/propaganda techniques														
	3	3	1	Analyze text organization (sequence, question/answer, comparison/contrast, cause/effect, problem/solution)	3		1		4		4	3		1		4		4
	3	3	2	Identify content that fits into a specific section			1		1		1			1		1		1
	3	3	3	Interpret and make connections between graphics/charts/texts														
	Total For Assessment Anchor B.3																	
Identify and analyze concepts and organization of nonfiction text.																		
Total For Reporting Category B					14	12	26	27	40	39	79	14	4	26	9	40	13	53

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The number of items at each anchor/eligible content level will change yearly.

Mathematics

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Student Score		District Level Scores		Total Points			Number of Items				Total Number of Items			
					(Core Points)		(Matrix Points)		(Core & Matrix)		Core		Matrix		(Core & Matrix)				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total	
A: Numbers and Operations	1			Understand relationships and representations of numbers and number systems															
	1	1	1	Represent and/or use fractions as decimals/percents			1		1		1			1			1	1	
	1	1	2	Find square root of an integer	1		1		2		2		1		1		2	2	
	1	1	3	Use scientific notation	1		2		3		3		1		2		3	3	
	1	1	4	Simplify square roots	1				1		1		1				1	1	
	1	2	1	Factor algebraic expressions			4		4		4				4		4	4	
	1	2	2	Find/use GCF (monomial)	1		5		6		6		1		5		6	6	
	1	2	3	Simplify algebraic fractions			1		1		1				1		1	1	
	1	3	1	Compare and/or plot irrational numbers on a number line	1				1		1		1				1	1	
	Total For Assessment Anchor A.1					5		14		19		19		5		14		19	19
	Understand relationships among and representations of numbers and number systems																		
	2				Understand meanings, uses and relations of operations				8		8		8			2		2	2
	2	1	1		Solve problems using operations with rational numbers	1		1		2		2		1		1		2	2
	2	1	2		Solve problems using direct and inverse proportions														
	2	1	3		Identify/use proportional relationships			1		1		1				1		1	1
	2	2	1		Simplify expressions with exponents/roots/absolute value			2		2		2				2		2	2
	2	2	2		Simplify expressions involving operations of powers			2		2		2				2		2	2
	Total For Assessment Anchor A.2					1		6	8	7	8	15		1		6	2	7	2
Understand meanings, uses of operations and how they relate to each other																			
3				Compute accurately/fluently and make reasonable estimates															
3	1	1		Use order of operations to simplify	1				1		1		1				1	1	
3	2	1		Use estimation to check reasonableness of calculations	1				1		1		1				1	1	
3	2	2		Use estimation to solve problems	1				1		1		1				1	1	
Total For Assessment Anchor A.3					3				3		3		3				3	3	
Compute accurately and fluently and make reasonable estimates																			
Total For Reporting Category A					9		20	8	29	8	37		9		20	2	29	2	31

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Grade 11

The number of items at each anchor/eligible content level will change yearly.

Mathematics

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Student Score (Core Points)		District Level Scores (Matrix Points)		Total Points (Core & Matrix)			Number of Items				Total Number of Items (Core & Matrix)		
					MC	OE	MC	OE	MC	OE	Total	Core		Matrix		MC	OE	Total
Total For Assessment Anchor B.1					Not assessed at grade 11													
Understand measurable attributes and units, systems, processes of measurement																		
2			Apply techniques, tools & formulas to determine measurements		4		12		16	16		1		3		4	4	
2	1	1	Measure and/or compare angles			4		4	4			4			4		4	
2	1	2	Classify, use or determine measurements of angles	1		2		3	3		1		2		3		3	
2	2	1	Calculate surface area, volume	1		3		4	4		1		3		4		4	
2	2	2	Find perimeter, circumference, area of inscribed/circumscribed figures			3		3	3				3		3		3	
2	2	3	Find area, perimeter, circumference	1		2		3	3		1		2		3		3	
2	2	4	Find missing length measurement	1		2		3	3		1		2		3		3	
2	3	1	Describe effect of linear dimension change	1		4		5	5		1		4		5		5	
Total For Assessment Anchor B.2					5	4	20	12	25	16	41	5	1	20	3	25	4	29
Apply appropriate techniques, tools and formulas to determine measurements																		
Total For Reporting Category B					5	4	20	12	25	16	41	5	1	20	3	25	4	29

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The number of items at each anchor/eligible content level will change yearly.

Mathematics

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Student Score (Core Points)		District Level Scores (Matrix Points)		Total Points (Core & Matrix)			Number of Items				Total Number of Items (Core & Matrix)			
					MC	OE	MC	OE	MC	OE	Total	Core		Matrix		MC	OE	Total	
C: Geometry	1			Analyze characteristics & properties of 2-D & 3-D shapes				8		8	8				2		2	2	
	1	1	1	Recognize/use properties of circles	1		1		2		2	1		1		2		2	
	1	1	2	Recognize or use properties of arcs, angles, semicircles	1		1		2		2	1		1		2		2	
	1	2	1	Identify/use triangle properties	1		1		2		2	1		1		2		2	
	1	2	2	Recognize/use quadrilateral properties	1		2		3		3	1		2		3		3	
	1	3	1	Recognize/use properties of congruent & similar polygons/solids	3		1		4		4	3		1		4		4	
	1	4	1	Use the Pythagorean Theorem	2		2		4		4	2		2		4		4	
	Total For Assessment Anchor C.1					9		8	8	17	8	25	9		8	2	17	2	19
	Total For Assessment Anchor C.2					Not assessed at grade 11													
	Identify and/or apply concepts of transformations or symmetry																		
	3				Locate points/describe relationships using the coordinate plane				8		8	8				2		2	2
	3	1	1		Find distance and/or midpoint	1		2		3		3	1		2		3		3
	3	1	2		Relate slope to perpendicularity and/or parallelism	1		2		3		3	1		2		3		3
	Total For Assessment Anchor C.3					2		4	8	6	8	14	2		4	2	6	2	8
Locate points or describe relationships using the coordinate plane																			
Total For Reporting Category C					11		12	16	23	16	39	11		12	4	23	4	27	

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The number of items at each anchor/eligible content level will change yearly.

Mathematics

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Student Score		District Level Scores		Total Points			Number of Items				Total Number of Items				
					(Core Points)		(Matrix Points)		(Core & Matrix)		Core		Matrix		(Core & Matrix)					
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total		
D: Algebraic Concepts	1			Understand patterns, relations and functions				4		4	4				1			1	1	
	1	1	1	Analyze data for pattern; represent pattern algebraically/graphically	1		4		5		5	1		4			5		5	
	1	1	2	Determine if relation is a function	1		1		2		2	1		1			2		2	
	Total For Assessment Anchor D.1					2		5	4	7	4	11	2		5	1	7	1	8	
	Understand patterns, relations and functions																			
	2			Represent/analyze mathematical situations		4		8		12	12		1		2			3	3	
	2	1	1	Solve compound inequalities and/or graph solution sets on number line			4		4		4			4			4		4	
	2	1	2	Identify or graph linear inequalities on coordinate plane	1		3		4		4	1		3			4		4	
	2	1	3	Write and/or solve linear equation	3		5		8		8	3		5			8		8	
	2	1	4	Solve systems of equations	1		2		3		3	1		2			3		3	
	2	1	5	Solve quadratic equations using factoring	1		3		4		4	1		3			4		4	
	2	2	1	Add/subtract/multiply polynomials	2		3		5		5	2		3			5		5	
	Total For Assessment Anchor D.2					8	4	20	8	28	12	40	8	1	20	2	28	3	31	
	Represent/analyze mathematical situations using numbers, symbols, words, tables and/or graphs																			
	3			Analyze change in various contexts				4		4	4				1			1	1	
	3	1	1	Identify/describe rates of change	3		4		7		7	3		4			7		7	
	3	1	2	Determine relations in variable changes			4		4		4			4			4		4	
	3	2	1	Apply formula for slope of line	2				2		2	2					2		2	
	3	2	2	Write/identify linear equation	2		7		9		9	2		7			9		9	
	3	2	3	Compute slope	1		3		4		4	1		3			4		4	
	Total For Assessment Anchor D.3					8		18	4	26	4	30	8		18	1	26	1	27	
	Analyze change in various contexts																			
	4			Describe/use models to represent quantitative relationships																
	4	1	1	Match graph to table/equation	2		2		4		4	2		2			4		4	
	4	1	2	Graph linear functions	1		2		3		3	1		2			3		3	
	4	1	3	Determine maximum or minimum of quadratic function	1		1		2		2	1		1			2		2	
	Total For Assessment Anchor D.4					4		5		9		9	4		5		9		9	
Describe or use models to represent quantitative relationships																				
Total For Reporting Category D					22	4	48	16	70	20	90	22	1	48	4	70	5	75		

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Mathematics

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Student Score		District Level Scores		Total Points			Number of Items				Total Number of Items					
					(Core Points)		(Matrix Points)		(Core & Matrix)		Core		Matrix		(Core & Matrix)						
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total			
E: Data Analysis and Probability	1			Formulate/answer questions; organize, display, interpret or analyze data		4		4		8	8			1		1		2	2		
	1	1	1	Create and/or use appropriate graphical representations	1		1		2		2			1		1		2	2		
	1	1	2	Answer questions based on displayed data	2		1		3		3			2		1		3	3		
	Total For Assessment Anchor E.1																				
	Formulate or answer questions about data and/or organize, display, interpret or analyze data					3	4	2	4	5	8	13			3	1	2	1	5	2	7
	2			Select and/or use appropriate statistical methods to analyze data				4		4	4						1		1	1	
	2	1	1	Find or select appropriate measure of central tendency			2		2		2					2		2		2	
	2	1	2	Calculate and/or interpret range, quartiles, interquartile range			2		2		2					2		2		2	
	2	1	3	Describe influence of outliers			1		1		1					1		1		1	
	Total For Assessment Anchor E.2																				
	Select and/or use appropriate statistical methods to analyze data							5	4	5	4	9				5	1	5	1	6	
	3			Understand/apply basic concepts of probability or outcomes																	
	3	1	1	Determine probabilities			2		2		2					2		2		2	
	3	1	2	Determine, convert and/or compare probability and/or odds	1		2		3		3				1		2		3	3	
	3	2	1	Determine number of permutations and/or combinations			3		3		3					3		3		3	
	Total For Assessment Anchor E.3																				
	Understand and/or apply basic concepts of probability or outcomes					1		7		8		8			1		7		8		8
	4			Develop/evaluate inferences, predictions or draw conclusions based on data																	
	4	1	1	Estimate or calculate predictions based on circle, line, bar graphs			1		1		1					1		1		1	
	4	1	2	Use probability to predict outcomes	2		1		3		3				2		1		3	3	
	4	2	1	Draw/write equation for best-fit line	1		2		3		3				1		2		3	3	
	4	2	2	Predict using equations of best-fit lines			2		2		2					2		2		2	
	Total For Assessment Anchor E.4																				
Develop and/or evaluate inferences and predictions or draw conclusions based on data or data displays					3		6		9		9			3		6		9		9	
Total For Reporting Category E					7	4	20	8	27	12	39			7	1	20	2	27	3	30	

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Reading

Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Student Score (Core Points)		District Level Scores (Matrix Points)		Total Points (Core & Matrix)			Number of Items				Total Number of Items (Core & Matrix)				
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total		
					A: Comprehension and Reading Skills	1	1	1	Identify meaning of multiple-meaning words											
1	1	2	Identify synonym/antonym	1					1		1		1				1		1	
1	2	1	Identify meaning of unfamiliar word/root/affix																	
1	2	2	Define words from context clues	1			3		4		4		1		3		4		4	
1	3	1	Make inferences/draw conclusions	7			8		15		15		7		8		15		15	
1	3	2	Cite evidence to support assertions																	
1	4	1	Identify and/or interpret main ideas/relevant details				3		3		3				3		3		3	
1	5	1	Summarize main ideas/themes and important details																	
1	6	1	Identify mood and words that convey mood				1		1		1				1		1		1	
1	6	2	Draw conclusions about theme or author's purpose in relation to text elements (dialogue, symbolism, word choice)																	
Total For Assessment Anchor A.1						9		15		24		24		9		15		24		24
Understanding fiction text appropriate to grade level.																				
2	1	1	Identify meaning of multiple-meaning words				2		2		2				2		2		2	
2	1	2	Identify meaning of content-specific words																	
2	2	1	Identify meaning of unfamiliar word/root/affix																	
2	2	2	Identify meaning of words using context clues	2			12		14		14		2		12		14		14	
2	3	1	Make inferences/draw conclusions	5			22	9	27	9	36		5		22	3	27	3	30	
2	3	2	Cite evidence to support assertions	2			1		3		3		2		1		3		3	
2	4	1	Identify and/or interpret main ideas/relevant details	8			23		31		31		8		23		31		31	
2	5	1	Summarize main ideas/important details		3				3	3			1				1	1		
2	6	1	Draw conclusions about author's purpose in relation to word choices																	
Total For Assessment Anchor A.2					17	3	60	9	77	12	89	17	1	60	3	77	4	81		
Understanding nonfiction text appropriate to grade level.																				
Total For Reporting Category A					26	3	75	9	101	12	113	26	1	75	3	101	4	105		

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Reading

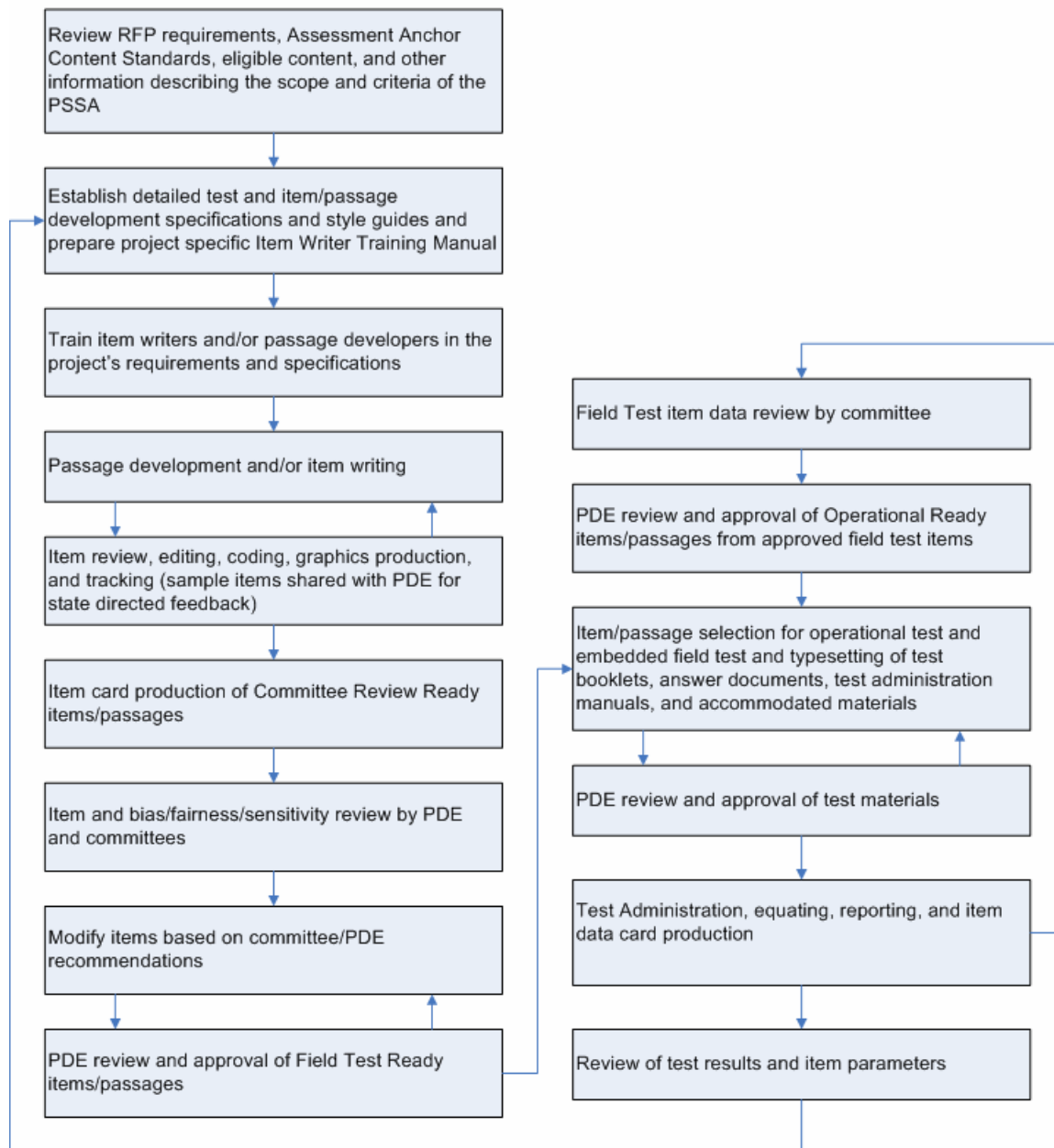
Reporting Category	Assessment Anchor	Descriptor (Sub-anchor)	Eligible Content	Focus	Student Score (Core Points)		District Level Scores (Matrix Points)		Total Points (Core & Matrix)			Number of Items				Total Number of Items (Core & Matrix)			
					MC	OE	MC	OE	MC	OE	Total	MC	OE	MC	OE	MC	OE	Total	
					B: Interpretation and Analysis of Literature	1	1	1	Describe/analyze/evaluate relationships in fiction and literary nonfiction (character/narrator/ speaker/subject, setting, plot, theme, topic, tone, style); describe/analyze/evaluate in nonfiction text (content, topic, style, tone)	5	6	8	24	13	30	43	5	2	8
Total For Assessment Anchor B.1																			
Analyze components within and across texts.																			
2	1	1	Analyze effectiveness of simile, metaphor, satire, personification, imagery, and irony	3		3	1		4	3	7	3	1	1		4	1	5	
2	2	1	Analyze the effectiveness of foreshadowing/flashbacks																
2	2	2	Analyze the effectiveness of the point of view as used by the author (first/third/limited/omniscient)				1		1		1				1			1	
Total For Assessment Anchor B.2																			
Analyze the effectiveness of the author's use of literary devices.																			
3	1	1	Identify a fact that supports an assertion; identify an opinion	3			4		7		7		3		4		7		7
3	1	2	Analyze positions/arguments for evidence of fact/opinion																
3	2	1	Identify bias/propaganda techniques																
3	2	2	Analyze the effectiveness of bias/propaganda techniques																
3	3	1	Identify/evaluate text organization				1		1		1				1			1	
3	3	2	Analyze/evaluate author's purpose for text organization and content	3			12	3	15	3	18		3		12	1	15	1	16
3	3	3	Analyze/evaluate author's thesis and logic					3		3	3					1		1	1
3	3	4	Analyze/evaluate graphics and charts																
Total For Assessment Anchor B.3																			
Interpret and analyze concepts and organization of nonfiction text.																			
Total For Reporting Category B				14	9	27	30	41	39	80	14	3	27	10	41	13	54		

Appendix E:

Item and Test Development Processes

Appendix E: Item and Test Development Processes

**DRC Item and Test Development Process
Mathematics and Reading**



Appendix F:
Item Review Tally Form

PSSA Item Review Tally Form: 2004/2005 Item Content Review

Grade: 5

Content: Reading

Record actual edits and comments on Item Card

Passage Title:

Status	Specify Change Location	Reason for Edit/Rejection
A = Accepted as is AR = Accepted w/revisions R = Rejected	T = Textual edit D = Distractor edit C = Item characteristic edit	A = Content Alignment R = Rigor Level T = Technical Design

ID #	Type	*Record appropriate code	*Record appropriate code	*Record appropriate code
Passage	P		T D C	
52-0001	MC		T D C	
52-0002	MC		T D C	
52-0003	MC		T D C	
52-0004	MC		T D C	
52-0005	MC		T D C	
52-0006	MC		T D C	
52-0007	MC		T D C	
52-0008	MC		T D C	
52-0009	MC		T D C	
52-0010	MC		T D C	
52-0011	MC		T D C	
52-0012	MC		T D C	
52-0013	MC		T D C	
52-0014	MC		T D C	
52-0015	MC		T D C	
52-0016	MC		T D C	
54-0017	OE		T D C	
54-0018	OE		T D C	
54-0019	OE		T D C	

Required Signatures

Date

DRC
Signature

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WestEd Signature

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PDE
Signature

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Appendix F: Item Review Tally Form

PSSA Item Review Tally Form: 2004/2005 Item Content Review

Grade: 5

Content: Mathematics

Record actual edits and comments on Item Card

ID #	Page #	Status	Specify Change Location	Reason for Edit/Rejection
		A = Accepted as is AR = Accepted w/revisions R = Rejected *Record appropriate code	T = Text edit G = Graphic edit D = Distracter edit C = Item characteristic edit	A = Content Alignment R = Rigor Level T = Technical Design *Record appropriate code
51-0001	1		T G D C	
51-0002	2		T G D C	
51-0003	3		T G D C	
51-0004	4		T G D C	
51-0005	5		T G D C	
51-0006	6		T G D C	
51-0007	7		T G D C	
51-0008	8		T G D C	
51-0009	9		T G D C	
51-0010	10		T G D C	
51-0011	11		T G D C	
51-0012	12		T G D C	
51-0013	13		T G D C	
51-0014	14		T G D C	
51-0015	15		T G D C	
51-0016	16		T G D C	
51-0017	17		T G D C	
51-0018	18		T G D C	
51-0019	19		T G D C	
51-0020	20		T G D C	
51-0021	21		T G D C	
51-0022	22		T G D C	
51-0023	23		T G D C	
51-0024	24		T G D C	
51-0025	25		T G D C	
51-0026	26		T G D C	

Required Signatures

Date

DRC Signature

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WestEd Signature

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PDE Signature

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Appendix G:

PSSA New Item Review Cards and IVAN Card

PSSA New Item Review	
	Item
	51-3174
	Content Area
	Grade Level
	Rpt Category
	Asmt Anchor
	Sub-Anchor
	Eligible Content
	Primary Code
	Passage Title
	Passage ID
	Focus
	Item Type
	Points
	Depth of Knldg
	Est Difficulty
	Answer Key
	Calculator Use
Distractor Analysis-A:	
Distractor Analysis-B:	
Distractor Analysis-C:	
Distractor Analysis-D:	

Appendix G: PSSA New Item Review Cards and IVAN Card

PSSA New Item Review	
	Item
	51-3173
	Content Area
	Grade Level
	Rpt Category
	Asmt Anchor
	Sub-Anchor
	Eligible Content
	Primary Code
	Passage Title
	Passage ID
	Focus
	Item Type
	Points
	Depth of Knldg
	Est Difficulty
	Answer Key
	Calculator Use

Appendix G: PSSA New Item Review Cards and IVAN Card

IVAN Item Card

Item content copyright Pennsylvania



Released: No **Item Status:** accepted

Item Name	Item Type	Key	Grade	Subject	Report Category	Asmt Anchor	Sub-Anchor	Eligible Content	Content Difficulty	DRP	Item Calculator
	MC	1	08	Math	A	3	3	1			No

Depth of Knowledge: 1

2. A list of numbers is shown below.

-5 -4 -3 -2 -1

What is the sum of the numbers shown above?

A -5
B -2
C -1
D 0

Administration

Form Grade	Form Subject	Form Name	Sequence	Form Type	Month	Year	Report Category	Asmt Anchor	Sub-Anchor	Eligible Content	Day	Session	Calculator
08	Math	A		Field Test	May	2004	A	3	3	1	0		No

Statistics Detail

Label	P-Value	Pt. Bis. Corr.	Label	Value	DIF Analysis	Value
A*	0.696	0.449	N	928	White/Black	A-
B	0.145	-0.375	Outfit t	-3.900	Eco Disad	A-
C	0.084	-0.315	Logit	-1.260	Male/Female	B-
D	0.069	-0.259	Logit SE	0.079		
Omits	0.005					

Notes:

Accepted by Data Review Committee, August 04

Appendix H:

2006 Uncommon Grade 5 Multiple Choice Statistics for Reading

Appendix H: 2006 Uncommon Grade 5 Multiple Choice Statistics for Reading

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00345	A	M	7149	0.9074	0.9074	0.0315	0.0238	0.0371	0.0003	0.4625	0.4625	-0.3291	-0.2522	-0.3236	-1.8867	0.0450	-8.50
00346	B	M	7149	0.8014	0.0592	0.8014	0.0325	0.1070	0.0000	0.5777	-0.4222	0.5777	-0.3767	-0.4799	-0.8131	0.0338	-9.90
00347	D	M	7149	0.8089	0.0278	0.0681	0.0940	0.8089	0.0011	0.5217	-0.3457	-0.3840	-0.4082	0.5217	-0.8724	0.0343	-9.30
00348	B	M	7149	0.8534	0.0550	0.8534	0.0544	0.0358	0.0014	0.5328	-0.3684	0.5328	-0.3662	-0.3972	-1.2753	0.0377	-9.90
00349	B	M	7149	0.3988	0.0564	0.3988	0.1279	0.4159	0.0011	0.2529	-0.2945	0.2529	-0.3552	-0.1908	1.4994	0.0276	9.90
00350	B	M	7149	0.7282	0.0765	0.7282	0.0434	0.1508	0.0011	0.4286	-0.3896	0.4286	-0.3293	-0.2955	-0.2925	0.0306	-0.60
00351	C	M	7149	0.7590	0.0951	0.0852	0.7590	0.0596	0.0011	0.4488	-0.3123	-0.3169	0.4488	-0.3823	-0.5013	0.0318	-4.30
00352	C	M	7149	0.7394	0.1308	0.0642	0.7394	0.0638	0.0018	0.4301	-0.2559	-0.3383	0.4301	-0.4395	-0.3650	0.0310	-0.10
00353	C	F	7149	0.5460	0.1245	0.0604	0.5460	0.2668	0.0024	0.4085	-0.4596	-0.3679	0.4085	-0.3082	0.7189	0.0275	1.90
00354	D	F	7149	0.2751	0.4525	0.0832	0.1872	0.2751	0.0020	0.1997	-0.1529	-0.3842	-0.2807	0.1997	2.1742	0.0296	9.90
00355	B	F	7149	0.3880	0.2483	0.3880	0.2363	0.1245	0.0029	0.2122	-0.1300	0.2122	-0.2165	-0.3265	1.5545	0.0277	9.90
00356	A	F	7149	0.4409	0.4409	0.2812	0.0498	0.2251	0.0031	0.3456	0.3456	-0.2959	-0.4838	-0.3237	1.2635	0.0273	8.60
00357	B	F	7149	0.2903	0.4118	0.2903	0.1978	0.0974	0.0028	0.1759	-0.1242	0.1759	-0.2657	-0.2582	2.1012	0.0293	9.90
00358	C	F	7149	0.6164	0.0782	0.2694	0.6164	0.0326	0.0034	0.3062	-0.2820	-0.2381	0.3062	-0.2394	0.3652	0.0282	7.80
00359	A	F	7149	0.6195	0.6195	0.0722	0.1161	0.1890	0.0032	0.4076	0.4076	-0.4640	-0.2854	-0.3153	0.3413	0.0282	1.70
00360	A	F	7149	0.5960	0.5960	0.1828	0.0915	0.1266	0.0031	0.4703	0.4703	-0.3678	-0.4072	-0.4472	0.4528	0.0280	-4.10
00361	B	M	6724	0.4320	0.3571	0.4320	0.0784	0.1312	0.0013	0.3043	-0.2793	0.3043	-0.3324	-0.2849	1.4054	0.0280	9.70
00362	A	M	6724	0.7061	0.7061	0.1154	0.0416	0.1356	0.0012	0.5058	0.5058	-0.3877	-0.3965	-0.4166	-0.0565	0.0306	-9.90
00363	D	M	6724	0.8056	0.0568	0.0738	0.0626	0.8056	0.0012	0.5486	-0.4123	-0.3767	-0.4273	0.5486	-0.7214	0.0347	-9.90
00364	D	M	6724	0.6655	0.0964	0.1539	0.0834	0.6655	0.0007	0.2313	-0.1983	-0.1819	-0.1486	0.2313	0.1917	0.0296	9.90
00365	C	M	6724	0.6560	0.1225	0.1660	0.6560	0.0538	0.0016	0.3801	-0.3079	-0.2865	0.3801	-0.3349	0.2491	0.0294	0.10
00366	A	M	6724	0.7017	0.7017	0.1084	0.0712	0.1170	0.0016	0.2051	0.2051	-0.1047	-0.1219	-0.2218	-0.0108	0.0304	9.90
00367	C	M	6724	0.5689	0.0235	0.1386	0.5689	0.2681	0.0009	0.3381	-0.3983	-0.2776	0.3381	-0.2843	0.7095	0.0282	6.30
00368	C	M	6724	0.5764	0.0659	0.1408	0.5764	0.2149	0.0019	0.4087	-0.4308	-0.3623	0.4087	-0.3212	0.6728	0.0283	0.90
00369	C	F	6724	0.4756	0.1438	0.2252	0.4756	0.1545	0.0009	0.3490	-0.4205	-0.1640	0.3490	-0.4576	1.1974	0.0279	7.50
00370	B	F	6724	0.7539	0.0922	0.7539	0.0764	0.0766	0.0009	0.4374	-0.3583	0.4374	-0.3123	-0.3020	-0.3644	0.0323	-3.10
00371	A	F	6724	0.8482	0.8482	0.0903	0.0345	0.0254	0.0016	0.3873	0.3873	-0.2750	-0.2798	-0.2453	-1.0982	0.0381	-1.40
00372	D	F	6724	0.7957	0.0693	0.0480	0.0860	0.7957	0.0010	0.4823	-0.3298	-0.3219	-0.3956	0.4823	-0.6465	0.0342	-6.70
00373	C	F	6724	0.8709	0.0402	0.0445	0.8709	0.0430	0.0015	0.4796	-0.3450	-0.3101	0.4796	-0.3223	-1.3343	0.0407	-9.50
00374	C	F	6724	0.7158	0.0775	0.1102	0.7158	0.0953	0.0012	0.4711	-0.3822	-0.3452	0.4711	-0.3696	-0.1325	0.0310	-5.70
00375	C	F	6724	0.6911	0.1731	0.0657	0.6911	0.0692	0.0009	0.4838	-0.4456	-0.3437	0.4838	-0.3244	0.0343	0.0302	-6.30
00376	D	F	6724	0.4997	0.3816	0.0819	0.0341	0.4997	0.0027	0.2420	-0.1341	-0.3845	-0.4107	0.2420	1.0712	0.0279	9.90
00377	B	M	6706	0.8786	0.0458	0.8786	0.0564	0.0188	0.0004	0.3778	-0.3085	0.3778	-0.2383	-0.2044	-1.3920	0.0418	-2.30
00378	C	M	6706	0.8944	0.0456	0.0249	0.8944	0.0347	0.0003	0.4119	-0.2437	-0.3105	0.4119	-0.2815	-1.5952	0.0445	-5.30
00379	A	M	6706	0.9244	0.9244	0.0279	0.0148	0.0321	0.0009	0.3634	0.3634	-0.2577	-0.2412	-0.2086	-2.0097	0.0511	-2.10
00380	C	M	6706	0.8357	0.0259	0.0643	0.8357	0.0731	0.0010	0.4352	-0.3111	-0.3052	0.4352	-0.3121	-0.9768	0.0373	-4.60
00381	A	M	6706	0.7756	0.7756	0.0957	0.0620	0.0655	0.0012	0.3586	0.3586	-0.2995	-0.2590	-0.2130	-0.4966	0.0333	2.20
00382	B	M	6706	0.3580	0.3212	0.3580	0.2639	0.0558	0.0010	0.0778	-0.0910	0.0778	0.0270	-0.3546	1.7997	0.0286	9.90
00383	C	M	6706	0.6931	0.0297	0.2125	0.6931	0.0634	0.0013	0.2315	-0.2767	-0.0923	0.2315	-0.3261	0.0466	0.0302	9.90
00384	D	M	6706	0.4551	0.0474	0.0936	0.4020	0.4551	0.0018	0.2866	-0.4967	-0.4309	-0.1722	0.2866	1.2972	0.0278	9.90
00385	D	F	6706	0.6013	0.0987	0.1139	0.1848	0.6013	0.0013	0.4477	-0.4614	-0.4230	-0.3120	0.4477	0.5518	0.0285	-3.30
00386	A	F	6706	0.6578	0.6578	0.0447	0.2568	0.0392	0.0015	0.3750	0.3750	-0.3327	-0.2789	-0.3867	0.2460	0.0294	0.70
00387	D	F	6706	0.8185	0.0661	0.0459	0.0667	0.8185	0.0028	0.4407	-0.3172	-0.3428	-0.2843	0.4407	-0.8137	0.0358	-3.80
00388	B	F	6706	0.5270	0.2878	0.5270	0.1111	0.0714	0.0027	0.3959	-0.3409	0.3959	-0.3812	-0.3746	0.9361	0.0278	2.70
00389	C	F	6706	0.8066	0.1005	0.0506	0.8066	0.0398	0.0025	0.5101	-0.4262	-0.3443	0.5101	-0.3231	-0.7368	0.0351	-7.10
00390	C	F	6706	0.6710	0.0698	0.1275	0.6710	0.1290	0.0027	0.3870	-0.3526	-0.3379	0.3870	-0.2448	0.1574	0.0298	1.10
00391	A	F	6706	0.8257	0.8257	0.0498	0.0634	0.0582	0.0030	0.4944	0.4944	-0.3871	-0.3457	-0.3381	-0.8869	0.0364	-6.40
00392	B	F	6706	0.7647	0.1004	0.7647	0.0899	0.0412	0.0039	0.4393	-0.3294	0.4393	-0.3180	-0.3559	-0.4318	0.0329	-2.30
00393	B	M	6682	0.7079	0.1061	0.7079	0.0578	0.1278	0.0004	0.3823	-0.3083	0.3823	-0.2857	-0.2843	-0.0152	0.0307	-0.40

Appendix H: 2006 Uncommon Grade 5 Multiple Choice Statistics for Reading

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00394	B	M	6682	0.8334	0.0397	0.8334	0.0928	0.0340	0.0001	0.4832	-0.3377	0.4832	-0.3793	-0.3003	-0.9371	0.0369	-6.90
00395	C	M	6682	0.5198	0.1416	0.2507	0.5198	0.0867	0.0013	0.2973	-0.3222	-0.1555	-0.2973	-0.4014	0.9795	0.0281	9.90
00396	A	M	6682	0.5025	0.5025	0.1455	0.2489	0.1022	0.0009	0.3492	0.3492	-0.3604	-0.2671	-0.3800	1.0849	0.0280	6.50
00397	B	M	6682	0.8544	0.0641	0.8544	0.0227	0.0579	0.0009	0.4753	-0.3466	0.4753	-0.2508	-0.3680	-1.1249	0.0388	-6.20
00398	A	M	6682	0.5615	0.5615	0.0811	0.1004	0.2558	0.0012	0.2893	0.2893	-0.2600	-0.3749	-0.1769	0.7705	0.0283	9.90
00399	B	M	6682	0.6031	0.2409	0.6031	0.0546	0.0997	0.0016	0.4135	-0.2981	0.4135	-0.4175	-0.4146	0.5535	0.0287	0.00
00400	D	M	6682	0.6368	0.0834	0.1324	0.1453	0.6368	0.0021	0.4879	-0.3929	-0.3946	-0.4237	0.4879	0.3627	0.0292	-6.70
00401	D	F	6682	0.7827	0.1402	0.0160	0.0593	0.7827	0.0018	0.5078	-0.4559	-0.3262	-0.3187	0.5078	-0.5247	0.0336	-7.10
00402	C	F	6682	0.7656	0.0902	0.0901	0.7656	0.0524	0.0016	0.3489	-0.2499	-0.2537	0.3489	-0.2730	-0.3957	0.0328	5.20
00403	A	F	6682	0.8045	0.8045	0.0781	0.0804	0.0344	0.0025	0.5118	0.5118	-0.3596	-0.4263	-0.3284	-0.6876	0.0348	-7.30
00404	B	F	6682	0.6423	0.1030	0.6423	0.1309	0.1214	0.0024	0.4207	-0.3138	0.4207	-0.3101	-0.4004	0.3516	0.0293	-2.20
00405	D	F	6682	0.6678	0.1649	0.0799	0.0841	0.6678	0.0033	0.4907	-0.3723	-0.4586	-0.3827	0.4907	0.1712	0.0299	-7.20
00406	D	F	6682	0.7760	0.0932	0.0742	0.0537	0.7760	0.0028	0.5119	-0.3107	-0.4348	-0.4345	0.5119	-0.4932	0.0334	-6.10
00407	C	F	6682	0.4903	0.1778	0.1712	0.4903	0.1588	0.0019	0.2105	-0.0801	-0.2218	0.2105	-0.2645	1.1399	0.0280	9.90
00408	A	F	6682	0.6464	0.6464	0.1097	0.1987	0.0421	0.0031	0.4742	0.4742	-0.3409	-0.4146	-0.4569	0.3172	0.0294	-5.80
00409	A	M	6660	0.8865	0.8865	0.0368	0.0393	0.0372	0.0002	0.4533	0.4533	-0.2964	-0.3393	-0.2761	-1.4699	0.0431	-8.00
00410	A	M	6660	0.8114	0.8114	0.0575	0.0614	0.0692	0.0005	0.4856	0.4856	-0.3568	-0.3854	-0.3103	-0.7524	0.0357	-8.10
00411	D	M	6660	0.7189	0.1931	0.0632	0.0239	0.7189	0.0009	0.5215	-0.4785	-0.3724	-0.3219	0.5215	-0.1010	0.0313	-8.40
00412	B	M	6660	0.8764	0.0312	0.8764	0.0480	0.0431	0.0012	0.4650	-0.2587	0.4650	-0.3175	-0.3688	-1.3845	0.0420	-6.60
00413	C	M	6660	0.7491	0.0781	0.0291	0.7491	0.1426	0.0011	0.4390	-0.4187	-0.3479	0.4390	-0.2870	-0.2912	0.0324	-1.20
00414	B	M	6660	0.9023	0.0431	0.9023	0.0254	0.0285	0.0008	0.4839	-0.3505	0.4839	-0.2962	-0.3236	-1.6758	0.0459	-7.50
00415	A	M	6660	0.7856	0.7856	0.0617	0.0450	0.1066	0.0011	0.3966	0.3966	-0.2308	-0.3533	-0.2930	-0.5606	0.0342	-0.90
00416	B	M	6660	0.7646	0.0970	0.7646	0.0820	0.0551	0.0014	0.4822	-0.4132	0.4822	-0.3355	-0.3193	-0.4041	0.0331	-7.00
00417	C	F	6660	0.7435	0.0964	0.0440	0.7435	0.1143	0.0018	0.4974	-0.4662	-0.4212	0.4974	-0.2953	-0.2755	0.0323	-5.80
00418	A	F	6660	0.9060	0.9060	0.0278	0.0308	0.0339	0.0015	0.4621	0.4621	-0.3130	-0.3099	-0.3007	-1.7582	0.0471	-6.60
00419	B	F	6660	0.6911	0.0674	0.6911	0.1093	0.1297	0.0024	0.3614	-0.2315	0.3614	-0.3382	-0.2577	0.0825	0.0305	1.20
00420	B	F	6660	0.8860	0.0383	0.8860	0.0420	0.0314	0.0023	0.4862	-0.3005	0.4862	-0.3441	-0.3532	-1.4867	0.0433	-6.10
00421	D	F	6660	0.5709	0.1117	0.1679	0.1464	0.5709	0.0032	0.3281	-0.4338	-0.1472	-0.3061	0.3281	0.7335	0.0284	8.80
00422	C	F	6660	0.7643	0.1438	0.0396	0.7643	0.0494	0.0029	0.3359	-0.1834	-0.3575	0.3359	-0.2806	-0.3812	0.0330	3.70
00423	C	F	6660	0.3086	0.4174	0.1554	0.3086	0.1149	0.0038	0.0763	0.0525	-0.2392	0.0763	-0.2729	2.1071	0.0297	9.90
00424	C	F	6660	0.4047	0.1824	0.1456	0.4047	0.2641	0.0032	0.2584	-0.2066	-0.3148	0.2584	-0.2531	1.5890	0.0283	9.90
00425	C	M	6673	0.8782	0.0271	0.0195	0.8782	0.0749	0.0003	0.3812	-0.2801	-0.2218	0.3812	-0.2725	-1.3510	0.0418	-2.00
00426	B	M	6673	0.8479	0.0360	0.8479	0.0845	0.0313	0.0003	0.3846	-0.2914	0.3846	-0.2606	-0.2598	-1.0401	0.0383	-1.00
00427	C	M	6673	0.6693	0.0129	0.2070	0.6693	0.1095	0.0013	0.3094	-0.2876	-0.1780	0.3094	-0.3660	0.2099	0.0298	7.70
00428	D	M	6673	0.6606	0.1728	0.1076	0.0581	0.6606	0.0009	0.4896	-0.3973	-0.3779	-0.4702	0.4896	0.2602	0.0296	-6.30
00429	D	M	6673	0.9117	0.0141	0.0472	0.0258	0.9117	0.0012	0.3261	-0.2357	-0.1743	-0.2506	0.3261	-1.7782	0.0479	-1.60
00430	C	M	6673	0.5560	0.1419	0.2585	0.5560	0.0417	0.0019	0.3111	-0.3008	-0.2307	0.3111	-0.3595	0.8218	0.0281	9.70
00431	D	M	6673	0.7920	0.0406	0.1089	0.0562	0.7920	0.0022	0.3640	-0.2576	-0.2421	-0.3116	0.3640	-0.5620	0.0341	2.60
00432	B	M	6673	0.7918	0.0623	0.7918	0.0339	0.1091	0.0028	0.3959	-0.2711	0.3959	-0.2496	-0.3225	-0.5608	0.0341	-2.20
00433	B	F	6673	0.7440	0.0886	0.7440	0.0177	0.1482	0.0015	0.3597	-0.2978	0.3597	-0.2907	-0.2639	-0.2403	0.0320	2.10
00434	B	F	6673	0.4202	0.2035	0.4202	0.2053	0.1689	0.0021	0.1573	-0.1292	0.1573	-0.1817	-0.1264	1.5208	0.0281	9.90
00435	A	F	6673	0.5554	0.5554	0.0541	0.2345	0.1535	0.0025	0.3373	0.3373	-0.3736	-0.2870	-0.2648	0.8274	0.0281	5.90
00436	B	F	6673	0.6156	0.1043	0.6156	0.0589	0.2183	0.0028	0.3352	-0.3167	0.3352	-0.3923	-0.2100	0.5099	0.0288	8.60
00437	D	F	6673	0.8073	0.0429	0.0415	0.1056	0.8073	0.0027	0.5339	-0.4061	-0.3917	-0.4002	0.5339	-0.6942	0.0351	-9.70
00438	C	F	6673	0.5681	0.0643	0.1211	0.5681	0.2434	0.0031	0.1959	-0.3127	-0.1492	0.1959	-0.1130	0.7645	0.0282	9.90
00439	D	F	6673	0.6372	0.0599	0.2602	0.0396	0.6372	0.0031	0.5061	-0.3771	-0.4636	-0.4007	0.5061	0.3991	0.0291	-8.90
00440	A	F	6673	0.7848	0.7848	0.1167	0.0456	0.0499	0.0030	0.4759	0.4759	-0.3421	-0.3390	-0.3923	-0.5170	0.0338	-6.50
00441	D	M	6644	0.6863	0.0596	0.2079	0.0456	0.6863	0.0006	0.3310	-0.2920	-0.2408	-0.2821	0.3310	0.1040	0.0304	4.00
00442	C	M	6644	0.8870	0.0479	0.0441	0.8870	0.0209	0.0002	0.4350	-0.2776	-0.3794	0.4350	-0.1887	-1.4846	0.0434	-6.00

Appendix H: 2006 Uncommon Grade 5 Multiple Choice Statistics for Reading

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00443	A	M	6644	0.5501	0.5501	0.2961	0.0602	0.0921	0.0015	0.3982	0.3982	-0.3964	-0.3972	-0.2217	0.8404	0.0283	3.30
00444	A	M	6644	0.8415	0.8415	0.0418	0.0441	0.0710	0.0015	0.4370	0.4370	-0.2709	-0.3161	-0.3201	-0.9946	0.0379	-4.50
00445	D	M	6644	0.6072	0.0756	0.2365	0.0796	0.6072	0.0012	0.4504	-0.4625	-0.3752	-0.3247	0.4504	0.5514	0.0289	-4.40
00446	C	M	6644	0.7139	0.0355	0.0409	0.7139	0.2082	0.0015	0.4180	-0.3795	-0.3461	0.4180	-0.3154	-0.0623	0.0312	-0.90
00447	D	M	6644	0.5887	0.0599	0.1571	0.1936	0.5887	0.0008	0.3176	-0.3983	-0.2814	-0.2089	0.3176	0.6403	0.0287	9.90
00448	B	M	6644	0.4383	0.3888	0.4383	0.1200	0.0503	0.0027	0.2796	-0.1851	0.2796	-0.3597	-0.4635	1.4280	0.0282	9.90
00449	A	F	6644	0.8948	0.8948	0.0537	0.0295	0.0211	0.0009	0.4497	0.4497	-0.3767	-0.2412	-0.2494	-1.5640	0.0445	-7.10
00450	B	F	6644	0.5589	0.0874	0.5589	0.1764	0.1753	0.0020	0.3425	-0.1294	0.3425	-0.4354	-0.2602	0.8017	0.0284	9.00
00451	D	F	6644	0.8448	0.0534	0.0349	0.0647	0.8448	0.0021	0.5395	-0.3930	-0.3490	-0.4041	0.5395	-1.0383	0.0383	-9.90
00452	D	F	6644	0.8352	0.0391	0.0692	0.0548	0.8352	0.0017	0.5266	-0.3398	-0.3938	-0.3837	0.5266	-0.9490	0.0375	-9.90
00453	C	F	6644	0.8627	0.0339	0.0569	0.8627	0.0443	0.0023	0.5379	-0.3559	-0.4008	0.5379	-0.3630	-1.2206	0.0403	-9.90
00454	B	F	6644	0.8520	0.0269	0.8520	0.0738	0.0447	0.0026	0.5197	-0.3195	0.5197	-0.3955	-0.3737	-1.1043	0.0390	-7.90
00455	A	F	6644	0.7721	0.7721	0.1227	0.0759	0.0263	0.0030	0.4445	0.4445	-0.3039	-0.3649	-0.3608	-0.4459	0.0335	-3.70
00456	D	F	6644	0.8867	0.0424	0.0226	0.0449	0.8867	0.0035	0.4393	-0.3282	-0.3330	-0.2474	0.4393	-1.4677	0.0432	-5.20
00457	D	M	6648	0.8130	0.0757	0.0423	0.0687	0.8130	0.0003	0.3807	-0.3032	-0.2875	-0.2210	0.3807	-0.7357	0.0357	-0.50
00458	D	M	6648	0.8767	0.0653	0.0241	0.0334	0.8767	0.0006	0.3285	-0.2287	-0.2296	-0.2024	0.3285	-1.3239	0.0416	-0.10
00459	C	M	6648	0.8709	0.0181	0.0794	0.8709	0.0307	0.0009	0.4577	-0.2771	-0.3490	0.4577	-0.3156	-1.2777	0.0411	-6.70
00460	A	M	6648	0.8464	0.8464	0.0262	0.0743	0.0517	0.0014	0.4696	0.4696	-0.2668	-0.3490	-0.3597	-1.0301	0.0384	-6.20
00461	C	M	6648	0.8779	0.0268	0.0791	0.8779	0.0155	0.0008	0.3066	-0.2749	-0.1887	0.3066	-0.1833	-1.3362	0.0418	1.90
00462	D	M	6648	0.7879	0.1024	0.0423	0.0657	0.7879	0.0017	0.4402	-0.3418	-0.3625	-0.2682	0.4402	-0.5510	0.0342	-4.50
00463	A	M	6648	0.6820	0.6820	0.2017	0.0517	0.0620	0.0026	0.3704	0.3704	-0.2453	-0.3120	-0.3999	0.1502	0.0302	1.70
00464	C	M	6648	0.8652	0.0560	0.0492	0.8652	0.0263	0.0033	0.3054	-0.2258	-0.1910	0.3054	-0.2105	-1.1936	0.0401	1.80
00465	C	F	6648	0.8070	0.0162	0.0299	0.8070	0.1453	0.0015	0.3964	-0.2647	-0.3013	0.3964	-0.3123	-0.6902	0.0353	-0.60
00466	A	F	6648	0.6303	0.6303	0.0901	0.2049	0.0727	0.0021	0.3859	0.3859	-0.3609	-0.2810	-0.3474	0.4369	0.0291	2.00
00467	C	F	6648	0.9269	0.0134	0.0412	0.9269	0.0164	0.0021	0.3960	-0.2158	-0.3196	0.3960	-0.1994	-1.9976	0.0515	-4.50
00468	A	F	6648	0.8157	0.8157	0.0254	0.0710	0.0848	0.0030	0.5212	0.5212	-0.3536	-0.3756	-0.4133	-0.7549	0.0358	-8.40
00469	D	F	6648	0.9070	0.0194	0.0335	0.0381	0.9070	0.0020	0.4351	-0.2855	-0.3050	-0.2755	0.4351	-1.7065	0.0467	-5.90
00470	C	F	6648	0.5551	0.1665	0.1632	0.5551	0.1128	0.0024	0.3806	-0.3253	-0.3116	0.3806	-0.3690	0.8197	0.0282	4.00
00471	D	F	6648	0.7993	0.0256	0.0784	0.0933	0.7993	0.0035	0.4653	-0.3347	-0.3805	-0.3247	0.4653	-0.6225	0.0348	-5.00
00472	C	F	6648	0.6727	0.0651	0.0740	0.6727	0.1841	0.0041	0.3162	-0.3148	-0.3483	0.3162	-0.1743	0.2045	0.0300	8.80
00473	A	M	6623	0.9268	0.9268	0.0130	0.0457	0.0140	0.0005	0.3523	0.3523	-0.1717	-0.2909	-0.1806	-1.9731	0.0511	-2.20
00474	C	M	6623	0.9173	0.0287	0.0346	0.9173	0.0195	0.0000	0.3338	-0.2496	-0.2330	0.3338	-0.1469	-1.8335	0.0487	-2.20
00475	A	M	6623	0.8093	0.8093	0.0223	0.1182	0.0485	0.0017	0.4670	0.4670	-0.2830	-0.3883	-0.3205	-0.7075	0.0353	-6.50
00476	D	M	6623	0.8840	0.0400	0.0269	0.0476	0.8840	0.0015	0.2988	-0.1233	-0.2838	-0.2003	0.2988	-1.3957	0.0424	4.70
00477	C	M	6623	0.6500	0.0885	0.1591	0.6500	0.1013	0.0011	0.4404	-0.3553	-0.3886	0.4404	-0.3267	0.3031	0.0295	-2.20
00478	C	M	6623	0.7447	0.0920	0.0841	0.7447	0.0787	0.0006	0.3640	-0.3230	-0.2381	0.3640	-0.2476	-0.2606	0.0321	1.50
00479	B	M	6623	0.7521	0.0814	0.7521	0.0640	0.1013	0.0012	0.4171	-0.3646	0.4171	-0.2768	-0.2844	-0.2875	0.0323	-4.40
00480	B	M	6623	0.7590	0.1178	0.7590	0.0800	0.0408	0.0024	0.4443	-0.3270	0.4443	-0.3346	-0.3590	-0.3381	0.0326	-4.90
00481	C	F	6623	0.8671	0.0411	0.0368	0.8671	0.0331	0.0020	0.4422	-0.3308	-0.2799	0.4422	-0.2995	-1.2264	0.0403	-5.70
00482	B	F	6623	0.7892	0.0358	0.7892	0.0273	0.1459	0.0018	0.3508	-0.3200	0.3508	-0.2718	-0.2283	-0.5374	0.0339	0.60
00483	A	F	6623	0.5866	0.5866	0.1433	0.2309	0.0367	0.0026	0.3747	0.3747	-0.2657	-0.3358	-0.4225	0.6603	0.0285	2.50
00484	B	F	6623	0.8265	0.0187	0.8265	0.0642	0.0879	0.0027	0.3707	-0.2578	0.3707	-0.2971	-0.2384	-0.8478	0.0365	-1.00
00485	D	F	6623	0.7338	0.0963	0.0495	0.1170	0.7338	0.0033	0.4330	-0.3773	-0.2845	-0.3155	0.4330	-0.1801	0.0317	-3.90
00486	B	F	6623	0.7276	0.1010	0.7276	0.1051	0.0633	0.0030	0.4275	-0.3103	0.4275	-0.3000	-0.3920	-0.1422	0.0314	-0.50
00487	A	F	6623	0.4990	0.4990	0.2448	0.2129	0.0405	0.0029	0.2657	0.2657	-0.2307	-0.2221	-0.3377	1.1175	0.0279	9.90
00488	A	F	6623	0.3518	0.3518	0.4607	0.0695	0.1152	0.0029	0.1268	0.1268	-0.0300	-0.3896	-0.2501	1.8633	0.0289	9.90
00489	D	M	6636	0.7031	0.0934	0.0879	0.1153	0.7031	0.0003	0.4927	-0.4531	-0.3407	-0.3829	0.4927	0.0194	0.0303	-8.90
00490	C	M	6636	0.4693	0.3933	0.0960	0.4693	0.0407	0.0008	0.3507	-0.3101	-0.3573	0.3507	-0.3947	1.2357	0.0276	4.80
00491	C	M	6636	0.6448	0.0961	0.0556	0.6448	0.2027	0.0008	0.4084	-0.4312	-0.4095	0.4084	-0.2493	0.3600	0.0289	-3.00

Appendix H: 2006 Uncommon Grade 5 Multiple Choice Statistics for Reading

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00492	D	M	6636	0.6587	0.0999	0.1855	0.0547	0.6587	0.0012	0.4159	-0.3537	-0.3093	-0.3780	0.4159	0.2597	0.0293	-2.60
00493	D	M	6636	0.7569	0.1457	0.0630	0.0327	0.7569	0.0017	0.4246	-0.2962	-0.3772	-0.3492	0.4246	-0.3092	0.0322	-1.70
00494	B	M	6636	0.5674	0.0775	0.5674	0.1986	0.1551	0.0015	0.2266	-0.2379	0.2266	-0.0997	-0.2728	0.7467	0.0280	9.90
00495	A	M	6636	0.6863	0.6863	0.0422	0.1025	0.1683	0.0008	0.4294	0.4294	-0.3926	-0.4201	-0.2782	0.1158	0.0299	-2.50
00496	B	M	6636	0.7086	0.0601	0.7086	0.1514	0.0785	0.0014	0.5152	-0.4805	0.5152	-0.3916	-0.4108	-0.0242	0.0305	-9.10
00497	A	F	6636	0.4617	0.4617	0.1249	0.2749	0.1370	0.0015	-0.1340	-0.1340	-0.1097	0.2231	0.1651	1.2855	0.0276	9.90
00498	D	F	6636	0.5039	0.0955	0.2090	0.1894	0.5039	0.0021	0.2528	-0.2588	-0.3136	-0.1186	0.2528	1.0468	0.0276	9.90
00499	A	F	6636	0.4248	0.4248	0.1269	0.1829	0.2618	0.0036	0.2441	0.2441	-0.3815	-0.2952	-0.1015	1.4556	0.0278	9.90
00500	B	F	6636	0.4414	0.1308	0.4414	0.1282	0.2969	0.0027	0.2805	-0.2094	0.2805	-0.3499	-0.2485	1.3691	0.0277	9.90
00501	A	F	6636	0.6287	0.6287	0.0521	0.2795	0.0371	0.0026	0.2349	0.2349	-0.3359	-0.1064	-0.3519	0.4565	0.0286	9.90
00502	A	F	6636	0.7083	0.7083	0.1068	0.1370	0.0452	0.0027	0.2526	0.2526	-0.2126	-0.1465	-0.2485	-0.0093	0.0305	9.40
00503	B	F	6636	0.6200	0.1507	0.6200	0.0538	0.1727	0.0029	0.4043	-0.2774	0.4043	-0.4520	-0.3477	0.4827	0.0286	-1.20
00504	B	F	6636	0.5273	0.3006	0.5273	0.0722	0.0970	0.0029	0.3288	-0.2050	0.3288	-0.3397	-0.4703	0.9462	0.0277	7.00
00505	C	M	6631	0.8193	0.0329	0.1108	0.8193	0.0365	0.0005	0.4815	-0.3457	-0.3890	0.4815	-0.3035	-0.7776	0.0358	-5.70
00506	A	M	6631	0.8824	0.8824	0.0433	0.0597	0.0145	0.0002	0.4474	0.4474	-0.3296	-0.3158	-0.2628	-1.3619	0.0420	-7.20
00507	A	M	6631	0.8604	0.8604	0.0949	0.0296	0.0145	0.0008	0.5077	0.5077	-0.4344	-0.2928	-0.3049	-1.1398	0.0394	-6.70
00508	C	M	6631	0.7245	0.0754	0.0882	0.7245	0.1111	0.0008	0.3544	-0.2387	-0.2323	0.3544	-0.3167	-0.0996	0.0311	1.60
00509	D	M	6631	0.6109	0.1823	0.1775	0.0282	0.6109	0.0011	0.3128	-0.2197	-0.2993	-0.3046	0.3128	0.5424	0.0286	8.70
00510	B	M	6631	0.7973	0.0529	0.7973	0.0724	0.0766	0.0008	0.4548	-0.3530	0.4548	-0.2735	-0.3707	-0.6059	0.0344	-4.20
00511	D	M	6631	0.6993	0.1009	0.1314	0.0668	0.6993	0.0017	0.4108	-0.4013	-0.2146	-0.3915	0.4108	0.0435	0.0304	-0.40
00512	A	M	6631	0.8730	0.8730	0.0566	0.0273	0.0407	0.0024	0.3763	0.3763	-0.2476	-0.2540	-0.2612	-1.2672	0.0408	-2.40
00513	B	F	6631	0.5541	0.0746	0.5541	0.1591	0.2107	0.0015	0.4276	-0.5257	0.4276	-0.2737	-0.3918	0.8263	0.0280	-1.50
00514	D	F	6631	0.4912	0.1301	0.1232	0.2538	0.4912	0.0017	0.3325	-0.4261	-0.3132	-0.2265	0.3325	1.1293	0.0278	5.90
00515	B	F	6631	0.6117	0.0941	0.6117	0.1867	0.1056	0.0020	0.3393	-0.3153	0.3393	-0.2426	-0.2958	0.5383	0.0286	3.40
00516	C	F	6631	0.8409	0.0620	0.0722	0.8409	0.0226	0.0023	0.2892	-0.2540	-0.1437	0.2892	-0.2070	-0.9480	0.0374	2.90
00517	B	F	6631	0.3745	0.3027	0.3745	0.1347	0.1852	0.0030	0.0800	-0.0472	0.0800	-0.1639	-0.0573	1.7326	0.0284	9.90
00518	C	F	6631	0.4674	0.2274	0.1154	0.4674	0.1862	0.0036	0.2783	-0.1664	-0.3740	0.2783	-0.2901	1.2415	0.0278	9.90
00519	A	F	6631	0.6761	0.6761	0.0820	0.0553	0.1843	0.0023	0.2268	0.2268	-0.2885	-0.2612	-0.0726	0.1930	0.0297	9.90
00520	D	F	6631	0.8159	0.0662	0.0648	0.0484	0.8159	0.0047	0.4193	-0.2410	-0.2844	-0.3769	0.4193	-0.7469	0.0356	-4.00
00521	B	M	6648	0.4383	0.3475	0.4383	0.0833	0.1304	0.0005	0.3096	-0.2883	0.3096	-0.3406	-0.2721	1.3877	0.0278	8.10
00522	A	M	6648	0.7183	0.7183	0.1124	0.0396	0.1297	0.0002	0.5061	0.5061	-0.3978	-0.3775	-0.4124	-0.0737	0.0308	-9.90
00523	D	M	6648	0.8228	0.0489	0.0686	0.0594	0.8228	0.0003	0.5200	-0.3518	-0.3602	-0.4111	0.5200	-0.8243	0.0360	-9.90
00524	D	M	6648	0.6670	0.0960	0.1533	0.0824	0.6670	0.0014	0.2130	-0.1886	-0.1600	-0.1408	0.2130	0.2410	0.0294	9.50
00525	C	M	6648	0.6638	0.1185	0.1721	0.6638	0.0439	0.0017	0.3681	-0.2898	-0.2897	0.3681	-0.3188	0.2471	0.0294	-0.10
00526	A	M	6648	0.7058	0.7058	0.0994	0.0725	0.1212	0.0011	0.1920	0.1920	-0.1145	-0.0895	-0.2063	0.0235	0.0303	9.90
00527	C	M	6648	0.5877	0.0191	0.1325	0.5877	0.2601	0.0006	0.3627	-0.3754	-0.3106	0.3627	-0.3112	0.6357	0.0283	2.70
00528	C	M	6648	0.5815	0.0641	0.1280	0.5815	0.2250	0.0014	0.4120	-0.4017	-0.3554	0.4120	-0.3508	0.6700	0.0282	-1.90
00529	B	F	6648	0.8201	0.0973	0.8201	0.0284	0.0535	0.0006	0.3743	-0.2729	0.3743	-0.2359	-0.2787	-0.7641	0.0355	-2.10
00530	A	F	6648	0.8723	0.8723	0.0444	0.0474	0.0352	0.0008	0.4496	0.4496	-0.3326	-0.3139	-0.2666	-1.2708	0.0407	-6.80
00531	C	F	6648	0.5894	0.1769	0.1694	0.5894	0.0624	0.0020	0.2103	-0.1006	-0.1528	0.2103	-0.3703	0.6349	0.0283	9.90
00532	C	F	6648	0.6295	0.1372	0.1390	0.6295	0.0922	0.0021	0.3028	-0.0958	-0.2622	0.3028	-0.4182	0.4215	0.0288	8.70
00533	C	F	6648	0.2887	0.0557	0.3762	0.2887	0.2778	0.0017	0.0334	-0.3208	0.0725	0.0334	-0.0951	2.1972	0.0300	9.90
00534	D	F	6648	0.4570	0.1784	0.2372	0.1259	0.4570	0.0015	0.3203	-0.3612	-0.2637	-0.2963	0.3203	1.2764	0.0277	6.60
00535	D	F	6648	0.2232	0.2476	0.0782	0.4478	0.2232	0.0032	0.1517	-0.0886	-0.4467	-0.1635	0.1517	2.5948	0.0322	9.90
00536	A	F	6648	0.7965	0.7965	0.0684	0.0627	0.0675	0.0048	0.4539	0.4539	-0.2597	-0.3638	-0.3736	-0.6028	0.0342	-5.50
00537	D	M	6622	0.6767	0.1706	0.0595	0.0927	0.6767	0.0005	0.3835	-0.3519	-0.4031	-0.1579	0.3835	0.1947	0.0302	0.50
00538	B	M	6622	0.8568	0.0435	0.8568	0.0831	0.0163	0.0003	0.4609	-0.3037	0.4609	-0.3786	-0.2428	-1.1434	0.0397	-6.60
00539	C	M	6622	0.8594	0.0547	0.0219	0.8594	0.0637	0.0003	0.4051	-0.2943	-0.2677	0.4051	-0.2735	-1.1688	0.0399	-3.50
00540	D	M	6622	0.7150	0.1222	0.0841	0.0778	0.7150	0.0009	0.4143	-0.3219	-0.2944	-0.3381	0.4143	-0.0382	0.0312	-0.70

Appendix H: 2006 Uncommon Grade 5 Multiple Choice Statistics for Reading

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00541	C	M	6622	0.7076	0.0769	0.0417	0.7076	0.1728	0.0011	0.4710	-0.4123	-0.3207	0.4710	-0.3751	-0.0052	0.0311	-6.10
00542	A	M	6622	0.7620	0.7620	0.1010	0.0808	0.0554	0.0008	0.4574	0.4574	-0.3516	-0.3582	-0.2984	-0.3545	0.0330	-5.20
00543	A	M	6622	0.8150	0.8150	0.0834	0.0435	0.0574	0.0008	0.4921	0.4921	-0.3800	-0.4036	-0.2938	-0.7575	0.0360	-6.20
00544	A	M	6622	0.7986	0.7986	0.0223	0.1117	0.0661	0.0012	0.3793	0.3793	-0.3071	-0.2644	-0.2852	-0.6108	0.0348	0.70
00545	B	F	6622	0.8706	0.0375	0.8706	0.0613	0.0301	0.0006	0.3687	-0.3098	0.3687	-0.2250	-0.2128	-1.2489	0.0408	-1.00
00546	C	F	6622	0.8339	0.0568	0.0361	0.8339	0.0720	0.0012	0.5355	-0.4133	-0.3606	0.5355	-0.3808	-0.9207	0.0374	-9.90
00547	C	F	6622	0.5865	0.1028	0.1478	0.5865	0.1617	0.0011	0.3810	-0.3522	-0.2752	0.3810	-0.3396	0.6841	0.0287	4.80
00548	D	F	6622	0.7354	0.2007	0.0296	0.0331	0.7354	0.0012	0.4130	-0.3090	-0.3672	-0.3539	0.4130	-0.1791	0.0320	-2.10
00549	A	F	6622	0.7510	0.7510	0.0577	0.1190	0.0705	0.0018	0.5448	0.5448	-0.4185	-0.4373	-0.4045	-0.2866	0.0326	-9.90
00550	A	F	6622	0.8396	0.8396	0.0530	0.0584	0.0479	0.0011	0.5034	0.5034	-0.3865	-0.3733	-0.3004	-0.9618	0.0378	-8.00
00551	B	F	6622	0.7286	0.0449	0.7286	0.0379	0.1865	0.0021	0.4243	-0.4420	0.4243	-0.3969	-0.2730	-0.1214	0.0316	-1.60
00552	D	F	6622	0.7652	0.1555	0.0417	0.0362	0.7652	0.0014	0.3054	-0.1591	-0.2849	-0.3422	0.3054	-0.3687	0.0331	8.40
00553	A	M	6620	0.7437	0.7437	0.0177	0.2014	0.0364	0.0009	0.2961	0.2961	-0.2112	-0.2460	-0.2010	-0.1961	0.0317	2.50
00554	C	M	6620	0.9095	0.0213	0.0337	0.9095	0.0352	0.0003	0.4134	-0.2510	-0.2542	0.4134	-0.3061	-1.6938	0.0471	-5.30
00555	C	M	6620	0.7603	0.1278	0.0456	0.7603	0.0657	0.0006	0.5145	-0.4248	-0.4034	0.5145	-0.3490	-0.3158	0.0325	-9.80
00556	B	M	6620	0.6601	0.0571	0.6601	0.2426	0.0390	0.0012	0.3146	-0.3660	0.3146	-0.2000	-0.3090	0.2934	0.0294	6.10
00557	B	M	6620	0.6429	0.1776	0.6429	0.0548	0.1240	0.0006	0.3531	-0.2692	0.3531	-0.2901	-0.3024	0.3816	0.0291	2.50
00558	C	M	6620	0.6131	0.2036	0.0784	0.6131	0.1032	0.0017	0.4108	-0.3220	-0.3662	0.4108	-0.3555	0.5440	0.0286	-2.50
00559	B	M	6620	0.6136	0.0988	0.6136	0.0251	0.2609	0.0017	0.1622	-0.2275	0.1622	-0.3020	-0.0529	0.5408	0.0286	9.90
00560	D	M	6620	0.7310	0.0801	0.0379	0.1483	0.7310	0.0027	0.4452	-0.3596	-0.3739	-0.3331	0.4452	-0.1462	0.0314	-4.40
00561	D	F	6620	0.8541	0.1076	0.0261	0.0106	0.8541	0.0017	0.4811	-0.4281	-0.2944	-0.2065	0.4811	-1.0471	0.0387	-7.30
00562	B	F	6620	0.2900	0.5006	0.2900	0.0577	0.1498	0.0018	0.0191	0.0584	0.0191	-0.3869	-0.0605	2.2133	0.0300	9.90
00563	B	F	6620	0.9233	0.0136	0.9233	0.0245	0.0360	0.0027	0.4102	-0.2439	0.4102	-0.2646	-0.2928	-1.8909	0.0504	-5.30
00564	D	F	6620	0.6452	0.0429	0.2083	0.1005	0.6452	0.0032	0.3890	-0.4261	-0.3006	-0.3043	0.3890	0.3859	0.0291	-0.40
00565	A	F	6620	0.9202	0.9202	0.0363	0.0260	0.0157	0.0018	0.4046	0.4046	-0.3264	-0.2288	-0.2131	-1.8361	0.0495	-5.80
00566	D	F	6620	0.6409	0.1225	0.1447	0.0888	0.6409	0.0030	0.4706	-0.4330	-0.3320	-0.4206	0.4706	0.4028	0.0290	-6.60
00567	C	F	6620	0.4622	0.2184	0.1196	0.4622	0.1958	0.0039	0.2697	-0.2507	-0.2088	0.2697	-0.2836	1.3104	0.0278	9.90
00568	B	F	6620	0.6796	0.1266	0.6796	0.0320	0.1579	0.0039	0.2958	-0.1705	0.2958	-0.3669	-0.2412	0.1961	0.0298	6.00
00569	A	M	6606	0.8963	0.8963	0.0328	0.0318	0.0391	0.0000	0.4346	0.4346	-0.2772	-0.3190	-0.2690	-1.5973	0.0449	-8.10
00570	A	M	6606	0.8150	0.8150	0.0518	0.0599	0.0730	0.0003	0.4763	0.4763	-0.3121	-0.3802	-0.3287	-0.7747	0.0360	-7.50
00571	D	M	6606	0.7284	0.1860	0.0615	0.0236	0.7284	0.0005	0.5053	-0.4760	-0.3310	-0.2738	0.5053	-0.1444	0.0318	-7.50
00572	B	M	6606	0.8856	0.0315	0.8856	0.0403	0.0419	0.0008	0.4421	-0.2620	0.4421	-0.2672	-0.3569	-1.4708	0.0432	-6.00
00573	C	M	6606	0.7540	0.0739	0.0271	0.7540	0.1443	0.0008	0.4290	-0.4179	-0.3429	0.4290	-0.2758	-0.3249	0.0328	-0.60
00574	B	M	6606	0.9069	0.0419	0.9069	0.0253	0.0253	0.0006	0.4604	-0.3491	0.4604	-0.2821	-0.2749	-1.7148	0.0466	-6.90
00575	A	M	6606	0.7860	0.7860	0.0665	0.0403	0.1052	0.0021	0.3842	0.3842	-0.2375	-0.3302	-0.2884	-0.5417	0.0342	0.30
00576	B	M	6606	0.7592	0.1048	0.7592	0.0819	0.0512	0.0030	0.4757	-0.4201	0.4757	-0.3026	-0.3350	-0.3575	0.0330	-6.90
00577	D	F	6606	0.7891	0.0589	0.0251	0.1256	0.7891	0.0012	0.4579	-0.4183	-0.2532	-0.3403	0.4579	-0.5819	0.0345	-2.30
00578	B	F	6606	0.6191	0.2551	0.6191	0.0628	0.0618	0.0012	0.3704	-0.2586	0.3704	-0.3704	-0.4046	0.4850	0.0293	5.10
00579	D	F	6606	0.8710	0.0716	0.0368	0.0192	0.8710	0.0014	0.4170	-0.2655	-0.3308	-0.2901	0.4170	-1.3082	0.0413	-2.60
00580	A	F	6606	0.8124	0.8124	0.1261	0.0407	0.0188	0.0020	0.4778	0.4778	-0.3826	-0.3492	-0.3133	-0.7669	0.0359	-5.50
00581	C	F	6606	0.5934	0.1211	0.1208	0.5934	0.1621	0.0026	0.3635	-0.1994	-0.3641	0.3635	-0.3501	0.6309	0.0289	6.10
00582	A	F	6606	0.6599	0.6599	0.1788	0.1008	0.0574	0.0032	0.4695	0.4695	-0.3450	-0.4495	-0.3828	0.2546	0.0300	-3.20
00583	B	F	6606	0.6178	0.1456	0.6178	0.1029	0.1308	0.0029	0.5108	-0.3864	0.5108	-0.4452	-0.4693	0.4884	0.0293	-7.60
00584	A	F	6606	0.7487	0.7487	0.0681	0.0954	0.0854	0.0024	0.4928	0.4928	-0.4305	-0.3477	-0.3580	-0.2896	0.0326	-6.40
00585	B	M	6627	0.9122	0.0158	0.9122	0.0432	0.0288	0.0000	0.4121	-0.2196	0.4121	-0.2881	-0.2982	-1.7462	0.0479	-4.10
00586	B	M	6627	0.7682	0.1482	0.7682	0.0155	0.0676	0.0005	0.4701	-0.4135	0.4701	-0.2912	-0.3146	-0.3743	0.0330	-6.10
00587	D	M	6627	0.6129	0.1177	0.1504	0.1179	0.6129	0.0011	0.3300	-0.2443	-0.2869	-0.2871	0.3300	0.5540	0.0287	5.40
00588	C	M	6627	0.5625	0.1968	0.0330	0.5625	0.2061	0.0015	0.2870	-0.2137	-0.3118	0.2870	-0.2603	0.8082	0.0282	9.90
00589	A	M	6627	0.8929	0.8929	0.0492	0.0252	0.0321	0.0006	0.3185	0.3185	-0.1710	-0.2276	-0.2389	-1.4770	0.0439	0.10

Appendix H: 2006 Uncommon Grade 5 Multiple Choice Statistics for Reading

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00590	A	M	6627	0.6270	0.6270	0.1326	0.0338	0.2049	0.0017	0.3281	0.3281	-0.3493	-0.4001	-0.1809	0.4707	0.0290	6.90
00591	C	M	6627	0.8936	0.0216	0.0219	0.8936	0.0617	0.0012	0.4177	-0.3107	-0.2596	0.4177	-0.2827	-1.5103	0.0444	-4.80
00592	B	M	6627	0.8791	0.0605	0.8791	0.0377	0.0207	0.0020	0.3977	-0.2497	0.3977	-0.2742	-0.3145	-1.3328	0.0420	-0.90
00593	D	F	6627	0.7305	0.1240	0.0412	0.1028	0.7305	0.0015	0.5251	-0.5243	-0.2912	-0.3633	0.5251	-0.1305	0.0315	-8.30
00594	C	F	6627	0.8532	0.0967	0.0350	0.8532	0.0134	0.0017	0.2171	-0.0121	-0.3468	0.2171	-0.2315	-1.0550	0.0388	9.90
00595	A	F	6627	0.6833	0.6833	0.1560	0.0430	0.1139	0.0038	0.4269	0.4269	-0.2921	-0.2871	-0.4343	0.1616	0.0301	-3.20
00596	D	F	6627	0.8296	0.0812	0.0545	0.0317	0.8296	0.0030	0.4011	-0.2915	-0.2579	-0.3027	0.4011	-0.8558	0.0369	-1.40
00597	B	F	6627	0.7786	0.0330	0.7786	0.1032	0.0828	0.0023	0.4418	-0.2899	0.4418	-0.3897	-0.2819	-0.4531	0.0336	-1.60
00598	A	F	6627	0.5037	0.5037	0.0472	0.3179	0.1277	0.0035	0.2254	0.2254	-0.4241	-0.1034	-0.2773	1.1056	0.0279	9.90
00599	D	F	6627	0.7969	0.0939	0.0536	0.0521	0.7969	0.0036	0.5360	-0.4624	-0.3319	-0.3743	0.5360	-0.5928	0.0346	-9.60
00600	D	F	6627	0.1151	0.0652	0.2431	0.5731	0.1151	0.0035	-0.0914	-0.2436	0.0389	0.1808	-0.0914	3.5452	0.0412	9.90
00601	D	ML	6623	0.9106	0.0171	0.0430	0.0290	0.9106	0.0003	0.2373	-0.2460	-0.0636	-0.1939	0.2373	-1.2574	0.0415	-0.30
00602	A	ML	6623	0.8206	0.8206	0.0418	0.0571	0.8003	0.0002	0.3286	0.3286	-0.2692	-0.2267	-0.2088	-0.1158	0.0316	-5.70
00603	B	ML	6623	0.8057	0.1191	0.8057	0.0364	0.0377	0.0011	0.4148	-0.2949	0.4148	-0.3241	-0.3030	0.0568	0.0307	-9.90
00604	C	ML	6623	0.8546	0.0332	0.0630	0.8546	0.0482	0.0011	0.4888	-0.3056	-0.4094	0.4888	-0.2944	-0.4809	0.0340	-9.90
00605	A	ML	6623	0.8837	0.8837	0.0462	0.0409	0.0287	0.0005	0.4408	0.4408	-0.2733	-0.3239	-0.2991	-0.8749	0.0373	-9.90
00606	A	ML	6623	0.9305	0.9305	0.0189	0.0362	0.0130	0.0014	0.3627	0.3627	-0.1829	-0.2804	-0.2234	-1.7318	0.0481	-6.10
00607	D	ML	6623	0.8440	0.0297	0.0326	0.0926	0.8440	0.0011	0.4149	-0.3069	-0.3561	-0.2575	0.4149	-0.4955	0.0341	-8.50
00608	D	ML	6623	0.7074	0.1676	0.0646	0.0578	0.7074	0.0026	0.4645	-0.4195	-0.3190	-0.3292	0.4645	0.0415	0.0308	-4.40
00609	A	F	6623	0.9404	0.9404	0.0226	0.0198	0.0168	0.0005	0.3564	0.3564	-0.2633	-0.1858	-0.2162	-2.2152	0.0571	-4.40
00610	A	F	6623	0.8801	0.8801	0.0808	0.0169	0.0216	0.0006	0.4202	0.4202	-0.3260	-0.2585	-0.2684	-1.2999	0.0420	-5.00
00611	C	F	6623	0.5455	0.1617	0.1138	0.5455	0.1774	0.0015	0.1603	-0.0406	-0.1948	0.1603	-0.1937	0.9400	0.0280	9.90
00612	B	F	6623	0.7839	0.0435	0.7839	0.0788	0.0923	0.0015	0.5083	-0.3456	0.5083	-0.3684	-0.4091	-0.4512	0.0338	-9.40
00613	C	F	6623	0.5870	0.0873	0.1576	0.5870	0.1665	0.0015	0.3223	-0.3501	-0.2798	0.3223	-0.2121	0.7223	0.0284	7.30
00614	D	F	6623	0.6994	0.1214	0.0957	0.0809	0.6994	0.0026	0.5471	-0.4390	-0.4421	-0.4600	0.5471	0.0914	0.0305	-9.90
00615	B	F	6623	0.5345	0.3278	0.5345	0.0690	0.0661	0.0026	0.3191	-0.1875	0.3191	-0.4420	-0.4559	0.9722	0.0279	9.20
00616	C	F	6623	0.6994	0.0778	0.1773	0.6994	0.0418	0.0038	0.3940	-0.3609	-0.2707	0.3940	-0.3704	0.0989	0.0305	2.90
00617	D	ML	6641	0.7383	0.1132	0.0212	0.1268	0.7383	0.0005	0.4473	-0.4251	-0.3080	-0.2945	0.4473	-0.0522	0.0314	-6.00
00618	C	ML	6641	0.7327	0.0256	0.0899	0.7327	0.1515	0.0003	0.4160	-0.3191	-0.3175	0.4160	-0.3361	0.0497	0.0309	-2.70
00619	A	ML	6641	0.8472	0.8472	0.0392	0.0251	0.0876	0.0009	0.4154	0.4154	-0.2695	-0.3428	-0.2832	-1.0048	0.0383	-3.50
00620	D	ML	6641	0.5585	0.2561	0.0602	0.1244	0.5585	0.0008	0.3575	-0.3101	-0.3257	-0.3114	0.3575	1.4213	0.0282	9.90
00621	C	ML	6641	0.8988	0.0176	0.0513	0.8988	0.0309	0.0014	0.4633	-0.2947	-0.3955	0.4633	-0.2159	-1.7352	0.0472	-4.90
00622	A	ML	6641	0.7276	0.7276	0.0616	0.0923	0.1175	0.0011	0.4267	0.4267	-0.3206	-0.3490	-0.3078	-0.0107	0.0312	-3.90
00623	C	ML	6641	0.8469	0.0432	0.0480	0.8469	0.0602	0.0017	0.5336	-0.3952	-0.3472	0.5336	-0.3956	-1.0767	0.0390	-8.20
00624	D	ML	6641	0.8771	0.0477	0.0250	0.0489	0.8771	0.0012	0.5440	-0.4123	-0.3463	-0.3739	0.5440	-1.4345	0.0431	-9.90
00625	A	F	6641	0.9107	0.9107	0.0271	0.0491	0.0120	0.0011	0.4031	0.4031	-0.2055	-0.3446	-0.2080	-1.7780	0.0479	-5.00
00626	B	F	6641	0.9444	0.0173	0.9444	0.0236	0.0134	0.0012	0.3893	-0.2431	0.3893	-0.2691	-0.2268	-2.3604	0.0585	-5.00
00627	A	F	6641	0.6416	0.6416	0.0831	0.1170	0.1559	0.0024	0.4428	0.4428	-0.3642	-0.4149	-0.3250	0.3773	0.0296	-1.30
00628	C	F	6641	0.9139	0.0250	0.0268	0.9139	0.0318	0.0026	0.4568	-0.3050	-0.3006	0.4568	-0.2910	-1.8340	0.0487	-7.90
00629	C	F	6641	0.8064	0.0533	0.0678	0.8064	0.0699	0.0027	0.5093	-0.3976	-0.3911	0.5093	-0.3302	-0.7046	0.0356	-7.70
00630	D	F	6641	0.6303	0.0500	0.2661	0.0513	0.6303	0.0023	0.3558	-0.3960	-0.2354	-0.4041	0.3558	0.4625	0.0293	5.40
00631	C	F	6641	0.8176	0.0492	0.1053	0.8176	0.0261	0.0018	0.4730	-0.4098	-0.3183	0.4730	-0.3347	-0.7916	0.0364	-6.00
00632	B	F	6641	0.7460	0.1449	0.7460	0.0803	0.0267	0.0023	0.5124	-0.4128	0.5124	-0.4013	-0.4026	-0.2551	0.0325	-7.40
00633	B	ML	6640	0.7470	0.0616	0.7470	0.1492	0.0419	0.0003	0.4975	-0.4307	0.4975	-0.3850	-0.3650	-0.4232	0.0330	-2.90
00634	A	ML	6640	0.7172	0.7172	0.1536	0.0611	0.0679	0.0002	0.5412	0.5412	-0.4451	-0.4087	-0.4398	-0.1046	0.0311	-9.50
00635	A	ML	6640	0.6491	0.6491	0.1321	0.1330	0.0846	0.0012	0.4008	0.4008	-0.3036	-0.3601	-0.3164	0.3972	0.0290	-2.30
00636	B	ML	6640	0.7508	0.1002	0.7508	0.0907	0.0572	0.0012	0.5248	-0.4260	0.5248	-0.3869	-0.4000	-0.3974	0.0328	-7.80
00637	D	ML	6640	0.6544	0.0595	0.2595	0.0256	0.6544	0.0011	0.3252	-0.3228	-0.2363	-0.3515	0.3252	0.3812	0.0290	4.20
00638	A	ML	6640	0.7205	0.7205	0.0691	0.1176	0.0916	0.0012	0.3623	0.3623	-0.2507	-0.2962	-0.2751	-0.1769	0.0314	3.50

Appendix H: 2006 Uncommon Grade 5 Multiple Choice Statistics for Reading

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00639	C	ML	6640	0.7327	0.1008	0.0699	0.7327	0.0950	0.0017	0.4737	-0.3212	-0.3424	0.4737	-0.4336	-0.2799	0.0320	-2.70
00640	D	ML	6640	0.8236	0.0565	0.0745	0.0428	0.8236	0.0026	0.4266	-0.2879	-0.2899	-0.3425	0.4266	-0.9143	0.0369	-1.20
00641	B	F	6640	0.4184	0.0962	0.4184	0.1973	0.2852	0.0029	0.2269	-0.4069	0.2269	-0.0926	-0.2314	1.5024	0.0280	9.90
00642	D	F	6640	0.6565	0.2276	0.0565	0.0571	0.6565	0.0024	0.4504	-0.4096	-0.3579	-0.3073	0.4504	0.2701	0.0294	-3.90
00643	D	F	6640	0.3980	0.1866	0.3048	0.1074	0.3980	0.0032	0.2830	-0.2739	-0.2433	-0.3648	0.2830	1.6012	0.0282	9.90
00644	A	F	6640	0.5205	0.5205	0.1503	0.1069	0.2184	0.0039	0.3683	0.3683	-0.4436	-0.3265	-0.2550	0.9872	0.0279	4.50
00645	C	F	6640	0.6377	0.0783	0.1206	0.6377	0.1602	0.0032	0.2779	-0.2734	-0.2736	0.2779	-0.1442	0.3940	0.0290	7.90
00646	D	F	6640	0.5194	0.3054	0.1128	0.0589	0.5194	0.0035	0.3684	-0.3212	-0.3203	-0.4099	0.3684	0.9981	0.0278	2.70
00647	C	F	6640	0.6693	0.0675	0.1134	0.6693	0.1471	0.0027	0.3357	-0.2992	-0.3181	0.3357	-0.1948	0.2168	0.0296	4.00
00648	C	F	6640	0.1752	0.2343	0.2327	0.1752	0.3542	0.0036	-0.0904	0.1342	0.0201	-0.0904	0.1630	2.9620	0.0351	9.90
00649	A	ML	6637	0.9162	0.9162	0.0325	0.0318	0.0193	0.0002	0.3481	0.3481	-0.2570	-0.2019	-0.2119	-2.0607	0.0525	0.80
00650	D	ML	6637	0.8047	0.0399	0.1225	0.0319	0.8047	0.0009	0.4850	-0.4115	-0.3407	-0.3764	0.4850	-0.7516	0.0357	-4.20
00651	A	ML	6637	0.6480	0.6480	0.0957	0.1404	0.1139	0.0020	0.4863	0.4863	-0.4266	-0.3832	-0.4036	0.2485	0.0298	-5.40
00652	B	ML	6637	0.8450	0.0579	0.8450	0.0405	0.0557	0.0009	0.3660	-0.2194	0.3660	-0.2801	-0.2590	-1.2445	0.0406	2.90
00653	C	ML	6637	0.4321	0.0446	0.2438	0.4321	0.2777	0.0018	0.2837	-0.2976	-0.3575	0.2837	-0.1875	1.7608	0.0286	9.90
00654	D	ML	6637	0.8032	0.0622	0.0518	0.0815	0.8032	0.0012	0.4719	-0.3763	-0.3262	-0.3276	0.4719	-0.8408	0.0365	-2.20
00655	A	ML	6637	0.6000	0.6000	0.1132	0.0457	0.2397	0.0015	0.3241	0.3241	-0.2656	-0.3782	-0.2481	0.6579	0.0285	6.70
00656	B	ML	6637	0.7746	0.0803	0.7746	0.0695	0.0732	0.0024	0.4386	-0.3091	0.4386	-0.3314	-0.3334	-0.6282	0.0347	-0.70
00657	D	F	6637	0.5964	0.1776	0.1826	0.0413	0.5964	0.0021	0.3405	-0.3787	-0.1833	-0.3571	0.3405	0.6130	0.0287	6.80
00658	C	F	6637	0.6620	0.0441	0.1948	0.6620	0.0964	0.0026	0.4407	-0.3374	-0.3296	0.4407	-0.4391	0.2634	0.0297	-2.20
00659	D	F	6637	0.7558	0.0916	0.1126	0.0375	0.7558	0.0026	0.5366	-0.4408	-0.4062	-0.4038	0.5366	-0.3306	0.0327	-7.70
00660	D	F	6637	0.6004	0.0405	0.2631	0.0928	0.6004	0.0032	0.3448	-0.3413	-0.2756	-0.3053	0.3448	0.5899	0.0287	4.50
00661	B	F	6637	0.8969	0.0420	0.8969	0.0398	0.0190	0.0023	0.4502	-0.3371	0.4502	-0.3023	-0.2520	-1.6083	0.0452	-5.30
00662	C	F	6637	0.7957	0.0707	0.0440	0.7957	0.0874	0.0023	0.4192	-0.3728	-0.3174	0.4192	-0.2314	-0.6061	0.0346	-2.30
00663	C	F	6637	0.4558	0.1335	0.2064	0.4558	0.2004	0.0039	0.2828	-0.3878	-0.2667	0.2828	-0.1822	1.3339	0.0280	9.90
00664	B	F	6637	0.8089	0.0791	0.8089	0.0613	0.0469	0.0038	0.4625	-0.3322	0.4625	-0.3263	-0.3549	-0.7191	0.0355	-4.60

Appendix I:

**2006 Uncommon Grade 8 Multiple Choice Statistics for
Reading**

Appendix I: 2006 Uncommon Grade 8 Multiple Choice Statistics for Reading

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00665	D	M	7740	0.8258	0.0478	0.0638	0.0620	0.8258	0.0005	0.5886	-0.4098	-0.4391	-0.4308	0.5886	-0.8391	0.0344	-9.90
00666	C	M	7740	0.7611	0.1346	0.0441	0.7611	0.0589	0.0013	0.5382	-0.4422	-0.3789	0.5382	-0.3882	-0.3350	0.0310	-9.40
00667	D	M	7740	0.7300	0.0744	0.0514	0.1432	0.7300	0.0010	0.4307	-0.4178	-0.3443	-0.2728	0.4307	-0.1119	0.0298	2.60
00668	A	M	7740	0.8959	0.8959	0.0385	0.0384	0.0262	0.0010	0.4877	0.4877	-0.3077	-0.3442	-0.3285	-1.5695	0.0417	-9.90
00669	B	M	7740	0.8749	0.0161	0.8749	0.0603	0.0479	0.0006	0.4581	-0.2412	0.4581	-0.3092	-0.3604	-1.3142	0.0387	-5.40
00670	C	M	7740	0.8408	0.0401	0.0891	0.8408	0.0292	0.0008	0.4396	-0.3179	-0.3073	0.4396	-0.3011	-0.9823	0.0355	-4.20
00671	B	M	7740	0.8270	0.0385	0.8270	0.1043	0.0295	0.0008	0.3465	-0.2446	0.3465	-0.2497	-0.2378	-0.8261	0.0343	4.20
00672	A	F	7740	0.7469	0.7469	0.1176	0.0784	0.0558	0.0013	0.2904	0.2904	-0.0761	-0.2962	-0.3261	-0.2200	0.0304	9.90
00673	B	F	7740	0.7899	0.0753	0.7899	0.0496	0.0819	0.0032	0.3855	-0.2049	0.3855	-0.3575	-0.2845	-0.5421	0.0322	6.10
00674	B	F	7740	0.7111	0.0496	0.7111	0.2110	0.0253	0.0030	0.4243	-0.4249	0.4243	-0.3097	-0.3238	0.0071	0.0293	2.50
00675	A	F	7740	0.6474	0.6474	0.1125	0.1494	0.0860	0.0047	0.4522	0.4522	-0.3263	-0.3563	-0.4245	0.3979	0.0279	-3.10
00676	D	F	7740	0.7360	0.1001	0.1193	0.0407	0.7360	0.0039	0.4618	-0.2924	-0.3984	-0.3626	0.4618	-0.1478	0.0300	-2.40
00677	B	F	7740	0.7496	0.0849	0.7496	0.0466	0.1152	0.0036	0.4373	-0.3710	0.4373	-0.3470	-0.2770	-0.2506	0.0305	-1.00
00678	C	F	7740	0.6961	0.1355	0.1054	0.6961	0.0588	0.0041	0.4639	-0.2971	-0.4068	0.4639	-0.4150	0.1063	0.0289	-1.60
00679	B	F	7740	0.4986	0.2678	0.4986	0.1425	0.0871	0.0040	0.3367	-0.1743	0.3367	-0.4516	-0.3762	1.2126	0.0265	9.90
00680	D	F	7740	0.4455	0.3245	0.1318	0.0933	0.4455	0.0049	0.2757	-0.1140	-0.4229	-0.4290	0.2757	1.4989	0.0266	9.90
00681	A	M	7252	0.6892	0.6892	0.0308	0.1475	0.1317	0.0008	0.3244	0.3244	-0.2497	-0.1693	-0.3429	0.3103	0.0289	3.80
00682	D	M	7252	0.5507	0.0575	0.0670	0.3238	0.5507	0.0010	0.1770	-0.1976	-0.1876	-0.1276	0.1770	1.0637	0.0270	9.90
00683	A	M	7252	0.5451	0.5451	0.0287	0.0512	0.3744	0.0007	0.2840	0.2840	-0.3421	-0.3242	-0.2170	1.0791	0.0270	9.90
00684	D	M	7252	0.7409	0.0634	0.1085	0.0863	0.7409	0.0008	0.3927	-0.3096	-0.3531	-0.1967	0.3927	-0.0254	0.0305	-2.60
00685	D	M	7252	0.8828	0.0422	0.0321	0.0414	0.8828	0.0015	0.3743	-0.2227	-0.2400	-0.2737	0.3743	-1.2007	0.0407	-4.30
00686	A	M	7252	0.8429	0.8429	0.0342	0.0990	0.0234	0.0004	0.4596	0.4596	-0.2489	-0.4108	-0.2372	-0.7831	0.0361	-4.50
00687	B	M	7252	0.7232	0.1657	0.7232	0.0605	0.0496	0.0008	0.2989	-0.1456	0.2989	-0.2805	-0.3417	0.1034	0.0299	9.90
00688	B	M	7252	0.7635	0.0609	0.7635	0.0983	0.0761	0.0011	0.3697	-0.3001	0.3697	-0.2577	-0.2633	-0.1881	0.0315	3.30
00689	C	F	7252	0.8297	0.0161	0.0967	0.8297	0.0556	0.0019	0.3643	-0.2615	-0.2812	0.3643	-0.2223	-0.6565	0.0350	-0.50
00690	B	F	7252	0.5934	0.0410	0.5934	0.2601	0.1038	0.0018	0.3086	-0.2923	0.3086	-0.2351	-0.2657	0.8316	0.0274	6.80
00691	C	F	7252	0.7872	0.0534	0.0658	0.7872	0.0917	0.0019	0.4514	-0.2751	-0.2927	0.4514	-0.3863	-0.3641	0.0326	-4.70
00692	B	F	7252	0.8813	0.0241	0.8813	0.0630	0.0296	0.0019	0.4826	-0.2955	0.4826	-0.3509	-0.3302	-1.1923	0.0406	-8.60
00693	A	F	7252	0.9151	0.9151	0.0243	0.0233	0.0359	0.0015	0.4222	0.4222	-0.2423	-0.3086	-0.2711	-1.6185	0.0466	-6.70
00694	C	F	7252	0.2046	0.2912	0.1686	0.2046	0.3333	0.0022	0.1405	-0.0504	-0.3613	0.1405	-0.1601	2.9981	0.0322	9.90
00695	D	F	7252	0.4351	0.1191	0.2937	0.1498	0.4351	0.0023	0.3462	-0.4817	-0.2930	-0.2729	0.3462	1.6429	0.0270	6.60
00696	B	F	7252	0.6135	0.2799	0.6135	0.0641	0.0397	0.0028	0.2935	-0.1826	0.2935	-0.3689	-0.3104	0.7468	0.0276	9.80
00697	A	M	7285	0.7850	0.7850	0.1065	0.0792	0.0284	0.0008	0.4049	0.4049	-0.3188	-0.3203	-0.2078	-0.3674	0.0326	0.20
00698	B	M	7285	0.9277	0.0343	0.9277	0.0244	0.0133	0.0003	0.3850	-0.2757	0.3850	-0.2403	-0.2136	-1.8703	0.0500	-6.10
00699	B	M	7285	0.9149	0.0397	0.9149	0.0290	0.0156	0.0008	0.3819	-0.2666	0.3819	-0.2355	-0.2332	-1.6714	0.0467	-5.50
00700	D	M	7285	0.7161	0.0795	0.0689	0.1348	0.7161	0.0007	0.3242	-0.2147	-0.2612	-0.2552	0.3242	0.1342	0.0297	6.70
00701	C	M	7285	0.8666	0.0275	0.0688	0.8666	0.0369	0.0003	0.4160	-0.2837	-0.2955	0.4160	-0.2670	-1.0588	0.0386	-4.70
00702	A	M	7285	0.8622	0.8622	0.0257	0.0339	0.0780	0.0003	0.3441	0.3441	-0.2577	-0.2686	-0.2040	-1.0204	0.0382	2.80
00703	C	M	7285	0.7260	0.2292	0.0275	0.7260	0.0167	0.0005	0.4341	-0.3776	-0.3420	0.4341	-0.2794	0.0456	0.0301	-1.00
00704	A	M	7285	0.6328	0.6328	0.1181	0.2222	0.0258	0.0011	0.3856	0.3856	-0.4151	-0.2548	-0.3837	0.5910	0.0280	2.90
00705	D	F	7285	0.5373	0.3181	0.0397	0.1036	0.5373	0.0014	0.3233	-0.2278	-0.3909	-0.3855	0.3233	1.0967	0.0270	9.50
00706	C	F	7285	0.8292	0.1019	0.0367	0.8292	0.0302	0.0021	0.4720	-0.3639	-0.3496	0.4720	-0.2784	-0.7149	0.0353	-7.40
00707	D	F	7285	0.8568	0.0365	0.0482	0.0564	0.8568	0.0021	0.3972	-0.2021	-0.2847	-0.3065	0.3972	-0.9529	0.0375	-2.20
00708	C	F	7285	0.7272	0.0335	0.1414	0.7272	0.0960	0.0019	0.4524	-0.3760	-0.3225	0.4524	-0.3838	0.0282	0.0302	-1.60
00709	A	F	7285	0.6475	0.6475	0.1432	0.0907	0.1164	0.0022	0.4931	0.4931	-0.3888	-0.4613	-0.3710	0.4806	0.0283	-7.10
00710	C	F	7285	0.6894	0.1846	0.0851	0.6894	0.0384	0.0025	0.4723	-0.3368	-0.4642	0.4723	-0.3478	0.2659	0.0291	-6.50
00711	D	F	7285	0.2636	0.1208	0.1437	0.4696	0.2636	0.0023	0.2219	-0.5247	-0.3169	-0.1430	0.2219	2.5710	0.0297	9.90
00712	A	F	7285	0.5282	0.5282	0.0788	0.0537	0.3367	0.0026	0.3918	0.3918	-0.3753	-0.3733	-0.3404	1.1390	0.0270	3.50
00713	A	M	7262	0.8580	0.8580	0.0796	0.0369	0.0255	0.0000	0.4242	0.4242	-0.3370	-0.2272	-0.2957	-0.9650	0.0378	-5.10

Appendix I: 2006 Uncommon Grade 8 Multiple Choice Statistics for Reading

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00714	A	M	7262	0.5511	0.5511	0.1435	0.1110	0.1939	0.0006	0.4218	0.4218	-0.3865	-0.5084	-0.2713	1.0325	0.0272	1.90
00715	D	M	7262	0.7750	0.0936	0.0376	0.0925	0.7750	0.0012	0.4503	-0.2913	-0.3548	-0.3662	0.4503	-0.2718	0.0320	-2.70
00716	B	M	7262	0.9120	0.0321	0.9120	0.0390	0.0167	0.0003	0.4383	-0.3259	0.4383	-0.2819	-0.2495	-1.6058	0.0459	-7.50
00717	D	M	7262	0.8871	0.0157	0.0616	0.0348	0.8871	0.0008	0.4796	-0.2805	-0.3838	-0.2901	0.4796	-1.2905	0.0415	-9.40
00718	D	M	7262	0.8134	0.0551	0.0563	0.0744	0.8134	0.0008	0.4887	-0.4023	-0.3959	-0.2733	0.4887	-0.5756	0.0342	-4.00
00719	A	M	7262	0.6512	0.6512	0.1553	0.0989	0.0929	0.0017	0.3241	0.3241	-0.2585	-0.3779	-0.1241	0.4985	0.0284	8.20
00720	A	M	7262	0.7192	0.7192	0.0857	0.1736	0.0201	0.0014	0.3354	0.3354	-0.2686	-0.2478	-0.2949	0.1042	0.0300	4.90
00721	D	F	7262	0.7223	0.1449	0.0452	0.0865	0.7223	0.0012	0.4530	-0.3677	-0.3666	-0.3193	0.4530	0.0725	0.0301	-3.60
00722	C	F	7262	0.9086	0.0432	0.0333	0.9086	0.0131	0.0018	0.4210	-0.2655	-0.3129	0.4210	-0.2395	-1.5559	0.0451	-6.40
00723	A	F	7262	0.7185	0.7185	0.0235	0.2382	0.0168	0.0029	0.3943	0.3943	-0.3016	-0.3401	-0.2438	0.1024	0.0300	1.10
00724	B	F	7262	0.5971	0.0219	0.5971	0.0273	0.3516	0.0022	0.2642	-0.3288	0.2642	-0.3015	-0.1947	0.8197	0.0276	9.90
00725	D	F	7262	0.4895	0.4082	0.0291	0.0700	0.4895	0.0033	0.3146	-0.2334	-0.4125	-0.4210	0.3146	1.3680	0.0270	9.90
00726	C	F	7262	0.7874	0.0826	0.0599	0.7874	0.0679	0.0022	0.4316	-0.2707	-0.3772	0.4316	-0.2949	-0.3866	0.0328	-1.50
00727	A	F	7262	0.5621	0.5621	0.2469	0.1548	0.0342	0.0021	0.4454	0.4454	-0.4117	-0.3640	-0.4348	0.9766	0.0273	-1.30
00728	D	F	7262	0.5644	0.1348	0.2125	0.0848	0.5644	0.0034	0.4240	-0.3678	-0.3303	-0.4360	0.4240	0.9571	0.0273	-0.50
00729	C	M	7236	0.6034	0.0491	0.3376	0.6034	0.0098	0.0001	0.4166	-0.4359	-0.3642	0.4166	-0.2401	0.7363	0.0275	-1.40
00730	D	M	7236	0.7358	0.0632	0.1358	0.0645	0.7358	0.0007	0.5705	-0.4807	-0.4336	-0.4467	0.5705	-0.0468	0.0304	-9.90
00731	C	M	7236	0.7095	0.1477	0.0709	0.7095	0.0712	0.0007	0.4843	-0.4100	-0.3787	0.4843	-0.3302	0.1287	0.0295	-7.10
00732	C	M	7236	0.7688	0.0941	0.0992	0.7688	0.0372	0.0007	0.4408	-0.3443	-0.2981	0.4408	-0.3488	-0.2470	0.0316	-5.60
00733	A	M	7236	0.8755	0.8755	0.0380	0.0341	0.0520	0.0004	0.4518	0.4518	-0.2957	-0.3259	-0.2965	-1.1432	0.0395	-7.30
00734	A	M	7236	0.7557	0.7557	0.0658	0.0825	0.0955	0.0006	0.4781	0.4781	-0.3770	-0.3666	-0.3370	-0.1585	0.0310	-6.70
00735	D	M	7236	0.7125	0.0741	0.1090	0.1031	0.7125	0.0012	0.4177	-0.2872	-0.3335	-0.3344	0.4177	0.1218	0.0296	-2.50
00736	C	M	7236	0.7036	0.0907	0.1578	0.7036	0.0474	0.0006	0.3573	-0.2002	-0.2875	0.3573	-0.3659	0.1774	0.0293	2.60
00737	D	F	7236	0.2908	0.4388	0.0290	0.2400	0.2908	0.0014	0.1442	-0.0864	-0.3908	-0.2256	0.1442	2.3983	0.0291	9.90
00738	A	F	7236	0.4392	0.4392	0.0832	0.2106	0.2645	0.0025	0.3478	0.3478	-0.3991	-0.3457	-0.2991	1.5832	0.0270	4.70
00739	C	F	7236	0.3197	0.0760	0.4664	0.3197	0.1353	0.0026	0.2453	-0.3633	-0.2130	0.2453	-0.2929	2.2290	0.0285	9.90
00740	B	F	7236	0.7062	0.1242	0.7062	0.0540	0.1132	0.0023	0.2438	-0.0168	0.2438	-0.3199	-0.2740	0.1843	0.0293	9.90
00741	D	F	7236	0.3722	0.0333	0.4686	0.1238	0.3722	0.0021	0.3059	-0.5176	-0.2336	-0.4483	0.3059	1.9270	0.0276	8.30
00742	B	F	7236	0.5292	0.1118	0.5292	0.2240	0.1324	0.0026	0.2776	-0.2852	0.2776	-0.1808	-0.2873	1.1229	0.0269	9.90
00743	B	F	7236	0.5535	0.2228	0.5535	0.0786	0.1425	0.0026	0.3688	-0.3416	0.3688	-0.3796	-0.2474	0.9993	0.0271	3.70
00744	B	F	7236	0.4860	0.2360	0.4860	0.0554	0.2200	0.0025	0.2711	-0.1892	0.2711	-0.3429	-0.2622	1.3434	0.0269	9.90
00745	A	M	7248	0.7675	0.7675	0.0951	0.0826	0.0544	0.0004	0.3502	0.3502	-0.2758	-0.3131	-0.1433	-0.1953	0.0317	2.10
00746	C	M	7248	0.6093	0.1990	0.1447	0.6093	0.0461	0.0010	0.2597	-0.1563	-0.2919	0.2597	-0.1911	0.7580	0.0277	9.90
00747	A	M	7248	0.7370	0.7370	0.0320	0.0975	0.1320	0.0014	0.3329	0.3329	-0.2784	-0.2228	-0.2586	0.0218	0.0304	2.80
00748	A	M	7248	0.8308	0.8308	0.0273	0.0272	0.1140	0.0007	0.4433	0.4433	-0.3433	-0.3283	-0.3162	-0.7067	0.0355	-3.40
00749	A	M	7248	0.7430	0.7430	0.1175	0.1218	0.0170	0.0007	0.4406	0.4406	-0.3938	-0.3036	-0.3090	-0.0411	0.0308	-2.70
00750	D	M	7248	0.8166	0.0356	0.0662	0.0808	0.8166	0.0007	0.4678	-0.3439	-0.2966	-0.3700	0.4678	-0.5676	0.0343	-6.30
00751	B	M	7248	0.6999	0.1319	0.6999	0.1028	0.0639	0.0015	0.5156	-0.4106	0.5156	-0.4366	-0.3783	0.2256	0.0295	-8.40
00752	B	M	7248	0.5728	0.1962	0.5728	0.2038	0.0257	0.0015	0.3711	-0.3644	0.3711	-0.2722	-0.3724	0.9475	0.0273	5.00
00753	D	F	7248	0.4699	0.3811	0.0419	0.1038	0.4699	0.0033	0.1868	-0.1641	-0.3426	-0.1002	0.1868	1.4695	0.0270	9.90
00754	B	F	7248	0.8427	0.0607	0.8427	0.0705	0.0235	0.0026	0.4447	-0.3356	0.4447	-0.3401	-0.2193	-0.7983	0.0363	-4.50
00755	C	F	7248	0.4415	0.4305	0.0625	0.4415	0.0618	0.0037	0.2605	-0.2471	-0.3163	0.2605	-0.1714	1.6260	0.0271	9.90
00756	B	F	7248	0.7642	0.0672	0.7642	0.1478	0.0182	0.0026	0.4724	-0.4147	0.4724	-0.3529	-0.3111	-0.1783	0.0316	-5.40
00757	C	F	7248	0.3444	0.2043	0.0908	0.3444	0.3571	0.0034	0.2752	-0.2809	-0.3967	0.2752	-0.2454	2.1381	0.0280	9.90
00758	C	F	7248	0.7511	0.0700	0.1158	0.7511	0.0602	0.0030	0.5367	-0.3970	-0.4241	0.5367	-0.4087	-0.1112	0.0312	-9.90
00759	B	F	7248	0.8299	0.0495	0.8299	0.0702	0.0470	0.0033	0.4897	-0.3257	0.4897	-0.3753	-0.3275	-0.7004	0.0354	-8.60
00760	C	F	7248	0.7638	0.0669	0.0781	0.7638	0.0882	0.0030	0.4535	-0.3540	-0.3403	0.4535	-0.3153	-0.1832	0.0316	-4.70
00761	B	M	7244	0.8502	0.0755	0.8502	0.0664	0.0077	0.0001	0.0874	-0.0029	0.0874	-0.1073	-0.1111	-0.8333	0.0366	9.90
00762	C	M	7244	0.7279	0.1766	0.0181	0.7279	0.0766	0.0008	0.3137	-0.2740	-0.2547	0.3137	-0.1862	0.0474	0.0301	4.90

Appendix I: 2006 Uncommon Grade 8 Multiple Choice Statistics for Reading

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00763	D	M	7244	0.7515	0.0214	0.1984	0.0280	0.7515	0.0007	0.3629	-0.2940	-0.2866	-0.2766	0.3629	-0.0973	0.0309	1.90
00764	A	M	7244	0.7873	0.7873	0.0485	0.1328	0.0301	0.0014	0.2879	0.2879	-0.2392	-0.1614	-0.2842	-0.3471	0.0325	7.30
00765	D	M	7244	0.9318	0.0199	0.0295	0.0182	0.9318	0.0006	0.4209	-0.2741	-0.2915	-0.2372	0.4209	-1.9047	0.0514	-7.70
00766	D	M	7244	0.9076	0.0171	0.0344	0.0402	0.9076	0.0007	0.4837	-0.2825	-0.3196	-0.3501	0.4837	-1.5357	0.0452	-9.90
00767	B	M	7244	0.7533	0.0541	0.7533	0.1719	0.0192	0.0015	0.3066	-0.3330	0.3066	-0.1718	-0.2789	-0.1021	0.0310	5.70
00768	D	M	7244	0.7438	0.1125	0.1183	0.0237	0.7438	0.0017	0.3873	-0.2773	-0.3067	-0.2997	0.3873	-0.0291	0.0305	-0.80
00769	C	F	7244	0.8171	0.0177	0.1048	0.8171	0.0587	0.0018	0.3665	-0.2466	-0.2919	0.3665	-0.2274	-0.5689	0.0342	-0.30
00770	B	F	7244	0.5737	0.0391	0.5737	0.2822	0.1034	0.0017	0.2842	-0.2710	0.2842	-0.2159	-0.2589	0.9274	0.0272	8.80
00771	C	F	7244	0.7790	0.0589	0.0652	0.7790	0.0957	0.0012	0.4647	-0.3068	-0.2847	0.4647	-0.4074	-0.3009	0.0322	-5.80
00772	B	F	7244	0.8722	0.0308	0.8722	0.0647	0.0306	0.0017	0.4581	-0.3148	0.4581	-0.3256	-0.2873	-1.1113	0.0396	-7.50
00773	A	F	7244	0.9099	0.9099	0.0243	0.0260	0.0380	0.0019	0.4265	0.4265	-0.2428	-0.3339	-0.2531	-1.5564	0.0455	-8.00
00774	C	F	7244	0.1942	0.2566	0.1690	0.1942	0.3770	0.0032	0.1155	-0.0221	-0.3484	0.1155	-0.1104	3.0587	0.0327	9.90
00775	D	F	7244	0.3904	0.1350	0.3168	0.1561	0.3904	0.0017	0.2983	-0.4705	-0.2332	-0.2487	0.2983	1.8664	0.0273	9.90
00776	B	F	7244	0.5997	0.2846	0.5997	0.0675	0.0460	0.0022	0.2920	-0.1819	0.2920	-0.3521	-0.3305	0.7914	0.0274	9.90
00777	A	M	7243	0.7835	0.7835	0.1013	0.0873	0.0268	0.0011	0.4006	0.4006	-0.3007	-0.3347	-0.2070	-0.3179	0.0326	-0.30
00778	B	M	7243	0.9330	0.0320	0.9330	0.0211	0.0138	0.0000	0.3875	-0.2786	0.3875	-0.2360	-0.2183	-1.9126	0.0519	-7.00
00779	B	M	7243	0.9225	0.0331	0.9225	0.0276	0.0166	0.0001	0.3720	-0.2255	0.3720	-0.2444	-0.2543	-1.7645	0.0492	-5.00
00780	D	M	7243	0.7243	0.0769	0.0678	0.1291	0.7243	0.0019	0.3282	-0.2077	-0.2721	-0.2558	0.3282	0.1191	0.0300	4.90
00781	C	M	7243	0.8739	0.0193	0.0650	0.8739	0.0409	0.0008	0.4085	-0.2381	-0.3090	0.4085	-0.2678	-1.0820	0.0395	-4.80
00782	A	M	7243	0.8673	0.8673	0.0217	0.0315	0.0792	0.0003	0.3298	0.3298	-0.2156	-0.2612	-0.2106	-1.0175	0.0388	1.90
00783	C	M	7243	0.7349	0.2219	0.0260	0.7349	0.0162	0.0011	0.4472	-0.3886	-0.3472	0.4472	-0.3014	0.0314	0.0304	-2.40
00784	A	M	7243	0.6321	0.6321	0.1190	0.2261	0.0210	0.0018	0.3530	0.3530	-0.4024	-0.2215	-0.3496	0.6428	0.0280	5.80
00785	D	F	7243	0.7183	0.1451	0.0472	0.0868	0.7183	0.0025	0.4518	-0.3629	-0.3670	-0.3274	0.4518	0.1379	0.0299	-3.40
00786	C	F	7243	0.9209	0.0366	0.0260	0.9209	0.0145	0.0021	0.4213	-0.2568	-0.3029	0.4213	-0.2619	-1.7052	0.0482	-6.80
00787	A	F	7243	0.7161	0.7161	0.0221	0.2420	0.0159	0.0039	0.4193	0.4193	-0.3384	-0.3645	-0.2815	0.1487	0.0298	-0.90
00788	B	F	7243	0.6206	0.0217	0.6206	0.0276	0.3276	0.0025	0.3101	-0.3143	0.3101	-0.3338	-0.2408	0.7107	0.0278	5.60
00789	D	F	7243	0.4892	0.4237	0.0247	0.0594	0.4892	0.0030	0.3148	-0.2474	-0.3857	-0.4176	0.3148	1.3920	0.0269	9.90
00790	C	F	7243	0.7868	0.0826	0.0595	0.7868	0.0682	0.0029	0.4342	-0.2686	-0.3798	0.4342	-0.3089	-0.3264	0.0326	-1.40
00791	A	F	7243	0.5616	0.5616	0.2611	0.1418	0.0327	0.0028	0.4169	0.4169	-0.3847	-0.3253	-0.4315	1.0081	0.0272	1.00
00792	D	F	7243	0.5788	0.1280	0.2005	0.0891	0.5788	0.0037	0.4177	-0.3271	-0.3271	-0.4426	0.4177	0.9291	0.0273	-0.20
00793	A	M	7232	0.9353	0.9353	0.0196	0.0158	0.0283	0.0010	0.3638	0.3638	-0.2227	-0.2393	-0.2311	-1.8803	0.0516	-5.70
00794	A	M	7232	0.7995	0.7995	0.0697	0.0210	0.1083	0.0015	0.3697	0.3697	-0.2433	-0.2796	-0.2814	-0.3885	0.0331	-1.40
00795	B	M	7232	0.9299	0.0319	0.9299	0.0093	0.0279	0.0010	0.3065	-0.2467	0.3065	-0.1244	-0.1817	-1.7949	0.0501	-1.00
00796	C	M	7232	0.7842	0.0958	0.0871	0.7842	0.0324	0.0006	0.2811	-0.1796	-0.1813	0.2811	-0.2785	-0.2693	0.0323	6.20
00797	B	M	7232	0.6209	0.0971	0.6209	0.1297	0.1515	0.0008	0.2268	-0.0307	0.2268	-0.1826	-0.2880	0.7344	0.0278	9.90
00798	C	M	7232	0.5261	0.2066	0.0455	0.5261	0.2205	0.0012	0.3091	-0.2013	-0.4115	0.3091	-0.2951	1.2378	0.0270	9.90
00799	C	M	7232	0.8420	0.0581	0.0567	0.8420	0.0420	0.0012	0.4382	-0.2589	-0.3562	0.4382	-0.2988	-0.7478	0.0362	-3.50
00800	B	M	7232	0.7651	0.0456	0.7651	0.0270	0.1605	0.0018	0.2611	-0.2763	0.2611	-0.2982	-0.1239	-0.1260	0.0314	8.60
00801	B	F	7232	0.7727	0.0614	0.7727	0.1225	0.0415	0.0019	0.3627	-0.3355	0.3627	-0.2222	-0.2546	-0.1981	0.0318	2.00
00802	C	F	7232	0.7667	0.0769	0.0991	0.7667	0.0552	0.0021	0.4872	-0.3706	-0.4538	0.4872	-0.2123	-0.1548	0.0316	-7.20
00803	C	F	7232	0.7088	0.1206	0.0503	0.7088	0.1182	0.0021	0.3648	-0.3989	-0.3044	0.3648	-0.1393	0.2139	0.0296	3.70
00804	D	F	7232	0.7907	0.0572	0.0463	0.1032	0.7907	0.0026	0.4041	-0.2677	-0.2837	-0.3042	0.4041	-0.3340	0.0328	-3.40
00805	B	F	7232	0.7489	0.1280	0.7489	0.0384	0.0827	0.0019	0.3149	-0.2491	0.3149	-0.2596	-0.1943	-0.0348	0.0309	7.60
00806	D	F	7232	0.7053	0.1061	0.0503	0.1358	0.7053	0.0025	0.5494	-0.4043	-0.4413	-0.4720	0.5494	0.2331	0.0295	-9.90
00807	B	F	7232	0.8500	0.0566	0.8500	0.0581	0.0333	0.0021	0.4697	-0.3517	0.4697	-0.2964	-0.3351	-0.8295	0.0369	-6.10
00808	A	F	7232	0.8928	0.8928	0.0321	0.0360	0.0369	0.0022	0.4426	0.4426	-0.2882	-0.2963	-0.2900	-1.2863	0.0422	-7.40
00809	A	M	7239	0.8552	0.8552	0.0837	0.0361	0.0247	0.0003	0.4377	0.4377	-0.3445	-0.2657	-0.2836	-0.8812	0.0372	-5.10
00810	A	M	7239	0.5606	0.5606	0.1362	0.1082	0.1946	0.0004	0.3864	0.3864	-0.3485	-0.5031	-0.2152	1.0023	0.0271	2.80
00811	D	M	7239	0.7775	0.0984	0.0344	0.0890	0.7775	0.0008	0.4351	-0.2717	-0.3212	-0.3732	0.4351	-0.2649	0.0320	-3.60

Appendix I: 2006 Uncommon Grade 8 Multiple Choice Statistics for Reading

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00812	B	M	7239	0.9124	0.0305	0.9124	0.0383	0.0184	0.0004	0.4562	-0.3217	0.4562	-0.2947	-0.2841	-1.5768	0.0460	-9.20
00813	D	M	7239	0.8957	0.0134	0.0580	0.0322	0.8957	0.0007	0.4711	-0.2588	-0.3775	-0.2848	0.4711	-1.3451	0.0426	-9.90
00814	D	M	7239	0.8117	0.0528	0.0593	0.0751	0.8117	0.0011	0.4950	-0.3966	-0.3971	-0.2883	0.4950	-0.5328	0.0340	-6.40
00815	A	M	7239	0.6569	0.6569	0.1517	0.0967	0.0935	0.0012	0.3149	0.3149	-0.2415	-0.3668	-0.1350	0.4836	0.0283	7.80
00816	A	M	7239	0.7194	0.7194	0.0934	0.1656	0.0207	0.0008	0.3459	0.3459	-0.2815	-0.2576	-0.2955	0.1247	0.0298	3.10
00817	A	F	7239	0.3822	0.3822	0.0202	0.0320	0.5643	0.0012	0.3096	0.3096	-0.3750	-0.3934	-0.2819	1.8963	0.0273	9.90
00818	B	F	7239	0.6334	0.1473	0.6334	0.1064	0.1109	0.0021	0.2318	-0.1522	0.2318	-0.2483	-0.1627	0.6204	0.0279	9.90
00819	C	F	7239	0.7330	0.0977	0.1021	0.7330	0.0641	0.0032	0.4214	-0.3311	-0.2634	0.4214	-0.3647	0.0427	0.0302	-2.40
00820	D	F	7239	0.3792	0.1877	0.0329	0.3981	0.3792	0.0021	0.2432	-0.2428	-0.3780	-0.2220	0.2432	1.9149	0.0273	9.90
00821	C	F	7239	0.6301	0.2502	0.0729	0.6301	0.0449	0.0019	0.4253	-0.3284	-0.4044	0.4253	-0.3787	0.6391	0.0278	-2.10
00822	B	F	7239	0.4835	0.1779	0.4835	0.1786	0.1576	0.0023	0.3020	-0.2703	0.3020	-0.3584	-0.1907	1.3908	0.0268	9.90
00823	C	F	7239	0.3590	0.1211	0.0441	0.3590	0.4726	0.0032	-0.0153	-0.3069	-0.2417	-0.0153	0.1662	2.0493	0.0276	9.90
00824	B	F	7239	0.8424	0.0170	0.8424	0.1018	0.0361	0.0028	0.4248	-0.2590	0.4248	-0.3304	-0.2925	-0.7775	0.0361	-3.80
00825	B	M	7223	0.8251	0.1117	0.8251	0.0191	0.0437	0.0003	0.3620	-0.2700	0.3620	-0.2123	-0.2725	-0.6108	0.0347	-0.80
00826	C	M	7223	0.4794	0.1574	0.2161	0.4794	0.1461	0.0010	0.3425	-0.4673	-0.2623	0.3425	-0.2318	1.4047	0.0267	5.90
00827	D	M	7223	0.8768	0.0702	0.0289	0.0231	0.8768	0.0010	0.2464	-0.1091	-0.2158	-0.2132	0.2464	-1.0934	0.0397	4.90
00828	A	M	7223	0.8451	0.8451	0.1091	0.0187	0.0264	0.0007	0.4204	0.4204	-0.3702	-0.2464	-0.1968	-0.7693	0.0362	-5.60
00829	D	M	7223	0.6006	0.0419	0.0346	0.3220	0.6006	0.0008	0.2363	-0.3928	-0.3062	-0.1340	0.2363	0.8098	0.0273	9.90
00830	C	M	7223	0.8715	0.0363	0.0354	0.8715	0.0566	0.0001	0.3736	-0.3008	-0.2587	0.3736	-0.2032	-1.0375	0.0390	-3.90
00831	C	M	7223	0.7813	0.0094	0.1929	0.7813	0.0155	0.0010	0.3330	-0.2286	-0.2775	0.3330	-0.2640	-0.2666	0.0320	3.20
00832	A	M	7223	0.6605	0.6605	0.2158	0.0653	0.0573	0.0010	0.0346	0.0346	0.0494	-0.1179	-0.1012	0.4905	0.0282	9.90
00833	C	F	7223	0.9079	0.0143	0.0638	0.9079	0.0119	0.0021	0.2966	-0.2326	-0.2177	0.2966	-0.1141	-1.4829	0.0449	0.50
00834	B	F	7223	0.3270	0.3096	0.3270	0.2420	0.1186	0.0028	0.2286	-0.2465	0.2286	-0.2356	-0.2221	2.1977	0.0281	9.90
00835	A	F	7223	0.9240	0.9240	0.0332	0.0137	0.0270	0.0021	0.3343	0.3343	-0.2174	-0.2410	-0.1839	-1.7151	0.0487	-0.30
00836	D	F	7223	0.9283	0.0284	0.0241	0.0169	0.9283	0.0024	0.4010	-0.2470	-0.2719	-0.2409	0.4010	-1.8009	0.0502	-8.00
00837	C	F	7223	0.6190	0.2455	0.0739	0.6190	0.0581	0.0035	0.4274	-0.3628	-0.3053	0.4274	-0.4042	0.6990	0.0276	-1.50
00838	D	F	7223	0.8196	0.1296	0.0318	0.0159	0.8196	0.0030	0.1395	-0.0077	-0.1776	-0.2698	0.1395	-0.5513	0.0342	9.90
00839	B	F	7223	0.6320	0.0327	0.6320	0.2171	0.1156	0.0026	0.2380	-0.2645	0.2380	-0.1471	-0.2220	0.6562	0.0277	9.90
00840	D	F	7223	0.6697	0.0282	0.2669	0.0325	0.6697	0.0026	0.2637	-0.3169	-0.1683	-0.2959	0.2637	0.4263	0.0284	8.50
00841	C	M	7217	0.6119	0.0427	0.3355	0.6119	0.0097	0.0003	0.3985	-0.3911	-0.3555	0.3985	-0.2205	0.7608	0.0278	1.60
00842	D	M	7217	0.7385	0.0594	0.1433	0.0581	0.7385	0.0007	0.5535	-0.4544	-0.4354	-0.4232	0.5535	0.0021	0.0307	-9.90
00843	C	M	7217	0.7225	0.1402	0.0655	0.7225	0.0707	0.0011	0.4456	-0.3623	-0.3434	0.4456	-0.3182	0.1164	0.0302	-3.90
00844	C	M	7217	0.7820	0.0865	0.0930	0.7820	0.0380	0.0006	0.4519	-0.3494	-0.3033	0.4519	-0.3662	-0.2925	0.0326	-4.70
00845	A	M	7217	0.8867	0.8867	0.0335	0.0305	0.0482	0.0011	0.4212	0.4212	-0.2660	-0.2909	-0.2885	-1.2398	0.0416	-5.90
00846	A	M	7217	0.7682	0.7682	0.0629	0.0727	0.0955	0.0007	0.4629	0.4629	-0.3554	-0.3367	-0.3407	-0.1937	0.0319	-5.20
00847	D	M	7217	0.7144	0.0675	0.1097	0.1075	0.7144	0.0008	0.4323	-0.2871	-0.3288	-0.3776	0.4323	0.1724	0.0299	-3.20
00848	C	M	7217	0.7086	0.0881	0.1569	0.7086	0.0449	0.0015	0.3547	-0.2157	-0.2765	0.3547	-0.3621	0.2187	0.0297	3.80
00849	B	F	7217	0.7121	0.1485	0.7121	0.0829	0.0553	0.0012	0.5500	-0.4654	0.5500	-0.4187	-0.4177	0.1589	0.0299	-9.90
00850	A	F	7217	0.6287	0.6287	0.0729	0.0351	0.2623	0.0011	0.3810	0.3810	-0.3511	-0.3809	-0.2940	0.6757	0.0280	2.50
00851	D	F	7217	0.7868	0.0818	0.0495	0.0802	0.7868	0.0018	0.5046	-0.3968	-0.3550	-0.3613	0.5046	-0.3214	0.0328	-7.70
00852	C	F	7217	0.6893	0.0581	0.0639	0.6893	0.1871	0.0017	0.2601	-0.2908	-0.3201	0.2601	-0.0980	0.3366	0.0292	9.90
00853	A	F	7217	0.9170	0.9170	0.0392	0.0247	0.0179	0.0012	0.4307	0.4307	-0.3030	-0.2697	-0.2621	-1.6160	0.0469	-7.70
00854	B	F	7217	0.8734	0.0499	0.8734	0.0545	0.0208	0.0015	0.3582	-0.2529	0.3582	-0.2077	-0.2829	-1.0729	0.0396	2.20
00855	C	F	7217	0.5292	0.0791	0.2771	0.5292	0.1131	0.0015	0.1538	-0.1956	-0.0245	0.1538	-0.2896	1.2151	0.0271	9.90
00856	A	F	7217	0.8517	0.8517	0.0313	0.0689	0.0464	0.0017	0.4389	0.4389	-0.3190	-0.2736	-0.3319	-0.8698	0.0374	-4.70
00857	D	M	7229	0.8629	0.0375	0.0524	0.0461	0.8629	0.0011	0.5212	-0.3424	-0.3940	-0.3437	0.5212	-1.0396	0.0387	-9.90
00858	C	M	7229	0.7860	0.1342	0.0346	0.7860	0.0447	0.0006	0.5104	-0.4333	-0.3337	0.5104	-0.3284	-0.3567	0.0328	-8.40
00859	D	M	7229	0.7666	0.0551	0.0422	0.1345	0.7666	0.0017	0.3552	-0.3209	-0.2689	-0.2309	0.3552	-0.2036	0.0318	5.60
00860	A	M	7229	0.9194	0.9194	0.0320	0.0279	0.0198	0.0010	0.4279	0.4279	-0.2729	-0.2826	-0.2757	-1.7374	0.0480	-6.90

Appendix I: 2006 Uncommon Grade 8 Multiple Choice Statistics for Reading

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00861	B	M	7229	0.9047	0.0122	0.9047	0.0501	0.0321	0.0010	0.4041	-0.1979	0.4041	-0.2902	-0.2855	-1.5024	0.0444	-4.90
00862	C	M	7229	0.8696	0.0308	0.0788	0.8696	0.0198	0.0010	0.3968	-0.2732	-0.2915	0.3968	-0.2318	-1.1054	0.0394	-2.80
00863	B	M	7229	0.8556	0.0304	0.8556	0.0941	0.0190	0.0010	0.2599	-0.1614	0.2599	-0.1866	-0.1845	-0.9233	0.0375	6.50
00864	A	F	7229	0.7648	0.7648	0.1145	0.0690	0.0486	0.0030	0.2441	0.2441	-0.0505	-0.2426	-0.2976	-0.1905	0.0317	9.90
00865	C	F	7229	0.8455	0.0492	0.0701	0.8455	0.0331	0.0021	0.4248	-0.3496	-0.3009	0.4248	-0.2105	-0.8446	0.0367	-4.10
00866	B	F	7229	0.9369	0.0183	0.9369	0.0313	0.0118	0.0018	0.3488	-0.2256	0.3488	-0.2450	-0.1770	-2.0062	0.0528	-4.10
00867	A	F	7229	0.8139	0.8139	0.0212	0.1228	0.0400	0.0021	0.3470	0.3470	-0.2539	-0.2656	-0.2251	-0.5601	0.0343	3.90
00868	D	F	7229	0.5034	0.2042	0.0977	0.1921	0.5034	0.0026	0.3343	-0.2630	-0.4050	-0.2856	0.3343	1.3014	0.0271	8.40
00869	A	F	7229	0.6842	0.6842	0.0593	0.1029	0.1509	0.0026	0.4539	0.4539	-0.3801	-0.3639	-0.3369	0.3096	0.0292	-6.20
00870	C	F	7229	0.7913	0.0755	0.0578	0.7913	0.0730	0.0024	0.5062	-0.3746	-0.3992	0.5062	-0.3415	-0.4002	0.0331	-8.00
00871	B	F	7229	0.6758	0.0717	0.6758	0.1020	0.1480	0.0026	0.4160	-0.3248	0.4160	-0.3126	-0.3430	0.3797	0.0289	-0.40
00872	D	F	7229	0.8481	0.0603	0.0567	0.0326	0.8481	0.0022	0.4992	-0.3721	-0.3402	-0.3313	0.4992	-0.8842	0.0371	-8.80
00873	A	M	7236	0.7782	0.7782	0.0878	0.0770	0.0568	0.0003	0.3351	0.3351	-0.2551	-0.2929	-0.1545	-0.2510	0.0319	2.70
00874	C	M	7236	0.6088	0.1881	0.1555	0.6088	0.0467	0.0010	0.2640	-0.1512	-0.3007	0.2640	-0.1954	0.7545	0.0276	9.90
00875	A	M	7236	0.7295	0.7295	0.0271	0.0988	0.1437	0.0008	0.3067	0.3067	-0.2482	-0.2093	-0.2412	0.0628	0.0301	3.30
00876	A	M	7236	0.8347	0.8347	0.0297	0.0252	0.1099	0.0006	0.4361	0.4361	-0.3509	-0.3236	-0.3004	-0.7141	0.0355	-3.10
00877	A	M	7236	0.7402	0.7402	0.1119	0.1331	0.0140	0.0008	0.4352	0.4352	-0.3920	-0.3127	-0.2932	-0.0155	0.0305	-2.90
00878	D	M	7236	0.8105	0.0383	0.0706	0.0795	0.8105	0.0011	0.4527	-0.3248	-0.2849	-0.3632	0.4527	-0.5013	0.0337	-5.50
00879	B	M	7236	0.6978	0.1306	0.6978	0.1043	0.0662	0.0011	0.5140	-0.4038	0.5140	-0.4462	-0.3655	0.2473	0.0292	-8.60
00880	B	M	7236	0.5732	0.1965	0.5732	0.2026	0.0256	0.0021	0.3915	-0.3719	0.3915	-0.2933	-0.4285	0.9417	0.0272	2.70
00881	A	F	7236	0.9140	0.9140	0.0388	0.0236	0.0216	0.0019	0.4259	0.4259	-0.3085	-0.2714	-0.2329	-1.6032	0.0464	-6.90
00882	C	F	7236	0.8347	0.0203	0.0965	0.8347	0.0460	0.0025	0.4488	-0.2801	-0.3461	0.4488	-0.3003	-0.7077	0.0355	-6.40
00883	B	F	7236	0.6334	0.1353	0.6334	0.1082	0.1202	0.0029	0.4129	-0.3689	0.4129	-0.3443	-0.2817	0.6187	0.0279	-1.50
00884	B	F	7236	0.7358	0.1335	0.7358	0.0835	0.0446	0.0026	0.3834	-0.2673	0.3834	-0.2701	-0.3456	0.0142	0.0304	0.10
00885	C	F	7236	0.6093	0.1227	0.0661	0.6093	0.1993	0.0026	0.3587	-0.2590	-0.3759	0.3587	-0.2810	0.7507	0.0276	3.60
00886	B	F	7236	0.2475	0.0638	0.2475	0.6627	0.0238	0.0022	0.1752	-0.3171	0.1752	-0.1567	-0.2674	2.7119	0.0304	9.90
00887	B	F	7236	0.8307	0.0504	0.8307	0.0959	0.0200	0.0029	0.3320	-0.2604	0.3320	-0.1982	-0.2757	-0.6739	0.0352	4.20
00888	A	F	7236	0.7937	0.7937	0.0482	0.0748	0.0799	0.0035	0.4527	0.4527	-0.3424	-0.3372	-0.3093	-0.3900	0.0329	-3.70
00889	B	M	7222	0.8218	0.1144	0.8218	0.0181	0.0454	0.0003	0.3734	-0.2914	0.3734	-0.1949	-0.2815	-0.5709	0.0344	-1.00
00890	C	M	7222	0.4891	0.1619	0.1994	0.4891	0.1491	0.0006	0.3404	-0.4500	-0.2628	0.3404	-0.2203	1.3532	0.0268	5.70
00891	D	M	7222	0.8581	0.0802	0.0331	0.0274	0.8581	0.0012	0.2373	-0.0978	-0.2168	-0.2128	0.2373	-0.9017	0.0375	6.50
00892	A	M	7222	0.8341	0.8341	0.1126	0.0231	0.0294	0.0008	0.4009	0.4009	-0.3437	-0.2652	-0.1821	-0.6917	0.0354	-3.90
00893	D	M	7222	0.5971	0.0454	0.0341	0.3217	0.5971	0.0018	0.2470	-0.3748	-0.3226	-0.1463	0.2470	0.8225	0.0274	9.90
00894	C	M	7222	0.8653	0.0400	0.0335	0.8653	0.0605	0.0007	0.3943	-0.3132	-0.2699	0.3943	-0.2262	-0.9896	0.0384	-4.30
00895	C	M	7222	0.7840	0.0118	0.1883	0.7840	0.0151	0.0008	0.3224	-0.2588	-0.2630	0.3224	-0.2352	-0.2949	0.0323	4.20
00896	A	M	7222	0.6728	0.6728	0.1981	0.0738	0.0534	0.0018	0.0588	0.0588	0.0221	-0.1179	-0.1044	0.4264	0.0285	9.90
00897	B	F	7222	0.9171	0.0403	0.9171	0.0295	0.0118	0.0014	0.3664	-0.2731	0.3664	-0.2228	-0.2031	-1.5973	0.0465	-2.40
00898	C	F	7222	0.8831	0.0363	0.0374	0.8831	0.0410	0.0022	0.3898	-0.2876	-0.2085	0.3898	-0.2751	-1.1837	0.0407	-4.40
00899	C	F	7222	0.5446	0.0942	0.1836	0.5446	0.1754	0.0022	0.3570	-0.4805	-0.2003	0.3570	-0.3128	1.0856	0.0269	4.50
00900	D	F	7222	0.5516	0.1494	0.1234	0.1735	0.5516	0.0021	0.3968	-0.4558	-0.3642	-0.2375	0.3968	1.0354	0.0270	2.00
00901	D	F	7222	0.6320	0.0942	0.1700	0.1004	0.6320	0.0035	0.2859	-0.2769	-0.1489	-0.3151	0.2859	0.6544	0.0278	9.90
00902	A	F	7222	0.7276	0.7276	0.1230	0.0734	0.0734	0.0026	0.4233	0.4233	-0.2747	-0.3718	-0.3386	0.0667	0.0301	-2.70
00903	C	F	7222	0.3637	0.2833	0.2415	0.3637	0.1080	0.0035	0.1878	-0.2711	-0.0659	0.1878	-0.2495	2.0089	0.0275	9.90
00904	D	F	7222	0.6012	0.1927	0.1376	0.0649	0.6012	0.0035	0.4038	-0.2607	-0.3715	-0.4572	0.4038	0.7751	0.0275	0.70
00905	A	M	7224	0.9306	0.9306	0.0205	0.0183	0.0302	0.0004	0.3860	0.3860	-0.2476	-0.2264	-0.2600	-1.8421	0.0507	-6.30
00906	A	M	7224	0.7942	0.7942	0.0781	0.0194	0.1074	0.0010	0.3764	0.3764	-0.2635	-0.2719	-0.2887	-0.3790	0.0329	-1.20
00907	B	M	7224	0.9250	0.0357	0.9250	0.0094	0.0295	0.0004	0.2976	-0.2377	0.2976	-0.1483	-0.1637	-1.7354	0.0488	0.10
00908	C	M	7224	0.7882	0.0898	0.0868	0.7882	0.0346	0.0006	0.2952	-0.1758	-0.1811	0.2952	-0.3156	-0.3273	0.0326	5.30
00909	B	M	7224	0.6272	0.0993	0.6272	0.1290	0.1438	0.0007	0.2357	-0.0705	0.2357	-0.1815	-0.2868	0.6757	0.0278	9.90

Appendix I: 2006 Uncommon Grade 8 Multiple Choice Statistics for Reading

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00910	C	M	7224	0.5343	0.1931	0.0479	0.5343	0.2231	0.0015	0.3221	-0.2287	-0.4348	0.3221	-0.2781	1.1604	0.0270	9.90
00911	C	M	7224	0.8367	0.0616	0.0586	0.8367	0.0425	0.0007	0.4663	-0.3005	-0.3681	0.4663	-0.3131	-0.7385	0.0359	-5.30
00912	B	M	7224	0.7803	0.0417	0.7803	0.0267	0.1505	0.0008	0.2550	-0.2458	0.2550	-0.2943	-0.1245	-0.2437	0.0320	8.90
00913	D	F	7224	0.5579	0.0730	0.2190	0.1470	0.5579	0.0032	0.4514	-0.4492	-0.4019	-0.3666	0.4514	1.0099	0.0272	-4.60
00914	A	F	7224	0.5919	0.5919	0.1350	0.0921	0.1776	0.0035	0.3915	0.3915	-0.3530	-0.3584	-0.2940	0.8509	0.0274	0.30
00915	B	F	7224	0.8023	0.0652	0.8023	0.0713	0.0590	0.0022	0.4336	-0.3540	0.4336	-0.3185	-0.2501	-0.4634	0.0336	-4.60
00916	C	F	7224	0.3779	0.0518	0.4896	0.3779	0.0788	0.0019	0.2598	-0.4042	-0.2332	0.2598	-0.2337	1.9533	0.0275	9.90
00917	D	F	7224	0.3534	0.2061	0.2478	0.1884	0.3534	0.0043	0.2599	-0.2948	-0.1143	-0.4273	0.2599	2.0912	0.0278	9.90
00918	C	F	7224	0.8249	0.0540	0.0612	0.8249	0.0572	0.0028	0.3822	-0.2645	-0.2962	0.3822	-0.2265	-0.6096	0.0348	0.50
00919	D	F	7224	0.7334	0.0401	0.1653	0.0583	0.7334	0.0029	0.3971	-0.3158	-0.2638	-0.3770	0.3971	0.0455	0.0303	0.50
00920	C	F	7224	0.5365	0.3261	0.1100	0.5365	0.0241	0.0032	0.2912	-0.2273	-0.3024	0.2912	-0.3271	1.1495	0.0270	9.90
00921	A	ML	7243	0.8839	0.8839	0.0380	0.0406	0.0366	0.0010	0.4885	0.4885	-0.3377	-0.3350	-0.3149	-1.2645	0.0419	-9.10
00922	D	ML	7243	0.8211	0.1207	0.0398	0.0182	0.8211	0.0003	0.4224	-0.3555	-0.2593	-0.2587	0.4224	-0.5966	0.0348	-2.40
00923	A	ML	7243	0.7729	0.7729	0.0440	0.0922	0.0900	0.0008	0.3797	0.3797	-0.3542	-0.2844	-0.2262	-0.1168	0.0313	1.10
00924	B	ML	7243	0.6423	0.1399	0.6423	0.1901	0.0265	0.0012	0.4344	-0.3083	0.4344	-0.4085	-0.3826	0.8013	0.0276	-2.30
00925	D	ML	7243	0.6009	0.0193	0.2694	0.1096	0.6009	0.0008	0.3491	-0.3753	-0.2161	-0.4447	0.3491	1.0656	0.0271	5.20
00926	D	ML	7243	0.8764	0.0599	0.0257	0.0366	0.8764	0.0014	0.4351	-0.3021	-0.2876	-0.2953	0.4351	-1.1424	0.0403	-4.10
00927	D	ML	7243	0.5502	0.0954	0.0650	0.2873	0.5502	0.0021	0.4197	-0.4767	-0.4248	-0.3153	0.4197	1.4145	0.0269	2.40
00928	B	ML	7243	0.6206	0.1158	0.6206	0.1151	0.1462	0.0022	0.3463	-0.2641	0.3463	-0.3618	-0.2353	0.9320	0.0273	4.60
00929	B	F	7243	0.8139	0.0657	0.8139	0.0392	0.0791	0.0021	0.3208	-0.1407	0.3208	-0.3091	-0.2366	-0.5116	0.0341	5.30
00930	B	F	7243	0.7328	0.0435	0.7328	0.2032	0.0177	0.0028	0.3884	-0.4148	0.3884	-0.2778	-0.2586	0.0707	0.0303	0.50
00931	A	F	7243	0.6678	0.6678	0.1176	0.1356	0.0747	0.0043	0.4310	0.4310	-0.3101	-0.3490	-0.3760	0.4557	0.0286	-4.00
00932	D	F	7243	0.7708	0.0820	0.1099	0.0340	0.7708	0.0033	0.4267	-0.2419	-0.3645	-0.3371	0.4267	-0.1801	0.0317	-2.00
00933	B	F	7243	0.7929	0.0652	0.7929	0.0392	0.0997	0.0030	0.3913	-0.3097	0.3913	-0.2888	-0.2478	-0.3654	0.0330	-0.80
00934	C	F	7243	0.7178	0.1379	0.0920	0.7178	0.0496	0.0028	0.4232	-0.2925	-0.3368	0.4232	-0.3713	0.1532	0.0299	-1.20
00935	B	F	7243	0.5114	0.2611	0.5114	0.1382	0.0862	0.0032	0.3521	-0.1906	0.3521	-0.4716	-0.3749	1.2865	0.0269	7.40
00936	D	F	7243	0.4602	0.3309	0.1251	0.0804	0.4602	0.0035	0.2509	-0.1030	-0.3949	-0.3775	0.2509	1.5561	0.0269	9.90
00937	D	ML	7203	0.9148	0.0269	0.0222	0.0361	0.9148	0.0000	0.3192	-0.2587	-0.1768	-0.1796	0.3192	-1.1722	0.0417	-5.60
00938	A	ML	7203	0.7158	0.7158	0.1677	0.0948	0.0215	0.0001	0.3790	0.3790	-0.2638	-0.4044	-0.1483	0.6904	0.0282	-1.80
00939	A	ML	7203	0.7693	0.7693	0.0300	0.0543	0.1459	0.0006	0.4729	0.4729	-0.3293	-0.3667	-0.3730	0.2746	0.0297	-9.90
00940	B	ML	7203	0.9085	0.0251	0.9085	0.0233	0.0425	0.0006	0.3798	-0.2089	0.3798	-0.2507	-0.2737	-1.1586	0.0416	-7.00
00941	A	ML	7203	0.8224	0.8224	0.0416	0.1247	0.0108	0.0004	0.4470	0.4470	-0.2486	-0.4026	-0.2391	-0.0975	0.0318	-9.90
00942	D	ML	7203	0.7352	0.0673	0.1279	0.0696	0.7352	0.0000	0.2324	-0.1841	-0.1901	-0.1257	0.2324	0.6739	0.0282	6.00
00943	D	ML	7203	0.6674	0.0212	0.1055	0.2045	0.6674	0.0014	0.4361	-0.3658	-0.4140	-0.3313	0.4361	1.0639	0.0273	-5.40
00944	B	ML	7203	0.8689	0.0244	0.8689	0.0428	0.0632	0.0007	0.3742	-0.2230	0.3742	-0.2776	-0.2546	-0.6975	0.0365	-6.40
00945	D	F	7203	0.5513	0.3086	0.0375	0.1002	0.5513	0.0024	0.3270	-0.2379	-0.3753	-0.3696	0.3270	1.1545	0.0272	9.30
00946	C	F	7203	0.8420	0.0961	0.0294	0.8420	0.0297	0.0028	0.4738	-0.3606	-0.3272	0.4738	-0.3017	-0.6873	0.0364	-7.90
00947	D	F	7203	0.8624	0.0369	0.0457	0.0523	0.8624	0.0026	0.3685	-0.2175	-0.2178	-0.3008	0.3685	-0.8885	0.0384	0.10
00948	C	F	7203	0.7401	0.0271	0.1280	0.7401	0.1022	0.0026	0.4312	-0.3203	-0.3025	0.4312	-0.3714	0.0914	0.0307	-1.70
00949	A	F	7203	0.6651	0.6651	0.1299	0.0854	0.1172	0.0024	0.5038	0.5038	-0.4057	-0.4638	-0.3696	0.5376	0.0287	-7.70
00950	C	F	7203	0.6887	0.1944	0.0825	0.6887	0.0310	0.0035	0.4840	-0.3667	-0.4823	0.4840	-0.3058	0.4061	0.0292	-7.30
00951	D	F	7203	0.2618	0.1087	0.1405	0.4869	0.2618	0.0021	0.2210	-0.5030	-0.3032	-0.1614	0.2210	2.7068	0.0299	9.90
00952	A	F	7203	0.5514	0.5514	0.0701	0.0546	0.3213	0.0026	0.3924	0.3924	-0.3490	-0.3599	-0.3444	1.1552	0.0272	3.40
00953	C	ML	7189	0.7773	0.0697	0.1189	0.7773	0.0337	0.0004	0.3801	-0.2989	-0.3143	0.3801	-0.1805	0.1968	0.0300	-4.30
00954	A	ML	7189	0.8094	0.8094	0.1352	0.0242	0.0307	0.0004	0.3816	0.3816	-0.2556	-0.3308	-0.3072	-0.0387	0.0313	-5.70
00955	A	ML	7189	0.7815	0.7815	0.0275	0.1092	0.0811	0.0007	0.3948	0.3948	-0.2494	-0.3249	-0.2708	0.1873	0.0301	-7.20
00956	B	ML	7189	0.8681	0.0470	0.8681	0.0609	0.0232	0.0007	0.4410	-0.2955	0.4410	-0.2988	-0.3242	-0.6169	0.0355	-9.90
00957	C	ML	7189	0.7849	0.1149	0.0821	0.7849	0.0175	0.0006	0.3863	-0.2088	-0.3889	0.3863	-0.2752	0.1565	0.0302	-6.80
00958	A	ML	7189	0.7500	0.7500	0.1260	0.0325	0.0911	0.0003	0.4047	0.4047	-0.2458	-0.3435	-0.3592	0.4690	0.0288	-7.70

Appendix I: 2006 Uncommon Grade 8 Multiple Choice Statistics for Reading

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00959	C	ML	7189	0.6834	0.1206	0.0768	0.6834	0.1178	0.0014	0.3437	-0.2544	-0.3030	0.3437	-0.2532	0.9165	0.0276	2.50
00960	B	ML	7189	0.8889	0.0281	0.8889	0.0530	0.0291	0.0010	0.4508	-0.2631	0.4508	-0.3208	-0.3320	-0.9619	0.0389	-8.10
00961	C	F	7189	0.7511	0.1582	0.0746	0.7511	0.0139	0.0022	0.3387	-0.2750	-0.2383	0.3387	-0.2649	-0.0120	0.0311	5.20
00962	B	F	7189	0.8596	0.0732	0.8596	0.0519	0.0139	0.0014	0.3510	-0.2002	0.3510	-0.3044	-0.2280	-0.8761	0.0380	4.50
00963	B	F	7189	0.7909	0.0601	0.7909	0.0655	0.0811	0.0024	0.4558	-0.3375	0.4558	-0.3158	-0.3420	-0.2984	0.0330	-3.70
00964	B	F	7189	0.6687	0.1266	0.6687	0.0551	0.1474	0.0022	0.4005	-0.3297	0.4005	-0.3553	-0.2855	0.4928	0.0288	1.90
00965	B	F	7189	0.8157	0.0623	0.8157	0.0669	0.0530	0.0021	0.4159	-0.2457	0.4159	-0.3219	-0.3002	-0.4990	0.0345	-3.30
00966	D	F	7189	0.9053	0.0217	0.0211	0.0497	0.9053	0.0022	0.4628	-0.2788	-0.2977	-0.3332	0.4628	-1.4271	0.0449	-9.20
00967	C	F	7189	0.4005	0.2187	0.0897	0.4005	0.2891	0.0021	0.2613	-0.3764	-0.4189	0.2613	-0.0854	1.9131	0.0274	9.90
00968	A	F	7189	0.7811	0.7811	0.1526	0.0280	0.0366	0.0018	0.3593	0.3593	-0.2455	-0.3153	-0.2962	-0.2138	0.0324	4.90
00969	C	ML	7173	0.8663	0.0404	0.0679	0.8663	0.0250	0.0004	0.3571	-0.2401	-0.2815	0.3571	-0.1690	-1.1240	0.0403	-0.30
00970	D	ML	7173	0.6866	0.1455	0.0947	0.0725	0.6866	0.0007	0.3377	-0.1793	-0.3226	-0.3218	0.3377	0.2148	0.0294	6.50
00971	D	ML	7173	0.4850	0.3555	0.1217	0.0354	0.4850	0.0024	0.3702	-0.3139	-0.4295	-0.3274	0.3702	1.3693	0.0267	1.50
00972	D	ML	7173	0.6328	0.0468	0.2969	0.0222	0.6328	0.0013	0.3142	-0.3140	-0.2340	-0.3615	0.3142	0.5268	0.0281	8.70
00973	C	ML	7173	0.6059	0.2236	0.1366	0.6059	0.0326	0.0013	0.3507	-0.3083	-0.2857	0.3507	-0.2819	0.6545	0.0277	4.70
00974	A	ML	7173	0.5964	0.5964	0.1404	0.2123	0.0491	0.0018	0.2918	0.2918	-0.2446	-0.2350	-0.2488	0.7438	0.0275	7.90
00975	D	ML	7173	0.7244	0.0343	0.0541	0.1854	0.7244	0.0018	0.4077	-0.3059	-0.3661	-0.3070	0.4077	-0.0111	0.0305	1.00
00976	C	ML	7173	0.5227	0.0572	0.1175	0.5227	0.3009	0.0018	0.2465	-0.3651	-0.3088	0.2465	-0.1286	1.0953	0.0269	9.90
00977	A	F	7173	0.9272	0.9272	0.0307	0.0192	0.0212	0.0017	0.3883	0.3883	-0.2760	-0.2423	-0.2118	-1.7413	0.0495	-6.00
00978	B	F	7173	0.8724	0.0322	0.8724	0.0685	0.0248	0.0021	0.3754	-0.2450	0.3754	-0.2640	-0.2369	-1.0422	0.0393	-3.30
00979	D	F	7173	0.4426	0.1082	0.2802	0.1655	0.4426	0.0035	0.2728	-0.3834	-0.1497	-0.3407	0.2728	1.6032	0.0268	9.90
00980	C	F	7173	0.2038	0.5827	0.0889	0.2038	0.1217	0.0028	0.0776	-0.0379	-0.2946	0.0776	-0.1406	2.9762	0.0321	9.90
00981	B	F	7173	0.1832	0.1764	0.1832	0.2042	0.4336	0.0026	0.0975	0.0304	0.0975	-0.3027	-0.0910	3.1182	0.0332	9.90
00982	C	F	7173	0.4234	0.1195	0.1216	0.4234	0.3329	0.0026	0.1431	-0.2156	-0.2547	0.1431	-0.0421	1.7058	0.0269	9.90
00983	C	F	7173	0.5801	0.0429	0.0889	0.5801	0.2848	0.0032	0.3439	-0.3634	-0.4210	0.3439	-0.2222	0.9057	0.0271	5.10
00984	B	F	7173	0.7026	0.1676	0.7026	0.0751	0.0514	0.0032	0.2603	-0.1970	0.2603	-0.1730	-0.2290	0.2618	0.0291	9.90

Appendix J:

**2006 Uncommon Grade 11 Multiple Choice Statistics
for Reading**

Appendix J: 2006 Uncommon Grade 11 Multiple Choice Statistics for Reading

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00985	A	M	7037	0.8279	0.8279	0.0398	0.0338	0.0965	0.0020	0.4259	0.4259	-0.3360	-0.3214	-0.2693	-1.0176	0.0353	-2.80
00986	A	M	7037	0.6278	0.6278	0.0404	0.3116	0.0200	0.0001	0.3468	0.3468	-0.3129	-0.2850	-0.3173	0.2714	0.0282	3.60
00987	C	M	7037	0.8433	0.0618	0.0350	0.8433	0.0591	0.0009	0.4036	-0.2998	-0.3368	0.4036	-0.2051	-1.1522	0.0366	-4.50
00988	B	M	7037	0.7766	0.1086	0.7766	0.0634	0.0507	0.0007	0.4039	-0.2534	0.4039	-0.3097	-0.3253	-0.6329	0.0324	-4.30
00989	A	M	7037	0.8076	0.8076	0.0280	0.0978	0.0659	0.0007	0.3911	0.3911	-0.2887	-0.2859	-0.2669	-0.8623	0.0340	-1.40
00990	D	F	7037	0.5502	0.0772	0.1255	0.2461	0.5502	0.0010	0.5418	-0.5015	-0.5702	-0.4294	0.5418	0.6712	0.0274	-9.90
00991	B	M	7037	0.6071	0.1974	0.6071	0.0568	0.1378	0.0009	0.3691	-0.2874	0.3691	-0.3787	-0.2757	0.3875	0.0279	-0.10
00992	B	M	7037	0.7608	0.0975	0.7608	0.0635	0.0772	0.0010	0.5018	-0.3571	0.5018	-0.3836	-0.3832	-0.5301	0.0317	-8.90
00993	B	F	7037	0.6834	0.0368	0.6834	0.0671	0.2088	0.0040	0.4420	-0.3600	0.4420	-0.3325	-0.3563	-0.0346	0.0292	-4.80
00994	A	F	7037	0.7132	0.7132	0.1174	0.1161	0.0499	0.0034	0.3881	0.3881	-0.3984	-0.2362	-0.1983	-0.2118	0.0300	-0.80
00995	A	F	7037	0.8606	0.8606	0.0470	0.0337	0.0544	0.0043	0.4105	0.4105	-0.3073	-0.3064	-0.2205	-1.3249	0.0383	-3.60
00996	C	F	7037	0.6796	0.1266	0.1256	0.6796	0.0644	0.0038	0.4519	-0.3731	-0.3374	0.4519	-0.3494	-0.0217	0.0292	-5.20
00997	B	F	7037	0.5525	0.0880	0.5525	0.1842	0.1702	0.0051	0.3418	-0.3853	0.3418	-0.2963	-0.2189	0.6614	0.0275	5.20
00998	C	F	7037	0.4020	0.3779	0.1008	0.4020	0.1151	0.0043	0.1034	0.0509	-0.3763	0.1034	-0.2138	1.4481	0.0277	9.90
00999	D	F	7037	0.3268	0.0838	0.0770	0.5073	0.3268	0.0050	0.1516	-0.3614	-0.4644	-0.0375	0.1516	1.8351	0.0287	9.90
01000	D	F	7037	0.6436	0.2360	0.0675	0.0482	0.6436	0.0047	0.4246	-0.3007	-0.4151	-0.4023	0.4246	0.1698	0.0285	0.20
01001	C	M	6717	0.8406	0.1044	0.0269	0.8406	0.0274	0.0007	0.4159	-0.3461	-0.2449	0.4159	-0.2360	-1.0433	0.0374	-5.70
01002	C	M	6717	0.7887	0.1547	0.0180	0.7887	0.0383	0.0003	0.4556	-0.3674	-0.3074	0.4556	-0.3306	-0.6324	0.0338	-6.50
01003	D	M	6717	0.4530	0.4197	0.0746	0.0512	0.4530	0.0015	0.2640	-0.2163	-0.2891	-0.3213	0.2640	1.2614	0.0277	9.90
01004	C	M	6717	0.7311	0.0872	0.1353	0.7311	0.0453	0.0010	0.0413	-0.0159	-0.0013	0.0413	-0.1037	-0.1908	0.0310	9.90
01005	D	M	6717	0.7926	0.1076	0.0499	0.0481	0.7926	0.0018	0.3905	-0.2690	-0.2594	-0.3212	0.3905	-0.6578	0.0340	-1.70
01006	C	M	6717	0.7995	0.0780	0.0951	0.7995	0.0253	0.0021	0.3207	-0.2038	-0.2427	0.3207	-0.2652	-0.7060	0.0344	5.10
01007	D	M	6717	0.7709	0.0855	0.0655	0.0764	0.7709	0.0018	0.4858	-0.3225	-0.4049	-0.3674	0.4858	-0.4911	0.0328	-7.50
01008	B	M	6717	0.9104	0.0213	0.9104	0.0405	0.0262	0.0016	0.3766	-0.2644	0.3766	-0.2322	-0.2475	-1.7976	0.0471	-4.10
01009	A	F	6717	0.8464	0.8464	0.0612	0.0144	0.0737	0.0043	0.4669	0.4669	-0.3494	-0.2260	-0.3463	-1.0831	0.0378	-9.30
01010	D	F	6717	0.4947	0.1547	0.1578	0.1880	0.4947	0.0048	0.4718	-0.4467	-0.4822	-0.3865	0.4718	1.0538	0.0277	-7.60
01011	C	F	6717	0.2619	0.5651	0.0902	0.2619	0.0786	0.0042	-0.0651	0.1757	-0.1568	-0.0651	-0.2426	2.3102	0.0308	9.90
01012	A	F	6717	0.5382	0.5382	0.1358	0.1475	0.1734	0.0051	0.3474	0.3474	-0.3259	-0.2466	-0.3297	0.8318	0.0278	4.20
01013	D	F	6717	0.7511	0.0773	0.0759	0.0908	0.7511	0.0049	0.4243	-0.3357	-0.2936	-0.3062	0.4243	-0.3382	0.0318	-1.80
01014	D	F	6717	0.2885	0.0581	0.1452	0.5033	0.2885	0.0049	0.3409	-0.6317	-0.4601	-0.2954	0.3409	2.1210	0.0299	3.80
01015	B	F	6717	0.7343	0.0308	0.7343	0.0859	0.1443	0.0048	0.4508	-0.3753	0.4508	-0.4170	-0.2797	-0.2404	0.0313	-5.40
01016	B	F	6717	0.6927	0.1873	0.6927	0.0713	0.0438	0.0049	0.3573	-0.2015	0.3573	-0.3589	-0.3532	-0.0003	0.0301	2.80
01017	B	M	6713	0.7898	0.1365	0.7898	0.0419	0.0307	0.0012	0.4040	-0.3000	0.4040	-0.3140	-0.2720	-0.6229	0.0337	-4.90
01018	D	M	6713	0.7191	0.0615	0.1925	0.0255	0.7191	0.0015	0.4532	-0.3448	-0.3852	-0.3046	0.4532	-0.1712	0.0307	-6.60
01019	B	M	6713	0.7821	0.1165	0.7821	0.0795	0.0209	0.0010	0.4782	-0.3532	0.4782	-0.3975	-0.3028	-0.5880	0.0334	-8.60
01020	C	M	6713	0.6846	0.0441	0.1001	0.6846	0.1689	0.0022	0.4479	-0.3026	-0.3785	0.4479	-0.3616	0.0427	0.0297	-7.60
01021	B	M	6713	0.9091	0.0366	0.9091	0.0264	0.0271	0.0007	0.4429	-0.3017	0.4429	-0.2891	-0.2752	-1.7953	0.0473	-9.90
01022	C	M	6713	0.8527	0.0801	0.0363	0.8527	0.0298	0.0010	0.4807	-0.4039	-0.2799	0.4807	-0.2797	-1.1563	0.0386	-9.30
01023	A	M	6713	0.6863	0.6863	0.2294	0.0603	0.0219	0.0021	0.2151	0.2151	-0.1532	-0.1793	-0.2471	0.0427	0.0297	9.90
01024	A	M	6713	0.6648	0.6648	0.2211	0.0320	0.0800	0.0021	0.3090	0.3090	-0.1754	-0.3524	-0.3346	0.1636	0.0292	5.30
01025	A	F	6713	0.5132	0.5132	0.1147	0.2568	0.1129	0.0024	0.2540	0.2540	-0.4295	-0.1595	-0.1323	0.9312	0.0276	9.90
01026	C	F	6713	0.6516	0.0810	0.2015	0.6516	0.0629	0.0030	0.3707	-0.2964	-0.3083	0.3707	-0.2588	0.2255	0.0290	-0.60
01027	A	F	6713	0.5877	0.5877	0.0536	0.1101	0.2453	0.0033	0.2395	0.2395	-0.2492	-0.2928	-0.1225	0.5755	0.0280	9.90
01028	C	F	6713	0.4965	0.3057	0.1073	0.4965	0.0876	0.0030	0.0903	-0.0001	-0.1000	0.0903	-0.2530	1.0346	0.0275	9.90
01029	B	F	6713	0.5197	0.1573	0.5197	0.1458	0.1743	0.0028	0.1833	-0.2078	0.1833	-0.1439	-0.1273	0.9061	0.0276	9.90
01030	D	F	6713	0.5323	0.0891	0.1081	0.2675	0.5323	0.0030	0.4589	-0.3857	-0.4820	-0.3839	0.4589	0.8266	0.0276	-8.30
01031	D	F	6713	0.6662	0.0331	0.2532	0.0444	0.6662	0.0031	0.4402	-0.4088	-0.3435	-0.4108	0.4402	1.1481	0.0293	-4.80
01032	C	F	6713	0.6648	0.0797	0.0684	0.6648	0.1840	0.0031	0.1480	-0.2662	-0.1439	0.1480	-0.0033	0.1619	0.0292	9.90
01033	D	M	6722	0.8789	0.0220	0.0674	0.0309	0.8789	0.0007	0.2135	-0.2530	-0.0161	-0.2432	0.2135	-1.3908	0.0416	9.00

Appendix J: 2006 Uncommon Grade 11 Multiple Choice Statistics for Reading

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
01034	C	M	6722	0.5552	0.0399	0.0963	0.5552	0.3072	0.0015	0.2643	-0.2939	-0.3002	0.2643	-0.1831	0.7625	0.0280	9.90
01035	C	M	6722	0.8234	0.0861	0.0617	0.8234	0.0277	0.0010	0.3635	-0.2498	-0.3001	0.3635	-0.1884	-0.8790	0.0361	-1.20
01036	C	M	6722	0.8609	0.0583	0.0418	0.8609	0.0381	0.0009	0.4860	-0.3301	-0.3591	0.4860	-0.3163	-1.2509	0.0399	-8.70
01037	D	M	6722	0.8237	0.0611	0.0663	0.0472	0.8237	0.0016	0.4639	-0.3487	-0.3016	-0.3408	0.4639	-0.9014	0.0363	-7.50
01038	B	M	6722	0.7754	0.0379	0.7754	0.1500	0.0353	0.0015	0.4199	-0.3081	0.4199	-0.3086	-0.3363	-0.5090	0.0332	-4.20
01039	C	M	6722	0.9262	0.0129	0.0455	0.9262	0.0144	0.0009	0.3375	-0.2208	-0.2198	0.3375	-0.2282	-2.0509	0.0518	-1.50
01040	B	F	6722	0.5852	0.2111	0.5852	0.0722	0.1294	0.0021	0.3460	-0.2767	0.3460	-0.3038	-0.3130	0.6019	0.0283	5.20
01041	B	F	6722	0.9396	0.0361	0.9396	0.0161	0.0062	0.0019	0.2707	-0.1941	0.2707	-0.1625	-0.1337	-2.3335	0.0575	0.80
01042	D	F	6722	0.7587	0.0672	0.1468	0.0247	0.7587	0.0025	0.4084	-0.3589	-0.2822	-0.3118	0.4084	-0.3990	0.0324	-0.60
01043	A	F	6722	0.8527	0.0857	0.0727	0.0216	0.0501	0.0028	0.3899	0.3899	-0.2316	-0.2919	-0.3014	-1.1453	0.0388	-3.70
01044	C	F	6722	0.7713	0.0943	0.0202	0.7713	0.1125	0.0016	0.3672	-0.2954	-0.2786	0.3672	-0.2448	-0.4642	0.0329	-2.60
01045	A	F	6722	0.7764	0.0764	0.0925	0.0677	0.0608	0.0025	0.3349	0.3349	-0.2165	-0.3123	-0.1933	-0.5068	0.0332	4.40
01046	C	F	6722	0.8664	0.0213	0.0903	0.8664	0.0202	0.0018	0.4245	-0.2436	-0.3278	0.4245	-0.2952	-1.2880	0.0404	-4.70
01047	D	F	6722	0.8081	0.0228	0.0439	0.1217	0.8081	0.0036	0.4724	-0.2817	-0.4194	-0.3412	0.4724	-0.7745	0.0352	-6.70
01048	B	F	6722	0.7236	0.0126	0.7236	0.0635	0.1982	0.0021	0.3980	-0.2720	0.3980	-0.2340	-0.3667	-0.1736	0.0311	-0.70
01049	A	M	6713	0.7853	0.7853	0.0285	0.1703	0.0150	0.0009	0.3520	0.3520	-0.2636	-0.2893	-0.1873	-0.5781	0.0335	-1.90
01050	C	M	6713	0.8659	0.0290	0.0912	0.8659	0.0136	0.0003	0.4384	-0.2903	-0.3484	0.4384	-0.2370	-1.2786	0.0401	-7.00
01051	C	M	6713	0.5564	0.1743	0.0377	0.5564	0.2306	0.0010	0.2860	-0.1894	-0.3350	0.2860	-0.2645	0.7180	0.0280	9.90
01052	A	M	6713	0.6197	0.6197	0.0985	0.1531	0.1275	0.0012	0.3707	0.3707	-0.3732	-0.2584	-0.2987	0.4119	0.0286	2.80
01053	B	M	6713	0.9135	0.0246	0.9135	0.0289	0.0323	0.0007	0.4318	-0.2918	0.4318	-0.2745	-0.2729	-1.8714	0.0485	-7.60
01054	A	M	6713	0.6931	0.6931	0.0724	0.0792	0.1542	0.0010	0.3587	0.3587	-0.2392	-0.3997	-0.2230	-0.0011	0.0301	3.00
01055	D	M	6713	0.6657	0.1096	0.0800	0.1436	0.6657	0.0010	0.4247	-0.3897	-0.3768	-0.2757	0.4247	0.1376	0.0295	-2.50
01056	D	M	6713	0.8886	0.0286	0.0261	0.0559	0.8886	0.0009	0.4080	-0.2513	-0.2816	-0.2792	0.4080	-1.5519	0.0436	-5.60
01057	B	F	6713	0.9124	0.0411	0.9124	0.0298	0.0147	0.0019	0.3493	-0.2727	0.3493	-0.2126	-0.1531	-1.8410	0.0480	-2.00
01058	D	F	6713	0.9120	0.0216	0.0299	0.0337	0.9120	0.0028	0.4124	-0.2394	-0.2539	-0.2958	0.4124	-1.8457	0.0481	-6.90
01059	C	F	6713	0.8689	0.0229	0.0374	0.8689	0.0684	0.0024	0.3307	-0.2718	-0.1950	0.3307	-0.2072	-1.3112	0.0405	-0.50
01060	A	F	6713	0.7191	0.7191	0.0581	0.1460	0.0746	0.0022	0.2975	0.2975	-0.3392	-0.1070	-0.2988	-0.1507	0.0308	8.00
01061	B	F	6713	0.8826	0.0317	0.8826	0.0633	0.0197	0.0027	0.3727	-0.2271	0.3727	-0.2701	-0.2272	-1.4538	0.0423	-2.50
01062	B	F	6713	0.7201	0.1278	0.7201	0.1277	0.0215	0.0030	0.3191	-0.1170	0.3191	-0.3574	-0.2856	-0.1535	0.0308	6.70
01063	C	F	6713	0.7141	0.0215	0.2427	0.7141	0.0183	0.0034	0.2334	-0.2644	-0.1460	0.2334	-0.2867	-0.1016	0.0306	8.90
01064	A	F	6713	0.5860	0.5860	0.0690	0.1037	0.2374	0.0039	0.2336	0.2336	-0.3392	-0.3172	-0.0572	0.5950	0.0282	9.90
01065	D	M	6686	0.9197	0.0154	0.0458	0.0184	0.9197	0.0007	0.3932	-0.1883	-0.3021	-0.2471	0.3932	-1.9492	0.0498	-5.70
01066	C	M	6686	0.9342	0.0429	0.0159	0.9342	0.0066	0.0004	0.3299	-0.2500	-0.2004	0.3299	-0.1556	-2.1672	0.0539	-4.10
01067	A	M	6686	0.7576	0.7576	0.0494	0.1473	0.0450	0.0007	0.2629	0.2629	-0.2769	-0.1397	-0.2145	-0.3869	0.0321	6.70
01068	B	M	6686	0.7940	0.0663	0.7940	0.1013	0.0371	0.0013	0.4847	-0.3190	0.4847	-0.4074	-0.3038	-0.6608	0.0341	-8.70
01069	C	M	6686	0.7309	0.0145	0.1473	0.7309	0.1057	0.0015	0.3534	-0.2921	-0.3383	0.3534	-0.1879	-0.2272	0.0312	3.50
01070	B	M	6686	0.6167	0.0752	0.6167	0.0582	0.2475	0.0024	0.2757	-0.3123	0.2757	-0.2205	-0.1889	0.4192	0.0286	8.80
01071	A	M	6686	0.8510	0.8510	0.0556	0.0636	0.0289	0.0009	0.4355	0.4355	-0.2431	-0.3530	-0.2956	-1.1474	0.0386	-7.20
01072	A	M	6686	0.9025	0.9025	0.0413	0.0372	0.0182	0.0007	0.4232	0.4232	-0.2930	-0.3083	-0.2180	-1.7048	0.0458	-7.30
01073	B	F	6686	0.6280	0.0328	0.6280	0.2549	0.0818	0.0025	0.3181	-0.2864	0.3181	-0.2804	-0.2044	0.3566	0.0287	6.30
01074	C	F	6686	0.5966	0.1950	0.0576	0.5966	0.1490	0.0018	0.4148	-0.3918	-0.4799	0.4148	-0.2364	0.5293	0.0283	-1.30
01075	B	F	6686	0.2966	0.3270	0.2966	0.0793	0.2934	0.0037	0.1388	-0.1137	0.1388	-0.3039	-0.1292	2.0801	0.0298	9.90
01076	A	F	6686	0.8237	0.8237	0.0845	0.0238	0.0657	0.0024	0.3995	0.3995	-0.2488	-0.3044	-0.3066	-0.8995	0.0361	-1.90
01077	B	F	6686	0.7885	0.0144	0.7885	0.0410	0.1533	0.0028	0.2312	-0.2442	0.2312	-0.2997	-0.0847	-0.6136	0.0337	8.10
01078	A	F	6686	0.6772	0.6772	0.0340	0.0325	0.2538	0.0025	0.3637	0.3637	-0.3571	-0.3854	-0.2580	0.0859	0.0297	1.60
01079	D	F	6686	0.3587	0.1535	0.0562	0.4291	0.3587	0.0025	0.1547	-0.3757	-0.4663	0.0020	0.1547	1.7448	0.0286	9.90
01080	C	F	6686	0.6557	0.0890	0.0631	0.6557	0.1895	0.0027	0.4024	-0.3791	-0.3990	0.4024	-0.2470	0.2034	0.0292	-1.50
01081	B	M	6667	0.9111	0.0199	0.9111	0.0415	0.0274	0.0000	0.2888	-0.2113	0.2888	-0.2039	-0.1405	-1.7771	0.0471	-0.70
01082	B	M	6667	0.6795	0.0228	0.6795	0.0405	0.2569	0.0003	0.3193	-0.3031	0.3193	-0.3221	-0.2365	0.0892	0.0295	3.30

Appendix J: 2006 Uncommon Grade 11 Multiple Choice Statistics for Reading

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
01083	C	M	6667	0.8851	0.0193	0.0823	0.8851	0.0126	0.0006	0.3292	-0.2096	-0.2710	0.3292	-0.1343	-1.4631	0.0424	-0.50
01084	C	M	6667	0.8286	0.0162	0.0526	0.8286	0.1017	0.0009	0.4027	-0.2803	-0.2983	0.4027	-0.2892	-0.9273	0.0363	-4.40
01085	D	M	6667	0.6891	0.0631	0.1504	0.0964	0.6891	0.0009	0.3703	-0.3027	-0.2439	-0.3360	0.3703	0.0086	0.0299	0.10
01086	A	M	6667	0.5536	0.5536	0.0372	0.0277	0.3799	0.0015	0.2130	0.2130	-0.3446	-0.2983	-0.1360	0.7420	0.0278	9.90
01087	C	M	6667	0.5991	0.0270	0.1827	0.5991	0.1902	0.0010	0.3874	-0.3410	-0.2579	0.3874	-0.3973	0.5082	0.0282	0.00
01088	A	M	6667	0.9318	0.9318	0.0249	0.0166	0.0261	0.0006	0.3477	0.3477	-0.2116	-0.2676	-0.1917	-2.1447	0.0539	-4.10
01089	A	F	6667	0.5506	0.5506	0.1009	0.2181	0.1267	0.0036	0.3418	0.3418	-0.3130	-0.3115	-0.2451	0.7529	0.0278	2.80
01090	B	F	6667	0.5955	0.0667	0.5955	0.0201	0.3153	0.0024	0.4093	-0.3046	0.4093	-0.3463	-0.3682	0.5194	0.0282	-2.50
01091	A	F	6667	0.2127	0.2127	0.3301	0.2748	0.1791	0.0033	0.1077	0.1077	-0.0273	-0.2199	-0.1745	2.5798	0.0328	9.90
01092	D	F	6667	0.4785	0.1197	0.2628	0.1347	0.4785	0.0043	0.2175	-0.1774	-0.0861	-0.3940	0.2175	1.1029	0.0276	9.90
01093	D	F	6667	0.2268	0.5349	0.0736	0.1615	0.2268	0.0031	0.1992	-0.1520	-0.3970	-0.3596	0.1992	2.4675	0.0320	9.90
01094	C	F	6667	0.6448	0.0613	0.2238	0.6448	0.0673	0.0027	0.4383	-0.3496	-0.3618	0.4383	-0.3466	0.2459	0.0290	-6.90
01095	B	F	6667	0.4317	0.2046	0.4317	0.2437	0.1168	0.0031	0.0228	0.1733	0.0228	-0.1599	-0.0648	1.3543	0.0278	9.90
01096	A	F	6667	0.6847	0.6847	0.0786	0.0970	0.1366	0.0030	0.4828	0.4828	-0.4060	-0.4342	-0.3237	0.0238	0.0298	-7.90
01097	B	M	6683	0.6249	0.2587	0.6249	0.0787	0.0370	0.0007	0.2706	-0.1854	0.2706	-0.2892	-0.2456	0.3747	0.0287	8.70
01098	D	M	6683	0.4211	0.0922	0.3388	0.1469	0.4211	0.0010	0.2182	-0.2942	-0.0927	-0.3711	0.2182	1.3994	0.0280	9.90
01099	D	M	6683	0.3358	0.2339	0.1332	0.2958	0.3358	0.0013	0.3537	-0.4106	-0.4764	-0.2910	0.3537	1.8423	0.0290	2.40
01100	B	M	6683	0.7453	0.0286	0.7453	0.1592	0.0667	0.0001	0.3535	-0.2728	0.3535	-0.2709	-0.2511	-0.3406	0.0317	-1.30
01101	A	M	6683	0.5474	0.5474	0.1056	0.0254	0.3204	0.0012	0.3200	0.3200	-0.2478	-0.3616	-0.2838	0.7645	0.0279	5.00
01102	D	M	6683	0.7841	0.0386	0.1215	0.0554	0.7841	0.0004	0.4349	-0.2882	-0.3681	-0.2690	0.4349	-0.5941	0.0334	-4.70
01103	B	M	6683	0.6123	0.2068	0.6123	0.1580	0.0223	0.0006	0.4385	-0.4116	0.4385	-0.3348	-0.3232	0.4272	0.0285	-6.50
01104	C	M	6683	0.8424	0.0467	0.0675	0.8424	0.0425	0.0009	0.4296	-0.2576	-0.3530	0.4296	-0.2610	-1.0747	0.0376	-6.60
01105	D	F	6683	0.7950	0.0706	0.0615	0.0684	0.7950	0.0045	0.5177	-0.3443	-0.4336	-0.3565	0.5177	-0.6854	0.0341	-9.50
01106	C	F	6683	0.6331	0.2376	0.0693	0.6331	0.0554	0.0046	0.3112	-0.1920	-0.3553	0.3112	-0.2715	0.3301	0.0288	5.40
01107	B	F	6683	0.7036	0.1405	0.7036	0.0561	0.0950	0.0048	0.4517	-0.3364	0.4517	-0.4139	-0.3120	-0.0814	0.0303	-5.00
01108	C	F	6683	0.8104	0.0298	0.1281	0.8104	0.0266	0.0051	0.5114	-0.3433	-0.4146	0.5114	-0.3161	-0.8041	0.0351	-9.90
01109	B	F	6683	0.6719	0.1550	0.6719	0.1182	0.0495	0.0054	0.4235	-0.2541	0.4235	-0.4198	-0.3507	0.1097	0.0295	-1.90
01110	D	F	6683	0.5436	0.1876	0.1396	0.1237	0.5436	0.0054	0.4373	-0.3775	-0.3748	-0.3949	0.4373	0.7840	0.0279	-5.50
01111	A	F	6683	0.4844	0.4844	0.3041	0.0497	0.1568	0.0051	0.3204	0.3204	-0.2901	-0.4366	-0.2126	1.0857	0.0277	5.60
01112	C	F	6683	0.3219	0.0593	0.5843	0.3219	0.0292	0.0054	0.0719	-0.3960	0.0154	0.0719	-0.4090	1.9448	0.0294	9.90
01113	D	M	6696	0.8522	0.0239	0.0942	0.0293	0.8522	0.0004	0.4509	-0.2485	-0.3811	-0.2621	0.4509	-1.1204	0.0386	-7.20
01114	A	M	6696	0.8368	0.8368	0.0406	0.0568	0.0657	0.0001	0.4276	0.4276	-0.2799	-0.3542	-0.2589	-0.9576	0.0369	-5.50
01115	B	M	6696	0.7688	0.0212	0.7688	0.0980	0.1116	0.0004	0.3743	-0.2526	0.3743	-0.3050	-0.2646	-0.4256	0.0326	-3.10
01116	D	M	6696	0.8145	0.0491	0.0923	0.0436	0.8145	0.0004	0.4442	-0.3226	-0.3078	-0.3294	0.4442	-0.7713	0.0352	-7.80
01117	C	M	6696	0.8100	0.0372	0.0862	0.8100	0.0660	0.0006	0.4453	-0.2687	-0.3772	0.4453	-0.2845	-0.7491	0.0350	-6.30
01118	B	M	6696	0.6719	0.1949	0.6719	0.0657	0.0665	0.0010	0.5162	-0.5167	0.5162	-0.3707	-0.2617	0.1365	0.0295	-9.90
01119	C	M	6696	0.6707	0.0708	0.1089	0.6707	0.1484	0.0012	0.3820	-0.1292	-0.3442	0.3820	-0.3652	0.1556	0.0295	-0.70
01120	C	M	6696	0.7858	0.0493	0.1501	0.7858	0.0139	0.0009	0.4027	-0.3090	-0.3181	0.4027	-0.2548	-0.5476	0.0334	-3.10
01121	D	F	6696	0.8462	0.0775	0.0493	0.0245	0.8462	0.0025	0.4530	-0.3732	-0.2808	-0.2562	0.4530	-1.0573	0.0379	-7.00
01122	D	F	6696	0.8751	0.0335	0.0330	0.0557	0.8751	0.0027	0.3346	-0.1511	-0.2446	-0.2490	0.3346	-1.3132	0.0409	-1.20
01123	C	F	6696	0.6223	0.1368	0.1151	0.6223	0.1223	0.0034	0.2996	-0.3212	-0.2384	0.2996	-0.1579	0.4354	0.0285	7.20
01124	B	F	6696	0.6338	0.1402	0.6338	0.0751	0.1476	0.0033	0.1266	-0.1321	0.1266	-0.2033	0.0089	0.3821	0.0287	9.90
01125	C	F	6696	0.6665	0.2630	0.0357	0.6665	0.0321	0.0027	0.2689	-0.1840	-0.2314	0.2689	-0.3387	0.1885	0.0293	9.90
01126	A	F	6696	0.4471	0.4471	0.3766	0.0762	0.0962	0.0039	0.1528	0.1528	-0.0540	-0.3244	-0.2429	1.3147	0.0277	9.90
01127	D	F	6696	0.4047	0.0739	0.4546	0.0630	0.4047	0.0037	0.0272	-0.2635	0.0922	-0.2968	0.0272	1.5250	0.0279	9.90
01128	B	F	6696	0.7100	0.0163	0.7100	0.1329	0.1378	0.0030	0.3296	-0.2984	0.3296	-0.2420	-0.2563	-0.0513	0.0304	1.70
01129	B	M	6676	0.6338	0.2579	0.6338	0.0698	0.0373	0.0012	0.2700	-0.1823	0.2700	-0.3072	-0.2324	0.3509	0.0287	8.10
01130	D	M	6676	0.4061	0.1019	0.3372	0.1535	0.4061	0.0013	0.2094	-0.2760	-0.0909	-0.3594	0.2094	1.4911	0.0281	9.90
01131	D	M	6676	0.3409	0.2359	0.1233	0.2982	0.3409	0.0016	0.3652	-0.4238	-0.4862	-0.3119	0.3652	1.8284	0.0289	1.00

Appendix J: 2006 Uncommon Grade 11 Multiple Choice Statistics for Reading

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
01132	B	M	6676	0.7509	0.0289	0.7509	0.1637	0.0554	0.0010	0.3615	-0.2833	0.3615	-0.2702	-0.2684	-0.3390	0.0318	-1.80
01133	A	M	6676	0.5457	0.5457	0.1059	0.0256	0.3213	0.0015	0.3184	0.3184	-0.2561	-0.3482	-0.2804	-0.7959	0.0279	6.10
01134	D	M	6676	0.7865	0.0337	0.1231	0.0560	0.7865	0.0006	0.4415	-0.2861	-0.3740	-0.2800	0.4415	-0.5912	0.0335	-5.60
01135	B	M	6676	0.6152	0.2033	0.6152	0.1609	0.0190	0.0016	0.4639	-0.4416	0.4639	-0.3623	-0.3223	0.4217	0.0285	-8.70
01136	C	M	6676	0.8486	0.0401	0.0640	0.8486	0.0457	0.0016	0.4444	-0.2656	-0.3558	0.4444	-0.2859	-1.1071	0.0381	-7.10
01137	B	F	6676	0.5142	0.1565	0.5142	0.1137	0.2132	0.0024	0.2479	-0.1856	0.2479	-0.2191	-0.2393	0.9563	0.0278	9.90
01138	B	F	6676	0.8558	0.0231	0.8558	0.1014	0.0189	0.0009	0.4073	-0.2327	0.4073	-0.3337	-0.2430	-1.1439	0.0385	-5.40
01139	C	F	6676	0.5541	0.0851	0.0641	0.5541	0.2943	0.0024	0.1510	-0.2110	-0.1640	0.1510	-0.0828	0.7585	0.0279	9.90
01140	A	F	6676	0.7319	0.7319	0.0722	0.0280	0.1664	0.0015	0.4681	0.4681	-0.2748	-0.3201	-0.4269	-0.2290	0.0311	-7.50
01141	B	F	6676	0.6544	0.0619	0.6544	0.1935	0.0873	0.0028	0.4583	-0.3658	0.4583	-0.3636	-0.3866	0.2209	0.0291	-7.40
01142	A	F	6676	0.7936	0.7936	0.0487	0.1362	0.0204	0.0012	0.4490	0.4490	-0.3526	-0.3475	-0.2876	-0.6550	0.0339	-5.80
01143	C	F	6676	0.5993	0.1093	0.2046	0.5993	0.0843	0.0024	0.4106	-0.3046	-0.3302	0.4106	-0.4017	0.5084	0.0283	-3.40
01144	D	F	6676	0.7469	0.0761	0.1345	0.0404	0.7469	0.0021	0.4735	-0.3834	-0.3420	-0.3804	0.4735	-0.3178	0.0316	-6.90
01145	A	M	6705	0.8458	0.8458	0.0309	0.0322	0.0890	0.0021	0.3942	0.3942	-0.3109	-0.3010	-0.2473	-1.0883	0.0377	-1.20
01146	A	M	6705	0.6327	0.6327	0.0336	0.3163	0.0170	0.0004	0.3512	0.3512	-0.3376	-0.2927	-0.3090	0.3259	0.0290	2.80
01147	C	M	6705	0.8622	0.0525	0.0262	0.8622	0.0580	0.0010	0.3830	-0.2764	-0.3192	0.3830	-0.2077	-1.2523	0.0395	-4.10
01148	B	M	6705	0.7943	0.0953	0.7943	0.0635	0.0462	0.0006	0.4005	-0.2559	0.4005	-0.3086	-0.3038	-0.6712	0.0340	-4.20
01149	A	M	6705	0.8225	0.8225	0.0201	0.0929	0.0637	0.0007	0.3714	0.3714	-0.2656	-0.2591	-0.2691	-0.8948	0.0359	-1.40
01150	D	F	6705	0.5658	0.0722	0.1147	0.2465	0.5658	0.0007	0.5507	-0.4976	-0.5509	-0.4630	0.5507	0.6726	0.0282	-9.90
01151	B	M	6705	0.6128	0.1896	0.6128	0.0519	0.1444	0.0013	0.3680	-0.2813	0.3680	-0.3735	-0.2868	0.4301	0.0287	0.00
01152	B	M	6705	0.7831	0.0875	0.7831	0.0541	0.0744	0.0007	0.4891	-0.3126	0.4891	-0.3774	-0.3987	-0.6048	0.0335	-6.80
01153	B	F	6705	0.5881	0.1651	0.5881	0.0664	0.1760	0.0045	0.4186	-0.3723	0.4186	-0.4241	-0.2933	0.5544	0.0284	-2.80
01154	B	F	6705	0.8456	0.0468	0.8456	0.0682	0.0362	0.0031	0.4597	-0.3272	0.4597	-0.3279	-0.2868	-1.1012	0.0378	-9.30
01155	A	F	6705	0.7845	0.7845	0.0459	0.1029	0.0626	0.0040	0.4214	0.4214	-0.2948	-0.2900	-0.3261	-0.6083	0.0336	-4.10
01156	D	F	6705	0.7125	0.1445	0.0726	0.0664	0.7125	0.0040	0.4821	-0.3293	-0.4039	-0.4284	0.4821	-0.1437	0.0308	-6.40
01157	C	F	6705	0.6127	0.0747	0.2043	0.6127	0.1041	0.0042	0.4117	-0.4323	-0.3453	0.4117	-0.2555	0.4458	0.0287	-0.70
01158	D	F	6705	0.3360	0.4688	0.0702	0.1208	0.3360	0.0042	0.3369	-0.2904	-0.5153	-0.4023	0.3369	1.8697	0.0292	6.40
01159	A	F	6705	0.6240	0.6240	0.2395	0.0647	0.0673	0.0045	0.4072	0.4072	-0.3169	-0.4112	-0.3230	0.3911	0.0288	-1.90
01160	C	F	6705	0.7034	0.0937	0.1090	0.7034	0.0902	0.0037	0.4680	-0.3822	-0.3271	0.4680	-0.3775	-0.0779	0.0305	-6.90
01161	C	M	6652	0.8552	0.0938	0.0254	0.8552	0.0250	0.0006	0.3860	-0.3133	-0.2383	0.3860	-0.2074	-1.1249	0.0386	-5.50
01162	C	M	6652	0.7995	0.1437	0.0156	0.7995	0.0403	0.0009	0.4341	-0.3385	-0.2607	0.4341	-0.3441	-0.6563	0.0341	-5.90
01163	D	M	6652	0.4561	0.4268	0.0675	0.0480	0.4561	0.0017	0.2764	-0.2357	-0.2932	-0.3058	0.2764	1.2547	0.0276	9.10
01164	C	M	6652	0.7275	0.0894	0.1365	0.7275	0.0451	0.0015	0.0123	-0.0029	0.0209	0.0123	-0.0706	-0.1543	0.0308	9.90
01165	D	M	6652	0.7898	0.1082	0.0519	0.0492	0.7898	0.0009	0.3896	-0.2568	-0.2861	-0.3221	0.3896	-0.5953	0.0337	-1.90
01166	C	M	6652	0.8050	0.0750	0.0928	0.8050	0.0260	0.0012	0.2887	-0.1657	-0.2101	0.2887	-0.2679	-0.6846	0.0344	3.90
01167	D	M	6652	0.7757	0.0867	0.0705	0.0655	0.7757	0.0015	0.4862	-0.3315	-0.4029	-0.3603	0.4862	-0.4932	0.0329	-8.50
01168	B	M	6652	0.9121	0.0236	0.9121	0.0380	0.0250	0.0014	0.3727	-0.2542	0.3727	-0.2362	-0.2359	-1.7900	0.0478	-4.80
01169	B	F	6652	0.6327	0.0311	0.6327	0.2568	0.0776	0.0018	0.2878	-0.2285	0.2878	-0.2588	-0.1858	0.3639	0.0286	7.20
01170	C	F	6652	0.6078	0.1831	0.0492	0.6078	0.1583	0.0017	0.4087	-0.3890	-0.4430	0.4087	-0.2490	0.4760	0.0283	-3.40
01171	B	F	6652	0.2906	0.3170	0.2906	0.0759	0.3142	0.0023	0.1464	-0.1336	0.1464	-0.3037	-0.1316	2.1006	0.0298	9.90
01172	A	F	6652	0.8348	0.8348	0.0833	0.0227	0.0576	0.0017	0.3689	0.3689	-0.2335	-0.2950	-0.2653	-0.9298	0.0366	-1.70
01173	B	F	6652	0.7951	0.0119	0.7951	0.0403	0.1506	0.0021	0.2069	-0.2171	0.2069	-0.2875	-0.0734	-0.6112	0.0338	9.00
01174	A	F	6652	0.6858	0.6858	0.0287	0.0283	0.2550	0.0023	0.3333	0.3333	-0.3372	-0.3510	-0.2379	0.0655	0.0297	3.60
01175	D	F	6652	0.3569	0.1452	0.0535	0.4418	0.3569	0.0026	0.1372	-0.3591	-0.4464	0.0106	0.1372	1.7469	0.0285	9.90
01176	C	F	6652	0.6669	0.0861	0.0540	0.6669	0.1906	0.0024	0.3807	-0.3663	-0.3366	0.3807	-0.2443	0.1709	0.0293	-2.00
01177	B	M	6673	0.7948	0.1308	0.7948	0.0450	0.0282	0.0012	0.4226	-0.3178	0.4226	-0.3254	-0.2798	-0.6616	0.0343	-5.30
01178	D	M	6673	0.7216	0.0533	0.1971	0.0274	0.7216	0.0006	0.4671	-0.3332	-0.4067	-0.3146	0.4671	-0.1685	0.0311	-6.80
01179	B	M	6673	0.7887	0.1109	0.7887	0.0778	0.0217	0.0009	0.4819	-0.3526	0.4819	-0.3945	-0.3097	-0.6255	0.0340	-8.30
01180	C	M	6673	0.6938	0.0496	0.0925	0.6938	0.1633	0.0007	0.4507	-0.3216	-0.3505	0.4507	-0.3718	-0.0046	0.0303	-6.10

Appendix J: 2006 Uncommon Grade 11 Multiple Choice Statistics for Reading

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
01181	B	M	6673	0.9144	0.0361	0.9144	0.0244	0.0247	0.0003	0.4483	-0.3161	0.4483	-0.2821	-0.2766	-1.8768	0.0486	-8.60
01182	C	M	6673	0.8546	0.0803	0.0376	0.8546	0.0268	0.0006	0.5080	-0.4269	-0.3293	0.5080	-0.2638	-1.1814	0.0391	-9.90
01183	A	M	6673	0.6823	0.6823	0.2315	0.0626	0.0222	0.0013	0.2054	0.2054	-0.1418	-0.1778	-0.2568	0.0905	0.0299	9.90
01184	A	M	6673	0.6636	0.6636	0.2249	0.0294	0.0812	0.0009	0.3096	0.3096	-0.1704	-0.3620	-0.3480	0.1953	0.0294	7.70
01185	D	F	6673	0.9135	0.0447	0.0156	0.0235	0.9135	0.0027	0.4540	-0.3546	-0.2417	-0.2602	0.4540	-1.8792	0.0486	-8.60
01186	C	F	6673	0.4130	0.0489	0.2200	0.4130	0.3135	0.0046	0.2036	-0.3480	-0.3108	0.2036	-0.0660	1.4755	0.0280	9.90
01187	D	F	6673	0.6670	0.0803	0.0481	0.2010	0.6670	0.0036	0.4808	-0.3694	-0.2749	-0.4448	0.4808	0.1542	0.0296	-7.30
01188	B	F	6673	0.3519	0.2967	0.3519	0.3101	0.0378	0.0036	0.0825	-0.1542	0.0825	0.0350	-0.2767	1.8086	0.0288	9.90
01189	A	F	6673	0.9071	0.9071	0.0385	0.0282	0.0226	0.0036	0.4140	0.4140	-0.3107	-0.2738	-0.1921	-1.7587	0.0467	-5.80
01190	C	F	6673	0.5717	0.0986	0.1990	0.5717	0.1269	0.0037	0.3578	-0.3413	-0.2327	0.3578	-0.3621	0.6879	0.0281	3.30
01191	A	F	6673	0.6126	0.6126	0.0908	0.2336	0.0590	0.0039	0.3638	0.3638	-0.3241	-0.2633	-0.3530	0.4673	0.0286	1.90
01192	B	F	6673	0.6189	0.1024	0.6189	0.1352	0.1403	0.0033	0.2287	-0.2728	0.2287	-0.0884	-0.1989	0.4426	0.0287	9.90
01193	D	M	6711	0.8774	0.0180	0.0699	0.0343	0.8774	0.0004	0.2250	-0.2482	-0.0385	-0.2517	0.2250	-1.3566	0.0412	9.90
01194	C	M	6711	0.5594	0.0347	0.0875	0.5594	0.3162	0.0022	0.2745	-0.2895	-0.2870	0.2745	-0.2066	0.7442	0.0279	9.90
01195	C	M	6711	0.8193	0.0855	0.0617	0.8193	0.0325	0.0010	0.3518	-0.2401	-0.2780	0.3518	-0.2042	-0.8268	0.0356	-1.50
01196	C	M	6711	0.8678	0.0574	0.0386	0.8678	0.0352	0.0010	0.4737	-0.3320	-0.3345	0.4737	-0.2978	-1.2689	0.0401	-8.90
01197	D	M	6711	0.8221	0.0630	0.0656	0.0481	0.8221	0.0012	0.4597	-0.3598	-0.2811	-0.3334	0.4597	-0.8613	0.0359	-7.40
01198	B	M	6711	0.7757	0.0383	0.7757	0.1521	0.0326	0.0012	0.4214	-0.3171	0.4214	-0.3147	-0.3181	-0.4952	0.0330	-4.90
01199	C	M	6711	0.9225	0.0136	0.0468	0.9225	0.0167	0.0004	0.3637	-0.2294	-0.2430	0.3637	-0.2439	-1.9730	0.0504	-3.80
01200	B	F	6711	0.5865	0.2116	0.5865	0.0718	0.1290	0.0010	0.3462	-0.2968	0.3462	-0.2869	-0.2893	0.5922	0.0282	3.60
01201	C	F	6711	0.7076	0.0332	0.0291	0.7076	0.2275	0.0025	0.1033	-0.1503	-0.1525	0.1033	-0.0320	-0.0438	0.0303	9.90
01202	B	F	6711	0.7985	0.0693	0.7985	0.0729	0.0566	0.0027	0.3962	-0.2446	0.3962	-0.3163	-0.2750	-0.6705	0.0343	-2.50
01203	D	F	6711	0.8003	0.0232	0.0744	0.0989	0.8003	0.0031	0.4032	-0.2380	-0.2893	-0.3163	0.4032	-0.6693	0.0343	-3.70
01204	B	F	6711	0.9034	0.0605	0.9034	0.0212	0.0121	0.0028	0.4187	-0.3360	0.4187	-0.2547	-0.1943	-1.7021	0.0459	-6.40
01205	A	F	6711	0.5405	0.5405	0.0219	0.1760	0.2582	0.0034	0.1804	0.1804	-0.3023	-0.2547	-0.0544	0.8461	0.0278	9.90
01206	A	F	6711	0.9267	0.9267	0.0411	0.0171	0.0115	0.0036	0.4003	0.4003	-0.2907	-0.2436	-0.2228	-2.0492	0.0518	-7.20
01207	C	F	6711	0.6646	0.0398	0.1802	0.6646	0.1124	0.0031	0.3501	-0.3220	-0.3083	0.3501	-0.2041	0.1972	0.0293	1.70
01208	D	F	6711	0.5765	0.0517	0.2073	0.1614	0.5765	0.0031	0.3134	-0.2891	-0.2376	-0.2763	0.3134	0.6587	0.0281	5.30
01209	A	M	6670	0.7759	0.7759	0.0312	0.1783	0.0141	0.0006	0.3580	0.3580	-0.2830	-0.2951	-0.1787	-0.5217	0.0330	-1.40
01210	C	M	6670	0.8592	0.0324	0.0964	0.8592	0.0115	0.0004	0.4266	-0.2942	-0.3452	0.4266	-0.1959	-1.2349	0.0394	-6.30
01211	C	M	6670	0.5565	0.1874	0.0390	0.5565	0.2166	0.0004	0.3038	-0.2242	-0.3663	0.3038	-0.2714	0.7149	0.0280	9.70
01212	A	M	6670	0.6229	0.6229	0.0969	0.1534	0.1249	0.0019	0.3694	0.3694	-0.3767	-0.2394	-0.3213	0.3858	0.0287	3.30
01213	B	M	6670	0.9132	0.0252	0.9132	0.0270	0.0343	0.0003	0.4184	-0.2769	0.4184	-0.2715	-0.2693	-1.8624	0.0481	-7.40
01214	A	M	6670	0.7091	0.7091	0.0676	0.0724	0.1498	0.0010	0.3455	0.3455	-0.2041	-0.3854	-0.2206	-0.1047	0.0305	3.50
01215	D	M	6670	0.6751	0.0966	0.0832	0.1436	0.6751	0.0015	0.4175	-0.3699	-0.3669	-0.2754	0.4175	0.0893	0.0297	-1.80
01216	D	M	6670	0.8853	0.0304	0.0258	0.0573	0.8853	0.0012	0.4255	-0.2767	-0.2965	-0.2907	0.4255	-1.5121	0.0429	-6.70
01217	D	F	6670	0.8046	0.0801	0.0600	0.0526	0.8046	0.0027	0.4130	-0.2282	-0.3161	-0.3529	0.4130	-0.7558	0.0348	-1.50
01218	A	F	6670	0.8834	0.8834	0.0640	0.0183	0.0319	0.0024	0.3833	0.3833	-0.2573	-0.2669	-0.2483	-1.5011	0.0427	-3.70
01219	A	F	6670	0.7294	0.7294	0.0700	0.0342	0.1637	0.0027	0.2967	0.2967	-0.1798	-0.2958	-0.2208	-0.2257	0.0312	5.00
01220	C	F	6670	0.8828	0.0360	0.0277	0.8828	0.0511	0.0024	0.4135	-0.2181	-0.2839	0.4135	-0.3092	-1.4902	0.0426	-6.10
01221	B	F	6670	0.5850	0.2943	0.5850	0.0781	0.0393	0.0033	0.2800	-0.2098	0.2800	-0.3380	-0.1912	0.5831	0.0282	9.90
01222	C	F	6670	0.5436	0.0718	0.1693	0.5436	0.2120	0.0033	0.2878	-0.3242	-0.2978	0.2878	-0.1688	0.7922	0.0279	9.90
01223	C	F	6670	0.5286	0.1045	0.2940	0.5286	0.0693	0.0036	0.1315	-0.2295	-0.0373	0.1315	-0.1617	0.8643	0.0278	9.90
01224	D	F	6670	0.6522	0.0934	0.0589	0.1922	0.6522	0.0033	0.2861	-0.2983	-0.3807	-0.1033	0.2861	0.2304	0.0291	6.90
01225	D	M	6676	0.9302	0.0132	0.0449	0.0115	0.9302	0.0001	0.3771	-0.1883	-0.3056	-0.1964	0.3771	-2.0750	0.0523	-6.20
01226	C	M	6676	0.9390	0.0413	0.0123	0.9390	0.0072	0.0001	0.3264	-0.2632	-0.1686	0.3264	-0.1557	-2.2508	0.0559	-3.90
01227	A	M	6676	0.7516	0.7516	0.0496	0.1568	0.0413	0.0006	0.2755	0.2755	-0.2691	-0.1587	-0.2334	-0.3422	0.0319	5.20
01228	B	M	6676	0.7990	0.0650	0.7990	0.1005	0.0346	0.0009	0.4894	-0.3131	0.4894	-0.4156	-0.3117	-0.6888	0.0344	-8.30
01229	C	M	6676	0.7389	0.0127	0.1505	0.7389	0.0969	0.0009	0.3344	-0.2392	-0.3203	0.3344	-0.1803	-0.2626	0.0315	2.80

Appendix J: 2006 Uncommon Grade 11 Multiple Choice Statistics for Reading

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
01230	B	M	6676	0.6269	0.0812	0.6269	0.0572	0.2329	0.0018	0.2945	-0.3123	0.2945	-0.2138	-0.2128	0.3852	0.0287	7.70
01231	A	M	6676	0.8567	0.8567	0.0596	0.0523	0.0300	0.0015	0.4291	0.4291	-0.2629	-0.3095	-0.3189	-1.1741	0.0389	-6.70
01232	A	M	6676	0.9053	0.9053	0.0421	0.0327	0.0190	0.0009	0.3901	0.3901	-0.2648	-0.2607	-0.2379	-1.7057	0.0459	-5.80
01233	A	F	6676	0.8590	0.8590	0.0566	0.0136	0.0686	0.0021	0.4604	0.4604	-0.3520	-0.2324	-0.3337	-1.1986	0.0392	-9.00
01234	D	F	6676	0.5028	0.1538	0.1544	0.1862	0.5028	0.0027	0.4610	-0.4388	-0.4537	-0.3790	0.4610	1.0103	0.0278	-5.20
01235	C	F	6676	0.2443	0.5849	0.0884	0.2443	0.0792	0.0031	-0.0649	0.1680	-0.1358	-0.0649	-0.2741	2.4323	0.0316	9.90
01236	A	F	6676	0.5398	0.5398	0.1420	0.1416	0.1739	0.0027	0.3548	0.3548	-0.3308	-0.2514	-0.3362	0.8288	0.0279	4.00
01237	D	F	6676	0.7678	0.0706	0.0680	0.0908	0.7678	0.0028	0.3982	-0.3093	-0.2618	-0.2912	0.3982	-0.4615	0.0327	-1.20
01238	D	F	6676	0.2840	0.0572	0.1416	0.5141	0.2840	0.0031	0.3232	-0.5947	-0.4663	-0.2727	0.3232	2.1555	0.0301	4.30
01239	B	F	6676	0.7280	0.0283	0.7280	0.0918	0.1490	0.0028	0.4511	-0.3745	0.4511	-0.4352	-0.2785	-0.2056	0.0312	-5.70
01240	B	F	6676	0.7151	0.1693	0.7151	0.0720	0.0403	0.0033	0.3499	-0.1981	0.3499	-0.3444	-0.3333	-0.1194	0.0307	3.30
01241	D	ML	6667	0.9151	0.0138	0.0406	0.0298	0.9151	0.0006	0.4074	-0.1884	-0.2889	-0.2925	0.4074	-2.1932	0.0549	-2.80
01242	D	ML	6667	0.6651	0.0561	0.2620	0.0162	0.6651	0.0006	0.3111	-0.3940	-0.2050	-0.2817	0.3111	0.1483	0.0293	4.20
01243	B	ML	6667	0.4822	0.1551	0.4822	0.1344	0.2262	0.0021	0.1836	-0.1522	0.1836	-0.1282	-0.1935	1.2479	0.0276	9.90
01244	A	M	6667	0.5973	0.5973	0.0955	0.1581	0.1467	0.0024	0.2743	0.2743	-0.2611	-0.2925	-0.1234	0.5202	0.0281	8.90
01245	A	ML	6667	0.8253	0.8253	0.0501	0.0655	0.0586	0.0004	0.3389	0.3389	-0.3024	-0.2290	-0.1725	-0.9304	0.0363	0.20
01246	B	ML	6667	0.8079	0.1474	0.8079	0.0358	0.0082	0.0006	0.4074	-0.3288	0.4074	-0.3148	-0.2122	-0.8789	0.0358	-2.30
01247	C	ML	6667	0.6475	0.2332	0.0937	0.6475	0.0228	0.0027	0.0822	0.0370	-0.1639	0.0822	-0.2777	0.3708	0.0285	9.90
01248	C	ML	6667	0.8704	0.0214	0.0391	0.8704	0.0676	0.0013	0.3070	-0.2380	-0.2279	0.3070	-0.1775	-1.4149	0.0418	4.60
01249	C	F	6667	0.5697	0.1158	0.2704	0.5697	0.0408	0.0033	0.3030	-0.2901	-0.2413	0.3030	-0.2493	0.6647	0.0279	5.80
01250	A	F	6667	0.8448	0.8448	0.0559	0.0648	0.0318	0.0027	0.3876	0.3876	-0.2383	-0.2938	-0.2496	-1.0506	0.0375	-4.60
01251	D	F	6667	0.5392	0.1920	0.0348	0.2311	0.5392	0.0028	0.3650	-0.2417	-0.4013	-0.3724	0.3650	0.8106	0.0277	1.40
01252	C	F	6667	0.5824	0.0772	0.2416	0.5824	0.0949	0.0037	0.3118	-0.3444	-0.2566	0.3118	-0.1989	0.5928	0.0280	6.00
01253	A	F	6667	0.4704	0.4704	0.0813	0.1252	0.3205	0.0025	0.4046	0.4046	-0.5126	-0.4447	-0.3021	1.1382	0.0276	-0.70
01254	D	F	6667	0.4945	0.0379	0.2985	0.1663	0.4945	0.0027	0.2372	-0.3336	-0.2319	-0.1432	0.2372	1.0264	0.0275	9.90
01255	D	F	6667	0.5065	0.1318	0.1488	0.2098	0.5065	0.0030	0.1997	-0.3536	-0.1732	-0.0455	0.1997	0.9801	0.0276	9.90
01256	B	F	6667	0.1638	0.2541	0.1638	0.0367	0.5427	0.0027	0.0358	-0.1004	0.0358	-0.3626	0.0147	2.9449	0.0358	9.90
01257	D	ML	6668	0.8778	0.0163	0.0687	0.0367	0.8778	0.0004	0.3572	-0.1847	-0.2283	-0.2992	0.3572	-0.8504	0.0360	-9.90
01258	D	ML	6668	0.8061	0.0091	0.1476	0.0367	0.8061	0.0004	0.3829	-0.2119	-0.2829	-0.3573	0.3829	0.0091	0.0303	-9.70
01259	B	ML	6668	0.8901	0.0699	0.8901	0.0306	0.0088	0.0006	0.4564	-0.3864	0.4564	-0.2778	-0.2010	-1.0844	0.0383	-9.90
01260	A	ML	6668	0.9469	0.9469	0.0196	0.0234	0.0097	0.0003	0.4004	0.4004	-0.2501	-0.2918	-0.1981	-2.1391	0.0540	-9.90
01261	B	ML	6668	0.7881	0.1398	0.7881	0.0433	0.0279	0.0009	0.3245	-0.1945	0.3245	-0.2847	-0.2913	0.1626	0.0296	-5.50
01262	D	ML	6668	0.9148	0.0129	0.0205	0.0511	0.9148	0.0006	0.3770	-0.2238	-0.2696	-0.2529	0.3770	-1.3794	0.0417	-9.90
01263	D	ML	6668	0.9279	0.0135	0.0472	0.0108	0.9279	0.0006	0.3519	-0.2403	-0.2538	-0.1828	0.3519	-1.6225	0.0451	-8.40
01264	C	ML	6668	0.8293	0.1425	0.0153	0.8293	0.0118	0.0010	0.2995	-0.2506	-0.1747	0.2995	-0.1836	-0.2121	0.0314	-7.90
01265	D	F	6668	0.4600	0.0885	0.3388	0.1099	0.4600	0.0028	0.3594	-0.3857	-0.2930	-0.3976	0.3594	1.2653	0.0279	2.90
01266	A	F	6668	0.7385	0.7385	0.0579	0.1549	0.0459	0.0028	0.4405	0.4405	-0.2611	-0.4119	-0.2581	-0.2500	0.0316	-2.50
01267	C	F	6668	0.4789	0.1845	0.1191	0.4789	0.2149	0.0027	0.2975	-0.3019	-0.2712	0.2975	-0.2362	1.1788	0.0279	9.90
01268	B	F	6668	0.7993	0.0651	0.7993	0.1032	0.0297	0.0027	0.5252	-0.3860	0.5252	-0.4099	-0.3431	-0.6768	0.0345	-9.90
01269	C	F	6668	0.6395	0.0991	0.1657	0.6395	0.0925	0.0031	0.3386	-0.3178	-0.2323	0.3386	-0.2745	0.3340	0.0291	3.10
01270	D	F	6668	0.7131	0.1896	0.0480	0.0466	0.7131	0.0027	0.4701	-0.3421	-0.4179	-0.4009	0.4701	-0.0960	0.0308	-7.10
01271	A	F	6668	0.8359	0.8359	0.0657	0.0534	0.0418	0.0031	0.4784	0.4784	-0.3327	-0.3389	-0.3313	-0.9760	0.0372	-7.50
01272	B	F	6668	0.5747	0.0976	0.5747	0.1629	0.1618	0.0030	0.3350	-0.3304	0.3350	-0.3003	-0.2225	0.6853	0.0282	4.40
01273	C	ML	6703	0.9085	0.0464	0.0279	0.9085	0.0164	0.0007	0.3746	-0.2801	-0.2893	0.3746	-0.1222	-1.8316	0.0482	-2.70
01274	A	ML	6703	0.5888	0.5888	0.2917	0.0977	0.0198	0.0019	0.2745	0.2745	-0.2413	-0.2044	-0.2703	1.2092	0.0277	9.90
01275	D	ML	6703	0.8875	0.0179	0.0364	0.0571	0.8875	0.0010	0.4731	-0.2724	-0.3569	-0.3201	0.4731	-1.4827	0.0430	-9.90
01276	C	ML	6703	0.7523	0.0334	0.1273	0.7523	0.0849	0.0021	0.4615	-0.3154	-0.3724	0.4615	-0.3391	-0.1082	0.0308	-9.90
01277	D	ML	6703	0.8675	0.0489	0.0394	0.0431	0.8675	0.0010	0.4323	-0.2789	-0.2770	-0.3168	0.4323	-1.3128	0.0408	-5.60
01278	B	ML	6703	0.9203	0.0462	0.9203	0.0203	0.0124	0.0007	0.4033	-0.3208	0.4033	-0.2158	-0.2193	-1.9924	0.0510	-6.40

Appendix J: 2006 Uncommon Grade 11 Multiple Choice Statistics for Reading

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
01279	C	ML	6703	0.6321	0.1501	0.0434	0.6321	0.1722	0.0022	0.3585	-0.3492	-0.3338	0.3585	-0.2230	0.9495	0.0278	5.60
01280	D	ML	6703	0.9093	0.0448	0.0173	0.0280	0.9093	0.0006	0.4397	-0.3285	-0.2495	-0.2719	0.4397	-1.8649	0.0487	-7.70
01281	D	F	6703	0.8536	0.0721	0.0468	0.0242	0.8536	0.0033	0.3696	-0.2334	-0.2650	-0.2700	0.3696	-1.1388	0.0388	-0.20
01282	A	F	6703	0.8783	0.8783	0.0263	0.0758	0.0167	0.0030	0.3804	0.3804	-0.2369	-0.2970	-0.2048	-1.3902	0.0418	-3.10
01283	C	F	6703	0.7415	0.0458	0.0594	0.7415	0.1498	0.0036	0.3699	-0.2279	-0.2927	0.3699	-0.2916	-0.2725	0.0317	1.50
01284	B	F	6703	0.4665	0.0146	0.4665	0.0889	0.4270	0.0030	0.1179	-0.3063	0.1179	-0.3687	-0.0083	1.2274	0.0277	9.90
01285	B	F	6703	0.6315	0.0643	0.6315	0.0767	0.2236	0.0039	0.2783	-0.2394	0.2783	-0.2872	-0.1918	0.3794	0.0288	9.90
01286	A	F	6703	0.4917	0.4917	0.1975	0.1399	0.1668	0.0040	0.2474	0.2474	-0.1936	-0.2615	-0.2143	1.0866	0.0277	9.90
01287	D	F	6703	0.8416	0.0324	0.0767	0.0458	0.8416	0.0036	0.4378	-0.3118	-0.3007	-0.3108	0.4378	-1.0203	0.0376	-3.60
01288	C	F	6703	0.7831	0.1259	0.0571	0.7831	0.0306	0.0033	0.2965	-0.1230	-0.3220	0.2965	-0.2637	-0.5419	0.0335	5.70
01289	A	ML	6648	0.8836	0.8836	0.0734	0.0314	0.0114	0.0002	0.1864	0.1864	-0.1025	-0.1250	-0.1902	-1.6648	0.0449	9.90
01290	B	ML	6648	0.4498	0.1667	0.4498	0.1372	0.2435	0.0029	0.2915	-0.4232	0.2915	-0.2707	-0.1636	1.0538	0.0276	7.60
01291	D	ML	6648	0.6901	0.1077	0.0671	0.1339	0.6901	0.0012	0.3830	-0.2396	-0.2970	-0.3569	0.3830	-0.2465	0.0310	5.50
01292	C	ML	6648	0.7908	0.0671	0.0648	0.7908	0.0757	0.0017	0.3946	-0.2950	-0.2828	0.3946	-0.2633	-0.8721	0.0355	0.80
01293	B	ML	6648	0.7443	0.0197	0.7443	0.0851	0.1500	0.0009	0.0790	-0.2761	0.0790	-0.0525	0.0011	-0.5144	0.0327	9.90
01294	B	ML	6648	0.3667	0.2664	0.3667	0.1625	0.2013	0.0032	0.0682	-0.0284	0.0682	-0.1265	-0.0640	1.5885	0.0282	9.90
01295	A	ML	6648	0.7189	0.7189	0.1739	0.0385	0.0665	0.0023	0.1864	0.1864	-0.1040	-0.2392	-0.1416	-0.3059	0.0314	9.90
01296	B	ML	6648	0.7620	0.1223	0.7620	0.0519	0.0621	0.0017	0.4179	-0.2906	0.4179	-0.3075	-0.3357	-0.7171	0.0342	0.20
01297	A	F	6648	0.7282	0.7282	0.1432	0.0627	0.0630	0.0029	0.4464	0.4464	-0.3712	-0.3233	-0.2966	-0.2364	0.0310	-6.40
01298	C	F	6648	0.6109	0.0474	0.1897	0.6109	0.1492	0.0029	0.3993	-0.4402	-0.2192	0.3993	-0.4171	0.4094	0.0284	-0.80
01299	D	F	6648	0.5645	0.1113	0.2294	0.0904	0.5645	0.0044	0.3307	-0.3530	-0.2535	-0.2539	0.3307	0.6617	0.0279	3.70
01300	D	F	6648	0.4526	0.3479	0.0736	0.1230	0.4526	0.0029	0.4107	-0.3566	-0.4634	-0.4174	0.4107	1.1962	0.0276	-1.90
01301	C	F	6648	0.6405	0.1828	0.0511	0.6405	0.1230	0.0026	0.3916	-0.2954	-0.3616	0.3916	-0.3174	0.2628	0.0288	-1.80
01302	B	F	6648	0.6274	0.1423	0.6274	0.1507	0.0763	0.0033	0.3385	-0.2068	0.3385	-0.3341	-0.2755	0.3387	0.0286	2.50
01303	D	F	6648	0.6955	0.0961	0.0844	0.1193	0.6955	0.0047	0.4910	-0.3189	-0.4179	-0.4265	0.4910	-0.0474	0.0300	-7.90
01304	A	F	6648	0.7847	0.7847	0.1587	0.0224	0.0308	0.0033	0.3297	0.3297	-0.2069	-0.2888	-0.3191	-0.5967	0.0333	1.60

Appendix K:

**2006 Uncommon Grade 5 Multiple Choice Statistics for
Mathematics**

Appendix K: 2006 Uncommon Grade 5 Multiple Choice Statistics for Mathematics

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
01305	D	M	7266	0.4644	0.2062	0.1617	0.1656	0.4644	0.0022	0.2802	-0.2625	-0.2679	-0.2352	0.2802	1.5040	0.0272	9.90
01306	B	M	7266	0.8007	0.0783	0.8007	0.0904	0.0293	0.0012	0.4769	-0.3001	0.4769	-0.3990	-0.3116	-0.4448	0.0331	-5.40
01307	C	M	7266	0.8431	0.0571	0.0530	0.8431	0.0454	0.0014	0.4161	-0.2944	-0.2811	0.4161	-0.2668	-0.7628	0.0357	-3.10
01308	B	M	7266	0.6431	0.1317	0.6431	0.1119	0.1104	0.0029	0.4633	-0.3876	0.4633	-0.3403	-0.3684	0.5557	0.0282	-3.60
01309	D	M	7266	0.6350	0.1497	0.1536	0.0601	0.6350	0.0015	0.5317	-0.4569	-0.4718	-0.3679	0.5317	0.5956	0.0281	-7.70
01310	B	F	7266	0.6797	0.2063	0.6797	0.0950	0.0178	0.0012	0.4208	-0.3149	0.4208	-0.4076	-0.2807	0.3446	0.0289	1.10
01311	D	F	7266	0.6745	0.0663	0.0802	0.1764	0.6745	0.0025	0.4760	-0.4797	-0.3168	-0.3561	0.4760	0.3805	0.0288	-4.60
01312	B	F	7266	0.5958	0.3000	0.5958	0.0557	0.0467	0.0018	0.4120	-0.3536	0.4120	-0.3585	-0.3211	0.8253	0.0276	4.60
01313	C	F	7266	0.6687	0.0666	0.2342	0.6687	0.0295	0.0010	0.4707	-0.3100	-0.4325	0.4707	-0.2832	0.3822	0.0288	-5.00
01314	B	F	7266	0.4876	0.0161	0.4876	0.0381	0.4564	0.0018	0.3236	-0.2797	0.3236	-0.3066	-0.2964	1.3785	0.0272	9.90
01315	C	F	7266	0.8964	0.0202	0.0187	0.8964	0.0630	0.0017	0.3486	-0.2074	-0.1609	0.3486	-0.2804	-1.3461	0.0422	-2.40
01316	B	F	7266	0.8465	0.0679	0.8465	0.0186	0.0644	0.0026	0.3639	-0.2696	0.3639	-0.2136	-0.2457	-0.8531	0.0366	-0.80
01317	D	M	6736	0.7260	0.0537	0.1020	0.1173	0.7260	0.0010	0.4598	-0.4128	-0.3111	-0.3397	0.4598	0.2154	0.0311	-3.90
01318	C	M	6736	0.6528	0.1333	0.1839	0.6528	0.0289	0.0010	0.5193	-0.4323	-0.4701	0.5193	-0.2825	0.6348	0.0294	-7.30
01319	C	M	6736	0.5546	0.0919	0.1833	0.5546	0.1691	0.0010	0.3733	-0.3756	-0.2514	0.3733	-0.3644	1.1699	0.0283	6.00
01320	B	M	6736	0.8437	0.0870	0.8437	0.0456	0.0232	0.0006	0.3909	-0.3026	0.3909	-0.2662	-0.2129	-0.6487	0.0373	-1.30
01321	A	F	6736	0.9028	0.9028	0.0514	0.0276	0.0177	0.0006	0.3508	0.3508	-0.2128	-0.2876	-0.1865	-1.2757	0.0450	-1.60
01322	D	F	6736	0.7801	0.0965	0.0842	0.0387	0.7801	0.0004	0.4360	-0.3209	-0.3241	-0.3010	0.4360	-0.1453	0.0332	-1.90
01323	D	F	6736	0.9417	0.0183	0.0194	0.0196	0.9417	0.0010	0.3177	-0.1992	-0.2178	-0.1757	0.3177	-1.8734	0.0557	-2.90
01324	C	F	6736	0.6550	0.2221	0.0674	0.6550	0.0536	0.0019	0.4852	-0.4247	-0.3197	0.4852	-0.4064	0.6157	0.0294	-5.20
01325	B	F	6736	0.6875	0.1859	0.6875	0.0680	0.0573	0.0013	0.4273	-0.3236	0.4273	-0.3587	-0.3309	0.4409	0.0301	-1.30
01326	B	F	6736	0.8400	0.0319	0.8400	0.0480	0.0790	0.0012	0.3898	-0.3191	0.3898	-0.2211	-0.2701	-0.5963	0.0368	-2.50
01327	A	F	6736	0.8282	0.8282	0.0451	0.0852	0.0405	0.0009	0.4994	0.4994	-0.2950	-0.4206	-0.3071	-0.5215	0.0361	-8.40
01328	B	F	6736	0.3990	0.1341	0.3990	0.2004	0.2637	0.0028	0.3503	-0.3921	0.3503	-0.3484	-0.3065	1.9859	0.0286	8.20
01329	C	M	6728	0.6905	0.0574	0.0881	0.6905	0.1626	0.0013	0.3912	-0.3432	-0.3429	0.3912	-0.2528	0.4392	0.0302	3.40
01330	C	M	6728	0.6749	0.2033	0.0922	0.6749	0.0285	0.0010	0.3829	-0.3506	-0.2531	0.3829	-0.2272	0.5152	0.0299	1.80
01331	B	M	6728	0.9095	0.0416	0.9095	0.0284	0.0199	0.0006	0.3410	-0.2131	0.3410	-0.2304	-0.2202	-1.3943	0.0470	-2.00
01332	C	M	6728	0.9420	0.0193	0.0254	0.9420	0.0129	0.0003	0.3637	-0.2703	-0.2596	0.3637	-0.1374	-1.9548	0.0576	-3.10
01333	C	F	6728	0.7738	0.1739	0.0229	0.7738	0.0294	0.0000	0.4440	-0.4095	-0.2924	0.4440	-0.1738	-0.1146	0.0331	-1.60
01334	D	F	6728	0.8410	0.0116	0.0119	0.1351	0.8410	0.0004	0.3282	-0.1684	-0.2206	-0.2763	0.3282	-0.6454	0.0375	2.60
01335	A	F	6728	0.8598	0.8598	0.0534	0.0547	0.0312	0.0009	0.3951	0.3951	-0.2578	-0.2823	-0.2463	-0.8210	0.0393	-3.70
01336	D	F	6728	0.7170	0.1558	0.0425	0.0837	0.7170	0.0010	0.4886	-0.4545	-0.2431	-0.3404	0.4886	0.2440	0.0311	-6.80
01337	D	F	6728	0.8313	0.0461	0.0525	0.0691	0.8313	0.0010	0.5362	-0.3791	-0.3761	-0.3843	0.5362	-0.5574	0.0367	-9.60
01338	A	F	6728	0.9294	0.9294	0.0379	0.0198	0.0113	0.0016	0.3054	0.3054	-0.2058	-0.1966	-0.1731	-1.6797	0.0520	-1.90
01339	C	F	6728	0.7546	0.0837	0.0916	0.7546	0.0678	0.0024	0.4581	-0.3345	-0.3504	0.4581	-0.3156	0.0214	0.0323	-4.70
01340	B	F	6728	0.9177	0.0265	0.9177	0.0294	0.0217	0.0048	0.3261	-0.2323	0.3261	-0.1742	-0.2172	-1.5311	0.0493	-1.00
01341	C	M	6683	0.9638	0.0159	0.0097	0.9638	0.0103	0.0003	0.2870	-0.1942	-0.1646	0.2870	-0.1594	-2.3827	0.0694	-3.70
01342	C	M	6683	0.8335	0.0700	0.0563	0.8335	0.0394	0.0009	0.4860	-0.4055	-0.3030	0.4860	-0.2958	-0.5282	0.0364	-7.80
01343	D	M	6683	0.5640	0.2864	0.0833	0.0658	0.5640	0.0004	0.1907	-0.0995	-0.2476	-0.2090	0.1907	1.1297	0.0283	9.90
01344	B	M	6683	0.6609	0.0748	0.6609	0.0735	0.1890	0.0018	0.2303	-0.2881	0.2303	-0.2139	-0.0958	0.6230	0.0294	9.90
01345	B	F	6683	0.5025	0.4779	0.5025	0.0078	0.0111	0.0007	0.3918	-0.3829	0.3918	-0.2352	-0.2146	1.4415	0.0281	4.00
01346	D	F	6683	0.7280	0.0630	0.1469	0.0612	0.7280	0.0009	0.4862	-0.3937	-0.4054	-0.2836	0.4862	0.2157	0.0311	-4.80
01347	C	F	6683	0.6107	0.2421	0.0545	0.6107	0.0916	0.0012	0.4604	-0.4246	-0.3073	0.4604	-0.3613	0.8750	0.0287	-2.00
01348	D	F	6683	0.6834	0.2586	0.0319	0.0248	0.6834	0.0013	0.2836	-0.2012	-0.2870	-0.2751	0.2836	0.4990	0.0298	9.90
01349	D	F	6683	0.8396	0.0780	0.0567	0.0247	0.8396	0.0010	0.4683	-0.3139	-0.3727	-0.2815	0.4683	-0.5806	0.0369	-6.50
01350	C	F	6683	0.8326	0.0552	0.0503	0.8326	0.0608	0.0012	0.3624	-0.2847	-0.2398	0.3624	-0.2113	-0.5295	0.0364	-1.70
01351	A	F	6683	0.7978	0.7978	0.0736	0.0483	0.0783	0.0019	0.4035	0.4035	-0.3288	-0.3142	-0.2160	-0.2635	0.0341	-1.80
01352	A	F	6683	0.8288	0.8288	0.0790	0.0413	0.0489	0.0019	0.4482	0.4482	-0.2845	-0.2989	-0.3615	-0.4901	0.0360	-5.00
01353	D	M	6673	0.8899	0.0472	0.0454	0.0163	0.8899	0.0012	0.3948	-0.2889	-0.2464	-0.2439	0.3948	-1.0899	0.0429	-4.20

Appendix K: 2006 Uncommon Grade 5 Multiple Choice Statistics for Mathematics

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
01354	B	M	6673	0.6382	0.1353	0.6382	0.0874	0.1380	0.0010	0.3822	-0.3312	0.3822	-0.3144	-0.2740	0.7495	0.0291	3.40
01355	C	M	6673	0.7766	0.0450	0.0991	0.7766	0.0781	0.0013	0.3289	-0.2224	-0.2475	0.3289	-0.2279	-0.1283	0.0333	3.60
01356	D	M	6673	0.7207	0.0709	0.0886	0.1182	0.7207	0.0016	0.4836	-0.3606	-0.4108	-0.3340	0.4836	0.2576	0.0311	-6.90
01357	B	F	6673	0.7932	0.0195	0.7932	0.1588	0.0270	0.0015	0.4398	-0.2549	0.4398	-0.3770	-0.2672	-0.2344	0.0341	-3.60
01358	B	F	6673	0.6441	0.2829	0.6441	0.0261	0.0460	0.0009	0.4283	-0.3765	0.4283	-0.2131	-0.4096	0.6972	0.0293	1.40
01359	A	F	6673	0.8737	0.8737	0.0694	-0.0129	0.0427	0.0013	0.3275	0.3275	-0.3615	-0.2189	-0.0318	-0.9268	0.0408	5.50
01360	B	F	6673	0.8681	0.0178	0.8681	0.1045	0.0082	0.0013	0.4084	-0.2233	0.4084	-0.3544	-0.1787	-0.8629	0.0400	-4.20
01361	A	F	6673	0.5906	0.5906	0.2423	0.0826	0.0823	0.0022	0.4210	0.4210	-0.3256	-0.4222	-0.3555	0.9905	0.0286	-0.40
01362	B	F	6673	0.4810	0.1971	0.4810	0.0530	0.2678	0.0010	0.3030	-0.3544	0.3030	-0.2200	-0.2419	1.5674	0.0281	9.90
01363	A	F	6673	0.8695	0.8695	0.0487	0.0483	0.0310	0.0025	0.4413	0.4413	-0.2692	-0.3025	-0.3279	-0.8954	0.0404	-5.40
01364	B	F	6673	0.8458	0.0788	0.8458	0.0339	0.0361	0.0054	0.4909	-0.4315	0.4909	-0.2965	-0.2579	-0.6566	0.0378	-7.50
01365	D	M	6695	0.7277	0.0784	0.0644	0.1291	0.7277	0.0004	0.4111	-0.3452	-0.2419	-0.3228	0.4111	0.2172	0.0313	-0.90
01366	C	M	6695	0.5688	0.0804	0.2432	0.5688	0.1065	0.0012	0.3555	-0.3293	-0.3905	0.3555	-0.1124	1.1254	0.0284	9.00
01367	C	M	6695	0.5689	0.1240	0.2445	0.5689	0.0620	0.0006	0.3631	-0.5392	-0.1824	0.3631	-0.2856	1.1303	0.0284	9.90
01368	A	M	6695	0.9141	0.9141	0.0303	0.0317	0.0235	0.0004	0.3873	0.3873	-0.2489	-0.2697	-0.2228	-1.4050	0.0476	-5.60
01369	A	F	6695	0.5247	0.5247	0.3017	0.0929	0.0801	0.0006	0.5517	0.5517	-0.5136	-0.5767	-0.3789	1.3403	0.0282	-9.90
01370	C	F	6695	0.9403	0.0118	0.0211	0.9403	0.0264	0.0004	0.3733	-0.1924	-0.2260	0.3733	-0.2754	-1.8387	0.0558	-4.70
01371	C	F	6695	0.7122	0.1332	0.0387	0.7122	0.1158	0.0001	0.4122	-0.3223	-0.3424	0.4122	-0.2951	0.3271	0.0307	-0.80
01372	B	F	6695	0.3606	0.5391	0.3606	0.0574	0.0423	0.0007	0.3036	-0.2933	0.3036	-0.2673	-0.3062	2.2136	0.0292	9.90
01373	B	F	6695	0.8033	0.0660	0.8033	0.1164	0.0137	0.0006	0.4315	-0.3678	0.4315	-0.3185	-0.1820	-0.2740	0.0344	-5.20
01374	D	F	6695	0.7159	0.0581	0.0886	0.1368	0.7159	0.0006	0.5233	-0.4400	-0.4374	-0.3667	0.5233	0.2755	0.0310	-7.00
01375	C	F	6695	0.6987	0.1592	0.0342	0.6987	0.1069	0.0009	0.1788	-0.1585	-0.2873	0.1788	-0.0258	0.4086	0.0304	9.90
01376	D	F	6695	0.8689	0.0832	0.0196	0.0269	0.8689	0.0015	0.2159	-0.0826	-0.2045	-0.2122	0.2159	-0.8507	0.0399	8.20
01377	B	M	6665	0.7808	0.0377	0.7808	0.0258	0.1547	0.0011	0.3659	-0.2996	0.3659	-0.2332	-0.2738	-0.1521	0.0335	1.30
01378	C	M	6665	0.6546	0.1931	0.0348	0.6546	0.1167	0.0008	0.3676	-0.1990	-0.2600	0.3676	-0.4312	0.6453	0.0295	2.10
01379	D	M	6665	0.5884	0.0546	0.0762	0.2795	0.5884	0.0012	0.3085	-0.2614	-0.2008	-0.2714	0.3085	1.0049	0.0286	7.10
01380	C	M	6665	0.8194	0.0423	0.0528	0.8194	0.0842	0.0014	0.4639	-0.3378	-0.3129	0.4639	-0.3293	-0.4335	0.0356	-6.70
01381	B	F	6665	0.8900	0.0558	0.8900	0.0263	0.0272	0.0008	0.3849	-0.2746	0.3849	-0.2264	-0.2534	-1.1089	0.0431	-1.50
01382	C	F	6665	0.6249	0.2254	0.0824	0.6249	0.0648	0.0026	0.4601	-0.4143	-0.3680	0.4601	-0.3112	0.7987	0.0290	-4.30
01383	B	F	6665	0.5632	0.2126	0.5632	0.1674	0.0555	0.0012	0.3518	-0.3098	0.3518	-0.2610	-0.3428	1.1359	0.0284	6.30
01384	D	F	6665	0.6815	0.1775	0.0369	0.1022	0.6815	0.0020	0.4386	-0.3555	-0.3013	-0.3513	0.4386	0.4866	0.0300	-3.70
01385	A	F	6665	0.8893	0.8893	0.0245	0.0150	0.0698	0.0015	0.2512	0.2512	-0.1955	-0.2067	-0.1341	-1.0684	0.0425	4.00
01386	D	F	6665	0.7803	0.0332	0.0630	0.1221	0.7803	0.0014	0.3930	-0.3440	-0.3197	-0.2375	0.3930	-0.1264	0.0333	0.80
01387	C	F	6665	0.8567	0.0596	0.0558	0.8567	0.0270	0.0009	0.3778	-0.2430	-0.2782	0.3778	-0.2334	-0.7538	0.0388	-3.60
01388	C	F	6665	0.8047	0.0545	0.0716	0.8047	0.0668	0.0026	0.4935	-0.3356	-0.3458	0.4935	-0.3759	-0.3353	0.0348	-7.10
01389	B	M	6665	0.8699	0.0405	0.8699	0.0494	0.0393	0.0009	0.2901	-0.2012	0.2901	-0.2137	-0.1513	-0.8441	0.0401	3.30
01390	A	M	6665	0.7302	0.7302	0.0840	0.0431	0.1418	0.0009	0.1537	0.1537	-0.2347	-0.1365	-0.0007	0.2530	0.0311	9.90
01391	B	M	6665	0.5727	0.1421	0.5727	0.0827	0.2021	0.0005	0.4651	-0.2229	0.4651	-0.4271	-0.5113	1.0919	0.0283	-4.20
01392	B	M	6665	0.5893	0.0314	0.5893	0.2275	0.1515	0.0003	0.4108	-0.1651	0.4108	-0.2791	-0.5168	1.0129	0.0284	2.60
01393	D	F	6665	0.4857	0.2891	0.1104	0.1143	0.4857	0.0005	0.3686	-0.2835	-0.3759	-0.4071	0.3686	1.5421	0.0280	4.20
01394	B	F	6665	0.8729	0.0974	0.8729	0.0144	0.0147	0.0006	0.4660	-0.4523	0.4660	-0.1768	-0.1468	-0.8932	0.0407	-6.20
01395	A	F	6665	0.8071	0.8071	0.0482	0.0537	0.0902	0.0009	0.3325	0.3325	-0.1879	-0.2914	-0.2143	-0.2844	0.0346	0.70
01396	C	F	6665	0.7856	0.0828	0.0675	0.7856	0.0627	0.0014	0.4140	-0.2350	-0.3450	0.4140	-0.3131	-0.1349	0.0335	-2.90
01397	B	F	6665	0.9247	0.0188	0.9247	0.0381	0.0168	0.0017	0.3212	-0.2046	0.3212	-0.2040	-0.2147	-1.5299	0.0504	-2.60
01398	A	F	6665	0.8495	0.8495	0.0896	0.0350	0.0249	0.0011	0.4434	0.4434	-0.3816	-0.2475	-0.2312	-0.6576	0.0381	-6.60
01399	C	F	6665	0.6422	0.0171	0.0744	0.6422	0.2653	0.0011	0.4826	-0.3163	-0.4719	0.4826	-0.4011	0.7298	0.0291	-6.10
01400	D	F	6665	0.4209	0.0233	0.1564	0.0372	0.4209	0.0023	0.2381	-0.2188	-0.2254	-0.1963	0.2381	1.8855	0.0283	9.90
01401	B	M	6637	0.6922	0.1240	0.6922	0.1483	0.0350	0.0006	0.4533	-0.3748	0.4533	-0.3946	-0.2417	0.4536	0.0302	-1.20
01402	D	M	6637	0.8025	0.0818	0.0681	0.0464	0.8025	0.0012	0.3995	-0.2744	-0.2760	-0.2787	0.3995	-0.2499	0.0343	-4.00

Appendix K: 2006 Uncommon Grade 5 Multiple Choice Statistics for Mathematics

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
01403	B	M	6637	0.7580	0.0348	0.7580	0.0237	0.1831	0.0005	0.4336	-0.2576	0.4336	-0.1946	-0.3957	0.0585	0.0322	-3.00
01404	D	M	6637	0.7690	0.0723	0.0648	0.0931	0.7690	0.0008	0.3023	-0.2902	-0.2241	-0.1347	0.3023	-0.0164	0.0327	5.20
01405	D	F	6637	0.5941	0.2376	0.0921	0.0755	0.5941	0.0008	0.4046	-0.4145	-0.2823	-0.2065	0.4046	0.9981	0.0287	0.60
01406	A	F	6637	0.7292	0.7292	0.0625	0.0259	0.1814	0.0009	0.2281	0.2281	-0.2875	-0.2665	-0.0774	0.2671	0.0311	8.60
01407	D	F	6637	0.3083	0.1796	0.3001	0.2088	0.3083	0.0032	0.3254	-0.3614	-0.3583	-0.3237	0.3254	2.5117	0.0303	9.10
01408	B	F	6637	0.6025	0.0601	0.6025	0.2546	0.0811	0.0017	0.4479	-0.2740	0.4479	-0.3961	-0.4207	0.9386	0.0288	-1.90
01409	B	F	6637	0.5112	0.2105	0.5112	0.1823	0.0940	0.0020	0.4192	-0.2872	0.4192	-0.4608	-0.3899	1.4295	0.0282	1.00
01410	D	F	6637	0.7326	0.0675	0.0564	0.1410	0.7326	0.0026	0.4933	-0.3505	-0.4216	-0.3715	0.4933	0.2085	0.0314	-5.60
01411	B	F	6637	0.5860	0.1061	0.5860	0.1825	0.1231	0.0024	0.4591	-0.4768	0.4591	-0.3713	-0.3209	1.0343	0.0286	-4.30
01412	C	F	6637	0.3910	0.5200	0.0518	0.3910	0.0339	0.0033	0.3248	-0.2720	-0.4715	0.3248	-0.4760	2.0644	0.0289	9.50
01413	A	ML	6648	0.5967	0.5967	0.0520	0.1449	0.2056	0.0008	0.3211	0.3211	-0.3683	-0.1234	-0.3337	1.1296	0.0284	8.20
01414	D	ML	6648	0.6853	0.0596	0.2237	0.0307	0.6853	0.0008	0.3954	-0.3123	-0.3402	-0.2258	0.3954	0.6474	0.0295	0.20
01415	B	ML	6648	0.9236	0.0373	0.9236	0.0247	0.0140	0.0005	0.2301	-0.1737	0.2301	-0.1312	-0.1119	-1.6089	0.0514	2.70
01416	D	ML	6648	0.6792	0.0633	0.1026	0.1536	0.6792	0.0014	0.4402	-0.2876	-0.3455	-0.3740	0.4402	0.6307	0.0296	-4.10
01417	A	M	6648	0.9061	0.9061	0.0683	0.0129	0.0123	0.0003	0.3122	0.3122	-0.2682	-0.1689	-0.1140	-1.3021	0.0461	-0.40
01418	D	M	6648	0.8233	0.0466	0.0603	0.0684	0.8233	0.0014	0.4440	-0.3921	-0.2828	-0.2678	0.4440	-0.4310	0.0358	-5.50
01419	B	F	6648	0.8075	0.0782	0.8075	0.0788	0.0349	0.0006	0.3145	-0.1979	0.3145	-0.2050	-0.2687	-0.3040	0.0347	2.30
01420	D	F	6648	0.9055	0.0295	0.0332	0.0311	0.9055	0.0006	0.2933	-0.2428	-0.1252	-0.1953	0.2933	-1.2850	0.0459	0.80
01421	D	F	6648	0.6122	0.2174	0.0561	0.1125	0.6122	0.0018	0.4771	-0.3679	-0.4297	-0.4363	0.4771	0.8846	0.0289	-4.20
01422	B	F	6648	0.9285	0.0268	0.9285	0.0205	0.0233	0.0009	0.3452	-0.2423	0.3452	-0.2076	-0.1982	-1.6077	0.0514	-2.10
01423	D	F	6648	0.7234	0.0725	0.0596	-0.1431	0.7234	0.0015	0.4682	-0.4040	-0.3533	-0.3333	0.4682	0.2413	0.0312	-6.90
01424	D	F	6648	0.7850	0.0223	0.1184	0.0713	0.7850	0.0030	0.4914	-0.2724	-0.4146	-0.3501	0.4914	-0.1725	0.0337	-6.60
01425	C	ML	6646	0.7748	0.0232	0.1452	0.7748	0.0564	0.0005	0.3733	-0.2514	-0.2537	0.3733	-0.3416	-0.0509	0.0330	2.30
01426	A	ML	6646	0.8012	0.8012	0.0703	0.0636	0.0642	0.0006	0.5176	0.5176	-0.3530	-0.3943	-0.3708	-0.3212	0.0350	-7.70
01427	A	ML	6646	0.7302	0.7302	0.1481	0.0509	0.0697	0.0012	0.3083	0.3083	-0.1543	-0.3061	-0.2819	0.2513	0.0312	5.40
01428	D	ML	6646	0.8134	0.0333	0.0256	0.1270	0.8134	0.0008	0.3804	-0.2733	-0.2036	-0.3045	0.3804	-0.2535	0.0345	-3.20
01429	D	M	6646	0.5418	0.0736	0.2924	0.0913	0.5418	0.0009	0.4643	-0.4627	-0.4118	-0.3712	0.4643	1.2806	0.0283	-3.30
01430	B	M	6646	0.7776	0.1571	0.7776	0.0397	0.0245	0.0011	0.4373	-0.3380	0.4373	-0.3694	-0.2588	-0.0635	0.0331	-3.20
01431	D	F	6646	0.7651	0.0494	0.0710	0.1122	0.7651	0.0023	0.3436	-0.2265	-0.2238	-0.2694	0.3436	0.0025	0.0327	0.50
01432	B	F	6646	0.6273	0.1863	0.6273	0.0999	0.0850	0.0015	0.4499	-0.3280	0.4499	-0.4297	-0.3646	0.8254	0.0291	-3.30
01433	A	F	6646	0.8197	0.8197	0.1217	0.0266	0.0310	0.0009	0.3885	0.3885	-0.2874	-0.2847	-0.2631	-0.4009	0.0357	-1.70
01434	D	F	6646	0.9472	0.0159	0.0156	0.0200	0.9472	0.0012	0.2669	-0.1278	-0.1843	-0.1767	0.2669	-1.9741	0.0595	-1.20
01435	D	F	6646	0.4648	0.2003	0.0767	0.2559	0.4648	0.0023	0.3914	-0.1786	-0.3417	-0.5056	0.3914	1.6870	0.0283	3.80
01436	B	F	6646	0.5763	0.1863	0.5763	0.1389	0.0961	0.0024	0.4008	-0.4379	0.4008	-0.2514	-0.2693	1.1001	0.0285	1.00
01437	D	ML	6661	0.4288	0.4676	0.0486	0.0533	0.4288	0.0017	0.2931	-0.2125	-0.4852	-0.4305	0.2931	2.1211	0.0289	9.90
01438	C	ML	6661	0.7364	0.0486	0.1579	0.7364	0.0564	0.0006	0.4024	-0.3220	-0.3323	0.4024	-0.2280	0.3045	0.0309	-1.50
01439	D	ML	6661	0.7319	0.0724	0.0573	0.1372	0.7319	0.0012	0.3829	-0.3270	-0.3119	-0.2424	0.3829	0.2946	0.0310	-0.30
01440	C	ML	6661	0.6886	0.0781	0.1084	0.6886	0.1239	0.0011	0.5001	-0.3398	-0.4153	0.5001	-0.4079	0.5764	0.0298	-8.00
01441	D	M	6661	0.8503	0.0797	0.0447	0.0239	0.8503	0.0014	0.3913	-0.3042	-0.2396	-0.2323	0.3913	-0.6621	0.0381	-3.80
01442	C	M	6661	0.7850	0.0507	0.0982	0.7850	0.0656	0.0005	0.4750	-0.3356	-0.3691	0.4750	-0.3209	-0.1289	0.0335	-4.70
01443	D	F	6661	0.8688	0.0345	0.0297	0.0650	0.8688	0.0020	0.4337	-0.2587	-0.2745	-0.3270	0.4337	-0.8279	0.0399	-6.20
01444	B	F	6661	0.8201	0.1510	0.8201	0.0131	0.0150	0.0008	0.3039	-0.2609	0.3039	-0.1823	-0.1531	-0.3905	0.0355	4.40
01445	D	F	6661	0.8526	0.0351	0.0348	0.0761	0.8526	0.0014	0.3392	-0.2432	-0.2236	-0.2197	0.3392	-0.6915	0.0384	0.10
01446	D	F	6661	0.7924	0.1717	0.0194	0.0153	0.7924	0.0012	0.3680	-0.2960	-0.2703	-0.2479	0.3680	-0.1938	0.0339	-0.40
01447	A	F	6661	0.5478	0.5478	0.2410	0.1257	0.0839	0.0017	0.4236	0.4236	-0.3903	-0.3595	-0.3297	1.2402	0.0283	-1.10
01448	C	F	6661	0.8586	0.0302	0.0417	0.8586	0.0670	0.0026	0.4364	-0.2780	-0.2883	0.4364	-0.3175	-0.7362	0.0388	-4.90
01449	A	M	6639	0.7310	0.7310	0.0152	0.2338	0.0188	0.0012	0.4852	0.4852	-0.2057	-0.4635	-0.2430	0.2278	0.0313	-4.30
01450	B	M	6639	0.4635	0.1511	0.4635	0.1936	0.1917	0.0002	0.3401	-0.4961	0.3401	-0.1621	-0.2907	1.6986	0.0283	6.90
01451	A	M	6639	0.5799	0.5799	0.1170	0.1389	0.1628	0.0014	0.3283	0.3283	-0.3005	-0.2742	-0.2483	1.0681	0.0285	7.10

Appendix K: 2006 Uncommon Grade 5 Multiple Choice Statistics for Mathematics

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
01452	D	M	6639	0.7329	0.0910	0.0904	0.0848	0.7329	0.0009	0.5370	-0.4881	-0.4024	-0.3351	0.5370	0.2021	0.0315	-8.70
01453	A	F	6639	0.7010	0.7010	0.0831	0.0673	0.1479	0.0006	0.3910	0.3910	-0.2369	-0.3770	-0.3013	0.4288	0.0304	2.50
01454	C	F	6639	0.8479	0.0267	0.1121	0.8479	0.0116	0.0018	0.3647	-0.2009	-0.3177	0.3647	-0.1551	-0.6172	0.0377	-1.30
01455	B	F	6639	0.7153	0.1612	0.7153	0.0708	0.0509	0.0018	0.4403	-0.2872	0.4403	-0.3647	-0.4201	0.3246	0.0308	-1.30
01456	B	F	6639	0.6891	0.1926	0.6891	0.0651	0.0514	0.0018	0.3878	-0.3203	0.3878	-0.2953	-0.2642	0.4793	0.0301	1.10
01457	A	F	6639	0.5962	0.5962	0.1157	0.2038	0.0830	0.0014	0.3815	0.3815	-0.3129	-0.3044	-0.3247	0.9936	0.0286	1.00
01458	D	F	6639	0.8768	0.0209	0.0673	0.0343	0.8768	0.0006	0.3520	-0.2335	-0.2478	-0.2213	0.3520	-0.9008	0.0409	-0.60
01459	C	F	6639	0.9524	0.0134	0.0163	0.9524	0.0170	0.0009	0.2847	-0.1694	-0.2033	0.2847	-0.1465	-2.0249	0.0609	-2.00
01460	A	F	6639	0.8117	0.8117	0.0878	0.0471	0.0494	0.0039	0.3312	0.3312	-0.1503	-0.2711	-0.3002	-0.3413	0.0351	3.70
01461	C	ML	6636	0.8232	0.0511	0.0515	0.8232	0.0735	0.0006	0.4139	-0.2529	-0.3162	0.4139	-0.2904	-0.4342	0.0361	-2.20
01462	B	ML	6636	0.7605	0.0809	0.7605	0.1285	0.0289	0.0011	0.4061	-0.4036	0.4061	-0.2596	-0.2268	0.1151	0.0321	2.30
01463	D	ML	6636	0.7715	0.0102	0.0170	0.1992	0.7715	0.0020	0.3648	-0.2140	-0.1843	-0.3270	0.3648	0.0519	0.0324	-0.10
01464	B	ML	6636	0.8404	0.0336	0.8404	0.0690	0.0556	0.0014	0.3999	-0.2812	0.3999	-0.2184	-0.3369	-0.5071	0.0368	-1.10
01465	D	M	6636	0.9173	0.0422	0.0223	0.0173	0.9173	0.0009	0.4117	-0.3704	-0.1817	-0.1958	0.4117	-1.3922	0.0483	-4.70
01466	D	M	6636	0.7881	0.0836	0.0609	0.0660	0.7881	0.0014	0.3227	-0.3187	-0.1399	-0.1936	0.3227	-0.1356	0.0337	2.20
01467	C	F	6636	0.6114	0.0772	0.0999	0.6114	0.2102	0.0014	0.3346	-0.2907	-0.2865	0.3346	-0.2540	0.9304	0.0288	6.20
01468	D	F	6636	0.7939	0.0184	0.0796	0.1067	0.7939	0.0015	0.3873	-0.2317	-0.2774	-0.3073	0.3873	-0.1759	0.0340	1.90
01469	A	F	6636	0.9233	0.9233	0.0282	0.0267	0.0197	0.0021	0.3947	0.3947	-0.2160	-0.2750	-0.2603	-1.5114	0.0503	-4.90
01470	A	F	6636	0.7208	0.7208	0.0752	0.0256	0.1771	0.0014	0.4517	0.4517	-0.3646	-0.2902	-0.3699	0.3019	0.0310	-1.80
01471	C	F	6636	0.7694	0.1478	0.0332	0.7694	0.0472	0.0024	0.4798	-0.4286	-0.2877	0.4798	-0.2754	-0.0156	0.0329	-5.50
01472	A	F	6636	0.4357	0.4357	0.0325	0.0788	0.4495	0.0035	0.4728	0.4728	-0.3645	-0.4202	-0.4704	1.8399	0.0284	-2.50
01473	C	ML	6633	0.8501	0.0299	0.0404	0.8501	0.0790	0.0006	0.3999	-0.2120	-0.2499	0.3999	-0.3275	-0.7082	0.0387	0.30
01474	D	ML	6633	0.2994	0.1010	0.5497	0.0498	0.2994	0.0002	0.4037	-0.2701	-0.4570	-0.2919	0.4037	2.5879	0.0307	3.60
01475	C	ML	6633	0.8152	0.0250	0.0235	0.8152	0.1357	0.0006	0.3324	-0.2135	-0.2235	0.3324	-0.2597	-0.3457	0.0352	3.20
01476	B	ML	6633	0.7969	0.1212	0.7969	0.0347	0.0464	0.0008	0.4067	-0.3038	0.4067	-0.2846	-0.2803	-0.2297	0.0343	-2.10
01477	B	M	6633	0.6756	0.2555	0.6756	0.0434	0.0244	0.0011	0.4065	-0.3498	0.4065	-0.2993	-0.2952	0.5513	0.0300	1.20
01478	C	M	6633	0.6671	0.1575	0.0698	0.6671	0.1051	0.0005	0.4569	-0.3415	-0.4096	0.4569	-0.3492	0.6114	0.0298	-2.40
01479	D	F	6633	0.7292	0.1159	0.1277	0.0261	0.7292	0.0011	0.3518	-0.2490	-0.2889	-0.2401	0.3518	0.2442	0.0314	2.30
01480	C	F	6633	0.6474	0.0277	0.0817	0.6474	0.2430	0.0002	0.4159	-0.3362	-0.4052	0.4159	-0.3190	0.7320	0.0294	1.80
01481	B	F	6633	0.5497	0.2706	0.5497	0.0329	0.1458	0.0011	0.5784	-0.5704	0.5784	-0.2881	-0.5340	1.2360	0.0285	-9.90
01482	D	F	6633	0.6799	0.0440	0.1841	0.0911	0.6799	0.0009	0.4850	-0.3971	-0.3908	-0.3801	0.4850	0.5468	0.0300	-3.60
01483	D	F	6633	0.8337	0.0357	0.0727	0.0559	0.8337	0.0020	0.5170	-0.3460	-0.4165	-0.3332	0.5170	-0.5153	0.0367	-8.00
01484	D	F	6633	0.9020	0.0172	0.0425	0.0344	0.9020	0.0039	0.3169	-0.1910	-0.2378	-0.1792	0.3169	-1.2168	0.0451	-0.60
01485	D	M	6647	0.8314	0.0623	0.0578	0.0480	0.8314	0.0006	0.4504	-0.3379	-0.3107	-0.2915	0.4504	-0.4598	0.0365	-3.90
01486	A	M	6647	0.7354	0.7354	0.2007	0.0433	0.0197	0.0009	0.3686	0.3686	-0.2980	-0.3008	-0.2372	0.2225	0.0316	1.20
01487	C	M	6647	0.7325	0.0824	0.1041	0.7325	0.0793	0.0017	0.3882	-0.3186	-0.3009	0.3882	-0.2379	0.2563	0.0314	-1.00
01488	B	M	6647	0.9240	0.0289	0.9240	0.0301	0.0155	0.0015	0.3837	-0.2871	0.3837	-0.2402	-0.1934	-1.5332	0.0509	-4.20
01489	D	F	6647	0.7772	0.0239	0.0832	0.1136	0.7772	0.0021	0.4238	-0.2810	-0.4073	-0.2458	0.4238	-0.0482	0.0332	-2.90
01490	B	F	6647	0.8295	0.1453	0.8295	0.0135	0.0110	0.0006	0.3735	-0.3265	0.3735	-0.1997	-0.1988	-0.4439	0.0364	-1.70
01491	B	F	6647	0.5506	0.3421	0.5506	0.0283	0.0784	0.0006	0.1572	-0.0196	0.1572	-0.2120	-0.4250	1.2754	0.0282	9.90
01492	D	F	6647	0.8538	0.0277	0.0335	0.0838	0.8538	0.0012	0.4655	-0.2383	-0.2862	-0.3904	0.4655	-0.6762	0.0387	-7.00
01493	A	F	6647	0.7479	0.7479	0.0450	0.1814	0.0245	0.0012	0.4374	0.4374	-0.3628	-0.3355	-0.3330	0.1558	0.0319	-1.60
01494	A	F	6647	0.6620	0.6620	0.2407	0.0481	0.0466	0.0026	0.3964	0.3964	-0.3115	-0.3481	-0.3215	0.6872	0.0295	0.40
01495	B	F	6647	0.8778	0.0209	0.8778	0.0301	0.0682	0.0030	0.3205	-0.1943	0.3205	-0.2121	-0.2223	-0.9344	0.0417	0.20
01496	A	F	6647	0.7943	0.7943	0.0399	0.0606	0.1022	0.0030	0.4977	0.4977	-0.3686	-0.4286	-0.3193	-0.1779	0.0342	-6.10
01497	A	M	6646	0.8972	0.8972	0.0251	0.0317	0.0447	0.0012	0.4389	0.4389	-0.2480	-0.2764	-0.3345	-1.1557	0.0443	-6.10
01498	C	M	6646	0.6008	0.0176	0.3191	0.6008	0.0618	0.0006	0.5166	-0.2920	-0.5007	0.5166	-0.3710	0.9940	0.0288	-8.40
01499	B	M	6646	0.6521	0.0949	0.6521	0.1894	0.0629	0.0006	0.4543	-0.4084	0.4543	-0.3557	-0.3592	0.7081	0.0296	0.00
01500	B	M	6646	0.6044	0.0686	0.6044	0.2812	0.0447	0.0011	0.4396	-0.4119	0.4396	-0.4051	-0.2061	0.9714	0.0289	-1.00

Appendix K: 2006 Uncommon Grade 5 Multiple Choice Statistics for Mathematics

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
01501	D	F	6646	0.7153	0.1082	0.0983	0.0772	0.7153	0.0011	0.5030	-0.3824	-0.3777	-0.3968	0.5030	0.3516	0.0309	-6.70
01502	B	F	6646	0.4002	0.0721	0.4002	0.4547	0.0715	0.0015	0.4657	-0.3268	0.4657	-0.4817	-0.4137	2.0419	0.0288	0.10
01503	B	F	6646	0.8589	0.0218	0.8589	0.0716	0.0468	0.0009	0.4155	-0.2150	0.4155	-0.2943	-0.3252	-0.7378	0.0391	-1.10
01504	C	F	6646	0.5831	0.2225	0.0665	0.5831	0.1270	0.0009	0.4671	-0.3989	-0.4112	0.4671	-0.4066	1.0836	0.0287	-2.30
01505	C	F	6646	0.8664	0.0122	0.0730	0.8664	0.0477	0.0008	0.4609	-0.1886	-0.3652	0.4609	-0.3355	-0.8258	0.0401	-5.60
01506	A	F	6646	0.9178	0.9178	0.0284	0.0254	0.0275	0.0008	0.3804	0.3804	-0.2286	-0.2633	-0.2414	-1.4406	0.0487	-4.20
01507	A	F	6646	0.8048	0.8048	0.0424	0.0706	0.0807	0.0015	0.5203	0.5203	-0.3124	-0.3243	-0.4697	-0.2927	0.0349	-7.10
01508	B	F	6646	0.6174	0.0485	0.6174	0.3020	0.0280	0.0042	0.5625	-0.3453	0.5625	-0.5457	-0.3879	0.8983	0.0290	-9.90
01509	D	M	6657	0.4452	0.0341	0.1628	0.3574	0.4452	0.0005	0.4500	-0.3979	-0.4732	-0.4220	0.4500	1.7598	0.0283	-1.20
01510	A	M	6657	0.8861	0.8861	0.0475	0.0210	0.0448	0.0006	0.4114	0.4114	-0.2860	-0.2559	-0.2747	-1.0440	0.0425	-4.60
01511	A	M	6657	0.8728	0.8728	0.0188	0.0093	0.0981	0.0011	0.2079	0.2079	-0.1979	-0.1441	-0.1267	-0.8904	0.0405	7.90
01512	C	M	6657	0.7846	0.0919	0.0377	0.7846	0.0850	0.0008	0.4113	-0.3072	-0.2835	0.4113	-0.2886	-0.1456	0.0336	-3.10
01513	B	F	6657	0.5668	0.1860	0.5668	0.0904	0.1556	0.0012	0.3601	-0.3020	0.3601	-0.3577	-0.2655	1.1436	0.0284	6.50
01514	D	F	6657	0.5884	0.0735	0.0527	0.2844	0.5884	0.0011	0.4600	-0.1718	-0.3647	-0.4811	0.4600	1.0225	0.0286	-2.80
01515	C	F	6657	0.4319	0.0251	0.5187	0.4319	0.0233	0.0011	0.1913	-0.2703	-0.1666	0.1913	-0.1977	1.8476	0.0284	9.90
01516	C	F	6657	0.8369	0.0470	0.0511	0.8369	0.0638	0.0012	0.4256	-0.2486	-0.3075	0.4256	-0.3182	-0.5483	0.0369	-1.00
01517	B	F	6657	0.8534	0.0611	0.8534	0.0556	0.0291	0.0008	0.3969	-0.3399	0.3969	-0.2045	-0.2635	-0.7031	0.0384	-1.30
01518	D	F	6657	0.5630	0.1640	0.0613	0.2105	0.5630	0.0012	0.5131	-0.5274	-0.3534	-0.4289	0.5131	1.1565	0.0284	-7.80
01519	C	F	6657	0.7042	0.0625	0.0487	0.7042	0.1834	0.0012	0.3710	-0.2720	-0.2973	0.3710	-0.2850	0.3923	0.0305	1.20
01520	B	F	6657	0.8322	0.0376	0.8322	0.0604	0.0674	0.0024	0.4451	-0.2849	0.4451	-0.2562	-0.3798	-0.5185	0.0366	-2.10
01521	C	M	6669	0.8039	0.0841	0.0681	0.8039	0.0439	0.0000	0.5054	-0.3796	-0.4275	0.5054	-0.2557	-0.3203	0.0346	-7.60
01522	C	M	6669	0.7019	0.0682	0.1856	0.7019	0.0435	0.0007	0.5017	-0.3768	-0.4158	0.5017	-0.3714	0.3794	0.0304	-6.50
01523	B	M	6669	0.6116	0.2356	0.6116	0.0576	0.0940	0.0012	0.4365	-0.4016	0.4365	-0.3431	-0.2985	0.8881	0.0288	-0.30
01524	C	M	6669	0.5809	0.3624	0.0421	0.5809	0.0133	0.0012	0.3675	-0.3510	-0.2440	0.3675	-0.2102	1.0435	0.0285	5.00
01525	A	F	6669	0.7995	0.7995	0.1393	0.0327	0.0279	0.0006	0.3693	0.3693	-0.2727	-0.2735	-0.2466	-0.2751	0.0343	-1.40
01526	B	F	6669	0.8190	0.1053	0.8190	0.0649	0.0100	0.0007	0.3062	-0.1296	0.3062	-0.3380	-0.2267	-0.4050	0.0353	4.50
01527	B	F	6669	0.7578	0.0196	0.7578	0.2042	0.0178	0.0004	0.4099	-0.2444	0.4099	-0.3565	-0.2836	0.0046	0.0324	0.00
01528	A	F	6669	0.9357	0.9357	0.0328	0.0144	0.0166	0.0004	0.3282	0.3282	-0.2398	-0.1835	-0.1835	-1.7544	0.0538	-3.60
01529	B	F	6669	0.8698	0.0271	0.8698	0.0226	0.0792	0.0012	0.2984	-0.1510	0.2984	-0.1782	-0.2385	-0.8802	0.0401	1.30
01530	B	F	6669	0.7019	0.0354	0.7019	0.1056	0.1564	0.0007	0.4756	-0.3077	0.4756	-0.4413	-0.3465	0.3868	0.0304	-4.70
01531	D	F	6669	0.3665	0.0445	0.3617	0.2261	0.3665	0.0012	0.3719	-0.4837	-0.4133	-0.2865	0.3719	2.1709	0.0291	4.80
01532	D	F	6669	0.7806	0.0400	0.1618	0.0162	0.7806	0.0013	0.3653	-0.2820	-0.2968	-0.1784	0.3653	-0.1224	0.0332	1.40
01533	D	M	6641	0.7972	0.0894	0.0538	0.0586	0.7972	0.0011	0.4408	-0.3121	-0.3016	-0.3310	0.4408	-0.2000	0.0342	-4.60
01534	D	M	6641	0.6184	0.1147	0.0444	0.2215	0.6184	0.0009	0.4225	-0.2418	-0.2737	-0.4449	0.4225	0.9023	0.0290	2.30
01535	B	M	6641	0.5665	0.1860	0.5665	0.0595	0.1866	0.0015	0.4423	-0.4972	0.4423	-0.3488	-0.2717	1.1746	0.0285	-1.50
01536	D	M	6641	0.5353	0.0631	0.3361	0.0644	0.5353	0.0011	0.3376	-0.3893	-0.2283	-0.4435	0.3376	1.3368	0.0283	8.60
01537	D	F	6641	0.6552	0.2323	0.0804	0.0306	0.6552	0.0015	0.4699	-0.4689	-0.2668	-0.2410	0.4699	0.6722	0.0296	-4.50
01538	C	F	6641	0.8443	0.0646	0.0735	0.8443	0.0167	0.0009	0.4496	-0.3084	-0.3772	0.4496	-0.2030	-0.6041	0.0378	-4.30
01539	D	F	6641	0.8338	0.0482	0.0825	0.0337	0.8338	0.0018	0.4525	-0.3762	-0.3054	-0.2767	0.4525	-0.4875	0.0367	-3.00
01540	B	F	6641	0.7062	0.1069	0.7062	0.1528	0.0324	0.0017	0.3481	-0.2703	0.3481	-0.2707	-0.2573	0.3977	0.0307	6.30
01541	A	F	6641	0.9151	0.9151	0.0544	0.0179	0.0113	0.0014	0.3707	0.3707	-0.2929	-0.2199	-0.1799	-1.3728	0.0479	-4.70
01542	B	F	6641	0.9090	0.0556	0.9090	0.0261	0.0083	0.0011	0.3490	-0.2211	0.3490	-0.2901	-0.1728	-1.2771	0.0463	-2.60
01543	B	F	6641	0.5787	0.0855	0.5787	0.2528	0.0809	0.0021	0.3932	-0.3345	0.3932	-0.3295	-0.3532	1.1069	0.0286	4.10
01544	A	F	6641	0.6922	0.6922	0.0852	0.1575	0.0623	0.0027	0.5681	0.5681	-0.4437	-0.4926	-0.4048	0.4779	0.0303	-9.90

Appendix L:

**2006 Uncommon Grade 8 Multiple Choice Statistics for
Mathematics**

Appendix L: 2006 Uncommon Grade 8 Multiple Choice Statistics for Mathematics

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
01545	D	ML	7887	0.6569	0.0844	0.0890	0.1679	0.6569	0.0018	0.5343	-0.3738	-0.4697	-0.4401	0.5343	0.0465	0.0273	-8.60
01546	B	ML	7887	0.5832	0.1013	0.5832	0.1904	0.1239	0.0011	0.4013	-0.2951	0.4013	-0.3948	-0.2798	0.5036	0.0265	3.10
01547	D	ML	7887	0.7320	0.0425	0.1686	0.0558	0.7320	0.0011	0.5021	-0.2560	-0.4341	-0.3917	0.5021	-0.4659	0.0292	-5.50
01548	A	ML	7887	0.6327	0.6327	0.2002	0.1095	0.0552	0.0024	0.4821	0.4821	-0.4084	-0.3840	-0.3497	0.2759	0.0268	-6.20
01549	C	M	7887	0.3446	0.1708	0.1374	0.3446	0.3458	0.0014	0.3477	-0.4651	-0.4318	0.3477	-0.2725	1.7053	0.0274	8.90
01550	D	M	7887	0.4856	0.1771	0.1193	0.2141	0.4856	0.0038	0.4097	-0.3342	-0.3753	-0.3974	0.4097	0.9514	0.0263	4.90
01551	D	F	7887	0.9566	0.0104	0.0120	0.0203	0.9566	0.0006	0.2365	-0.1476	-0.1476	-0.1369	0.2365	-2.8434	0.0593	-1.30
01552	B	F	7887	0.5420	0.0347	0.5420	0.2067	0.2148	0.0018	0.4363	-0.3393	0.4363	-0.3007	-0.4735	0.6394	0.0263	2.50
01553	D	F	7887	0.6787	0.1514	0.0623	0.1063	0.6787	0.0014	0.5216	-0.3663	-0.4338	-0.4520	0.5216	-0.1151	0.0278	-7.30
01554	C	F	7887	0.4061	0.2833	0.1828	0.4061	0.1249	0.0029	0.3619	-0.4062	-0.4228	0.3619	-0.1104	1.3759	0.0267	9.40
01555	B	F	7887	0.6640	0.0795	0.6640	0.1458	0.1082	0.0025	0.3638	-0.3312	0.3638	-0.1541	-0.3903	-0.0033	0.0275	6.60
01556	B	F	7887	0.6740	0.0773	0.6740	0.0843	0.1612	0.0032	0.2925	-0.2374	0.2925	-0.2943	-0.1726	-0.0658	0.0277	9.90
01557	C	M	7266	0.6920	0.1510	0.1383	0.6920	0.0182	0.0006	0.4175	-0.3144	-0.3719	0.4175	-0.2318	-0.0184	0.0289	-2.20
01558	A	M	7266	0.5389	0.5389	0.1367	0.1722	0.1503	0.0019	0.4732	0.4732	-0.4394	-0.3207	-0.4927	0.8100	0.0270	-4.50
01559	B	M	7266	0.6729	0.0467	0.6729	0.0714	0.2085	0.0006	0.4168	-0.3763	0.4168	-0.1721	-0.3895	0.0783	0.0285	0.20
01560	C	M	7266	0.7513	0.0740	0.1246	0.7513	0.0486	0.0015	0.3463	-0.2790	-0.2005	0.3463	-0.3076	-0.3969	0.0307	4.80
01561	B	M	7266	0.6296	0.0266	0.6296	0.0764	0.2652	0.0022	0.2277	-0.2151	0.2277	-0.2165	-0.1591	0.3275	0.0278	9.90
01562	B	M	7266	0.6152	0.1050	0.6152	0.2275	0.0516	0.0007	0.3855	-0.1864	0.3855	-0.3787	-0.3478	0.4120	0.0276	4.90
01563	D	F	7266	0.4405	0.1236	0.3485	0.0851	0.4405	0.0023	0.4865	-0.5961	-0.4567	-0.3523	0.4865	1.3073	0.0271	-6.30
01564	A	F	7266	0.8814	0.8814	0.0392	0.0482	0.0303	0.0010	0.3865	0.3865	-0.2706	-0.2430	-0.2500	-1.4420	0.0399	-3.70
01565	C	F	7266	0.7228	0.0976	0.1086	0.7228	0.0685	0.0025	0.3134	-0.1212	-0.3287	0.3134	-0.2304	-0.1988	0.0297	6.40
01566	A	F	7266	0.5527	0.5527	0.0890	0.3201	0.0363	0.0018	0.1149	0.1149	-0.2895	0.0014	-0.1944	0.7492	0.0270	9.90
01567	B	F	7266	0.8717	0.0139	0.8717	0.0235	0.0888	0.0021	0.2944	-0.1552	0.2944	-0.1958	-0.2200	-1.3311	0.0386	-0.20
01568	A	F	7266	0.7769	0.7769	0.1089	0.0628	0.0483	0.0032	0.3033	0.3033	-0.1607	-0.2396	-0.2596	-0.5407	0.0316	1.80
01569	A	ML	7306	0.4551	0.4551	0.2487	0.1615	0.1321	0.0026	0.3289	0.3289	-0.2384	-0.3647	-0.3230	1.3668	0.0274	9.90
01570	C	ML	7306	0.7820	0.1421	0.0505	0.7820	0.0242	0.0012	0.4894	-0.4732	-0.3118	0.4894	-0.1096	-0.6320	0.0321	-6.10
01571	C	ML	7306	0.5382	0.1184	0.2939	0.5382	0.0479	0.0016	0.4086	-0.4085	-0.3305	0.4086	-0.3598	0.8913	0.0271	4.40
01572	B	ML	7306	0.5946	0.1689	0.5946	0.1163	0.1185	0.0016	0.3240	-0.3443	0.3240	-0.2345	-0.1813	0.5457	0.0275	9.20
01573	C	M	7306	0.5242	0.1087	0.1174	0.5242	0.2480	0.0016	0.4596	-0.4256	-0.3188	0.4596	-0.4325	0.8585	0.0272	-1.60
01574	C	M	7306	0.8233	0.0658	0.0661	0.8233	0.0428	0.0019	0.4951	-0.3546	-0.3385	0.4951	-0.3458	-0.9453	0.0344	-6.00
01575	B	F	7306	0.6630	0.1226	0.6630	0.1106	0.1021	0.0016	0.3673	-0.2477	0.3673	-0.3592	-0.2392	0.1266	0.0284	2.90
01576	B	F	7306	0.7758	0.0333	0.7758	0.0172	0.1727	0.0010	0.3520	-0.2905	0.3520	-0.2098	-0.2724	-0.5985	0.0318	4.50
01577	C	F	7306	0.8575	0.0300	0.0667	0.8575	0.0441	0.0018	0.3842	-0.2756	-0.2778	0.3842	-0.2123	-1.2612	0.0374	-1.10
01578	B	F	7306	0.6642	0.0679	0.6642	0.1619	0.1033	0.0026	0.5031	-0.3436	0.5031	-0.3850	-0.4525	0.0973	0.0285	-7.70
01579	C	F	7306	0.9269	0.0219	0.0261	0.9269	0.0231	0.0019	0.3606	-0.2220	-0.1993	0.3606	-0.2585	-2.0948	0.0489	-4.70
01580	C	F	7306	0.6142	0.0401	0.2889	0.6142	0.0547	0.0021	0.3169	-0.3465	-0.2235	0.3169	-0.3090	0.4006	0.0277	9.90
01581	C	M	7284	0.5308	0.3499	0.0674	0.5308	0.0511	0.0008	0.4560	-0.4281	-0.3488	0.4560	-0.3699	0.8381	0.0272	-0.60
01582	B	M	7284	0.7957	0.1365	0.7957	0.0427	0.0246	0.0005	0.2503	-0.1485	0.2503	-0.2172	-0.2223	-0.7034	0.0327	9.90
01583	C	M	7284	0.5724	0.0574	0.2471	0.5724	0.1204	0.0027	0.4532	-0.3424	-0.4981	0.4532	-0.2054	0.6176	0.0274	-2.50
01584	B	M	7284	0.6490	0.1425	0.6490	0.1034	0.1039	0.0012	0.5242	-0.4190	0.5242	-0.4628	-0.3759	0.2071	0.0283	-9.10
01585	C	M	7284	0.7453	0.1569	0.0551	0.7453	0.0406	0.0021	0.4706	-0.3637	-0.3599	0.4706	-0.3434	-0.3871	0.0307	-3.00
01586	B	M	7284	0.9290	0.0166	0.9290	0.0181	0.0357	0.0005	0.3123	-0.1950	0.3123	-0.1782	-0.2117	-2.1074	0.0495	-3.50
01587	C	F	7284	0.6988	0.0360	0.0697	0.6988	0.1941	0.0014	0.4867	-0.3370	-0.3752	0.4867	-0.4039	-0.0743	0.0293	-5.90
01588	C	F	7284	0.8839	0.0563	0.0287	0.8839	0.0305	0.0007	0.4341	-0.3564	-0.2568	0.4341	-0.2217	-1.5394	0.0408	-6.80
01589	A	F	7284	0.6380	0.6380	0.0494	0.2787	0.0325	0.0014	0.3721	0.3721	-0.3592	-0.2942	-0.2841	0.2597	0.0281	5.80
01590	D	F	7284	0.5570	0.0751	0.0815	0.2851	0.5570	0.0012	0.4849	-0.4675	-0.5928	-0.3551	0.4849	0.6882	0.0273	-0.80
01591	A	F	7284	0.6178	0.6178	0.1720	0.1164	0.0924	0.0014	0.4722	0.4722	-0.3626	-0.3899	-0.4116	0.3767	0.0278	-4.00
01592	D	F	7284	0.8145	0.0784	0.0603	0.0442	0.8145	0.0026	0.4002	-0.2471	-0.2968	-0.2894	0.4002	-0.8899	0.0341	-2.80
01593	A	ML	7266	0.6643	0.6643	0.0795	0.2195	0.0361	0.0006	0.4217	0.4217	-0.2844	-0.3991	-0.2013	0.1606	0.0281	-1.90

Appendix L: 2006 Uncommon Grade 8 Multiple Choice Statistics for Mathematics

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
01594	B	ML	7266	0.5705	0.1013	0.5705	0.0856	0.2404	0.0022	0.1889	-0.2960	0.1889	-0.2319	-0.0414	0.6545	0.0272	9.90
01595	A	ML	7266	0.5973	0.5973	0.1001	0.1814	0.1192	0.0021	0.5353	0.5353	-0.4413	-0.4387	-0.4645	0.5033	0.0274	-9.90
01596	D	ML	7266	0.5292	0.0725	0.2531	0.1431	0.5292	0.0021	0.4421	-0.4193	-0.3737	-0.3857	0.4421	0.8581	0.0270	-2.10
01597	D	M	7266	0.5245	0.1061	0.2020	0.1664	0.5245	0.0010	0.1348	-0.1143	-0.0812	-0.1410	0.1348	0.8701	0.0270	9.90
01598	A	M	7266	0.5727	0.5727	0.1563	0.0890	0.1804	0.0015	0.3461	0.3461	-0.3721	-0.3497	-0.1735	0.5926	0.0272	6.00
01599	D	F	7266	0.7627	0.0414	0.0446	0.1496	0.7627	0.0017	0.4882	-0.3539	-0.3497	-0.3787	0.4882	-0.5090	0.0311	-7.00
01600	B	F	7266	0.7962	0.0436	0.7962	0.0314	0.1272	0.0017	0.3562	-0.2321	0.3562	-0.2203	-0.2785	-0.7526	0.0327	-0.10
01601	D	F	7266	0.8737	0.0633	0.0182	0.0435	0.8737	0.0014	0.4702	-0.3596	-0.2243	-0.3304	0.4702	-1.4433	0.0393	-8.20
01602	D	F	7266	0.8190	0.0837	0.0224	0.0735	0.8190	0.0014	0.3705	-0.3225	-0.2470	-0.1933	0.3705	-0.9051	0.0339	-0.70
01603	C	F	7266	0.2737	0.4776	0.1614	0.2737	0.0852	0.0021	0.2196	-0.1607	-0.2977	0.2196	-0.4301	2.2133	0.0299	9.90
01604	B	F	7266	0.7697	0.0703	0.7697	0.0494	0.1080	0.0025	0.4148	-0.3497	0.4148	-0.3243	-0.2437	-0.5432	0.0313	-0.80
01605	C	M	7265	0.4380	0.3025	0.1788	0.4380	0.0787	0.0019	0.3124	-0.3140	-0.2977	0.3124	-0.2166	1.3363	0.0273	9.90
01606	C	M	7265	0.7697	0.0465	0.0639	0.7697	0.1189	0.0010	0.4152	-0.3502	-0.2600	0.4152	-0.3069	-0.5363	0.0316	0.00
01607	A	M	7265	0.7477	0.7477	0.0650	0.0379	0.1480	0.0015	0.4916	0.4916	-0.3969	-0.3730	-0.3532	-0.3821	0.0307	-7.90
01608	C	M	7265	0.9122	0.0224	0.0357	0.9122	0.0285	0.0012	0.3673	-0.2386	-0.2015	0.3673	-0.2674	-1.8848	0.0458	-4.70
01609	D	M	7265	0.5415	0.0297	0.0796	0.3482	0.5415	0.0010	0.4082	-0.2652	-0.3666	-0.3786	0.4082	0.7727	0.0272	4.40
01610	A	M	7265	0.6184	0.6184	0.1060	0.2504	0.0224	0.0028	0.1697	0.1697	-0.3186	-0.0146	-0.2245	0.3909	0.0278	9.90
01611	D	F	7265	0.5576	0.0379	0.0603	0.3421	0.5576	0.0022	0.4490	-0.3106	-0.3345	-0.4237	0.4490	0.7027	0.0273	-1.10
01612	A	F	7265	0.8329	0.8329	0.0317	0.0886	0.0453	0.0015	0.3988	0.3988	-0.2820	-0.2676	-0.2839	-1.0077	0.0351	-0.50
01613	B	F	7265	0.6785	0.1619	0.6785	0.0596	0.0980	0.0021	0.5418	-0.4805	0.5418	-0.2815	-0.4695	0.0224	0.0288	-8.20
01614	A	F	7265	0.5807	0.5807	0.0929	0.2652	0.0596	0.0015	0.4346	0.4346	-0.4275	-0.3347	-0.3715	0.5917	0.0274	-0.10
01615	B	F	7265	0.7620	0.0285	0.7620	0.0932	0.1148	0.0015	0.4435	-0.2949	0.4435	-0.4028	-0.2729	-0.4771	0.0312	-3.40
01616	A	F	7265	0.7270	0.7270	0.0730	0.1525	0.0456	0.0019	0.3659	0.3659	-0.2315	-0.2975	-0.2749	-0.2368	0.0299	3.00
01617	B	ML	7262	0.6929	0.1162	0.6929	0.0869	0.1020	0.0019	0.2518	-0.1635	0.2518	-0.2338	-0.1687	0.0576	0.0288	9.90
01618	D	ML	7262	0.7918	0.0767	0.0165	0.1140	0.7918	0.0010	0.2723	-0.2569	-0.1643	-0.1559	0.2723	-0.6526	0.0324	7.60
01619	D	ML	7262	0.5946	0.1208	0.1113	0.1708	0.5946	0.0026	0.5951	-0.5127	-0.5254	-0.4963	0.5951	0.5838	0.0275	-9.90
01620	B	ML	7262	0.6473	0.0128	0.6473	0.0138	0.3255	0.0006	0.5182	-0.2598	0.5182	-0.2445	-0.5029	0.2162	0.0283	-5.30
01621	B	M	7262	0.7019	0.0969	0.7019	0.1487	0.0519	0.0006	0.5121	-0.3933	0.5121	-0.4527	-0.2868	-0.1097	0.0295	-7.90
01622	D	M	7262	0.7896	0.1268	0.0348	0.0476	0.7896	0.0011	0.5742	-0.5389	-0.3254	-0.2956	0.5742	-0.6876	0.0326	-9.90
01623	B	F	7262	0.3719	0.1125	0.3719	0.1615	0.3518	0.0022	0.2267	-0.1268	0.2267	-0.2586	-0.2394	1.7093	0.0280	9.90
01624	C	F	7262	0.9157	0.0275	0.0359	0.9157	0.0190	0.0018	0.3475	-0.2312	-0.2423	0.3475	-0.1756	-1.9213	0.0464	-2.90
01625	B	F	7262	0.5844	0.1665	0.5844	0.1703	0.0773	0.0015	0.4056	-0.4054	0.4056	-0.2806	-0.3182	0.5582	0.0276	3.90
01626	C	F	7262	0.7338	0.0941	0.0796	0.7338	0.0918	0.0007	0.3898	-0.3189	-0.2894	0.3898	-0.2453	-0.2920	0.0303	1.60
01627	D	F	7262	0.7223	0.1188	0.0843	0.0723	0.7223	0.0023	0.5410	-0.3714	-0.4837	-0.3961	0.5410	-0.2390	0.0300	-9.50
01628	C	F	7262	0.6238	0.1529	0.1239	0.6238	0.0954	0.0040	0.4554	-0.4688	-0.3336	0.4554	-0.2668	0.3631	0.0279	-3.60
01629	B	M	7258	0.6521	0.0548	0.6521	0.2227	0.0696	0.0008	0.4043	-0.3520	0.4043	-0.3341	-0.2819	0.2168	0.0283	0.90
01630	C	M	7258	0.5462	0.1671	0.1438	0.5462	0.1412	0.0017	0.4715	-0.4246	-0.4386	0.4715	-0.3726	0.7753	0.0272	-3.60
01631	B	M	7258	0.5922	0.0171	0.5922	0.2160	0.1740	0.0007	0.4702	-0.3319	0.4702	-0.5016	-0.3122	0.5330	0.0275	-2.00
01632	B	M	7258	0.5564	0.2503	0.5564	0.1076	0.0840	0.0017	0.4602	-0.4726	0.4602	-0.3043	-0.3415	0.7135	0.0273	-1.20
01633	A	M	7258	0.6649	0.6649	0.1230	0.1164	0.0940	0.0017	0.3931	0.3931	-0.3297	-0.3164	-0.2551	0.1449	0.0285	0.10
01634	B	M	7258	0.7877	0.1221	0.7877	0.0535	0.0358	0.0010	0.3356	-0.3481	0.3356	-0.1784	-0.0893	-0.6412	0.0324	3.60
01635	D	F	7258	0.3899	0.2393	0.1601	0.2074	0.3899	0.0033	0.3054	-0.2467	-0.4077	-0.2694	0.3054	1.6027	0.0277	9.90
01636	D	F	7258	0.8756	0.0785	0.0211	0.0241	0.8756	0.0007	0.4831	-0.4100	-0.2580	-0.2556	0.4831	-1.4396	0.0399	-8.50
01637	B	F	7258	0.7564	0.1303	0.7564	0.0762	0.0358	0.0012	0.4549	-0.3958	0.4549	-0.3053	-0.2641	-0.4488	0.0312	-4.40
01638	D	F	7258	0.7917	0.1135	0.0362	0.0579	0.7917	0.0007	0.2265	-0.0982	-0.1755	-0.2300	0.2265	-0.6485	0.0325	9.40
01639	B	F	7258	0.8395	0.0503	0.8395	0.0809	0.0284	0.0010	0.4325	-0.2812	0.4325	-0.3652	-0.2083	-1.0501	0.0357	-3.40
01640	B	F	7258	0.3194	0.0502	0.3194	0.3691	0.2587	0.0026	0.3153	-0.2759	0.3153	-0.2573	-0.4463	1.9949	0.0288	9.90
01641	C	M	7252	0.7610	0.0936	0.1189	0.7610	0.0255	0.0010	0.4677	-0.2945	-0.4366	0.4677	-0.2487	-0.4480	0.0311	-3.60
01642	D	M	7252	0.7785	0.0436	0.0609	0.1156	0.7785	0.0014	0.4491	-0.2015	-0.3456	-0.3747	0.4491	-0.5609	0.0318	-5.30

Appendix L: 2006 Uncommon Grade 8 Multiple Choice Statistics for Mathematics

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
01643	C	M	7252	0.5616	0.0823	0.1273	0.5616	0.2272	0.0015	0.4834	-0.3785	-0.3812	0.4834	-0.4639	0.6942	0.0272	-6.80
01644	B	M	7252	0.6542	0.0800	0.6542	0.2075	0.0560	0.0023	0.4393	-0.2385	0.4393	-0.4055	-0.3503	0.2072	0.0282	-1.90
01645	B	M	7252	0.4840	0.1828	0.4840	0.1462	0.1862	0.0008	0.3131	-0.1824	0.3131	-0.3179	-0.3462	1.1005	0.0271	9.90
01646	B	M	7252	0.5444	0.1914	0.5444	0.1681	0.0940	0.0021	0.4261	-0.3858	0.4261	-0.3863	-0.2960	0.7950	0.0272	0.60
01647	C	F	7252	0.1950	0.5243	0.0934	0.1950	0.1859	0.0015	0.2418	-0.1367	-0.4789	0.2418	-0.5565	2.8251	0.0333	9.90
01648	B	F	7252	0.6961	0.2062	0.6961	0.0757	0.0203	0.0018	0.4068	-0.3245	0.4068	-0.3633	-0.2211	-0.0359	0.0291	1.20
01649	A	F	7252	0.3498	0.3498	0.2366	0.2521	0.1583	0.0032	0.3147	0.3147	-0.2367	-0.3848	-0.3415	1.8253	0.0283	9.90
01650	C	F	7252	0.8326	0.0247	0.1124	0.8326	0.0294	0.0010	0.4079	-0.2411	-0.3611	0.4079	-0.1718	-0.9751	0.0349	-3.50
01651	A	F	7252	0.7056	0.7056	0.1136	0.0749	0.1040	0.0019	0.5803	0.5803	-0.4511	-0.4419	-0.4756	-0.1043	0.0293	-9.90
01652	C	F	7252	0.4759	0.3217	0.1171	0.4759	0.0820	0.0033	0.3997	-0.2563	-0.5337	0.3997	-0.4428	1.1543	0.0271	2.10
01653	C	M	7257	0.5107	0.0584	0.0919	0.5107	0.3371	0.0019	0.4308	-0.2863	-0.3807	0.4308	-0.4095	0.9555	0.0272	0.40
01654	B	M	7257	0.7409	0.0739	0.7409	0.0918	0.0919	0.0015	0.5310	-0.3662	0.5310	-0.3752	-0.4478	-0.3422	0.0306	-8.80
01655	D	M	7257	0.3676	0.2480	0.1251	0.2569	0.3676	0.0023	0.3109	-0.3145	-0.3693	-0.2696	0.3109	1.7291	0.0281	9.90
01656	B	M	7257	0.6675	0.0909	0.6675	0.1383	0.1016	0.0017	0.5085	-0.4090	0.5085	-0.3739	-0.4311	0.0965	0.0287	-6.00
01657	A	M	7257	0.5815	0.5815	0.1348	0.1363	0.1461	0.0014	0.4163	0.4163	-0.3734	-0.3959	-0.2739	0.5930	0.0275	0.90
01658	C	M	7257	0.4244	0.3806	0.1141	0.4244	0.0772	0.0037	0.4464	-0.4680	-0.3911	0.4464	-0.3085	1.4138	0.0275	0.50
01659	B	F	7257	0.7203	0.0885	0.7203	0.1496	0.0408	0.0008	0.2690	-0.2201	0.2690	-0.1731	-0.2295	-0.1813	0.0298	9.90
01660	D	F	7257	0.6322	0.0992	0.1415	0.1253	0.6322	0.0018	0.4091	-0.3110	-0.3642	-0.3060	0.4091	0.3132	0.0281	3.10
01661	B	F	7257	0.7928	0.0732	0.7928	0.1031	0.0294	0.0017	0.4500	-0.2646	0.4500	-0.3941	-0.2663	-0.6821	0.0327	-6.20
01662	D	F	7257	0.5490	0.0683	0.0881	0.2925	0.5490	0.0021	0.4748	-0.3833	-0.4563	-0.4176	0.4748	0.7614	0.0274	-2.20
01663	A	F	7257	0.5531	0.5531	0.1262	0.2053	0.1130	0.0023	0.4302	0.4302	-0.4220	-0.3688	-0.3038	0.7388	0.0274	-1.20
01664	C	F	7257	0.8352	0.0390	0.0656	0.8352	0.0575	0.0028	0.4241	-0.3063	-0.2598	0.4241	-0.3206	-1.0280	0.0354	-0.90
01665	D	M	7249	0.9000	0.0188	0.0630	0.0174	0.9000	0.0008	0.2988	-0.2108	-0.1901	-0.1958	0.2988	-1.6710	0.0429	0.20
01666	A	M	7249	0.2690	0.2690	0.0370	0.6183	0.0752	0.0006	0.2823	0.2823	-0.2861	-0.2772	-0.3566	2.3045	0.0301	9.90
01667	D	M	7249	0.3970	0.1585	0.1679	0.2755	0.3970	0.0011	0.4112	-0.5116	-0.3626	-0.3713	0.4112	1.5567	0.0277	3.00
01668	B	M	7249	0.4995	0.1665	0.4995	0.1693	0.1632	0.0015	0.3061	-0.2678	0.3061	-0.3229	-0.2258	1.0285	0.0272	9.90
01669	A	M	7249	0.7412	0.7412	0.1642	0.0556	0.0379	0.0011	0.3641	0.3641	-0.2941	-0.2796	-0.1958	-0.3111	0.0304	0.00
01670	C	M	7249	0.6798	0.0741	0.1461	0.6798	0.0984	0.0017	0.5025	-0.3668	-0.3950	0.5025	-0.4089	0.0501	0.0288	-7.70
01671	A	F	7249	0.6504	0.6504	0.0464	0.1460	0.1560	0.0012	0.5936	0.5936	-0.4349	-0.4907	-0.5203	0.2086	0.0283	-9.90
01672	D	F	7249	0.6720	0.0673	0.0973	0.1628	0.6720	0.0007	0.4474	-0.3093	-0.4249	-0.3231	0.4474	0.1129	0.0286	-1.40
01673	A	F	7249	0.5644	0.5644	0.2022	0.0942	0.1378	0.0014	0.4319	0.4319	-0.3586	-0.3779	-0.3664	0.6865	0.0273	-0.80
01674	C	F	7249	0.6940	0.0199	0.2725	0.6940	0.0130	0.0007	0.4135	-0.3122	-0.3707	0.4135	-0.2263	-0.0153	0.0291	0.30
01675	A	F	7249	0.4714	0.4714	0.2509	0.1795	0.0968	0.0014	0.3408	0.3408	-0.2280	-0.3841	-0.3310	1.1865	0.0272	8.30
01676	D	F	7249	0.4047	0.1153	0.1276	0.3507	0.4047	0.0017	0.3461	-0.5579	-0.3306	-0.2498	0.3461	1.5230	0.0276	8.10
01677	A	M	7238	0.8460	0.8460	0.0542	0.0459	0.0532	0.0008	0.2976	0.2976	-0.2236	-0.1861	-0.1767	-1.0951	0.0361	3.00
01678	B	M	7238	0.5384	0.1478	0.5384	0.2541	0.0568	0.0029	0.4194	-0.4181	0.4194	-0.3365	-0.3111	0.8177	0.0272	-0.40
01679	A	M	7238	0.6960	0.6960	0.2285	0.0482	0.0264	0.0008	0.3058	0.3058	-0.2403	-0.2334	-0.2318	-0.0359	0.0291	7.60
01680	D	M	7238	0.5362	0.0709	0.1741	0.2169	0.5362	0.0019	0.4343	-0.3478	-0.4006	-0.3686	0.4343	0.8288	0.0272	-0.50
01681	A	M	7238	0.5210	0.5210	0.3319	0.0887	0.0568	0.0017	0.3312	0.3312	-0.2705	-0.2996	-0.3291	0.9103	0.0272	9.00
01682	A	M	7238	0.4717	0.4717	0.2939	0.1661	0.0669	0.0015	0.4442	0.4442	-0.4666	-0.2992	-0.4279	1.1440	0.0272	-2.00
01683	D	F	7238	0.3979	0.2112	0.1879	0.2001	0.3979	0.0029	0.2864	-0.3809	-0.2006	-0.2545	0.2864	1.5442	0.0277	9.90
01684	B	F	7238	0.7096	0.1836	0.7096	0.0435	0.0612	0.0021	0.3750	-0.2948	0.3750	-0.3275	-0.2181	-0.1095	0.0294	0.30
01685	C	F	7238	0.5126	0.1681	0.1596	0.5126	0.1583	0.0014	0.4566	-0.3540	-0.4717	0.4566	-0.3795	0.9435	0.0271	-3.80
01686	A	F	7238	0.6911	0.6911	0.0956	0.1466	0.0641	0.0026	0.4994	0.4994	-0.3757	-0.4245	-0.3268	-0.0182	0.0290	-8.00
01687	B	F	7238	0.8156	0.0993	0.8156	0.0602	0.0218	0.0030	0.4781	-0.4189	0.4781	-0.2937	-0.2365	-0.8471	0.0339	-5.90
01688	C	F	7238	0.6607	0.1889	0.0818	0.6607	0.0648	0.0039	0.4327	-0.3208	-0.3813	0.4327	-0.3330	0.1697	0.0284	-2.80
01689	A	ML	7248	0.6955	0.6955	0.0700	0.1358	0.0978	0.0010	0.5540	0.5540	-0.3984	-0.4774	-0.4109	-0.0442	0.0292	-9.90
01690	C	ML	7248	0.7328	0.0175	0.1156	0.7328	0.1331	0.0010	0.5193	-0.2785	-0.4113	0.5193	-0.4342	-0.3597	0.0306	-6.90
01691	B	ML	7248	0.5763	0.1174	0.5763	0.2620	0.0422	0.0021	0.4562	-0.3735	0.4562	-0.4324	-0.2575	0.6555	0.0274	-3.50

Appendix L: 2006 Uncommon Grade 8 Multiple Choice Statistics for Mathematics

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
01692	C	ML	7248	0.5281	0.1522	0.2823	0.5281	0.0361	0.0012	0.3923	-0.4134	-0.3053	0.3923	-0.3501	0.9491	0.0273	3.90
01693	C	M	7248	0.6831	0.0930	0.1889	0.6831	0.0345	0.0006	0.5423	-0.2558	-0.5699	0.5423	-0.3294	-0.0111	0.0290	-8.40
01694	D	M	7248	0.4800	0.3198	0.1298	0.0694	0.4800	0.0010	0.3254	-0.2156	-0.3643	-0.4410	0.3254	1.1171	0.0273	9.90
01695	B	F	7248	0.7072	0.0291	0.7072	0.1329	0.1301	0.0007	0.4805	-0.3198	0.4805	-0.3514	-0.4250	-0.1410	0.0296	-3.40
01696	D	F	7248	0.5578	0.1726	0.1529	0.1147	0.5578	0.0021	0.5192	-0.4265	-0.4777	-0.4446	0.5192	0.7066	0.0274	-8.80
01697	B	F	7248	0.5127	0.1551	0.5127	0.2002	0.1305	0.0015	0.4172	-0.3085	0.4172	-0.3964	-0.3935	0.9384	0.0273	1.80
01698	A	F	7248	0.6449	0.6449	0.1231	0.0615	0.1698	0.0007	0.4301	0.4301	-0.4220	-0.4376	-0.2342	0.2402	0.0282	0.90
01699	D	F	7248	0.6567	0.1446	0.0956	0.1018	0.6567	0.0012	0.4959	-0.3190	-0.4322	-0.4667	0.4959	0.1621	0.0285	-4.90
01700	D	F	7248	0.4389	0.1225	0.3284	0.1087	0.4389	0.0015	0.3318	-0.4580	-0.2137	-0.3968	0.3318	1.3157	0.0274	9.90
01701	D	M	7256	0.6943	0.0813	0.0894	0.1337	0.6943	0.0012	0.3796	-0.1904	-0.3373	-0.3158	0.3796	-0.0332	0.0291	2.90
01702	D	M	7256	0.2846	0.5113	0.1010	0.1012	0.2846	0.0019	0.4145	-0.4474	-0.4627	-0.3613	0.4145	2.1957	0.0296	0.80
01703	A	M	7256	0.6120	0.6120	0.1211	0.1539	0.1115	0.0014	0.4760	0.4760	-0.4094	-0.4282	-0.3235	0.4115	0.0277	-4.20
01704	B	M	7256	0.7705	0.1544	0.7705	0.0579	0.0161	0.0011	0.3876	-0.2991	0.3876	-0.3236	-0.1866	-0.5254	0.0316	-0.50
01705	D	M	7256	0.5870	0.1228	0.1050	0.1833	0.5870	0.0019	0.5098	-0.3666	-0.4320	-0.4696	0.5098	0.5534	0.0274	-8.40
01706	B	M	7256	0.4720	0.2876	0.4720	0.1816	0.0575	0.0012	0.4314	-0.3870	0.4314	-0.4681	-0.2778	1.1569	0.0271	-0.70
01707	D	F	7256	0.4187	0.2237	0.1229	0.2335	0.4187	0.0012	0.2126	-0.2319	-0.2721	-0.1361	0.2126	1.4600	0.0274	9.90
01708	A	F	7256	0.8479	0.8479	0.0714	0.0474	0.0321	0.0012	0.4574	0.4574	-0.2588	-0.3620	-0.3537	-1.1255	0.0364	-3.80
01709	C	F	7256	0.6717	0.0792	0.1448	0.6717	0.1018	0.0023	0.4369	-0.3208	-0.3797	0.4369	-0.3007	0.0926	0.0286	-2.80
01710	A	F	7256	0.7843	0.7843	0.1629	0.0243	0.0274	0.0011	0.4426	0.4426	-0.3510	-0.2956	-0.3319	-0.6097	0.0321	-4.10
01711	C	F	7256	0.5070	0.1435	0.2672	0.5070	0.0802	0.0021	0.3367	-0.3819	-0.3215	0.3367	-0.0990	0.9766	0.0271	8.00
01712	D	F	7256	0.6357	0.1542	0.1403	0.0662	0.6357	0.0036	0.4266	-0.3940	-0.3019	-0.3314	0.4266	0.2948	0.0280	0.80
01713	D	M	7240	0.2751	0.1579	0.0891	0.4764	0.2751	0.0015	0.0742	-0.2411	-0.3344	0.0384	0.0742	2.2624	0.0300	9.90
01714	B	M	7240	0.6050	0.1110	0.6050	0.1598	0.1225	0.0017	0.4510	-0.3569	0.4510	-0.3575	-0.3884	0.4491	0.0277	-2.30
01715	B	M	7240	0.6552	0.1836	0.6552	0.1058	0.0539	0.0015	0.5396	-0.4567	0.5396	-0.4373	-0.3816	0.1809	0.0283	-9.90
01716	C	M	7240	0.7604	0.1943	0.0215	0.7604	0.0232	0.0006	0.4311	-0.3849	-0.2328	0.4311	-0.2446	-0.4485	0.0311	-5.00
01717	B	M	7240	0.6608	0.1688	0.6608	0.0790	0.0901	0.0014	0.4042	-0.4303	0.4042	-0.1748	-0.2732	0.1551	0.0284	1.80
01718	B	M	7240	0.9122	0.0235	0.9122	0.0420	0.0209	0.0015	0.4028	-0.1900	0.4028	-0.3109	-0.2569	-1.8252	0.0451	-5.30
01719	C	F	7240	0.6140	0.2113	0.0548	0.6140	0.1184	0.0015	0.5504	-0.5356	-0.3846	0.5504	-0.3971	0.3952	0.0278	-9.50
01720	B	F	7240	0.3238	0.0628	0.3238	0.1713	0.4392	0.0029	0.2628	-0.2345	0.2628	-0.3283	-0.2422	1.9674	0.0288	9.90
01721	C	F	7240	0.5517	0.2319	0.1559	0.5517	0.0584	0.0021	0.4004	-0.3391	-0.3863	0.4004	-0.2466	0.7550	0.0272	1.70
01722	B	F	7240	0.1314	0.1099	0.1314	0.1001	0.6566	0.0019	-0.0628	-0.1815	-0.0628	-0.1331	0.1423	3.4088	0.0387	9.90
01723	B	F	7240	0.6978	0.1733	0.6978	0.0612	0.0659	0.0018	0.3415	-0.3208	0.3415	-0.2943	-0.1087	-0.0539	0.0291	6.70
01724	D	F	7240	0.5403	0.0769	0.2104	0.1686	0.5403	0.0037	0.4122	-0.3923	-0.2930	-0.3989	0.4122	0.7981	0.0272	1.70
01725	D	M	7245	0.3680	0.1019	0.1435	0.3859	0.3680	0.0007	0.2176	-0.3019	-0.3368	-0.1366	0.2176	1.7494	0.0280	9.90
01726	A	M	7245	0.7111	0.7111	0.1901	0.0624	0.0348	0.0017	0.5409	0.5409	-0.4837	-0.3839	-0.3125	-0.1045	0.0295	-9.90
01727	B	M	7245	0.7539	0.0362	0.7539	0.1154	0.0928	0.0018	0.5083	-0.3184	0.5083	-0.4018	-0.3951	-0.3791	0.0309	-7.30
01728	D	M	7245	0.7075	0.1756	0.0386	0.0769	0.7075	0.0014	0.4390	-0.3742	-0.2952	-0.3147	0.4390	-0.1089	0.0295	0.10
01729	D	M	7245	0.6496	0.0628	0.1819	0.1048	0.6496	0.0010	0.5467	-0.3992	-0.4653	-0.4468	0.5467	0.2419	0.0283	-9.90
01730	C	M	7245	0.7658	0.0915	0.0738	0.7658	0.0679	0.0010	0.3801	-0.2601	-0.2761	0.3801	-0.2832	-0.4636	0.0314	0.30
01731	D	F	7245	0.6029	0.1732	0.1168	0.1063	0.6029	0.0008	0.4330	-0.3768	-0.3644	-0.3383	0.4330	0.5012	0.0277	1.10
01732	C	F	7245	0.5212	0.1365	0.2168	0.5212	0.1233	0.0022	0.3424	-0.2993	-0.2923	0.3424	-0.2908	0.9344	0.0272	7.50
01733	C	F	7245	0.4288	0.0563	0.4882	0.4288	0.0258	0.0008	0.3690	-0.4952	-0.3169	0.3690	-0.3831	1.4189	0.0274	7.30
01734	B	F	7245	0.5542	0.1960	0.5542	0.1209	0.1268	0.0021	0.5088	-0.4803	0.5088	-0.4474	-0.3719	0.7567	0.0273	-7.80
01735	D	F	7245	0.5431	0.0703	0.1683	0.2153	0.5431	0.0030	0.3955	-0.3825	-0.3132	-0.3451	0.3955	0.8141	0.0272	3.30
01736	C	F	7245	0.7390	0.1161	0.0923	0.7390	0.0509	0.0017	0.3171	-0.2689	-0.1890	0.3171	-0.2207	-0.2639	0.0303	4.20
01737	C	M	7263	0.6862	0.0785	0.1201	0.6862	0.1148	0.0004	0.4196	-0.3150	-0.2979	0.4196	-0.3544	0.0173	0.0288	-0.80
01738	D	M	7263	0.8863	0.0213	0.0388	0.0529	0.8863	0.0007	0.3786	-0.2377	-0.3144	-0.2026	0.3786	-1.4986	0.0406	-0.70
01739	D	M	7263	0.5914	0.1838	0.1077	0.1159	0.5914	0.0012	0.4056	-0.3421	-0.3351	-0.3083	0.4056	0.5358	0.0274	-0.10
01740	A	M	7263	0.5321	0.5321	0.2206	0.1285	0.1177	0.0011	0.3271	0.3271	-0.3221	-0.2090	-0.2888	0.8541	0.0271	8.50

Appendix L: 2006 Uncommon Grade 8 Multiple Choice Statistics for Mathematics

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
01741	A	M	7263	0.7887	0.7887	0.0565	0.0907	0.0635	0.0007	0.3202	0.3202	-0.2041	-0.2812	-0.1652	-0.6391	0.0323	2.00
01742	D	M	7263	0.8368	0.0357	0.0470	0.0799	0.8368	0.0007	0.3916	-0.2269	-0.2683	-0.2945	0.3916	-1.0209	0.0354	-0.90
01743	C	F	7263	0.7772	0.1130	0.0841	0.7772	0.0241	0.0015	0.4895	-0.3994	-0.3730	0.4895	-0.2462	-0.5701	0.0318	-8.20
01744	A	F	7263	0.6471	0.6471	0.1663	0.1056	0.0792	0.0018	0.5193	0.5193	-0.4311	-0.4333	-0.3858	0.2404	0.0281	-8.50
01745	D	F	7263	0.6321	0.0876	0.0646	0.2149	0.6321	0.0008	0.5643	-0.4532	-0.4685	-0.4863	0.5643	0.3096	0.0279	-9.90
01746	C	F	7263	0.3918	0.1289	0.2162	0.3918	0.2608	0.0023	0.1831	-0.3148	-0.3080	0.1831	0.0211	1.5995	0.0276	9.90
01747	C	F	7263	0.4701	0.0565	0.4436	0.4701	0.0277	0.0022	0.3270	-0.3574	-0.2776	0.3270	-0.3442	1.1593	0.0270	9.90
01748	B	F	7263	0.6674	0.0783	0.6674	0.1782	0.0731	0.0030	0.4053	-0.3370	0.4053	-0.2875	-0.3623	0.1348	0.0284	2.00
01749	C	M	7222	0.5745	0.1952	0.0433	0.5745	0.1855	0.0014	0.3072	-0.2740	-0.3175	0.3072	-0.2142	0.6707	0.0273	8.70
01750	B	M	7222	0.4684	0.2796	0.4684	0.1404	0.1097	0.0019	0.3268	-0.1823	0.3268	-0.4232	-0.3773	1.2204	0.0271	9.90
01751	A	M	7222	0.6616	0.6616	0.1718	0.1037	0.0620	0.0008	0.4218	0.4218	-0.3559	-0.2696	-0.3654	0.1981	0.0284	-2.70
01752	D	M	7222	0.5762	0.1375	0.2013	0.0836	0.5762	0.0014	0.4628	-0.3169	-0.4670	-0.3794	0.4628	0.6535	0.0274	-0.70
01753	A	M	7222	0.8727	0.8727	0.0276	0.0169	0.0822	0.0006	0.3495	0.3495	-0.2266	-0.1724	-0.2711	-1.3260	0.0390	-1.20
01754	D	F	7222	0.6988	0.0237	0.0428	0.2340	0.6988	0.0007	0.4719	-0.2995	-0.3147	-0.4238	0.4719	-0.0186	0.0292	-2.50
01755	C	F	7222	0.2524	0.3214	0.2922	0.2524	0.1314	0.0026	0.1421	-0.0994	-0.1876	0.1421	-0.2301	2.4510	0.0307	9.90
01756	B	F	7222	0.3751	0.1735	0.3751	0.1790	0.2707	0.0017	0.4119	-0.4385	0.4119	-0.2635	-0.5010	1.6947	0.0278	1.30
01757	B	F	7222	0.4603	0.3800	0.4603	0.0814	0.0770	0.0014	0.2374	-0.2047	0.2374	-0.2638	-0.2045	1.2625	0.0272	9.90
01758	D	F	7222	0.6292	0.0530	0.1555	0.1592	0.6292	0.0030	0.4590	-0.3206	-0.3846	-0.3944	0.4590	0.3776	0.0279	-3.50
01759	C	F	7222	0.5374	0.0547	0.3707	0.5374	0.0353	0.0019	0.3624	-0.4243	-0.2877	0.3624	-0.3719	0.8618	0.0271	6.90
01760	C	F	7222	0.6772	0.0516	0.1501	0.6772	0.1176	0.0035	0.4237	-0.3077	-0.3869	0.4237	-0.2722	0.1132	0.0287	-1.20
01761	D	M	7204	0.6657	0.1127	0.0974	0.1230	0.6657	0.0011	0.5476	-0.4280	-0.4254	-0.4532	0.5476	0.1222	0.0287	-9.90
01762	D	M	7204	0.3354	0.1839	0.0851	0.3949	0.3354	0.0007	0.2788	-0.2560	-0.5126	-0.2395	0.2788	1.9069	0.0286	9.90
01763	A	M	7204	0.8702	0.8702	0.0534	0.0285	0.0473	0.0006	0.4692	0.4692	-0.3158	-0.2961	-0.3336	-1.3767	0.0391	-8.00
01764	D	M	7204	0.7456	0.0146	0.1985	0.0401	0.7456	0.0012	0.4410	-0.2271	-0.4040	-0.2547	0.4410	-0.3603	0.0308	-1.00
01765	D	M	7204	0.6402	0.0806	0.1713	0.1066	0.6402	0.0012	0.4485	-0.2704	-0.4096	-0.3689	0.4485	0.2719	0.0283	-1.10
01766	A	F	7204	0.8436	0.8436	0.0819	0.0375	0.0368	0.0003	0.4280	0.4280	-0.3199	-0.2864	-0.2603	-1.1244	0.0365	-4.70
01767	C	F	7204	0.3920	0.1878	0.2589	0.3920	0.1577	0.0036	0.3286	-0.3877	-0.3286	0.3286	-0.2109	1.5920	0.0278	9.90
01768	C	F	7204	0.8747	0.0786	0.0265	0.8747	0.0192	0.0011	0.2381	-0.0957	-0.2333	0.2381	-0.2098	-1.4014	0.0394	7.60
01769	D	F	7204	0.7976	0.0393	0.1029	0.0586	0.7976	0.0017	0.5231	-0.3587	-0.4346	-0.3191	0.5231	-0.7436	0.0332	-8.80
01770	C	F	7204	0.5983	0.0314	0.3411	0.5983	0.0283	0.0010	0.5566	-0.4228	-0.5176	0.5566	-0.4004	0.4898	0.0278	-9.90
01771	B	F	7204	0.5844	0.1026	0.5844	0.1451	0.1666	0.0014	0.4058	-0.3688	0.4058	-0.1890	-0.4521	0.5774	0.0276	3.80
01772	D	F	7204	0.6358	0.0591	0.0844	0.2181	0.6358	0.0026	0.3574	-0.2488	-0.3486	-0.2677	0.3574	0.2999	0.0282	5.10
01773	B	M	7187	0.6023	0.1878	0.6023	0.1770	0.0316	0.0013	0.3570	-0.3997	0.3570	-0.2206	-0.1590	0.5020	0.0276	4.40
01774	C	M	7187	0.7966	0.0572	0.0786	0.7966	0.0654	0.0022	0.3957	-0.3015	-0.2502	0.3957	-0.2785	-0.6989	0.0329	-2.50
01775	A	M	7187	0.9247	0.9247	0.0291	0.0191	0.0266	0.0006	0.3351	0.3351	-0.2190	-0.2039	-0.2020	-2.0186	0.0488	-5.40
01776	C	M	7187	0.7436	0.0605	0.1475	0.7436	0.0473	0.0011	0.5416	-0.4153	-0.4472	0.5416	-0.3339	-0.3358	0.0306	-9.90
01777	A	M	7187	0.5446	0.5446	0.3529	0.0429	0.0576	0.0021	0.2266	0.2266	-0.1278	-0.3458	-0.3014	0.8027	0.0272	9.90
01778	B	F	7187	0.6943	0.0527	0.6943	0.1227	0.1288	0.0014	0.3187	-0.2396	0.3187	-0.2251	-0.2536	-0.0202	0.0291	6.40
01779	C	F	7187	0.7586	0.1081	0.0533	0.7586	0.0789	0.0011	0.2352	-0.1907	-0.1766	0.2352	-0.1244	-0.4081	0.0310	9.90
01780	B	F	7187	0.7258	0.1085	0.7258	0.0729	0.0913	0.0015	0.3547	-0.2958	0.3547	-0.1876	-0.2813	-0.2090	0.0300	1.10
01781	C	F	7187	0.8038	0.1056	0.0346	0.8038	0.0552	0.0007	0.3137	-0.1459	-0.2777	0.3137	-0.2797	-0.7461	0.0333	5.60
01782	C	F	7187	0.3730	0.1564	0.0966	0.3730	0.3725	0.0015	0.4878	-0.6118	-0.4443	0.4878	-0.4562	1.6772	0.0280	-5.10
01783	B	F	7187	0.8852	0.0225	0.8852	0.0616	0.0292	0.0014	0.3841	-0.2280	0.3841	-0.2748	-0.2419	-1.5021	0.0409	-3.50
01784	C	F	7187	0.3629	0.2154	0.1940	0.3629	0.2253	0.0025	0.3286	-0.3863	-0.3220	0.3286	-0.2759	1.7467	0.0282	9.90

Appendix M:

**2006 Uncommon Grade 11 Multiple Choice Statistics
for Mathematics**

Appendix M: 2006 Uncommon Grade 11 Multiple Choice Statistics for Mathematics

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
01785	C	M	7083	0.4289	0.1868	0.2163	0.4289	0.1587	0.0093	0.3200	-0.3714	-0.2155	0.3200	-0.3231	0.9069	0.0284	9.90
01786	B	M	7083	0.6773	0.1001	0.6773	0.0599	0.1614	0.0014	0.4287	-0.2065	0.4287	-0.3681	-0.3979	-0.4739	0.0296	-0.30
01787	C	M	7083	0.5738	0.0366	0.1824	0.5738	0.2034	0.0038	0.2435	-0.2381	-0.2131	0.2435	-0.1842	0.1391	0.0283	9.90
01788	A	M	7083	0.4816	0.4816	0.3243	0.0919	0.1008	0.0014	0.4825	0.4825	-0.4088	-0.4800	-0.4804	0.6131	0.0281	-1.90
01789	B	M	7083	0.8655	0.0305	0.8655	0.0505	0.0524	0.0011	0.4277	-0.2739	0.4277	-0.3131	-0.2669	-1.8640	0.0389	-5.30
01790	A	M	7083	0.6922	0.6922	0.1066	0.1264	0.0738	0.0010	0.3885	0.3885	-0.3614	-0.2640	-0.2616	-0.5661	0.0299	6.80
01791	B	F	7083	0.8727	0.0637	0.8727	0.0394	0.0236	0.0007	0.3342	-0.2183	0.3342	-0.2290	-0.2173	-1.9448	0.0398	2.60
01792	B	F	7083	0.5327	0.0901	0.5327	0.2273	0.1465	0.0034	0.3601	-0.3043	0.3601	-0.4021	-0.1713	0.3422	0.0281	8.10
01793	D	F	7083	0.2917	0.4388	0.1344	0.1323	0.2917	0.0028	0.2383	-0.1257	-0.4233	-0.4074	0.2383	1.7361	0.0307	9.90
01794	B	F	7083	0.5759	0.2747	0.5759	0.0874	0.0606	0.0014	0.3421	-0.2602	0.3421	-0.3515	-0.2890	0.1190	0.0283	9.90
01795	B	F	7083	0.5595	0.1792	0.5595	0.1789	0.0801	0.0024	0.4483	-0.4298	0.4483	-0.3665	-0.3160	0.2022	0.0282	0.40
01796	D	F	7083	0.3254	0.0851	0.2359	0.3494	0.3254	0.0041	0.2952	-0.3333	-0.3924	-0.2274	0.2952	1.5053	0.0299	9.90
01797	A	M	6732	0.4045	0.4045	0.1056	0.1869	0.3015	0.0015	0.3285	0.3285	-0.2716	-0.2892	-0.3669	1.1584	0.0293	9.90
01798	C	M	6732	0.7597	0.1731	0.0299	0.7597	0.0365	0.0009	0.3752	-0.3547	-0.1615	0.3752	-0.1962	-0.8785	0.0328	5.20
01799	C	M	6732	0.5025	0.0688	0.1328	0.5025	0.2934	0.0025	0.2820	-0.2219	-0.2065	0.2820	-0.2858	0.6380	0.0289	9.90
01800	B	M	6732	0.5879	0.2256	0.5879	0.0885	0.0958	0.0021	0.4384	-0.2795	0.4384	-0.4666	-0.4201	0.1613	0.0292	-0.60
01801	A	M	6732	0.4926	0.4926	0.1543	0.2264	0.1255	0.0012	0.5243	0.5243	-0.3740	-0.5701	-0.4595	0.6648	0.0289	-4.50
01802	A	M	6732	0.5370	0.5370	0.3167	0.0927	0.0493	0.0043	0.4716	0.4716	-0.4012	-0.4544	-0.4151	0.4330	0.0289	0.00
01803	D	F	6732	0.3513	0.1407	0.2516	0.2493	0.3513	0.0071	0.4152	-0.4724	-0.4826	-0.3436	0.4152	1.4686	0.0300	4.70
01804	A	F	6732	0.8421	0.8421	0.0903	0.0401	0.0261	0.0013	0.5039	0.5039	-0.3863	-0.3600	-0.2902	-1.5428	0.0378	-6.80
01805	D	F	6732	0.5496	0.0719	0.1664	0.2078	0.5496	0.0043	0.3858	-0.3045	-0.2487	-0.4105	0.3858	0.3775	0.0290	6.50
01806	B	F	6732	0.6329	0.1872	0.6329	0.1067	0.0703	0.0030	0.4570	-0.4398	0.4570	-0.3126	-0.3092	-0.1051	0.0298	1.40
01807	C	F	6732	0.6093	0.1435	0.1796	0.6093	0.0634	0.0042	0.3655	-0.2100	-0.3431	0.3655	-0.3478	0.0449	0.0294	6.60
01808	A	F	6732	0.3994	0.3994	0.4572	0.0573	0.0810	0.0051	0.1693	0.1693	-0.1075	-0.3129	-0.2489	1.1930	0.0294	9.90
01809	A	M	6717	0.6324	0.6324	0.0997	0.1600	0.1056	0.0022	0.5859	0.5859	-0.4936	-0.4683	-0.5011	-0.1220	0.0299	-9.90
01810	A	M	6717	0.4322	0.4322	0.2482	0.1950	0.1198	0.0048	0.3732	0.3732	-0.3562	-0.3390	-0.3340	0.9999	0.0293	9.20
01811	D	M	6717	0.4563	0.0951	0.2113	0.2355	0.4563	0.0018	0.4130	-0.4716	-0.4998	-0.2405	0.4130	0.8468	0.0291	5.80
01812	B	M	6717	0.6449	0.0348	0.6449	0.1000	0.2178	0.0024	0.4155	-0.3279	0.4155	-0.3444	-0.3368	-0.1877	0.0300	2.10
01813	D	M	6717	0.3056	0.3988	0.1032	0.1891	0.3056	0.0033	0.3969	-0.3558	-0.5307	-0.4785	0.3969	1.7376	0.0312	6.20
01814	B	M	6717	0.7299	0.1112	0.7299	0.1257	0.0313	0.0019	0.3966	-0.3163	0.3966	-0.2971	-0.2520	-0.7085	0.0319	2.10
01815	B	F	6717	0.4134	0.1967	0.4134	0.2489	0.1362	0.0048	0.2917	-0.2540	0.2917	-0.2857	-0.2771	1.1028	0.0294	9.90
01816	C	F	6717	0.5895	0.1526	0.1694	0.5895	0.0850	0.0034	0.4925	-0.4481	-0.4706	0.4925	-0.2614	0.1109	0.0294	-1.30
01817	B	F	6717	0.5580	0.1194	0.5580	0.0905	0.2303	0.0018	0.4329	-0.1498	0.4329	-0.3399	-0.5176	0.3058	0.0291	5.10
01818	D	F	6717	0.7022	0.0329	0.2060	0.0581	0.7022	0.0007	0.5393	-0.3737	-0.4854	-0.3460	0.5393	-0.5535	0.0312	-6.80
01819	D	F	6717	0.6780	0.0846	0.1532	0.0828	0.6780	0.0015	0.4709	-0.4534	-0.2839	-0.4182	0.4709	-0.3941	0.0306	0.40
01820	A	F	6717	0.4913	0.4913	0.2531	0.1356	0.1163	0.0037	0.4650	0.4650	-0.4351	-0.4302	-0.3843	0.6571	0.0290	0.80
01821	A	ML	6739	0.2977	0.2977	0.3244	0.1531	0.2220	0.0028	0.1779	0.1779	-0.1917	-0.2440	-0.1454	1.9773	0.0320	9.90
01822	D	ML	6739	0.6865	0.0889	0.0988	0.1242	0.6865	0.0016	0.5666	-0.3494	-0.4588	-0.5189	0.5666	-0.4712	0.0308	-7.30
01823	C	ML	6739	0.6112	0.0301	0.2140	0.6112	0.1410	0.0037	0.2031	-0.1311	-0.2005	0.2031	-0.1399	0.0828	0.0293	9.90
01824	B	ML	6739	0.4366	0.1530	0.4366	0.2175	0.1892	0.0037	0.3463	-0.2570	0.3463	-0.3001	-0.3969	1.0077	0.0291	9.90
01825	D	M	6739	0.3971	0.2558	0.1747	0.1712	0.3971	0.0012	0.3989	-0.2621	-0.3905	-0.5799	0.3989	1.1912	0.0294	3.80
01826	B	M	6739	0.5155	0.1994	0.5155	0.1939	0.0871	0.0040	0.3622	-0.3174	0.3622	-0.3041	-0.3306	0.5471	0.0288	8.00
01827	A	F	6739	0.6256	0.6256	0.1285	0.1527	0.0922	0.0010	0.5510	0.5510	-0.3607	-0.5264	-0.4825	-0.0806	0.0296	-6.90
01828	C	F	6739	0.3276	0.4064	0.2149	0.3276	0.0487	0.0024	0.4213	-0.4468	-0.4301	0.4213	-0.3783	1.5886	0.0304	4.60
01829	A	F	6739	0.5873	0.5873	0.1853	0.1028	0.1229	0.0016	0.5315	0.5315	-0.4974	-0.4285	-0.4249	0.1336	0.0292	-6.20
01830	D	F	6739	0.6813	0.0853	0.0380	0.1941	0.6813	0.0013	0.4150	-0.2055	-0.3529	-0.3986	0.4150	-0.4083	0.0306	6.80
01831	C	F	6739	0.8906	0.0372	0.0396	0.8906	0.0316	0.0009	0.3633	-0.2183	-0.2871	0.3633	-0.1997	-2.0708	0.0439	0.00
01832	B	F	6739	0.6186	0.2453	0.6186	0.0766	0.0577	0.0018	0.4537	-0.4098	0.4537	-0.3039	-0.3543	-0.0271	0.0295	-0.60
01833	A	M	6727	0.5692	0.5692	0.1479	0.1418	0.1394	0.0016	0.4968	0.4968	-0.3272	-0.4992	-0.4499	0.2342	0.0291	-3.60

Appendix M: 2006 Uncommon Grade 11 Multiple Choice Statistics for Mathematics

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
01834	B	M	6727	0.4298	0.1530	0.4298	0.3397	0.0764	0.0012	0.3388	-0.4578	0.3388	-0.2040	-0.4369	1.0162	0.0291	9.90
01835	B	M	6727	0.4846	0.1002	0.4846	0.1745	0.2355	0.0052	0.3603	-0.3394	0.3603	-0.3027	-0.3195	0.6918	0.0289	9.00
01836	C	M	6727	0.6747	0.1637	0.0801	0.6747	0.0795	0.0019	0.5475	-0.4767	-0.4009	0.5475	-0.3925	-0.3715	0.0305	-9.90
01837	B	M	6727	0.4702	0.2210	0.4702	0.1369	0.1663	0.0055	0.2568	-0.2058	0.2568	-0.2461	-0.2507	0.7839	0.0289	9.90
01838	A	M	6727	0.6979	0.6979	0.1723	0.0746	0.0522	0.0030	0.5263	0.5263	-0.4547	-0.4183	-0.2980	-0.5233	0.0310	-8.00
01839	C	F	6727	0.8772	0.0552	0.0407	0.8772	0.0254	0.0015	0.4095	-0.3068	-0.2903	0.4095	-0.1896	-1.8914	0.0415	-5.90
01840	D	F	6727	0.8420	0.0274	0.0757	0.0534	0.8420	0.0016	0.4763	-0.2729	-0.3869	-0.3026	0.4763	-1.5745	0.0380	-5.60
01841	D	F	6727	0.1604	0.4981	0.1851	0.1533	0.1604	0.0031	0.0548	0.0499	-0.3011	-0.1947	0.0548	2.8310	0.0378	9.90
01842	B	F	6727	0.6581	0.2120	0.6581	0.0624	0.0657	0.0018	0.4590	-0.3701	0.4590	-0.4088	-0.3050	-0.2583	0.0301	-1.10
01843	B	F	6727	0.2490	0.4052	0.2490	0.1907	0.1481	0.0070	0.0804	0.0334	0.0804	-0.2718	-0.1694	2.1137	0.0327	9.90
01844	C	F	6727	0.8493	0.0517	0.0446	0.8493	0.0510	0.0034	0.4352	-0.3260	-0.2882	0.4352	-0.2654	-1.6484	0.0388	-3.70
01845	C	M	6691	0.6317	0.0915	0.1453	0.6317	0.1300	0.0015	0.4277	-0.4349	-0.3597	0.4277	-0.2467	-0.1153	0.0299	1.10
01846	A	M	6691	0.4705	0.4705	0.3086	0.1354	0.0828	0.0027	0.4650	0.4650	-0.4425	-0.4238	-0.3867	0.7814	0.0292	1.60
01847	B	M	6691	0.6855	0.0895	0.6855	0.1732	0.0505	0.0012	0.3506	-0.2901	0.3506	-0.2405	-0.3001	-0.4295	0.0309	8.70
01848	C	M	6691	0.2405	0.0797	0.1182	0.2405	0.5600	0.0016	0.2574	-0.4295	-0.5040	0.2574	-0.2022	2.1907	0.0333	9.90
01849	B	M	6691	0.6412	0.2278	0.6412	0.0959	0.0323	0.0028	0.4308	-0.3426	0.4308	-0.3835	-0.3192	-0.1675	0.0301	3.80
01850	B	M	6691	0.5134	0.0217	0.5134	0.1773	0.2859	0.0018	0.4938	-0.4054	0.4938	-0.5428	-0.4044	0.5348	0.0291	-1.70
01851	B	F	6691	0.2083	0.2355	0.2083	0.2222	0.3304	0.0034	0.1775	-0.1440	0.1775	-0.2675	-0.2092	2.4573	0.0350	9.90
01852	A	F	6691	0.6507	0.6507	0.1527	0.1007	0.0937	0.0021	0.5378	0.5378	-0.4734	-0.4333	-0.3824	-0.2267	0.0302	-6.60
01853	C	F	6691	0.6346	0.0698	0.2438	0.6346	0.0505	0.0013	0.3847	-0.2767	-0.3143	0.3847	-0.3616	-0.1188	0.0299	5.70
01854	C	F	6691	0.6930	0.0534	0.0901	0.6930	0.1625	0.0010	0.4887	-0.3821	-0.3173	0.4887	-0.4272	-0.4804	0.0310	-2.20
01855	A	F	6691	0.7527	0.7527	0.0743	0.0810	0.0897	0.0024	0.5600	0.5600	-0.3756	-0.4710	-0.4087	-0.8891	0.0329	-6.30
01856	B	F	6691	0.5282	0.0747	0.5282	0.2822	0.1096	0.0054	0.2598	-0.4313	0.2598	-0.1299	-0.2363	0.4949	0.0291	9.90
01857	A	M	6678	0.3609	0.3609	0.1268	0.1731	0.3365	0.0027	0.2494	0.2494	-0.3654	-0.3667	-0.1348	1.4004	0.0300	9.90
01858	B	M	6678	0.6147	0.0833	0.6147	0.1168	0.1839	0.0013	0.4920	-0.3465	0.4920	-0.4272	-0.4269	-0.0232	0.0296	-4.20
01859	C	M	6678	0.2627	0.1912	0.0987	0.2627	0.4465	0.0009	0.0580	-0.3718	-0.2266	0.0580	0.1198	2.0240	0.0324	9.90
01860	A	M	6678	0.3961	0.3961	0.2014	0.2567	0.1417	0.0042	0.3998	0.3998	-0.3713	-0.4278	-0.3680	1.1983	0.0295	4.70
01861	C	M	6678	0.6478	0.0966	0.0915	0.6478	0.1614	0.0027	0.2283	-0.2370	-0.2691	0.2283	-0.0798	-0.1738	0.0299	9.90
01862	B	M	6678	0.6099	0.0981	0.6099	0.1152	0.1760	0.0009	0.4375	-0.4302	0.4375	-0.3455	-0.3151	0.0074	0.0295	1.00
01863	B	F	6678	0.8074	0.0636	0.8074	0.0520	0.0761	0.0009	0.3988	-0.2211	0.3988	-0.3276	-0.2887	-1.2637	0.0354	0.20
01864	D	F	6678	0.7481	0.0264	0.0714	0.1524	0.7481	0.0016	0.5120	-0.3064	-0.3895	-0.4202	0.5120	-0.8424	0.0326	-6.70
01865	B	F	6678	0.5493	0.1541	0.5493	0.1875	0.1080	0.0012	0.5001	-0.4257	0.5001	-0.3812	-0.5195	0.3354	0.0290	-4.00
01866	B	F	6678	0.4558	0.2465	0.4558	0.1557	0.1388	0.0031	0.3823	-0.4917	0.3823	-0.3164	-0.1658	0.8632	0.0290	8.30
01867	D	F	6678	0.6231	0.0641	0.1198	0.1902	0.6231	0.0028	0.4995	-0.3328	-0.4433	-0.4223	0.4995	-0.0601	0.0296	-4.50
01868	D	F	6678	0.2760	0.2149	0.0797	0.4274	0.2760	0.0021	0.3829	-0.4900	-0.4496	-0.3682	0.3829	1.9155	0.0318	7.30
01869	C	ML	6695	0.5135	0.1618	0.1355	0.5135	0.1875	0.0018	0.3273	-0.1719	-0.2590	0.3273	-0.4004	0.6448	0.0290	9.90
01870	C	ML	6695	0.5497	0.1129	0.3004	0.5497	0.0358	0.0012	0.3950	-0.3238	-0.3483	0.3950	-0.3537	0.3943	0.0290	5.50
01871	A	ML	6695	0.5155	0.5155	0.1240	0.1945	0.1604	0.0057	0.4763	0.4763	-0.4426	-0.4159	-0.4254	0.6022	0.0290	-2.00
01872	A	ML	6695	0.5226	0.5226	0.3138	0.0714	0.0896	0.0025	0.1974	0.1974	-0.1716	-0.2391	-0.0930	0.5987	0.0290	9.90
01873	B	M	6695	0.4648	0.1123	0.4648	0.3546	0.0650	0.0033	0.4260	-0.5696	0.4260	-0.3517	-0.2697	0.8364	0.0290	5.20
01874	D	M	6695	0.4659	0.2468	0.1510	0.1337	0.4659	0.0027	0.5305	-0.3953	-0.5477	-0.5954	0.5305	0.8161	0.0290	-6.20
01875	A	F	6695	0.4497	0.4497	0.1985	0.1951	0.1532	0.0034	0.4508	0.4508	-0.3362	-0.4410	-0.5158	0.9212	0.0291	2.20
01876	C	F	6695	0.5184	0.0338	0.3298	0.5184	0.1162	0.0018	0.3344	-0.3701	-0.2187	0.3344	-0.4308	0.5434	0.0290	9.90
01877	B	F	6695	0.6814	0.1074	0.6814	0.1229	0.0866	0.0016	0.5165	-0.4019	0.5165	-0.4011	-0.4061	-0.3851	0.0306	-7.40
01878	C	F	6695	0.7326	0.0822	0.0893	0.7326	0.0942	0.0016	0.2902	-0.2561	-0.2912	0.2902	-0.0826	-0.6759	0.0318	8.90
01879	B	F	6695	0.8333	0.0476	0.8333	0.0951	0.0223	0.0016	0.4484	-0.3350	0.4484	-0.3538	-0.2038	-1.4558	0.0372	-3.30
01880	D	F	6695	0.3707	0.1170	0.2648	0.2435	0.3707	0.0040	0.2546	-0.3705	-0.1869	-0.2546	0.2546	1.3836	0.0299	9.90
01881	D	ML	6721	0.3447	0.1860	0.2193	0.2485	0.3447	0.0015	0.3680	-0.4769	-0.4593	-0.2372	0.3680	1.5859	0.0305	9.40
01882	A	ML	6721	0.5578	0.5578	0.3181	0.0790	0.0429	0.0022	0.6057	0.6057	-0.5953	-0.4510	-0.3956	0.2662	0.0290	-9.90

Appendix M: 2006 Uncommon Grade 11 Multiple Choice Statistics for Mathematics

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
01883	D	ML	6721	0.5303	0.1582	0.1189	0.1903	0.5303	0.0024	0.4471	-0.4065	-0.4602	-0.3247	0.4471	0.5090	0.0289	1.20
01884	B	ML	6721	0.5031	0.1330	0.5031	0.1245	0.2372	0.0022	0.2662	-0.1270	0.2662	-0.3387	-0.2369	0.7527	0.0289	9.90
01885	C	M	6721	0.6987	0.0800	0.1742	0.6987	0.0446	0.0024	0.3686	-0.4031	-0.2014	0.3686	-0.3164	-0.4799	0.0309	9.60
01886	C	M	6721	0.4124	0.1192	0.3441	0.4124	0.1232	0.0010	0.4653	-0.5343	-0.4897	0.4653	-0.2479	1.1197	0.0293	2.10
01887	B	F	6721	0.5416	0.3436	0.5416	0.0701	0.0427	0.0021	0.3014	-0.2293	0.3014	-0.3891	-0.1896	0.4407	0.0289	9.90
01888	C	F	6721	0.3809	0.1951	0.3102	0.3809	0.1095	0.0043	0.3730	-0.2594	-0.4672	0.3730	-0.2685	1.3082	0.0297	8.30
01889	B	F	6721	0.6529	0.1236	0.6529	0.1283	0.0942	0.0010	0.3521	-0.3407	0.3521	-0.2813	-0.1974	-0.1937	0.0299	9.90
01890	B	F	6721	0.6090	0.0879	0.6090	0.1320	0.1677	0.0034	0.4375	-0.3231	0.4375	-0.3774	-0.3682	0.0390	0.0294	1.70
01891	D	F	6721	0.4310	0.2522	0.1327	0.1800	0.4310	0.0040	0.5089	-0.5395	-0.5185	-0.4232	0.5089	1.0143	0.0292	-4.90
01892	B	F	6721	0.8191	0.0412	0.8191	0.0818	0.0551	0.0028	0.5027	-0.2804	0.5027	-0.4150	-0.3410	-1.3334	0.0361	-5.00
01893	D	ML	6688	0.8122	0.0840	0.0464	0.0571	0.8122	0.0003	0.4183	-0.3054	-0.2789	-0.2876	0.4183	-1.3320	0.0360	0.00
01894	A	ML	6688	0.5232	0.5232	0.1921	0.1971	0.0854	0.0022	0.4872	0.4872	-0.3905	-0.4782	-0.4482	0.5059	0.0288	-1.60
01895	B	ML	6688	0.6935	0.1193	0.6935	0.1292	0.0559	0.0021	0.3214	-0.2585	0.3214	-0.2408	-0.2219	-0.4716	0.0308	7.10
01896	A	ML	6688	0.5172	0.5172	0.1796	0.1754	0.1216	0.0063	0.1832	0.1832	-0.1674	-0.1527	-0.1572	0.6849	0.0288	9.90
01897	B	M	6688	0.6296	0.0534	0.6296	0.2285	0.0870	0.0015	0.5207	-0.3322	0.5207	-0.5282	-0.2855	-0.0802	0.0296	-6.70
01898	C	M	6688	0.7451	0.0673	0.0875	0.7451	0.0993	0.0009	0.4515	-0.3913	-0.3116	0.4515	-0.3030	-0.7672	0.0322	-3.30
01899	A	F	6688	0.7669	0.2669	0.0387	0.0517	0.1419	0.0007	0.2857	-0.2857	-0.2109	-0.1820	-0.2194	-0.9057	0.0330	8.00
01900	B	F	6688	0.6361	0.2739	0.6361	0.0516	0.0372	0.0012	0.4912	-0.4712	0.4912	-0.2672	-0.3509	-0.1049	0.0297	-0.80
01901	D	F	6688	0.6754	0.1205	0.0957	0.1068	0.6754	0.0016	0.4559	-0.2910	-0.4049	-0.3745	0.4559	-0.3294	0.0303	-1.20
01902	D	F	6688	0.6063	0.1338	0.1367	0.1222	0.6063	0.0010	0.4229	-0.1656	-0.4484	-0.4315	0.4229	0.0530	0.0293	3.30
01903	B	F	6688	0.4284	0.2214	0.4284	0.2845	0.0640	0.0016	0.3537	-0.1815	0.3537	-0.4345	-0.3733	1.0318	0.0291	9.90
01904	C	F	6688	0.5773	0.1752	0.1109	0.5773	0.1338	0.0027	0.2880	-0.0760	-0.3572	0.2880	-0.3189	0.2281	0.0291	9.90
01905	A	M	6717	0.4097	0.4097	0.2141	0.1897	0.1816	0.0049	0.4517	0.4517	-0.4309	-0.4962	-0.3884	1.0854	0.0292	1.00
01906	C	M	6717	0.4581	0.3421	0.1151	0.4581	0.0835	0.0012	0.4263	-0.3065	-0.5431	0.4263	-0.4607	0.8373	0.0289	1.30
01907	B	M	6717	0.4350	0.2620	0.4350	0.1118	0.1891	0.0021	0.2828	-0.3210	0.2828	-0.2555	-0.1999	0.9623	0.0290	9.90
01908	A	M	6717	0.5898	0.5898	0.0799	0.0603	0.2683	0.0016	0.2688	0.2688	-0.2495	-0.2934	-0.1835	0.1313	0.0291	9.90
01909	B	M	6717	0.3560	0.2817	0.3560	0.1227	0.2381	0.0016	0.3876	-0.3094	0.3876	-0.4370	-0.4660	1.4042	0.0299	6.10
01910	B	M	6717	0.5656	0.1303	0.5656	0.2202	0.0799	0.0040	0.2110	-0.3116	0.2110	-0.1401	-0.0633	0.2600	0.0289	9.90
01911	C	F	6717	0.4841	0.0709	0.0822	0.4841	0.3610	0.0018	0.0446	-0.3087	-0.3116	0.0446	0.1368	0.7117	0.0288	9.90
01912	B	F	6717	0.4432	0.0927	0.4432	0.1176	0.3441	0.0024	0.3594	-0.3321	0.3594	-0.4341	-0.2935	0.9169	0.0289	9.20
01913	D	F	6717	0.5909	0.1154	0.1056	0.1865	0.5909	0.0016	0.5157	-0.4311	-0.4055	-0.4516	0.5157	0.1041	0.0291	-6.00
01914	A	F	6717	0.4751	0.4751	0.2802	0.1557	0.0828	0.0063	0.3947	0.3947	-0.3849	-0.3646	-0.2674	0.7374	0.0288	4.50
01915	B	F	6717	0.7274	0.0978	0.7274	0.1181	0.0543	0.0024	0.5264	-0.3858	0.5264	-0.3898	-0.4645	-0.7059	0.0317	-3.00
01916	B	F	6717	0.4483	0.1204	0.4483	0.2922	0.1326	0.0064	0.4052	-0.4232	0.4052	-0.3855	-0.3117	0.8968	0.0289	4.60
01917	B	M	6670	0.3951	0.0976	0.3951	0.3663	0.1382	0.0028	0.3953	-0.3028	0.3953	-0.4297	-0.3197	1.2363	0.0297	8.20
01918	C	M	6670	0.8388	0.0891	0.0478	0.8388	0.0235	0.0007	0.3890	-0.2650	-0.3007	0.3890	-0.2274	-1.4838	0.0375	-0.70
01919	B	M	6670	0.3250	0.2565	0.3250	0.2841	0.1309	0.0034	0.3728	-0.3294	0.3728	-0.3760	-0.5160	1.6428	0.0308	9.20
01920	B	M	6670	0.4619	0.0741	0.4619	0.2591	0.2037	0.0012	0.3073	-0.3478	0.3073	-0.2090	-0.3368	0.8656	0.0292	9.90
01921	C	M	6670	0.6588	0.1177	0.1487	0.6588	0.0729	0.0019	0.2782	-0.2002	-0.2584	0.2782	-0.1542	-0.2169	0.0302	8.80
01922	A	M	6670	0.6663	0.6663	0.0933	0.0870	0.1520	0.0015	0.5514	0.5514	-0.4303	-0.4708	-0.4408	-0.2841	0.0304	-7.10
01923	A	F	6670	0.3502	0.3502	0.2807	0.1949	0.1697	0.0045	0.3684	0.3684	-0.3638	-0.3869	-0.3691	1.4992	0.0304	9.70
01924	B	F	6670	0.5913	0.0958	0.5913	0.1972	0.1135	0.0022	0.4502	-0.4297	0.4502	-0.3186	-0.4205	0.1545	0.0294	0.00
01925	D	F	6670	0.4630	0.1070	0.0603	0.3685	0.4630	0.0012	0.5284	-0.5981	-0.5132	-0.4704	0.5284	0.8519	0.0291	-5.50
01926	B	F	6670	0.4243	0.2060	0.4243	0.1639	0.2024	0.0034	0.3332	-0.2278	0.3332	-0.3921	-0.3304	1.0717	0.0294	9.90
01927	A	F	6670	0.2570	0.2570	0.0781	0.5943	0.0685	0.0021	0.2451	0.2451	-0.3799	-0.2223	-0.3623	2.0998	0.0328	9.90
01928	C	F	6670	0.7457	0.0543	0.1223	0.7457	0.0750	0.0027	0.5395	-0.3313	-0.5033	0.5395	-0.3346	-0.7976	0.0325	-6.30
01929	B	ML	6691	0.3898	0.1224	0.3898	0.2687	0.2154	0.0037	0.2564	-0.0800	0.2564	-0.3308	-0.2548	1.4325	0.0300	9.90
01930	A	ML	6691	0.4802	0.4802	0.2209	0.1717	0.1248	0.0024	0.4178	0.4178	-0.3831	-0.3958	-0.3451	0.8493	0.0290	5.10
01931	D	ML	6691	0.6660	0.0767	0.1910	0.0641	0.6660	0.0022	0.5442	-0.4005	-0.4980	-0.3623	0.5442	-0.2646	0.0303	-7.20

Appendix M: 2006 Uncommon Grade 11 Multiple Choice Statistics for Mathematics

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
01932	D	ML	6691	0.7386	0.1040	0.0901	0.0664	0.7386	0.0009	0.5418	-0.4649	-0.4021	-0.3544	0.5418	-0.8115	0.0326	-6.00
01933	B	M	6691	0.5128	0.2627	0.5128	0.1338	0.0894	0.0013	0.3726	-0.1764	0.3726	-0.4414	-0.5089	0.5825	0.0289	8.40
01934	C	M	6691	0.7689	0.0643	0.0623	0.7689	0.1028	0.0016	0.3909	-0.3020	-0.3289	0.3909	-0.2345	-0.9499	0.0334	3.60
01935	D	F	6691	0.4605	0.1998	0.1719	0.1640	0.4605	0.0039	0.5128	-0.4719	-0.5250	-0.4539	0.5128	0.8535	0.0290	-3.50
01936	D	F	6691	0.4978	0.0617	0.1910	0.2426	0.4978	0.0069	0.3355	-0.3131	-0.3057	-0.2842	0.3355	0.6733	0.0289	9.90
01937	C	F	6691	0.5642	0.1178	0.2089	0.5642	0.1057	0.0034	0.4540	-0.3922	-0.3385	0.4540	-0.4538	0.2955	0.0291	-0.80
01938	D	F	6691	0.7356	0.0767	0.0649	0.1202	0.7356	0.0027	0.4930	-0.3444	-0.4040	-0.3722	0.4930	-0.7428	0.0322	-3.30
01939	A	F	6691	0.1850	0.1850	0.1495	0.4558	0.2048	0.0049	0.2825	0.2825	-0.3920	-0.3545	-0.2530	2.6338	0.0361	9.90
01940	D	F	6691	0.5489	0.2601	0.0958	0.0922	0.5489	0.0030	0.5267	-0.4279	-0.5311	-0.4860	0.5267	0.3735	0.0290	-4.20
01941	C	M	6723	0.4703	0.1590	0.1989	0.4703	0.1672	0.0046	0.0972	-0.0583	-0.0964	0.0972	-0.1015	0.8221	0.0291	9.90
01942	D	M	6723	0.5086	0.1642	0.1598	0.1642	0.5086	0.0033	0.4002	-0.3062	-0.3782	-0.3649	0.4002	0.5969	0.0290	4.70
01943	B	M	6723	0.7074	0.0773	0.7074	0.1342	0.0793	0.0018	0.5361	-0.3423	0.5361	-0.4549	-0.4246	-0.5479	0.0312	-6.10
01944	B	M	6723	0.7169	0.1358	0.7169	0.0617	0.0849	0.0006	0.5552	-0.5134	0.5552	-0.3715	-0.3590	-0.6319	0.0316	-7.90
01945	D	M	6723	0.5553	0.0623	0.0768	0.3034	0.5553	0.0022	0.4585	-0.4064	-0.4776	-0.3726	0.4585	0.3385	0.0291	1.00
01946	B	M	6723	0.5435	0.1922	0.5435	0.2218	0.0406	0.0019	0.4407	-0.3717	0.4407	-0.4068	-0.3587	0.4088	0.0290	3.50
01947	B	F	6723	0.7095	0.1306	0.7095	0.0772	0.0820	0.0007	0.4152	-0.2025	0.4152	-0.3727	-0.3984	-0.5606	0.0313	3.70
01948	A	F	6723	0.7692	0.2692	0.0321	0.0406	0.1566	0.0015	0.4253	0.4253	-0.3162	-0.3513	-0.3056	-0.9533	0.0332	-0.70
01949	C	F	6723	0.5651	0.1470	0.1058	0.5651	0.1806	0.0016	0.4659	-0.4525	-0.3820	0.4659	-0.3568	0.2756	0.0291	-1.20
01950	B	F	6723	0.6830	0.1440	0.6830	0.1145	0.0571	0.0013	0.3405	-0.2617	0.3405	-0.2455	-0.2774	-0.3842	0.0306	7.60
01951	D	F	6723	0.6650	0.1831	0.0646	0.0848	0.6650	0.0025	0.5429	-0.4545	-0.4061	-0.4439	0.5429	-0.2931	0.0303	-6.90
01952	B	F	6723	0.4372	0.1882	0.4372	0.2854	0.0863	0.0030	0.3734	-0.3874	0.3734	-0.3337	-0.3054	0.9949	0.0292	9.10
01953	C	M	6694	0.5659	0.1322	0.1584	0.5659	0.1424	0.0012	0.4344	-0.2758	-0.4052	0.4344	-0.3973	0.2495	0.0290	0.10
01954	A	M	6694	0.4319	0.4319	0.1806	0.1534	0.2299	0.0042	0.3046	0.3046	-0.2741	-0.3675	-0.2363	0.9715	0.0290	9.90
01955	A	M	6694	0.6873	0.0673	0.1273	0.0911	0.0932	0.0010	0.4065	0.4065	-0.2934	-0.3087	-0.3369	-0.4439	0.0306	3.70
01956	D	M	6694	0.5444	0.1171	0.1664	0.1675	0.5444	0.0046	0.4669	-0.4354	-0.3974	-0.4000	0.4669	0.3619	0.0289	-2.10
01957	C	M	6694	0.5981	0.2356	0.0890	0.5981	0.0759	0.0013	0.5485	-0.4633	-0.4333	0.5485	-0.5055	0.0697	0.0292	-9.40
01958	A	M	6694	0.2652	0.2652	0.3496	0.0578	0.3257	0.0018	0.3676	0.3676	-0.4352	-0.5481	-0.3414	1.9512	0.0320	7.90
01959	A	F	6694	0.7758	0.7758	0.0831	0.0623	0.0775	0.0013	0.4796	0.4796	-0.3521	-0.4215	-0.2833	-1.0263	0.0335	-2.90
01960	B	F	6694	0.6563	0.0731	0.6563	0.1785	0.0890	0.0031	0.5298	-0.4177	0.5298	-0.4467	-0.4005	-0.2708	0.0300	-8.70
01961	A	F	6694	0.3272	0.3272	0.0999	0.4001	0.1702	0.0027	0.0722	0.0722	-0.1690	-0.0554	-0.0432	1.5970	0.0305	9.90
01962	A	F	6694	0.2278	0.2278	0.3385	0.1083	0.3236	0.0018	0.1724	0.1724	-0.0971	-0.4187	-0.2289	2.2297	0.0335	9.90
01963	C	F	6694	0.7304	0.0932	0.0722	0.7304	0.1032	0.0010	0.2838	-0.3163	-0.3013	0.2838	-0.0290	-0.7012	0.0317	9.90
01964	B	F	6694	0.5562	0.1358	0.5562	0.1398	0.1651	0.0031	0.4254	-0.3704	0.4254	-0.4081	-0.3052	0.3025	0.0289	3.10
01965	B	M	6686	0.6802	0.0914	0.6802	0.1907	0.0366	0.0010	0.5167	-0.3823	0.5167	-0.4615	-0.3270	-0.3578	0.0305	-5.10
01966	A	M	6686	0.2486	0.2486	0.1297	0.1722	0.4454	0.0042	0.2515	0.2515	-0.3561	-0.2225	-0.2778	2.1353	0.0328	9.90
01967	C	M	6686	0.3298	0.1440	0.2475	0.3298	0.2755	0.0031	0.2191	-0.3861	-0.1870	0.2191	-0.1620	1.6181	0.0305	9.90
01968	D	M	6686	0.5978	0.0531	0.2214	0.1264	0.5978	0.0013	0.4254	-0.2683	-0.3457	-0.4172	0.4254	0.1135	0.0292	3.00
01969	A	M	6686	0.5823	0.5823	0.1386	0.1337	0.1437	0.0016	0.3718	0.3718	-0.3143	-0.3038	-0.2956	0.1980	0.0291	4.10
01970	B	M	6686	0.4188	0.3730	0.4188	0.1065	0.1002	0.0015	0.3459	-0.2821	0.3459	-0.4367	-0.3309	1.0951	0.0292	9.90
01971	B	F	6686	0.3015	0.1686	0.3015	0.4922	0.0343	0.0034	0.2973	-0.5090	0.2973	-0.2358	-0.2829	1.7800	0.0311	9.90
01972	C	F	6686	0.5039	0.1369	0.2130	0.5039	0.1442	0.0021	0.4137	-0.3510	-0.3010	0.4137	-0.4595	0.6324	0.0288	3.00
01973	C	F	6686	0.6077	0.1192	0.1388	0.6077	0.1322	0.0021	0.4362	-0.3874	-0.4052	0.4362	-0.2634	0.0662	0.0293	-1.60
01974	B	F	6686	0.5458	0.0930	0.5458	0.1732	0.1867	0.0013	0.3099	-0.4090	0.3099	-0.1785	-0.2575	0.3945	0.0289	9.90
01975	B	F	6686	0.4729	0.2019	0.4729	0.1753	0.1460	0.0039	0.3365	-0.2210	0.3365	-0.3889	-0.3128	0.7977	0.0289	9.10
01976	C	F	6686	0.6982	0.1080	0.0507	0.6982	0.1404	0.0027	0.4052	-0.3852	-0.3418	0.4052	-0.2293	-0.4614	0.0308	1.00
01977	A	M	6687	0.5660	0.5660	0.1472	0.1486	0.1368	0.0013	0.5287	0.5287	-0.3910	-0.4902	-0.4846	0.2504	0.0293	-5.70
01978	D	M	6687	0.4960	0.1304	0.1829	0.1887	0.4960	0.0019	0.3895	-0.3954	-0.4311	-0.2353	0.3895	0.6509	0.0291	8.50
01979	D	M	6687	0.5079	0.1971	0.1199	0.1730	0.5079	0.0021	0.5112	-0.5034	-0.4241	-0.4473	0.5112	0.5657	0.0291	-3.20
01980	C	M	6687	0.5641	0.3142	0.0585	0.5641	0.0621	0.0012	0.2802	-0.1429	-0.3895	0.2802	-0.3899	0.2839	0.0293	9.90

Appendix M: 2006 Uncommon Grade 11 Multiple Choice Statistics for Mathematics

Item Detail				Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	Item Status	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
01981	A	M	6687	0.6073	0.6073	0.2391	0.1054	0.0473	0.0009	0.5796	0.5796	-0.5516	-0.4502	-0.3660	0.0226	0.0296	-9.40
01982	D	M	6687	0.3311	0.3445	0.1971	0.1240	0.3311	0.0033	0.2833	-0.1724	-0.3792	-0.4045	0.2833	1.6083	0.0308	9.90
01983	D	F	6687	0.4400	0.0600	0.3746	0.1217	0.4400	0.0037	0.2763	-0.3689	-0.1946	-0.3359	0.2763	0.9741	0.0294	9.90
01984	C	F	6687	0.6420	0.0941	0.1235	0.6420	0.1382	0.0022	0.5397	-0.4166	-0.4260	0.5397	-0.4586	-0.1755	0.0301	-7.10
01985	D	F	6687	0.6012	0.2055	0.1045	0.0854	0.6012	0.0034	0.4825	-0.4043	-0.3882	-0.4096	0.4825	0.0585	0.0296	-2.40
01986	B	F	6687	0.7924	0.0923	0.7924	0.0661	0.0480	0.0012	0.5150	-0.3894	0.5150	-0.3850	-0.3245	-1.1596	0.0346	-6.30
01987	A	F	6687	0.3314	0.3314	0.1926	0.1350	0.3378	0.0031	0.3736	0.3736	-0.3519	-0.5280	-0.3506	1.5931	0.0308	9.90
01988	B	F	6687	0.6940	0.0374	0.6940	0.0887	0.1777	0.0022	0.4402	-0.1659	0.4402	-0.3071	-0.4229	-0.4844	0.0310	-0.30
01989	C	M	6688	0.5534	0.0754	0.2201	0.5534	0.1494	0.0018	0.3983	-0.3696	-0.3074	0.3983	-0.3538	0.3075	0.0290	2.10
01990	B	M	6688	0.6624	0.1465	0.6624	0.1250	0.0643	0.0018	0.4931	-0.4533	0.4931	-0.3638	-0.3169	-0.3196	0.0302	-4.90
01991	C	M	6688	0.4400	0.1364	0.1601	0.4400	0.2581	0.0054	0.3074	-0.2307	-0.3107	0.3074	-0.2889	0.9351	0.0292	9.90
01992	B	M	6688	0.6199	0.0879	0.6199	0.1047	0.1853	0.0022	0.2549	-0.2281	0.2549	-0.2251	-0.1634	-0.0487	0.0295	9.90
01993	B	M	6688	0.6093	0.2869	0.6093	0.0609	0.0407	0.0022	0.3057	-0.2302	0.3057	-0.3256	-0.2139	0.0043	0.0294	8.30
01994	A	M	6688	0.4308	0.4308	0.1684	0.1172	0.2823	0.0013	0.5406	0.5406	-0.5193	-0.4804	-0.5490	0.9634	0.0293	-6.90
01995	D	F	6688	0.5742	0.1772	0.0467	0.1987	0.5742	0.0033	0.4059	-0.3213	-0.3629	-0.3675	0.4059	0.1812	0.0291	4.50
01996	C	F	6688	0.8399	0.0716	0.0438	0.8399	0.0432	0.0015	0.2878	-0.1550	-0.2323	0.2878	-0.1934	-1.5247	0.0373	1.90
01997	B	F	6688	0.7156	0.1111	0.7156	0.1166	0.0549	0.0018	0.4075	-0.2173	0.4075	-0.3726	-0.3353	-0.6159	0.0313	1.50
01998	C	F	6688	0.4940	0.1660	0.2808	0.4940	0.0555	0.0037	0.3268	-0.4017	-0.2325	0.3268	-0.2558	0.6365	0.0290	9.90
01999	D	F	6688	0.5843	0.1314	0.1211	0.1607	0.5843	0.0024	0.5575	-0.5295	-0.4683	-0.4393	0.5575	0.1214	0.0292	-7.90
02000	C	F	6688	0.6586	0.1394	0.1292	0.6586	0.0715	0.0013	0.2880	-0.2509	-0.1846	0.2880	-0.2355	-0.2796	0.0301	9.90
02001	C	M	6719	0.2672	0.3067	0.0522	0.2672	0.3727	0.0012	0.2981	-0.1601	-0.2578	0.2981	-0.4707	1.9829	0.0322	9.90
02002	B	M	6719	0.5733	0.1688	0.5733	0.1857	0.0705	0.0016	0.2882	-0.3170	0.2882	-0.1712	-0.2151	0.2336	0.0291	9.90
02003	C	M	6719	0.5614	0.2791	0.1399	0.5614	0.0183	0.0013	0.5125	-0.4854	-0.4495	0.5125	-0.2735	0.2776	0.0290	-5.10
02004	A	M	6719	0.4760	0.4760	0.1915	0.2320	0.0945	0.0060	0.4296	0.4296	-0.3721	-0.4152	-0.4039	0.7501	0.0289	2.70
02005	D	M	6719	0.3940	0.2660	0.2341	0.1040	0.3940	0.0019	0.4644	-0.4689	-0.4590	-0.4391	0.4644	1.2028	0.0295	0.90
02006	D	M	6719	0.3975	0.2029	0.2112	0.1844	0.3975	0.0040	0.4929	-0.5628	-0.4679	-0.4435	0.4929	1.1810	0.0295	-3.20
02007	C	F	6719	0.3063	0.1390	0.4513	0.3063	0.1009	0.0025	0.2920	-0.4048	-0.2911	0.2920	-0.2080	1.7319	0.0311	9.90
02008	A	F	6719	0.6873	0.6873	0.0897	0.1537	0.0658	0.0034	0.5443	0.5443	-0.3923	-0.4615	-0.4224	-0.4529	0.0308	-6.90
02009	D	F	6719	0.5560	0.1756	0.1167	0.1481	0.5560	0.0036	0.4031	-0.2993	-0.4178	-0.3472	0.4031	0.3224	0.0290	7.20
02010	A	F	6719	0.3752	0.3752	0.2420	0.2664	0.1139	0.0025	0.2905	0.2905	-0.2765	-0.2637	-0.3508	1.3110	0.0297	9.90
02011	B	F	6719	0.4825	0.1945	0.4825	0.2088	0.1100	0.0042	0.4117	-0.3262	0.4117	-0.4369	-0.3168	0.7224	0.0289	3.40
02012	C	F	6719	0.2862	0.2878	0.1805	0.2862	0.2395	0.0060	0.1442	-0.2134	-0.1326	0.1442	-0.1071	1.8737	0.0316	9.90
02013	C	M	6665	0.4450	0.0938	0.2056	0.4450	0.2531	0.0026	0.3639	-0.3428	-0.3653	0.3639	-0.3126	0.8991	0.0288	7.80
02014	D	M	6665	0.3299	0.2147	0.2284	0.2231	0.3299	0.0039	0.3599	-0.3959	-0.3579	-0.3701	0.3599	1.5387	0.0302	8.20
02015	C	M	6665	0.4189	0.2512	0.1794	0.4189	0.1490	0.0015	0.2794	-0.1835	-0.3645	0.2794	-0.2673	1.0436	0.0290	9.90
02016	C	M	6665	0.3652	0.4515	0.1514	0.3652	0.0309	0.0011	0.4208	-0.4897	-0.2269	0.4208	-0.3891	1.3245	0.0295	5.10
02017	B	M	6665	0.5124	0.1164	0.5124	0.3157	0.0540	0.0015	0.2990	-0.2336	0.2990	-0.2711	-0.2431	0.5458	0.0286	9.90
02018	B	M	6665	0.8429	0.0803	0.8429	0.0600	0.0161	0.0008	0.3446	-0.2856	0.3446	-0.2129	-0.1721	-1.5183	0.0376	1.00
02019	D	F	6665	0.5538	0.2498	0.0710	0.1223	0.5538	0.0032	0.4789	-0.3634	-0.4514	-0.4959	0.4789	0.3184	0.0287	-4.10
02020	D	F	6665	0.5449	0.2554	0.1454	0.0528	0.5449	0.0015	0.1208	0.0261	-0.2268	-0.2410	0.1208	0.3894	0.0287	9.90
02021	B	F	6665	0.3695	0.1550	0.3695	0.2563	0.2111	0.0081	0.2313	-0.2546	0.2313	-0.2202	-0.2196	1.3149	0.0295	9.90
02022	B	F	6665	0.3071	0.4278	0.3071	0.1230	0.1397	0.0024	0.2314	-0.3607	0.2314	-0.1916	0.0624	1.6655	0.0306	9.90
02023	C	F	6665	0.5029	0.3098	0.0842	0.5029	0.1004	0.0027	0.4763	-0.4470	-0.4793	0.4763	-0.3378	0.5778	0.0286	-3.00
02024	C	F	6665	0.5868	0.1937	0.1088	0.5868	0.1077	0.0030	0.3702	-0.2348	-0.3357	0.3702	-0.3640	0.1356	0.0290	4.50

Appendix N:

**2006 Uncommon Grade 5 Constructed Response
Statistics for Reading**

Appendix N: 2006 Uncommon Grade 5 Constructed Response Statistics for Reading

Item Detail				Proportions					Point Biserials					Rasch Statistics		
Item ID	Max Score Points	Item Status	N	P-Value	0	1	2	3	Item Total Corr	0	1	2	3	Logit	SE	Outfit t
02025	3	M	7149	0.6292	0.0919	0.2132	0.4104	0.2845	0.6613	-0.5231	-0.6021	-0.4041	0.4041	0.2218	0.0174	-5.60
02026	3	F	3934	0.5647	0.1657	0.2768	0.2550	0.3025	0.5775	-0.4658	-0.5093	-0.4198	0.4198	0.5868	0.0209	7.80
02027	3	M	6724	0.5022	0.1504	0.3458	0.3508	0.1530	0.5850	-0.4500	-0.5243	-0.3290	0.3290	1.0107	0.0174	-1.70
02028	3	F	3310	0.6841	0.0704	0.1888	0.3589	0.3819	0.6089	-0.4301	-0.5352	-0.4459	0.4459	0.1039	0.0246	-1.40
02029	3	M	6706	0.6176	0.0471	0.2920	0.4219	0.2390	0.5628	-0.3818	-0.4856	-0.3736	0.3736	0.1753	0.0187	-0.40
02030	3	F	3124	0.7113	0.0637	0.1431	0.3889	0.4043	0.5721	-0.3899	-0.5119	-0.4159	0.4159	-0.0003	0.0262	-0.20
02031	3	M	6682	0.5271	0.1107	0.3614	0.3637	0.1642	0.5112	-0.4116	-0.4313	-0.2992	0.2992	0.8599	0.0180	6.90
02032	3	F	3280	0.5824	0.1110	0.2497	0.4204	0.2189	0.5995	-0.4760	-0.5258	-0.3634	0.3634	0.6937	0.0246	-1.60
02033	3	M	6660	0.5851	0.1147	0.2574	0.3859	0.2420	0.6236	-0.4403	-0.5681	-0.4113	0.4113	0.5929	0.0174	-3.70
02034	3	F	3234	0.7202	0.0618	0.1645	0.3250	0.4487	0.4856	-0.3087	-0.4191	-0.3898	0.3898	-0.0353	0.0253	8.10
02035	3	M	6673	0.6210	0.0507	0.2753	0.4346	0.2395	0.5254	-0.3773	-0.4606	-0.3292	0.3292	0.2503	0.0188	3.70
02036	3	F	3406	0.7494	0.0716	0.1512	0.2346	0.5426	0.6637	-0.4636	-0.5850	-0.5483	0.5483	-0.0617	0.0241	-4.40
02037	3	M	6644	0.6591	0.0531	0.2071	0.4491	0.2906	0.5599	-0.3785	-0.4725	-0.3953	0.3953	0.0850	0.0190	1.60
02038	3	F	3292	0.5364	0.1179	0.3399	0.3575	0.1847	0.5616	-0.4240	-0.4983	-0.3368	0.3368	0.9073	0.0246	0.70
02039	3	M	6648	0.6427	0.0421	0.2162	0.5132	0.2285	0.5327	-0.3714	-0.4805	-0.3108	0.3108	0.1116	0.0200	0.90
02040	3	F	3379	0.6257	0.0373	0.2527	0.5055	0.2045	0.4176	-0.3248	-0.3679	-0.2297	0.2297	0.2383	0.0274	6.70
02041	3	M	6623	0.6024	0.1149	0.2858	0.2765	0.3228	0.5924	-0.4084	-0.5353	-0.4469	0.4469	0.5046	0.0164	0.10
02042	3	F	3299	0.4049	0.2328	0.4041	0.2789	0.0843	0.5202	-0.4490	-0.4257	-0.2576	0.2576	1.6860	0.0245	0.90
02043	3	M	6636	0.7767	0.0280	0.1418	0.3023	0.5279	0.6183	-0.3314	-0.5347	-0.5042	0.5042	-0.5888	0.0194	-4.50
02044	3	F	3144	0.5581	0.1454	0.2863	0.3171	0.2513	0.5472	-0.4586	-0.4745	-0.3552	0.3552	0.8362	0.0229	1.70
02045	3	M	6631	0.6758	0.0276	0.2223	0.4453	0.3048	0.5516	-0.2926	-0.5059	-0.3762	0.3762	-0.1817	0.0194	-0.80
02046	3	F	3413	0.7668	0.0372	0.1207	0.3466	0.4955	0.4459	-0.2970	-0.3801	-0.3430	0.3430	-0.3478	0.0264	7.10
02047	3	M	6648	0.5029	0.1449	0.3496	0.3577	0.1479	0.5730	-0.4370	-0.5130	-0.3196	0.3196	1.0391	0.0173	-3.00
02048	3	F	3232	0.6445	0.0715	0.2293	0.3936	0.3057	0.5794	-0.4555	-0.5065	-0.3775	0.3775	0.2966	0.0247	-1.50
02049	3	M	6622	0.6987	0.0427	0.1475	0.4805	0.3292	0.5820	-0.3990	-0.5283	-0.3766	0.3766	-0.1303	0.0199	-1.00
02050	3	F	3367	0.5458	0.0989	0.3243	0.4173	0.1595	0.5492	-0.4849	-0.4610	-0.2799	0.2799	0.9038	0.0253	1.10
02051	3	M	6620	0.6014	0.0844	0.3122	0.3181	0.2852	0.5937	-0.4164	-0.5375	-0.4064	0.4064	0.4545	0.0170	-3.30
02052	3	F	3372	0.5449	0.0845	0.3523	0.4072	0.1560	0.5110	-0.4378	-0.4207	-0.2783	0.2783	0.8351	0.0252	1.40
02053	3	M	6606	0.5844	0.1110	0.2652	0.3834	0.2404	0.6109	-0.4137	-0.5624	-0.4059	0.4059	0.6080	0.0176	-0.90
02054	3	F	3226	0.6779	0.0803	0.1714	0.3825	0.3658	0.5781	-0.4164	-0.4981	-0.4276	0.4276	0.2333	0.0252	1.60
02055	3	M	6627	0.6113	0.0650	0.2772	0.4165	0.2413	0.5254	-0.3911	-0.4617	-0.3268	0.3268	0.3812	0.0183	4.50
02056	3	F	3165	0.7525	0.0303	0.1570	0.3374	0.4752	0.5969	-0.3360	-0.5266	-0.4641	0.4641	-0.3667	0.0271	-3.70
02057	3	M	6623	0.5336	0.1083	0.3609	0.3526	0.1783	0.5645	-0.4518	-0.4885	-0.3260	0.3260	0.8773	0.0176	-1.30
02058	3	F	3320	0.5460	0.0795	0.4169	0.2898	0.2139	0.4150	-0.2820	-0.3640	-0.2853	0.2853	0.7342	0.0241	8.80
02059	3	M	6641	0.5784	0.0684	0.3012	0.4573	0.1732	0.5158	-0.3762	-0.4453	-0.3034	0.3034	0.5528	0.0193	5.50
02060	3	F	3364	0.6200	0.0559	0.2417	0.4890	0.2134	0.5056	-0.3722	-0.4390	-0.3033	0.3033	0.3841	0.0268	3.90
02061	3	M	6640	0.7222	0.0404	0.1381	0.4361	0.3854	0.5700	-0.3774	-0.4982	-0.4049	0.4049	-0.2498	0.0195	-1.30
02062	3	F	3155	0.6385	0.0466	0.2437	0.4574	0.2523	0.5345	-0.3884	-0.4569	-0.3453	0.3453	0.2152	0.0269	0.70
02063	3	M	6637	0.6538	0.0341	0.2189	0.4986	0.2485	0.5263	-0.3722	-0.4618	-0.3242	0.3242	-0.0126	0.0200	1.70
02064	3	F	3457	0.6360	0.1114	0.2418	0.2742	0.3726	0.5754	-0.4580	-0.5042	-0.4238	0.4238	0.4506	0.0223	3.40

NOTE: Overall P-value is an indicator of item difficulty, with higher values indicating easier items. Category proportion values are the percentage of students attaining each score category.

Appendix O:

**2006 Uncommon Grade 8 Constructed Response
Statistics for Reading**

Appendix O: 2006 Uncommon Grade 8 Constructed Response Statistics for Reading

Item Detail				Proportions					Point Biserials					Rasch Statistics		
Item ID	Max Score Points	Item Status	N	P-Value	0	1	2	3	Item Total Corr	0	1	2	3	Logit	SE	Outfit t
02065	3	M	7740	0.5941	0.1180	0.2061	0.4516	0.2244	0.6467	-0.5387	-0.5788	-0.3676	0.3676	0.6803	0.0170	-2.40
02066	3	F	4297	0.4719	0.1643	0.3565	0.3784	0.1008	0.6871	-0.5922	-0.5884	-0.3013	0.3013	1.3861	0.0233	-7.00
02067	3	M	7252	0.6363	0.0458	0.1958	0.5622	0.1962	0.5585	-0.3565	-0.4972	-0.3352	0.3352	0.4259	0.0197	-2.40
02068	3	F	3826	0.5093	0.0844	0.4169	0.3850	0.1137	0.5192	-0.4461	-0.4219	-0.2587	0.2587	1.2716	0.0248	1.50
02069	3	M	7285	0.5402	0.1150	0.2918	0.4507	0.1425	0.5431	-0.4091	-0.4737	-0.3069	0.3069	1.0635	0.0177	4.40
02070	3	F	3857	0.5280	0.1509	0.3531	0.2569	0.2390	0.5803	-0.4904	-0.5020	-0.3759	0.3759	1.1573	0.0212	2.00
02071	3	M	7262	0.5576	0.1363	0.2210	0.4762	0.1665	0.6370	-0.5027	-0.5819	-0.3423	0.3423	1.0458	0.0174	-3.80
02072	3	F	3851	0.5324	0.1652	0.2690	0.3693	0.1966	0.6169	-0.5220	-0.5402	-0.3626	0.3626	1.2276	0.0219	-1.40
02073	3	M	7236	0.6844	0.0457	0.1892	0.4313	0.3337	0.5534	-0.3326	-0.4942	-0.3924	0.3924	0.1145	0.0182	1.60
02074	3	F	3826	0.5471	0.0622	0.4305	0.3110	0.1963	0.5390	-0.3851	-0.4677	-0.3499	0.3499	0.8383	0.0236	1.10
02075	3	M	7248	0.5671	0.1326	0.2975	0.3059	0.2641	0.5814	-0.4586	-0.5126	-0.3922	0.3922	0.9001	0.0160	3.50
02076	3	F	3833	0.6428	0.0642	0.1925	0.4939	0.2494	0.5973	-0.4054	-0.5298	-0.3852	0.3852	0.5807	0.0246	-2.60
02077	3	M	7244	0.6548	0.0573	0.2158	0.4321	0.2949	0.5590	-0.4002	-0.4914	-0.3694	0.3694	0.3311	0.0179	2.00
02078	3	F	3857	0.4832	0.1047	0.4426	0.3511	0.1016	0.5368	-0.4887	-0.4270	-0.2447	0.2447	1.4263	0.0246	0.40
02079	3	M	7243	0.5376	0.1154	0.2899	0.4611	0.1335	0.5345	-0.3968	-0.4663	-0.3016	0.3016	1.1441	0.0179	5.50
02080	3	F	3837	0.5607	0.1465	0.2450	0.3886	0.2200	0.6067	-0.5136	-0.5300	-0.3645	0.3645	1.1284	0.0219	-0.70
02081	3	M	7232	0.6549	0.0430	0.1798	0.5467	0.2305	0.5652	-0.3660	-0.5143	-0.3385	0.3385	0.3322	0.0195	-1.90
02082	3	F	3804	0.5237	0.0718	0.4445	0.3247	0.1590	0.6042	-0.3759	-0.5653	-0.3510	0.3510	1.0955	0.0242	-6.30
02083	3	M	7239	0.5629	0.1311	0.2167	0.4845	0.1677	0.6093	-0.4722	-0.5561	-0.3341	0.3341	1.0263	0.0173	-3.10
02084	3	F	3831	0.6065	0.0509	0.2216	0.5844	0.1430	0.4630	-0.3339	-0.4162	-0.2290	0.2290	0.7553	0.0267	3.30
02085	3	M	7223	0.6361	0.0581	0.2326	0.4522	0.2571	0.6185	-0.3662	-0.5572	-0.4206	0.4206	0.4554	0.0179	-7.70
02086	3	F	3821	0.6828	0.0547	0.1756	0.4363	0.3334	0.5676	-0.4056	-0.5126	-0.3720	0.3720	0.3726	0.0239	-0.80
02087	3	M	7217	0.6931	0.0394	0.1889	0.4248	0.3470	0.5577	-0.3399	-0.5011	-0.3905	0.3905	0.0571	0.0186	1.50
02088	3	F	3811	0.6341	0.0756	0.2183	0.4343	0.2718	0.6010	-0.4032	-0.5512	-0.3912	0.3912	0.6677	0.0236	-2.30
02089	3	M	7229	0.6224	0.0787	0.2108	0.4752	0.2353	0.5840	-0.4418	-0.5148	-0.3561	0.3561	0.5850	0.0180	-0.40
02090	3	F	3825	0.5677	0.1205	0.2753	0.3848	0.2193	0.6195	-0.4934	-0.5593	-0.3621	0.3621	1.0452	0.0227	-2.20
02091	3	M	7236	0.5726	0.1321	0.2898	0.3064	0.2717	0.5832	-0.4702	-0.5068	-0.3971	0.3971	0.8728	0.0159	3.50
02092	3	F	3837	0.7185	0.0401	0.1613	0.4014	0.3972	0.5872	-0.3886	-0.5126	-0.4242	0.4242	0.0860	0.0247	-0.70
02093	3	M	7222	0.6322	0.0580	0.2379	0.4536	0.2505	0.6291	-0.3811	-0.5691	-0.4180	0.4180	0.4668	0.0180	-8.50
02094	3	F	3795	0.4187	0.2877	0.3115	0.2577	0.1431	0.5520	-0.4717	-0.4813	-0.3336	0.3336	1.8095	0.0207	0.70
02095	3	M	7224	0.6477	0.0480	0.1870	0.5389	0.2261	0.5828	-0.3959	-0.5240	-0.3476	0.3476	0.3830	0.0193	-3.50
02096	3	F	3813	0.5973	0.0587	0.3181	0.3958	0.2274	0.5953	-0.4032	-0.5270	-0.3838	0.3838	0.7058	0.0239	-3.80
02097	3	M	7243	0.6035	0.0707	0.2295	0.5186	0.1813	0.6293	-0.4615	-0.5657	-0.3446	0.3446	0.6949	0.0188	-6.90
02098	3	F	3836	0.5000	0.1204	0.3644	0.4098	0.1053	0.6243	-0.5271	-0.5325	-0.2774	0.2774	1.4631	0.0242	-6.10
02099	3	M	7203	0.6592	0.0369	0.1805	0.5507	0.2318	0.5567	-0.3047	-0.4733	-0.3880	0.3880	0.3358	0.0198	-2.60
02100	3	F	3813	0.5534	0.1359	0.3318	0.2688	0.2636	0.5799	-0.5112	-0.4935	-0.3749	0.3749	1.1536	0.0213	2.30
02101	3	M	7189	0.6796	0.0408	0.1924	0.4540	0.3128	0.6110	-0.3643	-0.5390	-0.4292	0.4292	0.1378	0.0189	-5.60
02102	3	F	3805	0.5649	0.0476	0.3277	0.5072	0.1175	0.5046	-0.3599	-0.4340	-0.2636	0.2636	0.9871	0.0269	0.90
02103	3	M	7173	0.6974	0.0321	0.2081	0.3954	0.3644	0.5748	-0.3025	-0.5134	-0.4273	0.4273	0.0014	0.0181	-2.20
02104	3	F	3793	0.5544	0.0670	0.3530	0.4297	0.1503	0.5047	-0.3176	-0.4549	-0.2952	0.2952	0.9887	0.0245	1.10

NOTE: Overall P-value is an indicator of item difficulty, with higher values indicating easier items. Category proportion values are the percentage of students attaining each score category.

Appendix P:

**2006 Uncommon Grade 11 Constructed Response
Statistics for Reading**

Appendix P: 2006 Uncommon Grade 11 Constructed Response Statistics for Reading

Item Detail				Proportions					Point Biserials					Rasch Statistics		
Item ID	Max Score Points	Item Status	N	P-Value	0	1	2	3	Item Total Corr	0	1	2	3	Logit	SE	Outfit t
02105	3	M	7037	0.5666	0.0630	0.2701	0.5711	0.0958	0.5551	-0.4181	-0.4955	-0.2313	0.2313	0.5849	0.0205	-3.50
02106	3	F	3717	0.5830	0.1262	0.2505	0.3715	0.2518	0.7167	-0.5685	-0.6602	-0.4323	0.4323	0.5337	0.0223	-9.90
02107	3	M	6717	0.6171	0.0472	0.2413	0.5245	0.1870	0.5850	-0.3873	-0.5288	-0.3321	0.3321	0.2130	0.0199	-5.00
02108	3	F	3401	0.6484	0.0429	0.2070	0.5119	0.2382	0.5503	-0.4072	-0.4848	-0.3258	0.3258	0.1548	0.0268	-1.60
02109	3	M	6713	0.5809	0.0647	0.3087	0.4461	0.1805	0.5935	-0.4111	-0.5217	-0.3549	0.3549	0.4308	0.0186	-6.80
02110	3	F	3386	0.6367	0.0806	0.1999	0.4480	0.2714	0.6201	-0.4479	-0.5462	-0.4101	0.4101	0.3815	0.0244	-6.30
02111	3	M	6722	0.6291	0.0619	0.2084	0.5101	0.2196	0.6317	-0.4507	-0.5620	-0.3772	0.3772	0.2542	0.0193	-8.30
02112	3	F	3349	0.6877	0.0260	0.1938	0.4715	0.3087	0.5516	-0.3000	-0.4834	-0.3902	0.3902	-0.1666	0.0273	-2.00
02113	3	M	6713	0.6131	0.0645	0.2038	0.5597	0.1721	0.6284	-0.4648	-0.5665	-0.3307	0.3307	0.3660	0.0199	-8.40
02114	3	F	3235	0.6090	0.0615	0.2491	0.4903	0.1991	0.5566	-0.4161	-0.4678	-0.3436	0.3436	0.4708	0.0266	-1.60
02115	3	M	6686	0.6812	0.0348	0.1702	0.5114	0.2836	0.6145	-0.3605	-0.5490	-0.4099	0.4099	-0.1927	0.0200	-9.60
02116	3	F	3254	0.6485	0.0676	0.1930	0.4656	0.2738	0.6049	-0.4572	-0.5393	-0.3742	0.3742	0.2992	0.0257	-4.20
02117	3	M	6667	0.6459	0.0526	0.2023	0.4998	0.2452	0.5877	-0.4173	-0.5302	-0.3512	0.3512	0.1086	0.0191	-6.30
02118	3	F	3227	0.5883	0.0769	0.3055	0.3936	0.2240	0.5125	-0.3833	-0.4490	-0.3186	0.3186	0.5259	0.0247	0.70
02119	3	M	6683	0.6489	0.0563	0.2014	0.4818	0.2605	0.5042	-0.4054	-0.4313	-0.3075	0.3075	0.1039	0.0189	4.60
02120	3	F	3393	0.6484	0.0698	0.1877	0.4698	0.2726	0.5834	-0.4284	-0.5255	-0.3632	0.3632	0.2990	0.0251	-3.50
02121	3	M	6696	0.5930	0.0685	0.2358	0.5438	0.1519	0.5676	-0.4176	-0.4937	-0.3114	0.3114	0.5148	0.0195	-4.90
02122	3	F	3227	0.6327	0.0487	0.2213	0.5135	0.2166	0.5763	-0.3922	-0.5095	-0.3495	0.3495	0.3214	0.0272	-4.20
02123	3	M	6676	0.6465	0.0553	0.2055	0.4835	0.2557	0.4949	-0.4000	-0.4235	-0.2988	0.2988	0.1301	0.0189	5.80
02124	3	F	3393	0.7007	0.0410	0.1712	0.4327	0.3551	0.5826	-0.3932	-0.5130	-0.4026	0.4026	-0.0782	0.0259	-3.90
02125	3	M	6705	0.5842	0.0497	0.2543	0.5897	0.1063	0.5204	-0.3927	-0.4563	-0.2339	0.2339	0.5188	0.0214	-0.90
02126	3	F	3328	0.6016	0.0880	0.2587	0.4138	0.2395	0.6396	-0.4529	-0.5619	-0.4234	0.4234	0.5370	0.0247	-5.90
02127	3	M	6652	0.6211	0.0419	0.2350	0.5409	0.1822	0.5509	-0.3679	-0.4954	-0.3086	0.3086	0.2065	0.0200	-4.50
02128	3	F	3228	0.6540	0.0641	0.1825	0.4808	0.2726	0.5953	-0.4417	-0.5122	-0.3877	0.3877	0.3004	0.0258	-4.40
02129	3	M	6673	0.5889	0.0616	0.3069	0.4346	0.1969	0.5997	-0.4067	-0.5309	-0.3681	0.3681	0.3911	0.0187	-5.70
02130	3	F	3319	0.6779	0.0572	0.1585	0.4776	0.3067	0.6017	-0.4526	-0.5480	-0.3693	0.3693	0.1231	0.0263	-3.00
02131	3	M	6711	0.6256	0.0647	0.2074	0.5142	0.2137	0.6212	-0.4540	-0.5574	-0.3580	0.3580	0.3028	0.0191	-7.40
02132	3	F	3342	0.6188	0.0595	0.2558	0.4533	0.2313	0.5677	-0.4153	-0.5087	-0.3365	0.3365	0.3829	0.0258	-2.00
02133	3	M	6670	0.6150	0.0654	0.1973	0.5643	0.1730	0.6251	-0.4353	-0.5741	-0.3360	0.3360	0.3722	0.0198	-9.30
02134	3	F	3386	0.5725	0.0824	0.2986	0.4383	0.1807	0.5551	-0.4087	-0.4779	-0.3365	0.3365	0.6800	0.0250	-1.60
02135	3	M	6676	0.6850	0.0333	0.1676	0.5100	0.2891	0.5934	-0.3527	-0.5216	-0.4022	0.4022	-0.2114	0.0201	-6.80
02136	3	F	3314	0.6543	0.0353	0.1922	0.5468	0.2257	0.5437	-0.3784	-0.4798	-0.3232	0.3232	0.1093	0.0282	-2.60
02137	3	M	6667	0.6696	0.0628	0.1398	0.5230	0.2743	0.6160	-0.4275	-0.5549	-0.3939	0.3939	0.0875	0.0191	-7.80
02138	3	F	3119	0.5489	0.1097	0.3181	0.3883	0.1840	0.5947	-0.4797	-0.5150	-0.3418	0.3418	0.8067	0.0247	-5.20
02139	3	M	6668	0.5942	0.0441	0.2677	0.5498	0.1384	0.5599	-0.3519	-0.4987	-0.3079	0.3079	0.3841	0.0208	-4.10
02140	3	F	3400	0.6716	0.0568	0.1691	0.4768	0.2974	0.6224	-0.4431	-0.5505	-0.4058	0.4058	0.2003	0.0260	-5.00
02141	3	M	6703	0.7191	0.0234	0.1599	0.4525	0.3642	0.6030	-0.3172	-0.5155	-0.4507	0.4507	-0.5037	0.0201	-7.40
02142	3	F	3369	0.7586	0.0502	0.0956	0.3826	0.4717	0.6149	-0.4283	-0.5216	-0.4687	0.4687	-0.2419	0.0265	-5.40
02143	3	M	6648	0.5922	0.0988	0.2715	0.3839	0.2458	0.5827	-0.5068	-0.5013	-0.3436	0.3436	0.4456	0.0171	-0.90
02144	3	F	3359	0.7302	0.0188	0.1149	0.5234	0.3430	0.5594	-0.3014	-0.4632	-0.4122	0.4122	-0.4734	0.0289	-4.90

NOTE: Overall P-value is an indicator of item difficulty, with higher values indicating easier items. Category proportion values are the percentage of students attaining each score category.

Appendix Q:

**2006 Uncommon Grade 5 Constructed Response
Statistics for Mathematics**

Appendix Q: 2006 Uncommon Grade 5 Constructed Response Statistics for Mathematics

Item Detail				Proportions						Point Biserials						Rasch Statistics		
Item ID	Max Score Points	Item Status	N	P-Value	0	1	2	3	4	Item Total Corr	0	1	2	3	4	Logit	SE	Outfit t
02145	4	M	7266	0.3107	0.2762	0.3558	0.2527	0.0795	0.0358	0.6063	-0.5048	-0.5323	-0.3628	-0.2182	0.2182	2.4364	0.0157	2.00
02146	4	F	3968	0.5522	0.1951	0.1888	0.0980	0.2485	0.2697	0.7022	-0.5916	-0.6263	-0.5935	-0.4918	0.4918	1.0827	0.0169	7.10
02147	4	M	6736	0.3937	0.2558	0.3315	0.0811	0.2452	0.0864	0.6273	-0.5597	-0.5336	-0.5152	-0.2985	0.2985	2.0083	0.0139	9.90
02148	4	F	3501	0.6525	0.0466	0.1225	0.2714	0.2933	0.2662	0.5906	-0.3068	-0.4645	-0.5380	-0.3760	0.3760	0.6452	0.0207	7.90
02149	4	M	6728	0.3066	0.3731	0.3071	0.1326	0.0948	0.0924	0.6203	-0.5301	-0.5502	-0.4752	-0.3527	0.3527	2.3274	0.0144	1.50
02150	4	F	3492	0.3811	0.1111	0.4940	0.1964	0.1564	0.0421	0.5754	-0.4352	-0.4968	-0.4047	-0.2237	0.2237	2.1381	0.0227	3.80
02151	4	M	6683	0.3682	0.1594	0.3769	0.3476	0.0636	0.0525	0.5862	-0.4526	-0.5232	-0.3251	-0.2621	0.2621	2.1577	0.0168	2.70
02152	4	F	3485	0.7053	0.0198	0.1205	0.2100	0.3179	0.3317	0.5563	-0.1776	-0.4129	-0.4879	-0.4264	0.4264	0.2467	0.0213	8.50
02153	4	M	6673	0.5947	0.1740	0.1449	0.1734	0.1436	0.3642	0.5600	-0.4559	-0.5201	-0.4710	-0.4117	0.4117	1.0351	0.0128	9.90
02154	4	F	3469	0.7139	0.0124	0.1294	0.1908	0.3249	0.3425	0.4817	-0.0979	-0.3510	-0.4405	-0.3665	0.3665	0.1067	0.0216	9.90
02155	4	M	6695	0.4944	0.1639	0.2285	0.2021	0.2772	0.1283	0.7154	-0.5657	-0.6408	-0.5810	-0.3530	0.3530	1.5502	0.0141	-3.90
02156	4	F	3495	0.7049	0.0524	0.1144	0.1645	0.2984	0.3702	0.6071	-0.3674	-0.5076	-0.5204	-0.4355	0.4355	0.5192	0.0202	7.50
02157	4	M	6665	0.2507	0.4200	0.3644	0.0726	0.0788	0.0642	0.5235	-0.5292	-0.4079	-0.3508	-0.2630	0.2630	2.6177	0.0153	9.90
02158	4	F	3481	0.6602	0.0448	0.1241	0.1985	0.4105	0.2221	0.5094	-0.2675	-0.4441	-0.4159	-0.3219	0.3219	0.6844	0.0214	9.90
02159	4	M	6665	0.3651	0.3659	0.1472	0.1970	0.2404	0.0495	0.5115	-0.4534	-0.4796	-0.3834	-0.2126	0.2126	2.3217	0.0137	9.90
02160	4	F	3479	0.5729	0.1199	0.2049	0.2285	0.1572	0.2895	0.6568	-0.5065	-0.5924	-0.5226	-0.4565	0.4565	1.1564	0.0179	5.10
02161	4	M	6637	0.4568	0.2376	0.2465	0.1581	0.1668	0.1911	0.6598	-0.5541	-0.6199	-0.5297	-0.3972	0.3972	1.6400	0.0132	7.80
02162	4	F	3472	0.6133	0.0386	0.1463	0.2866	0.3802	0.1483	0.5540	-0.2560	-0.4339	-0.4779	-0.3274	0.3274	0.8937	0.0220	6.90
02163	4	M	6648	0.6594	0.0542	0.0657	0.3562	0.2360	0.2879	0.5370	-0.2828	-0.3401	-0.5146	-0.3801	0.3801	0.6024	0.0154	9.90
02164	4	F	3495	0.5240	0.0401	0.1837	0.5219	0.1491	0.1053	0.5431	-0.2923	-0.4612	-0.4089	-0.2901	0.2901	1.2278	0.0235	4.90
02165	4	M	6646	0.6334	0.0373	0.1742	0.2695	0.2553	0.2636	0.5522	-0.2978	-0.4441	-0.4573	-0.3970	0.3970	0.6210	0.0152	9.90
02166	4	F	3496	0.6609	0.1825	0.0400	0.2320	0.0423	0.5031	0.6236	-0.5109	-0.5405	-0.5589	-0.5356	0.5356	0.9222	0.0171	9.90
02167	4	M	6661	0.5839	0.0378	0.2413	0.2354	0.3184	0.1671	0.6184	-0.2131	-0.5325	-0.5564	-0.3709	0.3709	0.8798	0.0154	5.20
02168	4	F	3508	0.5510	0.2015	0.1879	0.1454	0.1354	0.3298	0.5992	-0.4455	-0.5453	-0.5410	-0.4577	0.4577	1.2962	0.0171	9.90
02169	4	M	6639	0.6247	0.0776	0.2347	0.1592	0.1684	0.3601	0.5910	-0.3399	-0.5288	-0.5211	-0.4575	0.4575	0.7918	0.0135	9.90
02170	4	F	3512	0.6105	0.1831	0.1167	0.1908	0.0937	0.4157	0.5830	-0.4745	-0.5173	-0.5139	-0.4618	0.4618	1.1030	0.0169	9.90
02171	4	M	6636	0.6917	0.0778	0.0874	0.1435	0.3730	0.3184	0.5942	-0.4402	-0.5058	-0.4865	-0.4009	0.4009	0.6401	0.0149	9.90
02172	4	F	3520	0.6364	0.1469	0.0466	0.3474	0.0324	0.4267	0.5619	-0.4078	-0.4451	-0.4957	-0.4901	0.4901	0.9647	0.0176	8.30
02173	4	M	6633	0.6750	0.0650	0.0243	0.2786	0.4102	0.2219	0.5792	-0.4122	-0.4206	-0.5053	-0.3372	0.3372	0.6803	0.0164	7.20
02174	4	F	3494	0.4965	0.1474	0.2524	0.2252	0.2167	0.1583	0.6143	-0.4422	-0.5265	-0.5112	-0.3749	0.3749	1.5516	0.0191	7.00
02175	4	M	6647	0.5193	0.2512	0.1014	0.1859	0.2419	0.2195	0.6402	-0.5647	-0.5718	-0.5422	-0.4001	0.4001	1.4961	0.0128	9.90
02176	4	F	3501	0.6852	0.0646	0.1057	0.1991	0.2859	0.3448	0.5728	-0.3638	-0.4851	-0.4833	-0.4038	0.4038	0.6864	0.0198	9.90
02177	4	M	6646	0.3875	0.1780	0.3324	0.2875	0.1660	0.0361	0.5466	-0.4627	-0.4663	-0.3534	-0.1861	0.1861	2.2666	0.0161	9.90
02178	4	F	3502	0.5972	0.1025	0.2022	0.1899	0.2147	0.2907	0.6951	-0.4228	-0.5824	-0.6169	-0.5234	0.5234	1.0417	0.0187	-0.60
02179	4	M	6657	0.5412	0.1268	0.2650	0.1624	0.2085	0.2373	0.6754	-0.5087	-0.6099	-0.5451	-0.4554	0.4554	1.2050	0.0135	5.10
02180	4	F	3503	0.2827	0.4870	0.1679	0.1630	0.0916	0.0905	0.5513	-0.4817	-0.5212	-0.4271	-0.3108	0.3108	2.5014	0.0188	7.80
02181	4	M	6669	0.4900	0.1267	0.2729	0.2563	0.2018	0.1423	0.6127	-0.4047	-0.5317	-0.5072	-0.3623	0.3623	1.4662	0.0144	8.00
02182	4	F	3487	0.7458	0.0284	0.0800	0.1781	0.3071	0.4064	0.6064	-0.2500	-0.4026	-0.5160	-0.5152	0.5152	0.1760	0.0216	3.20
02183	4	F	6641	0.4360	0.1717	0.2198	0.4227	0.0643	0.1215	0.5857	-0.5006	-0.4951	-0.3840	-0.3400	0.3400	1.7903	0.0150	9.20
02184	4	F	3455	0.7256	0.0194	0.1204	0.1062	0.4463	0.3077	0.4797	-0.1823	-0.3088	-0.3978	-0.4126	0.4126	0.2580	0.0223	9.90

NOTE: Overall P-value is an indicator of item difficulty, with higher values indicating easier items. Category proportion values are the percentage of students attaining each score category.

Appendix R:

**2006 Uncommon Grade 8 Constructed Response
Statistics for Mathematics**

Appendix R: 2006 Uncommon Grade 8 Constructed Response Statistics for Mathematics

Item Detail				Proportions						Point Biserials						Rasch Statistics		
Item ID	Max Score Points	Item Status	N	P-Value	0	1	2	3	4	Item Total Corr	0	1	2	3	4	Logit	SE	Outfit t
02185	4	M	7887	0.3957	0.2110	0.3475	0.1928	0.1449	0.1037	0.7002	-0.5504	-0.6355	-0.5238	-0.3704	0.3704	1.3548	0.0136	-2.20
02186	4	F	4255	0.6197	0.1549	0.0881	0.1734	0.2902	0.2933	0.6869	-0.5183	-0.5984	-0.6010	-0.4761	0.4761	0.3334	0.0173	6.90
02187	4	M	7266	0.4652	0.1552	0.2941	0.2629	0.1102	0.1775	0.5876	-0.4248	-0.5254	-0.4535	-0.3905	0.3905	1.0580	0.0133	9.90
02188	4	F	3780	0.7018	0.0770	0.1146	0.1447	0.2519	0.4119	0.5870	-0.3725	-0.4887	-0.5200	-0.4498	0.4498	0.1622	0.0183	9.90
02189	4	M	7306	0.4478	0.1313	0.2839	0.3675	0.0972	0.1202	0.6854	-0.4955	-0.6126	-0.4745	-0.3981	0.3981	1.1634	0.0146	-2.70
02190	4	F	3862	0.2298	0.4705	0.3011	0.0994	0.0966	0.0324	0.5235	-0.4915	-0.4300	-0.3534	-0.2200	0.2200	2.5281	0.0207	8.90
02191	4	M	7284	0.4411	0.3145	0.2015	0.0984	0.1759	0.2096	0.6882	-0.6134	-0.6060	-0.5905	-0.4795	0.4795	1.2416	0.0123	8.30
02192	4	F	3829	0.4062	0.2972	0.2379	0.1794	0.1136	0.1718	0.6586	-0.5116	-0.5904	-0.5583	-0.4533	0.4533	1.4368	0.0174	3.40
02193	4	M	7266	0.4636	0.1796	0.3457	0.1188	0.1525	0.2034	0.6742	-0.5234	-0.6021	-0.5643	-0.4567	0.4567	1.0165	0.0128	5.90
02194	4	F	3712	0.6098	0.1026	0.1404	0.1985	0.3322	0.2263	0.6357	-0.4432	-0.5098	-0.5599	-0.4105	0.4105	0.5472	0.0187	6.10
02195	4	M	7265	0.5393	0.2041	0.0445	0.2592	0.3744	0.1178	0.6915	-0.5511	-0.5799	-0.5986	-0.3870	0.3870	1.0179	0.0137	1.00
02196	4	F	3830	0.4678	0.1540	0.3272	0.1329	0.2653	0.1206	0.6386	-0.4359	-0.5742	-0.5613	-0.3340	0.3340	1.2359	0.0185	6.00
02197	4	M	7262	0.4194	0.2581	0.3359	0.0997	0.0830	0.2234	0.6991	-0.6050	-0.6235	-0.5709	-0.5098	0.5098	1.2479	0.0126	3.50
02198	4	F	3678	0.1736	0.5829	0.2719	0.0430	0.0723	0.0299	0.5464	-0.5496	-0.4216	-0.3833	-0.2060	0.2060	2.7841	0.0223	0.20
02199	4	M	7258	0.2662	0.5781	0.0759	0.1710	0.0529	0.1221	0.5582	-0.5328	-0.5296	-0.4186	-0.3852	0.3852	2.0005	0.0130	9.90
02200	4	F	3793	0.6018	0.1898	0.1418	0.0975	0.2128	0.3580	0.7003	-0.5161	-0.6397	-0.6248	-0.5581	0.5581	0.6676	0.0166	2.90
02201	4	M	7252	0.5315	0.0604	0.2099	0.4211	0.1605	0.1481	0.6523	-0.3638	-0.4972	-0.5457	-0.4269	0.4269	0.6922	0.0152	-2.90
02202	4	F	3637	0.5378	0.0767	0.1936	0.2920	0.3772	0.0605	0.5709	-0.4179	-0.4995	-0.3988	-0.2809	0.2809	1.0794	0.0214	7.70
02203	4	M	7257	0.4814	0.1025	0.3041	0.2512	0.2494	0.0927	0.7189	-0.4656	-0.6468	-0.5703	-0.3424	0.3424	1.0957	0.0148	-8.30
02204	4	F	3750	0.5939	0.1181	0.1877	0.2003	0.1883	0.3056	0.6751	-0.4560	-0.6220	-0.5697	-0.4760	0.4760	0.6060	0.0177	7.40
02205	4	M	7249	0.5492	0.0370	0.0410	0.7207	0.0910	0.1104	0.5434	-0.2477	-0.3591	-0.4735	-0.3705	0.3705	0.6062	0.0185	-0.60
02206	4	F	3652	0.5347	0.0852	0.1684	0.3949	0.2256	0.1260	0.6119	-0.3730	-0.4948	-0.5131	-0.3356	0.3356	0.9220	0.0207	3.40
02207	4	M	7238	0.4124	0.2436	0.2549	0.2061	0.1992	0.0962	0.7099	-0.5518	-0.6509	-0.5647	-0.3494	0.3494	1.4776	0.0136	-5.30
02208	4	F	3760	0.3112	0.1495	0.6745	0.0532	0.0277	0.0952	0.5174	-0.4655	-0.3927	-0.3835	-0.3535	0.3535	1.7757	0.0220	5.70
02209	4	M	7248	0.3802	0.3967	0.1213	0.2133	0.1021	0.1667	0.7030	-0.6256	-0.6265	-0.5829	-0.4732	0.4732	1.5301	0.0127	-0.10
02210	4	F	3687	0.2919	0.3428	0.2943	0.2433	0.0917	0.0279	0.6106	-0.5467	-0.5271	-0.3576	-0.2017	0.2017	2.3911	0.0214	0.60
02211	4	M	7256	0.6452	0.1861	0.1003	0.1256	0.1228	0.4653	0.7068	-0.5722	-0.6205	-0.6503	-0.5860	0.5860	0.4174	0.0121	4.20
02212	4	F	3740	0.3242	0.3858	0.2524	0.1198	0.1631	0.0789	0.6149	-0.5386	-0.5450	-0.4926	-0.3167	0.3167	1.9482	0.0184	4.00
02213	4	M	7240	0.5996	0.0519	0.1994	0.3047	0.1860	0.2579	0.7082	-0.3575	-0.6023	-0.6028	-0.4967	0.4967	0.3297	0.0141	-3.20
02214	4	F	3787	0.5138	0.1872	0.1452	0.3544	0.0515	0.2617	0.6766	-0.5148	-0.5774	-0.5514	-0.5137	0.5137	0.9852	0.0173	1.80
02215	4	M	7245	0.5733	0.1618	0.1208	0.1640	0.3695	0.1840	0.7231	-0.5781	-0.6315	-0.6270	-0.4073	0.4073	0.7962	0.0134	-3.40
02216	4	F	3644	0.4824	0.1740	0.2259	0.2887	0.1196	0.1918	0.6617	-0.5173	-0.5641	-0.5137	-0.4528	0.4528	1.1473	0.0184	3.20
02217	4	M	7263	0.2065	0.5345	0.2371	0.1322	0.0604	0.0358	0.5350	-0.5408	-0.4328	-0.3231	-0.2119	0.2119	2.5108	0.0153	6.80
02218	4	F	3662	0.3550	0.1824	0.4429	0.2108	0.0999	0.0639	0.5880	-0.4869	-0.5060	-0.3836	-0.2739	0.2739	1.7672	0.0209	3.40
02219	4	M	7222	0.4639	0.1040	0.3858	0.1991	0.1729	0.1382	0.6802	-0.4630	-0.6110	-0.5464	-0.3918	0.3918	1.0597	0.0141	-0.60
02220	4	F	3667	0.2771	0.3392	0.4118	0.1216	0.0559	0.0714	0.5707	-0.4844	-0.5045	-0.3824	-0.3092	0.3092	2.1391	0.0206	2.50
02221	4	M	7204	0.5078	0.1453	0.2340	0.2485	0.1882	0.1839	0.7188	-0.5492	-0.6561	-0.5673	-0.4169	0.4169	0.9169	0.0136	-2.40
02222	4	F	3809	0.3360	0.4818	0.1184	0.1053	0.1633	0.1313	0.5237	-0.4236	-0.4939	-0.4868	-0.3530	0.3530	1.8121	0.0169	9.90
02223	4	M	7187	0.6892	0.0637	0.0829	0.2985	0.1425	0.4124	0.5935	-0.3881	-0.4760	-0.5072	-0.4577	0.4577	0.0461	0.0139	9.90
02224	4	F	3754	0.4991	0.1406	0.2371	0.2531	0.2238	0.1454	0.6542	-0.4950	-0.5594	-0.5222	-0.3788	0.3788	1.0997	0.0185	2.10

NOTE: Overall P-value is an indicator of item difficulty, with higher values indicating easier items. Category proportion values are the percentage of students attaining each score category.

Appendix S:

**2006 Uncommon Grade 11 Constructed Response
Statistics for Mathematics**

Appendix S: 2006 Uncommon Grade 11 Constructed Response Statistics for Mathematics

Item Detail				Proportions						Point Biserials						Rasch Statistics		
Item ID	Max Score Points	Item Status	N	P-Value	0	1	2	3	4	Item Total Corr	0	1	2	3	4	Logit	SE	Outfit t
02225	4	M	7083	0.3538	0.2860	0.1689	0.4169	0.1004	0.0278	0.6781	-0.5861	-0.6290	-0.3697	-0.2173	0.2173	1.6659	0.0160	-2.20
02226	4	F	3741	0.5362	0.1866	0.1949	0.1411	0.2422	0.2352	0.6758	-0.5116	-0.6028	-0.5827	-0.4643	0.4643	0.3927	0.0181	9.50
02227	4	M	6732	0.5006	0.1977	0.1851	0.1768	0.2980	0.1425	0.7071	-0.5866	-0.6624	-0.5810	-0.3323	0.3323	0.7010	0.0144	7.60
02228	4	F	3319	0.3058	0.3320	0.3884	0.0883	0.1070	0.0844	0.6103	-0.5164	-0.5491	-0.4589	-0.3296	0.3296	1.7022	0.0213	3.40
02229	4	M	6717	0.4840	0.3899	0.0762	0.0359	0.2038	0.2942	0.6959	-0.6346	-0.6683	-0.6578	-0.5178	0.5178	0.6962	0.0128	9.90
02230	4	F	3291	0.1945	0.5269	0.3130	0.0529	0.0686	0.0377	0.4644	-0.4517	-0.3540	-0.3257	-0.2179	0.2179	2.4270	0.0242	9.90
02231	4	M	6739	0.3322	0.3825	0.2101	0.1625	0.1855	0.0594	0.7387	-0.7177	-0.6661	-0.5267	-0.2719	0.2719	1.6006	0.0148	-8.40
02232	4	F	3425	0.3625	0.2873	0.2309	0.2593	0.1895	0.0330	0.6331	-0.5275	-0.5357	-0.4885	-0.2200	0.2200	1.7565	0.0214	4.50
02233	4	M	6727	0.3799	0.2612	0.3511	0.1414	0.0996	0.1467	0.6947	-0.5225	-0.6579	-0.5466	-0.4515	0.4515	1.1306	0.0144	-2.50
02234	4	F	3418	0.5061	0.2235	0.1311	0.2905	0.1071	0.2478	0.6293	-0.5520	-0.5740	-0.4686	-0.4356	0.4356	0.6959	0.0187	9.90
02235	4	M	6691	0.4787	0.4152	0.0516	0.0765	0.1169	0.3399	0.7703	-0.7396	-0.7474	-0.7033	-0.6043	0.6043	0.6996	0.0127	1.00
02236	4	F	3392	0.5000	0.0301	0.4876	0.1495	0.1179	0.2149	0.6555	-0.2788	-0.5876	-0.5909	-0.5008	0.5008	0.2760	0.0214	2.80
02237	4	M	6678	0.2581	0.4970	0.1423	0.2255	0.1018	0.0334	0.6652	-0.6093	-0.6339	-0.4249	-0.2275	0.2275	2.0754	0.0158	-1.40
02238	4	F	3260	0.3749	0.2816	0.3445	0.1172	0.1061	0.1506	0.6037	-0.3945	-0.5794	-0.5149	-0.4358	0.4358	1.2614	0.0202	7.50
02239	4	M	6695	0.4299	0.3553	0.0866	0.2454	0.1083	0.2043	0.7258	-0.6642	-0.6620	-0.5958	-0.4737	0.4737	0.9668	0.0135	2.60
02240	4	F	3410	0.5327	0.2006	0.0645	0.2918	0.2897	0.1534	0.7210	-0.6021	-0.6320	-0.5969	-0.3830	0.3830	0.7342	0.0198	0.00
02241	4	M	6721	0.3883	0.3458	0.2974	0.0375	0.0963	0.2230	0.7171	-0.6177	-0.6565	-0.6341	-0.5358	0.5358	1.0632	0.0135	0.80
02242	4	F	3236	0.2512	0.5235	0.1848	0.0992	0.1483	0.0442	0.6361	-0.6125	-0.5636	-0.4909	-0.2550	0.2550	2.2018	0.0219	-0.60
02243	4	M	6688	0.4845	0.1876	0.2476	0.2186	0.1313	0.2149	0.7075	-0.5059	-0.6255	-0.6089	-0.4856	0.4856	0.6347	0.0140	3.20
02244	4	F	3407	0.3248	0.4403	0.1077	0.2571	0.1021	0.0928	0.7062	-0.6797	-0.6832	-0.4725	-0.3315	0.3315	1.6612	0.0199	-3.90
02245	4	M	6717	0.2616	0.4771	0.2428	0.1084	0.0999	0.0718	0.6886	-0.6886	-0.5949	-0.4888	-0.3273	0.3273	1.8107	0.0152	-8.00
02246	4	F	3418	0.3234	0.4877	0.1273	0.1457	0.0822	0.1571	0.6990	-0.6660	-0.6469	-0.5646	-0.4651	0.4651	1.5185	0.0190	-3.30
02247	4	M	6670	0.6428	0.0766	0.1687	0.2454	0.1255	0.3838	0.7521	-0.4502	-0.6397	-0.6510	-0.5991	0.5991	-0.1935	0.0145	-1.10
02248	4	F	3302	0.4535	0.2977	0.1669	0.1429	0.2087	0.1838	0.7564	-0.6805	-0.6899	-0.6230	-0.4632	0.4632	1.0424	0.0190	-3.20
02249	4	M	6691	0.6380	0.1669	0.0876	0.1285	0.2605	0.3564	0.6241	-0.5461	-0.5701	-0.5268	-0.4265	0.4265	0.0275	0.0138	9.90
02250	4	F	3323	0.3984	0.1896	0.4105	0.1059	0.2049	0.0891	0.6802	-0.5140	-0.6263	-0.5517	-0.3205	0.3205	1.3129	0.0213	-0.50
02251	4	M	6723	0.5071	0.2621	0.0851	0.2721	0.1238	0.2570	0.7553	-0.6255	-0.6599	-0.6450	-0.5472	0.5472	0.6083	0.0136	-0.10
02252	4	F	3397	0.4850	0.1392	0.2467	0.3197	0.1236	0.1707	0.6293	-0.4764	-0.5057	-0.5068	-0.4136	0.4136	0.7666	0.0206	7.60
02253	4	M	6694	0.1662	0.5251	0.3406	0.0899	0.0332	0.0112	0.5172	-0.5125	-0.3738	-0.2285	-0.1262	0.1262	2.7785	0.0195	4.30
02254	4	F	3399	0.7339	0.0627	0.1097	0.1233	0.2380	0.4663	0.6866	-0.3940	-0.5477	-0.6103	-0.5703	0.5703	-0.4565	0.0203	2.80
02255	4	F	6686	0.1900	0.5405	0.2481	0.1276	0.0784	0.0054	0.5820	-0.5636	-0.4735	-0.3360	-0.0919	0.0919	2.9282	0.0180	0.20
02256	4	F	3416	0.4636	0.2860	0.1543	0.1625	0.2137	0.1835	0.7331	-0.6727	-0.6491	-0.6030	-0.4449	0.4449	0.9715	0.0186	0.80
02257	4	F	6687	0.2999	0.3245	0.4111	0.0845	0.0999	0.0800	0.6479	-0.5780	-0.5475	-0.4858	-0.3387	0.3387	1.6726	0.0159	0.80
02258	4	F	3413	0.4296	0.2335	0.3328	0.0891	0.1708	0.1737	0.7252	-0.6124	-0.6406	-0.6094	-0.4568	0.4568	1.0720	0.0195	0.60
02259	4	F	6688	0.3630	0.3889	0.2057	0.1373	0.1008	0.1673	0.7042	-0.6241	-0.6358	-0.5770	-0.4817	0.4817	1.2044	0.0140	0.60
02260	4	F	3406	0.5451	0.2017	0.1650	0.1917	0.1342	0.3074	0.7458	-0.5858	-0.6665	-0.6375	-0.5614	0.5614	0.4838	0.0185	0.10
02261	4	F	6719	0.4810	0.1767	0.2887	0.1116	0.2800	0.1430	0.7475	-0.5663	-0.6624	-0.6611	-0.4038	0.4038	0.7207	0.0144	-3.20
02262	4	F	3420	0.4852	0.2284	0.2772	0.0968	0.1208	0.2769	0.7406	-0.5870	-0.6918	-0.6490	-0.5387	0.5387	0.7341	0.0185	0.20
02263	4	F	6665	0.2759	0.3550	0.3668	0.1325	0.1110	0.0347	0.5070	-0.4801	-0.3990	-0.3380	-0.1921	0.1921	1.8819	0.0161	9.90
02264	4	F	3363	0.2700	0.3515	0.3533	0.2004	0.0535	0.0413	0.5614	-0.4901	-0.4891	-0.3136	-0.2418	0.2418	1.9494	0.0228	2.80

NOTE: Overall P-value is an indicator of item difficulty, with higher values indicating easier items. Category proportion values are the percentage of students attaining each score category.

Appendix T:

**2006 Common Grade 5 Multiple Choice Statistics for
Reading**

Appendix T: 2006 Common Grade 5 Multiple Choice Statistics for Reading

Item Detail			Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00042	C	133440	0.8070	0.0568	0.1129	0.8070	0.0230	0.0003	0.2610	-0.3036	-0.1202	0.2610	-0.1570	-0.6817	0.0078	9.90
00043	A	133440	0.6701	0.6701	0.1909	0.0544	0.0835	0.0011	0.3341	-0.3341	-0.1487	-0.3295	-0.4223	-0.2307	0.0066	9.90
00044	C	133440	0.5168	0.0739	0.1705	0.5168	0.2377	0.0010	0.3555	-0.4981	-0.4049	0.3555	-0.1804	1.0579	0.0062	9.90
00045	C	133440	0.9285	0.0296	0.0200	0.9285	0.0210	0.0008	0.4460	-0.3205	-0.2586	0.4460	-0.2786	-2.0713	0.0118	-9.90
00046	A	133440	0.9241	0.9241	0.0197	0.0176	0.0379	0.0007	0.4543	0.4543	-0.2429	-0.2751	-0.3535	-2.0145	0.0115	-9.90
00047	B	133440	0.8796	0.0353	0.8796	0.0291	0.0551	0.0009	0.4521	-0.2881	0.4521	-0.2871	-0.3398	-1.3906	0.0094	-9.90
00048	D	133440	0.8855	0.0531	0.0250	0.0348	0.8855	0.0017	0.5016	-0.3215	-0.3166	-0.4010	0.5016	-1.4738	0.0097	-9.90
00049	D	133440	0.7573	0.1428	0.0617	0.0367	0.7573	0.0016	0.3863	-0.2458	-0.3611	-0.3113	0.3863	-0.3295	0.0073	9.90
00050	B	133440	0.4940	0.1685	0.4940	0.1523	0.1834	0.0017	0.3805	-0.4057	0.3805	-0.2995	-0.3557	1.0963	0.0062	9.90
00051	D	133440	0.8241	0.0878	0.0252	0.0605	0.8241	0.0024	0.4954	-0.3602	-0.3289	-0.3764	0.4954	-0.8804	0.0082	-9.90
00052	B	133440	0.8360	0.0506	0.8360	0.0666	0.0448	0.0020	0.5315	-0.3770	0.5315	-0.3892	-0.3685	-0.9985	0.0084	-9.90
00053	C	133440	0.7036	0.0858	0.1176	0.7036	0.0899	0.0031	0.4264	-0.3904	-0.2929	0.4264	-0.3248	-0.0091	0.0069	-4.10
00054	A	133440	0.7295	0.7295	0.0905	0.1004	0.0772	0.0024	0.2923	0.2923	-0.3195	-0.1402	-0.1890	-0.1516	0.0070	9.90
00055	B	133440	0.7976	0.0819	0.7976	0.0852	0.0326	0.0026	0.5225	-0.3990	0.5225	-0.3777	-0.3886	-0.6620	0.0078	-9.90
00056	A	133440	0.5458	0.5458	0.3250	0.0711	0.0545	0.0036	0.3456	0.3456	-0.1999	-0.5194	-0.4597	0.8682	0.0063	9.90
00057	C	133440	0.6700	0.1233	0.1180	0.6700	0.0863	0.0024	0.3626	-0.1862	-0.3942	0.3626	-0.2762	0.1917	0.0067	9.90
00058	A	133440	0.8381	0.8381	0.0329	0.0889	0.0375	0.0026	0.3972	-0.3271	-0.3271	-0.2330	-0.3066	-0.9795	0.0084	-0.10
00059	B	133440	0.7858	0.0765	0.7858	0.0660	0.0687	0.0030	0.4347	-0.3504	0.4347	-0.2979	-0.2839	-0.5640	0.0076	-9.90
00060	B	133440	0.4850	0.0511	0.4850	0.2653	0.1948	0.0038	0.2103	-0.3649	0.2103	-0.1368	-0.1842	1.2044	0.0062	9.90
00061	B	133440	0.5715	0.2449	0.5715	0.0450	0.1346	0.0040	0.3359	-0.3195	0.3359	-0.3887	-0.1960	0.7256	0.0063	9.90
00062	D	133440	0.7591	0.0907	0.0343	0.1105	0.7591	0.0053	0.3722	-0.2646	-0.3589	-0.2496	0.3722	-0.3478	0.0073	9.90
00063	C	133440	0.7538	0.0796	0.0865	0.7538	0.0748	0.0052	0.4774	-0.3508	-0.3443	0.4774	-0.3904	-0.3577	0.0073	-9.90
00064	B	133440	0.7946	0.0464	0.7946	0.0355	0.1231	0.0004	0.4902	-0.3519	0.4902	-0.3037	-0.4078	-0.6352	0.0077	-9.90
00065	D	133440	0.7316	0.0629	0.0707	0.1341	0.7316	0.0007	0.4821	-0.3009	-0.3566	-0.4311	0.4821	-0.2041	0.0071	-9.90
00066	A	133440	0.7674	0.7674	0.0745	0.0560	0.1009	0.0012	0.4275	0.4275	-0.2444	-0.3376	-0.3616	-0.4334	0.0074	-9.90
00067	C	133440	0.7713	0.0516	0.0467	0.7713	0.1293	0.0012	0.3807	-0.2908	-0.3116	0.3807	-0.2570	-0.4594	0.0074	-0.10
00068	B	133440	0.6635	0.0755	0.6635	0.1036	0.1560	0.0015	0.3899	-0.3403	0.3899	-0.3032	-0.3102	0.2317	0.0066	5.50
00069	D	133440	0.6214	0.1607	0.0527	0.1637	0.6214	0.0015	0.4614	-0.3733	-0.4963	-0.3677	0.4614	0.4613	0.0065	-9.90
00070	A	133440	0.6308	0.6308	0.1146	0.1527	0.1004	0.0015	0.4067	0.4067	-0.3772	-0.3058	-0.3325	0.4204	0.0065	1.60
00071	A	133440	0.8404	0.8404	0.0681	0.0243	0.0654	0.0017	0.4902	0.4902	-0.3046	-0.3343	-0.4097	-1.0250	0.0085	-9.90
00072	C	133440	0.8029	0.0352	0.0882	0.8029	0.0717	0.0019	0.4862	-0.3624	-0.3818	0.4862	-0.3224	-0.6861	0.0078	-9.90
00073	B	133440	0.4048	0.3391	0.4048	0.2004	0.0527	0.0031	0.2782	-0.1997	0.2782	-0.3373	-0.3788	1.6223	0.0063	9.90
00074	B	133440	0.6521	0.0417	0.6521	0.0972	0.2060	0.0030	0.4231	-0.4234	0.4231	-0.3507	-0.3209	0.2888	0.0066	-4.00
00075	B	133440	0.6556	0.0966	0.6556	0.0596	0.1850	0.0033	0.5147	-0.4574	0.5147	-0.4093	-0.4204	0.2591	0.0066	-9.90
00076	B	133440	0.5356	0.1460	0.5356	0.0815	0.2336	0.0033	0.3410	-0.3386	0.3410	-0.3171	-0.2657	0.9214	0.0063	9.90
00077	B	133440	0.6932	0.0706	0.6932	0.0691	0.1636	0.0034	0.4266	-0.3962	0.4266	-0.3889	-0.2670	0.0510	0.0068	-9.40
00078	C	133440	0.4802	0.1387	0.2919	0.4802	0.0856	0.0036	0.3178	-0.2929	-0.2575	0.3178	-0.3676	1.2071	0.0062	9.90
00079	D	133440	0.5728	0.0737	0.1830	0.1666	0.5728	0.0040	0.3620	-0.3399	-0.2909	-0.3123	0.3620	0.7204	0.0063	9.90
00080	A	133440	0.7143	0.7143	0.0546	0.1354	0.0917	0.0040	0.4889	0.4889	-0.4164	-0.3686	-0.3729	-0.0838	0.0069	-9.90
00081	B	133440	0.6168	0.1585	0.6168	0.1508	0.0696	0.0043	0.3677	-0.2806	0.3677	-0.2239	-0.5035	0.5139	0.0064	9.90

Appendix U:

**2006 Common Grade 8 Multiple Choice Statistics for
Reading**

Appendix U: 2006 Common Grade 8 Multiple Choice Statistics for Reading

Item Detail			Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00082	B	145140	0.8337	0.0430	0.8337	0.0396	0.0833	0.0004	0.3618	-0.2987	0.3618	-0.2981	-0.1874	-0.7107	0.0079	-2.10
00083	C	145140	0.6110	0.2475	0.0292	0.6110	0.1117	0.0006	0.3370	-0.2325	-0.4057	0.3370	-0.3342	-0.7528	0.0062	9.90
00084	B	145140	0.7297	0.1051	0.7297	0.1419	0.0223	0.0011	0.2566	-0.1150	0.2566	-0.2593	-0.1796	0.0941	0.0067	9.90
00085	B	145140	0.5141	0.2045	0.5141	0.1862	0.0936	0.0016	0.3069	-0.2427	0.3069	-0.3185	-0.2735	1.2661	0.0060	9.90
00086	C	145140	0.7617	0.1462	0.0456	0.7617	0.0456	0.0010	0.4471	-0.3007	-0.3445	0.4471	-0.4103	-0.1637	0.0070	-9.90
00087	A	145140	0.6756	0.6756	0.0862	0.2135	0.0228	0.0019	0.2904	0.2904	-0.1887	-0.2492	-0.2568	0.4206	0.0064	9.90
00088	C	145140	0.7873	0.1099	0.0728	0.7873	0.0274	0.0026	0.3867	-0.3469	-0.2251	0.3867	-0.2436	-0.3216	0.0073	9.40
00089	A	145140	0.7920	0.7920	0.0732	0.0765	0.0568	0.0015	0.4210	0.4210	-0.3078	-0.3547	-0.2338	-0.3846	0.0074	-1.00
00090	B	145140	0.6487	0.1362	0.6487	0.1776	0.0363	0.0013	0.3096	-0.3088	0.3096	-0.2104	-0.2193	0.5750	0.0063	9.90
00091	C	145140	0.8073	0.0373	0.1280	0.8073	0.0257	0.0017	0.3763	-0.2863	-0.2491	0.3763	-0.3304	-0.4705	0.0075	5.90
00092	C	145140	0.9140	0.0283	0.0275	0.9140	0.0289	0.0013	0.4492	-0.2789	-0.3061	0.4492	-0.2889	-1.6438	0.0105	-9.90
00093	C	145140	0.6819	0.1675	0.0721	0.6819	0.0766	0.0019	0.4994	-0.3936	-0.3858	0.4994	-0.4299	0.3183	0.0065	-9.90
00094	D	145140	0.6303	0.1884	0.0411	0.1378	0.6303	0.0024	0.4911	-0.4511	-0.4409	-0.3641	0.4911	0.6259	0.0062	-9.90
00095	A	145140	0.7823	0.7823	0.0875	0.0766	0.0505	0.0030	0.4340	0.4340	-0.3467	-0.2564	-0.3509	-0.3142	0.0072	-9.90
00096	D	145140	0.7245	0.1892	0.0669	0.0153	0.7245	0.0041	0.5171	-0.4485	-0.3995	-0.3306	0.5171	0.0402	0.0068	-9.90
00097	C	145140	0.6692	0.0410	0.1707	0.6692	0.1143	0.0048	0.5270	-0.3721	-0.4601	0.5270	-0.4062	0.3716	0.0064	-9.90
00098	B	145140	0.6966	0.0595	0.6966	0.0778	0.1611	0.0050	0.5292	-0.3947	0.5292	-0.3279	-0.4907	0.2170	0.0066	-9.90
00099	B	145140	0.6829	0.0985	0.6829	0.0911	0.1222	0.0053	0.3438	-0.2659	0.3438	-0.2397	-0.2744	0.3565	0.0064	9.90
00100	C	145140	0.7080	0.1234	0.1080	0.7080	0.0543	0.0063	0.4495	-0.3514	-0.3483	0.4495	-0.3251	0.1628	0.0066	-9.90
00101	C	145140	0.4809	0.2524	0.2319	0.4809	0.0284	0.0063	0.4284	-0.4499	-0.3369	0.4284	-0.4092	1.4346	0.0060	0.70
00102	B	145140	0.5746	0.0314	0.5746	0.2963	0.0970	0.0008	0.3542	-0.3529	0.3542	-0.2824	-0.3329	0.9615	0.0061	9.90
00103	C	145140	0.7925	0.0518	0.1074	0.7925	0.0475	0.0008	0.4740	-0.3707	-0.3663	0.4740	-0.2907	-0.4152	0.0074	-9.90
00104	B	145140	0.7151	0.1843	0.7151	0.0275	0.0716	0.0015	0.3742	-0.2932	0.3742	-0.3500	-0.2638	0.1380	0.0067	9.90
00105	A	145140	0.9097	0.9097	0.0287	0.0230	0.0377	0.0009	0.4735	-0.4735	-0.3045	-0.2996	-0.3297	-1.5845	0.0103	-9.90
00106	A	145140	0.6415	0.6415	0.0605	0.0354	0.2617	0.0010	0.3333	0.3333	-0.2265	-0.2718	-0.2922	0.5889	0.0063	9.90
00107	B	145140	0.5340	0.1731	0.5340	0.1895	0.1022	0.0011	0.4863	-0.4841	0.4863	-0.4143	-0.4160	1.1222	0.0060	-9.90
00108	A	145140	0.3070	0.3070	0.0922	0.0918	0.5072	0.0018	0.1235	0.1235	-0.4504	-0.4133	0.0212	2.4382	0.0065	9.90
00109	B	145140	0.9136	0.0272	0.9136	0.0389	0.0187	0.0016	0.4375	-0.2826	0.4375	-0.3014	-0.2731	-1.6402	0.0105	-9.90
00110	A	145140	0.9078	0.9078	0.0319	0.0228	0.0360	0.0014	0.2798	0.2798	-0.2059	-0.1833	-0.1398	-1.4827	0.0099	6.20
00111	A	145140	0.4727	0.4727	0.0356	0.3894	0.1005	0.0018	0.1758	0.1758	-0.3440	-0.1250	-0.1583	1.5207	0.0060	9.90
00112	B	145140	0.7355	0.2157	0.7355	0.0254	0.0214	0.0020	0.3282	-0.2705	0.3282	-0.2711	-0.1984	0.0544	0.0068	9.90
00113	D	145140	0.8373	0.0672	0.0749	0.0185	0.8373	0.0021	0.3587	-0.2476	-0.2502	-0.2483	0.3587	-0.7465	0.0080	-1.10
00114	C	145140	0.7249	0.0400	0.1891	0.7249	0.0437	0.0023	0.4762	-0.4041	-0.3936	0.4762	-0.3091	0.0617	0.0067	-9.90
00115	B	145140	0.8465	0.0766	0.8465	0.0211	0.0517	0.0042	0.4010	-0.3350	0.4010	-0.2396	-0.2191	-0.8182	0.0082	-9.90
00116	A	145140	0.7546	0.7546	0.0888	0.0422	0.1098	0.0045	0.4737	0.4737	-0.3834	-0.4144	-0.2955	-0.1298	0.0070	-9.90
00117	D	145140	0.8480	0.0358	0.0506	0.0609	0.8480	0.0047	0.5415	-0.3809	-0.3494	-0.4082	0.5415	-0.8961	0.0083	-9.90
00118	D	145140	0.3836	0.1159	0.4021	0.0933	0.3836	0.0052	0.4142	-0.4464	-0.3808	-0.4916	0.4142	1.9590	0.0061	9.90
00119	A	145140	0.8035	0.8035	0.0607	0.0452	0.0854	0.0052	0.4642	0.4642	-0.2769	-0.3840	-0.3372	-0.4879	0.0075	-9.90
00120	C	145140	0.4671	0.1198	0.1034	0.4671	0.3038	0.0059	0.4068	-0.4015	-0.4306	-0.4306	-0.3502	1.4812	0.0060	9.90
00121	A	145140	0.8879	0.8879	0.0410	0.0277	0.0381	0.0053	0.5149	0.5149	-0.3649	-0.3355	-0.3367	-1.3179	0.0094	-9.90

Appendix V:

**2006 Common Grade 11 Multiple Choice Statistics for
Reading**

Appendix V: 2006 Common Grade 11 Multiple Choice Statistics for Reading

Item Detail			Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00122	C	134083	0.8989	0.0181	0.0542	0.8989	0.0277	0.0012	0.3666	-0.2450	-0.3012	0.3666	-0.1552	-1.6460	0.0100	-9.90
00123	B	134083	0.7513	0.0541	0.7513	0.1353	0.0583	0.0011	0.4247	-0.3579	0.4247	-0.3061	-0.2930	-0.3766	0.0072	-9.90
00124	A	134083	0.7311	0.7311	0.0547	0.1726	0.0405	0.0011	0.3650	0.3650	-0.3087	-0.2720	-0.2624	-0.2257	0.0070	3.70
00125	C	134083	0.7603	0.0805	0.0558	0.7603	0.1014	0.0020	0.4966	-0.3517	-0.3653	0.4966	-0.3898	-0.4417	0.0073	-9.90
00126	B	134083	0.7138	0.1180	0.7138	0.0522	0.1142	0.0019	0.4495	-0.2830	0.4495	-0.4063	-0.3755	-0.1453	0.0069	-9.90
00127	C	134083	0.6957	0.0706	0.0983	0.6957	0.1332	0.0021	0.4241	-0.3055	-0.3545	0.4241	-0.3251	-0.0092	0.0067	-9.90
00128	D	134083	0.6401	0.0615	0.0694	0.2266	0.6401	0.0023	0.4007	-0.4108	-0.3563	-0.2852	0.4007	0.2852	0.0065	-3.10
00129	B	134083	0.8356	0.0336	0.8356	0.0275	0.1021	0.0012	0.3805	-0.3037	0.3805	-0.2942	-0.2422	-0.9679	0.0082	-8.40
00130	C	134083	0.7714	0.0543	0.1256	0.7714	0.0469	0.0018	0.4156	-0.3307	-0.3138	0.4156	-0.2595	-0.4893	0.0073	-9.00
00131	B	134083	0.6293	0.0552	0.6293	0.1043	0.2072	0.0039	0.4074	-0.3867	0.4074	-0.3884	-0.2802	0.3240	0.0064	-4.30
00132	B	134083	0.6166	0.1266	0.6166	0.0874	0.1663	0.0031	0.4165	-0.3092	0.4165	-0.3097	-0.3857	0.4141	0.0064	-8.00
00133	B	134083	0.8031	0.1115	0.8031	0.0499	0.0330	0.0024	0.4342	-0.3188	0.4342	-0.3328	-0.2674	-0.7110	0.0077	-9.90
00134	C	134083	0.6487	0.0465	0.2491	0.6487	0.0530	0.0027	0.2019	-0.2205	-0.1418	0.2019	-0.1493	0.3025	0.0065	9.90
00135	B	134083	0.5350	0.2762	0.5350	0.0479	0.1379	0.0029	0.3687	-0.3658	0.3687	-0.3415	-0.2400	0.8320	0.0062	9.90
00136	C	134083	0.6766	0.0931	0.0594	0.6766	0.1674	0.0035	0.4300	-0.2190	-0.3960	0.4300	-0.3881	0.0870	0.0066	-9.90
00137	A	134083	0.7644	0.7644	0.1419	0.0413	0.0489	0.0035	0.3687	0.3687	-0.2275	-0.3678	-0.2688	-0.4415	0.0073	6.50
00138	D	134083	0.6093	0.1837	0.0941	0.1067	0.6093	0.0062	0.4724	-0.3583	-0.4455	-0.4047	0.4724	0.4434	0.0064	-9.90
00139	C	134083	0.6335	0.0466	0.1399	0.6335	0.1741	0.0059	0.4247	-0.2961	-0.3684	0.4247	-0.3401	0.3065	0.0065	-9.70
00140	C	134083	0.6788	0.1673	0.0635	0.6788	0.0839	0.0064	0.4096	-0.3308	-0.3803	0.4096	-0.2392	0.0742	0.0066	-3.40
00141	B	134083	0.2962	0.2278	0.2962	0.2488	0.2204	0.0067	0.1870	-0.2906	0.1870	-0.1981	-0.0944	2.1550	0.0067	9.90
00142	A	134083	0.3402	0.3402	0.0646	0.2045	0.3835	0.0072	0.1864	0.1864	-0.3293	-0.2615	-0.1045	1.8938	0.0065	9.90
00143	D	134083	0.4936	0.0796	0.2933	0.1249	0.4936	0.0086	0.4358	-0.4616	-0.3371	-0.4709	0.4358	1.0393	0.0062	-9.90
00144	A	134083	0.6097	0.6097	0.0887	0.0605	0.2322	0.0089	0.2480	0.2480	-0.3021	-0.2775	-0.1085	0.4938	0.0063	9.90
00145	C	134083	0.5292	0.1320	0.1046	0.5292	0.2252	0.0091	0.4181	-0.3860	-0.4130	0.4181	-0.3248	0.8409	0.0062	-9.60
00146	C	134083	0.9435	0.0131	0.0261	0.9435	0.0170	0.0003	0.3373	-0.2227	-0.2332	0.3373	-0.1763	-2.3489	0.0129	-9.90
00147	B	134083	0.8459	0.0362	0.8459	0.1034	0.0139	0.0006	0.2908	-0.1523	0.2908	-0.2372	-0.1950	-1.0521	0.0084	9.90
00148	C	134083	0.7570	0.0441	0.1098	0.7570	0.0881	0.0011	0.2199	-0.1709	-0.1309	0.2199	-0.1775	-0.3412	0.0071	9.90
00149	D	134083	0.6603	0.1503	0.1189	0.0691	0.6603	0.0015	0.3049	-0.2643	-0.1902	-0.2686	0.3049	0.2013	0.0065	9.90
00150	B	134083	0.8833	0.0402	0.8833	0.0141	0.0613	0.0011	0.3685	-0.2192	0.3685	-0.2074	-0.2927	-1.4498	0.0094	-9.90
00151	C	134083	0.6653	0.0801	0.2231	0.6653	0.0299	0.0016	0.1839	-0.2942	-0.0832	0.1839	-0.0985	0.2321	0.0065	9.90
00152	A	134083	0.5421	0.5421	0.1779	0.1519	0.1263	0.0018	0.3690	0.3690	-0.3241	-0.3494	-0.2857	0.8212	0.0062	9.90
00153	C	134083	0.8577	0.0315	0.0247	0.8577	0.0845	0.0016	0.3304	-0.3043	-0.2580	0.3304	-0.1689	-1.1761	0.0087	6.70
00154	C	134083	0.7198	0.1958	0.0548	0.7198	0.0267	0.0030	0.3928	-0.3355	-0.3143	0.3928	-0.1869	-0.1470	0.0069	-9.90
00155	D	134083	0.8153	0.0440	0.0345	0.1036	0.8153	0.0026	0.4480	-0.2648	-0.3644	-0.3300	0.4480	-0.8396	0.0079	-9.90
00156	B	134083	0.7971	0.0435	0.7971	0.0558	0.0999	0.0037	0.3777	-0.2708	0.3777	-0.3309	-0.2163	-0.6592	0.0076	-9.90
00157	D	134083	0.6471	0.2049	0.0765	0.0684	0.6471	0.0031	0.4859	-0.4253	-0.3563	-0.3766	0.4859	0.2403	0.0065	-9.90
00158	A	134083	0.8531	0.8531	0.0530	0.0570	0.0340	0.0030	0.5022	0.5022	-0.3569	-0.3544	-0.3246	-1.1893	0.0087	-9.90
00159	C	134083	0.7190	0.0279	0.0372	0.7190	0.2129	0.0031	0.3192	-0.3350	-0.3349	0.3192	-0.1958	-0.1291	0.0069	9.90
00160	C	134083	0.6568	0.1420	0.1211	0.6568	0.0769	0.0032	0.4349	-0.3258	-0.3825	0.4349	-0.3312	0.2158	0.0065	-9.90
00161	A	134083	0.7256	0.7256	0.1223	0.0840	0.0646	0.0034	0.4092	0.4092	-0.2981	-0.3567	-0.2596	-0.1970	0.0069	-9.90

Appendix W:

**2006 Common Grade 5 Multiple Choice Statistics for
Mathematics**

Appendix W: 2006 Common Grade 5 Multiple Choice Statistics for Mathematics

Item Detail			Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00162	D	133871	0.7608	0.1012	0.0933	0.0442	0.7608	0.0006	0.4452	-0.4155	-0.3079	-0.2167	0.4452	-0.0241	0.0073	-5.70
00163	D	133871	0.5269	0.0407	0.1437	0.2881	0.5269	0.0005	0.5033	-0.2917	-0.4340	-0.5038	0.5033	1.2783	0.0063	-9.90
00164	B	133871	0.6253	0.1788	0.6253	0.1176	0.0774	0.0009	0.4555	-0.3861	0.4555	-0.3168	-0.4283	0.7930	0.0065	-6.70
00165	C	133871	0.6733	0.0693	0.1682	0.6733	0.0886	0.0006	0.4783	-0.3665	-0.3716	0.4783	-0.4027	0.5135	0.0067	-9.90
00166	C	133871	0.4000	0.0355	0.2011	0.4000	0.3625	0.0008	0.3320	-0.4230	-0.4340	0.3320	-0.2391	2.0102	0.0064	9.90
00167	A	133871	0.8062	0.8062	0.0775	0.0523	0.0628	0.0012	0.4118	0.4118	-0.2644	-0.3169	-0.2858	-0.3303	0.0078	-9.90
00168	D	133871	0.7258	0.0571	0.0588	0.1575	0.7258	0.0008	0.4470	-0.3005	-0.3978	-0.3329	0.4470	0.2286	0.0070	-9.90
00169	C	133871	0.6149	0.1038	0.0454	0.6149	0.2344	0.0014	0.5008	-0.3090	-0.2543	0.5008	-0.5233	0.8528	0.0065	-9.90
00170	A	133871	0.7407	0.7407	0.0147	0.0269	0.2166	0.0011	0.4116	0.4116	-0.2226	-0.2874	-0.3614	0.1448	0.0071	-6.90
00171	C	133871	0.6530	0.0967	0.1857	0.6530	0.0634	0.0012	0.4296	-0.3112	-0.4049	0.4296	-0.2438	0.6532	0.0066	-7.90
00172	B	133871	0.6365	0.0754	0.6365	0.0985	0.1879	0.0016	0.4719	-0.3523	0.4719	-0.4234	-0.3739	0.7648	0.0065	-9.90
00173	B	133871	0.4725	0.0626	0.4725	0.2389	0.2250	0.0011	0.4568	-0.3831	0.4568	-0.4607	-0.4024	1.6243	0.0063	-3.20
00174	A	133871	0.6566	0.6566	0.0565	0.1637	0.1221	0.0012	0.5246	0.5246	-0.3357	-0.4306	-0.4803	0.7220	0.0065	-9.90
00175	B	133871	0.6164	0.2074	0.6164	0.0740	0.1007	0.0015	0.2719	-0.0863	0.2719	-0.3066	-0.3621	0.9038	0.0064	9.90
00176	D	133871	0.4984	0.4376	0.0475	0.0153	0.4984	0.0012	0.3897	-0.3541	-0.3913	-0.2935	0.3897	1.5248	0.0063	9.90
00177	C	133871	0.7384	0.0558	0.1725	0.7384	0.0320	0.0013	0.4815	-0.4604	-0.3569	0.4815	-0.3063	0.1095	0.0071	-9.90
00178	A	133871	0.7728	0.7728	0.0926	0.0991	0.0335	0.0019	0.4058	0.4058	-0.2877	-0.3036	-0.2813	-0.0725	0.0074	-9.90
00179	C	133871	0.5045	0.1451	0.1209	0.5045	0.2274	0.0020	0.4049	-0.4496	-0.4056	0.4049	-0.2711	1.4818	0.0063	9.90
00180	D	133871	0.8312	0.0496	0.0757	0.0420	0.8312	0.0015	0.4729	-0.3129	-0.3705	-0.2831	0.4729	-0.6126	0.0083	-9.90
00181	C	133871	0.8762	0.0469	0.0514	0.8762	0.0240	0.0013	0.4761	-0.3891	-0.3130	0.4761	-0.2377	-1.0779	0.0096	-9.90
00182	C	133871	0.5482	0.1489	0.1163	0.5482	0.1850	0.0016	0.3625	-0.3211	-0.1568	0.3625	-0.3882	1.2324	0.0063	9.90
00183	A	133871	0.7693	0.7693	0.0504	0.1505	0.0274	0.0025	0.3464	0.3464	-0.2465	-0.2638	-0.2442	-0.0460	0.0073	9.90
00184	C	133871	0.8044	0.0464	0.0348	0.8044	0.1139	0.0004	0.2695	-0.2470	-0.2102	0.2695	-0.1423	-0.3040	0.0077	9.90
00185	C	133871	0.6751	0.1475	0.1571	0.6751	0.0200	0.0004	0.3968	-0.4130	-0.2416	0.3968	-0.2604	0.5536	0.0067	4.90
00186	B	133871	0.5387	0.1160	0.5387	0.0204	0.3242	0.0007	0.4258	-0.5413	0.4258	-0.2646	-0.3293	1.3099	0.0063	-1.40
00187	B	133871	0.6700	0.0695	0.6700	0.1969	0.0627	0.0009	0.4240	-0.3651	0.4240	-0.3031	-0.3860	0.5543	0.0067	3.10
00188	A	133871	0.6850	0.6850	0.1411	0.1540	0.0190	0.0008	0.5124	0.5124	-0.5289	-0.3463	-0.3199	0.4326	0.0068	-9.90
00189	D	133871	0.7991	0.0553	0.0530	0.0916	0.7991	0.0010	0.4695	-0.3785	-0.3561	-0.2941	0.4695	-0.2920	0.0077	-9.90
00190	C	133871	0.5217	0.2347	0.1237	0.5217	0.1188	0.0011	0.4384	-0.4043	-0.3935	0.4384	-0.3611	1.3543	0.0063	-4.90
00191	D	133871	0.6470	0.0659	0.0565	0.2299	0.6470	0.0007	0.4854	-0.3512	-0.3526	-0.4309	0.4854	0.8400	0.0065	-9.90
00192	C	133871	0.8858	0.0319	0.0430	0.8858	0.0387	0.0006	0.4241	-0.2899	-0.2439	0.4241	-0.3127	-1.1842	0.0099	-9.60
00193	A	133871	0.8908	0.8908	0.0542	0.0247	0.0294	0.0009	0.4112	0.4112	-0.3393	-0.2323	-0.2113	-1.1166	0.0097	-9.90
00194	A	133871	0.7991	0.7991	0.0822	0.0340	0.0844	0.0003	0.1732	0.1732	-0.1381	-0.1411	-0.0850	-0.2429	0.0076	9.90
00195	A	133871	0.5129	0.5129	0.0993	0.1551	0.2315	0.0012	0.4361	0.4361	-0.4602	-0.2956	-0.4244	1.4181	0.0063	-3.90
00196	B	133871	0.8079	0.1053	0.8079	0.0355	0.0507	0.0006	0.4545	-0.3207	0.4545	-0.2737	-0.3802	-0.3555	0.0078	-9.90
00197	C	133871	0.7174	0.0355	0.0556	0.7174	0.1907	0.0008	0.4143	-0.2121	-0.1599	0.4143	-0.4260	0.3034	0.0069	5.80
00198	B	133871	0.7981	0.1113	0.7981	0.0487	0.0414	0.0005	0.3146	-0.2463	0.3146	-0.2031	-0.1893	-0.2293	0.0076	8.30
00199	B	133871	0.8013	0.1594	0.8013	0.0241	0.0146	0.0006	0.4818	-0.4497	0.4818	-0.2411	-0.2038	-0.3140	0.0078	-9.90
00200	D	133871	0.6036	0.0530	0.0410	0.3008	0.6036	0.0016	0.3383	-0.2905	-0.2753	-0.2830	0.3383	0.9751	0.0064	9.90
00201	B	133871	0.8274	0.0122	0.8274	0.1454	0.0144	0.0006	0.2891	-0.1743	0.2891	-0.2342	-0.1976	-0.4633	0.0080	9.90
00202	C	133871	0.6643	0.2006	0.0343	0.6643	0.0998	0.0010	0.3632	-0.2226	-0.3175	0.3632	-0.3787	0.5884	0.0066	9.90
00203	D	133871	0.5627	0.1462	0.1231	0.1668	0.5627	0.0011	0.4136	-0.4210	-0.2789	-0.3519	0.4136	1.1971	0.0063	5.70
00204	C	133871	0.5393	0.0781	0.2406	0.5393	0.1411	0.0009	0.3985	-0.5028	-0.2807	0.3985	-0.3463	1.2824	0.0063	9.90
00205	B	133871	0.6730	0.0827	0.6730	0.1317	0.1115	0.0011	0.4917	-0.4226	0.4917	-0.4384	-0.2989	0.5450	0.0067	-9.90
00206	B	133871	0.6950	0.1473	0.6950	0.0881	0.0686	0.0010	0.3261	-0.2563	0.3261	-0.2359	-0.2486	0.4551	0.0067	9.90
00207	A	133871	0.8352	0.8352	0.0559	0.0514	0.0563	0.0012	0.4435	0.4435	-0.2223	-0.2996	-0.3952	-0.6214	0.0084	-9.90
00208	C	133871	0.6643	0.1393	0.1083	0.6643	0.0868	0.0014	0.3871	-0.3350	-0.2503	0.3871	-0.3088	0.6151	0.0066	6.40
00209	C	133871	0.5879	0.1953	0.0619	0.5879	0.1536	0.0013	0.4118	-0.3853	-0.1660	0.4118	-0.3837	1.0169	0.0064	-0.30
00210	B	133871	0.7081	0.0746	0.7081	0.0503	0.1660	0.0010	0.4135	-0.3090	0.4135	-0.3101	-0.3259	0.4102	0.0068	-7.20

Appendix W: 2006 Common Grade 5 Multiple Choice Statistics for Mathematics

Item Detail			Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00211	D	133871	0.8659	0.0585	0.0383	0.0355	0.8659	0.0018	0.4691	-0.4122	-0.2708	-0.2420	0.4691	-0.8616	0.0089	-9.90
00212	C	133871	0.7345	0.1132	0.0740	0.7345	0.0768	0.0015	0.4786	-0.4103	-0.3581	0.4786	-0.2887	0.1520	0.0071	-9.90
00213	A	133871	0.7475	0.7475	0.0474	0.0698	0.1339	0.0013	0.5252	0.5252	-0.3561	-0.4654	-0.3817	0.0584	0.0072	-9.90
00214	C	133871	0.7248	0.0593	0.1778	0.7248	0.0366	0.0016	0.4065	-0.3425	-0.2800	0.4065	-0.3631	0.2349	0.0070	3.00
00215	B	133871	0.8567	0.0563	0.8567	0.0379	0.0456	0.0035	0.3984	-0.2870	0.3984	-0.2355	-0.2786	-0.7573	0.0087	-9.90

Appendix X:

**2006 Common Grade 8 Multiple Choice Statistics for
Mathematics**

Appendix X: 2006 Common Grade 8 Multiple Choice Statistics for Mathematics

Item Detail			Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00216	B	145655	0.8251	0.0623	0.8251	0.0453	0.0667	0.0006	0.3555	-0.1989	0.3555	-0.2452	-0.2726	-0.9353	0.0077	-9.20
00217	B	145655	0.7532	0.0682	0.7532	0.1472	0.0305	0.0009	0.4512	-0.3602	0.4512	-0.3764	-0.1920	-0.4369	0.0069	-9.90
00218	C	145655	0.6798	0.0772	0.0871	0.6798	0.1550	0.0009	0.4352	-0.2432	-0.3668	0.4352	-0.3723	0.0432	0.0064	-8.40
00219	B	145655	0.6969	0.1072	0.6969	0.1425	0.0526	0.0009	0.4004	-0.1855	0.4004	-0.3824	-0.3431	-0.0704	0.0065	8.00
00220	C	145655	0.7006	0.0169	0.2031	0.7006	0.0779	0.0014	0.4063	-0.2282	-0.3376	0.4063	-0.3284	-0.0837	0.0065	0.80
00221	B	145655	0.7133	0.2017	0.7133	0.0434	0.0408	0.0008	0.4574	-0.4067	0.4574	-0.3222	-0.2525	-0.1643	0.0066	-9.90
00222	B	145655	0.3764	0.3402	0.3764	0.1482	0.1343	0.0010	0.3087	-0.2276	0.3087	-0.3950	-0.3577	1.7117	0.0063	9.90
00223	C	145655	0.5921	0.0836	0.1692	0.5921	0.1535	0.0017	0.4236	-0.3842	-0.4395	0.4236	-0.2313	0.4979	0.0062	6.60
00224	C	145655	0.6010	0.0472	0.2706	0.6010	0.0789	0.0023	0.4313	-0.3816	-0.3492	0.4313	-0.3724	0.4717	0.0062	-6.10
00225	D	145655	0.8424	0.0747	0.0266	0.0552	0.8424	0.0010	0.4820	-0.3993	-0.2534	-0.3115	0.4820	-1.1347	0.0081	-9.90
00226	B	145655	0.6561	0.1312	0.6561	0.0318	0.1797	0.0011	0.5079	-0.3899	0.5079	-0.3059	-0.4699	0.1813	0.0063	-9.90
00227	C	145655	0.6612	0.1124	0.1561	0.6612	0.0684	0.0019	0.4567	-0.3498	-0.3537	0.4567	-0.3749	0.1272	0.0064	-9.90
00228	D	145655	0.7916	0.0642	0.0320	0.1107	0.7916	0.0015	0.4766	-0.2633	-0.3079	-0.4216	0.4766	-0.7281	0.0073	-9.90
00229	B	145655	0.5260	0.1659	0.5260	0.2190	0.0858	0.0032	0.4375	-0.3928	0.4375	-0.4100	-0.3151	0.9637	0.0061	0.50
00230	B	145655	0.7629	0.1146	0.7629	0.0467	0.0741	0.0016	0.5457	-0.4303	0.5457	-0.3016	-0.4504	-0.5216	0.0070	-9.90
00231	A	145655	0.8241	0.8241	0.1010	0.0399	0.0323	0.0026	0.4450	0.4450	-0.3505	-0.2874	-0.2692	-0.9792	0.0078	-9.90
00232	D	145655	0.7191	0.1434	0.0831	0.0530	0.7191	0.0014	0.4539	-0.2972	-0.3886	-0.3773	0.4539	-0.2306	0.0067	-9.90
00233	B	145655	0.6607	0.0451	0.6607	0.1408	0.1513	0.0022	0.4953	-0.2461	0.4953	-0.4689	-0.3974	0.1554	0.0063	-9.90
00234	B	145655	0.5850	0.2824	0.5850	0.0825	0.0482	0.0019	0.3834	-0.3114	0.3834	-0.3265	-0.3433	0.5523	0.0061	9.90
00235	D	145655	0.6273	0.0843	0.1244	0.1620	0.6273	0.0020	0.5769	-0.4604	-0.5197	-0.4660	0.5769	0.3106	0.0062	-9.90
00236	B	145655	0.7169	0.1856	0.7169	0.0619	0.0336	0.0019	0.4092	-0.3628	0.4092	-0.2521	-0.2645	-0.1967	0.0066	6.00
00237	B	145655	0.6218	0.1241	0.6218	0.1672	0.0832	0.0036	0.3804	-0.2773	0.3804	-0.3207	-0.3077	0.3816	0.0062	9.10
00238	C	145655	0.8892	0.0715	0.0302	0.8892	0.0089	0.0002	0.2562	-0.2545	-0.0947	0.2562	-0.0648	-1.5780	0.0092	9.90
00239	B	145655	0.7979	0.0805	0.7979	0.0392	0.0813	0.0011	0.4720	-0.3509	0.4720	-0.3301	-0.3289	-0.7762	0.0074	-9.90
00240	A	145655	0.5887	0.5887	0.0525	0.2948	0.0632	0.0007	0.5158	0.5158	-0.4152	-0.4811	-0.3547	0.5160	0.0061	-9.90
00241	C	145655	0.6536	0.0904	0.1278	0.6536	0.1266	0.0017	0.5285	-0.4879	-0.4038	0.5285	-0.3888	0.1383	0.0064	-9.90
00242	A	145655	0.6977	0.6977	0.1406	0.1181	0.0426	0.0009	0.3245	0.3245	-0.2620	-0.2501	-0.2160	-0.0179	0.0065	9.90
00243	C	145655	0.7673	0.0335	0.1352	0.7673	0.0627	0.0014	0.3256	-0.2293	-0.3191	0.3256	-0.0998	-0.5102	0.0070	9.90
00244	B	145655	0.5367	0.1811	0.5367	0.1218	0.1587	0.0017	0.2859	-0.2709	0.2859	-0.1491	-0.2783	0.9324	0.0061	9.90
00245	D	145655	0.5055	0.2493	0.1775	0.0667	0.5055	0.0010	0.4131	-0.4870	-0.2604	-0.2767	0.4131	1.0108	0.0061	9.90
00246	B	145655	0.8186	0.0771	0.8186	0.0391	0.0644	0.0008	0.4231	-0.2117	0.4231	-0.3377	-0.3582	-0.9343	0.0077	2.50
00247	B	145655	0.7042	0.2002	0.7042	0.0597	0.0350	0.0008	0.4024	-0.3042	0.4024	-0.3107	-0.3611	-0.0779	0.0065	9.90
00248	D	145655	0.6578	0.0281	0.2654	0.0482	0.6578	0.0005	0.3878	-0.3223	-0.3238	-0.2998	0.3878	0.1769	0.0063	9.90
00249	C	145655	0.7979	0.0575	0.1085	0.7979	0.0347	0.0013	0.3763	-0.2519	-0.3002	0.3763	-0.2201	-0.7170	0.0073	2.20
00250	C	145655	0.5245	0.1927	0.0979	0.5245	0.1827	0.0023	0.4861	-0.3701	-0.3712	0.4861	-0.5268	0.8502	0.0061	-9.90
00251	A	145655	0.8203	0.8203	0.0854	0.0224	0.0713	0.0006	0.4021	0.4021	-0.3054	-0.2141	-0.2922	-0.9311	0.0077	-8.20
00252	A	145655	0.6807	0.6807	0.1031	0.1839	0.0309	0.0013	0.2696	0.2696	-0.2899	-0.1512	-0.2147	0.0367	0.0064	9.90
00253	D	145655	0.6488	0.0239	0.2577	0.0687	0.6488	0.0009	0.3877	-0.2999	-0.2949	-0.3893	0.3877	0.2245	0.0063	9.90
00254	B	145655	0.7403	0.0604	0.7403	0.1540	0.0448	0.0006	0.4139	-0.2817	0.4139	-0.2904	-0.3913	-0.3353	0.0068	6.60
00255	D	145655	0.6110	0.1020	0.1408	0.1451	0.6110	0.0011	0.5261	-0.5133	-0.5190	-0.3081	0.5261	0.4657	0.0062	-9.90
00256	B	145655	0.7085	0.0858	0.7085	0.1118	0.0926	0.0012	0.5530	-0.4314	0.5530	-0.4420	-0.4049	-0.1502	0.0066	-9.90
00257	D	145655	0.6012	0.0639	0.0916	0.2419	0.6012	0.0013	0.4442	-0.3968	-0.4150	-0.3383	0.4442	0.4620	0.0062	-7.30
00258	B	145655	0.4913	0.1899	0.4913	0.1719	0.1455	0.0013	0.3031	-0.2312	0.3031	-0.3164	-0.2594	1.0958	0.0061	9.90
00259	D	145655	0.5491	0.0960	0.1004	0.2529	0.5491	0.0016	0.3956	-0.3893	-0.3976	-0.2757	0.3956	0.7607	0.0061	9.90
00260	D	145655	0.4160	0.1655	0.1951	0.2219	0.4160	0.0016	0.3829	-0.4393	-0.3536	-0.3298	0.3829	1.4567	0.0061	9.90
00261	B	145655	0.6365	0.1701	0.6365	0.1108	0.0809	0.0016	0.4031	-0.2542	0.4031	-0.3978	-0.3363	0.2852	0.0063	7.50
00262	A	145655	0.8243	0.8243	0.0331	0.0889	0.0524	0.0014	0.3246	0.3246	-0.2459	-0.2199	-0.2024	-0.9215	0.0077	6.80
00263	C	145655	0.6961	0.0881	0.0218	0.6961	0.1928	0.0011	0.3872	-0.2231	-0.2777	0.3872	-0.3563	-0.0739	0.0065	9.90
00264	D	145655	0.5468	0.0512	0.2438	0.1569	0.5468	0.0014	0.3410	-0.3303	-0.2636	-0.3135	0.3410	0.8012	0.0061	9.90

Appendix X: 2006 Common Grade 8 Multiple Choice Statistics for Mathematics

Item Detail			Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00265	C	145655	0.5216	0.0407	0.0552	0.5216	0.3810	0.0015	0.5293	-0.3042	-0.3328	0.5293	-0.5366	0.8864	0.0061	-9.90
00266	B	145655	0.4805	0.2497	0.4805	0.1333	0.1348	0.0017	0.4332	-0.4231	0.4332	-0.3834	-0.3542	1.1039	0.0061	5.30
00267	B	145655	0.8792	0.0500	0.8792	0.0411	0.0280	0.0016	0.4348	-0.2882	0.4348	-0.2844	-0.2888	-1.4581	0.0089	-9.90
00268	D	145655	0.7077	0.0713	0.1171	0.1020	0.7077	0.0019	0.5082	-0.3858	-0.3547	-0.4263	0.5082	-0.1193	0.0066	-9.90
00269	C	145655	0.8871	0.0282	0.0481	0.8871	0.0341	0.0025	0.4060	-0.2548	-0.2803	0.4060	-0.2586	-1.5562	0.0092	-9.90

Appendix Y:

**2006 Common Grade 11 Multiple Choice Statistics for
Mathematics**

Appendix Y: 2006 Common Grade 11 Multiple Choice Statistics for Mathematics

Item Detail			Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00270	A	134411	0.7206	0.7206	0.1655	0.0495	0.0638	0.0006	0.5479	0.5479	-0.4848	-0.4498	-0.2985	-0.6818	0.0071	-9.90
00271	C	134411	0.7199	0.0556	0.1513	0.7199	0.0722	0.0011	0.3860	-0.2642	-0.3245	0.3860	-0.2513	-0.6057	0.0070	9.90
00272	B	134411	0.5231	0.2232	0.5231	0.1440	0.1085	0.0013	0.3209	-0.2490	0.3209	-0.3492	-0.2395	0.5634	0.0065	9.90
00273	B	134411	0.7944	0.1276	0.7944	0.0493	0.0281	0.0006	0.3843	-0.3198	0.3843	-0.2518	-0.2044	-1.1351	0.0077	9.90
00274	C	134411	0.6269	0.0864	0.2418	0.6269	0.0402	0.0048	0.4635	-0.2986	-0.4821	0.4635	-0.1648	-0.0896	0.0066	9.90
00275	B	134411	0.6814	0.2265	0.6814	0.0568	0.0323	0.0031	0.4966	-0.4622	0.4966	-0.3608	-0.2006	-0.4099	0.0068	-9.90
00276	D	134411	0.4051	0.0585	0.1981	0.3365	0.4051	0.0018	0.4975	-0.5059	-0.6684	-0.3873	0.4975	1.1749	0.0066	-9.90
00277	C	134411	0.6084	0.1243	0.1458	0.6084	0.1203	0.0012	0.3296	-0.2501	-0.2505	0.3296	-0.2951	0.0678	0.0066	9.90
00278	C	134411	0.5792	0.0563	0.3160	0.5792	0.0475	0.0010	0.4901	-0.3134	-0.4642	0.4901	-0.3785	0.1859	0.0065	-9.90
00279	A	134411	0.7321	0.7321	0.0982	0.1477	0.0208	0.0012	0.4560	0.4560	-0.2003	-0.4774	-0.3015	-0.7329	0.0071	0.10
00280	D	134411	0.4198	0.1609	0.1698	0.2458	0.4198	0.0038	0.4387	-0.4591	-0.5032	-0.3494	0.4387	1.0793	0.0065	9.90
00281	C	134411	0.7913	0.0662	0.0691	0.7913	0.0714	0.0020	0.5028	-0.3678	-0.3760	0.5028	-0.3312	-1.1518	0.0077	-9.90
00282	A	134411	0.9233	0.9233	0.0415	0.0155	0.0189	0.0008	0.3455	0.3455	-0.2239	-0.2008	-0.2352	-2.5309	0.0114	-2.00
00283	B	134411	0.7340	0.0530	0.7340	0.1449	0.0652	0.0028	0.4934	-0.3079	0.4934	-0.4092	-0.3623	-0.7465	0.0072	-9.90
00284	D	134411	0.8379	0.0486	0.0606	0.0509	0.8379	0.0020	0.4672	-0.2923	-0.3452	-0.3119	0.4672	-1.6213	0.0086	-9.90
00285	B	134411	0.6827	0.0797	0.6827	0.0285	0.2077	0.0014	0.4797	-0.4825	0.4797	-0.3380	-0.3447	-0.3785	0.0068	-9.90
00286	C	134411	0.6649	0.0692	0.1430	0.6649	0.1193	0.0036	0.4192	-0.3372	-0.3328	0.4192	-0.3109	-0.2902	0.0067	5.60
00287	B	134411	0.7544	0.0902	0.7544	0.1030	0.0499	0.0025	0.4212	-0.3296	0.4212	-0.3135	-0.2541	-0.8516	0.0073	-9.90
00288	A	134411	0.4672	0.4672	0.1729	0.1838	0.1728	0.0033	0.4408	0.4408	-0.3370	-0.4399	-0.4382	0.7938	0.0065	9.90
00289	C	134411	0.4755	0.1462	0.1693	0.4755	0.2000	0.0089	0.2584	-0.3087	-0.2359	0.2584	-0.1708	0.8101	0.0065	9.90
00290	B	134411	0.5686	0.1840	0.5686	0.1248	0.1198	0.0029	0.4217	-0.3044	0.4217	-0.3761	-0.4003	0.2435	0.0065	9.90
00291	B	134411	0.8209	0.0937	0.8209	0.0577	0.0244	0.0033	0.3772	-0.2455	0.3772	-0.3002	-0.2427	-1.4068	0.0082	9.90
00292	C	134411	0.7642	0.1043	0.0739	0.7642	0.0558	0.0018	0.3691	-0.3196	-0.3119	0.3691	-0.1215	-0.9403	0.0074	9.90
00293	C	134411	0.5662	0.1755	0.2194	0.5662	0.0359	0.0030	0.5598	-0.5426	-0.5174	0.5598	-0.2222	0.3069	0.0065	-9.90
00294	B	134411	0.6703	0.1285	0.6703	0.1416	0.0584	0.0012	0.4361	-0.2317	0.4361	-0.4365	-0.3379	-0.3423	0.0068	2.60
00295	C	134411	0.7513	0.0238	0.1342	0.7513	0.0882	0.0026	0.4128	-0.2277	-0.2963	0.4128	-0.3606	-0.8331	0.0073	-5.00
00296	C	134411	0.6579	0.1323	0.1677	0.6579	0.0412	0.0009	0.4590	-0.4232	-0.3777	0.4590	-0.2390	-0.2910	0.0067	7.80
00297	A	134411	0.6594	0.6594	0.0803	0.1051	0.1537	0.0014	0.5235	0.5235	-0.3604	-0.4617	-0.4191	-0.3300	0.0068	-9.90
00298	A	134411	0.7820	0.7820	0.0932	0.0767	0.0465	0.0015	0.3888	0.3888	-0.3033	-0.2825	-0.2348	-1.0839	0.0076	9.90
00299	D	134411	0.5369	0.0985	0.1937	0.1673	0.5369	0.0035	0.4280	-0.3780	-0.3751	-0.3714	0.4280	0.4319	0.0065	9.90
00300	A	134411	0.5675	0.5675	0.1973	0.1511	0.0815	0.0026	0.4996	0.4996	-0.5246	-0.4039	-0.2871	0.2431	0.0065	-7.50
00301	B	134411	0.5343	0.3556	0.5343	0.0608	0.0480	0.0013	0.4268	-0.4035	0.4268	-0.4031	-0.2250	0.5479	0.0065	9.90
00302	A	134411	0.8037	0.8037	0.0649	0.0708	0.0591	0.0015	0.4692	0.4692	-0.3381	-0.3523	-0.2917	-1.3113	0.0080	-9.90
00303	A	134411	0.7490	0.7490	0.0564	0.1468	0.0466	0.0013	0.4198	0.4198	-0.3247	-0.3070	-0.3078	-0.8362	0.0073	6.40
00304	C	134411	0.8671	0.0303	0.0631	0.8671	0.0389	0.0006	0.4825	-0.2871	-0.3454	0.4825	-0.3357	-1.8336	0.0091	-9.90
00305	D	134411	0.5565	0.1016	0.2258	0.1136	0.5565	0.0024	0.5398	-0.4583	-0.5107	-0.4094	0.5398	0.2817	0.0065	-9.90
00306	A	134411	0.8064	0.8064	0.0927	0.0533	0.0467	0.0009	0.4773	0.4773	-0.3501	-0.3334	-0.3261	-1.2901	0.0079	-9.90
00307	A	134411	0.7760	0.7760	0.1183	0.0742	0.0301	0.0013	0.4275	0.4275	-0.3211	-0.3212	-0.2589	-1.0023	0.0075	-9.90
00308	C	134411	0.6263	0.0434	0.0681	0.6263	0.2610	0.0012	0.5256	-0.3955	-0.4056	0.5256	-0.4751	-0.0405	0.0066	-9.90
00309	B	134411	0.7289	0.0996	0.7289	0.1284	0.0416	0.0015	0.4747	-0.3401	0.4747	-0.4161	-0.2725	-0.6978	0.0071	-9.90
00310	D	134411	0.7580	0.0177	0.1872	0.0364	0.7580	0.0006	0.4140	-0.2530	-0.3346	-0.3291	0.4140	-0.8719	0.0073	5.90
00311	A	134411	0.7058	0.7058	0.0980	0.0725	0.1217	0.0020	0.4622	0.4622	-0.3404	-0.3012	-0.3937	-0.5429	0.0069	-9.90
00312	B	134411	0.4517	0.3438	0.4517	0.1297	0.0726	0.0021	0.4599	-0.4436	0.4599	-0.4404	-0.3465	1.0621	0.0065	9.90
00313	A	134411	0.7023	0.7023	0.1337	0.1135	0.0492	0.0014	0.5188	0.5188	-0.4666	-0.3842	-0.3167	-0.5592	0.0070	-9.90
00314	D	134411	0.6789	0.0520	0.1148	0.1527	0.6789	0.0015	0.6343	-0.4894	-0.5477	-0.5079	0.6343	-0.4288	0.0069	-9.90
00315	D	134411	0.6447	0.1334	0.0860	0.1349	0.6447	0.0010	0.4359	-0.3420	-0.4282	-0.2906	0.4359	-0.1888	0.0067	6.50
00316	C	134411	0.7647	0.0763	0.0746	0.7647	0.0832	0.0011	0.4606	-0.2202	-0.4164	0.4606	-0.3593	-0.9788	0.0074	-8.40
00317	B	134411	0.5955	0.1618	0.5955	0.1539	0.0858	0.0031	0.3925	-0.2792	0.3925	-0.3520	-0.3415	0.0971	0.0065	9.90
00318	B	134411	0.8699	0.0375	0.8699	0.0618	0.0295	0.0013	0.4954	-0.3242	0.4954	-0.3771	-0.2848	-1.9111	0.0093	-9.90

Appendix Y: 2006 Common Grade 11 Multiple Choice Statistics for Mathematics

Item Detail			Proportions						Point Biserials					Rasch Statistics		
Item ID	Answer Key	N	P-Value	A	B	C	D	Other	Item Total Corr	A	B	C	D	Logit	SE	Outfit t
00319	C	134411	0.6914	0.1936	0.0711	0.6914	0.0423	0.0015	0.4245	-0.3523	-0.2877	0.4245	-0.3388	-0.4528	0.0069	9.90
00320	D	134411	0.8715	0.0259	0.0389	0.0624	0.8715	0.0013	0.4355	-0.2686	-0.3020	-0.2987	0.4355	-1.8842	0.0093	-9.90
00321	D	134411	0.6877	0.1059	0.1103	0.0946	0.6877	0.0015	0.5964	-0.4574	-0.5036	-0.4604	0.5964	-0.4964	0.0069	-9.90
00322	A	134411	0.8983	0.8983	0.0456	0.0293	0.0255	0.0013	0.3553	0.3553	-0.2350	-0.2314	-0.2150	-2.1507	0.0101	-8.00
00323	B	134411	0.5906	0.1244	0.5906	0.1708	0.1107	0.0035	0.4408	-0.4133	0.4408	-0.3881	-0.2791	0.1290	0.0065	3.10

Appendix Z:

**2006 Common Grade 5 Constructed Response Statistics
for Reading**

Appendix Z: 2006 Common Grade 5 Constructed Response Statistics for Reading

Item Detail			Proportions					Point Biserials					Rasch Statistics		
Item ID	Max Score Points	N	P-Value	0	1	2	3	Item Total Corr	0	1	2	3	Logit	SE	Outfit t
00324	3	133440	0.6384	0.0621	0.2615	0.3754	0.3010	0.5389	-0.4345	-0.4638	-0.3516	0.3516	0.1744	0.0040	9.90
00325	3	133440	0.5648	0.0778	0.3188	0.4346	0.1688	0.5901	-0.4244	-0.5295	-0.3282	0.3282	0.6432	0.0042	-9.90
00326	3	133440	0.6138	0.0585	0.2679	0.4475	0.2262	0.5626	-0.4165	-0.4998	-0.3336	0.3336	0.3476	0.0042	1.80
00327	3	133440	0.4970	0.1611	0.3503	0.3249	0.1636	0.5713	-0.4621	-0.4949	-0.3367	0.3367	1.0726	0.0038	-4.70

NOTE: Overall P-value is an indicator of item difficulty, with higher values indicating easier items. Category proportion values are the percentage of students attaining each score category.

Appendix AA:
**2006 Common Grade 8 Constructed Response Statistics
for Reading**

Appendix AA: 2006 Common Grade 8 Constructed Response Statistics for Reading

Item Detail			Proportions					Point Biserials					Rasch Statistics		
Item ID	Max Score Points	N	P-Value	0	1	2	3	Item Total Corr	0	1	2	3	Logit	SE	Outfit t
00328	3	145140	0.4434	0.2868	0.2056	0.3982	0.1094	0.5758	-0.5127	-0.5129	-0.2929	0.2929	1.7066	0.0035	9.90
00329	3	145140	0.5785	0.1001	0.2961	0.3720	0.2318	0.6058	-0.4380	-0.5439	-0.3882	0.3882	0.7504	0.0038	-6.40
00330	3	145140	0.5200	0.1276	0.3174	0.4225	0.1325	0.6100	-0.4965	-0.5217	-0.3219	0.3219	1.1673	0.0039	-9.90
00331	3	145140	0.6976	0.0432	0.1165	0.5448	0.2955	0.6099	-0.3747	-0.5378	-0.4159	0.4159	0.0728	0.0044	-9.90

NOTE: Overall P-value is an indicator of item difficulty, with higher values indicating easier items. Category proportion values are the percentage of students attaining each score category.

Appendix BB:

**2006 Common Grade 11 Constructed Response
Statistics for Reading**

Appendix BB: 2006 Common Grade 11 Constructed Response Statistics for Reading

Item Detail			Proportions					Point Biserials					Rasch Statistics		
Item ID	Max Score Points	N	P-Value	0	1	2	3	Item Total Corr	0	1	2	3	Logit	SE	Outfit t
00332	3	134083	0.5846	0.0692	0.2510	0.5365	0.1433	0.6379	-0.4639	-0.5766	-0.3188	0.3188	0.4918	0.0044	-9.90
00333	3	134083	0.5654	0.1153	0.1730	0.6117	0.1000	0.6492	-0.5360	-0.5988	-0.2592	0.2592	0.7744	0.0044	-9.90
00334	3	134083	0.5340	0.0509	0.3747	0.4958	0.0785	0.5035	-0.3691	-0.4364	-0.2177	0.2177	0.7470	0.0047	-9.90
00335	3	134083	0.6304	0.0398	0.1749	0.6395	0.1457	0.5496	-0.3596	-0.4950	-0.2903	0.2903	0.1298	0.0048	-9.90

NOTE: Overall P-value is an indicator of item difficulty, with higher values indicating easier items. Category proportion values are the percentage of students attaining each score category.

Appendix CC:

**2006 Common Grade 5 Constructed Response Statistics
for Mathematics**

Appendix CC: 2006 Common Grade 5 Constructed Response Statistics for Mathematics

Item Detail			Proportions						Point Biserials					Rasch Statistics			
Item ID	Max Score Points	N	P-Value	0	1	2	3	4	Item Total Corr	0	1	2	3	4	Logit	SE	Outfit t
00336	4	133871	0.5003	0.1635	0.2315	0.2137	0.2227	0.1686	0.6865	-0.5476	-0.6112	-0.5504	-0.3915	0.3915	1.4403	0.0031	2.80
00337	4	133871	0.5390	0.0742	0.3692	0.1231	0.1930	0.2404	0.5753	-0.3122	-0.5117	-0.5065	-0.4306	0.4306	1.0880	0.0031	9.90
00338	4	133871	0.7846	0.0097	0.0583	0.1358	0.3764	0.4198	0.4485	-0.1840	-0.3039	-0.3634	-0.3532	0.3532	-0.3040	0.0040	9.90

NOTE: Overall P-value is an indicator of item difficulty, with higher values indicating easier items. Category proportion values are the percentage of students attaining each score category.

Appendix DD:

**2006 Common Grade 8 Constructed Response Statistics
for Mathematics**

Appendix DD: 2006 Common Grade 8 Constructed Response Statistics for Mathematics

Item Detail			Proportions						Point Biserials						Rasch Statistics		
Item ID	Max Score Points	N	P-Value	0	1	2	3	4	Item Total Corr	0	1	2	3	4	Logit	SE	Outfit t
00339	4	145655	0.3158	0.3558	0.2670	0.2095	0.0938	0.0739	0.6395	-0.5868	-0.5596	-0.4219	-0.3168	0.3168	1.9390	0.0032	7.00
00340	4	145655	0.5435	0.1494	0.1808	0.1878	0.3101	0.1718	0.6307	-0.4459	-0.5249	-0.5409	-0.4167	0.4167	0.8524	0.0030	9.90
00341	4	145655	0.6160	0.0891	0.2525	0.1001	0.2217	0.3365	0.6548	-0.4504	-0.5587	-0.5682	-0.5115	0.5115	0.3526	0.0029	9.90

NOTE: Overall P-value is an indicator of item difficulty, with higher values indicating easier items. Category proportion values are the percentage of students attaining each score category.

Appendix EE:

**2006 Common Grade 11 Constructed Response
Statistics for Mathematics**

Appendix EE: 2006 Common Grade 11 Constructed Response Statistics for Mathematics

Item Detail			Proportions						Point Biserials					Rasch Statistics			
Item ID	Max Score Points	N	P-Value	0	1	2	3	4	Item Total Corr	0	1	2	3	4	Logit	SE	Outfit t
00342	4	134411	0.3488	0.3752	0.1772	0.1766	0.2188	0.0521	0.7357	-0.6614	-0.6792	-0.5705	-0.2651	0.2651	1.5965	0.0033	-9.90
00343	4	134411	0.6232	0.0720	0.1835	0.1303	0.4078	0.2063	0.7039	-0.3177	-0.6211	-0.6421	-0.4583	0.4583	-0.0553	0.0034	7.90
00344	4	134411	0.6407	0.0659	0.1193	0.2762	0.2633	0.2753	0.6595	-0.4102	-0.5409	-0.5668	-0.4351	0.4351	-0.1934	0.0035	9.90

NOTE: Overall P-value is an indicator of item difficulty, with higher values indicating easier items. Category proportion values are the percentage of students attaining each score category.

Appendix FF:
2006 Raw to Scale Score Tables

Appendix FF: Raw to Scale Score Table - Grade 5 Reading

Raw Score	Measure	Scale Score	Logit SE	Scale Score SE	Freq	Freq %	Cum Freq	Cum Freq %	Percentile
0	-5.6123	700	1.8372	365	0	0	0	0	0
1	-4.3789	700	1.0208	203	0	0	0	0	0
2	-3.6438	700	0.7361	146	4	0	4	0	1
3	-3.1964	700	0.6126	122	14	0	18	0	1
4	-2.8668	700	0.5403	108	25	0	43	0	1
5	-2.6017	700	0.492	98	68	0.1	111	0.1	1
6	-2.3773	700	0.457	91	151	0.1	262	0.2	1
7	-2.1809	700	0.4304	86	258	0.2	520	0.4	1
8	-2.0049	700	0.4094	81	393	0.3	913	0.7	1
9	-1.8444	728	0.3924	78	520	0.4	1433	1.1	1
10	-1.696	757	0.3784	75	671	0.5	2104	1.6	1
11	-1.5573	785	0.3667	73	859	0.6	2963	2.2	2
12	-1.4265	811	0.3569	71	941	0.7	3904	2.9	3
13	-1.3022	836	0.3485	69	1035	0.8	4939	3.7	3
14	-1.1834	859	0.3413	68	1093	0.8	6032	4.5	4
15	-1.069	882	0.3351	67	1184	0.9	7216	5.4	5
16	-0.9585	904	0.3298	66	1254	0.9	8470	6.3	6
17	-0.8513	925	0.3253	65	1277	1	9747	7.3	7
18	-0.7468	946	0.3214	64	1324	1	11071	8.3	8
19	-0.6445	966	0.3182	63	1448	1.1	12519	9.4	9
20	-0.5441	986	0.3154	63	1530	1.1	14049	10.5	10
21	-0.4454	1006	0.3132	62	1600	1.2	15649	11.7	11
22	-0.3479	1025	0.3115	62	1797	1.3	17446	13.1	12
23	-0.2513	1045	0.3101	62	1891	1.4	19337	14.5	14
24	-0.1554	1064	0.3092	62	2082	1.6	21419	16.1	15
25	-0.0599	1083	0.3087	61	2214	1.7	23633	17.7	17
26	0.0353	1102	0.3086	61	2345	1.8	25978	19.5	19
27	0.1307	1121	0.3089	61	2527	1.9	28505	21.4	20
28	0.2263	1140	0.3096	62	2883	2.2	31388	23.5	22
29	0.3225	1159	0.3107	62	2945	2.2	34333	25.7	25
30	0.4195	1178	0.3122	62	3176	2.4	37509	28.1	27
31	0.5175	1197	0.3142	62	3440	2.6	40949	30.7	29
32	0.617	1217	0.3166	63	3731	2.8	44680	33.5	32
33	0.7181	1237	0.3195	63	4009	3	48689	36.5	35
34	0.8213	1258	0.323	64	4331	3.2	53020	39.7	38
35	0.9268	1279	0.327	65	4803	3.6	57823	43.3	42
36	1.0353	1300	0.3318	66	4966	3.7	62789	47.1	45
37	1.1472	1323	0.3373	67	5402	4	68191	51.1	49
38	1.263	1346	0.3437	68	5825	4.4	74016	55.5	53
39	1.3836	1370	0.3511	70	6089	4.6	80105	60	58
40	1.5099	1395	0.3597	71	6285	4.7	86390	64.7	62
41	1.6428	1421	0.3698	73	6394	4.8	92784	69.5	67
42	1.784	1449	0.3818	76	6567	4.9	99351	74.5	72
43	1.935	1479	0.396	78	6516	4.9	105867	79.3	77
44	2.0985	1512	0.4132	82	6086	4.6	111953	83.9	82
45	2.2778	1547	0.4344	86	5465	4.1	117418	88	86
46	2.4779	1587	0.4612	91	4872	3.7	122290	91.6	90
47	2.7065	1633	0.4964	98	4083	3.1	126373	94.7	93
48	2.9762	1686	0.5448	108	3052	2.3	129425	97	96
49	3.311	1753	0.617	122	2115	1.6	131540	98.6	98
50	3.764	1843	0.7403	147	1238	0.9	132778	99.5	99
51	4.5056	1990	1.0241	203	519	0.4	133297	99.9	99
52	5.7439	2236	1.8392	366	143	0.1	133440	100	99

Appendix FF: Raw to Scale Score Table - Grade 8 Reading

Raw Score	Measure	Scale Score	Logit SE	Scale Score SE	Freq	Freq %	Cum Freq	Cum Freq %	Percentile
0	-5.3695	700	1.8364	431	0	0	0	0	0
1	-4.1382	700	1.0193	239	0	0	0	0	0
2	-3.4061	700	0.7341	172	2	0	2	0	1
3	-2.9617	700	0.6102	143	5	0	7	0	1
4	-2.635	700	0.5377	126	23	0	30	0	1
5	-2.3726	700	0.4892	115	43	0	73	0.1	1
6	-2.1509	700	0.4542	107	82	0.1	155	0.1	1
7	-1.9569	700	0.4275	100	153	0.1	308	0.2	1
8	-1.7832	700	0.4066	96	301	0.2	609	0.4	1
9	-1.6249	732	0.3898	92	440	0.3	1049	0.7	1
10	-1.4784	767	0.3761	88	601	0.4	1650	1.1	1
11	-1.3413	799	0.3647	86	820	0.6	2470	1.7	1
12	-1.2119	829	0.3551	83	975	0.7	3445	2.4	2
13	-1.0887	858	0.3471	82	1098	0.8	4543	3.1	3
14	-0.9707	886	0.3402	80	1210	0.8	5753	4	4
15	-0.8569	912	0.3344	79	1385	1	7138	4.9	4
16	-0.7468	938	0.3295	77	1473	1	8611	5.9	5
17	-0.6396	964	0.3254	76	1503	1	10114	7	6
18	-0.5348	988	0.3219	76	1610	1.1	11724	8.1	8
19	-0.4322	1012	0.3189	75	1698	1.2	13422	9.2	9
20	-0.3313	1036	0.3165	74	1767	1.2	15189	10.5	10
21	-0.2317	1059	0.3146	74	1999	1.4	17188	11.8	11
22	-0.1332	1082	0.3131	73	2089	1.4	19277	13.3	13
23	-0.0355	1105	0.312	73	2170	1.5	21447	14.8	14
24	0.0616	1128	0.3113	73	2428	1.7	23875	16.4	16
25	0.1584	1151	0.311	73	2661	1.8	26536	18.3	17
26	0.2551	1174	0.3111	73	2797	1.9	29333	20.2	19
27	0.3521	1196	0.3116	73	3080	2.1	32413	22.3	21
28	0.4494	1219	0.3125	73	3347	2.3	35760	24.6	23
29	0.5474	1242	0.3137	73	3531	2.4	39291	27.1	26
30	0.6464	1265	0.3155	74	3806	2.6	43097	29.7	28
31	0.7466	1289	0.3177	74	4020	2.8	47117	32.5	31
32	0.8483	1313	0.3204	75	4218	2.9	51335	35.4	34
33	0.952	1337	0.3237	76	4423	3	55758	38.4	37
34	1.0581	1362	0.3276	77	4749	3.3	60507	41.7	40
35	1.1669	1388	0.3323	78	5136	3.5	65643	45.2	43
36	1.2791	1414	0.3377	79	5386	3.7	71029	48.9	47
37	1.3952	1441	0.344	80	5535	3.8	76564	52.8	51
38	1.516	1470	0.3513	82	5822	4	82386	56.8	55
39	1.6424	1499	0.3598	84	6064	4.2	88450	60.9	59
40	1.7753	1531	0.3697	86	6313	4.3	94763	65.3	63
41	1.9161	1564	0.3811	89	6416	4.4	101179	69.7	68
42	2.0664	1599	0.3945	92	6594	4.5	107773	74.3	72
43	2.2281	1637	0.4102	96	6483	4.5	114256	78.7	76
44	2.404	1678	0.4291	100	6474	4.5	120730	83.2	81
45	2.5978	1724	0.4519	105	6045	4.2	126775	87.3	85
46	2.8146	1775	0.4803	112	5493	3.8	132268	91.1	89
47	3.0624	1833	0.5169	120	4579	3.2	136847	94.3	93
48	3.3545	1901	0.5663	132	3595	2.5	140442	96.8	96
49	3.7149	1986	0.6389	149	2576	1.8	143018	98.5	98
50	4.1974	2099	0.7611	177	1422	1	144440	99.5	99
51	4.9722	2281	1.0412	243	588	0.4	145028	99.9	99
52	6.2362	2578	1.8495	434	112	0.1	145140	100	99

Appendix FF: Raw to Scale Score Table - Grade 11 Reading

Raw Score	Measure	Scale Score	Logit SE	Scale Score SE	Freq	Freq %	Cum Freq	Cum Freq %	Percentile
0	-5.624	700	1.8377	451	1	0	1	0	1
1	-4.3898	700	1.0213	251	0	0	1	0	1
2	-3.6542	700	0.7362	181	2	0	3	0	1
3	-3.207	700	0.6121	150	5	0	8	0	1
4	-2.8782	700	0.5393	132	18	0	26	0	1
5	-2.6144	700	0.4904	120	42	0	68	0.1	1
6	-2.3918	700	0.4549	112	73	0.1	141	0.1	1
7	-2.1974	700	0.4277	105	146	0.1	287	0.2	1
8	-2.0239	700	0.4063	100	245	0.2	532	0.4	1
9	-1.8659	700	0.3889	95	310	0.2	842	0.6	1
10	-1.7203	700	0.3746	92	455	0.3	1297	1	1
11	-1.5846	726	0.3626	89	586	0.4	1883	1.4	1
12	-1.4569	758	0.3525	87	698	0.5	2581	1.9	2
13	-1.3357	787	0.3439	84	795	0.6	3376	2.5	2
14	-1.22	816	0.3366	83	975	0.7	4351	3.2	3
15	-1.1089	843	0.3303	81	1101	0.8	5452	4.1	4
16	-1.0016	869	0.325	80	1181	0.9	6633	4.9	5
17	-0.8974	895	0.3205	79	1206	0.9	7839	5.8	5
18	-0.7959	920	0.3168	78	1397	1	9236	6.9	6
19	-0.6966	944	0.3137	77	1486	1.1	10722	8	7
20	-0.599	968	0.3112	76	1614	1.2	12336	9.2	9
21	-0.5028	992	0.3093	76	1799	1.3	14135	10.5	10
22	-0.4076	1015	0.308	76	1758	1.3	15893	11.9	11
23	-0.313	1038	0.3071	75	2032	1.5	17925	13.4	13
24	-0.2188	1061	0.3068	75	2173	1.6	20098	15	14
25	-0.1247	1085	0.3069	75	2408	1.8	22506	16.8	16
26	-0.0303	1108	0.3076	75	2689	2	25195	18.8	18
27	0.0646	1131	0.3087	76	2967	2.2	28162	21	20
28	0.1604	1155	0.3103	76	3188	2.4	31350	23.4	22
29	0.2574	1178	0.3125	77	3503	2.6	34853	26	25
30	0.3558	1203	0.3152	77	3812	2.8	38665	28.8	27
31	0.4561	1227	0.3184	78	4056	3	42721	31.9	30
32	0.5587	1252	0.3222	79	4355	3.2	47076	35.1	33
33	0.6639	1278	0.3267	80	4661	3.5	51737	38.6	37
34	0.7723	1305	0.3319	81	5056	3.8	56793	42.4	40
35	0.8845	1332	0.338	83	5485	4.1	62278	46.4	44
36	1.001	1361	0.3449	84	5675	4.2	67953	50.7	49
37	1.1227	1391	0.3528	86	5838	4.4	73791	55	53
38	1.2502	1422	0.3618	88	5995	4.5	79786	59.5	57
39	1.3848	1455	0.3722	91	6261	4.7	86047	64.2	62
40	1.5277	1490	0.3841	93	6393	4.8	92440	68.9	67
41	1.6804	1528	0.3978	96	6478	4.8	98918	73.8	71
42	1.8448	1568	0.4136	100	6333	4.7	105251	78.5	76
43	2.0235	1612	0.4321	104	6126	4.6	111377	83.1	81
44	2.2194	1660	0.4537	109	5726	4.3	117103	87.3	85
45	2.4367	1713	0.4792	115	4978	3.7	122081	91	89
46	2.681	1773	0.51	123	4275	3.2	126356	94.2	93
47	2.9602	1842	0.5482	132	3223	2.4	129579	96.6	95
48	3.2875	1922	0.598	144	2206	1.6	131785	98.3	97
49	3.686	2020	0.6688	161	1333	1	133118	99.3	99
50	4.208	2148	0.7867	191	662	0.5	133780	99.8	99
51	5.0217	2348	1.0591	258	252	0.2	134032	100	99
52	6.3112	2664	1.8589	455	51	0	134083	100	99

Appendix FF: Raw to Scale Score Table - Grade 5 Mathematics

Raw Score	Measure	Scale Score	Logit SE	Scale Score SE	Freq	Freq %	Cum Freq	Cum Freq %	Percentile
0	-5.3238	700	1.8346	348	0	0	0	0	0
1	-4.0973	700	1.0158	193	0	0	0	0	0
2	-3.3724	700	0.7291	139	1	0	1	0	1
3	-2.9356	700	0.6038	115	0	0	1	0	1
4	-2.6167	700	0.5301	101	0	0	1	0	1
5	-2.3626	700	0.4805	91	3	0	4	0	1
6	-2.1495	726	0.4443	85	8	0	12	0	1
7	-1.9646	761	0.4166	79	21	0	33	0	1
8	-1.8004	792	0.3946	75	35	0	68	0.1	1
9	-1.6519	821	0.3767	72	81	0.1	149	0.1	1
10	-1.5157	846	0.3617	69	115	0.1	264	0.2	1
11	-1.3895	870	0.3491	66	200	0.1	464	0.3	1
12	-1.2715	893	0.3383	64	264	0.2	728	0.5	1
13	-1.1602	914	0.329	63	358	0.3	1086	0.8	1
14	-1.0546	934	0.3209	61	486	0.4	1572	1.2	1
15	-0.9539	953	0.3139	60	604	0.5	2176	1.6	1
16	-0.8574	971	0.3076	58	703	0.5	2879	2.2	2
17	-0.7645	989	0.3022	57	822	0.6	3701	2.8	2
18	-0.6747	1006	0.2973	56	955	0.7	4656	3.5	3
19	-0.5876	1023	0.293	56	961	0.7	5617	4.2	4
20	-0.5028	1039	0.2892	55	1089	0.8	6706	5	5
21	-0.4202	1054	0.2859	54	1180	0.9	7886	5.9	5
22	-0.3393	1070	0.2829	54	1220	0.9	9106	6.8	6
23	-0.26	1085	0.2803	53	1269	0.9	10375	7.7	7
24	-0.1821	1100	0.278	53	1331	1	11706	8.7	8
25	-0.1054	1114	0.276	52	1522	1.1	13228	9.9	9
26	-0.0298	1128	0.2742	52	1645	1.2	14873	11.1	10
27	0.045	1143	0.2727	52	1666	1.2	16539	12.4	12
28	0.119	1157	0.2714	52	1727	1.3	18266	13.6	13
29	0.1924	1171	0.2704	51	1940	1.4	20206	15.1	14
30	0.2653	1184	0.2695	51	1975	1.5	22181	16.6	16
31	0.3377	1198	0.2688	51	2093	1.6	24274	18.1	17
32	0.4098	1212	0.2684	51	2149	1.6	26423	19.7	19
33	0.4817	1226	0.268	51	2322	1.7	28745	21.5	21
34	0.5535	1239	0.2679	51	2457	1.8	31202	23.3	22
35	0.6253	1253	0.2679	51	2491	1.9	33693	25.2	24
36	0.6972	1266	0.2681	51	2619	2	36312	27.1	26
37	0.7691	1280	0.2684	51	2763	2.1	39075	29.2	28
38	0.8413	1294	0.269	51	2896	2.2	41971	31.4	30
39	0.9138	1308	0.2697	51	2899	2.2	44870	33.5	32
40	0.9868	1321	0.2706	51	3033	2.3	47903	35.8	35
41	1.0603	1335	0.2717	52	3115	2.3	51018	38.1	37
42	1.1345	1349	0.273	52	3134	2.3	54152	40.5	39
43	1.2094	1364	0.2746	52	3251	2.4	57403	42.9	42
44	1.2853	1378	0.2765	52	3356	2.5	60759	45.4	44
45	1.3623	1393	0.2787	53	3531	2.6	64290	48	47
46	1.4407	1408	0.2812	53	3475	2.6	67765	50.6	49
47	1.5206	1423	0.2843	54	3594	2.7	71359	53.3	52
48	1.6024	1438	0.2878	55	3589	2.7	74948	56	55
49	1.6864	1454	0.2919	55	3571	2.7	78519	58.7	57
50	1.773	1471	0.2967	56	3716	2.8	82235	61.4	60
51	1.8626	1488	0.3023	57	3830	2.9	86065	64.3	63
52	1.956	1505	0.3089	59	3773	2.8	89838	67.1	66
53	2.0538	1524	0.3167	60	3801	2.8	93639	69.9	69
54	2.1569	1543	0.3257	62	3817	2.9	97456	72.8	71
55	2.2664	1564	0.3365	64	3796	2.8	101252	75.6	74
56	2.3839	1587	0.3492	66	3849	2.9	105101	78.5	77
57	2.511	1611	0.3644	69	3782	2.8	108883	81.3	80
58	2.6504	1637	0.3828	73	3761	2.8	112644	84.1	83
59	2.8054	1667	0.4054	77	3715	2.8	116359	86.9	86
60	2.9812	1700	0.4339	82	3556	2.7	119915	89.6	88
61	3.1852	1739	0.471	89	3416	2.6	123331	92.1	91
62	3.4303	1785	0.5217	99	3198	2.4	126529	94.5	93
63	3.7403	1844	0.5966	113	2777	2.1	129306	96.6	96
64	4.1686	1925	0.7232	137	2242	1.7	131548	98.3	97
65	4.885	2061	1.0117	192	1609	1.2	133157	99.5	99
66	6.1057	2293	1.8323	348	714	0.5	133871	100	99

Appendix FF: Raw to Scale Score Table - Grade 8 Mathematics

Raw Score	Measure	Scale Score	Logit SE	Scale Score SE	Freq	Freq %	Cum Freq	Cum Freq %	Percentile
0	-5.5307	700	1.8337	326	0	0	0	0	0
1	-4.3063	700	1.0145	180	0	0	0	0	0
2	-3.5839	700	0.7275	129	0	0	0	0	0
3	-3.1491	700	0.6023	107	1	0	1	0	1
4	-2.8319	700	0.5287	94	1	0	2	0	1
5	-2.5792	724	0.4792	85	10	0	12	0	1
6	-2.3672	762	0.4432	79	7	0	19	0	1
7	-2.1831	795	0.4157	74	32	0	51	0	1
8	-2.0196	824	0.3938	70	87	0.1	138	0.1	1
9	-1.8717	850	0.376	67	166	0.1	304	0.2	1
10	-1.7359	874	0.3611	64	247	0.2	551	0.4	1
11	-1.6102	896	0.3486	62	400	0.3	951	0.7	1
12	-1.4925	917	0.3378	60	592	0.4	1543	1.1	1
13	-1.3816	937	0.3285	58	770	0.5	2313	1.6	1
14	-1.2764	956	0.3203	57	934	0.6	3247	2.2	2
15	-1.1762	973	0.3131	56	1063	0.7	4310	3	3
16	-1.0801	991	0.3067	54	1254	0.9	5564	3.8	3
17	-0.9878	1007	0.3011	53	1414	1	6978	4.8	4
18	-0.8987	1023	0.296	53	1496	1	8474	5.8	5
19	-0.8125	1038	0.2914	52	1604	1.1	10078	6.9	6
20	-0.7288	1053	0.2873	51	1646	1.1	11724	8	7
21	-0.6472	1067	0.2836	50	1738	1.2	13462	9.2	9
22	-0.5677	1082	0.2803	50	1865	1.3	15327	10.5	10
23	-0.4901	1095	0.2773	49	1877	1.3	17204	11.8	11
24	-0.4139	1109	0.2746	49	2020	1.4	19224	13.2	13
25	-0.3392	1122	0.2722	48	2058	1.4	21282	14.6	14
26	-0.2657	1135	0.27	48	2161	1.5	23443	16.1	15
27	-0.1933	1148	0.2681	48	2237	1.5	25680	17.6	17
28	-0.1219	1161	0.2664	47	2301	1.6	27981	19.2	18
29	-0.0514	1173	0.2649	47	2425	1.7	30406	20.9	20
30	0.0184	1186	0.2637	47	2510	1.7	32916	22.6	22
31	0.0877	1198	0.2626	47	2525	1.7	35441	24.3	23
32	0.1564	1210	0.2619	47	2607	1.8	38048	26.1	25
33	0.2249	1222	0.2613	46	2703	1.9	40751	28	27
34	0.2931	1234	0.261	46	2725	1.9	43476	29.8	29
35	0.3612	1246	0.261	46	2877	2	46353	31.8	31
36	0.4293	1259	0.2612	46	2965	2	49318	33.9	33
37	0.4977	1271	0.2617	46	3001	2.1	52319	35.9	35
38	0.5663	1283	0.2625	47	3183	2.2	55502	38.1	37
39	0.6355	1295	0.2636	47	3111	2.1	58613	40.2	39
40	0.7053	1308	0.265	47	3217	2.2	61830	42.4	41
41	0.776	1320	0.2668	47	3313	2.3	65143	44.7	44
42	0.8478	1333	0.269	48	3284	2.3	68427	47	46
43	0.9208	1346	0.2716	48	3426	2.4	71853	49.3	48
44	0.9954	1359	0.2746	49	3525	2.4	75378	51.8	51
45	1.0716	1373	0.278	49	3493	2.4	78871	54.1	53
46	1.15	1386	0.2819	50	3528	2.4	82399	56.6	55
47	1.2307	1401	0.2864	51	3655	2.5	86054	59.1	58
48	1.3142	1416	0.2914	52	3697	2.5	89751	61.6	60
49	1.4007	1431	0.297	53	3611	2.5	93362	64.1	63
50	1.4907	1447	0.3033	54	3734	2.6	97096	66.7	65
51	1.5848	1464	0.3103	55	3709	2.5	100805	69.2	68
52	1.6835	1481	0.3181	56	3848	2.6	104653	71.8	71
53	1.7875	1500	0.3269	58	3868	2.7	108521	74.5	73
54	1.8975	1519	0.3368	60	3916	2.7	112437	77.2	76
55	2.0147	1540	0.348	62	3750	2.6	116187	79.8	78
56	2.1402	1562	0.3608	64	3867	2.7	120054	82.4	81
57	2.2756	1586	0.3756	67	3874	2.7	123928	85.1	84
58	2.4231	1612	0.3931	70	3727	2.6	127655	87.6	86
59	2.5858	1641	0.4142	74	3641	2.5	131296	90.1	89
60	2.768	1674	0.4405	78	3295	2.3	134591	92.4	91
61	2.9769	1711	0.4749	84	3097	2.1	137688	94.5	93
62	3.2244	1755	0.5225	93	2713	1.9	140401	96.4	95
63	3.5335	1810	0.5941	105	2205	1.5	142606	97.9	97
64	3.9566	1885	0.7179	127	1618	1.1	144224	99	98
65	4.6626	2010	1.0052	178	995	0.7	145219	99.7	99
66	5.8724	2225	1.8274	324	436	0.3	145655	100	99

Appendix FF: Raw to Scale Score Table - Grade 11 Mathematics

Raw Score	Measure	Scale Score	Logit SE	Scale Score SE	Freq	Freq %	Cum Freq	Cum Freq %	Percentile
0	-6.1209	700	1.8345	379	0	0	0	0	0
1	-4.8947	700	1.0157	210	0	0	0	0	0
2	-4.17	700	0.729	150	0	0	0	0	0
3	-3.7332	700	0.6037	125	1	0	1	0	1
4	-3.4145	700	0.53	109	1	0	2	0	1
5	-3.1605	700	0.4804	99	3	0	5	0	1
6	-2.9474	700	0.4442	92	9	0	14	0	1
7	-2.7627	700	0.4164	86	30	0	44	0	1
8	-2.5986	700	0.3944	81	61	0	105	0.1	1
9	-2.4504	700	0.3764	78	111	0.1	216	0.2	1
10	-2.3144	725	0.3614	75	207	0.2	423	0.3	1
11	-2.1885	751	0.3487	72	304	0.2	727	0.5	1
12	-2.0707	776	0.3378	70	473	0.4	1200	0.9	1
13	-1.9599	799	0.3284	68	644	0.5	1844	1.4	1
14	-1.8547	820	0.3202	66	923	0.7	2767	2.1	2
15	-1.7545	841	0.3131	65	1031	0.8	3798	2.8	2
16	-1.6585	861	0.3067	63	1181	0.9	4979	3.7	3
17	-1.5661	880	0.3012	62	1322	1	6301	4.7	4
18	-1.4769	898	0.2962	61	1416	1.1	7717	5.7	5
19	-1.3905	916	0.2918	60	1475	1.1	9192	6.8	6
20	-1.3065	933	0.2879	59	1586	1.2	10778	8	7
21	-1.2247	950	0.2844	59	1618	1.2	12396	9.2	9
22	-1.1446	967	0.2814	58	1719	1.3	14115	10.5	10
23	-1.0662	983	0.2787	58	1761	1.3	15876	11.8	11
24	-0.9893	999	0.2763	57	1762	1.3	17638	13.1	12
25	-0.9135	1015	0.2742	57	1879	1.4	19517	14.5	14
26	-0.8388	1030	0.2725	56	1942	1.4	21459	16	15
27	-0.7649	1045	0.271	56	1920	1.4	23379	17.4	17
28	-0.6918	1060	0.2697	56	1893	1.4	25272	18.8	18
29	-0.6194	1075	0.2687	56	2161	1.6	27433	20.4	20
30	-0.5474	1090	0.268	55	2112	1.6	29545	22	21
31	-0.4757	1105	0.2675	55	2305	1.7	31850	23.7	23
32	-0.4042	1120	0.2672	55	2259	1.7	34109	25.4	25
33	-0.3329	1134	0.2671	55	2294	1.7	36403	27.1	26
34	-0.2615	1149	0.2673	55	2356	1.8	38759	28.8	28
35	-0.19	1164	0.2677	55	2395	1.8	41154	30.6	30
36	-0.1182	1179	0.2683	55	2424	1.8	43578	32.4	32
37	-0.046	1194	0.2691	56	2539	1.9	46117	34.3	33
38	0.0267	1209	0.2702	56	2500	1.9	48617	36.2	35
39	0.1001	1224	0.2715	56	2715	2	51332	38.2	37
40	0.1742	1239	0.2731	56	2542	1.9	53874	40.1	39
41	0.2493	1255	0.2749	57	2636	2	56510	42	41
42	0.3254	1270	0.277	57	2684	2	59194	44	43
43	0.4028	1286	0.2794	58	2870	2.1	62064	46.2	45
44	0.4816	1303	0.2821	58	2860	2.1	64924	48.3	47
45	0.562	1319	0.2852	59	2940	2.2	67864	50.5	49
46	0.6443	1336	0.2887	60	3073	2.3	70937	52.8	52
47	0.7287	1354	0.2926	60	3049	2.3	73986	55	54
48	0.8157	1371	0.2971	61	3063	2.3	77049	57.3	56
49	0.9054	1390	0.3023	62	3230	2.4	80279	59.7	59
50	0.9985	1409	0.3081	64	3249	2.4	83528	62.1	61
51	1.0956	1429	0.3148	65	3275	2.4	86803	64.6	63
52	1.1971	1450	0.3226	67	3358	2.5	90161	67.1	66
53	1.3039	1472	0.3315	68	3373	2.5	93534	69.6	68
54	1.4172	1496	0.3419	70	3379	2.5	96913	72.1	71
55	1.5382	1521	0.354	73	3485	2.6	100398	74.7	73
56	1.6685	1548	0.3683	76	3573	2.7	103971	77.4	76
57	1.8103	1577	0.3854	79	3803	2.8	107774	80.2	79
58	1.9667	1609	0.406	84	3817	2.8	111591	83	82
59	2.1417	1645	0.4314	89	3899	2.9	115490	85.9	84
60	2.3413	1686	0.4633	95	3827	2.8	119317	88.8	87
61	2.5748	1735	0.5048	104	3888	2.9	123205	91.7	90
62	2.8575	1793	0.5613	115	3698	2.8	126903	94.4	93
63	3.2176	1867	0.6435	132	3187	2.4	130090	96.8	96
64	3.7153	1970	0.7782	159	2447	1.8	132537	98.6	98
65	4.5318	2139	1.0693	219	1407	1	133944	99.7	99
66	5.8473	2410	1.8732	385	467	0.3	134411	100	99

Appendix GG:
2006 Linking Item Statistics

Appendix GG: 2006 Linking Item Statistics

2006 Reading Grade 5 Linking Item Statistics							
Item ID	Prev Form	Prev Item Sequence	Prev Year	2005 Logit	2006 Logit	2005 P-Value	2006 P-Value
00601	1	76	2005	-1.7111	-1.2574	0.902	0.911
00602	1	77	2005	-0.8139	-0.1158	0.810	0.826
00603	1	78	2005	-0.6662	0.0568	0.791	0.811
00604	1	79	2005	-0.9935	-0.4809	0.832	0.858
00605	1	80	2005	-1.1874	-0.8749	0.853	0.887
00606	1	81	2005	-1.9743	-1.7318	0.921	0.935
00607	1	82	2005	-0.9188	-0.4955	0.823	0.859
00617	4	76	2005	-0.0901	-0.0522	0.728	0.756
00618	4	77	2005	0.1152	0.0497	0.694	0.743
00619	4	78	2005	-0.8535	-1.0048	0.831	0.855
00620	4	79	2005	0.9176	1.4213	0.547	0.562
00621	4	80	2005	-1.4062	-1.7352	0.886	0.909
00622	4	81	2005	-0.2603	-0.0107	0.754	0.751
00623	4	82	2005	-0.9565	-1.0767	0.843	0.861
00624	4	83	2005	-1.1562	-1.4345	0.863	0.889
00633	2	76	2005	-0.1174	-0.4232	0.736	0.767
00634	2	77	2005	0.1888	-0.1046	0.686	0.726
00635	2	78	2005	0.4211	0.3972	0.646	0.654
00636	2	79	2005	-0.1805	-0.3974	0.746	0.764
00637	2	80	2005	0.3613	0.3812	0.656	0.657
00638	2	81	2005	0.0848	-0.1769	0.704	0.736
00639	2	82	2005	0.1542	-0.2799	0.692	0.749
00640	2	83	2005	-0.8135	-0.9143	0.830	0.824
00649	3	76	2005	-1.6443	-2.0607	0.905	0.920
00650	3	77	2005	-0.3402	-0.7516	0.766	0.807
00651	3	78	2005	0.5073	0.2485	0.625	0.672
00652	3	79	2005	-0.9821	-1.2445	0.846	0.858
00653	3	80	2005	1.5357	1.7608	0.424	0.436
00654	3	81	2005	-0.5454	-0.8408	0.794	0.817
00655	3	82	2005	0.6486	0.6579	0.599	0.608
00656	3	83	2005	-0.4433	-0.6282	0.780	0.793
Average				-0.4232	-0.4232	0.758	0.781

Appendix GG: 2006 Linking Item Statistics

2006 Reading Grade 8 Linking Item Statistics							
Item ID	Prev Form	Prev Item Sequence	Prev Year	2005 Logit	2006 Logit	2005 P-Value	2006 P-Value
00921	19	75	2005	-0.7897	-1.2647	0.875	0.894
00922	19	76	2005	-0.2301	-0.5968	0.836	0.838
00923	19	77	2005	0.2374	-0.1170	0.772	0.785
00924	19	78	2005	1.0471	0.8011	0.639	0.658
00925	19	79	2005	1.0943	1.0654	0.621	0.616
00926	19	80	2005	-0.9449	-1.1426	0.891	0.885
00927	19	81	2005	1.3536	1.4143	0.579	0.560
00928	19	82	2005	1.3515	0.9318	0.582	0.637
00937	1	75	2005	-1.8044	-1.1724	0.898	0.918
00938	1	76	2005	-0.2028	0.6902	0.701	0.736
00939	1	77	2005	-0.4560	0.2744	0.741	0.788
00940	1	78	2005	-1.6973	-1.1588	0.889	0.917
00941	1	79	2005	-0.8244	-0.0977	0.794	0.830
00942	1	80	2005	-0.4241	0.6737	0.736	0.738
00943	1	81	2005	0.0323	1.0637	0.661	0.684
00944	1	82	2005	-1.3830	-0.6977	0.859	0.885
00953	18	75	2005	0.2659	0.1966	0.765	0.798
00954	18	76	2005	-0.0302	-0.0389	0.809	0.824
00955	18	77	2005	-0.0072	0.1871	0.800	0.799
00956	18	78	2005	-0.6657	-0.6171	0.870	0.879
00957	18	79	2005	0.1774	0.1563	0.774	0.803
00958	18	80	2005	0.4449	0.4688	0.743	0.765
00959	18	81	2005	1.0640	0.9163	0.620	0.706
00960	18	82	2005	-0.8146	-0.9621	0.886	0.904
00969	20	75	2005	-0.6758	-1.1242	0.870	0.876
00970	20	76	2005	0.6974	0.2146	0.691	0.703
00971	20	77	2005	1.7712	1.3691	0.496	0.495
00972	20	78	2005	1.0611	0.5266	0.625	0.650
00973	20	79	2005	1.3407	0.6543	0.574	0.627
00974	20	80	2005	1.2370	0.7436	0.598	0.611
00975	20	81	2005	0.4639	-0.0113	0.728	0.739
00976	20	82	2005	1.7510	1.0951	0.502	0.546
Average				0.1388	0.1388	0.732	0.753

Appendix GG: 2006 Linking Item Statistics

2006 Reading Grade 11 Linking Item Statistics							
Item ID	Prev Form	Prev Item Sequence	Prev Year	2005 Logit	2006 Logit	2005 P-Value	2006 P-Value
01241	9	75	2005	-1.9743	-2.1930	0.909	0.931
01242	9	76	2005	0.0329	0.1485	0.661	0.686
01243	9	77	2005	0.9703	1.2481	0.482	0.499
01245	9	79	2005	-1.0983	-0.9302	0.828	0.833
01246	9	80	2005	-0.8231	-0.8787	0.794	0.827
01247	9	81	2005	0.2712	0.3710	0.618	0.649
01248	9	82	2005	-1.3098	-1.4147	0.852	0.879
01257	20	75	2005	-0.6276	-0.8502	0.862	0.890
01258	20	76	2005	-0.2685	0.0093	0.816	0.820
01259	20	77	2005	-0.9714	-1.0842	0.878	0.905
01260	20	78	2005	-1.8709	-2.1389	0.940	0.953
01261	20	79	2005	0.0221	0.1628	0.788	0.806
01262	20	80	2005	-1.3099	-1.3792	0.910	0.922
01263	20	81	2005	-1.3257	-1.6223	0.922	0.933
01264	20	82	2005	-0.2300	-0.2119	0.816	0.841
01273	3	75	2005	-1.9556	-1.8314	0.905	0.919
01274	3	76	2005	0.3242	1.2094	0.607	0.600
01275	3	77	2005	-1.2788	-1.4825	0.846	0.898
01276	3	78	2005	-0.4474	-0.1080	0.739	0.773
01277	3	79	2005	-1.4303	-1.3126	0.861	0.886
01278	3	80	2005	-2.0917	-1.9922	0.914	0.927
01279	3	81	2005	0.2956	0.9497	0.613	0.636
01280	3	82	2005	-1.8423	-1.8647	0.897	0.921
01289	2	75	2005	-1.3301	-1.6646	0.859	0.887
01290	2	76	2005	1.3992	1.0540	0.413	0.461
01291	2	77	2005	-0.0790	-0.2463	0.692	0.706
01292	2	78	2005	-0.7098	-0.8719	0.787	0.801
01293	2	79	2005	-0.2978	-0.5142	0.727	0.749
01294	2	80	2005	1.6513	1.5887	0.365	0.362
01295	2	81	2005	-0.0936	-0.3057	0.694	0.716
01296	2	82	2005	-0.4733	-0.7169	0.754	0.779
Average				-0.6088	-0.6088	0.766	0.787

Appendix GG: 2006 Linking Item Statistics

2006 Math Grade 5 Linking Item Statistics							
Item ID	Prev Form	Prev Item Sequence	Prev Year	2005 Logit	2006 Logit	2005 P-Value	2006 P-Value
00170	1	9	2005	0.2769	0.1448	0.702	0.758
00174	1	13	2005	0.7290	0.7220	0.615	0.677
00178	1	17	2005	-0.3082	-0.0725	0.784	0.786
00180	1	19	2005	-0.5632	-0.6126	0.818	0.847
00181	1	20	2005	-1.1143	-1.0779	0.873	0.889
00183	1	22	2005	-0.1800	-0.0460	0.767	0.782
00191	1	59	2005	0.7566	0.8400	0.619	0.660
00192	1	60	2005	-1.1293	-1.1842	0.875	0.897
00207	1	107	2005	-0.7531	-0.6214	0.837	0.848
00210	1	110	2005	0.3196	0.4102	0.693	0.722
01413	10	63	2005	0.9249	1.1296	0.601	0.608
01414	10	64	2005	0.6004	0.6474	0.664	0.687
01415	10	65	2005	-1.2950	-1.6089	0.910	0.931
01416	10	66	2005	0.4794	0.6307	0.686	0.690
01425	11	63	2005	-0.2135	-0.0509	0.797	0.787
01426	11	64	2005	-0.2093	-0.3212	0.797	0.819
01427	11	66	2005	0.2829	0.2513	0.815	0.746
01428	11	65	2005	-0.3502	-0.2535	0.722	0.811
01437	12	63	2005	2.1884	2.1211	0.354	0.434
01438	12	64	2005	0.4285	0.3045	0.701	0.736
01439	12	65	2005	0.3961	0.2946	0.706	0.738
01440	12	66	2005	0.5282	0.5764	0.683	0.695
01461	14	63	2005	-0.0993	-0.4342	0.769	0.832
01462	14	64	2005	0.0479	0.1151	0.746	0.764
01463	14	65	2005	0.1881	0.0519	0.723	0.773
01464	14	66	2005	-0.6260	-0.5071	0.839	0.840
01473	15	63	2005	-0.6763	-0.7082	0.847	0.859
01475	15	65	2005	-0.1703	-0.3457	0.784	0.821
01476	15	66	2005	-0.2936	-0.2297	0.801	0.808
Average				0.0057	0.0057	0.742	0.767

Appendix GG: 2006 Linking Item Statistics

2006 Math Grade 8 Linking Item Statistics							
Item ID	Prev Form	Prev Item Sequence	Prev Year	2005 Logit	2006 Logit	2005 P-Value	2006 P-Value
00221	1	6	2005	-0.0818	-0.1645	0.693	0.733
00226	1	11	2005	0.0641	0.1811	0.667	0.679
00229	1	14	2005	0.9997	0.9635	0.501	0.546
00233	1	18	2005	0.1327	0.1552	0.652	0.685
00236	1	20	2005	-0.1651	-0.1969	0.712	0.738
00242	1	55	2005	-0.2145	-0.0181	0.720	0.710
00244	1	57	2005	0.7558	0.9322	0.550	0.550
00246	1	59	2005	-0.8350	-0.9345	0.803	0.835
00255	1	100	2005	0.3490	0.4655	0.617	0.630
00268	1	113	2005	-0.3238	-0.1195	0.733	0.728
01545	1	62	2005	0.0492	0.0463	0.635	0.687
01546	1	63	2005	0.2818	0.5034	0.591	0.611
01547	1	64	2005	-0.6495	-0.4661	0.755	0.763
01548	1	65	2005	0.2154	0.2757	0.604	0.649
01569	3	62	2005	1.4605	1.3666	0.416	0.460
01570	3	63	2005	-0.4130	-0.6322	0.758	0.800
01571	3	64	2005	0.9793	0.8911	0.509	0.548
01572	3	65	2005	0.5918	0.5455	0.584	0.612
01593	5	62	2005	0.1338	0.1604	0.653	0.673
01594	5	63	2005	0.5183	0.6543	0.581	0.585
01595	5	64	2005	0.5717	0.5031	0.570	0.612
01596	5	65	2005	0.5996	0.8579	0.565	0.547
01617	7	62	2005	-0.1620	0.0574	0.712	0.698
01618	7	63	2005	-0.4934	-0.6528	0.765	0.802
01619	7	64	2005	0.5292	0.5836	0.586	0.608
01620	7	65	2005	0.5884	0.2160	0.575	0.671
01689	13	62	2005	0.3293	-0.0444	0.637	0.715
01690	13	63	2005	-0.1262	-0.3599	0.717	0.761
01691	13	64	2005	0.6419	0.6553	0.579	0.600
01692	13	65	2005	1.0457	0.9489	0.500	0.548
Average				0.2458	0.2458	0.631	0.659

Appendix GG: 2006 Linking Item Statistics

2006 Math Grade 11 Linking Item Statistics							
Item ID	Prev Form	Prev Item Sequence	Prev Year	2005 Logit	2006 Logit	2005 P-Value	2006 P-Value
00279	1	10	2005	-0.5828	-0.7332	0.704	0.753
00284	1	15	2005	-1.3121	-1.6216	0.812	0.857
00285	1	16	2005	-0.3970	-0.3788	0.675	0.702
00291	1	22	2005	-1.4206	-1.4071	0.824	0.835
00293	1	52	2005	0.3223	0.3066	0.544	0.595
00301	1	60	2005	0.6586	0.5476	0.495	0.556
00302	1	93	2005	-0.8801	-1.3116	0.744	0.825
00308	1	99	2005	0.0922	-0.0408	0.586	0.649
00312	1	103	2005	1.3467	1.0618	0.375	0.474
00316	1	107	2005	-0.7173	-0.9791	0.731	0.785
01821	4	62	2005	1.6059	1.9770	0.295	0.299
01822	4	63	2005	-0.4027	-0.4715	0.667	0.719
01823	4	64	2005	-0.0618	0.0825	0.605	0.626
01824	4	65	2005	0.9856	1.0074	0.405	0.459
01869	8	62	2005	0.6698	0.6445	0.478	0.532
01870	8	63	2005	0.5400	0.3940	0.503	0.576
01871	8	64	2005	0.3928	0.6019	0.531	0.539
01872	8	65	2005	0.5288	0.5984	0.505	0.540
01881	9	62	2005	1.2632	1.5856	0.384	0.371
01882	9	63	2005	0.4103	0.2659	0.541	0.594
01883	9	64	2005	0.3015	0.5087	0.561	0.552
01884	9	65	2005	0.7114	0.7524	0.485	0.509
01893	10	62	2005	-1.9269	-1.3323	0.880	0.830
01894	10	63	2005	0.4373	0.5056	0.517	0.545
01895	10	64	2005	-0.4527	-0.4719	0.681	0.712
01896	10	65	2005	0.4149	0.6846	0.521	0.513
01929	13	62	2005	1.1347	1.4322	0.379	0.411
01930	13	63	2005	0.8370	0.8490	0.435	0.505
01931	13	64	2005	0.0553	-0.2649	0.586	0.688
01932	11	65	2005	-0.5736	-0.8118	0.313	0.768
Average				0.1327	0.1327	0.559	0.611