OKLAHOMA MODIFIED ALTERNATE ASSESSMENT PROGRAM

2009 Technical Report

September 2009

OKLAHOMA STATE DEPARTMENT OF EDUCATION

RIVERSIDE PUBLISHING
a subsidiary of Houghton Mifflin Harcourt

CONTENTS

List of Tables v

List of Figures x

Introduction 11

Chapter 1: The Oklahoma Modified Alternate Assessment Program 12

1.1 Statewide Assessment System Overview 12

1.2 Overview of the OMAAP 12

1.3 Purpose of the OMAAP 13

Chapter 2: Content Modifications 14

2.1 Modification of Blueprint and Item Specifications 14

2.2 Modification of Forms and Items 14

2.3 Content Validity of Test Items and Forms 16

2.4 Item and Bias Review 17

2.5 Key Validation 18

2.6 Future Development using Regular Assessment Item Statistics 21

2.7 Form and Linking Item Set Rollout Plan 24

2.8 Scoring the English II Writing Prompt 25

Chapter 3: Reliability 26

3.1 Reliability and Measurement Error 26

3.2 Sources of Measurement Error 27

3.3 Evidence of Raw Score Internal Consistency 28

3.4 Conditional Standard Error Estimates for Scale Scores 32

3.5 Reliability of Classifications 33

Chapter 4: Standard Setting 41

4.1 Goal of the OMAAP Standard Setting 41

4.2 Overview of the Bookmark Standard-Setting Method 41

4.3 Prerequisites to the OMAAP Standard-Setting Event 42

4.4 The OMAAP Standard-Setting Event 43

4.4.1 The Ordered Item Booklets 45

4.4.2 Panelists' Feedback 45

4.4.3 Results 46

4.44 Results from the 2009 U.S. History Standard Testing Workshop 54

Chapter 5: Scaling and Equating 56

5.1 Introduction 56

5.2 Local Independence 57

5.3 Unidimensionality 57

5.4 Methods for Scaling and Equating 58

5.5 Equating for the Braille Tests 80

5.6 Scale Scores 81

Chapter 6: Validity **82**

6.1 Introduction 82

6.2 Purpose and Intended Uses 82

6.3 Item Development 84

6.4 Item and Bias Review 84

6.5 Key Validation 85

6.6 Differential Item Functioning 86

6.7 Internal Structure of the OMAAP 88

6.8 Additional Evidence for Validity 89

Chapter 7: Statewide Results **90**

7.1 Summary of Scale Score Statistics 93

7.2 Performance Level Percentages 93

References **97**

Appendix A: OMAAP Performance Level Descriptors **99**

Appendix B: Scale Score Conversion Tables **118**

Appendix C: Principal Component Analyses and WINSTEPS Local Independence Tables **158**

Appendix D: WINSTEPS Item Output Files **181**

Appendix E: Sample Impact Graph **219**

Appendix F: Item Distributions by Standards **221**

Appendix G: Test Reliability and SEM for Selected Subgroups **230**

Appendix H: Raw-to-Theta Conversion Tables with Frequency Data **255**

Appendix I: Correlation Coefficients Among Test-Content Strands for the 2009 OMAAP **293**

LIST OF TABLES

Table 2-1 Item Modification Rules 15
Table 2-2 Numbers of Multiple-Choice (MC) Items on the OCCT and OMAAP Tests 16
Table 2-3 Key Validation Criteria 18
Table 2-4 Items Removed from Scoring 19
Table 2-5 Total Possible Points on the 2008 OMAAP after Item Review 20
Table 2-6 Pearson Correlation between OCCT and OMAAP P-values for Reading 22
Table 2-7 Pearson Correlation between OCCT and OMAAP P-values for Mathematics 22
Table 2-8 Pearson Correlation between OCCT and OMAAP P-values for Science 23
Table 2-9 Distributional Summary of the Difference between OCCT and OMAAP P-values for Mathematics 23
Table 3-1 Reliability Coefficients and Standard Errors of Measurement, Reading 29
Table 3-2 Reliability Coefficients and Standard Errors of Measurement, Mathematics 30
Table 3-3 Reliability Coefficients and Standard Errors of Measurement, Science 31
Table 3-4 Reliability Coefficients and Standard Errors of Measurement, U.S. History 31
Table 3-5 Conditional Standard Errors of Measurement at the Proficient Cut Score 32

Table 3-6 Classification Consistency for Reading, Form D, Spring 2009 33
Table 3-7 Classification Consistency for Reading, Form E, Spring 2009 34
Table 3-8 Classification Consistency for Mathematics, Form D, Spring 2009 .. 34
Table 3-9 Classification Consistency for Mathematics, Form E, Spring 2009 .. 35
Table 3-10 Classification Consistency for Science, Form D, Spring 2009..... 35
Table 3-11 Classification Consistency for Science, Form E, Spring 2009 35
Table 3-12 Classification Consistency for U.S. History, Form D, Spring 2009 .. 36
Table 3-13 Classification Consistency for U.S. History, Form E, Spring 2009 .. 36
Table 3-14 Classification Consistency for Winter 2008/09 EOI..... 36
Table 3-15 Agreement Consistency for Reading, Form D, Spring 2009 37
Table 3-16 Agreement Consistency for Reading, Form E, Spring 2009..... 37
Table 3-17 Agreement Consistency for Mathematics, Form D, Spring 2009..... 38
Table 3-18 Agreement Consistency for Mathematics, Form E, Spring 2009 38
Table 3-19 Agreement Consistency for Science, Form D, Spring 2009 39
Table 3-20 Agreement Consistency for Science, Form E, Spring 2009 39
Table 3-21 Agreement Consistency for U.S. History, Form D, Spring 2009 39
Table 3-22 Agreement Consistency for U.S. History, Form E, Spring 2009 39
Table 3-23 Agreement Consistency for Winter 2008/09 EOI 40
Table 3-24 Reliability Coefficients and Standard Errors of Measurement, African American Students, Mathematics 231
Table 3-25 Reliability Coefficients and Standard Errors of Measurement, African American Students, Reading..... 232
Table 3-26 Reliability Coefficients and Standard Errors of Measurement, African American Students, Science..... 233
Table 3-27 Reliability Coefficients and Standard Errors of Measurement, Hispanic Students, Mathematics 234
Table 3-28 Reliability Coefficients and Standard Errors of Measurement, Hispanic Students, Reading..... 235
Table 3-29 Reliability Coefficients and Standard Errors of Measurement, Hispanic Students, Science 236
Table 3-30 Reliability Coefficients and Standard Errors of Measurement, Native American Students, Mathematics 237

Table 3-31 Reliability Coefficients and Standard Errors of Measurement, Native American Students, Reading 238
Table 3-32 Reliability Coefficients and Standard Errors of Measurement, Native American Students, Science 239
Table 3-33 Reliability Coefficients and Standard Errors of Measurement, White Students, Mathematics 240
Table 3-34 Reliability Coefficients and Standard Errors of Measurement, White Students, Reading..... 241
Table 3-35 Reliability Coefficients and Standard Errors of Measurement, White Students, Science 242
Table 3-36 Reliability Coefficients and Standard Errors of Measurement, Female Students, Mathematics 243
Table 3-37 Reliability Coefficients and Standard Errors of Measurement, Female Students, Reading 244
Table 3-38 Reliability Coefficients and Standard Errors of Measurement, Female Students, Science 245
Table 3-39 Reliability Coefficients and Standard Errors of Measurement, Male Students, Mathematics 246
Table 3-40 Reliability Coefficients and Standard Errors of Measurement, Male Students, Reading..... 247
Table 3-41 Reliability Coefficients and Standard Errors of Measurement, Male Students, Science 248
Table 3-42 Reliability Coefficients and Standard Errors of Measurement, Non-National School Lunch Program Students, Mathematics 249
Table 3-43 Reliability Coefficients and Standard Errors of Measurement, Non-National School Lunch Program Students, Reading 250
Table 3-44 Reliability Coefficients and Standard Errors of Measurement, Non-National School Lunch Program Students, Science..... 251
Table 3-45 Reliability Coefficients and Standard Errors of Measurement, National School Lunch Program Students, Mathematics 252
Table 3-46 Reliability Coefficients and Standard Errors of Measurement, National School Lunch Program Students, Reading 253

Table 3-47 Reliability Coefficients and Standard Errors of Measurement National School Lunch Program Students, Science 254
Table 4-1 Panel Design for the OMAAP Standard Setting 42
Table 4-2 Characteristics of the Standard-Setting Panels..... 43
Table 4-3 OMAAP Standard-Setting Schedule for Sessions 1, 2, and 3 43
Table 4-4 OIB Bookmarks by Round, Mathematics 47
Table 4-5 OIB Bookmarks by Round, Reading 48
Table 4-6 OIB Bookmarks by Round, Science..... 48
Table 4-7 Raw Cut Scores by Round, Mathematics..... 49
Table 4-8 Raw Cut Scores by Round, Reading 50
Table 4-9 Raw Cut Scores by Round, Science..... 51
Table 4-10 Panel-Recommended and Final Board-Approved Cut Scores and Impact, Mathematics 52
Table 4-11 Panel-Recommended and Final Board-Approved Cut Scores and Impact, Reading..... 53
Table 4-12 Panel-Recommended and Final Board-Approved Cut Scores and Impact, Science 54
Table 4-13 OIB Bookmarks by Round, U.S. History EOI..... 55
Table 4-14 Raw Cut Scores by Round, U.S. History EOI..... 55
Table 4-15 Panel-Recommended and Final Board-Approved Cut Scores and Impact, U.S. History EOI 55
Table 5-1 Summary Statistics for Reading, Grade 3, Form D, Spring 2009 59
Table 5-2 Summary Statistics for Reading, Grade 3, Form E, Spring 2009 60
Table 5-3 Summary Statistics for Reading, Grade 4, Form D, Spring 2009 60
Table 5-4 Summary Statistics for Reading, Grade 4, Form E, Spring 2009 61
Table 5-5 Summary Statistics for Reading, Grade 5, Form D, Spring 2009 61
Table 5-6 Summary Statistics for Reading, Grade 5, Form E, Spring 2009 62
Table 5-7 Summary Statistics for Reading, Grade 6, Form D, Spring 2009 62
Table 5-8 Summary Statistics for Reading, Grade 6, Form E, Spring 2009 63
Table 5-9 Summary Statistics for Reading, Grade 7, Form D, Spring 2009 63
Table 5-10 Summary Statistics for Reading, Grade 7, Form E, Spring 2009 64
Table 5-11 Summary Statistics for Reading, Grade 8, Form D, Spring 2009 64

Table 5-12 Summary Statistics for Reading, Grade 8, Form E, Spring 2009 65
Table 5-13 Summary Statistics for Math, Grade 3, Form D, Spring 2009 65
Table 5-14 Summary Statistics for Math, Grade 3, Form E, Spring 2009 66
Table 5-15 Summary Statistics for Math, Grade 4, Form D, Spring 2009 66
Table 5-16 Summary Statistics for Math, Grade 4, Form E, Spring 2009 67
Table 5-17 Summary Statistics for Math, Grade 5, Form D, Spring 2009 67
Table 5-18 Summary Statistics for Math, Grade 5, Form E, Spring 2009 68
Table 5-19 Summary Statistics for Math, Grade 6, Form D, Spring 2009 68
Table 5-20 Summary Statistics for Math, Grade 6, Form E, Spring 2009 69
Table 5-21 Summary Statistics for Math, Grade 7, Form D, Spring 2009 69
Table 5-22 Summary Statistics for Math, Grade 7, Form E, Spring 2009 70
Table 5-23 Summary Statistics for Math, Grade 8, Form D, Spring 2009 70
Table 5-24 Summary Statistics for Math, Grade 8, Form E, Spring 2009 71
Table 5-25 Summary Statistics for Science, Grade 5, Form D, Spring 2009 71
Table 5-26 Summary Statistics for Science, Grade 5, Form E, Spring 2009 72
Table 5-27 Summary Statistics for Science, Grade 8, Form D, Spring 2009 72
Table 5-28 Summary Statistics for Science, Grade 8, Form E, Spring 2009 73
Table 5-29 Summary Statistics for English II, Form D, Spring 2009 73
Table 5-30 Summary Statistics for English II, Form E, Spring 2009 74
Table 5-31 Summary Statistics for Algebra I, Form D, Spring 2009 74
Table 5-32 Summary Statistics for Algebra I, Form E, Spring 2009 75
Table 5-33 Summary Statistics for Biology I, Form D, Spring 2009 75
Table 5-34 Summary Statistics for Biology I, Form E, Spring 2009 76
Table 5-35 Summary Statistics for English II, Winter 2008/09 76
Table 5-36 Summary Statistics for Algebra I, Winter 2008/09 77
Table 5-37 Summary Statistics for Biology I, Winter 2008/09 77
Table 5-38 Numbers of Original Anchor Items and Anchor Items Dropped 79
Table 5-39 Summary of Items That Were Removed from the Regular Assessment 80
Table 6-1 Key Validation Criteria 85
Table 6-2 Numbers of Items with DIF for Reading 86
Table 6-3 Numbers of Items with DIF for Mathematics 87

Table 6-4 Numbers of Items with DIF for Science 88
Table 6-5 Number of Items with DIF for Winter 2008/09 EOI..... 88
Table 7-1 Scale Score Summary Statistics for Reading 90
Table 7-2 Scale Score Summary Statistics for Mathematics..... 91
Table 7-3 Scale Score Summary Statistics for Science..... 92
Table 7-4 Percentages of Students at Each Performance Level for Reading..... 93
Table 7-5 Percentages of Students at Each Performance Level for Mathematics94
Table 7-6 Percentages of Students at Each Performance Level for Science 96

LIST OF FIGURES

Figure 4-1 Steps in the OMAAP Standard Setting. 44
Figure 5-1 Spring 2008 Stability Checks for English II..... 78
Figure 5-2 Spring 2008 Stability Checks for Science Grade 5..... 79

INTRODUCTION

The Oklahoma Modified Alternate Assessment Program (OMAAP) is composed of assessments developed and administered to meet the federal regulations outlined in Title I of the Elementary and Secondary Education Act. Specifically, Title I mandates that "State assessments shall be aligned with the State's challenging content and student performance standards and provide coherent information about student attainment of such standards."

The OMAAP is intended for a population of students for whom the Oklahoma Alternate Assessment Program (OAAP) (which are portfolio assessments) and the general Oklahoma Core Curriculum Tests (OCCT) are inappropriate. The aim of the OMAAP is to provide an assessment that is comparable to the OSTP but more accessible for these "gap" students.

The 2009 OMAAP tested students in mathematics, grades 3 through 8; reading, grades 3 through 8; science, grades 5 and 8; and Biology I, end-of-instruction (EOI), Algebra I, EOI; English II, EOI and U.S. History, EOI. The OMAAP for grades 3 through 8 was administered in the Spring between April 20, 2009, and May 15, 2009. The Spring administration of the OMAAP EOI exams also occurred between April 20, 2009, and May 15, 2009. Note that EOI assessments were also administered in the Winter and for the Trimester.

The objective of this report is to document the major developmental and psychometric activities conducted in support of the Spring 2009 and Winter 2008/09 test administration of the OMAAP and to provide evidence of the validity and reliability of the tests. Specific topics addressed are item writing and test construction, standard setting, scaling, equating, and statewide results from the 2009 OMAAP test administrations.

Chapter

1

THE OKLAHOMA MODIFIED ALTERNATE ASSESSMENT PROGRAM

1.1 Statewide Assessment System Overview

The Oklahoma School Testing Program (OSTP) includes the Oklahoma Core Curriculum Tests (OCCT), which are administered statewide to students in grades 3 through 8, and the statewide high school level end-of-instruction (EOI) tests. In 2002, the Oklahoma State Board of Education adopted the *Priority Academic Student Skills* (*PASS*), a set of skills that students are expected to master by the end of each grade. Items from the OCCT are aligned to *PASS* standards and objectives.

In addition to the OCCT, students with significant cognitive disabilities may qualify for the Oklahoma Alternate Assessment Portfolio (OAAP). The OAAP assesses progress according to alternate grade-level standards, as provided in the *Curriculum Access Resource Guide-Alternate (CARG-A).*

1.2 Overview of the OMAAP

The OMAAP is a new assessment program intended for Oklahoma students for whom the OAAP portfolio assessments and the general OCCT are inappropriate.

In 2006, in response to new federal regulations, Oklahoma educators developed the *Curriculum Access Resource Guide-Modified* (*CARG-M*) as a modified approach to teaching *PASS* standards. The OMAAP is an alternate assessment based on standards as provided in the *PASS*. The *PASS*, *CARG-M*, Performance Level Descriptors (PLDs), and Oklahoma Performance Index (OPI) are key components of the OMAAP that ensure the validity and reliability of the testing program.

All items on the 2009 OMAAP were selected for modification from the 2005 through 2007 OCCT assessments. With the exception of one writing prompt on the English II test, all items on the OMAAP are multiple-choice.

Student performance on the OMAAP is classified into four performance levels: *Advanced*, *Satisfactory*, *Limited Knowledge*, and *Unsatisfactory*. OMAAP PLDs describe

the specific knowledge and skills that a student must be able to demonstrate at each performance level.

Like the OCCT, the OMAAP uses the OPI to report scores. The OPI is an index of scale scores with values ranging from 100 to 350.

1.3 Purpose of the OMAAP

The OMAAP is intended for gap students for whom both the OCCT and the OAAP assessments are inappropriate. The primary purpose of the OMAAP is to produce information on these gap students for educators to use when making instructional decisions. District reports were developed in a manner that yields diagnostic information for the purpose of guiding instruction based on student performance levels in relation to the *PASS*. Yearly improvement will also be assessed with common item equating, using Item Response Theory (IRT).

In addition, the OMAAP fulfills the following objectives:

- Identifying the areas where students need improvement
- Informing various stakeholders (teachers, school administrators, district administrators, Oklahoma Department of Education staff, parents, and the public) of progress toward meeting academic achievement standards of the state
- Meeting the requirements set forth by the No Child Left Behind (NCLB) Act
- Gauging the overall quality of education in the state of Oklahoma

Chapter

2

CONTENT MODIFICATIONS

The development of the OMAAP forms was a collaborative effort between The Riverside Publishing Company, the Oklahoma State Department of Education (OK SDE), and educators from around the state. In November 2006, committees of Oklahoma educators were convened to assist in the development of the first OMAAP assessments. Prior to reviewing the items and forms, teachers were given information about the OMAAP program, including a review of blueprints, item specifications, and types of modifications. In addition, teachers were trained on item bias and sensitivity issues and desirable item qualities.

2.1 Modification of Blueprint and Item Specifications

In 2006, Oklahoma educators developed the *Curriculum Access Resource Guide-Modified* (*CARG-M*) as a tool for teaching the *Priority Academic Student Skills* (*PASS*). The *PASS* standards were created by Oklahoma teachers, parents, and community leaders, who met to agree upon the skills that students are expected to master by the end of each grade, and serve as the foundation for the OCCT and OMAAP.

OMAAP blueprints use the same percentage of items per standard as the original OCCT blueprints. Each standard must have at least six items to qualify as a reporting category. Teacher committees reviewed the blueprints to confirm the appropriate distribution of items across the standards and objectives. Teacher committees also reviewed the *PASS* item specifications prior to reviewing any OMAAP test items. After reviewing the test items, teacher committees revisited the item specifications to make any final edits. The OK SDE also reviewed and edited item specifications before they were published.

2.2 Modification of Forms and Items

Modifications to the items from the general administration were based on the same types of accommodations that typically are performed in the classroom or on other tests for this student population. Table 2-1 provides a list of the universal and content specific modifications.

Table 2-1 Item Modification Rules

Universal
Minimize the number of questions on the page (limit to 2)
Use a larger font size
Provide only three answer options instead of four
Highlight the main points in the question or passage by underlining and using boldface
Allow for the same accommodations as in the standard assessment
Avoid questions that require students to select the better/best answer
Eliminate answer choices that give students the option of making "no change" to the item
For Reading Passages and Items
Display passages in a one column format
Break passages into smaller portions, and place the questions that pertain to the smaller portion underneath or on a page facing that section (this is a modification used frequently in the classroom)
For Mathematics Items
Allow for read-aloud and calculators
For lower grades, display numbers on all sides of figures for questions about perimeter
Unless required by standard, avoid items with negative and positive answer choices that use the same number (e.g., -4 and $+4$)
Place any items with coordinate grids on one page
For lower grades, use grids for questions
Be consistent with qualifiers in the stem and answer choices (e.g., use ml throughout or milliliters throughout)
Avoid questions that use best or closest
Avoid complicated art
For Science Items
Reduce the amount of reading
Avoid complicated art
Simplify tables and charts by removing irrelevant rows or columns
Box formulas to make them stand out
For the Writing Prompt
Simplify the question
Update the checklist describing the aspects that will be graded so it matches the new rubric, and simplify it

Use a three-point holistic writing rubric

In addition, the number of items on each OMAAP form has been reduced by 25% to 50% from the number on the OCCT. Table 2-2 compares the final numbers of items on the OMAAP with the numbers on the OCCT assessments.

Table 2-2 Numbers of Multiple-Choice (MC) Items on the OCCT and OMAAP Tests

Administration	Test	OCCT Items	OMAAP Items
Spring 2009	Reading, Grades 3-8	50 plus 10 FT MC	40 MC
	English II, EOI	60 plus 20 FT MC + 2 writing prompts	40 MC +1 writing prompt
	Math, Grades 3–8	45 plus 10 FT MC	40 MC
	Algebra I, EOI	55 plus 20 FT MC	40 MC
	Science, Grade 5	45 plus 10 FT MC	40 MC
	Science, Grade 8	45 plus 10 FT MC	40 MC
	Biology I, EOI	60 plus 20 FT MC	46 MC

2.3 Content Validity of Test Items and Forms

All items on the 2009 OMAAP came from previous years of the Oklahoma School Testing Program Core Curriculum Tests (OSTP OCCT) for Grades 3–8 and the EOI operational test forms. The use of existing items from the regular state testing program means that only items with established validity were considered for the OMAAP.

The following describes the process taken to develop the OMAAP forms.

1. Riverside Publishing selected items from the OCCT that could be modified to fit the guidelines and built test forms to match the blueprint.
2. Riverside Publishing used a set of modification rules (see Table 2-1) to propose edits to passages and items.
3. Riverside Test Development Specialists conducted training sessions with teacher committees during item review and provided instruction on avoiding bias and stereotyping of groups and individuals on the basis of gender, race, ethnicity, religion, age, language, socioeconomic group, or disability.

4. Riverside Test Development Specialists reviewed each item to see how well it measured the specified standard and for clarity, grade appropriateness, and correspondence with item specifications. Artwork was also considered when the items were evaluated. Item distributions by standard are given in Appendix F.

2.4 Item and Bias Review

The item review specifically targeted items in the following areas:

- Grades 3–8: reading and mathematics
- Grades 5 and 8: science
- High school EOI: English II, Algebra I, Biology I and U.S. History

The content and bias item review for the 2009 test forms for grades 3–8 was held in Oklahoma City on July 8 and 9, 2008. The EOI content and bias item review for the 2009 test forms was held in Oklahoma City, Oklahoma, on July 10, 2008. Items were evaluated using the following criteria:

- Overall quality and syntactical clarity
- Content coverage and content appropriateness
- Alignment to the specified standard and objective
- Grade-appropriate context
- One clearly correct answer and plausible distractors
- Freedom from bias toward or against any particular group

Item content review committees included Oklahoma educators from around the state. Committee members were recommended to the OK SDE by other teachers and/or administrators from across the state. Before reviewing the items, Riverside Test Development Specialists held a training session for the committees. The criteria listed above were presented along with the specific types of modifications that had been made prior to the review, procedures were discussed, and question-and-answer sessions were held. Content item review committee members revised, edited, or rejected items that they deemed unsatisfactory.

Riverside Publishing took great care throughout the item-selection process to monitor items for potential bias and to ensure appropriate representation of the various segments and groups in the Oklahoma population. An important part of the item-selection process was the training that content specialists received to help them identify and eliminate potential bias from the materials they created.

It is important to note that all item review sessions were held in secure meeting rooms and that all materials were confidential. Committee members were required to sign confidentiality agreements so that the integrity of the test questions was not compromised. Although educators were encouraged to share information about the item review process as mentioned above, they were made fully aware of the expectation that any information about specific items and passages was to remain secure and confidential.

2.5 Key Validation

As testing materials were returned for scanning and scoring after the 2009 administration, a preliminary data file was created for key validation (a key check using empirical data) and key verification (a review of test items and keys by Test Development Specialists). The purpose of these analyses was to confirm the answer keys by scoring and analyzing the multiple-choice items. Classical test statistics were used for this process. For the empirical checks, items meeting the statistical criteria defined in Table 2-3 were flagged.

Table 2-3 Key Validation Criteria

Key Validation Item-Flagging Criteria	Indicates
If p value of keyed response < 0.35	Difficult item
If p value of keyed response < 0.05 or > 0.95	Extreme item
If p value of keyed response < p value of	Possible mis-key
If p value of distracter > 0.35	Possible second correct option
If point-biserial of coded response < 0.20	Poorly discriminating item

Riverside Test Development Specialists and the Oklahoma Department of Education reviewed all flagged items. No items were identified as being mis-keyed. At this stage, a thorough review of the item statistics warranted removal of items based on poor item statistics. A final recommendation was made by the Oklahoma State Department of Education to exclude the items listed in Table 2-4 from students' scores.

Table 2-4 Items Removed from Scoring by Subject, Form and Grade

	Subject (Form)	Grade	Item Number(s)
Spring 2009	Reading (D)	3	29
	Reading (E)	3	34
	Reading (D)	5	32
	Reading (E)	5	35
	Reading (D)	6	18
	Reading (E)	6	9,19
	Reading (D)	7	2
	Reading (E)	8	32
	Math (D)	4	39
	Math (E)	5	13
	Math (D)	5	26
	Math (E)	6	7
	Math (D)	7	29
	Math (E)	7	1,24
	Science (D)	8	2
	Science (E)	8	36,38
	History (D)	EOI	16
	History (E)	EOI	25
	Algebra I (D)	EOI	2,22
	Algebra I (E)	EOI	21,38
	Biology (D)	EOI	32
	English II (E)	EOI	32
Winter 2008/09	English II	10	35
	Algebra I	9	20,38
	Biology	9	23

Table 2-5 gives the final number of points possible on the 2009 OMAAP after the removal of items with poor statistics.

Table 2-5 Total Possible Points on the 2009 OMAAP after Item Review

	Subject (Form)	Grade(s)	Score Points
Spring 2009	Reading (D)	4,8	40
	Reading (D)	3,5,6,7	39
	Reading (E)	4,7	40
	Reading (E)	3,5,6,8	39
	English II (D)	EOI	43*
	English II (E)	EOI	42*
	Math (D)	3,4,6,8	40
	Math (D)	5,7	39
	Math (E)	3,8	40
	Math (E)	4,5,6	39
	Math (E)	7	38
	Algebra I (D)	EOI	38
	Algebra I (E)	EOI	38
	Science (D)	5	40
	Science (D)	8	39
	Science (E)	5	40
	Science (E)	8	38
	Biology (D)	EOI	45
	Biology (E)	EOI	46
Winter 2008/09	Algebra I	EOI	38
	Biology	EOI	45
	English II	EOI	43*

* Includes 3 points from essay

2.6 Future Development using Regular Assessment Item Statistics

A study was performed, based on the 2008 assessment, to determine if item statistics (e.g., p-values) derived from OCCT items *before* modification could be used in future item development activities. The study compared p-values between the original OCCT items and their modified OMAAP counterpart. Tables 2-6 through 2-8 provide the Pearson correlation between the pairs of p-values for each grade and content area. The mean p-value and other summary statistics are also provided in the tables. Correlations were generally moderate to high, indicating a relatively good degree of correspondence between the two sets of p-values. The mean p-values for the OMAAP were generally .10 to .15 lower than for OCCT.

Table 2-9 provides a distributional summary of the difference between p-values for mathematics (all grades combined). Because the distributions for the other content areas were similar, only the results for mathematics are reported. Note that approximately 70% of the differences between OCCT and OMAAP p-values were within the range of .00 to .20. The distribution of a uniform random variable is provided for comparison. Based on the above analyses, it has been determined that OCCT item statistics provide a reasonable proxy to the modified OMAAP items, and thus will be used in future item development procedures. In 2009, a similar study was performed for the U.S. History EOI test. The results of this new study were found to be comparable to the results of the original study.

Table 2-6 Pearson Correlation between OCCT and OMAAP P-values for Reading

Content Area	Grade	Program	Items	Corr.	Mean PV	SD	Min.	Max.
Reading	3	OCCT	36	.30	.69	.12	.46	.91
		OMAAP			.55	.10	.33	.81
	4	OCCT	36	.66	.71	.12	.49	.91
		OMAAP			.56	.12	.32	.81
	5	OCCT	34	.62	.62	.16	.28	.87
		OMAAP			.50	.12	.31	.78
	6	OCCT	36	.66	.65	.14	.33	.93
		OMAAP			.55	.13	.32	.82
	7	OCCT	35	.44	.63	.10	.36	.82
		OMAAP			.55	.12	.28	.80
	8	OCCT	36	.66	.71	.12	.44	.93
		OMAAP			.60	.16	.31	.91
	EOI	OCCT	23*	.44	.62	.16	.28	.85
		OMAAP			.60	.15	.28	.86

Content Area	Grade	Program	Items	Corr.	Mean PV	SD	Min.	Max.
Math	3	OCCT	38	.50	.69	.18	.28	.94
		OMAAP			.61	.15	.30	.87
	4	OCCT	36	.48	.67	.15	.34	.89
		OMAAP			.56	.16	.22	.85
	5	OCCT	38	.38	.67	.14	.37	.89
		OMAAP			.56	.13	.25	.78
	6	OCCT	38	.42	.60	.16	.30	.89
		OMAAP			.55	.18	.28	.90
	7	OCCT	37	.18	.53	.15	.22	.82
		OMAAP			.53	.15	.24	.88
	8	OCCT	38	.44	.59	.13	.27	.83
		OMAAP			.52	.16	.27	.87
	EOI	OCCT	36	.60	.63	.17	.31	.93
		OMAAP			.51	.14	.22	.87

Table 2-7 Pearson Correlation between OCCT and OMAAP P-values for Mathematics

Table 2-8 Pearson Correlation between OCCT and OMAAP P-values for Science

Content Area	Grade	Program	Items	Corr.	Mean PV	SD	Min.	Max.
Science	5	OCCT	32	.68	.71	.15	.39	.96
		OMAAP			.60	.16	.35	.95
	8	OCCT	31	.54	.71	.13	.41	.92
		OMAAP			.64	.14	.34	.88
	EOI	OCCT	44	.67	.61	.14	.21	.92
		OMAAP			.52	.15	.27	.88

Table 2-9 Distributional Summary of the Difference between OCCT and OMAAP P-values for Mathematics

Math PV Diff.	Freq.	%	Ran. Freq.	Ran. %
-.9				
-.8			4	1.78
-.7			8	3.56
-.6			11	4.89
-.5	2	.89	8	3.56
-.4	5	2.22	15	6.67
-.3	6	2.67	14	6.22
-.2	17	7.56	19	8.44
-.1	14	6.22	18	8.00
0	28	12.44	19	8.44
.1	69	30.67	25	11.11
.2	57	25.33	19	8.44
.3	24	10.67	21	9.33
.4	3	1.33	11	4.89
.5			9	4.00
.6			15	6.67
.7			3	1.33
.8			4	1.78
.9			2	0.89

2.7 Form and Linking Item Set Rollout Plan

The test form and linking item set rollout plan for past years and the next several years is briefly outlined below. Bulleted points are organized by assessment year.

Spring 2007 Administration (all tests)

- First administration of the OMAAP (Form A).

Winter 2007/08 Trimester Administration (EOI only)

- First administration with additional items (Form B). Test forms include 30% linking items.

Spring 2008 Administration (all tests)

- First administration with larger number of items (Form C) and new linking plan.
- Test forms include 40% linking items (link to Spring 2007).
- Alternate form used Spring 2007 as the base form (Form A) with items added for parallel form length. Reported scale score did not include additional items.

Winter 2008/09 Trimester Administration (EOI only)

- Administration of Form C (the 2008 Spring form).
- For U.S. History, Form D was administered to all Winter 08/09 Trimester students. Form E was administered as the Alternate form.

Spring 2009 Administration (all tests)

- First administration of two new forms (D and E).
- 50% of the linking items were replaced for Science and Math. Reading replaced 2 of the 3 linking passages.
- Forms D and E were distributed by district while maintaining demographic representation.
- Form A was used as the Alternate form.

Winter 2009/10 Trimester Administration (EOI only)

- Administration of either Form B, C, D, or E.

Spring 2010 Administration (all tests)

- First administration of Form F.
- The remaining 50% of the linking items will be replaced for Science and Math. Reading will replace the remaining linking passage.

- Either Form B, C, D, or E will be used as the Alternate form.

Winter 2010/11 Trimester Administration (EOI only)

- Administration of either Form B, C, D, E, or F.

Spring 2011 Administration (all tests)

- First administration of Form G.
- Either Form B, C, D, E, or F will be used as the Alternate form.

U.S. History was administered for the first time during the Winter 2008/09 trimester. The U.S. History EOI test is composed of 40 multiple-choice items. There were two forms (D and E) of the test for Winter 2008/09 and Spring 2009. The two forms shared 40% of their items, i.e., 40% common items across the two forms. In 2010, a new form (F) will be created with 40% linking items. Some additional information for U.S. History includes:

- Form D was administered to all Winter 08/09 Trimester students. Form E was administered as the Alternate form.
- For Spring 2009, Forms D and E were distributed by district while maintaining demographic representation.
- The form not distributed to the district was used as the Alternate form for that district.
- A new form (F) will be administered in Spring 2010.
- A new form (G) will be administered in Spring 2011.

2.8 Scoring the English II Writing Prompt

The writing prompt on the English II EOI test was scored from 0 to 3. The following procedures were used to score the English II EOI essay.

1. Each essay was scored independently by two graders according to the rubric. For the two writing prompts administered in the spring of 2009, the percent exact agreement was 81% for one form and 85% for the other form. The percent adjacent agreement was 19% and 15, respectively.
2. If the resulting scores varied between the two graders, a Table Leader then offered a score.
3. If the Table Leader's score did not match one of the scores from the first two graders, the essay was handled by an exception process.

A score from 1 to 3 was assigned unless a non-score was specified. Essays that could not be scored were given a non-score of 0 and placed into one of the following categories:

- Illegible
- Off topic
- Written in another language
- No response

Chapter

3

RELIABILITY

The Oklahoma State Department of Education is required by federal law to ensure that the instruments it uses to measure student achievement for school accountability provide reliable results. This section provides evidence that scores from the OMAAP measure student achievement in a reliable manner. In addition, the size of the measurement error associated with test scores is reasonable, especially at the proficiency cut score.

3.1 Reliability and Measurement Error

Reliable student test scores, like other reliable measurements, are consistent. More specifically, measurement components are consistent with each other. Results of the components vary, but they do so within tolerable limits. In general, measurement error and reliability are inversely related. When measurement error is large, reliability is small. Increasing reliability by minimizing measurement error is an important goal in the construction of any test. For example, based upon a Technical Advisory Committee recommendation in 2007, test development specialists increased the number of items administered to students in 2008. These increases were also implemented in 2009. Increasing the number of items did generally increase reliability estimates (see Section 3.3 below).

The OMAAP assessments, like many other standardized achievement tests, were designed under the assumptions of Classical Test Theory (CTT). This approach builds on the notion of an ideal, error-free or true measurement score. Any observed measurement, such as test score X, is defined as a composite of true score T and its associated error:

$$X = T + \text{error}$$

Estimating the size of the measurement error associated with the true score is the key to estimating reliability. Errors in measurement can result from any of a multitude of factors, including environmental factors (e.g., testing conditions) and examinee factors (e.g., fatigue, stress). Feldt and Brennan (1989) note, “Quantification of the consistency and inconsistency in examinee performance constitutes the essence of reliability

analysis" (p. 105). CTT provides a means for this quantification of examinee inconsistency (i.e., measurement error).

The definitions or assumptions in CTT lead to several important properties. For example, it can be demonstrated that

$$\sigma_x^2 = \sigma_t^2 + \sigma_e^2,$$

or observed score variance equals the sum of true score variance plus error variance. The relationships among variance terms (i.e., $\sigma_x^2, \sigma_t^2, \sigma_e^2$) are critical to a more thorough understanding of important CTT concepts, including reliability and the standard error of measurement. For example, CTT reliability is defined as the correlation between observed scores on parallel forms, which is equal to

$$\rho_{x_1 x_2} = \sigma_t^2 / \sigma_x^2.$$

Reliability in CTT is thus conceptualized as true score variance divided by observed score variance. With just a few algebraic steps, the CTT definition of the standard error of measurement (SEM) can be shown as

$$\sigma_e = \sigma_x \sqrt{1 - \rho_{x_1 x_2}}.$$

Although the conceptualization of reliability and SEM is relatively straightforward, issues underlying the estimation of reliability are not. Reliability can be estimated via the correlation of scores on parallel forms or from test-retest data, or it can be estimated from a single test administration using any one of a variety of techniques (e.g., Brown, 1910; Cronbach, 1951; Kuder & Richardson, 1937). A very popular technique for estimating reliability from a single test administration is Cronbach's coefficient alpha.

3.2 Sources of Measurement Error

As noted above, errors in measurement can result from environmental factors (e.g., testing conditions) and examinee factors (e.g., fatigue, stress). To reduce other sources of measurement error, the scoring of student responses to multiple-choice items was done electronically. Scoring error may result from improper coding and extraneous marks on scannable response sheets. The size of this sort of error is usually small and is controlled though proper test administration procedures, including instructions on how to fill out response sheets and how to erase extraneous markings. Two of the most common types of errors are use of pen rather than pencil and double-bubbling, which often turns out to be just a bad erasure. During scoring, if a student's responses were clear to the human eye, as opposed to the machine's eye, the correct response was recorded and the score changed.

The English II writing item is susceptible to scoring error due to ambiguity in the scoring rubric as well as to differences among raters. The rubric was written to balance generality and specificity, covering the range of student responses, while at the same time allowing raters to easily identify the response characteristics distinguishing each score category. To minimize error due to raters, the test contractor thoroughly trained raters and monitored the scoring process. Only raters who met the contractor's criteria for consistent scoring during training were retained as scorers.

3.3 Evidence of Raw Score Internal Consistency

Consistency of individual student performance was estimated using coefficient alpha. As previously noted, coefficient alpha is conceptualized as the proportion of total raw score variance that may be attributed to a student's true score variance. Ideally, more score variance should be attributable to true test scores than to measurement error. Alpha is an appropriate index of internal consistency for use on untimed tests such as OMAAP.

Separate analyses were performed for each grade level and content area. Both multiple-choice and open-ended items (English II) were used in the computations. Coefficient alpha can be interpreted as a lower bound to reliability and was estimated using the following formula:

$$\alpha_{\text{Cronbach}} = \frac{n}{n-1}[1 - \frac{\sum_{i=1}^{n} \sigma_{Y_i}^2}{\sigma_X^2}],$$

where n is the number of items, $\sigma_{Y_i}^2$ is the variance of item i, and σ_X^2 is the variance of total score. SEM can be interpreted as "the square root of the average of the person-specific error variances of all examinees who participated in the reliability estimation experiment" (Traub, 1994, p. 114). SEMs were calculated using the following formula:

$$SEM = S_X \sqrt{1 - \alpha_{\text{Cronbach}}},$$

where S_X is the standard deviation of observed total scores. Tables 3-1 to 3-3 show the reliability coefficients (Cronbach's Alpha) and SEMs based on the raw score metric for the total population. Note that increasing the number of items for each test administered in 2008 generally increased the coefficient of reliability for the test. Appendix G provides Cronbach's Alpha reliability coefficients for selected subgroups.

Table 3-1 Reliability Coefficients and Standard Errors of Measurement, Reading

Administration	Grade	N (Students)	N (Items)	Mean	SD	Reliability	SEM
Spring 2007	3	2,513	36	19.74	7.03	0.85	2.72
	4	2,154	36	20.22	6.60	0.83	2.72
	5	2,123	35	17.60	6.04	0.79	2.77
	6	2,325	36	19.66	6.10	0.80	2.73
	7	2,357	36	19.86	6.50	0.82	2.76
	8	2,548	36	21.47	6.06	0.81	2.64
	English II	2,217	37	21.37	6.36	0.82	2.70
Spring 2008	3	3,131	40	20.76	7.48	0.85	2.87
	4	3,285	40	23.05	7.70	0.87	2.82
	5	3,055	38	19.73	6.49	0.81	2.83
	6	3,137	40	20.89	6.99	0.83	2.92
	7	3,146	39	23.23	7.08	0.85	2.78
	8	3,088	39	24.01	6.70	0.83	2.73
	English II	2,736	42	23.78	6.83	0.81	2.98
Winter 2007/08	English II	155	42	21.39	5.72	0.71	3.08
Spring 2009 Form D	3	1797	39	19.77	7.52	0.86	2.84
	4	1798	40	22.73	7.33	0.85	2.86
	5	1943	39	20.56	6.89	0.82	2.88
	6	1846	39	21.09	6.66	0.81	2.87
	7	1844	39	21.20	6.34	0.80	2.82
	8	1886	40	24.18	6.62	0.82	2.82
	English II	1788	41	24.20	6.91	0.80	3.11
Spring 2009 Form E	3	1873	39	21.85	8.00	0.88	2.77
	4	1985	40	23.45	7.68	0.87	2.80
	5	1869	39	21.73	7.08	0.84	2.83
	6	1784	38	20.07	6.29	0.80	2.85
	7	1733	40	23.47	7.02	0.84	2.81
	8	1770	39	24.45	6.34	0.82	2.71
	English II	1678	40	22.13	6.51	0.77	3.13
Winter 2008/09	English II	233	40	24.61	6.40	0.78	3.00

Table 3-2 Reliability Coefficients and Standard Errors of Measurement, Mathematics

Administration	Grade	N (Students)	N (Items)	Mean	SD	Reliability	SEM
Spring 2007	3	2,140	38	23.12	6.93	0.85	2.68
	4	1,941	36	20.21	6.07	0.80	2.71
	5	1,960	38	21.42	6.28	0.80	2.81
	6	1,918	38	21.06	6.10	0.80	2.73
	7	2,355	37	19.61	5.36	0.73	2.79
	8	2,695	38	19.78	5.67	0.75	2.84
	Algebra I	2,332	36	18.39	5.54	0.75	2.77
Spring 2008	3	2,634	39	25.82	7.51	0.88	2.60
	4	2,884	39	23.15	6.96	0.84	2.77
	5	2,879	38	21.17	6.10	0.79	2.80
	6	2,790	39	22.56	5.91	0.78	2.78
	7	3,034	38	20.07	5.41	0.74	2.77
	8	3,202	39	20.23	5.68	0.74	2.87
	Algebra I	3,286	38	19.33	5.68	0.75	2.82
Winter 2007/08	Algebra I	129	38	17.50	5.64	0.75	2.82
Spring 2009 Form D	3	1,548	40	25.55	7.88	0.88	2.71
	4	1,556	40	22.76	7.07	0.84	2.83
	5	1,800	39	21.94	6.48	0.82	2.77
	6	1,698	40	23.31	5.34	0.72	2.81
	7	1,766	39	21.61	5.93	0.78	2.80
	8	1,868	40	20.76	5.73	0.75	2.88
	Algebra I	2,180	38	20.53	5.97	0.77	2.85
Spring 2009 Form E	3	1,629	40	28.54	7.12	0.88	2.49
	4	1,756	39	25.06	7.26	0.86	2.67
	5	1,758	39	22.43	6.62	0.83	2.72
	6	1,666	39	21.17	5.85	0.77	2.81
	7	1,688	38	19.61	5.99	0.79	2.75
	8	1,756	40	21.12	5.92	0.77	2.84
	Algebra I	2,055	38	20.36	6.34	0.81	2.76
Winter 2008-09	Algebra I	216	38	19.58	5.95	0.78	2.79

Table 3-3 Reliability Coefficients and Standard Errors of Measurement, Science

Administration	Grade	N (Students)	N (Items)	Mean	SD	Reliability	SEM
Spring 2007	5	1,548	32	19.15	5.09	0.76	2.50
	8	1,852	31	20.03	5.38	0.80	2.40
	Biology I	1,872	44	23.11	6.42	0.77	3.10
Spring 2008	5	2,220	39	23.58	6.19	0.81	2.73
	8	2,317	39	24.35	6.41	0.82	2.73
	Biology I	2,609	45	24.89	7.54	0.84	3.06
Winter 2007/08	Biology I	113	42	22.40	7.05	0.83	2.91

Administration	Grade	N (Students)	N (Items)	Mean	SD	Reliability	SEM
Spring 2009 Form D	5	1,503	40	24.52	6.46	0.82	2.76
	8	1,401	39	23.17	6.29	0.80	2.82
	Biology I	1,696	45	25.99	7.05	0.81	3.04
Spring 2009 Form E	5	1,471	40	23.81	6.62	0.82	2.78
	8	1,287	38	22.49	5.92	0.78	2.79
	Biology I	1,651	46	26.96	7.64	0.84	3.05
Winter 2008/09	Biology I	161	45	26.11	6.77	0.79	3.11

Table 3-4 Reliability Coefficients and Standard Errors of Measurement, U.S. History

Administration	Grade	N (Students)	N (Items)	Mean	SD	Reliability	SEM
Spring 2009 Form D	U.S. History	1285	39	17.98	5.85	0.75	2.90
Spring 2009 Form E	U.S. History	1261	39	17.53	5.55	0.72	2.95
Winter 2008/09	U.S. History	211	39	17.59	5.71	0.74	2.91

3.4 Conditional Standard Error Estimates for Scale Scores

The overall SEM in Tables 3-1 to 3-4 represents the standard deviation of projected replications of the testing procedure averaged over all students. In contrast, conditional standard errors of measurement (CSEMs) are conditioned on the ability of the student. Rasch-based CSEMs ($CSEM(\theta)$) for each scale score are defined as the reciprocal of the square root of the test information function ($I(\theta)$) at the point on the ability continuum that corresponds to each scale-score (Hambleton and Swaminathan 1985).

$$CSEM(\theta) = \frac{1}{\sqrt{I(\theta)}}$$

CSEMs are especially useful for characterizing measurement precision in the neighborhood of score levels used for decision-making, such as cut scores for identifying students who meet a performance standard. The CSEMs for the proficient cut scores (i.e., the Satisfactory performance level and above) for the OMAAP are presented in Table 3-5. CSEMs for other scale scores are reported in Appendix B. Note that CSEMs are smaller in the middle of the score distribution than at the extremes. This pattern is expected for IRT-based CSEMs. The value for all CSEMs was 7 scale score points except for Biology which was 6. These values reflect a reasonable amount of measurement error at the proficiency cut for making AYP determinations for federal accountability.

Table 3-5 Conditional Standard Errors of Measurement at the Proficient Cut Score

Administration	Content Area	Grade	Form D SS Cut*	Form D CSEM	Form E SS Cut*	Form E CSEM
Spring 2009	Reading	3	250	7	250	7
		4	250	7	250	7
		5	250	7	250	7
		6	250	7	250	7
		7	250	7	250	7
		8	250	7	250	7
		English II	250	6	250	6
	Math	3	250	7	250	7
		4	250	7	250	7
		5	250	7	250	7
		6	250	7	250	7
		7	250	7	250	7
		8	250	7	250	7
		Algebra I	250	7	250	7
	Science	5	250	7	250	7
		8	250	7	250	7

		Biology I	250	6	250	6
	U.S History	U.S History	250	7	250	7

* See Appendix B for the CSEM at each scale score.

3.5 Reliability of Classifications

The reliability of student achievement level classifications (i.e., Unsatisfactory, Limited Knowledge, Satisfactory, and Advanced) was evaluated using a computer program developed by Huynh (1979). This FORTRAN program is based on the beta-binomial model that also provides SEs for the consistency estimates. Classification consistency refers to the degree to which each student's achievement level can be replicated and is similar to the traditional test-retest or equivalent forms reliability. Using the maximum possible score, mean, standard deviation, and KR-21, the parameters (▯, ▯) for the beta-binomial distribution are computed. Next, the program projects the univariate and bivariate frequency distributions. Kappa indices are then computed. The Kappa index estimates the level of improvement in the decision consistency beyond chance when test data are used (Huynh, 1979).

Tables 3-6 to 3-22 show the results of the classification and decision consistency for the Spring 2009 administration, and Tables 3-23 show results of the classification and decision consistency estimates for the Winter 2008/09 administration. As noted above, the raw agreement index is a classification consistency index that estimates the percentage of examinees that would be assigned to (hypothetically) the same achievement level if the same test was administered a second time or an equivalent test was administered under the same conditions. The agreement consistency coefficients (*P)* for the OMAAP were generally in the low to mid 60s. These values reflect classification consistency for the four performance categories: Unsatisfactory, Limited Knowledge, Satisfactory, and Advanced. Had a student been regarded as "pass" if their achievement level was Satisfactory or Advanced and as "fail" if their achievement level was Unsatisfactory or Limited Knowledge, the classification consistency indices would have been 10 to 15 percent higher. The latter classification accuracy is directly related to determining the accuracy of proficiency classifications for NCLB.

Table 3-6 Classification Consistency Coefficients for Reading, Form D, Spring 2009

Grade	N (Items)	Raw Cut Score			Mean	SD	Kappa	SE
		Limited Knowledge	Satisfactory	Advanced				
3	39	14	18	27	19.77	7.52	0.47	0.0009
4	40	13	18	26	22.73	7.33	0.47	0.0008

5	39	11	19	27	20.56	6.89	0.45	0.0008
6	39	13	21	26	21.09	6.66	0.42	0.0009
7	39	13	20	29	21.20	6.34	0.40	0.0009
8	40	16	21	32	24.18	6.62	0.42	0.0010
Algebra I, EOI	41	16	21	29	24.20	6.91	0.43	0.0009

Table 3-7 Classification Consistency Coefficients for Reading, Form E, Spring 2009

Grade	N (Items)	Raw Cut Score			Mean	SD	Kappa	SE
		Limited Knowledge	Satisfactory	Advanced				
3	39	14	19	27	21.85	8.00	0.51	0.0008
4	40	14	19	26	23.45	7.68	0.49	0.0008
5	39	12	19	27	21.73	7.08	0.46	0.0008
6	38	12	19	24	20.07	6.29	0.39	0.0009
7	40	14	22	30	23.47	7.02	0.45	0.0008
8	39	17	22	31	24.45	6.34	0.41	0.0010
Algebra I, EOI	40	13	18	26	22.13	6.51	0.41	0.0009

Table 3-8 Classification Consistency Coefficients for Mathematics, Form D, Spring 2009

Grade	N (Items)	Raw Cut Score			Mean	SD	Kappa	SE
		Limited Knowledge	Satisfactory	Advanced				
3	40	14	20	29	25.55	7.88	0.53	0.0007
4	40	13	19	30	22.76	7.07	0.46	0.0009

5	39	15	18	28	21.94	6.48	0.42	0.0011
6	40	15	20	32	23.31	5.34	0.32	0.0010
7	39	15	19	28	21.61	5.93	0.36	0.0011
8	40	13	19	28	20.76	5.73	0.34	0.0010
English II, EOI	38	11	16	25	20.53	5.97	0.39	0.0010

Table 3-9 Classification Consistency Coefficients for Mathematics, Form E, Spring 2009

Grade	N (Items)	Raw Cut Score			Mean	SD	Kappa	SE
		Limited Knowledge	Satisfactory	Advanced				
3	40	17	22	30	28.54	7.12	0.52	0.0007
4	39	15	21	31	25.06	7.26	0.50	0.0008
5	39	15	18	28	22.43	6.62	0.43	0.0010
6	39	13	17	30	21.17	5.85	0.36	0.0011
7	38	13	17	25	19.61	5.99	0.37	0.0011
8	40	13	20	29	21.12	5.92	0.37	0.0009
English II, EOI	40	17	22	30	28.54	7.12	0.52	0.0007

Table 3-10 Classification Consistency Coefficients for Science, Form D, Spring 2009

Grade	N (Items)	Raw Cut Score			Mean	SD	Kappa	SE
		Limited Knowledge	Satisfactory	Advanced				
5	40	16	20	31	24.52	6.46	0.42	0.0010
8	39	11	14	31	23.17	6.29	0.42	0.0013

Biology I, EOI	45	16	24	32	25.99	7.05	0.42	0.0009

Table 3-11 Classification Consistency Coefficients for Science, Form E, Spring 2009

Grade	N (Items)	Raw Cut Score			Mean	SD	Kappa	SE
		Limited Knowledge	Satisfactory	Advanced				
5	40	14	18	30	23.81	6.62	0.44	0.0010
8	38	12	15	30	22.49	5.92	0.39	0.0013
Biology I, EOI	46	16	24	32	26.96	7.64	0.46	0.0008

Table 3-12 Classification Consistency Coefficients for U.S. History, Form D, Spring 2009

Grade	N (Items)	Raw Cut Score			Mean	SD	Kappa	SE
		Limited Knowledge	Satisfactory	Advanced				
U.S. History, EOI	39	14	20	25	17.98	5.9	0.34	0.0010

Table 3-13 Classification Consistency Coefficients for U.S. History, Form E, Spring 2009

Grade	N (Items)	Raw Cut Score			Mean	SD	Kappa	SE
		Limited Knowledge	Satisfactory	Advanced				
U.S. History, EOI	39	14	20	25	17.53	5.6	0.32	0.0011

Table 3-14 Classification Consistency Coefficients for Winter 2008/09 EOI

Grade	N (Items)	Raw Cut Score			Mean	SD	Kappa	SE
		Limited	Satisfactory	Advanced				

		Knowledge						
English II, EOI	40	16	21	28	24.61	6.40	0.41	0.0009
Algebra I, EOI	38	12	16	25	19.58	5.95	0.37	0.0011
Biology I, EOI	45	16	24	32	26.11	6.77	0.40	0.0009
U. S. History, EOI	39	14	20	25	17.59	5.7	0.33	0.0010

Table 3-15 Agreement Consistency Coefficients for Reading Grade 3, Form D, Spring 2009

Grade	N (Items)	Raw Cut Score			Mean	SD	*P*	SE(*p*)
		Limited Knowledge	Satisfactory	Advanced				
3	39	14	18	27	19.77	7.52	0.62	0.0005
4	40	13	18	26	22.73	7.33	0.64	0.0006
5	39	11	19	27	20.56	6.89	0.62	0.0003
6	39	13	21	26	21.09	6.66	0.58	0.0005
7	39	13	20	29	21.20	6.34	0.61	0.0002
8	40	16	21	32	24.18	6.62	0.65	0.0002
English II,	41	16	21	29	24.20	6.91	0.60	0.0005

EOI								

Table 3-16 Agreement Consistency Coefficients for Reading, Grade 3, Form E, Spring 2009

Grade	N (Items)	Raw Cut Score			Mean	SD	*P*	SE(*p*)
		Limited Knowledge	Satisfactory	Advanced				
3	39	14	19	27	21.85	8.00	0.64	0.0006
4	40	14	19	26	23.45	7.68	0.65	0.0006
5	39	12	19	27	21.73	7.08	0.62	0.0004
6	38	12	19	24	20.07	6.29	0.57	0.0006
7	40	14	22	30	23.47	7.02	0.62	0.0004
8	39	17	22	31	24.45	6.34	0.61	0.0003
English II, EOI	40	13	18	26	22.13	6.51	0.60	0.0005

Table 3-17 Agreement Consistency Coefficients for Mathematics, Form D, Spring 2009

Grade	N (Items)	Raw Cut Score			Mean	SD	*P*	SE(*p*)
		Limited Knowledge	Satisfactory	Advanced				
3	40	14	20	29	25.55	7.88	0.68	0.0005
4	40	13	19	30	22.76	7.07	0.66	0.0003
5	39	15	18	28	21.94	6.48	0.63	0.0003
6	40	15	20	32	23.31	5.34	0.68	0.0005
7	39	15	19	28	21.61	5.93	0.59	0.0003

8	40	13	19	28	20.76	5.73	0.58	0.0002
Algebra I, EOI	38	11	16	25	20.53	5.97	0.62	0.0003

Table 3-18 Agreement Consistency Coefficients for Mathematics, Form E, Spring 2009

Grade	N (Items)	Raw Cut Score			Mean	SD	*P*	SE(*p*)
		Limited Knowledge	Satisfactory	Advanced				
3	40	17	22	30	28.54	7.12	0.70	0.0006
4	39	15	21	31	25.06	7.26	0.66	0.0004
5	39	15	18	28	22.43	6.62	0.64	0.0003
6	39	13	17	30	21.17	5.85	0.69	0.0004
7	38	13	17	25	19.61	5.99	0.57	0.0004
8	40	13	20	29	21.12	5.92	0.60	0.0002
Algebra I, EOI	38	11	15	24	20.36	6.34	0.63	0.0004

Table 3-19 Agreement Consistency Coefficients for Science, Form D, Spring 2009

Grade	N (Items)	Raw Cut Score			Mean	SD	*P*	SE(*p*)
		Limited Knowledge	Satisfactory	Advanced				
5	40	16	20	31	24.52	6.46	0.65	0.0002
8	39	11	14	31	23.17	6.29	0.80	0.0004
Biology I, EOI	45	16	24	32	25.99	7.05	0.60	0.0004

Table 3-20 Agreement Consistency Coefficients for Science, Form E, Spring 2009

Grade	N (Items)	Raw Cut Score			Mean	SD	*P*	SE(*p*)
		Limited Knowledge	Satisfactory	Advanced				
5	40	14	18	30	23.81	6.62	0.68	0.0002
8	38	12	15	30	22.49	5.92	0.77	0.0005
Biology I, EOI	46	16	24	32	26.96	7.64	0.62	0.0005

Table 3-21 Agreement Consistency Coefficients for U.S. History, Form D, Spring 2009

Grade	N (Items)	Raw Cut Score			Mean	SD	*P*	SE(*p*)
		Limited Knowledge	Satisfactory	Advanced				
U.S. History, EOI	39	14	20	25	17.98	5.9	0.52	0.0006

Table 3-22 Agreement Consistency Coefficients for U.S. History, Form E, Spring 2009

Grade	N (Items)	Raw Cut Score			Mean	SD	*P*	SE(*p*)
		Limited Knowledge	Satisfactory	Advanced				
U.S. History, EOI	39	14	20	25	17.53	5.6	0.51	0.0005

Table 3-23 Agreement Consistency Coefficients for Winter 2008/09 EOI

Grade	N (Items)	Raw Cut Score			Mean	SD	*P*	SE(*p*)
		Limited Knowledge	Satisfactory	Advanced				
English	40	16	21	28	24.61	6.40	0.59	0.0006

II, EOI								
Algebra I, EOI	38	12	16	25	19.58	5.95	0.60	0.0003
Biology I, EOI	45	16	24	32	26.11	6.77	0.59	0.0004
U.S. History, EOI	39	14	20	25	17.59	5.7	0.52	0.0006

Chapter
4

STANDARD SETTING

This chapter presents a summary of the procedures and results of the standard-setting sessions held May 29 through June 1, 2007, for the OMAAP. In order to provide full documentation for the OMAAP program, important information from the 2007 standard-setting workshop is provided, as the cut scores established at the 2007 standard-setting sessions were applied to 2008 and 2009 test scores. Reports of past standard-setting activities provide continuity and will help readers more fully understand the OMAAP program and its impact on student learning. For a detailed description of the 2007 OMAAP standard-setting event, see *Oklahoma Modified Alternate Assessment Program, Results from the Standard-Setting Workshop*. For a detailed description of the 2009 OMAAP U.S. History EOI standard-setting event, see *Oklahoma Modified Alternate Assessment Program, Results from the U.S. History EOI Standard-Setting Workshop*.

4.1 Goal of the OMAAP Standard Setting

The main goal of the 2007 OMAAP standard-setting event was to establish three cut scores for each test:

(1) the cut score that differentiates *Limited Knowledge* performance from *Unsatisfactory* performance
(2) the cut score that differentiates *Satisfactory* performance from *Limited Knowledge* performance
(3) the cut score that differentiates *Advanced* performance from *Satisfactory* performance

In other words, the determination of three cut scores yielded four performance categories for each test.

4.2 Overview of the Bookmark Standard-Setting Method

Riverside Publishing employed the Bookmark method (Lewis, Mitzel, & Greene, 1996) for the OMAAP standard setting. This method of setting cut scores has been employed in various state assessment programs as well as in the NAEP assessment program.

With the Bookmark standard-setting method, participants are provided with an Ordered Item Booklet (OIB). The OIB contains all the test items, one per page, in order from easiest to hardest as indicated by IRT item difficulty estimates. The participants' task is to indicate—by actually placing "bookmarks" in this booklet—the points at which the cut scores delineating the various performance levels should fall for that test. In the case of the OMAAP tests, participants undertook three rounds of bookmark placements to delineate the four performance categories on each test.

After each round of bookmark placements, participants were provided with increasing amounts of feedback about their groups' cut scores and the impact those cut scores would have on the population of students who took the OMAAP in 2007. Through small-group discussions between each round of bookmark placements, participants refined their ideas about the skills and knowledge students should possess to fall within a particular performance level. The goal was for each panel's bookmark placements to become more consistent throughout the standard-setting process.

After the final round of bookmark placements, the panel's median cut scores became the final recommended cut scores for the panel. Results from the standard-setting event were used to inform the recommended cut scores presented to the Oklahoma State Board of Education for approval.

4.3 Prerequisites to the OMAAP Standard-Setting Event

Two key activities that were required before the OMAAP standard-setting event were the development of performance-level descriptors (PLDs) and the selection of participants.

The PLDs for the OMAAP were developed with the Oklahoma Core Curriculum Tests (OCCT) PLDs as a starting point. Panels of Oklahoma educators modified the OCCT PLDs to make them appropriate for the content tested by the OMAAP. The development of these modified PLDs took place during May 2007. Final OMAAP PLDs were approved by the Oklahoma State Board of Education in June 2007. The final OMAAP PLDs are given in Appendix A of this report.

Riverside Publishing worked with the OK SDE to recruit eight panels for the standard-setting event. Because of content overlap, it was possible for several of the panels to set standards for multiple assessments. The panel design is depicted in Table 4-1.

Table 4-1 Panel Design for the OMAAP Standard Setting

Panel Number	Set Standards for:
1	Mathematics, grades 3, 4, and 5
2	Mathematics, grades 6, 7, and 8
3	Reading, grades 3, 4, and 5
4	Reading, grades 6, 7, and 8

Panel Number	Set Standards for:
5	Science, grades 5 and 8
6	EOI Biology I
7	EOI Algebra I
8	EOI English II/Writing

Participants were selected on the basis of their knowledge of the subject matter and familiarity with students in the grades assessed. Additionally, special emphasis was placed on selecting educators who had experience working with special-education populations.

Table 4-2 Characteristics of the Standard-Setting Panels

	Math 3–5	Math 6–8	Reading 3–5	Reading 6–8	Science 5 and 8	EOI Biology I	EOI Algebra I	EOI English II/ Writing
Total Participants	13	13	18	15	13	14	15	14
Female	13	13	17	13	12	7	14	14
Male	0	0	1	2	1	7	1	0
Number of Districts Represented	11	10	14	14	13	12	15	12

4.4 The OMAAP Standard-Setting Event

Because some panels set cut scores across multiple days and content areas, the standard setting was divided into three sessions. This breakout is displayed in Table 4-3.

Table 4-3 OMAAP Standard-Setting Schedule for Sessions 1, 2, and 3

Panel Number	Session #1 9:00 A.M., May 30, to 9:00 A.M., May 31	Session #2 9:00 A.M., May 31, to 5:15 P.M., May 31	Session #3 8:00 A.M., June 1, to 4:30 P.M., June 1
1	Mathematics Grade 5	Mathematics Grade 4	Mathematics Grade 3
2	Mathematics Grade 6	Mathematics Grade 7	Mathematics Grade 8
3	Reading Grade 5	Reading Grade 4	Reading Grade 3
4	Reading Grade 6	Reading Grade 7	Reading Grade 8
5	Science Grade 8	Science Grade 8	
6	EOI Biology I		
7	EOI Algebra I		
8	EOI English II/Writing		

The order of grades and content areas for mathematics and reading was planned so that a discussion of the articulation between the standards for grades 5 and 6 could

take place among the Table Leaders of those panels midway through the first session of standard setting. Articulation between the remaining grades was handled within those panels and thus did not require any conversation between panels.

Figure 4-1 outlines the events of the 2007 OMAAP standard setting, held May 29 through June 1, 2007.

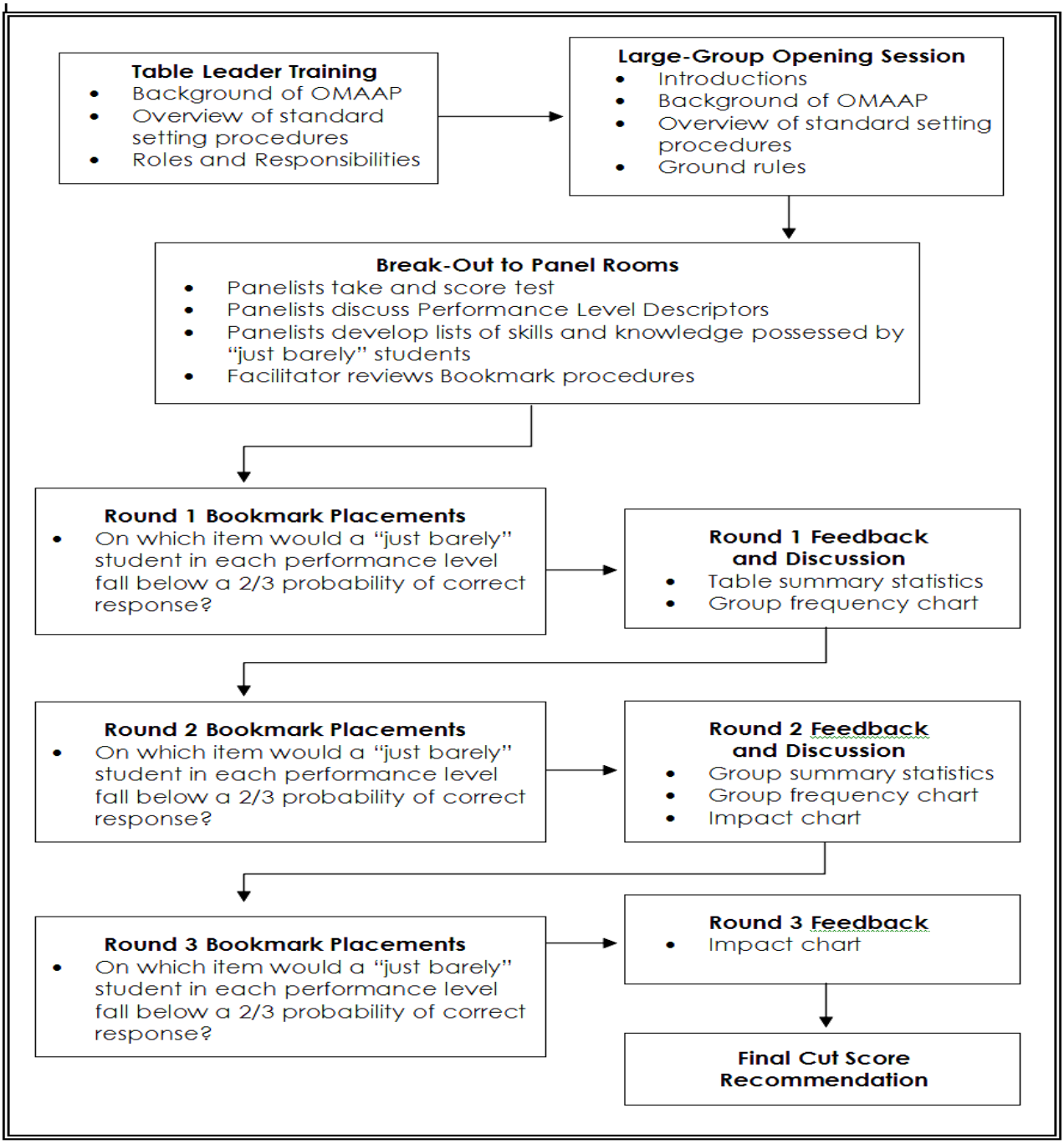


Figure 4-1 Steps in the OMAAP Standard Setting

4.4.1 The Ordered Item Booklets

The ordered-item booklets (OIBs) contained all the items from the 2007 OMAAP operational tests. However, items were ordered according to their Rasch difficulties in the OIBs. Negative Rasch difficulty values were removed from the OIBs to make the values easier for participants to process cognitively. This was achieved by adding a constant of 10 to each Rasch item difficulty. The item difficulty information was derived from actual student test data taken from the Spring 2007 administration of the OMAAP.

The EOI English II test contained one 3-point constructed-response writing item. With the Bookmark method, constructed-response items appear in the OIB once for each possible score point, excluding zero. Therefore, in the case of the OMAAP English II test, the writing item appeared in the OIB three times, once at the difficulty level of each possible score point of 1, 2, and 3. The constructed-response OIB difficulty values were obtained by finding the ability level associated with a two-thirds chance of obtaining each point value for the constructed-response item (English II/writing only).

4.4.2 Panelists' Feedback

Group summary information from panelist OIB page number placements was used to provide feedback to the panelists at each round of the standard setting. In addition, in rounds 2 and 3 raw cut scores calculated from the OIB page number placements were used to provide impact data to the panelists. Raw cut scores for each panel were calculated in the following manner.

1. The panel's median OIB page numbers for the *Limited Knowledge*, *Satisfactory*, and *Advanced* bookmarks were obtained. If the median OIB page number was not an integer, the OIB page number was rounded down to the nearest integer.
2. The Rasch ability estimate associated with each of the three median OIB page numbers was obtained.
3. The raw score-to-ability estimate table obtained from the WINSTEPS software was used to obtain the raw score associated with each of the three Rasch ability estimates.

The following information was provided to each panelist after Round 1:

- A report containing the median, minimum, and maximum bookmark placements for each table, for each of the three cut scores
- A frequency chart showing the number of participants in the panel who chose each OIB page number for each of the three bookmark placements

The following information was provided to each panelist after Round 2:

- A report containing the median, minimum, and maximum bookmark placements for the entire panel

- A frequency chart showing the number of participants on the panel who chose each OIB page number for each of the three bookmark placements
- An "impact graph" showing actual raw cut scores associated with each group's three median bookmark placements and how these cut scores would break out the actual percentages of students falling into each of the four performance levels on the 2007 OMAAP
- A chart showing the percentage of students falling into each performance level on the 2006 OCCT

A sample impact graph is included as Appendix E of this report.

Round 3 results were presented in the form of an impact chart, showing the final recommended raw cut scores as well as the percentage of students who would fall into each performance level on the 2007 OMAAP test.

When the Bookmark method of standard setting is used for deriving raw cut scores, and depending on the distribution of raw scores in the population of students who take the test, small changes to bookmarked OIB page numbers from round to round can have large effects on the raw cut scores. Conversely, large changes to the bookmarked OIB page numbers from round to round can have very little effect on the associated raw cut scores. In fact, the latter situation was the case for several of the OMAAP standard-setting panels. In these panels' OIBs, there were several consecutive page numbers that had the same associated ability estimate and, therefore, the same associated raw cut score. When the panel members were discussing the "tweaking" of their bookmarks before Rounds 2 and 3, they had a general level of agreement about where the cut scores should be, both in terms of test content and percentage of students falling in each performance level. However, because of the non-uniform distribution of raw test scores in the population of students who took those particular tests, it was difficult for panel members to know how much to alter their bookmark placements in Rounds 2 and 3 to obtain the desired raw cut scores. In these cases and when panels agreed that their Round 3 cut scores were not acceptable, the panels were given the opportunity to conduct a fourth round of bookmark placements. The results of the Round 4 bookmark placements were then treated as the final recommended cut scores.

4.4.3 Results

Tables presenting the results of the standard setting for each OMAAP test follow.

Tables 4-4 through 4-6 display the median, minimum, and maximum page numbers for each panel's bookmark placements after each round for mathematics, reading, and science, respectively. Tables 4-7 through 4-9 display the median, minimum, and maximum raw cut scores after each round for mathematics, reading, and science, respectively. Also included in Tables 4-7 through 4-9 is the standard error of judgment (SEJ) for the median cut score for each round of bookmark placements. The SEJ is a

measure of the degree of variability among the participants in each panel. It is calculated in the following manner:

$$SEJ = SE_{Mean} \times 1.25 ,$$

where SE_{Mean} is the standard error of the mean of the panel's Round 3 cut scores. SE_{Mean} is calculated by dividing the standard deviation of the participant ratings by the square root of the number of panelists. Lower values of SEJ indicate greater agreement among the participants within a panel on their Round 3 raw cut scores.

Tables 4-10 through 4-12 display the panel-recommended raw cut scores as well as the final board-approved raw cut scores and the percentages of students who scored at each performance level on the spring 2007 OMAAP administration for mathematics, reading, and science. Note that both panel-recommended cut scores and final board-approved cut scores are provided in Tables 4-10 through 4-12. Differences between the two sets of cut scores reflect adjustments made by the OK SDE after the standard-setting workshop. These adjustments were made to "smooth" the cut scores with respect to the percentages in each performance category across grade levels within each content area. As a rule, adjustments made by the OK SDE were never greater than one SEM.

Table 4-4 OIB Bookmarks by Round, Mathematics

		Limited Knowledge			Satisfactory			Advanced		
Grade		Round 1	Round 2	Round 3*	Round 1	Round 2	Round 3*	Round 1	Round 2	Round 3*
3	Low	2	2	2	7	7	7	21	25	25
	High	4	3	3	13	12	12	36	26	28
	Median	2	2	2	10	10	7	26	25	26
4	Low	4	4	1	11	12	8	29	28	24
	High	8	7	4	28	16	12	35	32	32
	Median	4	4	1	12	12	8	31	30	29
5	Low	1	4	3	5	10	10	22	31	31
	High	13	6	5	20	19	12	35	34	34
	Median	3.5	5	5	11	11	10.5	31.5	31.5	32
6	Low	5	6	4(1)	9	13	9(8)	25	26	25(24)
	High	11	10	10(10)	25	25	24(21)	38	35	35(34)
	Median	7	9	6(4)	20	21	18(13)	31	31	30(31)
7	Low	4	3	2(2)	9	10	7(6)	16	26	26(26)
	High	8	8	8(8)	28	20	17(16)	34	32	35(32)
	Median	5	4	4(4)	16	15	15(11)	28	27	27(27)
8	Low	3	2	1(1)	6	6	4(4)	17	24	23(23)
	High	8	6	4(4)	19	19	17(14)	34	34	34(34)
	Median	5	5	1(4)	15	16	13(12)	27	30	30(30)
Algebra I	Low	1	3	1(1)	6	8	3(3)	14	15	17(17)
	High	8	5	3(1)	16	13	8(8)	33	28	25(25)

Grade		Limited Knowledge			Satisfactory			Advanced		
		Round 1	Round 2	Round 3*	Round 1	Round 2	Round 3*	Round 1	Round 2	Round 3*
	Median	3	3	2(1)	9	9	5(5)	25	20	19(19)

* Numbers in parentheses indicate Round 4 results, where applicable.

Table 4-5 OIB Bookmarks by Round, Reading

Grade		Limited Knowledge			Satisfactory			Advanced		
		Round	Round	Round	Round	Round	Round	Round	Round	Round
3	Low	1	1	1	5	6	5	13	18	25
	High	6	4	2	23	16	6	33	23	33
	Median	2	2	1	7.5	8	6	20	23	32
4	Low	2	2	2	4	7	6	8	16	21
	High	10	5	3	17	9	9	29	21	26
	Median	3	2	2	9	9	9	19	17	22
5	Low	2	2	1	8	8	5	16	16	22
	High	15	6	2	26	22	9	35	29	28
	Median	5	4.5	2	15	13	6	28	24	24
6	Low	1	5	4	7	8	11	21	22	26
	High	7	7	5	22	18	13	30	28	28
	Median	5	6	4	13	10	13	27	26	26
7	Low	2	3	4	5	10	10	22	22	25
	High	8	5	5	17	13	11	29	25	28
	Median	5	5	4	11	11	11	24	22	25
8	Low	3	4	4	8	13	13	22	27	27
	High	8	7	7	23	19	19	31	30	32
	Median	5	6	6	14	15	15	27	27	30
English II EOI	Low	2	4	3	6	7	6	13	22	22
	High	6	6	5	14	13	12	34	28	27
	Median	3	4	4	8.5	8.5	8.5	26	23	23

* Numbers in parentheses indicate Round 4 results, where applicable.

Table 4-6 OIB Bookmarks by Round, Science

Grade		Limited Knowledge			Satisfactory			Advanced		
		Round 1	Round 2	Round 3*	Round 1	Round 2	Round 3*	Round 1	Round 2	Round 3*
5	Low	2	2	2	6	11	5	27	28	28
	High	5	5	5	13	12	12	31	31	32
	Median	2	2	5	11	11	11	28	30	30
8	Low	3	5	3(3)	7	10	8(8)	19	22	27(29)
	High	14	7	7(3)	22	15	14(10)	31	28	30(30)
	Median	7	6	4(3)	13	12	9(9)	27	27	29(29)
Biology I EOI	Low	3	5	4	14	14	14	26	33	33
	High	9	8	8	39	28	17	44	38	38
	Median	7	8	5	21	23	14	38	35	34

* Numbers in parentheses indicate Round 4 results, where applicable.

Table 4-7 Raw Cut Scores by Round, Mathematics

Grade		Limited Knowledge			Satisfactory			Advanced		
		Round 1	Round 2	Round 3*	Round 1	Round 2	Round 3*	Round 1	Round 2	Round 3*
3	Low	11	11	11	17	17	17	24	27	27
	High	16	15	15	21	21	21	31	27	28
	Median	11	11	11	19	19	17	27	27	27
	SEJ	0.8	0.5	0.5	0.5	0.4	0.5	0.6	0	0.1
4	Low	16	16	10	19	19	18	28	28	24
	High	18	17	16	28	21	19	32	29	29
	Median	16	16	10	19	19	18	28	28	28
	SEJ	0.2	0.2	0.9	0.9	0.2	0.2	0.4	0.2	0.6
5	Low	15	16	16	16	20	20	25	29	29
	High	22	16	16	25	25	22	30	30	30
	Median	16	16	16	20	20	20	29	29	29
	SEJ	0.7	0.0	0.0	1.0	0.5	0.2	0.6	0.1	0.1
6	Low	16	16	16(8)	17	19	17(17)	28	28	28(27)
	High	17	17	17(17)	28	28	27(26)	33	31	31(31)
	Median	17	17	16(16)	25	26	23(19)	30	30	29(30)
	SEJ	0.2	0.2	0.2(0.8)	1.6	1.0	1.4(1.0)	0.6	0.4	0.5(0.5)
7	Low	15	15	13(13)	18	20	17(17)	23	26	26(26)
	High	17	17	17(17)	27	25	23(23)	29	28	31(28)
	Median	16	15	15(15)	23	21	21(20)	27	27	27(27)
	SEJ	0.3	0.3	0.5(0.5)	0.9	0.6	0.7(0.7)	0.5	0.3	0.5(0.3)
8	Low	13	13	9(9)	17	17	13(13)	23	27	26(26)
	High	18	17	13(13)	25	25	23(22)	30	30	30(30)
	Median	17	17	9(13)	23	23	20(20)	28	28	28(28)
	SEJ	0.7	0.7	0.7(0.4)	0.8	0.9	1.2(0.8)	0.8	0.4	0.5(0.5)
Algebra I EOI	Low	8	15	8(8)	16	19	15(15)	21	22	23(23)
	High	19	16	15(8)	22	21	19(19)	29	26	25(25)
	Median	15	15	15(8)	19	19	16(16)	25	24	24(24)
	SEJ	0.7	0.1	1.0(0.0)	0.5	0.2	0.5(0.4)	0.8	0.4	0.2(0.2)

* Numbers in parentheses indicate Round 4 results, where applicable.

Table 4-8 Raw Cut Scores by Round, Reading

Grade		Limited Knowledge			Satisfactory			Advanced		
		Round 1	Round 2	Round 3*	Round 1	Round 2	Round 3*	Round 1	Round 2	Round 3*
3	Low	Low	11	11	11	18	19	18	22	23
	High	High	19	17	17	24	23	19	27	24
	Median	Median	17	17	11	21	21	19	23.5	24
	SEJ	SEJ	0.5	0.4	0.4	0.4	0.3	0.1	0.4	0.1
4	Low	Low	14	14	14	17	18	18	19	22
	High	High	19	17	16	23	19	19	27	24
	Median	Median	16	14	14	19	19	19	24	23
	SEJ	SEJ	0.4	0.3	0.3	0.5	0.1	0.1	0.6	0.3
5	Low	Low	14	14	12	18	18	18	21	21
	High	High	21	18	14	26	24	19	29	26
	Median	Median	18	17.5	14	21	21	18	26	25
	SEJ	SEJ	0.5	0.3	0.2	0.6	0.3	0.1	0.7	0.4
6	Low	Low	11	17	16	19	19	20	24	24
	High	High	19	19	17	24	23	21	27	27
	Median	Median	17	19	16	21	19	21	26	25
	SEJ	SEJ	0.9	0.3	0.1	0.6	0.5	0.1	0.4	0.2
7	Low	Low	15	15	16	16	20	20	24	24
	High	High	18	16	16	23	22	21	26	25
	Median	Median	16	16	16	21	21	21	25	24
	SEJ	SEJ	0.2	0.1	0.0	0.6	0.1	0.2	0.3	0.2
8	Low	Low	13	14	14	18	20	20	25	27
	High	High	18	18	18	25	23	23	29	29
	Median	Median	15	16	16	21	21	21	27	27
	SEJ	SEJ	0.6	0.6	0.5	0.7	0.4	0.2	0.4	0.3
English II EOI	Low	Low	11	14	14	17	18	17	21	23
	High	High	17	17	15	21	21	20	30	27
	Median	Median	14	14	14	18.5	18.5	18.5	26	25
	SEJ	SEJ	0.6	0.3	0.2	0.5	0.4	0.4	0.9	0.6

* Numbers in parentheses indicate Round 4 results, where applicable.

Table 4-9 Raw Cut Scores by Round, Science

Grade		Limited Knowledge			Satisfactory			Advanced		
		Round 1	Round 2	Round 3*	Round 1	Round 2	Round 3*	Round 1	Round 2	Round 3*
5	Low	6	6	6	16	17	13	24	25	25
	High	13	13	13	20	20	20	26	26	26
	Median	6	6	13	17	17	17	25	25	25
	SEJ	1.1	1.2	1.1	0.6	0.5	0.9	0.2	0.2	0.2
8	Low	12	13	12(12)	14	16	15(15)	21	22	24(26)
	High	19	14	14(12)	22	20	19(16)	27	24	26(26)
	Median	14	13	13(12)	19	19	15(15)	24	24	26(26)
	SEJ	0.6	0.2	0.2(0.0)	0.9	0.5	0.5(0.2)	0.6	0.2	0.3(0.0)
Biology I EOI	Low	13	17	15	26	26	26	30	33	33
	High	23	23	23	33	31	26	38	33	33
	Median	21	23	17	29	30	26	33	33	33
	SEJ	1.2	0.7	1.2	1.0	0.7	0.0	0.9	0.0	0.0

* Numbers in parentheses indicate Round 4 results, where applicable.

Table 4-10 Panel-Recommended and Final Board-Approved Cut Scores and Impact, Mathematics

Grade	Performance Level	Panel-Recommended Cut Scores	Final Board-Approved	
			Cut Scores	Impact (% of students at each performance level)
3	Unsatisfactory			10.3
	Limited Knowledge	11	14	22.4
	Satisfactory	17	20	33.2
	Advanced	27	27	34.1
4	Unsatisfactory			11.0
	Limited Knowledge	10	13	30.0
	Satisfactory	18	19	45.2
	Advanced	28	28	13.9
5	Unsatisfactory			20.1
	Limited Knowledge	16	16	22.4
	Satisfactory	20	20	42.5
	Advanced	29	29	15.1
6	Unsatisfactory			12.9
	Limited Knowledge	16	14	23.5
	Satisfactory	19	19	54.3
	Advanced	30	30	9.3
7	Unsatisfactory			18.8
	Limited Knowledge	15	15	33.8
	Satisfactory	20	20	36.3
	Advanced	27	27	11.1
8	Unsatisfactory			10.4
	Limited Knowledge	13	13	40.9
	Satisfactory	20	20	39.2
	Advanced	28	28	9.5
Algebra I EOI	Unsatisfactory			7.6
	Limited Knowledge	8	11	28.1
	Satisfactory	16	16	46.8
	Advanced	24	24	17.5

Table 4-11 Panel-Recommended and Final Board-Approved Cut Scores and Impact, Reading

Grade	Performance Level	Panel-Recommended Cut Scores	Final Board-Approved	
			Cut Scores	Impact (% of students at each performance level)
3	Unsatisfactory			22.8
	Limited Knowledge	11	14	26.3
	Satisfactory	19	19	26.6
	Advanced	26	26	24.3
4	Unsatisfactory			19.1
	Limited Knowledge	14	14	23.8
	Satisfactory	19	19	27.8
	Advanced	25	25	29.2
5	Unsatisfactory			10.7
	Limited Knowledge	14	11	44.0
	Satisfactory	18	18	29.6
	Advanced	25	25	15.7
6	Unsatisfactory			14.0
	Limited Knowledge	16	13	42.5
	Satisfactory	21	21	20.4
	Advanced	25	25	23.1
7	Unsatisfactory			15.5
	Limited Knowledge	16	13	41.0
	Satisfactory	21	21	29.1
	Advanced	25	28	14.4
8	Unsatisfactory		20.4	20.4
	Limited Knowledge	16	16	24.3
	Satisfactory	21	21	41.9
	Advanced	29	29	13.4
English II EOI	Unsatisfactory			13.8
	Limited Knowledge	14	14	22.4
	Satisfactory	18.5	19	30.5
	Advanced	25	25	33.2

Table 4-12 Panel-Recommended and Final Board-Approved Cut Scores and Impact, Science

Grade	Performance Level	Panel-Recommended Cut Scores	Final Board-Approved	
			Cut Scores	Impact (% of students at each performance level)
5	Unsatisfactory			10.2
	Limited Knowledge	13	13	23.1
	Satisfactory	17	17	49.6
	Advanced	25	25	17.1
8	Unsatisfactory			10.2
	Limited Knowledge	12	12	9.4
	Satisfactory	15	15	63.9
	Advanced	26	26	16.5
Biology I EOI	Unsatisfactory			8.8
	Limited Knowledge	17	15	42.6
	Satisfactory	26	23	31.6
	Advanced	33	30	16.9

4.4.4 Results from the 2009 U.S. History Standard Testing Workshop

The Bookmark standard setting procedures outlined above were used to set standards for U.S. History EOI in June 2009. Tables presenting the results of the standard setting for the U.S. History EOI test follow.

Table 4-13 displays the median, minimum, and maximum page numbers for the panel's bookmark placements after each round for U.S. History. Table 4-14 displays the median, minimum, and maximum raw cut scores after each round. Also included in Table 4-14 is the standard error of judgment (SEJ) for the median cut score for each round of bookmark placements. The SEJ is calculated as described above with lower values of SEJ indicating greater agreement among the participants within the panel on their Round 3 raw cut scores.

Table 4-15 displays the panel-recommended raw cut scores as well as the final board-approved raw cut scores and the percentages of students who scored at each performance level on the spring 2009 administration for U.S. History. Note that both panel-recommended cut scores and final board-approved cut scores are provided in Tables 4-15.

Table 4-13 OIB Bookmarks by Round, U.S. History EOI

Grade		Limited Knowledge			Satisfactory			Advanced		
		Round 1	Round 2	Round 3	Round 1	Round 2	Round 3	Round 1	Round 2	Round 3
U.S. History EOI	Low	4	1	4	8	5	11	33	21	30
	High	24	10	8	52	28	27	62	56	52
	Median	7	6	5	26	23	22	51	46	45

Table 4-14 Raw Cut Scores by Round, U.S. History EOI

Grade		Limited Knowledge			Satisfactory			Advanced		
		Round 1	Round 2	Round 3	Round 1	Round 2	Round 3	Round 1	Round 2	Round 3
U.S. History EOI	Low	13	9	13	16	14	17	22	19	21
	High	20	16	16	26	21	21	32	27	26
	Median	16	14	14	21	20	20	26	24	25
	SEJ	0.55	0.78	0.31	0.60	0.65	0.25	0.74	0.70	0.43

Table 4-15 Panel-Recommended and Final Board-Approved Cut Scores and Impact, U.S. History EOI

Grade	Performance Level	Panel-Recommended Cut Scores	Final Board-Approved	
			Cut Scores	Impact (% of students at each performance level)
U.S. History EOI	Unsatisfactory			24.7
	Limited Knowledge	14	14	44.2
	Satisfactory	20	20	19.2
	Advanced	25	25	11.9

Chapter

5

SCALING AND EQUATING

5.1 Introduction

This section details the scaling and equating procedures implemented for the 2009 OMAAP. For details regarding the 2008 scaling and equating see the *OMAAP 2008 Technical Report*. After the scaling and equating plan was approved by the OK SDE, the 2008 OMAAP operational test scores were equated to the 2007 OMAAP operational test scores. Equating was performed for reading, grades 3 through 8; mathematics, grades 3 through 8; science, grades 5 and 8; and for EOI exams for English II, Algebra I, and Biology I. To accomplish the scaling and equating, the 2008 OMAAP operational tests were calibrated with WINSTEPS software (Linacre, 2006). WINSTEPS is designed to produce a single scale by jointly analyzing data resulting from students' responses to both multiple-choice and open-ended items. Multiple-choice items were calibrated using the Rasch model (Rasch, 1960; Wright & Stone, 1979; Anderich, 1978), while the partial credit model (Masters, 1982) was used for open-ended items.

The Rasch IRT model expresses the probability of a correct response to an item as a function of the ability of the person and the difficulty of the item. One feature of the Rasch model that distinguishes it from classical test theory is the placement of estimates of a person's ability and the item difficulty on the same scale. Rasch scaling is "a method for obtaining objective, fundamental, linear measures from stochastic observations of ordered category responses" (Linacre, 2006, p. 10). In the Rasch model, the probability of a correct response to item i, given θ, is:

$$P_i(\theta) = \frac{e^{(\theta - b_i)}}{1 + e^{(\theta - b_i)}},$$

where θ = latent trait or ability level and b_i = the difficulty parameter for item i.

Similar to other IRT models (Hambleton, 1989; Hambleton & Swaminathan, 1985), the Rasch model requires the assumptions of local independence and unidimensionality (Smith, 2004). Local independence refers to the assumption that

items are statistically independent for examinees who have the same level of the latent trait that is being measured. Unidimensionality means that all items measure a single construct. If these assumptions are met and the data fit the model, the measurement units (logits) have the desirable property of maintaining the same size over the whole continuum. These interval measures may then be used in subsequent statistical analyses that assume an interval scale (Smith, 2004). Also, like other IRT models, the Rasch model allows for separability of parameter estimates (Hambleton, Swaminathan, & Rogers, 1991; van der Linden & Hambleton, 1997). That is, the ability estimates of persons are freed from the distributional properties of the specific items attempted. Likewise, the estimated difficulties of items are freed from the distributional properties of specific examinees used in the calibration. This property was useful for the Braille and large print test score-scaling described below in Section 5.5.

Three steps were followed to equate the 2009 OMAAP operational test to the 2007 test: (1) calibrate the 2009 assessment without constraint, (2) examine the stability of the common items, and (3) equate the 2009 assessments to the 2007 assessment. Specific details for the scaling and equating procedures are discussed in Section 5.4. Section 5.5 focuses on the procedures and results of the equating for the Braille and large print tests. Because the Rasch model was the basis for all scoring and scaling analyses associated with the OMAAP, the utility of the results depends on the degree to which the assumptions of the model are met as well as the degree to which the model fits the test data. The following sections address these issues and include evaluations of the dimensionality of the data and fit indices.

5.2 Local Independence

WINSTEPS, which is based on the Principle Component Analysis (PCA), provides standardized residual correlations that can be used to assess the local dependency assumption of the Rasch model. The purpose of the analysis is to detect dependency between pairs of items. Appendix C contains the WINSTEPS table for each grade and form.

5.3 Unidimensionality

WINSTEPS provides a residual-based, unrotated PCA that can be used to assess the unidimensionality assumption of the Rasch model. The purpose of the analysis is to reveal contrasts between opposing factors by showing the variance explained by factors not accounted for by the Rasch model. That is, the Rasch dimension is removed first, and the residual variance is analyzed. Consequently, with this analysis, one does not want to identify a second dimension that accounts for a practically significant amount of residual variance.

Ideally, additional factors will be at the “noise” level, implying there are no other shared dimensions in the data. Because WINSTEPS standardized residuals are modeled to have unit normal distributions, which are independent, a PCA of these residuals

should look similar to a PCA of random normal deviates. Simulation studies (Smith & Miao, 1994) indicate that the largest component in a set of random normal deviates would have an eigenvalue of about 1.4.

Tables in Appendix C show the results of the PCA. Across all content areas, the secondary dimension has less strength than three items; thus, it is of little practical import. In other words, the results suggest a primary dominant dimension in the item-level data for each grade and content area.

5.4 Methods for Scaling and Equating

The following steps were implemented to accomplish the scaling and equating.

1. Calibrate the 2009 OMAAP assessments without constraint.
2. Examine the stability of the common items.
3. Equate the 2009 assessments to the 2007 scale.

Raw score-to-scale score conversion tables are reported in Appendix B. The following sections provide more details about the procedures and the results of the equating for the 2009 OMAAP.

(1) Calibrate the 2008 OMAAP Assessments without Constraint

The main purpose of this calibration was to examine the stability of common items, or linking items, administered across the two years (i.e., 2007 and 2008). For each test, a calibration was executed "freely," without constraint. Detailed results for the 2009 calibration are provided below. Equivalent results for the 2007 calibration can be found in the *OMAAP 2007 Technical Report*.

WINSTEPS provides two statistics for indicating how well the Rasch model fits test data. Infit (inlier-sensitive, or information-weighted, fit) is sensitive to aberrations in item response patterns and will indicate overfit for Guttman-like ("perfect") patterns and underfit for items targeting different curricula. Outfit (outlier-sensitive fit) 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. Relatively speaking, extreme infit values are believed to be a greater threat to the measurement process than extreme outfit values.

Infit and outfit can be expressed as a mean square (MS) statistic or on a standardized metric (Z). Both should be considered because they provide different perspectives; MS values are more oriented toward practical significance, while Z values are more oriented toward statistical significance. Fit statistics expressed as MSs (statistically, a chi-square statistic divided by its degrees of freedom) show the degree of practical distortion in the measurement. The expected value is 1.0, with values less than 1.0 indicating overfitting items (too predictable, too much redundancy) and values greater than 1.0 indicating underfitting items (unpredictability, too much noise). Rules of thumb regarding "practically significant" MS values vary. More conservative users might prefer items with MS values that range from 0.8 to 1.2. Others believe reasonable test results can be achieved with values from 0.5 to 1.5. Riverside Publishing has typically considered values outside the range of 0.7 to 1.3 to be of some practical import. Fit statistics expressed as Z scores (standardized unit normal deviates) offer a means to statistically test model fit. They show the degree of statistical improbability in the data (i.e., their significance) if the model actually does fit the data. The expected

value is 0.00, with values significantly less than 0.0 indicating too much predictability and values significantly greater than 0.0 indicating lack of predictability. Also, Z scores may be affected by sample sizes. For example, in a large sample size, the test of interest might show a statistically significant difference. In practice, the difference might not be important.

Evaluation of fit values, specifically MS infit, yielded the results below (see Tables 5-1 to 5-34 for spring 2009, Tables 5-35 to 5-37 for Winter 2008/09, and Appendix D). The fit values and output files are based on the local runs using WINSTEPS 3.64.2. For spring 2009 grades 3-8, the MS fit values were as follows:

- For Reading, values ranged from 0.82 to 1.30
- For Mathematics, values ranged from 0.81 to 1.33
- For Science, values ranged from 0.87 to 1.24

For spring 2009 EOI, MS fit values ranges were the following:

- For English II, values ranged from 0.84 to 1.41
- For Algebra I, values ranged from 0.86 to 1.20
- For Biology I, values ranged from 0.87 to 1.25

For Winter 2008/09, MS fit values ranges were the following:

- For English II, values ranged from 0.85 to 1.30
- For Algebra I, values ranged from 0.89 to 1.18
- For Biology I, values ranged from 0.87 to 1.15

Table 5.1 Summary Statistics for Reading, Grade 3, Form D
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	39	39	39	39	39	39	39
Mean	0.00	0.51	1.00	-0.36	0.99	-0.38	0.34
SD	0.54	0.11	0.10	4.72	0.14	4.37	0.10
Minimum	-1.11	0.33	0.87	-6.88	0.73	-6.20	0.11
Percentiles							
10	-0.74	0.37	0.90	-5.60	0.85	-5.50	0.19

25	-0.34	0.42	0.93	-3.93	0.89	-3.57	0.27
50	-0.01	0.51	0.97	-1.60	0.95	-1.72	0.37
75	0.46	0.58	1.07	3.17	1.08	2.52	0.41
90	0.66	0.66	1.16	7.21	1.19	6.03	0.44
Maximum	0.89	0.73	1.24	8.97	1.31	8.28	0.47

Table 5.2 Summary Statistics for Reading, Grade 3, Form E
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	39	39	39	39	39	39	39
Mean	0.00	0.56	1.00	-0.20	0.99	-0.07	0.37
SD	0.58	0.11	0.11	4.97	0.17	4.60	0.09
Minimum	-1.18	0.37	0.85	-7.38	0.70	-6.31	0.16
Percentiles							
10	-0.74	0.42	0.90	-5.38	0.82	-4.95	0.25
25	-0.33	0.48	0.91	-4.04	0.86	-3.86	0.31
50	0.00	0.56	0.95	-1.80	0.94	-1.31	0.40
75	0.43	0.63	1.08	4.09	1.11	2.76	0.45
90	0.73	0.70	1.16	7.15	1.22	7.06	0.48
Maximum	0.99	0.78	1.24	9.65	1.34	9.46	0.51

Table 5.3 Summary Statistics for Reading, Grade 4, Form D
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	40	40	40	40	40	40	40
Mean	0.00	0.57	1.00	0.05	0.99	-0.09	0.32
SD	0.57	0.11	0.10	4.81	0.15	4.74	0.11
Minimum	-1.08	0.35	0.85	-6.39	0.73	-6.44	0.10
Percentiles							
10	-0.80	0.44	0.89	-5.84	0.79	-5.41	0.18
25	-0.38	0.48	0.91	-3.95	0.86	-4.41	0.24
50	0.03	0.56	0.99	-0.73	0.96	-1.27	0.35
75	0.42	0.65	1.08	4.33	1.10	3.83	0.42
90	0.64	0.73	1.15	7.53	1.19	7.28	0.45
Maximum	1.09	0.77	1.21	9.90	1.30	9.61	0.48

Table 5.4 Summary Statistics for Reading, Grade 4, Form E
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	40	40	40	40	40	40	40
Mean	0.00	0.59	1.00	-0.12	0.98	-0.27	0.35
SD	0.65	0.13	0.11	4.93	0.19	4.88	0.11
Minimum	-1.18	0.27	0.85	-6.59	0.68	-6.69	0.06
Percentiles							
10	-0.77	0.45	0.88	-5.22	0.81	-5.05	0.19
25	-0.45	0.51	0.91	-4.30	0.85	-4.22	0.30
50	0.02	0.59	0.99	-0.50	0.96	-1.24	0.37
75	0.41	0.68	1.06	3.10	1.09	2.85	0.43
90	0.67	0.73	1.18	7.06	1.23	8.15	0.46
Maximum	1.62	0.80	1.30	9.90	1.46	9.90	0.48

Table 5.5 Summary Statistics for Reading, Grade 5, Form D
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	39	39	39	39	39	39	39
Mean	0.00	0.53	1.00	-0.12	1.00	-0.06	0.30
SD	0.49	0.10	0.09	5.04	0.12	4.67	0.11
Minimum	-1.03	0.32	0.87	-7.21	0.79	-6.57	0.07
Percentiles							
10	-0.71	0.41	0.89	-6.10	0.85	-5.73	0.16
25	-0.26	0.46	0.93	-4.58	0.91	-3.78	0.21
50	-0.04	0.54	0.98	-1.37	0.97	-1.10	0.33
75	0.35	0.59	1.08	4.44	1.10	3.90	0.39
90	0.57	0.67	1.13	6.63	1.16	6.79	0.42
Maximum	1.03	0.74	1.20	8.85	1.27	8.89	0.45

Table 5.6 Summary Statistics for Reading, Grade 5, Form E
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	39	39	39	39	39	39	39
Mean	0.00	0.56	1.00	0.04	0.98	-0.09	0.32
SD	0.61	0.12	0.10	4.96	0.15	4.72	0.11
Minimum	-1.69	0.33	0.86	-7.58	0.67	-6.95	0.08
Percentiles							
10	-0.78	0.41	0.87	-5.83	0.81	-5.57	0.17
25	-0.40	0.47	0.91	-4.27	0.84	-4.45	0.25
50	0.03	0.55	0.98	-0.91	0.98	-0.75	0.34
75	0.43	0.64	1.07	3.95	1.10	3.83	0.41
90	0.69	0.71	1.15	6.69	1.19	6.42	0.44
Maximum	1.13	0.85	1.23	9.90	1.31	9.67	0.48

Table 5.7 Summary Statistics for Reading, Grade 6, Form D
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	39	39	39	39	39	39	39
Mean	0.00	0.54	1.00	-0.26	1.00	-0.25	0.29
SD	0.58	0.12	0.10	4.71	0.14	4.66	0.12
Minimum	-1.08	0.23	0.84	-8.10	0.74	-7.67	0.02
Percentiles							
10	-0.61	0.37	0.90	-5.01	0.86	-4.89	0.09
25	-0.39	0.50	0.93	-3.83	0.91	-3.53	0.22
50	-0.06	0.55	0.98	-1.20	0.97	-1.37	0.32
75	0.23	0.63	1.06	2.56	1.09	2.71	0.37
90	0.81	0.67	1.15	6.66	1.21	6.75	0.40
Maximum	1.56	0.75	1.23	9.90	1.34	9.90	0.48

Table 5.8 Summary Statistics for Reading, Grade 6, Form E
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	38	38	38	38	38	38	38
Mean	0.00	0.53	1.00	-0.22	1.00	-0.08	0.27
SD	0.58	0.12	0.09	4.79	0.12	4.59	0.11
Minimum	-1.26	0.34	0.84	-7.97	0.76	-7.79	0.05
Percentiles							
10	-0.72	0.36	0.90	-5.63	0.86	-5.20	0.11
25	-0.47	0.43	0.93	-3.81	0.91	-3.72	0.17
50	-0.07	0.54	0.98	-0.88	0.97	-0.88	0.29
75	0.43	0.63	1.09	4.59	1.11	4.45	0.36
90	0.78	0.68	1.13	6.70	1.17	6.64	0.39
Maximum	0.89	0.78	1.17	9.39	1.25	8.26	0.47

Table 5.9 Summary Statistics for Reading, Grade 7, Form D
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	39	39	39	39	39	39	39
Mean	0.00	0.54	1.00	0.12	0.98	0.08	0.28
SD	0.80	0.15	0.09	4.34	0.15	4.57	0.11
Minimum	-2.15	0.30	0.85	-6.93	0.66	-6.87	0.09
Percentiles							
10	-1.15	0.35	0.88	-4.89	0.79	-5.27	0.14
25	-0.27	0.45	0.92	-3.33	0.89	-4.44	0.19
50	0.13	0.52	0.98	-1.07	1.00	0.05	0.30
75	0.47	0.61	1.07	4.05	1.10	4.06	0.37
90	0.96	0.77	1.11	6.21	1.17	5.96	0.40
Maximum	1.21	0.90	1.15	7.91	1.23	8.14	0.45

Table 5.10 Summary Statistics for Reading, Grade 7, Form E
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	40	40	40	40	40	40	40
Mean	0.00	0.59	1.00	0.15	0.98	-0.01	0.32
SD	0.75	0.14	0.08	3.50	0.15	3.69	0.09
Minimum	-2.15	0.35	0.85	-5.47	0.61	-5.13	0.14
Percentiles							
10	-1.07	0.41	0.89	-3.94	0.78	-4.67	0.20
25	-0.41	0.51	0.94	-2.62	0.91	-3.09	0.27
50	0.13	0.57	1.00	-0.45	0.98	-0.71	0.34
75	0.44	0.68	1.05	2.53	1.07	2.29	0.38
90	0.91	0.79	1.10	4.65	1.18	5.16	0.43
Maximum	1.19	0.91	1.17	7.26	1.23	6.79	0.45

Table 5.11 Summary Statistics for Reading, Grade 8, Form D
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	40	40	40	40	40	40	40
Mean	0.00	0.61	1.00	0.34	0.98	0.11	0.29
SD	0.68	0.13	0.08	3.60	0.13	3.74	0.09
Minimum	-1.22	0.35	0.82	-5.46	0.66	-6.91	0.10
Percentiles							
10	-0.95	0.43	0.89	-3.98	0.81	-4.63	0.18
25	-0.48	0.51	0.96	-2.03	0.92	-2.65	0.22
50	0.12	0.59	0.99	-0.47	1.00	-0.01	0.30
75	0.47	0.70	1.07	3.00	1.08	3.20	0.34
90	0.88	0.78	1.09	4.79	1.12	5.01	0.42
Maximum	1.26	0.82	1.17	9.68	1.21	9.04	0.49

Table 5.12 Summary Statistics for Reading, Grade 8, Form E
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	39	39	39	39	39	39	39
Mean	0.00	0.63	0.99	0.24	0.98	0.18	0.30
SD	0.85	0.16	0.10	4.12	0.16	4.46	0.12
Minimum	-1.72	0.30	0.82	-6.52	0.67	-6.71	0.02
Percentiles							
10	-1.01	0.41	0.88	-4.17	0.79	-4.40	0.12
25	-0.68	0.50	0.92	-2.45	0.86	-2.93	0.23
50	0.07	0.63	0.98	-1.07	0.98	-0.87	0.32
75	0.70	0.76	1.06	2.64	1.08	2.84	0.38
90	1.09	0.81	1.12	6.14	1.20	7.33	0.43
Maximum	1.64	0.89	1.24	9.90	1.34	9.90	0.51

Table 5.13 Summary Statistics for Math, Grade 3, Form D
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	40	40	40	40	40	40	40
Mean	0.00	0.64	1.00	0.10	0.99	0.10	0.38
SD	0.66	0.12	0.09	3.31	0.15	3.07	0.07
Minimum	-1.63	0.33	0.81	-7.26	0.69	-6.13	0.24
Percentiles							
10	-0.85	0.49	0.91	-3.04	0.80	-2.87	0.26
25	-0.41	0.58	0.95	-1.86	0.91	-1.87	0.35
50	0.05	0.63	0.98	-1.07	0.98	-0.57	0.39
75	0.37	0.72	1.04	1.35	1.04	1.24	0.42
90	0.78	0.78	1.14	5.80	1.20	4.88	0.45
Maximum	1.65	0.88	1.17	7.19	1.28	6.82	0.55

Table 5.14 Summary Statistics for Math, Grade 3, Form E
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	40	40	40	40	40	40	40
Mean	0.00	0.71	0.99	-0.03	0.98	-0.01	0.37
SD	0.94	0.15	0.10	3.24	0.20	3.18	0.08
Minimum	-1.57	0.32	0.88	-4.58	0.70	-4.53	0.16
Percentiles							
10	-1.24	0.50	0.91	-2.88	0.76	-3.06	0.25
25	-0.71	0.60	0.92	-2.11	0.83	-2.27	0.33
50	-0.16	0.76	0.97	-0.69	0.95	-0.73	0.39
75	0.71	0.83	1.01	0.57	1.10	0.96	0.41
90	1.25	0.88	1.15	5.02	1.24	4.32	0.46
Maximum	2.22	0.91	1.33	9.90	1.59	9.90	0.50

Table 5.15 Summary Statistics for Math, Grade 4, Form D
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	40	40	40	40	40	40	40
Mean	0.00	0.57	1.00	-0.19	1.01	0.15	0.31
SD	0.72	0.14	0.07	3.16	0.14	3.32	0.08
Minimum	-1.90	0.29	0.88	-5.76	0.78	-4.75	0.13
Percentiles							
10	-0.79	0.35	0.90	-4.66	0.86	-3.81	0.21
25	-0.45	0.49	0.94	-2.33	0.91	-2.45	0.27
50	-0.10	0.60	1.00	-0.15	1.00	-0.15	0.31
75	0.38	0.67	1.04	1.89	1.11	3.20	0.37
90	1.08	0.72	1.10	4.11	1.15	4.35	0.43
Maximum	1.40	0.88	1.16	6.19	1.35	6.54	0.45

Table 5.16 Summary Statistics for Math, Grade 4, Form E
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	39	39	39	39	39	39	39
Mean	0.00	0.64	1.00	0.01	1.00	0.20	0.35
SD	0.72	0.13	0.07	3.03	0.13	3.08	0.07
Minimum	-1.21	0.30	0.88	-5.41	0.75	-4.86	0.20
Percentiles							
10	-1.01	0.49	0.91	-3.27	0.84	-3.44	0.27
25	-0.44	0.56	0.94	-2.40	0.90	-2.21	0.31
50	-0.01	0.65	0.99	-0.33	1.00	0.02	0.35
75	0.46	0.73	1.03	1.69	1.06	1.48	0.40
90	0.80	0.81	1.08	3.51	1.18	4.11	0.43
Maximum	1.79	0.84	1.17	7.96	1.29	7.51	0.48

Table 5.17 Summary Statistics for Math, Grade 5, Form D
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	39	39	39	39	39	39	39
Mean	0.00	0.56	1.00	-0.10	0.99	0.20	0.29
SD	0.87	0.17	0.09	3.90	0.13	4.02	0.09
Minimum	-2.33	0.31	0.86	-6.36	0.73	-5.99	0.06
Percentiles							
10	-1.01	0.35	0.91	-4.69	0.85	-4.14	0.19
25	-0.59	0.41	0.94	-3.00	0.91	-2.53	0.23
50	0.05	0.56	0.98	-0.86	0.97	-1.01	0.30
75	0.78	0.69	1.06	2.78	1.10	2.95	0.36
90	1.08	0.77	1.11	4.74	1.19	5.32	0.40
Maximum	1.27	0.92	1.22	9.90	1.26	9.90	0.44

Table 5.18 Summary Statistics for Math, Grade 5, Form E
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	39	39	39	39	39	39	39
Mean	0.00	0.57	0.99	-0.10	1.01	0.43	0.31
SD	0.93	0.18	0.07	3.52	0.11	3.41	0.07
Minimum	-1.82	0.22	0.88	-6.99	0.84	-5.40	0.14
Percentiles							
10	-1.13	0.38	0.92	-3.58	0.87	-3.31	0.22
25	-0.83	0.42	0.94	-2.10	0.93	-1.64	0.25
50	-0.02	0.59	0.97	-1.44	0.99	-0.23	0.33
75	0.77	0.74	1.04	2.19	1.09	2.53	0.36
90	0.99	0.79	1.09	4.76	1.16	4.92	0.39
Maximum	1.89	0.88	1.17	7.74	1.26	8.41	0.46

Table 5.19 Summary Statistics for Math, Grade 6, Form D
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	40	40	40	40	40	40	40
Mean	0.00	0.58	0.99	0.18	0.99	0.26	0.22
SD	0.98	0.19	0.08	3.74	0.14	3.94	0.11
Minimum	-2.38	0.30	0.86	-7.65	0.62	-6.82	-0.03
Percentiles							
10	-1.27	0.37	0.90	-4.31	0.81	-4.97	0.07
25	-0.73	0.43	0.93	-1.72	0.91	-2.75	0.16
50	0.14	0.57	0.99	-0.49	1.00	-0.33	0.22
75	0.74	0.75	1.04	2.13	1.08	2.90	0.29
90	1.06	0.83	1.10	5.32	1.15	5.68	0.36
Maximum	1.42	0.93	1.16	9.04	1.32	9.10	0.42

Table 5.20 Summary Statistics for Math, Grade 6, Form E
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	39	39	39	39	39	39	39
Mean	0.00	0.54	1.00	-0.11	1.01	0.21	0.25
SD	0.86	0.17	0.07	3.19	0.10	3.24	0.09
Minimum	-2.16	0.20	0.87	-7.30	0.82	-6.71	0.09
Percentiles							
10	-1.03	0.32	0.92	-3.94	0.88	-3.71	0.14
25	-0.46	0.42	0.94	-2.40	0.92	-2.37	0.18
50	-0.08	0.57	1.00	0.08	1.01	0.45	0.24
75	0.57	0.65	1.06	2.55	1.09	3.25	0.31
90	1.09	0.75	1.07	3.39	1.13	3.89	0.35
Maximum	1.75	0.90	1.12	7.09	1.26	5.91	0.43

Table 5.21 Summary Statistics for Math, Grade 7, Form D
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	39	39	39	39	39	39	39
Mean	0.00	0.55	1.00	-0.13	1.00	0.10	0.25
SD	0.87	0.17	0.08	4.66	0.12	4.41	0.11
Minimum	-2.12	0.24	0.86	-9.43	0.82	-8.13	0.03
Percentiles							
10	-1.13	0.36	0.89	-6.41	0.83	-5.65	0.14
25	-0.50	0.42	0.93	-3.07	0.89	-3.54	0.17
50	0.15	0.53	1.00	-0.22	1.02	0.38	0.26
75	0.69	0.67	1.07	3.00	1.10	3.18	0.35
90	0.94	0.78	1.09	5.83	1.15	5.59	0.40
Maximum	1.59	0.90	1.18	8.81	1.27	9.26	0.46

Table 5.22 Summary Statistics for Math, Grade 7, Form E
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	38	38	38	38	38	38	38
Mean	0.00	0.52	1.00	-0.22	1.01	0.17	0.26
SD	0.97	0.18	0.09	4.64	0.14	4.48	0.12
Minimum	-2.65	0.09	0.85	-8.06	0.81	-7.24	0.07
Percentiles							
10	-1.12	0.30	0.89	-5.39	0.84	-5.19	0.08
25	-0.45	0.42	0.94	-3.47	0.92	-3.35	0.15
50	0.09	0.50	0.98	-0.86	0.99	-0.39	0.28
75	0.44	0.61	1.06	1.29	1.11	3.28	0.35
90	1.08	0.74	1.13	6.85	1.20	6.75	0.41
Maximum	2.63	0.92	1.17	9.32	1.39	8.92	0.46

Table 5.23 Summary Statistics for Math, Grade 8, Form D
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	40	40	40	40	40	40	40
Mean	0.00	0.52	1.00	-0.23	1.01	0.11	0.23
SD	0.82	0.17	0.06	3.52	0.10	3.62	0.10
Minimum	-1.73	0.23	0.88	-7.94	0.76	-6.85	0.02
Percentiles							
10	-1.02	0.28	0.93	-3.91	0.88	-4.26	0.12
25	-0.53	0.44	0.95	-3.09	0.94	-2.95	0.17
50	0.01	0.52	1.00	0.18	1.02	0.91	0.22
75	0.40	0.64	1.04	2.36	1.07	2.81	0.30
90	1.14	0.73	1.06	3.33	1.13	4.11	0.34
Maximum	1.42	0.84	1.15	8.98	1.23	7.87	0.40

Table 5.24 Summary Statistics for Math, Grade 8, Form E
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	40	40	40	40	40	40	40
Mean	0.00	0.53	1.00	-0.27	1.02	0.28	0.24
SD	0.89	0.18	0.07	3.61	0.12	3.82	0.10
Minimum	-1.75	0.19	0.88	-7.88	0.81	-7.39	0.03
Percentiles							
10	-1.31	0.28	0.92	-4.12	0.87	-3.98	0.12
25	-0.42	0.41	0.95	-2.54	0.93	-2.90	0.18
50	-0.01	0.54	0.99	-0.34	1.01	0.41	0.25
75	0.57	0.62	1.04	2.12	1.08	3.27	0.32
90	1.20	0.79	1.09	4.35	1.18	5.28	0.35
Maximum	1.75	0.85	1.14	8.70	1.30	8.54	0.42

Table 5.25 Summary Statistics for Science, Grade 5, Form D
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	40	40	40	40	40	40	40
Mean	0.00	0.61	1.00	0.08	0.99	0.19	0.29
SD	0.88	0.16	0.08	3.11	0.15	3.36	0.09
Minimum	-2.26	0.29	0.87	-4.91	0.61	-4.69	0.05
Percentiles							
10	-1.14	0.42	0.91	-3.11	0.77	-3.92	0.19
25	-0.58	0.48	0.92	-2.54	0.89	-2.72	0.25
50	0.10	0.61	1.00	-0.39	0.99	-0.19	0.31
75	0.72	0.73	1.04	1.97	1.07	2.33	0.36
90	1.00	0.82	1.07	2.85	1.16	3.64	0.39
Maximum	1.67	0.93	1.24	9.90	1.31	9.90	0.42

Table 5.26 Summary Statistics for Science, Grade 5, Form E
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	40	40	40	40	40	40	40
Mean	0.00	0.59	1.00	0.12	0.99	0.18	0.30
SD	0.90	0.16	0.07	2.65	0.14	2.92	0.07
Minimum	-2.62	0.23	0.89	-3.97	0.59	-4.01	0.09
Percentiles							
10	-1.20	0.37	0.92	-2.96	0.80	-3.21	0.20
25	-0.50	0.48	0.94	-1.95	0.92	-2.01	0.25
50	-0.04	0.62	1.00	0.01	1.01	0.09	0.30
75	0.62	0.70	1.03	1.70	1.05	1.85	0.36
90	1.13	0.82	1.09	3.52	1.14	4.21	0.39
Maximum	1.95	0.94	1.13	6.36	1.42	6.87	0.40

Table 5.27 Summary Statistics for Science, Grade 8, Form D
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	39	39	39	39	39	39	39
Mean	0.00	0.59	1.00	0.24	0.99	0.07	0.27
SD	0.64	0.13	0.08	3.25	0.12	3.31	0.10
Minimum	-1.23	0.21	0.87	-4.80	0.73	-4.94	0.05
Percentiles							
10	-0.76	0.44	0.90	-3.70	0.83	-4.24	0.15
25	-0.44	0.53	0.93	-2.32	0.91	-2.39	0.23
50	-0.01	0.60	1.00	0.25	0.99	-0.16	0.27
75	0.32	0.69	1.04	2.03	1.06	2.01	0.35
90	0.75	0.75	1.09	4.33	1.13	4.61	0.41
Maximum	1.93	0.82	1.18	8.06	1.24	8.02	0.43

Table 5.28 Summary Statistics for Science, Grade 8, Form E
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	38	38	38	38	38	38	38
Mean	0.00	0.59	1.00	0.13	0.99	0.05	0.26
SD	0.69	0.14	0.08	3.08	0.13	3.36	0.10
Minimum	-1.60	0.24	0.88	-4.52	0.74	-4.37	0.06
Percentiles							
10	-0.79	0.43	0.90	-3.47	0.83	-4.06	0.08
25	-0.40	0.52	0.94	-2.33	0.92	-2.55	0.20
50	-0.04	0.61	1.00	-0.24	1.00	-0.09	0.27
75	0.36	0.68	1.04	1.87	1.07	2.03	0.34
90	0.75	0.75	1.12	3.83	1.18	5.15	0.38
Maximum	1.73	0.86	1.15	7.39	1.30	8.09	0.40

Table 5.29 Summary Statistics for English II, Form D
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	41	41	41	41	41	41	41
Mean	0.00	0.59	1.00	-0.21	1.01	-0.11	0.28
SD	0.67	0.26	0.10	4.05	0.22	4.30	0.10
Minimum	-1.45	0.26	0.84	-6.75	0.70	-7.07	0.08
Percentiles							
10	-0.71	0.36	0.90	-5.43	0.86	-5.42	0.13
25	-0.43	0.48	0.94	-2.88	0.92	-3.01	0.21
50	-0.04	0.57	0.98	-1.34	0.97	-0.99	0.30
75	0.35	0.66	1.04	2.37	1.10	3.05	0.34
90	0.93	0.74	1.10	4.80	1.15	5.14	0.40
Maximum	1.44	1.98	1.41	9.90	2.17	9.90	0.47

Table 5.30 Summary Statistics for English II, Form E
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	40	40	40	40	40	40	40
Mean	0.00	0.55	1.00	-0.29	1.01	-0.07	0.25
SD	0.56	0.25	0.07	3.51	0.13	3.90	0.10
Minimum	-0.94	0.30	0.88	-6.30	0.82	-6.43	-0.06
Percentiles							
10	-0.71	0.35	0.91	-4.67	0.88	-4.54	0.15
25	-0.47	0.43	0.96	-3.05	0.94	-2.79	0.20
50	-0.03	0.53	0.99	-1.01	0.98	-0.89	0.27
75	0.41	0.63	1.04	2.33	1.05	2.37	0.31
90	0.80	0.68	1.08	4.36	1.10	4.15	0.36
Maximum	1.05	1.87	1.21	7.74	1.52	9.90	0.41

Table 5.31 Summary Statistics for Algebra I, Form D
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	38	38	38	38	38	38	38
Mean	0.00	0.54	1.00	-0.15	1.00	0.03	0.25
SD	0.60	0.13	0.08	4.78	0.11	4.52	0.11
Minimum	-1.42	0.31	0.89	-6.99	0.83	-6.41	-0.01
Percentiles							
10	-0.82	0.39	0.92	-5.78	0.88	-4.28	0.10
25	-0.39	0.46	0.94	-3.33	0.92	-3.29	0.17
50	0.04	0.54	0.98	-1.50	0.97	-1.62	0.28
75	0.39	0.63	1.06	3.50	1.08	3.70	0.33
90	0.73	0.72	1.12	7.06	1.17	7.16	0.37
Maximum	1.10	0.81	1.20	9.90	1.25	9.90	0.41

Table 5.32 Summary Statistics for Algebra I, Form E
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	38	38	38	38	38	38	38
Mean	0.00	0.54	1.00	-0.11	1.00	0.06	0.29
SD	0.84	0.16	0.08	4.19	0.14	4.13	0.09
Minimum	-2.06	0.16	0.86	-9.48	0.73	-7.71	0.07
Percentiles							
10	-0.96	0.32	0.89	-5.88	0.82	-5.70	0.18
25	-0.51	0.43	0.93	-2.66	0.90	-3.12	0.20
50	-0.07	0.56	1.00	-0.21	1.00	-0.13	0.30
75	0.48	0.65	1.07	2.58	1.11	3.42	0.35
90	1.05	0.73	1.10	4.98	1.16	4.96	0.42
Maximum	2.12	0.88	1.18	9.90	1.29	9.90	0.47

Table 5.33 Summary Statistics for Biology, Form D
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	45	45	45	45	45	45	45
Mean	0.00	0.58	1.00	0.09	0.99	-0.05	0.27
SD	0.78	0.15	0.09	4.10	0.15	4.14	0.11
Minimum	-2.05	0.25	0.87	-8.05	0.69	-7.19	-0.07
Percentiles							
10	-0.89	0.42	0.91	-4.00	0.82	-4.32	0.12
25	-0.50	0.50	0.93	-3.17	0.89	-3.29	0.23
50	0.22	0.54	0.98	-1.31	0.97	-1.56	0.31
75	0.39	0.69	1.04	2.09	1.05	2.02	0.36
90	0.76	0.76	1.13	6.19	1.17	5.75	0.38
Maximum	1.68	0.90	1.25	9.90	1.47	9.90	0.45

Table 5.34 Summary Statistics for Biology, Form E
Spring 2009

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	46	46	46	46	46	46	46
Mean	0.00	0.58	1.00	0.04	0.99	0.12	0.30
SD	0.81	0.15	0.08	3.64	0.14	3.68	0.09
Minimum	-2.19	0.21	0.87	-7.88	0.65	-6.45	0.10
Percentiles							
10	-0.85	0.39	0.90	-3.99	0.84	-4.37	0.21
25	-0.56	0.50	0.95	-2.18	0.91	-2.62	0.25
50	0.10	0.58	0.99	-0.68	0.99	-0.36	0.31
75	0.42	0.71	1.05	2.56	1.07	2.48	0.36
90	0.95	0.76	1.09	4.31	1.14	4.59	0.42
Maximum	2.02	0.91	1.20	9.02	1.29	9.28	0.47

Table 5.35 Summary Statistics for English II
Winter 2008/09

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	40	40	40	40	40	40	40
Mean	0.00	0.62	1.00	0.00	1.00	0.03	0.26
SD	0.67	0.25	0.09	1.46	0.15	1.57	0.11
Minimum	-1.62	0.34	0.85	-2.41	0.77	-2.40	0.03
Percentiles							
10	-0.86	0.40	0.89	-1.68	0.80	-1.88	0.11
25	-0.41	0.48	0.95	-1.03	0.93	-1.00	0.19
50	-0.03	0.61	1.00	-0.05	1.00	0.06	0.26
75	0.50	0.72	1.05	0.84	1.05	0.66	0.33
90	0.85	0.76	1.13	2.19	1.17	2.48	0.42
Maximum	1.15	1.92	1.30	3.05	1.55	4.44	0.46

Table 5.36 Summary Statistics for Algebra I
Winter 2008/09

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	38	38	38	38	38	38	38
Mean	0.00	0.51	1.00	-0.03	1.00	0.04	0.26
SD	0.82	0.16	0.08	1.37	0.14	1.45	0.09
Minimum	-2.26	0.25	0.89	-2.03	0.77	-1.74	0.05
Percentiles							
10	-1.02	0.31	0.91	-1.60	0.86	-1.54	0.12
25	-0.50	0.37	0.94	-1.14	0.91	-1.04	0.19
50	0.04	0.51	0.96	-0.40	0.97	-0.37	0.28
75	0.68	0.63	1.06	1.14	1.09	0.83	0.33
90	0.98	0.73	1.11	1.92	1.16	2.07	0.37
Maximum	1.31	0.89	1.18	2.94	1.38	4.75	0.39

Table 5.37 Summary Statistics for Biology I
Winter 2008/09

			INFIT		OUTFIT		
Statistic	**Measure**	**PVAL**	**MS**	**Z**	**MS**	**Z**	**PTBS**
Items	45	45	45	45	45	45	45
Mean	0.00	0.58	1.00	0.09	0.98	0.03	0.26
SD	0.74	0.15	0.08	1.19	0.14	1.21	0.10
Minimum	-1.93	0.26	0.87	-2.07	0.66	-1.92	0.06
Percentiles							
10	-0.86	0.40	0.90	-1.22	0.82	-1.46	0.10
25	-0.46	0.49	0.94	-0.90	0.92	-1.00	0.19
50	-0.04	0.60	0.98	-0.29	0.97	-0.24	0.28
75	0.44	0.68	1.05	0.93	1.08	1.12	0.33
90	0.84	0.76	1.12	1.79	1.14	1.75	0.39
Maximum	1.58	0.89	1.15	2.78	1.27	2.24	0.43

(2) Examine the Stability of the Common Items

The stability of common items refers to the expectation that common items function the same way for all the groups involved in an equating study. It is recommended that the stability of common items be examined visually and statistically (Kolen & Brennan, 2004). For example, scatterplots can be used to check visually for outlier common items. For OMAAP, Rasch measures for the common items from the 2008 unconstrained, or free, calibrations were plotted against each other. The scatter points for items that function similarly should line up along a straight line. Outlier items will not fall on the straight line and thus can be seen visually.

In addition to a visual examination, an analytical study of the stability of common items should be performed. It is recommended that a 0.30-logistic unit be applied as a cut criterion for removing "unstable" common items (Miller, Rotou, & Twing, 2004). That is, any common item with a difference greater than 0.30 logits (after adjustments) between the two equating groups should be removed from the common item set and treated as a unique item.

In the 2009 OMAAP equating study, both visual and analytical methods were applied. Figures 5-1 and 5-2 present examples of scatterplots that were used for visual examinations. The numbers of items removed from the common item sets are provided in Table 5-21.

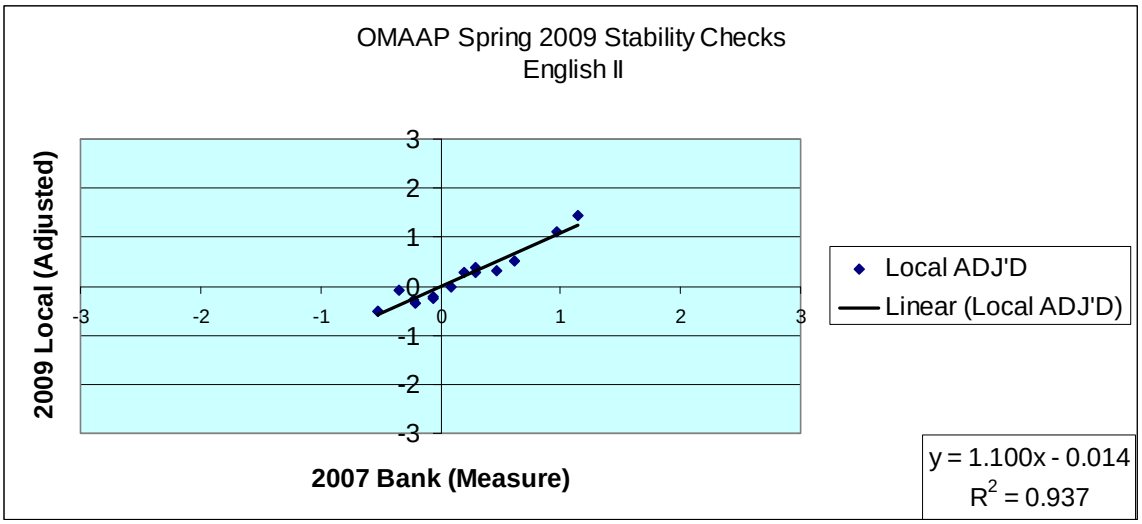


Figure 5-1 Spring 2009 Stability Checks for English II

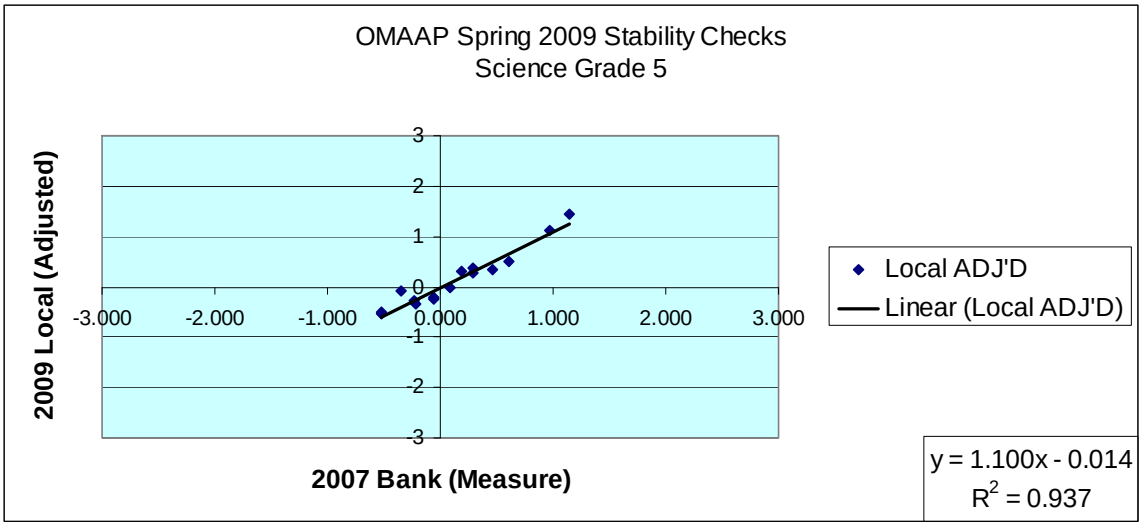


Figure 5-2 Spring 2009 Stability Checks for Science Grade 5

Table 5-38 Numbers of Original Anchor Items and Anchor Items Dropped

Subject	Grade	Number of Items	Number of Anchor Items	Anchor Items Dropped
Reading	3	40	16	1
Reading	4	40	16	1
Reading	5	38	16	1
Reading	6	40	16	2
Reading	7	39	16	3
Reading	8	39	16	0
Math	3	39	16	0
Math	4	39	14	1
Math	5	38	16	1
Math	6	39	16	0
Math	7	38	16	1
Math	8	39	16	0
Science	5	39	16	0
Science	8	39	16	1
Algebra I	EOI	38	16	2
English II	EOI	40 + 1 WP	16	2
Biology I	EOI	45	18	1

(3) Equate the 2009 Assessments to the 2007 Scale

It was assumed that the latent traits measured by the 2009 operational tests and the 2007 tests were the same. Given that common anchor items were used across the two years and the blueprint and item specifications were the same, it seems reasonable to assume that the underlying latent trait or construct measured by each assessment was

the same. To equate the 2009 assessment to the 2007 scale, the Rasch values for the common items were fixed to the 2007 parameter estimates. This resulted in a raw score-to-theta conversion on the 2007 scale for the 2009 assessment (i.e., the 2009 assessment was scaled to the 2007 scale metric).

5.5 Equating for the Braille Tests

Because sample sizes for the Braille tests are too small to produce reliable parameter estimates for equating, parameter estimates from the regular administration must be used for the Braille items. Thus, items are reviewed for changes in perceived item difficulty. In addition, items are removed if they cannot be translated to the Braille format.

The items that were removed from the regular test form to create the Braille form of the OMAAP are summarized in Table 5-39.

Table 5-39 Summary of Items That Were Removed from the Regular Assessment

Content	Grade	Items
Mathematics	8	Item number 20
Science	8	Item number 36

Several assumptions have to be made in order to equate the scores of the Braille tests to the scores of the regular tests. First, it is assumed that the latent traits measured by these tests and the regular tests are the same. Given that the same items were used across the tests within each content area, with the exception of the removed items, it seems reasonable to assume that changes to item format or item presentation would not greatly change the overall latent trait or construct measured by each assessment.

A second, and stronger, assumption, however, is that item parameters across the tests are identical. This is a strong assumption considering the different item formats across the tests. It is this assumption that requires a careful review of the items for possible changes in difficulty as a result of the Braille format.

A summary of the steps taken to create scaled scores for the Braille form are listed below.

1. Review and select items for the Braille forms.

2. Use common item non-equivalent equating to place item parameters from the regular administration on the OMAAP scale.

3. Use a subset of the scaled item parameters from the regular administration that make up the Braille form to run a completely anchored IRT calibration to obtain Rasch IRT abilities for the Braille form.

4. Transform thetas to the scale score metric using transformation constants from the regular administration.

5.6 Scale Scores

Based upon the common-item non-equivalent group (CINEG) equating design described above, raw score-to-theta tables were obtained from subsequent WINSTEPS output files. A scale score of 250 was anchored to the Rasch ability corresponding to the *Satisfactory* raw score cut from the standard setting. A scale score of 350 was anchored to the Rasch ability corresponding to the maximum number of points possible on the form. Thus, the highest obtainable scale score was anchored at 350.

Below is the formula used to compute the transformation constants.

$$A = (350 - 250) / (\theta_2 - \theta_1)$$
$$B = 350 - (A * \theta_2)$$

A and B are the slope and intercept, respectively, and θ_1 and θ_2 refer to the Rasch abilities corresponding to the *Satisfactory* raw score cut and the maximum raw score, respectively. After the process above was completed, scale scores (SS) were computed by applying the following formula:

$$SS = (\theta * A) + B,$$

where θ was the WINSTEPS theta estimate that applied to a given raw score.

In addition to the scaling transformation above, the following rules were applied for the 2009 operational tests.

1) The raw score cut for Proficient was selected as the lowest raw score associated with a rounded scale score of 250.

2) If there was no raw score associated with a rounded scale score of 250, the raw score with the highest scale score below 250 was selected as the cut score and assigned a scale score of 250. For example, if two consecutive raw scores were associated with rounded scale scores of 248 and 251, the scale score of 248 was moved up to 250.

3) Scale scores below 100 were rounded up to 100.

4) Scale scores above 350 were rounded down to 350.

The final conversion tables are provided in Appendix B of this report. Similar to the 2008 and 2009 forms, future OMAAP forms will be equated using a CINEG equating design to account for possible differences in test form difficulty across years.

Chapter
6

VALIDITY

6.1 Introduction

The *Standards for Educational and Psychological Testing* states:

> Ultimately, the validity of an intended interpretation of test scores relies on all the available evidence relevant to the technical quality of a testing program. This includes evidence of careful test construction; adequate score reliability; appropriate test administration and scoring; accurate score scaling, equating, and standard setting; and careful attention to fairness for all examinees (p. 17).

While this section summarizes evidence supporting claims for the validity of the OMAAP performance scores, many parts of this Technical Report provide appropriate evidence for validity. Some of this evidence is repeated or cross-referenced below for added convenience. Given the procedural and empirical evidence available and the rationale presented below, valid performance standards-based interpretations and uses of the scores are generally supported.

This section begins with a review of the purposes and intended uses of performance test scores, including implications for schools, teachers, students, and parents. Next, content-related evidence supporting validity is presented in terms of the adequacy and appropriateness of the state's content standards and the representation of the content standards on the tests. Then, validity evidence based on the internal structure of the OMAAP is provided through a correlational analysis of content clusters. References to specific standards within the *Standards for Educational and Psychological Testing* are provided where appropriate.

6.2 Purpose and Intended Uses[1]

[1] Standard 1.2 – The test developer should set forth clearly how test scores are intended to be interpreted and used. The population(s) for which a test is appropriate should be clearly delimited, and the construct that the test is intended to assess should be clearly described (p. 17).

As stated in Chapter 1 of this Technical Report, the OMAAP is intended for gap students for whom both the OCCT and the OAAP assessments are inappropriate. The primary purpose of the OMAAP is to produce information on these gap students for educators to use when making instructional decisions. District reports are developed in a manner that yields diagnostic information for guiding instruction based on student performance levels in relation to the *PASS*. Yearly improvement is also assessed with common item equating using Item Response Theory (IRT).

In addition, the OMAAP fulfills the following objectives:

- Identifying the areas where students need improvement
- Informing various stakeholders (teachers, school administrators, district administrators, Oklahoma State Department of Education staff, parents, and the public) of progress toward meeting academic achievement standards of the state
- Meeting the requirements set forth by the No Child Left Behind (NCLB) Act
- Gauging the overall quality of education in the state of Oklahoma

To fulfill the above objectives, OMAAP results are displayed at the standard level in school-level and district-level reports that provide meaningful information for educational program reviews. Because scores for smaller subsets of items are reported, the reliability of these subsets of items, generally at the standard level, must be considered. All other factors being equal, the reliability (stability) of scores decreases as the number of items used decreases. More specifically, reliability is lower in standards that have smaller numbers of items. As a general rule, differences in mean standard scores for standards with smaller numbers of items must be greater than differences for standards with large numbers of items before they can be considered meaningful. Decreases in reliability also increase the need for multiple measures, particularly where the number of students in the assessed group is small.

In addition to the above, all standards cannot be assumed to be of equal difficulty level. Standard scores should, therefore, be compared to their respective state mean to facilitate effective interpretation. Insofar as tests are not equated at the standard level, standard scores cannot be compared from year to year. Year-to-year comparisons should be limited to total test scores in the content areas tested. For each content area, it is the whole test level (only) for which scores are equated.

Evaluation about a student's performance should never be based solely on the results of the OMAAP or any other single form of formal or informal assessment. As noted above, because the OMAAP is equated at the test level only, standard performance should not be directly compared across multiple test administrations. It is also important to take into account measurement error when interpreting student test results. The standard error takes into account that there are errors of measurement in

any assessment program. Introductory statistics courses teach that measurement error should always be taken into account when interpreting test scores. In fact, measurement experts strongly recommend that test publishers and other reporting agencies properly represent measurement error when reporting test scores. For example, confidence intervals are often built around individual student scores. OMAAP individual student level reports provide an indication of measurement error in the form of a confidence interval. For more detailed information regarding all OMAAP reports see the *2009 OMAAP Test Interpretation Manual*.

6.3 Item Development[2]

As stated in Chapter 2, all items on the 2009 OMAAP came from previous years of the Oklahoma School Testing Program Core Curriculum Tests (OSTP OCCT) for Grades 3–8 and the EOI operational test forms. The use of existing items from the regular state testing program means that only items with established validity were considered for the OMAA.

The following describes the process taken to develop the OMAAP forms.

1. Riverside Publishing selected items from OCCT that could be modified to fit the guidelines and built test forms to match the blueprint.
2. Riverside Publishing used a set of modification rules (see Table 2-1) to propose edits to passages and items.
3. Riverside Test Development Specialists conducted training sessions with teacher committees during item review and provided instruction on avoiding bias and stereotyping of groups and individuals on the basis of gender, race, ethnicity, religion, age, language, socioeconomic group, or disability.
4. Riverside Test Development Specialists reviewed each item to see how well it measured the specified standard and for clarity, grade appropriateness, and correspondence with item specifications. Artwork was also considered when items were evaluated. Item distributions by standards are given in Appendix F.

6.4 Item and Bias Review

The item review specifically targeted items in the following areas:

- Grades 3–8: reading and mathematics
- Grades 5 and 8: science
- High school EOI: English II, Algebra I, Biology I and U.S. History

The content and bias item review for the 2009 test forms for grades 3–8 was held in Oklahoma City on July 8 and 9, 2008. The EOI content and bias item review for the 2009 test forms was held in Oklahoma City, Oklahoma, on July 10, 2008. Items were evaluated using the following criteria:

- Overall quality and syntactical clarity
- Content coverage and content appropriateness
- Alignment to the specified standard and objective

[2] Standard 1.6 – When the validation rests in part on the appropriateness of test content, the procedures followed in specifying and generating test content should be described and justified in reference to the construct the test is intended to measure or the domain it is intended to represent. If the definition of the content sampled incorporates criteria such as importance, frequency, or criticality, these criteria should also be clearly explained and justified (p. 18).

- Grade-appropriate context
- One clearly correct answer and plausible distractors
- Freedom from bias toward or against any particular group

The content item review committee included educators from around the state of Oklahoma. Committee members were recommended to the Oklahoma State Department of Education by other teachers and/or administrators from across the state. Before the items were reviewed, Riverside Test Development Specialists held a training session for the committee. The criteria listed above were presented along with the specific types of modifications that had been made prior to the review, procedures were discussed, and question-and-answer sessions were held. Members of the content item review committee revised, edited, or rejected items that they deemed unsatisfactory.

Riverside Publishing took great care throughout the item-selection process to monitor items for potential bias and to ensure appropriate representation of the various segments and groups of the Oklahoma population. An important part of the item-selection process was the training that content specialists received to help them identify and eliminate potential bias from the materials they created.

It is important to note that all item review sessions were held in secure meeting rooms and that all materials were confidential. Committee members were required to sign confidentiality agreements so that the integrity of the test questions was not compromised. Although educators were encouraged to share information about the process of the item review as mentioned above, they were made fully aware of the expectation that any information about specific items and passages was to remain secure and confidential.

6.5 Key Validation

As testing materials were returned for scanning and scoring after the 2009 administration, a preliminary data file was created for key validation (a key check using empirical data) and key verification (a review of test items and keys by Test Development Specialists). The purpose of these analyses was to confirm the answer keys by scoring and analyzing the multiple-choice items. Classical test statistics were used for this process. For the empirical checks, items meeting the statistical criteria defined in Table 6-1 were flagged.

Table 6-1 Key Validation Criteria

Key Validation Item-Flagging Criteria	Indicates
If p-value of keyed response < 0.35	Difficult item
If p-value of keyed response < 0.05 or > 0.95	Extreme item

If p-value of keyed response < p-value of distracter	Possible mis-key
If p-value of distracter > 0.35	Possible second correct option
If point biserial of coded response < 0.20	Poorly discriminating item

6.6 Differential Item Functioning

Investigation of item bias is one way to maximize the validity of test score interpretations. Differential item functioning (DIF) analysis entails using Mantel-Haenszel chi-square and delta statistics to classify each field-tested item. The classification system, computational formulas for Mantel-Haenszel, and delta statistics are described in detail elsewhere (e.g., Camilli & Shepard, 1994; Dorans & Holland, 1993). Items classified as "A" are considered to exhibit a negligible amount of DIF, "B" items to exhibit a moderate amount of DIF, and "C" items to exhibit a large amount of DIF. After the 2009 administration of the OMAAP, the DIF was investigated for female/male and African American/Caucasian focal/reference groups. Results of the analyses are presented in Tables 6-2 to 6-5. Priority was given to those items in category A. Items flagged with moderate-to-severe DIF (ETS classification of B or C) were reviewed. Sometimes items in categories B or C were used after careful review, to satisfy test specification requirements.

Table 6-2 Numbers of Items with DIF for Reading

		ETS Classification									
		Female/Male					African American/Caucasian				
Grade	**Form**	**A**	**B**	**B-**	**C**	**C-**	**A**	**B**	**B-**	**C**	**C-**
3	D	40	0	0	0	0	40	0	0	0	0
3	E	40	0	0	0	0	39	1	0	0	0
4	D	40	0	0	0	0	38	1	1	0	0
4	E	39	0	1	0	0	39	0	1	0	0
5	D	40	0	0	0	0	40	0	0	0	0
5	E	40	0	0	0	0	40	0	0	0	0
6	D	39	0	1	0	0	39	0	1	0	0
6	E	40	0	0	0	0	40	0	0	0	0
7	D	39	1	0	0	0	39	1	0	0	0
7	E	38	1	1	0	0	36	3	1	0	0
8	D	39	1	0	0	0	40	0	0	0	0
8	E	39	1	0	0	0	37	0	3	0	0
English II	D	39	1	0	0	0	39	0	1	0	0
English II	E	38	2	0	0	0	40	0	0	0	0

Table 6-3 Numbers of Items with DIF for Mathematics

		ETS Classification									
		Female/Male					African American/Caucasian				
Grade	**Form**	**A**	**B**	**B-**	**C**	**C-**	**A**	**B**	**B-**	**C**	**C-**
3	D	37	1	2	0	0	40	0	0	0	0
3	E	36	2	2	0	0	38	1	1	0	0
4	D	40	0	0	0	0	38	0	2	0	0
4	E	38	1	0	0	1	38	0	2	0	0
5	D	40	0	0	0	0	38	1	1	0	0
5	E	39	1	0	0	0	37	1	2	0	0
6	D	38	1	0	0	1	38	0	2	0	0
6	E	39	0	1	0	0	35	2	2	0	1
7	D	38	1	1	0	0	39	0	1	0	0
7	E	38	0	2	0	0	37	1	2	0	0
8	D	40	0	0	0	0	39	0	1	0	0
8	E	38	2	0	0	0	39	1	0	0	0
Algebra I	D	39	0	1	0	0	39	0	1	0	0
Algebra I	E	38	0	2	0	0	36	0	4	0	0

Table 6-4 Numbers of Items with DIF for Science

		ETS Classification									
		Female/Male					African American/Caucasian				
Grade	**Form**	**A**	**B**	**B-**	**C**	**C-**	**A**	**B**	**B-**	**C**	**C-**
5	D	38	0	2	0	0	37	2	1	0	0
5	E	40	0	0	0	0	37	0	3	0	0
8	D	38	0	2	0	0	35	1	3	0	1
8	E	38	1	1	0	0	36	1	2	0	1
Biology I	D	42	3	1	0	0	46	0	0	0	0
Biology I	E	44	1	1	0	0	45	0	1	0	0

Table 6-5 Numbers of Items with DIF for Winter 2008/09 EOI

		ETS Classification									
		Female/Male					African American/Caucasian				
Grade	**Form**	**A**	**B**	**B-**	**C**	**C-**	**A**	**B**	**B-**	**C**	**C-**
English II	C	37	2	0	0	0	34	2	3	0	0
Algebra I	C	38	0	0	0	0	38	0	0	0	0
Biology I	C	45	0	0	0	0	45	0	0	0	0

6.7 Internal Structure of the OMAAP[3]

Because the OMAAP assesses student performance across domain clusters, it is important to study the pattern of relationships among the item clusters. Appendix I summarizes Pearson correlation coefficients among test-content strands by grade level.

[3] Standard 1.11 – If the rationale for a test use or interpretation depends on premises about the relationships among parts of the test, evidence concerning the internal structure of the test should be provided.

6.8 Additional Evidence for Validity

Validity evidence related to other standards is listed below.

Standard 1.5[4]

- The composition of the sample of examinees from which validity evidence was obtained is described in detail in Appendix G. These tables also provide descriptive statistics for number correct raw score. Statistics include N-counts, means, and standard deviations, and a variety of data disaggregations including student demographic groups.

Standard 1.7[5]

- Standard-setting procedures, including the selection process and the characteristics of judges, are described in the Standard-Setting section of this Technical Report.

Standard 1.13[6]

- Information about the administration of the OMAAP is available in the *Oklahoma Modified Alternate Assessment Program Test Administrator's Manual Spring 2009.*

[4] Standard 1.5 – The composition of any sample of examinees from which validity evidence is obtained should be described in as much detail as is practical, including major relevant sociodemographic and developmental characteristics.
[5] Standard 1.7 – When a validation rests in part on the opinions or decisions of expert judges, observers, or raters, procedures for selecting such experts and for eliciting judgments or ratings should be fully described. The qualifications, and experience, of the judges should be presented. The description of procedures should include any training and instructions provided, should indicate whether participants reached their decisions independently, and should report the level of agreement reached. If participants interacted with one another or exchanged information, the procedures through which they may have influenced one another should be set forth.
[6] Standard 1.13 – When validity evidence includes statistical analyses of test results, either alone or together with data on other variables, the conditions under which the data were collected should be described in enough detail that users can judge the relevance of the statistical findings to local conditions. Attention should be drawn to any features of a validation data collection that are likely to differ from typical operational testing conditions and that could plausibly influence test performance.

Chapter 7

STATEWIDE RESULTS

7.1 Summary of Scale Score Statistics

Tables 7-1 to 7-3 provide a summary for scale score statistics based on the total number of students who were administered the OMAAP in Spring 2007, Spring 2008, Winter 2007/08, Spring 2009, and Winter 2008/09.

Table 7-1 Scale Score Summary Statistics for Reading

Administration	Grade	N	Scale Score						
			Mean	SD	P_{10}	P_{25}	P_{50}	P_{75}	P_{90}
Spring 2007	3	2,513	253.4	21.3	229	238	250	266	283
	4	2,154	254.2	19.4	232	240	253	269	279
	5	2,123	249.4	17.6	228	237	247	260	272
	6	2,325	247.5	19.1	226	234	245	258	271
	7	2,357	248.3	20.7	226	234	245	261	275
	8	2,548	252.8	20.1	228	239	253	265	276
	English II, EOI	2,217	257.0	18.0	235	245	257	268	281
Spring 2008	3	3,131	255.0	20.2	233	241	252	266	280
	4	3,285	259.7	21.4	235	244	258	273	289
	5	3,055	252.6	17.6	233	241	250	265	276
	6	3,137	249.7	18.5	228	235	247	261	275
	7	3,146	252.4	20.8	228	238	250	267	281
	8	3,088	256.0	19.7	229	242	257	268	279
	English II, EOI	2,736	256.2	16.9	236	243	256	267	278
Winter 2007/08	English II, EOI	155	254.0	12.3	238	245	253	263	270
Spring 2009	3	1797	253.90	20.32	232	240	250	268	282

Administration	Grade	N	Scale Score						
			Mean	SD	P_{10}	P_{25}	P_{50}	P_{75}	P_{90}
Form D	4	1798	260.54	19.23	237	246	260	272	287
	5	1943	254.37	17.83	234	241	252	266	277
	6	1846	250.62	18.27	227	238	250	262	274
	7	1844	251.74	17.85	230	238	251	264	276
	8	1886	257.78	18.36	234	244	258	269	282
	English II, EOI	1788	256.98	16.40	237	245	256	267	280
Spring 2009 Form E	3	1873	258.60	23.11	233	241	255	275	289
	4	1985	262.60	21.37	236	246	260	278	292
	5	1869	257.18	19.09	236	243	254	269	284
	6	1784	252.11	17.75	231	239	251	264	276
	7	1733	254.11	20.36	229	239	254	268	281
	8	1770	258.18	18.71	232	245	258	270	281
	English II, EOI	1678	257.93	14.73	240	247	257	268	277
Winter 2008/09	English II, EOI	233	257.96	15.67	238	247	258	267	278

Table 7-2 Scale Score Summary Statistics for Mathematics

Administration	Grade	N	Scale Score						
			Mean	S.D.	P_{10}	P_{25}	P_{50}	P_{75}	P_{90}
Spring 2007	3	2,140	259.7	20.9	235	245	257	274	285
	4	1,941	254.3	18.1	232	242	253	266	280
	5	1,960	254.4	17.2	233	243	252	265	277
	6	1,918	255.7	16.6	235	245	255	265	276
	7	2,355	249.4	15.0	232	240	247	258	269
	8	2,695	249.9	15.5	233	240	248	257	268
	Algebra I, EOI	2,332	256.1	14.9	240	245	255	264	275
Spring 2008	3	2,634	262.3	24.6	233	244	259	277	297
	4	2,884	258.4	19.5	235	245	256	269	282

	5	2,879	257.0	16.8	239	246	256	265	280
	6	2,790	256.4	15.7	238	245	257	267	275
	7	3,034	252.0	15.1	233	241	252	262	270
	8	3,202	249.5	14.7	232	239	250	258	268
	Algebra I, EOI	3,286	257.1	14.6	239	247	256	265	275
Winter 2007/08	Algebra I, EOI	129	251.1	14.3	235	243	248	258	271
Spring 2009 Form D	3	1548	264.30	23.42	237	246	262	278	295
	4	1556	259.64	18.80	236	245	259	271	283
	5	1800	259.25	18.05	239	246	258	271	283
	6	1698	258.28	13.76	241	250	257	267	275
	7	1766	255.26	16.33	236	243	253	266	274
	8	1868	253.29	14.64	234	244	254	263	271
	Algebra I, EOI	2180	259.82	15.02	242	250	258	268	279
Spring 2009 Form E	3	1629	270.09	25.57	239	253	266	284	301
	4	1756	262.12	22.29	235	245	260	276	288
	5	1758	261.47	20.20	239	250	259	272	289
	6	1666	259.69	15.24	242	250	259	268	279
	7	1688	255.04	16.95	234	243	253	266	278
	8	1756	252.74	15.39	235	243	252	262	272
	Algebra I, EOI	2055	262.37	16.82	242	250	261	273	284
Winter 2008/09	Algebra I, EOI	216	257.81	16.71	242	247	256	265	275

Table 7-3 Scale Score Summary Statistics for Science

			Scale Score						
Administration	Grade	N	Mean	S.D.	P_{10}	P_{25}	P_{50}	P_{75}	P_{90}
Spring 2007	5	1,548	257.8	18.1	238	244	256	269	281
	8	1,852	267.6	20.6	244	253	265	279	294
	Biology I, EOI	1,872	250.6	14.3	233	240	248	258	269
Spring 2008	5	2,220	259.9	18.5	237	247	260	271	285

	8	2,317	268.6	18.0	247	257	269	279	293
	Biology I, EOI	2,609	252.5	17.1	232	240	250	262	276
Winter 2007/08	Biology I, EOI	113	250.8	16.5	230	239	247	265	273
Spring 2009 Form D	5	1503	261.20	19.14	238	250	258	272	285
	8	1401	270.25	16.48	250	260	271	281	290
	Biology I, EOI	1696	254.68	15.94	236	244	254	264	274
Spring 2009 Form E	5	1471	263.92	19.07	241	251	263	276	290
	8	1287	268.88	16.08	248	257	269	279	289
	Biology I, EOI	1651	256.12	18.14	235	243	255	265	281
Winter 2008/09	Biology I, EOI	161	254.87	15.05	236	246	252	264	274

7.2 Performance Level Percentages

The percentages of students at each performance level are shown in Tables 7-4 to 7-6. The total percentages of students across the four performance levels might not add to 100% because of rounding.

Table 7-4 Percentages of Students at Each Performance Level for Reading

Administration	Grade	N	Performance Levels %			
			Unsatisfactory	*Limited Knowledge*	*Satisfactory*	*Advanced*
Spring 2007	3	2,513	22.0	26.7	26.7	24.6
	4	2,154	18.7	23.9	28.0	29.4
	5	2,123	10.1	44.2	29.9	15.8
	6	2,325	12.6	43.2	20.7	23.4
	7	2,357	13.8	41.8	29.7	14.6
	8	2,548	18.5	24.9	42.8	13.7
	English	2,21	12.6	22.9	30.9	33.7

Administration	Grade	N	Performance Levels %			
			Unsatisfactory	*Limited Knowledge*	*Satisfactory*	*Advanced*
	II, EOI	7				
Spring 2008	3	3,131	17.7	27.6	29.8	24.9
	4	3,285	11.4	22.1	30.8	35.7
	5	3,055	9.1	37.6	35.8	17.5
	6	3,137	10.4	41.1	21.4	27.1
	7	3,146	12.5	34.6	34.2	18.7
	8	3,088	15.3	18.8	53.2	12.7
	English II, EOI	2,736	12.1	22.2	35.5	30.2
Winter 2007/08	English II, EOI	155	8.4	25.8	47.1	18.7
Spring 2009 Form D	3	1797	22.0	24.3	30.6	23.1
	4	1798	8.0	20.7	32.9	38.4
	5	1943	5.0	38.3	33.4	23.3
	6	1846	10.5	37.4	23.7	28.4
	7	1844	8.5	33.6	43.0	15.0
	8	1886	11.1	19.5	55.0	14.4
	English II, EOI	1788	11.8	19.9	39.8	28.6
Spring 2009 Form E	3	1873	16.9	24.0	26.9	32.3
	4	1985	10.3	20.2	27.5	42.0
	5	1869	5.8	31.1	36.0	27.2
	6	1784	7.6	35.5	27.5	29.4
	7	1733	8.8	29.8	38.7	22.7
	8	1770	12.9	17.3	52.8	17.0
	English II, EOI	1678	5.4	20.3	44.7	29.6
Winter 2008/09	English II, EOI	233	8.6	20.6	37.3	33.5

Table 7-5 Percentages of Students at Each Performance Level for Mathematics

Administration	Grade	N	Performance Levels %			
			Unsatisfactory	*Limited Knowledge*	*Satisfactory*	*Advanced*
Spring 2007	3	2,140	9.5	22.7	33.4	34.4
	4	1,941	10.5	30.0	45.5	14.0
	5	1,960	19.5	22.7	42.6	15.2
	6	1,918	11.8	23.7	55.0	9.4
	7	2,355	17.4	34.4	36.9	11.3
	8	2,695	8.7	41.7	39.9	9.6
	Algebra I, EOI	2,332	6.2	28.3	47.6	18.0
Spring 2008	3	2,634	11.2	18.5	34.4	36.0
	4	2,884	9.0	23.6	50.3	17.1
	5	2,879	13.2	16.5	53.2	17.1
	6	2,790	9.2	22.0	62.0	6.8
	7	3,034	15.7	24.6	47.2	12.5
	8	3,202	11.3	35.4	44.8	8.5
	Algebra I, EOI	3,286	6.8	19.4	55.6	18.2
Winter 2007/08	Algebra I, EOI	129	11.6	38.8	35.7	14.0
Spring 2009 Form D	3	1548	7.0	18.2	34.8	40.1
	4	1556	6.9	23.6	50.6	18.9
	5	1800	13.3	13.3	51.8	21.6
	6	1698	4.7	18.8	70.0	6.5
	7	1766	11.9	20.3	49.9	17.8
	8	1868	7.2	28.5	52.0	12.3
	Algebra I, EOI	2180	3.8	16.7	54.4	25.0
Spring 2009 Form E	3	1629	6.1	12.1	32.1	49.7
	4	1756	8.8	20.2	44.5	26.5
	5	1758	11.4	12.5	52.2	24.0
	6	1666	6.1	17.4	67.2	9.3

Administration	Grade	N	Performance Levels %			
			Unsatisfactory	*Limited Knowledge*	*Satisfactory*	*Advanced*
	7	1688	12.4	21.0	45.1	21.5
	8	1756	5.9	36.5	45.6	12.1
	Algebra I, EOI	2055	4.0	15.6	48.4	32.0
Winter 2008/09	Algebra I, EOI	216	5.6	19.9	55.1	19.4

Table 7-6 Percentages of Students at Each Performance Level for Science

Administration	Grade	N	Performance Levels %			
			Unsatisfactory	*Limited Knowledge*	*Satisfactory*	*Advanced*
Spring 2007	5	1,548	9.6	23.3	49.9	17.2
	8	1,852	7.0	9.7	66.1	17.1
	Biology I, EOI	1,872	7.4	42.9	32.3	17.4
Spring 2008	5	2,220	10.6	16.5	55.0	17.9
	8	2,317	4.5	8.3	72.6	14.7
	Biology I, EOI	2,609	10.3	35.6	32.5	21.5
Winter 2007/08	Biology I, EOI	113	13.3	37.2	22.1	27.4
Spring 2009 Form D	5	1503	8.4	15.3	56.2	20.0
	8	1401	2.1	5.3	80.9	11.7
	Biology I, EOI	1696	5.9	33.0	37.4	23.8
Spring 2009 Form E	5	1471	6.0	13.7	59.1	21.3
	8	1287	3.0	7.1	77.7	12.1
	Biology I, EOI	1651	6.4	27.4	37.7	28.5
Winter 2008/09	Biology I, EOI	161	4.3	32.9	39.8	23.0

REFERENCES

Anderich, D. (1978). A rating formulation for ordered response categories. *Psychometrika*, *43*, 561-573.

Brown, W. (1910). Some experimental results in the correlation of mental abilities. *British Journal of Psychology*, *3*, 296–322.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, *16*, 297–334.

Donlon, T. F. (Ed.). (1984). *The College Board technical handbook for the Scholastic Aptitude Test and Achievement Tests*. New York: College Entrance Examination Board.

Dorans, N. J. (Ed.). (1990). Selecting samples for equating: To match or not to match [Special issue]. *Applied Measurement in Education*, 3(1).

Dorans N.J., & Holland, P.W. (1993). DIF detection and description: Mantel-Haenszel and standardization. In P.W. Holland, & H. Wainer (Eds.), Differential item functioning (p. 35-66). Hillsdale, NJ: Lawrence Earlbaum.

Feldt and Brennan (1989). Reliability. In R. L. Linn (Ed.), *Educational Measurement* (3rd ed.). Washington, DC: American Council on Education.

Hambleton, R. K., Swaminathan, H., & Rogers, H. J. (1991). *Fundamentals of items response theory*. Newbury Park, CA: Sage.

Hambleton, R. K. (1989). Principles and selected applications of item response theory. In R. L. Linn (Ed.), *Educational measurement* (3rd ed.). Washington, DC: American Council on Education.

Hambleton, R. K., & Swaminathan, H. (1985). *Item response theory*: *Principles and applications*. Boston: Kluwer.

Huynh, H. (1979). Computational and statistical inference for two reliability indices based on the beta-binomial model. *Journal of Educational Statistics*, *4*, 231-246.

Kolen, M. J. (2004). *Common Item Program for Equating (CIPE).*

Kolen, M. J., & Brennan, R. L. (2004). *Test equating, scaling, and linking: Methods and practices* (2nd ed.). New York: Springer-Verlag.

Kuder, G. F., & Richardson, M. W. (1937). The theory of the estimation of test reliability. *Psychometrika*, *2*, 151–160.

Lewis, D. M., Mitzel, H. C., & Green, D. R. (1996, June). Standard setting: A bookmark approach. In D. R. Green (Chair), *IRT-based standard setting procedures utilizing behavioral anchoring.* Symposium conducted at the Council of Chief States School Officers National Conference on Large-Scale Assessment, Phoenix, AZ.

Linacre, J. M., & Wright, B. D. (1999). *A user's guide to WINSTEPS: Rasch-model computer program*. Chicago: MESA Press.

Linacre, J. M. (2006). A *user's guide to WINSTEPS MINISTEP Rasch-model computer programs*. Chicago.

Masters, G. N. (1982). A Rasch model for partial credit scoring. *Psychometrika*, *47*, 149-174.

Miller, G.E., Rotou, O., & Twing, J. S. (2004). Evaluation of the 0.3 logits screening criterion in common item equating. *Journal of Applied Measurement*, *5*(2), 172-177.

Rasch, G. (1960). *Probabilistic models for some intelligence and attainment tests*. Copenhagen, Denmark: Danish Institute for Educational Research.

Smith, R. M., & Miao, C. Y. (1994). Assessing unidimensionality for Rasch measurement. In M. Wilson (Ed.), *Objective measurement: Theory into practice* (Vol. 2). Norwood, NJ: Ablex.

Smith, E. V., Jr. (2004). Evidence for the reliability of measures and validity of measure interpretation: A Rasch measurement perspective. In E. V. Smith, Jr., & R. M. Smith, *Introduction to Rasch measurement: Theory, models and applications*. Maple Grove, MN: JAM Press.

Traub, R. E. (1994). Reliability for the social sciences, v3. Thousand Oaks, Sage.

van der Linden, W. J., & Hambleton, R. K. (1997). *Handbook of modern item response theory*. New York: Springer-Verlag.

Wright, B. D., & Stone, M. H. (1979). *Best test design*. Chicago: MESA Press.

Appendix

A

OMAAP PERFORMANCE LEVEL DESCRIPTORS

Performance Level Descriptors: Grade 3 Mathematics

Advanced: Students performing at the Advanced level on the Oklahoma Modified Alternate Assessment consistently demonstrate an understanding of the knowledge and skills expected of students at this grade, which include patterns, number sense, number operations and computation, geometry, measurement, and data analysis and probability. In addition to demonstrating an understanding and application of all modified skills at the Satisfactory performance level, students scoring at the Advanced level typically use a range of strategies to solve problems, regularly use various types of reasoning, connect one area or idea of mathematics to another, and communicate mathematical ideas.

Satisfactory: Students performing at the Satisfactory level on the Oklahoma Modified Alternate Assessment demonstrate a general understanding of the mathematics knowledge, skills, and processes expected of students at this grade. Students scoring at the Satisfactory level typically will

- recognize and predict patterns; Skip counting is limited to 2s, 5s, and 10s
- understand and model place value (to three digits)
- compare and order whole numbers (to three digits) and fractions (halves, thirds, and fourths) using models
- estimate and solve addition and subtraction problems using whole numbers and money (without regrouping)
- demonstrate fluency with basic multiplication concepts (including fact families through 5×5)
- apply geometric properties and relationships (including coordinate locations)
- apply measurement concepts (including area and perimeter, length, weight, mass, time, and temperature)
- analyze and interpret data in tables, graphs, and charts
- determine the likelihood of events

Limited Knowledge: Students performing at the Limited Knowledge level on the Oklahoma Modified Alternate Assessment demonstrate a partial understanding of the mathematics knowledge, skills, and processes expected of students at this grade. Students scoring at the Limited Knowledge level have difficulty and are inconsistent in applying the general knowledge and mathematical process skills necessary to solve problems effectively and reason mathematically.

Unsatisfactory: Students performing at the Unsatisfactory level on the Oklahoma Modified Alternate Assessment do not demonstrate at least a Limited Knowledge level

of the skills expected of students at this grade. Students scoring at the Unsatisfactory level should be given additional comprehensive mathematics instruction.

Performance Level Descriptors: Grade 4 Mathematics

Advanced: Students performing at the Advanced level on the Oklahoma Modified Alternate Assessment consistently demonstrate an understanding of the knowledge and skills expected of students at this grade, which include patterns, number sense, number operations and computation, geometry, measurement, and data analysis. In addition to demonstrating an understanding and application of all modified skills at the Satisfactory performance level, students scoring at the Advanced level typically use a range of strategies to solve problems, regularly use various types of reasoning, connect one area or idea of mathematics to another, and communicate mathematical ideas.

Satisfactory: Students performing at the Satisfactory level on the Oklahoma Modified Alternate Assessment demonstrate a general understanding of the mathematics knowledge, skills, and processes expected of students at this grade. Students scoring at the Satisfactory level typically will

- be able to recognize, describe, and extend patterns
- be able to solve open sentences involving addition and subtraction with whole numbers
- understand place value to four digits and decimals to the hundredths
- compare and order whole numbers
- be able to use addition and subtraction of whole numbers (to four digits) to estimate and to solve problems
- compare fractions (including the use of benchmarks)
- estimate and find the product of up to two 2-digit numbers to solve problems
- find the quotient of a one-digit divisor and a two-digit dividend to solve problems
- apply geometric (spatial reasoning) and measurement concepts using customary and metric units of measure (including estimation)
- analyze and interpret data in graphs

Limited Knowledge: Students performing at the Limited Knowledge level on the Oklahoma Modified Alternate Assessment demonstrate a partial understanding of the mathematics knowledge, skills, and processes expected of students at this grade. Students scoring at the Limited Knowledge level have difficulty and are inconsistent in applying the general knowledge and mathematical process skills necessary to solve problems effectively and reason mathematically.

Unsatisfactory: Students performing at the Unsatisfactory level on the Oklahoma Modified Alternate Assessment do not demonstrate at least a Limited Knowledge level of the skills expected of students at this grade. Students scoring at the Unsatisfactory level should be given additional comprehensive mathematics instruction.

Performance Level Descriptors: Grade 5 Mathematics

Advanced: Students performing at the Advanced level on the Oklahoma Modified Alternate Assessment consistently demonstrate an understanding of the knowledge and skills expected of students at this grade, which include patterns, number sense, number operations and computation, geometry, measurement, and data analysis. In addition to demonstrating an understanding and application of all modified skills at the Satisfactory performance level, students scoring at the Advanced level typically use a range of strategies to solve problems, regularly use various types of reasoning, connect one area or idea of mathematics to another, and communicate mathematical ideas.

Satisfactory: Students performing at the Satisfactory level on the Oklahoma Modified Alternate Assessment demonstrate a general understanding of the mathematics knowledge, skills, and processes expected of students at this grade. Students scoring at the Satisfactory level typically will

- use whole numbers, fractions, and decimals to solve problems
- apply basic properties of arithmetic and simulate algebraic problem-solving techniques
- identify factors and multiples
- estimate to determine solutions to problems involving decimals
- identify and describe the basic properties of figures
- identify and estimate basic measurements of volume, weight, and distance
- find the perimeter of simple polygons and the area of rectangles
- analyze and transfer data in graphs, charts, and tables
- determine the probabilities of events and express them as fractions
- list permutations and combinations of up to three items
- determine the range (spread) and mean (average) of a set of data

Limited Knowledge: Students performing at the Limited Knowledge level on the Oklahoma Modified Alternate Assessment demonstrate a partial understanding of the mathematics knowledge, skills, and processes expected of students at this grade. Students scoring at the Limited Knowledge level have difficulty and are inconsistent in applying the general knowledge and mathematical process skills necessary to solve problems effectively and reason mathematically.

Unsatisfactory: Students performing at the Unsatisfactory level on the Oklahoma Modified Alternate Assessment do not demonstrate at least a Limited Knowledge level of the skills expected of students at this grade. Students scoring at the Unsatisfactory level should be given additional comprehensive mathematics instruction.

Performance Level Descriptors: Grade 6 Mathematics

Advanced: Students performing at the Advanced level on the Oklahoma Modified Alternate Assessment consistently demonstrate an understanding of the knowledge and skills expected of students at this grade, which include algebraic reasoning, number sense, geometry, measurement, and data analysis and statistics. In addition to demonstrating an understanding and application of all modified skills at the Satisfactory performance level, students scoring at the Advanced level typically use a range of strategies to solve problems, regularly use various types of reasoning, connect one area or idea of mathematics to another, and communicate mathematical ideas.

Satisfactory: Students performing at the Satisfactory level on the Oklahoma Modified Alternate Assessment demonstrate a general understanding of the mathematics knowledge, skills, and processes expected of students at this grade. Students scoring at the Satisfactory level on the Oklahoma Modified Alternate Assessment typically will

- extend and create patterns from a variety of contexts
- use substitution and the order of operations to simplify and evaluate single-step algebraic expressions and numerical expressions (including exponents up to the power of 3 and parentheses)
- order decimals, fractions, and percents
- multiply and divide common fractions to solve problems
- estimate solutions to single-step problems using whole numbers, decimals, fractions, and percents
- compare, estimate, and determine the measurement of angles and find the complement and supplement of an angle
- differentiate between congruent and similar figures
- compare and convert units within the same measurement system and find reasonable estimates for measurements using measurements in standard and metric units
- analyze and transfer data in graphs, charts, and tables and determine the median and the mode of a set of data

Limited Knowledge: Students performing at the Limited Knowledge level on the Oklahoma Modified Alternate Assessment demonstrate a partial understanding of the mathematics knowledge, skills, and processes expected of students at this grade. Students scoring at the Limited Knowledge level have difficulty and are inconsistent in applying the general knowledge and mathematical process skills necessary to solve problems effectively and reason mathematically.

Unsatisfactory: Students performing at the Unsatisfactory level on the Oklahoma Modified Alternate Assessment do not demonstrate at least a Limited Knowledge level of the skills expected of students at this grade. Students scoring at the Unsatisfactory level should be given additional comprehensive mathematics instruction.

Performance Level Descriptors: Grade 7 Mathematics

Advanced: Students performing at the Advanced level on the Oklahoma Modified Alternate Assessment consistently demonstrate an understanding of the knowledge and skills expected of students at this grade, which include number sense, algebraic reasoning, geometry, measurement, and data analysis and probability. In addition to demonstrating an understanding and application of all modified skills at the Satisfactory performance level, students scoring at the Advanced level typically use a range of strategies to solve problems, regularly use various types of reasoning, connect one area or idea of mathematics to another, and communicate mathematical ideas.

Satisfactory: Students performing at the Satisfactory level on the Oklahoma Modified Alternate Assessment demonstrate a general understanding of the mathematics knowledge, skills, and processes expected of students at this grade. Students scoring at the Satisfactory level on the Oklahoma Modified Alternate Assessment typically will

- identify and apply commutative, identity, associative, distributive, and inverse properties
- model and evaluate simple linear relationships using tables or coordinate graphs
- model and solve single-step algebraic equations
- compare, order, and use integers to solve problems
- estimate and solve problems using ratio, proportion, and percent
- recognize models of squares and square roots (perfect squares to 25)
- classify triangles and quadrilaterals according to sides and angles and identify and compare vertical angles
- identify geometric reflections and rotations not on a coordinate plane and locate points on a coordinate plane
- solve problems involving perimeter and area using formulas or grids
- find reasonable estimates of measurements using customary and metric units
- use data from a set, chart, or illustration to predict outcomes and probabilities

Limited Knowledge: Students performing at the Limited Knowledge level on the Oklahoma Modified Alternate Assessment demonstrate a partial understanding of the mathematics knowledge, skills, and processes expected of students at this grade. Students scoring at the Limited Knowledge level have difficulty and are inconsistent in applying the general knowledge and mathematical process skills necessary to solve problems effectively and reason mathematically.

Unsatisfactory: Students performing at the Unsatisfactory level on the Oklahoma Modified Alternate Assessment do not demonstrate at least a Limited Knowledge level

of the skills expected of students at this grade. Students scoring at the Unsatisfactory level should be given additional comprehensive mathematics instruction.

Performance Level Descriptors: Grade 8 Mathematics

Advanced: Students performing at the Advanced level on the Oklahoma Modified Alternate Assessment consistently demonstrate an understanding of the knowledge and skills expected of students at this grade, which include number sense, algebraic operations, geometry, and data analysis and statistics. In addition to demonstrating an understanding and application of all modified skills at the Satisfactory performance level, students scoring at the Advanced level typically use a range of strategies to solve problems, regularly use various types of reasoning, connect one area or idea of mathematics to another, and communicate mathematical ideas.

Satisfactory: Students performing at the Satisfactory level on the Oklahoma Modified Alternate Assessment demonstrate a general understanding of the mathematics knowledge, skills, and processes expected of students at this grade. Students scoring at the Satisfactory level on the Oklahoma Modified Alternate Assessment typically will

- solve one-step and two-step algebraic equations and one-step inequalities
- compare and order positive and negative rational integers and decimals
- use the rules of exponents, including integer exponents (excluding raising a power to a power), to solve problems
- classify solid figures and estimate surface area and volume of rectangular solids in real-world settings
- use ratio and proportion to solve problems involving similar geometric figures
- apply appropriate formulas for given situations
- analyze samples and select and apply appropriate charts and graphs to represent collected data
- find the measures of central tendency (mean, median, and mode) of a set of data

Limited Knowledge: Students performing at the Limited Knowledge level on the Oklahoma Modified Alternate Assessment demonstrate a partial understanding of the mathematics knowledge, skills, and processes expected of students at this grade. Students scoring at the Limited Knowledge level have difficulty and are inconsistent in applying the general knowledge and mathematical process skills necessary to solve problems effectively and reason mathematically.

Unsatisfactory: Students performing at the Unsatisfactory level on the Oklahoma Modified Alternate Assessment do not demonstrate at least a Limited Knowledge level of the skills expected of students at this grade. Students scoring at the Unsatisfactory level should be given additional comprehensive mathematics instruction.

Performance Level Descriptors: Algebra I, End-of-Instruction

Advanced: Students performing at the Advanced level on the Oklahoma Modified Alternate Assessment consistently demonstrate a thorough understanding of the knowledge and skills expected of students at the End-of-Instruction in Algebra I, which includes objectives in the areas of number sense and algebraic operations, relations and functions, and data analysis and statistics. In addition to demonstrating an understanding and application of all modified skills at the Satisfactory performance level, students scoring at the Advanced level typically use a range of strategies to solve problems, regularly use various types of reasoning, connect one area or idea of mathematics to another, and communicate mathematical ideas.

Satisfactory: Students performing at the Satisfactory level on the Oklahoma Modified Alternate Assessment demonstrate a general understanding of the mathematics knowledge, skills, and processes expected of students at the End-of-Instruction in Algebra I. Students scoring at the Satisfactory level on the Oklahoma Modified Alternate Assessment typically will

- use formulas, laws of exponents, percents, probability, and measures of central tendency to solve problems within an algebraic context
- simplify and evaluate linear expressions
- distinguish between linear and nonlinear data
- calculate the slope of a line
- identify the equation of a line
- solve linear equations or inequalities and match simple equations to a graph
- solve a system of linear equations by graphing
- translate from one representation of data to another and make valid inferences and predictions based on collected data

Limited Knowledge: Students performing at the Limited Knowledge level on the Oklahoma Modified Alternate Assessment demonstrate a partial understanding of the mathematics knowledge, skills, and processes expected of students at the End-of-Instruction in Algebra I. Students scoring at the Limited Knowledge level have difficulty and are inconsistent in applying the general knowledge and mathematical process skills necessary to solve problems effectively and reason mathematically.

Unsatisfactory: Students performing at the Unsatisfactory level on the Oklahoma Modified Alternate Assessment do not demonstrate at least a Limited Knowledge level of the skills expected of students at the End-of-Instruction in Algebra I. These students typically should be given additional comprehensive mathematics instruction.

Performance Level Descriptors: Grade 3 Reading

Advanced: Students performing at the Advanced level on the Oklahoma Modified Alternate Assessment consistently demonstrate a thorough understanding of the knowledge and skills expected of students at this grade. These skills are broadly demonstrated in reading processes, responses to text, and the acquisition of information through research.

Satisfactory: Students performing at the Satisfactory level on the Oklahoma Modified Alternate Assessment demonstrate a general understanding of the reading knowledge and skills expected of students at this grade. Students scoring at the Satisfactory level typically read and comprehend grade-level-modified reading material and will

- identify new words and multiple meanings of words, using structural analysis in combination with context clues and introductory resources with guidance, such as boldface text, and underlining, etc.
- identify the major elements of story structure such as plot, setting, and characters and be able to make logical predictions based on text information
- determine the main idea and important details
- make obvious inferences, organize, and draw conclusions
- identify fact and opinion statements in various texts
- identify summaries
- answer literal questions about the reading selection
- identify character traits
- use functional print information resources such as dictionaries, charts, and diagrams
- alphabetize to the first or second letter
- use guidewords to locate information

Limited Knowledge: Students performing at the Limited Knowledge level on the Oklahoma Modified Alternate Assessment demonstrate a partial understanding of the reading knowledge and skills expected of students at this grade. Students scoring at the Limited Knowledge level are inconsistent in demonstrating Satisfactory level competencies.

Unsatisfactory: Students performing at the Unsatisfactory level on the Oklahoma Modified Alternate Assessment do not demonstrate at least a Limited Knowledge level of the skills expected of students at this grade. Students scoring at the Unsatisfactory level should be given additional comprehensive reading instruction.

Performance Level Descriptors: Grade 4 Reading

Advanced: Students performing at the Advanced level on the Oklahoma Modified Alternate Assessment consistently demonstrate a thorough understanding of the knowledge and skills expected of students at this grade. These skills are broadly demonstrated in reading processes, responses to text, and the acquisition of information through research.

Satisfactory: Students performing at the Satisfactory level on the Oklahoma Modified Alternate Assessment demonstrate a general understanding of the reading knowledge and skills expected of students at this grade. Students scoring at the Satisfactory level typically read and comprehend grade-level-modified reading material and will

- identify new words using structural analysis in combination with context clues
- identify synonyms, antonyms, and homonyms
- identify the major elements of story structure such as plot, setting, and characters and be able to make logical predictions based on text information
- identify character traits
- recognize and interpret cause and effect, sequence, and compare/contrast
- recognize the main ideas, key concepts, and key actions in text
- make inferences, draw conclusions, and make generalizations, but not in a complex way
- recognize simple figurative language in poetry and descriptive passages
- distinguish among facts, opinions, and supported inferences in a variety of texts
- determine the purposes of different types of texts
- identify similarities and differences in text and summarize events
- use functional print information resources such as dictionaries, charts, and diagrams
- answer literal questions about the reading selection
- identify characteristics of a variety of genres

Limited Knowledge: Students performing at the Limited Knowledge level on the Oklahoma Modified Alternate Assessment demonstrate a partial understanding of the reading knowledge and skills expected of students at this grade. Students scoring at the Limited Knowledge level are inconsistent in demonstrating Satisfactory level competencies.

Unsatisfactory: Students performing at the Unsatisfactory level on the Oklahoma Modified Alternate Assessment do not demonstrate at least a Limited Knowledge level

of the skills expected of students at this grade. Students scoring at the Unsatisfactory level should be given additional comprehensive reading instruction.

Performance Level Descriptors: Grade 5 Reading

Advanced: Students performing at the Advanced level on the Oklahoma Modified Alternate Assessment consistently demonstrate a thorough understanding of the knowledge and skills expected of students at this grade. These skills are broadly demonstrated in reading processes, responses to text, and acquisition of information through research. In addition to demonstrating an understanding and application of all skills at the Satisfactory performance level, students scoring at the Advanced level typically use a range of strategies to interpret text, regularly demonstrate a thorough understanding of literary forms when using regular and modified text, and consistently apply different strategies for accessing and summarizing information.

Satisfactory: Students performing at the Satisfactory level on the Oklahoma Modified Alternate Assessment demonstrate a general understanding of the reading knowledge and skills expected of students at this grade. Students scoring at the Satisfactory level typically read and comprehend grade-level-modified reading material and will

- identify new words using structural analysis and context clues
- identify major elements of story structure
- recognize and interpret relationships in narrative and expository text
- identify key concepts and/or main ideas and important details
- make inferences and draw conclusions and/or generalizations
- identify figurative language and characteristics of poetry
- recognize characteristics of a variety of genres
- distinguish among facts, opinions, and supported inferences in expository text
- identify the author's purpose
- demonstrate use of functional print, charts, diagrams, and informational resources
- identify similarities and differences in text and summarize events

Limited Knowledge: Students performing at the Limited Knowledge level on the Oklahoma Modified Alternate Assessment demonstrate a partial understanding of the reading knowledge and skills expected of students at this grade. Students scoring at the Limited Knowledge level are inconsistent in demonstrating Satisfactory level competencies.

Unsatisfactory: Students performing at the Unsatisfactory level on the Oklahoma Modified Alternate Assessment do not demonstrate at least a Limited Knowledge level of the skills expected of students at this grade. Students scoring at the Unsatisfactory level should be given additional comprehensive reading instruction.

Performance Level Descriptors: Grade 6 Reading

Advanced: Students performing at the Advanced level on the Oklahoma Modified Alternate Assessment consistently demonstrate a thorough understanding of the knowledge and skills expected of students at this grade. These skills are broadly demonstrated in reading processes, responses to text, and in the acquisition of information through research. In addition to demonstrating an understanding and application of all skills at the Satisfactory performance level, students scoring at the Advanced level typically use a range of strategies to understand text; regularly demonstrate a thorough knowledge of literary forms when using regular or modified text; and consistently apply strategies for accessing, organizing, and summarizing information.

Satisfactory: Students performing at the Satisfactory level on the Oklahoma Modified Alternate Assessment demonstrate a general understanding of the reading knowledge and skills expected of students at this grade. Students scoring at the Satisfactory level typically read and comprehend grade-level-modified reading material and will

- determine stated and implied word meanings using various strategies
- recognize the main idea and supporting details
- use text structure to locate information
- make inferences, generalizations, and predictions and draw conclusions from various types of literature
- summarize information from text
- distinguish among facts, opinions, and supported inferences in a variety of texts
- identify figurative language, literary elements, and sound devices in various genres
- determine the author's purpose
- access information from a variety of sources
- use timelines, outlines, and graphic organizers to identify ideas within text
- recognize structural patterns in literature

Limited Knowledge: Students performing at the Limited Knowledge level on the Oklahoma Modified Alternate Assessment demonstrate a partial understanding of the reading knowledge and skills expected of students at this grade. Students scoring at the Limited Knowledge level are inconsistent in demonstrating Satisfactory level competencies.

Unsatisfactory: Students performing at the Unsatisfactory level on the Oklahoma Modified Alternate Assessment do not demonstrate at least a Limited Knowledge level of the skills expected of students at this grade. Students scoring at the Unsatisfactory level should be given additional comprehensive reading instruction.

Performance Level Descriptors: Grade 7 Reading

Advanced: Students performing at the Advanced level on the Oklahoma Modified Alternate Assessment consistently demonstrate a thorough understanding of the knowledge and skills expected of students at this grade. These skills are broadly demonstrated in reading processes, responses to text, and in the acquisition of information through research. In addition to demonstrating an understanding and application of all skills at the Satisfactory performance level, students scoring at the Advanced level typically use a range of strategies to understand text; regularly demonstrate a thorough knowledge of literary forms when using regular or modified text; and consistently apply strategies for accessing, summarizing, and interpreting information.

Satisfactory: Students performing at the Satisfactory level on the Oklahoma Modified Alternate Assessment demonstrate a general understanding of the reading knowledge and skills expected of students at this grade. Students scoring at the Satisfactory level typically read and comprehend grade-level-modified reading material and will

- determine literal and nonliteral word meanings in context, using a wide variety of strategies
- identify and explain comparisons such as analogies, metaphors, and similes to infer meanings of words and phrases
- determine the author's purpose
- recognize and understand transition words in text
- demonstrate literal understanding of a variety of texts
- identify the main idea and supporting details
- demonstrate comprehension by inferring, summarizing, and predicting in a variety of texts
- distinguish facts and opinions in text
- identify and explain figurative language, sound devices, and literary elements
- identify characteristics of genres and subgenres
- use appropriate strategies to organize, summarize, and interpret information
- identify elements of fiction and nonfiction
- select the best source for a given purpose

Limited Knowledge: Students performing at the Limited Knowledge level on the Oklahoma Modified Alternate Assessment demonstrate a partial understanding of the reading knowledge and skills expected of students at this grade. Students scoring at the Limited Knowledge level are inconsistent in demonstrating Satisfactory level competencies.

Unsatisfactory: Students performing at the Unsatisfactory level on the Oklahoma Modified Alternate Assessment do not demonstrate at least a Limited Knowledge level of the skills expected of students at this grade. Students scoring at the Unsatisfactory level should be given additional comprehensive reading instruction.

Performance Level Descriptors: Grade 8 Reading

Advanced: Students performing at the Advanced level on the Oklahoma Modified Alternate Assessment consistently demonstrate a thorough understanding of the knowledge and skills expected of students at this grade. These skills are broadly demonstrated in reading processes, responses to text, and in the acquisition of information through research. In addition to demonstrating an understanding and application of all skills at the Satisfactory performance level, students scoring at the Advanced level typically use a range of strategies to understand text; regularly demonstrate a thorough knowledge of literary forms when using regular or modified text; and consistently apply strategies for accessing, summarizing, and paraphrasing information.

Satisfactory: Students performing at the Satisfactory level on the Oklahoma Modified Alternate Assessment demonstrate a general understanding of the reading knowledge and skills expected of students at this grade. Students scoring at the Satisfactory level typically read and comprehend grade-level-modified reading material and will

- determine literal and nonliteral word meanings using a variety of strategies
- recognize the characteristics of both literary and informational texts
- identify the main idea and recognize the relevance of details
- identify and explain figurative language and elements of poetry
- make inferences and predictions, draw conclusions, and paraphrase ideas in a variety of texts
- identify point of view
- determine the author's purpose
- distinguish stated fact and opinion
- use appropriate strategies to organize and summarize information

Limited Knowledge: Students performing at the Limited Knowledge level on the Oklahoma Modified Alternate Assessment demonstrate a partial understanding of the reading knowledge and skills expected of students at this grade. Students scoring at the Limited Knowledge level are inconsistent in demonstrating Satisfactory level competencies.

Unsatisfactory: Students performing at the Unsatisfactory level on the Oklahoma Modified Alternate Assessment do not demonstrate at least a Limited Knowledge level of the skills expected of students at this grade. Students scoring at the Unsatisfactory level should be given additional comprehensive reading instruction.

Performance Level Descriptors: English II, End-of-Instruction

Advanced: Students performing at the Advanced level on the Oklahoma Modified Alternate Assessment typically demonstrate a thorough understanding of the knowledge and skills expected of students at the End-of-Instruction in English II. In addition to demonstrating an understanding and application of knowledge and skills at the Satisfactory performance level, students scoring at the Advanced level typically are effective in understanding abstract text, demonstrating an understanding of a broad variety of literary forms, regularly applying research strategies for understanding factual information, demonstrating a thorough understanding of correct Standard English usage, demonstrating a consistent understanding of literary elements and techniques when using regular or modified text, and applying correct Standard English to writing.

Satisfactory: Students performing at the Satisfactory level on the Oklahoma Modified Alternate Assessment typically demonstrate a general understanding of the knowledge and skills expected of students at the End-of-Instruction in English II. Students scoring at the Satisfactory level typically read and comprehend grade-level-modified reading material and will

- use a range of strategies to comprehend reading material (both fiction and nonfiction)
- demonstrate a general understanding of a variety of literary forms
- use basic research strategies to organize and understand factual information
- demonstrate a general understanding of correct use of Standard English
- demonstrate a general understanding of literary elements and techniques
- write responses that demonstrate moderate support, address the prompt with some development of details, use acceptable word choice, contain evidence of sentence structure, and demonstrate sufficient mastery in grammar and mechanics so that readability is not affected

Limited Knowledge: Students performing at the Limited Knowledge level on the Oklahoma Modified Alternate Assessment typically demonstrate a partial understanding of the knowledge and skills expected of students at the End-of-Instruction in English II. Students are inconsistent in demonstrating the Satisfactory level competencies. They typically use a limited number of strategies to comprehend and interpret grade-level-modified reading material; demonstrate some understanding of the various literary forms; use simple research strategies to organize and interpret factual information; display partial understanding of correct Standard English usage; demonstrate an understanding of some basic literary elements and techniques and their effect on a limited number of literary forms when explicitly stated; write responses

with minimal focus, limited support, little or insufficient organization and planning, vague or inappropriate word choice, and frequent errors in basic sentence structure.

Unsatisfactory: Students performing at the Unsatisfactory level on the Oklahoma Modified Alternate Assessment do not demonstrate even a Limited Knowledge level of the knowledge and skills expected of students at the End-of-Instruction in English II. Students scoring at the Unsatisfactory level need additional comprehensive remedial instruction.

Performance Level Descriptors: Grade 5 Science

Advanced: Students performing at the Advanced level on the Oklahoma Modified Alternate Assessment consistently and thoroughly demonstrate the ability to recognize and use scientific processes (e.g., observing and measuring, classifying, experimenting, interpreting, communicating, and practicing safety) as related to the physical, life, and earth/space sciences. The students regularly demonstrate a working knowledge and understanding of the science processes and consistently apply many different strategies for identifying, organizing, and comparing scientific data.

Satisfactory: Students performing at the Satisfactory level on the Oklahoma Modified Alternate Assessment demonstrate a general understanding of science processes as related to the knowledge and reasoning required for understanding the physical, life, and earth/space sciences. Students performing at this level also demonstrate the ability to apply their understanding to practical situations at a level appropriate for this grade. In addition to demonstrating a general understanding and application of the science skills at previous levels, students performing at the Satisfactory level will

- make descriptive and numerical observations of the living and nonliving world, using Système International units of measurement
- identify observable properties to classify objects, organisms, and events
- arrange the steps of a scientific problem in an appropriate order
- recognize line graphs, bar graphs, and simple circle graphs and use data to make predictions
- communicate the results of a scientific investigation
- practice safety and recognize potential hazards in all science investigations

Limited Knowledge: Students performing at the Limited Knowledge level on the Oklahoma Modified Alternate Assessment demonstrate a partial understanding of science processes as related to the knowledge and reasoning required for understanding the physical, life, and earth/space sciences at a level appropriate for this grade. These students are partially able to recognize and explain experimental procedures.

Unsatisfactory: Students performing at the Unsatisfactory level on the Oklahoma Modified Alternate Assessment do not demonstrate even a Limited Knowledge level of the science processes as related to the knowledge and reasoning required for understanding the physical, life, and earth/space sciences at a level appropriate for this grade. Students scoring at the Unsatisfactory level should be given additional comprehensive science instruction.

Performance Level Descriptors: Grade 8 Science

Advanced: Students performing at the Advanced level on the Oklahoma Modified Alternate Assessment consistently and thoroughly demonstrate the ability to recognize and use scientific processes (e.g., observing and measuring, classifying, experimenting, interpreting, communicating, and practicing safety) as related to the physical, life, and earth/space sciences. The students regularly demonstrate a working knowledge and understanding of the science processes and consistently apply many different strategies for identifying, organizing, comparing, and interpreting scientific data.

Satisfactory: Students performing at the Satisfactory level on the Oklahoma Modified Alternate Assessment demonstrate a general understanding of science processes as related to the knowledge and reasoning required for understanding the physical, life, and earth/space sciences. Students performing at this level also demonstrate the ability to apply their understanding to practical situations at a level appropriate for this grade. In addition to demonstrating a general understanding and application of the science skills at previous levels, students performing at the Satisfactory level will

- make qualitative and quantitative observations of the living and nonliving world using Système International units of measurement
- classify objects, organisms, and events
- arrange the steps of a scientific problem in an appropriate order and identify simple variables
- interpret line graphs, bar graphs, and circle graphs and use data to develop reasonable explanations and predictions
- practice safety and recognize potential hazards in all science investigations

Limited Knowledge: Students performing at the Limited Knowledge level on the Oklahoma Modified Alternate Assessment demonstrate a partial understanding of science processes as related to the knowledge and reasoning required for understanding the physical, life, and earth/space sciences at a level appropriate for this grade. These students are partially able to interpret information, identify the design of simple investigations, and explain scientific processes and experimental procedures.

Unsatisfactory: Students performing at the Unsatisfactory level on the Oklahoma Modified Alternate Assessment do not demonstrate even a Limited Knowledge level of the science processes as related to the knowledge and reasoning required for understanding the physical, life, and earth/space sciences at a level appropriate for this grade. Students scoring at the Unsatisfactory level should be given additional comprehensive science instruction.

Performance Level Descriptors: Biology I, End-of-Instruction

Advanced: Students performing at the Advanced level on the Oklahoma Modified Alternate Assessment demonstrate a more thorough understanding of the knowledge, skills, and application of the science concepts expected of students at the End-of-Instruction in Biology I. Students performing at this level also consistently demonstrate their ability to recognize and use scientific processes (e.g., observing and measuring, classifying, experimenting, interpreting, communicating, and modeling) and understand Biology I content. Students regularly demonstrate a working knowledge of the science processes and biology concepts, applying different strategies for selecting, identifying, organizing, comparing, and interpreting scientific data.

Satisfactory: Students performing at the Satisfactory level on the Oklahoma Modified Alternate Assessment demonstrate a general understanding of science concepts expected at the End-of-Instruction in Biology I. Students performing at this level also demonstrate the ability to apply understandings to practical situations. Students performing at the Satisfactory level will

- identify qualitative and quantitative changes
- use observable properties to make biological classifications
- recognize the correct designs of scientific investigations, identify variables, use mathematics, identify hypotheses, and recognize hazards
- make predictions, interpret data, accept or reject hypotheses, draw conclusions, and select an appropriate graph or chart from data
- select and make appropriate predictions based on biological models
- identify cell structures and functions
- understand the cell cycle, replication, mitosis, and gene recombination
- identify evidence of common ancestry related to biological diversity and adaptations
- understand biosphere structure, organism and species interaction in an ecosystem, and how populations change and are limited
- identify the basic inputs and outputs of photosynthesis and cellular respiration

Limited Knowledge: Students performing at the Limited Knowledge level on the Oklahoma Modified Alternate Assessment demonstrate a partial understanding of the knowledge, skills, and application of the science concepts expected of students at the End-of-Instruction in Biology I. These students are partially able to interpret information, to recognize the correct design of simple investigations, and to understand scientific processes and experimental procedures in biological investigations.

Unsatisfactory: Students performing at the Unsatisfactory level on the Oklahoma Modified Alternate Assessment do not demonstrate even a Limited Knowledge level of the knowledge, skills, and application of the science concepts expected of students at the End-of-Instruction in Biology I. Students scoring at the Unsatisfactory level should be given additional comprehensive science instruction.

Performance Level Descriptors: U.S. History, End-of-Instruction

Advanced: Students performing at the Advanced level on the Oklahoma Modified Alternate Assessment demonstrate a more thorough understanding of the knowledge and skills expected of students at the End-of-Instruction in U.S. History. Students performing at this level consistently demonstrate an understanding of the chronology of historical events and the interrelationships among them, make more sophisticated interpretations of evidence, and use social studies terminology and skills such as explaining cause and effect, comparing and contrasting, and distinguishing between fact and opinion.

Satisfactory: Students performing at the Satisfactory level on the Oklahoma Modified Alternate Assessment demonstrate a general understanding of the knowledge and skills expected of students at the End-of-Instruction in U.S. History. Students performing at this level typically show a general understanding of the chronology of historical events and the interrelationships among them, make clear and logical interpretations of evidence, and use social studies skills such as explaining cause and effect, comparing and contrasting, and distinguishing between fact and opinion. Students performing at the Satisfactory level typically will

- demonstrate process skills in social studies;
- explain causes, key events, and effects of the Civil War and Reconstruction era;
- describe the impact of immigration, migration, and settlement patterns;
- identify the impact of industrialization on American society;
- describe the changing role of the United States in world affairs at the turn of the twentieth century;
- describe social, cultural, economic, and technological ideas and events in the United States in the era between World War I and World War II;
- describe the major causes, events, and effects of United States involvement in World War II;
- identify foreign and domestic policies of the United States since the end of World War II.

Limited Knowledge: Students performing at the Limited Knowledge level on the Oklahoma Modified Alternate Assessment demonstrate a partial understanding of the knowledge and skills expected of students at the End-of-Instruction in U.S. History.

Students performing at this level typically show partial understanding of the chronology of historical events and the interrelationships among them, make simple interpretations of evidence, and demonstrate limited use of social studies skills. Students performing at this level could benefit from remediation in U.S. History.

Unsatisfactory: Students performing at the Unsatisfactory level on the Oklahoma Modified Alternate Assessment do not demonstrate even a Limited Knowledge level of the knowledge and skills expected of students at the End-of-Instruction in U.S. History. Students performing at this level should be provided remediation in U.S. History.

Appendix

B

SCALE SCORE CONVERSION TABLES

READING SPRING 2009 GRADE 3 FORM D: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	148	38
1	174	21
2	189	15
3	198	13
4	205	11
5	210	10
6	215	9
7	219	9
8	223	8
9	226	8
10	229	8
11	232	8
12	234	7
13	237	7
14	240	7
15	242	7
16	244	7
17	247	7
18	250	7
19	251	7
20	254	7
21	256	7
22	258	7
23	261	7
24	263	7
25	265	7
26	268	7
27	271	7
28	273	8
29	276	8
30	279	8
31	282	8
32	286	9
33	290	9
34	295	10
35	300	11
36	307	13
37	316	15
38	331	21
39	350	38

READING SPRING 2009 GRADE 3 FORM E: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	147	38
1	172	21
2	187	15
3	197	13
4	203	11
5	209	10
6	213	9
7	217	9
8	221	8
9	224	8
10	227	8
11	230	8
12	233	7
13	236	7
14	238	7
15	241	7
16	243	7
17	245	7
18	248	7
19	250	7
20	252	7
21	255	7
22	257	7
23	259	7
24	262	7
25	264	7
26	267	7
27	269	7
28	272	8
29	275	8
30	278	8
31	281	8
32	285	9
33	289	9
34	293	10
35	299	11
36	305	13
37	315	15
38	330	21
39	350	38

READING SPRING 2009 GRADE 4 FORM D: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	148	38
1	174	21
2	189	15
3	198	13
4	205	11
5	210	10
6	215	9
7	219	9
8	222	8
9	226	8
10	229	8
11	232	8
12	234	7
13	237	7
14	239	7
15	242	7
16	244	7
17	246	7
18	250	7
19	251	7
20	253	7
21	255	7
22	258	7
23	260	7
24	262	7
25	264	7
26	267	7
27	269	7
28	272	7
29	275	8
30	277	8
31	280	8
32	284	8
33	287	9
34	291	9
35	296	10
36	301	11
37	308	13
38	317	15
39	332	21
40	350	38

READING SPRING 2009 GRADE 4 FORM E: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	148	38
1	173	21
2	188	15
3	198	13
4	204	11
5	210	10
6	214	9
7	218	9
8	222	8
9	225	8
10	228	8
11	231	8
12	234	7
13	236	7
14	239	7
15	241	7
16	244	7
17	246	7
18	248	7
19	250	7
20	253	7
21	255	7
22	257	7
23	260	7
24	262	7
25	264	7
26	267	7
27	269	7
28	272	7
29	275	8
30	278	8
31	281	8
32	284	8
33	288	9
34	292	9
35	296	10
36	302	11
37	309	13
38	318	15
39	333	21
40	350	38

READING SPRING 2009 GRADE 5 FORM D: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	148	38
1	174	21
2	189	15
3	198	13
4	204	11
5	210	10
6	214	9
7	218	9
8	222	8
9	225	8
10	228	8
11	231	8
12	234	7
13	236	7
14	239	7
15	241	7
16	243	7
17	246	7
18	248	7
19	250	7
20	252	7
21	255	7
22	257	7
23	259	7
24	262	7
25	264	7
26	266	7
27	269	7
28	272	8
29	274	8
30	277	8
31	281	8
32	284	9
33	288	9
34	293	10
35	298	11
36	305	13
37	314	15
38	329	21
39	350	38

READING SPRING 2009 GRADE 5 FORM E: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	146	38
1	172	21
2	187	15
3	196	13
4	203	11
5	209	10
6	213	9
7	217	9
8	221	8
9	224	8
10	227	8
11	230	8
12	233	7
13	236	7
14	238	7
15	240	7
16	243	7
17	245	7
18	248	7
19	250	7
20	252	7
21	254	7
22	257	7
23	259	7
24	261	7
25	264	7
26	266	7
27	269	7
28	272	8
29	274	8
30	277	8
31	281	8
32	284	9
33	288	9
34	293	10
35	298	11
36	305	13
37	314	15
38	329	21
39	350	38

READING SPRING 2009 GRADE 6 FORM D: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	137	40
1	164	22
2	180	16
3	189	13
4	196	12
5	202	11
6	207	10
7	211	9
8	215	9
9	218	8
10	221	8
11	224	8
12	227	8
13	230	8
14	232	8
15	235	7
16	238	7
17	240	7
18	242	7
19	245	7
20	247	7
21	250	7
22	252	7
23	254	7
24	257	7
25	260	8
26	262	8
27	265	8
28	268	8
29	271	8
30	274	9
31	278	9
32	281	9
33	286	10
34	291	11
35	296	12
36	303	13
37	313	16
38	329	22
39	350	40

READING SPRING 2009 GRADE 6 FORM E: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	140	40
1	167	22
2	183	16
3	192	13
4	199	12
5	205	11
6	210	10
7	214	9
8	218	9
9	221	9
10	225	8
11	228	8
12	231	8
13	233	8
14	236	8
15	239	7
16	241	7
17	244	7
18	246	7
19	250	7
20	251	7
21	254	7
22	256	7
23	259	7
24	261	8
25	264	8
26	267	8
27	270	8
28	273	8
29	276	9
30	279	9
31	283	9
32	287	10
33	292	11
34	298	12
35	305	13
36	314	16
37	330	22
38	350	40

READING SPRING 2009 GRADE 7 FORM D: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	132	40
1	159	22
2	176	16
3	186	14
4	193	12
5	199	11
6	204	10
7	209	10
8	213	9
9	217	9
10	220	9
11	224	8
12	227	8
13	230	8
14	232	8
15	235	8
16	238	8
17	240	8
18	243	7
19	246	7
20	250	7
21	251	7
22	253	7
23	256	7
24	258	8
25	261	8
26	264	8
27	267	8
28	269	8
29	273	8
30	276	9
31	279	9
32	283	9
33	287	10
34	292	11
35	298	12
36	305	13
37	315	16
38	331	22
39	350	40

READING SPRING 2009 GRADE 7 FORM E: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	130	40
1	157	22
2	173	16
3	183	14
4	191	12
5	197	11
6	202	10
7	206	10
8	210	9
9	214	9
10	217	8
11	220	8
12	223	8
13	226	8
14	229	8
15	231	8
16	234	7
17	237	7
18	239	7
19	242	7
20	244	7
21	247	7
22	250	7
23	251	7
24	254	7
25	257	8
26	259	8
27	262	8
28	265	8
29	268	8
30	271	8
31	274	9
32	277	9
33	281	9
34	285	10
35	290	11
36	296	12
37	303	13
38	313	16
39	329	22
40	350	40

READING SPRING 2009 GRADE 8 FORM D: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	138	39
1	164	22
2	179	16
3	189	13
4	196	11
5	201	10
6	206	10
7	210	9
8	214	9
9	217	8
10	221	8
11	224	8
12	226	8
13	229	8
14	232	7
15	234	7
16	237	7
17	239	7
18	242	7
19	244	7
20	246	7
21	250	7
22	251	7
23	254	7
24	256	7
25	258	7
26	261	7
27	264	8
28	266	8
29	269	8
30	272	8
31	275	8
32	279	9
33	282	9
34	287	10
35	291	10
36	297	11
37	304	13
38	313	16
39	329	22
40	350	39

READING SPRING 2009 GRADE 8 FORM E: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	133	39
1	160	22
2	175	16
3	185	13
4	192	12
5	198	11
6	203	10
7	207	9
8	211	9
9	214	9
10	218	8
11	221	8
12	224	8
13	227	8
14	230	8
15	232	8
16	235	7
17	238	7
18	240	7
19	243	7
20	245	7
21	248	7
22	250	7
23	253	7
24	256	8
25	258	8
26	261	8
27	264	8
28	267	8
29	270	8
30	273	9
31	277	9
32	281	9
33	285	10
34	290	11
35	296	12
36	303	13
37	312	16
38	328	22
39	350	39

ENGLISH II, SPRING 2009 EOI FORM D: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	151	36
1	175	20
2	189	14
3	198	12
4	204	10
5	209	9
6	213	9
7	216	8
8	219	8
9	222	7
10	225	7
11	227	7
12	230	7
13	232	7
14	234	7
15	237	7
16	239	7
17	241	6
18	243	6
19	245	6
20	247	6
21	250	6
22	251	6
23	254	6
24	256	6
25	258	7
26	260	7
27	262	7
28	264	7
29	267	7
30	269	7
31	272	7
32	274	7
33	277	8
34	280	8
35	283	8
36	287	8
37	291	9
38	295	10
39	300	11
40	307	12
41	315	14
42	330	20

43	350	36

ENGLISH II, SPRING 2009 EOI FORM E: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	157	36
1	181	20
2	195	14
3	204	12
4	210	10
5	215	9
6	219	9
7	222	8
8	226	8
9	228	7
10	231	7
11	234	7
12	236	7
13	238	7
14	240	7
15	243	6
16	245	6
17	247	6
18	250	6
19	251	6
20	253	6
21	255	6
22	257	6
23	259	6
24	261	6
25	263	6
26	265	7
27	268	7
28	270	7
29	272	7
30	275	7
31	277	7
32	280	7
33	283	8
34	286	8
35	289	8
36	293	9
37	297	10
38	302	11
39	309	12
40	318	14
41	332	20
42	350	36

MATHEMATICS SPRING 2009 GRADE 3 FORM D: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	147	37
1	171	20
2	186	15
3	195	12
4	201	11
5	207	10
6	211	9
7	215	9
8	218	8
9	222	8
10	225	8
11	227	7
12	230	7
13	233	7
14	235	7
15	237	7
16	240	7
17	242	7
18	244	7
19	246	7
20	250	7
21	251	7
22	253	7
23	255	7
24	257	7
25	260	7
26	262	7
27	264	7
28	267	7
29	270	7
30	272	8
31	275	8
32	278	8
33	282	9
34	286	9
35	290	10
36	295	11
37	302	12
38	311	15
39	325	20
40	350	37

MATHEMATICS SPRING 2009 GRADE 3 FORM E: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	139	37
1	164	20
2	178	15
3	187	12
4	194	11
5	199	10
6	204	9
7	208	9
8	211	8
9	215	8
10	218	8
11	221	8
12	224	7
13	226	7
14	229	7
15	231	7
16	234	7
17	236	7
18	239	7
19	241	7
20	243	7
21	246	7
22	250	7
23	251	7
24	253	7
25	255	7
26	258	7
27	261	7
28	263	7
29	266	8
30	269	8
31	272	8
32	276	8
33	280	9
34	284	9
35	288	10
36	294	11
37	301	12
38	310	15
39	325	20
40	350	37

MATHEMATICS SPRING 2009 GRADE 4 FORM D: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	149	37
1	174	21
2	188	15
3	197	12
4	204	11
5	209	10
6	214	9
7	218	9
8	221	8
9	225	8
10	228	8
11	230	7
12	233	7
13	236	7
14	238	7
15	241	7
16	243	7
17	245	7
18	248	7
19	250	7
20	252	7
21	254	7
22	257	7
23	259	7
24	261	7
25	264	7
26	266	7
27	268	7
28	271	7
29	274	7
30	277	8
31	280	8
32	283	8
33	286	9
34	290	9
35	295	10
36	300	11
37	307	12
38	316	15
39	331	20
40	350	37

MATHEMATICS SPRING 2009 GRADE 4 FORM E: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	144	37
1	169	20
2	183	15
3	192	12
4	199	11
5	204	10
6	209	9
7	213	9
8	216	8
9	219	8
10	222	8
11	225	7
12	228	7
13	231	7
14	233	7
15	235	7
16	238	7
17	240	7
18	242	7
19	245	7
20	247	7
21	250	7
22	252	7
23	254	7
24	256	7
25	259	7
26	261	7
27	264	7
28	267	8
29	270	8
30	273	8
31	276	8
32	280	9
33	284	9
34	288	10
35	294	11
36	300	12
37	309	15
38	324	21
39	349	37

MATHEMATICS SPRING 2009 GRADE 5 FORM D: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	145	37
1	170	21
2	185	15
3	195	13
4	202	11
5	207	10
6	212	10
7	216	9
8	220	9
9	224	8
10	227	8
11	230	8
12	233	8
13	236	7
14	239	7
15	241	7
16	244	7
17	246	7
18	250	7
19	251	7
20	254	7
21	256	7
22	258	7
23	261	7
24	263	7
25	266	7
26	269	7
27	271	7
28	274	8
29	277	8
30	280	8
31	283	8
32	287	9
33	291	9
34	296	10
35	301	11
36	308	12
37	317	15
38	332	21
39	350	37

MATHEMATICS SPRING 2009 GRADE 5 FORM E: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	146	37
1	171	21
2	186	15
3	195	13
4	202	11
5	208	10
6	212	9
7	217	9
8	220	9
9	224	8
10	227	8
11	230	8
12	233	8
13	236	7
14	239	7
15	241	7
16	244	7
17	246	7
18	250	7
19	251	7
20	254	7
21	256	7
22	259	7
23	261	7
24	264	7
25	267	7
26	269	7
27	272	8
28	275	8
29	278	8
30	281	8
31	285	9
32	289	9
33	293	9
34	297	10
35	303	11
36	310	13
37	319	15
38	334	21
39	350	37

MATHEMATICS SPRING 2009 GRADE 6 FORM D: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	145	36
1	169	20
2	184	15
3	193	12
4	200	11
5	205	10
6	210	9
7	214	9
8	218	8
9	221	8
10	224	8
11	227	8
12	230	7
13	233	7
14	236	7
15	238	7
16	241	7
17	243	7
18	245	7
19	248	7
20	250	7
21	252	7
22	255	7
23	257	7
24	259	7
25	262	7
26	264	7
27	267	7
28	269	7
29	272	7
30	275	7
31	278	8
32	281	8
33	284	8
34	288	9
35	292	10
36	297	10
37	304	12
38	312	14
39	327	20
40	350	36

MATHEMATICS SPRING 2009 GRADE 6 FORM E: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	153	36
1	177	20
2	192	14
3	201	12
4	207	11
5	213	10
6	217	9
7	221	9
8	225	8
9	228	8
10	231	8
11	234	7
12	237	7
13	240	7
14	242	7
15	245	7
16	247	7
17	250	7
18	252	7
19	254	7
20	256	7
21	259	7
22	261	7
23	263	7
24	266	7
25	268	7
26	271	7
27	273	7
28	276	7
29	279	8
30	282	8
31	285	8
32	289	8
33	293	9
34	297	10
35	302	11
36	309	12
37	318	14
38	332	20
39	350	36

MATHEMATICS SPRING 2009 GRADE 7 FORM D: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	141	38
1	167	21
2	182	15
3	191	13
4	198	11
5	204	10
6	209	10
7	213	9
8	217	9
9	221	8
10	224	8
11	227	8
12	230	8
13	233	8
14	236	7
15	238	7
16	241	7
17	243	7
18	246	7
19	250	7
20	251	7
21	253	7
22	255	7
23	258	7
24	260	7
25	263	7
26	266	7
27	268	8
28	271	8
29	274	8
30	277	8
31	281	9
32	284	9
33	289	9
34	293	10
35	299	11
36	305	13
37	315	15
38	330	21
39	350	38

MATHEMATICS SPRING 2009 GRADE 7 FORM E: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	145	38
1	170	21
2	186	15
3	195	13
4	202	11
5	208	10
6	213	10
7	217	9
8	221	9
9	225	8
10	228	8
11	231	8
12	234	8
13	237	8
14	240	7
15	243	7
16	245	7
17	250	7
18	251	7
19	253	7
20	256	7
21	258	7
22	261	7
23	263	7
24	266	7
25	269	8
26	272	8
27	275	8
28	278	8
29	281	8
30	284	9
31	288	9
32	293	10
33	298	10
34	303	11
35	310	13
36	320	15
37	336	21
38	350	38

MATHEMATICS SPRING 2009 GRADE 8 FORM D: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	147	37
1	172	21
2	186	15
3	195	12
4	202	11
5	208	10
6	212	9
7	216	9
8	220	8
9	223	8
10	226	8
11	229	8
12	232	7
13	234	7
14	237	7
15	239	7
16	242	7
17	244	7
18	247	7
19	250	7
20	251	7
21	254	7
22	256	7
23	258	7
24	261	7
25	263	7
26	265	7
27	268	7
28	271	7
29	273	8
30	276	8
31	279	8
32	283	8
33	286	9
34	290	9
35	295	10
36	300	11
37	307	12
38	316	15
39	331	21
40	350	37

MATHEMATICS SPRING 2009 GRADE 8 FORM E: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	144	37
1	169	21
2	184	15
3	193	12
4	200	11
5	205	10
6	210	9
7	214	9
8	218	8
9	221	8
10	224	8
11	227	8
12	230	7
13	233	7
14	235	7
15	238	7
16	240	7
17	243	7
18	245	7
19	247	7
20	250	7
21	252	7
22	254	7
23	257	7
24	259	7
25	262	7
26	264	7
27	267	7
28	269	7
29	272	8
30	275	8
31	278	8
32	282	8
33	285	9
34	290	9
35	294	10
36	300	11
37	306	12
38	315	15
39	330	21
40	350	37

ALGEBRA, SPRING 2009 EOI FORM D: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	160	35
1	184	19
2	198	14
3	206	12
4	212	10
5	217	9
6	222	9
7	225	8
8	229	8
9	232	8
10	235	7
11	237	7
12	240	7
13	242	7
14	245	7
15	247	7
16	250	7
17	251	6
18	254	6
19	256	6
20	258	6
21	260	6
22	262	6
23	265	7
24	267	7
25	269	7
26	272	7
27	274	7
28	277	7
29	280	7
30	283	8
31	286	8
32	290	9
33	294	9
34	299	10
35	305	12
36	313	14
37	327	19
38	350	35

ALGEBRA, SPRING 2009 EOI FORM E: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	161	35
1	184	20
2	198	14
3	207	12
4	213	10
5	219	9
6	223	9
7	227	8
8	230	8
9	233	8
10	236	7
11	239	7
12	242	7
13	244	7
14	247	7
15	250	7
16	252	7
17	254	7
18	256	7
19	258	7
20	261	7
21	263	7
22	265	7
23	268	7
24	270	7
25	273	7
26	275	7
27	278	7
28	281	7
29	284	8
30	287	8
31	290	8
32	294	9
33	299	10
34	304	10
35	310	12
36	319	14
37	333	20
38	350	35

SCIENCE SPRING 2009 GRADE 5 FORM D: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	137	39
1	163	21
2	179	16
3	189	13
4	196	11
5	201	10
6	206	10
7	211	9
8	215	9
9	218	8
10	221	8
11	225	8
12	227	8
13	230	8
14	233	7
15	236	7
16	238	7
17	241	7
18	243	7
19	246	7
20	250	7
21	251	7
22	253	7
23	256	7
24	258	7
25	261	7
26	263	7
27	266	8
28	269	8
29	272	8
30	275	8
31	278	8
32	281	9
33	285	9
34	289	10
35	294	10
36	299	11
37	306	13
38	316	15
39	331	21
40	350	38

SCIENCE SPRING 2009 GRADE 5 FORM E: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	141	39
1	168	22
2	183	16
3	193	13
4	200	12
5	206	11
6	211	10
7	215	9
8	219	9
9	223	8
10	226	8
11	229	8
12	232	8
13	235	8
14	238	7
15	241	7
16	243	7
17	246	7
18	250	7
19	251	7
20	253	7
21	256	7
22	258	7
23	260	7
24	263	7
25	265	7
26	268	7
27	271	8
28	274	8
29	276	8
30	279	8
31	283	8
32	286	9
33	290	9
34	294	10
35	299	10
36	304	11
37	311	13
38	321	15
39	336	21
40	350	38

SCIENCE SPRING 2009 GRADE 8 FORM D: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	160	37
1	185	20
2	199	15
3	208	12
4	215	11
5	220	10
6	224	9
7	228	9
8	232	8
9	235	8
10	238	8
11	241	7
12	243	7
13	246	7
14	250	7
15	251	7
16	253	7
17	255	7
18	257	7
19	260	7
20	262	7
21	264	7
22	266	7
23	269	7
24	271	7
25	273	7
26	276	7
27	278	7
28	281	7
29	284	8
30	287	8
31	290	8
32	294	9
33	298	9
34	302	10
35	308	11
36	314	12
37	323	15
38	338	21
39	350	37

SCIENCE SPRING 2009 GRADE 8 FORM E: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	158	37
1	183	21
2	198	15
3	207	12
4	213	11
5	219	10
6	223	9
7	227	9
8	231	8
9	234	8
10	237	8
11	240	7
12	243	7
13	245	7
14	248	7
15	250	7
16	253	7
17	255	7
18	257	7
19	260	7
20	262	7
21	264	7
22	267	7
23	269	7
24	271	7
25	274	7
26	277	7
27	279	8
28	282	8
29	285	8
30	289	8
31	292	9
32	296	9
33	301	10
34	306	11
35	313	12
36	322	15
37	337	21
38	350	37

BIOLOGY SPRING 2009 EOI FORM D: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	142	36
1	166	20
2	180	15
3	189	12
4	196	11
5	201	10
6	206	9
7	209	9
8	213	8
9	216	8
10	219	7
11	222	7
12	224	7
13	227	7
14	229	7
15	231	7
16	234	7
17	236	6
18	238	6
19	240	6
20	242	6
21	244	6
22	246	6
23	248	6
24	250	6
25	252	6
26	254	6
27	256	6
28	258	6
29	260	6
30	262	7
31	264	7
32	266	7
33	269	7
34	271	7
35	274	7
36	277	8
37	280	8
38	283	8
39	287	9
40	291	10
41	296	11
42	303	12
43	311	14
44	326	20
45	350	36

BIOLOGY SPRING 2009 EQ FORM E: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	141	36
1	166	20
2	180	15
3	189	12
4	196	11
5	201	10
6	205	9
7	209	8
8	213	8
9	216	8
10	219	7
11	221	7
12	224	7
13	226	7
14	229	7
15	231	7
16	233	6
17	235	6
18	237	6
19	239	6
20	241	6
21	243	6
22	245	6
23	247	6
24	250	6
25	251	6
26	253	6
27	255	6
28	257	6
29	259	6
30	261	6
31	263	7
32	265	7
33	268	7
34	270	7
35	272	7
36	275	7
37	278	8
38	281	8
39	284	8
40	288	9
41	292	10
42	298	11
43	304	12
44	313	14

U. S. HISTORY SPRING 2009 EOI FORM D: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	149	37
1	174	20
2	188	15
3	197	12
4	204	11
5	209	10
6	213	9
7	217	9
8	221	8
9	224	8
10	227	8
11	230	7
12	232	7
13	235	7
14	237	7
15	240	7
16	242	7
17	244	7
18	247	7
19	249	7
20	250	7
21	253	7
22	255	7
23	258	7
24	260	7
25	262	7
26	265	7
27	267	7
28	270	7
29	273	8
30	276	8
31	279	8
32	282	9
33	286	9
34	290	10
35	296	11
36	302	12
37	311	15
38	325	20
39	350	37

U. S. HISTORY SPRING 2009 EOI FORM E: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	151	37
1	175	20
2	190	15
3	199	12
4	205	11
5	210	10
6	215	9
7	218	8
8	222	8
9	225	8
10	228	7
11	231	7
12	233	7
13	236	7
14	237	7
15	240	7
16	243	7
17	245	7
18	247	7
19	249	7
20	250	7
21	253	7
22	256	7
23	258	7
24	260	7
25	262	7
26	265	7
27	267	7
28	270	7
29	272	7
30	275	8
31	278	8
32	282	8
33	285	9
34	290	10
35	295	11
36	301	12
37	310	15
38	324	20
39	349	37

ENGLISH II WINTER 2008/09 EOI: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	148	36
1	172	20
2	186	14
3	194	12
4	200	10
5	205	10
6	210	9
7	213	8
8	217	8
9	220	8
10	223	8
11	226	7
12	229	7
13	231	7
14	234	7
15	236	7
16	238	7
17	241	7
18	243	7
19	245	7
20	247	7
21	250	7
22	251	7
23	254	7
24	256	7
25	258	7
26	260	7
27	262	7
28	265	7
29	267	7
30	270	7
31	272	7
32	275	7
33	278	8
34	281	8
35	285	8
36	288	9
37	293	10
38	298	11
39	304	12
40	313	14
41	327	20
42	350	36

ALGEBRA WINTER 2008/09 EOI: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	157	35
1	181	20
2	195	14
3	204	12
4	210	10
5	216	10
6	220	9
7	224	8
8	227	8
9	231	8
10	234	7
11	236	7
12	239	7
13	242	7
14	244	7
15	247	7
16	250	7
17	251	7
18	254	7
19	256	7
20	258	7
21	261	7
22	263	7
23	265	7
24	268	7
25	270	7
26	273	7
27	275	7
28	278	7
29	281	8
30	284	8
31	288	8
32	291	9
33	296	9
34	301	10
35	307	12
36	316	14
37	330	19
38	350	35

BIOLOGY WINTER 2008/09 EOI: RAW SCORE TO SCALE SCORE CONVERSIONS		
Raw Score	Scale Score	CSEM
0	143	36
1	167	20
2	182	14
3	191	12
4	197	11
5	202	10
6	206	9
7	210	8
8	214	8
9	217	8
10	220	7
11	222	7
12	225	7
13	227	7
14	230	7
15	232	7
16	234	6
17	236	6
18	238	6
19	240	6
20	242	6
21	244	6
22	246	6
23	248	6
24	250	6
25	252	6
26	254	6
27	256	6
28	258	6
29	260	6
30	262	6
31	264	7
32	266	7
33	269	7
34	271	7
35	274	7
36	276	8
37	279	8
38	283	8
39	287	9
40	291	10
41	296	10
42	302	12

43	311	14
44	325	20
45	349	36

Appendix C

PRINCIPAL COMPONENT ANALYSES AND WINSTEPS LOCAL INDEPENDENCE TABLES

Principal Components Analysis for Reading

Grade	Form	Total Units (Items)	First Dimension % of Variance	Second Dimension % of Variance
3	D	39	30.6	3.8
3	E	39	37.1	3.4
4	D	40	28.8	3.7
4	E	40	35.0	3.5
5	D	39	24.9	3.7
5	E	39	30.9	3.7
6	D	39	25.2	3.9
6	E	38	24.4	3.8
7	D	39	32.4	3.6
7	E	40	35.8	3.0
8	D	40	28.7	3.3
8	E	39	33.9	3.4
English II, EOI	D	41	27.1	3.5
English II, EOI	E	40	22.0	3.4

Principal Components Analysis for Mathematics

Grade	Form	Total Units (Items)	First Dimension % of Variance	Second Dimension % of Variance
3	D	40	39.1	2.6
3	E	40	48.6	2.3
4	D	40	33.1	3.2
4	E	39	37.8	3.0
5	D	39	37.5	2.9
5	E	39	40.0	2.9
6	D	40	35.1	3.5
6	E	39	32.0	3.2
7	D	39	33.6	3.5
7	E	38	38.6	3.3
8	D	40	28.6	3.4
8	E	40	31.5	3.2
Algebra I, EOI	D	38	24.9	3.7
Algebra I, EOI	E	38	35.9	3.2

Principal Components Analysis for Science

Grade	Form	Total Units (Items)	First Dimension % of Variance	Second Dimension % of Variance
5	D	40	38.7	2.7
5	E	40	40.4	2.7
8	D	39	26.8	3.5
8	E	38	27.9	3.4
Biology I, EOI	D	39	33.4	3.0
Biology I, EOI	E	40	36.7	2.7

Principal Components Analysis for U. S. History

Grade	Form	Total Units (Items)	First Dimension % of Variance	Second Dimension % of Variance
History, EOI	D	39	21.7	3.7
History, EOI	E	39	17.0	3.6

Principal Components Analysis for Winter 2008/09 EOI

Grade	Total Units (Items)	First Dimension % of Variance	Second Dimension % of Variance
English II, EOI	40	26.5	3.9
Algebra I, EOI	38	34.5	3.9
Biology I, EOI	45	28.7	3.6
History, EOI	39	23.7	3.8

Spring 2009 Reading Grade 3, Form D

```
TABLE 23.99 2009  OK MOD -- REA 3 1                    REA31.OUT Aug 17 15:18 2009
INPUT: 1797 PERSONS  40 ITEMS  MEASURED: 1797 PERSONS  39 ITEMS  78 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .21 |    11 I0011 |    12 I0012 |
|   .17 |     7 I0007 |    19 I0019 |
|   .16 |    24 I0024 |    25 I0025 |
|   .15 |    20 I0020 |    21 I0021 |
|   .14 |    16 I0016 |    17 I0017 |
|-------+-------------+-------------|
|  -.15 |    25 I0025 |    37 I0037 |
|  -.15 |    14 I0014 |    24 I0024 |
|  -.13 |    19 I0019 |    22 I0022 |
|  -.13 |    15 I0015 |    24 I0024 |
|  -.13 |     7 I0007 |    22 I0022 |
+-----------------------------------+
```

Spring 2009 Reading Grade 3, Form E

```
 TABLE 23.99 2009  OK MOD -- REA 3 2                    REA32.OUT Aug 17 15:18 2009
INPUT: 1873 PERSONS  40 ITEMS  MEASURED: 1873 PERSONS  39 ITEMS  78 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .19 |     5 I0005 |     7 I0007 |
|   .18 |     1 I0001 |     5 I0005 |
|   .17 |    11 I0011 |    12 I0012 |
|   .16 |    24 I0024 |    25 I0025 |
|-------+-------------+-------------|
|  -.18 |     7 I0007 |    24 I0024 |
|  -.16 |    31 I0031 |    32 I0032 |
|  -.15 |    16 I0016 |    17 I0017 |
|  -.13 |     5 I0005 |    24 I0024 |
|  -.13 |     2 I0002 |    29 I0029 |
|  -.12 |    13 I0013 |    27 I0027 |
+-----------------------------------+
```

Spring 2009 Reading Grade 4, Form D

```
 TABLE 23.99 2009  OK MOD -- REA 4 1                    REA41.OUT Aug 17 15:18 2009
INPUT: 1798 PERSONS  40 ITEMS  MEASURED: 1798 PERSONS  40 ITEMS  80 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .15 |     7 I0007 |     8 I0008 |
|   .15 |     5 I0005 |     6 I0006 |
|   .13 |     8 I0008 |     9 I0009 |
|   .13 |     9 I0009 |    11 I0011 |
|-------+-------------+-------------|
|  -.15 |     4 I0004 |    12 I0012 |
|  -.13 |    11 I0011 |    40 I0040 |
|  -.13 |    16 I0016 |    26 I0026 |
|  -.13 |     9 I0009 |    35 I0035 |
|  -.12 |    11 I0011 |    33 I0033 |
|  -.12 |    19 I0019 |    35 I0035 |
+-----------------------------------+
```

Spring 2009 Reading Grade 4, Form E

```
 TABLE 23.99 2009  OK MOD -- REA 4 2                    REA42.OUT Aug 17 15:18 2009
INPUT: 1985 PERSONS  40 ITEMS  MEASURED: 1985 PERSONS  40 ITEMS  80 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .18 |     5 I0005 |     6 I0006 |
|   .15 |    31 I0031 |    32 I0032 |
|   .14 |    13 I0013 |    17 I0017 |
|   .12 |    13 I0013 |    19 I0019 |
|-------+-------------+-------------|
|  -.17 |    13 I0013 |    32 I0032 |
|  -.17 |    13 I0013 |    31 I0031 |
|  -.13 |    30 I0030 |    32 I0032 |
|  -.12 |    10 I0010 |    23 I0023 |
|  -.12 |    19 I0019 |    32 I0032 |
|  -.12 |    12 I0012 |    31 I0031 |
```

Spring 2009 Reading Grade 5, Form D

```
TABLE 23.99 2009  OK MOD -- REA 5 1                    REA51.OUT Aug 17 15:19 2009
INPUT: 1943 PERSONS  40 ITEMS  MEASURED: 1943 PERSONS  39 ITEMS  78 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|  -.13 |     3 I0003 |     4 I0004 |
|  -.12 |    23 I0023 |    24 I0024 |
|  -.12 |    15 I0015 |    16 I0016 |
|  -.11 |     9 I0009 |    33 I0033 |
|  -.11 |     9 I0009 |    30 I0030 |
|  -.11 |    10 I0010 |    14 I0014 |
|  -.11 |     7 I0007 |    37 I0037 |
|  -.11 |    21 I0021 |    36 I0036 |
|  -.11 |    14 I0014 |    34 I0034 |
|  -.11 |    10 I0010 |    36 I0036 |
+-----------------------------------+
```

Spring 2009 Reading Grade 5, Form E

```
TABLE 23.99 2009  OK MOD -- REA 5 2                    REA52.OUT Aug 17 15:19 2009
INPUT: 1869 PERSONS  40 ITEMS  MEASURED: 1869 PERSONS  39 ITEMS  78 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .12 |     9 I0009 |    12 I0012 |
|   .12 |    32 I0032 |    33 I0033 |
|   .12 |    12 I0012 |    18 I0018 |
|-------+-------------+-------------|
|  -.16 |     7 I0007 |    12 I0012 |
|  -.14 |    12 I0012 |    23 I0023 |
|  -.13 |    12 I0012 |    16 I0016 |
|  -.12 |    16 I0016 |    31 I0031 |
|  -.12 |     3 I0003 |     4 I0004 |
|  -.12 |     6 I0006 |    25 I0025 |
|  -.12 |    14 I0014 |    34 I0034 |
+-----------------------------------+
```

Spring 2009 Reading Grade 6, Form D

```
TABLE 23.99 2009  OK MOD -- REA 6 1                    REA61.OUT Aug 17 15:19 2009
INPUT: 1846 PERSONS  40 ITEMS  MEASURED: 1846 PERSONS  39 ITEMS  78 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .21 |    21 I0021 |    22 I0022 |
|-------+-------------+-------------|
|  -.17 |    22 I0022 |    30 I0030 |
|  -.17 |    14 I0014 |    22 I0022 |
|  -.16 |    14 I0014 |    21 I0021 |
|  -.14 |    21 I0021 |    30 I0030 |
|  -.14 |    22 I0022 |    37 I0037 |
|  -.12 |    14 I0014 |    36 I0036 |
|  -.11 |    10 I0010 |    11 I0011 |
|  -.11 |    15 I0015 |    31 I0031 |
|  -.11 |     9 I0009 |    20 I0020 |
+-----------------------------------+
```

Spring 2009 Reading Grade 6, Form E

```
TABLE 23.99 2009  OK MOD -- REA 6 2                    REA62.OUT Aug 17 15:19 2009
INPUT: 1784 PERSONS  40 ITEMS  MEASURED: 1784 PERSONS  38 ITEMS  76 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .15 |    26 I0026 |    27 I0027 |
|   .13 |    22 I0022 |    39 I0039 |
|   .12 |    11 I0011 |    12 I0012 |
|-------+-------------+-------------|
|  -.14 |     7 I0007 |    26 I0026 |
|  -.13 |    22 I0022 |    24 I0024 |
|  -.12 |     3 I0003 |    16 I0016 |
|  -.12 |    22 I0022 |    31 I0031 |
|  -.12 |    24 I0024 |    40 I0040 |
|  -.11 |    26 I0026 |    37 I0037 |
|  -.11 |    20 I0020 |    33 I0033 |
+-----------------------------------+
```

Spring 2009 Reading Grade 7, Form D

```
TABLE 23.99 2009  OK MOD -- REA 7 1                    REA71.OUT Aug 17 15:20 2009
INPUT: 1844 PERSONS  40 ITEMS  MEASURED: 1844 PERSONS  39 ITEMS  78 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .13 |    16 I0016 |    17 I0017 |
|   .12 |    12 I0012 |    16 I0016 |
|   .12 |    12 I0012 |    13 I0013 |
|-------+-------------+-------------|
|  -.17 |    16 I0016 |    29 I0029 |
|  -.13 |    10 I0010 |    16 I0016 |
|  -.13 |    12 I0012 |    29 I0029 |
|  -.13 |    29 I0029 |    32 I0032 |
|  -.12 |    17 I0017 |    19 I0019 |
|  -.12 |     8 I0008 |    16 I0016 |
|  -.12 |     9 I0009 |    12 I0012 |
+-----------------------------------+
```

Spring 2009 Reading Grade 7, Form E

```
TABLE 23.99 2009  OK MOD -- REA 7 2                    REA72.OUT Aug 17 15:20 2009
INPUT: 1733 PERSONS  40 ITEMS  MEASURED: 1733 PERSONS  40 ITEMS  80 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .26 |    30 I0030 |    31 I0031 |
|   .16 |    16 I0016 |    17 I0017 |
|   .13 |     4 I0004 |     5 I0005 |
|   .11 |    12 I0012 |    29 I0029 |
|-------+-------------+-------------|
|  -.14 |     3 I0003 |    29 I0029 |
|  -.12 |    23 I0023 |    25 I0025 |
|  -.12 |    13 I0013 |    15 I0015 |
|  -.11 |     3 I0003 |    33 I0033 |
|  -.11 |    10 I0010 |    34 I0034 |
|  -.11 |    17 I0017 |    26 I0026 |
+-----------------------------------+
```

Spring 2009 Reading Grade 8, Form D

```
TABLE 23.99 2009  OK MOD -- REA 8 1                    REA81.OUT Aug 17 15:20 2009
INPUT: 1886 PERSONS  40 ITEMS  MEASURED: 1886 PERSONS  40 ITEMS  80 CATS    3.64.2
--------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .15 |    15 I0015 |    17 I0017 |
|   .15 |    17 I0017 |    20 I0020 |
|   .11 |    34 I0034 |    39 I0039 |
|-------+-------------+-------------|
|  -.12 |    25 I0025 |    35 I0035 |
|  -.12 |    17 I0017 |    33 I0033 |
|  -.12 |    21 I0021 |    30 I0030 |
|  -.11 |    17 I0017 |    31 I0031 |
|  -.11 |    15 I0015 |    24 I0024 |
|  -.10 |    32 I0032 |    37 I0037 |
|  -.10 |    13 I0013 |    20 I0020 |
+-----------------------------------+
```

Spring 2009 Reading Grade 8, Form E

```
TABLE 23.99 2009  OK MOD -- REA 8 2                    REA82.OUT Aug 17 15:20 2009
INPUT: 1770 PERSONS  40 ITEMS  MEASURED: 1770 PERSONS  39 ITEMS  78 CATS    3.64.2
--------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .13 |    15 I0015 |    17 I0017 |
|   .11 |    15 I0015 |    18 I0018 |
|-------+-------------+-------------|
|  -.13 |    18 I0018 |    20 I0020 |
|  -.13 |    18 I0018 |    22 I0022 |
|  -.12 |    18 I0018 |    39 I0039 |
|  -.12 |    18 I0018 |    35 I0035 |
|  -.12 |    18 I0018 |    29 I0029 |
|  -.11 |    13 I0013 |    18 I0018 |
|  -.11 |    17 I0017 |    22 I0022 |
|  -.11 |    11 I0011 |    19 I0019 |
+-----------------------------------+
```

Spring 2009 Mathematics Grade 3, Form D

```
TABLE 23.99 2009  OK MOD -- MAT 3 1                    MAT31.OUT Aug 17 15:18 2009
INPUT: 1548 PERSONS  40 ITEMS  MEASURED: 1548 PERSONS  40 ITEMS  80 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .20 |     1 I0001 |     5 I0005 |
|   .19 |     4 I0004 |    21 I0021 |
|   .19 |     5 I0005 |    20 I0020 |
|   .17 |     1 I0001 |    20 I0020 |
|   .15 |    12 I0012 |    37 I0037 |
|-------+-------------+-------------|
|  -.12 |     3 I0003 |    23 I0023 |
|  -.12 |    20 I0020 |    30 I0030 |
|  -.12 |    21 I0021 |    23 I0023 |
|  -.11 |    18 I0018 |    19 I0019 |
|  -.11 |    15 I0015 |    21 I0021 |
+-----------------------------------+
```

Spring 2009 Mathematics Grade 3, Form E

```
TABLE 23.95 2009  OK MOD -- MAT 3 2                    MAT32.OUT Aug 17 15:18 2009
INPUT: 1629 PERSONS  40 ITEMS  MEASURED: 1629 PERSONS  40 ITEMS  80 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .35 |    15 I0015 |    18 I0018 |
|   .20 |     1 I0001 |     5 I0005 |
|   .17 |     4 I0004 |    21 I0021 |
|   .10 |    25 I0025 |    31 I0031 |
|-------+-------------+-------------|
|  -.12 |    15 I0015 |    35 I0035 |
|  -.11 |    15 I0015 |    28 I0028 |
|  -.10 |    11 I0011 |    39 I0039 |
|  -.10 |    18 I0018 |    21 I0021 |
|  -.10 |    17 I0017 |    40 I0040 |
|  -.10 |    15 I0015 |    21 I0021 |
+-----------------------------------+
```

Spring 2009 Mathematics Grade 4, Form D

```
TABLE 23.99 2009  OK MOD -- MAT 4 1                    MAT41.OUT Aug 17 15:18 2009
INPUT: 1556 PERSONS  40 ITEMS  MEASURED: 1556 PERSONS  40 ITEMS  80 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .31 |    19 I0019 |    40 I0040 |
|   .18 |    12 I0012 |    36 I0036 |
|   .13 |    19 I0019 |    34 I0034 |
|   .12 |    34 I0034 |    40 I0040 |
|   .12 |     8 I0008 |    40 I0040 |
|-------+-------------+-------------|
|  -.13 |    14 I0014 |    35 I0035 |
|  -.13 |     3 I0003 |    17 I0017 |
|  -.13 |    10 I0010 |    19 I0019 |
|  -.11 |    16 I0016 |    36 I0036 |
|  -.11 |    30 I0030 |    39 I0039 |
+-----------------------------------+
```

Spring 2009 Mathematics Grade 4, Form E

```
TABLE 23.99 2009  OK MOD -- MAT 4 2                    MAT42.OUT Aug 17 15:18 2009
INPUT: 1756 PERSONS  40 ITEMS  MEASURED: 1756 PERSONS  39 ITEMS  78 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .29 |    19 I0019 |    40 I0040 |
|   .22 |     2 I0002 |    19 I0019 |
|   .21 |     2 I0002 |    40 I0040 |
|   .15 |    20 I0020 |    29 I0029 |
|   .13 |    13 I0013 |    35 I0035 |
|   .12 |    34 I0034 |    40 I0040 |
|   .12 |    19 I0019 |    34 I0034 |
|-------+-------------+-------------|
|  -.12 |     2 I0002 |    38 I0038 |
|  -.12 |     2 I0002 |    32 I0032 |
|  -.12 |    13 I0013 |    40 I0040 |
+-----------------------------------+
```

Spring 2009 Mathematics Grade 5, Form D

```
TABLE 23.99 2009  OK MOD -- MAT 5 1                    MAT51.OUT Aug 17 15:19 2009
INPUT: 1800 PERSONS  40 ITEMS  MEASURED: 1800 PERSONS  39 ITEMS  78 CATS    3.64.2
--------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY        | ENTRY        |
|CORRELN|NUMBER ITEM   |NUMBER ITEM   |
|-------+-------------+-------------|
|  -.15 |      2 I0002 |     16 I0016 |
|  -.12 |      2 I0002 |     28 I0028 |
|  -.12 |     10 I0010 |     32 I0032 |
|  -.11 |     19 I0019 |     31 I0031 |
|  -.11 |      2 I0002 |     27 I0027 |
|  -.11 |     19 I0019 |     25 I0025 |
|  -.11 |      2 I0002 |     10 I0010 |
|  -.11 |     15 I0015 |     19 I0019 |
|  -.10 |     22 I0022 |     34 I0034 |
|  -.10 |     35 I0035 |     37 I0037 |
+-----------------------------------+
```

Spring 2009 Mathematics Grade 5, Form E

```
TABLE 23.99 2009  OK MOD -- MAT 5 2                    MAT52.OUT Aug 17 15:19 2009
INPUT: 1758 PERSONS  40 ITEMS  MEASURED: 1758 PERSONS  39 ITEMS  78 CATS    3.64.2
--------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY        | ENTRY        |
|CORRELN|NUMBER ITEM   |NUMBER ITEM   |
|-------+-------------+-------------|
|   .25 |     18 I0018 |     37 I0037 |
|   .19 |      2 I0002 |     16 I0016 |
|   .13 |     16 I0016 |     29 I0029 |
|   .12 |      6 I0006 |     21 I0021 |
|   .12 |      6 I0006 |     34 I0034 |
|-------+-------------+-------------|
|  -.14 |     15 I0015 |     18 I0018 |
|  -.12 |     23 I0023 |     40 I0040 |
|  -.12 |     15 I0015 |     40 I0040 |
|  -.12 |      9 I0009 |     22 I0022 |
|  -.11 |      4 I0004 |     23 I0023 |
+-----------------------------------+
```

Spring 2009 Mathematics Grade 6, Form D

```
TABLE 23.99 2009  OK MOD -- MAT 6 1                    MAT61.OUT Aug 17 15:19 2009
INPUT: 1698 PERSONS  40 ITEMS  MEASURED: 1698 PERSONS  40 ITEMS  80 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .18 |    29 I0029 |    37 I0037 |
|   .18 |    12 I0012 |    34 I0034 |
|   .15 |    14 I0014 |    19 I0019 |
|   .15 |    33 I0033 |    37 I0037 |
|   .14 |    20 I0020 |    27 I0027 |
|   .12 |    27 I0027 |    33 I0033 |
|-------+-------------+-------------|
|  -.17 |    24 I0024 |    37 I0037 |
|  -.14 |    16 I0016 |    34 I0034 |
|  -.13 |    32 I0032 |    33 I0033 |
|  -.12 |     2 I0002 |    35 I0035 |
+-----------------------------------+
```

Spring 2009 Mathematics Grade 6, Form E

```
TABLE 23.99 2009  OK MOD -- MAT 6 2                    MAT62.OUT Aug 17 15:19 2009
INPUT: 1666 PERSONS  40 ITEMS  MEASURED: 1666 PERSONS  39 ITEMS  78 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .21 |    19 I0019 |    38 I0038 |
|   .16 |    13 I0013 |    39 I0039 |
|   .15 |    33 I0033 |    35 I0035 |
|   .13 |    29 I0029 |    37 I0037 |
|-------+-------------+-------------|
|  -.14 |    30 I0030 |    34 I0034 |
|  -.13 |    30 I0030 |    31 I0031 |
|  -.12 |    24 I0024 |    29 I0029 |
|  -.12 |    18 I0018 |    37 I0037 |
|  -.11 |    20 I0020 |    34 I0034 |
|  -.11 |    15 I0015 |    26 I0026 |
+-----------------------------------+
```

Spring 2009 Mathematics Grade 7, Form D

```
TABLE 23.99 2009  OK MOD -- MAT 7 1                    MAT71.OUT Aug 17 15:19 2009
INPUT: 1766 PERSONS  40 ITEMS  MEASURED: 1766 PERSONS  39 ITEMS  78 CATS    3.64.2
-------------------------------------------------------------------------------
```

LARGEST STANDARDIZED RESIDUAL CORRELATIONS
USED TO IDENTIFY DEPENDENT ITEMS

RESIDUL CORRELN	ENTRY NUMBER	ITEM	ENTRY NUMBER	ITEM
.27	9	I0009	37	I0037
.27	22	I0022	37	I0037
.24	9	I0009	22	I0022
.21	11	I0011	39	I0039
.17	1	I0001	18	I0018
.14	6	I0006	17	I0017
.13	21	I0021	25	I0025
.13	3	I0003	16	I0016
-.13	22	I0022	24	I0024
-.12	9	I0009	19	I0019

Spring 2009 Mathematics Grade 7, Form E

```
TABLE 23.99 2009  OK MOD -- MAT 7 2                    MAT72.OUT Aug 17 15:19 2009
INPUT: 1688 PERSONS  40 ITEMS  MEASURED: 1688 PERSONS  38 ITEMS  76 CATS    3.64.2
-------------------------------------------------------------------------------
```

LARGEST STANDARDIZED RESIDUAL CORRELATIONS
USED TO IDENTIFY DEPENDENT ITEMS

RESIDUL CORRELN	ENTRY NUMBER	ITEM	ENTRY NUMBER	ITEM
.30	9	I0009	37	I0037
.18	4	I0004	21	I0021
.17	11	I0011	30	I0030
.16	12	I0012	22	I0022
.15	16	I0016	29	I0029
.14	6	I0006	17	I0017
-.15	9	I0009	26	I0026
-.15	12	I0012	26	I0026
-.14	9	I0009	20	I0020
-.13	22	I0022	29	I0029

Spring 2009 Mathematics Grade 8, Form D

```
TABLE 23.99 2009  OK MOD -- MAT 8 1                    MAT81.OUT Aug 17 15:20 2009
INPUT: 1868 PERSONS  40 ITEMS  MEASURED: 1868 PERSONS  40 ITEMS  80 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .15 |     19 I0019 |     33 I0033 |
|   .13 |     25 I0025 |     29 I0029 |
|-------+-------------+-------------|
|  -.15 |     12 I0012 |     16 I0016 |
|  -.14 |     10 I0010 |     17 I0017 |
|  -.13 |     12 I0012 |     17 I0017 |
|  -.13 |     26 I0026 |     33 I0033 |
|  -.13 |     10 I0010 |     22 I0022 |
|  -.13 |     10 I0010 |     15 I0015 |
|  -.12 |     16 I0016 |     35 I0035 |
|  -.12 |     10 I0010 |     33 I0033 |
+-----------------------------------+
```

Spring 2009 Mathematics Grade 8, Form E

```
TABLE 23.99 2009  OK MOD -- MAT 8 2                    MAT82.OUT Aug 17 15:20 2009
INPUT: 1756 PERSONS  40 ITEMS  MEASURED: 1756 PERSONS  40 ITEMS  80 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .24 |      8 I0008 |     21 I0021 |
|   .22 |     35 I0035 |     39 I0039 |
|   .21 |      6 I0006 |     34 I0034 |
|   .12 |     19 I0019 |     33 I0033 |
|   .12 |     20 I0020 |     32 I0032 |
|-------+-------------+-------------|
|  -.16 |      3 I0003 |     11 I0011 |
|  -.12 |     11 I0011 |     31 I0031 |
|  -.12 |     11 I0011 |     39 I0039 |
|  -.12 |      8 I0008 |     19 I0019 |
|  -.12 |      8 I0008 |     31 I0031 |
+-----------------------------------+
```

Spring 2009 Science Grade 5, Form D

```
TABLE 23.99 2009  OK MOD -- SCI 5 1                    SCI51.OUT Aug 17 15:19 2009
INPUT: 1503 PERSONS  40 ITEMS  MEASURED: 1503 PERSONS  40 ITEMS  80 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .12 |     9 I0009 |    14 I0014 |
|-------+-------------+-------------|
|  -.16 |    17 I0017 |    30 I0030 |
|  -.12 |    29 I0029 |    36 I0036 |
|  -.11 |    19 I0019 |    26 I0026 |
|  -.10 |    34 I0034 |    38 I0038 |
|  -.10 |    16 I0016 |    36 I0036 |
|  -.10 |    14 I0014 |    30 I0030 |
|  -.10 |     7 I0007 |    30 I0030 |
|  -.10 |    19 I0019 |    30 I0030 |
|  -.10 |     6 I0006 |    28 I0028 |
+-----------------------------------+
```

Spring 2009 Science Grade 5, Form E

```
TABLE 23.99 2009  OK MOD -- SCI 5 2                    SCI52.OUT Aug 17 15:19 2009
INPUT: 1471 PERSONS  40 ITEMS  MEASURED: 1471 PERSONS  40 ITEMS  80 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|  -.15 |     9 I0009 |    39 I0039 |
|  -.13 |    16 I0016 |    39 I0039 |
|  -.12 |    12 I0012 |    37 I0037 |
|  -.11 |     4 I0004 |    21 I0021 |
|  -.11 |    37 I0037 |    39 I0039 |
|  -.11 |    18 I0018 |    39 I0039 |
|  -.10 |    22 I0022 |    30 I0030 |
|  -.10 |     7 I0007 |    29 I0029 |
|  -.10 |     2 I0002 |    22 I0022 |
|  -.10 |    24 I0024 |    27 I0027 |
+-----------------------------------+
```

Spring 2009 Science Grade 8, Form D

```
TABLE 23.99 2009  OK MOD -- SCI 8 1                    SCI81.OUT Aug 17 15:20 2009
INPUT: 1401 PERSONS  40 ITEMS  MEASURED: 1401 PERSONS  39 ITEMS  78 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|  -.16 |    28 I0028 |    36 I0036 |
|  -.13 |    22 I0022 |    25 I0025 |
|  -.13 |    17 I0017 |    22 I0022 |
|  -.13 |     1 I0001 |     7 I0007 |
|  -.12 |     1 I0001 |    14 I0014 |
|  -.12 |     4 I0004 |     9 I0009 |
|  -.12 |     8 I0008 |    35 I0035 |
|  -.11 |    11 I0011 |    25 I0025 |
|  -.10 |     4 I0004 |    21 I0021 |
|  -.10 |     4 I0004 |    38 I0038 |
+-----------------------------------+
```

Spring 2009 Science Grade 8, Form E

```
TABLE 23.99 2009  OK MOD -- SCI 8 2                    SCI82.OUT Aug 17 15:20 2009
INPUT: 1287 PERSONS  40 ITEMS  MEASURED: 1287 PERSONS  38 ITEMS  76 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .11 |    13 I0013 |    17 I0017 |
|   .10 |     3 I0003 |    11 I0011 |
|-------+-------------+-------------|
|  -.13 |    24 I0024 |    40 I0040 |
|  -.12 |     8 I0008 |    24 I0024 |
|  -.12 |    17 I0017 |    22 I0022 |
|  -.11 |     7 I0007 |    13 I0013 |
|  -.11 |    13 I0013 |    28 I0028 |
|  -.11 |     8 I0008 |    32 I0032 |
|  -.10 |    20 I0020 |    37 I0037 |
|  -.10 |    12 I0012 |    28 I0028 |
+-----------------------------------+
```

Spring 2009 English II, Form D

```
TABLE 23.99 2009  OK MOD -- REA 9 1                    REA91.OUT Aug 28 12:25 2009
INPUT: 1788 PERSONS  41 ITEMS  MEASURED: 1788 PERSONS  41 ITEMS  84 CATS    3.64.2
--------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .21 |    21 I0021 |    22 I0022 |
|   .15 |     4 I0004 |     5 I0005 |
|   .14 |    19 I0019 |    21 I0021 |
|   .14 |    27 I0027 |    28 I0028 |
|   .12 |    11 I0011 |    12 I0012 |
|-------+-------------+-------------|
|  -.14 |    21 I0021 |    30 I0030 |
|  -.14 |    26 I0026 |    41 I0041 |
|  -.12 |    22 I0022 |    41 I0041 |
|  -.12 |    11 I0011 |    16 I0016 |
|  -.12 |    34 I0034 |    41 I0041 |
+-----------------------------------+
```

Spring 2009 English II, Form E

```
TABLE 23.99 2009  OK MOD -- REA 9 2                    REA92.OUT Aug 28 12:25 2009
INPUT: 1678 PERSONS  41 ITEMS  MEASURED: 1678 PERSONS  40 ITEMS  82 CATS    3.64.2
--------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .20 |    11 I0011 |    12 I0012 |
|   .11 |     6 I0006 |    26 I0026 |
|-------+-------------+-------------|
|  -.12 |    11 I0011 |    15 I0015 |
|  -.12 |    11 I0011 |    26 I0026 |
|  -.12 |    26 I0026 |    40 I0040 |
|  -.11 |     9 I0009 |    37 I0037 |
|  -.11 |    14 I0014 |    20 I0020 |
|  -.11 |    30 I0030 |    41 I0041 |
|  -.10 |     6 I0006 |     8 I0008 |
|  -.10 |    40 I0040 |    41 I0041 |
+-----------------------------------+
```

Spring 2009 Algebra I, Form D

```
TABLE 23.99 2009  OK MOD -- MAT 9 1                    MAT91.OUT Aug 26 16:47 2009
INPUT: 2180 PERSONS  40 ITEMS  MEASURED: 2180 PERSONS  38 ITEMS  76 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .17 |    13 I0013 |    40 I0040 |
|   .17 |     7 I0007 |    25 I0025 |
|   .14 |    19 I0019 |    39 I0039 |
|   .12 |    12 I0012 |    33 I0033 |
|   .12 |    17 I0017 |    33 I0033 |
|-------+-------------+-------------|
|  -.13 |    10 I0010 |    35 I0035 |
|  -.13 |    19 I0019 |    28 I0028 |
|  -.12 |     8 I0008 |    34 I0034 |
|  -.11 |     8 I0008 |    14 I0014 |
|  -.11 |    18 I0018 |    36 I0036 |
+-----------------------------------+
```

Spring 2009 Algebra I, Form E

```
TABLE 23.99 2009  OK MOD -- MAT 9 2                    MAT92.OUT Aug 26 16:47 2009
INPUT: 2055 PERSONS  40 ITEMS  MEASURED: 2055 PERSONS  38 ITEMS  76 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .22 |    13 I0013 |    40 I0040 |
|   .21 |    19 I0019 |    34 I0034 |
|   .16 |     7 I0007 |    25 I0025 |
|   .14 |     3 I0003 |    30 I0030 |
|   .13 |    28 I0028 |    36 I0036 |
|   .13 |     5 I0005 |    32 I0032 |
|   .12 |    20 I0020 |    32 I0032 |
|-------+-------------+-------------|
|  -.13 |    24 I0024 |    33 I0033 |
|  -.12 |     1 I0001 |    28 I0028 |
|  -.12 |    14 I0014 |    40 I0040 |
+-----------------------------------+
```

Spring 2009 Biology I, Form D

```
TABLE 23.99 2009  OK MOD -- SCI 9 1                    SCI91.OUT Aug 31 12:48 2009
INPUT: 1696 PERSONS  46 ITEMS  MEASURED: 1696 PERSONS  45 ITEMS  90 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .13 |    12 I0012 |    43 I0043 |
|-------+-------------+-------------|
|  -.14 |    23 I0023 |    46 I0046 |
|  -.13 |    26 I0026 |    44 I0044 |
|  -.13 |     1 I0001 |    44 I0044 |
|  -.13 |    18 I0018 |    44 I0044 |
|  -.13 |    21 I0021 |    27 I0027 |
|  -.12 |    12 I0012 |    44 I0044 |
|  -.11 |    15 I0015 |    22 I0022 |
|  -.11 |    42 I0042 |    44 I0044 |
|  -.11 |     7 I0007 |    28 I0028 |
+-----------------------------------+
```

Spring 2009 Biology I, Form E

```
TABLE 23.99 2009  OK MOD -- SCI 9 2                    SCI92.OUT Aug 31 12:27 2009
INPUT: 1651 PERSONS  46 ITEMS  MEASURED: 1651 PERSONS  46 ITEMS  92 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .19 |    43 I0043 |    44 I0044 |
|   .16 |    22 I0022 |    40 I0040 |
|   .14 |     2 I0002 |    40 I0040 |
|   .12 |    27 I0027 |    46 I0046 |
|-------+-------------+-------------|
|  -.16 |    24 I0024 |    25 I0025 |
|  -.14 |     6 I0006 |    43 I0043 |
|  -.14 |    28 I0028 |    43 I0043 |
|  -.13 |    39 I0039 |    43 I0043 |
|  -.13 |    12 I0012 |    25 I0025 |
|  -.11 |    40 I0040 |    42 I0042 |
+-----------------------------------+
```

Spring 2009 U.S. History, Form D

```
TABLE 23.99 2009  OK MOD -- HIS 9 1                    HIS91.OUT Sep  3 14:32 2009
INPUT: 1285 PERSONS  40 ITEMS  MEASURED: 1285 PERSONS  39 ITEMS  78 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .11 |    36 I0036 |    40 I0040 |
|-------+-------------+-------------|
|  -.18 |     7 I0007 |    20 I0020 |
|  -.15 |    30 I0030 |    31 I0031 |
|  -.12 |     5 I0005 |    20 I0020 |
|  -.12 |     2 I0002 |    26 I0026 |
|  -.12 |     6 I0006 |    27 I0027 |
|  -.12 |    13 I0013 |    36 I0036 |
|  -.12 |     5 I0005 |    28 I0028 |
|  -.11 |     6 I0006 |    33 I0033 |
|  -.10 |    21 I0021 |    29 I0029 |
+-----------------------------------+
```

Spring 2009 U.S. History, Form E

```
TABLE 23.99 2009  OK MOD -- HIS 9 2                    HIS92.OUT Sep  3 14:32 2009
INPUT: 1261 PERSONS  40 ITEMS  MEASURED: 1261 PERSONS  39 ITEMS  78 CATS    3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|  -.16 |    26 I0026 |    27 I0027 |
|  -.14 |     1 I0001 |     2 I0002 |
|  -.12 |    22 I0022 |    23 I0023 |
|  -.12 |     3 I0003 |     5 I0005 |
|  -.11 |     7 I0007 |    20 I0020 |
|  -.11 |    14 I0014 |    20 I0020 |
|  -.10 |     4 I0004 |    26 I0026 |
|  -.10 |    30 I0030 |    31 I0031 |
|  -.10 |    21 I0021 |    37 I0037 |
|  -.10 |    26 I0026 |    32 I0032 |
+-----------------------------------+
```

Winter 2008/09 English II

```
TABLE 23.99 2009 OK MOD -- REA 10 1                REA101.OUT Aug 28 12:26 2009
INPUT: 233 PERSONS  41 ITEMS  MEASURED: 233 PERSONS  40 ITEMS  82 CATS      3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .22 |     2 I0002 |    39 I0039 |
|   .21 |     2 I0002 |    36 I0036 |
|   .19 |    14 I0014 |    29 I0029 |
|-------+-------------+-------------|
|  -.26 |    30 I0030 |    38 I0038 |
|  -.22 |    14 I0014 |    33 I0033 |
|  -.21 |    18 I0018 |    41 I0041 |
|  -.19 |     8 I0008 |    33 I0033 |
|  -.19 |     9 I0009 |    19 I0019 |
|  -.19 |    13 I0013 |    17 I0017 |
|  -.18 |    14 I0014 |    21 I0021 |
+-----------------------------------+
```

Winter 2008/09 Algebra I

```
TABLE 23.99 2009  OK MOD -- MAT 10 1                MAT101.OUT Aug 28 12:26 2009
INPUT: 216 PERSONS  40 ITEMS  MEASURED: 216 PERSONS  38 ITEMS  76 CATS      3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .29 |    15 I0015 |    17 I0017 |
|   .21 |     9 I0009 |    32 I0032 |
|   .21 |    21 I0021 |    28 I0028 |
|-------+-------------+-------------|
|  -.25 |    24 I0024 |    40 I0040 |
|  -.24 |     3 I0003 |    34 I0034 |
|  -.23 |     1 I0001 |    33 I0033 |
|  -.23 |    17 I0017 |    25 I0025 |
|  -.23 |    28 I0028 |    29 I0029 |
|  -.21 |    23 I0023 |    31 I0031 |
|  -.21 |    12 I0012 |    40 I0040 |
+-----------------------------------+
```

Winter 2008/09 Biology I

```
TABLE 23.99 2009  OK MOD -- SCI 10 1                SCI101.OUT Aug 31 12:27 2009
INPUT: 161 PERSONS  46 ITEMS  MEASURED: 161 PERSONS  45 ITEMS  90 CATS      3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .27 |    10 I0010 |    40 I0040 |
|-------+-------------+-------------|
|  -.30 |    17 I0017 |    40 I0040 |
|  -.28 |     8 I0008 |    21 I0021 |
|  -.26 |     6 I0006 |    41 I0041 |
|  -.24 |    32 I0032 |    34 I0034 |
|  -.23 |     4 I0004 |    18 I0018 |
|  -.23 |    16 I0016 |    17 I0017 |
|  -.23 |    14 I0014 |    40 I0040 |
|  -.23 |     5 I0005 |    15 I0015 |
|  -.23 |    12 I0012 |    18 I0018 |
+-----------------------------------+
```

Winter 2008/09 U.S. History

```
TABLE 23.99 2009  OK MOD -- HIS 10 1                HIS101.OUT Sep  3 15:13 2009
INPUT: 211 PERSONS  40 ITEMS  MEASURED: 211 PERSONS  39 ITEMS  78 CATS      3.64.2
-------------------------------------------------------------------------------

     LARGEST STANDARDIZED RESIDUAL CORRELATIONS
     USED TO IDENTIFY DEPENDENT ITEMS
+-----------------------------------+
|RESIDUL| ENTRY       | ENTRY       |
|CORRELN|NUMBER ITEM  |NUMBER ITEM  |
|-------+-------------+-------------|
|   .22 |     9 I0009 |    26 I0026 |
|   .21 |    22 I0022 |    32 I0032 |
|   .21 |    25 I0025 |    36 I0036 |
|   .19 |    20 I0020 |    38 I0038 |
|-------+-------------+-------------|
|  -.22 |    18 I0018 |    26 I0026 |
|  -.22 |    35 I0035 |    39 I0039 |
|  -.21 |    22 I0022 |    39 I0039 |
|  -.20 |     6 I0006 |    21 I0021 |
|  -.19 |     2 I0002 |    20 I0020 |
|  -.18 |     7 I0007 |    39 I0039 |
+-----------------------------------+
```

Appendix
D

WINSTEPS ITEM OUTPUT FILES

Spring 2009 **Reading, Grade 3, Form D**

; ITEM 2009 OK MOD -- REA 3 1 Aug 17 15:18 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	.2028	1	1795.0	832.0	.0518	1.01	.30	1.01	.41	.00	.34	1.00	67.2	67.9	.98	0	R	I0001
2	-.2153	1	1795.0	989.0	.0516	.97	-1.58	.97	-.99	.00	.37	1.00	67.9	66.5	1.09	0	R	I0002
3	-.9047	1	1795.0	1237.0	.0546	.92	-3.73	.86	-3.43	.00	.39	1.00	73.1	71.0	1.20	0	R	I0003
4	.8864	1	1795.0	590.0	.0552	1.12	4.52	1.18	5.03	.00	.22	1.00	69.5	73.1	.75	0	R	I0004
5	-.1461	1	1795.0	963.0	.0516	.90	-5.76	.87	-4.91	.00	.45	1.00	71.5	66.6	1.35	0	R	I0005
6	.4339	1	1795.0	747.0	.0525	1.08	3.61	1.08	2.80	.00	.27	1.00	65.5	69.4	.79	0	R	I0006
7	.6361	1	1795.0	675.0	.0535	1.20	8.20	1.26	7.91	.00	.15	1.00	64.2	70.9	.51	0	R	I0007
8	-.5202	1	1795.0	1102.0	.0524	.93	-4.00	.91	-2.83	.00	.40	1.00	70.7	67.3	1.23	0	R	I0008
9	-.2954	1	1795.0	1019.0	.0518	.89	-6.43	.84	-5.64	.00	.46	1.00	72.5	66.5	1.39	0	R	I0009
10	.3434	1	1795.0	780.0	.0522	1.02	1.20	1.01	.45	.00	.33	1.00	67.4	68.8	.94	0	R	I0010
11	-.3061	1	1795.0	1023.0	.0518	.90	-5.56	.85	-5.47	.00	.44	1.00	70.8	66.6	1.35	0	R	I0011
12	-.0106	1	1795.0	912.0	.0516	.96	-2.50	.93	-2.51	.00	.39	1.00	68.7	67.0	1.16	0	R	I0012
13	-.5010	1	1795.0	1095.0	.0523	1.01	.76	1.05	1.62	.00	.30	1.00	68.5	67.2	.93	0	R	I0013
14	.5509	1	1795.0	705.0	.0531	1.09	4.14	1.12	3.90	.00	.25	1.00	66.6	70.2	.76	0	R	I0014
15	.8022	1	1795.0	618.0	.0545	1.12	4.63	1.16	4.55	.00	.23	1.00	68.5	72.3	.74	0	R	I0015
16	-.5092	1	1795.0	1098.0	.0524	.91	-4.78	.86	-4.54	.00	.42	1.00	71.4	67.2	1.29	0	R	I0016
17	-.7671	1	1795.0	1190.0	.0537	.88	-6.02	.80	-5.63	.00	.45	1.00	72.1	69.4	1.34	0	R	I0017
18	.4229	1	1795.0	751.0	.0525	1.16	7.17	1.16	5.73	.00	.19	1.00	62.7	69.3	.58	0	R	I0018
19	.6161	1	1795.0	682.0	.0534	1.13	5.50	1.15	4.89	.00	.23	1.00	65.8	70.7	.69	0	R	I0019
20	.0053	1	1795.0	906.0	.0516	.94	-3.12	.91	-3.44	.00	.41	1.00	68.5	67.0	1.21	0	R	I0020
21	.4866	1	1795.0	728.0	.0528	1.06	2.71	1.05	1.65	.00	.29	1.00	66.0	69.8	.86	0	R	I0021
22	-.1381	1	1795.0	960.0	.0516	.88	-6.88	.85	-5.80	.00	.47	1.00	72.9	66.6	1.42	0	R	I0022
23	-.3787	1	1795.0	1050.0	.0519	1.05	2.73	1.05	1.57	.00	.27	1.00	63.4	66.7	.84	0	R	I0023
24	-1.1076	1	1795.0	1303.0	.0564	.87	-5.28	.73	-6.20	.00	.44	1.00	75.3	73.7	1.29	0	R	I0024
25	-.3061	1	1795.0	1023.0	.0518	.90	-5.55	.85	-5.28	.00	.44	1.00	72.4	66.6	1.35	0	R	I0025
26	-.8193	1	1795.0	1208.0	.0540	.94	-2.98	.94	-1.65	.00	.37	1.00	71.8	70.0	1.16	0	R	I0026
27	.0772	1	1795.0	879.0	.0516	.97	-1.54	.95	-2.02	.00	.38	1.00	67.8	67.3	1.11	0	R	I0027
28	.0107	1	1795.0	904.0	.0516	.96	-2.36	.94	-2.46	.00	.39	1.00	68.7	67.0	1.15	0	R	I0028
; 29	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0029
30	.5425	1	1795.0	708.0	.0530	1.17	7.36	1.22	7.22	.00	.18	1.00	63.0	70.2	.56	0	R	I0030
31	-.1301	1	1795.0	957.0	.0516	.93	-3.85	.90	-3.69	.00	.42	1.00	69.7	66.6	1.25	0	R	I0031
32	-.7270	1	1795.0	1176.0	.0534	.92	-4.15	.85	-4.23	.00	.40	1.00	71.8	69.0	1.25	0	R	I0032
33	-.6059	1	1795.0	1133.0	.0528	.96	-2.39	.92	-2.45	.00	.37	1.00	69.1	67.9	1.15	0	R	I0033
34	.8864	1	1795.0	590.0	.0552	1.24	8.97	1.31	8.28	.00	.11	1.00	64.7	73.1	.51	0	R	I0034
35	.4146	1	1795.0	754.0	.0525	.99	-.33	.99	-.34	.00	.36	1.00	70.2	69.2	1.02	0	R	I0035
36	.5594	1	1795.0	702.0	.0531	1.06	2.69	1.07	2.23	.00	.29	1.00	67.7	70.3	.85	0	R	I0036
37	.7785	1	1795.0	626.0	.0544	1.22	8.55	1.28	7.98	.00	.13	1.00	64.6	72.1	.52	0	R	I0037
38	-.2740	1	1795.0	1011.0	.0517	.93	-3.77	.92	-2.77	.00	.41	1.00	70.0	66.5	1.23	0	R	I0038
39	-.2393	1	1795.0	998.0	.0517	.97	-1.60	.95	-1.72	.00	.37	1.00	67.5	66.5	1.11	0	R	I0039
40	.2459	1	1795.0	816.0	.0519	.95	-2.76	.93	-2.92	.00	.41	1.00	71.0	68.2	1.17	0	R	I0040

Spring 2009 **Reading, Grade 3, Form E**

; ITEM 2009 OK MOD -- REA 3 2 Aug 17 15:18 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	.5310	1	1867.0	848.0	.0520	1.08	3.58	1.07	2.41	.00	.32	1.00	66.4	69.9	.81	0	R	I0001
2	-1.1755	1	1867.0	1447.0	.0592	.91	-3.29	.82	-2.95	.00	.40	1.00	79.6	78.0	1.15	0	R	I0002
3	-.8095	1	1867.0	1335.0	.0554	.92	-3.29	.84	-3.27	.00	.41	1.00	75.8	73.3	1.17	0	R	I0003
4	-1.0128	1	1867.0	1399.0	.0573	.95	-1.80	.94	-1.05	.00	.36	1.00	77.7	75.8	1.08	0	R	I0004
5	.8588	1	1867.0	729.0	.0532	1.14	5.88	1.21	6.13	.00	.25	1.00	67.5	71.6	.67	0	R	I0005
6	.7192	1	1867.0	779.0	.0526	1.19	8.10	1.25	7.59	.00	.23	1.00	63.3	70.8	.54	0	R	I0006
7	.6396	1	1867.0	808.0	.0523	1.18	7.78	1.23	7.13	.00	.23	1.00	63.9	70.4	.55	0	R	I0007
8	-.5803	1	1867.0	1258.0	.0538	.95	-2.40	.90	-2.38	.00	.40	1.00	72.5	71.0	1.13	0	R	I0008
9	-.2226	1	1867.0	1130.0	.0521	.90	-5.44	.83	-4.87	.00	.48	1.00	73.1	69.0	1.31	0	R	I0009
10	.3674	1	1867.0	909.0	.0517	1.04	1.78	1.04	1.37	.00	.36	1.00	67.0	69.3	.90	0	R	I0010
11	-.3404	1	1867.0	1173.0	.0526	.91	-4.47	.86	-3.79	.00	.45	1.00	72.8	69.4	1.25	0	R	I0011
12	.0884	1	1867.0	1014.0	.0516	.93	-3.85	.88	-4.00	.00	.45	1.00	71.8	68.7	1.23	0	R	I0012
13	-.4154	1	1867.0	1200.0	.0529	1.04	1.94	1.10	2.29	.00	.31	1.00	69.4	69.8	.87	0	R	I0013
14	.6807	1	1867.0	793.0	.0524	1.12	5.17	1.13	4.30	.00	.28	1.00	66.0	70.6	.71	0	R	I0014
15	.9933	1	1867.0	682.0	.0539	1.14	5.74	1.21	5.79	.00	.26	1.00	68.2	72.5	.69	0	R	I0015
16	-.1199	1	1867.0	1092.0	.0519	.90	-5.36	.87	-3.93	.00	.47	1.00	72.8	68.8	1.30	0	R	I0016
17	.3594	1	1867.0	912.0	.0516	1.15	6.99	1.22	7.04	.00	.25	1.00	63.1	69.3	.57	0	R	I0017
18	.2743	1	1867.0	944.0	.0516	1.08	3.93	1.07	2.42	.00	.32	1.00	65.7	69.0	.78	0	R	I0018
19	.1256	1	1867.0	1000.0	.0515	.95	-2.47	.93	-2.13	.00	.43	1.00	70.9	68.8	1.14	0	R	I0019
20	-.0716	1	1867.0	1074.0	.0518	.98	-1.04	.99	-.14	.00	.39	1.00	69.9	68.7	1.05	0	R	I0020
21	-.1738	1	1867.0	1112.0	.0520	1.08	4.25	1.11	3.10	.00	.28	1.00	65.2	68.9	.75	0	R	I0021
22	-.0904	1	1867.0	1081.0	.0518	.86	-7.38	.80	-6.31	.00	.51	1.00	76.0	68.7	1.41	0	R	I0022
23	-.3349	1	1867.0	1171.0	.0525	.99	-.40	1.01	.34	.00	.37	1.00	69.9	69.4	1.01	0	R	I0023
24	-1.1685	1	1867.0	1445.0	.0591	.87	-4.74	.70	-5.25	.00	.45	1.00	78.2	77.9	1.24	0	R	I0024
25	-.3294	1	1867.0	1169.0	.0525	.88	-6.53	.81	-5.26	.00	.49	1.00	74.9	69.4	1.35	0	R	I0025
26	-.7155	1	1867.0	1304.0	.0547	.91	-4.22	.85	-3.22	.00	.43	1.00	75.6	72.3	1.21	0	R	I0026
27	.1494	1	1867.0	991.0	.0515	.98	-1.26	.96	-1.31	.00	.41	1.00	69.9	68.8	1.07	0	R	I0027
28	.1309	1	1867.0	998.0	.0515	1.04	1.95	1.08	2.37	.00	.35	1.00	67.5	68.8	.88	0	R	I0028
29	.9156	1	1867.0	709.0	.0534	1.24	9.62	1.34	9.38	.00	.16	1.00	64.5	72.0	.46	0	R	I0029
30	.1442	1	1867.0	993.0	.0515	.90	-5.15	.86	-4.82	.00	.48	1.00	73.5	68.8	1.30	0	R	I0030
31	-.7275	1	1867.0	1308.0	.0548	.85	-6.88	.73	-6.03	.00	.50	1.00	75.8	72.4	1.35	0	R	I0031
32	.7970	1	1867.0	751.0	.0529	1.23	9.65	1.32	9.46	.00	.18	1.00	63.4	71.3	.44	0	R	I0032
33	.0618	1	1867.0	1024.0	.0516	.94	-3.40	.91	-2.88	.00	.45	1.00	71.8	68.7	1.19	0	R	I0033
; 34	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0034
35	-.2608	1	1867.0	1144.0	.0523	.98	-.93	.98	-.49	.00	.38	1.00	69.2	69.1	1.05	0	R	I0035
36	-.1901	1	1867.0	1118.0	.0520	.91	-4.57	.85	-4.32	.00	.46	1.00	72.8	68.9	1.26	0	R	I0036
37	.0032	1	1867.0	1046.0	.0516	.94	-3.34	.88	-3.71	.00	.44	1.00	70.2	68.7	1.21	0	R	I0037
38	-.2690	1	1867.0	1147.0	.0523	.93	-3.81	.86	-4.03	.00	.44	1.00	71.1	69.1	1.23	0	R	I0038
39	.6779	1	1867.0	794.0	.0524	.95	-2.52	.94	-1.91	.00	.44	1.00	73.3	70.6	1.13	0	R	I0039
40	.4905	1	1867.0	863.0	.0519	1.09	4.28	1.13	4.15	.00	.30	1.00	66.6	69.7	.75	0	R	I0040

Spring 2009 **Reading, Grade 4, Form D**

; ITEM 2009 OK MOD -- REA 4 1 Aug 17 15:18 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	-.7109	1	1796.0	1276.0	.0556	1.01	.27	1.00	.11	.00	.29	1.00	73.6	72.7	.99	0	R	I0001
2	-.3862	1	1796.0	1166.0	.0533	.89	-5.49	.83	-5.36	.00	.44	1.00	72.9	69.3	1.31	0	R	I0002
3	-.2991	1	1796.0	1135.0	.0528	.95	-2.70	.90	-3.25	.00	.38	1.00	70.5	68.6	1.17	0	R	I0003
4	-1.0841	1	1796.0	1389.0	.0597	.89	-3.77	.75	-5.25	.00	.42	1.00	78.2	77.7	1.20	0	R	I0004
5	-.2381	1	1796.0	1113.0	.0525	.89	-6.09	.85	-5.12	.00	.45	1.00	73.2	68.2	1.35	0	R	I0005
6	-1.0071	1	1796.0	1367.0	.0587	.90	-3.57	.79	-4.45	.00	.40	1.00	77.5	76.6	1.18	0	R	I0006
7	-.9459	1	1796.0	1349.0	.0580	.94	-2.27	.92	-1.64	.00	.35	1.00	77.1	75.7	1.10	0	R	I0007
8	-.8828	1	1796.0	1330.0	.0573	.85	-6.11	.73	-6.44	.00	.48	1.00	77.2	74.9	1.30	0	R	I0008
9	-.7483	1	1796.0	1288.0	.0559	.86	-5.83	.77	-5.89	.00	.46	1.00	76.4	73.1	1.30	0	R	I0009
10	-.3019	1	1796.0	1136.0	.0528	.91	-4.51	.86	-4.47	.00	.42	1.00	72.3	68.6	1.27	0	R	I0010
11	-.4376	1	1796.0	1184.0	.0536	.88	-5.96	.83	-5.01	.00	.45	1.00	74.1	69.7	1.32	0	R	I0011
12	1.0911	1	1796.0	622.0	.0540	1.21	8.53	1.30	8.79	.00	.10	1.00	65.8	71.2	.49	0	R	I0012
13	.9057	1	1796.0	687.0	.0529	1.11	5.00	1.14	4.86	.00	.21	1.00	65.8	69.5	.70	0	R	I0013
14	-.3721	1	1796.0	1161.0	.0532	.97	-1.43	.96	-1.11	.00	.35	1.00	70.2	69.2	1.08	0	R	I0014
15	.3342	1	1796.0	899.0	.0514	1.20	9.90	1.25	9.61	.00	.12	1.00	56.7	66.9	.30	0	R	I0015
16	.6266	1	1796.0	789.0	.0518	1.17	8.11	1.20	7.65	.00	.16	1.00	60.4	67.8	.47	0	R	I0016
17	-.4750	1	1796.0	1197.0	.0538	.89	-5.32	.85	-4.39	.00	.44	1.00	74.8	70.1	1.28	0	R	I0017
18	.0910	1	1796.0	991.0	.0515	1.01	.77	1.01	.30	.00	.32	1.00	66.2	67.0	.96	0	R	I0018
19	-.7956	1	1796.0	1303.0	.0564	.87	-5.42	.76	-5.92	.00	.45	1.00	76.0	73.7	1.28	0	R	I0019
20	.2524	1	1796.0	930.0	.0514	.92	-4.47	.91	-3.95	.00	.42	1.00	71.6	66.9	1.27	0	R	I0020
21	-.2161	1	1796.0	1105.0	.0524	1.04	1.93	1.08	2.65	.00	.27	1.00	68.0	68.1	.86	0	R	I0021
22	.0351	1	1796.0	1012.0	.0516	1.00	.07	1.01	.21	.00	.33	1.00	67.5	67.1	.99	0	R	I0022
23	.0298	1	1796.0	1014.0	.0517	.89	-6.39	.84	-6.42	.00	.46	1.00	72.4	67.1	1.40	0	R	I0023
24	.5303	1	1796.0	825.0	.0516	1.12	6.10	1.14	5.45	.00	.20	1.00	61.9	67.4	.61	0	R	I0024
25	-.0371	1	1796.0	1039.0	.0518	.98	-.82	.95	-1.77	.00	.35	1.00	65.4	67.3	1.07	0	R	I0025
26	.0031	1	1796.0	1024.0	.0517	.96	-2.45	.92	-2.89	.00	.38	1.00	69.3	67.2	1.16	0	R	I0026
27	.4135	1	1796.0	869.0	.0514	1.04	2.15	1.04	1.58	.00	.29	1.00	64.7	67.1	.87	0	R	I0027
28	.3342	1	1796.0	899.0	.0514	1.09	4.79	1.10	3.93	.00	.24	1.00	62.0	66.9	.69	0	R	I0028
29	.5757	1	1796.0	808.0	.0517	1.09	4.56	1.10	4.07	.00	.23	1.00	64.4	67.5	.71	0	R	I0029
30	-.2381	1	1796.0	1113.0	.0525	1.03	1.49	1.04	1.24	.00	.29	1.00	66.3	68.2	.91	0	R	I0030
31	.0431	1	1796.0	1009.0	.0516	.95	-2.79	.95	-2.11	.00	.39	1.00	68.9	67.1	1.18	0	R	I0031
32	.7347	1	1796.0	749.0	.0522	1.10	4.70	1.15	5.37	.00	.23	1.00	64.5	68.3	.70	0	R	I0032
33	.4984	1	1796.0	837.0	.0516	1.15	7.47	1.19	7.24	.00	.18	1.00	60.4	67.3	.50	0	R	I0033
34	.4479	1	1796.0	856.0	.0515	1.04	2.37	1.05	2.03	.00	.29	1.00	65.0	67.1	.85	0	R	I0034
35	1.0679	1	1796.0	630.0	.0538	1.21	8.58	1.30	8.77	.00	.10	1.00	64.3	71.0	.49	0	R	I0035
36	.1202	1	1796.0	980.0	.0515	.96	-2.06	.94	-2.37	.00	.37	1.00	68.2	66.9	1.14	0	R	I0036
37	.0378	1	1796.0	1011.0	.0516	.98	-.91	.96	-1.60	.00	.35	1.00	67.3	67.1	1.07	0	R	I0037
38	.0138	1	1796.0	1020.0	.0517	.99	-.63	.96	-1.43	.00	.34	1.00	67.5	67.1	1.06	0	R	I0038
39	.3712	1	1796.0	885.0	.0514	1.00	-.22	.99	-.60	.00	.34	1.00	66.8	67.0	1.02	0	R	I0039
40	.6185	1	1796.0	792.0	.0518	1.08	4.25	1.10	3.79	.00	.24	1.00	64.4	67.7	.74	0	R	I0040

Spring 2009 **Reading, Grade 4, Form E**

; ITEM 2009 OK MOD -- REA 4 2 Aug 17 15:18 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	-.7618	1	1983.0	1451.0	.0546	1.00	-.09	.98	-.49	.00	.32	1.00	74.5	74.6	1.01	0	R	I0001
2	-.3875	1	1983.0	1318.0	.0518	.87	-6.59	.80	-5.63	.00	.48	1.00	76.1	70.8	1.33	0	R	I0002
3	-.3875	1	1983.0	1318.0	.0518	.94	-2.72	.89	-2.97	.00	.40	1.00	73.6	70.8	1.15	0	R	I0003
4	-1.0409	1	1983.0	1540.0	.0576	.95	-1.91	.82	-3.30	.00	.37	1.00	78.3	78.2	1.11	0	R	I0004
5	-.2346	1	1983.0	1260.0	.0510	.91	-4.77	.85	-4.44	.00	.45	1.00	73.2	69.8	1.25	0	R	I0005
6	-.9820	1	1983.0	1522.0	.0569	.90	-3.63	.78	-4.24	.00	.42	1.00	78.8	77.4	1.17	0	R	I0006
7	.0800	1	1983.0	1136.0	.0499	1.05	2.89	1.06	2.17	.00	.30	1.00	66.4	68.5	.84	0	R	I0007
8	.0225	1	1983.0	1159.0	.0501	.91	-5.15	.86	-4.98	.00	.46	1.00	72.7	68.6	1.29	0	R	I0008
9	-.5071	1	1983.0	1362.0	.0525	.91	-4.20	.86	-3.53	.00	.43	1.00	74.9	71.9	1.20	0	R	I0009
10	1.3041	1	1983.0	654.0	.0527	1.26	9.90	1.40	9.90	.00	.09	1.00	65.3	73.0	.44	0	R	I0010
11	-.4769	1	1983.0	1351.0	.0523	.88	-5.86	.82	-4.87	.00	.47	1.00	75.2	71.6	1.29	0	R	I0011
12	-.2973	1	1983.0	1284.0	.0513	.91	-4.69	.86	-4.21	.00	.44	1.00	73.7	70.2	1.24	0	R	I0012
13	-1.1777	1	1983.0	1580.0	.0594	.85	-4.85	.68	-5.83	.00	.46	1.00	81.0	80.0	1.22	0	R	I0013
14	.2435	1	1983.0	1070.0	.0497	1.09	4.73	1.11	3.82	.00	.27	1.00	63.9	68.2	.72	0	R	I0014
15	.5687	1	1983.0	938.0	.0498	1.18	9.17	1.24	8.52	.00	.19	1.00	60.7	68.5	.45	0	R	I0015
16	.0750	1	1983.0	1138.0	.0499	1.04	2.38	1.06	2.02	.00	.32	1.00	65.9	68.5	.87	0	R	I0016
17	-.7381	1	1983.0	1443.0	.0544	.90	-4.21	.83	-3.84	.00	.43	1.00	76.7	74.3	1.20	0	R	I0017
18	.5193	1	1983.0	958.0	.0497	1.08	3.92	1.09	3.19	.00	.30	1.00	65.1	68.4	.78	0	R	I0018
19	-.8805	1	1983.0	1490.0	.0558	.85	-5.89	.69	-6.69	.00	.48	1.00	78.5	76.1	1.28	0	R	I0019
20	.1619	1	1983.0	1103.0	.0498	.94	-3.14	.91	-3.22	.00	.42	1.00	69.6	68.3	1.18	0	R	I0020
21	-.1932	1	1983.0	1244.0	.0508	1.04	1.78	1.10	2.74	.00	.31	1.00	69.1	69.5	.88	0	R	I0021
22	.1173	1	1983.0	1121.0	.0498	1.00	.22	1.00	.08	.00	.36	1.00	68.0	68.4	.99	0	R	I0022
23	.1073	1	1983.0	1125.0	.0499	.88	-6.53	.83	-6.09	.00	.48	1.00	73.5	68.4	1.36	0	R	I0023
24	.6158	1	1983.0	919.0	.0498	1.18	8.81	1.23	8.11	.00	.19	1.00	60.9	68.7	.47	0	R	I0024
25	.0125	1	1983.0	1163.0	.0501	1.02	.86	.98	-.54	.00	.34	1.00	66.4	68.6	.97	0	R	I0025
26	.0326	1	1983.0	1155.0	.0500	.93	-3.84	.89	-3.66	.00	.43	1.00	71.8	68.6	1.22	0	R	I0026
27	.4084	1	1983.0	1003.0	.0496	1.07	3.74	1.07	2.63	.00	.29	1.00	64.3	68.2	.79	0	R	I0027
28	.4158	1	1983.0	1000.0	.0496	1.05	2.76	1.05	1.92	.00	.32	1.00	66.3	68.2	.85	0	R	I0028
29	-.0151	1	1983.0	1174.0	.0502	1.04	1.88	1.12	3.63	.00	.32	1.00	68.7	68.7	.86	0	R	I0029
30	-.4851	1	1983.0	1354.0	.0524	.89	-5.08	.81	-4.94	.00	.45	1.00	74.2	71.7	1.26	0	R	I0030
31	1.6243	1	1983.0	544.0	.0553	1.20	6.87	1.45	9.17	.00	.11	1.00	73.8	76.1	.61	0	R	I0031
32	1.2958	1	1983.0	657.0	.0527	1.30	9.90	1.46	9.90	.00	.06	1.00	64.9	72.9	.37	0	R	I0032
33	.0725	1	1983.0	1139.0	.0499	1.01	.44	.98	-.59	.00	.35	1.00	68.0	68.5	.99	0	R	I0033
34	1.1326	1	1983.0	717.0	.0517	1.12	5.06	1.18	5.48	.00	.23	1.00	68.8	71.6	.72	0	R	I0034
35	-.4632	1	1983.0	1346.0	.0522	.90	-4.55	.85	-4.09	.00	.44	1.00	73.8	71.5	1.23	0	R	I0035
36	.5218	1	1983.0	957.0	.0497	1.10	5.06	1.11	3.97	.00	.27	1.00	63.8	68.4	.71	0	R	I0036
37	-.2868	1	1983.0	1280.0	.0512	.93	-3.37	.87	-3.79	.00	.42	1.00	72.1	70.1	1.19	0	R	I0037
38	-.4469	1	1983.0	1340.0	.0521	.92	-4.04	.84	-4.37	.00	.43	1.00	74.1	71.3	1.21	0	R	I0038
39	.4232	1	1983.0	997.0	.0496	1.02	.98	1.00	.19	.00	.34	1.00	66.2	68.2	.96	0	R	I0039
40	.0075	1	1983.0	1165.0	.0501	.98	-.91	.94	-1.88	.00	.38	1.00	67.7	68.7	1.07	0	R	I0040

Spring 2009 **Reading, Grade 5, Form D**

; ITEM 2009 OK MOD -- REA 5 1 Aug 17 15:19 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	-.0388	1	1943.0	1042.0	.0489	1.06	3.79	1.08	3.54	.00	.23	1.00	60.7	65.4	.75	0	R	I0001
2	.2738	1	1943.0	911.0	.0490	1.03	1.82	1.03	1.53	.00	.27	1.00	65.1	66.1	.88	0	R	I0002
3	-1.0349	1	1943.0	1429.0	.0543	.95	-1.84	.95	-1.10	.00	.31	1.00	75.2	74.3	1.08	0	R	I0003
4	.2738	1	1943.0	911.0	.0490	1.03	1.95	1.05	2.15	.00	.26	1.00	65.2	66.1	.87	0	R	I0004
5	.3773	1	1943.0	868.0	.0492	1.11	6.07	1.16	6.81	.00	.18	1.00	62.3	66.6	.58	0	R	I0005
6	.4161	1	1943.0	852.0	.0493	1.16	8.80	1.18	7.63	.00	.12	1.00	58.3	66.8	.44	0	R	I0006
7	.8222	1	1943.0	690.0	.0511	1.20	8.85	1.27	8.89	.00	.07	1.00	62.7	70.1	.48	0	R	I0007
8	-.1706	1	1943.0	1097.0	.0491	.94	-3.52	.91	-3.74	.00	.37	1.00	68.1	65.6	1.23	0	R	I0008
9	-.6045	1	1943.0	1272.0	.0508	.89	-6.02	.86	-4.61	.00	.42	1.00	73.1	68.6	1.32	0	R	I0009
10	.8065	1	1943.0	696.0	.0510	1.16	7.19	1.20	6.78	.00	.12	1.00	63.9	70.0	.59	0	R	I0010
11	-.1827	1	1943.0	1102.0	.0491	.92	-4.92	.92	-3.47	.00	.39	1.00	70.9	65.7	1.29	0	R	I0011
12	-.2845	1	1943.0	1144.0	.0494	.98	-1.29	1.00	-.14	.00	.32	1.00	67.2	66.1	1.07	0	R	I0012
13	.1471	1	1943.0	964.0	.0489	1.09	5.53	1.11	4.69	.00	.19	1.00	60.2	65.6	.64	0	R	I0013
14	-.6356	1	1943.0	1284.0	.0510	.87	-7.21	.81	-6.46	.00	.45	1.00	73.3	68.9	1.38	0	R	I0014
15	1.0259	1	1943.0	614.0	.0525	.95	-2.03	.98	-.74	.00	.35	1.00	73.8	72.3	1.08	0	R	I0015
16	-.7732	1	1943.0	1336.0	.0519	.96	-2.05	.91	-2.74	.00	.33	1.00	69.9	70.6	1.12	0	R	I0016
17	-.6932	1	1943.0	1306.0	.0514	.90	-4.93	.85	-4.79	.00	.40	1.00	71.4	69.6	1.27	0	R	I0017
18	-.7624	1	1943.0	1332.0	.0519	.88	-5.74	.82	-5.60	.00	.42	1.00	74.0	70.4	1.30	0	R	I0018
19	-.0699	1	1943.0	1055.0	.0489	.98	-1.37	.97	-1.09	.00	.33	1.00	67.0	65.4	1.09	0	R	I0019
20	-.3260	1	1943.0	1161.0	.0495	.92	-4.71	.89	-4.35	.00	.39	1.00	70.3	66.3	1.29	0	R	I0020
21	-.8167	1	1943.0	1352.0	.0523	.87	-6.43	.79	-6.35	.00	.44	1.00	75.6	71.1	1.33	0	R	I0021
22	.4161	1	1943.0	852.0	.0493	1.12	6.49	1.15	6.43	.00	.17	1.00	61.1	66.8	.58	0	R	I0022
23	-.2262	1	1943.0	1120.0	.0492	.89	-6.86	.85	-6.23	.00	.43	1.00	71.2	65.8	1.42	0	R	I0023
24	-.0102	1	1943.0	1030.0	.0489	1.06	3.72	1.08	3.62	.00	.23	1.00	61.8	65.4	.75	0	R	I0024
25	-.2189	1	1943.0	1117.0	.0492	.89	-6.89	.85	-6.57	.00	.43	1.00	71.2	65.8	1.43	0	R	I0025
26	-.0723	1	1943.0	1056.0	.0489	.93	-4.45	.92	-3.71	.00	.39	1.00	69.2	65.4	1.28	0	R	I0026
27	.6556	1	1943.0	755.0	.0502	1.17	8.38	1.20	7.52	.00	.11	1.00	60.1	68.6	.50	0	R	I0027
28	.5509	1	1943.0	797.0	.0498	1.08	4.40	1.10	3.90	.00	.21	1.00	63.7	67.8	.74	0	R	I0028
29	-.1948	1	1943.0	1107.0	.0491	.97	-1.72	.95	-2.11	.00	.33	1.00	66.8	65.7	1.12	0	R	I0029
30	.2594	1	1943.0	917.0	.0490	1.08	4.61	1.10	4.22	.00	.21	1.00	61.3	66.0	.70	0	R	I0030
31	.4942	1	1943.0	820.0	.0496	1.07	3.58	1.07	2.84	.00	.23	1.00	64.0	67.3	.79	0	R	I0031
; 32	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0032
33	.3267	1	1943.0	889.0	.0491	1.09	5.02	1.09	3.89	.00	.20	1.00	61.3	66.3	.69	0	R	I0033
34	.4697	1	1943.0	830.0	.0495	1.08	4.47	1.11	4.49	.00	.20	1.00	63.1	67.2	.72	0	R	I0034
35	.0518	1	1943.0	1004.0	.0488	.96	-2.25	.94	-2.59	.00	.35	1.00	67.7	65.4	1.16	0	R	I0035
36	.1042	1	1943.0	982.0	.0488	.98	-1.11	.97	-1.43	.00	.33	1.00	65.8	65.6	1.08	0	R	I0036
37	-.3506	1	1943.0	1171.0	.0496	.93	-4.31	.90	-3.81	.00	.38	1.00	70.0	66.4	1.26	0	R	I0037
38	.2738	1	1943.0	911.0	.0490	.95	-3.30	.93	-3.40	.00	.37	1.00	68.4	66.1	1.21	0	R	I0038
39	-.2069	1	1943.0	1112.0	.0492	.92	-5.23	.90	-4.21	.00	.40	1.00	70.6	65.7	1.32	0	R	I0039
40	-.0723	1	1943.0	1056.0	.0489	.98	-1.24	.96	-1.84	.00	.33	1.00	65.8	65.4	1.09	0	R	I0040

Spring 2009 **Reading, Grade 5, Form E**

; ITEM 2009 OK MOD -- REA 5 2 Aug 17 15:19 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	-.0544	1	1868.0	1068.0	.0506	1.08	4.66	1.11	3.93	.00	.22	1.00	62.6	66.8	.70	0	R	I0001
2	.2857	1	1868.0	934.0	.0503	1.05	2.66	1.04	1.72	.00	.28	1.00	63.2	66.5	.84	0	R	I0002
3	-1.0111	1	1868.0	1409.0	.0570	.95	-2.02	.89	-2.26	.00	.34	1.00	76.2	76.0	1.10	0	R	I0003
4	.3389	1	1868.0	913.0	.0504	1.07	3.92	1.07	3.03	.00	.25	1.00	63.1	66.7	.76	0	R	I0004
5	.2579	1	1868.0	945.0	.0503	1.07	3.98	1.09	3.73	.00	.25	1.00	63.8	66.5	.74	0	R	I0005
6	.6515	1	1868.0	791.0	.0510	1.20	9.90	1.23	8.55	.00	.11	1.00	58.0	68.1	.39	0	R	I0006
7	.8956	1	1868.0	699.0	.0521	1.18	8.14	1.24	7.70	.00	.13	1.00	62.6	70.0	.52	0	R	I0007
8	-.2775	1	1868.0	1154.0	.0513	.93	-4.07	.90	-3.50	.00	.40	1.00	70.4	67.8	1.24	0	R	I0008
9	-.6959	1	1868.0	1306.0	.0539	.90	-4.53	.82	-4.86	.00	.42	1.00	74.5	71.8	1.24	0	R	I0009
10	1.1325	1	1868.0	614.0	.0536	1.15	5.98	1.22	6.32	.00	.16	1.00	67.6	72.3	.67	0	R	I0010
11	-.2276	1	1868.0	1135.0	.0511	.90	-5.81	.87	-4.57	.00	.44	1.00	73.1	67.6	1.33	0	R	I0011
12	-1.6934	1	1868.0	1589.0	.0676	.87	-3.11	.67	-5.08	.00	.40	1.00	85.3	85.1	1.16	0	R	I0012
13	.0298	1	1868.0	1035.0	.0505	1.06	3.49	1.11	3.94	.00	.25	1.00	63.8	66.6	.76	0	R	I0013
14	-.4380	1	1868.0	1214.0	.0521	.91	-4.86	.84	-5.09	.00	.42	1.00	70.8	69.1	1.28	0	R	I0014
15	.0349	1	1868.0	1033.0	.0504	.98	-1.28	.95	-1.78	.00	.35	1.00	67.6	66.6	1.09	0	R	I0015
16	.9228	1	1868.0	689.0	.0522	1.23	9.78	1.31	9.67	.00	.08	1.00	61.9	70.3	.42	0	R	I0016
17	-.8568	1	1868.0	1360.0	.0553	.89	-4.42	.83	-4.07	.00	.41	1.00	76.1	73.9	1.22	0	R	I0017
18	-.7604	1	1868.0	1328.0	.0544	.89	-4.73	.81	-4.94	.00	.42	1.00	75.1	72.6	1.25	0	R	I0018
19	.1136	1	1868.0	1002.0	.0504	1.04	2.07	1.06	2.51	.00	.28	1.00	64.6	66.5	.86	0	R	I0019
20	-.4055	1	1868.0	1202.0	.0520	.96	-2.32	.91	-2.66	.00	.36	1.00	70.0	68.8	1.14	0	R	I0020
21	-.8568	1	1868.0	1360.0	.0553	.86	-5.92	.76	-5.79	.00	.46	1.00	76.9	73.9	1.29	0	R	I0021
22	.6437	1	1868.0	794.0	.0510	1.13	6.48	1.14	5.32	.00	.19	1.00	61.7	68.0	.61	0	R	I0022
23	.6463	1	1868.0	793.0	.0510	1.08	4.14	1.11	4.08	.00	.23	1.00	65.8	68.1	.74	0	R	I0023
24	.1415	1	1868.0	991.0	.0503	.99	-.32	.98	-.61	.00	.33	1.00	65.7	66.5	1.03	0	R	I0024
25	-.3947	1	1868.0	1198.0	.0519	.87	-7.16	.79	-6.91	.00	.47	1.00	73.2	68.7	1.40	0	R	I0025
26	.8443	1	1868.0	718.0	.0518	1.01	.55	1.05	1.76	.00	.30	1.00	71.3	69.6	.95	0	R	I0026
27	.4457	1	1868.0	871.0	.0505	.99	-.47	.99	-.51	.00	.34	1.00	68.1	67.0	1.03	0	R	I0027
28	.2225	1	1868.0	959.0	.0503	1.03	1.67	1.02	.93	.00	.29	1.00	64.5	66.5	.90	0	R	I0028
29	-.3545	1	1868.0	1183.0	.0517	.86	-7.58	.79	-6.95	.00	.48	1.00	74.5	68.4	1.43	0	R	I0029
30	.4686	1	1868.0	862.0	.0505	.95	-2.74	.96	-1.86	.00	.38	1.00	70.5	67.1	1.15	0	R	I0030
31	-.1083	1	1868.0	1089.0	.0508	.87	-7.35	.83	-6.59	.00	.47	1.00	72.6	67.0	1.44	0	R	I0031
32	-.4325	1	1868.0	1212.0	.0521	.90	-5.31	.82	-5.52	.00	.43	1.00	72.3	69.1	1.31	0	R	I0032
33	-.6042	1	1868.0	1274.0	.0532	.91	-4.12	.84	-4.33	.00	.40	1.00	72.8	70.7	1.23	0	R	I0033
34	.6567	1	1868.0	789.0	.0510	1.15	7.52	1.18	6.82	.00	.17	1.00	61.6	68.1	.54	0	R	I0034
; 35	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0035
36	.1187	1	1868.0	1000.0	.0503	.98	-.91	.98	-.90	.00	.34	1.00	66.0	66.5	1.06	0	R	I0036
37	.4202	1	1868.0	881.0	.0505	1.08	4.55	1.10	3.95	.00	.24	1.00	62.3	66.9	.71	0	R	I0037
38	-.1264	1	1868.0	1096.0	.0508	.98	-1.14	.98	-.75	.00	.34	1.00	67.8	67.1	1.07	0	R	I0038
39	-.1937	1	1868.0	1122.0	.0510	1.06	3.34	1.10	3.42	.00	.24	1.00	65.6	67.4	.78	0	R	I0039
40	.2200	1	1868.0	960.0	.0503	.98	-.91	.97	-1.21	.00	.35	1.00	68.1	66.5	1.06	0	R	I0040

Spring 2009 **Reading, Grade 6, Form D**

; ITEM 2009 OK MOD -- REA 6 1 Aug 17 15:19 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	-1.0719	1	1846.0	1390.0	.0568	.99	-.30	.97	-.62	.00	.26	1.00	76.1	75.7	1.02	0	R	I0001
2	.4727	1	1846.0	811.0	.0504	1.10	5.32	1.12	5.04	.00	.18	1.00	61.1	66.3	.65	0	R	I0002
3	-.3552	1	1846.0	1139.0	.0511	.92	-4.44	.88	-4.60	.00	.39	1.00	70.9	67.1	1.28	0	R	I0003
4	-.2800	1	1846.0	1110.0	.0508	.97	-1.70	.96	-1.37	.00	.32	1.00	67.9	66.6	1.11	0	R	I0004
5	-.6317	1	1846.0	1242.0	.0527	.94	-2.96	.91	-2.66	.00	.35	1.00	72.3	69.7	1.16	0	R	I0005
6	-.1928	1	1846.0	1076.0	.0505	.93	-4.07	.91	-3.84	.00	.38	1.00	69.8	66.1	1.26	0	R	I0006
7	1.1610	1	1846.0	556.0	.0543	1.05	1.88	1.12	3.28	.00	.21	1.00	73.0	72.8	.88	0	R	I0007
8	.1016	1	1846.0	959.0	.0500	.93	-4.25	.90	-4.61	.00	.38	1.00	68.1	65.3	1.29	0	R	I0008
9	-.6512	1	1846.0	1249.0	.0528	.88	-5.67	.83	-5.55	.00	.42	1.00	74.1	70.0	1.31	0	R	I0009
10	.2564	1	1846.0	897.0	.0500	.98	-1.20	.97	-1.49	.00	.32	1.00	65.5	65.4	1.09	0	R	I0010
11	-.4024	1	1846.0	1157.0	.0513	.99	-.65	.97	-1.11	.00	.30	1.00	68.4	67.4	1.05	0	R	I0011
12	-.4927	1	1846.0	1191.0	.0518	.91	-4.78	.90	-3.50	.00	.39	1.00	73.6	68.3	1.26	0	R	I0012
13	.5723	1	1846.0	772.0	.0507	1.20	9.90	1.23	9.03	.00	.07	1.00	55.8	67.0	.34	0	R	I0013
14	.7841	1	1846.0	691.0	.0517	1.23	9.90	1.32	9.90	.00	.02	1.00	60.5	68.7	.32	0	R	I0014
15	-.3761	1	1846.0	1147.0	.0512	.88	-6.84	.83	-6.58	.00	.44	1.00	72.2	67.2	1.41	0	R	I0015
16	-.2491	1	1846.0	1098.0	.0507	1.09	4.91	1.11	4.24	.00	.18	1.00	62.2	66.4	.68	0	R	I0016
17	-.0940	1	1846.0	1037.0	.0503	.99	-.41	.98	-.88	.00	.30	1.00	64.5	65.7	1.04	0	R	I0017
; 18	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0018
19	-.2465	1	1846.0	1097.0	.0507	1.06	3.23	1.04	1.64	.00	.22	1.00	62.2	66.4	.81	0	R	I0019
20	.1789	1	1846.0	928.0	.0500	1.08	4.58	1.12	5.43	.00	.20	1.00	61.6	65.3	.66	0	R	I0020
21	-.6041	1	1846.0	1232.0	.0525	.84	-8.10	.77	-7.67	.00	.48	1.00	74.8	69.4	1.44	0	R	I0021
22	-1.0784	1	1846.0	1392.0	.0569	.86	-5.43	.74	-6.39	.00	.45	1.00	77.1	75.8	1.27	0	R	I0022
23	.1290	1	1846.0	948.0	.0500	.94	-3.60	.92	-3.56	.00	.37	1.00	68.6	65.3	1.24	0	R	I0023
24	-.0612	1	1846.0	1024.0	.0502	1.00	.05	1.01	.30	.00	.29	1.00	66.4	65.5	.99	0	R	I0024
25	.1765	1	1846.0	929.0	.0500	1.02	1.31	1.02	.76	.00	.27	1.00	63.3	65.3	.92	0	R	I0025
26	-.4024	1	1846.0	1157.0	.0513	.91	-4.90	.87	-4.73	.00	.40	1.00	71.8	67.4	1.29	0	R	I0026
27	.0741	1	1846.0	970.0	.0500	1.02	1.23	1.02	.91	.00	.27	1.00	64.7	65.3	.92	0	R	I0027
28	-.6096	1	1846.0	1234.0	.0525	1.04	1.70	1.07	2.13	.00	.22	1.00	68.6	69.5	.89	0	R	I0028
29	-.2107	1	1846.0	1083.0	.0506	.93	-3.99	.93	-2.82	.00	.37	1.00	70.2	66.2	1.24	0	R	I0029
30	1.5566	1	1846.0	431.0	.0586	1.14	4.24	1.34	6.91	.00	.06	1.00	76.8	77.9	.75	0	R	I0030
31	.7021	1	1846.0	722.0	.0513	1.15	7.45	1.16	6.26	.00	.13	1.00	59.4	68.0	.55	0	R	I0031
32	.1490	1	1846.0	940.0	.0500	.94	-3.46	.93	-3.36	.00	.37	1.00	68.6	65.3	1.23	0	R	I0032
33	-.5385	1	1846.0	1208.0	.0521	.93	-3.67	.88	-4.07	.00	.37	1.00	71.3	68.7	1.22	0	R	I0033
34	.1640	1	1846.0	934.0	.0500	.96	-2.17	.95	-2.36	.00	.34	1.00	67.7	65.3	1.15	0	R	I0034
35	.9608	1	1846.0	626.0	.0528	1.15	6.46	1.21	6.71	.00	.10	1.00	65.4	70.5	.62	0	R	I0035
36	.3089	1	1846.0	876.0	.0501	.96	-2.13	.95	-2.26	.00	.34	1.00	68.1	65.6	1.14	0	R	I0036
37	.8947	1	1846.0	650.0	.0523	1.18	8.16	1.25	8.14	.00	.07	1.00	62.5	69.8	.51	0	R	I0037
38	-.2697	1	1846.0	1106.0	.0508	1.01	.71	.98	-.58	.00	.28	1.00	64.0	66.5	.98	0	R	I0038
39	.2039	1	1846.0	918.0	.0500	.95	-3.15	.93	-3.28	.00	.36	1.00	67.9	65.4	1.21	0	R	I0039
40	-.0285	1	1846.0	1011.0	.0501	.95	-3.32	.94	-2.68	.00	.36	1.00	68.0	65.5	1.22	0	R	I0040

Spring 2009 **Reading, Grade 6, Form E**

; ITEM 2009 OK MOD -- REA 6 2 Aug 17 15:19 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	-1.2556	1	1783.0	1383.0	.0593	.98	-.69	.96	-.90	.00	.25	1.00	77.8	77.7	1.03	0	R	I0001
2	.4359	1	1783.0	774.0	.0511	1.09	4.85	1.11	4.70	.00	.17	1.00	61.1	65.9	.67	0	R	I0002
3	-.4725	1	1783.0	1124.0	.0520	.90	-5.51	.86	-4.97	.00	.39	1.00	70.5	67.0	1.34	0	R	I0003
4	-.4456	1	1783.0	1114.0	.0519	.95	-3.09	.94	-2.32	.00	.34	1.00	69.3	66.7	1.19	0	R	I0004
5	-.7754	1	1783.0	1232.0	.0541	.94	-2.97	.87	-3.68	.00	.34	1.00	72.0	70.6	1.18	0	R	I0005
6	-.3151	1	1783.0	1065.0	.0513	.88	-7.33	.83	-6.84	.00	.43	1.00	71.6	65.8	1.48	0	R	I0006
7	.6834	1	1783.0	681.0	.0522	1.15	7.50	1.21	7.64	.00	.08	1.00	61.7	68.0	.51	0	R	I0007
8	.4281	1	1783.0	777.0	.0511	1.12	6.48	1.13	5.80	.00	.13	1.00	59.3	65.9	.55	0	R	I0008
; 9	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0009
10	.5944	1	1783.0	714.0	.0517	.98	-1.29	.98	-.85	.00	.31	1.00	68.9	67.2	1.07	0	R	I0010
11	-.7608	1	1783.0	1227.0	.0539	1.00	.01	1.03	.93	.00	.24	1.00	71.7	70.4	.98	0	R	I0011
12	-.7174	1	1783.0	1212.0	.0536	.93	-3.37	.94	-1.82	.00	.34	1.00	72.6	69.8	1.18	0	R	I0012
13	-.1975	1	1783.0	1020.0	.0510	.96	-2.77	.95	-1.97	.00	.33	1.00	67.5	65.1	1.18	0	R	I0013
14	.6159	1	1783.0	706.0	.0518	1.00	-.01	1.01	.39	.00	.28	1.00	68.0	67.4	.99	0	R	I0014
15	-.5987	1	1783.0	1170.0	.0528	.94	-3.14	.96	-1.26	.00	.33	1.00	71.9	68.3	1.16	0	R	I0015
16	.8666	1	1783.0	615.0	.0533	1.17	7.57	1.25	8.26	.00	.05	1.00	65.0	70.0	.53	0	R	I0016
17	-.7347	1	1783.0	1218.0	.0537	.93	-3.34	.90	-3.05	.00	.35	1.00	71.5	70.0	1.19	0	R	I0017
18	.1930	1	1783.0	868.0	.0506	1.02	1.38	1.03	1.51	.00	.25	1.00	63.5	64.7	.90	0	R	I0018
; 19	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0019
20	.7464	1	1783.0	658.0	.0525	1.12	5.71	1.16	5.86	.00	.12	1.00	64.3	68.7	.64	0	R	I0020
21	-.2000	1	1783.0	1021.0	.0510	1.00	-.30	.98	-.79	.00	.28	1.00	64.6	65.1	1.03	0	R	I0021
22	-.0709	1	1783.0	971.0	.0507	.91	-5.90	.88	-5.73	.00	.40	1.00	69.3	64.7	1.41	0	R	I0022
23	.4150	1	1783.0	782.0	.0511	1.00	.04	.99	-.35	.00	.28	1.00	64.7	65.8	1.01	0	R	I0023
24	-.2391	1	1783.0	1036.0	.0511	1.16	9.39	1.21	7.93	.00	.06	1.00	55.4	65.3	.33	0	R	I0024
25	.3968	1	1783.0	789.0	.0510	1.00	.15	.99	-.39	.00	.28	1.00	65.8	65.7	1.00	0	R	I0025
26	-.6803	1	1783.0	1199.0	.0533	.84	-7.97	.76	-7.79	.00	.47	1.00	75.2	69.3	1.45	0	R	I0026
27	-.5848	1	1783.0	1165.0	.0527	.90	-5.13	.85	-4.94	.00	.39	1.00	70.9	68.1	1.31	0	R	I0027
28	-.0658	1	1783.0	969.0	.0507	1.09	5.78	1.15	6.48	.00	.15	1.00	59.5	64.7	.56	0	R	I0028
29	.8638	1	1783.0	616.0	.0533	1.12	5.09	1.14	4.86	.00	.14	1.00	65.8	70.0	.70	0	R	I0029
30	.4150	1	1783.0	782.0	.0511	1.02	1.13	1.01	.47	.00	.26	1.00	63.9	65.8	.94	0	R	I0030
31	.6185	1	1783.0	705.0	.0518	1.14	7.21	1.18	7.02	.00	.10	1.00	60.9	67.4	.53	0	R	I0031
32	-.1224	1	1783.0	991.0	.0508	.94	-4.04	.92	-3.73	.00	.36	1.00	69.3	64.8	1.28	0	R	I0032
33	-.6238	1	1783.0	1179.0	.0529	.91	-4.43	.86	-4.59	.00	.38	1.00	71.5	68.6	1.27	0	R	I0033
34	.0368	1	1783.0	929.0	.0506	.94	-3.96	.92	-3.93	.00	.36	1.00	67.8	64.6	1.28	0	R	I0034
35	.8780	1	1783.0	611.0	.0534	1.09	3.82	1.11	3.69	.00	.17	1.00	67.1	70.1	.78	0	R	I0035
36	.2212	1	1783.0	857.0	.0507	.97	-2.17	.95	-2.25	.00	.33	1.00	66.5	64.8	1.16	0	R	I0036
37	.8865	1	1783.0	608.0	.0534	1.13	5.46	1.16	5.38	.00	.12	1.00	65.3	70.2	.68	0	R	I0037
38	-.3336	1	1783.0	1072.0	.0514	.98	-1.07	.96	-1.73	.00	.29	1.00	65.6	65.9	1.09	0	R	I0038
39	.0624	1	1783.0	919.0	.0506	.90	-6.23	.88	-5.93	.00	.40	1.00	69.7	64.6	1.44	0	R	I0039
40	-.1637	1	1783.0	1007.0	.0509	.92	-5.13	.91	-4.07	.00	.38	1.00	70.0	65.0	1.34	0	R	I0040

Spring 2009 **Reading, Grade 7, Form D**

; ITEM 2009 OK MOD -- REA 7 1 Aug 17 15:20 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	-1.9132	1	1844.0	1611.0	.0724	.91	-1.78	.79	-2.91	.00	.31	1.00	87.6	87.4	1.09	0	R	I0001
; 2	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0002
3	.4589	1	1844.0	834.0	.0502	.98	-1.22	.99	-.64	.00	.31	1.00	67.6	65.7	1.07	0	R	I0003
4	-.8095	1	1844.0	1320.0	.0546	.93	-3.15	.87	-3.57	.00	.35	1.00	74.9	72.9	1.16	0	R	I0004
5	-2.1521	1	1844.0	1653.0	.0786	.89	-1.92	.66	-4.38	.00	.34	1.00	89.6	89.6	1.10	0	R	I0005
6	-.2336	1	1844.0	1110.0	.0508	1.08	4.38	1.09	3.37	.00	.18	1.00	60.9	66.5	.73	0	R	I0006
7	-1.1360	1	1844.0	1423.0	.0583	.90	-3.44	.80	-4.61	.00	.38	1.00	79.1	77.6	1.17	0	R	I0007
8	.2865	1	1844.0	903.0	.0499	1.11	6.81	1.13	5.82	.00	.14	1.00	57.9	65.1	.53	0	R	I0008
9	.9499	1	1844.0	645.0	.0522	1.15	6.71	1.23	7.47	.00	.09	1.00	64.9	69.5	.58	0	R	I0009
10	1.2096	1	1844.0	553.0	.0542	1.07	2.97	1.19	5.34	.00	.15	1.00	73.0	72.6	.80	0	R	I0010
11	-.0554	1	1844.0	1040.0	.0502	1.07	4.15	1.10	4.32	.00	.19	1.00	62.6	65.5	.70	0	R	I0011
12	-1.3998	1	1844.0	1496.0	.0621	.87	-3.67	.74	-5.11	.00	.40	1.00	81.6	81.3	1.17	0	R	I0012
13	-.0529	1	1844.0	1039.0	.0502	1.00	-.01	1.00	.05	.00	.28	1.00	65.6	65.5	1.00	0	R	I0013
14	.3214	1	1844.0	889.0	.0500	.90	-6.04	.89	-5.41	.00	.41	1.00	71.4	65.2	1.39	0	R	I0014
15	.0049	1	1844.0	1016.0	.0501	1.03	1.60	1.06	2.79	.00	.25	1.00	65.3	65.3	.87	0	R	I0015
16	-1.2120	1	1844.0	1445.0	.0593	.85	-4.91	.73	-6.10	.00	.44	1.00	79.5	78.7	1.23	0	R	I0016
17	-1.0790	1	1844.0	1406.0	.0575	.88	-4.19	.79	-4.95	.00	.40	1.00	77.9	76.7	1.20	0	R	I0017
18	-.3850	1	1844.0	1168.0	.0515	.87	-6.93	.83	-6.39	.00	.44	1.00	73.4	67.8	1.40	0	R	I0018
19	1.0549	1	1844.0	607.0	.0529	1.10	4.21	1.17	5.43	.00	.14	1.00	69.0	70.7	.74	0	R	I0019
20	-.1059	1	1844.0	1060.0	.0503	.98	-1.36	1.00	.07	.00	.31	1.00	67.8	65.7	1.06	0	R	I0020
21	.5370	1	1844.0	803.0	.0503	1.02	1.12	1.04	1.75	.00	.26	1.00	65.3	66.1	.91	0	R	I0021
22	.4891	1	1844.0	822.0	.0502	1.02	1.11	1.03	1.46	.00	.26	1.00	65.6	65.8	.92	0	R	I0022
23	.1322	1	1844.0	965.0	.0499	1.05	3.15	1.06	2.63	.00	.22	1.00	62.0	65.0	.79	0	R	I0023
24	.3039	1	1844.0	896.0	.0499	.97	-1.64	.97	-1.67	.00	.32	1.00	66.8	65.1	1.11	0	R	I0024
25	.1098	1	1844.0	974.0	.0500	.95	-3.04	.94	-2.68	.00	.35	1.00	69.1	65.0	1.20	0	R	I0025
26	-.0177	1	1844.0	1025.0	.0501	.95	-3.21	.92	-3.54	.00	.35	1.00	67.5	65.3	1.22	0	R	I0026
27	-.3009	1	1844.0	1136.0	.0511	.98	-1.07	.98	-.64	.00	.30	1.00	68.4	67.0	1.06	0	R	I0027
28	.3887	1	1844.0	862.0	.0500	.97	-2.03	.96	-1.82	.00	.33	1.00	66.9	65.4	1.13	0	R	I0028
29	.9828	1	1844.0	633.0	.0524	1.13	5.94	1.20	6.53	.00	.11	1.00	66.3	69.9	.64	0	R	I0029
30	-.1313	1	1844.0	1070.0	.0504	.92	-4.76	.89	-4.78	.00	.39	1.00	69.6	65.8	1.31	0	R	I0030
31	.7397	1	1844.0	724.0	.0511	1.10	5.20	1.13	4.97	.00	.16	1.00	63.4	67.5	.67	0	R	I0031
32	-.5687	1	1844.0	1236.0	.0526	.87	-6.63	.80	-6.87	.00	.45	1.00	73.8	69.8	1.37	0	R	I0032
33	.6595	1	1844.0	755.0	.0507	1.11	6.09	1.14	5.56	.00	.15	1.00	60.8	66.9	.61	0	R	I0033
34	.3887	1	1844.0	862.0	.0500	1.14	7.91	1.18	8.14	.00	.12	1.00	58.4	65.4	.43	0	R	I0034
35	.2542	1	1844.0	916.0	.0499	1.13	7.55	1.15	7.01	.00	.13	1.00	57.6	65.1	.46	0	R	I0035
36	-.0152	1	1844.0	1024.0	.0501	.92	-4.89	.89	-5.24	.00	.39	1.00	69.5	65.3	1.33	0	R	I0036
37	.2243	1	1844.0	928.0	.0499	.93	-4.60	.91	-4.49	.00	.38	1.00	68.8	65.0	1.31	0	R	I0037
38	1.0437	1	1844.0	611.0	.0529	1.03	1.51	1.06	2.03	.00	.23	1.00	70.6	70.6	.91	0	R	I0038
39	.3613	1	1844.0	873.0	.0500	1.01	.62	1.00	.24	.00	.28	1.00	63.6	65.3	.97	0	R	I0039
40	.6672	1	1844.0	752.0	.0508	1.07	3.95	1.09	3.80	.00	.19	1.00	63.4	66.9	.75	0	R	I0040

Spring 2009 **Reading, Grade 7, Form E**

; ITEM 2009 OK MOD -- REA 7 2 Aug 17 15:20 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	.2425	1	1733.0	945.0	.0524	.99	-.67	.97	-1.07	.00	.34	1.00	66.0	66.6	1.05	0	R	I0001
2	.8410	1	1733.0	727.0	.0530	1.14	6.78	1.20	6.79	.00	.17	1.00	62.1	67.9	.55	0	R	I0002
3	.8804	1	1733.0	713.0	.0531	1.09	4.55	1.14	5.00	.00	.21	1.00	65.3	68.2	.70	0	R	I0003
4	-1.0589	1	1733.0	1365.0	.0622	.90	-3.08	.80	-3.73	.00	.39	1.00	80.3	79.2	1.15	0	R	I0004
5	-1.4364	1	1733.0	1454.0	.0685	.86	-3.55	.67	-5.13	.00	.43	1.00	84.5	84.0	1.17	0	R	I0005
6	.1656	1	1733.0	973.0	.0525	1.00	-.22	.99	-.20	.00	.33	1.00	67.2	66.9	1.02	0	R	I0006
7	1.1664	1	1733.0	614.0	.0546	1.15	6.50	1.23	6.69	.00	.14	1.00	65.6	70.5	.60	0	R	I0007
8	-.4422	1	1733.0	1184.0	.0555	.94	-2.47	.91	-2.44	.00	.37	1.00	73.3	71.4	1.14	0	R	I0008
9	-.5168	1	1733.0	1208.0	.0561	1.04	1.83	1.12	2.87	.00	.24	1.00	72.2	72.2	.88	0	R	I0009
10	.5182	1	1733.0	844.0	.0523	.98	-.88	.98	-.71	.00	.35	1.00	67.8	66.5	1.05	0	R	I0010
11	-.4793	1	1733.0	1196.0	.0558	1.10	4.21	1.18	4.19	.00	.17	1.00	69.9	71.8	.75	0	R	I0011
12	-1.2280	1	1733.0	1407.0	.0648	.85	-4.35	.71	-5.00	.00	.45	1.00	82.1	81.4	1.20	0	R	I0012
13	-.1057	1	1733.0	1070.0	.0534	.98	-.98	.94	-1.82	.00	.34	1.00	68.7	68.4	1.08	0	R	I0013
14	.3546	1	1733.0	904.0	.0523	.94	-3.29	.91	-3.46	.00	.39	1.00	69.2	66.4	1.22	0	R	I0014
15	.1958	1	1733.0	962.0	.0525	1.11	5.53	1.19	6.66	.00	.21	1.00	63.1	66.8	.60	0	R	I0015
16	-1.0745	1	1733.0	1369.0	.0624	.89	-3.40	.80	-3.72	.00	.40	1.00	80.0	79.4	1.16	0	R	I0016
17	-1.0706	1	1733.0	1368.0	.0623	.87	-4.14	.75	-4.72	.00	.43	1.00	81.0	79.3	1.20	0	R	I0017
18	-.2298	1	1733.0	1113.0	.0541	.89	-5.47	.85	-4.66	.00	.44	1.00	74.7	69.4	1.31	0	R	I0018
19	1.1605	1	1733.0	616.0	.0545	1.09	4.11	1.16	4.91	.00	.20	1.00	67.3	70.5	.74	0	R	I0019
20	.1131	1	1733.0	992.0	.0526	.98	-1.20	.98	-.61	.00	.35	1.00	68.8	67.1	1.07	0	R	I0020
21	.7214	1	1733.0	770.0	.0526	1.05	2.70	1.09	3.41	.00	.27	1.00	66.1	67.2	.81	0	R	I0021
22	.4473	1	1733.0	870.0	.0522	1.04	1.99	1.05	2.09	.00	.29	1.00	64.3	66.4	.86	0	R	I0022
23	.1269	1	1733.0	987.0	.0526	1.07	3.68	1.06	1.97	.00	.25	1.00	62.6	67.1	.78	0	R	I0023
24	.5019	1	1733.0	850.0	.0523	1.03	1.82	1.03	1.19	.00	.29	1.00	64.9	66.5	.89	0	R	I0024
25	.2013	1	1733.0	960.0	.0524	.98	-.98	.97	-1.05	.00	.34	1.00	67.5	66.8	1.06	0	R	I0025
26	.3000	1	1733.0	924.0	.0523	.91	-5.25	.88	-4.59	.00	.43	1.00	71.2	66.5	1.33	0	R	I0026
27	-.0915	1	1733.0	1065.0	.0534	1.02	1.18	1.04	1.22	.00	.29	1.00	68.0	68.3	.92	0	R	I0027
28	-.8628	1	1733.0	1312.0	.0596	.89	-3.92	.78	-4.71	.00	.42	1.00	77.7	76.5	1.20	0	R	I0028
29	-2.1531	1	1733.0	1577.0	.0866	.89	-1.76	.61	-4.18	.00	.35	1.00	91.1	91.0	1.11	0	R	I0029
30	.2151	1	1733.0	955.0	.0524	1.00	.23	.98	-.70	.00	.32	1.00	66.2	66.7	1.00	0	R	I0030
31	.1297	1	1733.0	986.0	.0526	1.01	.54	.98	-.83	.00	.31	1.00	65.7	67.0	.99	0	R	I0031
32	-.0067	1	1733.0	1035.0	.0530	.95	-2.54	.95	-1.67	.00	.38	1.00	70.3	67.8	1.15	0	R	I0032
33	-.4024	1	1733.0	1171.0	.0552	.94	-2.61	.91	-2.55	.00	.38	1.00	73.0	71.0	1.15	0	R	I0033
34	.4309	1	1733.0	876.0	.0522	1.00	.06	1.02	.88	.00	.33	1.00	67.2	66.4	.98	0	R	I0034
35	-.0040	1	1733.0	1034.0	.0530	.95	-2.64	.91	-2.96	.00	.38	1.00	69.5	67.7	1.17	0	R	I0035
36	.1380	1	1733.0	983.0	.0526	.97	-1.74	.96	-1.47	.00	.36	1.00	69.0	67.0	1.11	0	R	I0036
37	1.1873	1	1733.0	607.0	.0547	1.17	7.26	1.23	6.58	.00	.14	1.00	63.6	70.7	.58	0	R	I0037
38	.1711	1	1733.0	971.0	.0525	1.05	2.47	1.06	1.98	.00	.27	1.00	64.5	66.9	.84	0	R	I0038
39	1.1486	1	1733.0	620.0	.0545	1.10	4.39	1.15	4.53	.00	.20	1.00	67.5	70.4	.73	0	R	I0039
40	-.1949	1	1733.0	1101.0	.0539	1.03	1.27	1.03	.80	.00	.28	1.00	68.7	69.1	.93	0	R	I0040

Spring 2009 **Reading, Grade 8, Form D**

; ITEM 2009 OK MOD -- REA 8 1 Aug 17 15:20 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	-.8473	1	1885.0	1449.0	.0577	1.01	.38	1.03	.66	.00	.25	1.00	76.8	77.5	.98	0	R	I0001
2	.1627	1	1885.0	1089.0	.0501	1.08	4.69	1.09	3.70	.00	.20	1.00	62.0	66.6	.71	0	R	I0002
3	.0896	1	1885.0	1118.0	.0504	1.02	1.23	1.00	.01	.00	.27	1.00	63.7	67.0	.94	0	R	I0003
4	1.1591	1	1885.0	691.0	.0514	1.04	1.98	1.09	3.21	.00	.22	1.00	68.3	68.8	.86	0	R	I0004
5	-.9462	1	1885.0	1478.0	.0590	.96	-1.25	.89	-2.27	.00	.31	1.00	79.3	78.8	1.07	0	R	I0005
6	.2477	1	1885.0	1055.0	.0499	1.03	2.00	1.05	2.04	.00	.26	1.00	62.8	66.2	.87	0	R	I0006
7	-1.2218	1	1885.0	1552.0	.0633	.92	-2.04	.84	-2.88	.00	.34	1.00	82.7	82.5	1.10	0	R	I0007
8	-.5260	1	1885.0	1346.0	.0542	1.07	2.71	1.07	1.74	.00	.20	1.00	70.0	73.2	.87	0	R	I0008
9	-.4649	1	1885.0	1325.0	.0537	.97	-1.19	.94	-1.75	.00	.32	1.00	72.9	72.4	1.07	0	R	I0009
10	.2078	1	1885.0	1071.0	.0500	.98	-1.28	.96	-1.77	.00	.33	1.00	66.9	66.4	1.09	0	R	I0010
11	.2153	1	1885.0	1068.0	.0500	1.01	.60	1.02	.79	.00	.29	1.00	65.0	66.3	.96	0	R	I0011
12	-.3823	1	1885.0	1296.0	.0530	.99	-.39	1.00	-.03	.00	.29	1.00	71.4	71.4	1.02	0	R	I0012
13	.9446	1	1885.0	774.0	.0504	1.08	4.21	1.10	4.17	.00	.20	1.00	64.0	66.9	.73	0	R	I0013
14	.1527	1	1885.0	1093.0	.0501	.97	-1.88	.98	-.99	.00	.34	1.00	69.2	66.7	1.11	0	R	I0014
15	-1.1627	1	1885.0	1537.0	.0623	.88	-3.44	.72	-5.25	.00	.42	1.00	81.9	81.7	1.17	0	R	I0015
16	-.6708	1	1885.0	1394.0	.0557	.97	-1.17	1.02	.47	.00	.31	1.00	76.3	75.1	1.05	0	R	I0016
17	-1.1092	1	1885.0	1523.0	.0614	.82	-5.46	.66	-6.91	.00	.49	1.00	81.6	81.0	1.24	0	R	I0017
18	.2850	1	1885.0	1040.0	.0498	.94	-3.39	.92	-3.47	.00	.37	1.00	68.9	66.0	1.22	0	R	I0018
19	-.3349	1	1885.0	1279.0	.0527	1.02	.95	1.08	2.41	.00	.25	1.00	70.9	70.8	.93	0	R	I0019
20	-.9742	1	1885.0	1486.0	.0594	.88	-3.91	.77	-4.83	.00	.42	1.00	80.2	79.2	1.18	0	R	I0020
21	.1552	1	1885.0	1092.0	.0501	.93	-3.97	.92	-3.44	.00	.38	1.00	70.0	66.6	1.24	0	R	I0021
22	.8012	1	1885.0	831.0	.0500	1.03	1.68	1.06	2.72	.00	.26	1.00	65.3	66.1	.87	0	R	I0022
23	-.3156	1	1885.0	1272.0	.0525	.91	-4.14	.86	-4.32	.00	.40	1.00	73.3	70.6	1.23	0	R	I0023
24	.6821	1	1885.0	879.0	.0497	1.07	3.85	1.08	3.56	.00	.22	1.00	63.1	65.7	.74	0	R	I0024
25	.3913	1	1885.0	997.0	.0497	1.07	3.90	1.07	3.20	.00	.22	1.00	61.5	65.7	.75	0	R	I0025
26	.0820	1	1885.0	1121.0	.0504	1.01	.75	1.01	.50	.00	.28	1.00	66.2	67.1	.96	0	R	I0026
27	-.0669	1	1885.0	1179.0	.0510	.96	-1.95	.94	-2.09	.00	.34	1.00	69.0	68.2	1.12	0	R	I0027
28	-.2149	1	1885.0	1235.0	.0518	.95	-2.56	.94	-1.98	.00	.35	1.00	72.0	69.5	1.14	0	R	I0028
29	-.8341	1	1885.0	1445.0	.0576	.88	-4.08	.77	-5.40	.00	.42	1.00	77.8	77.3	1.20	0	R	I0029
30	.6228	1	1885.0	903.0	.0497	1.07	4.40	1.09	3.84	.00	.21	1.00	60.3	65.6	.71	0	R	I0030
31	1.0443	1	1885.0	735.0	.0508	1.11	5.77	1.16	5.82	.00	.16	1.00	64.0	67.7	.64	0	R	I0031
32	.7241	1	1885.0	862.0	.0498	1.17	9.68	1.21	9.04	.00	.10	1.00	56.4	65.9	.34	0	R	I0032
33	.4308	1	1885.0	981.0	.0496	1.12	7.11	1.14	5.93	.00	.16	1.00	58.9	65.6	.53	0	R	I0033
34	1.2604	1	1885.0	653.0	.0520	1.09	4.38	1.17	5.58	.00	.16	1.00	68.1	69.9	.73	0	R	I0034
35	-.0565	1	1885.0	1175.0	.0510	.96	-2.03	.93	-2.60	.00	.34	1.00	69.4	68.1	1.13	0	R	I0035
36	.5809	1	1885.0	920.0	.0496	.97	-1.88	.97	-1.53	.00	.34	1.00	67.1	65.6	1.12	0	R	I0036
37	-.7146	1	1885.0	1408.0	.0561	.89	-4.26	.81	-4.61	.00	.42	1.00	77.0	75.7	1.20	0	R	I0037
38	.1652	1	1885.0	1088.0	.0501	.99	-.55	.97	-1.07	.00	.31	1.00	66.3	66.6	1.04	0	R	I0038
39	.8714	1	1885.0	803.0	.0501	1.10	5.71	1.12	4.95	.00	.18	1.00	60.2	66.5	.64	0	R	I0039
40	-.4333	1	1885.0	1314.0	.0534	.96	-1.70	.90	-2.80	.00	.34	1.00	71.8	72.0	1.11	0	R	I0040

Spring 2009 **Reading, Grade 8, Form E**

; ITEM 2009 OK MOD -- REA 8 2 Aug 17 15:20 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	.0742	1	1770.0	1108.0	.0530	.92	-3.75	.89	-3.79	.00	.40	1.00	72.3	69.0	1.22	0	R	I0001
2	1.6380	1	1770.0	535.0	.0552	1.10	4.27	1.34	8.24	.00	.12	1.00	70.6	72.2	.71	0	R	I0002
3	-.8302	1	1770.0	1392.0	.0617	.95	-1.44	.94	-1.21	.00	.33	1.00	81.0	79.4	1.06	0	R	I0003
4	-1.7206	1	1770.0	1578.0	.0796	.94	-1.07	.83	-1.95	.00	.30	1.00	89.2	89.2	1.06	0	R	I0004
5	-1.4747	1	1770.0	1536.0	.0735	.89	-2.38	.79	-2.85	.00	.38	1.00	87.5	86.9	1.11	0	R	I0005
6	.3823	1	1770.0	995.0	.0517	1.01	.57	1.02	.72	.00	.29	1.00	66.4	66.7	.96	0	R	I0006
7	-1.1916	1	1770.0	1479.0	.0676	.90	-2.52	.81	-3.00	.00	.38	1.00	84.5	83.8	1.11	0	R	I0007
8	-.4200	1	1770.0	1274.0	.0567	1.07	2.62	1.08	2.04	.00	.21	1.00	72.5	74.3	.87	0	R	I0008
9	-.3097	1	1770.0	1239.0	.0557	1.03	1.01	1.04	.95	.00	.26	1.00	71.4	73.0	.95	0	R	I0009
10	.2803	1	1770.0	1033.0	.0520	.98	-1.27	.95	-1.90	.00	.34	1.00	67.3	67.3	1.09	0	R	I0010
11	.3126	1	1770.0	1021.0	.0519	1.06	3.31	1.09	3.31	.00	.23	1.00	64.6	67.1	.78	0	R	I0011
12	-.3283	1	1770.0	1245.0	.0558	.96	-1.70	.95	-1.38	.00	.35	1.00	74.9	73.2	1.08	0	R	I0012
13	1.1027	1	1770.0	723.0	.0520	1.05	2.47	1.05	1.81	.00	.23	1.00	64.7	66.8	.85	0	R	I0013
14	.2694	1	1770.0	1037.0	.0521	.99	-.55	1.01	.25	.00	.32	1.00	69.2	67.4	1.02	0	R	I0014
15	-1.0254	1	1770.0	1441.0	.0647	.87	-3.48	.77	-4.16	.00	.43	1.00	83.0	81.8	1.16	0	R	I0015
16	-.5993	1	1770.0	1328.0	.0586	.99	-.20	1.01	.34	.00	.29	1.00	76.9	76.5	1.00	0	R	I0016
17	-.4008	1	1770.0	1268.0	.0565	.88	-4.93	.79	-5.60	.00	.45	1.00	76.8	74.1	1.25	0	R	I0017
18	-.9037	1	1770.0	1411.0	.0627	.82	-5.54	.67	-6.71	.00	.51	1.00	82.5	80.3	1.25	0	R	I0018
19	-.8998	1	1770.0	1410.0	.0627	.93	-2.14	.83	-3.28	.00	.37	1.00	80.9	80.3	1.11	0	R	I0019
20	.5626	1	1770.0	927.0	.0514	1.24	9.90	1.30	9.90	.00	.02	1.00	53.6	66.0	.06	0	R	I0020
21	-1.0088	1	1770.0	1437.0	.0644	.93	-1.95	.85	-2.62	.00	.36	1.00	82.2	81.6	1.09	0	R	I0021
22	1.1624	1	1770.0	701.0	.0523	1.18	8.92	1.27	8.86	.00	.08	1.00	58.9	67.2	.39	0	R	I0022
23	-.8841	1	1770.0	1406.0	.0624	.88	-3.73	.79	-4.23	.00	.43	1.00	81.2	80.1	1.17	0	R	I0023
24	-.6797	1	1770.0	1351.0	.0596	.92	-2.60	.89	-2.48	.00	.38	1.00	78.9	77.5	1.12	0	R	I0024
25	.0938	1	1770.0	1101.0	.0529	.92	-4.22	.88	-4.49	.00	.41	1.00	71.6	68.8	1.25	0	R	I0025
26	1.0595	1	1770.0	739.0	.0519	1.06	3.19	1.12	4.36	.00	.21	1.00	63.8	66.6	.76	0	R	I0026
27	-.2728	1	1770.0	1227.0	.0553	1.01	.23	.98	-.51	.00	.29	1.00	71.6	72.6	1.00	0	R	I0027
28	.0686	1	1770.0	1110.0	.0530	.87	-6.52	.82	-6.61	.00	.46	1.00	74.2	69.0	1.38	0	R	I0028
29	.8626	1	1770.0	813.0	.0514	1.15	8.18	1.19	7.30	.00	.12	1.00	58.5	65.8	.42	0	R	I0029
30	-.0998	1	1770.0	1169.0	.0540	.91	-4.16	.87	-4.38	.00	.41	1.00	73.6	70.7	1.23	0	R	I0030
31	.6626	1	1770.0	889.0	.0513	1.05	2.66	1.08	3.17	.00	.24	1.00	64.5	65.8	.80	0	R	I0031
; 32	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0032
33	1.0838	1	1770.0	730.0	.0520	1.09	4.86	1.14	5.10	.00	.18	1.00	62.8	66.7	.67	0	R	I0033
34	.9553	1	1770.0	778.0	.0516	1.03	1.93	1.06	2.50	.00	.24	1.00	65.6	66.1	.86	0	R	I0034
35	1.1542	1	1770.0	704.0	.0522	1.11	5.72	1.20	6.84	.00	.14	1.00	64.9	67.2	.59	0	R	I0035
36	.7283	1	1770.0	864.0	.0513	.97	-1.59	.98	-.87	.00	.33	1.00	67.8	65.7	1.10	0	R	I0036
37	-.6761	1	1770.0	1350.0	.0596	.93	-2.18	.87	-2.78	.00	.37	1.00	78.2	77.5	1.11	0	R	I0037
38	.3314	1	1770.0	1014.0	.0519	1.03	1.45	1.02	.82	.00	.27	1.00	64.9	67.0	.91	0	R	I0038
39	1.0703	1	1770.0	735.0	.0519	1.15	7.81	1.21	7.46	.00	.11	1.00	58.7	66.6	.47	0	R	I0039
40	-.1291	1	1770.0	1179.0	.0542	.96	-1.89	.93	-2.28	.00	.35	1.00	72.1	71.0	1.11	0	R	I0040

Spring 2009 **Mathematics, Grade 3, Form D**

; ITEM 2009 OK MOD -- MAT 3 1 Aug 17 15:18 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	.5795	1	1535.0	814.0	.0572	1.01	.49	1.02	.60	.00	.39	1.00	69.1	69.3	.97	0	R	I0001
2	-.4938	1	1535.0	1122.0	.0627	.91	-3.24	.80	-3.52	.00	.45	1.00	76.4	75.2	1.18	0	R	I0002
3	.0358	1	1535.0	977.0	.0587	.95	-1.96	.96	-.80	.00	.43	1.00	73.5	70.8	1.10	0	R	I0003
4	-.2882	1	1535.0	1068.0	.0608	.91	-3.41	.90	-1.91	.00	.45	1.00	76.9	73.3	1.17	0	R	I0004
5	.2159	1	1535.0	924.0	.0579	.99	-.28	.99	-.30	.00	.40	1.00	69.6	69.9	1.02	0	R	I0005
6	.1043	1	1535.0	957.0	.0584	.97	-1.20	.96	-.83	.00	.41	1.00	71.9	70.5	1.07	0	R	I0006
7	.0495	1	1535.0	973.0	.0586	1.02	.76	.95	-1.07	.00	.37	1.00	69.6	70.8	.99	0	R	I0007
8	.3460	1	1535.0	885.0	.0576	1.17	7.19	1.28	6.82	.00	.24	1.00	61.8	69.5	.52	0	R	I0008
9	.4549	1	1535.0	852.0	.0574	1.03	1.26	1.03	.92	.00	.37	1.00	67.8	69.4	.92	0	R	I0009
10	-.8271	1	1535.0	1202.0	.0667	.95	-1.61	.89	-1.47	.00	.38	1.00	79.5	79.0	1.08	0	R	I0010
11	.2059	1	1535.0	927.0	.0580	1.15	6.17	1.25	5.77	.00	.25	1.00	64.4	70.0	.60	0	R	I0011
12	-.1896	1	1535.0	1041.0	.0601	.96	-1.43	.96	-.73	.00	.40	1.00	74.1	72.4	1.07	0	R	I0012
13	-1.0760	1	1535.0	1255.0	.0706	.92	-2.19	.81	-2.37	.00	.40	1.00	82.7	82.0	1.11	0	R	I0013
14	-.3629	1	1535.0	1088.0	.0614	.94	-2.25	.85	-2.80	.00	.42	1.00	75.2	73.9	1.13	0	R	I0014
15	.6417	1	1535.0	795.0	.0572	1.07	3.13	1.07	2.18	.00	.33	1.00	65.9	69.3	.81	0	R	I0015
16	-1.0075	1	1535.0	1241.0	.0694	.95	-1.35	1.00	.01	.00	.35	1.00	82.0	81.2	1.05	0	R	I0016
17	.8680	1	1535.0	726.0	.0574	1.17	6.92	1.22	6.31	.00	.26	1.00	62.5	69.7	.55	0	R	I0017
18	.7825	1	1535.0	752.0	.0573	.93	-3.02	.92	-2.53	.00	.46	1.00	72.8	69.5	1.18	0	R	I0018
19	-.6018	1	1535.0	1149.0	.0638	1.07	2.32	1.26	3.80	.00	.26	1.00	76.0	76.3	.85	0	R	I0019
20	-.3856	1	1535.0	1094.0	.0616	.81	-7.26	.69	-6.13	.00	.55	1.00	80.5	74.1	1.37	0	R	I0020
21	-1.1112	1	1535.0	1262.0	.0712	.89	-2.78	.71	-3.74	.00	.43	1.00	82.8	82.4	1.15	0	R	I0021
22	.3194	1	1535.0	893.0	.0576	.97	-1.44	.93	-1.86	.00	.42	1.00	70.2	69.6	1.10	0	R	I0022
23	1.0773	1	1535.0	663.0	.0579	1.12	4.76	1.16	4.55	.00	.28	1.00	66.4	70.4	.70	0	R	I0023
24	.1180	1	1535.0	953.0	.0583	.96	-1.82	.92	-1.85	.00	.43	1.00	71.5	70.4	1.11	0	R	I0024
25	.2427	1	1535.0	916.0	.0579	1.14	5.76	1.20	4.89	.00	.26	1.00	63.4	69.9	.64	0	R	I0025
26	.1958	1	1535.0	930.0	.0580	1.10	4.05	1.15	3.68	.00	.30	1.00	65.8	70.0	.74	0	R	I0026
27	-1.6286	1	1535.0	1351.0	.0824	.93	-1.37	.72	-2.66	.00	.35	1.00	87.9	88.0	1.08	0	R	I0027
28	-.6264	1	1535.0	1155.0	.0641	.95	-1.81	.97	-.49	.00	.39	1.00	79.3	76.6	1.07	0	R	I0028
29	-.5413	1	1535.0	1134.0	.0632	.88	-4.14	.76	-4.19	.00	.47	1.00	78.4	75.7	1.22	0	R	I0029
30	1.6537	1	1535.0	499.0	.0611	1.05	1.63	1.16	3.59	.00	.32	1.00	73.6	74.3	.88	0	R	I0030
31	-.0092	1	1535.0	990.0	.0589	.98	-.93	.99	-.22	.00	.40	1.00	72.2	71.1	1.05	0	R	I0031
32	.4582	1	1535.0	851.0	.0574	1.16	6.74	1.18	4.88	.00	.25	1.00	62.5	69.4	.57	0	R	I0032
33	-.1145	1	1535.0	1020.0	.0596	1.01	.57	1.01	.30	.00	.36	1.00	70.8	71.8	.97	0	R	I0033
34	.7825	1	1535.0	752.0	.0573	1.00	.18	1.01	.26	.00	.39	1.00	69.2	69.5	.98	0	R	I0034
35	.0530	1	1535.0	972.0	.0586	.99	-.55	.94	-1.33	.00	.40	1.00	71.3	70.7	1.05	0	R	I0035
36	-.8182	1	1535.0	1200.0	.0666	.93	-2.09	.89	-1.51	.00	.40	1.00	79.6	78.9	1.10	0	R	I0036
37	.0289	1	1535.0	979.0	.0587	1.03	1.18	1.03	.58	.00	.35	1.00	68.8	70.9	.93	0	R	I0037
38	.6319	1	1535.0	798.0	.0572	1.00	.05	.98	-.65	.00	.39	1.00	68.5	69.3	1.01	0	R	I0038
39	.3261	1	1535.0	891.0	.0576	.97	-1.55	.99	-.24	.00	.43	1.00	71.8	69.6	1.08	0	R	I0039
40	-.0897	1	1535.0	1013.0	.0594	.96	-1.63	.91	-2.03	.00	.41	1.00	72.6	71.7	1.10	0	R	I0040

Spring 2009 **Mathematics, Grade 3, Form E**

; ITEM 2009 OK MOD -- MAT 3 2 Aug 17 15:18 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	.9498	1	1605.0	892.0	.0569	1.01	.55	1.03	.82	.00	.41	1.00	70.2	70.5	.96	0	R	I0001
2	.6251	1	1605.0	1313.0	.0700	.92	-2.17	.83	-1.96	.00	.41	1.00	83.7	82.4	1.10	0	R	I0002
3	.0318	1	1605.0	1159.0	.0617	.98	-.58	1.01	.24	.00	.39	1.00	76.8	75.6	1.02	0	R	I0003
4	-.0686	1	1605.0	1185.0	.0626	.97	-.85	.92	-1.24	.00	.40	1.00	77.3	76.6	1.05	0	R	I0004
5	.5951	1	1605.0	1000.0	.0579	1.01	.44	1.03	.64	.00	.40	1.00	71.0	71.5	.97	0	R	I0005
6	-.2675	1	1605.0	1234.0	.0649	.95	-1.49	.85	-2.23	.00	.41	1.00	77.9	78.6	1.09	0	R	I0006
7	-.4193	1	1605.0	1269.0	.0669	.92	-2.38	.82	-2.37	.00	.43	1.00	81.2	80.2	1.12	0	R	I0007
8	1.1465	1	1605.0	831.0	.0567	1.33	9.90	1.59	9.90	.00	.16	1.00	58.9	70.4	.09	0	R	I0008
9	-1.3449	1	1605.0	1435.0	.0857	1.04	.62	1.38	2.65	.00	.21	1.00	89.8	89.5	.94	0	R	I0009
10	-.5670	1	1605.0	1301.0	.0691	.92	-2.13	.80	-2.48	.00	.42	1.00	83.4	81.8	1.11	0	R	I0010
11	.3939	1	1605.0	1059.0	.0589	1.20	7.54	1.36	6.62	.00	.22	1.00	66.2	72.7	.54	0	R	I0011
12	.0280	1	1605.0	1160.0	.0617	1.15	4.89	1.26	4.00	.00	.24	1.00	70.6	75.7	.73	0	R	I0012
13	-1.1581	1	1605.0	1408.0	.0808	.91	-1.74	.70	-2.82	.00	.39	1.00	87.9	87.9	1.10	0	R	I0013
14	1.4826	1	1605.0	727.0	.0571	.90	-4.42	.89	-3.06	.00	.48	1.00	75.5	71.0	1.23	0	R	I0014
15	1.2463	1	1605.0	800.0	.0568	1.01	.28	1.02	.44	.00	.39	1.00	70.5	70.5	.98	0	R	I0015
16	-1.5659	1	1605.0	1463.0	.0922	.98	-.34	1.11	.76	.00	.25	1.00	91.5	91.2	1.00	0	R	I0016
17	-1.2731	1	1605.0	1425.0	.0838	.93	-1.27	.76	-2.07	.00	.36	1.00	89.2	88.9	1.07	0	R	I0017
18	1.2559	1	1605.0	797.0	.0568	.99	-.43	.99	-.20	.00	.40	1.00	71.0	70.5	1.02	0	R	I0018
19	-.1928	1	1605.0	1216.0	.0640	1.11	3.54	1.23	3.12	.00	.25	1.00	74.9	77.8	.81	0	R	I0019
20	-.6949	1	1605.0	1327.0	.0712	.97	-.81	1.03	.31	.00	.36	1.00	83.1	83.2	1.04	0	R	I0020
21	-.8922	1	1605.0	1364.0	.0749	.94	-1.33	.83	-1.73	.00	.38	1.00	85.7	85.3	1.07	0	R	I0021
22	.6651	1	1605.0	979.0	.0576	.99	-.33	.98	-.53	.00	.42	1.00	72.2	71.2	1.02	0	R	I0022
23	1.5678	1	1605.0	701.0	.0573	1.16	6.19	1.24	6.19	.00	.28	1.00	66.2	71.3	.62	0	R	I0023
24	.4936	1	1605.0	1030.0	.0584	.93	-2.78	.86	-3.09	.00	.46	1.00	74.1	72.0	1.17	0	R	I0024
25	.4078	1	1605.0	1055.0	.0589	1.02	.87	1.03	.66	.00	.38	1.00	72.0	72.6	.95	0	R	I0025
26	.9206	1	1605.0	901.0	.0569	.94	-2.69	.90	-2.77	.00	.46	1.00	72.3	70.5	1.16	0	R	I0026
27	-1.2384	1	1605.0	1420.0	.0829	.92	-1.38	.75	-2.17	.00	.37	1.00	89.0	88.6	1.08	0	R	I0027
28	-.7619	1	1605.0	1340.0	.0724	.91	-2.10	.86	-1.54	.00	.41	1.00	84.4	83.9	1.10	0	R	I0028
29	-.3143	1	1605.0	1245.0	.0655	.88	-3.80	.73	-4.02	.00	.48	1.00	80.7	79.1	1.19	0	R	I0029
30	-.4282	1	1605.0	1271.0	.0670	.92	-2.34	.79	-2.80	.00	.43	1.00	81.0	80.3	1.12	0	R	I0030
31	.1070	1	1605.0	1139.0	.0610	.88	-4.58	.76	-4.53	.00	.50	1.00	77.7	74.9	1.24	0	R	I0031
32	.8426	1	1605.0	925.0	.0571	1.16	6.76	1.19	4.47	.00	.27	1.00	65.0	70.6	.60	0	R	I0032
33	-1.2944	1	1605.0	1428.0	.0843	.96	-.77	.88	-.92	.00	.32	1.00	89.1	89.1	1.04	0	R	I0033
34	1.1111	1	1605.0	842.0	.0567	1.00	.18	1.01	.28	.00	.40	1.00	71.1	70.4	.99	0	R	I0034
35	-.2465	1	1605.0	1229.0	.0646	1.00	-.11	1.10	1.38	.00	.36	1.00	79.6	78.3	.98	0	R	I0035
36	-.7359	1	1605.0	1335.0	.0719	.95	-1.12	.87	-1.45	.00	.37	1.00	83.7	83.6	1.06	0	R	I0036
37	-.2093	1	1605.0	1220.0	.0642	1.07	2.20	1.14	1.98	.00	.29	1.00	77.5	78.0	.87	0	R	I0037
38	-1.0321	1	1605.0	1388.0	.0779	.97	-.60	.82	-1.66	.00	.33	1.00	86.9	86.7	1.04	0	R	I0038
39	-.1361	1	1605.0	1202.0	.0634	.88	-4.01	.78	-3.50	.00	.48	1.00	79.6	77.2	1.20	0	R	I0039
40	2.2212	1	1605.0	512.0	.0608	1.04	1.36	1.22	4.30	.00	.33	1.00	75.5	75.3	.89	0	R	I0040

Spring 2009 **Mathematics, Grade 4, Form D**

; ITEM 2009 OK MOD -- MAT 4 1 Aug 17 15:18 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	-.1938	1	1556.0	955.0	.0562	1.01	.54	1.01	.24	.00	.30	1.00	67.5	67.9	.97	0	R	I0001
2	1.2486	1	1556.0	496.0	.0592	1.05	1.98	1.14	3.55	.00	.25	1.00	72.8	72.8	.86	0	R	I0002
3	-.7721	1	1556.0	1127.0	.0605	1.12	4.24	1.35	6.54	.00	.13	1.00	72.4	73.8	.71	0	R	I0003
4	-.7430	1	1556.0	1119.0	.0602	.88	-4.65	.79	-4.67	.00	.43	1.00	77.5	73.4	1.25	0	R	I0004
5	-1.0820	1	1556.0	1207.0	.0643	.96	-1.08	.91	-1.62	.00	.31	1.00	77.9	78.0	1.06	0	R	I0005
6	.8849	1	1556.0	605.0	.0567	1.07	2.93	1.11	3.37	.00	.25	1.00	66.5	69.2	.81	0	R	I0006
7	-.5432	1	1556.0	1062.0	.0584	1.00	.06	1.05	1.10	.00	.29	1.00	71.8	71.0	.98	0	R	I0007
8	-.1435	1	1556.0	939.0	.0560	.97	-1.27	.97	-.80	.00	.35	1.00	68.2	67.6	1.09	0	R	I0008
9	-.5398	1	1556.0	1061.0	.0583	.96	-1.90	.93	-1.61	.00	.35	1.00	72.6	71.0	1.11	0	R	I0009
10	-.3021	1	1556.0	989.0	.0567	.88	-5.76	.88	-3.58	.00	.45	1.00	74.5	68.7	1.33	0	R	I0010
11	-1.8971	1	1556.0	1368.0	.0806	.94	-1.02	.80	-2.22	.00	.29	1.00	88.0	87.9	1.06	0	R	I0011
12	.1734	1	1556.0	836.0	.0552	1.10	4.94	1.12	4.28	.00	.22	1.00	61.2	66.5	.64	0	R	I0012
13	.6707	1	1556.0	673.0	.0557	.90	-5.14	.87	-4.75	.00	.44	1.00	73.2	67.6	1.33	0	R	I0013
14	1.1013	1	1556.0	539.0	.0580	1.16	6.19	1.23	6.40	.00	.15	1.00	66.6	71.2	.61	0	R	I0014
15	-.0874	1	1556.0	921.0	.0558	1.04	1.96	1.07	2.03	.00	.27	1.00	65.7	67.3	.86	0	R	I0015
16	-.1373	1	1556.0	937.0	.0560	1.02	1.23	1.00	.12	.00	.29	1.00	66.0	67.5	.93	0	R	I0016
17	-.5127	1	1556.0	1053.0	.0581	.89	-4.76	.86	-3.57	.00	.43	1.00	75.2	70.7	1.27	0	R	I0017
18	1.0778	1	1556.0	546.0	.0578	1.02	.81	1.06	1.88	.00	.29	1.00	71.5	70.9	.93	0	R	I0018
19	.3433	1	1556.0	780.0	.0551	1.02	.79	1.00	.18	.00	.31	1.00	65.6	66.4	.95	0	R	I0019
20	.2827	1	1556.0	800.0	.0551	1.02	1.02	1.00	.05	.00	.31	1.00	63.6	66.4	.95	0	R	I0020
21	1.0812	1	1556.0	545.0	.0579	1.02	.93	1.08	2.26	.00	.29	1.00	71.8	71.0	.92	0	R	I0021
22	-.4292	1	1556.0	1028.0	.0575	1.02	1.04	1.13	3.14	.00	.27	1.00	70.3	69.8	.90	0	R	I0022
23	.6429	1	1556.0	682.0	.0556	.99	-.38	.99	-.34	.00	.33	1.00	68.8	67.4	1.02	0	R	I0023
24	.0053	1	1556.0	891.0	.0555	.93	-3.56	.90	-3.57	.00	.40	1.00	70.5	66.8	1.25	0	R	I0024
25	-.6084	1	1556.0	1081.0	.0589	.95	-2.09	.97	-.72	.00	.35	1.00	74.6	71.8	1.10	0	R	I0025
26	-.1530	1	1556.0	942.0	.0560	.99	-.46	1.00	-.11	.00	.33	1.00	67.1	67.6	1.03	0	R	I0026
27	-1.0655	1	1556.0	1203.0	.0640	.90	-3.21	.78	-4.05	.00	.40	1.00	78.8	77.8	1.18	0	R	I0027
28	1.0678	1	1556.0	549.0	.0578	1.10	3.83	1.18	4.99	.00	.21	1.00	67.2	70.8	.75	0	R	I0028
29	.2341	1	1556.0	816.0	.0551	.93	-3.67	.92	-3.13	.00	.41	1.00	68.8	66.4	1.25	0	R	I0029
30	-.2636	1	1556.0	977.0	.0565	.91	-4.43	.87	-3.78	.00	.42	1.00	72.3	68.4	1.27	0	R	I0030
31	-.2860	1	1556.0	984.0	.0566	1.09	4.10	1.15	4.06	.00	.20	1.00	66.1	68.6	.71	0	R	I0031
32	.1277	1	1556.0	851.0	.0552	.90	-5.32	.87	-4.65	.00	.44	1.00	72.5	66.5	1.36	0	R	I0032
33	.0819	1	1556.0	866.0	.0553	1.01	.36	.99	-.18	.00	.32	1.00	65.8	66.6	.98	0	R	I0033
34	.2250	1	1556.0	819.0	.0551	.99	-.35	.98	-.85	.00	.33	1.00	66.3	66.4	1.03	0	R	I0034
35	-.9691	1	1556.0	1179.0	.0628	.91	-3.04	.81	-3.56	.00	.39	1.00	77.8	76.5	1.17	0	R	I0035
36	-.4028	1	1556.0	1020.0	.0573	1.04	1.86	1.14	3.48	.00	.25	1.00	69.2	69.6	.85	0	R	I0036
37	-.1092	1	1556.0	928.0	.0558	1.08	3.91	1.11	3.37	.00	.22	1.00	63.3	67.4	.73	0	R	I0037
38	.1033	1	1556.0	859.0	.0553	.98	-1.11	.95	-1.72	.00	.35	1.00	66.3	66.6	1.09	0	R	I0038
39	1.4026	1	1556.0	453.0	.0606	1.15	4.88	1.29	6.37	.00	.13	1.00	72.9	74.5	.70	0	R	I0039
40	.4863	1	1556.0	733.0	.0553	.96	-1.88	.95	-1.85	.00	.36	1.00	69.5	66.7	1.13	0	R	I0040

Spring 2009 Mathematics, Grade 4, Form E

; ITEM 2009 OK MOD -- MAT 4 2 Aug 17 15:18 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	-.3820	1	1747.0	1254.0	.0578	1.00	-.03	1.00	.02	.00	.34	1.00	74.8	74.4	1.00	0	R	I0001
2	1.7860	1	1747.0	527.0	.0578	1.06	2.09	1.25	5.47	.00	.27	1.00	74.8	74.9	.84	0	R	I0002
3	-.2900	1	1747.0	1226.0	.0570	1.01	.44	.98	-.37	.00	.33	1.00	72.3	73.4	.99	0	R	I0003
4	-.5149	1	1747.0	1293.0	.0590	.93	-2.57	.88	-2.29	.00	.40	1.00	78.1	75.8	1.13	0	R	I0004
5	-.7902	1	1747.0	1368.0	.0623	.94	-1.95	.89	-1.72	.00	.37	1.00	80.1	79.1	1.09	0	R	I0005
6	-.8934	1	1747.0	1394.0	.0638	1.00	-.12	1.06	.88	.00	.30	1.00	80.7	80.3	.99	0	R	I0006
7	.8373	1	1747.0	842.0	.0532	1.17	7.96	1.23	7.39	.00	.20	1.00	61.0	68.6	.49	0	R	I0007
8	.4584	1	1747.0	976.0	.0533	.99	-.33	1.00	.11	.00	.38	1.00	68.1	68.6	1.02	0	R	I0008
9	-.1876	1	1747.0	1194.0	.0562	.97	-1.12	.98	-.38	.00	.37	1.00	74.4	72.4	1.04	0	R	I0009
10	.1584	1	1747.0	1080.0	.0542	1.02	1.08	1.05	1.22	.00	.34	1.00	68.9	69.8	.93	0	R	I0010
11	-1.2140	1	1747.0	1467.0	.0691	.98	-.37	1.02	.31	.00	.29	1.00	84.4	84.1	1.01	0	R	I0011
12	-1.1391	1	1747.0	1451.0	.0677	.99	-.36	.96	-.42	.00	.30	1.00	83.6	83.2	1.02	0	R	I0012
13	.4783	1	1747.0	969.0	.0533	.94	-3.23	.92	-2.64	.00	.44	1.00	72.1	68.6	1.19	0	R	I0013
14	.5576	1	1747.0	941.0	.0532	.93	-3.41	.90	-3.34	.00	.44	1.00	71.3	68.4	1.21	0	R	I0014
15	.3125	1	1747.0	1027.0	.0537	1.08	3.79	1.10	2.78	.00	.29	1.00	64.6	69.0	.78	0	R	I0015
16	.4697	1	1747.0	972.0	.0533	1.06	3.12	1.07	2.04	.00	.31	1.00	65.9	68.6	.82	0	R	I0016
17	-.3621	1	1747.0	1248.0	.0576	.92	-2.97	.85	-3.08	.00	.42	1.00	76.0	74.1	1.16	0	R	I0017
18	-.2066	1	1747.0	1200.0	.0563	.88	-5.13	.80	-4.67	.00	.47	1.00	76.0	72.6	1.27	0	R	I0018
19	.7949	1	1747.0	857.0	.0532	1.03	1.44	1.04	1.49	.00	.34	1.00	67.9	68.5	.91	0	R	I0019
20	.6029	1	1747.0	925.0	.0532	1.02	1.24	1.02	.68	.00	.35	1.00	66.9	68.4	.93	0	R	I0020
21	.2837	1	1747.0	1037.0	.0538	1.03	1.69	1.13	3.53	.00	.33	1.00	68.0	69.1	.87	0	R	I0021
22	-.2066	1	1747.0	1200.0	.0563	1.11	4.23	1.22	4.57	.00	.23	1.00	69.3	72.6	.74	0	R	I0022
23	.8685	1	1747.0	831.0	.0533	1.02	.87	1.03	1.17	.00	.36	1.00	67.8	68.7	.94	0	R	I0023
24	.2518	1	1747.0	1048.0	.0539	.94	-2.83	.88	-3.60	.00	.42	1.00	70.2	69.3	1.18	0	R	I0024
25	-.4290	1	1747.0	1268.0	.0582	.96	-1.57	.96	-.79	.00	.38	1.00	77.1	74.9	1.07	0	R	I0025
26	-1.0234	1	1747.0	1425.0	.0658	.97	-.71	.94	-.80	.00	.32	1.00	81.9	81.9	1.04	0	R	I0026
27	-1.0061	1	1747.0	1421.0	.0655	.90	-2.94	.77	-3.40	.00	.41	1.00	82.4	81.7	1.14	0	R	I0027
28	-.7747	1	1747.0	1364.0	.0621	.94	-2.00	.86	-2.27	.00	.38	1.00	79.5	78.9	1.10	0	R	I0028
29	.4042	1	1747.0	995.0	.0534	1.03	1.68	1.05	1.36	.00	.34	1.00	67.1	68.7	.90	0	R	I0029
30	-.0146	1	1747.0	1138.0	.0551	.99	-.60	.97	-.70	.00	.37	1.00	70.7	70.9	1.04	0	R	I0030
31	.2286	1	1747.0	1056.0	.0539	1.16	7.36	1.29	7.51	.00	.21	1.00	62.5	69.4	.53	0	R	I0031
32	-.4563	1	1747.0	1276.0	.0585	.91	-3.42	.89	-2.15	.00	.43	1.00	77.2	75.2	1.16	0	R	I0032
33	1.5846	1	1747.0	589.0	.0563	1.06	2.36	1.15	3.75	.00	.29	1.00	71.4	73.1	.85	0	R	I0033
34	.3757	1	1747.0	1005.0	.0535	1.06	3.03	1.05	1.47	.00	.31	1.00	64.8	68.8	.84	0	R	I0034
35	.0157	1	1747.0	1128.0	.0549	.89	-5.41	.82	-4.86	.00	.48	1.00	74.8	70.7	1.30	0	R	I0035
36	-.0328	1	1747.0	1144.0	.0552	1.08	3.44	1.17	4.00	.00	.27	1.00	69.7	71.1	.78	0	R	I0036
37	-.3029	1	1747.0	1230.0	.0571	.94	-2.22	.92	-1.71	.00	.40	1.00	75.6	73.5	1.11	0	R	I0037
38	-1.0320	1	1747.0	1427.0	.0659	.90	-2.73	.75	-3.64	.00	.41	1.00	83.1	82.0	1.14	0	R	I0038
; 39	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0039
40	.7892	1	1747.0	859.0	.0532	1.01	.70	1.03	.95	.00	.35	1.00	69.4	68.5	.95	0	R	I0040

Spring 2009 **Mathematics, Grade 5, Form D**

; ITEM 2009 OK MOD -- MAT 5 1 Aug 17 15:19 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	-.5780	1	1800.0	1239.0	.0542	.93	-3.22	.87	-3.65	.00	.37	1.00	72.2	71.1	1.19	0	R	I0001
2	.9640	1	1800.0	664.0	.0529	1.00	-.06	1.03	1.00	.00	.30	1.00	70.2	69.8	.99	0	R	I0002
3	-1.1927	1	1800.0	1427.0	.0611	.97	-.82	.97	-.50	.00	.27	1.00	80.2	79.5	1.03	0	R	I0003
4	.1432	1	1800.0	974.0	.0510	1.05	3.13	1.11	4.11	.00	.24	1.00	62.6	65.6	.77	0	R	I0004
5	-.9594	1	1800.0	1361.0	.0580	.92	-3.00	.86	-2.92	.00	.36	1.00	77.0	76.2	1.15	0	R	I0005
6	.7935	1	1800.0	726.0	.0520	.95	-2.34	.96	-1.65	.00	.36	1.00	71.3	68.2	1.13	0	R	I0006
7	-.8703	1	1800.0	1334.0	.0569	.98	-.86	.97	-.62	.00	.29	1.00	75.4	75.0	1.04	0	R	I0007
8	.7209	1	1800.0	753.0	.0518	1.11	5.45	1.14	5.19	.00	.20	1.00	62.2	67.7	.65	0	R	I0008
9	-.0163	1	1800.0	1035.0	.0513	1.01	.30	1.03	1.04	.00	.29	1.00	66.3	66.1	.97	0	R	I0009
10	-2.3286	1	1800.0	1650.0	.0874	.91	-1.28	.74	-2.63	.00	.28	1.00	91.7	91.7	1.07	0	R	I0010
11	.8370	1	1800.0	710.0	.0522	.94	-3.22	.96	-1.57	.00	.38	1.00	72.5	68.6	1.16	0	R	I0011
12	.0702	1	1800.0	1002.0	.0511	.98	-1.27	.95	-1.84	.00	.33	1.00	66.1	65.8	1.10	0	R	I0012
; 13	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0013
14	-.6046	1	1800.0	1248.0	.0544	1.06	2.43	1.09	2.33	.00	.20	1.00	69.7	71.4	.86	0	R	I0014
15	-.5082	1	1800.0	1215.0	.0537	.89	-5.23	.83	-4.95	.00	.42	1.00	74.5	70.3	1.29	0	R	I0015
16	-1.5524	1	1800.0	1515.0	.0672	.92	-1.94	.84	-2.41	.00	.31	1.00	84.7	84.2	1.09	0	R	I0016
17	-.3696	1	1800.0	1166.0	.0528	.94	-2.99	.89	-3.40	.00	.36	1.00	70.6	68.7	1.19	0	R	I0017
18	.2366	1	1800.0	938.0	.0509	.93	-4.55	.90	-4.10	.00	.40	1.00	69.6	65.6	1.30	0	R	I0018
19	.5777	1	1800.0	807.0	.0513	1.22	9.90	1.26	9.90	.00	.06	1.00	55.2	66.7	.24	0	R	I0019
20	1.2661	1	1800.0	560.0	.0551	1.12	4.61	1.19	5.07	.00	.17	1.00	70.4	73.1	.74	0	R	I0020
21	-1.1964	1	1800.0	1428.0	.0611	.97	-.77	.91	-1.54	.00	.28	1.00	79.7	79.6	1.04	0	R	I0021
22	-.2241	1	1800.0	1113.0	.0520	.94	-3.27	.92	-2.65	.00	.36	1.00	70.5	67.4	1.19	0	R	I0022
23	-.0452	1	1800.0	1046.0	.0514	1.02	.86	.99	-.21	.00	.28	1.00	63.6	66.2	.96	0	R	I0023
24	.3611	1	1800.0	890.0	.0510	1.21	9.90	1.25	9.73	.00	.07	1.00	54.7	65.8	.20	0	R	I0024
25	.0545	1	1800.0	1008.0	.0511	.90	-6.36	.85	-5.99	.00	.43	1.00	71.1	65.8	1.41	0	R	I0025
26	.2444	1	1800.0	935.0	.0509	1.03	1.64	1.03	1.20	.00	.27	1.00	64.2	65.6	.89	0	R	I0026
27	-.2106	1	1800.0	1108.0	.0520	.90	-5.34	.88	-4.32	.00	.41	1.00	71.4	67.3	1.31	0	R	I0027
28	-.8254	1	1800.0	1320.0	.0565	.94	-2.38	.91	-2.09	.00	.34	1.00	74.8	74.4	1.12	0	R	I0028
29	1.0917	1	1800.0	619.0	.0537	1.07	3.15	1.11	3.57	.00	.22	1.00	69.1	71.1	.82	0	R	I0029
30	1.1004	1	1800.0	616.0	.0538	1.12	5.24	1.21	6.34	.00	.16	1.00	67.7	71.2	.68	0	R	I0030
31	.7638	1	1800.0	737.0	.0519	1.04	1.80	1.05	1.81	.00	.27	1.00	66.2	68.0	.89	0	R	I0031
32	1.1033	1	1800.0	615.0	.0538	1.09	3.68	1.19	5.82	.00	.19	1.00	69.5	71.2	.76	0	R	I0032
33	-.8866	1	1800.0	1339.0	.0571	.95	-1.73	.95	-1.01	.00	.31	1.00	77.0	75.2	1.08	0	R	I0033
34	1.0430	1	1800.0	636.0	.0534	1.08	3.47	1.16	5.20	.00	.20	1.00	68.7	70.6	.77	0	R	I0034
35	-.9696	1	1800.0	1364.0	.0581	.86	-5.27	.73	-5.96	.00	.44	1.00	77.9	76.4	1.26	0	R	I0035
36	-.1435	1	1800.0	1083.0	.0517	.98	-1.35	.97	-1.17	.00	.32	1.00	68.5	66.8	1.09	0	R	I0036
37	.9864	1	1800.0	656.0	.0530	1.08	3.55	1.12	3.91	.00	.21	1.00	67.6	70.0	.79	0	R	I0037
38	-.4738	1	1800.0	1203.0	.0534	.94	-3.10	.92	-2.43	.00	.36	1.00	71.9	69.9	1.17	0	R	I0038
39	1.0803	1	1800.0	623.0	.0536	.99	-.52	1.03	.89	.00	.31	1.00	73.1	71.0	1.01	0	R	I0039
40	.5173	1	1800.0	830.0	.0512	.96	-2.13	.96	-1.69	.00	.35	1.00	68.9	66.4	1.13	0	R	I0040

Spring 2009 **Mathematics, Grade 5, Form E**

; ITEM 2009 OK MOD -- MAT 5 2 Aug 17 15:19 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	1.0831	1	1747.0	623.0	.0544	1.01	.42	1.00	-.03	.00	.33	1.00	70.1	71.0	.98	0	R	I0001
2	-1.0069	1	1747.0	1345.0	.0601	.94	-2.17	.93	-1.31	.00	.33	1.00	78.7	77.5	1.09	0	R	I0002
3	.6162	1	1747.0	788.0	.0523	.94	-3.16	.94	-2.49	.00	.39	1.00	71.3	67.2	1.19	0	R	I0003
4	.0498	1	1747.0	997.0	.0523	1.08	4.44	1.12	3.98	.00	.23	1.00	62.6	66.3	.69	0	R	I0004
5	-.3166	1	1747.0	1128.0	.0537	.91	-4.82	.86	-4.12	.00	.41	1.00	71.6	68.9	1.28	0	R	I0005
6	-.8395	1	1747.0	1297.0	.0581	.96	-1.44	.96	-.89	.00	.31	1.00	76.1	75.3	1.07	0	R	I0006
7	-.9675	1	1747.0	1334.0	.0596	1.01	.32	1.00	-.04	.00	.25	1.00	77.3	77.0	.99	0	R	I0007
8	.6904	1	1747.0	761.0	.0525	1.08	4.00	1.10	3.51	.00	.25	1.00	62.9	67.6	.74	0	R	I0008
9	.8776	1	1747.0	694.0	.0533	1.00	.00	1.01	.19	.00	.33	1.00	70.4	69.1	1.00	0	R	I0009
10	.5371	1	1747.0	817.0	.0522	1.11	6.02	1.15	5.42	.00	.21	1.00	60.6	66.8	.60	0	R	I0010
11	1.8934	1	1747.0	381.0	.0627	1.03	.86	1.21	3.86	.00	.25	1.00	80.1	80.0	.92	0	R	I0011
12	.0552	1	1747.0	995.0	.0523	.97	-1.88	.97	-1.14	.00	.36	1.00	68.0	66.3	1.11	0	R	I0012
13	.9060	1	1747.0	684.0	.0534	.96	-2.02	.97	-1.22	.00	.37	1.00	71.8	69.3	1.11	0	R	I0013
14	-.3397	1	1747.0	1136.0	.0539	1.05	2.56	1.07	2.00	.00	.24	1.00	66.5	69.1	.84	0	R	I0014
15	-.4514	1	1747.0	1174.0	.0546	.93	-3.47	.88	-3.24	.00	.38	1.00	73.7	70.3	1.20	0	R	I0015
16	-1.8237	1	1747.0	1530.0	.0752	.92	-1.63	.91	-1.04	.00	.29	1.00	87.6	87.6	1.07	0	R	I0016
17	-.1799	1	1747.0	1080.0	.0530	.92	-4.04	.89	-3.59	.00	.40	1.00	70.7	67.6	1.24	0	R	I0017
18	1.4765	1	1747.0	497.0	.0576	1.02	.82	1.10	2.37	.00	.29	1.00	75.3	75.1	.94	0	R	I0018
19	-.9357	1	1747.0	1325.0	.0592	1.03	.88	1.11	1.94	.00	.23	1.00	76.5	76.6	.94	0	R	I0019
20	-1.5302	1	1747.0	1473.0	.0687	.98	-.36	.97	-.38	.00	.24	1.00	84.3	84.4	1.02	0	R	I0020
21	-1.0691	1	1747.0	1362.0	.0609	.92	-2.61	.86	-2.46	.00	.35	1.00	79.6	78.4	1.12	0	R	I0021
22	-.2138	1	1747.0	1092.0	.0532	.98	-1.11	.97	-.86	.00	.33	1.00	68.1	67.9	1.06	0	R	I0022
23	-.2194	1	1747.0	1094.0	.0532	.95	-2.50	.91	-2.85	.00	.37	1.00	69.2	68.0	1.17	0	R	I0023
24	-1.3897	1	1747.0	1442.0	.0660	.93	-1.79	.97	-.46	.00	.30	1.00	83.5	82.6	1.07	0	R	I0024
25	-.0656	1	1747.0	1039.0	.0526	.88	-6.99	.84	-5.40	.00	.46	1.00	73.4	66.9	1.42	0	R	I0025
; 26	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0026
27	.9547	1	1747.0	667.0	.0537	1.15	6.78	1.25	7.96	.00	.17	1.00	65.0	69.8	.56	0	R	I0027
28	-.8227	1	1747.0	1292.0	.0579	.95	-2.02	.99	-.23	.00	.33	1.00	75.0	75.0	1.09	0	R	I0028
29	-1.4161	1	1747.0	1448.0	.0665	.91	-2.21	.84	-2.28	.00	.33	1.00	83.2	83.0	1.10	0	R	I0029
30	.3450	1	1747.0	888.0	.0520	1.06	3.28	1.07	2.75	.00	.26	1.00	63.4	66.1	.78	0	R	I0030
31	.4882	1	1747.0	835.0	.0521	1.04	2.45	1.07	2.68	.00	.28	1.00	65.2	66.6	.83	0	R	I0031
32	.7875	1	1747.0	726.0	.0529	1.14	6.75	1.21	7.25	.00	.18	1.00	61.6	68.3	.55	0	R	I0032
33	-.9781	1	1747.0	1337.0	.0597	.94	-1.96	.95	-.96	.00	.33	1.00	78.4	77.1	1.09	0	R	I0033
34	-.0242	1	1747.0	1024.0	.0525	1.08	4.37	1.15	4.80	.00	.22	1.00	62.8	66.7	.69	0	R	I0034
35	1.4831	1	1747.0	495.0	.0577	.95	-1.66	1.00	.02	.00	.35	1.00	77.9	75.2	1.06	0	R	I0035
36	.7430	1	1747.0	742.0	.0527	1.04	1.93	1.05	1.93	.00	.29	1.00	67.7	68.0	.87	0	R	I0036
37	.9662	1	1747.0	663.0	.0537	.96	-1.93	1.00	.03	.00	.36	1.00	73.0	69.9	1.08	0	R	I0037
38	-.5115	1	1747.0	1194.0	.0550	.96	-1.87	.92	-1.97	.00	.34	1.00	72.1	71.0	1.11	0	R	I0038
39	.2478	1	1747.0	924.0	.0520	.90	-5.71	.87	-5.23	.00	.43	1.00	71.3	66.0	1.37	0	R	I0039
40	.9003	1	1747.0	686.0	.0534	1.17	7.74	1.26	8.41	.00	.14	1.00	63.8	69.3	.49	0	R	I0040

Spring 2009 **Mathematics, Grade 6, Form D**

; ITEM 2009 OK MOD -- MAT 6 1 Aug 17 15:19 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	-1.5062	1	1698.0	1458.0	.0716	.98	-.42	.93	-1.09	.00	.19	1.00	85.9	85.9	1.02	0	R	I0001
2	.0932	1	1698.0	987.0	.0517	.93	-4.25	.92	-3.95	.00	.32	1.00	68.2	64.1	1.31	0	R	I0002
3	.1333	1	1698.0	972.0	.0516	1.08	4.87	1.09	4.07	.00	.11	1.00	59.3	63.8	.63	0	R	I0003
4	1.1887	1	1698.0	579.0	.0539	.96	-1.86	.97	-.97	.00	.27	1.00	72.2	69.0	1.10	0	R	I0004
5	.4934	1	1698.0	835.0	.0512	.89	-7.65	.88	-6.82	.00	.39	1.00	71.1	62.8	1.59	0	R	I0005
6	-1.0874	1	1698.0	1365.0	.0633	1.11	2.84	1.32	5.68	.00	-.03	1.00	81.0	80.5	.82	0	R	I0006
7	-1.1861	1	1698.0	1389.0	.0650	.97	-.82	.95	-.96	.00	.22	1.00	81.9	81.9	1.04	0	R	I0007
8	-.1218	1	1698.0	1066.0	.0527	1.03	1.56	1.03	1.34	.00	.17	1.00	65.4	66.3	.90	0	R	I0008
9	.6695	1	1698.0	768.0	.0514	.99	-.40	1.00	.12	.00	.23	1.00	65.1	63.5	1.02	0	R	I0009
10	1.0181	1	1698.0	639.0	.0528	1.12	6.19	1.17	6.50	.00	.05	1.00	62.0	66.7	.56	0	R	I0010
11	.9572	1	1698.0	661.0	.0525	.99	-.67	.99	-.43	.00	.24	1.00	66.0	66.1	1.04	0	R	I0011
12	-.6856	1	1698.0	1254.0	.0575	.89	-4.06	.82	-4.97	.00	.37	1.00	76.0	74.4	1.22	0	R	I0012
13	1.2032	1	1698.0	574.0	.0540	1.03	1.43	1.08	2.78	.00	.16	1.00	69.7	69.2	.89	0	R	I0013
14	-.2115	1	1698.0	1098.0	.0532	1.00	-.16	1.00	.13	.00	.22	1.00	67.2	67.4	1.00	0	R	I0014
15	.6457	1	1698.0	777.0	.0514	1.03	1.96	1.05	2.53	.00	.18	1.00	62.2	63.3	.83	0	R	I0015
16	1.1569	1	1698.0	590.0	.0537	1.07	3.49	1.11	4.02	.00	.11	1.00	66.0	68.6	.77	0	R	I0016
17	.1439	1	1698.0	968.0	.0516	.98	-1.35	.98	-1.10	.00	.26	1.00	64.7	63.7	1.10	0	R	I0017
18	.8970	1	1698.0	683.0	.0522	1.16	8.98	1.21	8.79	.00	-.01	1.00	57.7	65.4	.33	0	R	I0018
19	-1.1777	1	1698.0	1387.0	.0649	.98	-.55	.94	-1.08	.00	.21	1.00	81.6	81.7	1.03	0	R	I0019
20	-1.5852	1	1698.0	1473.0	.0735	.92	-1.65	.82	-2.66	.00	.29	1.00	86.8	86.8	1.08	0	R	I0020
21	.7118	1	1698.0	752.0	.0515	.98	-1.16	.99	-.71	.00	.25	1.00	65.5	63.8	1.08	0	R	I0021
22	-.0693	1	1698.0	1047.0	.0524	.91	-5.43	.88	-5.19	.00	.36	1.00	70.1	65.7	1.37	0	R	I0022
23	.5537	1	1698.0	812.0	.0512	.98	-1.28	1.00	-.22	.00	.25	1.00	66.2	63.0	1.08	0	R	I0023
24	.8402	1	1698.0	704.0	.0519	1.16	9.04	1.21	9.10	.00	-.01	1.00	56.8	64.8	.30	0	R	I0024
25	.1279	1	1698.0	974.0	.0516	1.00	.19	1.02	.72	.00	.22	1.00	64.5	63.8	.98	0	R	I0025
26	-1.0835	1	1698.0	1364.0	.0632	.93	-2.04	.85	-3.02	.00	.30	1.00	80.8	80.4	1.11	0	R	I0026
27	-2.3804	1	1698.0	1585.0	.0989	.91	-1.17	.62	-3.93	.00	.31	1.00	93.4	93.4	1.08	0	R	I0027
28	.6748	1	1698.0	766.0	.0514	.97	-1.72	.99	-.46	.00	.26	1.00	66.3	63.5	1.12	0	R	I0028
29	-1.8515	1	1698.0	1518.0	.0806	.90	-1.73	.72	-3.75	.00	.32	1.00	89.5	89.4	1.09	0	R	I0029
30	.4778	1	1698.0	841.0	.0512	1.09	5.80	1.10	4.97	.00	.10	1.00	57.1	62.8	.53	0	R	I0030
31	-.5914	1	1698.0	1225.0	.0565	1.00	-.04	1.02	.61	.00	.20	1.00	73.2	72.9	.99	0	R	I0031
32	1.0517	1	1698.0	627.0	.0530	1.10	5.27	1.15	5.72	.00	.07	1.00	63.8	67.2	.63	0	R	I0032
33	-.8538	1	1698.0	1303.0	.0597	.86	-4.89	.79	-5.00	.00	.42	1.00	79.0	77.0	1.23	0	R	I0033
34	-.6267	1	1698.0	1236.0	.0569	.87	-5.10	.81	-5.35	.00	.40	1.00	75.7	73.5	1.27	0	R	I0034
35	.1864	1	1698.0	952.0	.0515	1.06	4.15	1.08	3.76	.00	.13	1.00	58.8	63.4	.67	0	R	I0035
36	.0879	1	1698.0	989.0	.0518	1.04	2.65	1.06	2.67	.00	.16	1.00	62.5	64.2	.79	0	R	I0036
37	-1.2419	1	1698.0	1402.0	.0660	.90	-2.47	.80	-3.64	.00	.34	1.00	82.8	82.6	1.12	0	R	I0037
38	1.4234	1	1698.0	501.0	.0559	1.04	1.42	1.11	3.24	.00	.15	1.00	72.4	72.4	.89	0	R	I0038
39	.6299	1	1698.0	783.0	.0513	.97	-1.69	.97	-1.33	.00	.26	1.00	65.7	63.3	1.12	0	R	I0039
40	.8943	1	1698.0	684.0	.0522	1.00	-.12	1.01	.27	.00	.22	1.00	66.5	65.3	1.00	0	R	I0040

Spring 2009 **Mathematics, Grade 6, Form E**

; ITEM 2009 OK MOD -- MAT 6 2 Aug 17 15:19 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	-.5780	1	1665.0	1115.0	.0549	.95	-2.60	.90	-3.09	.00	.31	1.00	70.6	69.0	1.17	0	R	I0001
2	-.1588	1	1665.0	969.0	.0526	1.03	1.49	1.04	1.69	.00	.22	1.00	64.1	64.7	.88	0	R	I0002
3	-.0350	1	1665.0	924.0	.0523	1.05	3.30	1.08	3.35	.00	.18	1.00	61.4	64.1	.74	0	R	I0003
4	.6167	1	1665.0	686.0	.0530	.99	-.36	1.00	.00	.00	.27	1.00	66.8	66.2	1.02	0	R	I0004
5	-.0816	1	1665.0	941.0	.0524	.89	-6.71	.87	-5.99	.00	.40	1.00	70.5	64.3	1.48	0	R	I0005
6	-.8607	1	1665.0	1205.0	.0574	.95	-1.94	.92	-2.05	.00	.29	1.00	73.9	73.1	1.11	0	R	I0006
; 7	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0007
8	-.3842	1	1665.0	1049.0	.0536	1.07	3.75	1.11	3.83	.00	.14	1.00	64.1	66.7	.73	0	R	I0008
9	.2316	1	1665.0	826.0	.0521	1.05	2.92	1.07	3.44	.00	.20	1.00	63.0	64.0	.76	0	R	I0009
10	.1637	1	1665.0	851.0	.0521	1.02	1.34	1.04	1.84	.00	.23	1.00	62.5	63.9	.88	0	R	I0010
11	1.0764	1	1665.0	530.0	.0559	.90	-4.35	.88	-4.13	.00	.39	1.00	76.0	71.4	1.23	0	R	I0011
12	-.2902	1	1665.0	1016.0	.0531	.98	-1.00	.96	-1.35	.00	.27	1.00	66.6	65.8	1.08	0	R	I0012
13	.5301	1	1665.0	717.0	.0527	.94	-3.55	.94	-2.90	.00	.34	1.00	70.8	65.5	1.23	0	R	I0013
14	-.3441	1	1665.0	1035.0	.0534	.93	-4.19	.90	-3.89	.00	.35	1.00	69.4	66.3	1.28	0	R	I0014
15	.8965	1	1665.0	589.0	.0546	1.06	2.95	1.09	3.12	.00	.18	1.00	66.3	69.2	.81	0	R	I0015
16	1.0267	1	1665.0	546.0	.0555	1.10	4.18	1.15	4.73	.00	.13	1.00	66.8	70.8	.74	0	R	I0016
17	.1121	1	1665.0	870.0	.0521	1.12	7.09	1.13	5.91	.00	.10	1.00	55.2	63.9	.45	0	R	I0017
18	1.5341	1	1665.0	395.0	.0610	1.06	1.85	1.14	3.15	.00	.15	1.00	76.9	77.6	.89	0	R	I0018
19	-1.0030	1	1665.0	1247.0	.0590	1.01	.43	1.04	.89	.00	.19	1.00	75.4	75.3	.97	0	R	I0019
20	.6902	1	1665.0	660.0	.0534	1.09	4.49	1.10	4.14	.00	.14	1.00	63.9	66.9	.70	0	R	I0020
21	.4803	1	1665.0	735.0	.0525	.96	-2.20	.96	-1.64	.00	.31	1.00	67.4	65.2	1.15	0	R	I0021
22	-.1977	1	1665.0	983.0	.0528	.95	-2.81	.94	-2.63	.00	.32	1.00	66.8	65.0	1.20	0	R	I0022
23	.1773	1	1665.0	846.0	.0521	.99	-.41	1.00	.04	.00	.27	1.00	64.3	63.9	1.02	0	R	I0023
24	1.3038	1	1665.0	460.0	.0582	1.06	2.11	1.13	3.43	.00	.16	1.00	73.9	74.5	.87	0	R	I0024
25	-.2452	1	1665.0	1000.0	.0530	1.01	.67	1.01	.45	.00	.23	1.00	64.2	65.4	.96	0	R	I0025
26	-1.1431	1	1665.0	1286.0	.0609	.93	-2.15	.87	-2.69	.00	.31	1.00	78.5	77.4	1.11	0	R	I0026
27	-.3727	1	1665.0	1045.0	.0535	.98	-.97	.96	-1.37	.00	.27	1.00	67.1	66.6	1.07	0	R	I0027
28	.3377	1	1665.0	787.0	.0522	1.02	1.06	1.02	.78	.00	.24	1.00	63.8	64.4	.92	0	R	I0028
29	-2.1639	1	1665.0	1496.0	.0830	.93	-1.06	.89	-1.28	.00	.26	1.00	89.8	89.8	1.06	0	R	I0029
30	1.7450	1	1665.0	341.0	.0641	1.09	2.46	1.26	4.71	.00	.09	1.00	79.9	80.4	.85	0	R	I0030
31	-.7413	1	1665.0	1168.0	.0562	1.00	.13	1.04	1.19	.00	.22	1.00	72.1	71.3	.98	0	R	I0031
32	1.1588	1	1665.0	504.0	.0567	1.07	2.88	1.13	3.63	.00	.15	1.00	72.1	72.6	.83	0	R	I0032
33	-1.1431	1	1665.0	1286.0	.0609	.90	-3.15	.92	-1.77	.00	.34	1.00	77.9	77.4	1.15	0	R	I0033
34	-.3756	1	1665.0	1046.0	.0536	.87	-7.30	.82	-6.71	.00	.43	1.00	73.3	66.6	1.47	0	R	I0034
35	-.8673	1	1665.0	1207.0	.0575	.93	-2.70	.92	-2.11	.00	.32	1.00	74.5	73.2	1.14	0	R	I0035
36	-.3957	1	1665.0	1053.0	.0537	1.00	.08	1.05	1.86	.00	.24	1.00	65.9	66.8	.98	0	R	I0036
37	-1.5216	1	1665.0	1379.0	.0672	.93	-1.78	.82	-3.01	.00	.30	1.00	83.1	82.8	1.09	0	R	I0037
38	-.5302	1	1665.0	1099.0	.0545	1.06	2.84	1.09	2.64	.00	.15	1.00	66.4	68.4	.82	0	R	I0038
39	.4225	1	1665.0	756.0	.0524	.94	-3.88	.92	-3.66	.00	.35	1.00	68.9	64.8	1.28	0	R	I0039
40	.9294	1	1665.0	578.0	.0548	1.06	2.64	1.11	3.75	.00	.17	1.00	68.6	69.6	.82	0	R	I0040

Spring 2009 **Mathematics, Grade 7, Form D**

; ITEM 2009 OK MOD -- MAT 7 1 Aug 17 15:19 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	-.3556	1	1765.0	1128.0	.0525	.97	-1.54	.95	-1.88	.00	.29	1.00	67.4	67.5	1.10	0	R	I0001
2	-1.9040	1	1765.0	1553.0	.0754	.93	-1.29	.83	-2.25	.00	.28	1.00	88.0	88.0	1.07	0	R	I0002
3	.7660	1	1765.0	700.0	.0519	1.13	6.98	1.15	6.08	.00	.10	1.00	59.7	66.9	.54	0	R	I0003
4	-1.0999	1	1765.0	1370.0	.0597	1.05	1.47	1.16	3.07	.00	.14	1.00	77.8	78.0	.91	0	R	I0004
5	.9271	1	1765.0	641.0	.0527	1.18	8.33	1.27	9.26	.00	.03	1.00	61.5	68.4	.44	0	R	I0005
6	-1.2058	1	1765.0	1399.0	.0612	.91	-2.78	.83	-3.38	.00	.35	1.00	79.8	79.5	1.14	0	R	I0006
7	-1.0160	1	1765.0	1346.0	.0586	1.02	.75	1.03	.70	.00	.19	1.00	76.5	76.7	.96	0	R	I0007
8	-1.3058	1	1765.0	1425.0	.0628	1.00	.04	1.03	.55	.00	.20	1.00	80.8	80.9	.99	0	R	I0008
9	-.3118	1	1765.0	1112.0	.0522	.86	-8.09	.83	-6.46	.00	.45	1.00	74.7	67.1	1.48	0	R	I0009
10	-.4757	1	1765.0	1171.0	.0532	1.06	2.92	1.08	2.56	.00	.17	1.00	66.2	68.9	.83	0	R	I0010
11	1.0714	1	1765.0	590.0	.0537	.94	-2.61	.95	-1.69	.00	.32	1.00	73.9	70.1	1.13	0	R	I0011
12	-.5041	1	1765.0	1181.0	.0534	.89	-5.43	.85	-5.02	.00	.40	1.00	74.6	69.3	1.31	0	R	I0012
13	.8967	1	1765.0	652.0	.0525	.92	-4.36	.89	-4.26	.00	.38	1.00	72.3	68.1	1.26	0	R	I0013
14	-2.1247	1	1765.0	1589.0	.0814	.99	-.22	1.03	.38	.00	.17	1.00	90.1	90.0	1.01	0	R	I0014
15	.5910	1	1765.0	766.0	.0512	1.09	5.35	1.11	4.70	.00	.14	1.00	61.3	65.5	.62	0	R	I0015
16	.7258	1	1765.0	715.0	.0517	1.05	2.74	1.06	2.29	.00	.20	1.00	64.5	66.5	.82	0	R	I0016
17	-1.1142	1	1765.0	1374.0	.0599	.90	-3.17	.82	-3.95	.00	.36	1.00	78.5	78.2	1.16	0	R	I0017
18	-.1426	1	1765.0	1049.0	.0515	.88	-7.63	.84	-6.79	.00	.43	1.00	72.2	65.6	1.50	0	R	I0018
19	.5596	1	1765.0	778.0	.0511	1.16	8.81	1.19	8.32	.00	.06	1.00	55.6	65.3	.35	0	R	I0019
20	1.5889	1	1765.0	425.0	.0589	1.02	.68	1.11	2.39	.00	.20	1.00	77.5	77.1	.94	0	R	I0020
21	.1827	1	1765.0	924.0	.0507	.89	-7.59	.86	-6.73	.00	.42	1.00	71.6	64.3	1.53	0	R	I0021
22	.1492	1	1765.0	937.0	.0508	.91	-6.11	.88	-5.45	.00	.39	1.00	69.7	64.3	1.43	0	R	I0022
23	.0017	1	1765.0	994.0	.0510	1.00	.25	1.01	.29	.00	.26	1.00	64.8	64.7	.98	0	R	I0023
24	.3679	1	1765.0	852.0	.0508	1.09	5.75	1.13	6.05	.00	.15	1.00	58.6	64.5	.56	0	R	I0024
25	.1053	1	1765.0	954.0	.0508	.95	-2.96	.94	-2.82	.00	.33	1.00	67.1	64.4	1.21	0	R	I0025
26	.5257	1	1765.0	791.0	.0510	1.10	6.13	1.12	5.47	.00	.13	1.00	59.3	65.1	.56	0	R	I0026
27	1.1295	1	1765.0	570.0	.0541	1.07	3.08	1.16	4.96	.00	.15	1.00	70.0	70.8	.79	0	R	I0027
28	.6515	1	1765.0	743.0	.0514	.96	-2.10	.97	-1.45	.00	.32	1.00	68.5	66.0	1.13	0	R	I0028
; 29	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0029
30	.7580	1	1765.0	703.0	.0518	1.04	2.42	1.05	2.06	.00	.20	1.00	64.6	66.8	.84	0	R	I0030
31	-.1347	1	1765.0	1046.0	.0514	1.00	-.25	1.01	.29	.00	.26	1.00	67.3	65.5	1.00	0	R	I0031
32	.4790	1	1765.0	809.0	.0509	1.08	4.72	1.09	3.98	.00	.17	1.00	60.3	64.9	.66	0	R	I0032
33	.7741	1	1765.0	697.0	.0519	1.06	3.28	1.08	3.28	.00	.18	1.00	65.0	66.9	.78	0	R	I0033
34	-.4899	1	1765.0	1176.0	.0533	.93	-3.68	.89	-3.69	.00	.35	1.00	71.4	69.1	1.22	0	R	I0034
35	-.6589	1	1765.0	1234.0	.0547	1.07	2.82	1.10	2.64	.00	.14	1.00	70.8	71.4	.83	0	R	I0035
36	-.2387	1	1765.0	1085.0	.0519	.92	-4.63	.89	-4.14	.00	.37	1.00	69.7	66.4	1.30	0	R	I0036
37	.1878	1	1765.0	922.0	.0507	.86	-9.43	.83	-8.13	.00	.46	1.00	73.6	64.3	1.65	0	R	I0037
38	-.7531	1	1765.0	1265.0	.0556	.97	-1.36	.93	-1.74	.00	.28	1.00	73.5	72.7	1.08	0	R	I0038
39	.9719	1	1765.0	625.0	.0530	.99	-.67	1.02	.66	.00	.27	1.00	72.0	68.9	1.02	0	R	I0039
40	.4246	1	1765.0	830.0	.0508	1.07	4.49	1.08	3.78	.00	.17	1.00	60.2	64.6	.67	0	R	I0040

Spring 2009 **Mathematics, Grade 7, Form E**

; ITEM 2009 OX MOD -- MAT 7 2 Aug 17 15:19 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
; 1	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0001
2	.1824	1	1688.0	809.0	.0522	.97	-1.70	.98	-.77	.00	.32	1.00	66.8	65.0	1.12	0	R	I0002
3	.0684	1	1688.0	851.0	.0521	1.02	1.38	1.02	1.09	.00	.25	1.00	63.4	64.8	.90	0	R	I0003
4	-.2147	1	1688.0	955.0	.0524	.96	-2.43	.96	-1.65	.00	.33	1.00	68.1	65.3	1.16	0	R	I0004
5	.8051	1	1688.0	588.0	.0547	1.11	4.72	1.15	4.70	.00	.14	1.00	66.5	69.8	.71	0	R	I0005
6	-1.1104	1	1688.0	1254.0	.0586	.91	-3.15	.84	-3.78	.00	.36	1.00	75.5	74.9	1.17	0	R	I0006
7	2.6316	1	1688.0	159.0	.0865	1.07	1.03	1.39	3.73	.00	.07	1.00	90.5	90.6	.92	0	R	I0007
8	-1.6308	1	1688.0	1389.0	.0664	1.00	.02	1.05	.86	.00	.19	1.00	82.8	82.4	.99	0	R	I0008
9	-.4914	1	1688.0	1054.0	.0535	.85	-8.06	.81	-7.24	.00	.46	1.00	74.6	67.2	1.49	0	R	I0009
10	.4044	1	1688.0	728.0	.0527	1.17	9.11	1.22	8.92	.00	.07	1.00	57.5	66.1	.34	0	R	I0010
11	1.1040	1	1688.0	492.0	.0572	.94	-2.20	.99	-.20	.00	.33	1.00	76.1	73.5	1.09	0	R	I0011
12	-.7961	1	1688.0	1157.0	.0555	.88	-5.61	.82	-5.43	.00	.41	1.00	74.8	70.5	1.31	0	R	I0012
13	-1.7778	1	1688.0	1421.0	.0692	1.02	.59	1.04	.64	.00	.16	1.00	84.2	84.3	.97	0	R	I0013
14	-2.6483	1	1688.0	1559.0	.0936	1.01	.09	1.09	.84	.00	.12	1.00	92.4	92.4	.99	0	R	I0014
15	.1200	1	1688.0	832.0	.0521	.99	-.88	.98	-.73	.00	.30	1.00	65.1	64.9	1.06	0	R	I0015
16	.2806	1	1688.0	773.0	.0523	1.12	6.48	1.13	5.59	.00	.14	1.00	58.5	65.4	.54	0	R	I0016
17	-1.1485	1	1688.0	1265.0	.0591	.89	-3.98	.81	-4.58	.00	.39	1.00	76.5	75.5	1.21	0	R	I0017
18	-.2753	1	1688.0	977.0	.0526	.89	-6.46	.85	-6.21	.00	.42	1.00	70.7	65.6	1.44	0	R	I0018
19	.9388	1	1688.0	544.0	.0557	1.02	.75	1.03	.93	.00	.25	1.00	71.8	71.4	.95	0	R	I0019
20	1.0715	1	1688.0	502.0	.0568	1.08	3.07	1.19	4.99	.00	.15	1.00	72.5	73.1	.80	0	R	I0020
21	-.0863	1	1688.0	908.0	.0522	.92	-5.09	.89	-4.81	.00	.38	1.00	69.0	64.9	1.36	0	R	I0021
22	-.8207	1	1688.0	1165.0	.0557	.88	-5.30	.83	-5.08	.00	.41	1.00	75.1	70.8	1.29	0	R	I0022
23	-.1381	1	1688.0	927.0	.0523	.94	-3.58	.93	-3.23	.00	.35	1.00	68.8	65.0	1.25	0	R	I0023
; 24	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0024
25	-.1053	1	1688.0	915.0	.0522	1.01	.62	1.04	1.92	.00	.26	1.00	64.8	64.9	.93	0	R	I0025
26	.5668	1	1688.0	670.0	.0533	1.15	7.48	1.21	7.63	.00	.09	1.00	60.8	67.3	.48	0	R	I0026
27	.4516	1	1688.0	711.0	.0528	.96	-2.24	.96	-1.56	.00	.33	1.00	70.3	66.4	1.14	0	R	I0027
28	.1906	1	1688.0	806.0	.0522	.96	-2.41	.95	-2.35	.00	.33	1.00	67.9	65.1	1.17	0	R	I0028
29	.3190	1	1688.0	759.0	.0524	1.17	9.32	1.20	8.25	.00	.07	1.00	55.3	65.6	.32	0	R	I0029
30	1.5287	1	1688.0	372.0	.0623	.97	-.83	1.06	1.31	.00	.26	1.00	81.0	79.0	1.01	0	R	I0030
31	-.3419	1	1688.0	1001.0	.0528	.98	-.96	.97	-1.00	.00	.29	1.00	66.9	66.0	1.07	0	R	I0031
32	.2669	1	1688.0	778.0	.0523	1.12	6.58	1.15	6.37	.00	.13	1.00	60.4	65.3	.51	0	R	I0032
33	.2779	1	1688.0	774.0	.0523	1.17	9.19	1.21	8.79	.00	.07	1.00	56.0	65.4	.31	0	R	I0033
34	-.7411	1	1688.0	1139.0	.0551	.94	-2.88	.90	-2.90	.00	.34	1.00	71.6	69.8	1.17	0	R	I0034
35	.3933	1	1688.0	732.0	.0526	1.09	4.93	1.11	4.67	.00	.17	1.00	61.4	66.0	.65	0	R	I0035
36	-.0591	1	1688.0	898.0	.0522	.94	-3.59	.92	-3.67	.00	.35	1.00	67.9	64.8	1.26	0	R	I0036
37	-.0618	1	1688.0	899.0	.0522	.89	-6.64	.87	-5.80	.00	.42	1.00	71.4	64.8	1.45	0	R	I0037
38	-.8866	1	1688.0	1186.0	.0563	.99	-.58	.98	-.57	.00	.26	1.00	72.2	71.7	1.03	0	R	I0038
39	1.2138	1	1688.0	459.0	.0583	.98	-.56	1.01	.32	.00	.27	1.00	77.1	74.9	1.01	0	R	I0039
40	.5188	1	1688.0	687.0	.0531	.92	-4.55	.92	-3.39	.00	.38	1.00	72.3	66.9	1.27	0	R	I0040

Spring 2009 **Mathematics, Grade 8, Form D**

; ITEM 2009 OK MOD -- MAT 8 1 Aug 17 15:20 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	1.1688	1	1868.0	514.0	.0544	1.06	2.34	1.12	3.42	.00	.12	1.00	73.3	74.0	.86	0	R	I0001
2	-.4068	1	1868.0	1141.0	.0499	1.00	.29	1.02	1.05	.00	.22	1.00	65.3	65.5	.97	0	R	I0002
3	-1.7318	1	1868.0	1572.0	.0654	.94	-1.40	.82	-3.22	.00	.29	1.00	84.3	84.3	1.08	0	R	I0003
4	-.8415	1	1868.0	1307.0	.0528	1.04	1.95	1.14	4.07	.00	.14	1.00	71.0	71.2	.87	0	R	I0004
5	1.4149	1	1868.0	435.0	.0574	.96	-1.43	.99	-.14	.00	.26	1.00	78.4	77.6	1.05	0	R	I0005
6	.3349	1	1868.0	833.0	.0491	1.04	2.53	1.05	2.39	.00	.18	1.00	61.2	63.9	.81	0	R	I0006
7	-1.0022	1	1868.0	1363.0	.0544	.96	-1.74	.91	-2.58	.00	.28	1.00	74.5	73.7	1.10	0	R	I0007
8	.7814	1	1868.0	654.0	.0511	1.09	4.48	1.12	4.43	.00	.10	1.00	64.4	68.4	.72	0	R	I0008
9	.0123	1	1868.0	968.0	.0488	.95	-3.39	.95	-2.94	.00	.31	1.00	66.0	63.0	1.25	0	R	I0009
10	1.0786	1	1868.0	545.0	.0535	1.13	5.04	1.23	6.63	.00	.02	1.00	71.0	72.6	.70	0	R	I0010
11	.2078	1	1868.0	886.0	.0489	1.04	2.96	1.05	2.78	.00	.18	1.00	60.4	63.2	.77	0	R	I0011
12	-.3032	1	1868.0	1099.0	.0495	1.15	8.98	1.18	7.87	.00	.02	1.00	56.3	64.5	.34	0	R	I0012
13	-.3771	1	1868.0	1129.0	.0498	.96	-2.74	.94	-2.77	.00	.30	1.00	66.6	65.2	1.19	0	R	I0013
14	-.0593	1	1868.0	998.0	.0489	1.05	3.62	1.09	4.65	.00	.16	1.00	61.8	63.1	.69	0	R	I0014
15	-1.4268	1	1868.0	1494.0	.0600	.88	-3.73	.76	-5.28	.00	.39	1.00	80.8	80.2	1.18	0	R	I0015
16	.2412	1	1868.0	872.0	.0490	.89	-7.88	.87	-6.85	.00	.40	1.00	70.8	63.3	1.56	0	R	I0016
17	.0027	1	1868.0	972.0	.0489	.89	-7.94	.88	-6.75	.00	.40	1.00	71.6	63.0	1.57	0	R	I0017
18	1.3985	1	1868.0	440.0	.0571	1.05	1.73	1.15	3.57	.00	.11	1.00	77.7	77.3	.89	0	R	I0018
19	-.8138	1	1868.0	1297.0	.0526	.93	-3.35	.89	-3.50	.00	.33	1.00	73.1	70.8	1.18	0	R	I0019
20	-1.1642	1	1868.0	1416.0	.0563	.93	-2.38	.92	-1.95	.00	.30	1.00	76.9	76.2	1.11	0	R	I0020
21	.6655	1	1868.0	699.0	.0504	1.03	1.83	1.06	2.37	.00	.18	1.00	66.7	66.9	.87	0	R	I0021
22	-.8165	1	1868.0	1298.0	.0526	.91	-4.11	.87	-4.22	.00	.35	1.00	73.5	70.8	1.23	0	R	I0022
23	1.1161	1	1868.0	532.0	.0539	1.07	2.69	1.13	3.60	.00	.12	1.00	72.4	73.2	.84	0	R	I0023
24	.5849	1	1868.0	731.0	.0500	1.03	1.83	1.03	1.16	.00	.19	1.00	63.3	66.0	.89	0	R	I0024
25	-.4973	1	1868.0	1177.0	.0504	.95	-3.17	.92	-3.39	.00	.31	1.00	68.4	66.5	1.21	0	R	I0025
26	.0885	1	1868.0	936.0	.0488	1.03	2.43	1.04	2.21	.00	.19	1.00	60.7	63.0	.81	0	R	I0026
27	-1.3286	1	1868.0	1466.0	.0585	1.01	.31	1.07	1.45	.00	.17	1.00	78.6	78.8	.97	0	R	I0027
28	.2964	1	1868.0	849.0	.0491	.94	-3.89	.94	-3.30	.00	.32	1.00	67.6	63.6	1.27	0	R	I0028
29	-.2495	1	1868.0	1077.0	.0493	.95	-3.06	.96	-2.07	.00	.30	1.00	67.0	64.1	1.21	0	R	I0029
30	-.2959	1	1868.0	1096.0	.0495	.98	-1.08	.98	-1.09	.00	.26	1.00	65.7	64.5	1.08	0	R	I0030
31	-.6102	1	1868.0	1221.0	.0510	.98	-1.12	.97	-.93	.00	.25	1.00	68.7	67.9	1.06	0	R	I0031
32	.2988	1	1868.0	848.0	.0491	1.05	3.30	1.07	3.33	.00	.17	1.00	60.5	63.7	.75	0	R	I0032
33	.1862	1	1868.0	895.0	.0489	.95	-3.28	.95	-2.96	.00	.30	1.00	66.5	63.2	1.24	0	R	I0033
34	.2964	1	1868.0	849.0	.0491	1.03	2.04	1.03	1.68	.00	.20	1.00	61.8	63.6	.85	0	R	I0034
35	1.4214	1	1868.0	433.0	.0574	1.04	1.25	1.13	2.89	.00	.14	1.00	77.8	77.7	.92	0	R	I0035
36	-.7973	1	1868.0	1291.0	.0524	1.05	2.47	1.08	2.47	.00	.13	1.00	68.7	70.6	.85	0	R	I0036
37	-.0498	1	1868.0	994.0	.0489	.98	-1.73	.97	-1.61	.00	.27	1.00	64.5	63.1	1.13	0	R	I0037
38	.1719	1	1868.0	901.0	.0489	1.01	.93	1.01	.77	.00	.22	1.00	61.2	63.1	.93	0	R	I0038
39	-.1288	1	1868.0	1027.0	.0490	.93	-4.96	.91	-4.65	.00	.34	1.00	67.7	63.3	1.36	0	R	I0039
40	1.1335	1	1868.0	526.0	.0541	1.00	.06	1.06	1.69	.00	.20	1.00	74.4	73.4	.97	0	R	I0040

Spring 2009 **Mathematics, Grade 8, Form E**

; ITEM 2009 OK MOD -- MAT 8 2 Aug 17 15:20 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	-1.7487	1	1756.0	1489.0	.0685	1.02	.35	1.13	1.86	.00	.13	1.00	84.6	84.8	.97	0	R	I0001
2	-.1279	1	1756.0	982.0	.0509	1.05	3.11	1.07	3.05	.00	.18	1.00	62.0	64.0	.76	0	R	I0002
3	-1.5875	1	1756.0	1453.0	.0653	.90	-2.46	.81	-3.32	.00	.33	1.00	83.3	82.8	1.12	0	R	I0003
4	.1499	1	1756.0	874.0	.0507	1.07	4.28	1.09	4.44	.00	.17	1.00	60.0	63.8	.66	0	R	I0004
5	.1653	1	1756.0	868.0	.0507	.88	-7.88	.86	-7.39	.00	.42	1.00	71.1	63.8	1.57	0	R	I0005
6	.2141	1	1756.0	849.0	.0507	1.05	3.32	1.07	3.22	.00	.19	1.00	60.4	63.9	.74	0	R	I0006
7	-.0762	1	1756.0	962.0	.0508	1.01	.69	1.02	.97	.00	.24	1.00	63.7	63.8	.94	0	R	I0007
8	1.5382	1	1756.0	393.0	.0604	1.03	.92	1.16	3.40	.00	.16	1.00	78.8	78.7	.92	0	R	I0008
9	-.0762	1	1756.0	962.0	.0508	.97	-2.27	.96	-2.01	.00	.30	1.00	67.7	63.8	1.17	0	R	I0009
10	1.3731	1	1756.0	440.0	.0582	1.00	.01	1.05	1.14	.00	.23	1.00	77.9	76.4	.98	0	R	I0010
11	1.1808	1	1756.0	499.0	.0561	1.14	5.20	1.29	7.56	.00	.03	1.00	71.2	73.8	.68	0	R	I0011
12	.2320	1	1756.0	842.0	.0507	1.14	8.70	1.18	8.54	.00	.07	1.00	54.8	64.0	.31	0	R	I0012
13	-.2635	1	1756.0	1034.0	.0513	1.01	.56	1.00	-.20	.00	.24	1.00	64.5	64.8	.97	0	R	I0013
14	1.0820	1	1756.0	531.0	.0551	.95	-2.13	.95	-1.68	.00	.32	1.00	74.3	72.4	1.11	0	R	I0014
15	-1.3181	1	1756.0	1385.0	.0608	1.04	1.18	1.19	3.55	.00	.12	1.00	79.2	79.0	.91	0	R	I0015
16	-.2714	1	1756.0	1037.0	.0513	.90	-6.30	.88	-5.26	.00	.39	1.00	70.6	64.9	1.42	0	R	I0016
17	.6491	1	1756.0	683.0	.0520	.93	-4.01	.93	-3.14	.00	.35	1.00	70.9	67.1	1.24	0	R	I0017
18	-.3695	1	1756.0	1074.0	.0517	1.09	4.93	1.15	5.74	.00	.12	1.00	62.8	65.7	.63	0	R	I0018
19	-.7720	1	1756.0	1218.0	.0544	.92	-3.49	.87	-3.92	.00	.34	1.00	72.8	70.8	1.20	0	R	I0019
20	-1.1753	1	1756.0	1345.0	.0588	.92	-2.82	.87	-2.89	.00	.33	1.00	78.0	76.9	1.14	0	R	I0020
21	1.0669	1	1756.0	536.0	.0550	.98	-.63	1.01	.32	.00	.26	1.00	74.0	72.2	1.02	0	R	I0021
22	1.5419	1	1756.0	392.0	.0605	.97	-1.06	1.06	1.23	.00	.25	1.00	80.3	78.7	1.02	0	R	I0022
23	.2913	1	1756.0	819.0	.0508	1.05	3.39	1.07	3.50	.00	.18	1.00	61.6	64.3	.74	0	R	I0023
24	.6141	1	1756.0	696.0	.0519	1.10	5.34	1.13	5.31	.00	.13	1.00	61.8	66.7	.64	0	R	I0024
25	-.2530	1	1756.0	1030.0	.0513	.96	-2.76	.93	-2.99	.00	.31	1.00	66.7	64.7	1.20	0	R	I0025
26	-.2477	1	1756.0	1028.0	.0513	.96	-2.36	.94	-2.57	.00	.30	1.00	66.1	64.7	1.17	0	R	I0026
27	-1.3107	1	1756.0	1383.0	.0607	.96	-1.27	.98	-.41	.00	.25	1.00	79.6	78.9	1.05	0	R	I0027
28	.5606	1	1756.0	716.0	.0516	.93	-3.99	.92	-3.48	.00	.35	1.00	70.5	66.2	1.25	0	R	I0028
29	.0652	1	1756.0	907.0	.0507	1.00	-.04	.99	-.67	.00	.26	1.00	63.3	63.7	1.02	0	R	I0029
30	-.1642	1	1756.0	996.0	.0510	1.03	1.85	1.04	1.60	.00	.21	1.00	63.4	64.2	.86	0	R	I0030
31	-.5519	1	1756.0	1141.0	.0527	.98	-1.11	1.01	.49	.00	.26	1.00	70.6	67.8	1.04	0	R	I0031
32	-1.4960	1	1756.0	1431.0	.0637	.93	-1.96	.88	-2.18	.00	.29	1.00	81.7	81.6	1.09	0	R	I0032
33	.2990	1	1756.0	816.0	.0508	.95	-3.41	.94	-2.94	.00	.33	1.00	68.1	64.3	1.24	0	R	I0033
34	.6033	1	1756.0	700.0	.0518	1.03	1.64	1.04	1.84	.00	.22	1.00	65.8	66.6	.89	0	R	I0034
35	.3897	1	1756.0	781.0	.0510	.92	-5.08	.91	-4.54	.00	.37	1.00	69.2	64.8	1.35	0	R	I0035
36	-.7987	1	1756.0	1227.0	.0546	1.07	3.21	1.18	4.95	.00	.11	1.00	70.2	71.2	.78	0	R	I0036
37	.0704	1	1756.0	905.0	.0507	1.01	.83	1.02	.90	.00	.24	1.00	63.3	63.7	.93	0	R	I0037
38	-.8864	1	1756.0	1256.0	.0554	.96	-1.71	.94	-1.74	.00	.29	1.00	72.7	72.5	1.10	0	R	I0038
39	-.3375	1	1756.0	1062.0	.0516	.89	-6.66	.85	-6.35	.00	.40	1.00	70.3	65.4	1.44	0	R	I0039
40	1.7455	1	1756.0	339.0	.0636	1.11	2.94	1.30	5.28	.00	.06	1.00	80.1	81.3	.84	0	R	I0040

Spring 2009 **Science, Grade 5, Form D**

; ITEM 2009 OK MOD -- SCI 5 1 Aug 17 15:19 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	-.5153	1	1502.0	1187.0	.0668	1.03	.73	1.16	2.40	.00	.20	1.00	79.4	79.4	.94	0	R	I0001
2	.1147	1	1502.0	906.0	.0568	1.03	1.32	1.07	2.01	.00	.27	1.00	65.6	67.1	.89	0	R	I0002
3	-.1286	1	1502.0	980.0	.0581	.98	-.83	.99	-.24	.00	.31	1.00	69.4	69.2	1.04	0	R	I0003
4	.7686	1	1502.0	698.0	.0561	1.05	2.50	1.07	2.72	.00	.25	1.00	64.3	66.4	.81	0	R	I0004
5	.7027	1	1502.0	719.0	.0560	1.16	7.80	1.22	7.76	.00	.13	1.00	57.5	66.1	.39	0	R	I0005
6	.7969	1	1502.0	689.0	.0561	1.24	9.90	1.31	9.90	.00	.05	1.00	54.1	66.5	.13	0	R	I0006
7	-.1421	1	1502.0	984.0	.0581	1.06	2.83	1.09	2.30	.00	.21	1.00	66.1	69.3	.82	0	R	I0007
8	-.7440	1	1502.0	1147.0	.0642	.96	-1.34	.94	-1.06	.00	.31	1.00	78.7	77.0	1.06	0	R	I0008
9	-2.2619	1	1502.0	1396.0	.1031	.91	-1.15	.61	-3.36	.00	.31	1.00	92.9	92.9	1.08	0	R	I0009
10	-.4558	1	1502.0	1073.0	.0608	.92	-3.24	.87	-2.85	.00	.38	1.00	76.0	73.1	1.18	0	R	I0010
11	-1.0921	1	1502.0	1225.0	.0698	.90	-2.49	.76	-3.66	.00	.37	1.00	82.4	81.7	1.14	0	R	I0011
12	-1.2818	1	1502.0	1262.0	.0735	1.02	.48	1.01	.11	.00	.20	1.00	84.3	84.1	.98	0	R	I0012
13	.2836	1	1502.0	853.0	.0562	1.04	2.31	1.05	1.67	.00	.25	1.00	62.9	66.2	.85	0	R	I0013
14	-1.2338	1	1502.0	1253.0	.0725	.90	-2.30	.77	-3.29	.00	.36	1.00	83.8	83.5	1.12	0	R	I0014
15	.5403	1	1502.0	771.0	.0559	1.03	1.41	1.04	1.33	.00	.28	1.00	64.1	65.8	.90	0	R	I0015
16	-.6272	1	1502.0	1118.0	.0627	.92	-2.70	.90	-1.99	.00	.36	1.00	77.0	75.4	1.14	0	R	I0016
17	-1.2710	1	1502.0	1260.0	.0733	.87	-3.10	.67	-4.69	.00	.41	1.00	84.4	84.0	1.17	0	R	I0017
18	-.1152	1	1502.0	976.0	.0580	1.00	.07	.99	-.14	.00	.29	1.00	68.8	69.0	1.00	0	R	I0018
19	-.5650	1	1502.0	1102.0	.0620	.92	-2.90	.90	-2.01	.00	.37	1.00	76.4	74.6	1.15	0	R	I0019
20	.8000	1	1502.0	688.0	.0561	.99	-.72	.98	-.80	.00	.33	1.00	66.3	66.5	1.05	0	R	I0020
21	1.0816	1	1502.0	600.0	.0571	1.00	-.20	.99	-.31	.00	.32	1.00	67.5	68.4	1.02	0	R	I0021
22	.8032	1	1502.0	687.0	.0561	1.04	1.85	1.04	1.56	.00	.27	1.00	65.0	66.5	.87	0	R	I0022
23	-.5574	1	1502.0	1100.0	.0619	.96	-1.31	.89	-2.14	.00	.32	1.00	74.5	74.5	1.09	0	R	I0023
24	.0857	1	1502.0	915.0	.0569	.95	-2.68	.97	-.79	.00	.36	1.00	69.6	67.3	1.16	0	R	I0024
25	-1.1315	1	1502.0	1233.0	.0705	1.07	1.59	1.15	2.02	.00	.14	1.00	82.0	82.3	.91	0	R	I0025
26	1.1606	1	1502.0	576.0	.0576	1.04	1.62	1.08	2.45	.00	.25	1.00	68.6	69.1	.88	0	R	I0026
27	-.1761	1	1502.0	994.0	.0584	.95	-2.39	.89	-2.82	.00	.36	1.00	71.3	69.7	1.16	0	R	I0027
28	.1501	1	1502.0	895.0	.0566	.91	-4.91	.87	-4.10	.00	.42	1.00	70.7	66.9	1.33	0	R	I0028
29	.6308	1	1502.0	742.0	.0559	.92	-4.17	.89	-4.08	.00	.40	1.00	70.0	65.9	1.30	0	R	I0029
30	.9204	1	1502.0	650.0	.0565	1.05	2.40	1.08	2.87	.00	.25	1.00	66.3	67.2	.82	0	R	I0030
31	.6246	1	1502.0	744.0	.0559	1.03	1.39	1.06	2.08	.00	.28	1.00	65.0	65.9	.88	0	R	I0031
32	-.2762	1	1502.0	1023.0	.0592	1.08	3.07	1.16	3.54	.00	.19	1.00	68.9	70.8	.79	0	R	I0032
33	.1276	1	1502.0	902.0	.0567	.99	-.57	.97	-.89	.00	.32	1.00	66.4	67.0	1.05	0	R	I0033
34	1.6719	1	1502.0	431.0	.0617	1.07	2.47	1.20	4.52	.00	.19	1.00	73.0	74.6	.83	0	R	I0034
35	.9941	1	1502.0	627.0	.0568	.98	-.93	1.00	.12	.00	.32	1.00	70.5	67.7	1.04	0	R	I0035
36	1.4161	1	1502.0	501.0	.0593	1.11	4.03	1.21	5.51	.00	.16	1.00	69.0	71.7	.73	0	R	I0036
37	-1.1068	1	1502.0	1228.0	.0701	.89	-2.74	.74	-4.02	.00	.39	1.00	82.1	81.9	1.15	0	R	I0037
38	.1276	1	1502.0	902.0	.0567	.94	-2.93	.91	-2.69	.00	.37	1.00	68.3	67.0	1.20	0	R	I0038
39	-.3936	1	1502.0	1056.0	.0602	.91	-3.73	.83	-3.91	.00	.40	1.00	74.3	72.3	1.22	0	R	I0039
40	.6745	1	1502.0	728.0	.0559	1.05	2.67	1.07	2.68	.00	.25	1.00	63.8	66.0	.79	0	R	I0040

Spring 2009 **Science, Grade 5, Form E**

; ITEM 2009 OK MOD -- SCI 5 2 Aug 17 15:19 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	-.9068	1	1471.0	1139.0	.0659	.96	-1.15	.92	-1.41	.00	.31	1.00	78.1	77.9	1.07	0	R	I0001
2	-.3999	1	1471.0	1010.0	.0601	1.05	1.89	1.14	3.02	.00	.23	1.00	70.2	71.3	.86	0	R	I0002
3	-.3747	1	1471.0	1003.0	.0599	1.00	.17	1.01	.18	.00	.28	1.00	70.8	71.0	.99	0	R	I0003
4	.5250	1	1471.0	731.0	.0565	1.01	.66	1.01	.22	.00	.30	1.00	65.9	66.1	.96	0	R	I0004
5	.8504	1	1471.0	630.0	.0572	1.12	5.66	1.17	5.62	.00	.17	1.00	61.7	67.4	.59	0	R	I0005
6	-1.2303	1	1471.0	1208.0	.0713	1.00	.01	.97	-.39	.00	.24	1.00	82.1	82.2	1.00	0	R	I0006
7	-.1482	1	1471.0	938.0	.0583	1.09	3.83	1.22	5.60	.00	.19	1.00	66.3	68.7	.71	0	R	I0007
8	.5377	1	1471.0	727.0	.0565	1.10	5.05	1.11	4.06	.00	.20	1.00	60.6	66.2	.63	0	R	I0008
9	-2.6220	1	1471.0	1389.0	.1158	.94	-.63	.59	-3.16	.00	.27	1.00	94.4	94.4	1.06	0	R	I0009
10	-.4803	1	1471.0	1032.0	.0608	.94	-2.32	.92	-1.78	.00	.36	1.00	75.0	72.2	1.13	0	R	I0010
11	1.1275	1	1471.0	547.0	.0585	1.03	1.45	1.05	1.55	.00	.28	1.00	68.0	69.5	.91	0	R	I0011
12	.6594	1	1471.0	689.0	.0567	1.03	1.63	1.05	1.76	.00	.28	1.00	65.3	66.5	.87	0	R	I0012
13	-.0173	1	1471.0	899.0	.0576	1.01	.27	1.01	.41	.00	.30	1.00	67.4	67.7	.99	0	R	I0013
14	-1.4122	1	1471.0	1242.0	.0751	.92	-1.81	.78	-2.85	.00	.34	1.00	85.0	84.5	1.10	0	R	I0014
15	1.1965	1	1471.0	527.0	.0590	1.07	2.85	1.10	3.04	.00	.23	1.00	66.8	70.2	.82	0	R	I0015
16	-.8595	1	1471.0	1128.0	.0652	.89	-3.32	.78	-4.01	.00	.40	1.00	77.6	77.3	1.19	0	R	I0016
17	.4228	1	1471.0	763.0	.0565	1.05	2.77	1.05	1.89	.00	.25	1.00	62.1	66.0	.81	0	R	I0017
18	-.3783	1	1471.0	1004.0	.0599	.97	-1.22	.95	-1.09	.00	.33	1.00	71.6	71.0	1.07	0	R	I0018
19	-.0840	1	1471.0	919.0	.0579	.94	-2.96	.91	-2.71	.00	.38	1.00	70.5	68.2	1.20	0	R	I0019
20	.4484	1	1471.0	755.0	.0565	.94	-3.23	.93	-2.50	.00	.38	1.00	69.6	66.0	1.23	0	R	I0020
21	-.2131	1	1471.0	957.0	.0587	.95	-2.45	.94	-1.67	.00	.36	1.00	72.5	69.3	1.15	0	R	I0021
22	.6177	1	1471.0	702.0	.0566	.96	-1.82	.95	-1.85	.00	.36	1.00	68.3	66.3	1.13	0	R	I0022
23	-.8090	1	1471.0	1116.0	.0646	.91	-2.90	.80	-3.79	.00	.39	1.00	77.6	76.6	1.17	0	R	I0023
24	.7076	1	1471.0	674.0	.0568	1.13	6.36	1.16	5.51	.00	.16	1.00	60.0	66.7	.53	0	R	I0024
25	-.4840	1	1471.0	1033.0	.0609	.96	-1.54	.92	-1.72	.00	.34	1.00	72.7	72.3	1.10	0	R	I0025
26	.5889	1	1471.0	711.0	.0566	1.03	1.54	1.05	1.84	.00	.28	1.00	66.1	66.3	.88	0	R	I0026
27	-.5400	1	1471.0	1048.0	.0614	.92	-2.97	.83	-3.67	.00	.39	1.00	73.6	73.0	1.19	0	R	I0027
28	.1725	1	1471.0	841.0	.0569	1.04	2.07	1.03	.94	.00	.26	1.00	64.7	66.5	.87	0	R	I0028
29	.4292	1	1471.0	761.0	.0565	.98	-1.30	.96	-1.48	.00	.34	1.00	68.3	66.0	1.10	0	R	I0029
30	.7076	1	1471.0	674.0	.0568	1.02	.78	1.03	1.26	.00	.29	1.00	67.6	66.7	.93	0	R	I0030
31	1.2244	1	1471.0	519.0	.0592	1.00	.01	1.03	.92	.00	.30	1.00	72.0	70.5	.98	0	R	I0031
32	-.5363	1	1471.0	1047.0	.0614	.93	-2.74	.87	-2.94	.00	.38	1.00	74.1	72.9	1.16	0	R	I0032
33	-.0606	1	1471.0	912.0	.0578	1.00	-.15	.99	-.26	.00	.31	1.00	68.9	68.0	1.01	0	R	I0033
34	1.2315	1	1471.0	517.0	.0592	1.03	1.35	1.10	2.91	.00	.25	1.00	71.6	70.6	.88	0	R	I0034
35	.2789	1	1471.0	808.0	.0567	1.00	.23	1.00	-.01	.00	.31	1.00	66.1	66.2	.99	0	R	I0035
36	-1.2924	1	1471.0	1220.0	.0726	.96	-.96	1.03	.39	.00	.28	1.00	83.1	83.0	1.04	0	R	I0036
37	-1.1999	1	1471.0	1202.0	.0708	.89	-2.89	.75	-3.88	.00	.39	1.00	82.8	81.9	1.15	0	R	I0037
38	-.2721	1	1471.0	974.0	.0591	.91	-3.97	.90	-2.65	.00	.40	1.00	73.5	69.9	1.23	0	R	I0038
39	1.9516	1	1471.0	333.0	.0671	1.13	3.48	1.42	6.87	.00	.09	1.00	78.0	79.0	.76	0	R	I0039
40	.6434	1	1471.0	694.0	.0567	1.06	3.17	1.08	2.93	.00	.25	1.00	63.0	66.5	.77	0	R	I0040

Spring 2009 **Science, Grade 8, Form D**

; ITEM 2009 OK MOD -- SCI 8 1 Aug 17 15:20 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	1.9316	1	1400.0	300.0	.0688	1.09	2.25	1.23	3.81	.00	.11	1.00	78.6	79.4	.85	0	R	I0001
; 2	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0002
3	.1033	1	1400.0	807.0	.0578	1.03	1.40	1.03	1.09	.00	.24	1.00	64.6	65.8	.90	0	R	I0003
4	.9130	1	1400.0	562.0	.0583	1.18	8.06	1.24	8.02	.00	.05	1.00	60.1	66.7	.37	0	R	I0004
5	.1532	1	1400.0	792.0	.0576	1.04	2.16	1.07	2.51	.00	.23	1.00	64.3	65.5	.82	0	R	I0005
6	-.4321	1	1400.0	960.0	.0611	.98	-.71	.95	-1.36	.00	.29	1.00	70.9	71.0	1.06	0	R	I0006
7	-.9601	1	1400.0	1089.0	.0676	.87	-3.67	.76	-4.74	.00	.42	1.00	79.7	78.3	1.20	0	R	I0007
8	-.1102	1	1400.0	870.0	.0587	.93	-3.14	.91	-2.95	.00	.36	1.00	69.4	67.4	1.22	0	R	I0008
9	-.7218	1	1400.0	1034.0	.0642	.89	-3.83	.81	-4.21	.00	.41	1.00	77.2	74.9	1.22	0	R	I0009
10	-.4697	1	1400.0	970.0	.0615	1.03	1.02	1.02	.60	.00	.23	1.00	70.1	71.5	.94	0	R	I0010
11	-.6808	1	1400.0	1024.0	.0637	.90	-3.47	.83	-3.80	.00	.39	1.00	76.8	74.3	1.20	0	R	I0011
12	-.4659	1	1400.0	969.0	.0614	1.01	.31	.99	-.25	.00	.26	1.00	70.9	71.4	.99	0	R	I0012
13	-1.2283	1	1400.0	1144.0	.0723	.87	-3.11	.73	-4.48	.00	.41	1.00	82.7	81.9	1.17	0	R	I0013
14	-.9374	1	1400.0	1084.0	.0672	.93	-2.01	.90	-1.82	.00	.34	1.00	79.2	77.9	1.10	0	R	I0014
15	.2524	1	1400.0	762.0	.0574	1.03	1.41	1.02	.70	.00	.25	1.00	62.6	65.1	.90	0	R	I0015
16	.2326	1	1400.0	768.0	.0574	1.02	1.01	1.01	.52	.00	.26	1.00	63.9	65.2	.93	0	R	I0016
17	.7451	1	1400.0	612.0	.0577	1.10	5.03	1.13	4.88	.00	.15	1.00	61.9	65.6	.59	0	R	I0017
18	-.4284	1	1400.0	959.0	.0611	1.03	1.00	1.03	.74	.00	.23	1.00	69.7	71.0	.94	0	R	I0018
19	-.2042	1	1400.0	897.0	.0593	1.02	1.09	1.04	1.07	.00	.24	1.00	67.6	68.4	.92	0	R	I0019
20	-.4098	1	1400.0	954.0	.0609	.99	-.55	.97	-.71	.00	.29	1.00	71.4	70.7	1.04	0	R	I0020
21	-.1866	1	1400.0	892.0	.0592	.90	-4.80	.85	-4.94	.00	.41	1.00	71.2	68.2	1.33	0	R	I0021
22	-1.0728	1	1400.0	1113.0	.0694	.87	-3.59	.77	-4.24	.00	.43	1.00	81.0	79.8	1.19	0	R	I0022
23	.5079	1	1400.0	684.0	.0572	1.00	.25	1.00	.19	.00	.27	1.00	64.9	64.8	.98	0	R	I0023
24	.5538	1	1400.0	670.0	.0573	1.01	.68	1.02	.87	.00	.26	1.00	65.8	64.9	.94	0	R	I0024
25	.6359	1	1400.0	645.0	.0574	1.13	6.90	1.17	6.52	.00	.11	1.00	57.7	65.1	.43	0	R	I0025
26	.3148	1	1400.0	743.0	.0573	1.04	1.90	1.04	1.50	.00	.24	1.00	63.1	64.9	.85	0	R	I0026
27	.0228	1	1400.0	831.0	.0581	.99	-.67	.97	-.96	.00	.30	1.00	65.0	66.3	1.06	0	R	I0027
28	-.1102	1	1400.0	870.0	.0587	1.00	.18	.99	-.16	.00	.27	1.00	67.9	67.4	.99	0	R	I0028
29	-.0519	1	1400.0	853.0	.0584	.96	-1.98	.95	-1.68	.00	.33	1.00	68.6	66.9	1.14	0	R	I0029
30	.7717	1	1400.0	604.0	.0577	1.08	4.15	1.12	4.54	.00	.18	1.00	61.2	65.7	.67	0	R	I0030
31	.1133	1	1400.0	804.0	.0577	1.00	.25	.99	-.28	.00	.27	1.00	65.1	65.7	.99	0	R	I0031
32	-.2537	1	1400.0	911.0	.0597	.96	-1.70	.97	-.76	.00	.32	1.00	72.6	68.9	1.10	0	R	I0032
33	.2161	1	1400.0	773.0	.0575	1.11	5.57	1.13	4.96	.00	.15	1.00	59.3	65.2	.55	0	R	I0033
34	-.4546	1	1400.0	966.0	.0613	.93	-2.62	.90	-2.67	.00	.36	1.00	73.2	71.3	1.16	0	R	I0034
35	1.0471	1	1400.0	523.0	.0590	1.09	4.15	1.12	3.92	.00	.15	1.00	64.1	68.0	.70	0	R	I0035
36	.7284	1	1400.0	617.0	.0576	1.07	3.82	1.09	3.44	.00	.19	1.00	61.0	65.5	.70	0	R	I0036
37	.1100	1	1400.0	805.0	.0578	.92	-4.14	.90	-3.71	.00	.38	1.00	70.2	65.8	1.31	0	R	I0037
38	-.0076	1	1400.0	840.0	.0582	.91	-4.39	.88	-4.24	.00	.39	1.00	70.4	66.6	1.32	0	R	I0038
39	.3181	1	1400.0	742.0	.0573	1.05	2.85	1.07	2.73	.00	.22	1.00	62.9	64.9	.77	0	R	I0039
40	-.4848	1	1400.0	974.0	.0616	.95	-1.85	.92	-2.11	.00	.33	1.00	72.8	71.7	1.12	0	R	I0040

Spring 2009 **Science, Grade 8, Form E**

; ITEM 2009 OK MOD -- SCI 8 2 Aug 17 15:20 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	.2943	1	1287.0	687.0	.0596	1.07	3.59	1.07	2.74	.00	.18	1.00	60.7	64.6	.70	0	R	I0001
2	-1.0309	1	1287.0	1016.0	.0715	.92	-2.04	.82	-3.18	.00	.34	1.00	79.6	79.2	1.13	0	R	I0002
3	-.0623	1	1287.0	786.0	.0608	.99	-.33	.97	-.98	.00	.27	1.00	66.6	66.6	1.04	0	R	I0003
4	1.1270	1	1287.0	457.0	.0621	1.13	5.02	1.18	5.32	.00	.08	1.00	65.5	68.9	.62	0	R	I0004
5	-.4508	1	1287.0	887.0	.0636	1.04	1.34	1.08	1.93	.00	.20	1.00	69.6	70.9	.90	0	R	I0005
6	-.2386	1	1287.0	833.0	.0619	.96	-1.66	.95	-1.33	.00	.31	1.00	69.2	68.2	1.12	0	R	I0006
7	.7129	1	1287.0	569.0	.0599	1.15	7.39	1.22	8.09	.00	.07	1.00	58.7	65.3	.34	0	R	I0007
8	-.0109	1	1287.0	772.0	.0605	.91	-4.41	.88	-4.16	.00	.38	1.00	70.2	66.1	1.34	0	R	I0008
9	-.6171	1	1287.0	927.0	.0654	.89	-3.90	.83	-3.80	.00	.40	1.00	75.4	73.2	1.24	0	R	I0009
10	-.2731	1	1287.0	842.0	.0621	1.04	1.88	1.09	2.42	.00	.20	1.00	66.4	68.7	.86	0	R	I0010
11	-.3236	1	1287.0	855.0	.0625	.89	-4.52	.85	-4.31	.00	.40	1.00	73.5	69.3	1.30	0	R	I0011
12	-.3985	1	1287.0	874.0	.0632	.98	-.85	.94	-1.50	.00	.29	1.00	70.0	70.2	1.07	0	R	I0012
13	-1.1412	1	1287.0	1037.0	.0735	.90	-2.48	.76	-4.01	.00	.38	1.00	80.8	80.7	1.15	0	R	I0013
14	-.6821	1	1287.0	942.0	.0662	.93	-2.17	.88	-2.54	.00	.34	1.00	75.4	74.1	1.14	0	R	I0014
15	.1303	1	1287.0	733.0	.0600	1.07	3.40	1.08	2.75	.00	.18	1.00	61.4	65.2	.72	0	R	I0015
16	.6878	1	1287.0	576.0	.0598	1.08	3.77	1.09	3.33	.00	.17	1.00	60.2	65.2	.69	0	R	I0016
17	-1.1144	1	1287.0	1032.0	.0730	.88	-2.97	.74	-4.37	.00	.40	1.00	80.9	80.3	1.18	0	R	I0017
18	.0110	1	1287.0	766.0	.0604	.94	-2.77	.93	-2.51	.00	.34	1.00	69.5	66.0	1.21	0	R	I0018
19	-.0476	1	1287.0	782.0	.0607	1.05	2.15	1.06	2.04	.00	.20	1.00	64.7	66.4	.83	0	R	I0019
20	-.1703	1	1287.0	815.0	.0614	.97	-1.31	.95	-1.51	.00	.30	1.00	68.0	67.6	1.10	0	R	I0020
21	-.4306	1	1287.0	882.0	.0635	.90	-3.89	.84	-4.18	.00	.39	1.00	73.6	70.6	1.26	0	R	I0021
22	1.7302	1	1287.0	314.0	.0687	1.11	3.04	1.30	5.56	.00	.06	1.00	75.8	76.9	.78	0	R	I0022
23	.5738	1	1287.0	608.0	.0596	1.00	.26	1.01	.39	.00	.26	1.00	64.6	64.6	.97	0	R	I0023
24	.6521	1	1287.0	586.0	.0598	1.00	.14	1.01	.43	.00	.26	1.00	66.9	65.0	.98	0	R	I0024
25	-1.6010	1	1287.0	1112.0	.0840	.90	-1.73	.74	-3.24	.00	.34	1.00	86.5	86.4	1.10	0	R	I0025
26	.3828	1	1287.0	662.0	.0595	1.03	1.81	1.03	1.06	.00	.23	1.00	61.6	64.4	.86	0	R	I0026
27	.8211	1	1287.0	539.0	.0603	1.04	1.84	1.05	1.99	.00	.22	1.00	64.6	66.0	.85	0	R	I0027
28	1.5526	1	1287.0	353.0	.0663	1.13	3.96	1.24	5.07	.00	.06	1.00	72.6	74.4	.73	0	R	I0028
29	.0510	1	1287.0	755.0	.0602	1.01	.63	1.03	1.10	.00	.25	1.00	65.5	65.7	.94	0	R	I0029
30	-.0882	1	1287.0	793.0	.0609	1.02	1.01	1.03	1.07	.00	.23	1.00	65.6	66.8	.92	0	R	I0030
31	-.0623	1	1287.0	786.0	.0608	.95	-2.38	.92	-2.54	.00	.33	1.00	68.9	66.6	1.19	0	R	I0031
32	.2837	1	1287.0	690.0	.0596	1.14	7.36	1.19	7.03	.00	.08	1.00	55.2	64.6	.34	0	R	I0032
33	.1912	1	1287.0	716.0	.0598	.94	-3.29	.92	-3.17	.00	.35	1.00	68.6	64.9	1.27	0	R	I0033
34	-.3866	1	1287.0	871.0	.0630	1.00	-.14	.99	-.24	.00	.26	1.00	70.7	70.0	1.01	0	R	I0034
35	.3828	1	1287.0	662.0	.0595	1.02	1.30	1.03	1.22	.00	.24	1.00	62.5	64.4	.89	0	R	I0035
; 36	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0036
37	.0256	1	1287.0	762.0	.0603	.95	-2.43	.93	-2.55	.00	.33	1.00	67.6	65.9	1.20	0	R	I0037
; 38	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0038
39	-.0292	1	1287.0	777.0	.0606	.99	-.38	1.00	.06	.00	.27	1.00	67.1	66.3	1.02	0	R	I0039
40	-.4508	1	1287.0	887.0	.0636	.97	-1.25	.94	-1.47	.00	.30	1.00	72.6	70.9	1.09	0	R	I0040

Spring 2009 **English II, Form D**

; ITEM 2009 OK MOD -- REA 9 1 Aug 26 16:46 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	.2049	1	1786.0	917.0	.0507	1.14	8.31	1.18	7.76	.00	.11	1.00	56.9	64.9	.39	0	R	I0001
2	.3231	1	1786.0	871.0	.0507	1.05	3.28	1.06	2.90	.00	.22	1.00	62.1	65.0	.77	0	R	I0002
3	.0504	1	1786.0	977.0	.0508	.98	-1.52	.96	-1.74	.00	.32	1.00	66.8	65.2	1.11	0	R	I0003
4	-.5467	1	1786.0	1199.0	.0535	.95	-2.60	.91	-2.71	.00	.34	1.00	71.6	69.8	1.15	0	R	I0004
5	-.1848	1	1786.0	1067.0	.0515	.98	-1.02	.98	-.93	.00	.30	1.00	67.7	66.3	1.07	0	R	I0005
6	.0737	1	1786.0	968.0	.0508	1.05	2.95	1.05	2.36	.00	.22	1.00	62.3	65.1	.80	0	R	I0006
7	.1664	1	1786.0	932.0	.0507	1.04	2.12	1.07	3.07	.00	.24	1.00	62.8	64.9	.84	0	R	I0007
8	-.3898	1	1786.0	1143.0	.0525	.95	-2.43	.93	-2.30	.00	.34	1.00	69.9	68.1	1.15	0	R	I0008
9	-.7196	1	1786.0	1258.0	.0549	1.00	.04	1.02	.48	.00	.26	1.00	72.0	72.1	1.00	0	R	I0009
10	-.7136	1	1786.0	1256.0	.0548	.98	-.89	.97	-.68	.00	.28	1.00	73.2	72.0	1.04	0	R	I0010
11	-.3678	1	1786.0	1135.0	.0523	.90	-5.15	.87	-4.86	.00	.40	1.00	72.5	67.9	1.31	0	R	I0011
12	-.5012	1	1786.0	1183.0	.0532	.93	-3.36	.88	-4.09	.00	.37	1.00	70.8	69.3	1.21	0	R	I0012
13	.9377	1	1786.0	639.0	.0528	1.09	4.30	1.13	4.38	.00	.16	1.00	65.6	69.2	.74	0	R	I0013
14	1.4536	1	1786.0	467.0	.0573	1.11	3.86	1.24	5.63	.00	.11	1.00	74.0	75.5	.78	0	R	I0014
15	1.0279	1	1786.0	607.0	.0534	1.12	5.35	1.19	5.98	.00	.12	1.00	66.0	70.2	.67	0	R	I0015
16	.7357	1	1786.0	713.0	.0518	1.12	6.28	1.16	6.25	.00	.13	1.00	62.1	67.3	.58	0	R	I0016
17	.3488	1	1786.0	861.0	.0507	1.04	2.60	1.06	2.86	.00	.24	1.00	63.0	65.0	.81	0	R	I0017
18	.9293	1	1786.0	642.0	.0528	1.12	5.70	1.16	5.50	.00	.13	1.00	64.3	69.1	.65	0	R	I0018
19	-1.4702	1	1786.0	1473.0	.0648	.88	-3.16	.74	-4.70	.00	.39	1.00	83.1	82.5	1.15	0	R	I0019
20	-.1662	1	1786.0	1060.0	.0514	1.10	5.53	1.14	5.47	.00	.15	1.00	62.2	66.2	.61	0	R	I0020
21	-1.1785	1	1786.0	1398.0	.0602	.83	-5.48	.70	-6.63	.00	.47	1.00	80.2	78.5	1.26	0	R	I0021
22	-.9813	1	1786.0	1341.0	.0576	.85	-5.63	.72	-7.03	.00	.46	1.00	76.7	75.7	1.29	0	R	I0022
23	.1998	1	1786.0	919.0	.0507	.95	-3.12	.93	-3.41	.00	.35	1.00	66.3	64.9	1.23	0	R	I0023
24	.7036	1	1786.0	725.0	.0516	1.06	3.17	1.09	3.52	.00	.21	1.00	65.1	67.0	.78	0	R	I0024
25	1.2212	1	1786.0	541.0	.0549	1.06	2.26	1.13	3.69	.00	.18	1.00	72.4	72.5	.85	0	R	I0025
26	-.3351	1	1786.0	1123.0	.0522	.91	-5.17	.85	-5.42	.00	.40	1.00	71.9	67.5	1.32	0	R	I0026
27	-.6365	1	1786.0	1230.0	.0542	.96	-1.89	.93	-1.98	.00	.32	1.00	72.3	71.0	1.11	0	R	I0027
28	-.9418	1	1786.0	1329.0	.0571	.93	-2.47	.97	-.65	.00	.33	1.00	76.3	75.2	1.11	0	R	I0028
29	-.0040	1	1786.0	998.0	.0510	.90	-6.25	.87	-5.73	.00	.42	1.00	70.8	65.3	1.41	0	R	I0029
30	.7518	1	1786.0	707.0	.0518	1.16	7.84	1.22	8.50	.00	.08	1.00	62.3	67.4	.46	0	R	I0030
31	-.4956	1	1786.0	1181.0	.0531	.97	-1.31	.95	-1.66	.00	.31	1.00	69.3	69.2	1.08	0	R	I0031
32	-.3788	1	1786.0	1139.0	.0524	.96	-2.05	.95	-1.81	.00	.33	1.00	69.1	68.0	1.13	0	R	I0032
33	-.2728	1	1786.0	1100.0	.0519	1.00	-.26	1.00	.01	.00	.28	1.00	68.3	67.0	1.01	0	R	I0033
34	-.4368	1	1786.0	1160.0	.0527	.90	-5.21	.85	-5.37	.00	.41	1.00	72.8	68.5	1.31	0	R	I0034
35	-.0430	1	1786.0	1013.0	.0510	.98	-.94	.98	-1.03	.00	.31	1.00	65.7	65.5	1.07	0	R	I0035
36	.3720	1	1786.0	852.0	.0508	1.02	1.41	1.04	1.74	.00	.26	1.00	63.5	65.1	.89	0	R	I0036
37	1.2455	1	1786.0	533.0	.0552	1.05	1.94	1.14	3.81	.00	.20	1.00	72.3	72.8	.87	0	R	I0037
38	.1226	1	1786.0	949.0	.0508	.97	-1.97	.97	-1.56	.00	.33	1.00	67.1	65.0	1.13	0	R	I0038
39	.0994	1	1786.0	958.0	.0508	.98	-1.33	.96	-2.06	.00	.32	1.00	63.8	65.0	1.11	0	R	I0039
40	-.2034	1	1786.0	1074.0	.0516	.95	-3.09	.90	-3.82	.00	.35	1.00	67.9	66.5	1.22	0	R	I0040

Spring 2009 **English II, Form E**

; ITEM 2009 OK MOD -- REA 9 2 Aug 26 16:47 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	.3150	1	1678.0	755.0	.0521	1.04	2.62	1.05	2.34	.00	.20	1.00	62.1	64.6	.81	0	R	I0001
2	.1482	1	1678.0	817.0	.0518	1.06	3.70	1.08	3.84	.00	.17	1.00	62.3	63.7	.70	0	R	I0002
3	.0573	1	1678.0	851.0	.0517	.96	-2.67	.96	-2.09	.00	.31	1.00	67.0	63.4	1.20	0	R	I0003
4	-.6947	1	1678.0	1123.0	.0545	.96	-1.84	.92	-2.55	.00	.29	1.00	69.4	68.6	1.13	0	R	I0004
5	-.2463	1	1678.0	964.0	.0522	.99	-.78	.99	-.37	.00	.26	1.00	65.7	64.2	1.05	0	R	I0005
6	1.0553	1	1678.0	499.0	.0565	1.22	8.05	1.32	8.65	.00	-.05	1.00	67.5	72.7	.52	0	R	I0006
7	-.1167	1	1678.0	916.0	.0519	.97	-2.23	.96	-1.96	.00	.30	1.00	66.9	63.6	1.17	0	R	I0007
8	-.4924	1	1678.0	1053.0	.0532	.95	-2.94	.93	-2.45	.00	.31	1.00	68.8	66.2	1.19	0	R	I0008
9	-.9090	1	1678.0	1193.0	.0563	.97	-1.46	.95	-1.44	.00	.27	1.00	73.1	71.8	1.08	0	R	I0009
10	-.9537	1	1678.0	1207.0	.0568	.98	-.98	.98	-.49	.00	.25	1.00	72.8	72.5	1.05	0	R	I0010
11	-.7335	1	1678.0	1136.0	.0548	.89	-5.49	.84	-5.18	.00	.39	1.00	73.8	69.2	1.32	0	R	I0011
12	-.7155	1	1678.0	1130.0	.0546	.90	-4.72	.84	-5.14	.00	.37	1.00	72.5	68.9	1.29	0	R	I0012
13	.7015	1	1678.0	616.0	.0537	1.06	2.87	1.08	3.13	.00	.17	1.00	65.9	68.2	.81	0	R	I0013
14	.1884	1	1678.0	802.0	.0518	1.05	3.01	1.07	3.42	.00	.19	1.00	61.0	63.9	.75	0	R	I0014
15	.8664	1	1678.0	560.0	.0549	1.16	6.63	1.21	6.90	.00	.04	1.00	63.7	70.2	.59	0	R	I0015
16	-.7909	1	1678.0	1155.0	.0552	1.07	2.99	1.11	3.12	.00	.12	1.00	69.0	70.0	.81	0	R	I0016
17	.6357	1	1678.0	639.0	.0533	1.06	3.00	1.07	2.84	.00	.17	1.00	65.1	67.4	.80	0	R	I0017
18	.5876	1	1678.0	656.0	.0531	1.04	2.05	1.06	2.51	.00	.20	1.00	65.8	66.9	.85	0	R	I0018
19	-.6271	1	1678.0	1100.0	.0540	.92	-4.40	.88	-4.21	.00	.35	1.00	70.9	67.7	1.27	0	R	I0019
20	-.2382	1	1678.0	961.0	.0521	.98	-1.27	.97	-1.12	.00	.27	1.00	65.7	64.1	1.10	0	R	I0020
21	.1322	1	1678.0	823.0	.0518	1.02	1.24	1.02	1.10	.00	.23	1.00	62.9	63.7	.91	0	R	I0021
22	.7890	1	1678.0	586.0	.0543	1.03	1.26	1.05	1.74	.00	.21	1.00	69.7	69.3	.91	0	R	I0022
23	-.3338	1	1678.0	996.0	.0524	.94	-3.65	.92	-3.57	.00	.33	1.00	67.6	64.8	1.26	0	R	I0023
24	.2421	1	1678.0	782.0	.0519	1.07	4.39	1.08	4.03	.00	.16	1.00	59.4	64.1	.66	0	R	I0024
25	.2798	1	1678.0	768.0	.0520	1.03	1.90	1.03	1.40	.00	.21	1.00	62.0	64.3	.86	0	R	I0025
26	.8996	1	1678.0	549.0	.0552	1.16	6.61	1.23	7.31	.00	.03	1.00	66.4	70.6	.58	0	R	I0026
27	.5932	1	1678.0	654.0	.0531	1.01	.74	1.02	.96	.00	.23	1.00	66.9	67.0	.95	0	R	I0027
28	.3747	1	1678.0	733.0	.0522	.99	-.60	.99	-.60	.00	.27	1.00	66.5	65.0	1.04	0	R	I0028
29	-.4755	1	1678.0	1047.0	.0531	.96	-2.23	.94	-2.23	.00	.30	1.00	68.2	66.0	1.15	0	R	I0029
30	-.2328	1	1678.0	959.0	.0521	.96	-2.69	.93	-3.12	.00	.31	1.00	65.0	64.1	1.22	0	R	I0030
31	.4983	1	1678.0	688.0	.0527	1.04	2.05	1.06	2.57	.00	.20	1.00	65.4	66.0	.84	0	R	I0031
; 32	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0032
33	-.3973	1	1678.0	1019.0	.0527	.95	-3.21	.92	-3.31	.00	.32	1.00	67.5	65.3	1.23	0	R	I0033
34	-.6388	1	1678.0	1104.0	.0541	.88	-6.27	.82	-6.21	.00	.41	1.00	72.2	67.9	1.39	0	R	I0034
35	-.0738	1	1678.0	900.0	.0518	.96	-2.36	.96	-2.15	.00	.30	1.00	66.2	63.5	1.18	0	R	I0035
36	.1054	1	1678.0	833.0	.0517	.99	-.41	.98	-1.04	.00	.26	1.00	62.5	63.6	1.05	0	R	I0036
37	.9424	1	1678.0	535.0	.0555	.99	-.42	1.00	-.14	.00	.26	1.00	71.8	71.2	1.02	0	R	I0037
38	.0038	1	1678.0	871.0	.0517	.96	-2.80	.94	-3.02	.00	.31	1.00	65.4	63.4	1.23	0	R	I0038
39	-.2138	1	1678.0	952.0	.0521	.95	-3.08	.92	-3.42	.00	.32	1.00	65.0	64.0	1.24	0	R	I0039
40	-.5321	1	1678.0	1067.0	.0534	.91	-4.95	.86	-5.34	.00	.37	1.00	70.3	66.6	1.33	0	R	I0040

Spring 2009 **Algebra I, Form D**

; ITEM 2009 OK MOD -- MAT 9 1 Aug 26 16:47 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	.7431	1	2179.0	831.0	.0469	1.13	7.27	1.17	7.38	.00	.08	1.00	62.6	67.4	.56	0	R	I0001
; 2	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0002
3	-.9874	1	2179.0	1620.0	.0513	.92	-3.33	.88	-3.31	.00	.33	1.00	76.0	74.9	1.15	0	R	I0003
4	.1687	1	2179.0	1103.0	.0455	1.15	9.90	1.18	8.72	.00	.06	1.00	53.4	63.7	.26	0	R	I0004
5	.3221	1	2179.0	1029.0	.0456	.99	-.91	.98	-.91	.00	.28	1.00	65.0	64.0	1.06	0	R	I0005
6	.6214	1	2179.0	887.0	.0464	1.06	3.61	1.07	3.11	.00	.18	1.00	63.4	66.1	.78	0	R	I0006
7	.6343	1	2179.0	881.0	.0464	.96	-2.73	.95	-2.47	.00	.32	1.00	68.9	66.2	1.16	0	R	I0007
8	.3908	1	2179.0	996.0	.0457	1.20	9.90	1.25	9.90	.00	-.01	1.00	53.3	64.3	.06	0	R	I0008
9	-.0512	1	2179.0	1209.0	.0457	.94	-4.57	.94	-3.23	.00	.34	1.00	68.0	64.0	1.29	0	R	I0009
10	.3075	1	2179.0	1036.0	.0456	1.12	8.22	1.16	7.87	.00	.10	1.00	58.0	64.0	.42	0	R	I0010
11	.0321	1	2179.0	1169.0	.0456	.99	-.53	.99	-.37	.00	.27	1.00	64.2	63.7	1.04	0	R	I0011
12	-.3051	1	2179.0	1329.0	.0464	.99	-.37	.96	-1.65	.00	.26	1.00	65.3	65.8	1.05	0	R	I0012
13	-.8894	1	2179.0	1582.0	.0503	.94	-2.79	.92	-2.40	.00	.31	1.00	74.9	73.4	1.13	0	R	I0013
14	.0466	1	2179.0	1162.0	.0455	.92	-6.36	.92	-4.31	.00	.37	1.00	69.5	63.7	1.40	0	R	I0014
15	.7739	1	2179.0	817.0	.0470	1.13	6.97	1.17	7.02	.00	.10	1.00	62.1	67.7	.59	0	R	I0015
16	-.1497	1	2179.0	1256.0	.0459	.98	-1.74	.99	-.51	.00	.28	1.00	66.7	64.5	1.09	0	R	I0016
17	.1832	1	2179.0	1096.0	.0455	.97	-2.51	.95	-2.67	.00	.30	1.00	65.1	63.7	1.18	0	R	I0017
18	.3950	1	2179.0	994.0	.0457	1.08	5.26	1.08	4.23	.00	.16	1.00	59.2	64.3	.66	0	R	I0018
19	.8747	1	2179.0	772.0	.0476	1.11	5.56	1.18	7.06	.00	.09	1.00	67.8	69.0	.66	0	R	I0019
20	-.7536	1	2179.0	1527.0	.0491	.97	-1.36	.93	-2.26	.00	.28	1.00	72.1	71.4	1.08	0	R	I0020
21	-.5730	1	2179.0	1450.0	.0478	1.07	3.64	1.12	3.89	.00	.14	1.00	66.1	68.9	.79	0	R	I0021
; 22	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0022
23	-.2195	1	2179.0	1289.0	.0461	.94	-4.09	.92	-3.79	.00	.33	1.00	68.1	65.0	1.26	0	R	I0023
24	.2515	1	2179.0	1063.0	.0455	.92	-5.95	.91	-4.85	.00	.37	1.00	69.8	63.8	1.38	0	R	I0024
25	.2101	1	2179.0	1083.0	.0455	.98	-1.40	.97	-1.58	.00	.29	1.00	64.8	63.7	1.10	0	R	I0025
26	1.0966	1	2179.0	677.0	.0492	1.02	1.03	1.05	1.75	.00	.22	1.00	72.7	71.9	.94	0	R	I0026
27	-.4139	1	2179.0	1379.0	.0469	1.05	2.93	1.11	4.10	.00	.17	1.00	65.9	66.9	.80	0	R	I0027
28	-.7949	1	2179.0	1544.0	.0495	.90	-4.90	.88	-3.69	.00	.37	1.00	75.4	72.0	1.22	0	R	I0028
29	.1894	1	2179.0	1093.0	.0455	.98	-1.76	.97	-1.37	.00	.29	1.00	65.4	63.7	1.11	0	R	I0029
30	.0196	1	2179.0	1175.0	.0456	.94	-4.57	.93	-3.67	.00	.34	1.00	67.9	63.7	1.30	0	R	I0030
31	.5212	1	2179.0	934.0	.0460	1.05	3.15	1.04	2.10	.00	.20	1.00	61.1	65.2	.82	0	R	I0031
32	.0341	1	2179.0	1168.0	.0456	.96	-3.32	.94	-3.08	.00	.32	1.00	65.6	63.7	1.22	0	R	I0032
33	-.0784	1	2179.0	1222.0	.0457	.96	-2.53	.94	-3.14	.00	.30	1.00	65.5	64.1	1.18	0	R	I0033
34	-.5753	1	2179.0	1451.0	.0478	.89	-6.42	.83	-6.38	.00	.41	1.00	71.5	68.9	1.35	0	R	I0034
35	-.0324	1	2179.0	1200.0	.0457	.91	-6.99	.88	-6.41	.00	.39	1.00	69.2	63.9	1.46	0	R	I0035
36	-1.2791	1	2179.0	1724.0	.0548	.92	-2.89	.84	-3.67	.00	.33	1.00	79.6	79.3	1.13	0	R	I0036
37	-.4559	1	2179.0	1398.0	.0471	.91	-5.71	.89	-4.27	.00	.37	1.00	71.7	67.4	1.30	0	R	I0037
38	.4369	1	2179.0	974.0	.0458	1.06	4.34	1.08	4.10	.00	.17	1.00	61.5	64.6	.71	0	R	I0038
39	.7255	1	2179.0	839.0	.0468	1.03	1.97	1.05	2.31	.00	.21	1.00	67.0	67.2	.88	0	R	I0039
40	-1.4192	1	2179.0	1769.0	.0569	.95	-1.60	.88	-2.36	.00	.27	1.00	81.6	81.3	1.07	0	R	I0040

Spring 2009 **Algebra I, Form E**

; ITEM 2009 OK MOD -- MAT 9 2 Aug 26 16:47 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	.0209	1	2053.0	1096.0	.0476	1.11	6.55	1.12	5.09	.00	.17	1.00	59.1	65.4	.58	0	R	I0001
2	.4381	1	2053.0	912.0	.0479	1.05	2.99	1.06	2.62	.00	.24	1.00	63.7	66.5	.82	0	R	I0002
3	-1.1030	1	2053.0	1550.0	.0541	.91	-3.65	.85	-3.53	.00	.37	1.00	76.9	76.1	1.17	0	R	I0003
4	.9950	1	2053.0	680.0	.0506	1.10	4.52	1.19	5.90	.00	.17	1.00	67.9	71.4	.75	0	R	I0004
5	.1451	1	2053.0	1041.0	.0475	1.00	-.24	.99	-.24	.00	.30	1.00	65.4	65.5	1.02	0	R	I0005
6	-.5157	1	2053.0	1327.0	.0492	.92	-4.24	.89	-3.82	.00	.38	1.00	70.1	68.3	1.24	0	R	I0006
7	.9367	1	2053.0	703.0	.0502	1.00	-.05	1.01	.31	.00	.30	1.00	71.0	70.8	1.00	0	R	I0007
8	1.1815	1	2053.0	609.0	.0520	1.07	2.66	1.17	4.90	.00	.19	1.00	73.9	73.6	.83	0	R	I0008
9	-.0403	1	2053.0	1123.0	.0476	.97	-1.93	.98	-.67	.00	.33	1.00	67.8	65.5	1.11	0	R	I0009
10	1.2444	1	2053.0	586.0	.0526	1.07	2.81	1.13	3.49	.00	.20	1.00	73.4	74.4	.85	0	R	I0010
11	.5003	1	2053.0	885.0	.0481	1.00	-.21	1.01	.38	.00	.31	1.00	68.4	66.8	1.00	0	R	I0011
12	-.1314	1	2053.0	1163.0	.0478	1.00	-.21	.98	-.74	.00	.30	1.00	65.3	65.7	1.02	0	R	I0012
13	-.8206	1	2053.0	1448.0	.0513	1.01	.34	1.04	1.17	.00	.25	1.00	72.6	72.0	.97	0	R	I0013
14	-.1131	1	2053.0	1155.0	.0478	.86	-9.48	.82	-7.71	.00	.47	1.00	74.1	65.7	1.56	0	R	I0014
15	2.1153	1	2053.0	323.0	.0644	1.09	2.04	1.28	4.17	.00	.14	1.00	84.4	84.9	.89	0	R	I0015
16	-.1680	1	2053.0	1179.0	.0479	1.00	.11	1.01	.46	.00	.29	1.00	66.1	65.9	.99	0	R	I0016
17	.5793	1	2053.0	851.0	.0483	1.10	5.43	1.11	4.66	.00	.19	1.00	61.3	67.4	.68	0	R	I0017
18	.4129	1	2053.0	923.0	.0479	1.08	4.74	1.09	3.87	.00	.21	1.00	60.9	66.3	.71	0	R	I0018
19	-.5302	1	2053.0	1333.0	.0493	.88	-6.58	.82	-6.26	.00	.43	1.00	71.8	68.5	1.36	0	R	I0019
20	-.5060	1	2053.0	1323.0	.0492	.98	-1.33	.93	-2.31	.00	.31	1.00	68.9	68.2	1.09	0	R	I0020
; 21	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0021
22	-.2417	1	2053.0	1211.0	.0481	1.03	1.61	1.01	.58	.00	.26	1.00	64.5	66.2	.92	0	R	I0022
23	-.2810	1	2053.0	1228.0	.0482	.96	-2.17	.98	-.89	.00	.33	1.00	68.3	66.4	1.12	0	R	I0023
24	.5049	1	2053.0	883.0	.0481	.99	-.39	1.00	-.07	.00	.30	1.00	69.2	66.9	1.01	0	R	I0024
25	.0231	1	2053.0	1095.0	.0476	1.01	.50	1.00	-.18	.00	.29	1.00	64.6	65.4	.98	0	R	I0025
26	1.2527	1	2053.0	583.0	.0527	1.05	2.11	1.12	3.20	.00	.21	1.00	74.6	74.5	.88	0	R	I0026
27	-.7425	1	2053.0	1418.0	.0507	1.05	2.34	1.12	3.18	.00	.20	1.00	70.6	71.0	.86	0	R	I0027
28	-2.0582	1	2053.0	1809.0	.0704	.91	-1.84	.73	-3.68	.00	.32	1.00	88.2	88.2	1.09	0	R	I0028
29	-.1497	1	2053.0	1171.0	.0478	.96	-2.82	.94	-2.64	.00	.35	1.00	67.1	65.8	1.18	0	R	I0029
30	-.9554	1	2053.0	1498.0	.0525	.87	-5.83	.78	-5.85	.00	.43	1.00	77.2	73.9	1.28	0	R	I0030
31	.3581	1	2053.0	947.0	.0477	1.11	6.27	1.11	4.68	.00	.18	1.00	59.8	66.0	.62	0	R	I0031
32	.4174	1	2053.0	921.0	.0479	.90	-6.33	.88	-5.63	.00	.42	1.00	72.5	66.4	1.37	0	R	I0032
33	-.1519	1	2053.0	1172.0	.0478	.99	-.62	.96	-1.45	.00	.31	1.00	65.4	65.8	1.05	0	R	I0033
34	-.9609	1	2053.0	1500.0	.0526	.86	-6.00	.74	-6.84	.00	.44	1.00	76.0	74.0	1.29	0	R	I0034
35	-.0630	1	2053.0	1133.0	.0477	.93	-4.67	.91	-3.95	.00	.38	1.00	69.0	65.6	1.29	0	R	I0035
36	-1.6931	1	2053.0	1726.0	.0627	.93	-1.72	.86	-2.23	.00	.30	1.00	84.2	84.2	1.08	0	R	I0036
37	-.6437	1	2053.0	1379.0	.0500	.93	-3.43	.89	-3.28	.00	.36	1.00	71.9	69.7	1.18	0	R	I0037
; 38	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0038
39	.8227	1	2053.0	749.0	.0495	1.10	4.79	1.16	5.64	.00	.18	1.00	66.4	69.6	.72	0	R	I0039
40	-.0789	1	2053.0	1140.0	.0477	1.18	9.90	1.29	9.90	.00	.07	1.00	57.8	65.6	.23	0	R	I0040

Spring 2009 **Biology I, Form D**

; ITEM 2009 OK MOD -- SCI 9 1 Aug 31 12:48 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	-2.0435	1	1696.0	1530.0	.0839	.91	-1.42	.72	-3.25	.00	.31	1.00	90.4	90.2	1.08	0	R	I0001
2	-.9410	1	1696.0	1302.0	.0602	1.00	-.12	1.11	2.13	.00	.24	1.00	77.4	77.2	1.00	0	R	I0002
3	.0247	1	1696.0	987.0	.0524	1.05	3.15	1.05	2.02	.00	.21	1.00	61.4	65.3	.79	0	R	I0003
4	-.1337	1	1696.0	1044.0	.0530	.95	-2.60	.95	-1.74	.00	.34	1.00	69.2	66.4	1.16	0	R	I0004
5	.1313	1	1696.0	948.0	.0521	.97	-1.82	.94	-2.42	.00	.32	1.00	66.0	64.8	1.15	0	R	I0005
6	-.6347	1	1696.0	1212.0	.0567	1.01	.57	1.05	1.16	.00	.23	1.00	72.8	72.6	.96	0	R	I0006
7	1.6829	1	1696.0	416.0	.0600	1.14	4.32	1.27	5.66	.00	.08	1.00	73.8	77.0	.76	0	R	I0007
8	-.8381	1	1696.0	1273.0	.0589	.91	-3.17	.82	-4.09	.00	.37	1.00	76.8	75.7	1.17	0	R	I0008
9	.4956	1	1696.0	813.0	.0520	1.00	.21	1.00	-.08	.00	.28	1.00	64.6	64.9	.99	0	R	I0009
10	-.9301	1	1696.0	1299.0	.0601	.93	-2.50	.85	-3.29	.00	.35	1.00	76.9	77.0	1.13	0	R	I0010
11	-.8312	1	1696.0	1271.0	.0588	.95	-1.83	.92	-1.79	.00	.31	1.00	77.0	75.6	1.09	0	R	I0011
12	-2.0505	1	1696.0	1531.0	.0841	.92	-1.36	.69	-3.69	.00	.32	1.00	90.2	90.3	1.08	0	R	I0012
13	-.4997	1	1696.0	1169.0	.0554	.91	-3.96	.90	-2.84	.00	.38	1.00	73.9	70.7	1.21	0	R	I0013
14	.2908	1	1696.0	889.0	.0519	1.02	1.03	1.03	1.25	.00	.26	1.00	64.3	64.6	.92	0	R	I0014
15	.2153	1	1696.0	917.0	.0520	1.10	6.03	1.12	5.04	.00	.15	1.00	59.6	64.6	.55	0	R	I0015
16	.2504	1	1696.0	904.0	.0520	.95	-3.21	.93	-3.00	.00	.35	1.00	68.0	64.6	1.23	0	R	I0016
17	.9625	1	1696.0	644.0	.0535	1.04	2.09	1.07	2.60	.00	.22	1.00	67.5	68.1	.85	0	R	I0017
18	-.7629	1	1696.0	1251.0	.0580	.91	-3.58	.84	-4.02	.00	.38	1.00	76.2	74.5	1.19	0	R	I0018
19	-.1675	1	1696.0	1056.0	.0532	.93	-4.02	.88	-4.49	.00	.38	1.00	69.0	66.8	1.28	0	R	I0019
20	.4174	1	1696.0	842.0	.0519	1.05	3.21	1.05	2.45	.00	.22	1.00	60.9	64.7	.77	0	R	I0020
21	.8773	1	1696.0	674.0	.0531	1.13	6.30	1.15	5.81	.00	.12	1.00	61.5	67.3	.58	0	R	I0021
22	-.1506	1	1696.0	1050.0	.0531	.94	-3.36	.91	-3.20	.00	.36	1.00	68.9	66.6	1.22	0	R	I0022
23	.2935	1	1696.0	888.0	.0519	.93	-4.22	.93	-3.41	.00	.37	1.00	69.7	64.6	1.29	0	R	I0023
24	.0713	1	1696.0	970.0	.0523	.87	-8.05	.83	-7.19	.00	.45	1.00	73.6	65.1	1.54	0	R	I0024
25	.3824	1	1696.0	855.0	.0519	1.13	7.89	1.18	7.51	.00	.12	1.00	57.7	64.6	.39	0	R	I0025
26	-.6123	1	1696.0	1205.0	.0565	.90	-4.28	.82	-4.84	.00	.40	1.00	74.2	72.3	1.24	0	R	I0026
27	-.4539	1	1696.0	1154.0	.0551	.93	-3.37	.88	-3.60	.00	.36	1.00	72.4	70.0	1.20	0	R	I0027
28	.0467	1	1696.0	979.0	.0524	.93	-3.98	.91	-3.91	.00	.37	1.00	68.8	65.2	1.28	0	R	I0028
29	.4497	1	1696.0	830.0	.0519	1.14	8.23	1.18	7.55	.00	.11	1.00	57.6	64.8	.37	0	R	I0029
30	.8213	1	1696.0	694.0	.0528	1.03	1.79	1.05	1.97	.00	.24	1.00	66.6	66.8	.87	0	R	I0030
31	.6694	1	1696.0	749.0	.0523	1.03	1.42	1.04	1.63	.00	.25	1.00	65.0	65.8	.89	0	R	I0031
; 32	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0032
33	.3178	1	1696.0	879.0	.0519	.98	-1.31	.96	-1.66	.00	.31	1.00	64.9	64.6	1.11	0	R	I0033
34	.3205	1	1696.0	878.0	.0519	.97	-2.16	.95	-2.05	.00	.33	1.00	66.7	64.6	1.16	0	R	I0034
35	.3608	1	1696.0	863.0	.0519	.97	-1.71	.97	-1.56	.00	.32	1.00	67.2	64.6	1.12	0	R	I0035
36	.0686	1	1696.0	971.0	.0523	1.03	1.91	1.04	1.59	.00	.24	1.00	63.2	65.1	.86	0	R	I0036
37	.1449	1	1696.0	943.0	.0521	1.03	1.50	1.01	.56	.00	.25	1.00	62.6	64.8	.91	0	R	I0037
38	.2531	1	1696.0	903.0	.0520	.91	-5.73	.88	-5.27	.00	.40	1.00	69.3	64.6	1.41	0	R	I0038
39	.5903	1	1696.0	778.0	.0521	1.08	4.59	1.08	3.61	.00	.18	1.00	60.6	65.3	.68	0	R	I0039
40	.2477	1	1696.0	905.0	.0520	1.01	.91	1.04	1.64	.00	.26	1.00	64.4	64.6	.92	0	R	I0040
41	.2585	1	1696.0	901.0	.0519	1.04	2.38	1.04	1.95	.00	.23	1.00	61.7	64.6	.83	0	R	I0041
42	-.6091	1	1696.0	1204.0	.0564	.93	-2.72	.89	-3.01	.00	.35	1.00	74.0	72.2	1.15	0	R	I0042

Spring 2009 **Biology I, Form E**

; ITEM 2009 OK MOD -- SCI 9 2 Aug 31 12:27 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	-2.1145	1	1647.0	1496.0	.0880	.95	-.82	.94	-.59	.00	.27	1.00	90.8	90.9	1.05	0	R	I0001
2	-.9284	1	1647.0	1266.0	.0616	.98	-.79	.97	-.45	.00	.29	1.00	78.2	77.4	1.04	0	R	I0002
3	.0627	1	1647.0	957.0	.0537	1.03	1.45	1.02	.79	.00	.28	1.00	65.2	66.1	.91	0	R	I0003
4	-.1416	1	1647.0	1027.0	.0545	.99	-.30	1.00	.03	.00	.31	1.00	67.8	67.6	1.01	0	R	I0004
5	-.6387	1	1647.0	1185.0	.0582	1.01	.27	1.02	.37	.00	.27	1.00	72.9	73.3	.99	0	R	I0005
6	1.2164	1	1647.0	560.0	.0562	1.18	7.00	1.27	7.49	.00	.11	1.00	67.0	71.2	.55	0	R	I0006
7	.9413	1	1647.0	650.0	.0545	1.18	8.42	1.27	8.80	.00	.12	1.00	60.0	68.3	.43	0	R	I0007
8	-.9667	1	1647.0	1276.0	.0622	.91	-2.96	.84	-3.06	.00	.38	1.00	79.4	77.9	1.15	0	R	I0008
9	.5255	1	1647.0	794.0	.0532	1.08	4.20	1.09	3.49	.00	.23	1.00	63.1	65.7	.70	0	R	I0009
10	-.7422	1	1647.0	1215.0	.0593	.96	-1.46	.94	-1.35	.00	.32	1.00	76.2	74.8	1.08	0	R	I0010
11	-.7669	1	1647.0	1222.0	.0596	.96	-1.40	1.02	.49	.00	.31	1.00	76.6	75.1	1.05	0	R	I0011
12	-2.1862	1	1647.0	1505.0	.0904	.90	-1.40	.65	-3.55	.00	.33	1.00	91.6	91.5	1.09	0	R	I0012
13	-.6693	1	1647.0	1194.0	.0585	.96	-1.60	.92	-1.75	.00	.33	1.00	75.2	73.7	1.09	0	R	I0013
14	.2681	1	1647.0	885.0	.0532	1.05	2.74	1.05	1.72	.00	.26	1.00	62.1	65.4	.82	0	R	I0014
15	.1287	1	1647.0	934.0	.0535	1.10	5.45	1.13	4.56	.00	.19	1.00	60.0	65.8	.62	0	R	I0015
16	.9532	1	1647.0	646.0	.0546	1.20	9.02	1.29	9.28	.00	.10	1.00	61.0	68.5	.38	0	R	I0016
17	1.0070	1	1647.0	628.0	.0548	1.10	4.41	1.14	4.61	.00	.20	1.00	67.0	69.0	.70	0	R	I0017
18	.8091	1	1647.0	695.0	.0539	1.06	3.06	1.07	2.57	.00	.24	1.00	64.5	67.3	.80	0	R	I0018
19	-.1923	1	1647.0	1044.0	.0547	.92	-3.86	.87	-4.03	.00	.40	1.00	71.0	68.0	1.25	0	R	I0019
20	.3953	1	1647.0	840.0	.0532	1.05	2.56	1.08	3.08	.00	.26	1.00	62.5	65.4	.81	0	R	I0020
21	-.3945	1	1647.0	1110.0	.0560	1.03	1.45	1.11	2.83	.00	.24	1.00	69.6	70.1	.88	0	R	I0021
22	.2567	1	1647.0	889.0	.0532	.99	-.76	.98	-.67	.00	.33	1.00	66.4	65.5	1.06	0	R	I0022
23	-.1953	1	1647.0	1045.0	.0548	.91	-4.82	.84	-4.87	.00	.42	1.00	70.9	68.0	1.31	0	R	I0023
24	.3388	1	1647.0	860.0	.0532	.89	-6.34	.87	-5.21	.00	.44	1.00	71.3	65.4	1.43	0	R	I0024
25	1.1787	1	1647.0	572.0	.0559	1.07	2.90	1.14	4.02	.00	.21	1.00	70.2	70.7	.80	0	R	I0025
26	-.5192	1	1647.0	1149.0	.0571	.90	-4.38	.83	-4.42	.00	.42	1.00	74.0	71.7	1.25	0	R	I0026
27	-.6488	1	1647.0	1188.0	.0583	.92	-3.26	.85	-3.50	.00	.39	1.00	74.7	73.5	1.18	0	R	I0027
28	2.0174	1	1647.0	338.0	.0654	1.03	.73	1.18	3.10	.00	.22	1.00	81.3	80.8	.93	0	R	I0028
29	-.4579	1	1647.0	1130.0	.0565	.97	-1.11	.98	-.58	.00	.32	1.00	71.2	70.9	1.06	0	R	I0029
30	.5652	1	1647.0	780.0	.0533	1.02	1.09	1.06	2.19	.00	.29	1.00	64.2	65.9	.91	0	R	I0030
31	-.1238	1	1647.0	1021.0	.0544	.98	-1.22	.99	-.26	.00	.33	1.00	69.6	67.4	1.06	0	R	I0031
32	.8998	1	1647.0	664.0	.0543	1.06	2.75	1.06	2.12	.00	.25	1.00	65.6	68.0	.83	0	R	I0032
33	.3501	1	1647.0	856.0	.0532	.97	-1.60	.95	-1.87	.00	.35	1.00	67.6	65.4	1.12	0	R	I0033
34	.4745	1	1647.0	812.0	.0532	1.01	.30	1.00	-.18	.00	.31	1.00	66.9	65.6	.99	0	R	I0034
35	.3699	1	1647.0	849.0	.0532	.96	-2.10	.93	-2.57	.00	.36	1.00	65.9	65.4	1.16	0	R	I0035
36	.1201	1	1647.0	937.0	.0535	1.07	4.05	1.14	4.76	.00	.22	1.00	63.6	65.8	.68	0	R	I0036
37	.0857	1	1647.0	949.0	.0536	.99	-.59	.98	-.74	.00	.32	1.00	65.7	66.0	1.04	0	R	I0037
38	.3586	1	1647.0	853.0	.0532	.95	-3.11	.92	-3.16	.00	.38	1.00	67.5	65.4	1.23	0	R	I0038
39	.4321	1	1647.0	827.0	.0532	1.04	2.52	1.04	1.40	.00	.26	1.00	63.7	65.5	.83	0	R	I0039
40	-.5816	1	1647.0	1168.0	.0576	.95	-2.20	.90	-2.46	.00	.35	1.00	73.6	72.5	1.13	0	R	I0040
41	.0627	1	1647.0	957.0	.0537	1.00	-.12	.98	-.59	.00	.31	1.00	66.7	66.1	1.02	0	R	I0041
42	.2255	1	1647.0	900.0	.0533	1.05	2.54	1.05	1.69	.00	.26	1.00	62.1	65.5	.83	0	R	I0042

Winter 2008/09 **English II**

; ITEM 2009 OK MOD -- REA 10 1 Aug 28 12:26 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	-.3453	1	233.0	154.0	.1459	.95	-.87	.94	-.73	.00	.32	1.00	70.8	68.6	1.14	0	R	I0001
2	.3153	1	233.0	121.0	.1391	1.08	1.77	1.09	1.62	.00	.15	1.00	60.1	63.8	.62	0	R	I0002
3	-1.6179	1	233.0	201.0	.1962	1.02	.17	1.02	.15	.00	.15	1.00	85.8	86.3	.98	0	R	I0003
4	-.8524	1	233.0	176.0	.1593	1.08	1.03	1.08	.65	.00	.11	1.00	75.1	76.0	.87	0	R	I0004
5	1.1532	1	233.0	79.0	.1465	1.16	2.56	1.22	2.65	.00	.07	1.00	63.1	69.5	.57	0	R	I0005
6	.5863	1	233.0	107.0	.1395	1.03	.77	1.03	.62	.00	.20	1.00	62.2	64.2	.85	0	R	I0006
7	.4313	1	233.0	115.0	.1390	1.06	1.30	1.07	1.22	.00	.18	1.00	60.5	63.8	.73	0	R	I0007
8	-.0973	1	233.0	142.0	.1420	.95	-1.09	.95	-.63	.00	.33	1.00	70.4	66.1	1.18	0	R	I0008
9	-.7287	1	233.0	171.0	.1553	1.05	.73	1.08	.72	.00	.15	1.00	73.8	74.1	.89	0	R	I0009
10	-.7047	1	233.0	170.0	.1546	.95	-.68	.89	-1.02	.00	.32	1.00	74.2	73.7	1.11	0	R	I0010
11	-.0973	1	233.0	142.0	.1420	.96	-.87	.93	-.99	.00	.31	1.00	66.1	66.1	1.17	0	R	I0011
12	-.0571	1	233.0	140.0	.1415	.99	-.24	1.02	.32	.00	.27	1.00	67.8	65.8	1.01	0	R	I0012
13	.9850	1	233.0	87.0	.1436	1.15	2.79	1.25	3.37	.00	.03	1.00	62.7	67.4	.46	0	R	I0013
14	-.5878	1	233.0	165.0	.1513	.85	-2.38	.77	-2.40	.00	.46	1.00	76.0	72.0	1.35	0	R	I0014
15	-.1377	1	233.0	144.0	.1425	.89	-2.41	.84	-2.38	.00	.42	1.00	70.8	66.4	1.44	0	R	I0015
16	.0027	1	233.0	137.0	.1409	1.00	-.07	1.03	.47	.00	.26	1.00	67.8	65.3	.98	0	R	I0016
17	.4699	1	233.0	113.0	.1391	.98	-.38	.97	-.48	.00	.28	1.00	63.9	63.8	1.09	0	R	I0017
18	-.2196	1	233.0	148.0	.1437	.95	-.95	.95	-.61	.00	.32	1.00	69.1	67.2	1.15	0	R	I0018
19	-.1581	1	233.0	145.0	.1428	.93	-1.37	.93	-.96	.00	.35	1.00	69.5	66.6	1.23	0	R	I0019
20	.1405	1	233.0	130.0	.1398	1.00	.11	1.00	.06	.00	.25	1.00	65.2	64.4	.98	0	R	I0020
21	.0620	1	233.0	134.0	.1403	.93	-1.53	.93	-1.16	.00	.35	1.00	69.1	64.9	1.28	0	R	I0021
22	-.1785	1	233.0	146.0	.1431	.95	-1.01	.92	-1.05	.00	.33	1.00	69.1	66.8	1.19	0	R	I0022
23	-.9038	1	233.0	178.0	.1611	.87	-1.67	.77	-1.92	.00	.43	1.00	79.0	76.8	1.23	0	R	I0023
24	-.3453	1	233.0	154.0	.1459	.91	-1.74	.85	-1.88	.00	.39	1.00	71.7	68.6	1.30	0	R	I0024
25	.7234	1	233.0	100.0	.1405	.98	-.51	.95	-.77	.00	.30	1.00	64.8	65.1	1.12	0	R	I0025
26	.3539	1	233.0	119.0	.1390	1.05	1.17	1.04	.67	.00	.19	1.00	61.8	63.8	.78	0	R	I0026
27	.6841	1	233.0	102.0	.1401	1.07	1.52	1.09	1.46	.00	.17	1.00	61.4	64.8	.69	0	R	I0027
28	-1.0103	1	233.0	182.0	.1652	.95	-.57	.90	-.75	.00	.30	1.00	79.4	78.4	1.08	0	R	I0028
29	-.7287	1	233.0	171.0	.1553	.85	-2.13	.80	-1.92	.00	.45	1.00	77.3	74.1	1.29	0	R	I0029
30	1.1318	1	233.0	80.0	.1461	1.13	2.15	1.20	2.51	.00	.07	1.00	65.2	69.2	.62	0	R	I0030
31	-1.1224	1	233.0	186.0	.1698	.87	-1.42	.77	-1.70	.00	.42	1.00	80.3	80.0	1.19	0	R	I0031
32	.3539	1	233.0	119.0	.1390	1.00	.03	1.01	.13	.00	.26	1.00	62.7	63.8	.99	0	R	I0032
33	.9236	1	233.0	90.0	.1427	1.15	2.78	1.17	2.48	.00	.05	1.00	60.1	66.8	.49	0	R	I0033
34	-.2403	1	233.0	149.0	.1440	1.02	.37	1.00	.06	.00	.23	1.00	65.7	67.4	.95	0	R	I0034
; 35	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0035
36	.7037	1	233.0	101.0	.1403	1.00	-.03	.99	-.10	.00	.25	1.00	63.5	65.0	1.01	0	R	I0036
37	-.7775	1	233.0	173.0	.1568	.89	-1.49	.80	-1.81	.00	.40	1.00	77.3	74.8	1.22	0	R	I0037
38	.6253	1	233.0	105.0	.1397	1.01	.34	1.01	.26	.00	.23	1.00	66.1	64.4	.93	0	R	I0038
39	.3733	1	233.0	118.0	.1390	1.01	.34	1.00	.09	.00	.24	1.00	62.2	63.8	.94	0	R	I0039
40	.8428	1	233.0	94.0	.1417	1.02	.40	1.04	.62	.00	.21	1.00	67.4	66.0	.91	0	R	I0040
41	.0487	1	233.0	447.0	.0769	1.30	3.05	1.55	4.44	.00	.19	1.00	43.3	45.3	.70	0	R	I0041

Winter 2008/09 **Algebra I**

; ITEM 2009 OK MOD -- MAT 10 1 Aug 28 12:26 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	-.4469	1	215.0	132.0	.1481	1.02	.41	1.03	.36	.00	.22	1.00	62.8	65.7	.92	0	R	I0001
2	1.0458	1	215.0	64.0	.1587	1.06	.84	1.09	.83	.00	.20	1.00	72.1	73.3	.87	0	R	I0002
3	.9712	1	215.0	67.0	.1567	1.06	.89	1.07	.69	.00	.19	1.00	69.3	72.3	.86	0	R	I0003
4	-.0624	1	215.0	114.0	.1450	1.07	1.62	1.05	.68	.00	.17	1.00	56.7	63.3	.69	0	R	I0004
5	.1055	1	215.0	106.0	.1449	.96	-.90	.94	-.90	.00	.32	1.00	64.7	63.3	1.20	0	R	I0005
6	-.5130	1	215.0	135.0	.1490	.92	-1.62	.91	-1.12	.00	.35	1.00	70.2	66.4	1.29	0	R	I0006
7	.3593	1	215.0	94.0	.1463	.99	-.15	.98	-.27	.00	.28	1.00	64.7	65.0	1.04	0	R	I0007
8	-.9346	1	215.0	153.0	.1581	.96	-.57	.93	-.64	.00	.28	1.00	73.0	72.4	1.09	0	R	I0008
9	.0216	1	215.0	110.0	.1449	.92	-2.03	.90	-1.55	.00	.38	1.00	69.3	63.2	1.42	0	R	I0009
10	.8984	1	215.0	70.0	.1549	.96	-.62	.93	-.66	.00	.32	1.00	71.6	71.3	1.10	0	R	I0010
11	-1.0891	1	215.0	159.0	.1629	.89	-1.40	.81	-1.68	.00	.38	1.00	75.8	74.9	1.22	0	R	I0011
12	.6887	1	215.0	79.0	.1506	1.11	1.88	1.18	2.06	.00	.12	1.00	65.6	68.6	.63	0	R	I0012
13	-.6712	1	215.0	142.0	.1518	.90	-1.74	.85	-1.74	.00	.37	1.00	72.6	68.4	1.30	0	R	I0013
14	1.2551	1	215.0	56.0	.1651	1.18	2.02	1.29	2.19	.00	.05	1.00	72.6	76.2	.69	0	R	I0014
15	.9958	1	215.0	66.0	.1574	1.08	1.15	1.15	1.38	.00	.14	1.00	70.7	72.6	.80	0	R	I0015
16	-.2101	1	215.0	121.0	.1457	.95	-1.23	.90	-1.38	.00	.33	1.00	67.4	63.8	1.28	0	R	I0016
17	.9712	1	215.0	67.0	.1567	1.16	2.25	1.23	2.10	.00	.06	1.00	67.4	72.3	.62	0	R	I0017
18	.4238	1	215.0	91.0	.1469	1.12	2.36	1.15	1.96	.00	.12	1.00	59.5	65.7	.51	0	R	I0018
19	-.4688	1	215.0	133.0	.1484	.91	-1.97	.88	-1.53	.00	.37	1.00	71.6	65.9	1.36	0	R	I0019
; 20	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0020
21	-2.2587	1	215.0	192.0	.2285	.96	-.20	.77	-.92	.00	.25	1.00	89.8	89.6	1.05	0	R	I0021
22	.3808	1	215.0	93.0	.1465	1.05	1.14	1.06	.81	.00	.20	1.00	65.1	65.2	.77	0	R	I0022
23	.0425	1	215.0	109.0	.1449	1.01	.19	1.01	.13	.00	.26	1.00	61.4	63.2	.97	0	R	I0023
24	.6661	1	215.0	80.0	.1502	1.06	1.13	1.09	1.02	.00	.19	1.00	64.2	68.3	.79	0	R	I0024
25	.2530	1	215.0	99.0	.1455	.96	-.89	.97	-.46	.00	.32	1.00	67.4	64.0	1.17	0	R	I0025
26	1.3102	1	215.0	54.0	.1670	.94	-.66	1.00	.03	.00	.31	1.00	79.1	77.0	1.06	0	R	I0026
27	-.7646	1	215.0	146.0	.1538	.93	-1.26	.93	-.71	.00	.34	1.00	69.8	69.8	1.20	0	R	I0027
28	-.9346	1	215.0	153.0	.1581	.95	-.69	.86	-1.27	.00	.31	1.00	74.0	72.4	1.14	0	R	I0028
29	.7804	1	215.0	75.0	.1524	1.03	.57	1.06	.72	.00	.22	1.00	70.2	69.7	.89	0	R	I0029
30	.0635	1	215.0	108.0	.1449	1.06	1.50	1.09	1.39	.00	.18	1.00	57.2	63.2	.65	0	R	I0030
31	.0216	1	215.0	110.0	.1449	1.13	2.94	1.15	2.10	.00	.10	1.00	57.2	63.2	.35	0	R	I0031
32	-1.1977	1	215.0	163.0	.1667	.91	-1.15	.80	-1.58	.00	.35	1.00	77.7	76.6	1.18	0	R	I0032
33	.0425	1	215.0	109.0	.1449	.95	-1.12	.93	-1.07	.00	.33	1.00	66.0	63.2	1.25	0	R	I0033
34	-.4469	1	215.0	132.0	.1481	.95	-.99	.93	-.93	.00	.31	1.00	66.5	65.7	1.19	0	R	I0034
35	.8271	1	215.0	73.0	.1533	.91	-1.49	.91	-.91	.00	.39	1.00	74.0	70.4	1.22	0	R	I0035
36	-.9851	1	215.0	155.0	.1596	.96	-.62	.97	-.20	.00	.28	1.00	74.0	73.2	1.08	0	R	I0036
37	-.2740	1	215.0	124.0	.1462	.93	-1.59	.91	-1.27	.00	.35	1.00	69.8	64.2	1.31	0	R	I0037
; 38	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0038
39	.3593	1	215.0	94.0	.1463	1.05	1.16	1.38	4.75	.00	.19	1.00	64.7	65.0	.68	0	R	I0039
40	-1.2257	1	215.0	164.0	.1678	.98	-.22	.89	-.80	.00	.26	1.00	76.3	77.0	1.06	0	R	I0040

Winter 2008/09 **Biology I**

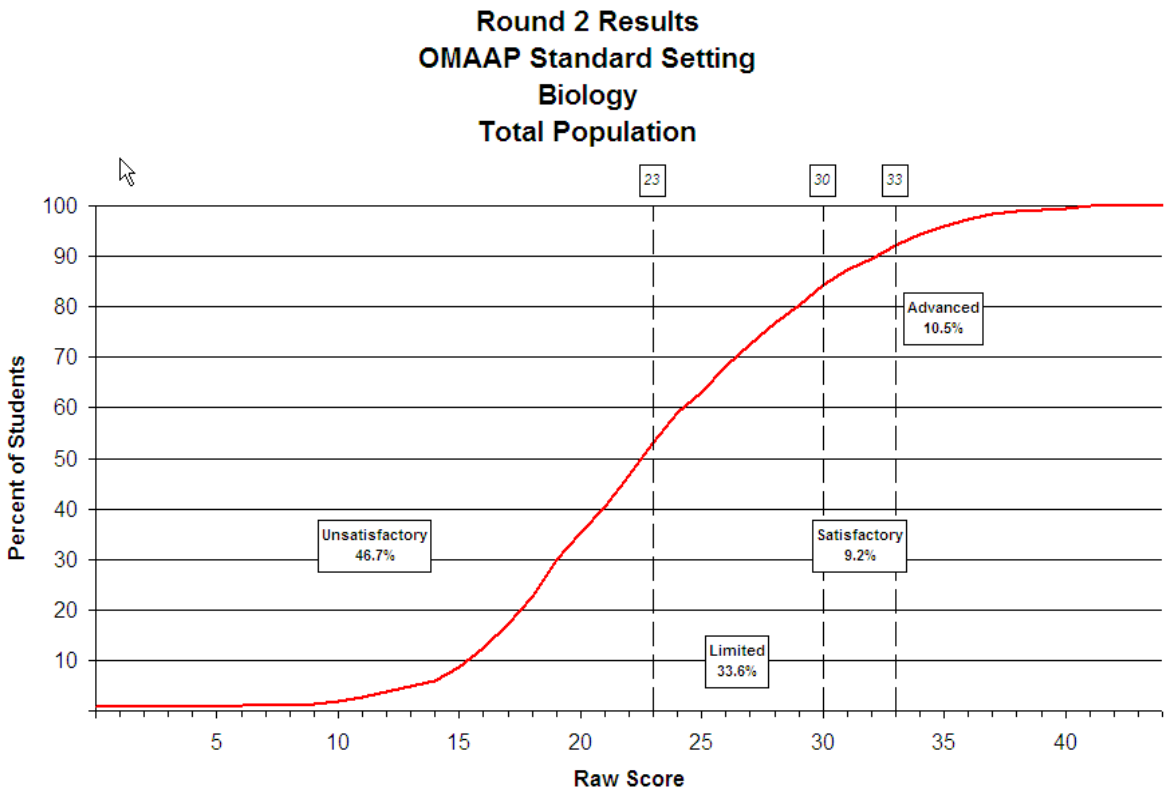
; ITEM 2009 OK MOD -- SCI 10 1 Aug 31 12:27 2009

;ENTRY	MEASURE	STTS	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	DISPL	PBSE	WEIGHT	OBSMA	EXPMA	DISCR	G	M	NAME
1	-.0373	1	161.0	96.0	.1700	.98	-.31	.97	-.30	.00	.28	1.00	67.1	65.0	1.07	0	R	I0001
2	-.7942	1	161.0	120.0	.1891	1.01	.09	.97	-.18	.00	.22	1.00	73.9	75.0	1.00	0	R	I0002
3	-.1245	1	161.0	99.0	.1712	.93	-1.21	.89	-1.33	.00	.36	1.00	68.3	65.9	1.28	0	R	I0003
4	-.5552	1	161.0	113.0	.1809	.92	-1.08	.86	-1.21	.00	.36	1.00	74.5	71.4	1.21	0	R	I0004
5	-.5227	1	161.0	112.0	.1799	.89	-1.46	.83	-1.55	.00	.40	1.00	73.9	70.9	1.28	0	R	I0005
6	.2187	1	161.0	87.0	.1678	1.05	.93	1.08	1.19	.00	.20	1.00	61.5	63.8	.76	0	R	I0006
7	.4150	1	161.0	80.0	.1675	.95	-1.07	.92	-1.15	.00	.34	1.00	65.8	64.0	1.27	0	R	I0007
8	-.9041	1	161.0	123.0	.1936	.87	-1.35	.74	-1.83	.00	.43	1.00	77.0	76.8	1.24	0	R	I0008
9	1.1423	1	161.0	55.0	.1766	1.03	.42	1.07	.76	.00	.22	1.00	67.7	69.8	.91	0	R	I0009
10	-1.5681	1	161.0	138.0	.2321	.92	-.52	.78	-.97	.00	.32	1.00	86.3	85.7	1.09	0	R	I0010
11	-1.1004	1	161.0	128.0	.2029	.98	-.11	.93	-.38	.00	.24	1.00	79.5	79.7	1.03	0	R	I0011
12	-1.9326	1	161.0	144.0	.2627	.91	-.44	.66	-1.29	.00	.33	1.00	89.4	89.4	1.10	0	R	I0012
13	.1905	1	161.0	88.0	.1679	.95	-.96	.92	-1.09	.00	.33	1.00	64.6	63.8	1.25	0	R	I0013
14	-.0373	1	161.0	96.0	.1700	1.02	.33	.98	-.20	.00	.24	1.00	65.8	65.0	.96	0	R	I0014
15	.0488	1	161.0	93.0	.1690	1.03	.63	1.02	.27	.00	.22	1.00	62.7	64.3	.87	0	R	I0015
16	1.4015	1	161.0	47.0	.1839	1.13	1.47	1.27	2.24	.00	.07	1.00	70.2	73.0	.71	0	R	I0016
17	.7546	1	161.0	68.0	.1698	.98	-.29	.97	-.35	.00	.29	1.00	65.2	65.9	1.07	0	R	I0017
18	1.5760	1	161.0	42.0	.1901	1.14	1.41	1.25	1.85	.00	.06	1.00	74.5	75.5	.74	0	R	I0018
19	-.1245	1	161.0	99.0	.1712	.94	-1.01	.91	-1.00	.00	.34	1.00	70.8	65.9	1.22	0	R	I0019
20	.1905	1	161.0	88.0	.1679	1.00	.11	1.01	.11	.00	.26	1.00	64.6	63.8	.97	0	R	I0020
21	-.1245	1	161.0	99.0	.1712	1.05	.81	1.02	.30	.00	.19	1.00	59.6	65.9	.85	0	R	I0021
22	-.0373	1	161.0	96.0	.1700	1.11	1.91	1.13	1.58	.00	.11	1.00	57.1	65.0	.57	0	R	I0022
; 23	.0000	-2	.0	.0	.0000	1.00	.00	1.00	.00	.00	.00	1.00	.0	.0	1.00	0	R	I0023
24	.0773	1	161.0	92.0	.1687	1.07	1.34	1.08	1.01	.00	.16	1.00	58.4	64.2	.69	0	R	I0024
25	.8416	1	161.0	65.0	.1709	1.05	.83	1.08	1.09	.00	.20	1.00	65.2	66.6	.80	0	R	I0025
26	-.7237	1	161.0	118.0	.1865	.90	-1.23	.88	-.87	.00	.38	1.00	77.6	73.9	1.20	0	R	I0026
27	-.3957	1	161.0	108.0	.1766	.95	-.73	1.12	1.12	.00	.31	1.00	73.3	69.2	1.08	0	R	I0027
28	-.2430	1	161.0	103.0	.1732	1.02	.39	1.11	1.14	.00	.21	1.00	70.2	67.1	.86	0	R	I0028
29	.4711	1	161.0	78.0	.1676	1.08	1.60	1.12	1.69	.00	.16	1.00	58.4	64.1	.59	0	R	I0029
30	.8416	1	161.0	65.0	.1709	1.15	2.40	1.14	1.78	.00	.07	1.00	60.2	66.6	.49	0	R	I0030
31	.8125	1	161.0	66.0	.1705	.94	-.98	.92	-1.06	.00	.34	1.00	68.3	66.4	1.22	0	R	I0031
32	-1.3656	1	161.0	134.0	.2182	.88	-.90	.70	-1.58	.00	.40	1.00	83.9	83.3	1.16	0	R	I0032
33	.4430	1	161.0	79.0	.1676	.98	-.43	.98	-.34	.00	.30	1.00	66.5	64.1	1.10	0	R	I0033
34	.2468	1	161.0	86.0	.1677	1.15	2.78	1.14	1.99	.00	.07	1.00	53.4	63.7	.33	0	R	I0034
35	.3870	1	161.0	81.0	.1675	.98	-.42	.97	-.48	.00	.30	1.00	65.2	63.9	1.11	0	R	I0035
36	-.0662	1	161.0	97.0	.1703	1.08	1.37	1.07	.85	.00	.15	1.00	59.6	65.3	.71	0	R	I0036
37	-.0953	1	161.0	98.0	.1707	.96	-.75	.94	-.70	.00	.32	1.00	68.9	65.6	1.17	0	R	I0037
38	.3870	1	161.0	81.0	.1675	1.05	1.03	1.09	1.38	.00	.19	1.00	64.0	63.9	.72	0	R	I0038
39	.4711	1	161.0	78.0	.1676	1.11	2.02	1.14	2.00	.00	.12	1.00	58.4	64.1	.48	0	R	I0039
40	-.7587	1	161.0	119.0	.1878	.95	-.57	.96	-.24	.00	.29	1.00	74.5	74.5	1.08	0	R	I0040
41	-.5552	1	161.0	113.0	.1809	.90	-1.29	.82	-1.56	.00	.39	1.00	72.0	71.4	1.25	0	R	I0041
42	.0488	1	161.0	93.0	.1690	.98	-.37	.97	-.40	.00	.29	1.00	61.5	64.3	1.09	0	R	I0042
43	-.1245	1	161.0	99.0	.1712	.88	-2.07	.84	-1.92	.00	.42	1.00	70.8	65.9	1.44	0	R	I0043
44	.7835	1	161.0	67.0	.1701	.97	-.47	1.01	.18	.00	.30	1.00	67.7	66.1	1.07	0	R	I0044
45	-.4586	1	161.0	110.0	.1782	.98	-.20	.92	-.69	.00	.27	1.00	70.2	70.0	1.07	0	R	I0045
46	.9002	1	161.0	63.0	.1718	1.14	2.19	1.14	1.70	.00	.10	1.00	60.2	67.1	.55	0	R	I0046

Appendix

E

SAMPLE IMPACT GRAPH


Round 2 Results
OMAAP Standard Setting
Biology
Total Population
23
30
33
Advanced
10.5%
Unsatisfactory
46.7%
Satisfactory
9.2%
Limited
33.6%
Percent of Students
100
90
80
70
60
50
40
30
20
10
5
10
15
20
25
30
35
40
Raw Score

Appendix

F

ITEM DISTRIBUTIONS BY STANDARDS

Spring 2009, Form D, Reading Item Distribution by Standard

Standard	Grade					
	3	4	5	6	7	8
	Percent of Total Items					
Vocabulary	25.0	22.5	22.5	15.0	17.5	15.0
Comprehension/Critical Literacy	45.0	45.0	37.5	42.5	42.5	40.0
Literature	15.0	15.0	15.0	15.0	17.5	15.0
Research and Information	15.0	25.0	25.0	15.0	20.0	15.0

Spring 2009, Form E, Reading Item Distribution by Standard

Standard	Grade					
	3	4	5	6	7	8
	Percent of Total Items					
Vocabulary	22.5	25.0	25.0	15.0	20.0	15.0
Comprehension/Critical Literacy	47.5	45.0	37.5	40.0	40.0	40.0
Literature	15.0	15.0	22.5	30.0	25.0	27.5
Research and Information	15.0	15.0	15.0	15.0	15.0	17.5

Spring 2009, Form D, Mathematics Item Distribution by Standard

Standard	Grade					
	3	4	5	6	7	8
	Percent of Total Items					
Patterns and Algebraic Reasoning	15.0	17.5	20.0	20.0	20.0	20.0
Number Sense	17.5	22.5	17.5	30.0	27.5	20.0
Number Operations and Computation	25.0	22.5	17.5	15.0	20.0	17.5
Geometry and Measurement	27.5	22.5	27.5	15.0	15.0	27.5
Data Analysis and Probability	15.0	15.0	17.5	--	17.5	--
Data Analysis and Statistics	--	--	--	20.0	--	15.0

Spring 2009, Form E, Mathematics Item Distribution by Standard

Standard	Grade					
	3	4	5	6	7	8
	Percent of Total Items					
Patterns and Algebraic Reasoning	15.0	17.5	17.5	20.0	20.0	20.0
Number Sense	17.5	22.5	17.5	30.0	27.5	20.0
Number Operations and Computation	25.0	22.5	17.5	15.0	20.0	17.5
Geometry and Measurement	27.5	22.5	30.0	15.0	15.0	27.5
Data Analysis and Probability	15.0	15.0	17.5	--	17.5	--
Data Analysis and Statistics	--	--	--	20.0	--	15.0

Spring 2009, Form D, Science Item Distribution by Standard

Standard	Grade	
	5	8
	Percent of Total Items	
Observe and Measure	22.5	17.5
Classify	22.5	20.0
Experiment	22.5	32.5
Interpret and Communicate	32.5	30.0

Spring 2009, Form E, Science Item Distribution by Standard

Standard	Grade	
	5	8
	Percent of Total Items	
Observe and Measure	22.5	17.5
Classify	22.5	20.0
Experiment	22.5	32.5
Interpret and Communicate	32.5	30.0

Spring 2009, Form D, Algebra I, EOI Item Distribution by Standard

Standard	Percent of Total Items
Number Sense and Algebraic Operations	27.5
Relations and Functions	55.0
Data Analysis, Probability & Statistics	17.5

Spring 2009, Form E, Algebra I, EOI Item Distribution by Standard

Standard	Percent of Total Items
Number Sense and Algebraic Operations	27.5
Relations and Functions	55.0
Data Analysis, Probability & Statistics	17.5

Spring 2009, Form D, English II, EOI Item Distribution by Standard

Standard	Percent of Total Items
Reading/Literature	
Vocabulary	14.0
Comprehension	20.9
Literature	44.2
Research and Information	14.0
Writing/Grammar/Usage and Mechanics	7.0

Spring 2009, Form E, English II, EOI Item Distribution by Standard

Standard	Percent of Total Items
Reading/Literature	
Vocabulary	14.0
Comprehension	20.9
Literature	44.2
Research and Information	14.0
Writing/Grammar/Usage and Mechanics	7.0

Spring 2009, Form D, Biology I, EOI Item Distribution by Standard

Standard	Percent of Total Items
Observe and Measure	13.0
Classify	13.0
Experiment	26.1
Interpret and communicate	34.8
Model	13.0

Spring 2009, Form E, Biology I, EOI Item Distribution by Standard

Standard	Percent of Total Items
Observe and Measure	13.0
Classify	13.0
Experiment	28.3
Interpret and communicate	32.6
Model	13.0

Winter 2008/09, English II, EOI Item Distribution by Standard

Standard	Percent of Total Items
Reading/Literature	
Vocabulary	9.5
Comprehension	26.2
Literature	31.0
Research and Information	9.5
Writing/Grammar/Usage and Mechanics	16.7
Writing	7.1

Winter 2008/09, Algebra I, EOI Item Distribution by Standard

Standard	Percent of Total Items
Number Sense and Algebraic Operations	29.0
Relations and Functions	52.6
Data Analysis, Probability & Statistics	18.4

Winter 2008/09, Biology I, EOI Item Distribution by Standard

Standard	Percent of Total Items
Observe and Measure	13.3
Classify	13.3
Experiment	26.7
Interpret and communicate	35.6
Model	11.1

Appendix

G

TEST RELIABILITY AND SEM FOR SELECTED SUBGROUPS

Table 3-24 Reliability Coefficients[7] and Standard Errors of Measurement, African American Students, Mathematics

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	365	38	22.59	7.12	0.86	2.69	429	39	25.44	7.70	0.88	2.63
4	303	36	19.67	5.81	0.78	2.71	505	39	22.50	7.38	0.86	2.78
5	358	38	20.20	6.08	0.78	2.83	498	38	21.14	6.15	0.79	2.80
6	354	38	20.32	5.86	0.78	2.76	490	39	21.64	5.84	0.77	2.82
7	437	37	18.24	5.29	0.72	2.81	515	38	19.43	5.42	0.74	2.79
8	464	38	18.72	5.52	0.74	2.81	527	39	18.68	5.57	0.73	2.89
EOI	309	36	16.50	4.92	0.68	2.80	518	38	17.86	5.03	0.68	2.86
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	260	40	23.77	8.11	0.88	2.77	246	40	27.26	7.64	0.89	2.57
4	271	40	22.26	6.70	0.81	2.88	277	39	24.39	7.25	0.86	2.70
5	342	39	21.67	6.81	0.83	2.78	294	39	22.27	6.36	0.81	2.75
6	295	40	21.95	5.18	0.70	2.84	273	39	20.05	5.52	0.74	2.83
7	301	39	19.86	5.58	0.74	2.83	269	38	18.45	5.86	0.77	2.78
8	318	40	19.68	5.60	0.73	2.91	318	40	20.73	5.41	0.72	2.86

[7] Based on Cronbach's Alpha

EOI	327	38	18.77	5.79	0.75	2.89	350	38	17.97	5.65	0.75	2.83

Table 3-25 Reliability Coefficients[8] and Standard Errors of Measurement, African American Students, Reading

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	414	36	19.41	6.95	0.85	2.73	476	40	20.96	7.69	0.86	2.86
4	317	36	19.26	6.28	0.81	2.75	567	40	22.59	7.78	0.87	2.83
5	381	35	16.66	5.62	0.76	2.77	492	38	19.48	6.44	0.80	2.85
6	422	36	19.39	6.12	0.80	2.75	531	40	20.08	6.72	0.81	2.94
7	428	36	18.82	6.40	0.81	2.76	547	39	22.95	6.91	0.84	2.80
8	434	36	20.35	6.03	0.80	2.69	538	39	22.86	6.77	0.83	2.79
EOI	300	35	19.24	6.09	0.79	2.77	439	42	21.57	6.40	0.77	3.05
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	282	39	19.79	7.61	0.86	2.84	262	39	22.41	7.72	0.87	2.78
4	301	40	22.37	7.04	0.83	2.89	310	40	23.53	8.22	0.89	2.77
5	347	39	20.20	6.93	0.83	2.89	305	39	21.61	6.99	0.84	2.83
6	304	39	19.84	6.17	0.78	2.92	280	38	19.51	5.98	0.77	2.87
7	326	39	20.34	6.20	0.79	2.84	266	40	22.35	6.93	0.83	2.83
8	312	40	23.25	6.62	0.81	2.86	335	39	23.16	6.48	0.82	2.77
EOI	273	41	21.88	6.61	0.77	3.16	263	40	19.95	5.71	0.69	3.17

[8] Based on Cronbach's Alpha

Table 3-26 Reliability Coefficients[9] and Standard Errors of Measurement, African American Students, Science

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
5	272	32	18.13	4.87	0.73	2.55	373	39	22.69	5.54	0.75	2.78
8	298	31	18.25	5.50	0.80	2.48	402	39	21.88	6.24	0.80	2.82
EOI	296	44	20.54	5.96	0.73	3.09	416	45	20.94	6.23	0.74	3.16
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
5	262	40	23.52	6.20	0.79	2.82	254	40	21.88	6.07	0.78	2.83
8	218	39	21.00	6.39	0.80	2.89	259	38	21.29	5.66	0.75	2.83
EOI	246	45	23.01	6.58	0.78	3.11	254	46	23.40	6.92	0.79	3.15

[9] Based on Cronbach's Alpha

Table 3-27 Reliability Coefficients[10] and Standard Errors of Measurement, Hispanic Students, Mathematics

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	232	38	22.99	6.66	0.84	2.68	257	39	26.21	7.67	0.89	2.56
4	183	36	20.20	6.05	0.81	2.67	334	39	23.50	6.69	0.83	2.74
5	216	38	21.63	6.16	0.79	2.81	278	38	21.27	5.77	0.76	2.83
6	170	38	20.77	6.15	0.80	2.73	273	39	22.34	5.39	0.74	2.77
7	179	37	18.72	4.58	0.63	2.80	234	38	20.15	5.22	0.72	2.76
8	238	38	19.68	5.99	0.78	2.79	266	39	20.42	5.73	0.75	2.87
EOI	116	36	18.19	4.88	0.68	2.78	180	38	19.49	4.98	0.67	2.84
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	175	40	24.93	8.07	0.88	2.74	198	40	28.72	7.16	0.88	2.48
4	174	40	22.84	7.27	0.85	2.80	166	39	26.12	7.59	0.88	2.59
5	239	39	21.85	6.30	0.81	2.78	176	39	23.44	6.96	0.85	2.68
6	194	40	22.83	5.19	0.71	2.81	139	39	21.35	5.83	0.77	2.80
7	173	39	20.51	5.49	0.73	2.84	168	38	18.43	5.77	0.77	2.78
8	175	40	20.49	5.85	0.76	2.87	134	40	21.24	5.76	0.76	2.83

[10] Based on Cronbach's Alpha

EOI	147	38	20.07	5.85	0.76	2.86	128	38	20.27	5.46	0.73	2.82

Table 3-28 Reliability Coefficients[11] and Standard Errors of Measurement, Hispanic Students, Reading

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	274	36	19.48	6.67	0.83	2.73	319	40	20.26	7.70	0.86	2.87
4	216	36	19.79	6.24	0.81	2.73	394	40	22.62	7.46	0.85	2.84
5	244	35	17.08	5.32	0.73	2.78	305	38	19.58	6.66	0.82	2.83
6	226	36	18.82	5.87	0.78	2.77	330	40	20.32	7.16	0.84	2.91
7	211	36	19.34	5.99	0.79	2.76	262	39	22.80	6.84	0.83	2.80
8	241	36	20.56	5.95	0.80	2.66	254	39	23.75	6.64	0.83	2.75
EOI	121	35	20.60	6.04	0.79	2.74	154	40	23.27	6.49	0.79	2.98
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	208	39	18.85	7.36	0.85	2.85	229	39	21.02	7.72	0.87	2.81
4	215	40	21.65	7.00	0.83	2.90	205	40	22.32	7.20	0.84	2.87
5	278	39	19.96	6.72	0.81	2.91	202	39	22.63	7.14	0.85	2.80
6	217	39	20.66	6.10	0.77	2.90	154	38	20.56	6.46	0.81	2.83
7	193	39	20.34	5.65	0.74	2.86	178	40	22.99	6.65	0.82	2.85
8	189	40	23.19	6.78	0.82	2.88	148	39	23.91	5.57	0.75	2.76
EOI	148	41	22.18	6.46	0.76	3.15	96	40	21.39	6.10	0.74	3.14

[11] Based on Cronbach's Alpha

Table 3-29 Reliability Coefficients[12] and Standard Errors of Measurement, Hispanic Students, Science

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
5	188	32	18.62	4.94	0.74	2.53	195	39	22.11	5.98	0.79	2.76
8	169	31	19.47	5.18	0.78	2.45	189	39	23.67	6.41	0.81	2.76
EOI	115	44	22.21	6.21	0.76	3.05	169	45	23.93	6.56	0.78	3.11
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
5	206	40	23.04	5.90	0.77	2.81	154	40	23.84	6.48	0.82	2.76
8	136	39	21.66	6.50	0.80	2.88	97	38	22.31	5.80	0.77	2.80
EOI	132	45	24.07	6.66	0.78	3.09	123	46	24.31	6.62	0.77	3.15

[12] Based on Cronbach's Alpha

Table 3-30 Reliability Coefficients[13] and Standard Errors of Measurement, Native American Students, Mathematics

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	423	38	23.48	6.92	0.85	2.66	507	39	25.08	7.20	0.86	2.65
4	417	36	19.92	5.87	0.79	2.70	494	39	23.11	6.68	0.83	2.78
5	367	38	21.54	6.22	0.80	2.81	549	38	20.65	6.04	0.78	2.81
6	367	38	21.26	6.13	0.80	2.73	529	39	22.69	5.78	0.77	2.77
7	489	37	19.84	5.24	0.72	2.79	600	38	20.06	5.31	0.73	2.77
8	496	38	19.94	5.12	0.69	2.84	583	39	20.53	5.80	0.76	2.87
EOI	493	36	18.44	5.15	0.71	2.77	560	38	19.21	5.61	0.75	2.83
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	325	40	25.88	7.99	0.89	2.68	307	40	28.51	7.04	0.87	2.50
4	322	40	22.70	7.04	0.84	2.82	366	39	24.42	7.05	0.85	2.72
5	349	39	21.92	6.25	0.81	2.75	349	39	21.71	6.92	0.84	2.74
6	342	40	23.68	5.40	0.74	2.77	344	39	20.60	5.83	0.76	2.84
7	395	39	21.73	5.96	0.78	2.80	341	38	19.68	6.06	0.79	2.75
8	390	40	21.25	5.53	0.73	2.87	381	40	20.92	5.52	0.73	2.86
EOI	478	38	20.77	5.69	0.75	2.86	392	38	20.22	6.10	0.79	2.77

[13] Based on Cronbach's Alpha

Table 3-31 Reliability Coefficients[14] and Standard Errors of Measurement, Native American Students, Reading

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	478	36	19.75	6.92	0.85	2.72	628	40	19.87	7.28	0.84	2.88
4	461	36	19.71	6.65	0.83	2.72	550	40	22.86	7.73	0.87	2.81
5	406	35	17.56	6.03	0.79	2.73	601	38	19.14	6.30	0.79	2.85
6	433	36	19.96	5.90	0.78	2.75	613	40	20.70	6.78	0.81	2.94
7	462	36	20.03	6.51	0.83	2.71	597	39	23.34	7.21	0.85	2.76
8	471	36	21.51	5.74	0.79	2.65	546	39	24.05	6.55	0.83	2.74
EOI	469	35	21.68	6.05	0.80	2.70	472	42	24.18	6.60	0.80	2.97
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	375	39	19.33	7.59	0.86	2.84	361	39	21.65	8.21	0.89	2.78
4	366	40	22.80	7.28	0.85	2.86	411	40	23.05	7.66	0.86	2.83
5	375	39	20.69	6.70	0.81	2.89	363	39	21.07	7.03	0.83	2.86
6	369	39	21.27	6.53	0.81	2.86	364	38	19.18	6.10	0.78	2.87
7	402	39	21.03	6.19	0.79	2.84	372	40	23.54	6.92	0.83	2.81
8	385	40	24.48	6.17	0.79	2.83	377	39	24.62	5.96	0.79	2.70
EOI	358	41	25.02	6.72	0.79	3.08	311	40	22.15	6.53	0.77	3.13

[14] Based on Cronbach's Alpha

Table 3-32 Reliability Coefficients[15] and Standard Errors of Measurement, Native American Students, Science

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
5	299	32	19.44	4.78	0.73	2.49	451	39	23.47	6.27	0.81	2.73
8	344	31	20.09	4.96	0.76	2.43	411	39	25.10	6.37	0.82	2.70
EOI	396	44	23.62	5.98	0.74	3.05	474	45	25.52	7.57	0.84	3.04
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
5	287	40	24.69	6.31	0.81	2.75	286	40	23.64	7.17	0.85	2.76
8	292	39	23.53	5.93	0.77	2.81	259	38	22.48	6.16	0.80	2.77
EOI	332	45	26.61	7.00	0.81	3.06	313	46	27.35	7.22	0.82	3.04

[15] Based on Cronbach's Alpha

Table 3-33 Reliability Coefficients[16] and Standard Errors of Measurement, White Students, Mathematics

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	1024	38	23.30	6.94	0.85	2.66	1326	39	26.18	7.51	0.88	2.57
4	958	36	20.57	6.20	0.82	2.67	1400	39	23.36	6.94	0.84	2.76
5	918	38	21.88	6.44	0.81	2.78	1382	38	21.38	6.17	0.80	2.79
6	890	38	21.32	6.20	0.81	2.72	1307	39	22.91	6.09	0.80	2.76
7	1107	37	20.26	5.39	0.74	2.78	1476	38	20.29	5.50	0.75	2.76
8	1309	38	20.17	5.74	0.76	2.80	1582	39	20.66	5.59	0.74	2.87
EOI	1261	36	18.96	5.73	0.77	2.74	1745	38	19.80	5.91	0.78	2.79
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	745	40	26.07	7.69	0.88	2.69	835	40	28.93	6.91	0.87	2.47
4	730	40	22.84	7.12	0.84	2.82	897	39	25.41	7.27	0.87	2.66
5	811	39	22.03	6.48	0.82	2.76	895	39	22.58	6.55	0.83	2.71
6	815	40	23.78	5.32	0.72	2.80	831	39	21.68	5.91	0.78	2.79
7	846	39	22.38	5.97	0.78	2.79	831	38	20.14	6.02	0.79	2.73
8	934	40	20.96	5.81	0.76	2.86	863	40	21.36	6.24	0.79	2.82
EOI	1133	38	21.04	6.07	0.78	2.83	1101	38	21.14	6.53	0.83	2.73

[16] Based on Cronbach's Alpha

Table 3-34 Reliability Coefficients[17] and Standard Errors of Measurement, White Students, Reading

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	1242	36	19.89	7.17	0.86	2.71	1568	40	21.03	7.41	0.85	2.88
4	1083	36	20.83	6.69	0.84	2.69	1617	40	23.46	7.72	0.87	2.80
5	980	35	18.06	6.31	0.82	2.71	1474	38	20.08	6.55	0.82	2.81
6	1107	36	19.95	6.21	0.81	2.73	1452	40	21.45	7.19	0.84	2.90
7	1124	36	20.43	6.61	0.83	2.71	1510	39	23.36	7.17	0.85	2.77
8	1236	36	22.03	6.10	0.82	2.61	1499	39	24.33	6.69	0.84	2.71
EOI	1185	35	21.88	6.52	0.83	2.69	1467	42	24.29	6.88	0.81	2.97
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	884	39	20.11	7.51	0.86	2.83	965	39	22.04	8.07	0.88	2.76
4	856	40	23.09	7.55	0.86	2.83	998	40	23.96	7.58	0.87	2.77
5	879	39	20.92	7.00	0.83	2.87	947	39	21.81	7.15	0.84	2.82
6	895	39	21.59	6.94	0.83	2.84	906	38	20.53	6.36	0.80	2.83
7	861	39	21.69	6.58	0.82	2.80	845	40	23.88	7.11	0.84	2.80
8	940	40	24.47	6.72	0.83	2.80	860	39	25.00	6.55	0.83	2.67

[17] Based on Cronbach's Alpha

EOI	921	41	24.82	6.98	0.80	3.09	910	40	22.88	6.56	0.78	3.11

Table 3-35 Reliability Coefficients[18] and Standard Errors of Measurement, White Students, Science

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
5	714	32	19.70	5.27	0.78	2.47	1090	39	24.09	6.30	0.81	2.72
8	920	31	20.76	5.31	0.80	2.35	1136	39	24.98	6.26	0.81	2.70
EOI	957	44	23.88	6.63	0.79	3.02	1367	45	25.80	7.58	0.84	3.03
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
5	704	40	25.24	6.66	0.83	2.72	723	40	24.51	6.52	0.82	2.76
8	719	39	24.01	6.18	0.80	2.79	638	38	23.04	5.86	0.78	2.77
EOI	896	45	26.85	6.89	0.81	3.02	879	46	28.27	7.67	0.85	3.00

[18] Based on Cronbach's Alpha

Table 3-36 Reliability Coefficients[19] and Standard Errors of Measurement, Female Students, Mathematics

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	752	38	22.28	6.73	0.84	2.71	899	39	24.66	7.33	0.87	2.66
4	724	36	19.49	5.92	0.79	2.69	1076	39	22.75	6.90	0.84	2.78
5	717	38	21.28	6.18	0.79	2.81	1068	38	21.26	5.76	0.76	2.81
6	716	38	20.58	6.02	0.79	2.74	972	39	22.64	5.69	0.77	2.76
7	832	37	19.67	5.35	0.73	2.78	1116	38	19.59	5.36	0.73	2.78
8	986	38	19.47	5.71	0.76	2.81	1167	39	19.95	5.60	0.74	2.86
EOI	807	36	18.08	5.43	0.74	2.77	1175	38	19.54	5.47	0.74	2.81
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	558	40	24.56	7.71	0.87	2.75	556	40	27.86	6.90	0.87	2.52
4	561	40	21.70	6.97	0.83	2.84	656	39	24.56	7.09	0.86	2.70
5	675	39	21.49	6.26	0.80	2.78	666	39	22.44	6.58	0.83	2.71
6	613	40	23.24	5.10	0.70	2.79	623	39	21.13	5.51	0.74	2.79
7	633	39	21.27	5.65	0.75	2.81	601	38	18.75	5.94	0.78	2.76
8	679	40	20.58	5.47	0.72	2.88	642	40	21.02	5.70	0.75	2.86

[19] Based on Cronbach's Alpha

EOI	769	38	20.91	5.84	0.76	2.84	797	38	20.52	6.16	0.80	2.76

Table 3-37 Reliability Coefficients[20] and Standard Errors of Measurement, Female Students, Reading

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	844	36	20.37	6.96	0.85	2.70	1041	40	20.74	7.23	0.84	2.87
4	744	36	20.97	6.40	0.82	2.68	1174	40	23.48	7.57	0.86	2.81
5	709	35	18.02	5.94	0.79	2.72	1030	38	20.41	5.95	0.77	2.82
6	820	36	20.34	5.92	0.79	2.72	1037	40	21.76	7.08	0.83	2.88
7	789	36	20.52	6.38	0.82	2.70	1095	39	23.91	6.88	0.84	2.75
8	877	36	21.80	5.74	0.79	2.63	1061	39	24.57	6.33	0.82	2.71
EOI	750	35	21.63	6.13	0.80	2.72	894	42	24.74	6.51	0.79	2.97
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	616	39	19.79	7.47	0.86	2.83	609	39	22.26	7.79	0.87	2.76
4	632	40	22.92	6.80	0.82	2.88	697	40	24.22	7.41	0.86	2.78
5	702	39	21.15	6.72	0.82	2.88	676	39	22.53	6.92	0.84	2.80
6	624	39	22.15	6.54	0.81	2.83	624	38	20.88	6.26	0.80	2.82
7	605	39	22.15	6.09	0.79	2.79	588	40	24.53	6.73	0.83	2.76
8	648	40	24.68	6.17	0.79	2.81	619	39	24.51	6.18	0.81	2.69
EOI	650	41	25.09	6.68	0.79	3.08	595	40	22.47	6.34	0.76	3.11

[20] Based on Cronbach's Alpha

Table 3-38 Reliability Coefficients[21] and Standard Errors of Measurement, Female Students, Science

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
5	516	32	19.10	5.03	0.75	2.50	765	39	23.00	5.91	0.79	2.74
8	648	31	19.58	5.09	0.77	2.42	808	39	23.92	6.02	0.79	2.75
EOI	655	44	22.57	6.22	0.76	3.05	900	45	24.01	7.04	0.81	3.08
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
5	540	40	23.74	5.89	0.78	2.79	522	40	23.38	6.26	0.80	2.78
8	493	39	22.69	5.95	0.77	2.85	444	38	22.33	5.90	0.78	2.79
EOI	611	45	26.00	6.56	0.78	3.05	611	46	26.98	7.15	0.82	3.06

[21] Based on Cronbach's Alpha

Table 3-39 Reliability Coefficients[22] and Standard Errors of Measurement, Male Students, Mathematics

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	1362	38	23.67	6.98	0.86	2.65	1702	39	26.44	7.52	0.88	2.57
4	1202	36	20.70	6.11	0.81	2.67	1771	39	23.38	6.99	0.84	2.76
5	1222	38	21.48	6.34	0.80	2.80	1792	38	21.11	6.28	0.80	2.80
6	1181	38	21.35	6.12	0.80	2.73	1785	39	22.53	6.02	0.79	2.78
7	1501	37	19.61	5.36	0.73	2.79	1880	38	20.37	5.44	0.74	2.76
8	1672	38	19.98	5.63	0.75	2.81	2005	39	20.42	5.73	0.75	2.87
EOI	1501	36	18.58	5.58	0.76	2.76	2073	38	19.23	5.80	0.76	2.82
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	982	40	26.10	7.94	0.89	2.68	1066	40	28.88	7.22	0.88	2.47
4	988	40	23.34	7.02	0.84	2.82	1090	39	25.37	7.35	0.87	2.65
5	1108	39	22.19	6.61	0.83	2.76	1086	39	22.44	6.65	0.83	2.73
6	1069	40	23.34	5.48	0.74	2.81	1031	39	21.17	6.04	0.78	2.82
7	1127	39	21.79	6.09	0.79	2.80	1066	38	20.08	5.98	0.79	2.74
8	1183	40	20.88	5.88	0.76	2.87	1107	40	21.20	6.03	0.78	2.83

[22] Based on Cronbach's Alpha

EOI	1383	38	20.33	6.02	0.77	2.86	1254	38	20.27	6.46	0.82	2.76

Table 3-40 Reliability Coefficients[23] and Standard Errors of Measurement, Male Students, Reading

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	1648	36	19.45	7.03	0.85	2.73	2058	40	20.74	7.62	0.86	2.87
4	1394	36	19.86	6.68	0.83	2.72	2077	40	22.79	7.76	0.87	2.83
5	1389	35	17.42	6.08	0.80	2.74	1982	38	19.37	6.72	0.82	2.83
6	1478	36	19.31	6.15	0.80	2.76	2069	40	20.47	6.93	0.82	2.93
7	1546	36	19.54	6.53	0.82	2.74	1999	39	22.87	7.18	0.85	2.79
8	1634	36	21.28	6.20	0.82	2.64	1988	39	23.74	6.87	0.84	2.74
EOI	1431	35	21.20	6.46	0.82	2.71	1799	42	23.28	6.93	0.81	2.99
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	1178	39	19.76	7.56	0.86	2.84	1251	39	21.63	8.08	0.88	2.78
4	1158	40	22.64	7.61	0.86	2.85	1280	40	23.05	7.81	0.87	2.80
5	1232	39	20.23	6.97	0.83	2.89	1188	39	21.28	7.14	0.84	2.84
6	1204	39	20.54	6.65	0.81	2.88	1151	38	19.62	6.23	0.79	2.86
7	1230	39	20.74	6.42	0.80	2.84	1132	40	22.92	7.11	0.84	2.83
8	1228	40	23.89	6.83	0.83	2.83	1145	39	24.42	6.42	0.82	2.71
EOI	1119	41	23.69	7.00	0.80	3.12	1062	40	22.00	6.59	0.77	3.12

[23] Based on Cronbach's Alpha

Table 3-41 Reliability Coefficients[24] and Standard Errors of Measurement, Male Students, Science

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
5	1013	32	19.21	5.11	0.76	2.50	1430	39	23.86	6.32	0.81	2.73
8	1169	31	20.28	5.51	0.81	2.39	1485	39	24.64	6.58	0.83	2.71
EOI	1201	44	23.44	6.50	0.78	3.04	1675	45	25.36	7.74	0.85	3.04
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
5	958	40	24.95	6.73	0.83	2.74	941	40	24.05	6.80	0.83	2.77
8	899	39	23.42	6.47	0.81	2.80	837	38	22.59	5.93	0.78	2.78
EOI	1073	45	26.01	7.33	0.83	3.04	1029	46	26.93	7.95	0.85	3.04

[24] Based on Cronbach's Alpha

Table 3-42 Reliability Coefficients[25] and Standard Errors of Measurement, Non-National School Lunch Program Students, Mathematics

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	789	38	23.43	6.79	0.85	2.66	909	39	26.12	7.42	0.88	2.58
4	670	36	20.19	6.31	0.82	2.68	1007	39	23.89	6.68	0.83	2.75
5	750	38	22.14	6.46	0.81	2.78	1030	38	21.50	6.06	0.79	2.80
6	714	38	21.24	6.25	0.81	2.72	1089	39	23.30	5.94	0.78	2.75
7	974	37	20.29	5.48	0.74	2.78	1250	38	20.33	5.36	0.73	2.77
8	1090	38	20.36	5.77	0.76	2.80	1334	39	20.51	5.70	0.75	2.87
EOI	1154	36	18.68	5.66	0.76	2.75	1820	38	19.54	5.70	0.76	2.80
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	785	40	25.55	7.99	0.89	2.70	787	40	28.00	6.86	0.86	2.54
4	813	40	22.66	7.12	0.84	2.82	890	39	25.03	7.05	0.85	2.69
5	914	39	21.60	6.40	0.81	2.78	925	39	22.09	6.09	0.80	2.74
6	857	40	23.24	5.30	0.72	2.81	891	39	21.57	6.01	0.78	2.79
7	917	39	22.20	5.96	0.78	2.79	897	38	19.68	5.89	0.78	2.75
8	1030	40	20.78	5.69	0.74	2.88	983	40	21.24	6.06	0.78	2.83
EOI	1292	38	20.70	5.97	0.77	2.84	1467	38	20.53	6.39	0.81	2.76

[25] Based on Cronbach's Alpha

Table 3-43 Reliability Coefficients[26] and Standard Errors of Measurement, Non-National School Lunch Program Students, Reading

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	934	36	20.15	7.29	0.86	2.68	1100	40	21.24	7.37	0.85	2.87
4	772	36	20.46	6.75	0.84	2.70	1151	40	23.85	7.81	0.87	2.78
5	796	35	17.98	6.20	0.81	2.72	1078	38	20.43	6.68	0.82	2.80
6	875	36	19.99	6.22	0.81	2.73	1239	40	21.75	7.01	0.83	2.90
7	950	36	20.40	6.48	0.82	2.71	1286	39	23.60	7.11	0.85	2.76
8	991	36	21.97	6.00	0.81	2.61	1207	39	24.51	6.68	0.84	2.71
EOI	1097	35	21.75	6.45	0.82	2.71	1470	42	24.10	6.89	0.81	2.98
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	910	39	19.81	7.53	0.86	2.83	914	39	21.25	7.80	0.87	2.80
4	964	40	22.81	7.51	0.86	2.85	1025	40	23.56	7.45	0.86	2.81
5	976	39	20.59	6.85	0.82	2.88	965	39	21.53	6.94	0.83	2.84
6	951	39	21.21	6.73	0.82	2.86	953	38	20.17	6.23	0.79	2.84

[26] Based on Cronbach's Alpha

7	947	39	21.78	6.33	0.80	2.81	903	40	23.65	6.96	0.84	2.81
8	1024	40	24.89	6.34	0.80	2.80	915	39	24.93	6.34	0.82	2.68
EOI	1076	41	24.70	6.85	0.79	3.11	1162	40	22.41	6.46	0.76	3.13

Table 3-44 Reliability Coefficients[27] and Standard Errors of Measurement, Non-National School Lunch Program Students, Science

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
5	584	32	19.59	5.27	0.78	2.47	749	39	23.92	6.15	0.80	2.72
8	698	31	20.55	5.35	0.80	2.38	928	39	24.69	6.32	0.82	2.71
EOI	918	44	23.54	6.56	0.79	3.03	1339	45	25.78	7.52	0.84	3.04
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
5	760	40	24.56	6.70	0.83	2.75	691	40	23.99	6.43	0.81	2.78
8	743	39	23.51	6.13	0.79	2.81	637	38	22.74	5.77	0.77	2.78
EOI	1025	45	26.41	7.11	0.82	3.03	1185	46	27.39	7.66	0.84	3.03

[27] Based on Cronbach's Alpha

Table 3-45 Reliability Coefficients[28] and Standard Errors of Measurement, National School Lunch Program Students, Mathematics

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	1351	38	22.95	7.01	0.85	2.68	1725	39	25.66	7.55	0.88	2.61
4	1271	36	20.21	5.95	0.80	2.69	1877	39	22.75	7.08	0.85	2.77
5	1210	38	20.97	6.12	0.79	2.82	1849	38	20.99	6.11	0.79	2.80
6	1204	38	20.95	6.00	0.79	2.74	1701	39	22.09	5.84	0.77	2.79
7	1381	37	19.14	5.22	0.71	2.80	1784	38	19.89	5.44	0.74	2.77
8	1605	38	19.38	5.57	0.75	2.82	1868	39	20.03	5.66	0.74	2.87
EOI	1178	36	18.12	5.41	0.74	2.77	1466	38	19.07	5.64	0.75	2.83
Grade	2009 (Form D)						2009 (Form E)					
	N	N	Mean	S.D.	Reliabilit	SEM	N	N	Mean	S.D.	Reliabilit	SEM

[28] Based on Cronbach's Alpha

	(Students)	(Items)			y		(Students)	(Items)			y	
3	763	40	25.54	7.77	0.88	2.72	842	40	29.04	7.33	0.89	2.44
4	743	40	22.87	7.01	0.84	2.83	866	39	25.09	7.47	0.87	2.66
5	886	39	22.29	6.54	0.82	2.76	833	39	22.82	7.15	0.86	2.70
6	841	40	23.39	5.37	0.73	2.80	775	39	20.70	5.62	0.75	2.83
7	849	39	20.97	5.84	0.77	2.82	791	38	19.52	6.10	0.80	2.76
8	838	40	20.74	5.79	0.75	2.88	773	40	20.96	5.74	0.75	2.85
EOI	888	38	20.30	5.96	0.77	2.86	588	38	19.96	6.19	0.80	2.77

Table 3-46 Reliability Coefficients[29] and Standard Errors of Measurement, National School Lunch Program Students, Reading

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	1579	36	19.50	6.86	0.84	2.74	2031	40	20.50	7.53	0.85	2.87
4	1382	36	20.08	6.51	0.83	2.72	2134	40	22.62	7.61	0.86	2.84
5	1327	35	17.37	5.93	0.79	2.74	1977	38	19.35	6.35	0.80	2.85
6	1450	36	19.45	6.02	0.79	2.75	1898	40	20.32	6.93	0.82	2.93
7	1407	36	19.50	6.48	0.82	2.74	1860	39	22.98	7.05	0.84	2.79
8	1557	36	21.15	6.07	0.81	2.65	1881	39	23.69	6.70	0.83	2.75
EOI	1120	35	21.00	6.26	0.81	2.72	1266	42	23.41	6.74	0.80	2.99
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
3	887	39	19.72	7.52	0.86	2.84	959	39	22.43	8.16	0.89	2.75
4	834	40	22.64	7.12	0.84	2.87	960	40	23.33	7.93	0.88	2.79
5	967	39	20.53	6.95	0.83	2.89	904	39	21.94	7.23	0.85	2.82
6	895	39	20.97	6.58	0.81	2.87	831	38	19.96	6.35	0.80	2.85
7	897	39	20.58	6.30	0.80	2.84	830	40	23.28	7.08	0.84	2.81
8	862	40	23.33	6.85	0.83	2.85	855	39	23.94	6.30	0.81	2.74
EOI	712	41	23.44	6.95	0.80	3.12	516	40	21.51	6.59	0.78	3.12

[29] Based on Cronbach's Alpha

Table 3-47 Reliability Coefficients[30] and Standard Errors of Measurement, National School Lunch Program Students, Science

Grade	2007						2008					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
5	964	32	18.89	4.96	0.74	2.52	1471	39	23.40	6.20	0.81	2.74
8	1154	31	19.71	5.38	0.80	2.42	1389	39	24.13	6.46	0.82	2.74
EOI	954	44	22.70	6.25	0.76	3.06	1270	45	23.95	7.44	0.83	3.08
Grade	2009 (Form D)						2009 (Form E)					
	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM	N (Students)	N (Items)	Mean	S.D.	Reliability	SEM
5	743	40	24.49	6.21	0.80	2.76	780	40	23.65	6.78	0.83	2.78
8	658	39	22.78	6.45	0.81	2.83	650	38	22.24	6.06	0.79	2.79
EOI	671	45	25.35	6.92	0.80	3.07	466	46	25.87	7.51	0.83	3.09

[30] Based on Cronbach's Alpha

Appendix

H

RAW-TO-THETA CONVERSION TABLES WITH FREQUENCY DATA

; PERSON SCORE FILE FOR 2009 OK MOD -- REA 3 1 Aug 17 15:18 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-4.9995	1.8348	.30	-18	188	0	.0	0	.0	0
1	-3.7720	1.0168	.97	107	104	0	.0	0	.0	0
2	-3.0446	.7311	1.87	182	75	3	.2	3	.2	1
3	-2.6043	.6071	2.71	227	62	2	.1	5	.3	1
4	-2.2810	.5348	3.50	260	55	2	.1	7	.4	1
5	-2.0214	.4866	4.22	287	50	4	.2	11	.6	1
6	-1.8018	.4520	4.89	309	46	4	.2	15	.8	1
7	-1.6096	.4260	5.51	329	44	10	.6	25	1.4	1
8	-1.4369	.4057	6.08	346	42	35	1.9	60	3.3	2
9	-1.2790	.3896	6.59	362	40	48	2.7	108	6.0	5
10	-1.1325	.3765	7.05	377	39	45	2.5	153	8.5	7
11	-.9947	.3659	7.47	392	37	65	3.6	218	12.1	10
12	-.8641	.3573	7.83	405	37	80	4.5	298	16.6	14
13	-.7391	.3502	8.15	418	36	97	5.4	395	22.0	19
14	-.6185	.3445	8.43	430	35	118	6.6	513	28.5	25
15	-.5014	.3399	8.65	442	35	120	6.7	633	35.2	32
16	-.3871	.3364	8.83	454	34	99	5.5	732	40.7	38
17	-.2748	.3339	8.97	465	34	99	5.5	831	46.2	43
18	-.1640	.3322	9.06	477	34	102	5.7	933	51.9	49
19	-.0539	.3314	9.11	488	34	70	3.9	1003	55.8	54
20	.0558	.3313	9.11	499	34	63	3.5	1066	59.3	58
21	.1658	.3321	9.06	510	34	56	3.1	1122	62.4	61
22	.2767	.3338	8.98	522	34	56	3.1	1178	65.6	64
23	.3889	.3363	8.84	533	34	54	3.0	1232	68.6	67
24	.5031	.3398	8.66	545	35	49	2.7	1281	71.3	70
25	.6200	.3443	8.44	557	35	53	2.9	1334	74.2	73
26	.7404	.3499	8.17	569	36	47	2.6	1381	76.9	76
27	.8652	.3570	7.85	582	37	62	3.5	1443	80.3	79
28	.9956	.3656	7.48	595	37	63	3.5	1506	83.8	82
29	1.1331	.3762	7.07	609	38	40	2.2	1546	86.0	85
30	1.2794	.3892	6.60	624	40	50	2.8	1596	88.8	87
31	1.4369	.4053	6.09	640	41	46	2.6	1642	91.4	90
32	1.6092	.4255	5.52	658	44	47	2.6	1689	94.0	93
33	1.8011	.4516	4.90	678	46	33	1.8	1722	95.8	95
34	2.0202	.4862	4.23	700	50	27	1.5	1749	97.3	97
35	2.2793	.5343	3.50	726	55	19	1.1	1768	98.4	98
36	2.6020	.6066	2.72	759	62	12	.7	1780	99.1	99
37	3.0417	.7307	1.87	804	75	12	.7	1792	99.7	99
38	3.7684	1.0164	.97	879	104	3	.2	1795	99.9	99
39	4.9954	1.8346	.30	1004	188	2	.1	1797	100.0	99

; PERSON SCORE FILE FOR 2009 OK MOD -- REA 3 2 Aug 17 15:18 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.0216	1.8354	.30	16	165	0	.0	0	.0	0
1	-3.7927	1.0177	.97	127	92	0	.0	0	.0	0
2	-3.0635	.7323	1.86	192	66	0	.0	0	.0	0
3	-2.6215	.6085	2.70	232	55	0	.0	0	.0	0
4	-2.2965	.5363	3.48	261	48	0	.0	0	.0	0
5	-2.0353	.4882	4.20	285	44	2	.1	2	.1	1
6	-1.8142	.4537	4.86	304	41	4	.2	6	.3	1
7	-1.6205	.4276	5.47	322	38	10	.5	16	.9	1
8	-1.4465	.4073	6.03	337	37	21	1.1	37	2.0	1
9	-1.2874	.3912	6.54	352	35	28	1.5	65	3.5	3
10	-1.1396	.3781	7.00	365	34	39	2.1	104	5.6	5
11	-1.0007	.3674	7.41	378	33	58	3.1	162	8.6	7
12	-.8690	.3587	7.77	389	32	66	3.5	228	12.2	10
13	-.7429	.3516	8.09	401	32	88	4.7	316	16.9	15
14	-.6214	.3459	8.36	412	31	94	5.0	410	21.9	19
15	-.5034	.3413	8.59	422	31	84	4.5	494	26.4	24
16	-.3882	.3377	8.77	433	30	110	5.9	604	32.2	29
17	-.2751	.3351	8.90	443	30	88	4.7	692	36.9	35
18	-.1634	.3334	9.00	453	30	73	3.9	765	40.8	39
19	-.0526	.3325	9.04	463	30	75	4.0	840	44.8	43
20	.0579	.3325	9.05	473	30	64	3.4	904	48.3	47
21	.1686	.3332	9.01	483	30	72	3.8	976	52.1	50
22	.2802	.3348	8.92	493	30	51	2.7	1027	54.8	53
23	.3931	.3373	8.79	503	30	65	3.5	1092	58.3	57
24	.5080	.3408	8.61	513	31	56	3.0	1148	61.3	60
25	.6256	.3452	8.39	524	31	57	3.0	1205	64.3	63
26	.7466	.3509	8.12	535	32	63	3.4	1268	67.7	66
27	.8722	.3579	7.81	546	32	64	3.4	1332	71.1	69
28	1.0032	.3665	7.44	558	33	70	3.7	1402	74.9	73
29	1.1414	.3771	7.03	570	34	68	3.6	1470	78.5	77
30	1.2883	.3900	6.57	583	35	56	3.0	1526	81.5	80
31	1.4465	.4061	6.06	598	37	63	3.4	1589	84.8	83
32	1.6194	.4263	5.50	613	38	60	3.2	1649	88.0	86
33	1.8120	.4523	4.89	630	41	54	2.9	1703	90.9	89
34	2.0319	.4869	4.22	650	44	46	2.5	1749	93.4	92
35	2.2916	.5350	3.49	674	48	50	2.7	1799	96.0	95
36	2.6151	.6072	2.71	703	55	28	1.5	1827	97.5	97
37	3.0555	.7312	1.87	742	66	18	1.0	1845	98.5	98
38	3.7829	1.0168	.97	808	91	22	1.2	1867	99.7	99
39	5.0105	1.8349	.30	918	165	6	.3	1873	100.0	99

; PERSON SCORE FILE FOR 2009 OK MOD -- REA 4 1 Aug 17 15:18 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.0416	1.8349	.30	-79	197	0	.0	0	.0	0
1	-3.8140	1.0169	.97	53	109	0	.0	0	.0	0
2	-3.0864	.7312	1.87	131	78	0	.0	0	.0	0
3	-2.6460	.6072	2.71	178	65	1	.1	1	.1	1
4	-2.3226	.5348	3.50	213	57	0	.0	1	.1	1
5	-2.0632	.4866	4.22	240	52	1	.1	2	.1	1
6	-1.8437	.4519	4.90	264	48	1	.1	3	.2	1
7	-1.6515	.4258	5.52	284	46	4	.2	7	.4	1
8	-1.4791	.4054	6.09	303	43	6	.3	13	.7	1
9	-1.3216	.3891	6.61	320	42	14	.8	27	1.5	1
10	-1.1754	.3759	7.08	335	40	20	1.1	47	2.6	2
11	-1.0382	.3651	7.50	350	39	42	2.3	89	4.9	4
12	-.9082	.3563	7.88	364	38	55	3.1	144	8.0	6
13	-.7839	.3490	8.21	377	37	63	3.5	207	11.5	10
14	-.6643	.3431	8.49	390	37	71	3.9	278	15.5	13
15	-.5482	.3383	8.74	403	36	70	3.9	348	19.4	17
16	-.4351	.3346	8.93	415	36	92	5.1	440	24.5	22
17	-.3241	.3317	9.09	427	36	77	4.3	517	28.8	27
18	-.2148	.3297	9.20	438	35	87	4.8	604	33.6	31
19	-.1065	.3285	9.26	450	35	73	4.1	677	37.7	36
20	.0013	.3281	9.29	462	35	73	4.1	750	41.7	40
21	.1089	.3285	9.27	473	35	74	4.1	824	45.8	44
22	.2172	.3296	9.20	485	35	68	3.8	892	49.6	48
23	.3264	.3315	9.10	496	36	69	3.8	961	53.4	52
24	.4372	.3343	8.95	508	36	59	3.3	1020	56.7	55
25	.5502	.3380	8.75	520	36	88	4.9	1108	61.6	59
26	.6660	.3428	8.51	533	37	80	4.4	1188	66.1	64
27	.7854	.3486	8.23	546	37	89	4.9	1277	71.0	69
28	.9094	.3559	7.90	559	38	73	4.1	1350	75.1	73
29	1.0391	.3647	7.52	573	39	68	3.8	1418	78.9	77
30	1.1759	.3754	7.10	587	40	53	2.9	1471	81.8	80
31	1.3217	.3886	6.62	603	42	68	3.8	1539	85.6	84
32	1.4788	.4048	6.10	620	43	48	2.7	1587	88.3	87
33	1.6508	.4252	5.53	638	46	70	3.9	1657	92.2	90
34	1.8424	.4514	4.91	659	48	55	3.1	1712	95.2	94
35	2.0614	.4861	4.23	682	52	36	2.0	1748	97.2	96
36	2.3204	.5343	3.50	710	57	21	1.2	1769	98.4	98
37	2.6433	.6067	2.72	745	65	18	1.0	1787	99.4	99
38	3.0831	.7308	1.87	792	78	5	.3	1792	99.7	99
39	3.8101	1.0166	.97	870	109	4	.2	1796	99.9	99
40	5.0373	1.8347	.30	1001	197	2	.1	1798	100.0	99

; PERSON SCORE FILE FOR 2009 OK MOD -- REA 4 2 Aug 17 15:18 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.0657	1.8350	.30	-37	178	0	.0	0	.0	0
1	-3.8378	1.0170	.97	82	99	1	.1	1	.1	1
2	-3.1100	.7314	1.87	153	71	0	.0	1	.1	1
3	-2.6693	.6074	2.71	196	59	0	.0	1	.1	1
4	-2.3456	.5351	3.49	227	52	1	.1	2	.1	1
5	-2.0857	.4870	4.22	252	47	1	.1	3	.2	1
6	-1.8658	.4524	4.89	274	44	6	.3	9	.5	1
7	-1.6733	.4263	5.50	292	41	5	.3	14	.7	1
8	-1.5004	.4060	6.07	309	39	5	.3	19	1.0	1
9	-1.3423	.3898	6.58	325	38	14	.7	33	1.7	1
10	-1.1956	.3767	7.05	339	37	20	1.0	53	2.7	2
11	-1.0578	.3661	7.46	352	36	41	2.1	94	4.7	4
12	-.9270	.3573	7.83	365	35	52	2.6	146	7.4	6
13	-.8020	.3502	8.15	377	34	59	3.0	205	10.3	9
14	-.6815	.3444	8.43	389	33	86	4.3	291	14.7	12
15	-.5645	.3398	8.66	400	33	89	4.5	380	19.1	17
16	-.4504	.3362	8.85	411	33	72	3.6	452	22.8	21
17	-.3383	.3335	8.99	422	32	85	4.3	537	27.1	25
18	-.2277	.3317	9.09	433	32	69	3.5	606	30.5	29
19	-.1181	.3307	9.15	443	32	93	4.7	699	35.2	33
20	-.0089	.3305	9.16	454	32	73	3.7	772	38.9	37
21	.1005	.3310	9.13	465	32	69	3.5	841	42.4	41
22	.2105	.3324	9.05	475	32	73	3.7	914	46.0	44
23	.3216	.3345	8.94	486	32	79	4.0	993	50.0	48
24	.4345	.3376	8.78	497	33	77	3.9	1070	53.9	52
25	.5497	.3415	8.57	508	33	82	4.1	1152	58.0	56
26	.6680	.3465	8.33	520	34	61	3.1	1213	61.1	60
27	.7901	.3526	8.04	532	34	100	5.0	1313	66.1	64
28	.9170	.3601	7.71	544	35	72	3.6	1385	69.8	68
29	1.0499	.3692	7.34	557	36	82	4.1	1467	73.9	72
30	1.1901	.3801	6.92	570	37	70	3.5	1537	77.4	76
31	1.3396	.3935	6.46	585	38	87	4.4	1624	81.8	80
32	1.5008	.4100	5.95	601	40	74	3.7	1698	85.5	84
33	1.6771	.4305	5.40	618	42	74	3.7	1772	89.3	87
34	1.8735	.4568	4.79	637	44	56	2.8	1828	92.1	91
35	2.0976	.4915	4.14	658	48	55	2.8	1883	94.9	93
36	2.3622	.5397	3.43	684	52	42	2.1	1925	97.0	96
37	2.6910	.6118	2.67	716	59	30	1.5	1955	98.5	98
38	3.1374	.7354	1.85	759	71	19	1.0	1974	99.4	99
39	3.8713	1.0202	.96	831	99	9	.5	1983	99.9	99
40	5.1038	1.8368	.30	950	178	2	.1	1985	100.0	99

; PERSON SCORE FILE FOR 2009 OK MOD -- REA 5 1 Aug 17 15:19 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-4.9765	1.8346	.30	-94	213	0	.0	0	.0	0
1	-3.7497	1.0163	.97	48	118	0	.0	0	.0	0
2	-3.0234	.7304	1.87	132	85	1	.1	1	.1	1
3	-2.5842	.6062	2.72	183	70	2	.1	3	.2	1
4	-2.2620	.5337	3.51	221	62	0	.0	3	.2	1
5	-2.0036	.4855	4.24	251	56	1	.1	4	.2	1
6	-1.7852	.4508	4.92	276	52	4	.2	8	.4	1
7	-1.5940	.4246	5.55	298	49	13	.7	21	1.1	1
8	-1.4226	.4042	6.12	318	47	12	.6	33	1.7	1
9	-1.2659	.3880	6.64	336	45	21	1.1	54	2.8	2
10	-1.1205	.3749	7.11	353	43	44	2.3	98	5.0	4
11	-.9840	.3642	7.54	369	42	53	2.7	151	7.8	6
12	-.8546	.3555	7.91	384	41	96	4.9	247	12.7	10
13	-.7308	.3484	8.24	398	40	75	3.9	322	16.6	15
14	-.6115	.3426	8.52	412	40	96	4.9	418	21.5	19
15	-.4957	.3380	8.75	425	39	115	5.9	533	27.4	24
16	-.3828	.3345	8.94	438	39	100	5.1	633	32.6	30
17	-.2717	.3319	9.08	451	38	101	5.2	734	37.8	35
18	-.1622	.3302	9.17	464	38	109	5.6	843	43.4	41
19	-.0535	.3294	9.22	477	38	98	5.0	941	48.4	46
20	.0550	.3294	9.22	489	38	93	4.8	1034	53.2	51
21	.1637	.3302	9.17	502	38	84	4.3	1118	57.5	55
22	.2732	.3318	9.08	514	38	84	4.3	1202	61.9	60
23	.3841	.3344	8.94	527	39	76	3.9	1278	65.8	64
24	.4970	.3379	8.76	540	39	84	4.3	1362	70.1	68
25	.6127	.3424	8.53	554	40	63	3.2	1425	73.3	72
26	.7318	.3482	8.25	568	40	66	3.4	1491	76.7	75
27	.8555	.3552	7.92	582	41	75	3.9	1566	80.6	79
28	.9847	.3640	7.55	597	42	81	4.2	1647	84.8	83
29	1.1209	.3746	7.13	613	43	66	3.4	1713	88.2	86
30	1.2660	.3877	6.65	629	45	65	3.3	1778	91.5	90
31	1.4225	.4039	6.13	648	47	31	1.6	1809	93.1	92
32	1.5937	.4243	5.56	667	49	34	1.7	1843	94.9	94
33	1.7844	.4504	4.93	689	52	39	2.0	1882	96.9	96
34	2.0025	.4851	4.25	715	56	21	1.1	1903	97.9	97
35	2.2606	.5334	3.51	745	62	15	.8	1918	98.7	98
36	2.5825	.6059	2.72	782	70	15	.8	1933	99.5	99
37	3.0213	.7301	1.88	833	85	8	.4	1941	99.9	99
38	3.7472	1.0161	.97	917	118	2	.1	1943	100.0	99
39	4.9736	1.8344	.30	1059	213	0	.0	1943	100.0	100

; PERSON SCORE FILE FOR 2009 OK MOD -- REA 5 2 Aug 17 15:19 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.0519	1.8367	.30	-76	197	0	.0	0	.0	0
1	-3.8200	1.0197	.96	56	110	0	.0	0	.0	0
2	-3.0871	.7348	1.85	135	79	0	.0	0	.0	0
3	-2.6417	.6110	2.68	183	66	1	.1	1	.1	1
4	-2.3139	.5388	3.44	218	58	0	.0	1	.1	1
5	-2.0501	.4906	4.15	246	53	1	.1	2	.1	1
6	-1.8269	.4560	4.81	270	49	4	.2	6	.3	1
7	-1.6312	.4298	5.41	291	46	7	.4	13	.7	1
8	-1.4555	.4094	5.97	310	44	11	.6	24	1.3	1
9	-1.2946	.3931	6.47	327	42	14	.7	38	2.0	2
10	-1.1454	.3799	6.93	344	41	34	1.8	72	3.9	3
11	-1.0053	.3691	7.34	359	40	36	1.9	108	5.8	5
12	-.8724	.3603	7.70	373	39	68	3.6	176	9.4	8
13	-.7452	.3531	8.02	387	38	78	4.2	254	13.6	12
14	-.6226	.3473	8.29	400	37	80	4.3	334	17.9	16
15	-.5037	.3426	8.52	412	37	95	5.1	429	23.0	20
16	-.3877	.3390	8.70	425	36	79	4.2	508	27.2	25
17	-.2737	.3363	8.84	437	36	95	5.1	603	32.3	30
18	-.1612	.3345	8.94	449	36	86	4.6	689	36.9	35
19	-.0497	.3336	8.99	461	36	82	4.4	771	41.3	39
20	.0615	.3335	8.99	473	36	82	4.4	853	45.6	43
21	.1729	.3342	8.95	485	36	84	4.5	937	50.1	48
22	.2851	.3357	8.87	497	36	93	5.0	1030	55.1	53
23	.3986	.3382	8.74	509	36	89	4.8	1119	59.9	57
24	.5140	.3416	8.57	522	37	81	4.3	1200	64.2	62
25	.6322	.3460	8.35	535	37	76	4.1	1276	68.3	66
26	.7538	.3516	8.09	548	38	85	4.5	1361	72.8	71
27	.8798	.3586	7.78	561	39	67	3.6	1428	76.4	75
28	1.0114	.3672	7.42	575	39	55	2.9	1483	79.3	78
29	1.1500	.3777	7.01	590	41	76	4.1	1559	83.4	81
30	1.2974	.3906	6.55	606	42	48	2.6	1607	86.0	85
31	1.4562	.4067	6.05	623	44	60	3.2	1667	89.2	88
32	1.6296	.4269	5.49	642	46	64	3.4	1731	92.6	91
33	1.8226	.4529	4.88	662	49	46	2.5	1777	95.1	94
34	2.0429	.4874	4.21	686	52	27	1.4	1804	96.5	96
35	2.3032	.5354	3.49	714	58	32	1.7	1836	98.2	97
36	2.6271	.6077	2.71	749	65	16	.9	1852	99.1	99
37	3.0681	.7315	1.87	796	79	11	.6	1863	99.7	99
38	3.7961	1.0171	.97	874	109	5	.3	1868	99.9	99
39	5.0240	1.8350	.30	1006	197	1	.1	1869	100.0	99

; PERSON SCORE FILE FOR 2009 OK MOD -- REA 6 1 Aug 17 15:19 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.0065	1.8348	.30	-123	219	0	.0	0	.0	0
1	-3.7793	1.0166	.97	24	121	0	.0	0	.0	0
2	-3.0523	.7308	1.87	111	87	0	.0	0	.0	0
3	-2.6124	.6068	2.72	163	72	1	.1	1	.1	1
4	-2.2894	.5345	3.50	202	64	0	.0	1	.1	1
5	-2.0303	.4863	4.23	233	58	1	.1	2	.1	1
6	-1.8110	.4517	4.90	259	54	4	.2	6	.3	1
7	-1.6190	.4257	5.52	282	51	5	.3	11	.6	1
8	-1.4467	.4054	6.08	303	48	9	.5	20	1.1	1
9	-1.2890	.3893	6.60	321	46	17	.9	37	2.0	2
10	-1.1426	.3763	7.06	339	45	31	1.7	68	3.7	3
11	-1.0050	.3658	7.47	355	44	60	3.3	128	6.9	5
12	-.8745	.3572	7.84	371	43	65	3.5	193	10.5	9
13	-.7494	.3502	8.15	386	42	79	4.3	272	14.7	13
14	-.6289	.3446	8.42	400	41	73	4.0	345	18.7	17
15	-.5116	.3402	8.64	414	41	90	4.9	435	23.6	21
16	-.3971	.3368	8.82	428	40	102	5.5	537	29.1	26
17	-.2845	.3344	8.94	441	40	83	4.5	620	33.6	31
18	-.1733	.3329	9.02	455	40	77	4.2	697	37.8	36
19	-.0627	.3322	9.06	468	40	97	5.3	794	43.0	40
20	.0476	.3324	9.05	481	40	90	4.9	884	47.9	45
21	.1584	.3334	9.00	494	40	97	5.3	981	53.1	51
22	.2701	.3352	8.90	508	40	96	5.2	1077	58.3	56
23	.3834	.3379	8.76	521	40	90	4.9	1167	63.2	61
24	.4987	.3416	8.57	535	41	87	4.7	1254	67.9	66
25	.6170	.3464	8.33	549	41	68	3.7	1322	71.6	70
26	.7390	.3523	8.06	564	42	76	4.1	1398	75.7	74
27	.8656	.3596	7.73	579	43	86	4.7	1484	80.4	78
28	.9980	.3684	7.37	595	44	71	3.8	1555	84.2	82
29	1.1376	.3792	6.95	611	45	65	3.5	1620	87.8	86
30	1.2864	.3925	6.49	629	47	62	3.4	1682	91.1	89
31	1.4467	.4088	5.98	648	49	43	2.3	1725	93.4	92
32	1.6220	.4293	5.43	669	51	39	2.1	1764	95.6	95
33	1.8172	.4554	4.82	692	54	35	1.9	1799	97.5	97
34	2.0400	.4901	4.16	719	59	16	.9	1815	98.3	98
35	2.3031	.5383	3.45	750	64	16	.9	1831	99.2	99
36	2.6303	.6105	2.68	790	73	9	.5	1840	99.7	99
37	3.0749	.7342	1.86	843	88	5	.3	1845	99.9	99
38	3.8070	1.0192	.96	930	122	1	.1	1846	100.0	99
39	5.0381	1.8363	.30	1077	219	0	.0	1846	100.0	100

; PERSON SCORE FILE FOR 2009 OK MOD -- REA 6 2 Aug 17 15:19 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-4.9912	1.8354	.30	-128	224	0	.0	0	.0	0
1	-3.7624	1.0177	.97	22	124	0	.0	0	.0	0
2	-3.0331	.7324	1.86	111	89	1	.1	1	.1	1
3	-2.5909	.6087	2.70	165	74	0	.0	1	.1	1
4	-2.2656	.5366	3.47	205	66	0	.0	1	.1	1
5	-2.0041	.4887	4.19	237	60	1	.1	2	.1	1
6	-1.7825	.4543	4.84	264	55	1	.1	3	.2	1
7	-1.5881	.4285	5.45	287	52	7	.4	10	.6	1
8	-1.4133	.4084	6.00	309	50	10	.6	20	1.1	1
9	-1.2532	.3925	6.49	328	48	21	1.2	41	2.3	2
10	-1.1043	.3796	6.94	347	46	39	2.2	80	4.5	3
11	-.9642	.3693	7.33	364	45	55	3.1	135	7.6	6
12	-.8311	.3608	7.68	380	44	76	4.3	211	11.8	10
13	-.7034	.3540	7.98	395	43	73	4.1	284	15.9	14
14	-.5801	.3485	8.23	411	43	99	5.5	383	21.5	19
15	-.4602	.3443	8.44	425	42	108	6.1	491	27.5	24
16	-.3428	.3411	8.60	439	42	101	5.7	592	33.2	30
17	-.2273	.3388	8.71	454	41	81	4.5	673	37.7	35
18	-.1130	.3375	8.78	468	41	95	5.3	768	43.0	40
19	.0007	.3371	8.80	481	41	105	5.9	873	48.9	46
20	.1144	.3375	8.78	495	41	94	5.3	967	54.2	52
21	.2288	.3388	8.71	509	41	106	5.9	1073	60.1	57
22	.3442	.3410	8.60	523	42	91	5.1	1164	65.2	63
23	.4615	.3442	8.44	538	42	95	5.3	1259	70.6	68
24	.5814	.3484	8.24	552	43	69	3.9	1328	74.4	73
25	.7046	.3538	7.99	567	43	64	3.6	1392	78.0	76
26	.8321	.3606	7.69	583	44	86	4.8	1478	82.8	80
27	.9651	.3690	7.34	599	45	69	3.9	1547	86.7	85
28	1.1050	.3794	6.95	616	46	48	2.7	1595	89.4	88
29	1.2537	.3922	6.50	634	48	50	2.8	1645	92.2	91
30	1.4136	.4081	6.01	654	50	37	2.1	1682	94.3	93
31	1.5881	.4281	5.46	675	52	23	1.3	1705	95.6	95
32	1.7821	.4539	4.85	699	55	23	1.3	1728	96.9	96
33	2.0033	.4882	4.20	726	60	22	1.2	1750	98.1	97
34	2.2643	.5361	3.48	758	65	14	.8	1764	98.9	98
35	2.5890	.6082	2.70	797	74	13	.7	1777	99.6	99
36	3.0307	.7320	1.87	851	89	5	.3	1782	99.9	99
37	3.7591	1.0173	.97	940	124	1	.1	1783	99.9	99
38	4.9874	1.8351	.30	1090	224	1	.1	1784	100.0	99

; PERSON SCORE FILE FOR 2009 OK MOD -- REA 7 1 Aug 17 15:20 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.2298	1.8420	.29	-170	225	0	.0	0	.0	0
1	-3.9844	1.0289	.94	-17	126	0	.0	0	.0	0
2	-3.2331	.7466	1.79	74	91	0	.0	0	.0	0
3	-2.7707	.6243	2.57	131	76	0	.0	0	.0	0
4	-2.4271	.5527	3.27	173	68	0	.0	0	.0	0
5	-2.1490	.5047	3.93	207	62	4	.2	4	.2	1
6	-1.9122	.4699	4.53	236	57	1	.1	5	.3	1
7	-1.7040	.4435	5.08	261	54	7	.4	12	.7	1
8	-1.5168	.4227	5.60	284	52	12	.7	24	1.3	1
9	-1.3454	.4059	6.07	305	50	9	.5	33	1.8	2
10	-1.1864	.3921	6.50	325	48	26	1.4	59	3.2	2
11	-1.0371	.3808	6.90	343	47	47	2.5	106	5.7	4
12	-.8958	.3714	7.25	360	45	50	2.7	156	8.5	7
13	-.7608	.3636	7.56	377	44	64	3.5	220	11.9	10
14	-.6309	.3572	7.84	393	44	85	4.6	305	16.5	14
15	-.5053	.3519	8.07	408	43	82	4.4	387	21.0	19
16	-.3830	.3478	8.27	423	43	83	4.5	470	25.5	23
17	-.2632	.3446	8.42	438	42	101	5.5	571	31.0	28
18	-.1453	.3423	8.54	452	42	100	5.4	671	36.4	34
19	-.0287	.3408	8.61	466	42	105	5.7	776	42.1	39
20	.0873	.3403	8.64	480	42	95	5.2	871	47.2	45
21	.2031	.3405	8.62	495	42	104	5.6	975	52.9	50
22	.3194	.3417	8.57	509	42	101	5.5	1076	58.4	56
23	.4368	.3437	8.47	523	42	79	4.3	1155	62.6	60
24	.5558	.3467	8.32	538	42	100	5.4	1255	68.1	65
25	.6774	.3508	8.13	553	43	87	4.7	1342	72.8	70
26	.8023	.3561	7.89	568	44	78	4.2	1420	77.0	75
27	.9313	.3627	7.60	584	44	89	4.8	1509	81.8	79
28	1.0658	.3710	7.27	600	45	59	3.2	1568	85.0	83
29	1.2071	.3812	6.88	617	47	78	4.2	1646	89.3	87
30	1.3571	.3938	6.45	636	48	55	3.0	1701	92.2	91
31	1.5182	.4096	5.96	655	50	42	2.3	1743	94.5	93
32	1.6940	.4295	5.42	677	53	34	1.8	1777	96.4	95
33	1.8892	.4552	4.83	701	56	26	1.4	1803	97.8	97
34	2.1117	.4895	4.17	728	60	22	1.2	1825	99.0	98
35	2.3739	.5373	3.46	760	66	11	.6	1836	99.6	99
36	2.6998	.6092	2.69	800	74	6	.3	1842	99.9	99
37	3.1427	.7328	1.86	854	90	2	.1	1844	100.0	99
38	3.8724	1.0179	.97	943	124	0	.0	1844	100.0	100
39	5.1014	1.8355	.30	1094	224	0	.0	1844	100.0	100

; PERSON SCORE FILE FOR 2009 OK MOD -- REA 7 2 Aug 17 15:20 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.2012	1.8401	.30	-110	198	0	.0	0	.0	0
1	-3.9608	1.0255	.95	23	110	0	.0	0	.0	0
2	-3.2167	.7419	1.82	103	80	1	.1	1	.1	1
3	-2.7614	.6187	2.61	152	67	0	.0	1	.1	1
4	-2.4245	.5467	3.35	188	59	0	.0	1	.1	1
5	-2.1527	.4984	4.03	218	54	1	.1	2	.1	1
6	-1.9221	.4636	4.65	242	50	2	.1	4	.2	1
7	-1.7197	.4371	5.23	264	47	2	.1	6	.3	1
8	-1.5379	.4164	5.77	284	45	8	.5	14	.8	1
9	-1.3716	.3998	6.26	302	43	9	.5	23	1.3	1
10	-1.2173	.3862	6.71	318	42	13	.8	36	2.1	2
11	-1.0726	.3750	7.11	334	40	24	1.4	60	3.5	3
12	-.9355	.3658	7.48	349	39	46	2.7	106	6.1	5
13	-.8046	.3581	7.80	363	39	47	2.7	153	8.8	7
14	-.6787	.3518	8.08	376	38	55	3.2	208	12.0	10
15	-.5568	.3466	8.32	389	37	68	3.9	276	15.9	14
16	-.4382	.3425	8.53	402	37	52	3.0	328	18.9	17
17	-.3220	.3393	8.69	415	37	69	4.0	397	22.9	21
18	-.2077	.3370	8.81	427	36	75	4.3	472	27.2	25
19	-.0947	.3355	8.89	439	36	60	3.5	532	30.7	29
20	.0176	.3347	8.92	451	36	75	4.3	607	35.0	33
21	.1296	.3348	8.92	463	36	62	3.6	669	38.6	37
22	.2419	.3357	8.88	475	36	95	5.5	764	44.1	41
23	.3551	.3373	8.79	487	36	90	5.2	854	49.3	47
24	.4697	.3399	8.66	500	37	91	5.3	945	54.5	52
25	.5863	.3433	8.48	512	37	88	5.1	1033	59.6	57
26	.7057	.3479	8.26	525	37	83	4.8	1116	64.4	62
27	.8286	.3535	8.00	538	38	81	4.7	1197	69.1	67
28	.9560	.3605	7.69	552	39	73	4.2	1270	73.3	71
29	1.0890	.3691	7.34	566	40	70	4.0	1340	77.3	75
30	1.2291	.3797	6.94	581	41	74	4.3	1414	81.6	79
31	1.3780	.3926	6.49	598	42	60	3.5	1474	85.1	83
32	1.5383	.4086	5.99	615	44	69	4.0	1543	89.0	87
33	1.7133	.4288	5.44	634	46	57	3.3	1600	92.3	91
34	1.9081	.4547	4.84	655	49	42	2.4	1642	94.7	94
35	2.1300	.4892	4.18	678	53	39	2.3	1681	97.0	96
36	2.3921	.5371	3.47	707	58	19	1.1	1700	98.1	98
37	2.7178	.6092	2.69	742	66	13	.8	1713	98.8	98
38	3.1607	.7328	1.86	789	79	14	.8	1727	99.7	99
39	3.8906	1.0181	.96	868	110	6	.3	1733	100.0	99
40	5.1199	1.8355	.30	1000	197	0	.0	1733	100.0	100

; PERSON SCORE FILE FOR 2009 OK MOD -- REA 8 1 Aug 17 15:20 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.1036	1.8358	.30	-153	213	0	.0	0	.0	0
1	-3.8738	1.0184	.96	-11	118	0	.0	0	.0	0
2	-3.1434	.7333	1.86	74	85	0	.0	0	.0	0
3	-2.6998	.6097	2.69	125	71	0	.0	0	.0	0
4	-2.3734	.5377	3.46	163	62	0	.0	0	.0	0
5	-2.1107	.4898	4.17	193	57	0	.0	0	.0	0
6	-1.8881	.4554	4.82	219	53	1	.1	1	.1	1
7	-1.6928	.4295	5.42	242	50	4	.2	5	.3	1
8	-1.5172	.4093	5.97	262	47	6	.3	11	.6	1
9	-1.3564	.3932	6.47	281	46	7	.4	18	1.0	1
10	-1.2071	.3802	6.92	298	44	12	.6	30	1.6	1
11	-1.0667	.3695	7.32	314	43	20	1.1	50	2.7	2
12	-.9335	.3608	7.68	330	42	28	1.5	78	4.1	3
13	-.8060	.3536	8.00	345	41	44	2.3	122	6.5	5
14	-.6831	.3478	8.27	359	40	44	2.3	166	8.8	8
15	-.5638	.3430	8.50	373	40	43	2.3	209	11.1	10
16	-.4475	.3393	8.68	386	39	67	3.6	276	14.6	13
17	-.3333	.3365	8.83	399	39	69	3.7	345	18.3	16
18	-.2208	.3345	8.94	412	39	76	4.0	421	22.3	20
19	-.1093	.3334	9.00	425	39	76	4.0	497	26.4	24
20	.0016	.3329	9.02	438	39	80	4.2	577	30.6	28
21	.1125	.3333	9.00	451	39	83	4.4	660	35.0	33
22	.2239	.3344	8.94	464	39	82	4.3	742	39.3	37
23	.3363	.3363	8.84	477	39	82	4.3	824	43.7	42
24	.4503	.3390	8.70	490	39	97	5.1	921	48.8	46
25	.5664	.3426	8.52	504	40	95	5.0	1016	53.9	51
26	.6853	.3473	8.29	517	40	112	5.9	1128	59.8	57
27	.8079	.3531	8.02	532	41	93	4.9	1221	64.7	62
28	.9350	.3602	7.71	546	42	129	6.8	1350	71.6	68
29	1.0678	.3689	7.35	562	43	98	5.2	1448	76.8	74
30	1.2077	.3795	6.94	578	44	86	4.6	1534	81.3	79
31	1.3565	.3925	6.49	595	45	81	4.3	1615	85.6	83
32	1.5167	.4086	5.99	614	47	75	4.0	1690	89.6	88
33	1.6917	.4288	5.44	634	50	68	3.6	1758	93.2	91
34	1.8864	.4547	4.84	657	53	45	2.4	1803	95.6	94
35	2.1084	.4892	4.18	682	57	27	1.4	1830	97.0	96
36	2.3704	.5371	3.47	713	62	25	1.3	1855	98.4	98
37	2.6963	.6092	2.69	750	71	20	1.1	1875	99.4	99
38	3.1391	.7329	1.86	802	85	7	.4	1882	99.8	99
39	3.8690	1.0180	.96	886	118	3	.2	1885	99.9	99
40	5.0983	1.8356	.30	1029	213	1	.1	1886	100.0	99

; PERSON SCORE FILE FOR 2009 OK MOD -- REA 8 2 Aug 17 15:20 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.1887	1.8378	.30	-167	209	0	.0	0	.0	0
1	-3.9538	1.0219	.96	-27	116	0	.0	0	.0	0
2	-3.2160	.7381	1.84	58	84	1	.1	1	.1	1
3	-2.7654	.6155	2.64	109	70	1	.1	2	.1	1
4	-2.4319	.5442	3.38	147	62	0	.0	2	.1	1
5	-2.1624	.4968	4.05	178	57	1	.1	3	.2	1
6	-1.9329	.4629	4.67	204	53	2	.1	5	.3	1
7	-1.7307	.4374	5.23	227	50	4	.2	9	.5	1
8	-1.5482	.4176	5.73	248	48	8	.5	17	1.0	1
9	-1.3806	.4019	6.19	267	46	6	.3	23	1.3	1
10	-1.2243	.3892	6.60	285	44	7	.4	30	1.7	1
11	-1.0768	.3789	6.96	301	43	18	1.0	48	2.7	2
12	-.9365	.3706	7.28	317	42	28	1.6	76	4.3	4
13	-.8018	.3637	7.56	333	41	37	2.1	113	6.4	5
14	-.6716	.3582	7.79	347	41	36	2.0	149	8.4	7
15	-.5449	.3539	7.99	362	40	43	2.4	192	10.8	10
16	-.4209	.3505	8.14	376	40	37	2.1	229	12.9	12
17	-.2989	.3481	8.25	390	40	46	2.6	275	15.5	14
18	-.1784	.3465	8.33	404	39	65	3.7	340	19.2	17
19	-.0587	.3457	8.37	417	39	65	3.7	405	22.9	21
20	.0608	.3457	8.37	431	39	58	3.3	463	26.2	25
21	.1805	.3464	8.33	445	39	72	4.1	535	30.2	28
22	.3010	.3480	8.26	458	40	76	4.3	611	34.5	32
23	.4229	.3504	8.14	472	40	100	5.6	711	40.2	37
24	.5468	.3538	7.99	486	40	103	5.8	814	46.0	43
25	.6735	.3581	7.80	501	41	74	4.2	888	50.2	48
26	.8036	.3636	7.57	516	41	123	6.9	1011	57.1	54
27	.9381	.3703	7.29	531	42	109	6.2	1120	63.3	60
28	1.0783	.3787	6.97	547	43	103	5.8	1223	69.1	66
29	1.2255	.3889	6.61	564	44	127	7.2	1350	76.3	73
30	1.3815	.4015	6.20	581	46	119	6.7	1469	83.0	80
31	1.5488	.4171	5.75	601	48	81	4.6	1550	87.6	85
32	1.7307	.4368	5.24	621	50	75	4.2	1625	91.8	90
33	1.9323	.4622	4.68	644	53	58	3.3	1683	95.1	93
34	2.1612	.4961	4.06	670	57	45	2.5	1728	97.6	96
35	2.4299	.5433	3.39	701	62	25	1.4	1753	99.0	98
36	2.7624	.6146	2.65	739	70	10	.6	1763	99.6	99
37	3.2119	.7373	1.84	790	84	4	.2	1767	99.8	99
38	3.9484	1.0212	.96	874	116	3	.2	1770	100.0	99
39	5.1823	1.8374	.30	1015	209	0	.0	1770	100.0	100

; PERSON SCORE FILE FOR 2009 OK MOD -- MAT 3 1 Aug 17 15:18 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.1012	1.8364	.30	0	156	1	.1	1	.1	1
1	-3.8699	1.0194	.96	105	86	0	.0	1	.1	1
2	-3.1374	.7344	1.85	167	62	0	.0	1	.1	1
3	-2.6924	.6108	2.68	204	52	0	.0	1	.1	1
4	-2.3648	.5386	3.45	232	46	0	.0	1	.1	1
5	-2.1012	.4905	4.16	255	42	1	.1	2	.1	1
6	-1.8780	.4559	4.81	273	39	0	.0	2	.1	1
7	-1.6824	.4297	5.42	290	36	2	.1	4	.3	1
8	-1.5067	.4093	5.97	305	35	2	.1	6	.4	1
9	-1.3460	.3930	6.48	319	33	11	.7	17	1.1	1
10	-1.1969	.3797	6.94	331	32	11	.7	28	1.8	1
11	-1.0570	.3689	7.35	343	31	17	1.1	45	2.9	2
12	-.9243	.3599	7.72	354	31	28	1.8	73	4.7	4
13	-.7975	.3526	8.04	365	30	35	2.3	108	7.0	6
14	-.6753	.3466	8.33	375	29	42	2.7	150	9.7	8
15	-.5569	.3417	8.56	386	29	51	3.3	201	13.0	11
16	-.4416	.3379	8.76	395	29	61	3.9	262	16.9	15
17	-.3284	.3349	8.91	405	28	36	2.3	298	19.3	18
18	-.2170	.3329	9.02	414	28	36	2.3	334	21.6	20
19	-.1066	.3316	9.09	424	28	56	3.6	390	25.2	23
20	.0032	.3312	9.12	433	28	68	4.4	458	29.6	27
21	.1129	.3315	9.10	442	28	51	3.3	509	32.9	31
22	.2231	.3326	9.04	452	28	63	4.1	572	37.0	35
23	.3343	.3345	8.94	461	28	63	4.1	635	41.0	39
24	.4470	.3372	8.79	471	29	50	3.2	685	44.3	43
25	.5619	.3409	8.60	480	29	60	3.9	745	48.1	46
26	.6797	.3457	8.37	490	29	64	4.1	809	52.3	50
27	.8012	.3516	8.09	501	30	58	3.7	867	56.0	54
28	.9273	.3588	7.77	511	30	61	3.9	928	59.9	58
29	1.0591	.3676	7.40	523	31	71	4.6	999	64.5	62
30	1.1982	.3784	6.98	534	32	53	3.4	1052	68.0	66
31	1.3462	.3916	6.52	547	33	70	4.5	1122	72.5	70
32	1.5058	.4079	6.01	560	35	60	3.9	1182	76.4	74
33	1.6804	.4284	5.45	575	36	68	4.4	1250	80.7	79
34	1.8748	.4545	4.84	592	39	60	3.9	1310	84.6	83
35	2.0968	.4892	4.18	611	41	75	4.8	1385	89.5	87
36	2.3591	.5375	3.46	633	46	36	2.3	1421	91.8	91
37	2.6854	.6098	2.69	660	52	53	3.4	1474	95.2	94
38	3.1291	.7336	1.86	698	62	38	2.5	1512	97.7	96
39	3.8603	1.0188	.96	760	86	24	1.6	1536	99.2	98
40	5.0909	1.8361	.30	864	156	12	.8	1548	100.0	99

; PERSON SCORE FILE FOR 2009 OK MOD -- MAT 3 2 Aug 17 15:18 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.2537	1.8372	.30	-12	143	0	.0	0	.0	0
1	-4.0203	1.0209	.96	84	79	0	.0	0	.0	0
2	-3.2845	.7369	1.84	142	57	0	.0	0	.0	0
3	-2.8356	.6141	2.65	176	48	0	.0	0	.0	0
4	-2.5037	.5429	3.39	202	42	0	.0	0	.0	0
5	-2.2354	.4956	4.07	223	39	1	.1	1	.1	1
6	-2.0070	.4618	4.69	241	36	2	.1	3	.2	1
7	-1.8057	.4364	5.25	256	34	0	.0	3	.2	1
8	-1.6241	.4168	5.76	271	32	2	.1	5	.3	1
9	-1.4570	.4012	6.21	284	31	4	.2	9	.6	1
10	-1.3012	.3887	6.62	296	30	3	.2	12	.7	1
11	-1.1542	.3785	6.98	307	29	5	.3	17	1.0	1
12	-1.0142	.3703	7.29	318	29	6	.4	23	1.4	1
13	-.8796	.3635	7.57	328	28	9	.6	32	2.0	2
14	-.7495	.3582	7.80	339	28	18	1.1	50	3.1	3
15	-.6228	.3539	7.98	348	28	23	1.4	73	4.5	4
16	-.4987	.3506	8.13	358	27	26	1.6	99	6.1	5
17	-.3767	.3482	8.25	368	27	34	2.1	133	8.2	7
18	-.2560	.3467	8.32	377	27	41	2.5	174	10.7	9
19	-.1362	.3459	8.36	386	27	38	2.3	212	13.0	12
20	-.0166	.3459	8.36	396	27	39	2.4	251	15.4	14
21	.1033	.3466	8.33	405	27	45	2.8	296	18.2	17
22	.2238	.3480	8.26	414	27	56	3.4	352	21.6	20
23	.3457	.3502	8.15	424	27	46	2.8	398	24.4	23
24	.4694	.3533	8.01	433	27	81	5.0	479	29.4	27
25	.5955	.3572	7.84	443	28	55	3.4	534	32.8	31
26	.7248	.3621	7.63	453	28	80	4.9	614	37.7	35
27	.8580	.3681	7.38	464	29	70	4.3	684	42.0	40
28	.9961	.3754	7.10	474	29	71	4.4	755	46.3	44
29	1.1402	.3842	6.78	485	30	64	3.9	819	50.3	48
30	1.2918	.3948	6.42	497	31	74	4.5	893	54.8	53
31	1.4527	.4078	6.01	510	32	70	4.3	963	59.1	57
32	1.6254	.4238	5.57	523	33	88	5.4	1051	64.5	62
33	1.8133	.4439	5.08	538	35	93	5.7	1144	70.2	67
34	2.0214	.4695	4.54	554	36	100	6.1	1244	76.4	73
35	2.2574	.5035	3.94	572	39	80	4.9	1324	81.3	79
36	2.5340	.5509	3.30	594	43	73	4.5	1397	85.8	84
37	2.8751	.6219	2.59	620	48	83	5.1	1480	90.9	88
38	3.3342	.7441	1.81	656	58	64	3.9	1544	94.8	93
39	4.0813	1.0267	.95	714	80	61	3.7	1605	98.5	97
40	5.3233	1.8406	.30	811	143	24	1.5	1629	100.0	99

; PERSON SCORE FILE FOR 2009 OK MOD -- MAT 4 1 Aug 17 15:18 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.1388	1.8374	.30	-91	197	0	.0	0	.0	0
1	-3.9049	1.0210	.96	41	109	0	.0	0	.0	0
2	-3.1694	.7364	1.84	120	79	0	.0	0	.0	0
3	-2.7218	.6127	2.66	168	66	0	.0	0	.0	0
4	-2.3920	.5405	3.42	204	58	0	.0	0	.0	0
5	-2.1266	.4923	4.13	232	53	1	.1	1	.1	1
6	-1.9017	.4576	4.78	256	49	3	.2	4	.3	1
7	-1.7046	.4314	5.37	277	46	3	.2	7	.4	1
8	-1.5275	.4109	5.92	296	44	6	.4	13	.8	1
9	-1.3655	.3946	6.42	314	42	18	1.2	31	2.0	1
10	-1.2151	.3814	6.88	330	41	14	.9	45	2.9	2
11	-1.0739	.3706	7.28	345	40	24	1.5	69	4.4	4
12	-.9399	.3617	7.64	359	39	38	2.4	107	6.9	6
13	-.8118	.3545	7.96	373	38	50	3.2	157	10.1	8
14	-.6883	.3485	8.23	386	37	53	3.4	210	13.5	12
15	-.5685	.3438	8.46	399	37	63	4.0	273	17.5	16
16	-.4517	.3401	8.65	412	36	65	4.2	338	21.7	20
17	-.3370	.3373	8.79	424	36	72	4.6	410	26.3	24
18	-.2240	.3354	8.89	436	36	64	4.1	474	30.5	28
19	-.1119	.3342	8.95	448	36	79	5.1	553	35.5	33
20	-.0003	.3339	8.97	460	36	69	4.4	622	40.0	38
21	.1113	.3344	8.95	472	36	65	4.2	687	44.2	42
22	.2234	.3356	8.88	484	36	78	5.0	765	49.2	47
23	.3367	.3376	8.77	496	36	70	4.5	835	53.7	51
24	.4516	.3405	8.63	509	37	72	4.6	907	58.3	56
25	.5687	.3442	8.44	521	37	85	5.5	992	63.8	61
26	.6888	.3490	8.21	534	37	73	4.7	1065	68.4	66
27	.8127	.3550	7.94	547	38	69	4.4	1134	72.9	71
28	.9412	.3622	7.62	561	39	60	3.9	1194	76.7	75
29	1.0755	.3710	7.26	575	40	68	4.4	1262	81.1	79
30	1.2170	.3817	6.86	591	41	47	3.0	1309	84.1	83
31	1.3676	.3948	6.41	607	42	53	3.4	1362	87.5	86
32	1.5298	.4110	5.92	624	44	49	3.1	1411	90.7	89
33	1.7068	.4312	5.38	643	46	34	2.2	1445	92.9	92
34	1.9037	.4572	4.78	664	49	27	1.7	1472	94.6	94
35	2.1280	.4916	4.14	688	53	27	1.7	1499	96.3	95
36	2.3924	.5394	3.44	717	58	19	1.2	1518	97.6	97
37	2.7207	.6113	2.68	752	66	23	1.5	1541	99.0	98
38	3.1663	.7347	1.85	800	79	12	.8	1553	99.8	99
39	3.8989	1.0194	.96	878	109	3	.2	1556	100.0	99
40	5.1302	1.8364	.30	1010	197	0	.0	1556	100.0	100

; PERSON SCORE FILE FOR 2009 OK MOD -- MAT 4 2 Aug 17 15:18 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.0867	1.8360	.30	-31	166	0	.0	0	.0	0
1	-3.8565	1.0187	.96	80	92	0	.0	0	.0	0
2	-3.1252	.7338	1.86	146	66	0	.0	0	.0	0
3	-2.6809	.6104	2.68	186	55	0	.0	0	.0	0
4	-2.3536	.5385	3.45	215	49	0	.0	0	.0	0
5	-2.0900	.4908	4.15	239	44	0	.0	0	.0	0
6	-1.8664	.4565	4.80	259	41	2	.1	2	.1	1
7	-1.6701	.4308	5.39	277	39	2	.1	4	.2	1
8	-1.4933	.4107	5.93	293	37	3	.2	7	.4	1
9	-1.3313	.3948	6.41	308	36	12	.7	19	1.1	1
10	-1.1806	.3820	6.85	321	34	21	1.2	40	2.3	2
11	-1.0387	.3716	7.24	334	34	16	.9	56	3.2	3
12	-.9039	.3631	7.59	346	33	27	1.5	83	4.7	4
13	-.7747	.3562	7.88	358	32	33	1.9	116	6.6	6
14	-.6498	.3506	8.14	369	32	38	2.2	154	8.8	8
15	-.5285	.3462	8.34	380	31	51	2.9	205	11.7	10
16	-.4099	.3428	8.51	391	31	49	2.8	254	14.5	13
17	-.2933	.3404	8.63	402	31	53	3.0	307	17.5	16
18	-.1780	.3388	8.71	412	31	58	3.3	365	20.8	19
19	-.0635	.3381	8.75	422	31	76	4.3	441	25.1	23
20	.0508	.3382	8.74	433	31	67	3.8	508	28.9	27
21	.1654	.3391	8.70	443	31	58	3.3	566	32.2	31
22	.2810	.3409	8.61	453	31	83	4.7	649	37.0	35
23	.3980	.3435	8.47	464	31	68	3.9	717	40.8	39
24	.5172	.3471	8.30	475	31	67	3.8	784	44.6	43
25	.6392	.3518	8.08	486	32	94	5.4	878	50.0	47
26	.7650	.3576	7.82	497	32	86	4.9	964	54.9	52
27	.8953	.3648	7.52	509	33	73	4.2	1037	59.1	57
28	1.0315	.3735	7.17	521	34	89	5.1	1126	64.1	62
29	1.1750	.3843	6.77	534	35	85	4.8	1211	69.0	67
30	1.3275	.3974	6.33	548	36	79	4.5	1290	73.5	71
31	1.4917	.4136	5.84	563	37	65	3.7	1355	77.2	75
32	1.6711	.4340	5.31	579	39	90	5.1	1445	82.3	80
33	1.8705	.4601	4.72	597	42	74	4.2	1519	86.5	84
34	2.0977	.4946	4.09	617	45	66	3.8	1585	90.3	88
35	2.3653	.5426	3.40	642	49	58	3.3	1643	93.6	92
36	2.6974	.6145	2.65	672	55	38	2.2	1681	95.7	95
37	3.1472	.7378	1.84	712	67	42	2.4	1723	98.1	97
38	3.8848	1.0220	.96	779	92	24	1.4	1747	99.5	99
39	5.1200	1.8380	.30	890	166	9	.5	1756	100.0	99

; PERSON SCORE FILE FOR 2009 OK MOD -- MAT 5 1 Aug 17 15:19 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.2586	1.8419	.29	-128	206	0	.0	0	.0	0
1	-4.0136	1.0285	.95	11	115	0	.0	0	.0	0
2	-3.2636	.7457	1.80	95	83	0	.0	0	.0	0
3	-2.8029	.6230	2.58	146	70	0	.0	0	.0	0
4	-2.4609	.5513	3.29	185	62	0	.0	0	.0	0
5	-2.1840	.5034	3.95	216	56	2	.1	2	.1	1
6	-1.9484	.4690	4.55	242	52	1	.1	3	.2	1
7	-1.7410	.4429	5.10	265	50	1	.1	4	.2	1
8	-1.5540	.4226	5.60	286	47	8	.4	12	.7	1
9	-1.3824	.4064	6.06	305	45	14	.8	26	1.4	1
10	-1.2227	.3932	6.47	323	44	24	1.3	50	2.8	2
11	-1.0724	.3825	6.83	340	43	23	1.3	73	4.1	3
12	-.9296	.3737	7.16	356	42	46	2.6	119	6.6	5
13	-.7927	.3665	7.45	371	41	59	3.3	178	9.9	8
14	-.6606	.3606	7.69	386	40	61	3.4	239	13.3	12
15	-.5324	.3559	7.90	401	40	61	3.4	300	16.7	15
16	-.4071	.3522	8.06	415	39	86	4.8	386	21.4	19
17	-.2841	.3494	8.19	428	39	92	5.1	478	26.6	24
18	-.1627	.3475	8.28	442	39	112	6.2	590	32.8	30
19	-.0425	.3464	8.34	455	39	101	5.6	691	38.4	36
20	.0773	.3461	8.35	469	39	93	5.2	784	43.6	41
21	.1972	.3465	8.33	482	39	113	6.3	897	49.8	47
22	.3177	.3478	8.26	496	39	107	5.9	1004	55.8	53
23	.4394	.3500	8.16	509	39	88	4.9	1092	60.7	58
24	.5629	.3531	8.02	523	40	91	5.1	1183	65.7	63
25	.6890	.3572	7.84	537	40	88	4.9	1271	70.6	68
26	.8183	.3624	7.61	552	41	74	4.1	1345	74.7	73
27	.9520	.3689	7.35	567	41	66	3.7	1411	78.4	77
28	1.0910	.3771	7.03	582	42	69	3.8	1480	82.2	80
29	1.2369	.3871	6.67	599	43	61	3.4	1541	85.6	84
30	1.3914	.3995	6.27	616	45	56	3.1	1597	88.7	87
31	1.5571	.4150	5.81	634	46	46	2.6	1643	91.3	90
32	1.7372	.4346	5.30	654	49	43	2.4	1686	93.7	92
33	1.9367	.4599	4.73	677	51	29	1.6	1715	95.3	94
34	2.1634	.4937	4.10	702	55	35	1.9	1750	97.2	96
35	2.4297	.5410	3.42	732	61	21	1.2	1771	98.4	98
36	2.7596	.6124	2.67	769	69	17	.9	1788	99.3	99
37	3.2062	.7353	1.85	819	82	10	.6	1798	99.9	99
38	3.9396	1.0197	.96	901	114	2	.1	1800	100.0	99
39	5.1712	1.8364	.30	1039	206	0	.0	1800	100.0	100

; PERSON SCORE FILE FOR 2009 OK MOD -- MAT 5 2 Aug 17 15:19 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.2555	1.8387	.30	-65	182	0	.0	0	.0	0
1	-4.0181	1.0237	.95	57	102	0	.0	0	.0	0
2	-3.2767	.7406	1.82	131	74	0	.0	0	.0	0
3	-2.8224	.6185	2.61	176	61	0	.0	0	.0	0
4	-2.4853	.5476	3.34	210	54	1	.1	1	.1	1
5	-2.2119	.5006	3.99	237	50	0	.0	1	.1	1
6	-1.9786	.4669	4.59	260	46	0	.0	1	.1	1
7	-1.7727	.4417	5.13	280	44	4	.2	5	.3	1
8	-1.5865	.4220	5.61	299	42	3	.2	8	.5	1
9	-1.4151	.4065	6.05	316	40	17	1.0	25	1.4	1
10	-1.2552	.3939	6.44	332	39	15	.9	40	2.3	2
11	-1.1041	.3837	6.79	347	38	34	1.9	74	4.2	3
12	-.9601	.3754	7.10	361	37	33	1.9	107	6.1	5
13	-.8218	.3686	7.36	375	37	46	2.6	153	8.7	7
14	-.6881	.3631	7.59	388	36	47	2.7	200	11.4	10
15	-.5579	.3587	7.77	401	36	67	3.8	267	15.2	13
16	-.4305	.3553	7.92	414	35	69	3.9	336	19.1	17
17	-.3052	.3528	8.03	426	35	83	4.7	419	23.8	21
18	-.1813	.3511	8.11	438	35	108	6.1	527	30.0	27
19	-.0584	.3503	8.15	450	35	94	5.3	621	35.3	33
20	.0642	.3502	8.15	463	35	109	6.2	730	41.5	38
21	.1871	.3509	8.12	475	35	119	6.8	849	48.3	45
22	.3107	.3524	8.05	487	35	97	5.5	946	53.8	51
23	.4356	.3547	7.95	500	35	78	4.4	1024	58.2	56
24	.5625	.3580	7.80	512	36	96	5.5	1120	63.7	61
25	.6921	.3622	7.62	525	36	75	4.3	1195	68.0	66
26	.8253	.3676	7.40	538	36	87	4.9	1282	72.9	70
27	.9628	.3743	7.14	552	37	54	3.1	1336	76.0	74
28	1.1059	.3826	6.83	566	38	61	3.5	1397	79.5	78
29	1.2560	.3927	6.48	581	39	55	3.1	1452	82.6	81
30	1.4150	.4053	6.09	597	40	68	3.9	1520	86.5	85
31	1.5855	.4208	5.65	614	42	59	3.4	1579	89.8	88
32	1.7706	.4405	5.15	632	44	47	2.7	1626	92.5	91
33	1.9755	.4658	4.61	652	46	33	1.9	1659	94.4	93
34	2.2077	.4996	4.01	675	50	35	2.0	1694	96.4	95
35	2.4801	.5467	3.35	702	54	21	1.2	1715	97.6	97
36	2.8164	.6178	2.62	736	61	13	.7	1728	98.3	98
37	3.2700	.7402	1.83	781	73	12	.7	1740	99.0	99
38	4.0108	1.0235	.95	854	102	7	.4	1747	99.4	99
39	5.2479	1.8387	.30	977	182	11	.6	1758	100.0	99

; PERSON SCORE FILE FOR 2009 OK MOD -- MAT 6 1 Aug 17 15:19 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.3911	1.8427	.29	-317	257	0	.0	0	.0	0
1	-4.1439	1.0302	.94	-143	144	0	.0	0	.0	0
2	-3.3898	.7487	1.78	-38	104	0	.0	0	.0	0
3	-2.9240	.6272	2.54	27	88	1	.1	1	.1	1
4	-2.5764	.5565	3.23	76	78	0	.0	1	.1	1
5	-2.2937	.5094	3.85	115	71	0	.0	1	.1	1
6	-2.0518	.4755	4.42	149	66	0	.0	1	.1	1
7	-1.8382	.4499	4.94	179	63	0	.0	1	.1	1
8	-1.6450	.4298	5.41	206	60	0	.0	1	.1	1
9	-1.4674	.4137	5.84	230	58	2	.1	3	.2	1
10	-1.3019	.4005	6.24	254	56	5	.3	8	.5	1
11	-1.1459	.3896	6.59	275	54	10	.6	18	1.1	1
12	-.9978	.3805	6.91	296	53	13	.8	31	1.8	1
13	-.8560	.3729	7.19	316	52	24	1.4	55	3.2	3
14	-.7193	.3666	7.44	335	51	25	1.5	80	4.7	4
15	-.5870	.3613	7.66	353	50	51	3.0	131	7.7	6
16	-.4580	.3570	7.85	371	50	49	2.9	180	10.6	9
17	-.3319	.3535	8.00	389	49	67	3.9	247	14.5	13
18	-.2079	.3509	8.12	406	49	67	3.9	314	18.5	17
19	-.0854	.3490	8.21	423	49	86	5.1	400	23.6	21
20	.0359	.3479	8.26	440	49	97	5.7	497	29.3	26
21	.1567	.3474	8.28	457	48	133	7.8	630	37.1	33
22	.2775	.3478	8.27	474	49	125	7.4	755	44.5	41
23	.3988	.3489	8.21	491	49	123	7.2	878	51.7	48
24	.5212	.3509	8.12	508	49	122	7.2	1000	58.9	55
25	.6453	.3538	7.99	525	49	121	7.1	1121	66.0	62
26	.7718	.3577	7.82	543	50	108	6.4	1229	72.4	69
27	.9015	.3627	7.60	561	51	103	6.1	1332	78.4	75
28	1.0353	.3691	7.34	580	52	88	5.2	1420	83.6	81
29	1.1744	.3771	7.03	599	53	67	3.9	1487	87.6	86
30	1.3202	.3869	6.68	619	54	57	3.4	1544	90.9	89
31	1.4746	.3992	6.27	641	56	44	2.6	1588	93.5	92
32	1.6399	.4146	5.82	664	58	27	1.6	1615	95.1	94
33	1.8197	.4342	5.31	689	61	30	1.8	1645	96.9	96
34	2.0189	.4594	4.74	717	64	20	1.2	1665	98.1	97
35	2.2451	.4932	4.11	749	69	10	.6	1675	98.6	98
36	2.5109	.5405	3.42	786	75	12	.7	1687	99.4	99
37	2.8402	.6119	2.67	832	85	8	.5	1695	99.8	99
38	3.2863	.7349	1.85	894	103	3	.2	1698	100.0	99
39	4.0191	1.0194	.96	996	142	0	.0	1698	100.0	100
40	5.2503	1.8363	.30	1168	256	0	.0	1698	100.0	100

; PERSON SCORE FILE FOR 2009 OK MOD -- MAT 6 2 Aug 17 15:19 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.2218	1.8402	.30	-192	234	0	.0	0	.0	0
1	-3.9810	1.0257	.95	-35	130	0	.0	0	.0	0
2	-3.2363	.7424	1.81	60	94	0	.0	0	.0	0
3	-2.7800	.6195	2.61	118	79	0	.0	0	.0	0
4	-2.4421	.5478	3.33	161	70	0	.0	0	.0	0
5	-2.1689	.5000	4.00	195	63	0	.0	0	.0	0
6	-1.9366	.4656	4.61	225	59	0	.0	0	.0	0
7	-1.7323	.4396	5.18	251	56	1	.1	1	.1	1
8	-1.5482	.4193	5.69	274	53	6	.4	7	.4	1
9	-1.3793	.4032	6.15	295	51	10	.6	17	1.0	1
10	-1.2221	.3901	6.57	315	50	16	1.0	33	2.0	2
11	-1.0741	.3795	6.94	334	48	27	1.6	60	3.6	3
12	-.9335	.3708	7.27	352	47	42	2.5	102	6.1	5
13	-.7987	.3637	7.56	369	46	45	2.7	147	8.8	7
14	-.6686	.3580	7.80	386	45	67	4.0	214	12.8	11
15	-.5421	.3535	8.00	402	45	75	4.5	289	17.3	15
16	-.4184	.3500	8.16	417	44	103	6.2	392	23.5	20
17	-.2968	.3475	8.28	433	44	75	4.5	467	28.0	26
18	-.1766	.3458	8.36	448	44	117	7.0	584	35.1	32
19	-.0574	.3450	8.40	463	44	103	6.2	687	41.2	38
20	.0616	.3451	8.40	478	44	128	7.7	815	48.9	45
21	.1810	.3459	8.36	493	44	106	6.4	921	55.3	52
22	.3011	.3476	8.28	509	44	81	4.9	1002	60.1	58
23	.4227	.3501	8.16	524	44	94	5.6	1096	65.8	63
24	.5465	.3536	8.00	540	45	102	6.1	1198	71.9	69
25	.6730	.3581	7.80	556	45	78	4.7	1276	76.6	74
26	.8032	.3637	7.56	572	46	71	4.3	1347	80.9	79
27	.9380	.3707	7.28	590	47	66	4.0	1413	84.8	83
28	1.0785	.3792	6.95	607	48	55	3.3	1468	88.1	86
29	1.2261	.3897	6.59	626	49	43	2.6	1511	90.7	89
30	1.3828	.4025	6.17	646	51	39	2.3	1550	93.0	92
31	1.5510	.4183	5.71	667	53	38	2.3	1588	95.3	94
32	1.7341	.4382	5.21	691	56	18	1.1	1606	96.4	96
33	1.9371	.4638	4.65	716	59	23	1.4	1629	97.8	97
34	2.1676	.4978	4.04	746	63	15	.9	1644	98.7	98
35	2.4382	.5452	3.36	780	69	10	.6	1654	99.3	99
36	2.7728	.6165	2.63	822	78	8	.5	1662	99.8	99
37	3.2248	.7391	1.83	880	94	2	.1	1664	99.9	99
38	3.9639	1.0226	.96	974	130	1	.1	1665	99.9	99
39	5.1999	1.8382	.30	1130	233	1	.1	1666	100.0	99

; PERSON SCORE FILE FOR 2009 OK MOD -- MAT 7 1 Aug 17 15:19 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.2608	1.8413	.29	-193	229	0	.0	0	.0	0
1	-4.0171	1.0279	.95	-38	128	0	.0	0	.0	0
2	-3.2679	.7455	1.80	55	93	0	.0	0	.0	0
3	-2.8069	.6233	2.57	113	78	0	.0	0	.0	0
4	-2.4643	.5521	3.28	155	69	0	.0	0	.0	0
5	-2.1864	.5045	3.93	190	63	1	.1	1	.1	1
6	-1.9496	.4703	4.52	219	59	1	.1	2	.1	1
7	-1.7410	.4443	5.07	245	55	6	.3	8	.5	1
8	-1.5529	.4240	5.56	269	53	7	.4	15	.8	1
9	-1.3802	.4077	6.02	290	51	9	.5	24	1.4	1
10	-1.2195	.3944	6.43	310	49	11	.6	35	2.0	2
11	-1.0683	.3835	6.80	329	48	22	1.2	57	3.2	3
12	-.9248	.3745	7.13	347	47	36	2.0	93	5.3	4
13	-.7873	.3671	7.42	364	46	47	2.7	140	7.9	7
14	-.6549	.3610	7.67	381	45	71	4.0	211	11.9	10
15	-.5264	.3561	7.89	397	44	77	4.4	288	16.3	14
16	-.4010	.3522	8.06	412	44	86	4.9	374	21.2	19
17	-.2782	.3492	8.20	428	43	93	5.3	467	26.4	24
18	-.1570	.3471	8.30	443	43	103	5.8	570	32.3	29
19	-.0371	.3458	8.36	458	43	114	6.5	684	38.7	36
20	.0823	.3453	8.39	472	43	115	6.5	799	45.2	42
21	.2017	.3457	8.37	487	43	94	5.3	893	50.6	48
22	.3215	.3468	8.31	502	43	105	5.9	998	56.5	54
23	.4424	.3489	8.21	517	43	115	6.5	1113	63.0	60
24	.5652	.3519	8.08	532	44	79	4.5	1192	67.5	65
25	.6904	.3559	7.89	548	44	79	4.5	1271	72.0	70
26	.8189	.3611	7.67	564	45	99	5.6	1370	77.6	75
27	.9516	.3677	7.40	581	46	81	4.6	1451	82.2	80
28	1.0897	.3759	7.08	598	47	74	4.2	1525	86.4	84
29	1.2346	.3859	6.71	616	48	71	4.0	1596	90.4	88
30	1.3883	.3984	6.30	635	50	47	2.7	1643	93.0	92
31	1.5531	.4140	5.83	655	52	40	2.3	1683	95.3	94
32	1.7325	.4338	5.31	678	54	23	1.3	1706	96.6	96
33	1.9314	.4592	4.74	703	57	18	1.0	1724	97.6	97
34	2.1574	.4932	4.11	731	61	22	1.2	1746	98.9	98
35	2.4234	.5407	3.42	764	67	7	.4	1753	99.3	99
36	2.7530	.6122	2.67	805	76	3	.2	1756	99.4	99
37	3.1996	.7354	1.85	860	92	5	.3	1761	99.7	99
38	3.9332	1.0199	.96	952	127	4	.2	1765	99.9	99
39	5.1650	1.8366	.30	1105	229	1	.1	1766	100.0	99

; PERSON SCORE FILE FOR 2009 OK MOD -- MAT 7 2 Aug 17 15:19 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.3256	1.8472	.29	-161	225	0	.0	0	.0	0
1	-4.0679	1.0367	.93	-8	126	0	.0	0	.0	0
2	-3.3024	.7550	1.75	86	92	1	.1	1	.1	1
3	-2.8288	.6323	2.50	143	77	0	.0	1	.1	1
4	-2.4760	.5601	3.19	186	68	1	.1	2	.1	1
5	-2.1902	.5116	3.82	221	62	2	.1	4	.2	1
6	-1.9469	.4765	4.40	251	58	3	.2	7	.4	1
7	-1.7328	.4498	4.94	277	55	3	.2	10	.6	1
8	-1.5402	.4289	5.44	300	52	15	.9	25	1.5	1
9	-1.3636	.4121	5.89	322	50	18	1.1	43	2.5	2
10	-1.1995	.3985	6.30	342	49	35	2.1	78	4.6	4
11	-1.0453	.3874	6.66	361	47	59	3.5	137	8.1	6
12	-.8989	.3782	6.99	378	46	72	4.3	209	12.4	10
13	-.7587	.3708	7.27	395	45	80	4.7	289	17.1	15
14	-.6234	.3648	7.52	412	44	93	5.5	382	22.6	20
15	-.4922	.3600	7.72	428	44	79	4.7	461	27.3	25
16	-.3640	.3564	7.87	444	43	103	6.1	564	33.4	30
17	-.2380	.3538	7.99	459	43	89	5.3	653	38.7	36
18	-.1134	.3521	8.07	474	43	111	6.6	764	45.3	42
19	.0102	.3514	8.10	489	43	107	6.3	871	51.6	48
20	.1338	.3516	8.09	504	43	95	5.6	966	57.2	54
21	.2577	.3528	8.03	519	43	84	5.0	1050	62.2	60
22	.3829	.3550	7.94	535	43	106	6.3	1156	68.5	65
23	.5100	.3581	7.80	550	44	79	4.7	1235	73.2	71
24	.6398	.3625	7.61	566	44	90	5.3	1325	78.5	76
25	.7731	.3680	7.38	582	45	74	4.4	1399	82.9	81
26	.9110	.3751	7.11	599	46	59	3.5	1458	86.4	85
27	1.0549	.3838	6.79	616	47	45	2.7	1503	89.0	88
28	1.2062	.3945	6.42	635	48	36	2.1	1539	91.2	90
29	1.3669	.4078	6.01	654	50	48	2.8	1587	94.0	93
30	1.5399	.4243	5.55	675	52	30	1.8	1617	95.8	95
31	1.7285	.4450	5.05	698	54	19	1.1	1636	96.9	96
32	1.9381	.4717	4.50	724	57	18	1.1	1654	98.0	97
33	2.1767	.5068	3.89	753	62	21	1.2	1675	99.2	99
34	2.4575	.5556	3.24	787	68	9	.5	1684	99.8	99
35	2.8051	.6282	2.53	830	77	4	.2	1688	100.0	99
36	3.2737	.7518	1.77	887	92	0	.0	1688	100.0	100
37	4.0345	1.0347	.93	979	126	0	.0	1688	100.0	100
38	5.2895	1.8463	.29	1132	225	0	.0	1688	100.0	100

; PERSON SCORE FILE FOR 2009 OK MOD -- MAT 8 1 Aug 17 15:20 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.1971	1.8375	.30	-226	252	0	.0	0	.0	0
1	-3.9628	1.0215	.96	-57	140	1	.1	1	.1	1
2	-3.2261	.7374	1.84	44	101	0	.0	1	.1	1
3	-2.7767	.6144	2.65	106	84	1	.1	2	.1	1
4	-2.4447	.5428	3.39	151	74	0	.0	2	.1	1
5	-2.1767	.4951	4.08	188	68	3	.2	5	.3	1
6	-1.9490	.4609	4.71	219	63	2	.1	7	.4	1
7	-1.7488	.4350	5.28	247	60	6	.3	13	.7	1
8	-1.5684	.4149	5.81	271	57	6	.3	19	1.0	1
9	-1.4031	.3989	6.29	294	55	9	.5	28	1.5	1
10	-1.2493	.3859	6.72	315	53	23	1.2	51	2.7	2
11	-1.1046	.3753	7.10	335	51	28	1.5	79	4.2	3
12	-.9671	.3665	7.44	354	50	56	3.0	135	7.2	6
13	-.8355	.3594	7.74	372	49	60	3.2	195	10.4	9
14	-.7085	.3535	8.00	389	48	73	3.9	268	14.3	12
15	-.5852	.3489	8.22	406	48	84	4.5	352	18.8	17
16	-.4648	.3452	8.39	423	47	84	4.5	436	23.3	21
17	-.3467	.3424	8.53	439	47	108	5.8	544	29.1	26
18	-.2302	.3405	8.63	455	47	123	6.6	667	35.7	32
19	-.1147	.3393	8.68	471	47	131	7.0	798	42.7	39
20	.0003	.3390	8.70	486	46	127	6.8	925	49.5	46
21	.1153	.3393	8.68	502	47	124	6.6	1049	56.2	53
22	.2308	.3405	8.62	518	47	122	6.5	1171	62.7	59
23	.3473	.3425	8.53	534	47	115	6.2	1286	68.8	66
24	.4655	.3452	8.39	550	47	92	4.9	1378	73.8	71
25	.5859	.3489	8.21	567	48	105	5.6	1483	79.4	77
26	.7093	.3536	8.00	584	48	78	4.2	1561	83.6	81
27	.8364	.3595	7.74	601	49	78	4.2	1639	87.7	86
28	.9681	.3666	7.44	619	50	58	3.1	1697	90.8	89
29	1.1055	.3753	7.10	638	51	43	2.3	1740	93.1	92
30	1.2502	.3858	6.72	658	53	36	1.9	1776	95.1	94
31	1.4040	.3988	6.29	679	55	27	1.4	1803	96.5	96
32	1.5692	.4147	5.81	701	57	18	1.0	1821	97.5	97
33	1.7493	.4348	5.29	726	60	21	1.1	1842	98.6	98
34	1.9493	.4605	4.72	753	63	7	.4	1849	99.0	99
35	2.1766	.4946	4.09	785	68	5	.3	1854	99.3	99
36	2.4441	.5422	3.40	821	74	6	.3	1860	99.6	99
37	2.7753	.6137	2.66	867	84	6	.3	1866	99.9	99
38	3.2238	.7367	1.84	928	101	2	.1	1868	100.0	99
39	3.9593	1.0208	.96	1029	140	0	.0	1868	100.0	100
40	5.1926	1.8372	.30	1198	252	0	.0	1868	100.0	100

; PERSON SCORE FILE FOR 2009 OK MOD -- MAT 8 2 Aug 17 15:20 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.2541	1.8384	.30	-203	239	0	.0	0	.0	0
1	-4.0175	1.0231	.96	-42	133	0	.0	0	.0	0
2	-3.2774	.7397	1.83	54	96	0	.0	0	.0	0
3	-2.8246	.6172	2.63	113	80	0	.0	0	.0	0
4	-2.4891	.5459	3.36	157	71	0	.0	0	.0	0
5	-2.2177	.4985	4.02	192	65	2	.1	2	.1	1
6	-1.9866	.4645	4.64	222	60	1	.1	3	.2	1
7	-1.7831	.4388	5.19	248	57	3	.2	6	.3	1
8	-1.5995	.4187	5.70	272	54	8	.5	14	.8	1
9	-1.4311	.4027	6.17	294	52	10	.6	24	1.4	1
10	-1.2743	.3897	6.58	314	51	22	1.3	46	2.6	2
11	-1.1266	.3791	6.96	334	49	25	1.4	71	4.0	3
12	-.9863	.3703	7.29	352	48	32	1.8	103	5.9	5
13	-.8519	.3631	7.58	369	47	60	3.4	163	9.3	8
14	-.7223	.3572	7.84	386	46	67	3.8	230	13.1	11
15	-.5964	.3525	8.05	403	46	76	4.3	306	17.4	15
16	-.4736	.3487	8.22	419	45	91	5.2	397	22.6	20
17	-.3531	.3459	8.36	434	45	106	6.0	503	28.6	26
18	-.2341	.3439	8.46	450	45	118	6.7	621	35.4	32
19	-.1164	.3427	8.51	465	45	123	7.0	744	42.4	39
20	.0009	.3423	8.54	480	45	117	6.7	861	49.0	46
21	.1182	.3427	8.52	495	45	104	5.9	965	55.0	52
22	.2359	.3438	8.46	511	45	114	6.5	1079	61.4	58
23	.3547	.3457	8.37	526	45	98	5.6	1177	67.0	64
24	.4752	.3485	8.23	542	45	79	4.5	1256	71.5	69
25	.5979	.3522	8.06	558	46	88	5.0	1344	76.5	74
26	.7236	.3570	7.85	574	46	85	4.8	1429	81.4	79
27	.8530	.3628	7.60	591	47	64	3.6	1493	85.0	83
28	.9872	.3700	7.30	608	48	51	2.9	1544	87.9	86
29	1.1273	.3787	6.97	627	49	50	2.8	1594	90.8	89
30	1.2746	.3894	6.60	646	51	36	2.1	1630	92.8	92
31	1.4312	.4023	6.18	666	52	36	2.1	1666	94.9	94
32	1.5993	.4183	5.71	688	54	26	1.5	1692	96.4	96
33	1.7825	.4384	5.20	712	57	20	1.1	1712	97.5	97
34	1.9856	.4641	4.64	738	60	17	1.0	1729	98.5	98
35	2.2164	.4982	4.03	768	65	10	.6	1739	99.0	99
36	2.4874	.5456	3.36	804	71	10	.6	1749	99.6	99
37	2.8225	.6169	2.63	847	80	6	.3	1755	99.9	99
38	3.2750	.7395	1.83	906	96	1	.1	1756	100.0	99
39	4.0147	1.0229	.96	1002	133	0	.0	1756	100.0	100
40	5.2511	1.8383	.30	1163	239	0	.0	1756	100.0	100

; PERSON SCORE FILE FOR 2009 OK MOD -- SCI 5 1 Aug 17 15:19 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.2781	1.8406	.30	-142	200	0	.0	0	.0	0
1	-4.0363	1.0264	.95	-7	112	0	.0	0	.0	0
2	-3.2903	.7432	1.81	74	81	0	.0	0	.0	0
3	-2.8328	.6205	2.60	124	67	0	.0	0	.0	0
4	-2.4938	.5488	3.32	161	60	0	.0	0	.0	0
5	-2.2195	.5010	3.98	191	54	0	.0	0	.0	0
6	-1.9861	.4666	4.59	216	51	0	.0	0	.0	0
7	-1.7808	.4407	5.15	238	48	3	.2	3	.2	1
8	-1.5957	.4204	5.66	258	46	1	.1	4	.3	1
9	-1.4260	.4042	6.12	277	44	6	.4	10	.7	1
10	-1.2681	.3910	6.54	294	42	6	.4	16	1.1	1
11	-1.1195	.3803	6.92	310	41	11	.7	27	1.8	1
12	-.9784	.3714	7.25	325	40	16	1.1	43	2.9	2
13	-.8432	.3641	7.54	340	40	22	1.5	65	4.3	4
14	-.7129	.3581	7.80	354	39	29	1.9	94	6.3	5
15	-.5864	.3532	8.01	368	38	33	2.2	127	8.4	7
16	-.4631	.3494	8.19	381	38	37	2.5	164	10.9	10
17	-.3421	.3464	8.33	395	38	50	3.3	214	14.2	13
18	-.2229	.3443	8.44	408	37	73	4.9	287	19.1	17
19	-.1049	.3429	8.50	420	37	70	4.7	357	23.8	21
20	.0124	.3423	8.53	433	37	69	4.6	426	28.3	26
21	.1296	.3425	8.53	446	37	73	4.9	499	33.2	31
22	.2471	.3434	8.48	459	37	85	5.7	584	38.9	36
23	.3656	.3450	8.40	472	37	91	6.1	675	44.9	42
24	.4855	.3476	8.28	485	38	77	5.1	752	50.0	47
25	.6074	.3510	8.12	498	38	85	5.7	837	55.7	53
26	.7321	.3554	7.92	511	39	87	5.8	924	61.5	59
27	.8603	.3609	7.68	525	39	78	5.2	1002	66.7	64
28	.9930	.3678	7.39	540	40	70	4.7	1072	71.3	69
29	1.1313	.3762	7.07	555	41	73	4.9	1145	76.2	74
30	1.2766	.3865	6.69	571	42	57	3.8	1202	80.0	78
31	1.4308	.3992	6.27	587	43	55	3.7	1257	83.6	82
32	1.5963	.4150	5.81	605	45	60	4.0	1317	87.6	86
33	1.7766	.4349	5.29	625	47	51	3.4	1368	91.0	89
34	1.9765	.4604	4.72	647	50	45	3.0	1413	94.0	93
35	2.2038	.4945	4.09	671	54	26	1.7	1439	95.7	95
36	2.4710	.5420	3.40	700	59	22	1.5	1461	97.2	96
37	2.8020	.6135	2.66	736	67	17	1.1	1478	98.3	98
38	3.2502	.7364	1.84	785	80	17	1.1	1495	99.5	99
39	3.9854	1.0207	.96	865	111	7	.5	1502	99.9	99
40	5.2185	1.8370	.30	999	200	1	.1	1503	100.0	99

; PERSON SCORE FILE FOR 2009 OK MOD -- SCI 5 2 Aug 17 15:19 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.3240	1.8451	.29	-140	202	0	.0	0	.0	0
1	-4.0716	1.0330	.94	-3	113	0	.0	0	.0	0
2	-3.3139	.7499	1.78	80	82	0	.0	0	.0	0
3	-2.8478	.6264	2.55	131	68	0	.0	0	.0	0
4	-2.5023	.5538	3.26	169	61	0	.0	0	.0	0
5	-2.2234	.5050	3.92	199	55	0	.0	0	.0	0
6	-1.9866	.4698	4.53	225	51	0	.0	0	.0	0
7	-1.7787	.4430	5.09	248	48	3	.2	3	.2	1
8	-1.5919	.4221	5.61	268	46	2	.1	5	.3	1
9	-1.4209	.4054	6.08	287	44	7	.5	12	.8	1
10	-1.2622	.3918	6.51	304	43	10	.7	22	1.5	1
11	-1.1132	.3807	6.90	320	42	12	.8	34	2.3	2
12	-.9719	.3715	7.25	336	41	24	1.6	58	3.9	3
13	-.8368	.3639	7.55	351	40	30	2.0	88	6.0	5
14	-.7067	.3577	7.82	365	39	34	2.3	122	8.3	7
15	-.5806	.3527	8.04	379	39	51	3.5	173	11.8	10
16	-.4577	.3487	8.23	392	38	46	3.1	219	14.9	13
17	-.3372	.3456	8.37	405	38	70	4.8	289	19.6	17
18	-.2186	.3434	8.48	418	38	59	4.0	348	23.7	22
19	-.1012	.3420	8.55	431	37	64	4.4	412	28.0	26
20	.0155	.3414	8.58	444	37	58	3.9	470	32.0	30
21	.1321	.3416	8.57	456	37	85	5.8	555	37.7	35
22	.2490	.3425	8.53	469	37	76	5.2	631	42.9	40
23	.3669	.3442	8.44	482	38	98	6.7	729	49.6	46
24	.4862	.3468	8.31	495	38	68	4.6	797	54.2	52
25	.6077	.3503	8.15	508	38	71	4.8	868	59.0	57
26	.7320	.3549	7.94	522	39	64	4.4	932	63.4	61
27	.8598	.3606	7.69	536	39	75	5.1	1007	68.5	66
28	.9923	.3676	7.40	550	40	75	5.1	1082	73.6	71
29	1.1305	.3762	7.07	566	41	76	5.2	1158	78.7	76
30	1.2758	.3867	6.69	581	42	56	3.8	1214	82.5	81
31	1.4302	.3996	6.26	598	44	50	3.4	1264	85.9	84
32	1.5961	.4156	5.79	616	45	53	3.6	1317	89.5	88
33	1.7769	.4356	5.27	636	48	43	2.9	1360	92.5	91
34	1.9777	.4615	4.70	658	50	33	2.2	1393	94.7	94
35	2.2060	.4957	4.07	683	54	33	2.2	1426	96.9	96
36	2.4747	.5435	3.39	712	59	15	1.0	1441	98.0	97
37	2.8076	.6151	2.64	749	67	11	.7	1452	98.7	98
38	3.2579	.7381	1.84	798	81	13	.9	1465	99.6	99
39	3.9959	1.0222	.96	879	112	6	.4	1471	100.0	99
40	5.2314	1.8380	.30	1014	201	0	.0	1471	100.0	100

; PERSON SCORE FILE FOR 2009 OK MOD -- SCI 8 1 Aug 17 15:20 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.0416	1.8354	.30	-163	221	0	.0	0	.0	0
1	-3.8128	1.0177	.97	-15	123	0	.0	0	.0	0
2	-3.0837	.7323	1.86	73	88	0	.0	0	.0	0
3	-2.6416	.6085	2.70	126	73	1	.1	1	.1	1
4	-2.3166	.5364	3.48	165	65	1	.1	2	.1	1
5	-2.0553	.4884	4.19	197	59	1	.1	3	.2	1
6	-1.8341	.4539	4.85	223	55	1	.1	4	.3	1
7	-1.6401	.4279	5.46	247	52	2	.1	6	.4	1
8	-1.4658	.4077	6.01	268	49	3	.2	9	.6	1
9	-1.3062	.3917	6.52	287	47	9	.6	18	1.3	1
10	-1.1581	.3787	6.97	305	46	11	.8	29	2.1	2
11	-1.0187	.3682	7.38	321	44	20	1.4	49	3.5	3
12	-.8864	.3596	7.73	337	43	20	1.4	69	4.9	4
13	-.7596	.3526	8.04	353	42	34	2.4	103	7.4	6
14	-.6373	.3470	8.31	367	42	38	2.7	141	10.1	9
15	-.5185	.3425	8.52	382	41	42	3.0	183	13.1	12
16	-.4024	.3391	8.69	396	41	44	3.1	227	16.2	15
17	-.2883	.3367	8.82	409	41	58	4.1	285	20.3	18
18	-.1755	.3351	8.90	423	40	51	3.6	336	24.0	22
19	-.0634	.3344	8.94	436	40	69	4.9	405	28.9	26
20	.0484	.3346	8.93	450	40	65	4.6	470	33.5	31
21	.1606	.3355	8.88	463	40	79	5.6	549	39.2	36
22	.2737	.3373	8.79	477	41	73	5.2	622	44.4	42
23	.3884	.3400	8.65	491	41	73	5.2	695	49.6	47
24	.5052	.3437	8.47	505	41	84	6.0	779	55.6	53
25	.6249	.3484	8.24	519	42	78	5.6	857	61.2	58
26	.7483	.3543	7.96	534	43	82	5.9	939	67.0	64
27	.8763	.3616	7.65	550	44	83	5.9	1022	72.9	70
28	1.0103	.3705	7.28	566	45	71	5.1	1093	78.0	75
29	1.1515	.3814	6.88	583	46	82	5.9	1175	83.9	81
30	1.3019	.3947	6.42	601	48	62	4.4	1237	88.3	86
31	1.4640	.4111	5.92	620	49	38	2.7	1275	91.0	90
32	1.6412	.4317	5.37	642	52	40	2.9	1315	93.9	92
33	1.8387	.4580	4.77	665	55	26	1.9	1341	95.7	95
34	2.0640	.4928	4.12	692	59	28	2.0	1369	97.7	97
35	2.3300	.5412	3.41	724	65	15	1.1	1384	98.8	98
36	2.6606	.6135	2.66	764	74	9	.6	1393	99.4	99
37	3.1093	.7372	1.84	818	89	5	.4	1398	99.8	99
38	3.8463	1.0219	.96	907	123	2	.1	1400	99.9	99
39	5.0816	1.8381	.30	1056	221	1	.1	1401	100.0	99

; PERSON SCORE FILE FOR 2009 OK MOD -- SCI 8 2 Aug 17 15:20 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.0542	1.8368	.30	-185	228	0	.0	0	.0	0
1	-3.8219	1.0202	.96	-32	127	0	.0	0	.0	0
2	-3.0879	.7355	1.85	59	91	0	.0	0	.0	0
3	-2.6413	.6121	2.67	115	76	0	.0	0	.0	0
4	-2.3120	.5402	3.43	156	67	0	.0	0	.0	0
5	-2.0467	.4924	4.13	189	61	0	.0	0	.0	0
6	-1.8217	.4580	4.77	217	57	2	.2	2	.2	1
7	-1.6241	.4321	5.36	241	54	1	.1	3	.2	1
8	-1.4463	.4119	5.89	263	51	2	.2	5	.4	1
9	-1.2833	.3959	6.38	283	49	10	.8	15	1.2	1
10	-1.1318	.3831	6.81	302	48	8	.6	23	1.8	1
11	-.9892	.3726	7.20	320	46	16	1.2	39	3.0	2
12	-.8535	.3641	7.54	337	45	22	1.7	61	4.7	4
13	-.7235	.3573	7.83	353	44	31	2.4	92	7.1	6
14	-.5979	.3518	8.08	369	44	39	3.0	131	10.2	9
15	-.4757	.3476	8.28	384	43	40	3.1	171	13.3	12
16	-.3561	.3444	8.43	399	43	50	3.9	221	17.2	15
17	-.2383	.3422	8.54	413	43	63	4.9	284	22.1	20
18	-.1216	.3410	8.60	428	42	63	4.9	347	27.0	25
19	-.0055	.3406	8.62	442	42	69	5.4	416	32.3	30
20	.1106	.3412	8.59	457	42	57	4.4	473	36.8	35
21	.2275	.3427	8.52	471	43	75	5.8	548	42.6	40
22	.3457	.3451	8.40	486	43	73	5.7	621	48.3	45
23	.4659	.3485	8.24	501	43	90	7.0	711	55.2	52
24	.5888	.3529	8.03	516	44	86	6.7	797	61.9	59
25	.7153	.3586	7.77	532	45	68	5.3	865	67.2	65
26	.8464	.3657	7.48	548	45	69	5.4	934	72.6	70
27	.9833	.3744	7.13	565	47	66	5.1	1000	77.7	75
28	1.1274	.3851	6.74	583	48	68	5.3	1068	83.0	80
29	1.2806	.3982	6.31	602	49	63	4.9	1131	87.9	85
30	1.4455	.4144	5.82	623	51	48	3.7	1179	91.6	90
31	1.6255	.4348	5.29	645	54	32	2.5	1211	94.1	93
32	1.8255	.4608	4.71	670	57	25	1.9	1236	96.0	95
33	2.0533	.4953	4.08	698	62	24	1.9	1260	97.9	97
34	2.3217	.5432	3.39	731	67	10	.8	1270	98.7	98
35	2.6544	.6151	2.64	773	76	9	.7	1279	99.4	99
36	3.1049	.7383	1.83	829	92	4	.3	1283	99.7	99
37	3.8432	1.0224	.96	920	127	4	.3	1287	100.0	99
38	5.0789	1.8382	.30	1074	228	0	.0	1287	100.0	100

; PERSON SCORE FILE FOR 2009 OK MOD -- REA 9 1 Aug 28 12:25 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.0955	1.8353	.30	-188	235	0	.0	0	.0	0
1	-3.8670	1.0175	.97	-31	130	0	.0	0	.0	0
2	-3.1385	.7316	1.87	63	94	0	.0	0	.0	0
3	-2.6977	.6073	2.71	119	78	0	.0	0	.0	0
4	-2.3746	.5343	3.50	160	68	0	.0	0	.0	0
5	-2.1160	.4853	4.25	193	62	0	.0	0	.0	0
6	-1.8982	.4496	4.95	221	58	1	.1	1	.1	1
7	-1.7086	.4222	5.61	245	54	5	.3	6	.3	1
8	-1.5397	.4004	6.24	267	51	3	.2	9	.5	1
9	-1.3867	.3825	6.84	287	49	5	.3	14	.8	1
10	-1.2462	.3675	7.40	305	47	15	.8	29	1.6	1
11	-1.1159	.3549	7.94	321	45	16	.9	45	2.5	2
12	-.9938	.3441	8.44	337	44	29	1.6	74	4.1	3
13	-.8786	.3350	8.91	352	43	37	2.1	111	6.2	5
14	-.7689	.3274	9.33	366	42	46	2.6	157	8.8	7
15	-.6639	.3211	9.70	379	41	54	3.0	211	11.8	10
16	-.5625	.3160	10.01	392	40	57	3.2	268	15.0	13
17	-.4639	.3122	10.26	405	40	64	3.6	332	18.6	17
18	-.3673	.3095	10.44	417	40	71	4.0	403	22.5	21
19	-.2721	.3078	10.55	429	39	81	4.5	484	27.1	25
20	-.1776	.3073	10.59	441	39	82	4.6	566	31.7	29
21	-.0831	.3076	10.57	453	39	79	4.4	645	36.1	34
22	.0118	.3089	10.48	466	40	100	5.6	745	41.7	39
23	.1079	.3110	10.34	478	40	79	4.4	824	46.1	44
24	.2054	.3138	10.15	490	40	92	5.1	916	51.2	49
25	.3050	.3174	9.93	503	41	98	5.5	1014	56.7	54
26	.4071	.3217	9.67	516	41	78	4.4	1092	61.1	59
27	.5121	.3266	9.37	530	42	102	5.7	1194	66.8	64
28	.6206	.3323	9.06	543	43	83	4.6	1277	71.4	69
29	.7331	.3388	8.71	558	43	74	4.1	1351	75.6	73
30	.8504	.3463	8.34	573	44	79	4.4	1430	80.0	78
31	.9732	.3548	7.94	589	45	78	4.4	1508	84.3	82
32	1.1026	.3648	7.52	605	47	55	3.1	1563	87.4	86
33	1.2399	.3765	7.06	623	48	42	2.3	1605	89.8	89
34	1.3867	.3904	6.56	641	50	53	3.0	1658	92.7	91
35	1.5456	.4072	6.03	662	52	38	2.1	1696	94.9	94
36	1.7197	.4281	5.46	684	55	31	1.7	1727	96.6	96
37	1.9141	.4546	4.84	709	58	30	1.7	1757	98.3	97
38	2.1361	.4894	4.18	737	63	16	.9	1773	99.2	99
39	2.3986	.5377	3.46	771	69	6	.3	1779	99.5	99
40	2.7251	.6099	2.69	813	78	4	.2	1783	99.7	99

; PERSON SCORE FILE FOR 2009 OK MOD -- REA 9 2 Aug 28 12:25 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.0091	1.8342	.30	-210	255	0	.0	0	.0	0
1	-3.7835	1.0154	.97	-40	141	0	.0	0	.0	0
2	-3.0592	.7288	1.88	61	101	0	.0	0	.0	0
3	-2.6224	.6039	2.74	121	84	1	.1	1	.1	1
4	-2.3034	.5305	3.55	165	74	0	.0	1	.1	1
5	-2.0487	.4812	4.32	201	67	0	.0	1	.1	1
6	-1.8349	.4452	5.05	230	62	1	.1	2	.1	1
7	-1.6491	.4176	5.73	256	58	1	.1	3	.2	1
8	-1.4840	.3958	6.38	279	55	7	.4	10	.6	1
9	-1.3346	.3780	7.00	300	52	7	.4	17	1.0	1
10	-1.1974	.3633	7.58	319	50	12	.7	29	1.7	1
11	-1.0699	.3510	8.11	337	49	27	1.6	56	3.3	3
12	-.9503	.3409	8.61	353	47	34	2.0	90	5.4	4
13	-.8370	.3325	9.05	369	46	67	4.0	157	9.4	7
14	-.7288	.3257	9.43	384	45	59	3.5	216	12.9	11
15	-.6246	.3202	9.75	398	44	71	4.2	287	17.1	15
16	-.5234	.3161	10.01	412	44	69	4.1	356	21.2	19
17	-.4245	.3131	10.20	426	43	75	4.5	431	25.7	23
18	-.3271	.3112	10.33	440	43	89	5.3	520	31.0	28
19	-.2306	.3103	10.39	453	43	105	6.3	625	37.2	34
20	-.1344	.3102	10.39	466	43	88	5.2	713	42.5	40
21	-.0379	.3110	10.34	480	43	103	6.1	816	48.6	46
22	.0593	.3126	10.23	493	43	94	5.6	910	54.2	51
23	.1577	.3149	10.09	507	44	109	6.5	1019	60.7	57
24	.2577	.3179	9.90	521	44	82	4.9	1101	65.6	63
25	.3599	.3215	9.67	535	45	80	4.8	1181	70.4	68
26	.4647	.3259	9.42	550	45	75	4.5	1256	74.9	73
27	.5725	.3310	9.13	565	46	58	3.5	1314	78.3	77
28	.6840	.3370	8.80	580	47	58	3.5	1372	81.8	80
29	.7999	.3440	8.45	596	48	52	3.1	1424	84.9	83
30	.9210	.3522	8.06	613	49	49	2.9	1473	87.8	86
31	1.0483	.3618	7.64	631	50	48	2.9	1521	90.6	89
32	1.1833	.3732	7.18	649	52	37	2.2	1558	92.8	92
33	1.3275	.3869	6.68	669	54	37	2.2	1595	95.1	94
34	1.4836	.4036	6.14	691	56	22	1.3	1617	96.4	96
35	1.6546	.4243	5.55	715	59	17	1.0	1634	97.4	97
36	1.8457	.4508	4.92	741	63	23	1.4	1657	98.7	98
37	2.0642	.4857	4.24	772	67	10	.6	1667	99.3	99
38	2.3229	.5341	3.51	807	74	7	.4	1674	99.8	99
39	2.6455	.6066	2.72	852	84	1	.1	1675	99.8	99
40	3.0853	.7308	1.87	913	101	3	.2	1678	100.0	99

; PERSON SCORE FILE FOR 2009 OK MOD -- MAT 9 1 Aug 26 16:47 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.0210	1.8364	.30	-164	233	0	.0	0	.0	0
1	-3.7894	1.0196	.96	-8	129	0	.0	0	.0	0
2	-3.0564	.7349	1.85	85	93	0	.0	0	.0	0
3	-2.6107	.6114	2.67	142	78	0	.0	0	.0	0
4	-2.2822	.5395	3.44	183	68	2	.1	2	.1	1
5	-2.0177	.4916	4.14	217	62	1	.0	3	.1	1
6	-1.7933	.4572	4.78	245	58	1	.0	4	.2	1
7	-1.5964	.4313	5.38	270	55	7	.3	11	.5	1
8	-1.4194	.4111	5.92	293	52	8	.4	19	.9	1
9	-1.2572	.3950	6.41	313	50	28	1.3	47	2.2	2
10	-1.1064	.3820	6.85	332	48	36	1.7	83	3.8	3
11	-.9647	.3714	7.25	350	47	59	2.7	142	6.5	5
12	-.8300	.3628	7.60	367	46	53	2.4	195	8.9	8
13	-.7011	.3557	7.90	384	45	79	3.6	274	12.6	11
14	-.5766	.3501	8.16	400	44	80	3.7	354	16.2	14
15	-.4557	.3456	8.37	415	44	94	4.3	448	20.6	18
16	-.3375	.3422	8.54	430	43	112	5.1	560	25.7	23
17	-.2213	.3397	8.66	445	43	137	6.3	697	32.0	29
18	-.1064	.3382	8.74	459	43	146	6.7	843	38.7	35
19	.0077	.3376	8.77	474	43	146	6.7	989	45.4	42
20	.1217	.3379	8.76	488	43	137	6.3	1126	51.7	49
21	.2363	.3390	8.70	503	43	113	5.2	1239	56.8	54
22	.3518	.3411	8.60	517	43	147	6.7	1386	63.6	60
23	.4692	.3442	8.44	532	44	135	6.2	1521	69.8	67
24	.5890	.3483	8.24	548	44	114	5.2	1635	75.0	72
25	.7121	.3536	8.00	563	45	99	4.5	1734	79.5	77
26	.8394	.3603	7.70	579	46	90	4.1	1824	83.7	82
27	.9722	.3687	7.36	596	47	73	3.3	1897	87.0	85
28	1.1117	.3790	6.96	614	48	65	3.0	1962	90.0	89
29	1.2601	.3917	6.52	633	50	43	2.0	2005	92.0	91
30	1.4196	.4076	6.02	653	52	49	2.2	2054	94.2	93
31	1.5937	.4276	5.47	675	54	35	1.6	2089	95.8	95
32	1.7873	.4535	4.86	700	58	26	1.2	2115	97.0	96
33	2.0081	.4878	4.20	728	62	23	1.1	2138	98.1	98
34	2.2687	.5358	3.48	761	68	21	1.0	2159	99.0	99
35	2.5930	.6079	2.71	802	77	8	.4	2167	99.4	99
36	3.0343	.7317	1.87	858	93	6	.3	2173	99.7	99
37	3.7623	1.0172	.97	950	129	6	.3	2179	100.0	99
38	4.9904	1.8351	.30	1106	233	1	.0	2180	100.0	99

; PERSON SCORE FILE FOR 2009 OK MOD -- MAT 9 2 Aug 26 16:47 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.1736	1.8402	.30	-105	207	0	.0	0	.0	0
1	-3.9327	1.0259	.95	35	115	0	.0	0	.0	0
2	-3.1877	.7426	1.81	119	84	1	.0	1	.0	1
3	-2.7310	.6199	2.60	170	70	2	.1	3	.1	1
4	-2.3926	.5482	3.33	208	62	0	.0	3	.1	1
5	-2.1190	.5004	3.99	239	56	2	.1	5	.2	1
6	-1.8863	.4660	4.61	265	52	4	.2	9	.4	1
7	-1.6816	.4400	5.17	288	49	3	.1	12	.6	1
8	-1.4971	.4197	5.68	309	47	14	.7	26	1.3	1
9	-1.3279	.4036	6.14	328	45	22	1.1	48	2.3	2
10	-1.1704	.3905	6.56	345	44	35	1.7	83	4.0	3
11	-1.0221	.3799	6.93	362	43	66	3.2	149	7.3	6
12	-.8811	.3713	7.25	378	42	58	2.8	207	10.1	9
13	-.7459	.3643	7.53	393	41	87	4.2	294	14.3	12
14	-.6153	.3587	7.77	408	40	109	5.3	403	19.6	17
15	-.4882	.3544	7.96	422	40	119	5.8	522	25.4	23
16	-.3638	.3511	8.11	436	39	110	5.4	632	30.8	28
17	-.2414	.3488	8.22	450	39	128	6.2	760	37.0	34
18	-.1203	.3475	8.28	464	39	100	4.9	860	41.8	39
19	.0002	.3470	8.30	477	39	124	6.0	984	47.9	45
20	.1207	.3475	8.28	491	39	107	5.2	1091	53.1	50
21	.2419	.3488	8.22	504	39	101	4.9	1192	58.0	56
22	.3644	.3511	8.11	518	40	104	5.1	1296	63.1	61
23	.4887	.3544	7.96	532	40	101	4.9	1397	68.0	66
24	.6158	.3588	7.77	546	40	110	5.4	1507	73.3	71
25	.7465	.3644	7.53	561	41	89	4.3	1596	77.7	75
26	.8817	.3713	7.25	576	42	77	3.7	1673	81.4	80
27	1.0228	.3799	6.93	592	43	73	3.6	1746	85.0	83
28	1.1711	.3905	6.56	609	44	71	3.5	1817	88.4	87
29	1.3285	.4035	6.14	627	45	56	2.7	1873	91.1	90
30	1.4976	.4195	5.68	646	47	45	2.2	1918	93.3	92
31	1.6818	.4397	5.17	666	49	41	2.0	1959	95.3	94
32	1.8864	.4657	4.61	689	52	37	1.8	1996	97.1	96
33	2.1188	.5000	4.00	716	56	16	.8	2012	97.9	98
34	2.3920	.5478	3.33	746	62	12	.6	2024	98.5	98
35	2.7299	.6195	2.61	784	70	16	.8	2040	99.3	99
36	3.1861	.7423	1.81	836	84	10	.5	2050	99.8	99
37	3.9307	1.0256	.95	919	115	3	.1	2053	99.9	99
38	5.1714	1.8402	.30	1059	207	2	.1	2055	100.0	99

; PERSON SCORE FILE FOR 2009 OK MOD -- SCI 9 1 Aug 31 12:48 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.3484	1.8393	.30	-207	226	0	.0	0	.0	0
1	-4.1099	1.0242	.95	-55	126	0	.0	0	.0	0
2	-3.3684	.7402	1.83	36	91	0	.0	0	.0	0
3	-2.9156	.6166	2.63	91	76	1	.1	1	.1	1
4	-2.5814	.5442	3.38	132	67	0	.0	1	.1	1
5	-2.3125	.4955	4.07	165	61	0	.0	1	.1	1
6	-2.0850	.4601	4.72	193	56	2	.1	3	.2	1
7	-1.8860	.4330	5.33	218	53	0	.0	3	.2	1
8	-1.7079	.4117	5.90	240	51	4	.2	7	.4	1
9	-1.5457	.3944	6.43	259	48	4	.2	11	.6	1
10	-1.3959	.3801	6.92	278	47	1	.1	12	.7	1
11	-1.2560	.3682	7.38	295	45	9	.5	21	1.2	1
12	-1.1242	.3582	7.79	311	44	12	.7	33	1.9	2
13	-.9990	.3497	8.18	327	43	13	.8	46	2.7	2
14	-.8793	.3425	8.52	341	42	25	1.5	71	4.2	3
15	-.7641	.3365	8.83	355	41	29	1.7	100	5.9	5
16	-.6527	.3313	9.11	369	41	43	2.5	143	8.4	7
17	-.5443	.3271	9.35	382	40	51	3.0	194	11.4	10
18	-.4385	.3236	9.55	395	40	59	3.5	253	14.9	13
19	-.3347	.3208	9.72	408	39	80	4.7	333	19.6	17
20	-.2325	.3187	9.85	421	39	72	4.2	405	23.9	22
21	-.1315	.3172	9.94	433	39	82	4.8	487	28.7	26
22	-.0312	.3163	10.00	445	39	82	4.8	569	33.5	31
23	.0687	.3160	10.01	458	39	90	5.3	659	38.9	36
24	.1686	.3163	10.00	470	39	92	5.4	751	44.3	42
25	.2690	.3172	9.94	482	39	85	5.0	836	49.3	47
26	.3700	.3187	9.84	495	39	87	5.1	923	54.4	52
27	.4723	.3209	9.71	507	39	75	4.4	998	58.8	57
28	.5762	.3238	9.54	520	40	74	4.4	1072	63.2	61
29	.6822	.3275	9.33	533	40	63	3.7	1135	66.9	65
30	.7908	.3320	9.07	546	41	76	4.5	1211	71.4	69
31	.9028	.3375	8.78	560	41	82	4.8	1293	76.2	74
32	1.0188	.3441	8.45	574	42	53	3.1	1346	79.4	78
33	1.1399	.3520	8.07	589	43	70	4.1	1416	83.5	81
34	1.2671	.3614	7.66	605	44	67	4.0	1483	87.4	85
35	1.4017	.3728	7.20	621	46	51	3.0	1534	90.4	89
36	1.5456	.3865	6.69	639	47	28	1.7	1562	92.1	91
37	1.7014	.4033	6.15	658	49	38	2.2	1600	94.3	93
38	1.8723	.4242	5.56	679	52	35	2.1	1635	96.4	95
39	2.0634	.4509	4.92	702	55	15	.9	1650	97.3	97
40	2.2821	.4861	4.23	729	60	21	1.2	1671	98.5	98
41	2.5414	.5347	3.50	761	66	14	.8	1685	99.4	99
42	2.8649	.6075	2.71	801	75	5	.3	1690	99.6	99
43	3.3060	.7318	1.87	855	90	4	.2	1694	99.9	99
44	4.0346	1.0175	.97	944	125	2	.1	1696	100.0	99
45	5.2634	1.8354	.30	1095	225	0	.0	1696	100.0	100

; PERSON SCORE FILE FOR 2009 OK MOD -- SCI 9 2 Aug 31 12:27 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.3825	1.8396	.30	-132	199	0	.0	0	.0	0
1	-4.1436	1.0244	.95	1	111	0	.0	0	.0	0
2	-3.4020	.7401	1.83	82	80	1	.1	1	.1	1
3	-2.9494	.6162	2.63	130	67	2	.1	3	.2	1
4	-2.6159	.5434	3.39	166	59	1	.1	4	.2	1
5	-2.3479	.4945	4.09	195	53	0	.0	4	.2	1
6	-2.1214	.4588	4.75	220	50	0	.0	4	.2	1
7	-1.9236	.4316	5.37	241	47	1	.1	5	.3	1
8	-1.7468	.4101	5.94	260	44	3	.2	8	.5	1
9	-1.5858	.3927	6.48	278	42	0	.0	8	.5	1
10	-1.4373	.3784	6.98	294	41	1	.1	9	.5	1
11	-1.2987	.3665	7.45	309	40	6	.4	15	.9	1
12	-1.1682	.3564	7.87	323	38	13	.8	28	1.7	1
13	-1.0442	.3480	8.26	336	38	18	1.1	46	2.8	2
14	-.9257	.3408	8.61	349	37	29	1.8	75	4.5	4
15	-.8117	.3347	8.93	361	36	31	1.9	106	6.4	5
16	-.7014	.3296	9.21	373	36	36	2.2	142	8.6	8
17	-.5942	.3253	9.45	385	35	39	2.4	181	11.0	10
18	-.4895	.3218	9.66	396	35	59	3.6	240	14.5	13
19	-.3869	.3190	9.83	407	34	58	3.5	298	18.0	16
20	-.2859	.3168	9.96	418	34	57	3.5	355	21.5	20
21	-.1860	.3153	10.06	429	34	67	4.1	422	25.6	24
22	-.0869	.3143	10.12	440	34	74	4.5	496	30.0	28
23	.0117	.3139	10.15	450	34	63	3.8	559	33.9	32
24	.1102	.3140	10.14	461	34	81	4.9	640	38.8	36
25	.2089	.3147	10.10	471	34	90	5.5	730	44.2	41
26	.3084	.3159	10.02	482	34	79	4.8	809	49.0	47
27	.4087	.3178	9.90	493	34	87	5.3	896	54.3	52
28	.5104	.3203	9.75	504	35	77	4.7	973	58.9	57
29	.6140	.3235	9.56	515	35	59	3.6	1032	62.5	61
30	.7199	.3274	9.33	527	35	71	4.3	1103	66.8	65
31	.8286	.3322	9.06	538	36	78	4.7	1181	71.5	69
32	.9408	.3379	8.76	551	36	67	4.1	1248	75.6	74
33	1.0572	.3447	8.42	563	37	51	3.1	1299	78.7	77
34	1.1788	.3528	8.04	576	38	55	3.3	1354	82.0	80
35	1.3065	.3624	7.61	590	39	47	2.8	1401	84.9	83
36	1.4419	.3739	7.15	605	40	37	2.2	1438	87.1	86
37	1.5868	.3878	6.65	620	42	47	2.8	1485	89.9	89
38	1.7437	.4048	6.10	637	44	53	3.2	1538	93.2	92
39	1.9158	.4258	5.52	656	46	19	1.2	1557	94.3	94
40	2.1083	.4526	4.88	677	49	27	1.6	1584	95.9	95
41	2.3287	.4879	4.20	700	53	24	1.5	1608	97.4	97
42	2.5898	.5366	3.47	729	58	16	1.0	1624	98.4	98
43	2.9155	.6094	2.69	764	66	11	.7	1635	99.0	99
44	3.3591	.7336	1.86	812	79	8	.5	1643	99.5	99
45	4.0906	1.0191	.96	891	110	4	.2	1647	99.8	99
46	5.3217	1.8364	.30	1024	198	4	.2	1651	100.0	99

; PERSON SCORE FILE FOR 2009 OK MOD -- REA 10 1 Aug 28 12:26 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.0950	1.8360	.30	-221	240	0	.0	0	.0	0
1	-3.8650	1.0184	.96	-60	133	0	.0	0	.0	0
2	-3.1348	.7327	1.86	36	96	0	.0	0	.0	0
3	-2.6926	.6082	2.70	94	80	0	.0	0	.0	0
4	-2.3684	.5352	3.49	136	70	0	.0	0	.0	0
5	-2.1089	.4860	4.23	170	64	0	.0	0	.0	0
6	-1.8905	.4503	4.93	199	59	0	.0	0	.0	0
7	-1.7003	.4229	5.59	224	55	1	.4	1	.4	1
8	-1.5307	.4013	6.21	246	53	0	.0	1	.4	1
9	-1.3768	.3838	6.79	266	50	1	.4	2	.9	1
10	-1.2351	.3695	7.32	285	48	1	.4	3	1.3	1
11	-1.1030	.3577	7.81	302	47	0	.0	3	1.3	1
12	-.9786	.3480	8.26	318	46	3	1.3	6	2.6	2
13	-.8603	.3401	8.65	334	45	3	1.3	9	3.9	3
14	-.7469	.3336	8.98	349	44	4	1.7	13	5.6	5
15	-.6374	.3286	9.26	363	43	7	3.0	20	8.6	7
16	-.5308	.3247	9.49	377	42	7	3.0	27	11.6	10
17	-.4263	.3218	9.65	390	42	6	2.6	33	14.2	13
18	-.3234	.3200	9.77	404	42	15	6.4	48	20.6	17
19	-.2214	.3190	9.83	417	42	7	3.0	55	23.6	22
20	-.1197	.3188	9.84	431	42	13	5.6	68	29.2	26
21	-.0179	.3193	9.81	444	42	7	3.0	75	32.2	31
22	.0844	.3205	9.73	457	42	5	2.1	80	34.3	33
23	.1877	.3224	9.62	471	42	19	8.2	99	42.5	38
24	.2924	.3249	9.47	485	43	12	5.2	111	47.6	45
25	.3990	.3282	9.29	498	43	9	3.9	120	51.5	50
26	.5079	.3321	9.07	513	43	24	10.3	144	61.8	57
27	.6198	.3368	8.82	527	44	11	4.7	155	66.5	64
28	.7350	.3423	8.53	542	45	8	3.4	163	70.0	68
29	.8544	.3489	8.21	558	46	13	5.6	176	75.5	73
30	.9788	.3567	7.86	574	47	13	5.6	189	81.1	78
31	1.1093	.3660	7.47	591	48	7	3.0	196	84.1	83
32	1.2472	.3771	7.03	610	49	10	4.3	206	88.4	86
33	1.3943	.3905	6.56	629	51	6	2.6	212	91.0	90
34	1.5531	.4069	6.04	650	53	10	4.3	222	95.3	93
35	1.7268	.4274	5.47	672	56	3	1.3	225	96.6	96
36	1.9204	.4536	4.86	698	59	4	1.7	229	98.3	97
37	2.1414	.4882	4.20	727	64	2	.9	231	99.1	99
38	2.4026	.5363	3.48	761	70	1	.4	232	99.6	99
39	2.7275	.6085	2.70	803	80	0	.0	232	99.6	99
40	3.1696	.7323	1.86	861	96	0	.0	232	99.6	99

; PERSON SCORE FILE FOR 2009 OK MOD -- MAT 10 1 Aug 28 12:26 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.1887	1.8415	.29	-101	209	0	.0	0	.0	0
1	-3.9448	1.0278	.95	40	117	1	.5	1	.5	1
2	-3.1962	.7447	1.80	125	84	0	.0	1	.5	1
3	-2.7369	.6218	2.59	177	71	0	.0	1	.5	1
4	-2.3963	.5501	3.31	216	62	0	.0	1	.5	1
5	-2.1208	.5022	3.97	247	57	0	.0	1	.5	1
6	-1.8864	.4677	4.57	274	53	1	.5	2	.9	1
7	-1.6801	.4417	5.13	297	50	1	.5	3	1.4	1
8	-1.4942	.4214	5.63	318	48	1	.5	4	1.9	2
9	-1.3236	.4053	6.09	338	46	2	.9	6	2.8	2
10	-1.1647	.3922	6.50	356	44	2	.9	8	3.7	3
11	-1.0152	.3816	6.87	373	43	4	1.9	12	5.6	5
12	-.8730	.3729	7.19	389	42	8	3.7	20	9.3	7
13	-.7366	.3659	7.47	404	41	4	1.9	24	11.1	10
14	-.6049	.3602	7.71	419	41	20	9.3	44	20.4	16
15	-.4768	.3557	7.90	434	40	11	5.1	55	25.5	23
16	-.3515	.3523	8.06	448	40	13	6.0	68	31.5	28
17	-.2284	.3498	8.17	462	40	14	6.5	82	38.0	35
18	-.1066	.3482	8.25	476	39	14	6.5	96	44.4	41
19	.0144	.3476	8.28	489	39	17	7.9	113	52.3	48
20	.1352	.3477	8.27	503	39	21	9.7	134	62.0	57
21	.2564	.3488	8.22	517	40	17	7.9	151	69.9	66
22	.3787	.3507	8.13	531	40	8	3.7	159	73.6	72
23	.5026	.3536	8.00	545	40	6	2.8	165	76.4	75
24	.6290	.3576	7.82	559	41	9	4.2	174	80.6	78
25	.7587	.3627	7.60	574	41	10	4.6	184	85.2	83
26	.8925	.3692	7.34	589	42	4	1.9	188	87.0	86
27	1.0317	.3773	7.03	605	43	7	3.2	195	90.3	89
28	1.1777	.3873	6.67	621	44	3	1.4	198	91.7	91
29	1.3323	.3997	6.26	639	45	3	1.4	201	93.1	92
30	1.4981	.4152	5.80	658	47	2	.9	203	94.0	94
31	1.6785	.4348	5.29	678	49	1	.5	204	94.4	94
32	1.8783	.4602	4.72	701	52	3	1.4	207	95.8	95
33	2.1051	.4940	4.10	727	56	6	2.8	213	98.6	97
34	2.3718	.5413	3.41	757	61	2	.9	215	99.5	99
35	2.7020	.6127	2.66	794	69	0	.0	215	99.5	99
36	3.1491	.7357	1.85	845	83	0	.0	215	99.5	99
37	3.8830	1.0200	.96	928	116	0	.0	215	99.5	99
38	5.1150	1.8366	.30	1068	208	1	.5	216	100.0	99

; PERSON SCORE FILE FOR 2009 OK MOD -- SCI 10 1 Aug 31 12:27 2009 USCALE=1.00
; TABLE OF SAMPLE NORMS (500/100) AND FREQUENCIES CORRESPONDING TO COMPLETE TEST

;SCORE	MEASURE	S.E.	INFO	NORMED	S.E.	FREQUENCY	%	CUM.FREQ.	%	PERCENTILE
0	-5.2896	1.8370	.30	-237	237	0	.0	0	.0	0
1	-4.0569	1.0202	.96	-78	132	0	.0	0	.0	0
2	-3.3230	.7353	1.85	17	95	0	.0	0	.0	0
3	-2.8770	.6113	2.68	75	79	0	.0	0	.0	0
4	-2.5489	.5388	3.44	117	70	0	.0	0	.0	0
5	-2.2855	.4902	4.16	151	63	0	.0	0	.0	0
6	-2.0629	.4550	4.83	180	59	0	.0	0	.0	0
7	-1.8683	.4283	5.45	205	55	0	.0	0	.0	0
8	-1.6941	.4072	6.03	228	53	1	.6	1	.6	1
9	-1.5353	.3902	6.57	248	50	0	.0	1	.6	1
10	-1.3886	.3762	7.06	267	49	0	.0	1	.6	1
11	-1.2515	.3647	7.52	285	47	1	.6	2	1.2	1
12	-1.1222	.3549	7.94	301	46	0	.0	2	1.2	1
13	-.9991	.3468	8.32	317	45	1	.6	3	1.9	2
14	-.8813	.3399	8.66	333	44	2	1.2	5	3.1	2
15	-.7678	.3341	8.96	347	43	2	1.2	7	4.3	4
16	-.6578	.3292	9.23	361	43	6	3.7	13	8.1	6
17	-.5508	.3252	9.45	375	42	6	3.7	19	11.8	10
18	-.4461	.3220	9.65	389	42	3	1.9	22	13.7	13
19	-.3433	.3194	9.80	402	41	2	1.2	24	14.9	14
20	-.2419	.3175	9.92	415	41	10	6.2	34	21.1	18
21	-.1415	.3162	10.00	428	41	5	3.1	39	24.2	23
22	-.0418	.3155	10.04	441	41	9	5.6	48	29.8	27
23	.0577	.3154	10.05	454	41	12	7.5	60	37.3	34
24	.1573	.3159	10.02	467	41	12	7.5	72	44.7	41
25	.2574	.3169	9.96	480	41	10	6.2	82	50.9	48
26	.3583	.3186	9.85	493	41	6	3.7	88	54.7	53
27	.4605	.3209	9.71	506	41	8	5.0	96	59.6	57
28	.5644	.3239	9.53	519	42	9	5.6	105	65.2	62
29	.6705	.3276	9.32	533	42	4	2.5	109	67.7	66
30	.7793	.3322	9.06	547	43	7	4.3	116	72.0	70
31	.8915	.3378	8.76	562	44	8	5.0	124	77.0	75
32	1.0078	.3444	8.43	577	45	4	2.5	128	79.5	78
33	1.1291	.3523	8.06	592	46	6	3.7	134	83.2	81
34	1.2565	.3618	7.64	609	47	7	4.3	141	87.6	85
35	1.3914	.3731	7.18	626	48	5	3.1	146	90.7	89
36	1.5356	.3868	6.68	645	50	6	3.7	152	94.4	93
37	1.6916	.4036	6.14	665	52	2	1.2	154	95.7	95
38	1.8627	.4244	5.55	687	55	2	1.2	156	96.9	96
39	2.0539	.4510	4.92	712	58	1	.6	157	97.5	97
40	2.2727	.4861	4.23	740	63	1	.6	158	98.1	98
41	2.5318	.5346	3.50	774	69	1	.6	159	98.8	98
42	2.8552	.6073	2.71	815	78	2	1.2	161	100.0	99
43	3.2959	.7315	1.87	872	95	0	.0	161	100.0	100
44	4.0240	1.0173	.97	966	131	0	.0	161	100.0	100
45	5.2522	1.8352	.30	1125	237	0	.0	161	100.0	100

Appendix
I

CORRELATION COEFFICIENTS AMONG TEST-CONTENT STRANDS FOR THE 2009 OMAAP

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Math 3, Form D

Standard	Patterns and Algebraic Reasoning	Number Sense	Number Operations and Computation	Geometry and Measurement	Data Analysis and Probability
Patterns and Algebraic Reasoning	1.00				
Number Sense	0.53	1.00			
Number Operations and Computation	0.56	0.54	1.00		
Geometry and Measurement	0.59	0.57	0.60	1.00	
Data Analysis and Probability	0.51	0.55	0.56	0.59	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Math 3, Form E

Standard	Patterns and Algebraic Reasoning	Number Sense	Number Operations and Computation	Geometry and Measurement	Data Analysis and Probability
Patterns and Algebraic Reasoning	1.00				
Number Sense	0.57	1.00			
Number Operations and Computation	0.60	0.55	1.00		
Geometry and Measurement	0.57	0.57	0.56	1.00	
Data Analysis and Probability	0.55	0.54	0.55	0.56	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Math 4, Form D

Standard	Patterns and Algebraic Reasoning	Number Sense	Number Operations and Computation	Geometry and Measurement	Data Analysis and Probability
Patterns and Algebraic Reasoning	1.00				
Number Sense	0.49	1.00			
Number Operations and Computation	0.50	0.45	1.00		
Geometry and Measurement	0.50	0.49	0.43	1.00	
Data Analysis and Probability	0.50	0.47	0.47	0.48	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Math 4, Form E

Standard	Patterns and Algebraic Reasoning	Number Sense	Number Operations and Computation	Geometry and Measurement	Data Analysis and Probability
Patterns and Algebraic Reasoning	1.00				
Number Sense	0.56	1.00			
Number Operations and Computation	0.57	0.51	1.00		
Geometry and Measurement	0.50	0.51	0.51	1.00	

Data Analysis and Probability	0.52	0.53	0.52	0.51	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Math 5, Form D

Standard	Patterns and Algebraic Reasoning	Number Sense	Number Operations and Computation	Geometry and Measurement	Data Analysis and Probability
Patterns and Algebraic Reasoning	1.00				
Number Sense	0.50	1.00			
Number Operations and Computation	0.44	0.40	1.00		
Geometry and Measurement	0.57	0.47	0.44	1.00	
Data Analysis and Probability	0.51	0.40	0.43	0.49	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Math 5, Form E

Standard	Patterns and Algebraic Reasoning	Number Sense	Number Operations and Computation	Geometry and Measurement	Data Analysis and Probability
Patterns and Algebraic Reasoning	1.00				
Number Sense	0.49	1.00			
Number Operations and Computation	0.43	0.42	1.00		
Geometry and Measurement	0.49	0.46	0.44	1.00	
Data Analysis and Probability	0.48	0.48	0.37	0.44	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Math 6, Form D

Standard	Patterns and Algebraic Reasoning	Number Sense	Number Operations and Computation	Geometry and Measurement	Data Analysis and Statistics
Patterns and Algebraic Reasoning	1.00				
Number Sense	0.41	1.00			
Number Operations and Computation	0.28	0.19	1.00		
Geometry and Measurement	0.33	0.28	0.18	1.00	
Data Analysis and Statistics	0.45	0.34	0.25	0.25	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Math 6, Form E

Standard	Patterns and Algebraic Reasoning	Number Sense	Number Operations and Computation	Geometry and Measurement	Data Analysis and Statistics
Patterns and Algebraic Reasoning	1.00				
Number Sense	0.45	1.00			
Number Operations and Computation	0.33	0.27	1.00		
Geometry and Measurement	0.32	0.36	0.22	1.00	
Data Analysis and Statistics	0.47	0.40	0.27	0.30	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Math 7, Form D

Standard	Patterns and Algebraic Reasoning	Number Sense	Number Operations and Computation	Geometry and Measurement	Data Analysis and Probability
Patterns and Algebraic Reasoning	1.00				
Number Sense	0.39	1.00			
Number Operations and Computation	0.31	0.44	1.00		
Geometry and Measurement	0.27	0.40	0.33	1.00	
Data Analysis and Probability	0.27	0.43	0.32	0.33	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Math 7, Form E

Standard	Patterns and Algebraic Reasoning	Number Sense	Number Operations and Computation	Geometry and Measurement	Data Analysis and Probability
Patterns and Algebraic Reasoning	1.00				
Number Sense	0.42	1.00			
Number Operations and Computation	0.38	0.45	1.00		
Geometry and Measurement	0.32	0.48	0.35	1.00	
Data Analysis and Probability	0.31	0.39	0.30	0.30	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Math 8, Form D

Standard	Patterns and Algebraic Reasoning	Number Sense	Number Operations and Computation	Geometry and Measurement	Data Analysis and Probability
Patterns and Algebraic Reasoning	1.00				
Number Sense	0.35	1.00			
Number Operations and Computation	0.31	0.27	1.00		
Geometry and Measurement	0.44	0.43	0.33	1.00	
Data Analysis and Statistics	0.32	0.30	0.27	0.36	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Math 8, Form E

Standard	Patterns and Algebraic Reasoning	Number Sense	Number Operations and Computation	Geometry and Measurement	Data Analysis and Probability
Patterns and Algebraic Reasoning	1.00				
Number Sense	0.38	1.00			
Number Operations and Computation	0.30	0.34	1.00		
Geometry and Measurement	0.42	0.45	0.36	1.00	
Data Analysis and Statistics	0.28	0.32	0.25	0.29	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Algebra I EOI, Form D

Standard	Number Sense and Algebraic Operations	Relations and Functions	Data Analysis, Probability & Statistics
Number Sense and Algebraic Operations	1.00		
Relations and Functions	0.51	1.00	
Data Analysis, Probability & Statistics	0.37	0.47	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Algebra I EOI, Form E

Standard	Number Sense and Algebraic Operations	Relations and Functions	Data Analysis, Probability & Statistics
Number Sense and Algebraic Operations	1.00		
Relations and Functions	0.58	1.00	
Data Analysis, Probability & Statistics	0.46	0.50	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Reading 3, Form D

Standard	Vocabulary	Comprehension/Critical Literacy	Literature	Research and Information
Vocabulary	1.00			
Comprehension/Critical Literacy	0.67	1.00		
Literature	0.52	0.56	1.00	
Research and Information	0.44	0.47	0.36	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Reading 3, Form E

Standard	Vocabulary	Comprehension/Critical Literacy	Literature	Research and Information
Vocabulary	1.00			
Comprehension/Critical Literacy	0.73	1.00		
Literature	0.55	0.61	1.00	
Research and Information	0.45	0.46	0.37	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Reading 4, Form D

Standard	Vocabulary	Comprehension/Critical Literacy	Literature	Research and Information
Vocabulary	1.00			
Comprehension/Critical Literacy	0.63	1.00		
Literature	0.50	0.62	1.00	
Research and Information	0.38	0.42	0.35	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Reading 4, Form E

Standard	Vocabulary	Comprehension/Critical Literacy	Literature	Research and Information
Vocabulary	1.00			
Comprehension/Critical Literacy	0.65	1.00		
Literature	0.55	0.65	1.00	
Research and Information	0.47	0.50	0.47	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Reading 5, Form D

Standard	Vocabulary	Comprehension/Critical Literacy	Literature	Research and Information
Vocabulary	1.00			
Comprehension/Critical Literacy	0.60	1.00		
Literature	0.58	0.62	1.00	
Research and Information	0.37	0.39	0.35	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Reading 5, Form E

Standard	Vocabulary	Comprehension/Critical Literacy	Literature	Research and Information
Vocabulary	1.00			
Comprehension/Critical Literacy	0.64	1.00		
Literature	0.52	0.56	1.00	
Research and Information	0.50	0.50	0.44	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Reading 6, Form D

Standard	Vocabulary	Comprehension/Critical Literacy	Literature	Research and Information
Vocabulary	1.00			
Comprehension/Critical Literacy	0.53	1.00		
Literature	0.44	0.59	1.00	
Research and Information	0.44	0.54	0.46	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Reading 6, Form E

Standard	Vocabulary	Comprehension/Critical Literacy	Literature	Research and Information
Vocabulary	1.00			
Comprehension/Critical Literacy	0.49	1.00		
Literature	0.47	0.54	1.00	
Research and Information	0.47	0.53	0.48	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Reading 7, Form D

Standard	Vocabulary	Comprehension/Critical Literacy	Literature	Research and Information
Vocabulary	1.00			
Comprehension/Critical Literacy	0.54	1.00		
Literature	0.43	0.56	1.00	
Research and Information	0.38	0.51	0.41	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Reading 7, Form E

Standard	Vocabulary	Comprehension/Critical Literacy	Literature	Research and Information
Vocabulary	1.00			
Comprehension/Critical Literacy	0.60	1.00		
Literature	0.48	0.58	1.00	
Research and Information	0.48	0.57	0.47	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Reading 8, Form D

Standard	Vocabulary	Comprehension/ Critical Literacy	Literature	Research and Information
Vocabulary	1.00			
Comprehension/Critical Literacy	0.53	1.00		
Literature	0.48	0.58	1.00	
Research and Information	0.35	0.44	0.37	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Reading 8, Form E

Standard	Vocabulary	Comprehension/ Critical Literacy	Literature	Research and Information
Vocabulary	1.00			
Comprehension/Critical Literacy	0.58	1.00		
Literature	0.45	0.49	1.00	
Research and Information	0.47	0.54	0.43	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
English II EOI, Form D

Standard	Vocabulary	Comprehension	Literature	Research and Information	Writing/ Grammar/ Usage and Mechanics
Vocabulary	1.00				
Comprehension	0.51	1.00			
Literature	0.54	0.53	1.00		
Writing/ Grammar/Usage and Mechanics	0.46	0.42	0.49	1.00	
Writing	0.35	0.31	0.31	0.32	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
English II EOI, Form E

Standard	Vocabulary	Comprehension	Literature	Research and Information	Writing/ Grammar/ Usage and Mechanics
Vocabulary	1.00				
Comprehension	0.45	1.00			
Literature	0.42	0.47	1.00		
Writing/ Grammar/Usage and Mechanics	0.42	0.40	0.38	1.00	
Writing	0.32	0.35	0.35	0.33	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Science 5, Form D

Standard	Observe and Measure	Classify	Experiment	Interpret and Communicate
Observe and Measure	1.00			
Classify	0.47	1.00		
Experiment	0.44	0.47	1.00	
Interpret and Communicate	0.50	0.59	0.56	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Science 5, Form E

Standard	Observe and Measure	Classify	Experiment	Interpret and Communicate
Observe and Measure	1.00			
Classify	0.50	1.00		
Experiment	0.51	0.50	1.00	
Interpret and Communicate	0.57	0.55	0.51	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Science 8, Form D

Standard	Observe and Measure	Classify	Experiment	Interpret and Communicate
Observe and Measure	1.00			
Classify	0.46	1.00		
Experiment	0.50	0.50	1.00	
Interpret and Communicate	0.49	0.47	0.52	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Science 8, Form E

Standard	Observe and Measure	Classify	Experiment	Interpret and Communicate
Observe and Measure	1.00			
Classify	0.37	1.00		
Experiment	0.34	0.52	1.00	
Interpret and Communicate	0.35	0.53	0.49	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Biology I EOI, Form D

Standard	Observe and Measure	Classify	Experiment	Interpret and communicate	Model
Observe and Measure	1.00				
Classify	0.41	1.00			
Experiment	0.44	0.42	1.00		
Interpret and communicate	0.49	0.48	0.57	1.00	
Model	0.36	0.35	0.36	0.43	1.00

Correlation Coefficients Among Test-Content Strands
Spring 2009 OMAAP
Biology I EOI, Form E

Standard	Observe and Measure	Classify	Experiment	Interpret and communicate	Model
Observe and Measure	1.00				
Classify	0.41	1.00			
Experiment	0.48	0.51	1.00		
Interpret and communicate	0.50	0.54	0.64	1.00	
Model	0.37	0.38	0.45	0.50	1.00

Correlation Coefficients Among Test-Content Strands
Winter 2008/09 OMAAP
Algebra I EOI

Standard	Number Sense and Algebraic Operations	Relations and Functions	Data Analysis, Probability & Statistics
Number Sense and Algebraic Operations	1.00		
Relations and Functions	0.61	1.00	
Data Analysis, Probability & Statistics	0.38	0.45	1.00

Correlation Coefficients Among Test-Content Strands
Winter 2008/09 OMAAP
English II EOI

Standard	Vocabulary	Comprehension	Literature	Research and Information	Writing/ Grammar/ Usage and Mechanics
Vocabulary	1.00				
Comprehension	0.44	1.00			
Literature	0.38	0.50	1.00		
Research and Information	0.22	0.32	0.25	1.00	
Writing/ Grammar/ Usage and Mechanics	0.25	0.42	0.38	0.27	1.00

Correlation Coefficients Among Test-Content Strands
Winter 2008/09 OMAAP
Biology I EOI

Standard	Observe and Measure	Classify	Experiment	Interpret and communicate	Model
Observe and Measure	1.00				
Classify	0.40	1.00			
Experiment	0.53	0.37	1.00		
Interpret and communicate	0.55	0.44	0.54	1.00	
Model	0.35	0.26	0.37	0.36	1.00