

New York State Regents Examination in Earth Science

2012 Field Test Analysis, Equating Procedure, and Scaling of Operational Test Forms

Technical Report



Prepared for the New York State Education Department
by Pearson

May 2013

Copyright

Developed and published under contract with the New York State Education Department by Pearson. Copyright © 2012 by the New York State Education Department.

Secure Materials.

All rights reserved. No part of this document may be reproduced or transmitted by any means. Use of these materials is expressly limited to the New York State Education Department.

Table of Contents

Table of Contents	i
List of Tables	ii
Section I: Introduction.....	1
Purpose.....	1
Section II: Field Test Analysis	1
File Merging and Data Cleanup	2
Classical Analysis	2
<i>Item Difficulty</i>	3
<i>Point-Biserial Correlation</i>	3
<i>Test Reliability</i>	5
<i>Scoring Reliability</i>	6
<i>Inter-rater Agreement</i>	6
<i>Constructed-Response Item Means and Standard Deviations</i>	18
<i>Intraclass Correlation</i>	18
<i>Weighted Kappa</i>	18
Item Response Theory (IRT) Statistics.....	19
<i>Item Calibration</i>	20
<i>Item Fit Evaluation</i>	20
Differential Item Functioning (DIF) Statistics	21
Section III: Equating Procedure.....	23
Section IV: Scaling of Operational Test Forms.....	25
References	27
Appendix A: Classical Item Analysis	28
Appendix B: Partial-Credit Model Item Analysis	48
Appendix C: DIF Statistics.....	67
Appendix D: Operational Test Maps	77
Appendix E: Scoring Tables	90

List of Tables

Table 1. Need/Resource Capacity Category Definitions	1
Table 2. Classical Item Analysis.....	4
Table 3. Test and Scoring Reliability	5
Table 4. Point Differences Between First and Second Reads.....	6
Table 5. First and Second Read Descriptive Statistics and Agreement	13
Table 6. Partial Credit Model Item Analysis.....	21
Table 7. Initial Mean Abilities and Equating Constants.....	24

Section I: Introduction

PURPOSE

The purpose of this report is to document the psychometric work on the New York State Regents Examination in Earth Science in 2012. Specifically, contained within this report are procedures for and results of field test analysis, equating, and scaling of operational test forms that were conducted by Pearson.

Section II: Field Test Analysis

In May 2012, field testing was conducted for the New York State Regents Examination in Earth Science to better understand the psychometric quality of the items. The results of this testing are used to help determine which items will be selected for use on operational tests.

Target student samples for participation in this testing were selected such that each would represent the student population expected to take the operational test. The Need/Resource Capacity Categories were used as variables in the sampling plan. See Table 1 for the seven Need/Resource Capacity Categories and their definitions.

Table 1. Need/Resource Capacity Category Definitions

Need/Resource Capacity (N/RC) Category	Definition
High N/RC Districts: New York City	New York City
Large Cities	Buffalo, Rochester, Syracuse, Yonkers
Urban-Suburban	Districts at or above the 70 th percentile on the index with at least 100 students per square mile or enrollment greater than 2500
Rural	All districts at or above the 70 th percentile with fewer than 50 students per square mile or enrollment of fewer than 2500
Average N/RC Districts	All districts between the 20 th and 70 th percentiles on the index
Low N/RC Districts	All districts below the 20 th percentile on the index
Charter Schools	Each charter school is a district

The field test forms were administered and scored by the New York State Education Department. Both classical and item response theory analyses were conducted using the data to evaluate the quality of the test items.

FILE MERGING AND DATA CLEANUP

Field test forms contained multiple-choice and constructed-response item types. Response data were contained in one file. After the exclusion rules¹ were applied, the resulting field test data file contained 20837 records.

Multiple-choice response data were then compared to the answer key. All item responses not matching the answer key were assigned scores of 0. The responses matching the answer key were assigned scores of 1. With respect to the constructed-response items, scores from 0 to the maximum point value available for each tested item were kept while out-of-range values were assigned scores of 0. For IRT calibrations, blanks (i.e., missing data) were assigned scores of 0 to be consistent with how operational test items are scored.

The final data file contained both the scored and unscored student responses. Unscored data were used to calculate the percentage of students who selected the various answer choices for the multiple-choice items or the percentage of students who received the range of possible raw score points for the constructed-response items. Thus, the frequency of students leaving items blank can be calculated. The scored data were used for all other analyses.

CLASSICAL ANALYSIS

Classical Test Theory is based on the assumption that an observed test score x is composed of both true score t and error score e . This assumption is expressed as follows:

$$x = t + e$$

In other words, error is associated with measuring a student's true score. For example, the choice of test items or the administration conditions might influence student responses, making a student's observed score higher or lower than the student's true score. The error is considered random. After repeated administrations, the mean of the error scores is virtually zero. Thus, a student's observed score is expected to equal his or her true score. This expectation is expressed as follows:

$$E(x) = t$$

¹ Exclusion rules define which test records are to be considered invalid. Such records include those without both an MC and a CR component, records with invalid or out-of-range form numbers, records without any responses, and duplicate records. These records were dropped and not included in any analyses.

Using a Classical Test Theory framework, field test data can be analyzed to provide information about the quality of test items. Item difficulties, point-biserial correlations, reliability estimates, and various statistics related to rater agreement have been calculated and are summarized in the following section.

Item Difficulty

Item difficulty is an indication of students' performance on a specific item. Because this examination contains polytomous items, item means are not appropriate for comparing difficulty across items. Instead, weighted item means were calculated by dividing an item's mean by the maximum points possible for that item.

For multiple-choice items, the item difficulty is the proportion of students who answer an item correctly. If 90% of the student responses to a multiple-choice item are correct, then this item is considered easier than a multiple-choice item with correct responses by 30% of the students.

Point-Biserial Correlation

The point-biserial correlation is another classical statistic that can be used to evaluate items. For multiple-choice items, it is the correlation between students' performance on a given item (correct or incorrect) and overall performance scores. This statistic is used to evaluate how well an item identifies students who understand the concept being measured, and can be generalized for constructed-response items. The possible range for the point-biserial correlation is -1 to 1 , with higher values being more desirable.

Table 2 presents a summary of the classical item analysis for each of the field test forms. The first three columns identify the form number, the number of students who took each form, and the number of items on each field test form, respectively. The remaining columns are divided into two sections (i.e., item difficulty and point-biserial correlations). Recall that for constructed-response items, item means were divided by the maximum number of points possible in order to place them in the same metric as the multiple-choice items. No items had an item difficulty above 0.90. With respect to the point-biserial correlations, 17 items had correlations that were less than 0.25.

Table 2. Classical Item Analysis

Form	N-Count	No. of Items	Item Difficulty			Point-Biserial		
			<0.50	0.50 to 0.90	>0.90	<0.25	0.25 to 0.50	>0.50
845	1,009	21	7	14	0	0	15	6
846	1,000	21	12	9	0	0	17	4
847	992	21	12	9	0	0	14	7
848	1,009	21	13	8	0	1	16	4
849	1,001	21	13	8	0	1	14	6
850	996	21	9	12	0	0	16	5
851	1,008	21	13	8	0	0	14	7
852	1,003	21	10	11	0	1	14	6
853	1,005	21	8	13	0	2	14	5
854	997	21	13	8	0	0	16	5
855	980	21	9	12	0	0	15	6
856	910	21	7	14	0	1	15	5
857	982	21	10	11	0	1	18	2
858	999	21	8	13	0	1	14	6
859	984	21	9	12	0	2	16	3
860	997	21	10	11	0	2	14	5
861	1,005	21	13	8	0	0	14	7
862	1,001	21	7	14	0	2	12	7
863	994	21	13	8	0	2	13	6
864	984	21	9	12	0	1	13	7
865	981	20	3	17	0	0	14	6

In addition to the summary information provided in Table 2, further classical item statistics are provided in Appendix A. “Max” is the maximum number of possible points. “N-Count” refers to the number of student records in the analysis. “Alpha” contains the internal consistency statistics discussed below. For multiple-choice items, “B” represents the proportion of students who left the item blank, and “M1” through “M4” are the proportions of students who selected each of the four answer choices. For constructed-response items, “B” represents the proportion of students who left the item blank, and “M0” through “M2” are the proportions of students who received scores 0 through 2. “Mean” is the average of the scores received by the students. The final column contains the point-biserial correlation for each item. There are some instances of items missing statistics; this occurs when an item was not scored.

Test Reliability

Classical analysis can also be used to measure the reliability of the test. Reliability is the consistency of the results obtained from a measurement with respect to time or among items or subjects that constitute a test. As such, test reliability can be estimated in a variety of ways. Internal consistency indices are a measure of how consistently examinees respond to items within a test. Two factors influence estimates of internal consistency: test length and homogeneity of items. In general, the more items on the examination, the higher the reliability, and the more similar the items are, the higher the reliability.

Cronbach's α (alpha) (Cronbach, 1951) has an important use as a measure of the internal consistency of a test. This formula is the extension of an earlier version, the Kuder-Richardson Formula 20 (KR-20), which is the equivalent for dichotomous items.

Table 3 contains the internal consistency statistics for all of the field test forms. These statistics ranged from 0.77 to 0.83 and were based solely on the items in the individual field test forms. It is expected that these statistics associated with the operational tests would be greater because there are more items on the operational test forms.

Table 3. Test and Scoring Reliability

Form Number	Test Reliability	Scoring Reliability
845	0.80	0.93
846	0.79	0.93
847	0.80	0.90
848	0.77	0.92
849	0.79	0.91
850	0.83	0.93
851	0.82	0.97
852	0.81	0.96
853	0.78	0.96
854	0.80	0.94
855	0.80	0.94
856	0.78	0.92
857	0.79	0.94
858	0.79	0.96
859	0.77	0.88
860	0.78	0.96
861	0.81	0.93

Table 3. Test and Scoring Reliability (continued)

Form Number	Test Reliability	Scoring Reliability
862	0.79	0.97
863	0.78	0.89
864	0.80	0.91
865	0.81	0.97

Scoring Reliability

One concern with constructed-response items is the reliability of the scoring process (i.e., consistency of the score assignment). Constructed-response items must be read by scorers who assign scores based on a comparison between the rubric and student responses. Consistency in the way scores are assigned is a critical part of the reliability of the assessment. To measure this consistency, 10% of the test booklets are scored a second time (i.e., second read scores) and compared to the original set of scores (i.e., first read scores).

As an overall measure of scoring reliability, the Pearson Correlation Coefficient between the first and second scores for each of the constructed-response items was computed. This statistic is often used as an overall indicator of scoring reliability, and generally ranges from 0 to near 1. Table 3 contains the results from these analyses in the column headed “Scoring Reliability.” The correlations ranged from 0.88 to 0.97, indicating high scoring reliability.

Inter-rater Agreement

For each constructed-response item, the difference between the first and second reads was computed. When examining inter-rater agreement statistics, it should be kept in mind that the maximum number of points per item varies, as shown in the “Score Points” column of the following tables.

Table 4 contains the proportion of occurrence of these differences for each item. Most items had a maximum point value of 1 and most had an exact agreement rate between their first and second reads of 95% or better.

Table 4. Point Differences Between First and Second Reads

			Difference (First Read Minus Second Read)				
Form	Item	Score Points	-2	-1	0	1	2
845	41	1	0.00	0.00	0.99	0.01	0.00
845	42	1	0.00	0.00	0.97	0.03	0.00
845	43	1	0.00	0.02	0.95	0.03	0.00

Table 4. Point Differences Between First and Second Reads (continued)

			Difference (First Read Minus Second Read)				
Form	Item	Score Points	-2	-1	0	1	2
845	44	1	0.00	0.00	0.97	0.03	0.00
845	45	1	0.00	0.02	0.97	0.01	0.00
845	46	1	0.00	0.01	0.97	0.02	0.00
845	47	1	0.00	0.04	0.95	0.01	0.00
845	48	1	0.00	0.00	0.98	0.02	0.00
845	49	1	0.00	0.00	0.98	0.02	0.00
845	50	1	0.00	0.04	0.91	0.05	0.00
846	41	1	0.00	0.02	0.94	0.03	0.00
846	42	1	0.00	0.00	1.00	0.00	0.00
846	43	1	0.00	0.01	0.99	0.00	0.00
846	44	1	0.00	0.01	0.96	0.03	0.00
846	45	1	0.00	0.01	0.99	0.00	0.00
846	46	1	0.00	0.03	0.97	0.00	0.00
846	47	1	0.00	0.05	0.94	0.01	0.00
846	48	1	0.00	0.02	0.98	0.00	0.00
846	49	1	0.00	0.05	0.90	0.04	0.00
846	50	1	0.00	0.02	0.98	0.00	0.00
847	41	1	0.00	0.01	0.99	0.00	0.00
847	42	1	0.00	0.00	0.97	0.03	0.00
847	43	1	0.00	0.04	0.95	0.01	0.00
847	44	1	0.00	0.04	0.92	0.03	0.00
847	45	1	0.00	0.05	0.90	0.04	0.00
847	46	1	0.00	0.00	0.96	0.04	0.00
847	47	1	0.00	0.01	0.99	0.00	0.00
847	48	1	0.00	0.02	0.94	0.03	0.00
847	49	1	0.00	0.05	0.92	0.03	0.00
848	41	1	0.00	0.00	1.00	0.00	0.00
848	42	1	0.00	0.00	0.99	0.01	0.00
848	43	1	0.00	0.00	1.00	0.00	0.00
848	44	1	0.00	0.00	1.00	0.00	0.00
848	45	1	0.00	0.02	0.98	0.00	0.00
848	46	1	0.00	0.06	0.85	0.09	0.00

Table 4. Point Differences Between First and Second Reads (continued)

			Difference (First Read Minus Second Read)				
Form	Item	Score Points	-2	-1	0	1	2
848	47	1	0.00	0.04	0.93	0.02	0.00
848	48	1	0.00	0.03	0.94	0.02	0.00
849	41	1	0.00	0.02	0.97	0.01	0.00
849	42	1	0.00	0.01	0.98	0.01	0.00
849	43	1	0.00	0.03	0.93	0.03	0.00
849	44	1	0.00	0.03	0.93	0.03	0.00
849	45	1	0.00	0.03	0.95	0.01	0.00
849	46	1	0.00	0.00	1.00	0.00	0.00
849	47	1	0.00	0.01	0.96	0.03	0.00
849	48	1	0.00	0.05	0.91	0.05	0.00
850	41	1	0.00	0.07	0.90	0.03	0.00
850	42	1	0.00	0.00	1.00	0.00	0.00
850	43	1	0.00	0.03	0.98	0.00	0.00
850	44	1	0.00	0.01	0.96	0.02	0.00
850	45	1	0.00	0.03	0.91	0.06	0.00
850	46	1	0.00	0.00	1.00	0.00	0.00
850	47	1	0.00	0.01	0.99	0.00	0.00
850	48	1	0.00	0.02	0.98	0.00	0.00
850	49	1	0.00	0.00	0.99	0.01	0.00
850	50	1	0.00	0.03	0.96	0.01	0.00
851	41	1	0.00	0.00	0.99	0.01	0.00
851	42	1	0.00	0.00	0.99	0.01	0.00
851	43	1	0.00	0.00	1.00	0.00	0.00
851	44	1	0.00	0.03	0.96	0.01	0.00
851	45	1	0.00	0.01	0.96	0.03	0.00
851	46	1	0.00	0.01	0.98	0.01	0.00
851	47	1	0.00	0.00	1.00	0.00	0.00
851	48	1	0.00	0.00	1.00	0.00	0.00
851	49	1	0.00	0.01	0.99	0.00	0.00
852	41	1	0.00	0.01	0.99	0.00	0.00
852	42	1	0.00	0.01	0.99	0.00	0.00
852	43	1	0.00	0.00	1.00	0.00	0.00

Table 4. Point Differences Between First and Second Reads (continued)

			Difference (First Read Minus Second Read)				
Form	Item	Score Points	-2	-1	0	1	2
852	44	1	0.00	0.00	0.94	0.06	0.00
852	45	1	0.00	0.00	0.99	0.01	0.00
852	46	1	0.00	0.01	0.99	0.00	0.00
852	47	1	0.00	0.04	0.96	0.00	0.00
852	48	1	0.00	0.01	0.97	0.01	0.00
852	49	1	0.00	0.00	0.99	0.01	0.00
853	41	1	0.00	0.01	0.97	0.02	0.00
853	42	1	0.00	0.03	0.95	0.02	0.00
853	43	1	0.00	0.00	1.00	0.00	0.00
853	44	1	0.00	0.00	1.00	0.00	0.00
853	45	1	0.00	0.00	0.98	0.02	0.00
853	46	1	0.00	0.00	0.99	0.01	0.00
853	47	1	0.00	0.00	0.99	0.01	0.00
854	41	1	0.00	0.05	0.95	0.00	0.00
854	42	1	0.00	0.00	1.00	0.00	0.00
854	43	1	0.00	0.03	0.92	0.05	0.00
854	44	1	0.00	0.01	0.93	0.06	0.00
854	45	1	0.00	0.00	1.00	0.00	0.00
854	46	1	0.00	0.00	0.99	0.01	0.00
854	47	1	0.00	0.00	1.00	0.00	0.00
854	48	1	0.00	0.01	0.99	0.00	0.00
854	49	1	0.00	0.02	0.95	0.02	0.00
854	50	1	0.00	0.02	0.95	0.02	0.00
855	41	1	0.00	0.00	0.99	0.01	0.00
855	42	1	0.00	0.00	1.00	0.00	0.00
855	43	1	0.00	0.02	0.97	0.01	0.00
855	44	1	0.00	0.00	0.97	0.03	0.00
855	45	1	0.00	0.03	0.91	0.06	0.00
855	46	1	0.00	0.00	0.98	0.02	0.00
855	47	1	0.00	0.00	0.99	0.01	0.00
855	48	1	0.00	0.02	0.96	0.01	0.00
856	41	1	0.00	0.02	0.97	0.01	0.00

Table 4. Point Differences Between First and Second Reads (continued)

			Difference (First Read Minus Second Read)				
Form	Item	Score Points	-2	-1	0	1	2
856	42	1	0.00	0.00	1.00	0.00	0.00
856	43	1	0.00	0.02	0.89	0.08	0.00
856	44	1	0.00	0.00	1.00	0.00	0.00
856	45	1	0.00	0.01	0.98	0.01	0.00
856	46	1	0.00	0.06	0.94	0.00	0.00
856	47	1	0.00	0.02	0.98	0.00	0.00
856	48	1	0.00	0.03	0.91	0.06	0.00
856	49	1	0.00	0.01	0.96	0.02	0.00
856	50	1	0.00	0.00	0.99	0.01	0.00
857	41	1	0.00	0.01	0.98	0.01	0.00
857	42	1	0.00	0.03	0.94	0.03	0.00
857	43	1	0.00	0.00	0.99	0.01	0.00
857	44	1	0.00	0.00	0.96	0.04	0.00
857	45	1	0.00	0.01	0.96	0.02	0.00
857	46	1	0.00	0.00	1.00	0.00	0.00
857	47	1	0.00	0.00	0.99	0.01	0.00
857	48	1	0.00	0.05	0.95	0.00	0.00
858	41	1	0.00	0.02	0.97	0.01	0.00
858	42	1	0.00	0.01	0.99	0.00	0.00
858	43	1	0.00	0.00	1.00	0.00	0.00
858	44	1	0.00	0.01	0.98	0.01	0.00
858	45	1	0.00	0.05	0.88	0.08	0.00
858	46	1	0.00	0.00	1.00	0.00	0.00
858	47	1	0.00	0.00	1.00	0.00	0.00
858	48	1	0.00	0.00	1.00	0.00	0.00
858	49	1	0.00	0.00	1.00	0.00	0.00
859	41	1	0.00	0.02	0.96	0.02	0.00
859	42	1	0.00	0.01	0.94	0.05	0.00
859	43	1	0.00	0.03	0.91	0.05	0.00
859	44	1	0.00	0.00	0.97	0.03	0.00
859	45	1	0.00	0.03	0.95	0.01	0.00
859	46	1	0.00	0.03	0.96	0.01	0.00

Table 4. Point Differences Between First and Second Reads (continued)

			Difference (First Read Minus Second Read)				
Form	Item	Score Points	-2	-1	0	1	2
859	47	1	0.00	0.02	0.97	0.01	0.00
859	48	1	0.00	0.00	1.00	0.00	0.00
859	49	1	0.00	0.11	0.80	0.09	0.00
859	50	1	0.00	0.02	0.96	0.01	0.00
860	41	1	0.00	0.00	1.00	0.00	0.00
860	42	1	0.00	0.00	0.98	0.02	0.00
860	43	1	0.00	0.02	0.95	0.03	0.00
860	44	1	0.00	0.01	0.97	0.02	0.00
860	45	1	0.00	0.00	0.99	0.01	0.00
860	46	1	0.00	0.00	1.00	0.00	0.00
860	47	1	0.00	0.00	1.00	0.00	0.00
860	48	1	0.00	0.01	0.99	0.00	0.00
860	49	1	0.00	0.01	0.95	0.04	0.00
860	50	1	0.00	0.00	1.00	0.00	0.00
861	41	1	0.00	0.00	0.99	0.01	0.00
861	42	1	0.00	0.01	0.96	0.03	0.00
861	43	1	0.00	0.01	0.97	0.01	0.00
861	44	1	0.00	0.00	0.99	0.01	0.00
861	45	1	0.00	0.03	0.96	0.01	0.00
861	46	1	0.00	0.03	0.92	0.05	0.00
861	47	1	0.00	0.00	1.00	0.00	0.00
861	48	1	0.00	0.04	0.95	0.01	0.00
861	49	1	0.00	0.01	0.94	0.04	0.00
862	41	1	0.00	0.00	1.00	0.00	0.00
862	42	1	0.00	0.00	1.00	0.00	0.00
862	43	1	0.00	0.00	0.99	0.01	0.00
862	44	1	0.00	0.01	0.97	0.02	0.00
862	45	1	0.00	0.00	0.98	0.02	0.00
862	46	1	0.00	0.00	1.00	0.00	0.00
862	47	1	0.00	0.01	0.99	0.00	0.00
862	48	1	0.00	0.02	0.98	0.00	0.00
863	41	1	0.00	0.00	1.00	0.00	0.00

Table 4. Point Differences Between First and Second Reads (continued)

			Difference (First Read Minus Second Read)				
Form	Item	Score Points	-2	-1	0	1	2
863	42	1	0.00	0.02	0.95	0.03	0.00
863	43	1	0.00	0.07	0.87	0.07	0.00
863	44	1	0.00	0.00	1.00	0.00	0.00
863	45	1	0.00	0.03	0.96	0.01	0.00
863	46	1	0.00	0.04	0.92	0.03	0.00
863	47	1	0.00	0.08	0.89	0.03	0.00
863	48	1	0.00	0.01	0.99	0.00	0.00
863	49	1	0.00	0.03	0.95	0.01	0.00
864	41	1	0.00	0.01	0.98	0.01	0.00
864	42	1	0.00	0.00	0.99	0.01	0.00
864	43	1	0.00	0.00	1.00	0.00	0.00
864	44	1	0.00	0.06	0.88	0.06	0.00
864	45	1	0.00	0.04	0.95	0.01	0.00
864	46	1	0.00	0.00	0.98	0.02	0.00
864	47	1	0.00	0.00	1.00	0.00	0.00
864	48	1	0.00	0.10	0.88	0.02	0.00
864	49	1	0.00	0.05	0.92	0.02	0.00
865	41	1	0.00	0.00	1.00	0.00	0.00
865	42	1	0.00	0.01	0.98	0.01	0.00
865	43	2	0.00	0.00	1.00	0.00	0.00
865	44	1	0.00	0.03	0.97	0.00	0.00
865	45	1	0.00	0.00	0.98	0.02	0.00
865	46	2	0.00	0.03	0.92	0.05	0.00

Table 5 contains additional summary information regarding the first and second reads. In the fifth column, the percent of exact matches between the first and second scores is provided. “Adj.” is the percentage of differences with a magnitude of 1. “Total” is the sum of the two prior columns. The two two-point items had totals of 100.0%. All one-point items also had totals of 100%, since the first and second scores for such items will always be exact or adjacent matches.

Table 5. First and Second Read Descriptive Statistics and Agreement

				Agreement (%)			Raw Score Mean		Raw Score Standard Deviation			
Form	Item	Score Points	Total N-Count	Exact	Adj.	Total	First Read	Second Read	First Read	Second Read	Intra-Class Correlation	Wt. Kappa
845	41	1	93	98.9	1.1	100.0	0.5	0.5	0.50	0.50	0.98	0.98
845	42	1	92	96.7	3.3	100.0	0.7	0.6	0.47	0.48	0.93	0.93
845	43	1	93	94.6	5.4	100.0	0.2	0.2	0.43	0.42	0.85	0.85
845	44	1	91	96.7	3.3	100.0	0.8	0.7	0.42	0.44	0.91	0.91
845	45	1	91	96.7	3.3	100.0	0.4	0.4	0.49	0.50	0.93	0.93
845	46	1	87	96.6	3.4	100.0	0.9	0.8	0.36	0.37	0.87	0.87
845	47	1	84	95.2	4.8	100.0	0.7	0.7	0.47	0.45	0.89	0.89
845	48	1	86	97.7	2.3	100.0	0.4	0.4	0.50	0.49	0.95	0.95
845	49	1	81	97.5	2.5	100.0	0.3	0.3	0.47	0.46	0.94	0.94
845	50	1	81	91.4	8.6	100.0	0.3	0.2	0.44	0.43	0.77	0.77
846	41	1	90	94.4	5.6	100.0	0.3	0.3	0.48	0.47	0.88	0.88
846	42	1	92	100.0	0.0	100.0	0.4	0.4	0.50	0.50	1.00	1.00
846	43	1	100	99.0	1.0	100.0	0.6	0.6	0.49	0.49	0.98	0.98
846	44	1	96	95.8	4.2	100.0	0.4	0.4	0.49	0.49	0.91	0.91
846	45	1	99	99.0	1.0	100.0	0.7	0.7	0.46	0.46	0.98	0.98
846	46	1	87	96.6	3.4	100.0	0.8	0.8	0.42	0.40	0.90	0.90
846	47	1	95	93.7	6.3	100.0	0.5	0.5	0.50	0.50	0.88	0.87
846	48	1	89	97.8	2.2	100.0	0.2	0.2	0.41	0.43	0.94	0.94
846	49	1	92	90.2	9.8	100.0	0.4	0.4	0.49	0.49	0.80	0.80
846	50	1	96	97.9	2.1	100.0	0.5	0.5	0.50	0.50	0.96	0.96
847	41	1	91	98.9	1.1	100.0	0.8	0.8	0.42	0.41	0.97	0.97
847	42	1	90	96.7	3.3	100.0	0.7	0.7	0.47	0.48	0.93	0.92
847	43	1	92	94.6	5.4	100.0	0.4	0.5	0.50	0.50	0.89	0.89
847	44	1	91	92.3	7.7	100.0	0.5	0.6	0.50	0.50	0.84	0.84
847	45	1	92	90.2	9.8	100.0	0.4	0.4	0.49	0.49	0.79	0.79
847	46	1	90	95.6	4.4	100.0	0.6	0.6	0.49	0.50	0.91	0.91
847	47	1	83	98.8	1.2	100.0	0.2	0.2	0.39	0.40	0.96	0.96
847	48	1	89	94.4	5.6	100.0	0.5	0.5	0.50	0.50	0.89	0.89
847	49	1	87	92.0	8.0	100.0	0.7	0.7	0.47	0.46	0.81	0.81
848	41	1	92	100.0	0.0	100.0	0.8	0.8	0.38	0.38	1.00	1.00
848	42	1	92	98.9	1.1	100.0	0.3	0.3	0.47	0.47	0.98	0.98
848	43	1	91	100.0	0.0	100.0	0.5	0.5	0.50	0.50	1.00	1.00
848	44	1	92	100.0	0.0	100.0	0.2	0.2	0.43	0.43	1.00	1.00
848	45	1	92	97.8	2.2	100.0	0.6	0.6	0.50	0.50	0.96	0.96
848	46	1	89	85.4	14.6	100.0	0.3	0.3	0.46	0.44	0.64	0.63
848	47	1	91	93.4	6.6	100.0	0.4	0.5	0.50	0.50	0.87	0.87

Table 5. First and Second Read Descriptive Statistics and Agreement (continued)

				Agreement (%)			Raw Score Mean		Raw Score Standard Deviation			
Form	Item	Score Points	Total N-Count	Exact	Adj.	Total	First Read	Second Read	First Read	Second Read	Intra-Class Correlation	Wt. Kappa
848	48	1	86	94.2	5.8	100.0	0.4	0.4	0.49	0.49	0.88	0.88
849	41	1	91	96.7	3.3	100.0	0.5	0.6	0.50	0.50	0.93	0.93
849	42	1	91	97.8	2.2	100.0	0.8	0.8	0.40	0.40	0.93	0.93
849	43	1	90	93.3	6.7	100.0	0.7	0.7	0.47	0.47	0.85	0.85
849	44	1	90	93.3	6.7	100.0	0.5	0.5	0.50	0.50	0.87	0.87
849	45	1	88	95.5	4.5	100.0	0.5	0.5	0.50	0.50	0.91	0.91
849	46	1	90	100.0	0.0	100.0	0.2	0.2	0.41	0.41	1.00	1.00
849	47	1	89	95.5	4.5	100.0	0.7	0.7	0.46	0.47	0.90	0.90
849	48	1	88	90.9	9.1	100.0	0.5	0.5	0.50	0.50	0.82	0.82
850	41	1	88	89.8	10.2	100.0	0.5	0.6	0.50	0.50	0.79	0.79
850	42	1	89	100.0	0.0	100.0	0.3	0.3	0.45	0.45	1.00	1.00
850	43	1	80	97.5	2.5	100.0	0.1	0.2	0.35	0.37	0.91	0.90
850	44	1	82	96.3	3.7	100.0	0.5	0.5	0.50	0.50	0.93	0.93
850	45	1	89	91.0	9.0	100.0	0.8	0.8	0.41	0.43	0.74	0.74
850	46	1	85	100.0	0.0	100.0	0.7	0.7	0.44	0.44	1.00	1.00
850	47	1	86	98.8	1.2	100.0	0.5	0.5	0.50	0.50	0.98	0.98
850	48	1	81	97.5	2.5	100.0	0.5	0.5	0.50	0.50	0.95	0.95
850	49	1	80	98.8	1.2	100.0	0.5	0.5	0.50	0.50	0.98	0.97
850	50	1	80	96.3	3.7	100.0	0.7	0.7	0.48	0.48	0.92	0.92
851	41	1	100	99.0	1.0	100.0	0.4	0.4	0.50	0.49	0.98	0.98
851	42	1	100	99.0	1.0	100.0	0.3	0.3	0.45	0.45	0.98	0.97
851	43	1	98	100.0	0.0	100.0	0.4	0.4	0.50	0.50	1.00	1.00
851	44	1	96	95.8	4.2	100.0	0.5	0.5	0.50	0.50	0.92	0.92
851	45	1	95	95.8	4.2	100.0	0.4	0.4	0.49	0.48	0.91	0.91
851	46	1	103	98.1	1.9	100.0	0.8	0.8	0.42	0.42	0.95	0.95
851	47	1	100	100.0	0.0	100.0	0.6	0.6	0.50	0.50	1.00	1.00
851	48	1	100	100.0	0.0	100.0	0.5	0.5	0.50	0.50	1.00	1.00
851	49	1	99	99.0	1.0	100.0	0.5	0.5	0.50	0.50	0.98	0.98
852	41	1	82	98.8	1.2	100.0	0.6	0.6	0.50	0.50	0.98	0.98
852	42	1	82	98.8	1.2	100.0	0.4	0.4	0.48	0.48	0.97	0.97
852	43	1	80	100.0	0.0	100.0	0.7	0.7	0.46	0.46	1.00	1.00
852	44	1	81	93.8	6.2	100.0	0.3	0.2	0.46	0.43	0.85	0.84
852	45	1	81	98.8	1.2	100.0	0.5	0.5	0.50	0.50	0.98	0.98
852	46	1	75	98.7	1.3	100.0	0.7	0.7	0.46	0.45	0.97	0.97
852	47	1	79	96.2	3.8	100.0	0.4	0.4	0.49	0.50	0.93	0.92
852	48	1	76	97.4	2.6	100.0	0.5	0.5	0.50	0.50	0.95	0.95

Table 5. First and Second Read Descriptive Statistics and Agreement (continued)

				Agreement (%)			Raw Score Mean		Raw Score Standard Deviation			
Form	Item	Score Points	Total N-Count	Exact	Adj.	Total	First Read	Second Read	First Read	Second Read	Intra-Class Correlation	Wt. Kappa
852	49	1	79	98.7	1.3	100.0	0.5	0.5	0.50	0.50	0.98	0.97
853	41	1	90	96.7	3.3	100.0	0.5	0.5	0.50	0.50	0.93	0.93
853	42	1	94	94.7	5.3	100.0	0.4	0.5	0.50	0.50	0.89	0.89
853	43	1	93	100.0	0.0	100.0	0.8	0.8	0.41	0.41	1.00	1.00
853	44	1	94	100.0	0.0	100.0	0.4	0.4	0.50	0.50	1.00	1.00
853	45	1	87	97.7	2.3	100.0	0.5	0.5	0.50	0.50	0.95	0.95
853	46	1	88	98.9	1.1	100.0	0.7	0.7	0.44	0.45	0.97	0.97
853	47	1	92	98.9	1.1	100.0	0.7	0.7	0.48	0.48	0.98	0.98
854	41	1	87	95.4	4.6	100.0	0.4	0.5	0.50	0.50	0.91	0.91
854	42	1	86	100.0	0.0	100.0	0.6	0.6	0.50	0.50	1.00	1.00
854	43	1	87	92.0	8.0	100.0	0.5	0.5	0.50	0.50	0.84	0.84
854	44	1	87	93.1	6.9	100.0	0.4	0.3	0.49	0.47	0.85	0.85
854	45	1	85	100.0	0.0	100.0	0.7	0.7	0.47	0.47	1.00	1.00
854	46	1	82	98.8	1.2	100.0	0.6	0.6	0.50	0.50	0.98	0.97
854	47	1	85	100.0	0.0	100.0	0.6	0.6	0.50	0.50	1.00	1.00
854	48	1	83	98.8	1.2	100.0	0.5	0.5	0.50	0.50	0.98	0.98
854	49	1	81	95.1	4.9	100.0	0.2	0.2	0.41	0.41	0.85	0.85
854	50	1	81	95.1	4.9	100.0	0.6	0.6	0.49	0.49	0.90	0.90
855	41	1	90	98.9	1.1	100.0	0.3	0.3	0.47	0.47	0.97	0.97
855	42	1	91	100.0	0.0	100.0	0.7	0.7	0.44	0.44	1.00	1.00
855	43	1	91	96.7	3.3	100.0	0.6	0.6	0.50	0.50	0.93	0.93
855	44	1	89	96.6	3.4	100.0	0.5	0.5	0.50	0.50	0.93	0.93
855	45	1	88	90.9	9.1	100.0	0.4	0.4	0.49	0.48	0.81	0.81
855	46	1	90	97.8	2.2	100.0	0.3	0.3	0.47	0.47	0.95	0.95
855	47	1	82	98.8	1.2	100.0	0.3	0.3	0.46	0.46	0.97	0.97
855	48	1	85	96.5	3.5	100.0	0.6	0.6	0.48	0.48	0.92	0.92
856	41	1	86	96.5	3.5	100.0	0.3	0.3	0.47	0.47	0.92	0.92
856	42	1	88	100.0	0.0	100.0	0.8	0.8	0.41	0.41	1.00	1.00
856	43	1	85	89.4	10.6	100.0	0.5	0.5	0.50	0.50	0.79	0.79
856	44	1	87	100.0	0.0	100.0	0.6	0.6	0.49	0.49	1.00	1.00
856	45	1	84	97.6	2.4	100.0	0.3	0.3	0.47	0.47	0.95	0.95
856	46	1	87	94.3	5.7	100.0	0.8	0.8	0.42	0.38	0.84	0.82
856	47	1	87	97.7	2.3	100.0	0.7	0.7	0.46	0.45	0.95	0.94
856	48	1	86	90.7	9.3	100.0	0.6	0.6	0.49	0.49	0.80	0.80
856	49	1	85	96.5	3.5	100.0	0.7	0.7	0.45	0.45	0.91	0.91
856	50	1	85	98.8	1.2	100.0	0.4	0.4	0.50	0.50	0.98	0.98

Table 5. First and Second Read Descriptive Statistics and Agreement (continued)

				Agreement (%)			Raw Score Mean		Raw Score Standard Deviation			
Form	Item	Score Points	Total N-Count	Exact	Adj.	Total	First Read	Second Read	First Read	Second Read	Intra-Class Correlation	Wt. Kappa
857	41	1	95	97.9	2.1	100.0	0.8	0.8	0.39	0.39	0.93	0.93
857	42	1	95	93.7	6.3	100.0	0.2	0.2	0.41	0.41	0.81	0.81
857	43	1	96	99.0	1.0	100.0	0.5	0.4	0.50	0.50	0.98	0.98
857	44	1	81	96.3	3.7	100.0	0.4	0.3	0.49	0.48	0.92	0.92
857	45	1	84	96.4	3.6	100.0	0.5	0.5	0.50	0.50	0.93	0.93
857	46	1	83	100.0	0.0	100.0	0.4	0.4	0.50	0.50	1.00	1.00
857	47	1	84	98.8	1.2	100.0	0.2	0.2	0.43	0.42	0.97	0.97
857	48	1	82	95.1	4.9	100.0	0.5	0.5	0.50	0.50	0.91	0.90
858	41	1	86	96.5	3.5	100.0	0.5	0.5	0.50	0.50	0.93	0.93
858	42	1	87	98.9	1.1	100.0	0.6	0.7	0.48	0.48	0.98	0.97
858	43	1	84	100.0	0.0	100.0	0.3	0.3	0.48	0.48	1.00	1.00
858	44	1	86	97.7	2.3	100.0	0.6	0.6	0.50	0.50	0.95	0.95
858	45	1	88	87.5	12.5	100.0	0.7	0.7	0.44	0.46	0.69	0.69
858	46	1	85	100.0	0.0	100.0	0.3	0.3	0.47	0.47	1.00	1.00
858	47	1	87	100.0	0.0	100.0	0.7	0.7	0.47	0.47	1.00	1.00
858	48	1	85	100.0	0.0	100.0	0.4	0.4	0.48	0.48	1.00	1.00
858	49	1	88	100.0	0.0	100.0	0.8	0.8	0.42	0.42	1.00	1.00
859	41	1	90	95.6	4.4	100.0	0.4	0.4	0.48	0.48	0.90	0.90
859	42	1	86	94.2	5.8	100.0	0.1	0.1	0.34	0.29	0.72	0.71
859	43	1	91	91.2	8.8	100.0	0.6	0.6	0.49	0.49	0.82	0.81
859	44	1	88	96.6	3.4	100.0	0.2	0.2	0.43	0.41	0.91	0.90
859	45	1	86	95.3	4.7	100.0	0.9	0.9	0.28	0.24	0.65	0.64
859	46	1	89	95.5	4.5	100.0	0.6	0.6	0.50	0.49	0.91	0.91
859	47	1	87	96.6	3.4	100.0	0.6	0.6	0.49	0.49	0.93	0.93
859	48	1	86	100.0	0.0	100.0	0.8	0.8	0.37	0.37	1.00	1.00
859	49	1	85	80.0	20.0	100.0	0.4	0.4	0.49	0.50	0.59	0.59
859	50	1	85	96.5	3.5	100.0	0.3	0.3	0.46	0.46	0.92	0.92
860	41	1	92	100.0	0.0	100.0	0.1	0.1	0.33	0.33	1.00	1.00
860	42	1	92	97.8	2.2	100.0	0.4	0.4	0.49	0.49	0.95	0.95
860	43	1	93	94.6	5.4	100.0	0.2	0.2	0.41	0.40	0.83	0.83
860	44	1	93	96.8	3.2	100.0	0.8	0.8	0.41	0.41	0.90	0.90
860	45	1	90	98.9	1.1	100.0	0.7	0.7	0.47	0.47	0.98	0.97
860	46	1	85	100.0	0.0	100.0	0.3	0.3	0.47	0.47	1.00	1.00
860	47	1	87	100.0	0.0	100.0	0.6	0.6	0.50	0.50	1.00	1.00
860	48	1	88	98.9	1.1	100.0	0.8	0.8	0.41	0.41	0.97	0.97
860	49	1	78	94.9	5.1	100.0	0.6	0.6	0.48	0.49	0.89	0.89

Table 5. First and Second Read Descriptive Statistics and Agreement (continued)

				Agreement (%)			Raw Score Mean		Raw Score Standard Deviation			
Form	Item	Score Points	Total N-Count	Exact	Adj.	Total	First Read	Second Read	First Read	Second Read	Intra-Class Correlation	Wt. Kappa
860	50	1	77	100.0	0.0	100.0	0.3	0.3	0.47	0.47	1.00	1.00
861	41	1	79	98.7	1.3	100.0	0.4	0.4	0.49	0.49	0.97	0.97
861	42	1	78	96.2	3.8	100.0	0.4	0.4	0.49	0.49	0.92	0.92
861	43	1	79	97.5	2.5	100.0	0.8	0.8	0.37	0.37	0.91	0.91
861	44	1	77	98.7	1.3	100.0	0.6	0.5	0.50	0.50	0.97	0.97
861	45	1	79	96.2	3.8	100.0	0.8	0.8	0.38	0.37	0.87	0.87
861	46	1	74	91.9	8.1	100.0	0.4	0.3	0.48	0.48	0.82	0.82
861	47	1	79	100.0	0.0	100.0	0.7	0.7	0.48	0.48	1.00	1.00
861	48	1	76	94.7	5.3	100.0	0.4	0.4	0.49	0.50	0.89	0.89
861	49	1	72	94.4	5.6	100.0	0.3	0.3	0.45	0.44	0.86	0.86
862	41	1	91	100.0	0.0	100.0	0.3	0.3	0.46	0.46	1.00	1.00
862	42	1	93	100.0	0.0	100.0	0.4	0.4	0.48	0.48	1.00	1.00
862	43	1	93	98.9	1.1	100.0	0.9	0.9	0.31	0.32	0.95	0.95
862	44	1	93	96.8	3.2	100.0	0.8	0.8	0.38	0.39	0.89	0.89
862	45	1	90	97.8	2.2	100.0	0.9	0.9	0.33	0.35	0.91	0.90
862	46	1	86	100.0	0.0	100.0	0.4	0.4	0.50	0.50	1.00	1.00
862	47	1	89	98.9	1.1	100.0	0.2	0.2	0.41	0.42	0.97	0.97
862	48	1	89	97.8	2.2	100.0	0.7	0.7	0.46	0.45	0.95	0.94
863	41	1	94	100.0	0.0	100.0	0.3	0.3	0.47	0.47	1.00	1.00
863	42	1	91	94.5	5.5	100.0	0.3	0.3	0.47	0.46	0.87	0.87
863	43	1	89	86.5	13.5	100.0	0.4	0.4	0.50	0.50	0.73	0.73
863	44	1	93	100.0	0.0	100.0	0.6	0.6	0.48	0.48	1.00	1.00
863	45	1	89	95.5	4.5	100.0	0.5	0.6	0.50	0.50	0.91	0.91
863	46	1	89	92.1	7.9	100.0	0.3	0.3	0.45	0.46	0.81	0.81
863	47	1	91	89.0	11.0	100.0	0.6	0.6	0.50	0.49	0.77	0.77
863	48	1	81	98.8	1.2	100.0	0.4	0.5	0.50	0.50	0.98	0.98
863	49	1	88	95.5	4.5	100.0	0.5	0.6	0.50	0.50	0.91	0.91
864	41	1	91	97.8	2.2	100.0	0.6	0.6	0.49	0.49	0.95	0.95
864	42	1	93	98.9	1.1	100.0	0.8	0.7	0.43	0.44	0.97	0.97
864	43	1	93	100.0	0.0	100.0	0.6	0.6	0.49	0.49	1.00	1.00
864	44	1	84	88.1	11.9	100.0	0.5	0.5	0.50	0.50	0.76	0.76
864	45	1	74	94.6	5.4	100.0	0.2	0.2	0.39	0.41	0.84	0.83
864	46	1	89	97.8	2.2	100.0	0.5	0.5	0.50	0.50	0.96	0.95
864	47	1	90	100.0	0.0	100.0	0.6	0.6	0.48	0.48	1.00	1.00
864	48	1	92	88.0	12.0	100.0	0.4	0.5	0.49	0.50	0.77	0.76
864	49	1	91	92.3	7.7	100.0	0.9	0.9	0.35	0.31	0.66	0.65

Table 5. First and Second Read Descriptive Statistics and Agreement (*continued*)

				Agreement (%)			Raw Score Mean		Raw Score Standard Deviation			
Form	Item	Score Points	Total N-Count	Exact	Adj.	Total	First Read	Second Read	First Read	Second Read	Intra-Class Correlation	Wt. Kappa
865	41	1	96	100.0	0.0	100.0	0.6	0.6	0.49	0.49	1.00	1.00
865	42	1	96	97.9	2.1	100.0	0.7	0.7	0.48	0.48	0.95	0.95
865	43	2	96	100.0	0.0	100.0	1.8	1.8	0.46	0.46	1.00	1.00
865	44	1	95	96.8	3.2	100.0	0.7	0.7	0.47	0.45	0.93	0.92
865	45	1	81	97.5	2.5	100.0	0.8	0.7	0.43	0.45	0.94	0.94
865	46	2	95	91.6	8.4	100.0	1.6	1.6	0.58	0.57	0.87	0.84

*Adj. = Difference of 1

Constructed-Response Item Means and Standard Deviations

The average score for each constructed-response item was computed based on the first and second reads. In addition, the standard deviation of the scores was computed.

Table 5 contains the means and standard deviations for the first and second read scores. The largest difference between the item means for the first and second read scores was 0.1, while there were minimal differences among standard deviation statistics.

Intraclass Correlation

The intraclass correlation was computed for each item. This correlation is an estimate of the reliability of scoring based on an average of the first and second read scores. Correlations greater than 0.60 are considered very strong because they explain more than one-third of the variance in scores. All but one item had intraclass correlations greater than or equal to 0.60 (See Table 5). Consistent with other information provided in the table, these values indicate a very high level of scoring reliability.

Weighted Kappa

Weighted Kappa (Cohen, 1968) was calculated for each item based on the first and second reads. This statistic produces an estimate of the reliability of the score classifications relative to what would be expected to occur by chance.

Weighted Kappa is an estimate of the reliability of the score classifications. That is, the Kappa statistic is a measure of reproducibility for categorical data. Guidelines for the evaluation of this statistic are:

- $k > 0.75$ denotes excellent reproducibility
- $0.4 < k \leq 0.75$ denotes good reproducibility
- $0 < k \leq 0.4$ denotes marginal reproducibility

The results found in Table 5 show a high degree of consistency between the first and second reads. The Weighted Kappa statistics ranged from 0.59 to 1.00, which in all cases indicates good-to-excellent reproducibility.

Based on the scoring reliability analyses, there is strong evidence that the scoring of the constructed-response items was performed in a highly reliable manner.

ITEM RESPONSE THEORY (IRT) STATISTICS

As discussed above, the item mean is a statistic used to evaluate item difficulty. However, many different test forms are used during field testing and different samples of students are responding to these items. The average ability of the different samples of students varies, and a direct comparison of item means across test forms may lead to inaccurate interpretations. Therefore, Item Response Theory (IRT) was also used to evaluate item difficulty.

Specifically, the Rasch Partial Credit Model (PCM) (Masters, 1982) was used. With the use of this model, the difficulty of items and the ability of examinees are placed on the same metric. Thus, the difficulty of an item and the ability of a person can be meaningfully compared across field test forms. Also, the use of this model provides greater flexibility in situations where different samples or test forms are used because the parameters generated are generally not considered to be sample dependent or test dependent. A description of this model, results of item calibration, and item fit evaluation are presented below.

The PCM provides an overall difficulty estimate for each item. Specifically for constructed-response items when there are several points possible, individual estimates of difficulty for each of the possible score points are also calculated (i.e., step values). Each step value represents the difficulty of a student receiving a particular score point, given that he or she has already received the prior score point. For example, if a 3-point item had step values of -1.0 , 1.0 , and 0.0 , one could say that it is relatively easy to obtain a score of 1. However, it is much more difficult to obtain a 2 given the student has the ability to score a 1, because the difference in difficulty between a 1 and a 2 is much greater than the difference between a 0 and a 1. Also, the difference between a 2 and a 3 is not as great as the difference between a 1 and a 2. Thus, with this example, a small step is needed to go from a 0 to a 1, a large step is needed to move from a 1 to a 2, and a moderate step is needed to proceed from a 2 to a 3.

Item Calibration

As discussed above, the use of Rasch item difficulty statistics provides an advantage over the use of classical item means because they can be compared across test forms. Students from different samples responded to the various test forms. Although the samples were selected to be similar with respect to student ability, there are differences. By equating the test forms (See the Equating Procedure section below), the Rasch item difficulties account for those differences, and these statistics can be compared across test forms.

Rasch item difficulty values generally range from -3.00 to $+3.00$. An item with a Rasch difficulty greater than $+2.0$ is considered very difficult and should be examined carefully. If the item is measuring an important concept that students are having difficulty with, then the item can be useful. However, if the item is measuring a trivial concept or is written in a confusing manner, then it might not be appropriate to use on an operational test form. Likewise, any item with a Rasch difficulty less than -2.0 is considered very easy and usually provides little information regarding student achievement. The vast majority of test items should range between -2.0 and $+2.0$. This range represents approximately two standard deviations around the average difficulty of 0. Thus, one would expect that, based on chance, roughly 5% of the items will fall outside of that range and, therefore, these are items that should be closely examined for content.

Item Fit Evaluation

The INFIT statistic is used to determine whether items are functioning in a way that is congruent with the assumptions of the Rasch model. Under these assumptions, how a student will respond to an item depends on the proficiency of the student and the difficulty of the item, both of which are on the same measurement scale. If an item is as difficult as a student is able, the student will have a 50% chance of getting the item correct. If a student is more able than an item is difficult, under the assumptions of the Rasch model, that student has a greater than 50% chance of correctly answering the item. On the other hand, if the item is more difficult than the student is able, he or she has a less than 50% chance of correctly responding to the item. Rasch fit statistics estimate the extent to which an item is functioning in this predicted manner. Items showing a poor fit with the Rasch model typically have values outside the range of 0.7 to 1.3.

Table 6 contains a summary of the Partial Credit Model item analysis for each of the field test forms. The first column lists the form numbers. The next two columns list the number of students who participated and the number of items on each field test form, respectively. The remaining columns are divided into two sections. The first section pertains to the Rasch item difficulties, while the second pertains to the INFIT statistics. Most of the items fell within the moderate -2.0 to $+2.0$ difficulty range, and only four items had an INFIT statistic outside the typical range.

Table 6. Partial Credit Model Item Analysis

Form	N-Count	No. of Items	Rasch			INFIT		
			<-2.0	-2.0 to 2.0	>2.0	<-0.70	-0.70 to 1.30	>1.30
845	1,009	21	0	18	3	0	21	0
846	1,000	21	0	18	3	0	21	0
847	992	21	0	20	1	0	21	0
848	1,009	21	0	19	2	0	21	0
849	1,001	21	0	20	1	0	21	0
850	996	21	0	19	2	0	21	0
851	1,008	21	0	21	0	0	21	0
852	1,003	21	0	21	0	0	21	0
853	1,005	21	0	21	0	0	21	0
854	997	21	0	20	1	0	21	0
855	980	21	0	20	1	0	21	0
856	910	21	0	21	0	0	21	0
857	982	21	0	19	2	0	21	0
858	999	21	0	20	1	0	21	0
859	984	21	0	19	2	0	20	1
860	997	21	0	17	4	0	21	0
861	1,005	21	0	19	2	0	21	0
862	1,001	21	0	21	0	0	19	2
863	994	21	0	19	2	0	20	1
864	984	21	0	20	1	0	21	0
865	981	20	0	20	0	0	20	0

All of the individual IRT item statistics are provided in Appendix B. The column entitled RID contains the Rasch item difficulty statistics. S1–S6 contain the step values for the constructed-response items. Finally, INFIT contains the INFIT statistic for each item.

DIFFERENTIAL ITEM FUNCTIONING (DIF) STATISTICS

Statistical procedures are employed to observe whether, on the basis of data, there exists the possibility of unfair treatment of different populations. DIF statistics are used to identify items for which members of a focal group have a different probability of getting the items correct than members of a reference group after the groups have been matched on ability level on the test.

For the multiple-choice items, the Mantel-Haenszel Delta (MHD) DIF statistics were computed (Dorans & Holland, 1992) to classify test items in three levels of DIF for each comparison: negligible DIF (A), moderate DIF (B), and large DIF (C). An item was flagged if it exhibited a B or C category of DIF, using the following rules derived from National Assessment of Educational Progress (NAEP) guidelines (Allen, Carlson, & Zalanak, 1999):

- MHD not significantly different from 0 (based on $\alpha = 0.05$) or $|MHD| < 1.0$ are classified as A.
- MHD significantly different from 0 and $\{|MHD| \geq 1.0 \text{ and } < 1.5\}$ or MHD not significantly different from 0 and $|MHD| \geq 1.0$ are classified as B.
- $|MHD| \geq 1.5$ and significantly different from 0 are classified as C.

For the constructed-response items, the effect size of the standardized mean difference (SMD) was used to flag DIF. The SMD reflects the size of the differences in performance on constructed-response items between student groups matched on the total score. It is the difference between the unweighted item mean of the focal group and the weighted item mean of the reference group. The weights applied to the reference group are applied so that the weighted number of reference group students is the same as in the focal group (within the same ability group). The SMD is divided by the total group item standard deviation to get a measure of the effect size (ES) for the SMD. The SMD effect size groups each item into one of three categories: negligible DIF (AA), moderate DIF (BB), and large DIF (CC). Only categories BB and CC were flagged in the results.

- Probability is > 0.05 or if $|ES| \leq 0.17$, classified as AA.
- Probability is > 0.05 and if $0.17 < |ES| \leq 0.25$, classified as BB.
- Probability is > 0.05 and if $|ES| > 0.25$, classified as CC.

Although DIF statistics are typically conducted by gender and ethnicity, the low N-counts for ethnic subgroups did not allow for these statistics to be meaningful. The N-counts for gender allowed for comparisons to be made, but were still somewhat low, so resulting statistics should be interpreted with caution.

The DIF statistics for gender are shown in Appendix C. Flagging of items appears in the “DIF Category” column and if an item is flagged, the “Favored Group” column indicates which gender is favored.

Section III: Equating Procedure

The 2012 field test administration for the New York State Regents Examination in Earth Science consisted of 20 field test forms numbered 845–864 and one anchor form labeled 865. The field test forms contained multiple-choice and constructed-response items. Each student participating in the field test was administered one of the 21 test forms. The test forms were spiraled within the classroom so that the groups of students taking each form were equivalent. A complete listing of these field test forms can be seen in Appendix A, where item type (e.g., multiple-choice, constructed-response) and the maximum points for each item are displayed.

The anchor form was equated to the item bank using a common-item equating design. The anchor item difficulty parameters were fixed to their 2011 item bank values. This places the item difficulty estimates and the ability estimates of the students taking the anchor form onto the item bank scale. After the anchor form was placed onto the bank scale, the mean ability estimate for the form was computed using ability estimates of nonextreme students. This ability estimate was used to equate the remaining field test forms, as well as to update the item parameters for the anchor form.

As a part of the anchor item equating, an item-stability check was performed. After fixing all of the items to their 2011 bank values, any item with a displacement value with a magnitude greater than 0.30 was no longer fixed, and the test form was reanalyzed. If more than one item had a displacement value with a magnitude greater than 0.30, then the item with the largest displacement was freed, and the test form was reanalyzed. In a stepwise fashion, this procedure was repeated until all remaining fixed anchor items had displacements with magnitudes less than or equal to 0.30.

Applying the anchor item-stability check to the anchor form resulted in two items having a displacement value with a magnitude greater than 0.30. This indicates a strong level of stability in the items used on the anchor form.

The equated mean ability estimate for form 865 was 0.61. This value served as the target mean ability estimate for the equating process.

After the anchor form was equated, the field test forms were equated using the equivalent groups design. The first step was to calibrate each form separately, where all the item parameters were free to estimate (without constraint). From those initial calibrations, the mean ability estimates for each field test form were obtained. The second step was to determine the equating constant for each form by subtracting the mean ability for a given field test form from the target mean ability calculated from the anchor form (i.e., form 865). The respective equating constant was then added to each of the item parameters on a given form. If the resulting mean of the ability estimates for those students did not equal that of the target mean, then the procedure was repeated

until the mean abilities for each of the field test forms equaled the target mean ability. Table 7 shows the mean abilities and constants used for the equating.

Table 7. Initial Mean Abilities and Equating Constants

Form Number	Mean Ability	Constant
845	0.10	0.49
846	-0.29	0.86
847	-0.13	0.71
848	-0.12	0.70
849	-0.02	0.60
850	0.09	0.50
851	0.02	0.57
852	0.04	0.54
853	0.31	0.29
854	0.03	0.56
855	0.22	0.37
856	0.17	0.43
857	0.05	0.54
858	0.09	0.50
859	-0.06	0.64
860	-0.05	0.63
861	-0.17	0.75
862	0.35	0.26
863	-0.32	0.89
864	0.22	0.38

The equated item parameters for the field test items can now be compared across test forms, since the equating process places all items on the same scale. In addition, when items are combined to form unique operational test forms, raw score-to-scale score tables can be generated based on these parameters. The following section contains a description of the development of the operational test forms and scoring tables.

Section IV: Scaling of Operational Test Forms

Operational test items are selected based on content coverage, content accuracy, and statistical quality. The sets of items on each operational test conform to the coverage suggested by content experts. These expert judgments are based on the learning standards established by the New York State Education Department. With respect to statistical quality, classical and Rasch statistics are examined to determine how well items function. Also, items are selected such that they range in difficulty in order to measure students across ability levels. Appendix D contains the 2012 operational test maps with content information regarding each item included on the January 2012, June 2012, and August 2012 operational test forms.

In order to limit wide fluctuations of raw scores that correspond to scale scores of 65 and 85 across administrations, the average Rasch item difficulty for the operational test is considered. For this examination, an average Rasch difficulty of approximately 0.453 is used as a target for each administration. In most cases, meeting this target will provide raw scores of similar magnitude to other forms. However, differences with these scores also occur due to the distribution of the Rasch item difficulty parameters.

Scoring tables display the relationship between raw scores on the operational test and assigned scale scores. Appendix E contains the scoring tables used for the January 2012, June 2012, and August 2012 operational test forms. Four steps are taken in order to produce these tables and resulting conversion charts.

The first step is to develop a raw score (i.e., number of points on the test form) to theta (i.e., student ability) to scale score relationship for the baseline operational test form. This relationship is determined when standards are set and then used for every administration moving forward until the standards are revisited. The baseline target was determined by the New York State Education Department to be June 2004. The raw score-to-theta relationship from that examination was used, and then scale scores are calculated based on the raw score cuts according to the following formula:

$$p(x) = m_3x^3 + m_2x^2 + m_1x + m_0$$

The raw score of zero was assigned a scale score of zero, and the maximum raw score was assigned a scale score of 100. The raw scores corresponding to the scale scores of 65 and 85 were also fixed. The polynomial relationship shown above was then used to assign all scale scores to the remaining raw scores. The resulting values for m_1 – m_3 are the transformation constants used to produce the final raw score-to-scale score table.

The second step is to develop a raw score-to-theta relationship for the new operational test form, using the field test equated PCM item parameters. This is accomplished by doing a calibration where all items are anchored to their field test

parameters. The number of points on the test form (i.e., raw score) expected across student ability levels is based on the difficulty of the items on the form. Thus, given a particular student ability level (i.e., theta), if the points are more difficult to earn on the new test than the points on the June 2004 test, the number of points expected of this student on the new test will be less than the number of points expected of this student on the baseline form.

The third step is to use linear interpolation to determine the raw score-to-theta-to-scale score relationship for the new test. The theta values associated with scale scores of 65 and 85 on the baseline form are used along with the raw score-to-theta relationship developed in the previous step. In other words, the baseline 65 and 85 theta values are used as reference points, and linear interpolation assigns the other scale scores.

Finally, a raw score to scale score table is created based on the scoring table generated in the third step. Scale scores are rounded to the nearest whole number in all cases except for 0, 65, 85, and 100. A raw score of zero is assigned a scale score of zero. The maximum raw score is assigned a scale score of 100. With respect to 65 and 85 scale scores, the raw scores with scale scores of 65 or 85, after rounding, are assigned those values. A separate raw score to scale score relationship exists for both the written and performance components of the test.

After the student has completed both the performance and written components of the assessment, he/she will have two scale scores, one for the written component and the other for the performance component. These scores are combined according to the following equation:

$$SS_{Total} = 0.15(SS_{Performance}) + 0.85(SS_{Written})$$

Where SS_{Total} is the total scale score, $SS_{Performance}$ is the scale score for the performance component, and $SS_{Written}$ is the scale score for the written component. SS_{Total} is rounded to the nearest integer and is assigned as the student's total score.

References

- Allen, N. L., Carlson, J. E., & Zalanak, C. A. (1999). *The NAEP 1996 technical report*. Washington, DC: National Center for Education Statistics.
- Cohen, J. (1968). Weighted kappa: Nominal scale agreement with provision for scaled disagreement or partial credit. *Psychological Bulletin, 70*, 213–220.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16*(3), 297–334.
- Dorans, N. J., & Holland, P. W. (1992). DIF detection and description: Mantel-Haenszel and standardization. In P. W. Holland & H. Wainer (Eds.) *Differential item functioning: Theory and practice* (35–66). Hillsdale, NJ: Erlbaum.
- Kuder, G. F., & Richardson, M. W. (1937) The theory of the estimation of test reliability. *Psychometrika, 2*, 151–160.
- Masters, G. N. (1982). A Rasch model for partial credit scoring. *Psychometrika, 47*, 149–174.

Appendix A: Classical Item Analysis

Test	Form	Type	Item	Max	N-Count	Alpha	B	M0	M1	M2	M3	M4	M5	M6	Mean	Point-Biserial
2012_ESci_FT	845	MC	01	1	1,009	0.80	0.02	n/a	0.18	0.50	0.18	0.11			0.50	0.48
2012_ESci_FT	845	MC	02	1	1,009	0.80	0.00	n/a	0.03	0.54	0.10	0.32			0.54	0.36
2012_ESci_FT	845	MC	03	1	1,009	0.80	0.00	n/a	0.54	0.14	0.09	0.23			0.54	0.34
2012_ESci_FT	845	MC	04	1	1,009	0.80	0.00	n/a	0.21	0.47	0.14	0.17			0.47	0.39
2012_ESci_FT	845	MC	05	1	1,009	0.80	0.01	n/a	0.55	0.08	0.26	0.10			0.55	0.47
2012_ESci_FT	845	MC	06	1	1,009	0.80	0.00	n/a	0.07	0.10	0.18	0.65			0.65	0.35
2012_ESci_FT	845	MC	07	1	1,009	0.80	0.01	n/a	0.14	0.03	0.50	0.31			0.50	0.43
2012_ESci_FT	845	MC	08	1	1,009	0.80	0.01	n/a	0.89	0.04	0.02	0.05			0.89	0.44
2012_ESci_FT	845	MC	09	1	1,009	0.80	0.01	n/a	0.04	0.07	0.18	0.70			0.70	0.45
2012_ESci_FT	845	MC	10	1	1,009	0.80	0.01	n/a	0.78	0.11	0.05	0.05			0.78	0.41
2012_ESci_FT	845	MC	11	1	1,009	0.80	0.02	n/a	0.11	0.12	0.57	0.19			0.57	0.28
2012_ESci_FT	845	CR	41	1	1,009	0.80	0.10	0.48	0.43						0.43	0.48
2012_ESci_FT	845	CR	42	1	1,009	0.80	0.13	0.25	0.62						0.62	0.60
2012_ESci_FT	845	CR	43	1	1,009	0.80	0.22	0.59	0.19						0.19	0.33
2012_ESci_FT	845	CR	44	1	1,009	0.80	0.18	0.19	0.63						0.63	0.62
2012_ESci_FT	845	CR	45	1	1,009	0.80	0.14	0.53	0.32						0.32	0.53
2012_ESci_FT	845	CR	46	1	1,009	0.80	0.13	0.16	0.71						0.71	0.55
2012_ESci_FT	845	CR	47	1	1,009	0.80	0.19	0.27	0.54						0.54	0.56
2012_ESci_FT	845	CR	48	1	1,009	0.80	0.19	0.47	0.33						0.33	0.55
2012_ESci_FT	845	CR	49	1	1,009	0.80	0.23	0.58	0.19						0.19	0.43
2012_ESci_FT	845	CR	50	1	1,009	0.80	0.23	0.53	0.24						0.24	0.47
2012_ESci_FT	846	MC	01	1	1,000	0.79	0.01	n/a	0.12	0.10	0.68	0.09			0.68	0.37
2012_ESci_FT	846	MC	02	1	1,000	0.79	0.02	n/a	0.18	0.17	0.17	0.46			0.46	0.38
2012_ESci_FT	846	MC	03	1	1,000	0.79	0.01	n/a	0.22	0.09	0.18	0.50			0.50	0.42

Test	Form	Type	Item	Max	N-Count	Alpha	B	M0	M1	M2	M3	M4	M5	M6	Mean	Point-Biserial
2012_ESci_FT	846	MC	04	1	1,000	0.79	0.01	n/a	0.59	0.32	0.06	0.03			0.59	0.49
2012_ESci_FT	846	MC	05	1	1,000	0.79	0.01	n/a	0.20	0.15	0.55	0.09			0.55	0.32
2012_ESci_FT	846	MC	06	1	1,000	0.79	0.01	n/a	0.19	0.18	0.39	0.23			0.39	0.32
2012_ESci_FT	846	MC	07	1	1,000	0.79	0.01	n/a	0.47	0.14	0.12	0.25			0.47	0.26
2012_ESci_FT	846	MC	08	1	1,000	0.79	0.02	n/a	0.07	0.11	0.32	0.48			0.48	0.45
2012_ESci_FT	846	MC	09	1	1,000	0.79	0.02	n/a	0.07	0.05	0.47	0.39			0.39	0.29
2012_ESci_FT	846	MC	10	1	1,000	0.79	0.02	n/a	0.08	0.73	0.10	0.06			0.73	0.39
2012_ESci_FT	846	MC	11	1	1,000	0.79	0.04	n/a	0.54	0.27	0.11	0.04			0.54	0.47
2012_ESci_FT	846	CR	41	1	1,000	0.79	0.24	0.55	0.21						0.21	0.45
2012_ESci_FT	846	CR	42	1	1,000	0.79	0.26	0.46	0.28						0.28	0.49
2012_ESci_FT	846	CR	43	1	1,000	0.79	0.17	0.30	0.54						0.54	0.60
2012_ESci_FT	846	CR	44	1	1,000	0.79	0.16	0.50	0.34						0.34	0.49
2012_ESci_FT	846	CR	45	1	1,000	0.79	0.16	0.26	0.58						0.58	0.56
2012_ESci_FT	846	CR	46	1	1,000	0.79	0.27	0.16	0.57						0.57	0.48
2012_ESci_FT	846	CR	47	1	1,000	0.79	0.27	0.38	0.35						0.35	0.58
2012_ESci_FT	846	CR	48	1	1,000	0.79	0.30	0.54	0.16						0.16	0.46
2012_ESci_FT	846	CR	49	1	1,000	0.79	0.30	0.47	0.23						0.23	0.45
2012_ESci_FT	846	CR	50	1	1,000	0.79	0.28	0.38	0.34						0.34	0.58
2012_ESci_FT	847	MC	01	1	992	0.80	0.01	n/a	0.20	0.56	0.17	0.07			0.56	0.38
2012_ESci_FT	847	MC	02	1	992	0.80	0.00	n/a	0.09	0.16	0.49	0.26			0.26	0.37
2012_ESci_FT	847	MC	03	1	992	0.80	0.00	n/a	0.20	0.70	0.04	0.05			0.70	0.43
2012_ESci_FT	847	MC	04	1	992	0.80	0.01	n/a	0.22	0.49	0.13	0.15			0.49	0.33
2012_ESci_FT	847	MC	05	1	992	0.80	0.01	n/a	0.38	0.33	0.11	0.17			0.38	0.31
2012_ESci_FT	847	MC	06	1	992	0.80	0.01	n/a	0.28	0.18	0.13	0.40			0.40	0.27

Test	Form	Type	Item	Max	N-Count	Alpha	B	M0	M1	M2	M3	M4	M5	M6	Mean	Point-Biserial
2012_ESci_FT	847	MC	07	1	992	0.80	0.01	n/a	0.15	0.18	0.16	0.50			0.50	0.40
2012_ESci_FT	847	MC	08	1	992	0.80	0.01	n/a	0.08	0.12	0.73	0.06			0.73	0.36
2012_ESci_FT	847	MC	09	1	992	0.80	0.02	n/a	0.08	0.07	0.15	0.67			0.67	0.51
2012_ESci_FT	847	MC	10	1	992	0.80	0.01	n/a	0.68	0.08	0.08	0.14			0.68	0.54
2012_ESci_FT	847	MC	11	1	992	0.80	0.02	n/a	0.43	0.08	0.03	0.44			0.43	0.46
2012_ESci_FT	847	MC	12	1	992	0.80	0.05	n/a	0.29	0.16	0.31	0.19			0.31	0.37
2012_ESci_FT	847	CR	41	1	992	0.80	0.11	0.22	0.67						0.67	0.57
2012_ESci_FT	847	CR	42	1	992	0.80	0.15	0.23	0.62						0.62	0.58
2012_ESci_FT	847	CR	43	1	992	0.80	0.11	0.45	0.44						0.44	0.39
2012_ESci_FT	847	CR	44	1	992	0.80	0.17	0.45	0.37						0.37	0.49
2012_ESci_FT	847	CR	45	1	992	0.80	0.16	0.52	0.32						0.32	0.45
2012_ESci_FT	847	CR	46	1	992	0.80	0.20	0.38	0.42						0.42	0.62
2012_ESci_FT	847	CR	47	1	992	0.80	0.27	0.56	0.17						0.17	0.41
2012_ESci_FT	847	CR	48	1	992	0.80	0.24	0.41	0.34						0.34	0.54
2012_ESci_FT	847	CR	49	1	992	0.80	0.25	0.20	0.55						0.55	0.60
2012_ESci_FT	848	MC	01	1	1,009	0.77	0.01	n/a	0.13	0.20	0.22	0.44			0.44	0.37
2012_ESci_FT	848	MC	02	1	1,009	0.77	0.01	n/a	0.14	0.61	0.20	0.04			0.61	0.41
2012_ESci_FT	848	MC	03	1	1,009	0.77	0.01	n/a	0.20	0.33	0.12	0.34			0.34	0.44
2012_ESci_FT	848	MC	04	1	1,009	0.77	0.01	n/a	0.49	0.25	0.14	0.11			0.49	0.45
2012_ESci_FT	848	MC	05	1	1,009	0.77	0.00	n/a	0.72	0.12	0.11	0.05			0.72	0.39
2012_ESci_FT	848	MC	06	1	1,009	0.77	0.00	n/a	0.06	0.63	0.15	0.15			0.63	0.45
2012_ESci_FT	848	MC	07	1	1,009	0.77	0.00	n/a	0.12	0.05	0.11	0.71			0.71	0.25
2012_ESci_FT	848	MC	08	1	1,009	0.77	0.00	n/a	0.17	0.07	0.68	0.09			0.68	0.49
2012_ESci_FT	848	MC	09	1	1,009	0.77	0.01	n/a	0.05	0.10	0.57	0.27			0.57	0.37

Test	Form	Type	Item	Max	N-Count	Alpha	B	M0	M1	M2	M3	M4	M5	M6	Mean	Point-Biserial
2012_ESci_FT	848	MC	10	1	1,009	0.77	0.01	n/a	0.13	0.74	0.06	0.06			0.74	0.51
2012_ESci_FT	848	MC	11	1	1,009	0.77	0.02	n/a	0.36	0.30	0.21	0.12			0.36	0.21
2012_ESci_FT	848	MC	12	1	1,009	0.77	0.02	n/a	0.14	0.09	0.26	0.48			0.48	0.46
2012_ESci_FT	848	MC	13	1	1,009	0.77	0.04	n/a	0.47	0.25	0.09	0.15			0.47	0.36
2012_ESci_FT	848	CR	41	1	1,009	0.77	0.09	0.24	0.67						0.67	0.49
2012_ESci_FT	848	CR	42	1	1,009	0.77	0.12	0.63	0.24						0.24	0.51
2012_ESci_FT	848	CR	43	1	1,009	0.77	0.15	0.42	0.44						0.44	0.55
2012_ESci_FT	848	CR	44	1	1,009	0.77	0.12	0.68	0.20						0.20	0.40
2012_ESci_FT	848	CR	45	1	1,009	0.77	0.15	0.38	0.47						0.47	0.32
2012_ESci_FT	848	CR	46	1	1,009	0.77	0.23	0.55	0.22						0.22	0.40
2012_ESci_FT	848	CR	47	1	1,009	0.77	0.18	0.51	0.32						0.32	0.50
2012_ESci_FT	848	CR	48	1	1,009	0.77	0.28	0.44	0.28						0.28	0.55
2012_ESci_FT	849	MC	01	1	1,001	0.79	0.00	n/a	0.11	0.46	0.31	0.11			0.46	0.46
2012_ESci_FT	849	MC	02	1	1,001	0.79	0.00	n/a	0.06	0.71	0.15	0.08			0.71	0.20
2012_ESci_FT	849	MC	03	1	1,001	0.79	0.01	n/a	0.45	0.09	0.09	0.37			0.37	0.41
2012_ESci_FT	849	MC	04	1	1,001	0.79	0.01	n/a	0.07	0.40	0.38	0.13			0.40	0.30
2012_ESci_FT	849	MC	05	1	1,001	0.79	0.00	n/a	0.42	0.06	0.12	0.40			0.40	0.40
2012_ESci_FT	849	MC	06	1	1,001	0.79	0.01	n/a	0.21	0.45	0.17	0.16			0.45	0.33
2012_ESci_FT	849	MC	07	1	1,001	0.79	0.01	n/a	0.17	0.53	0.10	0.19			0.53	0.41
2012_ESci_FT	849	MC	08	1	1,001	0.79	0.01	n/a	0.05	0.06	0.08	0.79			0.79	0.48
2012_ESci_FT	849	MC	09	1	1,001	0.79	0.01	n/a	0.14	0.43	0.25	0.17			0.43	0.41
2012_ESci_FT	849	MC	10	1	1,001	0.79	0.01	n/a	0.05	0.70	0.12	0.12			0.70	0.48
2012_ESci_FT	849	MC	11	1	1,001	0.79	0.01	n/a	0.07	0.26	0.17	0.49			0.49	0.46
2012_ESci_FT	849	MC	12	1	1,001	0.79	0.02	n/a	0.10	0.06	0.73	0.10			0.73	0.32

Test	Form	Type	Item	Max	N-Count	Alpha	B	M0	M1	M2	M3	M4	M5	M6	Mean	Point-Biserial
2012_ESci_FT	849	MC	13	1	1,001	0.79	0.04	n/a	0.17	0.20	0.48	0.11			0.48	0.36
2012_ESci_FT	849	CR	41	1	1,001	0.79	0.10	0.44	0.46						0.46	0.46
2012_ESci_FT	849	CR	42	1	1,001	0.79	0.13	0.22	0.64						0.64	0.51
2012_ESci_FT	849	CR	43	1	1,001	0.79	0.17	0.26	0.57						0.57	0.54
2012_ESci_FT	849	CR	44	1	1,001	0.79	0.18	0.43	0.38						0.38	0.52
2012_ESci_FT	849	CR	45	1	1,001	0.79	0.23	0.40	0.37						0.37	0.52
2012_ESci_FT	849	CR	46	1	1,001	0.79	0.23	0.60	0.17						0.17	0.46
2012_ESci_FT	849	CR	47	1	1,001	0.79	0.24	0.25	0.51						0.51	0.54
2012_ESci_FT	849	CR	48	1	1,001	0.79	0.27	0.32	0.41						0.41	0.56
2012_ESci_FT	850	MC	01	1	996	0.83	0.00	n/a	0.80	0.10	0.06	0.04			0.80	0.45
2012_ESci_FT	850	MC	02	1	996	0.83	0.01	n/a	0.06	0.10	0.20	0.63			0.63	0.43
2012_ESci_FT	850	MC	03	1	996	0.83	0.01	n/a	0.11	0.13	0.68	0.08			0.68	0.49
2012_ESci_FT	850	MC	04	1	996	0.83	0.01	n/a	0.15	0.12	0.10	0.62			0.62	0.52
2012_ESci_FT	850	MC	05	1	996	0.83	0.01	n/a	0.24	0.17	0.51	0.07			0.51	0.45
2012_ESci_FT	850	MC	06	1	996	0.83	0.01	n/a	0.45	0.18	0.26	0.10			0.45	0.33
2012_ESci_FT	850	MC	07	1	996	0.83	0.01	n/a	0.03	0.82	0.09	0.05			0.82	0.48
2012_ESci_FT	850	MC	08	1	996	0.83	0.01	n/a	0.31	0.09	0.53	0.05			0.53	0.50
2012_ESci_FT	850	MC	09	1	996	0.83	0.01	n/a	0.05	0.06	0.62	0.26			0.62	0.47
2012_ESci_FT	850	MC	10	1	996	0.83	0.01	n/a	0.76	0.10	0.08	0.04			0.76	0.49
2012_ESci_FT	850	MC	11	1	996	0.83	0.03	n/a	0.13	0.55	0.24	0.05			0.55	0.44
2012_ESci_FT	850	CR	41	1	996	0.83	0.07	0.47	0.46						0.46	0.40
2012_ESci_FT	850	CR	42	1	996	0.83	0.13	0.65	0.23						0.23	0.46
2012_ESci_FT	850	CR	43	1	996	0.83	0.22	0.67	0.11						0.11	0.35
2012_ESci_FT	850	CR	44	1	996	0.83	0.19	0.45	0.36						0.36	0.49

Test	Form	Type	Item	Max	N-Count	Alpha	B	M0	M1	M2	M3	M4	M5	M6	Mean	Point-Biserial
2012_ESci_FT	850	CR	45	1	996	0.83	0.11	0.18	0.71						0.71	0.42
2012_ESci_FT	850	CR	46	1	996	0.83	0.16	0.31	0.52						0.52	0.60
2012_ESci_FT	850	CR	47	1	996	0.83	0.16	0.37	0.47						0.47	0.48
2012_ESci_FT	850	CR	48	1	996	0.83	0.26	0.42	0.33						0.33	0.58
2012_ESci_FT	850	CR	49	1	996	0.83	0.22	0.47	0.31						0.31	0.56
2012_ESci_FT	850	CR	50	1	996	0.83	0.26	0.26	0.47						0.47	0.56
2012_ESci_FT	851	MC	01	1	1,008	0.82	0.00	n/a	0.13	0.34	0.11	0.42			0.42	0.46
2012_ESci_FT	851	MC	02	1	1,008	0.82	0.00	n/a	0.65	0.12	0.15	0.08			0.65	0.42
2012_ESci_FT	851	MC	03	1	1,008	0.82	0.00	n/a	0.02	0.52	0.05	0.41			0.52	0.52
2012_ESci_FT	851	MC	04	1	1,008	0.82	0.01	n/a	0.25	0.17	0.47	0.11			0.47	0.46
2012_ESci_FT	851	MC	05	1	1,008	0.82	0.00	n/a	0.03	0.05	0.09	0.83			0.83	0.44
2012_ESci_FT	851	MC	06	1	1,008	0.82	0.01	n/a	0.67	0.12	0.15	0.05			0.67	0.47
2012_ESci_FT	851	MC	07	1	1,008	0.82	0.01	n/a	0.07	0.20	0.12	0.60			0.60	0.40
2012_ESci_FT	851	MC	08	1	1,008	0.82	0.02	n/a	0.08	0.24	0.26	0.41			0.41	0.38
2012_ESci_FT	851	MC	09	1	1,008	0.82	0.01	n/a	0.27	0.62	0.06	0.03			0.62	0.49
2012_ESci_FT	851	MC	10	1	1,008	0.82	0.02	n/a	0.13	0.22	0.48	0.16			0.48	0.34
2012_ESci_FT	851	MC	11	1	1,008	0.82	0.02	n/a	0.72	0.12	0.04	0.10			0.72	0.39
2012_ESci_FT	851	MC	12	1	1,008	0.82	0.03	n/a	0.25	0.26	0.14	0.31			0.31	0.46
2012_ESci_FT	851	CR	41	1	1,008	0.82	0.04	0.58	0.38						0.38	0.58
2012_ESci_FT	851	CR	42	1	1,008	0.82	0.06	0.66	0.29						0.29	0.28
2012_ESci_FT	851	CR	43	1	1,008	0.82	0.06	0.52	0.42						0.42	0.47
2012_ESci_FT	851	CR	44	1	1,008	0.82	0.12	0.39	0.49						0.49	0.58
2012_ESci_FT	851	CR	45	1	1,008	0.82	0.13	0.56	0.31						0.31	0.56
2012_ESci_FT	851	CR	46	1	1,008	0.82	0.16	0.16	0.68						0.68	0.55

Test	Form	Type	Item	Max	N-Count	Alpha	B	M0	M1	M2	M3	M4	M5	M6	Mean	Point-Biserial
2012_ESci_FT	851	CR	47	1	1,008	0.82	0.19	0.35	0.46						0.46	0.57
2012_ESci_FT	851	CR	48	1	1,008	0.82	0.20	0.43	0.38						0.38	0.53
2012_ESci_FT	851	CR	49	1	1,008	0.82	0.21	0.34	0.45						0.45	0.50
2012_ESci_FT	852	MC	01	1	1,003	0.81	0.00	n/a	0.60	0.35	0.04	0.02			0.60	0.23
2012_ESci_FT	852	MC	02	1	1,003	0.81	0.00	n/a	0.05	0.23	0.69	0.03			0.69	0.38
2012_ESci_FT	852	MC	03	1	1,003	0.81	0.00	n/a	0.05	0.10	0.40	0.45			0.45	0.42
2012_ESci_FT	852	MC	04	1	1,003	0.81	0.00	n/a	0.08	0.81	0.04	0.07			0.81	0.48
2012_ESci_FT	852	MC	05	1	1,003	0.81	0.00	n/a	0.51	0.28	0.12	0.09			0.51	0.49
2012_ESci_FT	852	MC	06	1	1,003	0.81	0.01	n/a	0.06	0.73	0.09	0.12			0.73	0.42
2012_ESci_FT	852	MC	07	1	1,003	0.81	0.01	n/a	0.42	0.05	0.11	0.41			0.42	0.40
2012_ESci_FT	852	MC	08	1	1,003	0.81	0.01	n/a	0.15	0.53	0.14	0.17			0.53	0.44
2012_ESci_FT	852	MC	09	1	1,003	0.81	0.01	n/a	0.11	0.10	0.18	0.61			0.61	0.46
2012_ESci_FT	852	MC	10	1	1,003	0.81	0.02	n/a	0.14	0.20	0.18	0.47			0.47	0.40
2012_ESci_FT	852	MC	11	1	1,003	0.81	0.03	n/a	0.27	0.43	0.17	0.10			0.43	0.31
2012_ESci_FT	852	MC	12	1	1,003	0.81	0.03	n/a	0.20	0.13	0.55	0.10			0.55	0.36
2012_ESci_FT	852	CR	41	1	1,003	0.81	0.13	0.35	0.52						0.52	0.57
2012_ESci_FT	852	CR	42	1	1,003	0.81	0.12	0.54	0.34						0.34	0.35
2012_ESci_FT	852	CR	43	1	1,003	0.81	0.13	0.27	0.60						0.60	0.60
2012_ESci_FT	852	CR	44	1	1,003	0.81	0.17	0.58	0.25						0.25	0.42
2012_ESci_FT	852	CR	45	1	1,003	0.81	0.15	0.41	0.44						0.44	0.56
2012_ESci_FT	852	CR	46	1	1,003	0.81	0.18	0.24	0.58						0.58	0.61
2012_ESci_FT	852	CR	47	1	1,003	0.81	0.19	0.46	0.35						0.35	0.52
2012_ESci_FT	852	CR	48	1	1,003	0.81	0.24	0.38	0.38						0.38	0.64
2012_ESci_FT	852	CR	49	1	1,003	0.81	0.22	0.37	0.41						0.41	0.50

Test	Form	Type	Item	Max	N-Count	Alpha	B	M0	M1	M2	M3	M4	M5	M6	Mean	Point-Biserial
2012_ESci_FT	853	MC	01	1	1,005	0.78	0.01	n/a	0.02	0.11	0.12	0.74			0.74	0.44
2012_ESci_FT	853	MC	02	1	1,005	0.78	0.00	n/a	0.70	0.17	0.08	0.04			0.70	0.43
2012_ESci_FT	853	MC	03	1	1,005	0.78	0.00	n/a	0.12	0.63	0.10	0.14			0.63	0.20
2012_ESci_FT	853	MC	04	1	1,005	0.78	0.00	n/a	0.85	0.06	0.05	0.04			0.85	0.44
2012_ESci_FT	853	MC	05	1	1,005	0.78	0.01	n/a	0.24	0.44	0.22	0.10			0.44	0.31
2012_ESci_FT	853	MC	06	1	1,005	0.78	0.01	n/a	0.13	0.10	0.36	0.41			0.41	0.21
2012_ESci_FT	853	MC	07	1	1,005	0.78	0.01	n/a	0.21	0.07	0.65	0.06			0.65	0.46
2012_ESci_FT	853	MC	08	1	1,005	0.78	0.01	n/a	0.72	0.20	0.04	0.03			0.72	0.41
2012_ESci_FT	853	MC	09	1	1,005	0.78	0.01	n/a	0.13	0.55	0.24	0.08			0.55	0.48
2012_ESci_FT	853	MC	10	1	1,005	0.78	0.01	n/a	0.65	0.15	0.12	0.07			0.65	0.47
2012_ESci_FT	853	MC	11	1	1,005	0.78	0.02	n/a	0.05	0.14	0.51	0.28			0.51	0.35
2012_ESci_FT	853	MC	12	1	1,005	0.78	0.02	n/a	0.19	0.12	0.47	0.20			0.47	0.43
2012_ESci_FT	853	MC	13	1	1,005	0.78	0.02	n/a	0.24	0.57	0.12	0.04			0.57	0.36
2012_ESci_FT	853	MC	14	1	1,005	0.78	0.03	n/a	0.36	0.26	0.18	0.16			0.36	0.41
2012_ESci_FT	853	CR	41	1	1,005	0.78	0.11	0.48	0.42						0.42	0.45
2012_ESci_FT	853	CR	42	1	1,005	0.78	0.10	0.50	0.40						0.40	0.50
2012_ESci_FT	853	CR	43	1	1,005	0.78	0.09	0.19	0.72						0.72	0.54
2012_ESci_FT	853	CR	44	1	1,005	0.78	0.12	0.51	0.37						0.37	0.56
2012_ESci_FT	853	CR	45	1	1,005	0.78	0.18	0.39	0.43						0.43	0.51
2012_ESci_FT	853	CR	46	1	1,005	0.78	0.18	0.18	0.64						0.64	0.62
2012_ESci_FT	853	CR	47	1	1,005	0.78	0.12	0.34	0.54						0.54	0.52
2012_ESci_FT	854	MC	01	1	997	0.80	0.00	n/a	0.16	0.73	0.08	0.03			0.73	0.39
2012_ESci_FT	854	MC	02	1	997	0.80	0.01	n/a	0.16	0.30	0.12	0.41			0.41	0.44
2012_ESci_FT	854	MC	03	1	997	0.80	0.01	n/a	0.10	0.09	0.69	0.10			0.69	0.34

Test	Form	Type	Item	Max	N-Count	Alpha	B	M0	M1	M2	M3	M4	M5	M6	Mean	Point-Biserial
2012_ESci_FT	854	MC	04	1	997	0.80	0.01	n/a	0.29	0.47	0.09	0.14			0.47	0.49
2012_ESci_FT	854	MC	05	1	997	0.80	0.01	n/a	0.80	0.07	0.11	0.03			0.80	0.40
2012_ESci_FT	854	MC	06	1	997	0.80	0.01	n/a	0.06	0.06	0.78	0.09			0.78	0.41
2012_ESci_FT	854	MC	07	1	997	0.80	0.02	n/a	0.09	0.65	0.09	0.15			0.65	0.42
2012_ESci_FT	854	MC	08	1	997	0.80	0.02	n/a	0.17	0.58	0.19	0.04			0.58	0.44
2012_ESci_FT	854	MC	09	1	997	0.80	0.01	n/a	0.11	0.17	0.15	0.56			0.56	0.37
2012_ESci_FT	854	MC	10	1	997	0.80	0.01	n/a	0.18	0.27	0.16	0.37			0.37	0.34
2012_ESci_FT	854	MC	11	1	997	0.80	0.03	n/a	0.05	0.45	0.18	0.29			0.45	0.28
2012_ESci_FT	854	CR	41	1	997	0.80	0.13	0.50	0.37						0.37	0.51
2012_ESci_FT	854	CR	42	1	997	0.80	0.15	0.38	0.47						0.47	0.54
2012_ESci_FT	854	CR	43	1	997	0.80	0.11	0.44	0.44						0.44	0.41
2012_ESci_FT	854	CR	44	1	997	0.80	0.13	0.56	0.31						0.31	0.53
2012_ESci_FT	854	CR	45	1	997	0.80	0.17	0.30	0.52						0.52	0.49
2012_ESci_FT	854	CR	46	1	997	0.80	0.19	0.33	0.48						0.48	0.48
2012_ESci_FT	854	CR	47	1	997	0.80	0.19	0.35	0.47						0.47	0.59
2012_ESci_FT	854	CR	48	1	997	0.80	0.20	0.35	0.45						0.45	0.50
2012_ESci_FT	854	CR	49	1	997	0.80	0.25	0.61	0.14						0.14	0.42
2012_ESci_FT	854	CR	50	1	997	0.80	0.25	0.27	0.48						0.48	0.62
2012_ESci_FT	855	MC	01	1	980	0.80	0.00	n/a	0.43	0.28	0.11	0.18			0.43	0.46
2012_ESci_FT	855	MC	02	1	980	0.80	0.00	n/a	0.79	0.07	0.05	0.09			0.79	0.40
2012_ESci_FT	855	MC	03	1	980	0.80	0.00	n/a	0.09	0.06	0.80	0.05			0.80	0.45
2012_ESci_FT	855	MC	04	1	980	0.80	0.01	n/a	0.13	0.12	0.33	0.41			0.41	0.36
2012_ESci_FT	855	MC	05	1	980	0.80	0.00	n/a	0.07	0.59	0.09	0.24			0.59	0.33
2012_ESci_FT	855	MC	06	1	980	0.80	0.01	n/a	0.49	0.24	0.19	0.07			0.49	0.27

Test	Form	Type	Item	Max	N-Count	Alpha	B	M0	M1	M2	M3	M4	M5	M6	Mean	Point-Biserial
2012_ESci_FT	855	MC	07	1	980	0.80	0.01	n/a	0.08	0.06	0.05	0.80			0.80	0.49
2012_ESci_FT	855	MC	08	1	980	0.80	0.01	n/a	0.60	0.15	0.15	0.09			0.60	0.53
2012_ESci_FT	855	MC	09	1	980	0.80	0.01	n/a	0.06	0.10	0.08	0.75			0.75	0.52
2012_ESci_FT	855	MC	10	1	980	0.80	0.01	n/a	0.19	0.62	0.14	0.05			0.62	0.46
2012_ESci_FT	855	MC	11	1	980	0.80	0.01	n/a	0.13	0.10	0.72	0.05			0.72	0.51
2012_ESci_FT	855	MC	12	1	980	0.80	0.01	n/a	0.26	0.58	0.09	0.06			0.58	0.53
2012_ESci_FT	855	MC	13	1	980	0.80	0.03	n/a	0.13	0.16	0.59	0.09			0.59	0.44
2012_ESci_FT	855	CR	41	1	980	0.80	0.09	0.56	0.36						0.36	0.49
2012_ESci_FT	855	CR	42	1	980	0.80	0.09	0.27	0.64						0.64	0.49
2012_ESci_FT	855	CR	43	1	980	0.80	0.10	0.38	0.52						0.52	0.53
2012_ESci_FT	855	CR	44	1	980	0.80	0.14	0.40	0.46						0.46	0.54
2012_ESci_FT	855	CR	45	1	980	0.80	0.16	0.62	0.22						0.22	0.40
2012_ESci_FT	855	CR	46	1	980	0.80	0.17	0.57	0.26						0.26	0.32
2012_ESci_FT	855	CR	47	1	980	0.80	0.23	0.51	0.26						0.26	0.48
2012_ESci_FT	855	CR	48	1	980	0.80	0.24	0.31	0.45						0.45	0.50
2012_ESci_FT	856	MC	01	1	910	0.78	0.02	n/a	0.18	0.19	0.31	0.31			0.31	0.17
2012_ESci_FT	856	MC	02	1	910	0.78	0.00	n/a	0.05	0.15	0.26	0.54			0.54	0.52
2012_ESci_FT	856	MC	03	1	910	0.78	0.01	n/a	0.07	0.19	0.69	0.04			0.69	0.45
2012_ESci_FT	856	MC	04	1	910	0.78	0.01	n/a	0.05	0.26	0.63	0.05			0.63	0.31
2012_ESci_FT	856	MC	05	1	910	0.78	0.00	n/a	0.08	0.05	0.04	0.83			0.83	0.34
2012_ESci_FT	856	MC	06	1	910	0.78	0.01	n/a	0.24	0.57	0.12	0.06			0.57	0.37
2012_ESci_FT	856	MC	07	1	910	0.78	0.01	n/a	0.15	0.13	0.16	0.56			0.56	0.36
2012_ESci_FT	856	MC	08	1	910	0.78	0.01	n/a	0.18	0.51	0.15	0.14			0.51	0.43
2012_ESci_FT	856	MC	09	1	910	0.78	0.01	n/a	0.60	0.18	0.12	0.08			0.60	0.34

Test	Form	Type	Item	Max	N-Count	Alpha	B	M0	M1	M2	M3	M4	M5	M6	Mean	Point-Biserial
2012_ESci_FT	856	MC	10	1	910	0.78	0.01	n/a	0.25	0.15	0.40	0.19			0.40	0.36
2012_ESci_FT	856	MC	11	1	910	0.78	0.03	n/a	0.69	0.08	0.19	0.02			0.69	0.44
2012_ESci_FT	856	CR	41	1	910	0.78	0.16	0.58	0.26						0.26	0.43
2012_ESci_FT	856	CR	42	1	910	0.78	0.13	0.19	0.69						0.69	0.56
2012_ESci_FT	856	CR	43	1	910	0.78	0.16	0.40	0.44						0.44	0.53
2012_ESci_FT	856	CR	44	1	910	0.78	0.12	0.31	0.57						0.57	0.46
2012_ESci_FT	856	CR	45	1	910	0.78	0.17	0.55	0.28						0.28	0.50
2012_ESci_FT	856	CR	46	1	910	0.78	0.15	0.17	0.68						0.68	0.47
2012_ESci_FT	856	CR	47	1	910	0.78	0.18	0.22	0.60						0.60	0.42
2012_ESci_FT	856	CR	48	1	910	0.78	0.21	0.34	0.46						0.46	0.52
2012_ESci_FT	856	CR	49	1	910	0.78	0.21	0.25	0.53						0.53	0.61
2012_ESci_FT	856	CR	50	1	910	0.78	0.22	0.40	0.37						0.37	0.41
2012_ESci_FT	857	MC	01	1	982	0.79	0.00	n/a	0.81	0.09	0.06	0.03			0.81	0.39
2012_ESci_FT	857	MC	02	1	982	0.79	0.01	n/a	0.27	0.06	0.16	0.50			0.50	0.49
2012_ESci_FT	857	MC	03	1	982	0.79	0.00	n/a	0.12	0.54	0.27	0.06			0.54	0.41
2012_ESci_FT	857	MC	04	1	982	0.79	0.00	n/a	0.13	0.62	0.22	0.04			0.62	0.42
2012_ESci_FT	857	MC	05	1	982	0.79	0.00	n/a	0.62	0.12	0.14	0.12			0.62	0.44
2012_ESci_FT	857	MC	06	1	982	0.79	0.00	n/a	0.08	0.04	0.75	0.13			0.75	0.50
2012_ESci_FT	857	MC	07	1	982	0.79	0.01	n/a	0.11	0.21	0.40	0.27			0.27	0.19
2012_ESci_FT	857	MC	08	1	982	0.79	0.01	n/a	0.26	0.12	0.47	0.15			0.47	0.47
2012_ESci_FT	857	MC	09	1	982	0.79	0.01	n/a	0.04	0.04	0.12	0.79			0.79	0.48
2012_ESci_FT	857	MC	10	1	982	0.79	0.01	n/a	0.71	0.08	0.15	0.05			0.71	0.49
2012_ESci_FT	857	MC	11	1	982	0.79	0.01	n/a	0.14	0.12	0.63	0.10			0.63	0.39
2012_ESci_FT	857	MC	12	1	982	0.79	0.02	n/a	0.53	0.06	0.20	0.19			0.53	0.35

Test	Form	Type	Item	Max	N-Count	Alpha	B	M0	M1	M2	M3	M4	M5	M6	Mean	Point-Biserial
2012_ESci_FT	857	MC	13	1	982	0.79	0.05	n/a	0.10	0.25	0.47	0.14			0.47	0.40
2012_ESci_FT	857	CR	41	1	982	0.79	0.05	0.15	0.80						0.80	0.37
2012_ESci_FT	857	CR	42	1	982	0.79	0.11	0.73	0.16						0.16	0.43
2012_ESci_FT	857	CR	43	1	982	0.79	0.08	0.57	0.36						0.36	0.47
2012_ESci_FT	857	CR	44	1	982	0.79	0.12	0.63	0.25						0.25	0.49
2012_ESci_FT	857	CR	45	1	982	0.79	0.12	0.46	0.42						0.42	0.61
2012_ESci_FT	857	CR	46	1	982	0.79	0.16	0.46	0.38						0.38	0.53
2012_ESci_FT	857	CR	47	1	982	0.79	0.20	0.57	0.23						0.23	0.45
2012_ESci_FT	857	CR	48	1	982	0.79	0.20	0.42	0.38						0.38	0.44
2012_ESci_FT	858	MC	01	1	999	0.79	0.00	n/a	0.07	0.04	0.28	0.61			0.61	0.52
2012_ESci_FT	858	MC	02	1	999	0.79	0.01	n/a	0.28	0.41	0.16	0.15			0.41	0.28
2012_ESci_FT	858	MC	03	1	999	0.79	0.01	n/a	0.22	0.11	0.10	0.56			0.56	0.40
2012_ESci_FT	858	MC	04	1	999	0.79	0.00	n/a	0.04	0.11	0.58	0.27			0.58	0.36
2012_ESci_FT	858	MC	05	1	999	0.79	0.01	n/a	0.10	0.18	0.13	0.59			0.59	0.46
2012_ESci_FT	858	MC	06	1	999	0.79	0.01	n/a	0.82	0.06	0.03	0.08			0.82	0.32
2012_ESci_FT	858	MC	07	1	999	0.79	0.01	n/a	0.42	0.20	0.21	0.15			0.21	0.17
2012_ESci_FT	858	MC	08	1	999	0.79	0.01	n/a	0.08	0.49	0.26	0.15			0.49	0.45
2012_ESci_FT	858	MC	09	1	999	0.79	0.01	n/a	0.07	0.18	0.67	0.07			0.67	0.44
2012_ESci_FT	858	MC	10	1	999	0.79	0.01	n/a	0.22	0.55	0.13	0.09			0.55	0.36
2012_ESci_FT	858	MC	11	1	999	0.79	0.01	n/a	0.31	0.55	0.12	0.01			0.55	0.45
2012_ESci_FT	858	MC	12	1	999	0.79	0.03	n/a	0.07	0.03	0.09	0.78			0.78	0.42
2012_ESci_FT	858	CR	41	1	999	0.79	0.08	0.55	0.37						0.37	0.53
2012_ESci_FT	858	CR	42	1	999	0.79	0.11	0.34	0.56						0.56	0.48
2012_ESci_FT	858	CR	43	1	999	0.79	0.18	0.53	0.30						0.30	0.53

Test	Form	Type	Item	Max	N-Count	Alpha	B	M0	M1	M2	M3	M4	M5	M6	Mean	Point-Biserial
2012_ESci_FT	858	CR	44	1	999	0.79	0.17	0.36	0.47						0.47	0.46
2012_ESci_FT	858	CR	45	1	999	0.79	0.16	0.26	0.57						0.57	0.55
2012_ESci_FT	858	CR	46	1	999	0.79	0.18	0.59	0.23						0.23	0.47
2012_ESci_FT	858	CR	47	1	999	0.79	0.14	0.31	0.55						0.55	0.52
2012_ESci_FT	858	CR	48	1	999	0.79	0.18	0.48	0.34						0.34	0.46
2012_ESci_FT	858	CR	49	1	999	0.79	0.15	0.24	0.61						0.61	0.59
2012_ESci_FT	859	MC	01	1	984	0.77	0.00	n/a	0.24	0.20	0.05	0.51			0.24	0.16
2012_ESci_FT	859	MC	02	1	984	0.77	0.00	n/a	0.09	0.07	0.53	0.32			0.53	0.46
2012_ESci_FT	859	MC	03	1	984	0.77	0.01	n/a	0.06	0.08	0.64	0.21			0.64	0.31
2012_ESci_FT	859	MC	04	1	984	0.77	0.00	n/a	0.08	0.55	0.07	0.30			0.55	0.17
2012_ESci_FT	859	MC	05	1	984	0.77	0.00	n/a	0.79	0.04	0.07	0.10			0.79	0.46
2012_ESci_FT	859	MC	06	1	984	0.77	0.01	n/a	0.37	0.11	0.33	0.18			0.37	0.34
2012_ESci_FT	859	MC	07	1	984	0.77	0.01	n/a	0.18	0.70	0.06	0.05			0.70	0.47
2012_ESci_FT	859	MC	08	1	984	0.77	0.01	n/a	0.08	0.15	0.15	0.62			0.62	0.49
2012_ESci_FT	859	MC	09	1	984	0.77	0.01	n/a	0.11	0.18	0.17	0.52			0.52	0.40
2012_ESci_FT	859	MC	10	1	984	0.77	0.01	n/a	0.13	0.69	0.10	0.07			0.69	0.46
2012_ESci_FT	859	MC	11	1	984	0.77	0.02	n/a	0.14	0.64	0.10	0.09			0.64	0.46
2012_ESci_FT	859	CR	41	1	984	0.77	0.07	0.64	0.30						0.30	0.46
2012_ESci_FT	859	CR	42	1	984	0.77	0.11	0.74	0.15						0.15	0.34
2012_ESci_FT	859	CR	43	1	984	0.77	0.12	0.36	0.52						0.52	0.40
2012_ESci_FT	859	CR	44	1	984	0.77	0.11	0.72	0.17						0.17	0.40
2012_ESci_FT	859	CR	45	1	984	0.77	0.10	0.11	0.80						0.80	0.56
2012_ESci_FT	859	CR	46	1	984	0.77	0.12	0.41	0.48						0.48	0.50
2012_ESci_FT	859	CR	47	1	984	0.77	0.16	0.40	0.45						0.45	0.57

Test	Form	Type	Item	Max	N-Count	Alpha	B	M0	M1	M2	M3	M4	M5	M6	Mean	Point-Biserial
2012_ESci_FT	859	CR	48	1	984	0.77	0.19	0.19	0.62						0.62	0.61
2012_ESci_FT	859	CR	49	1	984	0.77	0.23	0.45	0.32						0.32	0.44
2012_ESci_FT	859	CR	50	1	984	0.77	0.21	0.52	0.27						0.27	0.43
2012_ESci_FT	860	MC	01	1	997	0.78	0.01	n/a	0.05	0.06	0.13	0.75			0.75	0.45
2012_ESci_FT	860	MC	02	1	997	0.78	0.00	n/a	0.19	0.18	0.60	0.03			0.60	0.44
2012_ESci_FT	860	MC	03	1	997	0.78	0.01	n/a	0.54	0.30	0.09	0.06			0.54	0.30
2012_ESci_FT	860	MC	04	1	997	0.78	0.01	n/a	0.15	0.69	0.09	0.06			0.69	0.48
2012_ESci_FT	860	MC	05	1	997	0.78	0.01	n/a	0.15	0.46	0.25	0.14			0.46	0.36
2012_ESci_FT	860	MC	06	1	997	0.78	0.01	n/a	0.08	0.08	0.36	0.47			0.47	0.35
2012_ESci_FT	860	MC	07	1	997	0.78	0.01	n/a	0.08	0.05	0.15	0.72			0.72	0.46
2012_ESci_FT	860	MC	08	1	997	0.78	0.01	n/a	0.81	0.02	0.10	0.06			0.81	0.36
2012_ESci_FT	860	MC	09	1	997	0.78	0.01	n/a	0.07	0.17	0.15	0.60			0.60	0.39
2012_ESci_FT	860	MC	10	1	997	0.78	0.01	n/a	0.21	0.23	0.23	0.31			0.23	0.22
2012_ESci_FT	860	MC	11	1	997	0.78	0.03	n/a	0.10	0.11	0.13	0.63			0.63	0.47
2012_ESci_FT	860	CR	41	1	997	0.78	0.08	0.72	0.21						0.21	0.18
2012_ESci_FT	860	CR	42	1	997	0.78	0.09	0.51	0.40						0.40	0.51
2012_ESci_FT	860	CR	43	1	997	0.78	0.12	0.72	0.16						0.16	0.41
2012_ESci_FT	860	CR	44	1	997	0.78	0.09	0.23	0.67						0.67	0.49
2012_ESci_FT	860	CR	45	1	997	0.78	0.15	0.32	0.53						0.53	0.53
2012_ESci_FT	860	CR	46	1	997	0.78	0.21	0.60	0.19						0.19	0.43
2012_ESci_FT	860	CR	47	1	997	0.78	0.18	0.38	0.44						0.44	0.55
2012_ESci_FT	860	CR	48	1	997	0.78	0.24	0.16	0.60						0.60	0.58
2012_ESci_FT	860	CR	49	1	997	0.78	0.30	0.27	0.43						0.43	0.60
2012_ESci_FT	860	CR	50	1	997	0.78	0.31	0.48	0.21						0.21	0.46

Test	Form	Type	Item	Max	N-Count	Alpha	B	M0	M1	M2	M3	M4	M5	M6	Mean	Point-Biserial
2012_ESci_FT	861	MC	01	1	1,005	0.81	0.01	n/a	0.12	0.07	0.10	0.71			0.71	0.40
2012_ESci_FT	861	MC	02	1	1,005	0.81	0.01	n/a	0.16	0.11	0.68	0.03			0.68	0.44
2012_ESci_FT	861	MC	03	1	1,005	0.81	0.00	n/a	0.66	0.10	0.16	0.08			0.66	0.44
2012_ESci_FT	861	MC	04	1	1,005	0.81	0.01	n/a	0.37	0.21	0.05	0.37			0.21	0.37
2012_ESci_FT	861	MC	05	1	1,005	0.81	0.00	n/a	0.50	0.42	0.05	0.03			0.42	0.43
2012_ESci_FT	861	MC	06	1	1,005	0.81	0.00	n/a	0.22	0.25	0.44	0.08			0.44	0.26
2012_ESci_FT	861	MC	07	1	1,005	0.81	0.01	n/a	0.18	0.15	0.20	0.47			0.47	0.51
2012_ESci_FT	861	MC	08	1	1,005	0.81	0.00	n/a	0.59	0.18	0.14	0.09			0.59	0.46
2012_ESci_FT	861	MC	09	1	1,005	0.81	0.01	n/a	0.28	0.09	0.49	0.13			0.49	0.45
2012_ESci_FT	861	MC	10	1	1,005	0.81	0.02	n/a	0.50	0.25	0.16	0.07			0.50	0.45
2012_ESci_FT	861	MC	11	1	1,005	0.81	0.02	n/a	0.17	0.43	0.27	0.11			0.43	0.42
2012_ESci_FT	861	MC	12	1	1,005	0.81	0.03	n/a	0.35	0.10	0.32	0.20			0.32	0.32
2012_ESci_FT	861	CR	41	1	1,005	0.81	0.10	0.64	0.26						0.26	0.49
2012_ESci_FT	861	CR	42	1	1,005	0.81	0.13	0.56	0.32						0.32	0.53
2012_ESci_FT	861	CR	43	1	1,005	0.81	0.10	0.16	0.75						0.75	0.43
2012_ESci_FT	861	CR	44	1	1,005	0.81	0.15	0.40	0.46						0.46	0.58
2012_ESci_FT	861	CR	45	1	1,005	0.81	0.11	0.17	0.72						0.72	0.43
2012_ESci_FT	861	CR	46	1	1,005	0.81	0.21	0.50	0.28						0.28	0.54
2012_ESci_FT	861	CR	47	1	1,005	0.81	0.18	0.25	0.57						0.57	0.57
2012_ESci_FT	861	CR	48	1	1,005	0.81	0.24	0.42	0.34						0.34	0.60
2012_ESci_FT	861	CR	49	1	1,005	0.81	0.31	0.48	0.21						0.21	0.51
2012_ESci_FT	862	MC	01	1	1,001	0.79	0.01	n/a	0.69	0.12	0.09	0.09			0.69	0.46
2012_ESci_FT	862	MC	02	1	1,001	0.79	0.01	n/a	0.04	0.72	0.13	0.10			0.72	0.36
2012_ESci_FT	862	MC	03	1	1,001	0.79	0.01	n/a	0.19	0.04	0.18	0.58			0.58	0.52

Test	Form	Type	Item	Max	N-Count	Alpha	B	M0	M1	M2	M3	M4	M5	M6	Mean	Point-Biserial
2012_ESci_FT	862	MC	04	1	1,001	0.79	0.01	n/a	0.58	0.16	0.18	0.08			0.58	0.19
2012_ESci_FT	862	MC	05	1	1,001	0.79	0.01	n/a	0.46	0.26	0.15	0.11			0.46	0.47
2012_ESci_FT	862	MC	06	1	1,001	0.79	0.01	n/a	0.10	0.08	0.29	0.51			0.51	0.37
2012_ESci_FT	862	MC	07	1	1,001	0.79	0.01	n/a	0.09	0.07	0.78	0.05			0.78	0.42
2012_ESci_FT	862	MC	08	1	1,001	0.79	0.01	n/a	0.04	0.80	0.03	0.11			0.80	0.36
2012_ESci_FT	862	MC	09	1	1,001	0.79	0.01	n/a	0.05	0.05	0.73	0.16			0.73	0.56
2012_ESci_FT	862	MC	10	1	1,001	0.79	0.01	n/a	0.70	0.05	0.10	0.14			0.70	0.48
2012_ESci_FT	862	MC	11	1	1,001	0.79	0.01	n/a	0.34	0.36	0.26	0.03			0.36	0.16
2012_ESci_FT	862	MC	12	1	1,001	0.79	0.02	n/a	0.27	0.61	0.07	0.03			0.61	0.36
2012_ESci_FT	862	MC	13	1	1,001	0.79	0.04	n/a	0.21	0.20	0.19	0.36			0.36	0.35
2012_ESci_FT	862	CR	41	1	1,001	0.79	0.10	0.63	0.27						0.27	0.45
2012_ESci_FT	862	CR	42	1	1,001	0.79	0.13	0.60	0.27						0.27	0.55
2012_ESci_FT	862	CR	43	1	1,001	0.79	0.10	0.10	0.80						0.80	0.57
2012_ESci_FT	862	CR	44	1	1,001	0.79	0.11	0.14	0.74						0.74	0.59
2012_ESci_FT	862	CR	45	1	1,001	0.79	0.13	0.15	0.72						0.72	0.55
2012_ESci_FT	862	CR	46	1	1,001	0.79	0.19	0.49	0.31						0.31	0.48
2012_ESci_FT	862	CR	47	1	1,001	0.79	0.17	0.52	0.31						0.31	0.44
2012_ESci_FT	862	CR	48	1	1,001	0.79	0.19	0.26	0.55						0.55	0.60
2012_ESci_FT	863	MC	01	1	994	0.78	0.01	n/a	0.55	0.19	0.08	0.17			0.55	0.38
2012_ESci_FT	863	MC	02	1	994	0.78	0.00	n/a	0.57	0.09	0.29	0.05			0.57	0.49
2012_ESci_FT	863	MC	03	1	994	0.78	0.00	n/a	0.04	0.71	0.11	0.14			0.71	0.42
2012_ESci_FT	863	MC	04	1	994	0.78	0.01	n/a	0.66	0.12	0.10	0.11			0.66	0.26
2012_ESci_FT	863	MC	05	1	994	0.78	0.01	n/a	0.17	0.28	0.35	0.19			0.19	0.08
2012_ESci_FT	863	MC	06	1	994	0.78	0.00	n/a	0.26	0.60	0.07	0.07			0.60	0.45

Test	Form	Type	Item	Max	N-Count	Alpha	B	M0	M1	M2	M3	M4	M5	M6	Mean	Point-Biserial
2012_ESci_FT	863	MC	07	1	994	0.78	0.01	n/a	0.27	0.07	0.51	0.13			0.51	0.35
2012_ESci_FT	863	MC	08	1	994	0.78	0.01	n/a	0.05	0.78	0.06	0.10			0.78	0.22
2012_ESci_FT	863	MC	09	1	994	0.78	0.01	n/a	0.29	0.07	0.14	0.49			0.49	0.42
2012_ESci_FT	863	MC	10	1	994	0.78	0.02	n/a	0.42	0.18	0.27	0.11			0.27	0.37
2012_ESci_FT	863	MC	11	1	994	0.78	0.02	n/a	0.46	0.21	0.19	0.12			0.46	0.49
2012_ESci_FT	863	MC	12	1	994	0.78	0.03	n/a	0.07	0.25	0.46	0.18			0.46	0.51
2012_ESci_FT	863	CR	41	1	994	0.78	0.12	0.65	0.23						0.23	0.47
2012_ESci_FT	863	CR	42	1	994	0.78	0.16	0.60	0.24						0.24	0.44
2012_ESci_FT	863	CR	43	1	994	0.78	0.25	0.44	0.32						0.32	0.48
2012_ESci_FT	863	CR	44	1	994	0.78	0.15	0.31	0.53						0.53	0.54
2012_ESci_FT	863	CR	45	1	994	0.78	0.21	0.36	0.43						0.43	0.55
2012_ESci_FT	863	CR	46	1	994	0.78	0.29	0.53	0.18						0.18	0.50
2012_ESci_FT	863	CR	47	1	994	0.78	0.26	0.32	0.42						0.42	0.53
2012_ESci_FT	863	CR	48	1	994	0.78	0.31	0.42	0.27						0.27	0.51
2012_ESci_FT	863	CR	49	1	994	0.78	0.29	0.32	0.39						0.39	0.51
2012_ESci_FT	864	MC	01	1	984	0.80	0.00	n/a	0.81	0.03	0.04	0.12			0.81	0.36
2012_ESci_FT	864	MC	02	1	984	0.80	0.00	n/a	0.40	0.42	0.15	0.03			0.42	0.35
2012_ESci_FT	864	MC	03	1	984	0.80	0.01	n/a	0.06	0.17	0.60	0.17			0.60	0.39
2012_ESci_FT	864	MC	04	1	984	0.80	0.00	n/a	0.13	0.07	0.14	0.66			0.66	0.41
2012_ESci_FT	864	MC	05	1	984	0.80	0.01	n/a	0.26	0.40	0.19	0.14			0.40	0.35
2012_ESci_FT	864	MC	06	1	984	0.80	0.00	n/a	0.11	0.57	0.26	0.07			0.57	0.37
2012_ESci_FT	864	MC	07	1	984	0.80	0.01	n/a	0.12	0.18	0.57	0.12			0.57	0.40
2012_ESci_FT	864	MC	08	1	984	0.80	0.00	n/a	0.03	0.05	0.88	0.04			0.88	0.41
2012_ESci_FT	864	MC	09	1	984	0.80	0.00	n/a	0.72	0.19	0.04	0.04			0.72	0.47

Test	Form	Type	Item	Max	N-Count	Alpha	B	M0	M1	M2	M3	M4	M5	M6	Mean	Point-Biserial
2012_ESci_FT	864	MC	10	1	984	0.80	0.01	n/a	0.02	0.46	0.44	0.08			0.44	0.24
2012_ESci_FT	864	MC	11	1	984	0.80	0.01	n/a	0.13	0.10	0.49	0.27			0.49	0.49
2012_ESci_FT	864	MC	12	1	984	0.80	0.02	n/a	0.52	0.12	0.06	0.29			0.52	0.54
2012_ESci_FT	864	CR	41	1	984	0.80	0.14	0.38	0.48						0.48	0.53
2012_ESci_FT	864	CR	42	1	984	0.80	0.09	0.26	0.66						0.66	0.52
2012_ESci_FT	864	CR	43	1	984	0.80	0.09	0.36	0.55						0.55	0.60
2012_ESci_FT	864	CR	44	1	984	0.80	0.20	0.39	0.41						0.41	0.57
2012_ESci_FT	864	CR	45	1	984	0.80	0.27	0.61	0.12						0.12	0.28
2012_ESci_FT	864	CR	46	1	984	0.80	0.15	0.40	0.45						0.45	0.48
2012_ESci_FT	864	CR	47	1	984	0.80	0.19	0.25	0.56						0.56	0.55
2012_ESci_FT	864	CR	48	1	984	0.80	0.19	0.47	0.34						0.34	0.49
2012_ESci_FT	864	CR	49	1	984	0.80	0.18	0.12	0.70						0.70	0.51
2012_ESci_FT	865	MC	01	1	981	0.81	0.01	n/a	0.59	0.26	0.10	0.03			0.59	0.35
2012_ESci_FT	865	MC	02	1	981	0.81	0.00	n/a	0.14	0.10	0.08	0.68			0.68	0.53
2012_ESci_FT	865	MC	03	1	981	0.81	0.01	n/a	0.24	0.60	0.11	0.04			0.60	0.45
2012_ESci_FT	865	MC	04	1	981	0.81	0.01	n/a	0.14	0.51	0.18	0.16			0.51	0.37
2012_ESci_FT	865	MC	05	1	981	0.81	0.01	n/a	0.10	0.08	0.21	0.60			0.60	0.45
2012_ESci_FT	865	MC	06	1	981	0.81	0.01	n/a	0.14	0.13	0.51	0.21			0.51	0.37
2012_ESci_FT	865	MC	07	1	981	0.81	0.01	n/a	0.33	0.30	0.16	0.20			0.33	0.32
2012_ESci_FT	865	MC	08	1	981	0.81	0.01	n/a	0.18	0.60	0.16	0.05			0.60	0.42
2012_ESci_FT	865	MC	09	1	981	0.81	0.01	n/a	0.60	0.14	0.15	0.09			0.60	0.29
2012_ESci_FT	865	MC	10	1	981	0.81	0.02	n/a	0.29	0.54	0.07	0.09			0.54	0.34
2012_ESci_FT	865	MC	11	1	981	0.81	0.02	n/a	0.24	0.36	0.09	0.28			0.36	0.44
2012_ESci_FT	865	MC	12	1	981	0.81	0.02	n/a	0.16	0.49	0.19	0.13			0.49	0.44

Test	Form	Type	Item	Max	N-Count	Alpha	B	M0	M1	M2	M3	M4	M5	M6	Mean	Point-Biserial
2012_ESci_FT	865	MC	13	1	981	0.81	0.03	n/a	0.04	0.08	0.13	0.71			0.71	0.47
2012_ESci_FT	865	MC	14	1	981	0.81	0.04	n/a	0.73	0.11	0.07	0.05			0.73	0.48
2012_ESci_FT	865	CR	41	1	981	0.81	0.09	0.40	0.51						0.51	0.56
2012_ESci_FT	865	CR	42	1	981	0.81	0.10	0.34	0.56						0.56	0.53
2012_ESci_FT	865	CR	43	2	981	0.81	0.10	0.04	0.10	0.75					1.60	0.69
2012_ESci_FT	865	CR	44	1	981	0.81	0.13	0.26	0.61						0.61	0.60
2012_ESci_FT	865	CR	45	1	981	0.81	0.33	0.16	0.51						0.51	0.50
2012_ESci_FT	865	CR	46	2	981	0.81	0.18	0.04	0.24	0.54					1.32	0.60

Appendix B: Partial-Credit Model Item Analysis

Test	Form	Type	Item	Max	N-Count	RID	S1	S2	S3	S4	S5	S6	INFIT
2012_ESci_FT	845	MC	01	1	1,009	0.5861							0.99
2012_ESci_FT	845	MC	02	1	1,009	0.3846							1.15
2012_ESci_FT	845	MC	03	1	1,009	0.3846							1.18
2012_ESci_FT	845	MC	04	1	1,009	0.7378							1.11
2012_ESci_FT	845	MC	05	1	1,009	0.3747							1.02
2012_ESci_FT	845	MC	06	1	1,009	-0.1360							1.14
2012_ESci_FT	845	MC	07	1	1,009	0.5812							1.06
2012_ESci_FT	845	MC	08	1	1,009	-1.8663							0.88
2012_ESci_FT	845	MC	09	1	1,009	-0.4578							1.01
2012_ESci_FT	845	MC	10	1	1,009	-0.9696							1.02
2012_ESci_FT	845	MC	11	1	1,009	0.2653							1.25
2012_ESci_FT	845	CR	41	1	1,009	0.9642							0.99
2012_ESci_FT	845	CR	42	1	1,009	-0.0148							0.84
2012_ESci_FT	845	CR	43	1	1,009	2.3429							1.07
2012_ESci_FT	845	CR	44	1	1,009	-0.0356							0.81
2012_ESci_FT	845	CR	45	1	1,009	1.4996							0.89
2012_ESci_FT	845	CR	46	1	1,009	-0.4811							0.87
2012_ESci_FT	845	CR	47	1	1,009	0.3994							0.90
2012_ESci_FT	845	CR	48	1	1,009	1.4564							0.87
2012_ESci_FT	845	CR	49	1	1,009	2.3503							0.94
2012_ESci_FT	845	CR	50	1	1,009	2.0076							0.92
2012_ESci_FT	846	MC	01	1	1,000	-0.3059							1.09
2012_ESci_FT	846	MC	02	1	1,000	0.7938							1.09
2012_ESci_FT	846	MC	03	1	1,000	0.5616							1.05

Test	Form	Type	Item	Max	N-Count	RID	S1	S2	S3	S4	S5	S6	INFIT
2012_ESci_FT	846	MC	04	1	1,000	0.1561							0.96
2012_ESci_FT	846	MC	05	1	1,000	0.3140							1.17
2012_ESci_FT	846	MC	06	1	1,000	1.0990							1.15
2012_ESci_FT	846	MC	07	1	1,000	0.7065							1.23
2012_ESci_FT	846	MC	08	1	1,000	0.6679							1.01
2012_ESci_FT	846	MC	09	1	1,000	1.1291							1.19
2012_ESci_FT	846	MC	10	1	1,000	-0.6276							1.00
2012_ESci_FT	846	MC	11	1	1,000	0.3969							0.99
2012_ESci_FT	846	CR	41	1	1,000	2.1430							0.92
2012_ESci_FT	846	CR	42	1	1,000	1.6851							0.93
2012_ESci_FT	846	CR	43	1	1,000	0.3872							0.83
2012_ESci_FT	846	CR	44	1	1,000	1.3660							0.94
2012_ESci_FT	846	CR	45	1	1,000	0.2008							0.87
2012_ESci_FT	846	CR	46	1	1,000	0.2157							0.97
2012_ESci_FT	846	CR	47	1	1,000	1.3187							0.85
2012_ESci_FT	846	CR	48	1	1,000	2.4962							0.89
2012_ESci_FT	846	CR	49	1	1,000	2.0090							0.95
2012_ESci_FT	846	CR	50	1	1,000	1.3554							0.84
2012_ESci_FT	847	MC	01	1	992	0.3055							1.11
2012_ESci_FT	847	MC	02	1	992	1.8464							1.05
2012_ESci_FT	847	MC	03	1	992	-0.4235							1.02
2012_ESci_FT	847	MC	04	1	992	0.6208							1.16
2012_ESci_FT	847	MC	05	1	992	1.1671							1.16
2012_ESci_FT	847	MC	06	1	992	1.0858							1.21
2012_ESci_FT	847	MC	07	1	992	0.6159							1.08

Test	Form	Type	Item	Max	N-Count	RID	S1	S2	S3	S4	S5	S6	INFIT
2012_ESci_FT	847	MC	08	1	992	-0.5828							1.08
2012_ESci_FT	847	MC	09	1	992	-0.2769							0.93
2012_ESci_FT	847	MC	10	1	992	-0.3102							0.89
2012_ESci_FT	847	MC	11	1	992	0.9456							1.00
2012_ESci_FT	847	MC	12	1	992	1.5775							1.05
2012_ESci_FT	847	CR	41	1	992	-0.2880							0.83
2012_ESci_FT	847	CR	42	1	992	0.0167							0.84
2012_ESci_FT	847	CR	43	1	992	0.8762							1.09
2012_ESci_FT	847	CR	44	1	992	1.2236							0.96
2012_ESci_FT	847	CR	45	1	992	1.4780							0.99
2012_ESci_FT	847	CR	46	1	992	0.9755							0.81
2012_ESci_FT	847	CR	47	1	992	2.4330							0.95
2012_ESci_FT	847	CR	48	1	992	1.3863							0.89
2012_ESci_FT	847	CR	49	1	992	0.3304							0.84
2012_ESci_FT	848	MC	01	1	1,009	0.8645							1.07
2012_ESci_FT	848	MC	02	1	1,009	0.0731							1.03
2012_ESci_FT	848	MC	03	1	1,009	1.3600							0.97
2012_ESci_FT	848	MC	04	1	1,009	0.6197							1.00
2012_ESci_FT	848	MC	05	1	1,009	-0.5005							1.03
2012_ESci_FT	848	MC	06	1	1,009	-0.0506							0.98
2012_ESci_FT	848	MC	07	1	1,009	-0.4612							1.17
2012_ESci_FT	848	MC	08	1	1,009	-0.2767							0.92
2012_ESci_FT	848	MC	09	1	1,009	0.2614							1.07
2012_ESci_FT	848	MC	10	1	1,009	-0.6397							0.88
2012_ESci_FT	848	MC	11	1	1,009	1.2886							1.25

Test	Form	Type	Item	Max	N-Count	RID	S1	S2	S3	S4	S5	S6	INFIT
2012_ESci_FT	848	MC	12	1	1,009	0.6900							0.98
2012_ESci_FT	848	MC	13	1	1,009	0.7511							1.09
2012_ESci_FT	848	CR	41	1	1,009	-0.2451							0.92
2012_ESci_FT	848	CR	42	1	1,009	1.9116							0.88
2012_ESci_FT	848	CR	43	1	1,009	0.8977							0.87
2012_ESci_FT	848	CR	44	1	1,009	2.1918							0.96
2012_ESci_FT	848	CR	45	1	1,009	0.7229							1.14
2012_ESci_FT	848	CR	46	1	1,009	2.0637							0.98
2012_ESci_FT	848	CR	47	1	1,009	1.5014							0.92
2012_ESci_FT	848	CR	48	1	1,009	1.6936							0.84
2012_ESci_FT	849	MC	01	1	1,001	0.7755							0.99
2012_ESci_FT	849	MC	02	1	1,001	-0.4727							1.24
2012_ESci_FT	849	MC	03	1	1,001	1.2373							1.02
2012_ESci_FT	849	MC	04	1	1,001	1.0619							1.16
2012_ESci_FT	849	MC	05	1	1,001	1.0817							1.04
2012_ESci_FT	849	MC	06	1	1,001	0.8428							1.12
2012_ESci_FT	849	MC	07	1	1,001	0.4651							1.05
2012_ESci_FT	849	MC	08	1	1,001	-0.9507							0.89
2012_ESci_FT	849	MC	09	1	1,001	0.9395							1.03
2012_ESci_FT	849	MC	10	1	1,001	-0.4275							0.93
2012_ESci_FT	849	MC	11	1	1,001	0.6512							0.99
2012_ESci_FT	849	MC	12	1	1,001	-0.5711							1.11
2012_ESci_FT	849	MC	13	1	1,001	0.6751							1.10
2012_ESci_FT	849	CR	41	1	1,001	0.7947							0.99
2012_ESci_FT	849	CR	42	1	1,001	-0.1161							0.91

Test	Form	Type	Item	Max	N-Count	RID	S1	S2	S3	S4	S5	S6	INFIT
2012_ESci_FT	849	CR	43	1	1,001	0.2484							0.88
2012_ESci_FT	849	CR	44	1	1,001	1.1715							0.91
2012_ESci_FT	849	CR	45	1	1,001	1.2322							0.92
2012_ESci_FT	849	CR	46	1	1,001	2.4879							0.91
2012_ESci_FT	849	CR	47	1	1,001	0.5415							0.89
2012_ESci_FT	849	CR	48	1	1,001	1.0176							0.87
2012_ESci_FT	850	MC	01	1	996	-1.1259							0.98
2012_ESci_FT	850	MC	02	1	996	-0.0861							1.09
2012_ESci_FT	850	MC	03	1	996	-0.3329							1.00
2012_ESci_FT	850	MC	04	1	996	-0.0262							0.96
2012_ESci_FT	850	MC	05	1	996	0.5386							1.07
2012_ESci_FT	850	MC	06	1	996	0.8511							1.22
2012_ESci_FT	850	MC	07	1	996	-1.3231							0.90
2012_ESci_FT	850	MC	08	1	996	0.4668							1.00
2012_ESci_FT	850	MC	09	1	996	-0.0370							1.04
2012_ESci_FT	850	MC	10	1	996	-0.8344							0.96
2012_ESci_FT	850	MC	11	1	996	0.3586							1.09
2012_ESci_FT	850	CR	41	1	996	0.8203							1.14
2012_ESci_FT	850	CR	42	1	996	2.1259							0.95
2012_ESci_FT	850	CR	43	1	996	3.1493							0.98
2012_ESci_FT	850	CR	44	1	996	1.3090							1.00
2012_ESci_FT	850	CR	45	1	996	-0.5100							1.07
2012_ESci_FT	850	CR	46	1	996	0.4771							0.86
2012_ESci_FT	850	CR	47	1	996	0.7331							1.03
2012_ESci_FT	850	CR	48	1	996	1.5141							0.84

Test	Form	Type	Item	Max	N-Count	RID	S1	S2	S3	S4	S5	S6	INFIT
2012_ESci_FT	850	CR	49	1	996	1.6058							0.87
2012_ESci_FT	850	CR	50	1	996	0.7279							0.91
2012_ESci_FT	851	MC	01	1	1,008	1.0079							1.03
2012_ESci_FT	851	MC	02	1	1,008	-0.1512							1.07
2012_ESci_FT	851	MC	03	1	1,008	0.5005							0.96
2012_ESci_FT	851	MC	04	1	1,008	0.7676							1.03
2012_ESci_FT	851	MC	05	1	1,008	-1.3683							0.93
2012_ESci_FT	851	MC	06	1	1,008	-0.2759							0.99
2012_ESci_FT	851	MC	07	1	1,008	0.0739							1.10
2012_ESci_FT	851	MC	08	1	1,008	1.0587							1.13
2012_ESci_FT	851	MC	09	1	1,008	-0.0244							0.98
2012_ESci_FT	851	MC	10	1	1,008	0.6883							1.18
2012_ESci_FT	851	MC	11	1	1,008	-0.5978							1.05
2012_ESci_FT	851	MC	12	1	1,008	1.5994							0.98
2012_ESci_FT	851	CR	41	1	1,008	1.2186							0.87
2012_ESci_FT	851	CR	42	1	1,008	1.7273							1.23
2012_ESci_FT	851	CR	43	1	1,008	1.0028							1.01
2012_ESci_FT	851	CR	44	1	1,008	0.6339							0.88
2012_ESci_FT	851	CR	45	1	1,008	1.5710							0.87
2012_ESci_FT	851	CR	46	1	1,008	-0.3146							0.88
2012_ESci_FT	851	CR	47	1	1,008	0.8024							0.90
2012_ESci_FT	851	CR	48	1	1,008	1.2081							0.94
2012_ESci_FT	851	CR	49	1	1,008	0.8472							0.98
2012_ESci_FT	852	MC	01	1	1,003	0.1184							1.28
2012_ESci_FT	852	MC	02	1	1,003	-0.3711							1.06

Test	Form	Type	Item	Max	N-Count	RID	S1	S2	S3	S4	S5	S6	INFIT
2012_ESci_FT	852	MC	03	1	1,003	0.8349							1.05
2012_ESci_FT	852	MC	04	1	1,003	-1.1155							0.88
2012_ESci_FT	852	MC	05	1	1,003	0.5520							0.98
2012_ESci_FT	852	MC	06	1	1,003	-0.5897							1.01
2012_ESci_FT	852	MC	07	1	1,003	0.9731							1.07
2012_ESci_FT	852	MC	08	1	1,003	0.4301							1.04
2012_ESci_FT	852	MC	09	1	1,003	0.0374							1.00
2012_ESci_FT	852	MC	10	1	1,003	0.7322							1.08
2012_ESci_FT	852	MC	11	1	1,003	0.9483							1.19
2012_ESci_FT	852	MC	12	1	1,003	0.3615							1.13
2012_ESci_FT	852	CR	41	1	1,003	0.4838							0.88
2012_ESci_FT	852	CR	42	1	1,003	1.3880							1.13
2012_ESci_FT	852	CR	43	1	1,003	0.0780							0.83
2012_ESci_FT	852	CR	44	1	1,003	1.9030							1.01
2012_ESci_FT	852	CR	45	1	1,003	0.8989							0.89
2012_ESci_FT	852	CR	46	1	1,003	0.2084							0.82
2012_ESci_FT	852	CR	47	1	1,003	1.3403							0.92
2012_ESci_FT	852	CR	48	1	1,003	1.1795							0.78
2012_ESci_FT	852	CR	49	1	1,003	1.0479							0.96
2012_ESci_FT	853	MC	01	1	1,005	-0.6184							0.98
2012_ESci_FT	853	MC	02	1	1,005	-0.4035							1.00
2012_ESci_FT	853	MC	03	1	1,005	-0.0421							1.27
2012_ESci_FT	853	MC	04	1	1,005	-1.3968							0.91
2012_ESci_FT	853	MC	05	1	1,005	0.9097							1.14
2012_ESci_FT	853	MC	06	1	1,005	1.0539							1.25

Test	Form	Type	Item	Max	N-Count	RID	S1	S2	S3	S4	S5	S6	INFIT
2012_ESci_FT	853	MC	07	1	1,005	-0.1242							0.98
2012_ESci_FT	853	MC	08	1	1,005	-0.4830							1.02
2012_ESci_FT	853	MC	09	1	1,005	0.3888							0.96
2012_ESci_FT	853	MC	10	1	1,005	-0.1242							0.97
2012_ESci_FT	853	MC	11	1	1,005	0.5501							1.11
2012_ESci_FT	853	MC	12	1	1,005	0.7578							1.01
2012_ESci_FT	853	MC	13	1	1,005	0.2690							1.09
2012_ESci_FT	853	MC	14	1	1,005	1.2709							1.01
2012_ESci_FT	853	CR	41	1	1,005	1.0056							0.98
2012_ESci_FT	853	CR	42	1	1,005	1.0636							0.92
2012_ESci_FT	853	CR	43	1	1,005	-0.5177							0.88
2012_ESci_FT	853	CR	44	1	1,005	1.2408							0.84
2012_ESci_FT	853	CR	45	1	1,005	0.9623							0.92
2012_ESci_FT	853	CR	46	1	1,005	-0.0727							0.80
2012_ESci_FT	853	CR	47	1	1,005	0.4412							0.92
2012_ESci_FT	854	MC	01	1	997	-0.6173							1.05
2012_ESci_FT	854	MC	02	1	997	1.0189							1.02
2012_ESci_FT	854	MC	03	1	997	-0.4003							1.11
2012_ESci_FT	854	MC	04	1	997	0.7473							0.97
2012_ESci_FT	854	MC	05	1	997	-1.0464							0.99
2012_ESci_FT	854	MC	06	1	997	-0.9473							0.99
2012_ESci_FT	854	MC	07	1	997	-0.1693							1.04
2012_ESci_FT	854	MC	08	1	997	0.1717							1.04
2012_ESci_FT	854	MC	09	1	997	0.3163							1.12
2012_ESci_FT	854	MC	10	1	997	1.2270							1.11

Test	Form	Type	Item	Max	N-Count	RID	S1	S2	S3	S4	S5	S6	INFIT
2012_ESci_FT	854	MC	11	1	997	0.8455							1.21
2012_ESci_FT	854	CR	41	1	997	1.2322							0.93
2012_ESci_FT	854	CR	42	1	997	0.7522							0.92
2012_ESci_FT	854	CR	43	1	997	0.8652							1.07
2012_ESci_FT	854	CR	44	1	997	1.5308							0.88
2012_ESci_FT	854	CR	45	1	997	0.4688							0.97
2012_ESci_FT	854	CR	46	1	997	0.7082							0.98
2012_ESci_FT	854	CR	47	1	997	0.7522							0.85
2012_ESci_FT	854	CR	48	1	997	0.8209							0.96
2012_ESci_FT	854	CR	49	1	997	2.7101							0.92
2012_ESci_FT	854	CR	50	1	997	0.6789							0.81
2012_ESci_FT	855	MC	01	1	980	0.9244							1.01
2012_ESci_FT	855	MC	02	1	980	-1.0156							1.02
2012_ESci_FT	855	MC	03	1	980	-1.0899							0.94
2012_ESci_FT	855	MC	04	1	980	1.0263							1.12
2012_ESci_FT	855	MC	05	1	980	0.1295							1.18
2012_ESci_FT	855	MC	06	1	980	0.6424							1.25
2012_ESci_FT	855	MC	07	1	980	-1.0748							0.90
2012_ESci_FT	855	MC	08	1	980	0.1139							0.93
2012_ESci_FT	855	MC	09	1	980	-0.7400							0.90
2012_ESci_FT	855	MC	10	1	980	0.0193							1.01
2012_ESci_FT	855	MC	11	1	980	-0.5385							0.94
2012_ESci_FT	855	MC	12	1	980	0.1814							0.93
2012_ESci_FT	855	MC	13	1	980	0.1399							1.04
2012_ESci_FT	855	CR	41	1	980	1.3139							0.96

Test	Form	Type	Item	Max	N-Count	RID	S1	S2	S3	S4	S5	S6	INFIT
2012_ESci_FT	855	CR	42	1	980	-0.1202							0.97
2012_ESci_FT	855	CR	43	1	980	0.4918							0.93
2012_ESci_FT	855	CR	44	1	980	0.7930							0.92
2012_ESci_FT	855	CR	45	1	980	2.1058							0.99
2012_ESci_FT	855	CR	46	1	980	1.8394							1.12
2012_ESci_FT	855	CR	47	1	980	1.8643							0.91
2012_ESci_FT	855	CR	48	1	980	0.8535							0.96
2012_ESci_FT	856	MC	01	1	910	1.5609							1.24
2012_ESci_FT	856	MC	02	1	910	0.3902							0.91
2012_ESci_FT	856	MC	03	1	910	-0.3329							0.98
2012_ESci_FT	856	MC	04	1	910	-0.0090							1.16
2012_ESci_FT	856	MC	05	1	910	-1.2627							1.06
2012_ESci_FT	856	MC	06	1	910	0.2577							1.08
2012_ESci_FT	856	MC	07	1	910	0.3109							1.10
2012_ESci_FT	856	MC	08	1	910	0.5474							1.01
2012_ESci_FT	856	MC	09	1	910	0.1013							1.12
2012_ESci_FT	856	MC	10	1	910	1.0780							1.07
2012_ESci_FT	856	MC	11	1	910	-0.3329							1.00
2012_ESci_FT	856	CR	41	1	910	1.8216							0.95
2012_ESci_FT	856	CR	42	1	910	-0.3450							0.85
2012_ESci_FT	856	CR	43	1	910	0.8921							0.89
2012_ESci_FT	856	CR	44	1	910	0.2684							0.98
2012_ESci_FT	856	CR	45	1	910	1.6823							0.89
2012_ESci_FT	856	CR	46	1	910	-0.2850							0.95
2012_ESci_FT	856	CR	47	1	910	0.1176							1.03

Test	Form	Type	Item	Max	N-Count	RID	S1	S2	S3	S4	S5	S6	INFIT
2012_ESci_FT	856	CR	48	1	910	0.8030							0.91
2012_ESci_FT	856	CR	49	1	910	0.4427							0.82
2012_ESci_FT	856	CR	50	1	910	1.2190							1.02
2012_ESci_FT	857	MC	01	1	982	-1.1722							1.00
2012_ESci_FT	857	MC	02	1	982	0.5752							0.97
2012_ESci_FT	857	MC	03	1	982	0.3715							1.07
2012_ESci_FT	857	MC	04	1	982	0.0162							1.05
2012_ESci_FT	857	MC	05	1	982	0.0162							1.01
2012_ESci_FT	857	MC	06	1	982	-0.7196							0.91
2012_ESci_FT	857	MC	07	1	982	1.7986							1.27
2012_ESci_FT	857	MC	08	1	982	0.7440							0.99
2012_ESci_FT	857	MC	09	1	982	-1.0230							0.88
2012_ESci_FT	857	MC	10	1	982	-0.5117							0.92
2012_ESci_FT	857	MC	11	1	982	-0.0465							1.08
2012_ESci_FT	857	MC	12	1	982	0.4461							1.14
2012_ESci_FT	857	MC	13	1	982	0.7390							1.08
2012_ESci_FT	857	CR	41	1	982	-1.0447							1.03
2012_ESci_FT	857	CR	42	1	982	2.5511							0.92
2012_ESci_FT	857	CR	43	1	982	1.3023							0.98
2012_ESci_FT	857	CR	44	1	982	1.9310							0.92
2012_ESci_FT	857	CR	45	1	982	0.9546							0.82
2012_ESci_FT	857	CR	46	1	982	1.1806							0.91
2012_ESci_FT	857	CR	47	1	982	2.0367							0.95
2012_ESci_FT	857	CR	48	1	982	1.2016							1.02
2012_ESci_FT	858	MC	01	1	999	0.0459							0.92

Test	Form	Type	Item	Max	N-Count	RID	S1	S2	S3	S4	S5	S6	INFIT
2012_ESci_FT	858	MC	02	1	999	1.0229							1.20
2012_ESci_FT	858	MC	03	1	999	0.3039							1.07
2012_ESci_FT	858	MC	04	1	999	0.1958							1.11
2012_ESci_FT	858	MC	05	1	999	0.1362							1.00
2012_ESci_FT	858	MC	06	1	999	-1.2099							1.05
2012_ESci_FT	858	MC	07	1	999	2.1407							1.20
2012_ESci_FT	858	MC	08	1	999	0.6139							1.01
2012_ESci_FT	858	MC	09	1	999	-0.2722							1.01
2012_ESci_FT	858	MC	10	1	999	0.3381							1.12
2012_ESci_FT	858	MC	11	1	999	0.3624							1.01
2012_ESci_FT	858	MC	12	1	999	-0.9603							0.99
2012_ESci_FT	858	CR	41	1	999	1.2293							0.90
2012_ESci_FT	858	CR	42	1	999	0.3137							0.97
2012_ESci_FT	858	CR	43	1	999	1.6204							0.87
2012_ESci_FT	858	CR	44	1	999	0.7056							1.00
2012_ESci_FT	858	CR	45	1	999	0.2205							0.89
2012_ESci_FT	858	CR	46	1	999	1.9938							0.92
2012_ESci_FT	858	CR	47	1	999	0.3186							0.92
2012_ESci_FT	858	CR	48	1	999	1.3591							0.98
2012_ESci_FT	858	CR	49	1	999	0.0358							0.83
2012_ESci_FT	859	MC	01	1	984	1.9668							1.19
2012_ESci_FT	859	MC	02	1	984	0.4609							0.99
2012_ESci_FT	859	MC	03	1	984	-0.1089							1.17
2012_ESci_FT	859	MC	04	1	984	0.3434							1.32
2012_ESci_FT	859	MC	05	1	984	-0.9726							0.93

Test	Form	Type	Item	Max	N-Count	RID	S1	S2	S3	S4	S5	S6	INFIT
2012_ESci_FT	859	MC	06	1	984	1.2267							1.09
2012_ESci_FT	859	MC	07	1	984	-0.4180							0.96
2012_ESci_FT	859	MC	08	1	984	0.0011							0.95
2012_ESci_FT	859	MC	09	1	984	0.4853							1.06
2012_ESci_FT	859	MC	10	1	984	-0.3382							0.96
2012_ESci_FT	859	MC	11	1	984	-0.0825							0.98
2012_ESci_FT	859	CR	41	1	984	1.6211							0.94
2012_ESci_FT	859	CR	42	1	984	2.5652							1.00
2012_ESci_FT	859	CR	43	1	984	0.5144							1.05
2012_ESci_FT	859	CR	44	1	984	2.4016							0.95
2012_ESci_FT	859	CR	45	1	984	-1.0159							0.79
2012_ESci_FT	859	CR	46	1	984	0.7084							0.95
2012_ESci_FT	859	CR	47	1	984	0.8590							0.86
2012_ESci_FT	859	CR	48	1	984	0.0115							0.81
2012_ESci_FT	859	CR	49	1	984	1.4942							0.98
2012_ESci_FT	859	CR	50	1	984	1.7590							0.97
2012_ESci_FT	860	MC	01	1	997	-0.7410							0.96
2012_ESci_FT	860	MC	02	1	997	0.0612							1.02
2012_ESci_FT	860	MC	03	1	997	0.3922							1.19
2012_ESci_FT	860	MC	04	1	997	-0.3760							0.95
2012_ESci_FT	860	MC	05	1	997	0.7654							1.11
2012_ESci_FT	860	MC	06	1	997	0.7168							1.12
2012_ESci_FT	860	MC	07	1	997	-0.5647							0.96
2012_ESci_FT	860	MC	08	1	997	-1.1367							1.04
2012_ESci_FT	860	MC	09	1	997	0.1014							1.08

Test	Form	Type	Item	Max	N-Count	RID	S1	S2	S3	S4	S5	S6	INFIT
2012_ESci_FT	860	MC	10	1	997	1.9802							1.19
2012_ESci_FT	860	MC	11	1	997	-0.0818							0.98
2012_ESci_FT	860	CR	41	1	997	2.1695							1.23
2012_ESci_FT	860	CR	42	1	997	1.0458							0.93
2012_ESci_FT	860	CR	43	1	997	2.5403							0.92
2012_ESci_FT	860	CR	44	1	997	-0.2936							0.94
2012_ESci_FT	860	CR	45	1	997	0.4213							0.91
2012_ESci_FT	860	CR	46	1	997	2.2633							0.95
2012_ESci_FT	860	CR	47	1	997	0.8825							0.88
2012_ESci_FT	860	CR	48	1	997	0.1014							0.85
2012_ESci_FT	860	CR	49	1	997	0.9120							0.83
2012_ESci_FT	860	CR	50	1	997	2.1695							0.92
2012_ESci_FT	861	MC	01	1	1,005	-0.5422							1.04
2012_ESci_FT	861	MC	02	1	1,005	-0.3669							1.01
2012_ESci_FT	861	MC	03	1	1,005	-0.2687							1.02
2012_ESci_FT	861	MC	04	1	1,005	2.1641							1.04
2012_ESci_FT	861	MC	05	1	1,005	0.9597							1.06
2012_ESci_FT	861	MC	06	1	1,005	0.8492							1.28
2012_ESci_FT	861	MC	07	1	1,005	0.7398							0.96
2012_ESci_FT	861	MC	08	1	1,005	0.1409							1.01
2012_ESci_FT	861	MC	09	1	1,005	0.6114							1.04
2012_ESci_FT	861	MC	10	1	1,005	0.5818							1.04
2012_ESci_FT	861	MC	11	1	1,005	0.9043							1.07
2012_ESci_FT	861	MC	12	1	1,005	1.4933							1.19

Test	Form	Type	Item	Max	N-Count	RID	S1	S2	S3	S4	S5	S6	INFIT
2012_ESci_FT	861	CR	41	1	1,005	1.8716							0.97
2012_ESci_FT	861	CR	42	1	1,005	1.5157							0.92
2012_ESci_FT	861	CR	43	1	1,005	-0.7337							0.95
2012_ESci_FT	861	CR	44	1	1,005	0.7894							0.88
2012_ESci_FT	861	CR	45	1	1,005	-0.6007							0.98
2012_ESci_FT	861	CR	46	1	1,005	1.7185							0.90
2012_ESci_FT	861	CR	47	1	1,005	0.2460							0.88
2012_ESci_FT	861	CR	48	1	1,005	1.3938							0.83
2012_ESci_FT	861	CR	49	1	1,005	2.1783							0.89
2012_ESci_FT	862	MC	01	1	1,001	-0.3637							1.00
2012_ESci_FT	862	MC	02	1	1,001	-0.5540							1.10
2012_ESci_FT	862	MC	03	1	1,001	0.1921							0.93
2012_ESci_FT	862	MC	04	1	1,001	0.2269							1.33
2012_ESci_FT	862	MC	05	1	1,001	0.7778							0.98
2012_ESci_FT	862	MC	06	1	1,001	0.5353							1.12
2012_ESci_FT	862	MC	07	1	1,001	-0.9025							1.01
2012_ESci_FT	862	MC	08	1	1,001	-1.0427							1.04
2012_ESci_FT	862	MC	09	1	1,001	-0.5899							0.86
2012_ESci_FT	862	MC	10	1	1,001	-0.4202							0.97
2012_ESci_FT	862	MC	11	1	1,001	1.3018							1.31
2012_ESci_FT	862	MC	12	1	1,001	0.0663							1.12
2012_ESci_FT	862	MC	13	1	1,001	1.2810							1.08
2012_ESci_FT	862	CR	41	1	1,001	1.8118							0.95
2012_ESci_FT	862	CR	42	1	1,001	1.8118							0.83
2012_ESci_FT	862	CR	43	1	1,001	-1.0572							0.81

Test	Form	Type	Item	Max	N-Count	RID	S1	S2	S3	S4	S5	S6	INFIT
2012_ESci_FT	862	CR	44	1	1,001	-0.6817							0.81
2012_ESci_FT	862	CR	45	1	1,001	-0.5126							0.87
2012_ESci_FT	862	CR	46	1	1,001	1.5366							0.94
2012_ESci_FT	862	CR	47	1	1,001	1.5754							0.97
2012_ESci_FT	862	CR	48	1	1,001	0.3697							0.84
2012_ESci_FT	863	MC	01	1	994	0.3408							1.08
2012_ESci_FT	863	MC	02	1	994	0.2385							0.95
2012_ESci_FT	863	MC	03	1	994	-0.5132							0.98
2012_ESci_FT	863	MC	04	1	994	-0.2008							1.19
2012_ESci_FT	863	MC	05	1	994	2.2950							1.32
2012_ESci_FT	863	MC	06	1	994	0.0954							0.99
2012_ESci_FT	863	MC	07	1	994	0.5292							1.11
2012_ESci_FT	863	MC	08	1	994	-0.9072							1.13
2012_ESci_FT	863	MC	09	1	994	0.6305							1.04
2012_ESci_FT	863	MC	10	1	994	1.7571							1.05
2012_ESci_FT	863	MC	11	1	994	0.7658							0.95
2012_ESci_FT	863	MC	12	1	994	0.7416							0.94
2012_ESci_FT	863	CR	41	1	994	1.9878							0.94
2012_ESci_FT	863	CR	42	1	994	1.9361							0.97
2012_ESci_FT	863	CR	43	1	994	1.4830							0.96
2012_ESci_FT	863	CR	44	1	994	0.4231							0.89
2012_ESci_FT	863	CR	45	1	994	0.9318							0.89
2012_ESci_FT	863	CR	46	1	994	2.3715							0.86
2012_ESci_FT	863	CR	47	1	994	0.9713							0.91
2012_ESci_FT	863	CR	48	1	994	1.7333							0.89

Test	Form	Type	Item	Max	N-Count	RID	S1	S2	S3	S4	S5	S6	INFIT
2012_ESci_FT	863	CR	49	1	994	1.0909							0.93
2012_ESci_FT	864	MC	01	1	984	-1.1432							1.05
2012_ESci_FT	864	MC	02	1	984	0.9969							1.12
2012_ESci_FT	864	MC	03	1	984	0.1086							1.09
2012_ESci_FT	864	MC	04	1	984	-0.2079							1.06
2012_ESci_FT	864	MC	05	1	984	1.0884							1.11
2012_ESci_FT	864	MC	06	1	984	0.2659							1.12
2012_ESci_FT	864	MC	07	1	984	0.2256							1.08
2012_ESci_FT	864	MC	08	1	984	-1.7238							0.95
2012_ESci_FT	864	MC	09	1	984	-0.5566							0.96
2012_ESci_FT	864	MC	10	1	984	0.8864							1.26
2012_ESci_FT	864	MC	11	1	984	0.6235							0.97
2012_ESci_FT	864	MC	12	1	984	0.4950							0.91
2012_ESci_FT	864	CR	41	1	984	0.6729							0.91
2012_ESci_FT	864	CR	42	1	984	-0.2024							0.91
2012_ESci_FT	864	CR	43	1	984	0.3610							0.83
2012_ESci_FT	864	CR	44	1	984	1.0171							0.86
2012_ESci_FT	864	CR	45	1	984	2.9310							1.06
2012_ESci_FT	864	CR	46	1	984	0.8315							0.98
2012_ESci_FT	864	CR	47	1	984	0.3110							0.89
2012_ESci_FT	864	CR	48	1	984	1.3714							0.94
2012_ESci_FT	864	CR	49	1	984	-0.4209							0.91
2012_ESci_FT	865	MC	01	1	981	0.1590							1.13
2012_ESci_FT	865	MC	02	1	981	0.0100							0.86
2012_ESci_FT	865	MC	03	1	981	0.3500							0.99

Test	Form	Type	Item	Max	N-Count	RID	S1	S2	S3	S4	S5	S6	INFIT
2012_ESci_FT	865	MC	04	1	981	0.4700							1.10
2012_ESci_FT	865	MC	05	1	981	-0.0400							1.04
2012_ESci_FT	865	MC	06	1	981	0.4900							1.10
2012_ESci_FT	865	MC	07	1	981	1.6800							1.22
2012_ESci_FT	865	MC	08	1	981	0.2300							1.02
2012_ESci_FT	865	MC	09	1	981	0.1000							1.19
2012_ESci_FT	865	MC	10	1	981	0.4200							1.13
2012_ESci_FT	865	MC	11	1	981	1.3000							0.98
2012_ESci_FT	865	MC	12	1	981	0.4300							1.03
2012_ESci_FT	865	MC	13	1	981	-0.7500							1.09
2012_ESci_FT	865	MC	14	1	981	-0.6400							0.97
2012_ESci_FT	865	CR	41	1	981	0.3700							0.89
2012_ESci_FT	865	CR	42	1	981	0.3295							0.92
2012_ESci_FT	865	CR	43	2	981	-0.7500	0.3900	-0.3900					0.79
2012_ESci_FT	865	CR	44	1	981	0.2100							0.82
2012_ESci_FT	865	CR	45	1	981	0.6800							0.95
2012_ESci_FT	865	CR	46	2	981	-0.0700	0.2200	-0.2200					0.98

Appendix C: DIF Statistics

Form	Item	Item Type	MH Delta	MH Chi-Sq	Effect Size	DIF Category	Favored Group
845	01	MC	-0.74	4.03	-0.13		
845	02	MC	0.26	0.57	0.04		
845	03	MC	-0.69	4.09	-0.14		
845	04	MC	0.27	0.61	0.05		
845	05	MC	0.10	0.08	0.02		
845	06	MC	0.30	0.73	0.06		
845	07	MC	-0.14	0.15	-0.04		
845	08	MC	0.88	2.17	0.09		
845	09	MC	0.75	3.46	0.12		
845	10	MC	0.39	0.78	0.05		
845	11	MC	-0.05	0.02	-0.01		
845	41	CR		20.25	-0.28	CC	Male
845	42	CR		0.18	0.01		
845	43	CR		1.14	0.07		
845	44	CR		8.99	-0.18	BB	Male
845	45	CR		0.56	0.04		
845	46	CR		6.01	0.16		
845	47	CR		0.21	-0.01		
845	48	CR		7.49	0.16		
845	49	CR		0.00	0.02		
845	50	CR		0.31	-0.03		
846	01	MC	-0.68	3.35	-0.13		
846	02	MC	-0.69	3.98	-0.12		
846	03	MC	-0.55	2.42	-0.12		
846	04	MC	0.61	2.66	0.10		
846	05	MC	-0.11	0.10	-0.03		

Form	Item	Item Type	MH Delta	MH Chi-Sq	Effect Size	DIF Category	Favored Group
846	06	MC	-0.18	0.29	-0.04		
846	07	MC	0.65	3.74	0.13		
846	08	MC	1.28	12.76	0.22	B	Female
846	09	MC	0.02	0.00	0.01		
846	10	MC	-0.54	1.71	-0.08		
846	11	MC	-0.54	2.21	-0.09		
846	41	CR		0.83	-0.05		
846	42	CR		0.99	0.06		
846	43	CR		2.72	0.08		
846	44	CR		0.26	-0.03		
846	45	CR		0.01	0.01		
846	46	CR		1.50	0.08		
846	47	CR		2.47	0.09		
846	48	CR		0.03	-0.01		
846	49	CR		1.08	-0.05		
846	50	CR		1.31	-0.07		
847	01	MC	-0.84	5.85	-0.15		
847	02	MC	-1.21	9.19	-0.17	B	Male
847	03	MC	-0.60	2.32	-0.09		
847	04	MC	1.29	14.60	0.26	B	Female
847	05	MC	-0.43	1.56	-0.07		
847	06	MC	0.48	1.99	0.09		
847	07	MC	0.55	2.57	0.09		
847	08	MC	0.07	0.04	0.00		
847	09	MC	-0.47	1.34	-0.07		
847	10	MC	-1.01	5.86	-0.16	B	Male

Form	Item	Item Type	MH Delta	MH Chi-Sq	Effect Size	DIF Category	Favored Group
847	11	MC	-0.18	0.26	0.00		
847	12	MC	-0.38	1.04	-0.07		
847	41	CR		12.13	0.20	BB	Female
847	42	CR		0.18	0.03		
847	43	CR		0.28	0.03		
847	44	CR		0.37	-0.04		
847	45	CR		1.33	0.07		
847	46	CR		0.98	0.04		
847	47	CR		0.53	-0.06		
847	48	CR		0.24	0.02		
847	49	CR		0.01	0.00		
848	01	MC	-0.20	0.34	-0.02		
848	02	MC	-0.21	0.33	-0.02		
848	03	MC	-0.85	4.79	-0.14		
848	04	MC	0.03	0.01	0.00		
848	05	MC	0.30	0.59	0.05		
848	06	MC	-0.12	0.11	-0.02		
848	07	MC	-0.17	0.21	-0.04		
848	08	MC	1.27	9.55	0.18	B	Female
848	09	MC	0.18	0.25	0.03		
848	10	MC	-1.04	5.15	-0.13	B	Male
848	11	MC	-0.04	0.01	0.00		
848	12	MC	0.04	0.01	0.01		
848	13	MC	-0.25	0.52	-0.06		
848	41	CR		0.32	-0.04		
848	42	CR		2.09	-0.09		

Form	Item	Item Type	MH Delta	MH Chi-Sq	Effect Size	DIF Category	Favored Group
848	43	CR		0.44	-0.03		
848	44	CR		0.02	-0.01		
848	45	CR		6.14	0.18	BB	Female
848	46	CR		7.54	0.16		
848	47	CR		0.02	0.01		
848	48	CR		0.04	-0.02		
849	01	MC	-0.68	3.62	-0.11		
849	02	MC	0.26	0.54	0.06		
849	03	MC	-1.38	14.06	-0.24	B	Male
849	04	MC	0.07	0.04	0.02		
849	05	MC	0.09	0.06	0.02		
849	06	MC	0.44	1.63	0.08		
849	07	MC	-0.46	1.73	-0.08		
849	08	MC	1.92	16.06	0.24	C	Female
849	09	MC	0.03	0.01	0.00		
849	10	MC	0.28	0.46	0.04		
849	11	MC	0.33	0.87	0.05		
849	12	MC	0.91	5.62	0.14		
849	13	MC	0.12	0.12	0.02		
849	41	CR		0.41	0.05		
849	42	CR		0.06	-0.02		
849	43	CR		0.04	-0.02		
849	44	CR		8.17	-0.16		
849	45	CR		1.11	0.07		
849	46	CR		0.00	0.00		
849	47	CR		0.00	0.01		

Form	Item	Item Type	MH Delta	MH Chi-Sq	Effect Size	DIF Category	Favored Group
849	48	CR		2.49	-0.09		
850	01	MC	-0.76	2.66	-0.11		
850	02	MC	-0.02	0.00	0.00		
850	03	MC	-0.74	3.45	-0.12		
850	04	MC	1.06	7.47	0.17	B	Female
850	05	MC	-0.80	4.94	-0.14		
850	06	MC	-0.20	0.34	-0.03		
850	07	MC	0.30	0.36	0.05		
850	08	MC	-1.32	12.43	-0.20	B	Male
850	09	MC	0.07	0.03	0.00		
850	10	MC	-0.16	0.13	-0.02		
850	11	MC	-0.44	1.47	-0.08		
850	41	CR		0.73	-0.05		
850	42	CR		1.32	-0.07		
850	43	CR		1.71	0.08		
850	44	CR		4.10	0.12		
850	45	CR		2.07	0.10		
850	46	CR		5.09	0.12		
850	47	CR		1.02	0.06		
850	48	CR		0.30	0.03		
850	49	CR		5.74	0.12		
850	50	CR		0.00	0.00		
851	01	MC	-0.65	3.53	-0.11		
851	02	MC	-0.70	3.82	-0.13		
851	03	MC	0.04	0.02	0.02		
851	04	MC	-0.99	8.07	-0.16		

Form	Item	Item Type	MH Delta	MH Chi-Sq	Effect Size	DIF Category	Favored Group
851	05	MC	1.18	5.93	0.14	B	Female
851	06	MC	0.53	1.90	0.08		
851	07	MC	0.56	2.63	0.13		
851	08	MC	-1.22	12.48	-0.22	B	Male
851	09	MC	-0.35	0.88	-0.06		
851	10	MC	0.70	4.32	0.12		
851	11	MC	0.27	0.50	0.04		
851	12	MC	-0.01	0.00	-0.01		
851	41	CR		0.26	-0.03		
851	42	CR		4.11	0.12		
851	43	CR		0.00	0.00		
851	44	CR		4.56	-0.12		
851	45	CR		3.48	-0.08		
851	46	CR		0.43	-0.04		
851	47	CR		1.32	0.06		
851	48	CR		6.55	0.15		
851	49	CR		7.63	0.14		
852	01	MC	-0.67	4.17	-0.10		
852	02	MC	-0.75	4.00	-0.13		
852	03	MC	0.04	0.01	0.02		
852	04	MC	-1.32	6.98	-0.16	B	Male
852	05	MC	-1.58	18.60	-0.25	C	Male
852	06	MC	0.94	5.54	0.15		
852	07	MC	-0.11	0.10	-0.02		
852	08	MC	-0.06	0.03	-0.01		
852	09	MC	0.71	3.71	0.11		

Form	Item	Item Type	MH Delta	MH Chi-Sq	Effect Size	DIF Category	Favored Group
852	10	MC	0.95	7.25	0.15		
852	11	MC	-0.63	3.53	-0.11		
852	12	MC	0.66	3.86	0.12		
852	41	CR		0.47	0.03		
852	42	CR		8.22	-0.19	BB	Male
852	43	CR		3.87	0.11		
852	44	CR		9.25	0.16		
852	45	CR		0.04	0.01		
852	46	CR		0.01	0.00		
852	47	CR		2.00	0.09		
852	48	CR		0.23	-0.02		
852	49	CR		0.21	0.02		
853	01	MC	-0.44	1.18	-0.07		
853	02	MC	-0.43	1.26	-0.08		
853	03	MC	-0.06	0.03	-0.01		
853	04	MC	1.59	9.78	0.19	C	Female
853	05	MC	0.06	0.03	-0.01		
853	06	MC	0.30	0.81	0.07		
853	07	MC	-0.52	1.97	-0.09		
853	08	MC	1.15	9.08	0.18	B	Female
853	09	MC	-1.18	10.66	-0.20	B	Male
853	10	MC	-0.09	0.06	-0.01		
853	11	MC	0.33	0.94	0.07		
853	12	MC	-1.31	14.17	-0.24	B	Male
853	13	MC	0.63	3.44	0.12		
853	14	MC	-0.76	4.47	-0.13		

Form	Item	Item Type	MH Delta	MH Chi-Sq	Effect Size	DIF Category	Favored Group
853	41	CR		0.00	0.02		
853	42	CR		0.45	0.04		
853	43	CR		2.30	0.09		
853	44	CR		3.05	-0.09		
853	45	CR		0.73	0.06		
853	46	CR		0.20	0.03		
853	47	CR		5.56	0.13		
854	01	MC	-0.14	0.14	-0.02		
854	02	MC	-0.21	0.37	-0.04		
854	03	MC	0.94	6.57	0.16		
854	04	MC	-0.53	2.24	-0.09		
854	05	MC	0.15	0.12	0.03		
854	06	MC	0.38	0.85	0.07		
854	07	MC	-0.59	2.62	-0.10		
854	08	MC	0.68	3.88	0.11		
854	09	MC	0.28	0.70	0.04		
854	10	MC	0.49	2.00	0.09		
854	11	MC	-0.44	1.84	-0.09		
854	41	CR		4.39	-0.13		
854	42	CR		0.10	-0.03		
854	43	CR		3.51	-0.11		
854	44	CR		2.54	-0.09		
854	45	CR		3.52	0.11		
854	46	CR		1.15	-0.05		
854	47	CR		3.45	0.11		
854	48	CR		0.04	0.02		

Form	Item	Item Type	MH Delta	MH Chi-Sq	Effect Size	DIF Category	Favored Group
854	49	CR		2.79	0.09		
854	50	CR		0.51	-0.04		
855	01	MC	-0.66	3.23	-0.10		
855	02	MC	-0.04	0.01	0.01		
855	03	MC	1.50	10.11	0.22	C	Female
855	04	MC	0.06	0.03	0.01		
855	05	MC	0.05	0.02	0.04		
855	06	MC	-0.19	0.32	-0.04		
855	07	MC	0.51	1.12	0.09		
855	08	MC	-0.17	0.20	-0.02		
855	09	MC	-0.34	0.63	-0.02		
855	10	MC	0.39	1.16	0.05		
855	11	MC	-0.06	0.02	0.01		
855	12	MC	0.08	0.04	0.01		
855	13	MC	0.30	0.70	0.07		
855	41	CR		10.36	-0.18	BB	Male
855	42	CR		0.19	0.03		
855	43	CR		0.05	-0.02		
855	44	CR		0.08	-0.01		
855	45	CR		4.59	0.15		
855	46	CR		0.05	0.02		
855	47	CR		0.27	-0.03		
855	48	CR		0.25	-0.01		
856	01	MC	0.26	0.52	0.07		
856	02	MC	0.27	0.47	0.06		
856	03	MC	-0.14	0.11	0.01		

Form	Item	Item Type	MH Delta	MH Chi-Sq	Effect Size	DIF Category	Favored Group
856	04	MC	-0.33	0.83	-0.05		
856	05	MC	0.77	2.69	0.15		
856	06	MC	0.76	4.40	0.16		
856	07	MC	0.31	0.73	0.09		
856	08	MC	-0.36	0.97	-0.04		
856	09	MC	-0.54	2.25	-0.08		
856	10	MC	-0.70	3.74	-0.11		
856	11	MC	-0.12	0.08	0.02		
856	41	CR		0.08	0.00		
856	42	CR		2.64	0.11		
856	43	CR		2.88	0.12		
856	44	CR		5.40	-0.11		
856	45	CR		0.53	-0.02		
856	46	CR		1.93	0.11		
856	47	CR		1.31	0.10		
856	48	CR		0.17	0.04		
856	49	CR		2.74	-0.07		
856	50	CR		0.67	-0.03		
857	01	MC	-1.04	4.91	-0.14	B	Male
857	02	MC	-1.04	8.07	-0.15	B	Male
857	03	MC	-0.53	2.29	-0.10		
857	04	MC	-0.37	1.02	-0.05		
857	05	MC	-0.06	0.03	-0.01		
857	06	MC	-0.55	1.61	-0.06		
857	07	MC	0.30	0.65	0.07		
857	08	MC	0.25	0.48	0.05		

Form	Item	Item Type	MH Delta	MH Chi-Sq	Effect Size	DIF Category	Favored Group
857	09	MC	0.42	0.82	0.09		
857	10	MC	0.62	2.18	0.10		
857	11	MC	-0.29	0.65	-0.02		
857	12	MC	0.14	0.16	0.04		
857	13	MC	0.69	3.81	0.15		
857	41	CR		1.50	-0.06		
857	42	CR		0.60	0.04		
857	43	CR		8.82	-0.16		
857	44	CR		0.44	-0.05		
857	45	CR		1.42	0.07		
857	46	CR		6.64	0.16		
857	47	CR		15.09	0.23	BB	Female
857	48	CR		0.15	0.03		
858	01	MC	-0.43	1.32	-0.07		
858	02	MC	0.24	0.54	0.06		
858	03	MC	0.44	1.69	0.07		
858	04	MC	-0.48	2.12	-0.09		
858	05	MC	0.23	0.43	0.04		
858	06	MC	0.54	1.56	0.07		
858	07	MC	0.47	1.42	0.08		
858	08	MC	-0.72	4.36	-0.13		
858	09	MC	-0.94	6.47	-0.15		
858	10	MC	0.02	0.00	0.01		
858	11	MC	-0.95	7.26	-0.16		
858	12	MC	0.38	0.83	0.06		
858	41	CR		0.81	0.05		

Form	Item	Item Type	MH Delta	MH Chi-Sq	Effect Size	DIF Category	Favored Group
858	42	CR		7.97	0.16		
858	43	CR		5.57	-0.13		
858	44	CR		13.91	0.22	BB	Female
858	45	CR		2.61	0.09		
858	46	CR		0.60	-0.06		
858	47	CR		0.17	-0.02		
858	48	CR		0.45	-0.05		
858	49	CR		1.33	-0.06		
859	01	MC	-0.13	0.11	-0.02		
859	02	MC	-0.46	1.68	-0.08		
859	03	MC	0.41	1.32	0.06		
859	04	MC	-0.24	0.53	-0.05		
859	05	MC	-1.32	8.10	-0.17	B	Male
859	06	MC	-0.42	1.41	-0.07		
859	07	MC	-0.32	0.62	-0.05		
859	08	MC	-0.58	2.33	-0.10		
859	09	MC	0.47	1.92	0.09		
859	10	MC	0.03	0.00	0.01		
859	11	MC	0.70	3.47	0.11		
859	41	CR		1.45	-0.08		
859	42	CR		1.74	-0.10		
859	43	CR		0.37	0.04		
859	44	CR		2.38	-0.09		
859	45	CR		0.03	-0.01		
859	46	CR		4.12	0.14		
859	47	CR		0.86	0.05		

Form	Item	Item Type	MH Delta	MH Chi-Sq	Effect Size	DIF Category	Favored Group
859	48	CR		0.84	0.05		
859	49	CR		4.25	0.12		
859	50	CR		0.67	0.06		
860	01	MC	-0.52	1.59	-0.08		
860	02	MC	-1.10	9.96	-0.20	B	Male
860	03	MC	-0.43	1.72	-0.08		
860	04	MC	0.66	2.96	0.10		
860	05	MC	0.35	1.06	0.06		
860	06	MC	-0.64	3.69	-0.12		
860	07	MC	0.26	0.45	0.05		
860	08	MC	0.47	1.17	0.08		
860	09	MC	0.21	0.38	0.05		
860	10	MC	0.71	3.60	0.12		
860	11	MC	0.96	6.88	0.15		
860	41	CR		8.38	-0.19	BB	Male
860	42	CR		19.03	-0.25	BB	Male
860	43	CR		0.13	0.01		
860	44	CR		6.32	0.14		
860	45	CR		5.57	0.14		
860	46	CR		0.26	0.04		
860	47	CR		5.88	-0.14		
860	48	CR		3.06	0.10		
860	49	CR		0.28	0.02		
860	50	CR		0.25	0.03		
861	01	MC	0.15	0.15	0.03		
861	02	MC	0.53	1.80	0.09		

Form	Item	Item Type	MH Delta	MH Chi-Sq	Effect Size	DIF Category	Favored Group
861	03	MC	0.31	0.63	0.04		
861	04	MC	0.74	2.83	0.12		
861	05	MC	1.11	8.89	0.18	B	Female
861	06	MC	0.27	0.68	0.04		
861	07	MC	-0.59	2.49	-0.09		
861	08	MC	0.59	2.55	0.10		
861	09	MC	0.01	0.00	0.00		
861	10	MC	-0.33	0.86	-0.04		
861	11	MC	-0.23	0.40	-0.04		
861	12	MC	0.24	0.41	0.04		
861	41	CR		2.46	0.08		
861	42	CR		0.02	-0.02		
861	43	CR		4.22	0.13		
861	44	CR		1.46	-0.08		
861	45	CR		0.07	-0.02		
861	46	CR		19.59	-0.25	BB	Male
861	47	CR		0.04	0.02		
861	48	CR		9.09	-0.16		
861	49	CR		11.64	-0.19	BB	Male
862	01	MC	-1.30	11.53	-0.19	B	Male
862	02	MC	0.29	0.59	0.03		
862	03	MC	0.64	2.91	0.09		
862	04	MC	-0.05	0.03	-0.02		
862	05	MC	-0.33	0.86	-0.05		
862	06	MC	0.30	0.81	0.06		
862	07	MC	0.35	0.67	0.06		

Form	Item	Item Type	MH Delta	MH Chi-Sq	Effect Size	DIF Category	Favored Group
862	08	MC	0.83	3.80	0.12		
862	09	MC	-0.31	0.50	-0.04		
862	10	MC	-0.27	0.45	-0.04		
862	11	MC	0.44	1.69	0.09		
862	12	MC	0.23	0.43	0.03		
862	13	MC	-0.12	0.13	-0.03		
862	41	CR		0.49	0.04		
862	42	CR		0.67	0.04		
862	43	CR		0.09	-0.01		
862	44	CR		0.32	0.03		
862	45	CR		0.13	0.03		
862	46	CR		0.22	-0.03		
862	47	CR		10.04	-0.18	BB	Male
862	48	CR		0.10	-0.02		
863	01	MC	-0.42	1.51	-0.08		
863	02	MC	-0.30	0.68	-0.03		
863	03	MC	-0.47	1.50	-0.07		
863	04	MC	0.95	7.66	0.17		
863	05	MC	0.49	1.40	0.09		
863	06	MC	-0.85	5.39	-0.13		
863	07	MC	0.33	0.96	0.07		
863	08	MC	1.45	13.23	0.24	B	Female
863	09	MC	-0.43	1.51	-0.08		
863	10	MC	0.43	1.23	0.06		
863	11	MC	-0.12	0.12	-0.04		
863	12	MC	-0.36	0.96	-0.06		

Form	Item	Item Type	MH Delta	MH Chi-Sq	Effect Size	DIF Category	Favored Group
863	41	CR		0.13	0.02		
863	42	CR		1.86	0.06		
863	43	CR		1.35	-0.07		
863	44	CR		3.42	0.11		
863	45	CR		6.48	0.14		
863	46	CR		3.93	-0.10		
863	47	CR		3.03	-0.10		
863	48	CR		0.34	-0.03		
863	49	CR		5.01	-0.13		
864	01	MC	0.86	3.74	0.14		
864	02	MC	-1.21	12.48	-0.21	B	Male
864	03	MC	0.32	0.77	0.05		
864	04	MC	0.52	1.94	0.09		
864	05	MC	-0.41	1.34	-0.06		
864	06	MC	-0.06	0.03	-0.04		
864	07	MC	-0.33	0.91	-0.05		
864	08	MC	1.84	10.56	0.21	C	Female
864	09	MC	-1.78	17.45	-0.24	C	Male
864	10	MC	-0.74	4.98	-0.14		
864	11	MC	-0.65	3.16	-0.12		
864	12	MC	-0.42	1.21	-0.08		
864	41	CR		2.56	0.09		
864	42	CR		1.37	0.05		
864	43	CR		10.25	0.18	BB	Female
864	44	CR		0.11	-0.02		
864	45	CR		4.63	0.13		

Form	Item	Item Type	MH Delta	MH Chi-Sq	Effect Size	DIF Category	Favored Group
864	46	CR		0.08	0.01		
864	47	CR		3.38	0.11		
864	48	CR		0.05	-0.02		
864	49	CR		0.30	0.05		
865	01	MC	-0.39	1.24	-0.09		
865	02	MC	0.43	1.15	0.06		
865	03	MC	0.19	0.27	0.03		
865	04	MC	-0.41	1.39	-0.08		
865	05	MC	-0.31	0.71	-0.04		
865	06	MC	-1.01	8.48	-0.19	B	Male
865	07	MC	0.10	0.07	0.02		
865	08	MC	0.87	5.57	0.14		

*DIF Category meanings: A/AA=negligible, B/BB=moderate, C/CC=large

Form	Item	Item Type	MH Delta	MH Chi-Sq	Effect Size	DIF Category	Favored Group
865	09	MC	0.49	1.93	0.09		
865	10	MC	-0.89	6.79	-0.16		
865	11	MC	0.66	3.00	0.10		
865	12	MC	-0.21	0.32	-0.03		
865	13	MC	-0.12	0.10	-0.02		
865	14	MC	-1.27	8.91	-0.18	B	Male
865	41	CR		0.21	-0.02		
865	42	CR		0.56	-0.04		
865	43	CR		11.70	0.17		
865	44	CR		0.00	0.01		
865	45	CR		4.65	0.12		
865	46	CR		0.16	0.02		

Appendix D: Operational Test Maps

January 2012

Position	Item Type	Max Points	Weight	Strand	Mean	PBS	Rasch	S1	S2	S3	S4	S5	S6
1	MC	1	1	4	0.75	0.30	-0.95						
2	MC	1	1	4	0.62	0.54	-0.13						
3	MC	1	1	4	0.43	0.29	0.80						
4	MC	1	1	4	0.44	0.37	0.74						
5	MC	1	1	4	0.52	0.43	0.38						
6	MC	1	1	4	0.65	0.34	-0.30						
7	MC	1	1	4	0.80	0.37	-1.22						
8	MC	1	1	4	0.34	0.41	1.29						
9	MC	1	1	4	0.52	0.50	0.35						
10	MC	1	1	4	0.71	0.28	-0.59						
11	MC	1	1	4	0.28	0.28	1.62						
12	MC	1	1	4	0.67	0.23	-0.22						
13	MC	1	1	4	0.48	0.41	0.55						
14	MC	1	1	4	0.46	0.32	0.54						
15	MC	1	1	4	0.70	0.32	-0.65						
16	MC	1	1	4	0.42	0.45	0.88						
17	MC	1	1	4	0.46	0.46	0.66						
18	MC	1	1	4	0.74	0.52	-0.86						
19	MC	1	1	4	0.58	0.35	0.11						
20	MC	1	1	4	0.33	0.38	1.31						
21	MC	1	1	4	0.48	0.41	0.55						
22	MC	1	1	4	0.71	0.35	-0.66						
23	MC	1	1	4	0.69	0.38	-0.41						

Position	Item Type	Max Points	Weight	Strand	Mean	PBS	Rasch	S1	S2	S3	S4	S5	S6
24	MC	1	1	4	0.52	0.45	0.38						
25	MC	1	1	4	0.36	0.35	1.16						
26	MC	1	1	4	0.45	0.32	0.71						
27	MC	1	1	4	0.82	0.41	-1.29						
28	MC	1	1	4	0.89	0.32	-2.02						
29	MC	1	1	4	0.67	0.46	-0.38						
30	MC	1	1	4	0.67	0.48	-0.39						
31	MC	1	1	4	0.36	0.35	1.16						
32	MC	1	1	4	0.61	0.35	-0.08						
33	MC	1	1	4	0.54	0.25	0.28						
34	MC	1	1	4	0.76	0.47	-0.86						
35	MC	1	1	4	0.84	0.30	-1.43						
36	MC	1	1	4	0.56	0.48	0.18						
37	MC	1	1	4	0.47	0.41	0.59						
38	MC	1	1	4	0.56	0.37	0.17						
39	MC	1	1	4	0.55	0.44	0.21						
40	MC	1	1	4	0.42	0.34	0.87						
41	MC	1	1	4	0.40	0.46	0.93						
42	MC	1	1	4	0.72	0.56	-0.69						
43	MC	1	1	4	0.60	0.36	-0.07						
44	MC	1	1	4	0.50	0.41	0.44						
45	MC	1	1	4	0.65	0.39	-0.32						
46	MC	1	1	4	0.60	0.45	0.00						
47	MC	1	1	4	0.40	0.40	0.96						

Position	Item Type	Max Points	Weight	Strand	Mean	PBS	Rasch	S1	S2	S3	S4	S5	S6
48	MC	1	1	4	0.41	0.34	0.93						
49	MC	1	1	4	0.61	0.50	-0.06						
50	MC	1	1	4	0.54	0.47	0.26						
51	CR	1	1	4	0.22	0.48	1.98						
52	CR	1	1	4	0.61	0.52	-0.06						
53	CR	1	1	4	0.26	0.22	1.70						
54	CR	1	1	4	0.57	0.45	0.16						
55	CR	1	1	4	0.64	0.47	-0.23						
56	CR	1	1	4	0.60	0.59	0.00						
57	CR	1	1	4	0.57	0.48	0.13						
58	CR	1	1	4	0.59	0.56	0.04						
59	CR	1	1	4	0.25	0.47	1.77						
60	CR	1	1	4	0.62	0.33	-0.05						
61	CR	1	1	4	0.32	0.44	1.40						
62	CR	1	1	4	0.28	0.49	1.59						
63	CR	1	1	4	0.54	0.48	0.24						
64	CR	1	1	4	0.49	0.60	0.52						
65	CR	1	1	4	0.32	0.56	1.41						
66	CR	1	1	4	0.31	0.52	1.46						
67	CR	1	1	4	0.27	0.60	1.69						
68	CR	1	1	4	0.17	0.55	2.40						
69	CR	1	1	4	0.26	0.55	1.78						
70	CR	1	1	4	0.37	0.48	1.00						
71	CR	1	1	4	0.39	0.32	0.86						

Position	Item Type	Max Points	Weight	Strand	Mean	PBS	Rasch	S1	S2	S3	S4	S5	S6
72	CR	1	1	4	0.33	0.57	1.30						
73	CR	1	1	4	0.36	0.51	1.18						
74	CR	1	1	4	0.32	0.46	1.37						
75	CR	1	1	4	0.37	0.55	1.13						
76	CR	1	1	4	0.69	0.45	-0.50						
77	CR	1	1	4	0.29	0.43	1.53						
78	CR	1	1	4	0.19	0.37	2.19						
79	CR	1	1	4	0.52	0.57	0.37						
80	CR	1	1	4	0.43	0.58	0.80						
81	CR	1	1	4	0.43	0.57	0.80						
82	CR	1	1	4	0.39	0.34	0.98						
83	CR	1	1	4	0.50	0.54	0.45						
84	CR	1	1	4	0.35	0.64	1.23						
85	CR	1	1	4	0.24	0.47	1.92						

June 2012

Position	Item Type	Max Points	Weight	Strand	Mean	PBS	Rasch	S1	S2	S3	S4	S5	S6
1	MC	1	1	4	0.64	0.44	-0.21						
2	MC	1	1	4	0.62	0.44	-0.07						
3	MC	1	1	4	0.63	0.45	-0.16						
4	MC	1	1	4	0.69	0.31	-0.44						
5	MC	1	1	4	0.62	0.46	-0.08						
6	MC	1	1	4	0.72	0.33	-0.83						
7	MC	1	1	4	0.42	0.38	0.83						
8	MC	1	1	4	0.38	0.29	1.05						
9	MC	1	1	4	0.61	0.43	0.00						
10	MC	1	1	4	0.85	0.30	-1.41						
11	MC	1	1	4	0.64	0.25	-0.22						
12	MC	1	1	4	0.51	0.32	0.40						
13	MC	1	1	4	0.67	0.37	-0.38						
14	MC	1	1	4	0.65	0.44	-0.16						
15	MC	1	1	4	0.53	0.43	0.35						
16	MC	1	1	4	0.68	0.42	-0.42						
17	MC	1	1	4	0.61	0.51	-0.02						
18	MC	1	1	4	0.72	0.39	-0.65						
19	MC	1	1	4	0.48	0.41	0.56						
20	MC	1	1	4	0.69	0.42	-0.64						
21	MC	1	1	4	0.66	0.30	-0.30						
22	MC	1	1	4	0.41	0.34	0.89						
23	MC	1	1	4	0.48	0.29	0.57						

Position	Item Type	Max Points	Weight	Strand	Mean	PBS	Rasch	S1	S2	S3	S4	S5	S6
24	MC	1	1	4	0.44	0.30	0.73						
25	MC	1	1	4	0.35	0.26	1.17						
26	MC	1	1	4	0.22	0.21	1.98						
27	MC	1	1	4	0.42	0.40	0.83						
28	MC	1	1	4	0.40	0.34	0.93						
29	MC	1	1	4	0.46	0.25	0.69						
30	MC	1	1	4	0.48	0.43	0.59						
31	MC	1	1	4	0.48	0.44	0.57						
32	MC	1	1	4	0.55	0.37	0.23						
33	MC	1	1	4	0.74	0.43	-0.74						
34	MC	1	1	4	0.73	0.31	-0.85						
35	MC	1	1	4	0.69	0.41	-0.65						
36	MC	1	1	4	0.43	0.41	0.85						
37	MC	1	1	4	0.77	0.35	-0.87						
38	MC	1	1	4	0.27	0.30	1.61						
39	MC	1	1	4	0.34	0.46	1.27						
40	MC	1	1	4	0.49	0.34	0.54						
41	MC	1	1	4	0.62	0.46	-0.11						
42	MC	1	1	4	0.59	0.39	0.02						
43	MC	1	1	4	0.66	0.57	-0.34						
44	MC	1	1	4	0.50	0.57	0.46						
45	MC	1	1	4	0.67	0.45	-0.40						
46	MC	1	1	4	0.78	0.39	-0.94						
47	MC	1	1	4	0.42	0.20	0.83						

Position	Item Type	Max Points	Weight	Strand	Mean	PBS	Rasch	S1	S2	S3	S4	S5	S6
48	MC	1	1	4	0.48	0.39	0.56						
49	MC	1	1	4	0.30	0.26	1.53						
50	MC	1	1	4	0.71	0.43	-0.48						
51	CR	1	1	4	0.30	0.50	1.46						
52	CR	1	1	4	0.36	0.55	1.15						
53	CR	1	1	4	0.27	0.42	1.59						
54	CR	1	1	4	0.56	0.52	0.20						
55	CR	1	1	4	0.45	0.47	0.73						
56	CR	1	1	4	0.53	0.57	0.34						
57	CR	1	1	4	0.18	0.43	2.21						
58	CR	1	1	4	0.55	0.60	0.26						
59	CR	1	1	4	0.28	0.49	1.58						
60	CR	1	1	4	0.59	0.59	0.06						
61	CR	1	1	4	0.59	0.60	0.03						
62	CR	1	1	4	0.80	0.37	-1.12						
63	CR	1	1	4	0.30	0.49	1.45						
64	CR	1	1	4	0.53	0.57	0.34						
65	CR	1	1	4	0.55	0.49	0.24						
66	CR	1	1	4	0.41	0.59	0.90						
67	CR	1	1	4	0.48	0.53	0.54						
68	CR	1	1	4	0.31	0.59	1.41						
69	CR	1	1	4	0.33	0.58	1.29						
70	CR	1	1	4	0.38	0.56	1.07						
71	CR	1	1	4	0.26	0.44	1.76						

Position	Item Type	Max Points	Weight	Strand	Mean	PBS	Rasch	S1	S2	S3	S4	S5	S6
72	CR	1	1	4	0.38	0.60	1.07						
73	CR	1	1	4	0.24	0.46	1.85						
74	CR	1	1	4	0.23	0.46	1.88						
75	CR	1	1	4	0.37	0.61	1.11						
76	CR	1	1	4	0.61	0.39	-0.10						
77	CR	1	1	4	0.41	0.47	0.87						
78	CR	1	1	4	0.58	0.48	0.12						
79	CR	1	1	4	0.36	0.44	1.14						
80	CR	1	1	4	0.37	0.44	1.08						
81	CR	1	1	4	0.34	0.44	1.25						
82	CR	1	1	4	0.28	0.52	1.53						
83	CR	1	1	4	0.45	0.61	0.72						
84	CR	1	1	4	0.24	0.43	1.77						
85	CR	1	1	4	0.48	0.53	0.57						

August 2012

Position	Item Type	Max Points	Weight	Strand	Mean	PBS	Rasch	S1	S2	S3	S4	S5	S6
1	MC	1	1	4	0.77	0.37	-0.93						
2	MC	1	1	4	0.61	0.41	-0.10						
3	MC	1	1	4	0.75	0.43	-0.86						
4	MC	1	1	4	0.38	0.25	1.02						
5	MC	1	1	4	0.59	0.34	0.01						
6	MC	1	1	4	0.48	0.38	0.53						
7	MC	1	1	4	0.48	0.36	0.55						
8	MC	1	1	4	0.45	0.36	0.67						
9	MC	1	1	4	0.42	0.49	0.83						
10	MC	1	1	4	0.64	0.34	-0.22						
11	MC	1	1	4	0.36	0.32	1.11						
12	MC	1	1	4	0.76	0.42	-0.91						
13	MC	1	1	4	0.67	0.46	-0.35						
14	MC	1	1	4	0.61	0.47	-0.09						
15	MC	1	1	4	0.50	0.45	0.45						
16	MC	1	1	4	0.74	0.41	-0.78						
17	MC	1	1	4	0.71	0.33	-0.60						
18	MC	1	1	4	0.66	0.49	-0.34						
19	MC	1	1	4	0.65	0.38	-0.26						
20	MC	1	1	4	0.50	0.49	0.44						
21	MC	1	1	4	0.53	0.45	0.29						
22	MC	1	1	4	0.57	0.30	0.13						
23	MC	1	1	4	0.51	0.39	0.40						

Position	Item Type	Max Points	Weight	Strand	Mean	PBS	Rasch	S1	S2	S3	S4	S5	S6
24	MC	1	1	4	0.44	0.47	0.71						
25	MC	1	1	4	0.39	0.38	0.96						
26	MC	1	1	4	0.59	0.47	0.01						
27	MC	1	1	4	0.74	0.41	-0.73						
28	MC	1	1	4	0.35	0.36	1.15						
29	MC	1	1	4	0.64	0.47	-0.20						
30	MC	1	1	4	0.46	0.29	0.64						
31	MC	1	1	4	0.46	0.48	0.64						
32	MC	1	1	4	0.40	0.27	0.93						
33	MC	1	1	4	0.61	0.40	-0.09						
34	MC	1	1	4	0.54	0.32	0.27						
35	MC	1	1	4	0.68	0.29	-0.45						
36	MC	1	1	4	0.56	0.22	0.15						
37	MC	1	1	4	0.55	0.53	0.21						
38	MC	1	1	4	0.42	0.50	0.79						
39	MC	1	1	4	0.53	0.42	0.31						
40	MC	1	1	4	0.54	0.32	0.26						
41	MC	1	1	4	0.73	0.40	-0.68						
42	MC	1	1	4	0.66	0.31	-0.34						
43	MC	1	1	4	0.52	0.32	0.36						
44	MC	1	1	4	0.51	0.57	0.41						
45	MC	1	1	4	0.47	0.43	0.59						
46	MC	1	1	4	0.76	0.36	-0.90						
47	MC	1	1	4	0.49	0.34	0.50						

Position	Item Type	Max Points	Weight	Strand	Mean	PBS	Rasch	S1	S2	S3	S4	S5	S6
48	MC	1	1	4	0.61	0.40	-0.09						
49	MC	1	1	4	0.59	0.42	-0.01						
50	MC	1	1	4	0.63	0.52	-0.22						
51	CR	1	1	4	0.32	0.54	1.30						
52	CR	1	1	4	0.49	0.51	0.49						
53	CR	1	1	4	0.33	0.56	1.27						
54	CR	1	1	4	0.60	0.40	-0.04						
55	CR	1	1	4	0.52	0.49	0.37						
56	CR	1	1	4	0.39	0.44	0.96						
57	CR	1	1	4	0.37	0.49	1.06						
58	CR	1	1	4	0.23	0.44	1.86						
59	CR	1	1	4	0.65	0.42	-0.26						
60	CR	1	1	4	0.37	0.60	1.09						
61	CR	1	1	4	0.56	0.55	0.19						
62	CR	1	1	4	0.44	0.42	0.70						
63	CR	1	1	4	0.33	0.56	1.28						
64	CR	1	1	4	0.26	0.54	1.67						
65	CR	1	1	4	0.16	0.26	2.33						
66	CR	1	1	4	0.83	0.30	-1.47						
67	CR	1	1	4	0.32	0.50	1.34						
68	CR	1	1	4	0.47	0.48	0.58						
69	CR	1	1	4	0.09	0.27	3.09						
70	CR	1	1	4	0.20	0.32	2.02						
71	CR	1	1	4	0.55	0.47	0.21						

Position	Item Type	Max Points	Weight	Strand	Mean	PBS	Rasch	S1	S2	S3	S4	S5	S6
72	CR	1	1	4	0.36	0.53	1.12						
73	CR	1	1	4	0.51	0.49	0.39						
74	CR	1	1	4	0.13	0.41	2.61						
75	CR	1	1	4	0.51	0.56	0.41						
76	CR	1	1	4	0.35	0.56	1.18						
77	CR	1	1	4	0.58	0.56	0.06						
78	CR	1	1	4	0.33	0.48	1.31						
79	CR	1	1	4	0.24	0.51	1.78						
80	CR	1	1	4	0.31	0.46	1.38						
81	CR	1	1	4	0.38	0.42	1.02						
82	CR	1	1	4	0.33	0.35	1.31						
83	CR	1	1	4	0.49	0.50	0.52						
84	CR	1	1	4	0.58	0.54	0.08						
85	CR	1	1	4	0.47	0.46	0.59						

Appendix E: Scoring Tables

January 2012

Raw Score	Ability	Scale Score
0	-5.578	0.000
1	-4.355	1.613
2	-3.636	3.429
3	-3.205	5.135
4	-2.892	6.863
5	-2.644	8.533
6	-2.436	10.196
7	-2.258	11.950
8	-2.100	13.664
9	-1.957	15.290
10	-1.828	16.971
11	-1.708	18.686
12	-1.597	20.328
13	-1.493	21.966
14	-1.395	23.603
15	-1.302	25.228
16	-1.213	26.880
17	-1.128	28.529
18	-1.046	30.082
19	-0.968	31.626
20	-0.892	33.163
21	-0.818	34.714

Raw Score	Ability	Scale Score
22	-0.747	36.269
23	-0.678	37.817
24	-0.610	39.271
25	-0.544	40.811
26	-0.479	42.256
27	-0.415	43.694
28	-0.353	45.133
29	-0.291	46.544
30	-0.231	47.912
31	-0.171	49.318
32	-0.112	50.646
33	-0.054	51.983
34	0.003	53.320
35	0.061	54.645
36	0.117	55.926
37	0.173	57.200
38	0.229	58.474
39	0.285	59.688
40	0.340	60.908
41	0.396	62.125
42	0.451	63.287
43	0.506	64.454

Raw Score	Ability	Scale Score
44	0.561	65.603
45	0.616	66.775
46	0.672	67.934
47	0.727	69.032
48	0.783	70.081
49	0.839	71.148
50	0.895	72.244
51	0.952	73.292
52	1.009	74.294
53	1.067	75.291
54	1.126	76.288
55	1.185	77.290
56	1.245	78.236
57	1.306	79.190
58	1.367	80.128
59	1.430	81.082
60	1.494	82.024
61	1.560	82.920
62	1.627	83.754
63	1.695	84.611
64	1.766	85.506
65	1.838	86.342

Raw Score	Ability	Scale Score
66	1.913	87.133
67	1.990	87.924
68	2.070	88.715
69	2.154	89.505
70	2.241	90.298
71	2.332	91.037
72	2.429	91.769
73	2.531	92.510
74	2.640	93.195
75	2.757	93.878
76	2.884	94.558
77	3.024	95.234
78	3.179	95.880
79	3.354	96.484
80	3.558	97.135
81	3.802	97.707
82	4.111	98.279
83	4.537	98.847
84	5.252	99.447
85	6.470	100.000

June 2012

Raw Score	Ability	Scale Score
0	-5.481	0.000
1	-4.263	1.845
2	-3.549	3.679
3	-3.123	5.510
4	-2.815	7.335
5	-2.571	9.069
6	-2.368	10.811
7	-2.193	12.638
8	-2.038	14.357
9	-1.899	16.012
10	-1.772	17.749
11	-1.655	19.464
12	-1.547	21.103
13	-1.445	22.754
14	-1.349	24.392
15	-1.258	26.027
16	-1.171	27.681
17	-1.088	29.284
18	-1.009	30.821
19	-0.932	32.355
20	-0.857	33.889
21	-0.785	35.430

Raw Score	Ability	Scale Score
22	-0.716	36.971
23	-0.648	38.454
24	-0.581	39.942
25	-0.516	41.418
26	-0.453	42.844
27	-0.390	44.266
28	-0.329	45.687
29	-0.269	47.043
30	-0.209	48.433
31	-0.151	49.779
32	-0.093	51.092
33	-0.036	52.413
34	0.021	53.727
35	0.077	55.032
36	0.133	56.270
37	0.188	57.551
38	0.243	58.779
39	0.298	59.975
40	0.353	61.183
41	0.407	62.376
42	0.462	63.505
43	0.516	64.671

Raw Score	Ability	Scale Score
44	0.570	65.784
45	0.625	66.959
46	0.679	68.084
47	0.734	69.165
48	0.789	70.189
49	0.844	71.250
50	0.900	72.329
51	0.956	73.357
52	1.012	74.343
53	1.069	75.326
54	1.127	76.309
55	1.185	77.299
56	1.245	78.232
57	1.305	79.172
58	1.366	80.100
59	1.428	81.039
60	1.491	81.975
61	1.555	82.862
62	1.621	83.693
63	1.689	84.532
64	1.759	85.420
65	1.830	86.258

Raw Score	Ability	Scale Score
66	1.904	87.042
67	1.980	87.827
68	2.060	88.614
69	2.142	89.398
70	2.228	90.187
71	2.319	90.939
72	2.414	91.655
73	2.515	92.409
74	2.623	93.095
75	2.739	93.780
76	2.865	94.463
77	3.004	95.144
78	3.157	95.808
79	3.332	96.407
80	3.534	97.077
81	3.777	97.659
82	4.085	98.242
83	4.510	98.823
84	5.223	99.422
85	6.440	100.000

August 2012

Raw Score	Ability	Scale Score
0	-5.473	0.000
1	-4.255	1.866
2	-3.542	3.710
3	-3.117	5.548
4	-2.809	7.374
5	-2.566	9.108
6	-2.364	10.850
7	-2.190	12.669
8	-2.036	14.379
9	-1.898	16.024
10	-1.772	17.748
11	-1.657	19.447
12	-1.549	21.069
13	-1.448	22.700
14	-1.353	24.317
15	-1.263	25.926
16	-1.178	27.556
17	-1.096	29.142
18	-1.017	30.653
19	-0.941	32.160
20	-0.868	33.662
21	-0.797	35.172

Raw Score	Ability	Scale Score
22	-0.729	36.682
23	-0.662	38.157
24	-0.596	39.589
25	-0.532	41.060
26	-0.470	42.456
27	-0.409	43.848
28	-0.348	45.237
29	-0.289	46.595
30	-0.231	47.918
31	-0.173	49.278
32	-0.116	50.560
33	-0.060	51.849
34	-0.004	53.143
35	0.051	54.425
36	0.106	55.679
37	0.160	56.890
38	0.215	58.152
39	0.269	59.329
40	0.322	60.507
41	0.376	61.698
42	0.430	62.858
43	0.483	63.961

Raw Score	Ability	Scale Score
44	0.537	65.122
45	0.591	66.209
46	0.645	67.398
47	0.699	68.481
48	0.754	69.549
49	0.809	70.550
50	0.864	71.635
51	0.920	72.709
52	0.976	73.714
53	1.033	74.695
54	1.090	75.688
55	1.149	76.677
56	1.208	77.681
57	1.268	78.586
58	1.329	79.573
59	1.392	80.482
60	1.456	81.476
61	1.521	82.394
62	1.587	83.292
63	1.656	84.099
64	1.726	85.017
65	1.799	85.922

Raw Score	Ability	Scale Score
66	1.874	86.733
67	1.952	87.540
68	2.033	88.356
69	2.117	89.167
70	2.206	89.984
71	2.298	90.790
72	2.396	91.513
73	2.500	92.313
74	2.612	93.024
75	2.731	93.734
76	2.861	94.441
77	3.004	95.144
78	3.162	95.825
79	3.342	96.443
80	3.551	97.117
81	3.800	97.704
82	4.115	98.285
83	4.549	98.856
84	5.271	99.463
85	6.496	100.000