



Maryland High School Assessments

**Maryland High School Assessment  
2006 Technical Report**

**Algebra/Data Analysis  
Biology  
English  
Government**

**Educational Testing Service  
January 2007  
Revised June 2007**

## **Forward**

The technical information included in this report is intended for use by those who evaluate tests, interpret scores, or use test results in making educational decisions. It is assumed that the reader has some technical knowledge of test construction and measurement procedures, as stated in Standards of Educational and Psychological Testing (American Educational Research Association, American Psychological Association, National Council on Measurement in Education, 1999).

# Table of Contents

|  |    |
|--|----|
| Forward.....   | ii |
| Introduction.....                                    | 1  |
| Section 1. Test Construction and Administration..... | 3  |
| Test Development.....                                | 3  |
| Test Specifications.....                             | 5  |
| Item Selection and Form Design.....                  | 10 |
| Section 2. Validity.....                             | 13 |
| Section 3. Scoring Procedures and Score Types.....   | 15 |
| Scale Scores.....                                    | 15 |
| Conditional Standard Errors of Measurement.....      | 15 |
| Lowest and Highest Obtainable Test Scores.....       | 16 |
| Cut-Scores.....                                      | 16 |
| Year-to-Year Scale Maintenance.....                  | 16 |
| Section 4. Test-Level Analyses.....                  | 18 |
| Demographic Distributions.....                       | 18 |
| Reliability.....                                     | 22 |
| Summary Statistics.....                              | 23 |
| Decision Accuracy and Consistency.....               | 31 |
| Section 5. Field Test Analyses.....                  | 34 |
| Classical Item Analyses.....                         | 34 |
| Differential Item Functioning.....                   | 36 |
| IRT Calibration and Scaling.....                     | 38 |
| Statistical Summary Tables.....                      | 41 |
| Section 6. English Test.....                         | 46 |
| Procedures for Selecting Operational Items.....      | 46 |
| Calibration and Linking Procedure.....               | 52 |
| Summary Statistics of Student Achievement.....       | 54 |
| Decision Accuracy and Consistency.....               | 58 |
| IRT Analyses.....                                    | 60 |
| Factor Analysis.....                                 | 63 |
| References.....                                      | 65 |

## List of Tables

|   |    |
|---|----|
| Table 1.1 Numbers of Items by Item Type for Each MDHSA Content Area .....   | 3  |
| Table 1.2 Algebra Blueprint .....   | 6  |
| Table 1.3 Biology Blueprint .....   | 7  |
| Table 1.4 English Blueprint .....   | 8  |
| Table 1.5 Government Blueprint .....  | 9  |
| Table 1.6 Form Construction Specifications for the January 2006 Administration .....  | 10 |
| Table 1.7 Form Construction Specifications for the May 2006 Administration .....  | 10 |
| Table 1.8 Form Construction Specifications for the 2006 Summer Administration .....   | 11 |
| Table 3.1 MDHSA 2006 Cut-Scores by Content Area.....  | 16 |
| Table 4.1 Demographic Information for Algebra.....  | 19 |
| Table 4.2 Demographic Information for Biology .....   | 20 |
| Table 4.3 Demographic Information for Government.....   | 21 |
| Table 4.4 Mean Scores by Administration .....   | 23 |
| Table 4.5 Comparison of Mean Scores.....  | 23 |
| Table 4.6 Comparison of Percentage Passing Rates.....   | 23 |
| Table 4.7 Classification Rates for Algebra.....   | 24 |
| Table 4.8 Summary Statistics for Algebra Primary Forms.....   | 25 |
| Table 4.9 Summary Statistics for Algebra Make Up Forms.....   | 26 |
| Table 4.10 Summary Statistics for Biology Primary Forms.....  | 27 |
| Table 4.11 Summary Statistics for Biology Make Up Forms.....  | 28 |
| Table 4.12 Summary Statistics for Government Primary Forms.....   | 29 |
| Table 4.13 Summary Statistics for Government Make Up Forms.....   | 30 |
| Table 4.14 Decision Accuracy and Consistency for the Algebra Tests.....   | 32 |
| Table 4.15 Decision Accuracy and Consistency for the Biology Tests.....   | 33 |
| Table 4.16 Decision Accuracy and Consistency for the Government Tests.....  | 33 |
| Table 5.1 Distribution of P-Values for the January Field Test SR Items .....  | 41 |
| Table 5.2 Distribution of P-Values for the January Field Test CR Items.....   | 41 |
| Table 5.3 Distribution of Item-Total Correlations for the January Field Test SR Items ..  | 42 |
| Table 5.4 Distribution of Item-Total Correlations for January Field Test CR Items .....   | 42 |
| Table 5.5 Distribution of P-Values for the May Field Test SR Items .....  | 43 |
| Table 5.6 Distribution of P-Values for the May Field Test CR Items .....  | 43 |
| Table 5.7 Distribution of Item-Total Correlations for the May Field Test SR Items .....   | 44 |
| Table 5.8 Distribution of Item-Total Correlations for May Field Test CR Items.....  | 44 |
| Table 5.9 Field Test Items Excluded from Analyses by Administration and Content Area .....  | 45 |
| Table 6.1 Number of Items Flagged by Field Test Form .....  | 47 |
| Table 6.2 Summary Statistics Describing the P-Values for the Selected Response and Constructed Response Items by Form .....               | 48 |
| Table 6.3 Summary Statistics Describing the Item-Test Correlations for the Selected Response and Constructed Response Items by Form ..... | 49 |
| Table 6.4 Demographic Information for the May 2006 Population by Form.....  | 50 |
| Table 6.4 Demographic Information for the May 2006 Population by Form.....  | 51 |
| Table 6.5 Content Representation of the 2006 Anchor Set .....   | 52 |
| Table 6.14 Demographic Information.....   | 55 |

|   |    |
|---|----|
| Table 6.15 Summary Statistics for English Primary Forms .....                 | 56 |
| Table 6.16 Summary Statistics for English Make-Up Forms .....                 | 57 |
| Table 6.17. Percent of Students Performing in Each Performance Category ..... | 58 |
| Table 6.18 Decision Accuracy and Consistency for the 2006 English Exam .....  | 59 |
| Table 6.19 Factor Analysis Results by Form.....                               | 64 |

## List of Figures

|   |    |
|---|----|
| Figure 6.1 Test Characteristic Curves for 2006 English Forms.....                     | 61 |
| Figure 6.2 Conditional Standard Error of Measurement for the 2006 English Forms ..... | 62 |
| Figure 6.3 Form E Scree Plot.....   | 67 |
| Figure 6.4 Form F Scree Plot.....   | 67 |
| Figure 6.5 Form G Scree Plot .....  | 68 |
| Figure 6.6 Form H Scree Plot .....  | 68 |
| Figure 6.7 Form J Scree Plot.....   | 69 |
| Figure 6.8 Form K Scree Plot .....  | 69 |
| Figure 6.9 Form L Scree Plot.....   | 70 |
| Figure 6.10 Form M Scree Plot.....  | 70 |
| Figure 6.11 Form N Scree Plot .....   | 71 |
| Figure 6.12 Form P Scree Plot.....  | 71 |

## Introduction

The 2006 Maryland High School Assessments (MDHSAs) consisted of end-of-course tests in Algebra/Data Analysis, Biology, English, and Government. The MDHSA are referred to as “end-of-course” tests because students take each test as they complete the appropriate coursework. In addition, results from the English and Algebra administrations are used in the Maryland State Department of Education (MSDE) Adequate Yearly Progress reports, required under the No Child Left Behind Act (NCLB) for the 2006 school year.

The MDHSAs consist of selected-response (SR) items, which require students to choose between four short response options; brief constructed response (BCR) items, which require students to write a short response; and extended constructed response (ECR) items, which require students to write a longer response. The SR items are machine-scored; the BCR and ECR items are scored by raters. In addition, Algebra/Data Analysis tests include items that require a student-produced response (SPR); to respond students must grid in correct responses on the answer document. All items are based on content outlined in Maryland’s Core Learning Goals.

The MDHSAs for Algebra, Biology, English, and Government are administered in January, May and July. For January and May 2006 administrations, three operational test forms were constructed; one for the primary administration window, and one for each of two make-up administrations. For the July 2006 administration, two forms were constructed; one for the first week of testing and one for the second week of testing.

For all content areas except English, each test form consisted of operational and field test items. Operational items were common across each of the operational forms and were used to produce student scores. The field test items were scored along with the operational items, but the item scores from the field test items were not used in producing a test score. Instead, the performance on the field test items was analyzed and the calibrated items were placed into the item bank. For these content areas, with the exception of items selected for public release, all operational items are returned to the item bank where they must remain unused for at least two years to minimize item exposure.

The English forms consisted of a set of items that appeared on the 2005 English test forms and field test items. Items selected for score reporting were determined after the test administration. Detailed information about the English forms is provided in Section 6. All English items were analyzed and placed into the item bank for use in future test form construction.

The item response models used to calibrate the items in the MDHSA tests were the three-parameter logistic (3PL) model and the two-parameter partial credit (2PPC) model, also known as the generalized partial credit model (GPCM; see Section 5). These models were used to generate both total test scores and subscores. The total test scores were

generated using item-pattern scoring, and the subscores were generated using raw score (RS) to scale score (SS) tables. Total test results in the scale score metric were reported to students. Subscores were not reported to students but were aggregated at the classroom level to provide teachers and administrators with additional information about student performance in each of the subscore categories.

Beginning with the 2004 administration, a pre-equated design was implemented; prior to 2004, scores were based on parameters that were estimated following the administration using a post-equated<sup>1</sup> design. In the pre-equated design, item parameters are not updated following an administration; instead existing bank parameters are used to produce student scores. Using this design, scores can be calculated and assigned to students immediately after their answer documents have been processed.

All technical support and analyses were carried out in accordance with both the *ETS Standards for Quality and Fairness* (2002) and the *Standards for Educational and Psychological Testing*, issued jointly by the American Educational Research Association, American Psychological Association, and National Council on Measurement in Education (1999).

This report is divided into 6 sections: Section 1 describes test development, form construction and administration details; Section 2 discusses the validity of the MDHSAs; Section 3 describes the scoring procedures and score types; Section 4 provides statistical summary results for each of the test forms administered in 2006; Section 5 describes the analyses conducted using the field test data including classical item analyses, differential item functioning, and item response theory calibrations and scaling; and Section 6 provides information regarding the MDHSA English examinations.

There are two Appendices. Appendix A provides scree plots for the English examinations. Appendix B provides classical item statistics for each operational form and field-test item administered in 2006.

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<sup>1</sup> In the post-equated design, anchor items representative of the content and difficulty of the test forms were used to equate the test forms using a Stocking and Lord procedure (CTB/McGraw-Hill, December, 2003).



# Section 1. Test Construction and Administration

## Test Development

### *Planning*

Planning for the test development process began with the creation of item development plans for each content area. ETS content leaders collaborated with their content counterparts at MSDE to create these plans. The item bank was reviewed to determine how well the available item pool matched the test form requirements set forth in the test form blueprint as defined by the Core Learning Goals. Areas that contained low item counts were given priority when determining which indicators were to be addressed by the item writers. After these critical need areas were defined and addressed, the remaining numbers of items to be developed (which was determined by the requirements set forth in the RFP) were distributed among the remaining indicators in a fashion that would best ensure sufficient numbers of items would be available to use in the construction of operational forms for future administrations.

### *Test Specifications and Design*

The basic test design was pre-determined by MSDE and provided to ETS in the form of the content specific “Test Specs – Test Form Matrix” document presented in Tables 1.2 to 1.6. This basic test design document provided information based on specified expectations and the distribution of the number of items by item type for each reporting category. How the specific items were placed throughout the forms was left to the collaborative efforts of the ETS and MSDE content specialists. Construction of the operational forms was based on test blueprints as approved by MSDE.

### *Item Type*

As noted previously, there were four item types that were used in the MDHSA tests. These item types were selected response (SR), student produced response (SPR), brief constructed response (BCR), and extended constructed response (ECR). Table 1.1 shows how these item types were distributed by content area.

Table 1.1 Numbers of Items by Item Type for Each MDHSA Content Area

| Content Area | Item Type |     |     |     |
|--------------|-----------|-----|-----|-----|
|              | SR        | SPR | BCR | ECR |
| Algebra      | 26        | 6   | 3   | 3   |
| Biology      | 48        | -   | 7   | -   |
| English      | 46        | -   | 2   | 2   |
| Government   | 50        | -   | 7   | 1   |

### *Item Writing*

Item writers, at least 50 percent of whom were Maryland educators, were employed to develop high quality test items that were aligned with Core Learning Goals. The item writers were selected on the basis of their depth of content knowledge and familiarity with the MDHSA testing program.

The item writers were trained on general item writing techniques as well as writing guidelines that were specific to the MDHSA program. Approximately one month after the initial item writer training, writers were provided a follow-up training session. This session was designed to evaluate how well their writing skills had developed to that point and to provide constructive feedback to guide the rest of their writing assignment.

Upon completion of their writing assignment, item writers submitted their items to ETS. The items that were accepted proceeded to item review and revision process. Specific requirements of writing for the MDHSA program can be found in the “Guidelines for Item Writers” document.

### *Item Review and Revision*

All items developed for this program underwent a series of editorial reviews in accordance with the following procedures:

- Items edited according to standard rules developed in conjunction with MSDE.
- Items reviewed for accuracy, organization and comprehension, style, usage, consistency and sensitivity.
- Item content reviewed to establish whether the item measured the intended Goal-Expectation-Indicator.
- Verification that copyright and/or trademark permission had been obtained for any required materials.
- Internal reviews conducted and historical records established for all version changes.

After ETS performed required internal reviews, items were submitted to MSDE for their review. If the MSDE content specialist requested a copy, an original version of the item as submitted by the item writer was provided. Any associated stimulus material, graphic, and/or art was provided as well as information regarding the Goal-Expectation-Indicator that each question addressed.

MSDE performed a review of the items and provided feedback to ETS content specialists. These edits were incorporated into the items, then MSDE and ETS content specialists met and conducted a side-by-side review of the items. Any final edits to the items were made. The items were then prepared for Content Review Committee review. All constructed response items were also submitted to Measurement Incorporated (MI) for review.

The final round of reviews involved the Content Review Committee and Bias/Fairness Review Committee. These committees were diverse groups of Maryland educators who reviewed each item and ensured that content in each item accurately reflected what was taught in Maryland schools and that no individual or group would be unfairly favored or disadvantaged due to the content of the items.

Upon the completion of this final round of review, MSDE and ETS content specialists conducted another side-by-side meeting to evaluate reviews by MI, Content Review Committee, and Bias/Fairness Review Committee. The ETS content specialist then made any necessary edits to the items. The items that survived this process were ready to be placed in field test sections of operational forms.

### **Test Specifications**

All of the 2006 operational test forms were constructed from items from the Maryland item bank. The pool of items available for use in the construction of the 2006 forms included all items that had been administered, calibrated and linked to the operational scale. The MDHSA operational scale was defined in 2002 and included items administered in 2002 and 2003. Items flagged for poor fit and items flagged for substantial differential item functioning (DIF) against one of the focal groups were excluded from the available item pool. Please refer to Section 5 for a more detailed account of these analyses and flagging criteria.

As noted previously, each test form was constructed to meet specific test blueprints. Tables 1.2 to 1.5 indicate the distribution of number of items within each reporting category by item type. The number of score points associated with each item type is provided in these tables. The forms for Algebra, Biology and Government consisted of two sessions administered within a single sitting (the two sessions were separated by a short break); the forms for English consisted of three sessions.

Rubrics for items can be found at the following locations:

|            |   |
|------------|---|
| Algebra    | <a href="http://mdk12.org/rubrics/mathematics">http://mdk12.org/rubrics/mathematics</a> .   |
| Biology    | <a href="http://mdk12.org/rubrics/science">http://mdk12.org/rubrics/science</a>             |
| English    | <a href="http://mdk12.org/rubrics/english">http://mdk12.org/rubrics/english</a>             |
| Government | <a href="http://mdk12.org/rubrics/socialstudies">http://mdk12.org/rubrics/socialstudies</a> |

Table 1.2 Algebra Blueprint

| <b>ALGEBRA</b>   |                        |            |            |            |                                  |
|--|------------------------|------------|------------|------------|----------------------------------|
| <b>Reporting Category</b>  | <b>Number of Items</b> |            |            |            | <b>Total Points per Category</b> |
|  | <b>SR</b>              | <b>SPR</b> | <b>BCR</b> | <b>ECR</b> |                                  |
|  | (1 pt)                 | (1 pt)     | (3 pts)    | (4 pts)    |                                  |
| Expectation 1.1<br>The student will analyze a wide variety of patterns and functional relationships using the language of mathematics and appropriate technology | 8                      | 1          | 0          | 1          | 13                               |
| Expectation 1.2<br>The student will model and interpret real-world situations, using the language of mathematics and appropriate technology.                     | 10                     | 3          | 0          | 1          | 17                               |
| Expectation 3.1<br>The student will collect, organize, analyze, and present data.  | 4                      | 2          | 2          | 0          | 12                               |
| Expectation 3.2<br>The student will apply the basic concepts of statistics and probability to predict possible outcomes of real-world situations.                | 4                      | 0          | 1          | 1          | 11                               |
| <b>TOTAL</b>   | 26                     | 6          | 3          | 3          | 53                               |

Table 1.3 Biology Blueprint

| <b>BIOLOGY</b>  |                        |            |            |                                  |
|---|------------------------|------------|------------|----------------------------------|
| <b>Reporting Category</b>   | <b>Number of Items</b> |            |            | <b>Total Points per Category</b> |
|   | <b>SR</b>              | <b>BCR</b> | <b>ECR</b> |                                  |
|   | (1 pt)                 | (4 pts)    | (4 pt)     |                                  |
| Goal 1<br>Skills and Processes of Biology                         | 8                      | 2          | 0          | 16                               |
| Expectation 3.1<br>Structure and Function of Biological Molecules | 8                      | 1          | 0          | 12                               |
| Expectation 3.2<br>Structure and Function of Cells and Organisms  | 9                      | 1          | 0          | 13                               |
| Expectation 3.3<br>Inheritance of Traits                          | 9                      | 1          | 0          | 13                               |
| Expectation 3.4<br>Mechanism of Evolutionary Change               | 5                      | 1          | 0          | 9                                |
| Expectation 3.5<br>Interdependence of Organisms in the Biosphere  | 9                      | 1          | 0          | 13                               |
| <b>TOTAL</b>  | 48                     | 7          | 0          | 76                               |

Table 1.4 English Blueprint

| <b>ENGLISH</b>   |                        |            |            |                                  |
|--|------------------------|------------|------------|----------------------------------|
| <b>Reporting Category</b>  | <b>Number of Items</b> |            |            | <b>Total Points per Category</b> |
|  | <b>SR</b>              | <b>BCR</b> | <b>ECR</b> |                                  |
|  | (1 pt)                 | (3 pts)    | (4 pt)     |                                  |
| 1: Reading and Literature: Comprehension and Interpretation (RC)<br><br>Includes the following indicators: 1.1.1; 1.1.2; 1.1.3; 1.2.1; 1.3.3; 3.2.2                | 13                     | 1          | 0          | 16                               |
| 2: Reading and Literature: Making Connections and Evaluation (RE)<br><br>Includes the following indicators: 1.1.4; 1.2.2; 1.2.3; 1.2.4; 1.2.5; 1.3.5; 4.1.1; 4.2.1 | 11                     | 1          | 0          | 14                               |
| 3: Writing - Composing (WC)<br><br>Includes the following indicators: 2.1.1; 2.1.4; 2.2.1; 2.2.2; 2.2.3; 2.2.5; 2.3.1; 2.3.3; 4.3.1                                | 8                      | 0          | 2          | 16                               |
| 4: Language Usage and Conventions (WL)<br><br>Includes the following indicators: 3.1.3; 3.1.4; 3.1.6; 3.1.8; 3.3.1; 3.3.2  | 14                     | 0          | 0          | 14                               |
| <b>TOTAL</b>   | 46                     | 2          | 2          | 60                               |

Table 1.5 Government Blueprint

| <b>GOVERNMENT</b>  |                        |            |                    |                                  |
|--|------------------------|------------|--------------------|----------------------------------|
| <b>Reporting Category</b>  | <b>Number of Items</b> |            |                    | <b>Total Points per Category</b> |
|  | <b>SR</b>              | <b>BCR</b> | <b>ECR</b>         |                                  |
|  | (1 pts)                | (4 pts)    | (4 pts)            |                                  |
| Expectation 1.1<br>The student will demonstrate understanding of the structure and functions of government and politics in the United States   | 13                     | 2          | 1<br>(alt<br>w/E2) | 21-25                            |
| Expectation 1.2<br>The student will evaluate how the United States government has maintained a balance between protecting rights and maintaining order.  | 11                     | 2          | 1<br>(alt<br>w/E1) | 19-23                            |
| Goal 2<br>The student will demonstrate an understanding of the history, diversity, and commonality of the peoples of the nation and world, the reality of human interdependence, and the need for global cooperation, through a perspective that is both historical and multicultural. | 8                      | 1          | 0                  | 12                               |
| Goal 3<br>The student will demonstrate an understanding of geographic concepts and processes to examine the role of culture, technology, and the environment in the location and distribution of human activities throughout history.  | 7                      | 1          | 0                  | 11                               |
| Goal 4<br>The student will demonstrate an understanding of the historical development and current status of economic principles, institutions, and processes needed to be effective citizens, consumers, and workers.  | 11                     | 1          | 0                  | 15                               |
| <b>TOTAL</b>   | 50                     | 7          | 1                  | 82                               |

### Item Selection and Form Design

In order to conserve the item pool, the operational set of items consisted of a common set of items shared across forms within an administration and a unique set of items. Approximately 60% of the total form was common across the operational test sections of the January and May forms. The remaining items in the forms consisted of different mixtures of items that varied across forms. The guidelines used to construct the forms are listed in Tables 1.6 to 1.8. The exact composition of the forms varied slightly based on available items in the pool.

Table 1.6 Form Construction Specifications for the January 2006 Administration

| <b>Primary Week<br/>Form A</b>                             | <b>Primary Week<br/>Form B</b>                             | <b>Make-Up #1<br/>Form C</b>                    | <b>Make-Up #2<br/>Form D</b>                            |
|--|--|---|---|
| Common set – 60%   | Common set – 60%   | Common set – 60%                                | Common set – 60%  |
| Unique Items from the pool – 40% (same as items in Form B) | Unique Items from the pool – 40% (same as items in Form A) | Half of the items from primary week’s 40% – 20% | Other half of items from primary week’s 40% items – 20% |
|  |  | Unique items from the pool – 20%                | Unique items from the pool – 20%                        |
| Field Test Section – unique items                          | Field Test Section – unique items                          | Field Test Section – same as Form A             | Field Test Section – same as Form A                     |

Table 1.7 Form Construction Specifications for the May 2006 Administration

| <b>Primary Week<br/>Forms E -K</b>                              | <b>Make-Up #1<br/>Form X</b>                      | <b>Make-Up #2<br/>Form Y</b>                            |
|---|---|---|
| Common Set –60%   | Common Set –60%                                   | Common Set – 60%  |
| Items from the pool – 40% (the same for Forms E – K)            | Half of items from primary week’s 40% items – 20% | Other half of items from primary week’s 40% items – 20% |
|   | Unique items from the pool – 20%                  | Unique items from the pool – 20%                        |
| Field Test Section – unique sets of items for Forms E through K | Field Test Section – same as Form E               | Field Test Section – same as Form E                     |



Table 1.8 Form Construction Specifications for the 2006 Summer Administration

| <b>Primary Week #1<br/>Form L</b>                        | <b>Primary Week #2<br/>Form M</b>                        |
|--|--|
| Common Set –60%  | Common Set –60%  |
| Unique Items from the pool –<br>40%                      | Unique Items from the pool –<br>40%                      |
| Field Test Section – items<br>repeated from May 05 forms | Field Test Section – items<br>repeated from May 05 forms |

In addition to the operational items, embedded field test items were included with each version of the test form, resulting in several versions of an operational form that contained different sets of field test items. The items being field-tested were either newly written items or previously administered items that had poor item statistics and/or had been revised. Items eligible for re-field testing included items from the 2000-2001 administration years. These items were judged to be acceptable from a content perspective, but had one or more of the following characteristics: p-values less than 0.25, item-total correlations of less than 0.15, collapsed score levels for constructed response items (i.e., very few responses in the top score levels), very high omit rates or SR items with one best answer, as well as positive point-biserials on one or more distractors. For the administration, different versions of the forms were spiraled at the student level.

Forms were constructed using the test construction software associated with the customer item bank. The goal was to match the conditional standard error of measurement curve (CSEM) and test characteristic curves (TCC) with the “target” form defined as the base form used to set the operational scale in 2002. The test information function, CSEM, and TCC were graphically displayed using item parameters associated with the operational items.

The general steps completed during the test construction process are:

1. For each administration, all operational forms were constructed simultaneously in order to provide the best opportunity to construct parallel forms.
2. First the common set of items was selected. Then items that matched the test blueprint were selected to match the target test characteristic and standard error of measurement curves.
3. Test developers were careful to ensure that the item selections met all content specifications, including matching items to the test blueprint, distribution of keys, and avoidance of clueing<sup>2</sup> or clanging<sup>3</sup>.

<sup>2</sup> Clueing refers to information within a passage, stimulus, item, graphic, or other test component that allows respondents to select/construct the correct answer to one or more items in an assessment without the knowledge and/or skill targeted by the item.

4. After the operational forms were selected, the field test sets were constructed. Field test sets did not meet any psychometric criteria, but the sets were constructed so that they could be completed by students in 30-minutes. Field test sets consisted of SR items, a combination of BCR and SR items, or an ECR item. The field test items were embedded in the operational test.

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<sup>3</sup> Clanging occurs when an identical or resembling word(s) appears in both the item stem and one or more item distracters.

## Section 2. Validity

Validity is one of the most important attributes of assessment quality. Validity refers to the degree to which evidence supports a proposed interpretation or use of a set of scores, and it is one of the most fundamental considerations in developing and evaluating tests (AERA, APA, & NCME, 1999). Validity is not based on a single study or type of study; but involves an ongoing process of gathering evidence supporting the interpretation or use of the resulting test scores. The process begins with the test design and continues throughout the entire assessment process, including design, content specifications, item development, psychometric quality, and inferences made from the results.

The development of test content for each MDHSA was overseen by a content expert who had a depth of knowledge and teaching experience related to the course in which the MDHSA was to be administered. Appropriate content leads who had similar qualifications reviewed the test development work of these individuals.

The test development process provided numerous opportunities for the client to review test content and make changes to ensure that the items were valid measures of the knowledge and skills of Maryland students according to course standards. Every item that was created was referenced to a particular instructional standard (i.e., goal, expectation, or indicator). During the internal ETS development process the specific reference was confirmed or changed to reflect changes to the item. When the item went to a committee of Maryland educators for a content review, the members of the committee made independent judgments about the match of the item content to the standard it was intended to measure, and evaluated the appropriateness for the age of students being tested. These judgments were tabulated and reviewed by the content experts who used the information to decide which items would advance to the field test stage of development.

The constructs measured by each MDHSA are described in detail in the Maryland high school curriculum standards (Core Learning Goals). All ETS content staff working on item development has been trained in the Core Learning Goals. The test blueprint documents presented in Section 1 (see Tables 1.2 to 1.5) were created in collaboration with committees of Maryland educators and were derived from the Maryland goals, expectations, and indicators. The Learning Goals can be found on the MSDE website at <http://www.mdk12.org>.

Although all eligible students participated in the MDHSA and information regarding student performance was provided to students, parents, teachers and other stakeholders, scores had no consequences for individual students. Algebra and English scores were used for AYP as a component of the Maryland No Child Left Behind (NCLB) Accountability program. Information on the interpretation of scores was provided to students, parents, schools and other stakeholders via the MSDE website.

In addition to the validation documentation gathered and maintained by MSDE, empirical information in support of the MDHSA follows:

- Section 3 provides detailed information concerning the scores that were reported for the MDHSA and the cut-scores for each content area.
- Section 4 provides demographic information for the population of students who were administered the MDHSA. Summary statistics at the test level are reported for the student population and for subgroups. In addition, score reliability analyses and measures of decision accuracy and consistency are provided for the student population.
- Section 5 includes documentation regarding the field test analyses. Descriptions of classical item analyses, differential item functioning, item response theory calibration and scaling are included. In addition, summary tables of item p-values and item-total correlations distributions are provided.
- Section 6 describes the development of the new English test. The section covers the procedures used for selecting operational items, calibration and linking, summary statistics of student achievement, decision accuracy and consistency, IRT analyses, and factor analyses.

## Section 3. Scoring Procedures and Score Types

### Scale Scores

The MHSA reporting scale ranges from 240 to 650. It was established in 2003 and defined so that the scores had a mean of 400 and a standard deviation 40. These scores represent ability estimates obtained using Item Response Theory (IRT). (See Section 5 IRT Calibration and Scaling for details on the 3-parameter logistic [3PL] and generalized partial-credit [GPCM] IRT models used for the MHSA).

Scale scores based on maximum likelihood estimates (MLE) are reported for the total test scores. While the total test score is based on item-pattern (IP) scoring, the subscores are based on raw score to scale score (RS-SS) scoring tables.

When IP scoring using the 3PL model is used the likelihood equation can have multiple maxima. Therefore, a numerical method was developed to find the scale score at the global maximum in the likelihood function. RS-SS scoring tables were obtained by taking the inverse of the TCC for items contributing to the associated subscores (Yen, 1984).

### Conditional Standard Errors of Measurement

Corresponding conditional standard errors of measurement (SEM) were produced for both types of scoring and were equal to the inverse of the square root of the test information function.

$$\text{SEM}(\hat{\theta}) = \frac{1}{\sqrt{I(\hat{\theta})}},$$

where  $\text{SEM}(\hat{\theta})$  refers to the standard error of measurement, and  $I(\hat{\theta})$  refers to the test information function.

The test information function is the sum of corresponding information functions of the test items when optimal item weights are used. Item information functions depend on the item difficulty, discrimination and conditional item score variance. Thus, while polytomous items often have lower discriminations than selected response items (Fitzpatrick et al., 1996), they may convey more information because they have more score points.

## Lowest and Highest Obtainable Test Scores

The maximum likelihood procedure under the 3PL model cannot produce reasonable scale score estimates for students with perfect scores or scores below the level expected by guessing. While maximum likelihood estimates are usually available for students with extreme scores other than zero or perfect, occasionally these estimates have very large CSEMs, and differences between these extreme values have little meaning. Therefore, scores were established for these students based on a rational procedure (refer to Appendix 3.C of the 2004 Technical Report). These values were called the lowest obtainable scale score (LOSS) and the highest obtainable scale score (HOSS). The same LOSS and HOSS values were used for RS-SS tables and the IP scoring. Starting with the summer 2005 administration, MSDE decided that the LOSS and HOSS values would be 240 and 650, respectively, for all content areas.

## Cut-Scores

The cut-scores associated with each of the performance levels in the non-English content areas were established by MSDE in 2003. These values are given in Table 3.1. The English cut-scores were established during the standard setting meeting held in October of 2005. One cut-score was established for Biology and Government. Because Algebra and English results are used as the high school mathematics and English/language arts components of the Maryland accountability plan under NCLB, two cut-scores were established.

Table 3.1 MDHSA 2006 Cut-Scores by Content Area

| Content Area | Cut-score  |          |
|--------------|------------|----------|
|              | Proficient | Advanced |
| Algebra      | 412        | 450      |
| Biology      | 400        |          |
| English      | 396        | 429      |
| Government   | 394        |          |

## Year-to-Year Scale Maintenance

The Maryland HSA tests have been pre-equated since 2004. In the pre-equated design, a pool of IRT calibrated items expressed on the reporting scale exists for test form construction. The item parameter estimates for new forms are obtained from the bank and are used to build test forms that are parallel across administrations. Student scores are produced with the new form bank-obtained item parameters, thereby linking scores from one administration to the other.

To increase the item pool, the MDHSA embeds field test items in the operational test forms. The field-test data for the January and May administrations are delivered in the fall, and the field-test items are calibrated with the operational items at that time. The calibrations are linked to the reporting scale using all operational non-CR items as anchors and the Stocking and Lord procedure (Stocking & Lord, 1983). Having all operational non-CR items serve as linking items ensures that the linking set is large and reliable. Item bank parameters are established at the time of field test and are not updated following each administration.

To ensure that items behave the same way across administrations, construction of new forms follows rules defined by Kolen & Brennan (1995). These rules are:

- a) items should appear in contexts and positions as when the item parameters were established,
- b) operational items should appear in similar positions on the test. It may be problematic if an item is positioned in very different locations on the two forms, such as at the beginning of the test on one form and at the end of the test on another form, and
- c) the text is exactly the same in the old and new forms. Minor editorial changes and rearranging answer choices are discouraged; otherwise the items may function differently.

## **Section 4. Test-Level Analyses**

Test-level analyses include demographic distributions, reliability analyses, summary statistics, and decision consistency and accuracy.

### **Demographic Distributions**

All eligible students completed the MDHSA. The demographic characteristics of the students are given in Tables 4.1 to 4.3 for the January and May administrations of Algebra, Biology, and Government, respectively. The number of students participating in the May administration was greater than the number of students participating in the January administration. As a result, only two field test versions were included in the January administration to ensure sufficient sample sizes for the analyses of the field test items. Due to the small numbers of students participating in the July administration, the May field test sections were repeated to ensure that the test length was comparable.



Table 4.1 Demographic Information for Algebra

|                            |                        | January Primary Forms |        | January Make-Up Forms |        | May Primary Forms |       | May Make-Up Forms |       |
|----------------------------|------------------------|-----------------------|--------|-----------------------|--------|-------------------|-------|-------------------|-------|
|                            |                        | N                     | %      | N                     | %      | N                 | %     | N                 | %     |
| Overall                    |                        | 5921                  |        | 904                   |        | 68550             |       | 3221              |       |
| Gender                     |                        |                       |        |                       |        |                   |       |                   |       |
|                            | Male                   | 2962                  | 50.03  | 469                   | 51.88  | 34150             | 49.82 | 1694              | 52.59 |
|                            | Female                 | 2870                  | 48.47  | 428                   | 47.35  | 34092             | 49.73 | 1414              | 43.90 |
|                            | Missing                | 89                    | 1.50   | 7                     | 0.77   | 308               | 0.45  | 113               | 3.51  |
| Special Education          |                        |                       |        |                       |        |                   |       |                   |       |
|                            | Yes                    | 31                    | 0.52   | 4                     | 0.44   | 643               | 0.94  | 42                | 1.30  |
|                            | No                     | 5888                  | 99.44  | 900                   | 99.56  | 67792             | 98.89 | 3174              | 98.54 |
|                            | 504                    | 2                     | 0.03   | 0                     | 0.00   | 115               | 0.17  | 5                 | 0.16  |
| Ethnicity                  |                        |                       |        |                       |        |                   |       |                   |       |
|                            | American Indian        | 24                    | 0.41   | 3                     | 0.33   | 227               | 0.33  | 20                | 0.62  |
|                            | Asian/Pacific Islander | 153                   | 2.58   | 21                    | 2.32   | 3710              | 5.41  | 75                | 2.33  |
|                            | African American       | 2487                  | 42.00  | 584                   | 64.60  | 24778             | 36.15 | 1456              | 45.20 |
|                            | White                  | 2786                  | 47.05  | 221                   | 24.45  | 34813             | 50.78 | 1267              | 39.34 |
|                            | Hispanic               | 281                   | 4.75   | 41                    | 4.54   | 4226              | 6.16  | 179               | 5.56  |
|                            | Missing                | 190                   | 3.21   | 34                    | 3.76   | 796               | 1.16  | 224               | 6.95  |
| Limited English Proficient |                        |                       |        |                       |        |                   |       |                   |       |
|                            | Yes                    | 0                     | 0.00   | 0                     | 0.00   | 138               | 0.20  | 6                 | 0.19  |
|                            | No                     | 5921                  | 100.00 | 904                   | 100.00 | 68373             | 99.74 | 3215              | 99.81 |
|                            | Exited                 | 0                     | 0.00   | 0                     | 0.00   | 39                | 0.06  | 0                 | 0.00  |

Table 4.2 Demographic Information for Biology

|                            |                        | January Primary Forms |        | January Make-Up Forms |        | May Primary Forms |       | May Make-Up Forms |       |
|----------------------------|------------------------|-----------------------|--------|-----------------------|--------|-------------------|-------|-------------------|-------|
|                            |                        | N                     | %      | N                     | %      | N                 | %     | N                 | %     |
| Overall                    |                        | 7533                  |        | 866                   |        | 68550             |       | 2592              |       |
| Gender                     |                        |                       |        |                       |        |                   |       |                   |       |
|                            | Male                   | 3660                  | 48.59  | 435                   | 50.23  | 34150             | 49.82 | 1331              | 51.35 |
|                            | Female                 | 3824                  | 50.76  | 409                   | 47.23  | 34092             | 49.73 | 1228              | 47.38 |
|                            | Missing                | 49                    | 0.65   | 22                    | 2.54   | 308               | 0.45  | 33                | 1.27  |
| Special Education          |                        |                       |        |                       |        |                   |       |                   |       |
|                            | Yes                    | 36                    | 0.48   | 3                     | 0.35   | 643               | 0.94  | 34                | 1.31  |
|                            | No                     | 7497                  | 99.52  | 863                   | 99.65  | 67792             | 98.89 | 2553              | 98.50 |
|                            | 504                    | 0                     | 0.00   | 0                     | 0.00   | 115               | 0.17  | 5                 | 0.19  |
| Ethnicity                  |                        |                       |        |                       |        |                   |       |                   |       |
|                            | American Indian        | 18                    | 0.24   | 4                     | 0.46   | 227               | 0.33  | 13                | 0.50  |
|                            | Asian/Pacific Islander | 156                   | 2.07   | 24                    | 2.77   | 3710              | 5.41  | 86                | 3.32  |
|                            | African American       | 1890                  | 25.09  | 470                   | 54.27  | 24778             | 36.15 | 1181              | 45.56 |
|                            | White                  | 5129                  | 68.09  | 281                   | 32.45  | 34813             | 50.78 | 1034              | 39.89 |
|                            | Hispanic               | 255                   | 3.39   | 56                    | 6.47   | 4226              | 6.16  | 184               | 7.10  |
|                            | Missing                | 85                    | 1.13   | 31                    | 3.58   | 796               | 1.16  | 94                | 3.63  |
| Limited English Proficient |                        |                       |        |                       |        |                   |       |                   |       |
|                            | Yes                    | 0                     | 0.00   | 0                     | 0.00   | 138               | 0.20  | 4                 | 0.15  |
|                            | No                     | 7533                  | 100.00 | 866                   | 100.00 | 68373             | 99.74 | 2587              | 99.81 |
|                            | Exited                 | 0                     | 0.00   | 0                     | 0.00   | 39                | 0.06  | 1                 | 0.04  |

Table 4.3 Demographic Information for Government

|                            |                        | January Primary Forms |        | January Make-Up Forms |        | May Primary Forms |       | May Make-Up Forms |       |
|----------------------------|------------------------|-----------------------|--------|-----------------------|--------|-------------------|-------|-------------------|-------|
|                            |                        | N                     | %      | N                     | %      | N                 | %     | N                 | %     |
| Overall                    |                        | 7648                  |        | 849                   |        | 54349             |       | 2252              |       |
| Gender                     |                        |                       |        |                       |        |                   |       |                   |       |
|                            | Male                   | 3745                  | 48.97  | 410                   | 48.29  | 26763             | 49.24 | 1172              | 52.04 |
|                            | Female                 | 3867                  | 50.56  | 408                   | 48.06  | 27375             | 50.37 | 1035              | 45.96 |
|                            | Missing                | 36                    | 0.47   | 31                    | 3.65   | 211               | 0.39  | 45                | 2.00  |
| Special Education          |                        |                       |        |                       |        |                   |       |                   |       |
|                            | Yes                    | 14                    | 0.18   | 5                     | 0.59   | 576               | 1.06  | 23                | 1.02  |
|                            | No                     | 7634                  | 99.82  | 844                   | 99.41  | 53676             | 98.76 | 2227              | 98.89 |
|                            | 504                    | 0                     | 0.00   | 0                     | 0.00   | 97                | 0.18  | 2                 | 0.09  |
| Ethnicity                  |                        |                       |        |                       |        |                   |       |                   |       |
|                            | American Indian        | 21                    | 0.27   | 5                     | 0.59   | 205               | 0.38  | 12                | 0.53  |
|                            | Asian/Pacific Islander | 132                   | 1.73   | 18                    | 2.12   | 3346              | 6.16  | 64                | 2.84  |
|                            | African American       | 2153                  | 28.15  | 486                   | 57.24  | 19326             | 35.56 | 921               | 40.90 |
|                            | White                  | 5033                  | 65.81  | 247                   | 29.09  | 27499             | 50.60 | 971               | 43.12 |
|                            | Hispanic               | 230                   | 3.01   | 45                    | 5.30   | 3558              | 6.55  | 174               | 7.73  |
|                            | Missing                | 79                    | 1.03   | 48                    | 5.65   | 415               | 0.76  | 110               | 4.88  |
| Limited English Proficient |                        |                       |        |                       |        |                   |       |                   |       |
|                            | Yes                    | 0                     | 0.00   | 0                     | 0.00   | 100               | 0.18  | 4                 | 0.18  |
|                            | No                     | 7648                  | 100.00 | 849                   | 100.00 | 54218             | 99.76 | 2247              | 99.78 |
|                            | Exited                 | 0                     | 0.00   | 0                     | 0.00   | 0                 | 0.00  | 0                 | 0.00  |

## Reliability

Reliability describes the extent to which differences in test scores reflect true differences in the knowledge, ability, or skill being tested rather than fluctuations due to chance or factors other than those which were being tested. The variance in the distributions of test scores (i.e., the differences among individuals) is partly due to real differences in the knowledge, skill, or ability being tested (true-score variance) and partly due to random errors in the measurement process (error variance).

The number used to describe reliability is an estimate of the proportion of the total variance that is true variance. Several different ways of estimating this proportion exist. The estimates of reliability given in this report are internal-consistency measures, which were derived from analysis of the consistency of the performance of individuals on items within a test (internal-consistency reliability). Therefore, the estimates apply only to the test form being analyzed. They do not take into account form-to-form variation due to equating limitations or lack of parallelism, nor were they responsive to day-to-day variation due to, for example, state of health or testing environment. Reliability coefficients range from 0 to 1. The higher the reliability coefficient for a set of scores, the more likely individuals would be to obtain very similar scores if they took another form of the test.

The formula for the internal consistency reliability as measured by Cronbach's alpha (Cronbach, 1951) is reported below:

$$\alpha = \frac{n}{n-1} \left[ 1 - \frac{\sum_{i=1}^n \sigma_i^2}{\sigma_x^2} \right],$$

where  $n$  is the number of items,  $\sigma_i^2$  is the variance of scores on the  $i$ -th item, and  $\sigma_x^2$  is the variance of the total score (sum of scores on the individual items).

Since all four content areas contain mixed item types (dichotomous and polytomous items), it is more appropriate to report stratified alpha (Feldt & Brennan, 1989). Stratified alpha is a weighted average of Cronbach's alpha for item sets with different maximum score points or "strata." The formula for calculating the stratified alpha is:

$$strata \rho = 1 - \frac{\sum \sigma_{x_j}^2 (1 - \alpha_j)}{\sigma_x^2}$$

where  $\sigma_{x_j}^2$  is the variance for strata  $j$  of the test,  $\sigma_x^2$  is the total variance of the test, and  $\alpha_j$  is the Cronbach's alpha for strata  $j$  of the test.

The results for the reliability analyses of the total test score are presented with the summary statistics in Tables 4.9 to 4.16. The reliability results indicate that all of the MDHSAs were highly reliable: reliabilities ranged from 0.89 to 0.95 for the primary forms, and from 0.90 to 0.96 for the make-up forms.

## Summary Statistics

The mean scale scores by content area for the January and May administrations are presented in Table 4.4. The mean scores for Algebra, Biology, and Government were higher for the May administration compared to the January administration.

Table 4.4 Mean Scores by Administration

|            | Jan 2006 |        |       | May 2006 |        |       |
|------------|----------|--------|-------|----------|--------|-------|
|            | N        | Mean   | SD    | N        | Mean   | SD    |
| Algebra    | 6825     | 404.18 | 46.39 | 71771    | 423.38 | 41.56 |
| Biology    | 8399     | 407.55 | 43.73 | 52914    | 416.31 | 40.01 |
| Government | 8497     | 407.36 | 41.35 | 56601    | 420.40 | 46.29 |

The 2006 data presented in Tables 4.5 to 4.7 are based on students who took the tests in January, May, and July. The mean scale scores are presented for the years 2003 to 2006 by content area in Table 4.5. The mean scale scores are highest for 2006 compared to the other years.

Table 4.5 Comparison of Mean Scores

|            | 2003  | 2004  | 2005  | 2006  |
|------------|-------|-------|-------|-------|
| Algebra    | 408.3 | 411.9 | 409.5 | 421.5 |
| Biology    | 400.8 | 406.2 | 404.7 | 415.0 |
| Government | 403.5 | 406.5 | 409.3 | 418.5 |

Table 4.6 presents the passing rates for Algebra, Biology, and Government. The passing rate for all three content areas is highest for 2006 compared to the passing rates for 2003, 2004, and 2005. As can be seen in the table, 66.6% of students achieved the proficient standard or above in the three subject areas.

Table 4.6 Comparison of Percentage Passing Rates

|            | 2003 | 2004 | 2005 | 2006 |
|------------|------|------|------|------|
| Algebra    | 53.1 | 59.3 | 54.5 | 66.6 |
| Biology    | 54.3 | 62.0 | 58.4 | 67.7 |
| Government | 39.8 | 54.6 | 67.1 | 74.1 |

Table 4.7 presents the percent of Algebra students classified as basic, proficient, and advanced. Algebra is the mathematics component of the MSDE Adequate Yearly Progress report as required under the NCLB act. As can be seen in the table, one-third of

students achieved the Basic performance level, whereas two-thirds of students achieved the Proficient or Advanced performance levels.

Table 4.7 Classification Rates for Algebra

|            | 2006 |
|------------|------|
| Basic      | 33.4 |
| Proficient | 40.7 |
| Advanced   | 25.9 |

Summary statistics for all students and for subgroups based on gender, special education programs, ethnicity, and English language fluency are presented in Tables 4.8 through 4.13. The tables include number of students tested for whom valid scores were available, mean scale scores, and standard deviations of scale scores. In addition, test score reliabilities are provided for the overall group of examinees. Information is presented for the primary forms of the content area, followed by the make-up forms.

Results indicate that for each administration and content area, students who took the primary form scored higher on average than students who took the make-up form(s). In addition, performance varied over subgroups. At the overall examinee level, score reliability coefficients ranged from 0.89 (May primary algebra form) to 0.95 (May primary government form).

Table 4.8 Summary Statistics for Algebra Primary Forms

|                            |                        | January |       |      |       | May    |       |       |       |
|----------------------------|------------------------|---------|-------|------|-------|--------|-------|-------|-------|
|                            |                        | Mean    | SD    | N    | Alpha | Mean   | SD    | N     | Alpha |
| Overall                    |                        | 407.86  | 45.42 | 5921 | 0.90  | 424.94 | 40.36 | 68550 | 0.89  |
| Gender                     |                        |         |       |      |       |        |       |       |       |
|                            | Male                   | 403.54  | 49.79 | 2962 |       | 422.98 | 43.44 | 34150 |       |
|                            | Female                 | 412.42  | 39.95 | 2870 |       | 427.17 | 36.65 | 34092 |       |
|                            | Missing                | 404.21  | 44.60 | 89   |       | 395.18 | 52.89 | 308   |       |
| Special Education          |                        |         |       |      |       |        |       |       |       |
|                            | Yes                    | *       | *     | 31   |       | 394.12 | 42.73 | 643   |       |
|                            | No                     | 408.02  | 45.39 | 5888 |       | 425.21 | 40.24 | 67792 |       |
|                            | 504                    | *       | *     | 2    |       | 433.03 | 27.36 | 115   |       |
| Ethnicity                  |                        |         |       |      |       |        |       |       |       |
|                            | American Indian        | *       | *     | 24   |       | 417.34 | 43.48 | 227   |       |
|                            | Asian/Pacific Islander | 421.61  | 35.57 | 153  |       | 447.27 | 31.98 | 3710  |       |
|                            | African American       | 385.38  | 47.58 | 2487 |       | 405.88 | 41.59 | 24778 |       |
|                            | White                  | 428.89  | 32.86 | 2786 |       | 437.83 | 33.00 | 34813 |       |
|                            | Hispanic               | 396.11  | 38.51 | 281  |       | 415.63 | 40.96 | 4226  |       |
|                            | Missing                | 399.04  | 44.01 | 190  |       | 401.70 | 51.88 | 796   |       |
| Limited English Proficient |                        |         |       |      |       |        |       |       |       |
|                            | Yes                    | *       | *     | 0    |       | 380.36 | 58.41 | 138   |       |
|                            | No                     | 407.86  | 45.42 | 5921 |       | 425.03 | 40.27 | 68373 |       |
|                            | Exited                 | *       | *     | 0    |       | *      | *     | 39    |       |

\* Statistics not reported for sample size less than 50

Table 4.9 Summary Statistics for Algebra Make Up Forms

|                            |                        | January Make-Up Forms |       |     |       |        |       |     |       | May Make-Up Forms |       |      |       |        |       |     |       |
|----------------------------|------------------------|-----------------------|-------|-----|-------|--------|-------|-----|-------|-------------------|-------|------|-------|--------|-------|-----|-------|
|                            |                        | C                     |       |     |       | D      |       |     |       | X                 |       |      |       | Y      |       |     |       |
|                            |                        | Mean                  | SD    | N   | Alpha | Mean   | SD    | N   | Alpha | Mean              | SD    | N    | Alpha | Mean   | SD    | N   | Alpha |
| Overall                    |                        | 384.38                | 44.68 | 588 | 0.91  | 372.19 | 46.04 | 316 | 0.92  | 391.74            | 51.39 | 2680 | 0.92  | 382.90 | 52.17 | 541 | 0.91  |
| Gender                     |                        |                       |       |     |       |        |       |     |       |                   |       |      |       |        |       |     |       |
|                            | Male                   | 381.24                | 47.87 | 303 |       | 367.43 | 46.23 | 166 |       | 386.54            | 56.52 | 1400 |       | 378.17 | 54.00 | 294 |       |
|                            | Female                 | 387.5                 | 40.96 | 282 |       | 378.14 | 45.75 | 146 |       | 398.62            | 43.93 | 1182 |       | 389.25 | 49.56 | 232 |       |
|                            | Missing                | *                     | *     | 3   |       | *      | *     | 4   |       | 382.83            | 47.98 | 98   |       | *      | *     | 15  |       |
| Special Education          |                        |                       |       |     |       |        |       |     |       |                   |       |      |       |        |       |     |       |
|                            | Yes                    | *                     | *     | 4   |       | *      | *     | 0   |       | *                 | *     | 39   |       | *      | *     | 3   |       |
|                            | No                     | 384.41                | 44.79 | 584 |       | 372.19 | 46.04 | 316 |       | 391.94            | 51.45 | 2637 |       | 383.03 | 52.26 | 537 |       |
|                            | 504                    | *                     | *     | 0   |       | *      | *     | 0   |       | *                 | *     | 4    |       | *      | *     | 1   |       |
| Ethnicity                  |                        |                       |       |     |       |        |       |     |       |                   |       |      |       |        |       |     |       |
|                            | American Indian        | *                     | *     | 2   |       | *      | *     | 1   |       | *                 | *     | 15   |       | *      | *     | 5   |       |
|                            | Asian/Pacific Islander | *                     | *     | 12  |       | *      | *     | 9   |       | 425.32            | 45.14 | 65   |       | *      | *     | 10  |       |
|                            | African American       | 372.73                | 42.71 | 386 |       | 363.87 | 43.35 | 198 |       | 377.31            | 49.92 | 1183 |       | 372.91 | 50.88 | 273 |       |
|                            | White                  | 410.57                | 38.48 | 155 |       | 397.68 | 43.86 | 66  |       | 407.86            | 48.89 | 1075 |       | 400.10 | 51.92 | 192 |       |
|                            | Hispanic               | *                     | *     | 19  |       | *      | *     | 22  |       | 383.43            | 51.01 | 152  |       | *      | *     | 27  |       |
|                            | Missing                | *                     | *     | 14  |       | *      | *     | 20  |       | 386.45            | 45.90 | 190  |       | *      | *     | 34  |       |
| Limited English Proficient |                        |                       |       |     |       |        |       |     |       |                   |       |      |       |        |       |     |       |
|                            | Yes                    | *                     | *     | 0   |       | *      | *     | 0   |       | *                 | *     | 6    |       | *      | *     | 0   |       |
|                            | No                     | 384.38                | 44.68 | 588 |       | 372.19 | 46.04 | 316 |       | 391.80            | 51.25 | 2674 |       | 382.90 | 52.17 | 541 |       |
|                            | Exited                 | *                     | *     | 0   |       | *      | *     | 0   |       | *                 | *     | 0    |       | *      | *     | 0   |       |

\* Statistics not reported for sample size less than 50 (N<50)



Table 4.10 Summary Statistics for Biology Primary Forms

|                            |                        | January |       |      |       | May    |       |       |       |
|----------------------------|------------------------|---------|-------|------|-------|--------|-------|-------|-------|
|                            |                        | Mean    | SD    | N    | Alpha | Mean   | SD    | N     | Alpha |
| Overall                    |                        | 411.16  | 41.96 | 7533 | 0.94  | 417.93 | 39.04 | 50322 | 0.94  |
| Gender                     |                        |         |       |      |       |        |       |       |       |
|                            | Male                   | 407.17  | 45.27 | 3660 |       | 415.77 | 42.33 | 24727 |       |
|                            | Female                 | 415.48  | 37.83 | 3824 |       | 420.14 | 35.26 | 25380 |       |
|                            | Missing                | *       | *     | 49   |       | 404.01 | 50.30 | 215   |       |
| Special Education          |                        |         |       |      |       |        |       |       |       |
|                            | Yes                    | *       | *     | 36   |       | 383.52 | 40.18 | 483   |       |
|                            | No                     | 411.33  | 41.95 | 7497 |       | 418.27 | 38.88 | 49772 |       |
|                            | 504                    | *       | *     | 0    |       | 413.33 | 33.10 | 67    |       |
| Ethnicity                  |                        |         |       |      |       |        |       |       |       |
|                            | American Indian        | *       | *     | 18   |       | 408.41 | 40.00 | 188   |       |
|                            | Asian/Pacific Islander | 425.06  | 40.55 | 156  |       | 438.99 | 37.13 | 3033  |       |
|                            | African American       | 381.38  | 42.77 | 1890 |       | 399.38 | 36.19 | 16974 |       |
|                            | White                  | 422.93  | 35.46 | 5129 |       | 429.01 | 35.81 | 26617 |       |
|                            | Hispanic               | 399.41  | 40.14 | 255  |       | 406.21 | 36.03 | 3117  |       |
|                            | Missing                | 372.61  | 34.41 | 85   |       | 403.11 | 45.59 | 393   |       |
| Limited English Proficient |                        |         |       |      |       |        |       |       |       |
|                            | Yes                    | *       | *     | 0    |       | 386.19 | 39.64 | 57    |       |
|                            | No                     | 411.16  | 41.96 | 7533 |       | 417.96 | 39.03 | 50247 |       |
|                            | Exited                 | *       | *     | 0    |       | *      | *     | 18    |       |

\* Statistics not reported for sample size less than 50

Table 4.11 Summary Statistics for Biology Make Up Forms

|                            |                        | January Make-Up Forms |       |     |       |        |       |     |       | May Make-Up Forms |       |      |       |        |       |     |       |
|----------------------------|------------------------|-----------------------|-------|-----|-------|--------|-------|-----|-------|-------------------|-------|------|-------|--------|-------|-----|-------|
|                            |                        | C                     |       |     |       | D      |       |     |       | X                 |       |      |       | Y      |       |     |       |
|                            |                        | Mean                  | SD    | N   | Alpha | Mean   | SD    | N   | Alpha | Mean              | SD    | N    | Alpha | Mean   | SD    | N   | Alpha |
| Overall                    |                        | 381.39                | 45.38 | 571 | 0.93  | 366.06 | 46.17 | 295 | 0.90  | 385.42            | 46.11 | 2271 | 0.92  | 381.66 | 40.30 | 321 | 0.90  |
| Gender                     |                        |                       |       |     |       |        |       |     |       |                   |       |      |       |        |       |     |       |
|                            | Male                   | 379.80                | 50.81 | 292 |       | 358.83 | 49.79 | 143 |       | 378.95            | 51.21 | 1177 |       | 378.37 | 41.79 | 154 |       |
|                            | Female                 | 383.97                | 39.06 | 267 |       | 374.08 | 41.02 | 142 |       | 392.78            | 38.04 | 1069 |       | 385.70 | 37.40 | 159 |       |
|                            | Missing                | *                     | *     | 12  |       | *      | *     | 10  |       | *                 | *     | 25   |       | *      | *     | 8   |       |
| Special Education          |                        |                       |       |     |       |        |       |     |       |                   |       |      |       |        |       |     |       |
|                            | Yes                    | *                     | *     | 3   |       | *      | *     | 0   |       | *                 | *     | 23   |       | *      | *     | 11  |       |
|                            | No                     | 381.28                | 45.46 | 568 |       | 366.06 | 46.17 | 295 |       | 385.75            | 45.91 | 2244 |       | 382.69 | 39.54 | 309 |       |
|                            | 504                    | *                     | *     | 0   |       | *      | *     | 0   |       | *                 | *     | 4    |       | *      | *     | 1   |       |
| Ethnicity                  |                        |                       |       |     |       |        |       |     |       |                   |       |      |       |        |       |     |       |
|                            | American Indian        | *                     | *     | 3   |       | *      | *     | 1   |       | *                 | *     | 13   |       | *      | *     | 0   |       |
|                            | Asian/Pacific Islander | *                     | *     | 9   |       | *      | *     | 15  |       | 410.99            | 43.26 | 78   |       | *      | *     | 8   |       |
|                            | African American       | 363.64                | 40.34 | 311 |       | 354.06 | 42.36 | 159 |       | 374.03            | 41.95 | 1031 |       | 378.85 | 33.90 | 150 |       |
|                            | White                  | 404.63                | 39.32 | 208 |       | 390.15 | 46.21 | 73  |       | 395.52            | 45.47 | 926  |       | 385.69 | 47.94 | 108 |       |
|                            | Hispanic               | *                     | *     | 24  |       | *      | *     | 32  |       | 380.25            | 45.86 | 153  |       | *      | *     | 31  |       |
|                            | Missing                | *                     | *     | 16  |       | *      | *     | 15  |       | 408.94            | 58.38 | 70   |       | *      | *     | 24  |       |
| Limited English Proficient |                        |                       |       |     |       |        |       |     |       |                   |       |      |       |        |       |     |       |
|                            | Yes                    | *                     | *     | 0   |       | *      | *     | 0   |       | *                 | *     | 3    |       | *      | *     | 1   |       |
|                            | No                     | 381.39                | 45.38 | 571 |       | 366.06 | 46.17 | 295 |       | 385.47            | 46.14 | 2267 |       | 381.47 | 40.22 | 320 |       |
|                            | Exited                 | *                     | *     | 0   |       | *      | *     | 0   |       | *                 | *     | 1    |       | *      | *     | 0   |       |

\* Statistics not reported for sample size less than 50 (N<50)

Table 4.12 Summary Statistics for Government Primary Forms

|                            |                        | January |       |      |       | May    |       |       |       |
|----------------------------|------------------------|---------|-------|------|-------|--------|-------|-------|-------|
|                            |                        | Mean    | SD    | N    | Alpha | Mean   | SD    | N     | Alpha |
| Overall                    |                        | 410.61  | 39.92 | 7648 | 0.94  | 421.53 | 45.55 | 54349 | 0.95  |
| Gender                     |                        |         |       |      |       |        |       |       |       |
|                            | Male                   | 408.86  | 42.06 | 3745 |       | 419.01 | 48.39 | 26763 |       |
|                            | Female                 | 412.63  | 37.54 | 3867 |       | 424.15 | 42.32 | 27375 |       |
|                            | Missing                | *       | *     | 36   |       | 401.98 | 54.50 | 211   |       |
| Special Education          |                        |         |       |      |       |        |       |       |       |
|                            | Yes                    | *       | *     | 14   |       | 392.53 | 36.35 | 576   |       |
|                            | No                     | 410.68  | 39.90 | 7634 |       | 421.85 | 45.55 | 53676 |       |
|                            | 504                    | *       | *     | 0    |       | 414.71 | 37.44 | 97    |       |
| Ethnicity                  |                        |         |       |      |       |        |       |       |       |
|                            | American Indian        | *       | *     | 21   |       | 414.38 | 36.26 | 205   |       |
|                            | Asian/Pacific Islander | 421.40  | 36.41 | 132  |       | 442.30 | 46.23 | 3346  |       |
|                            | African American       | 383.55  | 39.00 | 2153 |       | 401.89 | 41.12 | 19326 |       |
|                            | White                  | 423.11  | 33.62 | 5033 |       | 434.89 | 42.96 | 27499 |       |
|                            | Hispanic               | 399.37  | 36.88 | 230  |       | 408.51 | 41.58 | 3558  |       |
|                            | Missing                | 367.04  | 45.86 | 79   |       | 399.14 | 52.36 | 415   |       |
| Limited English Proficient |                        |         |       |      |       |        |       |       |       |
|                            | Yes                    | *       | *     | 0    |       | 390.68 | 49.82 | 100   |       |
|                            | No                     | 410.61  | 39.92 | 7648 |       | 421.59 | 45.53 | 54218 |       |
|                            | Exited                 | *       | *     | 0    |       | *      | *     | 31    |       |

\* Statistics not reported for sample size less than 50

Table 4.13 Summary Statistics for Government Make Up Forms

|                            |                        | January Make-Up Forms |       |     |       |        |       |     |       | May Make-Up Forms |       |      |       |        |       |     |       |
|----------------------------|------------------------|-----------------------|-------|-----|-------|--------|-------|-----|-------|-------------------|-------|------|-------|--------|-------|-----|-------|
|                            |                        | C                     |       |     |       | D      |       |     |       | X                 |       |      |       | Y      |       |     |       |
|                            |                        | Mean                  | SD    | N   | Alpha | Mean   | SD    | N   | Alpha | Mean              | SD    | N    | Alpha | Mean   | SD    | N   | Alpha |
| Overall                    |                        | 381.83                | 41.35 | 576 | 0.93  | 370.05 | 43.89 | 273 | 0.92  | 395.44            | 55.00 | 1944 | 0.96  | 377.86 | 51.22 | 308 | 0.94  |
| Gender                     |                        |                       |       |     |       |        |       |     |       |                   |       |      |       |        |       |     |       |
|                            | Male                   | 374.92                | 47.40 | 262 |       | 367.98 | 49.33 | 148 |       | 389.01            | 58.20 | 1012 |       | 375.49 | 52.75 | 160 |       |
|                            | Female                 | 388.74                | 34.98 | 293 |       | 373.97 | 35.05 | 115 |       | 403.71            | 50.20 | 891  |       | 380.86 | 48.39 | 144 |       |
|                            | Missing                | *                     | *     | 21  |       | *      | *     | 10  |       | *                 | *     | 41   |       | *      | *     | 4   |       |
| Special Education          |                        |                       |       |     |       |        |       |     |       |                   |       |      |       |        |       |     |       |
|                            | Yes                    | *                     | *     | 5   |       | *      | *     | 0   |       | *                 | *     | 17   |       | *      | *     | 6   |       |
|                            | No                     | 381.98                | 41.42 | 571 |       | 370.05 | 43.89 | 273 |       | 395.84            | 54.81 | 1927 |       | 378.56 | 50.53 | 300 |       |
|                            | 504                    | *                     | *     | 0   |       | *      | *     | 0   |       | *                 | *     | 0    |       | *      | *     | 2   |       |
| Ethnicity                  |                        |                       |       |     |       |        |       |     |       |                   |       |      |       |        |       |     |       |
|                            | American Indian        | *                     | *     | 2   |       | *      | *     | 3   |       | *                 | *     | 10   |       | *      | *     | 2   |       |
|                            | Asian/Pacific Islander | *                     | *     | 12  |       | *      | *     | 6   |       | 418.51            | 43.15 | 53   |       | *      | *     | 11  |       |
|                            | African American       | 373.37                | 39.57 | 322 |       | 362.24 | 42.43 | 164 |       | 375.30            | 50.54 | 761  |       | 370.89 | 49.64 | 160 |       |
|                            | White                  | 400.30                | 34.38 | 184 |       | 391.63 | 43.88 | 63  |       | 415.97            | 54.04 | 878  |       | 390.32 | 52.53 | 93  |       |
|                            | Hispanic               | *                     | *     | 25  |       | *      | *     | 20  |       | 380.99            | 45.15 | 149  |       | *      | *     | 25  |       |
|                            | Missing                | *                     | *     | 31  |       | *      | *     | 17  |       | 378.86            | 43.91 | 93   |       | *      | *     | 17  |       |
| Limited English Proficient |                        |                       |       |     |       |        |       |     |       |                   |       |      |       |        |       |     |       |
|                            | Yes                    | *                     | *     | 0   |       | *      | *     | 0   |       | *                 | *     | 4    |       | *      | *     | 0   |       |
|                            | No                     | 381.83                | 41.35 | 576 |       | 370.05 | 43.89 | 273 |       | 395.49            | 55.05 | 1939 |       | 377.86 | 51.22 | 308 |       |
|                            | Exited                 | *                     | *     | 0   |       | *      | *     | 0   |       | *                 | *     | 1    |       | *      | *     | 0   |       |

\* Statistics not reported for sample size less than 50 (N<50)

## Decision Accuracy and Consistency

The accuracy of decisions based on specified cut-scores was assessed for Reliability of Classification using the computer program RELCLASS, which is an ETS proprietary software. RELCLASS provides two statistics that describe the reliability of classifications based on test scores (Livingston & Lewis, 1995). More specifically, information from an administration of one form is used to estimate the following:

- 1) Decision Accuracy describes the extent to which examinees are classified in the same way as they would be on the basis of the average of all possible forms of a test. Decision accuracy answers the question: How does the actual classification of test takers, based on their single-form scores, agree with the classification that would be made on the basis of their true scores, if their true scores were somehow known?
- 2) Decision Consistency describes the extent to which examinees are classified in the same way as they would be on the basis of a single form of a test other than the one for which data are available. Decision consistency answers the question: What is the agreement between the classifications based on two non-overlapping, equally difficult forms of the test?

RELCLASS estimates decision accuracy using an estimated joint distribution of reported performance level classifications on the current form of the exam and the performance level classifications based on an all-forms average (true score). RELCLASS estimates decision consistency using an estimated joint distribution of reported performance level classifications on the current form of the exam and performance level classifications on the alternate (parallel) form. In each case, the proportion of performance level classifications with exact agreement is the sum of the entries in the diagonal of the contingency table representing the joint distribution.

The results are provided in Tables 4.14 to 4.16 by content area. The tables show that decision accuracy values ranged from 0.82 to 0.94, across all performance levels and from 0.89 to 0.90 for the Proficient and Above classification in algebra. Therefore, the agreement between classifications based on an observable variable (scores on one form of a test) and classifications based on an unobservable variable (the test takers' true scores) was very good. Decision consistency values ranged from 0.73 to 0.92 across all performance levels, and from 0.85 to 0.86 for the Proficient and Above classifications in algebra. Since decision consistency statistics describe the agreement between classifications based on two variables (scores on the form students have taken and a parallel form of the same test that is not administered to the students), these values are within the acceptable range.

Note that in all cases the decision accuracy indices are somewhat larger than the decision consistency indices. This is due to differences in the estimation procedures. The estimation procedure for decision accuracy includes a random component on one of the two variables, whereas in estimating decision consistency each variable includes a random component (Livingston & Lewis, 1995).

Table 4.14 Decision Accuracy and Consistency for the Algebra Tests

|                      | <b>Placement Score</b>  | <b>Advanced</b> | <b>Proficient</b> | <b>Basic</b> | <b>Category Total*</b> |
|----------------------|---|-----------------|-------------------|--------------|------------------------|
| January, 2006        |   |                 |                   |              |                        |
| Decision Accuracy    | 450 – 515   | 0.12            | 0.02              | 0.00         | 0.14                   |
|                      | 412 – 449   | 0.05            | 0.24              | 0.08         | 0.36                   |
|                      | 240 – 411   | 0.00            | 0.03              | 0.47         | 0.50                   |
|                      | Estimated Proportion Correctly Classified*: Total = 0.82; Proficient & Above = 0.89 |                 |                   |              |                        |
| Decision Consistency | 450 – 515   | 0.11            | 0.03              | 0.00         | 0.14                   |
|                      | 412 – 449   | 0.07            | 0.20              | 0.09         | 0.36                   |
|                      | 240 – 411   | 0.00            | 0.05              | 0.45         | 0.50                   |
|                      | Estimated Proportion Correctly Classified*: Total =0.76; Proficient & Above = 0.86  |                 |                   |              |                        |
| May, 2006            |   |                 |                   |              |                        |
| Decision Accuracy    | 450 – 650   | 0.21            | 0.06              | 0.00         | 0.27                   |
|                      | 412 – 449   | 0.05            | 0.29              | 0.08         | 0.41                   |
|                      | 240 – 411   | 0.00            | 0.01              | 0.30         | 0.32                   |
|                      | Estimated Proportion Correctly Classified*: Total = 0.80; Proficient & Above = 0.90 |                 |                   |              |                        |
| Decision Consistency | 450 – 650   | 0.20            | 0.07              | 0.01         | 0.27                   |
|                      | 412 – 449   | 0.07            | 0.24              | 0.10         | 0.41                   |
|                      | 240 – 411   | 0.00            | 0.03              | 0.29         | 0.32                   |
|                      | Estimated Proportion Correctly Classified*: Total =0.73; Proficient & Above = 0.87  |                 |                   |              |                        |

\*Inconsistencies with category cell entries are due to rounding.

Table 4.15 Decision Accuracy and Consistency for the Biology Tests

|                      | <b>Placement Score</b>                                   | <b>Proficient</b> | <b>Basic</b> | <b>Category Total*</b> |
|----------------------|--|-------------------|--------------|------------------------|
| January, 2006        |  |                   |              |                        |
| Decision Accuracy    | 400 – 546  | 0.56              | 0.06         | 0.62                   |
|                      | 240 – 399  | 0.02              | 0.36         | 0.38                   |
|                      | Estimated Proportion Correctly Classified*: Total = 0.92 |                   |              |                        |
| Decision Consistency | 400 – 546  | 0.54              | 0.08         | 0.62                   |
|                      | 240 – 399  | 0.03              | 0.35         | 0.38                   |
|                      | Estimated Proportion Correctly Classified*: Total =0.89  |                   |              |                        |
| May, 2006            |  |                   |              |                        |
| Decision Accuracy    | 400 – 588  | 0.67              | 0.02         | 0.69                   |
|                      | 240 – 399  | 0.04              | 0.27         | 0.31                   |
|                      | Estimated Proportion Correctly Classified*: Total = 0.94 |                   |              |                        |
| Decision Consistency | 400 – 588  | 0.66              | 0.03         | 0.69                   |
|                      | 240 – 399  | 0.05              | 0.27         | 0.31                   |
|                      | Estimated Proportion Correctly Classified*: Total =0.92  |                   |              |                        |

\*Inconsistencies with category cell entries are due to rounding.

Table 4.16 Decision Accuracy and Consistency for the Government Tests

|                      | <b>Placement Score</b>                                   | <b>Proficient</b> | <b>Basic</b> | <b>Category Total*</b> |
|----------------------|--|-------------------|--------------|------------------------|
| January, 2006        |  |                   |              |                        |
| Decision Accuracy    | 394 – 606  | 0.65              | 0.03         | 0.68                   |
|                      | 240 – 393  | 0.03              | 0.29         | 0.32                   |
|                      | Estimated Proportion Correctly Classified*: Total = 0.94 |                   |              |                        |
| Decision Consistency | 394 – 606  | 0.64              | 0.04         | 0.68                   |
|                      | 240 – 393  | 0.04              | 0.28         | 0.32                   |
|                      | Estimated Proportion Correctly Classified*: Total =0.92  |                   |              |                        |
| May, 2006            |  |                   |              |                        |
| Decision Accuracy    | 394 – 650  | 0.71              | 0.04         | 0.75                   |
|                      | 240 – 393  | 0.01              | 0.24         | 0.25                   |
|                      | Estimated Proportion Correctly Classified*: Total = 0.95 |                   |              |                        |
| Decision Consistency | 394 – 650  | 0.70              | 0.06         | 0.75                   |
|                      | 240 – 393  | 0.02              | 0.23         | 0.25                   |
|                      | Estimated Proportion Correctly Classified*: Total =0.92  |                   |              |                        |

\*Inconsistencies with category cell entries are due to rounding.

## Section 5. Field Test Analyses

Following the receipt of the final scored file from Measurement Incorporated (MI), the field test analyses were completed. The analyses of the field test data consisted of four components: classical item analyses, differential item functioning (DIF), calibration, and scaling. All of the analyses were completed using Genasys, which is an ETS proprietary software. The analysis procedures for each component are described in detail. Samples used for the analyses included all valid records available, including students learning English as a second language, students with IEP or 504 plans, and students receiving accommodations. Only duplicate records, records invalidated by the test administrator, and records with five or fewer item responses were excluded from the analysis sample.

### Classical Item Analyses

Classical item analyses involve computing a set of statistics based on classical test theory for every item in each form. The statistics provide key information about the quality of the items from an empirical perspective. The statistics estimated for the MDHSA field test items, and associated criteria used to flag items for the content specialists' review, are described below.

Classical item difficulty (“p-value”):

This statistic indicates the percent of examinees in the sample that answered the item correctly. Desired p-values generally fall within the range of 0.25 to 0.90. Occasionally, items that fall outside this range can be justified for inclusion in an item bank based upon the quality and educational importance of the item content or the ability to measure students with very high or low achievement, especially if the students have not yet received instruction in the content or lack motivation to complete the field test items to the best of their ability.

The item-total correlation of the correct response option (for SR items) or the CR item score with the total test score:

This statistic describes the relationship between performance on the specific item and performance on the entire form. It is sometimes referred to as a discrimination index. For SR items, the item-total correlation is the point-biserial correlation. For CR items, the item-total correlation is the polyserial correlation. Values less than 0.15 were flagged for a weaker than desired relationship and deserve careful consideration by ETS staff and MSDE before including them on future forms. Items with negative correlations can indicate serious problems with the item content (e.g., multiple correct answers, unusually complex content), an incorrect key, or students have not been taught the content.



The proportion of students choosing each response option (SR items):

This statistic indicates the percent of examinees selecting each answer option. Item options not selected by any students or selected by a very low proportion of students indicate problems with plausibility of the option. Items that do not have all answer options functioning may be discarded or revised and field tested again.

The point-biserial correlation of incorrect response option (SR items) with the total score:

These statistics describe the relationship between selecting an incorrect response option for a specific item and performance on the entire test. Typically, the correlation between an incorrect answer and total test performance is weak or negative. Values are typically compared and contrasted with the discrimination index. When the magnitude of these point-biserial correlations for the incorrect answer is stronger, relative to the correct answer, the item will be carefully reviewed for content-related problems. Alternatively, positive point-biserial correlations on incorrect option choices may indicate that students have not had sufficient opportunity to learn the material.

Percent of students omitting an item:

This statistic is useful for identifying problems with test features such as testing time and item/test layout. Typically, it is assumed that if students have an adequate amount of testing time, 95% of students should attempt to answer each question. When a pattern of omit percentages exceeds 5% for a series of items at the end of a timed section, this may indicate that there was insufficient time for students to complete all items. Alternatively, if the omit percentage is greater than 5% for a single item, this could be an indication of an item/test layout problem. For example, students might accidentally skip an item that follows a lengthy stem.

Frequency distribution of CR score points:

Observation of the distribution of scores is useful to identify how well the item is functioning. If no students are assigned the top score point, this may indicate that the item is not functioning with respect to the rubric, there are problems with the item content, or students have not been taught the content.

Summaries of p-values by content area for the field test items administered in January are found in Table 5.1 for SR items and Table 5.2 for CR items. Summaries of item-total

correlations by content area for the field test items administered in January are found in Table 5.3 for the SR items and Table 5.4 for the CR items. Summaries of p-values by content area for the field test items administered in May are found in Table 5.5 for SR items and Table 5.6 for CR items. Summaries of item-total correlations by content area for the field test items administered in May are found in Table 5.7 for the SR items and Table 5.8 for the CR items. In addition, a series of flags was created to identify items with extreme values. Flagged items were subject to additional scrutiny prior to the inclusion of the items in the final calibrations. The following flagging criteria were applied to all items tested in the 2006 assessments:

- *Difficulty Flag*: P-values less than 0.25 or greater than 0.90.
- *Discrimination Flag*: Point-biserial correlation less than 0.15 for the correct answer.
- *Distracter Flag*: Point-biserial correlation positive for incorrect option.
- *Omit Flag*: Percent omitted is greater than 5.
- *Collapsed Score Levels*: Items with no students obtaining the score point.

Following the classical item analyses, most items with poor item statistics and all items that were not scored, as per MSDE's instructions, were removed from further analyses. Table 5.9 presents items that were removed from further analyses and identified for revision and possible re-field testing. Table 5.10 presents items that, although flagged for statistical reasons including high omit rates; extreme p-values; low correlations; missing responses for SR distracters or CR score points; and C-Level DIF, were retained for further analyses and evaluation. Calibration results indicated the items were estimated reasonably, and therefore were not removed from scaling.

### **Differential Item Functioning**

Following the classical item analyses, differential item functioning (DIF) analyses were completed. One goal of test development is to assemble a set of items that provides an estimate of student ability that is as fair and accurate as possible for all groups within the population. DIF statistics are used to identify items whereby identifiable groups of students with the same underlying level of ability have different probabilities of answering correctly (e.g. females, African Americans, Hispanics). If the item is more difficult for an identifiable subgroup, the item may be measuring something different than the intended construct. However, it is important to recognize that DIF flagged items might be related to actual differences in relevant knowledge or skill (item impact) or statistical Type I error. Subsequent review by content experts and bias/sensitivity committees is required to determine the source and meaning of evident differences.

ETS used two DIF detection methods: the Mantel-Haenszel and standardization approaches. As part of the Mantel-Haenszel procedure, the statistic described by Holland

& Thayer (1988), known as MH D-DIF, was used<sup>4</sup>. This statistic is expressed as the difference between the focal and reference group performance on an item after conditioning on total test score. Negative MH D-DIF statistics favor the reference group and positive values favor the focal group. The classification logic used for flagging items is based on a combination of absolute differences and significance testing. Items that are not significantly different based on the MH D-DIF ( $p > 0.05$ ) are considered to have similar performance between the two studied groups; these items are considered to be functioning appropriately. For items where the statistical test indicates significant differences ( $p < 0.05$ ), the effect size is used to determine the direction and severity of the DIF. For the ELA CR item, the Mantel-Haenszel procedure was executed where item categories are treated as integer scores and a chi-square test was carried out with one degree of freedom. The male and white groups were treated as the reference groups for gender and ethnicity, respectively; the female and other ethnic groups were considered the focal groups.

Based on their DIF statistics, items are classified into one of three categories and assigned values of A, B or C. Category A items contain negligible DIF, Category B items exhibit slight or moderate DIF, and Category C items have moderate to large DIF. Negative values imply that conditional on the matching variable, the focal group has a lower mean item score than the reference group. In contrast a positive value implies that, conditional on the matching variable, the reference group has lower mean item score than the focal group.

For constructed response (CR) items, the MH D-DIF statistic is not calculated; instead the standardization procedure is used in conjunction with the Mantel chi-square statistic. Analogous flagging rules have been developed that are used to classify the CR items into A, B, or C DIF categories. The flagging criteria for constructed response items are:

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<sup>4</sup> The formula for the estimate of constant odds ratio is:

$$\alpha_{MH} = \frac{\left( \sum_m \frac{R_{rm} W_{fm}}{N_m} \right)}{\left( \sum_m \frac{R_{fm} W_{rm}}{N_m} \right)},$$

where,

- $R_{rm}$  = number in reference group at ability level m answering the item right,
- $W_{fm}$  = number in focal group at ability level m, answering the item wrong,
- $R_{fm}$  = number in focal group at ability level m answering the item right,
- $W_{rm}$  = number in reference group at ability level m, answering the item wrong,
- $N_m$  = total group at ability level m.

This can then be used in the following formula (Holland & Thayer, 1985):

$$MH\ D - DIF = -2.35 \ln[\alpha_{MH}].$$

- A) If the Mantel Chi-square p-value  $> 0.05$  and/or the Mantel Chi-square p-value  $< 0.05$  and the Standardized Mean Difference (SMD)/SD  $\leq 0.17$ , the item is classified as A.
- B) If the Mantel Chi-square p-value  $< 0.05$  and  $|SMD/SD| > 0.17$  then the item is classified as B.
- C) If the Mantel Chi-square p-value  $< 0.05$  and  $|SMD/SD| > 0.25$  then the item is classified as C.

Positive values favor the focal group and negative values favor the reference group.

There were 4 items flagged for C-level DIF against one of the identified focal groups (i.e., female, African American, American Indian, Asian, Hispanic). Refer to Table 5.10. The item in the January Algebra test was a CR item that favored females. The item in the May Algebra test was a SR item that was flagged for three focal groups of Hispanics, African Americans, and females, and favored the reference groups of Whites and males. The biology SR item in the January test favored males as opposed to females, as did the Government SR item in the May test. These items are flagged in the bank and will be reviewed.

### **IRT Calibration and Scaling**

One purpose of item calibration and scaling is to create a common scale for expressing the difficulty estimates of all the items across all versions of a test. The resulting scale has a mean score of 0 and a standard deviation of 1. It should be noted that this scale is often referred to as the “theta” metric and is not used for reporting purposes because the values typically range from  $-3$  to  $+3$ . Therefore, the scale is usually transformed to a reporting scale (also known as a scale score), which can be more meaningfully interpreted by students, teachers, and other stakeholders.

As noted previously, the IRT models used to calibrate the MDHSA test items were the 3-parameter logistic (3PL) model for SR items and the generalized partial credit model (GPCM) for CR items. Item response theory expresses the probability that a student will achieve a certain score on an item (such as correct or incorrect) as a function of the item’s statistical properties and the ability level (or proficiency level) of the student.

The fundamental equation of the 3PL model relates the probability that a person with ability  $\theta$  will respond correctly to item  $j$ :

$$P(U_j = 1 | \theta) = P_j(\theta) = c_j + \frac{1 - c_j}{1 + e^{-1.7a_j(\theta - b_j)}}$$

where:

$U_j$  is the response to item  $j$ , 1 if correct and 0 if incorrect;

- $a_j$  is the slope parameter of item  $j$ , characterizing its discrimination ;
- $b_j$  is the threshold parameter of item  $j$ , characterizing its difficulty; and
- $c_j$  is the lower asymptote parameter of item  $j$ , reflecting the chance that students with very low proficiency will select the correct answer, sometimes called the “pseudo-guessing” level.

The parameters estimated for the 3PL model were discrimination (a), difficulty (b), and the pseudo-guessing level (c).

The GPCM is given by

$$P_{jk}(\theta) = \frac{\exp\left[\sum_{v=1}^k Z_{jv}(\theta)\right]}{\sum_{c=1}^{m_j} \exp\left[\sum_{v=1}^c Z_{jv}(\theta)\right]},$$

where

$$Z_{jk}(\theta) = 1.7a_j(\theta - b_{jk}) = 1.7a_j(\theta - b_j + d_k),$$

$$\sum_{k=2}^{m_j} d_k = 0,$$

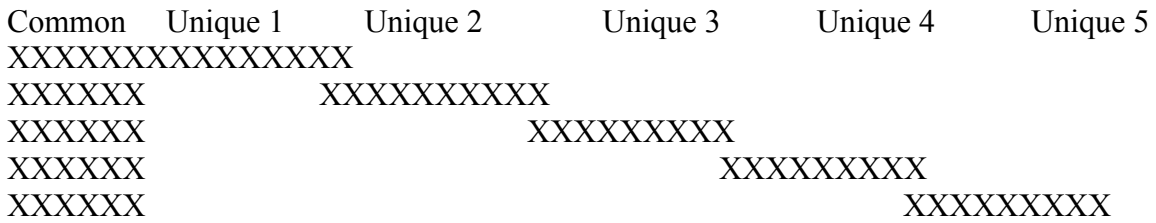
- $P_{jk}$  is the probability of responding in the  $k^{\text{th}}$  category from  $m_j+1$  categories for item  $j$ ,
- $\theta$  is the ability level,
- $a_j$  is the item parameter characterizing the discrimination for item  $j$ ,
- $b_{jk}$  is an item-category parameter for item  $j$ ,
- $b_j$  is the item parameter characterizing the difficulty for item  $j$ , and
- $d_k$  is the category parameter characterizing the relative difficulty of categories  $k$ .

A proprietary version of the PARSCALE computer program (Muraki & Bock, 1995) was used for all item calibration work. This program estimates parameters for a generalized partial-credit model using procedures described by Muraki (1992). The resulting calibrations were then scaled to the bank estimates using Stocking and Lord’s (1983) TCC method and the operational items as the anchor set.

The calibration and equating process is outlined in the steps below:

1. For each test, calibrate all items using a sparse matrix design that places all items on a common scale. Essentially, this means that the data was set up using the following format. In the diagram below X's represent items, spaces indicating missing data. For example, items included on version 2 but not on version 1, 3, 4

or 5 were treated as “not reached” for the purposes of the analyses and were denoted as “missing” in the diagram below.



2. Once the items have been calibrated, results are reviewed to determine if any items failed to calibrate.
3. After the final calibration parameters were obtained, the items were then linked to the bank scale using the test characteristic curve method. Specifically, the operational items were used to place the field test items onto the operational reporting scale.

Once the items were calibrated and placed onto the operational scale, the items were loaded into the item bank. Items were listed as unavailable based on the following criteria:

- Item-total correlation less than 0.1
- Item p-value less than 0.1
- Field test CR items that have fewer than 20 students achieving the highest score level
- Item not scored

## Statistical Summary Tables

Table 5.1 Distribution of P-Values for the January Field Test SR Items

| P-Value                  | Percent and Number of Items |   |         |   |            |   |
|--------------------------|-----------------------------|---|---------|---|------------|---|
|                          | Algebra                     |   | Biology |   | Government |   |
|                          | %                           | N | %       | N | %          | N |
| < 0.30 <sup>a</sup>      | 6.25                        | 1 | 12.50   | 3 | 0.00       | 0 |
| 0.30 to 0.40             | 12.50                       | 2 | 20.83   | 5 | 20.00      | 2 |
| 0.41 to 0.50             | 18.75                       | 3 | 8.33    | 2 | 40.00      | 4 |
| 0.51 to 0.60             | 12.50                       | 2 | 25.00   | 6 | 10.00      | 1 |
| 0.61 to 0.70             | 12.50                       | 2 | 4.17    | 1 | 10.00      | 1 |
| 0.71 to 0.80             | 18.75                       | 3 | 25.00   | 6 | 20.00      | 2 |
| ≥ 0.81 <sup>b</sup>      | 18.75                       | 3 | 4.17    | 1 | 0.00       | 0 |
| <b>Descriptive Stats</b> |                             |   |         |   |            |   |
| Number of Items          | 16                          |   | 24      |   | 10         |   |
| Mean                     | 0.59                        |   | 0.53    |   | 0.52       |   |
| SD                       | 0.21                        |   | 0.19    |   | 0.17       |   |
| Min                      | 0.18                        |   | 0.16    |   | 0.30       |   |
| Max                      | 0.94                        |   | 0.84    |   | 0.78       |   |

<sup>a</sup> p-value < 0.25: 1 algebra item; 1 biology item

<sup>b</sup> p-value > 0.90: 1 algebra item

Table 5.2 Distribution of P-Values for the January Field Test CR Items

| P-Value                  | Percent and Number of Items |   |         |   |            |   |
|--------------------------|-----------------------------|---|---------|---|------------|---|
|                          | Algebra                     |   | Biology |   | Government |   |
|                          | %                           | N | %       | N | %          | N |
| < 0.30                   | 0.00                        | 0 | 50.00   | 1 | 0.00       | 0 |
| 0.30 to 0.40             | 33.33                       | 1 | 50.00   | 1 | 50.00      | 1 |
| 0.41 to 0.50             | 33.33                       | 1 | 0.00    | 0 | 50.00      | 1 |
| 0.51 to 0.60             | 33.33                       | 1 | 0.00    | 0 | 0.00       | 0 |
| 0.61 to 0.70             | 0.00                        | 0 | 0.00    | 0 | 0.00       | 0 |
| 0.71 to 0.80             | 0.00                        | 0 | 0.00    | 0 | 0.00       | 0 |
| ≥ 0.81                   | 0.00                        | 0 | 0.00    | 0 | 0.00       | 0 |
| <b>Descriptive Stats</b> |                             |   |         |   |            |   |
| Number of Items          | 3                           |   | 2       |   | 2          |   |
| Mean                     | 0.46                        |   | 0.30    |   | 0.38       |   |
| SD                       | 0.05                        |   | 0.03    |   | 0.03       |   |
| Min                      | 0.40                        |   | 0.27    |   | 0.36       |   |
| Max                      | 0.51                        |   | 0.32    |   | 0.41       |   |

Table 5.3 Distribution of Item-Total Correlations for the January Field Test SR Items

| Correlation       | Percent and Number of Items |   |         |   |            |   |
|-------------------|-----------------------------|---|---------|---|------------|---|
|                   | Algebra                     |   | Biology |   | Government |   |
|                   | %                           | N | %       | N | %          | N |
| < 0.15            | 0.00                        | 0 | 12.50   | 3 | 0.00       | 0 |
| 0.15 to 0.24      | 0.00                        | 0 | 16.67   | 4 | 30.00      | 3 |
| 0.25 to 0.34      | 31.25                       | 5 | 16.67   | 4 | 40.00      | 4 |
| 0.35 to 0.44      | 50.00                       | 8 | 20.83   | 5 | 30.00      | 3 |
| 0.45 to 0.54      | 12.5                        | 2 | 33.33   | 8 | 0.00       | 0 |
| ≥ 0.55            | 6.25                        | 1 | 0.00    | 0 | 0.00       | 0 |
| Descriptive Stats |                             |   |         |   |            |   |
| Number of Items   | 16                          |   | 24      |   | 10         |   |
| Mean              | 0.38                        |   | 0.35    |   | 0.32       |   |
| SD                | 0.09                        |   | 0.15    |   | 0.07       |   |
| Min               | 0.25                        |   | 0.04    |   | 0.21       |   |
| Max               | 0.56                        |   | 0.52    |   | 0.40       |   |

Table 5.4 Distribution of Item-Total Correlations for January Field Test CR Items

| Correlation       | Percent and Number of Items |   |         |   |            |   |
|-------------------|-----------------------------|---|---------|---|------------|---|
|                   | Algebra                     |   | Biology |   | Government |   |
|                   | %                           | N | %       | N | %          | N |
| < 0.15            | 0.00                        | 0 | 0.00    | 0 | 0.00       | 0 |
| 0.15 to 0.24      | 0.00                        | 0 | 0.00    | 0 | 0.00       | 0 |
| 0.25 to 0.34      | 0.00                        | 0 | 0.00    | 0 | 0.00       | 0 |
| 0.35 to 0.44      | 0.00                        | 0 | 0.00    | 0 | 0.00       | 0 |
| 0.45 to 0.54      | 33.33                       | 1 | 0.00    | 0 | 0.00       | 0 |
| ≥ 0.55            | 66.67                       | 2 | 100.00  | 2 | 100.00     | 2 |
| Descriptive Stats |                             |   |         |   |            |   |
| Number of Items   | 3                           |   | 2       |   | 2          |   |
| Mean              | 0.60                        |   | 0.66    |   | 0.71       |   |
| SD                | 0.08                        |   | 0.01    |   | 0.02       |   |
| Min               | 0.52                        |   | 0.65    |   | 0.69       |   |
| Max               | 0.68                        |   | 0.67    |   | 0.72       |   |



Table 5.5 Distribution of P-Values for the May Field Test SR Items

| P-Value             | Percent and Number of Items |    |         |    |            |   |
|---------------------|-----------------------------|----|---------|----|------------|---|
|                     | Algebra                     |    | Biology |    | Government |   |
|                     | %                           | N  | %       | N  | %          | N |
| < 0.30 <sup>a</sup> | 12.50                       | 6  | 1.30    | 1  | 0.00       | 0 |
| 0.30 to 0.40        | 12.50                       | 6  | 9.09    | 7  | 6.67       | 2 |
| 0.41 to 0.50        | 14.58                       | 7  | 16.88   | 13 | 16.67      | 5 |
| 0.51 to 0.60        | 22.92                       | 11 | 20.78   | 16 | 26.67      | 8 |
| 0.61 to 0.70        | 18.75                       | 9  | 23.38   | 18 | 23.33      | 7 |
| 0.71 to 0.80        | 16.67                       | 8  | 14.29   | 11 | 20.00      | 6 |
| ≥ 0.81 <sup>b</sup> | 2.08                        | 1  | 14.29   | 11 | 6.67       | 2 |
| Descriptive Stats   |                             |    |         |    |            |   |
| Number of Items     | 48                          |    | 77      |    | 30         |   |
| Mean                | 0.52                        |    | 0.61    |    | 0.59       |   |
| SD                  | 0.17                        |    | 0.16    |    | 0.14       |   |
| Min                 | 0.17                        |    | 0.29    |    | 0.36       |   |
| Max                 | 0.81                        |    | 0.93    |    | 0.84       |   |

<sup>a</sup> p-value < 0.25: 3 algebra items

<sup>b</sup> p-value > 0.90: 1 biology item

Table 5.6 Distribution of P-Values for the May Field Test CR Items

| P-Value             | Percent and Number of Items |   |         |   |            |   |
|---------------------|-----------------------------|---|---------|---|------------|---|
|                     | Algebra                     |   | Biology |   | Government |   |
|                     | %                           | N | %       | N | %          | N |
| < 0.30 <sup>a</sup> | 0.00                        | 0 | 70.00   | 7 | 0.00       | 0 |
| 0.30 to 0.40        | 45.45                       | 5 | 30.00   | 3 | 100.00     | 5 |
| 0.41 to 0.50        | 54.55                       | 6 | 0.00    | 0 | 0.00       | 0 |
| 0.51 to 0.60        | 0.00                        | 0 | 0.00    | 0 | 0.00       | 0 |
| 0.61 to 0.70        | 0.00                        | 0 | 0.00    | 0 | 0.00       | 0 |
| 0.71 to 0.80        | 0.00                        | 0 | 0.00    | 0 | 0.00       | 0 |
| ≥ 0.81              | 0.00                        | 0 | 0.00    | 0 | 0.00       | 0 |
| Descriptive Stats   |                             |   |         |   |            |   |
| Number of Items     | 11                          |   | 10      |   | 5          |   |
| Mean                | 0.41                        |   | 0.28    |   | 0.36       |   |
| SD                  | 0.06                        |   | 0.05    |   | 0.05       |   |
| Min                 | 0.32                        |   | 0.18    |   | 0.31       |   |
| Max                 | 0.50                        |   | 0.33    |   | 0.40       |   |

<sup>a</sup> p-value < 0.25: 1 biology item

Table 5.7 Distribution of Item-Total Correlations for the May Field Test SR Items

| Correlation       | Percent and Number of Items |    |         |    |            |    |
|-------------------|-----------------------------|----|---------|----|------------|----|
|                   | Algebra                     |    | Biology |    | Government |    |
|                   | %                           | N  | %       | N  | %          | N  |
| < 0.15            | 4.17                        | 2  | 0.00    | 0  | 3.33       | 1  |
| 0.15 to 0.24      | 10.42                       | 5  | 5.19    | 4  | 13.33      | 4  |
| 0.25 to 0.34      | 29.17                       | 14 | 24.68   | 19 | 16.67      | 5  |
| 0.35 to 0.44      | 29.17                       | 14 | 45.45   | 35 | 26.67      | 8  |
| 0.45 to 0.54      | 25.00                       | 12 | 24.68   | 19 | 36.67      | 11 |
| ≥ 0.55            | 2.08                        | 1  | 0.00    | 0  | 3.33       | 1  |
| Descriptive Stats |                             |    |         |    |            |    |
| Number of Items   | 48                          |    | 77      |    | 30         |    |
| Mean              | 0.37                        |    | 0.39    |    | 0.39       |    |
| SD                | 0.11                        |    | 0.08    |    | 0.12       |    |
| Min               | 0.11                        |    | 0.21    |    | 0.10       |    |
| Max               | 0.59                        |    | 0.52    |    | 0.59       |    |

Table 5.8 Distribution of Item-Total Correlations for May Field Test CR Items

| Correlation       | Percent and Number of Items |    |         |    |            |   |
|-------------------|-----------------------------|----|---------|----|------------|---|
|                   | Algebra                     |    | Biology |    | Government |   |
|                   | %                           | N  | %       | N  | %          | N |
| < 0.15            | 0.00                        | 0  | 0.00    | 0  | 0.00       | 0 |
| 0.15 to 0.24      | 0.00                        | 0  | 0.00    | 0  | 0.00       | 0 |
| 0.25 to 0.34      | 0.00                        | 0  | 0.00    | 0  | 0.00       | 0 |
| 0.35 to 0.44      | 0.00                        | 0  | 0.00    | 0  | 0.00       | 0 |
| 0.45 to 0.54      | 0.00                        | 0  | 0.00    | 0  | 0.00       | 0 |
| ≥ 0.55            | 100.00                      | 11 | 100.00  | 10 | 100.00     | 5 |
| Descriptive Stats |                             |    |         |    |            |   |
| Number of Items   | 11                          |    | 10      |    | 5          |   |
| Mean              | 0.67                        |    | 0.70    |    | 0.71       |   |
| SD                | 0.04                        |    | 0.04    |    | 0.02       |   |
| Min               | 0.61                        |    | 0.64    |    | 0.69       |   |
| Max               | 0.73                        |    | 0.77    |    | 0.74       |   |

Table 5.9 Field Test Items Excluded from Analyses by Administration and Content Area

| Content    | MD ID  | Form | Sequence | Response Type | Reason  |
|------------|--------|------|----------|---------------|---|
| January    |        |      |          |               |   |
| Algebra    | 79121  | B    | 12       | CR            | grid incorrectly appeared in answer book;<br>MSDE requested Do Not Score        |
| Biology    | 79404  | ACD  | 67       | SR            | R = -0.06   |
|            | 79483  | B    | 8        | SR            | R = -0.13   |
|            | 79453  | B    | 9        | SR            | R = -0.03   |
|            | 79492  | B    | 51       | SR            | R = -0.03   |
| May        |        |      |          |               |   |
| Algebra    | 106647 | F    | 30       | CR            | item content issue;<br>MSDE requested Do Not Score                              |
| Biology    | 108504 | K    | 8        | SR            | R = -0.04   |
| Government | 135493 | H    | 48       | CR            | mistake in scoring (pooled with a similar item);<br>MSDE requested Do Not Score |

Table 5.10 Field Test Items with Statistical Flags Retained in Analysis

|            | Statistical Flag |               |             |             |        |   |             |
|------------|------------------|---------------|-------------|-------------|--------|---|-------------|
|            | Omit Rate        |               | P-value     |             | Corr   | Missing responses for distracters or score points | C-Level DIF |
|            | SR $\geq$ 5%     | CR $\geq$ 20% | $\leq$ 0.10 | $\geq$ 0.90 | < 0.10 |   |             |
| January    |                  |               |             |             |        |   |             |
| Algebra    | 2                | 0             | 0           | 1           | 0      | 0   | 1           |
| Biology    | 0                | 0             | 0           | 0           | 2      | 0   | 1           |
| Government | 0                | 0             | 0           | 0           | 0      | 0   | 0           |
| May        |                  |               |             |             |        |   |             |
| Algebra    | 3                | 0             | 0           | 0           | 0      | 0   | 1           |
| Biology    | 0                | 0             | 0           | 1           | 0      | 0   | 0           |
| Government | 0                | 0             | 0           | 0           | 0      | 0   | 1           |

## Section 6. English Test

In 2004, MSDE developed a tenth-grade English test to replace the ninth-grade English I test. Items for the new test were administered in May 2005, January 2006, and May 2006. The January 2006 forms were reprints of the May 2005 forms. In these forms, the items with the best qualities were designated as operational, and used to generate student scores. The January and May 2007 forms will be the first pre-equated operational forms.

The new grade 10 test differed somewhat from the grade 9 test. A number of indicators (i.e., objectives) were added to the new English test and several new item types were developed to assess the new indicators. The new test involved three sessions; the ninth-grade test had only two sessions. MSDE developed three templates to allow for the field-testing of items in each of the three sessions rather than at the end of the test as had been done in the ninth-grade test. The templates were designed to accommodate the requirements of the blueprint within the time constraints of the three sessions.

This section of the technical report largely describes the May 2006 tests. Although some information about student performance on the January 2006 tests is also provided.

The section is organized into two parts. The first part describes the procedures for selecting the operational items for the new English test. It also presents item-level statistics and demographic information by form and describes the calibration and linking procedure. The second part presents demographic characteristics of the test takers, summary statistics describing student achievement, measures of classification consistency, IRT analyses, and the results of factor analyses results.

### Procedures for Selecting Operational Items

The process used to select the operational items for the English May 2006 forms was as follows:

1. Measurement Incorporated delivered five English files (one per week from the last week of June to the last week of July) to MSDE. Each file contained a sample of data collected for two of the 10 field test forms (i.e., EF, GH, JK, LM, and NP). Each sample consisted of 3,000 students.
2. ETS conducted item analyses and DIF analyses for each form. An Excel file, which contained descriptive and DIF statistics in a pre-determined format, was posted to DocuShare. Items with one or more of the statistical characteristics listed below were flagged.
  - p-values  $\leq 0.25$
  - p-values  $\geq 0.90$
  - point-biserials  $\leq 0.15$
  - omit rate  $\geq 5.0\%$

- distracter item-total correlation > 0.0
- C-level DIF

Information about the interpretation of these indicators is found in the Field-Test Analysis section of this report. The number of items flagged for each form is presented in Table 6.1.

Table 6.1 Number of Items Flagged by Field Test Form

| Statistical Flag                   | E06 | F06 | G06 | H06 | J06 | K06 | L06 | M06 | N06 | P06 |
|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| P-value $\leq 0.25$                | 0   | 0   | 1   | 0   | 0   | 0   | 1   | 2   | 0   | 1   |
| Item Total Correlation $\leq 0.15$ | 2   | 1   | 1   | 0   | 0   | 1   | 1   | 1   | 2   | 1   |
| Omit $\geq 0.05$                   | 5   | 3   | 5   | 3   | 3   | 6   | 3   | 2   | 3   | 3   |
| Distracter Point Biserial > 0.0    | 4   | 3   | 5   | 2   | 3   | 6   | 1   | 4   | 7   | 5   |
| P-value $\geq 0.90$                | 0   | 0   | 1   | 1   | 1   | 2   | 1   | 2   | 1   | 1   |
| C-Level DIF                        | 3   | 5   | 1   | 3   | 4   | 3   | 0   | 2   | 4   | 2   |
| Total Number of Flags              | 14  | 12  | 14  | 9   | 11  | 18  | 7   | 13  | 17  | 13  |
| Total Number of Items Flagged      | 11  | 10  | 12  | 7   | 10  | 15  | 5   | 9   | 13  | 10  |
| Total Items Analyzed               | 75  | 76  | 72  | 77  | 76  | 75  | 75  | 76  | 75  | 74  |

Note: Results are for all items on the test and are derived from sample data of 3,000 students per form.

- MSDE reviewed the item analysis results and used the information to identify operational, field-test, and Do Not Score items. MSDE posted the files to DocuShare. The number of items per form varied from 72 to 77. Following item selection, each form consisted of 50 operational items: 46 SR items, 2 BCR items, and 2 ECR items. The number of items per subscore category was consistent with the Target test form, which was Form K from the May 2005 administration. Form K was determined to be the best form for standard setting. Consistent with Form K, each form had 14 items from Comprehension and Interpretation, 12 items from Making Connections and Evaluation, 10 items from Composing, and 14 items from Language Usage and Conventions.
- ETS produced summary statistics on all operational items. The field-test items were put into the item bank for future forms development. Items that were identified as Do Not Score were not calibrated. Summary statistics of the *p*-values and item-test correlations for the selected operational items are presented for each of the May 2006 forms in Tables 6.2 and 6.3, respectively. These results were based on test takers that took each form. Table 6.4 provides demographic information for the all test takers of the May 2006 English administration and by form.

Table 6.2 Summary Statistics Describing the P-Values for the Operational Selected Response and Constructed Response Items by Form

| Selected Response |        |     |     |     |     |     |     |     |     |     |     |
|-------------------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Interval          | Target | E06 | F06 | G06 | H06 | J06 | K06 | L06 | M06 | N06 | P06 |
| < 0.30            | 0      | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   |
| 0.30-0.39         | 1      | 3   | 1   | 1   | 4   | 1   | 1   | 1   | 2   | 1   | 1   |
| 0.40-0.49         | 5      | 2   | 3   | 4   | 2   | 5   | 4   | 3   | 1   | 3   | 4   |
| 0.50-0.59         | 4      | 6   | 7   | 4   | 7   | 6   | 5   | 6   | 7   | 3   | 5   |
| 0.60-0.69         | 15     | 14  | 11  | 8   | 10  | 8   | 10  | 13  | 6   | 8   | 13  |
| 0.70-0.79         | 17     | 15  | 20  | 22  | 14  | 19  | 19  | 17  | 19  | 24  | 18  |
| 0.80-0.89         | 4      | 5   | 3   | 6   | 8   | 6   | 6   | 5   | 9   | 6   | 4   |
| 0.90-1.00         | 0      | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   |

| Constructed Response |        |     |     |     |     |     |     |     |     |     |     |
|----------------------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Interval             | Target | E06 | F06 | G06 | H06 | J06 | K06 | L06 | M06 | N06 | P06 |
| < 0.30               | 0      | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 0.30-0.39            | 0      | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 0.40-0.49            | 2      | 2   | 3   | 2   | 2   | 0   | 2   | 1   | 2   | 2   | 2   |
| 0.50-0.59            | 1      | 2   | 1   | 2   | 1   | 4   | 2   | 3   | 1   | 1   | 1   |
| 0.60-0.69            | 1      | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 1   | 1   | 1   |
| 0.70-0.79            | 0      | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 0.80-0.89            | 0      | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 0.90-1.00            | 0      | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |

|         |      |      |      |      |      |      |      |      |      |      |      |
|---------|------|------|------|------|------|------|------|------|------|------|------|
| N Items | 50   | 50   | 50   | 50   | 50   | 50   | 50   | 50   | 50   | 50   | 50   |
| Mean    | 0.67 | 0.65 | 0.66 | 0.67 | 0.66 | 0.66 | 0.67 | 0.67 | 0.68 | 0.69 | 0.66 |
| SD      | 0.12 | 0.13 | 0.12 | 0.13 | 0.15 | 0.13 | 0.13 | 0.12 | 0.15 | 0.12 | 0.12 |

Note: Results are for the operational items only and are derived from the full population of students for each form. The number of examinees per form ranged from 4,972 to 6,804 (see Table 6.4).

Table 6.3 Summary Statistics Describing the Item-Test Correlations for the Operational Selected Response and Constructed Response Items by Form

| Selected Response |        |     |     |     |     |     |     |     |     |     |     |
|-------------------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Interval          | Target | E06 | F06 | G06 | H06 | J06 | K06 | L06 | M06 | N06 | P06 |
| < 0.30            | 0      | 2   | 1   | 2   | 3   | 3   | 3   | 4   | 3   | 1   | 4   |
| 0.30-0.39         | 11     | 7   | 11  | 12  | 11  | 10  | 12  | 14  | 10  | 11  | 13  |
| 0.40-0.49         | 21     | 20  | 18  | 19  | 19  | 25  | 21  | 21  | 24  | 20  | 18  |
| 0.50-0.59         | 13     | 17  | 15  | 13  | 13  | 8   | 10  | 7   | 9   | 14  | 10  |
| 0.60-0.69         | 1      | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   |
| 0.70-0.79         | 0      | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 0.80-0.89         | 0      | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 0.90-1.00         | 0      | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |

| Constructed Response |        |     |     |     |     |     |     |     |     |     |     |
|----------------------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Interval             | Target | E06 | F06 | G06 | H06 | J06 | K06 | L06 | M06 | N06 | P06 |
| < 0.30               | 0      | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 0.30-0.39            | 0      | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 0.40-0.49            | 0      | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 0.50-0.59            | 1      | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   |
| 0.60-0.69            | 1      | 3   | 1   | 2   | 3   | 2   | 3   | 4   | 3   | 2   | 4   |
| 0.70-0.79            | 2      | 1   | 3   | 2   | 1   | 2   | 1   | 0   | 1   | 1   | 0   |
| 0.80-0.89            | 0      | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 0.90-1.00            | 0      | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |

|         |      |      |      |      |      |      |      |      |      |      |      |
|---------|------|------|------|------|------|------|------|------|------|------|------|
| N Items | 50   | 50   | 50   | 50   | 50   | 50   | 50   | 50   | 50   | 50   | 50   |
| Mean    | 0.48 | 0.48 | 0.47 | 0.46 | 0.46 | 0.46 | 0.45 | 0.43 | 0.45 | 0.46 | 0.45 |
| SD      | 0.09 | 0.10 | 0.11 | 0.10 | 0.11 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.11 |

Note: Results are for the operational items only and are derived from the full population of students for each form. The number of examinees per form ranged from 4,972 to 6,804 (see Table 6.4).

Table 6.4 Demographic Information for the May 2006 Population by Form

|                      |                            | 2006<br>Poptn | E06   | F06   | G06   | H06   | J06   | K06   | L06   | M06   | N06   | P06   |
|----------------------|----------------------------|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Overall              | N                          | 57324         | 6804  | 5573  | 5521  | 5408  | 5380  | 5358  | 5261  | 5222  | 5098  | 4972  |
| Gender               | Male                       | 28397         | 3629  | 2751  | 2661  | 2664  | 2617  | 2604  | 2552  | 2518  | 2504  | 2470  |
|                      | (%)                        | 49.54         | 53.34 | 49.36 | 48.20 | 49.26 | 48.64 | 48.60 | 48.50 | 48.20 | 49.10 | 49.70 |
|                      | Female                     | 28927         | 3175  | 2822  | 2860  | 2744  | 2763  | 2754  | 2709  | 2704  | 2594  | 2502  |
|                      | (%)                        | 50.46         | 46.66 | 50.64 | 51.80 | 50.74 | 51.36 | 51.40 | 51.50 | 51.80 | 50.90 | 50.30 |
| Special<br>Education | Yes                        | 5518          | 1642  | 443   | 447   | 402   | 397   | 403   | 362   | 361   | 346   | 327   |
|                      | (%)                        | 9.63          | 24.13 | 7.95  | 8.10  | 7.43  | 7.38  | 7.52  | 6.88  | 6.91  | 6.79  | 6.58  |
|                      | No                         | 50705         | 5020  | 5019  | 4972  | 4906  | 4882  | 4863  | 4798  | 4755  | 4663  | 4551  |
|                      | (%)                        | 88.45         | 73.78 | 90.06 | 90.06 | 90.72 | 90.74 | 90.80 | 91.20 | 91.10 | 91.50 | 91.50 |
|                      | 504                        | 1101          | 142   | 111   | 102   | 100   | 101   | 92    | 101   | 106   | 89    | 94    |
|                      | (%)                        | 1.92          | 2.09  | 1.99  | 1.85  | 1.85  | 1.88  | 1.72  | 1.92  | 2.03  | 1.75  | 1.89  |
| Ethnicity            | American<br>Indian         | 214           | 23    | 20    | 21    | 16    | 29    | 32    | 15    | 17    | 18    | 12    |
|                      | (%)                        | 0.37          | 0.34  | 0.36  | 0.38  | 0.30  | 0.54  | 0.60  | 0.29  | 0.33  | 0.35  | 0.24  |
|                      | Asian/Pacifi<br>c Islander | 3238          | 378   | 336   | 323   | 317   | 310   | 322   | 288   | 279   | 311   | 287   |
|                      | (%)                        | 5.65          | 5.56  | 6.03  | 5.85  | 5.86  | 5.76  | 6.01  | 5.47  | 5.34  | 6.10  | 5.77  |
|                      | African<br>American        | 21155         | 2557  | 2030  | 1974  | 1978  | 1929  | 1941  | 1885  | 1959  | 1857  | 1789  |
|                      | (%)                        | 36.90         | 37.58 | 36.43 | 35.75 | 36.58 | 35.86 | 36.20 | 35.80 | 37.50 | 36.40 | 36.00 |
|                      | White                      | 29315         | 3442  | 2860  | 2893  | 2778  | 2794  | 2732  | 2755  | 2653  | 2602  | 2588  |
|                      | (%)                        | 51.14         | 50.59 | 51.32 | 52.40 | 51.37 | 51.93 | 51.00 | 52.40 | 50.80 | 51.00 | 52.10 |



Table 6.4 Demographic Information for the May 2006 Population by Form (Continued)

|                            |          | 2006<br>Poptn | E06   | F06   | G06   | H06   | J06   | K06   | L06   | M06   | N06   | P06   |
|----------------------------|----------|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                            | Hispanic | 3402          | 404   | 327   | 310   | 319   | 318   | 331   | 318   | 314   | 310   | 296   |
|                            | (%)      | 5.93          | 5.94  | 5.87  | 5.61  | 5.90  | 5.91  | 6.18  | 6.04  | 6.01  | 6.08  | 5.95  |
| Limited<br>English<br>Prof | Yes      | 783           | 99    | 85    | 73    | 64    | 64    | 77    | 77    | 74    | 68    | 73    |
|                            | (%)      | 1.37          | 1.46  | 1.53  | 1.32  | 1.18  | 1.19  | 1.44  | 1.46  | 1.42  | 1.33  | 1.47  |
|                            | No       | 55885         | 6623  | 5432  | 5381  | 5273  | 5255  | 5233  | 5128  | 5094  | 4966  | 4837  |
|                            | (%)      | 97.49         | 97.34 | 97.47 | 97.46 | 97.50 | 97.68 | 97.70 | 97.50 | 97.60 | 97.40 | 97.30 |
|                            | Exited   | 656           | 82    | 56    | 67    | 71    | 61    | 48    | 56    | 54    | 64    | 62    |
|                            | (%)      | 1.14          | 1.21  | 1.00  | 1.21  | 1.31  | 1.13  | 0.90  | 1.06  | 1.03  | 1.26  | 1.25  |
|                            |          |               |       |       |       |       |       |       |       |       |       |       |
| Grade                      | Mean     | 10.00         | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 9.99  | 9.99  | 10.00 | 10.00 |
|                            | (SD)     | 0.38          | 0.38  | 0.37  | 0.37  | 0.37  | 0.36  | 0.35  | 0.34  | 0.35  | 0.36  | 0.36  |

## Calibration and Linking Procedure

In order to calibrate and link the operational and field-test items on the 2006 English form to the scale of the reference form (May, 2005), there were two rounds of calibration and linking. Both rounds used only SR items for linking. In the first round, the operational items were calibrated and linked to the May, 2005 score scale using 22 items that were common to all 2006 forms and 2005 forms. In the second round, the operational items and the field test items were calibrated together and linked to the base year score scale using the transformed item parameters obtained in phase 1 as anchors.

The content representation of the 22 item anchor set is given in Table 6.5. The table shows the number and percentage of anchor items by subscore.

Table 6.5 Content Representation of the 2006 Anchor Set

| Subscore                          | # of Items | % of Anchor | % of Total Test |
|-----------------------------------|------------|-------------|-----------------|
| Comprehension and Interpretation  | 7          | 32          | 28              |
| Making Connections and Evaluation | 6          | 27          | 24              |
| Composing                         | 2          | 9           | 20              |
| Language Usage and Conventions    | 7          | 32          | 28              |

Calibration and Linking of 2006 Operational Items. Items identified as anchor items were calibrated using the three-parameter logistic (3PL) model. A proprietary version of the PARSCALE computer program (Muraki & Bock, 1995) that is included as a module within GENASYS was used for all item calibration work. The PARSCALE program is run in two stages. In the first stage, the estimation procedure constrains the updated prior distribution to be normally distributed. The estimates resulting from this first stage are used as starting values for a second PARSCALE run, in which the subject prior distribution is updated after each expectation-maximization (E-M) cycle.

The items common to all forms were used to concurrently calibrate the anchor items in all 10 forms. The resulting calibration was then scaled to the bank estimates using the Stocking and Lord (SL) procedure (Stocking & Lord, 1983). The linking process is iterative and involves an inspection of differences between the new estimates and the reference estimates for the linking items. Anchor items with large weighted or unweighted root-mean-square differences (WRMSD) between item characteristic curves (ICCs) based on the old and new difficulty estimates are eliminated and the linking constants re-estimated. The differences are calculated as follows:

$$WRMSD = \sqrt{\sum_{j=1}^{61} w_j [P_n(\theta_j) - P_r(\theta_j)]^2},$$

where  $\theta_j$  ranges from  $-3.0$  to  $3.0$  by  $0.1$  thus forming 61 intervals,  $w_j$  is a weight equal to the proportion of estimated abilities from the transformed new form in interval  $j$ ,  $P_n(\theta_j)$  is the probability of correct response for the transformed new form item at ability level  $j$ , and  $P_r(\theta_j)$  is the probability of correct response for the reference form (i.e., the bank estimates). Any linking item for which the difference WRMSD was greater than  $0.125$  was eliminated from the anchor set. None of the WRMSD values exceeded  $0.125$ , therefore it was not necessary to eliminate any of the anchor items from the analyses.

The SL procedure identifies a linear transformation that minimizes the differences between a test characteristic curve (TCC) based on a set of anchor items and a TCC based on a set of reference items. In this case, the scaling parameters of slope (i.e.,  $34.277$ ) and intercept (i.e.,  $407.237$ ) were used to transform all May 2006 operational item parameters so that they are expressed on the base year score scale.

Calibration and Linking of the Field Test Items. In this second round of calibration, the operational items and field-test items in the May 2006 English test forms were calibrated concurrently using a sparse-matrix linked by common items across the 10 English forms. Once calibrated together, the SL procedure was used to link the calibrations to the base year scale. Transformed parameters for the operational items served as anchors.

The SL procedure was used to put sets of operational and field-test items onto the reference scale. In this case, the scaling parameters of slope (i.e.,  $34.294$ ) and intercept (i.e.,  $404.967$ ) were used to transform all May 2006 field-test item parameters so that they are expressed on the base year score scale.

Both linking procedures were evaluated by considering the following:

1. Mean differences in reference and transformed anchor item parameters
2. Ratio of standard deviations of reference and transformed anchor item parameters
3. Correlations between reference and transformed anchor item parameters
4. Plots of reference and transformed anchor item parameters
5. Plot of test characteristic curves based on reference and anchor item parameters
6. Comparison of item characteristic curves for reference and anchor item parameters.

Transformed a-parameter, b-parameter, and c-parameter estimates were plotted against the parameter estimates on the base year scale. These plots were inspected. Results indicated high correlations between the transformed and base year item parameters. Plots comparing of the TCCs of the reference and transformed item parameters, as well as plots of the ICCs based on reference and transformed parameters for all anchor items were

produced and inspected for each round. All results indicated that the linking procedures functioned as expected and that all items were successfully placed on the reference scale.

### **Summary Statistics of Student Achievement**

Provided in this section are statistics that describe the test takers and their achievement on the January and May 2006 English tests. The demographic characteristics of the students are presented in Table 6.14. The scale score statistics and reliability analyses are presented in Table 6.15 for the primary forms and in Table 6.16 for the make-up forms.

Table 6.14 Demographic Information

|                            |                        | January Primary Forms |       | January Make-Up Forms |        | May Primary Forms |       | May Make-Up Forms |       |
|----------------------------|------------------------|-----------------------|-------|-----------------------|--------|-------------------|-------|-------------------|-------|
|                            |                        | N                     | %     | N                     | %      | N                 | %     | N                 | %     |
| Overall                    |                        | 7321                  |       | 1024                  |        | 54597             |       | 2727              |       |
| Gender                     |                        |                       |       |                       |        |                   |       |                   |       |
|                            | Male                   | 3625                  | 49.68 | 520                   | 52.37  | 26970             | 49.40 | 1427              | 52.33 |
|                            | Female                 | 3671                  | 50.32 | 473                   | 47.63  | 27627             | 50.60 | 1300              | 47.67 |
|                            | Missing                | 25                    | 0.34  | 31                    | 3.03   | 0                 | 0.00  | 0                 | 0.00  |
| Special Education          |                        |                       |       |                       |        |                   |       |                   |       |
|                            | Yes                    | 49                    | 0.67  | 1022                  | 99.80  | 5130              | 9.40  | 388               | 14.23 |
|                            | No                     | 7270                  | 99.30 | 2                     | 0.20   | 48429             | 88.70 | 2276              | 83.46 |
|                            | 504                    | 2                     | 0.03  | 0                     | 0.00   | 1038              | 1.90  | 63                | 2.31  |
| Ethnicity                  |                        |                       |       |                       |        |                   |       |                   |       |
|                            | American Indian        | 18                    | 0.25  | 4                     | 0.41   | 203               | 0.37  | 11                | 0.40  |
|                            | Asian/Pacific Islander | 196                   | 2.70  | 43                    | 4.40   | 3151              | 5.80  | 87                | 3.20  |
|                            | African American       | 1967                  | 27.28 | 486                   | 50.21  | 19899             | 36.45 | 1256              | 46.06 |
|                            | White                  | 4679                  | 64.89 | 364                   | 37.60  | 28097             | 51.46 | 1218              | 44.66 |
|                            | Hispanic               | 351                   | 4.87  | 71                    | 7.33   | 3247              | 5.95  | 155               | 5.68  |
|                            | Missing                | 110                   | 1.50  | 56                    | 5.47   | 0                 | 0.00  | 0                 | 0.00  |
| Limited English Proficient |                        |                       |       |                       |        |                   |       |                   |       |
|                            | Yes                    | 1                     | 0.01  | 0                     | 0.00   | 754               | 1.38  | 29                | 1.06  |
|                            | No                     | 7320                  | 99.99 | 1024                  | 100.00 | 53222             | 97.48 | 2663              | 97.65 |
|                            | Exited                 | 0                     | 0.00  | 0                     | 0.00   | 621               | 1.14  | 35                | 1.28  |

Table 6.15 Summary Statistics for English Primary Forms

|                            |                        | January |       |      |       | May    |       |       |       |
|----------------------------|------------------------|---------|-------|------|-------|--------|-------|-------|-------|
|                            |                        | Mean    | SD    | N    | Alpha | Mean   | SD    | N     | Alpha |
| Overall                    |                        | 398.40  | 38.78 | 7321 | 0.92  | 405.23 | 37.46 | 54597 | 0.92  |
| Gender                     |                        |         |       |      |       |        |       |       |       |
|                            | Male                   | 391.16  | 40.21 | 3625 |       | 397.35 | 38.76 | 26970 |       |
|                            | Female                 | 405.80  | 35.64 | 3671 |       | 412.92 | 34.44 | 27627 |       |
|                            | Missing                | *       | *     | 25   |       | *      | *     | 0     |       |
| Special Education          |                        |         |       |      |       |        |       |       |       |
|                            | Yes                    | *       | *     | 49   |       | 364.92 | 35.55 | 5130  |       |
|                            | No                     | 398.62  | 38.74 | 7270 |       | 409.63 | 35.01 | 48429 |       |
|                            | 504                    | *       | *     | 2    |       | 399.15 | 37.20 | 1038  |       |
| Ethnicity                  |                        |         |       |      |       |        |       |       |       |
|                            | American Indian        | *       | *     | 18   |       | 401.63 | 33.44 | 203   |       |
|                            | Asian/Pacific Islander | 401.84  | 37.71 | 196  |       | 421.93 | 36.15 | 3151  |       |
|                            | African American       | 377.38  | 37.07 | 1967 |       | 389.88 | 33.48 | 19899 |       |
|                            | White                  | 408.65  | 35.31 | 4679 |       | 415.44 | 36.51 | 28097 |       |
|                            | Hispanic               | 384.61  | 35.94 | 351  |       | 395.01 | 33.61 | 3247  |       |
|                            | Missing                | 377.52  | 46.25 | 110  |       | *      | *     | 0     |       |
| Limited English Proficient |                        |         |       |      |       |        |       |       |       |
|                            | Yes                    | *       | *     | 1    |       | 372.83 | 30.98 | 754   |       |
|                            | No                     | 398.40  | 38.78 | 7320 |       | 405.84 | 37.38 | 53222 |       |
|                            | Exited                 | *       | *     | 0    |       | 392.37 | 30.48 | 621   |       |

\* Statistics not reported for sample size less than 50 (N<50)

Table 6.16 Summary Statistics for English Make-Up Forms

|                   |                        | Jan Make-Up Forms |       |     |       |        |       |     |       | May Make-Up Forms |       |      |       |        |       |     |       |
|-------------------|------------------------|-------------------|-------|-----|-------|--------|-------|-----|-------|-------------------|-------|------|-------|--------|-------|-----|-------|
|                   |                        | C                 |       |     |       | D      |       |     |       | X                 |       |      |       | Y      |       |     |       |
|                   |                        | Mean              | SD    | N   | Alpha | Mean   | SD    | N   | Alpha | Mean              | SD    | N    | Alpha | Mean   | SD    | N   | Alpha |
| Overall           |                        | 371.56            | 43.28 | 679 | 0.92  | 357.13 | 44.61 | 345 | 0.92  | 378.40            | 44.47 | 2214 | 0.94  | 374.34 | 42.21 | 513 | 0.92  |
| Gender            |                        |                   |       |     |       |        |       |     |       |                   |       |      |       |        |       |     |       |
|                   | Male                   | 364.14            | 45.19 | 348 |       | 345.37 | 46.31 | 172 |       | 368.42            | 47.08 | 1146 |       | 363.98 | 43.40 | 281 |       |
|                   | Female                 | 380.29            | 39.62 | 311 |       | 368.83 | 40.56 | 162 |       | 389.11            | 38.74 | 1068 |       | 386.88 | 37.13 | 232 |       |
|                   | Missing                | *                 | *     | 20  |       | *      | *     | 11  |       | *                 | *     | 0    |       | *      | *     | 0   |       |
| Special Education |                        |                   |       |     |       |        |       |     |       |                   |       |      |       |        |       |     |       |
|                   | Yes                    | *                 | *     | 2   |       | *      | *     | 0   |       | 347.27            | 40.49 | 302  |       | 345.72 | 43.13 | 86  |       |
|                   | No                     | 371.62            | 43.31 | 677 |       | 357.13 | 44.61 | 345 |       | 383.21            | 43.01 | 1862 |       | 380.14 | 39.67 | 414 |       |
|                   | 504                    | *                 | *     | 0   |       | *      | *     | 0   |       | 387.26            | 45.34 | 50   |       | *      | *     | 13  |       |
| Ethnicity         |                        |                   |       |     |       |        |       |     |       |                   |       |      |       |        |       |     |       |
|                   | American Indian        | *                 | *     | 2   |       | *      | *     | 2   |       | *                 | *     | 10   |       | *      | *     | 1   |       |
|                   | Asian/Pacific Islander | *                 | *     | 23  |       | *      | *     | 20  |       | 398.30            | 41.56 | 79   |       | *      | *     | 8   |       |
|                   | African American       | 357.51            | 41.13 | 298 |       | 346.26 | 39.77 | 188 |       | 366.23            | 39.30 | 994  |       | 366.79 | 37.53 | 262 |       |
|                   | White                  | 387.98            | 40.78 | 271 |       | 373.92 | 45.53 | 93  |       | 389.59            | 46.21 | 1008 |       | 383.42 | 46.50 | 210 |       |
|                   | Hispanic               | *                 | *     | 43  |       | *      | *     | 28  |       | 372.27            | 43.40 | 123  |       | *      | *     | 32  |       |
|                   | Missing                | *                 | *     | 42  |       | *      | *     | 14  |       | *                 | *     | 0    |       | *      | *     | 0   |       |
| Limited English   |                        |                   |       |     |       |        |       |     |       |                   |       |      |       |        |       |     |       |
| Proficient        | Yes                    | *                 | *     | 0   |       | *      | *     | 0   |       | *                 | *     | 26   |       | *      | *     | 3   |       |
|                   | No                     | 371.56            | 43.28 | 679 |       | 357.13 | 44.61 | 345 |       | 379.06            | 44.34 | 2156 |       | 374.67 | 42.24 | 507 |       |
|                   | Exited                 | *                 | *     | 0   |       | *      | *     | 0   |       | *                 | *     | 32   |       | *      | *     | 3   |       |

\* Statistics not reported for sample size less than 50 (N<50)

Table 6.17 shows the percentage of students achieving the basic, proficient, and advanced levels for the January, May and July administrations in 2006. Results show that 51.5% of students achieved the proficient or advanced standard on the English test.

Table 6.17. Percent of Students Performing in Each Performance Category

|            | 2006 |
|------------|------|
| Basic      | 48.5 |
| Proficient | 34.1 |
| Advanced   | 17.4 |

### **Decision Accuracy and Consistency**

The accuracy of decisions based on specified cut scores was assessed for Reliability of Classification using a proprietary ETS computer program RELCLASS. RELCLASS provides two statistics that describe the reliability of classifications based on test scores (Livingston & Lewis, 1995). More specifically, information from an administration of one form is used to estimate decision accuracy and decision consistency as described in Chapter 4.

The results are provided in Table 6.18. The decision accuracy values are 0.81 and 0.83 for all classifications and 0.90 and 0.91 for the Proficient and Above classifications, for the January and May tests respectively. Therefore, the agreement between classifications based on an observable variable (scores on one form of a test) and classifications based on an unobservable variable (the test takers' true scores) was very good. The table shows that decision consistency values are 0.73 and 0.76 for all classifications and 0.87 and 0.90 for Proficient and Above for the January and May tests respectively. Since decision consistency statistics describe the agreement between classifications based on two variables (scores on the form students have taken and a parallel form of the same test that is not administered to the students), these values are within the acceptable range.



Table 6.18 Decision Accuracy and Consistency for the 2006 English Exam

|                      | Placement Score   | Advanced | Proficient | Basic | Category Total* |
|----------------------|---|----------|------------|-------|-----------------|
| January, 2006        |   |          |            |       |                 |
| Decision Accuracy    | 429 - 551   | 0.15     | 0.03       | 0.00  | 0.18            |
|                      | 396 - 428   | 0.06     | 0.25       | 0.03  | 0.35            |
|                      | 240 - 395   | 0.01     | 0.06       | 0.40  | 0.48            |
|                      | Estimated Proportion Correctly Classified*: Total = 0.81; Proficient & Above = 0.90 |          |            |       |                 |
| Decision Consistency | 429 - 551   | 0.13     | 0.05       | 0.00  | 0.19            |
|                      | 396 - 428   | 0.08     | 0.22       | 0.055 | 0.35            |
|                      | 240 - 395   | 0.01     | 0.08       | 0.40  | 0.48            |
|                      | Estimated Proportion Correctly Classified*: Total =0.74; Proficient & Above = 0.87  |          |            |       |                 |
| May, 2006            |   |          |            |       |                 |
| Decision Accuracy    | 429 - 650   | 0.23     | 0.03       | 0.00  | 0.25            |
|                      | 396 - 428   | 0.06     | 0.26       | 0.05  | 0.36            |
|                      | 240 - 395   | 0.00     | 0.05       | 0.34  | 0.39            |
|                      | Estimated Proportion Correctly Classified*: Total = 0.83; Proficient & Above = 0.91 |          |            |       |                 |
| Decision Consistency | 429 - 650   | 0.21     | 0.04       | 0.00  | 0.25            |
|                      | 396 - 428   | 0.08     | 0.22       | 0.06  | 0.36            |
|                      | 240 - 395   | 0.00     | 0.06       | 0.32  | 0.39            |
|                      | Estimated Proportion Correctly Classified*: Total =0.76; Proficient & Above = 0.88  |          |            |       |                 |

\*Inconsistencies with category cell entries are due to rounding.

## **IRT Analyses**

Test Characteristic Curves (TCC) and the Conditional Standard Error of Measurement (CSEM) plots were used to evaluate the extent to which the May 2006 forms were parallel. As illustrated in Figure 6.1, the TCCs of the 10 forms appeared very similar. For example, the raw scores associated with a scale score of 410 for target Form K was 41.24, whereas it was 38.94 for Form L, the most difficult form. All forms are within an acceptable range of the target form for the full range of scale score values. Figure 6.2 illustrates the CSEM plotted against scale score. The CSEMs were lowest for the scale score range of 350 to 450.

Figure 6.1 Test Characteristic Curves for 2006 English Forms

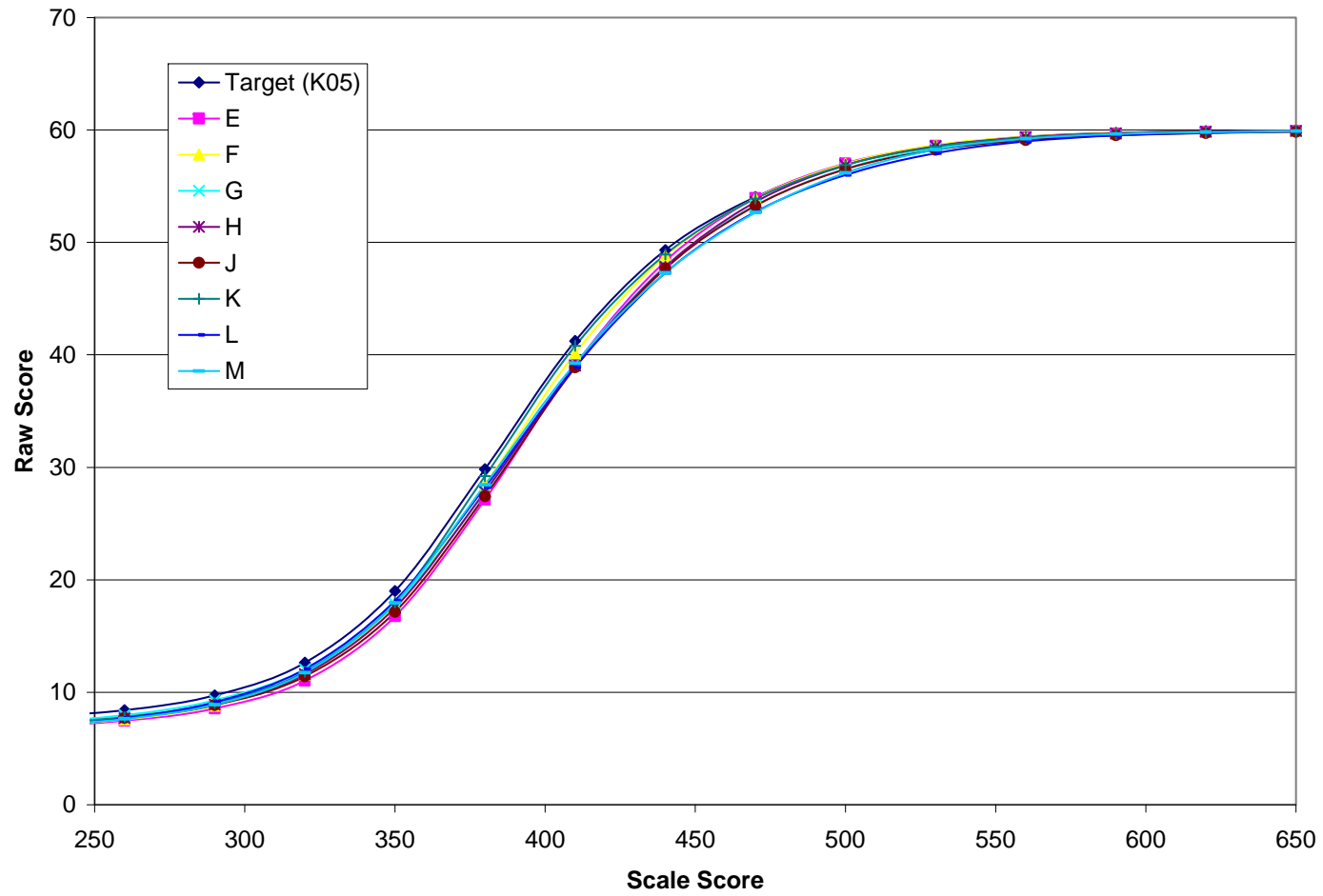
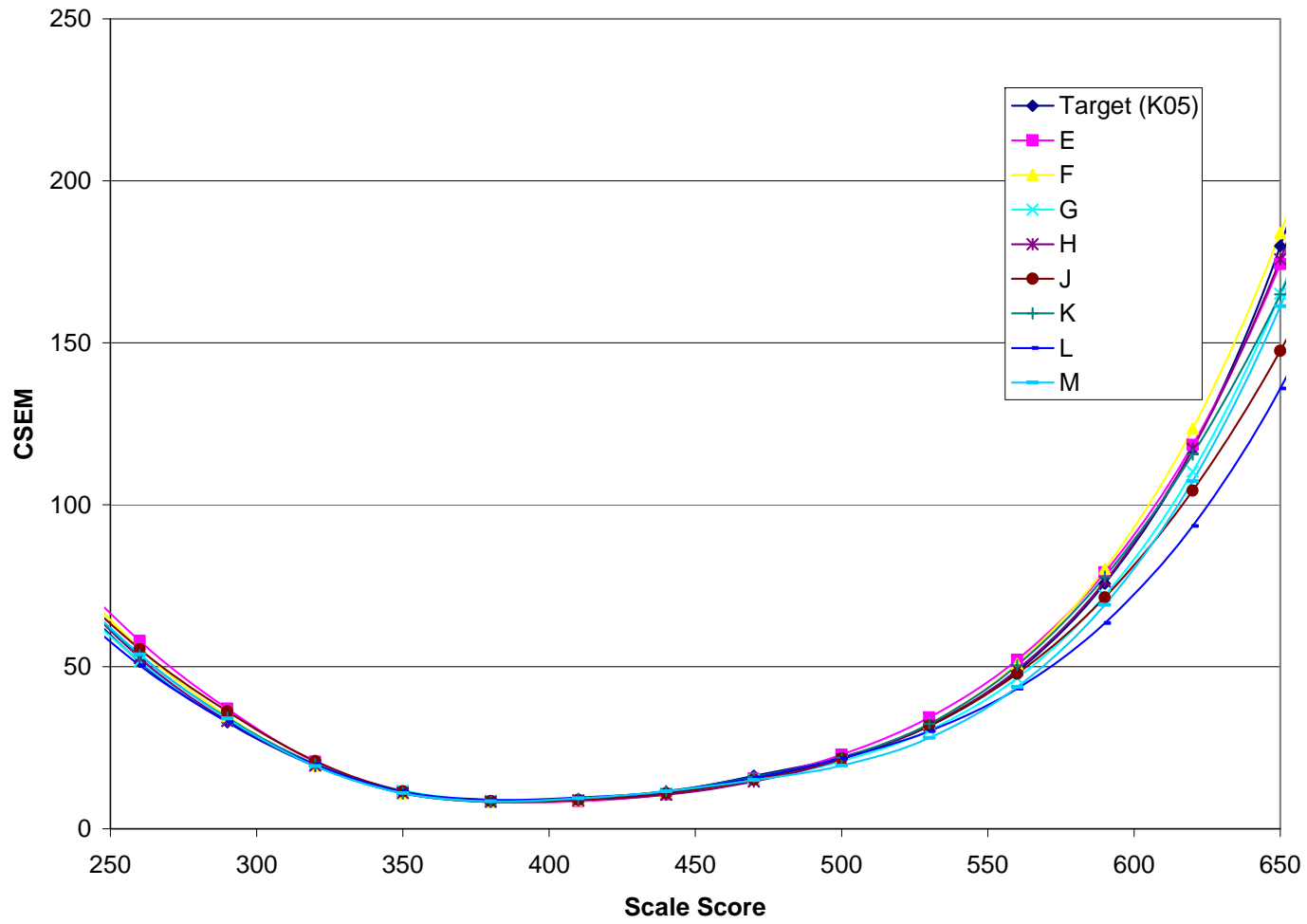


Figure 6.2 Conditional Standard Error of Measurement for the 2006 English Forms



## **Factor Analysis**

Exploratory factor analyses with principal axis factoring were used to investigate the dimensionality of the 10 May 2006 English forms. All students taking a particular form were used for the analyses. Given the ordinal nature of the item scores, matrices consisting of tetrachoric and polychoric correlations were produced for each form using PRELIS (Joreskog & Sorbom, 1993) and then analyzed using SPSS.

The factor analyses results of the 10 primary forms indicated that one dominant factor underlay the May 2006 test forms. Table 6.19 includes the eigenvalues and percent of variance for all factors with eigenvalues greater than one. In each case, there was one dominant eigenvalue that accounted for 29 to 38 percent of the total variance. The remaining factors accounted for considerably smaller percent of the variance. The scree plots for each form, which graphically present eigenvalues for factors 1 through 50, can be found in Appendix A.

Table 6.19 Factor Analysis Results by Form

| Form | Factor 1   |       | Factor 2   |       | Factor 3   |       | Factor 4   |       | Factor 5   |       | Factor 6   |       | Factor 7   |       | Factor 8   |       | Factor 9   |       |
|------|------------|-------|------------|-------|------------|-------|------------|-------|------------|-------|------------|-------|------------|-------|------------|-------|------------|-------|
|      | Eigenvalue | % Var | Eigenvalue | % Var | Eigenvalue | % Var | Eigenvalue | % Var | Eigenvalue | % Var | Eigenvalue | % Var | Eigenvalue | % Var | Eigenvalue | % Var | Eigenvalue | % Var |
| E    | 18.39      | 37.79 | 1.69       | 3.39  | 1.47       | 2.95  | 1.23       | 2.48  | 1.15       | 2.30  |            |       |            |       |            |       |            |       |
| F    | 16.68      | 33.72 | 1.72       | 3.44  | 1.47       | 2.94  | 1.24       | 2.48  | 1.13       | 2.26  | 1.04       | 2.08  | 1.02       | 2.04  |            |       |            |       |
| G    | 16.85      | 33.70 | 1.74       | 3.48  | 1.45       | 2.89  | 1.28       | 2.55  | 1.12       | 2.23  | 1.05       | 2.09  | 1.01       | 2.01  |            |       |            |       |
| H    | 16.82      | 33.63 | 1.77       | 3.55  | 1.46       | 2.93  | 1.32       | 2.63  | 1.23       | 2.45  | 1.04       | 2.09  |            |       |            |       |            |       |
| J    | 16.37      | 32.74 | 1.66       | 3.32  | 1.50       | 3.00  | 1.28       | 2.56  | 1.12       | 2.25  | 1.05       | 2.10  | 1.03       | 2.07  |            |       |            |       |
| K    | 15.98      | 31.95 | 1.68       | 3.53  | 1.50       | 3.00  | 1.32       | 2.65  | 1.29       | 2.58  | 1.15       | 2.29  | 1.02       | 2.05  | 1.00       | 2.01  |            |       |
| L    | 14.67      | 29.34 | 1.81       | 3.62  | 1.42       | 2.86  | 1.32       | 2.63  | 1.15       | 2.30  | 1.08       | 2.16  | 1.06       | 2.12  | 1.04       | 2.08  |            |       |
| M    | 16.33      | 32.66 | 1.75       | 3.50  | 1.54       | 3.09  | 1.23       | 2.45  | 1.15       | 2.29  | 1.07       | 2.15  | 1.05       | 2.10  |            |       |            |       |
| N    | 17.08      | 34.15 | 1.68       | 3.36  | 1.44       | 2.88  | 1.27       | 2.55  | 1.06       | 2.13  | 1.02       | 2.05  |            |       |            |       |            |       |
| P    | 15.69      | 31.38 | 1.63       | 3.26  | 1.49       | 2.98  | 1.33       | 2.67  | 1.17       | 2.33  | 1.15       | 2.30  | 1.07       | 2.13  | 1.03       | 2.07  | 1.01       | 2.02  |

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Appendix A: Scree Plots of Factor Analysis Results for the May 2006 English Forms



Figure 6.3 Form E Scree Plot

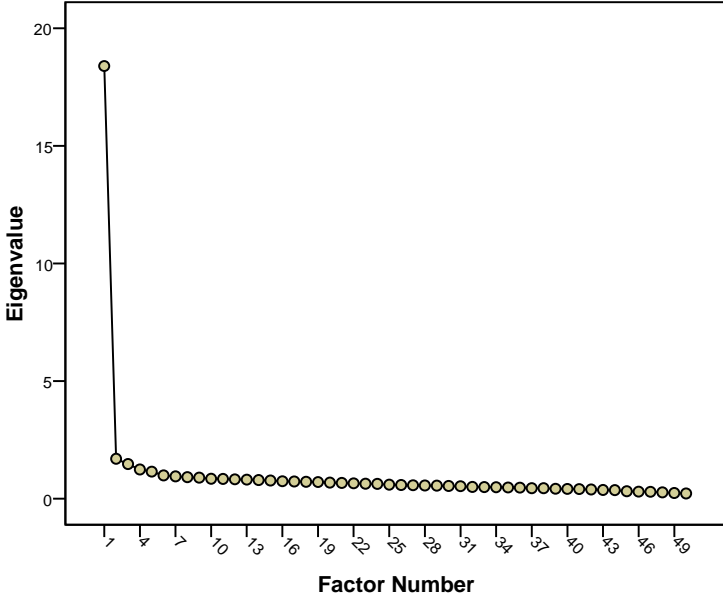


Figure 6.4 Form F Scree Plot

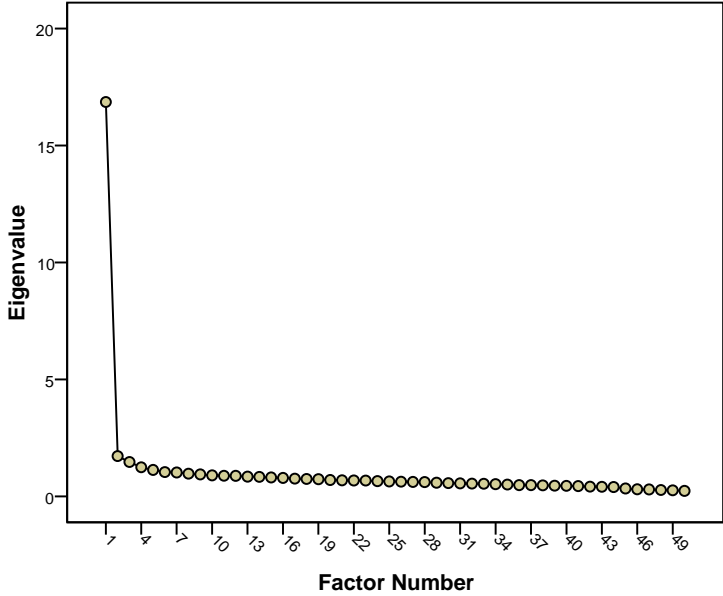


Figure 6.5 Form G Scree Plot

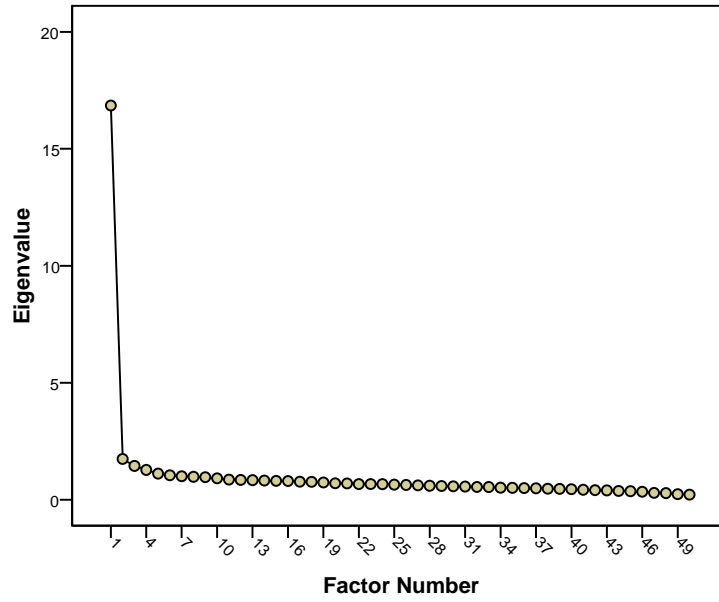


Figure 6.6 Form H Scree Plot

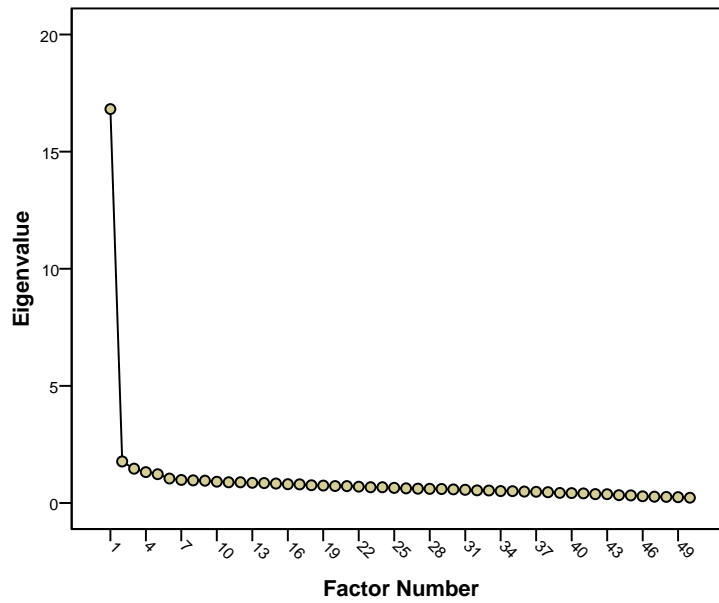


Figure 6.7 Form J Scree Plot

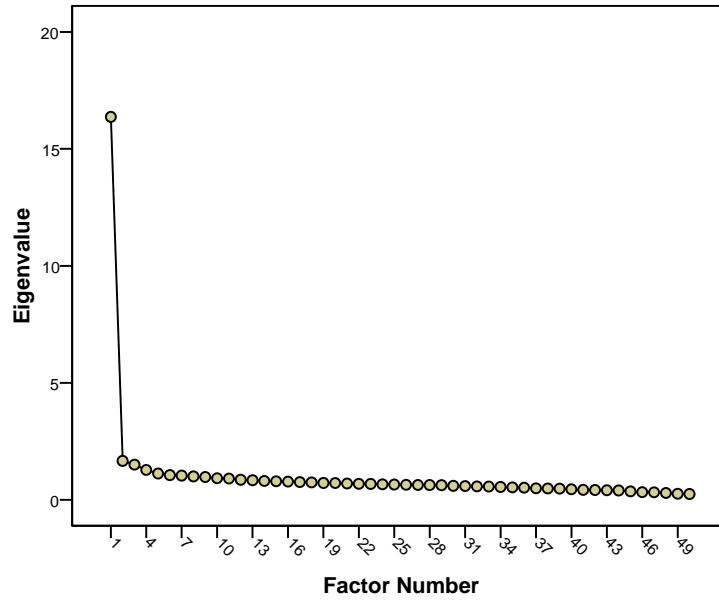


Figure 6.8 Form K Scree Plot

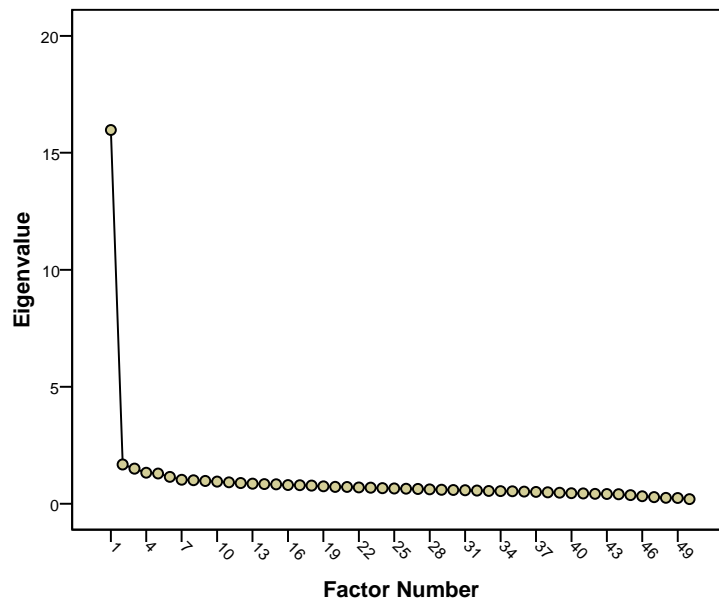


Figure 6.9 Form L Scree Plot

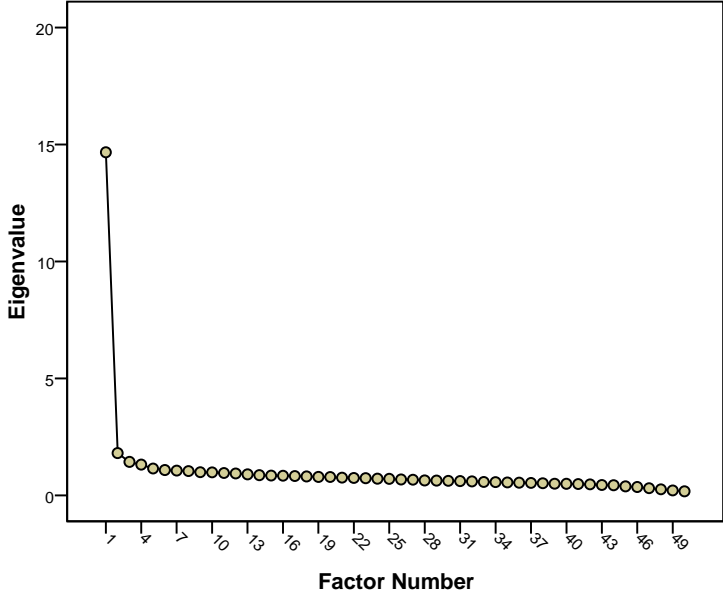


Figure 6.10 Form M Scree Plot

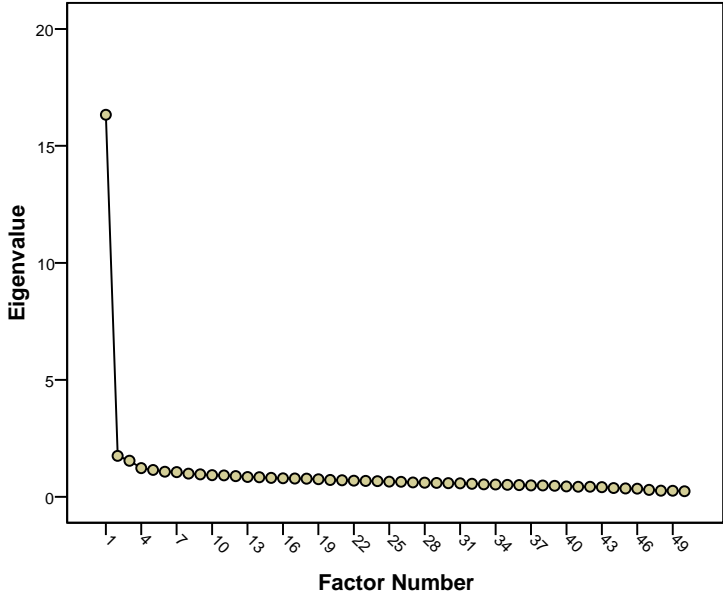


Figure 6.11 Form N Scree Plot

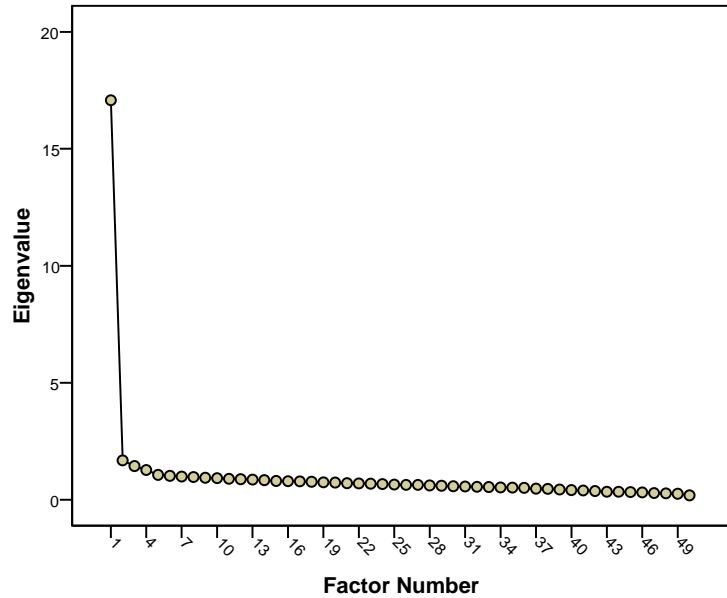
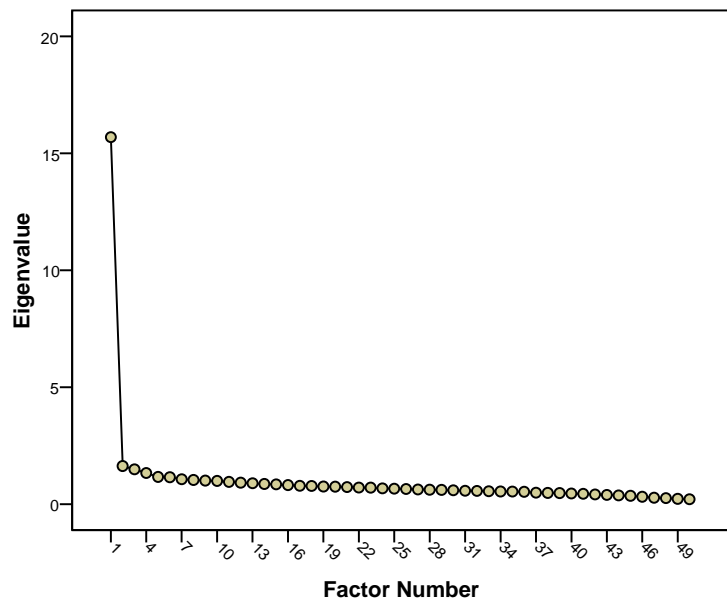


Figure 6.12 Form P Scree Plot



## Appendix B. Classical Item Statistics

Table A1. Summary Item Statistics - Operational Items  
Algebra - January Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| AB   | 1      | L             | 56636  | M         | 0.85  | 0.43  | -0.24  | -0.28  | 0.43   | -0.15  |
|      | 2      | L             | 52338  | M         | 0.81  | 0.43  | -0.16  | -0.35  | 0.43   | -0.14  |
|      | 4      | O             | 51450  | M         | 0.54  | 0.37  | -0.16  | -0.26  | 0.37   | -0.15  |
|      | 5      | L             | 67547  | M         | 0.54  | 0.54  | -0.32  | -0.23  | -0.23  | 0.54   |
|      | 6      | O             | 56745  | J         | 0.49  | 0.73  |        |        |        |        |
|      | 7      | L             | 54861  | M         | 0.34  | 0.35  | -0.21  | -0.01  | -0.19  | 0.35   |
|      | 8      | L             | 67515  | M         | 0.56  | 0.42  | -0.28  | 0.42   | -0.15  | -0.16  |
|      | 9      | L             | 54795  | M         | 0.64  | 0.46  | 0.46   | -0.24  | -0.24  | -0.20  |
|      | 10     | L             | 54619  | M         | 0.80  | 0.46  | -0.20  | -0.27  | -0.26  | 0.46   |
|      | 11     | O             | 56672  | M         | 0.69  | 0.38  | -0.13  | -0.22  | -0.23  | 0.38   |
|      | 13     | O             | 56666  | G         | 0.59  | 0.63  | 0.63   | -0.56  |        |        |
|      | 14     | L             | 64691  | G         | 0.66  | 0.60  | 0.60   | -0.52  |        |        |
|      | 16     | O             | 54788  | G         | 0.53  | 0.57  | 0.57   | -0.45  |        |        |
|      | 17     | L             | 67462  | J         | 0.16  | 0.66  |        |        |        |        |
|      | 19     | L             | 51549  | M         | 0.47  | 0.25  | -0.14  | -0.08  | 0.25   | -0.06  |
|      | 20     | L             | 51402  | M         | 0.67  | 0.42  | -0.19  | 0.42   | -0.18  | -0.19  |
|      | 21     | O             | 67446  | J         | 0.38  | 0.82  |        |        |        |        |
|      | 23     | O             | 56774  | M         | 0.46  | 0.33  | -0.13  | -0.12  | 0.33   | -0.07  |
|      | 24     | L             | 54848  | M         | 0.36  | 0.43  | -0.19  | -0.06  | -0.13  | 0.43   |
|      | 25     | O             | 51401  | M         | 0.83  | 0.45  | -0.21  | -0.28  | -0.23  | 0.45   |
|      | 26     | L             | 56648  | M         | 0.66  | 0.42  | -0.23  | -0.23  | 0.42   | -0.18  |
|      | 27     | L             | 51486  | M         | 0.60  | 0.22  | -0.03  | 0.22   | -0.23  | -0.20  |
|      | 29     | O             | 56597  | M         | 0.57  | 0.52  | 0.52   | -0.30  | -0.24  | -0.19  |
|      | 31     | L             | 54815  | M         | 0.64  | 0.30  | 0.30   | -0.16  | -0.20  | -0.16  |
|      | 33     | L             | 51358  | M         | 0.40  | 0.44  | -0.18  | -0.13  | -0.22  | 0.44   |
|      | 35     | O             | 54810  | M         | 0.64  | 0.54  | -0.27  | 0.54   | -0.23  | -0.27  |
|      | 36     | L             | 50391  | J         | 0.39  | 0.79  |        |        |        |        |
|      | 37     | L             | 54566  | G         | 0.39  | 0.52  | 0.52   | -0.40  |        |        |
|      | 39     | O             | 67496  | G         | 0.61  | 0.59  | 0.59   | -0.47  |        |        |
|      | 40     | L             | 67420  | G         | 0.34  | 0.55  | 0.55   | -0.31  |        |        |
|      | 41     | L             | 54903  | J         | 0.44  | 0.74  |        |        |        |        |
|      | 42     | O             | 51542  | M         | 0.52  | 0.55  | 0.55   | -0.25  | -0.31  | -0.22  |
|      | 43     | O             | 67444  | M         | 0.68  | 0.55  | 0.55   | -0.28  | -0.28  | -0.21  |
|      | 44     | L             | 64700  | M         | 0.78  | 0.52  | -0.26  | -0.25  | -0.24  | 0.52   |
|      | 45     | L             | 67533  | J         | 0.29  | 0.85  |        |        |        |        |
|      | 46     | O             | 43150  | M         | 0.60  | 0.41  | -0.13  | 0.41   | -0.26  | -0.22  |
|      | 47     | L             | 67488  | M         | 0.75  | 0.49  | -0.27  | -0.28  | 0.49   | -0.15  |
|      | 48     | O             | 56770  | M         | 0.56  | 0.62  | -0.35  | -0.23  | -0.25  | 0.62   |

Table A2. Summary Item Statistics - Operational Items

## Algebra - January Make-Up1

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| C    | 1      | L             | 56636  | M         | 0.85  | 0.43  | -0.24  | -0.28  | 0.43   | -0.15  |
|      | 2      | L             | 52338  | M         | 0.81  | 0.43  | -0.16  | -0.35  | 0.43   | -0.14  |
|      | 4      | O             | 51482  | M         | 0.51  | 0.38  | 0.38   | -0.21  | -0.14  | -0.16  |
|      | 5      | L             | 67547  | M         | 0.54  | 0.54  | -0.32  | -0.23  | -0.23  | 0.54   |
|      | 6      | O             | 54808  | J         | 0.40  | 0.69  |        |        |        |        |
|      | 7      | L             | 54861  | M         | 0.34  | 0.35  | -0.21  | -0.01  | -0.19  | 0.35   |
|      | 8      | L             | 67515  | M         | 0.56  | 0.42  | -0.28  | 0.42   | -0.15  | -0.16  |
|      | 9      | L             | 54795  | M         | 0.64  | 0.46  | 0.46   | -0.24  | -0.24  | -0.20  |
|      | 10     | L             | 54619  | M         | 0.80  | 0.46  | -0.20  | -0.27  | -0.26  | 0.46   |
|      | 11     | O             | 56672  | M         | 0.69  | 0.38  | -0.13  | -0.22  | -0.23  | 0.38   |
|      | 13     | O             | 51523  | G         | 0.39  | 0.58  | 0.58   | -0.46  |        |        |
|      | 14     | L             | 64691  | G         | 0.66  | 0.60  | 0.60   | -0.52  |        |        |
|      | 16     | O             | 54788  | G         | 0.53  | 0.57  | 0.57   | -0.45  |        |        |
|      | 17     | L             | 67462  | J         | 0.16  | 0.66  |        |        |        |        |
|      | 19     | L             | 51549  | M         | 0.47  | 0.25  | -0.14  | -0.08  | 0.25   | -0.06  |
|      | 20     | L             | 51402  | M         | 0.67  | 0.42  | -0.19  | 0.42   | -0.18  | -0.19  |
|      | 21     | O             | 67446  | J         | 0.38  | 0.82  |        |        |        |        |
|      | 23     | O             | 54763  | M         | 0.25  | 0.23  | -0.05  | -0.15  | 0.06   | 0.23   |
|      | 24     | L             | 54848  | M         | 0.36  | 0.43  | -0.19  | -0.06  | -0.13  | 0.43   |
|      | 25     | O             | 51401  | M         | 0.83  | 0.45  | -0.21  | -0.28  | -0.23  | 0.45   |
|      | 26     | L             | 56648  | M         | 0.66  | 0.42  | -0.23  | -0.23  | 0.42   | -0.18  |
|      | 27     | L             | 51486  | M         | 0.60  | 0.22  | -0.03  | 0.22   | -0.23  | -0.20  |
|      | 29     | O             | 56597  | M         | 0.57  | 0.52  | 0.52   | -0.30  | -0.24  | -0.19  |
|      | 31     | L             | 54815  | M         | 0.64  | 0.30  | 0.30   | -0.16  | -0.20  | -0.16  |
|      | 33     | L             | 51358  | M         | 0.40  | 0.44  | -0.18  | -0.13  | -0.22  | 0.44   |
|      | 35     | O             | 56440  | M         | 0.49  | 0.36  | -0.17  | 0.36   | -0.26  | -0.08  |
|      | 36     | L             | 50391  | J         | 0.39  | 0.79  |        |        |        |        |
|      | 37     | L             | 54566  | G         | 0.39  | 0.52  | 0.52   | -0.40  |        |        |
|      | 39     | O             | 67496  | G         | 0.61  | 0.59  | 0.59   | -0.47  |        |        |
|      | 40     | L             | 67420  | G         | 0.34  | 0.55  | 0.55   | -0.31  |        |        |
|      | 41     | L             | 54903  | J         | 0.44  | 0.74  |        |        |        |        |
|      | 42     | O             | 56685  | M         | 0.63  | 0.49  | -0.16  | -0.27  | -0.19  | 0.49   |
|      | 43     | O             | 51497  | M         | 0.49  | 0.46  | 0.46   | -0.19  | -0.24  | -0.10  |
|      | 44     | L             | 64700  | M         | 0.78  | 0.52  | -0.26  | -0.25  | -0.24  | 0.52   |
|      | 45     | L             | 67533  | J         | 0.29  | 0.85  |        |        |        |        |
|      | 46     | O             | 43150  | M         | 0.60  | 0.41  | -0.13  | 0.41   | -0.26  | -0.22  |
|      | 47     | L             | 67488  | M         | 0.75  | 0.49  | -0.27  | -0.28  | 0.49   | -0.15  |
|      | 48     | O             | 56770  | M         | 0.56  | 0.62  | -0.35  | -0.23  | -0.25  | 0.62   |



Table A3. Summary Item Statistics - Operational Items  
Algebra - January Make-Up2

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| D    | 1      | L             | 56636  | M         | 0.85  | 0.43  | -0.24  | -0.28  | 0.43   | -0.15  |
|      | 2      | L             | 52338  | M         | 0.81  | 0.43  | -0.16  | -0.35  | 0.43   | -0.14  |
|      | 4      | O             | 51450  | M         | 0.54  | 0.37  | -0.16  | -0.26  | 0.37   | -0.15  |
|      | 5      | L             | 67547  | M         | 0.54  | 0.54  | -0.32  | -0.23  | -0.23  | 0.54   |
|      | 6      | O             | 56745  | J         | 0.49  | 0.73  |        |        |        |        |
|      | 7      | L             | 54861  | M         | 0.34  | 0.35  | -0.21  | -0.01  | -0.19  | 0.35   |
|      | 8      | L             | 67515  | M         | 0.56  | 0.42  | -0.28  | 0.42   | -0.15  | -0.16  |
|      | 9      | L             | 54795  | M         | 0.64  | 0.46  | 0.46   | -0.24  | -0.24  | -0.20  |
|      | 10     | L             | 54619  | M         | 0.80  | 0.46  | -0.20  | -0.27  | -0.26  | 0.46   |
|      | 11     | O             | 56736  | M         | 0.49  | 0.40  | -0.23  | -0.13  | 0.40   | -0.20  |
|      | 13     | O             | 56666  | G         | 0.59  | 0.63  | 0.63   | -0.56  |        |        |
|      | 14     | L             | 64691  | G         | 0.66  | 0.60  | 0.60   | -0.52  |        |        |
|      | 16     | O             | 54741  | G         | 0.29  | 0.51  | 0.51   | -0.31  |        |        |
|      | 17     | L             | 67462  | J         | 0.16  | 0.66  |        |        |        |        |
|      | 19     | L             | 51549  | M         | 0.47  | 0.25  | -0.14  | -0.08  | 0.25   | -0.06  |
|      | 20     | L             | 51402  | M         | 0.67  | 0.42  | -0.19  | 0.42   | -0.18  | -0.19  |
|      | 21     | O             | 67524  | J         | 0.13  | 0.69  |        |        |        |        |
|      | 23     | O             | 56774  | M         | 0.46  | 0.33  | -0.13  | -0.12  | 0.33   | -0.07  |
|      | 24     | L             | 54848  | M         | 0.36  | 0.43  | -0.19  | -0.06  | -0.13  | 0.43   |
|      | 25     | O             | 54677  | M         | 0.67  | 0.39  | -0.22  | -0.23  | 0.39   | -0.11  |
|      | 26     | L             | 56648  | M         | 0.66  | 0.42  | -0.23  | -0.23  | 0.42   | -0.18  |
|      | 27     | L             | 51486  | M         | 0.60  | 0.22  | -0.03  | 0.22   | -0.23  | -0.20  |
|      | 29     | O             | 54811  | M         | 0.42  | 0.44  | 0.44   | -0.17  | -0.21  | -0.16  |
|      | 31     | L             | 54815  | M         | 0.64  | 0.30  | 0.30   | -0.16  | -0.20  | -0.16  |
|      | 33     | L             | 51358  | M         | 0.40  | 0.44  | -0.18  | -0.13  | -0.22  | 0.44   |
|      | 35     | O             | 54810  | M         | 0.64  | 0.54  | -0.27  | 0.54   | -0.23  | -0.27  |
|      | 36     | L             | 50391  | J         | 0.39  | 0.79  |        |        |        |        |
|      | 37     | L             | 54566  | G         | 0.39  | 0.52  | 0.52   | -0.40  |        |        |
|      | 39     | O             | 67526  | G         | 0.50  | 0.49  | 0.49   | -0.35  |        |        |
|      | 40     | L             | 67420  | G         | 0.34  | 0.55  | 0.55   | -0.31  |        |        |
|      | 41     | L             | 54903  | J         | 0.44  | 0.74  |        |        |        |        |
|      | 42     | O             | 51542  | M         | 0.52  | 0.55  | 0.55   | -0.25  | -0.31  | -0.22  |
|      | 43     | O             | 67444  | M         | 0.68  | 0.55  | 0.55   | -0.28  | -0.28  | -0.21  |
|      | 44     | L             | 64700  | M         | 0.78  | 0.52  | -0.26  | -0.25  | -0.24  | 0.52   |
|      | 45     | L             | 67533  | J         | 0.29  | 0.85  |        |        |        |        |
|      | 46     | O             | 64685  | M         | 0.42  | 0.45  | -0.12  | 0.45   | -0.26  | -0.18  |
|      | 47     | L             | 67488  | M         | 0.75  | 0.49  | -0.27  | -0.28  | 0.49   | -0.15  |
|      | 48     | O             | 51534  | M         | 0.39  | 0.39  | -0.08  | -0.16  | -0.20  | 0.39   |

Table A4. Summary Item Statistics - Operational Items  
Biology - January Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| AB   | 1      | O             | 68107  | M         | 0.85  | 0.42  | -0.24  | 0.42   | -0.26  | -0.19  |
|      | 2      | O             | 52482  | M         | 0.67  | 0.36  | -0.17  | -0.25  | -0.21  | 0.36   |
|      | 3      | O             | 68139  | M         | 0.71  | 0.35  | -0.12  | -0.26  | 0.35   | -0.13  |
|      | 4      | O             | 65046  | M         | 0.53  | 0.46  | -0.11  | -0.34  | -0.21  | 0.46   |
|      | 5      | L             | 55080  | J         | 0.29  | 0.77  |        |        |        |        |
|      | 6      | O             | 67600  | M         | 0.81  | 0.40  | -0.25  | 0.40   | -0.20  | -0.18  |
|      | 7      | O             | 67601  | M         | 0.84  | 0.33  | -0.13  | -0.17  | -0.22  | 0.33   |
|      | 10     | O             | 60524  | M         | 0.58  | 0.40  | -0.18  | -0.22  | 0.40   | -0.16  |
|      | 11     | O             | 53725  | M         | 0.61  | 0.43  | 0.43   | -0.17  | -0.18  | -0.28  |
|      | 12     | O             | 53713  | M         | 0.50  | 0.42  | -0.28  | 0.42   | -0.12  | -0.21  |
|      | 14     | O             | 55128  | M         | 0.68  | 0.52  | -0.21  | 0.52   | -0.26  | -0.30  |
|      | 15     | O             | 57004  | M         | 0.74  | 0.52  | -0.27  | -0.31  | 0.52   | -0.20  |
|      | 16     | O             | 57005  | M         | 0.67  | 0.53  | -0.30  | -0.26  | 0.53   | -0.24  |
|      | 17     | O             | 57096  | M         | 0.48  | 0.41  | -0.13  | 0.41   | -0.16  | -0.23  |
|      | 18     | L             | 52751  | J         | 0.21  | 0.80  |        |        |        |        |
|      | 19     | O             | 57057  | M         | 0.71  | 0.41  | -0.26  | -0.20  | 0.41   | -0.18  |
|      | 20     | O             | 52431  | M         | 0.49  | 0.49  | -0.23  | 0.49   | -0.23  | -0.23  |
|      | 21     | O             | 52519  | M         | 0.70  | 0.46  | -0.24  | -0.28  | 0.46   | -0.18  |
|      | 22     | O             | 55186  | M         | 0.49  | 0.34  | -0.15  | -0.10  | 0.34   | -0.23  |
|      | 23     | O             | 57119  | M         | 0.47  | 0.47  | -0.23  | -0.25  | -0.14  | 0.47   |
|      | 24     | O             | 57118  | M         | 0.75  | 0.51  | -0.29  | -0.31  | -0.19  | 0.51   |
|      | 25     | L             | 67609  | J         | 0.26  | 0.81  |        |        |        |        |
|      | 29     | O             | 67629  | M         | 0.56  | 0.47  | 0.47   | -0.18  | -0.26  | -0.20  |
|      | 30     | O             | 67628  | M         | 0.43  | 0.30  | -0.18  | 0.30   | -0.14  | -0.04  |
|      | 31     | O             | 68278  | M         | 0.49  | 0.51  | -0.22  | -0.22  | -0.23  | 0.51   |
|      | 32     | L             | 67561  | J         | 0.27  | 0.76  |        |        |        |        |
|      | 35     | O             | 52574  | M         | 0.45  | 0.43  | -0.30  | -0.14  | 0.43   | -0.07  |
|      | 36     | O             | 52569  | M         | 0.55  | 0.51  | -0.19  | -0.22  | 0.51   | -0.29  |
|      | 37     | O             | 52478  | M         | 0.47  | 0.33  | -0.17  | -0.11  | -0.14  | 0.33   |
|      | 38     | O             | 67595  | M         | 0.40  | 0.30  | 0.30   | -0.11  | -0.23  | -0.02  |
|      | 39     | O             | 67643  | M         | 0.46  | 0.36  | -0.15  | 0.36   | -0.24  | -0.05  |
|      | 40     | O             | 67644  | M         | 0.34  | 0.22  | 0.22   | -0.15  | -0.16  | 0.04   |
|      | 41     | L             | 65957  | J         | 0.27  | 0.78  |        |        |        |        |
|      | 42     | O             | 60549  | M         | 0.64  | 0.33  | -0.13  | 0.33   | -0.25  | -0.20  |
|      | 43     | O             | 64736  | M         | 0.71  | 0.55  | 0.55   | -0.31  | -0.31  | -0.18  |
|      | 44     | O             | 52500  | M         | 0.59  | 0.34  | -0.16  | -0.20  | 0.34   | -0.11  |
|      | 47     | O             | 55095  | M         | 0.71  | 0.48  | 0.48   | -0.29  | -0.22  | -0.23  |
|      | 48     | O             | 55094  | M         | 0.66  | 0.51  | -0.27  | -0.27  | -0.23  | 0.51   |
|      | 49     | O             | 55093  | M         | 0.83  | 0.53  | -0.27  | -0.27  | -0.29  | 0.53   |
|      | 50     | L             | 65112  | J         | 0.33  | 0.83  |        |        |        |        |
|      | 52     | O             | 55079  | M         | 0.57  | 0.50  | -0.24  | -0.25  | 0.50   | -0.18  |

Table A4. Summary Item Statistics - Operational Items (Continued)  
 Biology - January Primary

| <b>Form</b> | <b>Pos_No</b> | <b>Anchor_Status</b> | <b>ItemID</b> | <b>Item Type</b> | <b>P_Val</b> | <b>R_ITT</b> | <b>P_BIS1</b> | <b>P_BIS2</b> | <b>P_BIS3</b> | <b>P_BIS4</b> |
|-------------|---------------|----------------------|---------------|------------------|--------------|--------------|---------------|---------------|---------------|---------------|
| AB          | 53            | O                    | 52732         | M                | 0.37         | 0.32         | 0.32          | -0.15         | -0.10         | -0.12         |
|             | 54            | O                    | 55157         | M                | 0.52         | 0.43         | -0.23         | -0.19         | -0.15         | 0.43          |
|             | 55            | O                    | 56936         | M                | 0.29         | 0.19         | 0.19          | 0.18          | -0.25         | -0.24         |
|             | 56            | O                    | 56937         | M                | 0.54         | 0.50         | 0.50          | -0.27         | -0.16         | -0.28         |
|             | 60            | O                    | 60530         | M                | 0.67         | 0.53         | -0.18         | -0.30         | -0.28         | 0.53          |
|             | 61            | O                    | 67698         | M                | 0.46         | 0.39         | 0.39          | -0.31         | -0.22         | 0.01          |
|             | 62            | O                    | 67697         | M                | 0.62         | 0.39         | -0.26         | -0.11         | -0.18         | 0.39          |
|             | 63            | O                    | 67700         | M                | 0.32         | 0.25         | 0.03          | -0.10         | -0.25         | 0.25          |
|             | 64            | O                    | 65050         | M                | 0.61         | 0.50         | -0.23         | -0.28         | 0.50          | -0.18         |
|             | 65            | O                    | 55015         | M                | 0.39         | 0.33         | -0.15         | -0.28         | 0.33          | -0.03         |
|             | 66            | L                    | 68126         | J                | 0.19         | 0.79         |               |               |               |               |
|             | 69            | O                    | 57154         | M                | 0.35         | 0.28         | -0.17         | -0.18         | 0.06          | 0.28          |
|             | 70            | O                    | 57155         | M                | 0.59         | 0.58         | 0.58          | -0.26         | -0.27         | -0.25         |
|             | 71            | O                    | 65090         | M                | 0.53         | 0.46         | -0.20         | -0.23         | -0.17         | 0.46          |

Table A5. Summary Item Statistics - Operational Items

## Biology - January Make-Up1

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| C    | 1      | O             | 52734  | M         | 0.49  | 0.35  | 0.35   | -0.23  | -0.15  | -0.13  |
|      | 2      | O             | 68253  | M         | 0.48  | 0.44  | -0.25  | -0.10  | -0.26  | 0.44   |
|      | 3      | O             | 65139  | M         | 0.41  | 0.37  | -0.08  | -0.23  | 0.37   | -0.18  |
|      | 4      | O             | 65046  | M         | 0.53  | 0.46  | -0.11  | -0.34  | -0.21  | 0.46   |
|      | 5      | L             | 55080  | J         | 0.29  | 0.77  |        |        |        |        |
|      | 6      | O             | 67600  | M         | 0.81  | 0.40  | -0.25  | 0.40   | -0.20  | -0.18  |
|      | 7      | O             | 67601  | M         | 0.84  | 0.33  | -0.13  | -0.17  | -0.22  | 0.33   |
|      | 10     | O             | 60524  | M         | 0.58  | 0.40  | -0.18  | -0.22  | 0.40   | -0.16  |
|      | 11     | O             | 53725  | M         | 0.61  | 0.43  | 0.43   | -0.17  | -0.18  | -0.28  |
|      | 12     | O             | 53713  | M         | 0.50  | 0.42  | -0.28  | 0.42   | -0.12  | -0.21  |
|      | 14     | O             | 55088  | M         | 0.48  | 0.39  | -0.20  | -0.19  | 0.39   | -0.11  |
|      | 15     | O             | 57004  | M         | 0.74  | 0.52  | -0.27  | -0.31  | 0.52   | -0.20  |
|      | 16     | O             | 57005  | M         | 0.67  | 0.53  | -0.30  | -0.26  | 0.53   | -0.24  |
|      | 17     | O             | 57096  | M         | 0.48  | 0.41  | -0.13  | 0.41   | -0.16  | -0.23  |
|      | 18     | L             | 52751  | J         | 0.21  | 0.80  |        |        |        |        |
|      | 19     | O             | 52608  | M         | 0.45  | 0.39  | -0.19  | -0.20  | 0.39   | -0.03  |
|      | 20     | O             | 52431  | M         | 0.49  | 0.49  | -0.23  | 0.49   | -0.23  | -0.23  |
|      | 21     | O             | 52519  | M         | 0.70  | 0.46  | -0.24  | -0.28  | 0.46   | -0.18  |
|      | 22     | O             | 55186  | M         | 0.49  | 0.34  | -0.15  | -0.10  | 0.34   | -0.23  |
|      | 23     | O             | 57119  | M         | 0.47  | 0.47  | -0.23  | -0.25  | -0.14  | 0.47   |
|      | 24     | O             | 57118  | M         | 0.75  | 0.51  | -0.29  | -0.31  | -0.19  | 0.51   |
|      | 25     | L             | 67609  | J         | 0.26  | 0.81  |        |        |        |        |
|      | 29     | O             | 67629  | M         | 0.56  | 0.47  | 0.47   | -0.18  | -0.26  | -0.20  |
|      | 30     | O             | 67628  | M         | 0.43  | 0.30  | -0.18  | 0.30   | -0.14  | -0.04  |
|      | 31     | O             | 65151  | M         | 0.22  | 0.28  | 0.08   | -0.14  | -0.19  | 0.28   |
|      | 32     | L             | 67561  | J         | 0.27  | 0.76  |        |        |        |        |
|      | 35     | O             | 52574  | M         | 0.45  | 0.43  | -0.30  | -0.14  | 0.43   | -0.07  |
|      | 36     | O             | 55128  | M         | 0.68  | 0.52  | -0.21  | 0.52   | -0.26  | -0.30  |
|      | 37     | O             | 67660  | M         | 0.53  | 0.48  | -0.23  | -0.20  | -0.19  | 0.48   |
|      | 38     | O             | 67595  | M         | 0.40  | 0.30  | 0.30   | -0.11  | -0.23  | -0.02  |
|      | 39     | O             | 67643  | M         | 0.46  | 0.36  | -0.15  | 0.36   | -0.24  | -0.05  |
|      | 40     | O             | 67644  | M         | 0.34  | 0.22  | 0.22   | -0.15  | -0.16  | 0.04   |
|      | 41     | L             | 65957  | J         | 0.27  | 0.78  |        |        |        |        |
|      | 42     | O             | 60549  | M         | 0.64  | 0.33  | -0.13  | 0.33   | -0.25  | -0.20  |
|      | 43     | O             | 64736  | M         | 0.71  | 0.55  | 0.55   | -0.31  | -0.31  | -0.18  |
|      | 44     | O             | 52500  | M         | 0.59  | 0.34  | -0.16  | -0.20  | 0.34   | -0.11  |
|      | 47     | O             | 55095  | M         | 0.71  | 0.48  | 0.48   | -0.29  | -0.22  | -0.23  |
|      | 48     | O             | 55094  | M         | 0.66  | 0.51  | -0.27  | -0.27  | -0.23  | 0.51   |
|      | 49     | O             | 55093  | M         | 0.83  | 0.53  | -0.27  | -0.27  | -0.29  | 0.53   |
|      | 50     | L             | 65112  | J         | 0.33  | 0.83  |        |        |        |        |
|      | 52     | O             | 65080  | M         | 0.30  | 0.41  | -0.14  | -0.14  | -0.11  | 0.41   |

Table A5. Summary Item Statistics - Operational Items (Continued)  
 Biology - January Make-Up1

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| C    | 53     | O             | 52600  | M         | 0.43  | 0.44  | 0.44   | -0.19  | -0.19  | -0.15  |
|      | 54     | O             | 55157  | M         | 0.52  | 0.43  | -0.23  | -0.19  | -0.15  | 0.43   |
|      | 55     | O             | 56936  | M         | 0.29  | 0.19  | 0.19   | 0.18   | -0.25  | -0.24  |
|      | 56     | O             | 56937  | M         | 0.54  | 0.50  | 0.50   | -0.27  | -0.16  | -0.28  |
|      | 60     | O             | 53487  | M         | 0.43  | 0.57  | -0.23  | -0.24  | -0.17  | 0.57   |
|      | 61     | O             | 67698  | M         | 0.46  | 0.39  | 0.39   | -0.31  | -0.22  | 0.01   |
|      | 62     | O             | 67697  | M         | 0.62  | 0.39  | -0.26  | -0.11  | -0.18  | 0.39   |
|      | 63     | O             | 67700  | M         | 0.32  | 0.25  | 0.03   | -0.10  | -0.25  | 0.25   |
|      | 64     | O             | 52598  | M         | 0.34  | 0.28  | 0.03   | -0.18  | -0.10  | 0.28   |
|      | 65     | O             | 55015  | M         | 0.39  | 0.33  | -0.15  | -0.28  | 0.33   | -0.03  |
|      | 66     | L             | 68126  | J         | 0.19  | 0.79  |        |        |        |        |
|      | 69     | O             | 57154  | M         | 0.35  | 0.28  | -0.17  | -0.18  | 0.06   | 0.28   |
|      | 70     | O             | 57155  | M         | 0.59  | 0.58  | 0.58   | -0.26  | -0.27  | -0.25  |
|      | 71     | O             | 65090  | M         | 0.53  | 0.46  | -0.20  | -0.23  | -0.17  | 0.46   |

Table A6. Summary Item Statistics - Operational Items  
Biology - January Make-Up2

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| D    | 1      | O             | 68107  | M         | 0.85  | 0.42  | -0.24  | 0.42   | -0.26  | -0.19  |
|      | 2      | O             | 52482  | M         | 0.67  | 0.36  | -0.17  | -0.25  | -0.21  | 0.36   |
|      | 3      | O             | 68139  | M         | 0.71  | 0.35  | -0.12  | -0.26  | 0.35   | -0.13  |
|      | 4      | O             | 65046  | M         | 0.53  | 0.46  | -0.11  | -0.34  | -0.21  | 0.46   |
|      | 5      | L             | 55080  | J         | 0.29  | 0.77  |        |        |        |        |
|      | 6      | O             | 67600  | M         | 0.81  | 0.40  | -0.25  | 0.40   | -0.20  | -0.18  |
|      | 7      | O             | 67601  | M         | 0.84  | 0.33  | -0.13  | -0.17  | -0.22  | 0.33   |
|      | 10     | O             | 64728  | M         | 0.52  | 0.49  | 0.49   | -0.28  | -0.21  | -0.16  |
|      | 11     | O             | 53725  | M         | 0.61  | 0.43  | 0.43   | -0.17  | -0.18  | -0.28  |
|      | 12     | O             | 53713  | M         | 0.50  | 0.42  | -0.28  | 0.42   | -0.12  | -0.21  |
|      | 14     | O             | 52569  | M         | 0.55  | 0.51  | -0.19  | -0.22  | 0.51   | -0.29  |
|      | 15     | O             | 57004  | M         | 0.74  | 0.52  | -0.27  | -0.31  | 0.52   | -0.20  |
|      | 16     | O             | 57005  | M         | 0.67  | 0.53  | -0.30  | -0.26  | 0.53   | -0.24  |
|      | 17     | O             | 57070  | M         | 0.33  | 0.44  | -0.24  | -0.24  | 0.03   | 0.44   |
|      | 18     | L             | 52751  | J         | 0.21  | 0.80  |        |        |        |        |
|      | 19     | O             | 57057  | M         | 0.71  | 0.41  | -0.26  | -0.20  | 0.41   | -0.18  |
|      | 20     | O             | 52431  | M         | 0.49  | 0.49  | -0.23  | 0.49   | -0.23  | -0.23  |
|      | 21     | O             | 52519  | M         | 0.70  | 0.46  | -0.24  | -0.28  | 0.46   | -0.18  |
|      | 22     | O             | 56976  | M         | 0.40  | 0.17  | -0.07  | 0.17   | -0.10  | 0.02   |
|      | 23     | O             | 57119  | M         | 0.47  | 0.47  | -0.23  | -0.25  | -0.14  | 0.47   |
|      | 24     | O             | 57118  | M         | 0.75  | 0.51  | -0.29  | -0.31  | -0.19  | 0.51   |
|      | 25     | L             | 67609  | J         | 0.26  | 0.81  |        |        |        |        |
|      | 29     | O             | 67629  | M         | 0.56  | 0.47  | 0.47   | -0.18  | -0.26  | -0.20  |
|      | 30     | O             | 67628  | M         | 0.43  | 0.30  | -0.18  | 0.30   | -0.14  | -0.04  |
|      | 31     | O             | 68278  | M         | 0.49  | 0.51  | -0.22  | -0.22  | -0.23  | 0.51   |
|      | 32     | L             | 67561  | J         | 0.27  | 0.76  |        |        |        |        |
|      | 35     | O             | 68209  | M         | 0.36  | 0.43  | 0.43   | -0.18  | -0.19  | -0.18  |
|      | 36     | O             | 55253  | M         | 0.26  | 0.32  | 0.32   | -0.14  | -0.17  | -0.05  |
|      | 37     | O             | 52478  | M         | 0.47  | 0.33  | -0.17  | -0.11  | -0.14  | 0.33   |
|      | 38     | O             | 57039  | M         | 0.45  | 0.30  | -0.18  | 0.30   | -0.18  | 0.03   |
|      | 39     | O             | 67643  | M         | 0.46  | 0.36  | -0.15  | 0.36   | -0.24  | -0.05  |
|      | 40     | O             | 67644  | M         | 0.34  | 0.22  | 0.22   | -0.15  | -0.16  | 0.04   |
|      | 41     | L             | 65957  | J         | 0.27  | 0.78  |        |        |        |        |
|      | 42     | O             | 52419  | M         | 0.29  | 0.19  | 0.19   | -0.18  | -0.12  | 0.13   |
|      | 43     | O             | 65141  | M         | 0.37  | 0.22  | -0.04  | -0.15  | 0.22   | 0.00   |
|      | 44     | O             | 52500  | M         | 0.59  | 0.34  | -0.16  | -0.20  | 0.34   | -0.11  |
|      | 47     | O             | 55095  | M         | 0.71  | 0.48  | 0.48   | -0.29  | -0.22  | -0.23  |
|      | 48     | O             | 55094  | M         | 0.66  | 0.51  | -0.27  | -0.27  | -0.23  | 0.51   |
|      | 49     | O             | 55093  | M         | 0.83  | 0.53  | -0.27  | -0.27  | -0.29  | 0.53   |
|      | 50     | L             | 65112  | J         | 0.33  | 0.83  |        |        |        |        |
|      | 52     | O             | 55079  | M         | 0.57  | 0.50  | -0.24  | -0.25  | 0.50   | -0.18  |

Table A6. Summary Item Statistics - Operational Items (Continued)  
 Biology - January Make-Up2

| <b>Form</b> | <b>Pos_No</b> | <b>Anchor_Status</b> | <b>ItemID</b> | <b>Item Type</b> | <b>P_Val</b> | <b>R_ITT</b> | <b>P_BIS1</b> | <b>P_BIS2</b> | <b>P_BIS3</b> | <b>P_BIS4</b> |
|-------------|---------------|----------------------|---------------|------------------|--------------|--------------|---------------|---------------|---------------|---------------|
| D           | 53            | O                    | 52732         | M                | 0.37         | 0.32         | 0.32          | -0.15         | -0.10         | -0.12         |
|             | 54            | O                    | 54982         | M                | 0.36         | 0.17         | -0.17         | 0.17          | -0.01         | 0.01          |
|             | 55            | O                    | 56936         | M                | 0.29         | 0.19         | 0.19          | 0.18          | -0.25         | -0.24         |
|             | 56            | O                    | 56937         | M                | 0.54         | 0.50         | 0.50          | -0.27         | -0.16         | -0.28         |
|             | 60            | O                    | 60530         | M                | 0.67         | 0.53         | -0.18         | -0.30         | -0.28         | 0.53          |
|             | 61            | O                    | 67698         | M                | 0.46         | 0.39         | 0.39          | -0.31         | -0.22         | 0.01          |
|             | 62            | O                    | 67697         | M                | 0.62         | 0.39         | -0.26         | -0.11         | -0.18         | 0.39          |
|             | 63            | O                    | 67700         | M                | 0.32         | 0.25         | 0.03          | -0.10         | -0.25         | 0.25          |
|             | 64            | O                    | 65050         | M                | 0.61         | 0.50         | -0.23         | -0.28         | 0.50          | -0.18         |
|             | 65            | O                    | 52694         | M                | 0.26         | 0.40         | -0.14         | -0.06         | 0.40          | -0.18         |
|             | 66            | L                    | 68126         | J                | 0.19         | 0.79         |               |               |               |               |
|             | 69            | O                    | 57154         | M                | 0.35         | 0.28         | -0.17         | -0.18         | 0.06          | 0.28          |
|             | 70            | O                    | 57155         | M                | 0.59         | 0.58         | 0.58          | -0.26         | -0.27         | -0.25         |
|             | 71            | O                    | 65146         | M                | 0.35         | 0.35         | -0.09         | -0.18         | 0.35          | -0.04         |

Table A7. Summary Item Statistics - Operational Items  
English - January Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| A    | 1      | O             | 95621  | J         | 0.64  | 0.58  |        |        |        |        |
|      | 2      | O             | 95622  | M         | 0.55  | 0.42  | -0.14  | -0.22  | -0.23  | 0.42   |
|      | 3      | O             | 95623  | M         | 0.66  | 0.44  | -0.21  | -0.22  | 0.44   | -0.28  |
|      | 4      | O             | 95624  | M         | 0.52  | 0.25  | -0.18  | -0.14  | -0.11  | 0.25   |
|      | 5      | O             | 95625  | M         | 0.60  | 0.48  | -0.20  | -0.25  | 0.48   | -0.25  |
|      | 6      | O             | 95626  | M         | 0.48  | 0.22  | -0.17  | -0.06  | -0.07  | 0.22   |
|      | 10     | O             | 95630  | M         | 0.58  | 0.36  | 0.36   | -0.28  | -0.07  | -0.17  |
|      | 11     | O             | 95631  | M         | 0.79  | 0.41  | -0.20  | 0.41   | -0.22  | -0.23  |
|      | 13     | O             | 95633  | M         | 0.60  | 0.33  | -0.20  | -0.24  | -0.09  | 0.33   |
|      | 14     | O             | 95634  | M         | 0.71  | 0.48  | -0.27  | -0.29  | 0.48   | -0.18  |
|      | 17     | O             | 95637  | M         | 0.73  | 0.44  | -0.28  | 0.44   | -0.27  | -0.16  |
|      | 18     | O             | 95638  | M         | 0.59  | 0.38  | -0.24  | 0.38   | -0.15  | -0.24  |
|      | 19     | O             | 95639  | J         | 0.43  | 0.66  |        |        |        |        |
|      | 23     | O             | 95643  | J         | 0.54  | 0.69  |        |        |        |        |
|      | 24     | O             | 95570  | M         | 0.67  | 0.49  | -0.23  | -0.25  | -0.26  | 0.49   |
|      | 25     | O             | 95571  | M         | 0.70  | 0.45  | -0.19  | -0.32  | 0.45   | -0.17  |
|      | 27     | O             | 95573  | M         | 0.44  | 0.45  | 0.45   | -0.26  | -0.14  | -0.14  |
|      | 29     | O             | 95575  | M         | 0.59  | 0.34  | -0.14  | 0.34   | -0.12  | -0.23  |
|      | 30     | O             | 95576  | M         | 0.40  | 0.35  | -0.15  | -0.25  | -0.05  | 0.35   |
|      | 31     | O             | 95577  | M         | 0.77  | 0.50  | 0.50   | -0.25  | -0.32  | -0.18  |
|      | 32     | O             | 95578  | M         | 0.68  | 0.52  | -0.25  | -0.25  | -0.30  | 0.52   |
|      | 33     | O             | 95579  | M         | 0.73  | 0.55  | -0.31  | -0.28  | 0.55   | -0.23  |
|      | 34     | O             | 95580  | M         | 0.68  | 0.45  | -0.24  | 0.45   | -0.26  | -0.16  |
|      | 35     | O             | 95644  | M         | 0.55  | 0.50  | -0.21  | -0.22  | -0.23  | 0.50   |
|      | 36     | O             | 95645  | M         | 0.61  | 0.39  | -0.11  | -0.28  | 0.39   | -0.24  |
|      | 37     | O             | 95646  | M         | 0.57  | 0.45  | -0.14  | -0.26  | -0.21  | 0.45   |
|      | 38     | O             | 95647  | M         | 0.52  | 0.43  | -0.11  | -0.15  | -0.31  | 0.43   |
|      | 39     | O             | 95648  | M         | 0.69  | 0.38  | -0.30  | -0.13  | 0.38   | -0.21  |
|      | 40     | O             | 95649  | M         | 0.78  | 0.56  | 0.56   | -0.30  | -0.31  | -0.25  |
|      | 41     | O             | 95650  | M         | 0.56  | 0.36  | 0.36   | -0.09  | -0.28  | -0.21  |
|      | 42     | O             | 95651  | M         | 0.60  | 0.55  | -0.26  | -0.26  | 0.55   | -0.24  |
|      | 46     | O             | 95655  | M         | 0.52  | 0.35  | 0.35   | -0.12  | -0.16  | -0.19  |
|      | 47     | O             | 95656  | M         | 0.57  | 0.48  | -0.19  | -0.25  | -0.20  | 0.48   |
|      | 48     | O             | 95657  | M         | 0.50  | 0.26  | -0.04  | 0.26   | -0.21  | -0.05  |
|      | 49     | O             | 95658  | M         | 0.79  | 0.58  | -0.30  | 0.58   | -0.29  | -0.28  |
|      | 50     | O             | 95659  | M         | 0.72  | 0.52  | 0.52   | -0.24  | -0.28  | -0.24  |
|      | 51     | O             | 95660  | M         | 0.64  | 0.50  | -0.32  | -0.23  | 0.50   | -0.15  |
|      | 52     | O             | 95674  | M         | 0.61  | 0.42  | -0.13  | -0.28  | -0.18  | 0.42   |
|      | 53     | O             | 95661  | M         | 0.74  | 0.55  | -0.28  | -0.26  | -0.27  | 0.55   |



Table A7. Summary Item Statistics - Operational Items (Continued)  
English - January Primary

| <b>Form</b> | <b>Pos_No</b> | <b>Anchor_Status</b> | <b>ItemID</b> | <b>Item Type</b> | <b>P_Val</b> | <b>R_ITT</b> | <b>P_BIS1</b> | <b>P_BIS2</b> | <b>P_BIS3</b> | <b>P_BIS4</b> |
|-------------|---------------|----------------------|---------------|------------------|--------------|--------------|---------------|---------------|---------------|---------------|
| A           | 55            | O                    | 95663         | J                | 0.41         | 0.64         |               |               |               |               |
|             | 56            | O                    | 95664         | M                | 0.77         | 0.49         | 0.49          | -0.31         | -0.22         | -0.21         |
|             | 58            | O                    | 95666         | M                | 0.59         | 0.43         | -0.08         | 0.43          | -0.25         | -0.25         |
|             | 59            | O                    | 95607         | M                | 0.24         | 0.22         | 0.00          | -0.08         | 0.22          | -0.10         |
|             | 60            | O                    | 95608         | M                | 0.49         | 0.39         | -0.22         | 0.39          | -0.09         | -0.30         |
|             | 61            | O                    | 95609         | M                | 0.60         | 0.54         | 0.54          | -0.28         | -0.24         | -0.19         |
|             | 62            | O                    | 95610         | M                | 0.58         | 0.57         | -0.24         | -0.26         | -0.26         | 0.57          |
|             | 63            | O                    | 95611         | M                | 0.72         | 0.52         | -0.23         | -0.31         | 0.52          | -0.22         |
|             | 68            | O                    | 95671         | M                | 0.61         | 0.52         | 0.52          | -0.28         | -0.21         | -0.22         |
|             | 69            | O                    | 95672         | M                | 0.65         | 0.51         | -0.28         | -0.30         | 0.51          | -0.12         |
|             | 70            | O                    | 95673         | M                | 0.58         | 0.28         | -0.17         | 0.04          | 0.28          | -0.28         |

Table A8. Summary Item Statistics - Operational Items  
English - January Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| B    | 1      | O             | 96008  | J         | 0.68  | 0.57  |        |        |        |        |
|      | 2      | O             | 96009  | M         | 0.74  | 0.39  | -0.22  | -0.26  | 0.39   | -0.17  |
|      | 3      | O             | 96010  | M         | 0.67  | 0.34  | 0.34   | -0.11  | -0.25  | -0.22  |
|      | 4      | O             | 96011  | M         | 0.80  | 0.50  | -0.21  | -0.29  | -0.33  | 0.50   |
|      | 5      | O             | 96012  | M         | 0.63  | 0.31  | 0.31   | -0.02  | -0.32  | -0.28  |
|      | 6      | O             | 96013  | M         | 0.55  | 0.43  | 0.43   | -0.21  | -0.25  | -0.13  |
|      | 7      | O             | 96433  | M         | 0.83  | 0.50  | -0.21  | -0.36  | 0.50   | -0.21  |
|      | 8      | O             | 96434  | M         | 0.78  | 0.53  | -0.29  | -0.24  | -0.36  | 0.53   |
|      | 9      | O             | 96437  | M         | 0.54  | 0.42  | -0.26  | -0.35  | -0.08  | 0.42   |
|      | 10     | O             | 96436  | M         | 0.80  | 0.44  | -0.29  | 0.44   | -0.20  | -0.24  |
|      | 11     | O             | 96435  | M         | 0.69  | 0.46  | -0.26  | -0.26  | -0.23  | 0.46   |
|      | 12     | O             | 96438  | M         | 0.55  | 0.22  | 0.22   | -0.28  | 0.00   | -0.16  |
|      | 13     | O             | 96439  | M         | 0.63  | 0.40  | -0.24  | 0.40   | -0.23  | -0.10  |
|      | 14     | O             | 96021  | M         | 0.81  | 0.42  | -0.28  | -0.28  | 0.42   | -0.12  |
|      | 15     | O             | 96022  | M         | 0.68  | 0.48  | -0.17  | 0.48   | -0.24  | -0.29  |
|      | 16     | O             | 96023  | M         | 0.66  | 0.58  | -0.32  | -0.24  | -0.31  | 0.58   |
|      | 17     | O             | 96024  | M         | 0.76  | 0.40  | -0.22  | -0.26  | 0.40   | -0.13  |
|      | 18     | O             | 96025  | M         | 0.57  | 0.46  | -0.17  | -0.26  | 0.46   | -0.20  |
|      | 19     | O             | 96026  | J         | 0.50  | 0.68  |        |        |        |        |
|      | 23     | O             | 96030  | J         | 0.56  | 0.70  |        |        |        |        |
|      | 24     | O             | 95570  | M         | 0.67  | 0.49  | -0.23  | -0.25  | -0.26  | 0.49   |
|      | 25     | O             | 95571  | M         | 0.70  | 0.45  | -0.19  | -0.32  | 0.45   | -0.17  |
|      | 27     | O             | 95573  | M         | 0.44  | 0.45  | 0.45   | -0.26  | -0.14  | -0.14  |
|      | 29     | O             | 95575  | M         | 0.59  | 0.34  | -0.14  | 0.34   | -0.12  | -0.23  |
|      | 30     | O             | 95576  | M         | 0.40  | 0.35  | -0.15  | -0.25  | -0.05  | 0.35   |
|      | 31     | O             | 95577  | M         | 0.77  | 0.50  | 0.50   | -0.25  | -0.32  | -0.18  |
|      | 32     | O             | 95578  | M         | 0.68  | 0.52  | -0.25  | -0.25  | -0.30  | 0.52   |
|      | 33     | O             | 95579  | M         | 0.73  | 0.55  | -0.31  | -0.28  | 0.55   | -0.23  |
|      | 34     | O             | 95580  | M         | 0.68  | 0.45  | -0.24  | 0.45   | -0.26  | -0.16  |
|      | 37     | O             | 96033  | M         | 0.85  | 0.54  | -0.31  | -0.31  | 0.54   | -0.25  |
|      | 38     | O             | 96034  | M         | 0.82  | 0.50  | -0.31  | 0.50   | -0.26  | -0.20  |
|      | 48     | O             | 96044  | M         | 0.69  | 0.49  | -0.16  | 0.49   | -0.33  | -0.25  |
|      | 49     | O             | 96045  | M         | 0.37  | 0.27  | 0.27   | -0.08  | -0.15  | -0.05  |
|      | 50     | O             | 96046  | M         | 0.64  | 0.39  | -0.25  | -0.23  | 0.39   | -0.08  |
|      | 51     | O             | 96047  | M         | 0.42  | 0.29  | -0.11  | -0.23  | -0.01  | 0.29   |
|      | 52     | O             | 96048  | M         | 0.46  | 0.27  | -0.26  | 0.27   | 0.00   | -0.16  |
|      | 54     | O             | 96050  | M         | 0.70  | 0.48  | -0.26  | -0.28  | 0.48   | -0.19  |

Table A8. Summary Item Statistics - Operational Items (Continued)  
English - January Primary

| <b>Form</b> | <b>Pos_No</b> | <b>Anchor_Status</b> | <b>ItemID</b> | <b>Item Type</b> | <b>P_Val</b> | <b>R_ITT</b> | <b>P_BIS1</b> | <b>P_BIS2</b> | <b>P_BIS3</b> | <b>P_BIS4</b> |
|-------------|---------------|----------------------|---------------|------------------|--------------|--------------|---------------|---------------|---------------|---------------|
| B           | 55            | O                    | 96051         | M                | 0.46         | 0.27         | -0.01         | -0.17         | -0.23         | 0.27          |
|             | 58            | O                    | 96054         | M                | 0.65         | 0.43         | -0.17         | -0.26         | 0.43          | -0.19         |
|             | 59            | O                    | 96055         | J                | 0.46         | 0.70         |               |               |               |               |
|             | 60            | O                    | 95991         | M                | 0.51         | 0.40         | -0.16         | 0.40          | -0.19         | -0.17         |
|             | 61            | O                    | 95992         | M                | 0.67         | 0.45         | -0.26         | -0.30         | -0.17         | 0.45          |
|             | 62            | O                    | 95993         | M                | 0.74         | 0.43         | 0.43          | -0.20         | -0.27         | -0.23         |
|             | 63            | O                    | 95994         | M                | 0.69         | 0.50         | 0.50          | -0.25         | -0.31         | -0.14         |
|             | 64            | O                    | 95995         | M                | 0.74         | 0.48         | -0.24         | 0.48          | -0.23         | -0.26         |
|             | 65            | O                    | 96056         | M                | 0.69         | 0.56         | -0.27         | -0.30         | -0.25         | 0.56          |
|             | 66            | O                    | 96057         | M                | 0.46         | 0.41         | -0.16         | 0.41          | -0.18         | -0.22         |
|             | 68            | O                    | 96059         | M                | 0.72         | 0.44         | -0.26         | 0.44          | -0.22         | -0.17         |
|             | 73            | O                    | 96064         | M                | 0.46         | 0.31         | -0.23         | -0.23         | 0.31          | 0.02          |

Table A9. Summary Item Statistics - Operational Items  
English - January Make-Up1

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| C    | 1      | O             | 96446  | J         | 0.50  | 0.56  |        |        |        |        |
|      | 2      | O             | 96290  | M         | 0.39  | 0.32  | 0.32   | -0.27  | -0.20  | 0.07   |
|      | 4      | O             | 96292  | M         | 0.50  | 0.43  | 0.43   | -0.22  | -0.28  | -0.12  |
|      | 6      | O             | 96294  | M         | 0.57  | 0.45  | -0.23  | -0.27  | 0.45   | -0.12  |
|      | 7      | O             | 96238  | M         | 0.54  | 0.41  | -0.22  | -0.09  | -0.24  | 0.41   |
|      | 8      | O             | 96239  | M         | 0.54  | 0.45  | -0.24  | -0.27  | 0.45   | -0.12  |
|      | 9      | O             | 96240  | M         | 0.62  | 0.51  | -0.22  | -0.26  | -0.25  | 0.51   |
|      | 10     | O             | 96241  | M         | 0.54  | 0.41  | -0.16  | 0.41   | -0.31  | -0.08  |
|      | 11     | O             | 96242  | M         | 0.62  | 0.43  | -0.26  | 0.43   | -0.22  | -0.11  |
|      | 12     | O             | 96243  | M         | 0.51  | 0.24  | -0.03  | -0.17  | 0.24   | -0.13  |
|      | 14     | O             | 96295  | M         | 0.45  | 0.49  | -0.24  | -0.14  | -0.26  | 0.49   |
|      | 15     | O             | 96296  | M         | 0.46  | 0.36  | -0.15  | -0.24  | 0.36   | -0.06  |
|      | 16     | O             | 96297  | M         | 0.73  | 0.51  | 0.51   | -0.27  | -0.26  | -0.24  |
|      | 17     | O             | 96298  | M         | 0.34  | 0.27  | 0.01   | 0.27   | -0.17  | -0.21  |
|      | 18     | O             | 96299  | J         | 0.33  | 0.70  |        |        |        |        |
|      | 19     | O             | 96300  | M         | 0.51  | 0.38  | -0.07  | 0.38   | -0.28  | -0.13  |
|      | 20     | O             | 96301  | M         | 0.43  | 0.34  | -0.19  | -0.10  | 0.34   | -0.09  |
|      | 21     | O             | 96302  | M         | 0.46  | 0.34  | 0.34   | -0.12  | -0.07  | -0.23  |
|      | 22     | O             | 96303  | M         | 0.50  | 0.44  | 0.44   | -0.19  | -0.17  | -0.19  |
|      | 23     | O             | 96304  | J         | 0.35  | 0.68  |        |        |        |        |
|      | 24     | O             | 95570  | M         | 0.67  | 0.49  | -0.23  | -0.25  | -0.26  | 0.49   |
|      | 25     | O             | 95571  | M         | 0.70  | 0.45  | -0.19  | -0.32  | 0.45   | -0.17  |
|      | 27     | O             | 95573  | M         | 0.44  | 0.45  | 0.45   | -0.26  | -0.14  | -0.14  |
|      | 29     | O             | 95575  | M         | 0.59  | 0.34  | -0.14  | 0.34   | -0.12  | -0.23  |
|      | 30     | O             | 95576  | M         | 0.40  | 0.35  | -0.15  | -0.25  | -0.05  | 0.35   |
|      | 31     | O             | 95577  | M         | 0.77  | 0.50  | 0.50   | -0.25  | -0.32  | -0.18  |
|      | 32     | O             | 95578  | M         | 0.68  | 0.52  | -0.25  | -0.25  | -0.30  | 0.52   |
|      | 33     | O             | 95579  | M         | 0.73  | 0.55  | -0.31  | -0.28  | 0.55   | -0.23  |
|      | 34     | O             | 95580  | M         | 0.68  | 0.45  | -0.24  | 0.45   | -0.26  | -0.16  |
|      | 36     | O             | 96306  | M         | 0.44  | 0.33  | -0.10  | 0.33   | -0.12  | -0.17  |
|      | 38     | O             | 96308  | M         | 0.54  | 0.43  | -0.20  | -0.25  | 0.43   | -0.11  |
|      | 39     | O             | 96309  | M         | 0.52  | 0.38  | -0.03  | -0.25  | 0.38   | -0.22  |
|      | 40     | O             | 96310  | M         | 0.31  | 0.24  | 0.06   | -0.13  | -0.17  | 0.24   |
|      | 41     | O             | 96311  | M         | 0.38  | 0.33  | -0.09  | -0.13  | 0.33   | -0.13  |
|      | 42     | O             | 96312  | M         | 0.44  | 0.36  | -0.23  | 0.36   | -0.12  | -0.08  |
|      | 43     | O             | 96313  | M         | 0.51  | 0.41  | -0.15  | -0.23  | 0.41   | -0.15  |
|      | 44     | O             | 96314  | M         | 0.30  | 0.33  | -0.22  | -0.14  | 0.00   | 0.33   |
|      | 45     | O             | 96315  | M         | 0.42  | 0.42  | -0.23  | 0.42   | -0.20  | -0.07  |
|      | 46     | O             | 96316  | J         | 0.24  | 0.61  |        |        |        |        |
|      | 58     | O             | 96328  | M         | 0.60  | 0.51  | 0.51   | -0.27  | -0.26  | -0.16  |
|      | 59     | O             | 96329  | M         | 0.59  | 0.51  | -0.23  | 0.51   | -0.23  | -0.23  |

Table A9. Summary Item Statistics - Operational Items (Continued)  
English - January Make-Up1

| <b>Form</b> | <b>Pos_No</b> | <b>Anchor_Status</b> | <b>ItemID</b> | <b>Item Type</b> | <b>P_Val</b> | <b>R_ITT</b> | <b>P_BIS1</b> | <b>P_BIS2</b> | <b>P_BIS3</b> | <b>P_BIS4</b> |
|-------------|---------------|----------------------|---------------|------------------|--------------|--------------|---------------|---------------|---------------|---------------|
| C           | 60            | O                    | 96377         | M                | 0.49         | 0.47         | -0.21         | -0.18         | 0.47          | -0.20         |
|             | 61            | O                    | 96378         | M                | 0.58         | 0.50         | -0.19         | 0.50          | -0.26         | -0.22         |
|             | 62            | O                    | 96379         | M                | 0.52         | 0.42         | 0.42          | -0.23         | -0.20         | -0.10         |
|             | 63            | O                    | 96380         | M                | 0.39         | 0.32         | 0.32          | -0.20         | -0.21         | 0.06          |
|             | 64            | O                    | 96381         | M                | 0.42         | 0.47         | 0.47          | -0.22         | -0.27         | -0.06         |
|             | 67            | O                    | 96333         | M                | 0.36         | 0.43         | -0.16         | -0.08         | -0.24         | 0.43          |
|             | 69            | O                    | 96334         | M                | 0.48         | 0.47         | 0.47          | -0.22         | -0.19         | -0.17         |
|             | 70            | O                    | 96335         | M                | 0.33         | 0.43         | -0.21         | -0.11         | -0.13         | 0.43          |
|             | 71            | O                    | 96336         | M                | 0.53         | 0.40         | -0.19         | 0.40          | -0.14         | -0.19         |

Table A10. Summary Item Statistics - Operational Items  
English - January Make-Up2

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| D    | 1      | O             | 96232  | J         | 0.48  | 0.49  |        |        |        |        |
|      | 4      | O             | 96233  | M         | 0.44  | 0.37  | -0.20  | -0.18  | -0.10  | 0.37   |
|      | 6      | O             | 96237  | M         | 0.43  | 0.45  | 0.45   | -0.20  | -0.20  | -0.16  |
|      | 7      | O             | 96238  | M         | 0.54  | 0.41  | -0.22  | -0.09  | -0.24  | 0.41   |
|      | 8      | O             | 96239  | M         | 0.54  | 0.45  | -0.24  | -0.27  | 0.45   | -0.12  |
|      | 9      | O             | 96240  | M         | 0.62  | 0.51  | -0.22  | -0.26  | -0.25  | 0.51   |
|      | 10     | O             | 96241  | M         | 0.54  | 0.41  | -0.16  | 0.41   | -0.31  | -0.08  |
|      | 11     | O             | 96242  | M         | 0.62  | 0.43  | -0.26  | 0.43   | -0.22  | -0.11  |
|      | 12     | O             | 96243  | M         | 0.51  | 0.24  | -0.03  | -0.17  | 0.24   | -0.13  |
|      | 14     | O             | 96245  | M         | 0.31  | 0.40  | -0.18  | -0.07  | -0.20  | 0.40   |
|      | 15     | O             | 96246  | M         | 0.45  | 0.47  | -0.12  | -0.25  | -0.20  | 0.47   |
|      | 16     | O             | 96247  | M         | 0.45  | 0.40  | 0.40   | -0.23  | -0.12  | -0.17  |
|      | 17     | O             | 96248  | M         | 0.44  | 0.38  | -0.20  | -0.15  | 0.38   | -0.09  |
|      | 18     | O             | 96249  | M         | 0.45  | 0.46  | 0.46   | -0.27  | -0.13  | -0.16  |
|      | 19     | O             | 96250  | J         | 0.25  | 0.63  |        |        |        |        |
|      | 23     | O             | 96254  | J         | 0.36  | 0.61  |        |        |        |        |
|      | 24     | O             | 95570  | M         | 0.67  | 0.49  | -0.23  | -0.25  | -0.26  | 0.49   |
|      | 25     | O             | 95571  | M         | 0.70  | 0.45  | -0.19  | -0.32  | 0.45   | -0.17  |
|      | 27     | O             | 95573  | M         | 0.44  | 0.45  | 0.45   | -0.26  | -0.14  | -0.14  |
|      | 29     | O             | 95575  | M         | 0.59  | 0.34  | -0.14  | 0.34   | -0.12  | -0.23  |
|      | 30     | O             | 95576  | M         | 0.40  | 0.35  | -0.15  | -0.25  | -0.05  | 0.35   |
|      | 31     | O             | 95577  | M         | 0.77  | 0.50  | 0.50   | -0.25  | -0.32  | -0.18  |
|      | 32     | O             | 95578  | M         | 0.68  | 0.52  | -0.25  | -0.25  | -0.30  | 0.52   |
|      | 33     | O             | 95579  | M         | 0.73  | 0.55  | -0.31  | -0.28  | 0.55   | -0.23  |
|      | 34     | O             | 95580  | M         | 0.68  | 0.45  | -0.24  | 0.45   | -0.26  | -0.16  |
|      | 43     | O             | 96263  | M         | 0.51  | 0.48  | -0.20  | 0.48   | -0.20  | -0.14  |
|      | 44     | O             | 96264  | M         | 0.42  | 0.47  | 0.47   | -0.22  | -0.20  | -0.06  |
|      | 45     | O             | 96265  | M         | 0.40  | 0.49  | 0.49   | -0.17  | -0.20  | -0.13  |
|      | 46     | O             | 96266  | M         | 0.57  | 0.54  | -0.26  | -0.23  | 0.54   | -0.17  |
|      | 47     | O             | 96267  | M         | 0.40  | 0.38  | -0.05  | 0.38   | -0.19  | -0.13  |
|      | 48     | O             | 96268  | M         | 0.43  | 0.54  | -0.21  | -0.22  | 0.54   | -0.15  |
|      | 49     | O             | 96269  | M         | 0.38  | 0.50  | 0.50   | -0.23  | -0.10  | -0.17  |
|      | 50     | O             | 96270  | M         | 0.34  | 0.34  | -0.19  | -0.22  | 0.05   | 0.34   |
|      | 51     | O             | 96271  | M         | 0.53  | 0.46  | 0.46   | -0.24  | -0.18  | -0.09  |
|      | 52     | O             | 96272  | M         | 0.47  | 0.49  | -0.15  | -0.23  | 0.49   | -0.16  |
|      | 53     | O             | 96273  | M         | 0.27  | 0.44  | -0.13  | -0.11  | -0.12  | 0.44   |
|      | 54     | O             | 96275  | M         | 0.50  | 0.54  | 0.54   | -0.26  | -0.19  | -0.16  |
|      | 55     | O             | 96274  | M         | 0.53  | 0.46  | -0.18  | 0.46   | -0.23  | -0.13  |
|      | 56     | O             | 96276  | M         | 0.48  | 0.46  | -0.25  | -0.13  | 0.46   | -0.12  |
|      | 57     | O             | 96277  | M         | 0.50  | 0.44  | -0.21  | 0.44   | -0.11  | -0.17  |
|      | 58     | O             | 96278  | M         | 0.33  | 0.35  | -0.14  | 0.35   | -0.08  | -0.08  |
|      | 59     | O             | 96279  | J         | 0.21  | 0.60  |        |        |        |        |

Table A10. Summary Item Statistics - Operational Items (Continued)  
 English - January Make-Up2

| <b>Form</b> | <b>Pos_No</b> | <b>Anchor_Status</b> | <b>ItemID</b> | <b>Item Type</b> | <b>P_Val</b> | <b>R_ITT</b> | <b>P_BIS1</b> | <b>P_BIS2</b> | <b>P_BIS3</b> | <b>P_BIS4</b> |
|-------------|---------------|----------------------|---------------|------------------|--------------|--------------|---------------|---------------|---------------|---------------|
| D           | 60            | O                    | 96215         | M                | 0.41         | 0.39         | 0.39          | -0.20         | -0.09         | -0.03         |
|             | 61            | O                    | 96216         | M                | 0.47         | 0.45         | -0.10         | 0.45          | -0.20         | -0.14         |
|             | 62            | O                    | 96217         | M                | 0.38         | 0.42         | -0.18         | -0.19         | 0.42          | 0.00          |
|             | 63            | O                    | 96219         | M                | 0.33         | 0.28         | -0.18         | 0.06          | 0.28          | -0.05         |
|             | 64            | O                    | 96218         | M                | 0.39         | 0.36         | -0.13         | 0.36          | -0.20         | 0.05          |
|             | 65            | O                    | 96281         | M                | 0.35         | 0.49         | -0.17         | -0.11         | 0.49          | -0.16         |
|             | 66            | O                    | 96280         | M                | 0.47         | 0.47         | 0.47          | -0.18         | -0.12         | -0.17         |
|             | 72            | O                    | 96286         | M                | 0.44         | 0.54         | -0.22         | -0.19         | 0.54          | -0.16         |

Table A11. Summary Item Statistics - Operational Items  
Government - January Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| AB   | 1      | L             | 50918  | M         | 0.78  | 0.30  | 0.30   | -0.16  | -0.22  | -0.08  |
|      | 2      | L             | 51144  | M         | 0.77  | 0.34  | -0.11  | -0.33  | -0.11  | 0.34   |
|      | 3      | L             | 50866  | M         | 0.81  | 0.43  | 0.43   | -0.27  | -0.22  | -0.20  |
|      | 4      | L             | 50938  | M         | 0.36  | 0.22  | 0.22   | -0.09  | -0.09  | -0.10  |
|      | 5      | L             | 68677  | M         | 0.70  | 0.53  | -0.25  | -0.26  | -0.30  | 0.53   |
|      | 6      | L             | 51217  | J         | 0.18  | 0.60  |        |        |        |        |
|      | 10     | L             | 50974  | M         | 0.56  | 0.33  | -0.18  | -0.13  | 0.33   | -0.15  |
|      | 11     | L             | 68507  | J         | 0.37  | 0.74  |        |        |        |        |
|      | 12     | L             | 68490  | M         | 0.61  | 0.46  | -0.25  | -0.28  | -0.23  | 0.46   |
|      | 13     | L             | 51817  | M         | 0.57  | 0.47  | -0.21  | 0.47   | -0.22  | -0.26  |
|      | 14     | O             | 51725  | M         | 0.56  | 0.45  | 0.45   | -0.23  | -0.23  | -0.20  |
|      | 15     | O             | 68675  | M         | 0.58  | 0.46  | 0.46   | -0.25  | -0.28  | -0.11  |
|      | 16     | L             | 67962  | J         | 0.30  | 0.81  |        |        |        |        |
|      | 17     | O             | 68601  | M         | 0.51  | 0.49  | 0.49   | -0.24  | -0.22  | -0.23  |
|      | 18     | O             | 55584  | M         | 0.79  | 0.41  | -0.23  | -0.26  | 0.41   | -0.14  |
|      | 19     | O             | 68046  | M         | 0.77  | 0.49  | -0.25  | 0.49   | -0.29  | -0.21  |
|      | 20     | L             | 64953  | J         | 0.23  | 0.77  |        |        |        |        |
|      | 21     | O             | 50743  | M         | 0.90  | 0.44  | -0.27  | -0.28  | 0.44   | -0.15  |
|      | 22     | O             | 68568  | M         | 0.61  | 0.53  | -0.32  | -0.26  | 0.53   | -0.17  |
|      | 23     | O             | 68644  | M         | 0.48  | 0.32  | 0.32   | -0.12  | -0.19  | -0.11  |
|      | 24     | L             | 68513  | M         | 0.57  | 0.28  | -0.07  | -0.11  | -0.23  | 0.28   |
|      | 25     | L             | 58370  | M         | 0.80  | 0.45  | 0.45   | -0.24  | -0.23  | -0.23  |
|      | 26     | L             | 68099  | M         | 0.74  | 0.47  | -0.19  | 0.47   | -0.30  | -0.25  |
|      | 27     | L             | 68518  | M         | 0.64  | 0.47  | -0.26  | -0.23  | -0.20  | 0.47   |
|      | 29     | O             | 55641  | M         | 0.39  | 0.28  | -0.15  | -0.20  | 0.28   | 0.06   |
|      | 30     | O             | 51238  | M         | 0.53  | 0.45  | -0.14  | -0.25  | 0.45   | -0.16  |
|      | 31     | O             | 58278  | M         | 0.67  | 0.55  | 0.55   | -0.23  | -0.29  | -0.25  |
|      | 32     | O             | 55657  | M         | 0.58  | 0.48  | -0.26  | -0.21  | 0.48   | -0.21  |
|      | 33     | L             | 51799  | M         | 0.59  | 0.57  | -0.23  | -0.27  | -0.26  | 0.57   |
|      | 34     | L             | 67989  | M         | 0.41  | 0.48  | -0.24  | 0.48   | -0.24  | -0.06  |
|      | 35     | L             | 51002  | M         | 0.81  | 0.50  | -0.20  | -0.31  | -0.27  | 0.50   |
|      | 36     | L             | 51242  | M         | 0.83  | 0.47  | -0.23  | 0.47   | -0.27  | -0.24  |
|      | 37     | L             | 50760  | M         | 0.70  | 0.47  | -0.25  | -0.23  | 0.47   | -0.21  |
|      | 38     | L             | 68557  | J         | 0.47  | 0.64  |        |        |        |        |
|      | 41     | L             | 68773  | M         | 0.75  | 0.46  | 0.46   | -0.33  | -0.18  | -0.20  |
|      | 42     | O             | 58138  | M         | 0.66  | 0.47  | -0.26  | -0.24  | 0.47   | -0.18  |
|      | 43     | O             | 50902  | M         | 0.61  | 0.40  | -0.25  | -0.19  | -0.18  | 0.40   |
|      | 44     | O             | 51037  | M         | 0.49  | 0.46  | -0.15  | -0.21  | -0.24  | 0.46   |
|      | 45     | O             | 68641  | M         | 0.46  | 0.34  | -0.13  | -0.15  | 0.34   | -0.16  |



Table A11. Summary Item Statistics - Operational Items (Continued)  
 Government - January Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
|      | 46     | O             | 68600  | M         | 0.57  | 0.42  | 0.42   | -0.11  | -0.29  | -0.16  |
|      | 47     | O             | 58360  | M         | 0.71  | 0.50  | 0.50   | -0.27  | -0.23  | -0.30  |
|      | 48     | O             | 68649  | J         | 0.44  | 0.72  |        |        |        |        |
|      | 49     | O             | 58313  | M         | 0.60  | 0.37  | 0.37   | -0.21  | -0.26  | -0.07  |
|      | 50     | O             | 68602  | M         | 0.53  | 0.35  | -0.09  | 0.35   | -0.24  | -0.16  |
|      | 51     | O             | 68776  | M         | 0.56  | 0.36  | 0.36   | -0.20  | -0.23  | -0.13  |
|      | 52     | O             | 51249  | M         | 0.66  | 0.46  | 0.46   | -0.24  | -0.23  | -0.21  |
|      | 53     | L             | 68053  | J         | 0.27  | 0.78  |        |        |        |        |
|      | 54     | L             | 68697  | M         | 0.68  | 0.55  | -0.25  | -0.25  | -0.30  | 0.55   |
|      | 55     | L             | 58190  | M         | 0.65  | 0.57  | 0.57   | -0.30  | -0.29  | -0.22  |
|      | 56     | L             | 68703  | M         | 0.77  | 0.54  | 0.54   | -0.29  | -0.28  | -0.26  |
|      | 57     | L             | 68006  | M         | 0.40  | 0.36  | -0.18  | 0.36   | -0.21  | -0.04  |
|      | 58     | L             | 51110  | J         | 0.32  | 0.77  |        |        |        |        |
|      | 59     | L             | 51136  | M         | 0.43  | 0.42  | -0.09  | -0.18  | -0.22  | 0.42   |
|      | 60     | L             | 68727  | M         | 0.48  | 0.40  | -0.17  | -0.16  | -0.17  | 0.40   |
|      | 61     | L             | 51266  | M         | 0.35  | 0.28  | -0.07  | -0.08  | 0.28   | -0.13  |
|      | 62     | L             | 64949  | M         | 0.65  | 0.53  | -0.23  | 0.53   | -0.28  | -0.24  |
|      | 63     | L             | 68724  | M         | 0.66  | 0.58  | -0.30  | -0.26  | -0.28  | 0.58   |
|      | 64     | L             | 51812  | M         | 0.72  | 0.51  | -0.28  | 0.51   | -0.21  | -0.28  |

Table A12. Summary Item Statistics - Operational Items  
Government - January Make-Up1

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| C    | 1      | L             | 50918  | M         | 0.78  | 0.30  | 0.30   | -0.16  | -0.22  | -0.08  |
|      | 2      | L             | 51144  | M         | 0.77  | 0.34  | -0.11  | -0.33  | -0.11  | 0.34   |
|      | 3      | L             | 50866  | M         | 0.81  | 0.43  | 0.43   | -0.27  | -0.22  | -0.20  |
|      | 4      | L             | 50938  | M         | 0.36  | 0.22  | 0.22   | -0.09  | -0.09  | -0.10  |
|      | 5      | L             | 68677  | M         | 0.70  | 0.53  | -0.25  | -0.26  | -0.30  | 0.53   |
|      | 6      | L             | 51217  | J         | 0.18  | 0.60  |        |        |        |        |
|      | 10     | L             | 50974  | M         | 0.56  | 0.33  | -0.18  | -0.13  | 0.33   | -0.15  |
|      | 11     | L             | 68507  | J         | 0.37  | 0.74  |        |        |        |        |
|      | 12     | L             | 68490  | M         | 0.61  | 0.46  | -0.25  | -0.28  | -0.23  | 0.46   |
|      | 13     | L             | 51817  | M         | 0.57  | 0.47  | -0.21  | 0.47   | -0.22  | -0.26  |
|      | 14     | O             | 68042  | M         | 0.32  | 0.24  | -0.19  | -0.22  | 0.24   | 0.06   |
|      | 15     | O             | 68676  | M         | 0.50  | 0.33  | -0.08  | -0.20  | 0.33   | -0.16  |
|      | 16     | L             | 67962  | J         | 0.30  | 0.81  |        |        |        |        |
|      | 17     | O             | 68601  | M         | 0.51  | 0.49  | 0.49   | -0.24  | -0.22  | -0.23  |
|      | 18     | O             | 55584  | M         | 0.79  | 0.41  | -0.23  | -0.26  | 0.41   | -0.14  |
|      | 19     | O             | 68046  | M         | 0.77  | 0.49  | -0.25  | 0.49   | -0.29  | -0.21  |
|      | 20     | L             | 64953  | J         | 0.23  | 0.77  |        |        |        |        |
|      | 21     | O             | 51771  | M         | 0.51  | 0.38  | -0.10  | -0.23  | 0.38   | -0.18  |
|      | 22     | O             | 51058  | M         | 0.28  | 0.40  | -0.05  | -0.15  | -0.19  | 0.40   |
|      | 23     | O             | 68791  | M         | 0.42  | 0.32  | -0.05  | -0.19  | -0.16  | 0.32   |
|      | 24     | L             | 68513  | M         | 0.57  | 0.28  | -0.07  | -0.11  | -0.23  | 0.28   |
|      | 25     | L             | 58370  | M         | 0.80  | 0.45  | 0.45   | -0.24  | -0.23  | -0.23  |
|      | 26     | L             | 68099  | M         | 0.74  | 0.47  | -0.19  | 0.47   | -0.30  | -0.25  |
|      | 27     | L             | 68518  | M         | 0.64  | 0.47  | -0.26  | -0.23  | -0.20  | 0.47   |
|      | 29     | O             | 55641  | M         | 0.39  | 0.28  | -0.15  | -0.20  | 0.28   | 0.06   |
|      | 30     | O             | 51238  | M         | 0.53  | 0.45  | -0.14  | -0.25  | 0.45   | -0.16  |
|      | 31     | O             | 58278  | M         | 0.67  | 0.55  | 0.55   | -0.23  | -0.29  | -0.25  |
|      | 32     | O             | 55657  | M         | 0.58  | 0.48  | -0.26  | -0.21  | 0.48   | -0.21  |
|      | 33     | L             | 51799  | M         | 0.59  | 0.57  | -0.23  | -0.27  | -0.26  | 0.57   |
|      | 34     | L             | 67989  | M         | 0.41  | 0.48  | -0.24  | 0.48   | -0.24  | -0.06  |
|      | 35     | L             | 51002  | M         | 0.81  | 0.50  | -0.20  | -0.31  | -0.27  | 0.50   |
|      | 36     | L             | 51242  | M         | 0.83  | 0.47  | -0.23  | 0.47   | -0.27  | -0.24  |
|      | 37     | L             | 50760  | M         | 0.70  | 0.47  | -0.25  | -0.23  | 0.47   | -0.21  |
|      | 38     | L             | 68557  | J         | 0.47  | 0.64  |        |        |        |        |
|      | 41     | L             | 68773  | M         | 0.75  | 0.46  | 0.46   | -0.33  | -0.18  | -0.20  |
|      | 42     | O             | 68692  | M         | 0.70  | 0.42  | -0.18  | -0.27  | 0.42   | -0.16  |
|      | 43     | O             | 68751  | M         | 0.44  | 0.37  | -0.14  | -0.11  | 0.37   | -0.20  |
|      | 44     | O             | 68778  | M         | 0.30  | 0.25  | 0.25   | -0.15  | -0.07  | -0.04  |
|      | 45     | O             | 64958  | M         | 0.39  | 0.49  | -0.22  | -0.23  | -0.13  | 0.49   |

Table A12 Summary Item Statistics - Operational Items (Continued)

Government - January Make-Up1

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
|      | 46     | O             | 68072  | M         | 0.32  | 0.27  | -0.06  | -0.18  | 0.27   | -0.03  |
|      | 47     | O             | 68077  | M         | 0.56  | 0.52  | -0.23  | -0.24  | -0.23  | 0.52   |
|      | 48     | O             | 68629  | J         | 0.24  | 0.74  |        |        |        |        |
|      | 49     | O             | 58313  | M         | 0.60  | 0.37  | 0.37   | -0.21  | -0.26  | -0.07  |
|      | 50     | O             | 68602  | M         | 0.53  | 0.35  | -0.09  | 0.35   | -0.24  | -0.16  |
|      | 51     | O             | 68776  | M         | 0.56  | 0.36  | 0.36   | -0.20  | -0.23  | -0.13  |
|      | 52     | O             | 51249  | M         | 0.66  | 0.46  | 0.46   | -0.24  | -0.23  | -0.21  |
|      | 53     | L             | 68053  | J         | 0.27  | 0.78  |        |        |        |        |
|      | 54     | L             | 68697  | M         | 0.68  | 0.55  | -0.25  | -0.25  | -0.30  | 0.55   |
|      | 55     | L             | 58190  | M         | 0.65  | 0.57  | 0.57   | -0.30  | -0.29  | -0.22  |
|      | 56     | L             | 68703  | M         | 0.77  | 0.54  | 0.54   | -0.29  | -0.28  | -0.26  |
|      | 57     | L             | 68006  | M         | 0.40  | 0.36  | -0.18  | 0.36   | -0.21  | -0.04  |
|      | 58     | L             | 51110  | J         | 0.32  | 0.77  |        |        |        |        |
|      | 59     | L             | 51136  | M         | 0.43  | 0.42  | -0.09  | -0.18  | -0.22  | 0.42   |
|      | 60     | L             | 68727  | M         | 0.48  | 0.40  | -0.17  | -0.16  | -0.17  | 0.40   |
|      | 61     | L             | 51266  | M         | 0.35  | 0.28  | -0.07  | -0.08  | 0.28   | -0.13  |
|      | 62     | L             | 64949  | M         | 0.65  | 0.53  | -0.23  | 0.53   | -0.28  | -0.24  |
|      | 63     | L             | 68724  | M         | 0.66  | 0.58  | -0.30  | -0.26  | -0.28  | 0.58   |
|      | 64     | L             | 51812  | M         | 0.72  | 0.51  | -0.28  | 0.51   | -0.21  | -0.28  |

Table A13. Summary Item Statistics - Operational Items  
Government - January Make-Up2

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| D    | 1      | L             | 50918  | M         | 0.78  | 0.30  | 0.30   | -0.16  | -0.22  | -0.08  |
|      | 2      | L             | 51144  | M         | 0.77  | 0.34  | -0.11  | -0.33  | -0.11  | 0.34   |
|      | 3      | L             | 50866  | M         | 0.81  | 0.43  | 0.43   | -0.27  | -0.22  | -0.20  |
|      | 4      | L             | 50938  | M         | 0.36  | 0.22  | 0.22   | -0.09  | -0.09  | -0.10  |
|      | 5      | L             | 68677  | M         | 0.70  | 0.53  | -0.25  | -0.26  | -0.30  | 0.53   |
|      | 6      | L             | 51217  | J         | 0.18  | 0.60  |        |        |        |        |
|      | 10     | L             | 50974  | M         | 0.56  | 0.33  | -0.18  | -0.13  | 0.33   | -0.15  |
|      | 11     | L             | 68507  | J         | 0.37  | 0.74  |        |        |        |        |
|      | 12     | L             | 68490  | M         | 0.61  | 0.46  | -0.25  | -0.28  | -0.23  | 0.46   |
|      | 13     | L             | 51817  | M         | 0.57  | 0.47  | -0.21  | 0.47   | -0.22  | -0.26  |
|      | 14     | O             | 51725  | M         | 0.56  | 0.45  | 0.45   | -0.23  | -0.23  | -0.20  |
|      | 15     | O             | 68675  | M         | 0.58  | 0.46  | 0.46   | -0.25  | -0.28  | -0.11  |
|      | 16     | L             | 67962  | J         | 0.30  | 0.81  |        |        |        |        |
|      | 17     | O             | 51733  | M         | 0.60  | 0.55  | 0.55   | -0.27  | -0.27  | -0.21  |
|      | 18     | O             | 50912  | M         | 0.30  | 0.30  | 0.30   | -0.16  | -0.17  | 0.02   |
|      | 19     | O             | 50995  | M         | 0.46  | 0.28  | 0.28   | -0.01  | -0.23  | -0.13  |
|      | 20     | L             | 64953  | J         | 0.23  | 0.77  |        |        |        |        |
|      | 21     | O             | 50743  | M         | 0.90  | 0.44  | -0.27  | -0.28  | 0.44   | -0.15  |
|      | 22     | O             | 68568  | M         | 0.61  | 0.53  | -0.32  | -0.26  | 0.53   | -0.17  |
|      | 23     | O             | 68644  | M         | 0.48  | 0.32  | 0.32   | -0.12  | -0.19  | -0.11  |
|      | 24     | L             | 68513  | M         | 0.57  | 0.28  | -0.07  | -0.11  | -0.23  | 0.28   |
|      | 25     | L             | 58370  | M         | 0.80  | 0.45  | 0.45   | -0.24  | -0.23  | -0.23  |
|      | 26     | L             | 68099  | M         | 0.74  | 0.47  | -0.19  | 0.47   | -0.30  | -0.25  |
|      | 27     | L             | 68518  | M         | 0.64  | 0.47  | -0.26  | -0.23  | -0.20  | 0.47   |
|      | 29     | O             | 51152  | M         | 0.60  | 0.63  | -0.21  | -0.32  | -0.28  | 0.63   |
|      | 30     | O             | 58202  | M         | 0.47  | 0.48  | -0.23  | -0.25  | 0.48   | -0.06  |
|      | 31     | O             | 55689  | M         | 0.46  | 0.40  | -0.17  | 0.40   | -0.17  | -0.04  |
|      | 32     | O             | 64978  | M         | 0.21  | 0.19  | 0.19   | 0.05   | -0.18  | 0.13   |
|      | 33     | L             | 51799  | M         | 0.59  | 0.57  | -0.23  | -0.27  | -0.26  | 0.57   |
|      | 34     | L             | 67989  | M         | 0.41  | 0.48  | -0.24  | 0.48   | -0.24  | -0.06  |
|      | 35     | L             | 51002  | M         | 0.81  | 0.50  | -0.20  | -0.31  | -0.27  | 0.50   |
|      | 36     | L             | 51242  | M         | 0.83  | 0.47  | -0.23  | 0.47   | -0.27  | -0.24  |
|      | 37     | L             | 50760  | M         | 0.70  | 0.47  | -0.25  | -0.23  | 0.47   | -0.21  |
|      | 38     | L             | 68557  | J         | 0.47  | 0.64  |        |        |        |        |
|      | 41     | L             | 68773  | M         | 0.75  | 0.46  | 0.46   | -0.33  | -0.18  | -0.20  |
|      | 42     | O             | 58138  | M         | 0.66  | 0.47  | -0.26  | -0.24  | 0.47   | -0.18  |
|      | 43     | O             | 50902  | M         | 0.61  | 0.40  | -0.25  | -0.19  | -0.18  | 0.40   |
|      | 44     | O             | 51037  | M         | 0.49  | 0.46  | -0.15  | -0.21  | -0.24  | 0.46   |
|      | 45     | O             | 68641  | M         | 0.46  | 0.34  | -0.13  | -0.15  | 0.34   | -0.16  |

Table A413. Summary Item Statistics - Operational Items (Continued)  
 Government - January Make-Up2

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| D    | 46     | O             | 68600  | M         | 0.57  | 0.42  | 0.42   | -0.11  | -0.29  | -0.16  |
|      | 47     | O             | 58360  | M         | 0.71  | 0.50  | 0.50   | -0.27  | -0.23  | -0.30  |
|      | 48     | O             | 68649  | J         | 0.44  | 0.72  |        |        |        |        |
|      | 49     | O             | 58394  | M         | 0.45  | 0.31  | -0.15  | 0.31   | -0.08  | -0.13  |
|      | 50     | O             | 51029  | M         | 0.51  | 0.49  | -0.15  | -0.26  | -0.21  | 0.49   |
|      | 51     | O             | 58269  | M         | 0.56  | 0.50  | -0.22  | -0.19  | -0.24  | 0.50   |
|      | 52     | O             | 55650  | M         | 0.43  | 0.41  | -0.20  | -0.12  | -0.14  | 0.41   |
|      | 53     | L             | 68053  | J         | 0.27  | 0.78  |        |        |        |        |
|      | 54     | L             | 68697  | M         | 0.68  | 0.55  | -0.25  | -0.25  | -0.30  | 0.55   |
|      | 55     | L             | 58190  | M         | 0.65  | 0.57  | 0.57   | -0.30  | -0.29  | -0.22  |
|      | 56     | L             | 68703  | M         | 0.77  | 0.54  | 0.54   | -0.29  | -0.28  | -0.26  |
|      | 57     | L             | 68006  | M         | 0.40  | 0.36  | -0.18  | 0.36   | -0.21  | -0.04  |
|      | 58     | L             | 51110  | J         | 0.32  | 0.77  |        |        |        |        |
|      | 59     | L             | 51136  | M         | 0.43  | 0.42  | -0.09  | -0.18  | -0.22  | 0.42   |
|      | 60     | L             | 68727  | M         | 0.48  | 0.40  | -0.17  | -0.16  | -0.17  | 0.40   |
|      | 61     | L             | 51266  | M         | 0.35  | 0.28  | -0.07  | -0.08  | 0.28   | -0.13  |
|      | 62     | L             | 64949  | M         | 0.65  | 0.53  | -0.23  | 0.53   | -0.28  | -0.24  |
|      | 63     | L             | 68724  | M         | 0.66  | 0.58  | -0.30  | -0.26  | -0.28  | 0.58   |
|      | 64     | L             | 51812  | M         | 0.72  | 0.51  | -0.28  | 0.51   | -0.21  | -0.28  |

Table A14. Summary Item Statistics - Operational Items

## Algebra May Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| E-K  | 1      | L             | 56627  | M         | 0.86  | 0.32  | -0.22  | 0.32   | -0.20  | -0.09  |
|      | 2      | L             | 67502  | M         | 0.93  | 0.23  | -0.10  | 0.23   | -0.18  | -0.11  |
|      | 3      | L             | 51360  | M         | 0.83  | 0.32  | -0.22  | -0.14  | 0.32   | -0.14  |
|      | 5      | L             | 67531  | M         | 0.70  | 0.40  | -0.12  | -0.30  | 0.40   | -0.18  |
|      | 6      | L             | 51444  | J         | 0.13  | 0.69  |        |        |        |        |
|      | 7      | O             | 51396  | M         | 0.37  | 0.36  | -0.23  | -0.08  | -0.16  | 0.36   |
|      | 8      | L             | 51392  | M         | 0.75  | 0.50  | -0.18  | -0.34  | 0.50   | -0.25  |
|      | 9      | O             | 51359  | M         | 0.56  | 0.36  | -0.22  | 0.36   | -0.13  | -0.17  |
|      | 11     | O             | 67504  | M         | 0.89  | 0.44  | -0.35  | -0.18  | -0.18  | 0.44   |
|      | 13     | L             | 51467  | G         | 0.64  | 0.58  | 0.58   | -0.55  |        |        |
|      | 14     | L             | 54854  | G         | 0.24  | 0.26  | 0.26   | -0.19  |        |        |
|      | 16     | L             | 54650  | G         | 0.57  | 0.62  | 0.62   | -0.50  |        |        |
|      | 17     | L             | 56811  | J         | 0.57  | 0.74  |        |        |        |        |
|      | 18     | L             | 54646  | M         | 0.45  | 0.56  | -0.27  | -0.30  | -0.09  | 0.56   |
|      | 19     | O             | 67516  | M         | 0.63  | 0.60  | -0.29  | -0.28  | -0.29  | 0.60   |
|      | 20     | O             | 56773  | M         | 0.85  | 0.43  | 0.43   | -0.20  | -0.26  | -0.20  |
|      | 21     | L             | 56830  | J         | 0.58  | 0.78  |        |        |        |        |
|      | 22     | L             | 67492  | M         | 0.52  | 0.19  | -0.11  | 0.19   | -0.16  | 0.03   |
|      | 23     | L             | 56659  | M         | 0.80  | 0.47  | 0.47   | -0.31  | -0.22  | -0.19  |
|      | 25     | L             | 56695  | M         | 0.92  | 0.36  | -0.17  | -0.24  | 0.36   | -0.19  |
|      | 26     | O             | 51550  | M         | 0.73  | 0.43  | 0.43   | -0.25  | -0.22  | -0.21  |
|      | 27     | L             | 51511  | M         | 0.82  | 0.32  | -0.22  | -0.18  | 0.32   | -0.15  |
|      | 28     | L             | 51530  | M         | 0.24  | 0.41  | -0.15  | -0.19  | 0.41   | -0.06  |
|      | 31     | L             | 67499  | M         | 0.80  | 0.35  | -0.12  | -0.26  | -0.26  | 0.35   |
|      | 33     | O             | 54712  | M         | 0.83  | 0.48  | -0.17  | -0.34  | 0.48   | -0.24  |
|      | 35     | L             | 67539  | M         | 0.31  | 0.29  | 0.08   | 0.29   | -0.23  | -0.17  |
|      | 36     | O             | 43222  | J         | 0.37  | 0.73  |        |        |        |        |
|      | 37     | O             | 67552  | G         | 0.74  | 0.50  | 0.50   | -0.45  |        |        |
|      | 38     | O             | 51441  | G         | 0.87  | 0.35  | 0.35   | -0.30  |        |        |
|      | 40     | O             | 51545  | G         | 0.56  | 0.47  | 0.47   | -0.40  |        |        |
|      | 41     | O             | 52329  | J         | 0.55  | 0.73  |        |        |        |        |
|      | 42     | O             | 51551  | M         | 0.67  | 0.51  | 0.51   | -0.28  | -0.28  | -0.17  |
|      | 43     | L             | 56484  | M         | 0.43  | 0.37  | -0.29  | 0.01   | -0.25  | 0.37   |
|      | 44     | O             | 56572  | M         | 0.63  | 0.56  | 0.56   | -0.21  | -0.32  | -0.30  |
|      | 45     | L             | 51496  | J         | 0.43  | 0.76  |        |        |        |        |
|      | 46     | L             | 52332  | M         | 0.87  | 0.40  | -0.26  | -0.19  | 0.40   | -0.15  |
|      | 47     | O             | 51432  | M         | 0.72  | 0.46  | -0.26  | -0.28  | 0.46   | -0.15  |
|      | 48     | L             | 67521  | M         | 0.57  | 0.51  | 0.51   | -0.17  | -0.27  | -0.26  |

Table A15. Summary Item Statistics - Operational Items

## Algebra May Make-Up1

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| X    | 1      | L             | 56627  | M         | 0.86  | 0.32  | -0.22  | 0.32   | -0.20  | -0.09  |
|      | 2      | L             | 67502  | M         | 0.93  | 0.23  | -0.10  | 0.23   | -0.18  | -0.11  |
|      | 3      | L             | 51360  | M         | 0.83  | 0.32  | -0.22  | -0.14  | 0.32   | -0.14  |
|      | 5      | L             | 67531  | M         | 0.70  | 0.40  | -0.12  | -0.30  | 0.40   | -0.18  |
|      | 6      | L             | 51444  | J         | 0.13  | 0.69  |        |        |        |        |
|      | 7      | O             | 54660  | M         | 0.31  | 0.09  | -0.22  | -0.29  | -0.09  | 0.51   |
|      | 8      | L             | 51392  | M         | 0.75  | 0.50  | -0.18  | -0.34  | 0.50   | -0.25  |
|      | 9      | O             | 51359  | M         | 0.56  | 0.36  | -0.22  | 0.36   | -0.13  | -0.17  |
|      | 11     | O             | 67504  | M         | 0.89  | 0.44  | -0.35  | -0.18  | -0.18  | 0.44   |
|      | 13     | L             | 51467  | G         | 0.64  | 0.58  | 0.58   | -0.55  |        |        |
|      | 14     | L             | 54854  | G         | 0.24  | 0.26  | 0.26   | -0.19  |        |        |
|      | 16     | L             | 54650  | G         | 0.57  | 0.62  | 0.62   | -0.50  |        |        |
|      | 17     | L             | 56811  | J         | 0.57  | 0.74  |        |        |        |        |
|      | 18     | L             | 54646  | M         | 0.45  | 0.56  | -0.27  | -0.30  | -0.09  | 0.56   |
|      | 19     | O             | 54765  | M         | 0.57  | 0.31  | 0.37   | -0.13  | -0.17  | -0.08  |
|      | 20     | O             | 51431  | M         | 0.44  | 0.30  | 0.50   | -0.25  | -0.20  | -0.23  |
|      | 21     | L             | 56830  | J         | 0.58  | 0.78  |        |        |        |        |
|      | 22     | L             | 67492  | M         | 0.52  | 0.19  | -0.11  | 0.19   | -0.16  | 0.03   |
|      | 23     | L             | 56659  | M         | 0.80  | 0.47  | 0.47   | -0.31  | -0.22  | -0.19  |
|      | 25     | L             | 56695  | M         | 0.92  | 0.36  | -0.17  | -0.24  | 0.36   | -0.19  |
|      | 26     | O             | 51470  | M         | 0.20  | 0.77  | -0.23  | -0.23  | 0.47   | -0.15  |
|      | 27     | L             | 51511  | M         | 0.82  | 0.32  | -0.22  | -0.18  | 0.32   | -0.15  |
|      | 28     | L             | 51530  | M         | 0.24  | 0.41  | -0.15  | -0.19  | 0.41   | -0.06  |
|      | 31     | L             | 67499  | M         | 0.80  | 0.35  | -0.12  | -0.26  | -0.26  | 0.35   |
|      | 33     | O             | 54712  | M         | 0.83  | 0.48  | -0.17  | -0.34  | 0.48   | -0.24  |
|      | 35     | L             | 67539  | M         | 0.31  | 0.29  | 0.08   | 0.29   | -0.23  | -0.17  |
|      | 36     | O             | 43222  | J         | 0.37  | 0.73  |        |        |        |        |
|      | 37     | O             | 67552  | G         | 0.74  | 0.50  | 0.50   | -0.45  |        |        |
|      | 38     | O             | 64681  | G         | 0.19  | 0.47  | 0.52   | -0.43  |        |        |
|      | 40     | O             | 51545  | G         | 0.56  | 0.47  | 0.47   | -0.40  |        |        |
|      | 41     | O             | 51524  | J         | 0.29  | 0.46  |        |        |        |        |
|      | 42     | O             | 51551  | M         | 0.67  | 0.51  | 0.51   | -0.28  | -0.28  | -0.17  |
|      | 43     | L             | 56484  | M         | 0.43  | 0.37  | -0.29  | 0.01   | -0.25  | 0.37   |
|      | 44     | O             | 56572  | M         | 0.63  | 0.56  | 0.56   | -0.21  | -0.32  | -0.30  |
|      | 45     | L             | 51496  | J         | 0.43  | 0.76  |        |        |        |        |
|      | 46     | L             | 52332  | M         | 0.87  | 0.40  | -0.26  | -0.19  | 0.40   | -0.15  |
|      | 47     | O             | 51503  | M         | 0.56  | 0.51  | -0.25  | 0.48   | -0.17  | -0.18  |
|      | 48     | L             | 67521  | M         | 0.57  | 0.51  | 0.51   | -0.17  | -0.27  | -0.26  |

Table A16. Summary Item Statistics - Operational Items  
Algebra May Make-Up2

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| Y    | 1      | L             | 56627  | M         | 0.86  | 0.32  | -0.22  | 0.32   | -0.20  | -0.09  |
|      | 2      | L             | 67502  | M         | 0.93  | 0.23  | -0.10  | 0.23   | -0.18  | -0.11  |
|      | 3      | L             | 51360  | M         | 0.83  | 0.32  | -0.22  | -0.14  | 0.32   | -0.14  |
|      | 5      | L             | 67531  | M         | 0.70  | 0.40  | -0.12  | -0.30  | 0.40   | -0.18  |
|      | 6      | L             | 51444  | J         | 0.13  | 0.69  |        |        |        |        |
|      | 7      | O             | 51396  | M         | 0.37  | 0.36  | -0.23  | -0.08  | -0.16  | 0.36   |
|      | 8      | L             | 51392  | M         | 0.75  | 0.50  | -0.18  | -0.34  | 0.50   | -0.25  |
|      | 9      | O             | 51539  | M         | 0.31  | 0.09  | -0.14  | 0.10   | 0.09   | -0.10  |
|      | 11     | O             | 51411  | M         | 0.57  | 0.31  | -0.15  | 0.31   | -0.14  | -0.15  |
|      | 13     | L             | 51467  | G         | 0.64  | 0.58  | 0.58   | -0.55  |        |        |
|      | 14     | L             | 54854  | G         | 0.24  | 0.26  | 0.26   | -0.19  |        |        |
|      | 16     | L             | 54650  | G         | 0.57  | 0.62  | 0.62   | -0.50  |        |        |
|      | 17     | L             | 56811  | J         | 0.57  | 0.74  |        |        |        |        |
|      | 18     | L             | 54646  | M         | 0.45  | 0.56  | -0.27  | -0.30  | -0.09  | 0.56   |
|      | 19     | O             | 67516  | M         | 0.63  | 0.60  | -0.29  | -0.28  | -0.29  | 0.60   |
|      | 20     | O             | 56773  | M         | 0.85  | 0.43  | 0.43   | -0.20  | -0.26  | -0.20  |
|      | 21     | L             | 56830  | J         | 0.58  | 0.78  |        |        |        |        |
|      | 22     | L             | 67492  | M         | 0.52  | 0.19  | -0.11  | 0.19   | -0.16  | 0.03   |
|      | 23     | L             | 56659  | M         | 0.80  | 0.47  | 0.47   | -0.31  | -0.22  | -0.19  |
|      | 25     | L             | 56695  | M         | 0.92  | 0.36  | -0.17  | -0.24  | 0.36   | -0.19  |
|      | 26     | O             | 51550  | M         | 0.73  | 0.43  | 0.43   | -0.25  | -0.22  | -0.21  |
|      | 27     | L             | 51511  | M         | 0.82  | 0.32  | -0.22  | -0.18  | 0.32   | -0.15  |
|      | 28     | L             | 51530  | M         | 0.24  | 0.41  | -0.15  | -0.19  | 0.41   | -0.06  |
|      | 31     | L             | 67499  | M         | 0.80  | 0.35  | -0.12  | -0.26  | -0.26  | 0.35   |
|      | 33     | O             | 52337  | M         | 0.44  | 0.30  | -0.11  | 0.30   | -0.15  | -0.14  |
|      | 35     | L             | 67539  | M         | 0.31  | 0.29  | 0.08   | 0.29   | -0.23  | -0.17  |
|      | 36     | O             | 54744  | J         | 0.20  | 0.77  |        |        |        |        |
|      | 37     | O             | 67497  | G         | 0.19  | 0.47  | 0.47   | -0.25  |        |        |
|      | 38     | O             | 51441  | G         | 0.87  | 0.35  | 0.35   | -0.30  |        |        |
|      | 40     | O             | 51443  | G         | 0.29  | 0.46  | 0.46   | -0.33  |        |        |
|      | 41     | O             | 52329  | J         | 0.55  | 0.73  |        |        |        |        |
|      | 42     | O             | 54766  | M         | 0.56  | 0.51  | -0.28  | -0.26  | 0.51   | -0.14  |
|      | 43     | L             | 56484  | M         | 0.43  | 0.37  | -0.29  | 0.01   | -0.25  | 0.37   |
|      | 44     | O             | 54586  | M         | 0.29  | 0.36  | 0.36   | -0.13  | -0.06  | -0.13  |
|      | 45     | L             | 51496  | J         | 0.43  | 0.76  |        |        |        |        |
|      | 46     | L             | 52332  | M         | 0.87  | 0.40  | -0.26  | -0.19  | 0.40   | -0.15  |
|      | 47     | O             | 51432  | M         | 0.72  | 0.46  | -0.26  | -0.28  | 0.46   | -0.15  |
|      | 48     | L             | 67521  | M         | 0.57  | 0.51  | 0.51   | -0.17  | -0.27  | -0.26  |



Table A17. Summary Item Statistics - Operational Items  
Biology May Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| E-K  | 1      | O             | 57089  | M         | 0.73  | 0.51  | -0.24  | -0.29  | -0.28  | 0.51   |
|      | 2      | O             | 67605  | M         | 0.47  | 0.29  | 0.29   | -0.22  | -0.17  | 0.01   |
|      | 3      | O             | 52434  | M         | 0.55  | 0.45  | 0.45   | -0.28  | -0.19  | -0.18  |
|      | 4      | O             | 52433  | M         | 0.64  | 0.47  | 0.47   | -0.26  | -0.20  | -0.24  |
|      | 5      | L             | 67686  | J         | 0.37  | 0.72  |        |        |        |        |
|      | 6      | O             | 64987  | M         | 0.49  | 0.53  | -0.24  | -0.18  | -0.32  | 0.53   |
|      | 9      | O             | 60543  | M         | 0.62  | 0.33  | -0.21  | -0.22  | 0.33   | -0.08  |
|      | 10     | O             | 67687  | M         | 0.56  | 0.52  | -0.26  | -0.30  | 0.52   | -0.17  |
|      | 11     | O             | 55023  | M         | 0.87  | 0.34  | -0.20  | -0.17  | 0.34   | -0.18  |
|      | 13     | O             | 64709  | M         | 0.44  | 0.34  | -0.17  | -0.06  | -0.22  | 0.34   |
|      | 14     | O             | 64710  | M         | 0.41  | 0.39  | 0.39   | -0.02  | -0.28  | -0.21  |
|      | 15     | O             | 52665  | M         | 0.73  | 0.40  | -0.24  | -0.27  | 0.40   | -0.15  |
|      | 16     | O             | 52664  | M         | 0.63  | 0.48  | -0.21  | -0.32  | -0.17  | 0.48   |
|      | 17     | O             | 68236  | M         | 0.55  | 0.40  | -0.19  | -0.17  | -0.20  | 0.40   |
|      | 18     | L             | 52779  | J         | 0.33  | 0.71  |        |        |        |        |
|      | 19     | O             | 65117  | M         | 0.78  | 0.47  | -0.23  | 0.47   | -0.28  | -0.22  |
|      | 20     | O             | 65056  | M         | 0.54  | 0.44  | -0.28  | 0.44   | -0.22  | -0.15  |
|      | 21     | O             | 56848  | M         | 0.47  | 0.44  | -0.15  | -0.23  | 0.44   | -0.21  |
|      | 22     | O             | 56849  | M         | 0.44  | 0.37  | -0.10  | 0.37   | -0.17  | -0.20  |
|      | 23     | O             | 53511  | M         | 0.40  | 0.44  | -0.17  | 0.44   | -0.22  | -0.15  |
|      | 27     | L             | 67591  | J         | 0.25  | 0.76  |        |        |        |        |
|      | 28     | O             | 52470  | M         | 0.60  | 0.44  | -0.23  | 0.44   | -0.22  | -0.16  |
|      | 29     | O             | 52471  | M         | 0.67  | 0.48  | -0.24  | 0.48   | -0.27  | -0.20  |
|      | 30     | O             | 52469  | M         | 0.56  | 0.45  | -0.23  | 0.45   | -0.21  | -0.20  |
|      | 33     | L             | 67604  | J         | 0.30  | 0.74  |        |        |        |        |
|      | 34     | O             | 55211  | M         | 0.75  | 0.44  | -0.22  | 0.44   | -0.27  | -0.17  |
|      | 35     | O             | 55212  | M         | 0.51  | 0.36  | -0.20  | -0.15  | 0.36   | -0.11  |
|      | 36     | O             | 68294  | M         | 0.42  | 0.25  | 0.04   | 0.25   | -0.29  | -0.16  |
|      | 37     | O             | 65068  | M         | 0.81  | 0.41  | -0.16  | -0.18  | 0.41   | -0.29  |
|      | 38     | O             | 65096  | M         | 0.44  | 0.35  | -0.20  | -0.12  | 0.35   | -0.18  |
|      | 39     | O             | 65098  | M         | 0.76  | 0.39  | -0.16  | 0.39   | -0.26  | -0.20  |
|      | 40     | O             | 64703  | M         | 0.60  | 0.51  | -0.27  | 0.51   | -0.27  | -0.19  |
|      | 41     | L             | 52682  | J         | 0.33  | 0.77  |        |        |        |        |
|      | 42     | O             | 64984  | M         | 0.48  | 0.38  | -0.22  | -0.07  | 0.38   | -0.26  |
|      | 43     | O             | 65069  | M         | 0.45  | 0.34  | -0.16  | -0.26  | 0.34   | -0.04  |
|      | 44     | O             | 55250  | M         | 0.67  | 0.36  | -0.15  | -0.20  | 0.36   | -0.18  |
|      | 47     | O             | 52719  | M         | 0.87  | 0.43  | 0.43   | -0.21  | -0.26  | -0.22  |
|      | 48     | O             | 52775  | M         | 0.76  | 0.51  | -0.26  | -0.31  | -0.22  | 0.51   |
|      | 49     | O             | 52776  | M         | 0.76  | 0.52  | -0.27  | -0.27  | -0.27  | 0.52   |
|      | 50     | O             | 52720  | M         | 0.59  | 0.55  | -0.27  | -0.25  | 0.55   | -0.30  |
|      | 51     | L             | 65000  | J         | 0.19  | 0.82  |        |        |        |        |
|      | 52     | O             | 57088  | M         | 0.56  | 0.41  | -0.24  | 0.41   | -0.26  | -0.09  |

Table A17. Summary Item Statistics - Operational Items (Continued)

Biology May Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| E-K  | 53     | O             | 54965  | M         | 0.59  | 0.37  | -0.19  | 0.37   | -0.15  | -0.19  |
|      | 54     | O             | 57034  | M         | 0.73  | 0.53  | -0.22  | 0.53   | -0.25  | -0.33  |
|      | 58     | O             | 53476  | M         | 0.61  | 0.41  | -0.16  | 0.41   | -0.24  | -0.18  |
|      | 59     | O             | 68148  | M         | 0.42  | 0.34  | 0.34   | -0.06  | -0.23  | -0.12  |
|      | 60     | O             | 68147  | M         | 0.51  | 0.52  | -0.22  | -0.19  | -0.29  | 0.52   |
|      | 62     | O             | 55124  | M         | 0.73  | 0.49  | -0.24  | 0.49   | -0.25  | -0.25  |
|      | 63     | O             | 57024  | M         | 0.59  | 0.45  | -0.23  | -0.24  | 0.45   | -0.16  |
|      | 64     | O             | 56978  | M         | 0.43  | 0.36  | 0.36   | -0.11  | -0.21  | -0.11  |
|      | 65     | L             | 67615  | J         | 0.27  | 0.81  |        |        |        |        |
|      | 68     | O             | 55221  | M         | 0.69  | 0.56  | -0.24  | 0.56   | -0.25  | -0.33  |
|      | 69     | O             | 55222  | M         | 0.67  | 0.53  | -0.25  | -0.29  | 0.53   | -0.23  |
|      | 70     | O             | 55215  | M         | 0.59  | 0.53  | -0.23  | -0.29  | 0.53   | -0.21  |
|      | 71     | O             | 52552  | M         | 0.62  | 0.55  | -0.25  | -0.23  | -0.29  | 0.55   |

Table A18. Summary Item Statistics - Operational Items  
Biology May MakeUp1

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| X    | 1      | O             | 57089  | M         | 0.73  | 0.51  | -0.24  | -0.29  | -0.28  | 0.51   |
|      | 2      | O             | 67577  | M         | 0.32  | 0.27  | -0.12  | 0.27   | -0.12  | -0.06  |
|      | 3      | O             | 52434  | M         | 0.55  | 0.45  | 0.45   | -0.28  | -0.19  | -0.18  |
|      | 4      | O             | 52433  | M         | 0.64  | 0.47  | 0.47   | -0.26  | -0.20  | -0.24  |
|      | 5      | L             | 67686  | J         | 0.37  | 0.72  |        |        |        |        |
|      | 6      | O             | 64987  | M         | 0.49  | 0.53  | -0.24  | -0.18  | -0.32  | 0.53   |
|      | 9      | O             | 60543  | M         | 0.62  | 0.33  | -0.21  | -0.22  | 0.33   | -0.08  |
|      | 10     | O             | 67687  | M         | 0.56  | 0.52  | -0.26  | -0.30  | 0.52   | -0.17  |
|      | 11     | O             | 55023  | M         | 0.87  | 0.34  | -0.20  | -0.17  | 0.34   | -0.18  |
|      | 13     | O             | 64709  | M         | 0.44  | 0.34  | -0.17  | -0.06  | -0.22  | 0.34   |
|      | 14     | O             | 64710  | M         | 0.41  | 0.39  | 0.39   | -0.02  | -0.28  | -0.21  |
|      | 15     | O             | 52665  | M         | 0.73  | 0.40  | -0.24  | -0.27  | 0.40   | -0.15  |
|      | 16     | O             | 52664  | M         | 0.63  | 0.48  | -0.21  | -0.32  | -0.17  | 0.48   |
|      | 17     | O             | 64992  | M         | 0.32  | 0.32  | 0.04   | -0.28  | 0.32   | -0.21  |
|      | 18     | L             | 52779  | J         | 0.33  | 0.71  |        |        |        |        |
|      | 19     | O             | 57027  | M         | 0.61  | 0.54  | 0.54   | -0.26  | -0.28  | -0.19  |
|      | 20     | O             | 65056  | M         | 0.54  | 0.44  | -0.28  | 0.44   | -0.22  | -0.15  |
|      | 21     | O             | 56848  | M         | 0.47  | 0.44  | -0.15  | -0.23  | 0.44   | -0.21  |
|      | 22     | O             | 56849  | M         | 0.44  | 0.37  | -0.10  | 0.37   | -0.17  | -0.20  |
|      | 23     | O             | 53511  | M         | 0.40  | 0.44  | -0.17  | 0.44   | -0.22  | -0.15  |
|      | 27     | L             | 67591  | J         | 0.25  | 0.76  |        |        |        |        |
|      | 28     | O             | 52470  | M         | 0.60  | 0.44  | -0.23  | 0.44   | -0.22  | -0.16  |
|      | 29     | O             | 52471  | M         | 0.67  | 0.48  | -0.24  | 0.48   | -0.27  | -0.20  |
|      | 30     | O             | 52469  | M         | 0.56  | 0.45  | -0.23  | 0.45   | -0.21  | -0.20  |
|      | 33     | L             | 67604  | J         | 0.30  | 0.74  |        |        |        |        |
|      | 34     | O             | 55211  | M         | 0.75  | 0.44  | -0.22  | 0.44   | -0.27  | -0.17  |
|      | 35     | O             | 55212  | M         | 0.51  | 0.36  | -0.20  | -0.15  | 0.36   | -0.11  |
|      | 36     | O             | 68302  | M         | 0.42  | 0.26  | -0.22  | -0.24  | 0.26   | 0.10   |
|      | 37     | O             | 52740  | M         | 0.31  | 0.33  | -0.10  | -0.10  | -0.12  | 0.33   |
|      | 38     | O             | 65096  | M         | 0.44  | 0.35  | -0.20  | -0.12  | 0.35   | -0.18  |
|      | 39     | O             | 65098  | M         | 0.76  | 0.39  | -0.16  | 0.39   | -0.26  | -0.20  |
|      | 40     | O             | 54987  | M         | 0.39  | 0.35  | 0.35   | -0.09  | -0.18  | -0.11  |
|      | 41     | L             | 52682  | J         | 0.33  | 0.77  |        |        |        |        |
|      | 42     | O             | 64984  | M         | 0.48  | 0.38  | -0.22  | -0.07  | 0.38   | -0.26  |
|      | 43     | O             | 65069  | M         | 0.45  | 0.34  | -0.16  | -0.26  | 0.34   | -0.04  |
|      | 44     | O             | 55250  | M         | 0.67  | 0.36  | -0.15  | -0.20  | 0.36   | -0.18  |
|      | 47     | O             | 52719  | M         | 0.87  | 0.43  | 0.43   | -0.21  | -0.26  | -0.22  |
|      | 48     | O             | 52775  | M         | 0.76  | 0.51  | -0.26  | -0.31  | -0.22  | 0.51   |
|      | 49     | O             | 52776  | M         | 0.76  | 0.52  | -0.27  | -0.27  | -0.27  | 0.52   |
|      | 50     | O             | 52720  | M         | 0.59  | 0.55  | -0.27  | -0.25  | 0.55   | -0.30  |
|      | 51     | L             | 65000  | J         | 0.19  | 0.82  |        |        |        |        |

Table A18. Summary Item Statistics - Operational Items (Continued)

Biology May MakeUp1

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| X    | 52     | O             | 64723  | M         | 0.57  | 0.46  | 0.46   | -0.25  | -0.19  | -0.16  |
|      | 53     | O             | 55114  | M         | 0.60  | 0.41  | 0.41   | -0.13  | -0.20  | -0.21  |
|      | 54     | O             | 55200  | M         | 0.40  | 0.53  | -0.22  | -0.27  | -0.13  | 0.53   |
|      | 58     | O             | 53476  | M         | 0.61  | 0.41  | -0.16  | 0.41   | -0.24  | -0.18  |
|      | 59     | O             | 68148  | M         | 0.42  | 0.34  | 0.34   | -0.06  | -0.23  | -0.12  |
|      | 60     | O             | 64981  | M         | 0.49  | 0.37  | -0.08  | 0.37   | -0.23  | -0.14  |
|      | 62     | O             | 55124  | M         | 0.73  | 0.49  | -0.24  | 0.49   | -0.25  | -0.25  |
|      | 63     | O             | 57024  | M         | 0.59  | 0.45  | -0.23  | -0.24  | 0.45   | -0.16  |
|      | 64     | O             | 56978  | M         | 0.43  | 0.36  | 0.36   | -0.11  | -0.21  | -0.11  |
|      | 65     | L             | 67615  | J         | 0.27  | 0.81  |        |        |        |        |
|      | 68     | O             | 55221  | M         | 0.69  | 0.56  | -0.24  | 0.56   | -0.25  | -0.33  |
|      | 69     | O             | 55222  | M         | 0.67  | 0.53  | -0.25  | -0.29  | 0.53   | -0.23  |
|      | 70     | O             | 65070  | M         | 0.29  | 0.44  | -0.11  | -0.16  | -0.12  | 0.44   |
|      | 71     | O             | 52552  | M         | 0.62  | 0.55  | -0.25  | -0.23  | -0.29  | 0.55   |

Table A19. Summary Item Statistics - Operational Items  
Biology May MakeUp2

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| Y    | 1      | O             | 67622  | M         | 0.79  | 0.20  | -0.07  | -0.18  | -0.09  | 0.20   |
|      | 2      | O             | 67605  | M         | 0.47  | 0.29  | 0.29   | -0.22  | -0.17  | 0.01   |
|      | 3      | O             | 52434  | M         | 0.55  | 0.45  | 0.45   | -0.28  | -0.19  | -0.18  |
|      | 4      | O             | 52433  | M         | 0.64  | 0.47  | 0.47   | -0.26  | -0.20  | -0.24  |
|      | 5      | L             | 67686  | J         | 0.37  | 0.72  |        |        |        |        |
|      | 6      | O             | 55223  | M         | 0.24  | 0.43  | -0.10  | 0.03   | -0.33  | 0.43   |
|      | 9      | O             | 60543  | M         | 0.62  | 0.33  | -0.21  | -0.22  | 0.33   | -0.08  |
|      | 10     | O             | 67669  | M         | 0.15  | 0.25  | -0.08  | 0.00   | 0.25   | -0.10  |
|      | 11     | O             | 52680  | M         | 0.44  | 0.31  | -0.17  | -0.03  | 0.31   | -0.20  |
|      | 13     | O             | 64709  | M         | 0.44  | 0.34  | -0.17  | -0.06  | -0.22  | 0.34   |
|      | 14     | O             | 64710  | M         | 0.41  | 0.39  | 0.39   | -0.02  | -0.28  | -0.21  |
|      | 15     | O             | 52665  | M         | 0.73  | 0.40  | -0.24  | -0.27  | 0.40   | -0.15  |
|      | 16     | O             | 52664  | M         | 0.63  | 0.48  | -0.21  | -0.32  | -0.17  | 0.48   |
|      | 17     | O             | 68236  | M         | 0.55  | 0.40  | -0.19  | -0.17  | -0.20  | 0.40   |
|      | 18     | L             | 52779  | J         | 0.33  | 0.71  |        |        |        |        |
|      | 19     | O             | 65117  | M         | 0.78  | 0.47  | -0.23  | 0.47   | -0.28  | -0.22  |
|      | 20     | O             | 52634  | M         | 0.43  | 0.52  | 0.52   | -0.22  | -0.23  | -0.17  |
|      | 21     | O             | 56848  | M         | 0.47  | 0.44  | -0.15  | -0.23  | 0.44   | -0.21  |
|      | 22     | O             | 56849  | M         | 0.44  | 0.37  | -0.10  | 0.37   | -0.17  | -0.20  |
|      | 23     | O             | 52481  | M         | 0.34  | 0.27  | -0.15  | 0.01   | 0.27   | -0.15  |
|      | 27     | L             | 67591  | J         | 0.25  | 0.76  |        |        |        |        |
|      | 28     | O             | 52470  | M         | 0.60  | 0.44  | -0.23  | 0.44   | -0.22  | -0.16  |
|      | 29     | O             | 52471  | M         | 0.67  | 0.48  | -0.24  | 0.48   | -0.27  | -0.20  |
|      | 30     | O             | 52469  | M         | 0.56  | 0.45  | -0.23  | 0.45   | -0.21  | -0.20  |
|      | 33     | L             | 67604  | J         | 0.30  | 0.74  |        |        |        |        |
|      | 34     | O             | 55211  | M         | 0.75  | 0.44  | -0.22  | 0.44   | -0.27  | -0.17  |
|      | 35     | O             | 55212  | M         | 0.51  | 0.36  | -0.20  | -0.15  | 0.36   | -0.11  |
|      | 36     | O             | 68294  | M         | 0.42  | 0.25  | 0.04   | 0.25   | -0.29  | -0.16  |
|      | 37     | O             | 65068  | M         | 0.81  | 0.41  | -0.16  | -0.18  | 0.41   | -0.29  |
|      | 38     | O             | 65096  | M         | 0.44  | 0.35  | -0.20  | -0.12  | 0.35   | -0.18  |
|      | 39     | O             | 65098  | M         | 0.76  | 0.39  | -0.16  | 0.39   | -0.26  | -0.20  |
|      | 40     | O             | 64703  | M         | 0.60  | 0.51  | -0.27  | 0.51   | -0.27  | -0.19  |
|      | 41     | L             | 52682  | J         | 0.33  | 0.77  |        |        |        |        |
|      | 42     | O             | 68197  | M         | 0.43  | 0.22  | 0.22   | -0.16  | -0.20  | 0.10   |
|      | 43     | O             | 60537  | M         | 0.36  | 0.28  | -0.18  | -0.04  | -0.10  | 0.28   |
|      | 44     | O             | 55250  | M         | 0.67  | 0.36  | -0.15  | -0.20  | 0.36   | -0.18  |
|      | 47     | O             | 52719  | M         | 0.87  | 0.43  | 0.43   | -0.21  | -0.26  | -0.22  |
|      | 48     | O             | 52775  | M         | 0.76  | 0.51  | -0.26  | -0.31  | -0.22  | 0.51   |
|      | 49     | O             | 52776  | M         | 0.76  | 0.52  | -0.27  | -0.27  | -0.27  | 0.52   |
|      | 50     | O             | 52720  | M         | 0.59  | 0.55  | -0.27  | -0.25  | 0.55   | -0.30  |
|      | 51     | L             | 65000  | J         | 0.19  | 0.82  |        |        |        |        |

Table A19. Summary Item Statistics - Operational Items  
Biology May MakeUp2

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| Y    | 52     | O             | 57088  | M         | 0.56  | 0.41  | -0.24  | 0.41   | -0.26  | -0.09  |
|      | 53     | O             | 54965  | M         | 0.59  | 0.37  | -0.19  | 0.37   | -0.15  | -0.19  |
|      | 54     | O             | 57034  | M         | 0.73  | 0.53  | -0.22  | 0.53   | -0.25  | -0.33  |
|      | 58     | O             | 52741  | M         | 0.30  | 0.26  | -0.19  | 0.26   | -0.17  | 0.10   |
|      | 59     | O             | 64995  | M         | 0.72  | 0.49  | -0.31  | -0.23  | 0.49   | -0.19  |
|      | 60     | O             | 68147  | M         | 0.51  | 0.52  | -0.22  | -0.19  | -0.29  | 0.52   |
|      | 62     | O             | 55124  | M         | 0.73  | 0.49  | -0.24  | 0.49   | -0.25  | -0.25  |
|      | 63     | O             | 57024  | M         | 0.59  | 0.45  | -0.23  | -0.24  | 0.45   | -0.16  |
|      | 64     | O             | 56978  | M         | 0.43  | 0.36  | 0.36   | -0.11  | -0.21  | -0.11  |
|      | 65     | L             | 67615  | J         | 0.27  | 0.81  |        |        |        |        |
|      | 68     | O             | 55221  | M         | 0.69  | 0.56  | -0.24  | 0.56   | -0.25  | -0.33  |
|      | 69     | O             | 55222  | M         | 0.67  | 0.53  | -0.25  | -0.29  | 0.53   | -0.23  |
|      | 70     | O             | 55215  | M         | 0.59  | 0.53  | -0.23  | -0.29  | 0.53   | -0.21  |
|      | 71     | O             | 55007  | M         | 0.47  | 0.38  | -0.04  | 0.38   | -0.26  | -0.15  |

Table A20. Summary Item Statistics - Operational Items

## English May Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| E    | 1      | O             | 130029 | J         | 0.56  | 0.66  |        |        |        |        |
|      | 2      | O             | 130038 | M         | 0.66  | 0.53  | 0.53   | -0.26  | -0.24  | -0.29  |
|      | 3      | O             | 130039 | M         | 0.68  | 0.53  | -0.32  | 0.53   | -0.28  | -0.22  |
|      | 4      | O             | 130292 | M         | 0.59  | 0.52  | -0.25  | -0.27  | 0.52   | -0.31  |
|      | 5      | O             | 130040 | M         | 0.74  | 0.48  | 0.48   | -0.24  | -0.29  | -0.23  |
|      | 6      | O             | 130041 | M         | 0.75  | 0.53  | -0.26  | -0.29  | 0.53   | -0.27  |
|      | 7      | L             | 96175  | M         | 0.81  | 0.32  | -0.25  | -0.28  | -0.06  | 0.32   |
|      | 8      | L             | 96176  | M         | 0.90  | 0.47  | 0.47   | -0.25  | -0.27  | -0.26  |
|      | 9      | L             | 96177  | M         | 0.78  | 0.38  | -0.27  | 0.38   | -0.28  | -0.13  |
|      | 10     | L             | 96178  | M         | 0.70  | 0.42  | -0.23  | 0.42   | -0.20  | -0.26  |
|      | 11     | L             | 96179  | M         | 0.65  | 0.37  | -0.15  | -0.31  | -0.14  | 0.37   |
|      | 12     | L             | 96180  | M         | 0.76  | 0.47  | -0.24  | -0.26  | -0.27  | 0.47   |
|      | 13     | L             | 96181  | M         | 0.69  | 0.48  | -0.21  | 0.48   | -0.29  | -0.26  |
|      | 20     | O             | 130043 | M         | 0.57  | 0.43  | -0.23  | -0.32  | -0.06  | 0.43   |
|      | 21     | O             | 130044 | M         | 0.42  | 0.43  | -0.17  | -0.24  | -0.14  | 0.43   |
|      | 22     | O             | 135485 | M         | 0.64  | 0.42  | -0.12  | -0.26  | 0.42   | -0.25  |
|      | 23     | O             | 130047 | M         | 0.70  | 0.40  | -0.14  | 0.40   | -0.31  | -0.17  |
|      | 24     | O             | 130045 | M         | 0.63  | 0.45  | -0.23  | -0.19  | 0.45   | -0.23  |
|      | 25     | O             | 130046 | J         | 0.43  | 0.65  |        |        |        |        |
|      | 26     | O             | 135483 | J         | 0.50  | 0.68  |        |        |        |        |
|      | 27     | L             | 95570  | M         | 0.73  | 0.49  | -0.26  | -0.24  | -0.27  | 0.49   |
|      | 28     | L             | 95571  | M         | 0.75  | 0.45  | -0.20  | -0.31  | 0.45   | -0.21  |
|      | 29     | L             | 95572  | M         | 0.63  | 0.46  | -0.23  | 0.46   | -0.28  | -0.19  |
|      | 30     | L             | 95573  | M         | 0.51  | 0.48  | 0.48   | -0.34  | -0.15  | -0.13  |
|      | 31     | L             | 95574  | M         | 0.37  | 0.35  | -0.21  | 0.35   | -0.10  | -0.14  |
|      | 32     | L             | 95575  | M         | 0.65  | 0.34  | -0.16  | 0.34   | -0.13  | -0.24  |
|      | 33     | L             | 95576  | M         | 0.45  | 0.34  | -0.18  | -0.20  | -0.08  | 0.34   |
|      | 34     | L             | 95577  | M         | 0.81  | 0.49  | 0.49   | -0.25  | -0.33  | -0.18  |
|      | 35     | L             | 95578  | M         | 0.73  | 0.51  | -0.23  | -0.28  | -0.29  | 0.51   |
|      | 36     | L             | 95579  | M         | 0.78  | 0.53  | -0.29  | -0.30  | 0.53   | -0.25  |
|      | 37     | L             | 95580  | M         | 0.74  | 0.45  | -0.25  | 0.45   | -0.25  | -0.19  |
|      | 49     | O             | 108918 | M         | 0.66  | 0.51  | -0.28  | -0.31  | 0.51   | -0.20  |
|      | 50     | O             | 108784 | M         | 0.38  | 0.50  | -0.23  | -0.12  | -0.22  | 0.50   |
|      | 51     | O             | 108925 | M         | 0.80  | 0.53  | -0.30  | -0.28  | 0.53   | -0.24  |
|      | 52     | O             | 108783 | M         | 0.59  | 0.48  | -0.19  | -0.27  | -0.20  | 0.48   |
|      | 53     | O             | 108921 | M         | 0.56  | 0.46  | -0.09  | 0.46   | -0.29  | -0.26  |
|      | 54     | O             | 108919 | M         | 0.67  | 0.59  | -0.27  | -0.32  | -0.29  | 0.59   |
|      | 55     | O             | 108924 | M         | 0.61  | 0.49  | -0.26  | 0.49   | -0.25  | -0.17  |

Table A20. Summary Item Statistics - Operational Items (Continued)

English May Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| E    | 56     | O             | 108922 | M         | 0.34  | 0.27  | -0.18  | 0.05   | -0.20  | 0.27   |
|      | 57     | O             | 109739 | M         | 0.65  | 0.49  | 0.49   | -0.24  | -0.26  | -0.20  |
|      | 58     | O             | 108927 | J         | 0.42  | 0.73  |        |        |        |        |
|      | 59     | L             | 96106  | M         | 0.57  | 0.22  | -0.15  | -0.07  | 0.22   | -0.08  |
|      | 60     | L             | 96107  | M         | 0.77  | 0.34  | 0.34   | -0.12  | -0.22  | -0.17  |
|      | 61     | L             | 96108  | M         | 0.70  | 0.52  | -0.22  | 0.52   | -0.27  | -0.26  |
|      | 62     | L             | 96109  | M         | 0.71  | 0.51  | 0.51   | -0.27  | -0.29  | -0.20  |
|      | 63     | L             | 96110  | M         | 0.86  | 0.55  | -0.27  | 0.55   | -0.31  | -0.27  |
|      | 64     | O             | 130050 | M         | 0.69  | 0.55  | -0.25  | 0.55   | -0.33  | -0.21  |
|      | 65     | O             | 130049 | M         | 0.65  | 0.50  | 0.50   | -0.31  | -0.30  | -0.12  |
|      | 67     | O             | 130030 | M         | 0.86  | 0.50  | -0.26  | -0.27  | 0.50   | -0.23  |
|      | 68     | O             | 130031 | M         | 0.71  | 0.54  | -0.31  | -0.23  | -0.27  | 0.54   |



Table A21. Summary Item Statistics - Operational Items

## English May Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| F    | 1      | O             | 130211 | J         | 0.58  | 0.71  |        |        |        |        |
|      | 2      | O             | 130066 | M         | 0.73  | 0.32  | -0.10  | 0.32   | -0.11  | -0.26  |
|      | 3      | O             | 130067 | M         | 0.53  | 0.51  | -0.31  | -0.26  | 0.51   | -0.15  |
|      | 4      | O             | 130069 | M         | 0.56  | 0.36  | -0.25  | -0.08  | -0.18  | 0.36   |
|      | 5      | O             | 130074 | M         | 0.72  | 0.46  | -0.27  | 0.46   | -0.29  | -0.19  |
|      | 6      | O             | 130199 | M         | 0.71  | 0.40  | 0.40   | -0.26  | -0.26  | -0.12  |
|      | 7      | L             | 96175  | M         | 0.81  | 0.32  | -0.25  | -0.28  | -0.06  | 0.32   |
|      | 8      | L             | 96176  | M         | 0.90  | 0.47  | 0.47   | -0.25  | -0.27  | -0.26  |
|      | 9      | L             | 96177  | M         | 0.78  | 0.38  | -0.27  | 0.38   | -0.28  | -0.13  |
|      | 10     | L             | 96178  | M         | 0.70  | 0.42  | -0.23  | 0.42   | -0.20  | -0.26  |
|      | 11     | L             | 96179  | M         | 0.65  | 0.37  | -0.15  | -0.31  | -0.14  | 0.37   |
|      | 12     | L             | 96180  | M         | 0.76  | 0.47  | -0.24  | -0.26  | -0.27  | 0.47   |
|      | 13     | L             | 96181  | M         | 0.69  | 0.48  | -0.21  | 0.48   | -0.29  | -0.26  |
|      | 14     | O             | 130061 | M         | 0.61  | 0.36  | 0.36   | -0.24  | -0.26  | -0.06  |
|      | 15     | O             | 130062 | M         | 0.47  | 0.51  | -0.24  | -0.25  | -0.17  | 0.51   |
|      | 16     | O             | 130063 | M         | 0.68  | 0.51  | -0.26  | -0.31  | 0.51   | -0.25  |
|      | 17     | O             | 130201 | M         | 0.66  | 0.50  | -0.21  | -0.21  | 0.50   | -0.31  |
|      | 18     | O             | 130064 | M         | 0.69  | 0.47  | -0.23  | -0.29  | 0.47   | -0.23  |
|      | 19     | O             | 130065 | J         | 0.46  | 0.71  |        |        |        |        |
|      | 23     | O             | 108690 | J         | 0.47  | 0.68  |        |        |        |        |
|      | 24     | L             | 95570  | M         | 0.73  | 0.49  | -0.26  | -0.24  | -0.27  | 0.49   |
|      | 25     | L             | 95571  | M         | 0.75  | 0.45  | -0.20  | -0.31  | 0.45   | -0.21  |
|      | 26     | L             | 95572  | M         | 0.63  | 0.46  | -0.23  | 0.46   | -0.28  | -0.19  |
|      | 27     | L             | 95573  | M         | 0.51  | 0.48  | 0.48   | -0.34  | -0.15  | -0.13  |
|      | 28     | L             | 95574  | M         | 0.37  | 0.35  | -0.21  | 0.35   | -0.10  | -0.14  |
|      | 29     | L             | 95575  | M         | 0.65  | 0.34  | -0.16  | 0.34   | -0.13  | -0.24  |
|      | 30     | L             | 95576  | M         | 0.45  | 0.34  | -0.18  | -0.20  | -0.08  | 0.34   |
|      | 31     | L             | 95577  | M         | 0.81  | 0.49  | 0.49   | -0.25  | -0.33  | -0.18  |
|      | 32     | L             | 95578  | M         | 0.73  | 0.51  | -0.23  | -0.28  | -0.29  | 0.51   |
|      | 33     | L             | 95579  | M         | 0.78  | 0.53  | -0.29  | -0.30  | 0.53   | -0.25  |
|      | 34     | L             | 95580  | M         | 0.74  | 0.45  | -0.25  | 0.45   | -0.25  | -0.19  |
|      | 49     | O             | 130213 | M         | 0.71  | 0.55  | 0.55   | -0.29  | -0.32  | -0.23  |
|      | 50     | O             | 130214 | M         | 0.75  | 0.54  | -0.29  | 0.54   | -0.28  | -0.28  |
|      | 51     | O             | 108828 | M         | 0.77  | 0.48  | -0.26  | -0.30  | 0.48   | -0.18  |
|      | 52     | O             | 108831 | M         | 0.51  | 0.32  | 0.32   | -0.03  | -0.34  | -0.22  |
|      | 54     | O             | 108830 | M         | 0.68  | 0.52  | -0.29  | -0.28  | -0.21  | 0.52   |
|      | 55     | O             | 130204 | M         | 0.54  | 0.41  | 0.41   | -0.27  | -0.10  | -0.21  |

Table A21. Summary Item Statistics - Operational Items (Continued)

English May Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| F    | 56     | O             | 108835 | M         | 0.76  | 0.53  | -0.28  | 0.53   | -0.32  | -0.23  |
|      | 57     | O             | 108832 | M         | 0.69  | 0.56  | 0.56   | -0.31  | -0.30  | -0.21  |
|      | 58     | O             | 108829 | M         | 0.78  | 0.60  | -0.31  | -0.32  | -0.31  | 0.60   |
|      | 59     | O             | 171382 | M         | 0.48  | 0.47  | 0.47   | -0.29  | -0.17  | -0.21  |
|      | 60     | O             | 130205 | M         | 0.75  | 0.54  | -0.28  | 0.54   | -0.32  | -0.23  |
|      | 61     | O             | 130206 | J         | 0.45  | 0.71  |        |        |        |        |
|      | 62     | L             | 96106  | M         | 0.57  | 0.22  | -0.15  | -0.07  | 0.22   | -0.08  |
|      | 63     | L             | 96107  | M         | 0.77  | 0.34  | 0.34   | -0.12  | -0.22  | -0.17  |
|      | 64     | L             | 96108  | M         | 0.70  | 0.52  | -0.22  | 0.52   | -0.27  | -0.26  |
|      | 65     | L             | 96109  | M         | 0.71  | 0.51  | 0.51   | -0.27  | -0.29  | -0.20  |
|      | 66     | L             | 96110  | M         | 0.86  | 0.55  | -0.27  | 0.55   | -0.31  | -0.27  |
|      | 67     | O             | 130075 | M         | 0.51  | 0.40  | -0.22  | -0.24  | 0.40   | -0.07  |
|      | 68     | O             | 130076 | M         | 0.67  | 0.44  | -0.12  | -0.25  | -0.28  | 0.44   |

Table A22. Summary Item Statistics - Operational Items

## English May Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| G    | 1      | O             | 130215 | J         | 0.59  | 0.64  |        |        |        |        |
|      | 2      | O             | 130081 | M         | 0.77  | 0.33  | -0.10  | -0.24  | 0.33   | -0.16  |
|      | 3      | O             | 130082 | M         | 0.41  | 0.44  | 0.44   | -0.25  | -0.15  | -0.18  |
|      | 4      | O             | 130083 | M         | 0.77  | 0.45  | 0.45   | -0.26  | -0.19  | -0.28  |
|      | 5      | O             | 130084 | M         | 0.83  | 0.44  | -0.27  | -0.25  | 0.44   | -0.19  |
|      | 6      | O             | 130085 | M         | 0.79  | 0.47  | -0.22  | -0.22  | -0.29  | 0.47   |
|      | 7      | L             | 96175  | M         | 0.81  | 0.32  | -0.25  | -0.28  | -0.06  | 0.32   |
|      | 8      | L             | 96176  | M         | 0.90  | 0.47  | 0.47   | -0.25  | -0.27  | -0.26  |
|      | 9      | L             | 96177  | M         | 0.78  | 0.38  | -0.27  | 0.38   | -0.28  | -0.13  |
|      | 10     | L             | 96178  | M         | 0.70  | 0.42  | -0.23  | 0.42   | -0.20  | -0.26  |
|      | 11     | L             | 96179  | M         | 0.65  | 0.37  | -0.15  | -0.31  | -0.14  | 0.37   |
|      | 12     | L             | 96180  | M         | 0.76  | 0.47  | -0.24  | -0.26  | -0.27  | 0.47   |
|      | 13     | L             | 96181  | M         | 0.69  | 0.48  | -0.21  | 0.48   | -0.29  | -0.26  |
|      | 23     | O             | 108709 | J         | 0.50  | 0.65  |        |        |        |        |
|      | 24     | L             | 95570  | M         | 0.73  | 0.49  | -0.26  | -0.24  | -0.27  | 0.49   |
|      | 25     | L             | 95571  | M         | 0.75  | 0.45  | -0.20  | -0.31  | 0.45   | -0.21  |
|      | 26     | L             | 95572  | M         | 0.63  | 0.46  | -0.23  | 0.46   | -0.28  | -0.19  |
|      | 27     | L             | 95573  | M         | 0.51  | 0.48  | 0.48   | -0.34  | -0.15  | -0.13  |
|      | 28     | L             | 95574  | M         | 0.37  | 0.35  | -0.21  | 0.35   | -0.10  | -0.14  |
|      | 29     | L             | 95575  | M         | 0.65  | 0.34  | -0.16  | 0.34   | -0.13  | -0.24  |
|      | 30     | L             | 95576  | M         | 0.45  | 0.34  | -0.18  | -0.20  | -0.08  | 0.34   |
|      | 31     | L             | 95577  | M         | 0.81  | 0.49  | 0.49   | -0.25  | -0.33  | -0.18  |
|      | 32     | L             | 95578  | M         | 0.73  | 0.51  | -0.23  | -0.28  | -0.29  | 0.51   |
|      | 33     | L             | 95579  | M         | 0.78  | 0.53  | -0.29  | -0.30  | 0.53   | -0.25  |
|      | 34     | L             | 95580  | M         | 0.74  | 0.45  | -0.25  | 0.45   | -0.25  | -0.19  |
|      | 37     | O             | 130219 | M         | 0.74  | 0.47  | -0.23  | -0.25  | 0.47   | -0.22  |
|      | 38     | O             | 130222 | M         | 0.61  | 0.32  | -0.14  | -0.10  | 0.32   | -0.24  |
|      | 39     | O             | 130220 | M         | 0.71  | 0.52  | -0.28  | 0.52   | -0.27  | -0.23  |
|      | 40     | O             | 130221 | M         | 0.70  | 0.53  | -0.30  | 0.53   | -0.29  | -0.22  |
|      | 41     | O             | 130226 | M         | 0.66  | 0.51  | -0.27  | -0.27  | 0.51   | -0.19  |
|      | 45     | O             | 130228 | J         | 0.43  | 0.71  |        |        |        |        |
|      | 46     | O             | 96147  | M         | 0.84  | 0.26  | 0.26   | -0.08  | -0.23  | -0.11  |
|      | 47     | O             | 96148  | M         | 0.85  | 0.39  | -0.18  | -0.21  | 0.39   | -0.21  |
|      | 48     | O             | 96149  | M         | 0.73  | 0.49  | 0.49   | -0.22  | -0.28  | -0.26  |
|      | 49     | O             | 96150  | M         | 0.57  | 0.42  | -0.21  | -0.24  | -0.10  | 0.42   |
|      | 50     | O             | 96156  | J         | 0.46  | 0.71  |        |        |        |        |
|      | 51     | O             | 96151  | M         | 0.42  | 0.40  | -0.13  | -0.20  | -0.14  | 0.40   |
|      | 52     | O             | 96152  | M         | 0.46  | 0.37  | -0.13  | 0.37   | -0.13  | -0.23  |
|      | 55     | O             | 96155  | M         | 0.52  | 0.37  | -0.07  | -0.29  | 0.37   | -0.26  |

Table A22. Summary Item Statistics - Operational Items (Continued)

English May Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| G    | 57     | O             | 130090 | M         | 0.74  | 0.54  | 0.54   | -0.26  | -0.31  | -0.23  |
|      | 58     | O             | 130091 | M         | 0.72  | 0.50  | -0.24  | -0.26  | 0.50   | -0.24  |
|      | 59     | L             | 96106  | M         | 0.57  | 0.22  | -0.15  | -0.07  | 0.22   | -0.08  |
|      | 60     | L             | 96107  | M         | 0.77  | 0.34  | 0.34   | -0.12  | -0.22  | -0.17  |
|      | 61     | L             | 96108  | M         | 0.70  | 0.52  | -0.22  | 0.52   | -0.27  | -0.26  |
|      | 62     | L             | 96109  | M         | 0.71  | 0.51  | 0.51   | -0.27  | -0.29  | -0.20  |
|      | 63     | L             | 96110  | M         | 0.86  | 0.55  | -0.27  | 0.55   | -0.31  | -0.27  |
|      | 65     | O             | 108883 | M         | 0.71  | 0.47  | 0.47   | -0.23  | -0.23  | -0.21  |
|      | 69     | O             | 109138 | M         | 0.60  | 0.52  | 0.52   | -0.20  | -0.28  | -0.26  |
|      | 71     | O             | 130087 | M         | 0.79  | 0.53  | 0.53   | -0.25  | -0.30  | -0.24  |
|      | 72     | O             | 130088 | M         | 0.69  | 0.55  | -0.23  | -0.29  | -0.28  | 0.55   |

Table A23. Summary Item Statistics - Operational Items

## English May Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| H    | 1      | O             | 130229 | J         | 0.60  | 0.68  |        |        |        |        |
|      | 2      | O             | 130230 | M         | 0.48  | 0.29  | -0.15  | 0.29   | -0.08  | -0.21  |
|      | 3      | O             | 130231 | M         | 0.85  | 0.39  | -0.24  | -0.23  | -0.19  | 0.39   |
|      | 4      | O             | 130233 | M         | 0.34  | 0.30  | -0.19  | -0.20  | -0.09  | 0.30   |
|      | 5      | O             | 130232 | M         | 0.67  | 0.31  | 0.31   | -0.26  | -0.23  | -0.03  |
|      | 6      | O             | 130234 | M         | 0.85  | 0.45  | 0.45   | -0.23  | -0.26  | -0.24  |
|      | 7      | L             | 96175  | M         | 0.81  | 0.32  | -0.25  | -0.28  | -0.06  | 0.32   |
|      | 8      | L             | 96176  | M         | 0.90  | 0.47  | 0.47   | -0.25  | -0.27  | -0.26  |
|      | 9      | L             | 96177  | M         | 0.78  | 0.38  | -0.27  | 0.38   | -0.28  | -0.13  |
|      | 10     | L             | 96178  | M         | 0.70  | 0.42  | -0.23  | 0.42   | -0.20  | -0.26  |
|      | 11     | L             | 96179  | M         | 0.65  | 0.37  | -0.15  | -0.31  | -0.14  | 0.37   |
|      | 12     | L             | 96180  | M         | 0.76  | 0.47  | -0.24  | -0.26  | -0.27  | 0.47   |
|      | 13     | L             | 96181  | M         | 0.69  | 0.48  | -0.21  | 0.48   | -0.29  | -0.26  |
|      | 19     | O             | 130092 | M         | 0.72  | 0.45  | -0.25  | -0.28  | 0.45   | -0.17  |
|      | 20     | O             | 130093 | M         | 0.68  | 0.43  | -0.26  | -0.23  | 0.43   | -0.11  |
|      | 21     | O             | 135486 | M         | 0.76  | 0.58  | -0.26  | -0.33  | -0.30  | 0.58   |
|      | 22     | O             | 130095 | M         | 0.59  | 0.45  | -0.29  | -0.30  | -0.12  | 0.45   |
|      | 23     | O             | 130235 | M         | 0.79  | 0.54  | -0.26  | -0.30  | 0.54   | -0.27  |
|      | 24     | O             | 130236 | J         | 0.47  | 0.64  |        |        |        |        |
|      | 25     | O             | 130285 | J         | 0.53  | 0.68  |        |        |        |        |
|      | 26     | L             | 95570  | M         | 0.73  | 0.49  | -0.26  | -0.24  | -0.27  | 0.49   |
|      | 27     | L             | 95571  | M         | 0.75  | 0.45  | -0.20  | -0.31  | 0.45   | -0.21  |
|      | 28     | L             | 95572  | M         | 0.63  | 0.46  | -0.23  | 0.46   | -0.28  | -0.19  |
|      | 29     | L             | 95573  | M         | 0.51  | 0.48  | 0.48   | -0.34  | -0.15  | -0.13  |
|      | 30     | L             | 95574  | M         | 0.37  | 0.35  | -0.21  | 0.35   | -0.10  | -0.14  |
|      | 31     | L             | 95575  | M         | 0.65  | 0.34  | -0.16  | 0.34   | -0.13  | -0.24  |
|      | 32     | L             | 95576  | M         | 0.45  | 0.34  | -0.18  | -0.20  | -0.08  | 0.34   |
|      | 33     | L             | 95577  | M         | 0.81  | 0.49  | 0.49   | -0.25  | -0.33  | -0.18  |
|      | 34     | L             | 95578  | M         | 0.73  | 0.51  | -0.23  | -0.28  | -0.29  | 0.51   |
|      | 35     | L             | 95579  | M         | 0.78  | 0.53  | -0.29  | -0.30  | 0.53   | -0.25  |
|      | 36     | L             | 95580  | M         | 0.74  | 0.45  | -0.25  | 0.45   | -0.25  | -0.19  |
|      | 51     | O             | 108918 | M         | 0.66  | 0.51  | -0.28  | -0.31  | 0.51   | -0.20  |
|      | 52     | O             | 108784 | M         | 0.38  | 0.50  | -0.23  | -0.12  | -0.22  | 0.50   |
|      | 53     | O             | 108925 | M         | 0.80  | 0.53  | -0.30  | -0.28  | 0.53   | -0.24  |
|      | 54     | O             | 108783 | M         | 0.59  | 0.48  | -0.19  | -0.27  | -0.20  | 0.48   |
|      | 55     | O             | 108921 | M         | 0.56  | 0.46  | -0.09  | 0.46   | -0.29  | -0.26  |

Table A23. Summary Item Statistics - Operational Items (Continued)

English May Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| H    | 56     | O             | 108919 | M         | 0.67  | 0.59  | -0.27  | -0.32  | -0.29  | 0.59   |
|      | 57     | O             | 108924 | M         | 0.61  | 0.49  | -0.26  | 0.49   | -0.25  | -0.17  |
|      | 58     | O             | 108922 | M         | 0.34  | 0.27  | -0.18  | 0.05   | -0.20  | 0.27   |
|      | 59     | O             | 109739 | M         | 0.65  | 0.49  | 0.49   | -0.24  | -0.26  | -0.20  |
|      | 60     | O             | 108927 | J         | 0.42  | 0.73  |        |        |        |        |
|      | 61     | L             | 96106  | M         | 0.57  | 0.22  | -0.15  | -0.07  | 0.22   | -0.08  |
|      | 62     | L             | 96107  | M         | 0.77  | 0.34  | 0.34   | -0.12  | -0.22  | -0.17  |
|      | 63     | L             | 96108  | M         | 0.70  | 0.52  | -0.22  | 0.52   | -0.27  | -0.26  |
|      | 64     | L             | 96109  | M         | 0.71  | 0.51  | 0.51   | -0.27  | -0.29  | -0.20  |
|      | 65     | L             | 96110  | M         | 0.86  | 0.55  | -0.27  | 0.55   | -0.31  | -0.27  |
|      | 66     | O             | 130238 | M         | 0.81  | 0.57  | 0.57   | -0.31  | -0.28  | -0.28  |
|      | 67     | O             | 130239 | M         | 0.82  | 0.55  | -0.26  | 0.55   | -0.32  | -0.26  |
|      | 71     | O             | 130106 | M         | 0.51  | 0.35  | -0.27  | -0.16  | 0.35   | -0.04  |
|      | 72     | O             | 130107 | M         | 0.57  | 0.46  | -0.27  | 0.46   | -0.21  | -0.21  |

Table A24. Summary Item Statistics - Operational Items

## English May Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| J    | 1      | O             | 135487 | J         | 0.58  | 0.60  |        |        |        |        |
|      | 2      | O             | 130112 | M         | 0.62  | 0.43  | -0.18  | -0.25  | -0.19  | 0.43   |
|      | 3      | O             | 130108 | M         | 0.72  | 0.49  | 0.49   | -0.21  | -0.32  | -0.22  |
|      | 4      | O             | 130116 | M         | 0.75  | 0.48  | 0.48   | -0.22  | -0.31  | -0.24  |
|      | 5      | O             | 130117 | M         | 0.63  | 0.48  | -0.21  | -0.23  | 0.48   | -0.29  |
|      | 6      | O             | 130129 | M         | 0.75  | 0.43  | -0.20  | 0.43   | -0.15  | -0.31  |
|      | 7      | L             | 96175  | M         | 0.81  | 0.32  | -0.25  | -0.28  | -0.06  | 0.32   |
|      | 8      | L             | 96176  | M         | 0.90  | 0.47  | 0.47   | -0.25  | -0.27  | -0.26  |
|      | 9      | L             | 96177  | M         | 0.78  | 0.38  | -0.27  | 0.38   | -0.28  | -0.13  |
|      | 10     | L             | 96178  | M         | 0.70  | 0.42  | -0.23  | 0.42   | -0.20  | -0.26  |
|      | 11     | L             | 96179  | M         | 0.65  | 0.37  | -0.15  | -0.31  | -0.14  | 0.37   |
|      | 12     | L             | 96180  | M         | 0.76  | 0.47  | -0.24  | -0.26  | -0.27  | 0.47   |
|      | 13     | L             | 96181  | M         | 0.69  | 0.48  | -0.21  | 0.48   | -0.29  | -0.26  |
|      | 14     | O             | 108806 | M         | 0.72  | 0.48  | -0.25  | -0.24  | -0.27  | 0.48   |
|      | 15     | O             | 108808 | M         | 0.52  | 0.21  | -0.09  | 0.21   | -0.08  | -0.14  |
|      | 16     | O             | 108779 | M         | 0.82  | 0.49  | -0.31  | -0.24  | 0.49   | -0.21  |
|      | 19     | O             | 130246 | M         | 0.57  | 0.45  | -0.16  | -0.30  | -0.16  | 0.45   |
|      | 20     | O             | 108810 | M         | 0.69  | 0.43  | -0.26  | -0.24  | 0.43   | -0.18  |
|      | 21     | O             | 108807 | J         | 0.50  | 0.70  |        |        |        |        |
|      | 25     | O             | 108691 | J         | 0.52  | 0.67  |        |        |        |        |
|      | 26     | L             | 95570  | M         | 0.73  | 0.49  | -0.26  | -0.24  | -0.27  | 0.49   |
|      | 27     | L             | 95571  | M         | 0.75  | 0.45  | -0.20  | -0.31  | 0.45   | -0.21  |
|      | 28     | L             | 95572  | M         | 0.63  | 0.46  | -0.23  | 0.46   | -0.28  | -0.19  |
|      | 29     | L             | 95573  | M         | 0.51  | 0.48  | 0.48   | -0.34  | -0.15  | -0.13  |
|      | 30     | L             | 95574  | M         | 0.37  | 0.35  | -0.21  | 0.35   | -0.10  | -0.14  |
|      | 31     | L             | 95575  | M         | 0.65  | 0.34  | -0.16  | 0.34   | -0.13  | -0.24  |
|      | 32     | L             | 95576  | M         | 0.45  | 0.34  | -0.18  | -0.20  | -0.08  | 0.34   |
|      | 33     | L             | 95577  | M         | 0.81  | 0.49  | 0.49   | -0.25  | -0.33  | -0.18  |
|      | 34     | L             | 95578  | M         | 0.73  | 0.51  | -0.23  | -0.28  | -0.29  | 0.51   |
|      | 35     | L             | 95579  | M         | 0.78  | 0.53  | -0.29  | -0.30  | 0.53   | -0.25  |
|      | 36     | L             | 95580  | M         | 0.74  | 0.45  | -0.25  | 0.45   | -0.25  | -0.19  |
|      | 47     | O             | 130138 | M         | 0.75  | 0.47  | 0.47   | -0.23  | -0.25  | -0.23  |
|      | 49     | O             | 130140 | M         | 0.49  | 0.47  | -0.12  | -0.28  | -0.20  | 0.47   |
|      | 50     | O             | 130118 | M         | 0.81  | 0.49  | -0.30  | 0.49   | -0.26  | -0.19  |
|      | 52     | O             | 130120 | M         | 0.41  | 0.38  | -0.18  | 0.38   | -0.29  | -0.01  |
|      | 53     | O             | 130121 | M         | 0.66  | 0.47  | -0.26  | -0.23  | 0.47   | -0.22  |
|      | 54     | O             | 130122 | M         | 0.59  | 0.43  | -0.19  | -0.18  | -0.29  | 0.43   |
|      | 55     | O             | 130123 | M         | 0.70  | 0.57  | -0.34  | -0.29  | -0.28  | 0.57   |

Table A24. Summary Item Statistics - Operational Items (Continued)

English May Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| J    | 56     | O             | 130124 | M         | 0.80  | 0.51  | -0.30  | -0.27  | 0.51   | -0.24  |
|      | 57     | O             | 130125 | M         | 0.56  | 0.21  | -0.16  | 0.21   | -0.01  | -0.23  |
|      | 58     | O             | 130126 | M         | 0.78  | 0.53  | -0.28  | -0.30  | 0.53   | -0.24  |
|      | 60     | O             | 135489 | M         | 0.41  | 0.38  | -0.05  | -0.27  | 0.38   | -0.13  |
|      | 61     | O             | 130247 | J         | 0.50  | 0.71  |        |        |        |        |
|      | 62     | L             | 96106  | M         | 0.57  | 0.22  | -0.15  | -0.07  | 0.22   | -0.08  |
|      | 63     | L             | 96107  | M         | 0.77  | 0.34  | 0.34   | -0.12  | -0.22  | -0.17  |
|      | 64     | L             | 96108  | M         | 0.70  | 0.52  | -0.22  | 0.52   | -0.27  | -0.26  |
|      | 65     | L             | 96109  | M         | 0.71  | 0.51  | 0.51   | -0.27  | -0.29  | -0.20  |
|      | 66     | L             | 96110  | M         | 0.86  | 0.55  | -0.27  | 0.55   | -0.31  | -0.27  |
|      | 67     | O             | 130248 | M         | 0.76  | 0.47  | -0.29  | 0.47   | -0.28  | -0.14  |
|      | 68     | O             | 130249 | M         | 0.44  | 0.38  | 0.00   | 0.38   | -0.22  | -0.26  |



Table A25. Summary Item Statistics - Operational Items

## English May Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| K    | 1      | O             | 108706 | J         | 0.58  | 0.61  |        |        |        |        |
|      | 2      | O             | 130295 | M         | 0.85  | 0.35  | -0.20  | -0.21  | -0.19  | 0.35   |
|      | 3      | O             | 130299 | M         | 0.45  | 0.34  | 0.00   | -0.32  | -0.22  | 0.34   |
|      | 5      | O             | 130254 | M         | 0.69  | 0.47  | -0.31  | -0.17  | 0.47   | -0.25  |
|      | 6      | O             | 130301 | M         | 0.62  | 0.43  | -0.24  | 0.43   | -0.20  | -0.24  |
|      | 7      | L             | 96175  | M         | 0.81  | 0.32  | -0.25  | -0.28  | -0.06  | 0.32   |
|      | 8      | L             | 96176  | M         | 0.90  | 0.47  | 0.47   | -0.25  | -0.27  | -0.26  |
|      | 9      | L             | 96177  | M         | 0.78  | 0.38  | -0.27  | 0.38   | -0.28  | -0.13  |
|      | 10     | L             | 96178  | M         | 0.70  | 0.42  | -0.23  | 0.42   | -0.20  | -0.26  |
|      | 11     | L             | 96179  | M         | 0.65  | 0.37  | -0.15  | -0.31  | -0.14  | 0.37   |
|      | 12     | L             | 96180  | M         | 0.76  | 0.47  | -0.24  | -0.26  | -0.27  | 0.47   |
|      | 13     | L             | 96181  | M         | 0.69  | 0.48  | -0.21  | 0.48   | -0.29  | -0.26  |
|      | 14     | O             | 108700 | M         | 0.62  | 0.43  | -0.21  | -0.28  | 0.43   | -0.10  |
|      | 15     | O             | 108703 | M         | 0.62  | 0.41  | -0.22  | -0.17  | 0.41   | -0.18  |
|      | 16     | O             | 108702 | M         | 0.40  | 0.27  | -0.05  | 0.27   | -0.21  | -0.12  |
|      | 18     | O             | 108701 | M         | 0.74  | 0.42  | -0.25  | -0.31  | 0.42   | -0.12  |
|      | 19     | O             | 130959 | M         | 0.63  | 0.36  | -0.11  | 0.36   | -0.28  | -0.16  |
|      | 20     | O             | 108705 | J         | 0.47  | 0.69  |        |        |        |        |
|      | 24     | O             | 108688 | J         | 0.53  | 0.65  |        |        |        |        |
|      | 25     | L             | 95570  | M         | 0.73  | 0.49  | -0.26  | -0.24  | -0.27  | 0.49   |
|      | 26     | L             | 95571  | M         | 0.75  | 0.45  | -0.20  | -0.31  | 0.45   | -0.21  |
|      | 27     | L             | 95572  | M         | 0.63  | 0.46  | -0.23  | 0.46   | -0.28  | -0.19  |
|      | 28     | L             | 95573  | M         | 0.51  | 0.48  | 0.48   | -0.34  | -0.15  | -0.13  |
|      | 29     | L             | 95574  | M         | 0.37  | 0.35  | -0.21  | 0.35   | -0.10  | -0.14  |
|      | 30     | L             | 95575  | M         | 0.65  | 0.34  | -0.16  | 0.34   | -0.13  | -0.24  |
|      | 31     | L             | 95576  | M         | 0.45  | 0.34  | -0.18  | -0.20  | -0.08  | 0.34   |
|      | 32     | L             | 95577  | M         | 0.81  | 0.49  | 0.49   | -0.25  | -0.33  | -0.18  |
|      | 33     | L             | 95578  | M         | 0.73  | 0.51  | -0.23  | -0.28  | -0.29  | 0.51   |
|      | 34     | L             | 95579  | M         | 0.78  | 0.53  | -0.29  | -0.30  | 0.53   | -0.25  |
|      | 35     | L             | 95580  | M         | 0.74  | 0.45  | -0.25  | 0.45   | -0.25  | -0.19  |
|      | 44     | O             | 130253 | M         | 0.76  | 0.54  | 0.54   | -0.27  | -0.32  | -0.24  |
|      | 46     | O             | 130142 | M         | 0.75  | 0.43  | -0.26  | -0.25  | 0.43   | -0.12  |
|      | 47     | O             | 130143 | M         | 0.70  | 0.43  | -0.15  | -0.26  | 0.43   | -0.24  |
|      | 48     | O             | 130144 | M         | 0.69  | 0.47  | -0.27  | -0.23  | -0.21  | 0.47   |
|      | 49     | O             | 130145 | M         | 0.49  | 0.36  | -0.11  | -0.27  | -0.08  | 0.36   |
|      | 50     | O             | 130146 | M         | 0.83  | 0.46  | -0.20  | -0.20  | -0.30  | 0.46   |
|      | 51     | O             | 130147 | M         | 0.72  | 0.54  | 0.54   | -0.30  | -0.30  | -0.22  |
|      | 54     | O             | 130150 | M         | 0.85  | 0.58  | -0.30  | -0.30  | -0.32  | 0.58   |
|      | 55     | O             | 130151 | M         | 0.55  | 0.39  | 0.39   | -0.16  | -0.26  | -0.21  |

Table A25. Summary Item Statistics - Operational Items (Continued)

English May Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| K    | 56     | O             | 130152 | M         | 0.54  | 0.44  | -0.23  | -0.14  | -0.23  | 0.44   |
|      | 57     | O             | 130153 | J         | 0.45  | 0.71  |        |        |        |        |
|      | 58     | L             | 96106  | M         | 0.57  | 0.22  | -0.15  | -0.07  | 0.22   | -0.08  |
|      | 59     | L             | 96107  | M         | 0.77  | 0.34  | 0.34   | -0.12  | -0.22  | -0.17  |
|      | 60     | L             | 96108  | M         | 0.70  | 0.52  | -0.22  | 0.52   | -0.27  | -0.26  |
|      | 61     | L             | 96109  | M         | 0.71  | 0.51  | 0.51   | -0.27  | -0.29  | -0.20  |
|      | 62     | L             | 96110  | M         | 0.86  | 0.55  | -0.27  | 0.55   | -0.31  | -0.27  |
|      | 64     | O             | 130256 | M         | 0.79  | 0.48  | -0.26  | 0.48   | -0.23  | -0.24  |
|      | 65     | O             | 130257 | M         | 0.78  | 0.53  | 0.53   | -0.27  | -0.26  | -0.25  |
|      | 74     | O             | 109099 | M         | 0.53  | 0.21  | -0.16  | 0.21   | -0.05  | -0.02  |
|      | 75     | O             | 109100 | M         | 0.73  | 0.51  | -0.26  | -0.22  | 0.51   | -0.27  |

Table A26. Summary Item Statistics - Operational Items

## English May Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| L    | 1      | O             | 130154 | J         | 0.58  | 0.61  |        |        |        |        |
|      | 2      | O             | 130258 | M         | 0.76  | 0.23  | 0.23   | -0.12  | -0.15  | -0.15  |
|      | 3      | O             | 96120  | M         | 0.57  | 0.41  | 0.41   | -0.20  | -0.24  | -0.16  |
|      | 4      | O             | 96121  | M         | 0.84  | 0.42  | -0.23  | 0.42   | -0.25  | -0.20  |
|      | 5      | O             | 96122  | M         | 0.75  | 0.35  | -0.19  | -0.16  | 0.35   | -0.26  |
|      | 6      | O             | 96123  | M         | 0.47  | 0.26  | -0.17  | -0.13  | 0.26   | -0.09  |
|      | 7      | L             | 96175  | M         | 0.81  | 0.32  | -0.25  | -0.28  | -0.06  | 0.32   |
|      | 8      | L             | 96176  | M         | 0.90  | 0.47  | 0.47   | -0.25  | -0.27  | -0.26  |
|      | 9      | L             | 96177  | M         | 0.78  | 0.38  | -0.27  | 0.38   | -0.28  | -0.13  |
|      | 10     | L             | 96178  | M         | 0.70  | 0.42  | -0.23  | 0.42   | -0.20  | -0.26  |
|      | 11     | L             | 96179  | M         | 0.65  | 0.37  | -0.15  | -0.31  | -0.14  | 0.37   |
|      | 12     | L             | 96180  | M         | 0.76  | 0.47  | -0.24  | -0.26  | -0.27  | 0.47   |
|      | 13     | L             | 96181  | M         | 0.69  | 0.48  | -0.21  | 0.48   | -0.29  | -0.26  |
|      | 20     | O             | 96137  | M         | 0.62  | 0.32  | 0.32   | -0.04  | -0.28  | -0.23  |
|      | 21     | O             | 96138  | M         | 0.68  | 0.41  | -0.24  | -0.18  | 0.41   | -0.22  |
|      | 22     | O             | 96139  | M         | 0.83  | 0.56  | -0.30  | -0.25  | -0.34  | 0.56   |
|      | 23     | O             | 96140  | M         | 0.67  | 0.48  | -0.21  | -0.22  | -0.30  | 0.48   |
|      | 25     | O             | 96142  | J         | 0.51  | 0.66  |        |        |        |        |
|      | 26     | O             | 135490 | J         | 0.53  | 0.64  |        |        |        |        |
|      | 27     | L             | 95570  | M         | 0.73  | 0.49  | -0.26  | -0.24  | -0.27  | 0.49   |
|      | 28     | L             | 95571  | M         | 0.75  | 0.45  | -0.20  | -0.31  | 0.45   | -0.21  |
|      | 29     | L             | 95572  | M         | 0.63  | 0.46  | -0.23  | 0.46   | -0.28  | -0.19  |
|      | 30     | L             | 95573  | M         | 0.51  | 0.48  | 0.48   | -0.34  | -0.15  | -0.13  |
|      | 31     | L             | 95574  | M         | 0.37  | 0.35  | -0.21  | 0.35   | -0.10  | -0.14  |
|      | 32     | L             | 95575  | M         | 0.65  | 0.34  | -0.16  | 0.34   | -0.13  | -0.24  |
|      | 33     | L             | 95576  | M         | 0.45  | 0.34  | -0.18  | -0.20  | -0.08  | 0.34   |
|      | 34     | L             | 95577  | M         | 0.81  | 0.49  | 0.49   | -0.25  | -0.33  | -0.18  |
|      | 35     | L             | 95578  | M         | 0.73  | 0.51  | -0.23  | -0.28  | -0.29  | 0.51   |
|      | 36     | L             | 95579  | M         | 0.78  | 0.53  | -0.29  | -0.30  | 0.53   | -0.25  |
|      | 37     | L             | 95580  | M         | 0.74  | 0.45  | -0.25  | 0.45   | -0.25  | -0.19  |
|      | 49     | O             | 95981  | M         | 0.64  | 0.45  | -0.18  | -0.21  | -0.29  | 0.45   |
|      | 50     | O             | 95982  | M         | 0.72  | 0.37  | -0.11  | -0.24  | -0.27  | 0.37   |
|      | 51     | O             | 95983  | M         | 0.64  | 0.46  | -0.24  | -0.24  | -0.20  | 0.46   |
|      | 52     | O             | 95984  | M         | 0.75  | 0.50  | -0.28  | -0.29  | 0.50   | -0.19  |
|      | 53     | O             | 130260 | M         | 0.58  | 0.26  | -0.25  | 0.26   | 0.00   | -0.22  |
|      | 54     | O             | 95986  | M         | 0.78  | 0.46  | -0.20  | 0.46   | -0.29  | -0.21  |
|      | 55     | O             | 95987  | J         | 0.47  | 0.66  |        |        |        |        |

Table A26. Summary Item Statistics - Operational Items (Continued)

English May Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| L    | 56     | O             | 130261 | M         | 0.65  | 0.32  | -0.12  | 0.32   | -0.29  | -0.04  |
|      | 57     | O             | 95989  | M         | 0.42  | 0.39  | -0.18  | 0.39   | -0.18  | -0.14  |
|      | 58     | O             | 95990  | M         | 0.50  | 0.43  | -0.13  | -0.21  | -0.21  | 0.43   |
|      | 59     | L             | 96106  | M         | 0.57  | 0.22  | -0.15  | -0.07  | 0.22   | -0.08  |
|      | 60     | L             | 96107  | M         | 0.77  | 0.34  | 0.34   | -0.12  | -0.22  | -0.17  |
|      | 61     | L             | 96108  | M         | 0.70  | 0.52  | -0.22  | 0.52   | -0.27  | -0.26  |
|      | 62     | L             | 96109  | M         | 0.71  | 0.51  | 0.51   | -0.27  | -0.29  | -0.20  |
|      | 63     | L             | 96110  | M         | 0.86  | 0.55  | -0.27  | 0.55   | -0.31  | -0.27  |
|      | 64     | O             | 130262 | M         | 0.66  | 0.35  | -0.18  | -0.14  | 0.35   | -0.20  |
|      | 65     | O             | 130263 | M         | 0.77  | 0.48  | -0.25  | -0.23  | 0.48   | -0.24  |
|      | 67     | O             | 96225  | M         | 0.65  | 0.44  | -0.19  | -0.24  | 0.44   | -0.19  |
|      | 68     | O             | 130266 | M         | 0.68  | 0.45  | -0.22  | -0.23  | -0.20  | 0.45   |
|      | 73     | O             | 96229  | M         | 0.54  | 0.38  | 0.38   | -0.27  | -0.28  | -0.04  |

Table A27. Summary Item Statistics - Operational Items

## English May Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| M    | 1      | O             | 130268 | J         | 0.60  | 0.62  |        |        |        |        |
|      | 2      | O             | 130269 | M         | 0.74  | 0.42  | -0.27  | -0.22  | 0.42   | -0.22  |
|      | 3      | O             | 130272 | M         | 0.37  | 0.33  | -0.05  | -0.08  | -0.24  | 0.33   |
|      | 4      | O             | 130273 | M         | 0.73  | 0.39  | -0.19  | -0.25  | 0.39   | -0.15  |
|      | 5      | O             | 130279 | M         | 0.67  | 0.45  | -0.27  | -0.21  | 0.45   | -0.21  |
|      | 6      | O             | 130169 | M         | 0.84  | 0.43  | -0.21  | 0.43   | -0.27  | -0.22  |
|      | 7      | L             | 96175  | M         | 0.81  | 0.32  | -0.25  | -0.28  | -0.06  | 0.32   |
|      | 8      | L             | 96176  | M         | 0.90  | 0.47  | 0.47   | -0.25  | -0.27  | -0.26  |
|      | 9      | L             | 96177  | M         | 0.78  | 0.38  | -0.27  | 0.38   | -0.28  | -0.13  |
|      | 10     | L             | 96178  | M         | 0.70  | 0.42  | -0.23  | 0.42   | -0.20  | -0.26  |
|      | 11     | L             | 96179  | M         | 0.65  | 0.37  | -0.15  | -0.31  | -0.14  | 0.37   |
|      | 12     | L             | 96180  | M         | 0.76  | 0.47  | -0.24  | -0.26  | -0.27  | 0.47   |
|      | 13     | L             | 96181  | M         | 0.69  | 0.48  | -0.21  | 0.48   | -0.29  | -0.26  |
|      | 14     | O             | 108901 | M         | 0.82  | 0.44  | -0.23  | -0.22  | 0.44   | -0.25  |
|      | 15     | O             | 108902 | M         | 0.59  | 0.40  | -0.17  | -0.28  | 0.40   | -0.08  |
|      | 17     | O             | 108904 | M         | 0.78  | 0.45  | 0.45   | -0.23  | -0.29  | -0.21  |
|      | 19     | O             | 108906 | M         | 0.77  | 0.46  | -0.28  | -0.30  | -0.23  | 0.46   |
|      | 20     | O             | 130270 | M         | 0.58  | 0.24  | -0.24  | 0.24   | -0.22  | 0.02   |
|      | 21     | O             | 109858 | J         | 0.46  | 0.66  |        |        |        |        |
|      | 25     | O             | 108685 | J         | 0.54  | 0.64  |        |        |        |        |
|      | 26     | L             | 95570  | M         | 0.73  | 0.49  | -0.26  | -0.24  | -0.27  | 0.49   |
|      | 27     | L             | 95571  | M         | 0.75  | 0.45  | -0.20  | -0.31  | 0.45   | -0.21  |
|      | 28     | L             | 95572  | M         | 0.63  | 0.46  | -0.23  | 0.46   | -0.28  | -0.19  |
|      | 29     | L             | 95573  | M         | 0.51  | 0.48  | 0.48   | -0.34  | -0.15  | -0.13  |
|      | 30     | L             | 95574  | M         | 0.37  | 0.35  | -0.21  | 0.35   | -0.10  | -0.14  |
|      | 31     | L             | 95575  | M         | 0.65  | 0.34  | -0.16  | 0.34   | -0.13  | -0.24  |
|      | 32     | L             | 95576  | M         | 0.45  | 0.34  | -0.18  | -0.20  | -0.08  | 0.34   |
|      | 33     | L             | 95577  | M         | 0.81  | 0.49  | 0.49   | -0.25  | -0.33  | -0.18  |
|      | 34     | L             | 95578  | M         | 0.73  | 0.51  | -0.23  | -0.28  | -0.29  | 0.51   |
|      | 35     | L             | 95579  | M         | 0.78  | 0.53  | -0.29  | -0.30  | 0.53   | -0.25  |
|      | 36     | L             | 95580  | M         | 0.74  | 0.45  | -0.25  | 0.45   | -0.25  | -0.19  |
|      | 48     | O             | 130276 | M         | 0.52  | 0.40  | -0.15  | -0.19  | 0.40   | -0.25  |
|      | 49     | O             | 130277 | M         | 0.56  | 0.41  | -0.14  | -0.22  | -0.20  | 0.41   |
|      | 51     | O             | 130173 | M         | 0.82  | 0.47  | 0.47   | -0.31  | -0.25  | -0.16  |
|      | 52     | O             | 130174 | M         | 0.76  | 0.55  | -0.25  | 0.55   | -0.34  | -0.24  |
|      | 53     | O             | 130280 | M         | 0.72  | 0.46  | 0.46   | -0.30  | -0.26  | -0.19  |
|      | 54     | O             | 135492 | M         | 0.53  | 0.34  | 0.34   | -0.21  | -0.10  | -0.14  |
|      | 55     | O             | 130175 | M         | 0.82  | 0.54  | -0.27  | 0.54   | -0.29  | -0.29  |

Table A27. Summary Item Statistics - Operational Items (Continued)

English May Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| M    | 56     | O             | 130176 | M         | 0.84  | 0.52  | 0.52   | -0.30  | -0.32  | -0.20  |
|      | 57     | O             | 130177 | M         | 0.78  | 0.49  | -0.29  | -0.27  | 0.49   | -0.22  |
|      | 58     | O             | 130178 | M         | 0.73  | 0.48  | 0.48   | -0.30  | -0.20  | -0.23  |
|      | 59     | O             | 130179 | J         | 0.42  | 0.72  |        |        |        |        |
|      | 60     | L             | 96106  | M         | 0.57  | 0.22  | -0.15  | -0.07  | 0.22   | -0.08  |
|      | 61     | L             | 96107  | M         | 0.77  | 0.34  | 0.34   | -0.12  | -0.22  | -0.17  |
|      | 62     | L             | 96108  | M         | 0.70  | 0.52  | -0.22  | 0.52   | -0.27  | -0.26  |
|      | 63     | L             | 96109  | M         | 0.71  | 0.51  | 0.51   | -0.27  | -0.29  | -0.20  |
|      | 64     | L             | 96110  | M         | 0.86  | 0.55  | -0.27  | 0.55   | -0.31  | -0.27  |
|      | 65     | O             | 130305 | M         | 0.24  | 0.19  | 0.06   | -0.25  | -0.15  | 0.19   |
|      | 66     | O             | 130304 | M         | 0.68  | 0.40  | -0.08  | 0.40   | -0.26  | -0.26  |
|      | 72     | O             | 108800 | M         | 0.81  | 0.56  | -0.29  | -0.32  | 0.56   | -0.26  |

Table A28. Summary Item Statistics - Operational Items  
English May MakeUp1

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| X    | 1      | O             | 130211 | J         | 0.58  | 0.71  |        |        |        |        |
|      | 2      | O             | 130066 | M         | 0.73  | 0.32  | -0.10  | 0.32   | -0.11  | -0.26  |
|      | 3      | O             | 130067 | M         | 0.53  | 0.51  | -0.31  | -0.26  | 0.51   | -0.15  |
|      | 4      | O             | 130069 | M         | 0.56  | 0.36  | -0.25  | -0.08  | -0.18  | 0.36   |
|      | 5      | O             | 130074 | M         | 0.72  | 0.46  | -0.27  | 0.46   | -0.29  | -0.19  |
|      | 6      | O             | 130199 | M         | 0.71  | 0.40  | 0.40   | -0.26  | -0.26  | -0.12  |
|      | 7      | L             | 96175  | M         | 0.81  | 0.32  | -0.25  | -0.28  | -0.06  | 0.32   |
|      | 8      | L             | 96176  | M         | 0.90  | 0.47  | 0.47   | -0.25  | -0.27  | -0.26  |
|      | 9      | L             | 96177  | M         | 0.78  | 0.38  | -0.27  | 0.38   | -0.28  | -0.13  |
|      | 10     | L             | 96178  | M         | 0.70  | 0.42  | -0.23  | 0.42   | -0.20  | -0.26  |
|      | 11     | L             | 96179  | M         | 0.65  | 0.37  | -0.15  | -0.31  | -0.14  | 0.37   |
|      | 12     | L             | 96180  | M         | 0.76  | 0.47  | -0.24  | -0.26  | -0.27  | 0.47   |
|      | 13     | L             | 96181  | M         | 0.69  | 0.48  | -0.21  | 0.48   | -0.29  | -0.26  |
|      | 14     | O             | 130061 | M         | 0.61  | 0.36  | 0.36   | -0.24  | -0.26  | -0.06  |
|      | 15     | O             | 130062 | M         | 0.47  | 0.51  | -0.24  | -0.25  | -0.17  | 0.51   |
|      | 16     | O             | 130063 | M         | 0.68  | 0.51  | -0.26  | -0.31  | 0.51   | -0.25  |
|      | 17     | O             | 130201 | M         | 0.66  | 0.50  | -0.21  | -0.21  | 0.50   | -0.31  |
|      | 18     | O             | 130064 | M         | 0.69  | 0.47  | -0.23  | -0.29  | 0.47   | -0.23  |
|      | 19     | O             | 130065 | J         | 0.46  | 0.71  |        |        |        |        |
|      | 23     | O             | 108690 | J         | 0.47  | 0.68  |        |        |        |        |
|      | 24     | L             | 95570  | M         | 0.73  | 0.49  | -0.26  | -0.24  | -0.27  | 0.49   |
|      | 25     | L             | 95571  | M         | 0.75  | 0.45  | -0.20  | -0.31  | 0.45   | -0.21  |
|      | 26     | L             | 95572  | M         | 0.63  | 0.46  | -0.23  | 0.46   | -0.28  | -0.19  |
|      | 27     | L             | 95573  | M         | 0.51  | 0.48  | 0.48   | -0.34  | -0.15  | -0.13  |
|      | 28     | L             | 95574  | M         | 0.37  | 0.35  | -0.21  | 0.35   | -0.10  | -0.14  |
|      | 29     | L             | 95575  | M         | 0.65  | 0.34  | -0.16  | 0.34   | -0.13  | -0.24  |
|      | 30     | L             | 95576  | M         | 0.45  | 0.34  | -0.18  | -0.20  | -0.08  | 0.34   |
|      | 31     | L             | 95577  | M         | 0.81  | 0.49  | 0.49   | -0.25  | -0.33  | -0.18  |
|      | 32     | L             | 95578  | M         | 0.73  | 0.51  | -0.23  | -0.28  | -0.29  | 0.51   |
|      | 33     | L             | 95579  | M         | 0.78  | 0.53  | -0.29  | -0.30  | 0.53   | -0.25  |
|      | 34     | L             | 95580  | M         | 0.74  | 0.45  | -0.25  | 0.45   | -0.25  | -0.19  |
|      | 49     | O             | 130213 | M         | 0.71  | 0.55  | 0.55   | -0.29  | -0.32  | -0.23  |
|      | 50     | O             | 130214 | M         | 0.75  | 0.54  | -0.29  | 0.54   | -0.28  | -0.28  |
|      | 51     | O             | 108828 | M         | 0.77  | 0.48  | -0.26  | -0.30  | 0.48   | -0.18  |
|      | 52     | O             | 108831 | M         | 0.51  | 0.32  | 0.32   | -0.03  | -0.34  | -0.22  |
|      | 54     | O             | 108830 | M         | 0.68  | 0.52  | -0.29  | -0.28  | -0.21  | 0.52   |
|      | 55     | O             | 130204 | M         | 0.54  | 0.41  | 0.41   | -0.27  | -0.10  | -0.21  |

Table A28. Summary Item Statistics - Operational Items (Continued)

English May MakeUp1

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| X    | 56     | O             | 108835 | M         | 0.76  | 0.53  | -0.28  | 0.53   | -0.32  | -0.23  |
|      | 57     | O             | 108832 | M         | 0.69  | 0.56  | 0.56   | -0.31  | -0.30  | -0.21  |
|      | 58     | O             | 108829 | M         | 0.78  | 0.60  | -0.31  | -0.32  | -0.31  | 0.60   |
|      | 59     | O             | 171382 | M         | 0.48  | 0.47  | 0.47   | -0.29  | -0.17  | -0.21  |
|      | 60     | O             | 130205 | M         | 0.75  | 0.54  | -0.28  | 0.54   | -0.32  | -0.23  |
|      | 61     | O             | 130206 | J         | 0.45  | 0.71  |        |        |        |        |
|      | 62     | L             | 96106  | M         | 0.57  | 0.22  | -0.15  | -0.07  | 0.22   | -0.08  |
|      | 63     | L             | 96107  | M         | 0.77  | 0.34  | 0.34   | -0.12  | -0.22  | -0.17  |
|      | 64     | L             | 96108  | M         | 0.70  | 0.52  | -0.22  | 0.52   | -0.27  | -0.26  |
|      | 65     | L             | 96109  | M         | 0.71  | 0.51  | 0.51   | -0.27  | -0.29  | -0.20  |
|      | 66     | L             | 96110  | M         | 0.86  | 0.55  | -0.27  | 0.55   | -0.31  | -0.27  |
|      | 67     | O             | 130075 | M         | 0.51  | 0.40  | -0.22  | -0.24  | 0.40   | -0.07  |
|      | 68     | O             | 130076 | M         | 0.67  | 0.44  | -0.12  | -0.25  | -0.28  | 0.44   |



Table A29. Summary Item Statistics - Operational Items

## English May MakeUp2

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| Y    | 1      | O             | 130229 | J         | 0.60  | 0.68  |        |        |        |        |
|      | 2      | O             | 130230 | M         | 0.48  | 0.29  | -0.15  | 0.29   | -0.08  | -0.21  |
|      | 3      | O             | 130231 | M         | 0.85  | 0.39  | -0.24  | -0.23  | -0.19  | 0.39   |
|      | 4      | O             | 130233 | M         | 0.34  | 0.30  | -0.19  | -0.20  | -0.09  | 0.30   |
|      | 5      | O             | 130232 | M         | 0.67  | 0.31  | 0.31   | -0.26  | -0.23  | -0.03  |
|      | 6      | O             | 130234 | M         | 0.85  | 0.45  | 0.45   | -0.23  | -0.26  | -0.24  |
|      | 7      | L             | 96175  | M         | 0.81  | 0.32  | -0.25  | -0.28  | -0.06  | 0.32   |
|      | 8      | L             | 96176  | M         | 0.90  | 0.47  | 0.47   | -0.25  | -0.27  | -0.26  |
|      | 9      | L             | 96177  | M         | 0.78  | 0.38  | -0.27  | 0.38   | -0.28  | -0.13  |
|      | 10     | L             | 96178  | M         | 0.70  | 0.42  | -0.23  | 0.42   | -0.20  | -0.26  |
|      | 11     | L             | 96179  | M         | 0.65  | 0.37  | -0.15  | -0.31  | -0.14  | 0.37   |
|      | 12     | L             | 96180  | M         | 0.76  | 0.47  | -0.24  | -0.26  | -0.27  | 0.47   |
|      | 13     | L             | 96181  | M         | 0.69  | 0.48  | -0.21  | 0.48   | -0.29  | -0.26  |
|      | 19     | O             | 130092 | M         | 0.72  | 0.45  | -0.25  | -0.28  | 0.45   | -0.17  |
|      | 20     | O             | 130093 | M         | 0.68  | 0.43  | -0.26  | -0.23  | 0.43   | -0.11  |
|      | 21     | O             | 135486 | M         | 0.76  | 0.58  | -0.26  | -0.33  | -0.30  | 0.58   |
|      | 22     | O             | 130095 | M         | 0.59  | 0.45  | -0.29  | -0.30  | -0.12  | 0.45   |
|      | 23     | O             | 130235 | M         | 0.79  | 0.54  | -0.26  | -0.30  | 0.54   | -0.27  |
|      | 24     | O             | 130236 | J         | 0.47  | 0.64  |        |        |        |        |
|      | 25     | O             | 130285 | J         | 0.53  | 0.68  |        |        |        |        |
|      | 26     | L             | 95570  | M         | 0.73  | 0.49  | -0.26  | -0.24  | -0.27  | 0.49   |
|      | 27     | L             | 95571  | M         | 0.75  | 0.45  | -0.20  | -0.31  | 0.45   | -0.21  |
|      | 28     | L             | 95572  | M         | 0.63  | 0.46  | -0.23  | 0.46   | -0.28  | -0.19  |
|      | 29     | L             | 95573  | M         | 0.51  | 0.48  | 0.48   | -0.34  | -0.15  | -0.13  |
|      | 30     | L             | 95574  | M         | 0.37  | 0.35  | -0.21  | 0.35   | -0.10  | -0.14  |
|      | 31     | L             | 95575  | M         | 0.65  | 0.34  | -0.16  | 0.34   | -0.13  | -0.24  |
|      | 32     | L             | 95576  | M         | 0.45  | 0.34  | -0.18  | -0.20  | -0.08  | 0.34   |
|      | 33     | L             | 95577  | M         | 0.81  | 0.49  | 0.49   | -0.25  | -0.33  | -0.18  |
|      | 34     | L             | 95578  | M         | 0.73  | 0.51  | -0.23  | -0.28  | -0.29  | 0.51   |
|      | 35     | L             | 95579  | M         | 0.78  | 0.53  | -0.29  | -0.30  | 0.53   | -0.25  |
|      | 36     | L             | 95580  | M         | 0.74  | 0.45  | -0.25  | 0.45   | -0.25  | -0.19  |
|      | 51     | O             | 108918 | M         | 0.66  | 0.51  | -0.28  | -0.31  | 0.51   | -0.20  |
|      | 52     | O             | 108784 | M         | 0.38  | 0.50  | -0.23  | -0.12  | -0.22  | 0.50   |
|      | 53     | O             | 108925 | M         | 0.80  | 0.53  | -0.30  | -0.28  | 0.53   | -0.24  |
|      | 54     | O             | 108783 | M         | 0.59  | 0.48  | -0.19  | -0.27  | -0.20  | 0.48   |
|      | 55     | O             | 108921 | M         | 0.56  | 0.46  | -0.09  | 0.46   | -0.29  | -0.26  |

Table A29. Summary Item Statistics - Operational Items (Continued)

English May MakeUp2

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| Y    | 56     | O             | 108919 | M         | 0.67  | 0.59  | -0.27  | -0.32  | -0.29  | 0.59   |
|      | 57     | O             | 108924 | M         | 0.61  | 0.49  | -0.26  | 0.49   | -0.25  | -0.17  |
|      | 58     | O             | 108922 | M         | 0.34  | 0.27  | -0.18  | 0.05   | -0.20  | 0.27   |
|      | 59     | O             | 109739 | M         | 0.65  | 0.49  | 0.49   | -0.24  | -0.26  | -0.20  |
|      | 60     | O             | 108927 | J         | 0.42  | 0.73  |        |        |        |        |
|      | 61     | L             | 96106  | M         | 0.57  | 0.22  | -0.15  | -0.07  | 0.22   | -0.08  |
|      | 62     | L             | 96107  | M         | 0.77  | 0.34  | 0.34   | -0.12  | -0.22  | -0.17  |
|      | 63     | L             | 96108  | M         | 0.70  | 0.52  | -0.22  | 0.52   | -0.27  | -0.26  |
|      | 64     | L             | 96109  | M         | 0.71  | 0.51  | 0.51   | -0.27  | -0.29  | -0.20  |
|      | 65     | L             | 96110  | M         | 0.86  | 0.55  | -0.27  | 0.55   | -0.31  | -0.27  |
|      | 66     | O             | 130238 | M         | 0.81  | 0.57  | 0.57   | -0.31  | -0.28  | -0.28  |
|      | 67     | O             | 130239 | M         | 0.82  | 0.55  | -0.26  | 0.55   | -0.32  | -0.26  |
|      | 71     | O             | 130106 | M         | 0.51  | 0.35  | -0.27  | -0.16  | 0.35   | -0.04  |
|      | 72     | O             | 130107 | M         | 0.57  | 0.46  | -0.27  | 0.46   | -0.21  | -0.21  |

Table A30. Summary Item Statistics - Operational Items  
Government May Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| E-K  | 1      | L             | 58316  | M         | 0.84  | 0.42  | -0.23  | 0.42   | -0.22  | -0.25  |
|      | 2      | L             | 51063  | M         | 0.85  | 0.43  | 0.43   | -0.26  | -0.24  | -0.22  |
|      | 3      | L             | 58433  | M         | 0.68  | 0.46  | -0.21  | -0.23  | -0.25  | 0.46   |
|      | 4      | L             | 53748  | M         | 0.86  | 0.47  | 0.47   | -0.29  | -0.23  | -0.25  |
|      | 6      | L             | 68735  | J         | 0.43  | 0.65  |        |        |        |        |
|      | 7      | O             | 68766  | M         | 0.70  | 0.53  | -0.23  | -0.33  | -0.26  | 0.53   |
|      | 8      | O             | 51026  | M         | 0.63  | 0.46  | -0.26  | -0.25  | 0.46   | -0.17  |
|      | 9      | L             | 68508  | M         | 0.45  | 0.45  | 0.45   | -0.15  | -0.27  | -0.24  |
|      | 10     | L             | 68506  | M         | 0.50  | 0.38  | -0.23  | -0.20  | 0.38   | -0.15  |
|      | 11     | L             | 68096  | J         | 0.46  | 0.75  |        |        |        |        |
|      | 12     | L             | 68741  | M         | 0.71  | 0.52  | -0.28  | 0.52   | -0.27  | -0.25  |
|      | 13     | L             | 68489  | M         | 0.78  | 0.39  | 0.39   | -0.15  | -0.26  | -0.24  |
|      | 14     | O             | 64969  | M         | 0.55  | 0.52  | -0.33  | -0.27  | -0.14  | 0.52   |
|      | 15     | O             | 50887  | M         | 0.57  | 0.34  | 0.34   | -0.13  | -0.21  | -0.12  |
|      | 16     | L             | 50952  | J         | 0.39  | 0.79  |        |        |        |        |
|      | 19     | L             | 68559  | M         | 0.59  | 0.49  | -0.22  | 0.49   | -0.27  | -0.21  |
|      | 20     | L             | 68653  | J         | 0.43  | 0.74  |        |        |        |        |
|      | 21     | L             | 50993  | M         | 0.66  | 0.30  | 0.30   | -0.17  | -0.25  | -0.08  |
|      | 22     | O             | 58309  | M         | 0.72  | 0.56  | -0.21  | -0.27  | -0.35  | 0.56   |
|      | 23     | O             | 58304  | M         | 0.67  | 0.61  | -0.26  | -0.34  | -0.31  | 0.61   |
|      | 24     | O             | 68695  | M         | 0.67  | 0.47  | -0.22  | -0.26  | 0.47   | -0.21  |
|      | 25     | O             | 68739  | M         | 0.64  | 0.53  | -0.30  | -0.22  | -0.26  | 0.53   |
|      | 26     | L             | 68780  | M         | 0.45  | 0.29  | -0.18  | -0.26  | 0.29   | -0.01  |
|      | 27     | O             | 68531  | M         | 0.57  | 0.58  | -0.28  | -0.29  | -0.24  | 0.58   |
|      | 29     | L             | 51732  | M         | 0.87  | 0.38  | 0.38   | -0.22  | -0.19  | -0.16  |
|      | 30     | L             | 51017  | M         | 0.66  | 0.52  | 0.52   | -0.22  | -0.28  | -0.22  |
|      | 31     | L             | 68515  | M         | 0.73  | 0.48  | -0.23  | -0.29  | 0.48   | -0.19  |
|      | 32     | O             | 58142  | M         | 0.71  | 0.50  | -0.27  | 0.50   | -0.24  | -0.20  |
|      | 33     | O             | 68715  | M         | 0.49  | 0.42  | 0.42   | -0.15  | -0.26  | -0.21  |
|      | 35     | L             | 67997  | M         | 0.83  | 0.45  | 0.45   | -0.29  | -0.24  | -0.19  |
|      | 36     | L             | 68643  | M         | 0.81  | 0.47  | -0.26  | -0.21  | -0.28  | 0.47   |
|      | 37     | L             | 51244  | M         | 0.80  | 0.43  | -0.21  | -0.27  | 0.43   | -0.23  |
|      | 38     | L             | 68583  | J         | 0.22  | 0.73  |        |        |        |        |
|      | 39     | L             | 51735  | M         | 0.77  | 0.50  | -0.33  | 0.50   | -0.29  | -0.15  |
|      | 40     | L             | 50874  | M         | 0.65  | 0.53  | 0.53   | -0.35  | -0.27  | -0.14  |
|      | 42     | L             | 51798  | M         | 0.60  | 0.43  | -0.20  | 0.43   | -0.25  | -0.22  |
|      | 43     | L             | 51235  | M         | 0.53  | 0.29  | -0.05  | -0.14  | 0.29   | -0.27  |
|      | 44     | L             | 51169  | M         | 0.41  | 0.19  | -0.06  | 0.19   | -0.23  | 0.02   |
|      | 45     | O             | 50953  | M         | 0.69  | 0.47  | -0.28  | -0.27  | 0.47   | -0.17  |
|      | 46     | O             | 50900  | M         | 0.43  | 0.39  | -0.15  | 0.39   | -0.17  | -0.15  |
|      | 47     | L             | 68720  | M         | 0.81  | 0.53  | -0.30  | 0.53   | -0.25  | -0.29  |

Table A30. Summary Item Statistics - Operational Items (Continued)

Government May Primary

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| E-K  | 48     | O             | 68693  | J         | 0.39  | 0.77  |        |        |        |        |
|      | 49     | O             | 55572  | M         | 0.45  | 0.30  | -0.05  | 0.30   | -0.28  | -0.08  |
|      | 50     | O             | 55704  | M         | 0.73  | 0.44  | -0.24  | 0.44   | -0.28  | -0.21  |
|      | 51     | O             | 68595  | M         | 0.80  | 0.41  | -0.19  | 0.41   | -0.29  | -0.16  |
|      | 52     | O             | 68013  | M         | 0.60  | 0.48  | -0.25  | -0.27  | -0.17  | 0.48   |
|      | 53     | L             | 68065  | J         | 0.36  | 0.75  |        |        |        |        |
|      | 54     | O             | 51084  | M         | 0.71  | 0.48  | 0.48   | -0.34  | -0.24  | -0.17  |
|      | 55     | O             | 68504  | M         | 0.84  | 0.50  | 0.50   | -0.26  | -0.28  | -0.25  |
|      | 56     | O             | 67987  | M         | 0.66  | 0.51  | -0.26  | -0.28  | 0.51   | -0.21  |
|      | 57     | L             | 50829  | M         | 0.64  | 0.42  | -0.24  | -0.14  | -0.24  | 0.42   |
|      | 58     | L             | 50980  | J         | 0.45  | 0.76  |        |        |        |        |
|      | 59     | L             | 68785  | M         | 0.73  | 0.50  | 0.50   | -0.31  | -0.29  | -0.13  |
|      | 60     | L             | 68721  | M         | 0.65  | 0.43  | -0.11  | -0.31  | 0.43   | -0.17  |
|      | 61     | L             | 68754  | M         | 0.70  | 0.54  | -0.25  | -0.24  | -0.31  | 0.54   |
|      | 62     | L             | 68716  | M         | 0.65  | 0.53  | -0.25  | -0.26  | -0.24  | 0.53   |
|      | 63     | O             | 51092  | M         | 0.64  | 0.51  | -0.22  | 0.51   | -0.30  | -0.20  |
|      | 64     | O             | 51053  | M         | 0.69  | 0.49  | -0.30  | 0.49   | -0.18  | -0.28  |

Table A31. Summary Item Statistics - Operational Items  
Government May MakeUp1

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| X    | 1      | L             | 58316  | M         | 0.84  | 0.42  | -0.23  | 0.42   | -0.22  | -0.25  |
|      | 2      | L             | 51063  | M         | 0.85  | 0.43  | 0.43   | -0.26  | -0.24  | -0.22  |
|      | 3      | L             | 58433  | M         | 0.68  | 0.46  | -0.21  | -0.23  | -0.25  | 0.46   |
|      | 4      | L             | 53748  | M         | 0.86  | 0.47  | 0.47   | -0.29  | -0.23  | -0.25  |
|      | 6      | L             | 68735  | J         | 0.43  | 0.65  |        |        |        |        |
|      | 7      | O             | 68007  | M         | 0.52  | 0.45  | 0.45   | -0.31  | -0.28  | -0.07  |
|      | 8      | O             | 51026  | M         | 0.63  | 0.46  | -0.26  | -0.25  | 0.46   | -0.17  |
|      | 9      | L             | 68508  | M         | 0.45  | 0.45  | 0.45   | -0.15  | -0.27  | -0.24  |
|      | 10     | L             | 68506  | M         | 0.50  | 0.38  | -0.23  | -0.20  | 0.38   | -0.15  |
|      | 11     | L             | 68096  | J         | 0.46  | 0.75  |        |        |        |        |
|      | 12     | L             | 68741  | M         | 0.71  | 0.52  | -0.28  | 0.52   | -0.27  | -0.25  |
|      | 13     | L             | 68489  | M         | 0.78  | 0.39  | 0.39   | -0.15  | -0.26  | -0.24  |
|      | 14     | O             | 64969  | M         | 0.55  | 0.52  | -0.33  | -0.27  | -0.14  | 0.52   |
|      | 15     | O             | 50887  | M         | 0.57  | 0.34  | 0.34   | -0.13  | -0.21  | -0.12  |
|      | 16     | L             | 50952  | J         | 0.39  | 0.79  |        |        |        |        |
|      | 19     | L             | 68559  | M         | 0.59  | 0.49  | -0.22  | 0.49   | -0.27  | -0.21  |
|      | 20     | L             | 68653  | J         | 0.43  | 0.74  |        |        |        |        |
|      | 21     | L             | 50993  | M         | 0.66  | 0.30  | 0.30   | -0.17  | -0.25  | -0.08  |
|      | 22     | O             | 50903  | M         | 0.60  | 0.59  | -0.28  | -0.28  | -0.27  | 0.59   |
|      | 23     | O             | 68673  | M         | 0.61  | 0.60  | -0.29  | -0.26  | -0.31  | 0.60   |
|      | 24     | O             | 67967  | M         | 0.59  | 0.49  | -0.17  | -0.25  | 0.49   | -0.25  |
|      | 25     | O             | 68739  | M         | 0.64  | 0.53  | -0.30  | -0.22  | -0.26  | 0.53   |
|      | 26     | L             | 68780  | M         | 0.45  | 0.29  | -0.18  | -0.26  | 0.29   | -0.01  |
|      | 27     | O             | 68531  | M         | 0.57  | 0.58  | -0.28  | -0.29  | -0.24  | 0.58   |
|      | 28     | O             | 68649  | J         | 0.37  | 0.73  |        |        |        |        |
|      | 29     | L             | 51732  | M         | 0.87  | 0.38  | 0.38   | -0.22  | -0.19  | -0.16  |
|      | 30     | L             | 51017  | M         | 0.66  | 0.52  | 0.52   | -0.22  | -0.28  | -0.22  |
|      | 31     | L             | 68515  | M         | 0.73  | 0.48  | -0.23  | -0.29  | 0.48   | -0.19  |
|      | 32     | O             | 51786  | M         | 0.51  | 0.45  | -0.20  | 0.45   | -0.16  | -0.16  |
|      | 33     | O             | 58384  | M         | 0.47  | 0.59  | -0.22  | -0.25  | -0.20  | 0.59   |
|      | 35     | L             | 67997  | M         | 0.83  | 0.45  | 0.45   | -0.29  | -0.24  | -0.19  |
|      | 36     | L             | 68643  | M         | 0.81  | 0.47  | -0.26  | -0.21  | -0.28  | 0.47   |
|      | 37     | L             | 51244  | M         | 0.80  | 0.43  | -0.21  | -0.27  | 0.43   | -0.23  |
|      | 38     | L             | 68583  | J         | 0.22  | 0.73  |        |        |        |        |
|      | 39     | L             | 51735  | M         | 0.77  | 0.50  | -0.33  | 0.50   | -0.29  | -0.15  |
|      | 40     | L             | 50874  | M         | 0.65  | 0.53  | 0.53   | -0.35  | -0.27  | -0.14  |
|      | 42     | L             | 51798  | M         | 0.60  | 0.43  | -0.20  | 0.43   | -0.25  | -0.22  |
|      | 43     | L             | 51235  | M         | 0.53  | 0.29  | -0.05  | -0.14  | 0.29   | -0.27  |
|      | 44     | L             | 51169  | M         | 0.41  | 0.19  | -0.06  | 0.19   | -0.23  | 0.02   |
|      | 45     | O             | 68769  | M         | 0.53  | 0.35  | -0.02  | -0.28  | 0.35   | -0.19  |
|      | 46     | O             | 51245  | M         | 0.48  | 0.43  | -0.18  | 0.43   | -0.30  | -0.08  |
|      | 47     | L             | 68720  | M         | 0.81  | 0.53  | -0.30  | 0.53   | -0.25  | -0.29  |

Table A31. Summary Item Statistics - Operational Items (Continued)

Government May MakeUp1

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| X    | 48     | O             | 68693  | J         | 0.39  | 0.77  |        |        |        |        |
|      | 49     | O             | 55572  | M         | 0.45  | 0.30  | -0.05  | 0.30   | -0.28  | -0.08  |
|      | 50     | O             | 55704  | M         | 0.73  | 0.44  | -0.24  | 0.44   | -0.28  | -0.21  |
|      | 51     | O             | 68595  | M         | 0.80  | 0.41  | -0.19  | 0.41   | -0.29  | -0.16  |
|      | 52     | O             | 68013  | M         | 0.60  | 0.48  | -0.25  | -0.27  | -0.17  | 0.48   |
|      | 53     | L             | 68065  | J         | 0.36  | 0.75  |        |        |        |        |
|      | 54     | O             | 55605  | M         | 0.50  | 0.55  | -0.20  | -0.29  | -0.21  | 0.55   |
|      | 55     | O             | 55471  | M         | 0.38  | 0.40  | 0.40   | -0.14  | -0.24  | -0.04  |
|      | 56     | O             | 51150  | M         | 0.65  | 0.61  | -0.26  | -0.29  | -0.28  | 0.61   |
|      | 57     | L             | 50829  | M         | 0.64  | 0.42  | -0.24  | -0.14  | -0.24  | 0.42   |
|      | 58     | L             | 50980  | J         | 0.45  | 0.76  |        |        |        |        |
|      | 59     | L             | 68785  | M         | 0.73  | 0.50  | 0.50   | -0.31  | -0.29  | -0.13  |
|      | 60     | L             | 68721  | M         | 0.65  | 0.43  | -0.11  | -0.31  | 0.43   | -0.17  |
|      | 61     | L             | 68754  | M         | 0.70  | 0.54  | -0.25  | -0.24  | -0.31  | 0.54   |
|      | 62     | L             | 68716  | M         | 0.65  | 0.53  | -0.25  | -0.26  | -0.24  | 0.53   |
|      | 63     | O             | 51092  | M         | 0.64  | 0.51  | -0.22  | 0.51   | -0.30  | -0.20  |
|      | 64     | O             | 51053  | M         | 0.69  | 0.49  | -0.30  | 0.49   | -0.18  | -0.28  |

Table A32. Summary Item Statistics - Operational Items  
Government May MakeUp2

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| Y    | 1      | L             | 58316  | M         | 0.84  | 0.42  | -0.23  | 0.42   | -0.22  | -0.25  |
|      | 2      | L             | 51063  | M         | 0.85  | 0.43  | 0.43   | -0.26  | -0.24  | -0.22  |
|      | 3      | L             | 58433  | M         | 0.68  | 0.46  | -0.21  | -0.23  | -0.25  | 0.46   |
|      | 4      | L             | 53748  | M         | 0.86  | 0.47  | 0.47   | -0.29  | -0.23  | -0.25  |
|      | 6      | L             | 68735  | J         | 0.43  | 0.65  |        |        |        |        |
|      | 7      | O             | 68766  | M         | 0.70  | 0.53  | -0.23  | -0.33  | -0.26  | 0.53   |
|      | 8      | O             | 59843  | M         | 0.34  | 0.22  | 0.00   | -0.16  | 0.22   | -0.12  |
|      | 9      | L             | 68508  | M         | 0.45  | 0.45  | 0.45   | -0.15  | -0.27  | -0.24  |
|      | 10     | L             | 68506  | M         | 0.50  | 0.38  | -0.23  | -0.20  | 0.38   | -0.15  |
|      | 11     | L             | 68096  | J         | 0.46  | 0.75  |        |        |        |        |
|      | 12     | L             | 68741  | M         | 0.71  | 0.52  | -0.28  | 0.52   | -0.27  | -0.25  |
|      | 13     | L             | 68489  | M         | 0.78  | 0.39  | 0.39   | -0.15  | -0.26  | -0.24  |
|      | 14     | O             | 50836  | M         | 0.63  | 0.47  | 0.47   | -0.30  | -0.25  | -0.13  |
|      | 15     | O             | 51191  | M         | 0.42  | 0.30  | -0.08  | -0.14  | -0.16  | 0.30   |
|      | 16     | L             | 50952  | J         | 0.39  | 0.79  |        |        |        |        |
|      | 19     | L             | 68559  | M         | 0.59  | 0.49  | -0.22  | 0.49   | -0.27  | -0.21  |
|      | 20     | L             | 68653  | J         | 0.43  | 0.74  |        |        |        |        |
|      | 21     | L             | 50993  | M         | 0.66  | 0.30  | 0.30   | -0.17  | -0.25  | -0.08  |
|      | 22     | O             | 58309  | M         | 0.72  | 0.56  | -0.21  | -0.27  | -0.35  | 0.56   |
|      | 23     | O             | 58304  | M         | 0.67  | 0.61  | -0.26  | -0.34  | -0.31  | 0.61   |
|      | 24     | O             | 68695  | M         | 0.67  | 0.47  | -0.22  | -0.26  | 0.47   | -0.21  |
|      | 25     | O             | 51766  | M         | 0.33  | 0.24  | -0.02  | -0.13  | 0.24   | -0.11  |
|      | 26     | L             | 68780  | M         | 0.45  | 0.29  | -0.18  | -0.26  | 0.29   | -0.01  |
|      | 27     | O             | 51170  | M         | 0.69  | 0.55  | -0.29  | 0.55   | -0.31  | -0.22  |
|      | 29     | L             | 51732  | M         | 0.87  | 0.38  | 0.38   | -0.22  | -0.19  | -0.16  |
|      | 30     | L             | 51017  | M         | 0.66  | 0.52  | 0.52   | -0.22  | -0.28  | -0.22  |
|      | 31     | L             | 68515  | M         | 0.73  | 0.48  | -0.23  | -0.29  | 0.48   | -0.19  |
|      | 32     | O             | 58142  | M         | 0.71  | 0.50  | -0.27  | 0.50   | -0.24  | -0.20  |
|      | 33     | O             | 68715  | M         | 0.49  | 0.42  | 0.42   | -0.15  | -0.26  | -0.21  |
|      | 35     | L             | 67997  | M         | 0.83  | 0.45  | 0.45   | -0.29  | -0.24  | -0.19  |
|      | 36     | L             | 68643  | M         | 0.81  | 0.47  | -0.26  | -0.21  | -0.28  | 0.47   |
|      | 37     | L             | 51244  | M         | 0.80  | 0.43  | -0.21  | -0.27  | 0.43   | -0.23  |
|      | 38     | L             | 68583  | J         | 0.22  | 0.73  |        |        |        |        |
|      | 39     | L             | 51735  | M         | 0.77  | 0.50  | -0.33  | 0.50   | -0.29  | -0.15  |
|      | 40     | L             | 50874  | M         | 0.65  | 0.53  | 0.53   | -0.35  | -0.27  | -0.14  |
|      | 42     | L             | 51798  | M         | 0.60  | 0.43  | -0.20  | 0.43   | -0.25  | -0.22  |
|      | 43     | L             | 51235  | M         | 0.53  | 0.29  | -0.05  | -0.14  | 0.29   | -0.27  |
|      | 44     | L             | 51169  | M         | 0.41  | 0.19  | -0.06  | 0.19   | -0.23  | 0.02   |
|      | 45     | O             | 50953  | M         | 0.69  | 0.47  | -0.28  | -0.27  | 0.47   | -0.17  |
|      | 46     | O             | 50900  | M         | 0.43  | 0.39  | -0.15  | 0.39   | -0.17  | -0.15  |
|      | 47     | L             | 68720  | M         | 0.81  | 0.53  | -0.30  | 0.53   | -0.25  | -0.29  |

Table A32. Summary Item Statistics - Operational Items (Continued)  
 Government May MakeUp2

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| Y    | 48     | O             | 68693  | J         | 0.39  | 0.77  |        |        |        |        |
|      | 49     | O             | 64973  | M         | 0.63  | 0.57  | -0.23  | -0.32  | 0.57   | -0.21  |
|      | 50     | O             | 53700  | M         | 0.42  | 0.44  | -0.11  | -0.19  | 0.44   | -0.21  |
|      | 51     | O             | 51744  | M         | 0.63  | 0.52  | 0.52   | -0.27  | -0.29  | -0.14  |
|      | 52     | O             | 68663  | M         | 0.32  | 0.28  | -0.11  | 0.06   | -0.20  | 0.28   |
|      | 53     | L             | 68065  | J         | 0.36  | 0.75  |        |        |        |        |
|      | 54     | O             | 51084  | M         | 0.71  | 0.48  | 0.48   | -0.34  | -0.24  | -0.17  |
|      | 55     | O             | 68504  | M         | 0.84  | 0.50  | 0.50   | -0.26  | -0.28  | -0.25  |
|      | 56     | O             | 67987  | M         | 0.66  | 0.51  | -0.26  | -0.28  | 0.51   | -0.21  |
|      | 57     | L             | 50829  | M         | 0.64  | 0.42  | -0.24  | -0.14  | -0.24  | 0.42   |
|      | 58     | L             | 50980  | J         | 0.45  | 0.76  |        |        |        |        |
|      | 59     | L             | 68785  | M         | 0.73  | 0.50  | 0.50   | -0.31  | -0.29  | -0.13  |
|      | 60     | L             | 68721  | M         | 0.65  | 0.43  | -0.11  | -0.31  | 0.43   | -0.17  |
|      | 61     | L             | 68754  | M         | 0.70  | 0.54  | -0.25  | -0.24  | -0.31  | 0.54   |
|      | 62     | L             | 68716  | M         | 0.65  | 0.53  | -0.25  | -0.26  | -0.24  | 0.53   |
|      | 63     | O             | 51809  | M         | 0.62  | 0.52  | -0.26  | -0.27  | 0.52   | -0.18  |
|      | 64     | O             | 51776  | M         | 0.26  | 0.25  | 0.07   | -0.10  | -0.18  | 0.25   |



Table A33. Summary Item Statistics - Operational Items  
Algebra - July MakeUp1

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| L    | 1      | O             | 51474  | M         | 0.94  | 0.28  | -0.07  | 0.28   | -0.13  | -0.25  |
|      | 2      | O             | 56599  | M         | 0.63  | 0.44  | -0.14  | -0.36  | 0.44   | -0.13  |
|      | 3      | L             | 56658  | M         | 0.70  | 0.45  | -0.27  | 0.45   | -0.19  | -0.23  |
|      | 5      | L             | 54794  | M         | 0.36  | 0.41  | 0.41   | -0.23  | -0.09  | -0.22  |
|      | 6      | L             | 54776  | J         | 0.34  | 0.64  |        |        |        |        |
|      | 7      | O             | 56632  | M         | 0.35  | 0.42  | -0.14  | -0.36  | 0.42   | -0.08  |
|      | 8      | L             | 51485  | M         | 0.34  | 0.34  | -0.04  | -0.10  | -0.22  | 0.34   |
|      | 9      | L             | 67556  | M         | 0.52  | 0.46  | 0.46   | -0.33  | -0.21  | -0.06  |
|      | 11     | O             | 54796  | M         | 0.50  | 0.35  | -0.15  | -0.14  | -0.17  | 0.35   |
|      | 13     | L             | 54560  | G         | 0.46  | 0.63  | 0.63   | -0.51  |        |        |
|      | 14     | O             | 51489  | G         | 0.64  | 0.49  | 0.49   | -0.44  |        |        |
|      | 16     | O             | 67461  | G         | 0.63  | 0.47  | 0.47   | -0.37  |        |        |
|      | 17     | L             | 67498  | J         | 0.12  | 0.74  |        |        |        |        |
|      | 18     | L             | 51455  | M         | 0.45  | 0.40  | -0.18  | 0.40   | -0.08  | -0.23  |
|      | 19     | O             | 56712  | M         | 0.46  | 0.29  | -0.20  | -0.09  | 0.29   | -0.05  |
|      | 20     | L             | 67501  | M         | 0.55  | 0.42  | -0.21  | -0.16  | 0.42   | -0.17  |
|      | 21     | L             | 54857  | J         | 0.20  | 0.68  |        |        |        |        |
|      | 22     | L             | 51410  | M         | 0.67  | 0.41  | -0.24  | -0.16  | -0.21  | 0.41   |
|      | 23     | O             | 64689  | M         | 0.19  | 0.37  | 0.37   | -0.05  | -0.20  | -0.04  |
|      | 25     | L             | 56741  | M         | 0.59  | 0.24  | -0.22  | 0.24   | -0.28  | 0.18   |
|      | 26     | O             | 54692  | M         | 0.64  | 0.31  | -0.16  | -0.12  | -0.19  | 0.31   |
|      | 27     | L             | 56573  | M         | 0.44  | 0.34  | -0.24  | -0.06  | 0.34   | -0.18  |
|      | 28     | O             | 51555  | M         | 0.24  | 0.23  | 0.23   | -0.21  | 0.06   | -0.14  |
|      | 31     | L             | 54710  | M         | 0.54  | 0.39  | -0.22  | -0.27  | 0.39   | -0.10  |
|      | 33     | O             | 56557  | M         | 0.30  | 0.01  | 0.01   | 0.07   | -0.07  | 0.00   |
|      | 35     | L             | 56783  | M         | 0.46  | 0.39  | -0.04  | -0.29  | -0.20  | 0.39   |
|      | 36     | L             | 67557  | J         | 0.47  | 0.81  |        |        |        |        |
|      | 37     | O             | 67410  | G         | 0.55  | 0.47  | 0.47   | -0.43  |        |        |
|      | 38     | L             | 67411  | G         | 0.16  | 0.49  | 0.49   | -0.25  |        |        |
|      | 40     | O             | 51490  | G         | 0.60  | 0.47  | 0.47   | -0.32  |        |        |
|      | 41     | O             | 54896  | J         | 0.09  | 0.65  |        |        |        |        |
|      | 42     | L             | 64684  | M         | 0.56  | 0.50  | 0.50   | -0.22  | -0.27  | -0.15  |
|      | 43     | L             | 56767  | M         | 0.51  | 0.33  | 0.33   | -0.20  | -0.10  | -0.15  |
|      | 44     | L             | 54752  | M         | 0.44  | 0.31  | -0.19  | 0.02   | 0.31   | -0.22  |
|      | 45     | L             | 67466  | J         | 0.27  | 0.82  |        |        |        |        |
|      | 46     | L             | 54647  | M         | 0.26  | 0.07  | 0.13   | -0.13  | 0.07   | -0.09  |
|      | 47     | L             | 56558  | M         | 0.51  | 0.39  | 0.39   | -0.11  | -0.23  | -0.15  |
|      | 48     | O             | 54707  | M         | 0.42  | 0.22  | -0.32  | 0.22   | 0.02   | 0.00   |

Table A34. Summary Item Statistics - Operational Items  
Algebra - July MakeUp2

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| M    | 1      | M             | 50394  | O         | 0.93  | 0.28  | -0.06  | -0.11  | -0.25  | 0.28   |
|      | 2      | M             | 51533  | O         | 0.83  | 0.35  | 0.35   | -0.16  | -0.26  | -0.15  |
|      | 3      | L             | 56658  | M         | 0.70  | 0.45  | -0.27  | 0.45   | -0.19  | -0.23  |
|      | 5      | L             | 54794  | M         | 0.36  | 0.41  | 0.41   | -0.23  | -0.09  | -0.22  |
|      | 6      | L             | 54776  | J         | 0.34  | 0.64  |        |        |        |        |
|      | 7      | M             | 56661  | O         | 0.52  | 0.38  | -0.24  | -0.27  | 0.38   | 0.00   |
|      | 8      | L             | 51485  | M         | 0.34  | 0.34  | -0.04  | -0.10  | -0.22  | 0.34   |
|      | 9      | L             | 67556  | M         | 0.52  | 0.46  | 0.46   | -0.33  | -0.21  | -0.06  |
|      | 11     | M             | 67447  | O         | 0.77  | 0.29  | -0.16  | -0.15  | 0.29   | -0.11  |
|      | 13     | L             | 54560  | G         | 0.46  | 0.63  | 0.63   | -0.51  |        |        |
|      | 14     | G             | 56568  | O         | 0.49  | 0.47  | 0.47   | -0.33  |        |        |
|      | 16     | G             | 67528  | O         | 0.60  | 0.59  | 0.59   | -0.44  |        |        |
|      | 17     | L             | 67498  | J         | 0.12  | 0.74  |        |        |        |        |
|      | 18     | L             | 51455  | M         | 0.45  | 0.40  | -0.18  | 0.40   | -0.08  | -0.23  |
|      | 19     | M             | 56366  | O         | 0.56  | 0.42  | -0.24  | -0.12  | 0.42   | -0.16  |
|      | 20     | L             | 67501  | M         | 0.55  | 0.42  | -0.21  | -0.16  | 0.42   | -0.17  |
|      | 21     | L             | 54857  | J         | 0.20  | 0.68  |        |        |        |        |
|      | 22     | L             | 51410  | M         | 0.67  | 0.41  | -0.24  | -0.16  | -0.21  | 0.41   |
|      | 23     | M             | 51445  | O         | 0.50  | 0.30  | 0.30   | -0.12  | -0.17  | -0.06  |
|      | 25     | L             | 56741  | M         | 0.59  | 0.24  | -0.22  | 0.24   | -0.28  | 0.18   |
|      | 26     | M             | 54840  | O         | 0.86  | 0.23  | -0.27  | 0.23   | -0.19  | 0.03   |
|      | 27     | L             | 56573  | M         | 0.44  | 0.34  | -0.24  | -0.06  | 0.34   | -0.18  |
|      | 28     | M             | 67424  | O         | 0.28  | 0.27  | -0.11  | -0.15  | -0.03  | 0.27   |
|      | 31     | L             | 54710  | M         | 0.54  | 0.39  | -0.22  | -0.27  | 0.39   | -0.10  |
|      | 33     | M             | 54699  | O         | 0.44  | 0.46  | -0.16  | -0.23  | -0.23  | 0.46   |
|      | 35     | L             | 56783  | M         | 0.46  | 0.39  | -0.04  | -0.29  | -0.20  | 0.39   |
|      | 36     | L             | 67557  | J         | 0.47  | 0.81  |        |        |        |        |
|      | 37     | G             | 54742  | O         | 0.46  | 0.41  | 0.41   | -0.36  |        |        |
|      | 38     | L             | 67411  | G         | 0.16  | 0.49  | 0.49   | -0.25  |        |        |
|      | 40     | G             | 51417  | O         | 0.52  | 0.56  | 0.56   | -0.35  |        |        |
|      | 41     | J             | 51409  | O         | 0.22  | 0.71  |        |        |        |        |
|      | 42     | L             | 64684  | M         | 0.56  | 0.50  | 0.50   | -0.22  | -0.27  | -0.15  |
|      | 43     | L             | 56767  | M         | 0.51  | 0.33  | 0.33   | -0.20  | -0.10  | -0.15  |
|      | 44     | L             | 54752  | M         | 0.44  | 0.31  | -0.19  | 0.02   | 0.31   | -0.22  |
|      | 45     | L             | 67466  | J         | 0.27  | 0.82  |        |        |        |        |
|      | 46     | L             | 54647  | M         | 0.26  | 0.07  | 0.13   | -0.13  | 0.07   | -0.09  |
|      | 47     | L             | 56558  | M         | 0.51  | 0.39  | 0.39   | -0.11  | -0.23  | -0.15  |
|      | 48     | M             | 54892  | O         | 0.46  | 0.32  | -0.13  | -0.19  | 0.32   | -0.03  |

Table A35. Summary Item Statistics - Operational Items

## Biology - July MakeUp1

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| L    | 1      | O             | 68138  | M         | 0.47  | 0.38  | -0.13  | -0.29  | -0.08  | 0.38   |
|      | 2      | O             | 52673  | M         | 0.27  | 0.27  | -0.25  | 0.27   | 0.05   | -0.20  |
|      | 3      | O             | 64744  | M         | 0.41  | 0.35  | -0.18  | 0.35   | -0.17  | -0.14  |
|      | 4      | O             | 64743  | M         | 0.73  | 0.42  | 0.42   | -0.23  | -0.17  | -0.25  |
|      | 5      | O             | 64745  | M         | 0.48  | 0.45  | -0.20  | 0.45   | -0.33  | -0.05  |
|      | 6      | L             | 68119  | J         | 0.20  | 0.75  |        |        |        |        |
|      | 7      | L             | 52767  | M         | 0.19  | 0.13  | 0.00   | -0.17  | 0.13   | 0.03   |
|      | 8      | O             | 52522  | M         | 0.48  | 0.13  | -0.02  | 0.13   | -0.12  | -0.03  |
|      | 11     | O             | 52780  | M         | 0.42  | 0.32  | -0.19  | -0.05  | 0.32   | -0.17  |
|      | 12     | O             | 52621  | M         | 0.26  | 0.36  | -0.11  | 0.36   | -0.13  | -0.15  |
|      | 13     | O             | 55044  | M         | 0.42  | 0.29  | -0.23  | 0.29   | -0.21  | 0.05   |
|      | 15     | L             | 68257  | J         | 0.12  | 0.76  |        |        |        |        |
|      | 16     | O             | 56986  | M         | 0.37  | 0.42  | 0.42   | -0.15  | -0.21  | -0.11  |
|      | 17     | O             | 56987  | M         | 0.39  | 0.26  | -0.10  | 0.26   | -0.04  | -0.15  |
|      | 18     | O             | 52460  | M         | 0.51  | 0.48  | -0.24  | 0.48   | -0.24  | -0.16  |
|      | 19     | O             | 52506  | M         | 0.36  | 0.45  | -0.08  | -0.20  | -0.24  | 0.45   |
|      | 20     | O             | 52505  | M         | 0.43  | 0.30  | -0.05  | 0.30   | -0.15  | -0.18  |
|      | 21     | O             | 52504  | M         | 0.56  | 0.45  | -0.15  | -0.29  | 0.45   | -0.17  |
|      | 22     | L             | 52438  | J         | 0.10  | 0.83  |        |        |        |        |
|      | 26     | O             | 52759  | M         | 0.40  | 0.32  | 0.32   | -0.17  | -0.17  | -0.07  |
|      | 27     | O             | 68289  | M         | 0.19  | -0.01 | -0.25  | -0.01  | 0.02   | 0.18   |
|      | 28     | O             | 55239  | M         | 0.21  | 0.17  | 0.17   | -0.11  | 0.02   | -0.06  |
|      | 29     | O             | 52423  | M         | 0.40  | 0.48  | -0.21  | -0.13  | -0.28  | 0.48   |
|      | 30     | O             | 52645  | M         | 0.19  | 0.19  | -0.19  | 0.16   | -0.20  | 0.19   |
|      | 31     | L             | 52484  | J         | 0.09  | 0.79  |        |        |        |        |
|      | 34     | O             | 67569  | M         | 0.36  | 0.37  | -0.13  | 0.37   | -0.18  | -0.17  |
|      | 35     | O             | 67571  | M         | 0.48  | 0.34  | 0.34   | -0.21  | -0.22  | -0.07  |
|      | 36     | O             | 53469  | M         | 0.70  | 0.30  | -0.22  | 0.30   | -0.19  | -0.21  |
|      | 37     | O             | 68192  | M         | 0.74  | 0.39  | 0.39   | -0.21  | -0.19  | -0.23  |
|      | 38     | O             | 52466  | M         | 0.51  | 0.52  | -0.20  | -0.33  | -0.22  | 0.52   |
|      | 39     | O             | 52599  | M         | 0.43  | 0.27  | -0.02  | 0.27   | -0.18  | -0.16  |
|      | 40     | O             | 55076  | M         | 0.45  | 0.32  | -0.03  | 0.32   | -0.21  | -0.17  |
|      | 41     | O             | 55141  | M         | 0.40  | 0.36  | 0.36   | -0.22  | -0.23  | 0.01   |
|      | 42     | L             | 52498  | J         | 0.08  | 0.80  |        |        |        |        |
|      | 43     | O             | 57134  | M         | 0.46  | 0.43  | -0.08  | -0.16  | -0.29  | 0.43   |
|      | 46     | O             | 52750  | M         | 0.47  | 0.38  | -0.14  | 0.38   | -0.26  | -0.10  |
|      | 47     | O             | 52747  | M         | 0.36  | 0.31  | 0.05   | -0.23  | -0.23  | 0.31   |
|      | 48     | L             | 64704  | J         | 0.05  | 0.76  |        |        |        |        |
|      | 49     | O             | 68273  | M         | 0.34  | 0.29  | -0.14  | 0.29   | -0.06  | -0.17  |
|      | 50     | O             | 64999  | M         | 0.57  | 0.39  | 0.39   | -0.11  | -0.19  | -0.25  |

Table A35. Summary Item Statistics - Operational Items (Continued)

## Biology - July MakeUp1

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| L    | 51     | O             | 56965  | M         | 0.40  | 0.46  | -0.17  | -0.24  | -0.16  | 0.46   |
|      | 52     | O             | 56963  | M         | 0.42  | 0.53  | -0.13  | 0.53   | -0.28  | -0.24  |
|      | 53     | O             | 65126  | M         | 0.53  | 0.46  | 0.46   | -0.22  | -0.15  | -0.24  |
|      | 57     | O             | 55164  | M         | 0.37  | 0.44  | -0.23  | 0.44   | -0.27  | -0.04  |
|      | 58     | O             | 55165  | M         | 0.21  | 0.37  | 0.37   | -0.17  | -0.03  | -0.17  |
|      | 59     | O             | 55163  | M         | 0.47  | 0.55  | -0.25  | -0.23  | -0.22  | 0.55   |
|      | 60     | O             | 52592  | M         | 0.36  | 0.31  | -0.09  | -0.17  | 0.31   | -0.09  |
|      | 61     | O             | 52593  | M         | 0.46  | 0.47  | 0.47   | -0.15  | -0.29  | -0.14  |
|      | 63     | O             | 60528  | M         | 0.34  | 0.13  | -0.29  | 0.09   | 0.13   | 0.00   |
|      | 64     | L             | 67633  | J         | 0.07  | 0.75  |        |        |        |        |
|      | 67     | O             | 68282  | M         | 0.40  | 0.38  | 0.38   | -0.09  | -0.12  | -0.24  |
|      | 68     | O             | 68281  | M         | 0.47  | 0.42  | 0.42   | -0.22  | -0.15  | -0.14  |
|      | 69     | O             | 55208  | M         | 0.32  | 0.26  | -0.19  | 0.26   | 0.07   | -0.21  |
|      | 70     | O             | 67675  | M         | 0.40  | 0.54  | -0.20  | -0.14  | -0.31  | 0.54   |
|      | 71     | O             | 52742  | M         | 0.38  | 0.36  | -0.15  | -0.12  | 0.36   | -0.12  |

Table A36. Summary Item Statistics - Operational Items  
Biology - July MakeUp2

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val  | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|--------|-------|--------|--------|--------|--------|
| M    | 1      | O             | 55013  | M         | 0.79   | 0.44  | -0.27  | 0.44   | -0.34  |        |
|      | 2      | O             | 52424  | M         | 0.55   | 0.04  | 0.33   | -0.47  | -0.06  | 0.04   |
|      | 3      | O             | 64744  | M         | 0.41   | 0.35  | -0.18  | 0.35   | -0.17  | -0.14  |
|      | 4      | O             | 64743  | M         | 0.73   | 0.42  | 0.42   | -0.23  | -0.17  | -0.25  |
|      | 5      | O             | 64745  | M         | 0.48   | 0.45  | -0.20  | 0.45   | -0.33  | -0.05  |
|      | 6      | L             | 68119  | J         | 0.2    | 0.75  |        |        |        |        |
|      | 7      | O             | 52567  | M         | 0.27   | 0.44  | 0.44   | -0.26  | -0.21  |        |
|      | 8      | O             | 67683  | M         | 0.52   | 0.60  | -0.08  | 0.60   | -0.39  | -0.24  |
|      | 11     | O             | 55196  | M         | 0.52   | 0.24  | 0.24   | -0.28  | -0.25  | 0.06   |
|      | 12     | O             | 67671  | M         | 0.12   | 0.29  | -0.27  | -0.21  | 0.29   | 0.29   |
|      | 13     | O             | 52485  | M         | 0.7    | 0.65  | -0.25  | -0.31  | -0.35  | 0.65   |
|      | 15     | L             | 68257  | J         | 0.12   | 0.76  |        |        |        |        |
|      | 16     | O             | 56986  | M         | 0.37   | 0.42  | 0.42   | -0.15  | -0.21  | -0.11  |
|      | 17     | O             | 56987  | M         | 0.39   | 0.26  | -0.10  | 0.26   | -0.04  | -0.15  |
|      | 18     | O             | 52460  | M         | 0.51   | 0.48  | -0.24  | 0.48   | -0.24  | -0.16  |
|      | 19     | O             | 52506  | M         | 0.36   | 0.45  | -0.08  | -0.20  | -0.24  | 0.45   |
|      | 20     | O             | 52505  | M         | 0.43   | 0.30  | -0.05  | 0.30   | -0.15  | -0.18  |
|      | 21     | O             | 52504  | M         | 0.56   | 0.45  | -0.15  | -0.29  | 0.45   | -0.17  |
|      | 22     | L             | 52438  | J         | 0.0975 | 0.83  |        |        |        |        |
|      | 26     | O             | 64734  | M         | 0.27   | 0.65  | -0.12  | -0.20  | -0.32  | 0.65   |
|      | 27     | O             | 56992  | M         | 0.61   | 0.49  | -0.26  | -0.20  | -0.21  | 0.49   |
|      | 28     | O             | 65128  | M         | 0.39   | 0.15  | -0.04  | 0.15   | -0.19  | 0.26   |
|      | 29     | O             | 64993  | M         | 0.42   | 0.26  | -0.23  | 0.06   | 0.26   | -0.16  |
|      | 30     | O             | 52651  | M         | 0.67   | 0.73  | 0.73   | -0.50  | -0.22  | -0.26  |
|      | 31     | L             | 52484  | J         | 0.09   | 0.79  |        |        |        |        |
|      | 34     | O             | 67569  | M         | 0.36   | 0.37  | -0.13  | 0.37   | -0.18  | -0.17  |
|      | 35     | O             | 67571  | M         | 0.48   | 0.34  | 0.34   | -0.21  | -0.22  | -0.07  |
|      | 36     | O             | 57055  | M         | 0.27   | 0.61  | -0.18  | 0.61   | -0.23  | -0.25  |
|      | 37     | O             | 57145  | M         | 0.67   | 0.43  | -0.10  | 0.43   | -0.41  |        |
|      | 38     | O             | 67860  | M         | 0.55   | 0.56  | -0.13  | 0.56   | -0.36  | -0.31  |
|      | 39     | O             | 68223  | M         | 0.7    | 0.48  | 0.48   | -0.22  | -0.29  | -0.29  |
|      | 40     | O             | 55076  | M         | 0.45   | 0.32  | -0.03  | 0.32   | -0.21  | -0.17  |
|      | 41     | O             | 55141  | M         | 0.4    | 0.36  | 0.36   | -0.22  | -0.23  | 0.01   |
|      | 42     | L             | 52498  | J         | 0.075  | 0.80  |        |        |        |        |
|      | 43     | O             | 57134  | M         | 0.46   | 0.43  | -0.08  | -0.16  | -0.29  | 0.43   |
|      | 46     | O             | 52750  | M         | 0.47   | 0.38  | -0.14  | 0.38   | -0.26  | -0.10  |
|      | 47     | O             | 52747  | M         | 0.36   | 0.31  | 0.05   | -0.23  | -0.23  | 0.31   |
|      | 48     | L             | 64704  | J         | 0.0525 | 0.76  |        |        |        |        |
|      | 49     | O             | 65142  | M         | 0.61   | 0.38  | -0.23  | -0.13  | 0.38   | -0.17  |
|      | 50     | O             | 55149  | M         | 0.52   | 0.29  | -0.20  | -0.11  | -0.14  | 0.29   |

Table A36. Summary Item Statistics - Operational Items (Continued)

Biology - July MakeUp2

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| M    | 51     | O             | 56965  | M         | 0.4   | 0.46  | -0.17  | -0.24  | -0.16  | 0.46   |
|      | 52     | O             | 56963  | M         | 0.42  | 0.53  | -0.13  | 0.53   | -0.28  | -0.24  |
|      | 53     | O             | 54992  | M         | 0.42  | -0.07 | 0.02   | 0.24   | -0.07  | -0.25  |
|      | 57     | O             | 55164  | M         | 0.37  | 0.44  | -0.23  | 0.44   | -0.27  | -0.04  |
|      | 58     | O             | 55165  | M         | 0.21  | 0.37  | 0.37   | -0.17  | -0.03  | -0.17  |
|      | 59     | O             | 55163  | M         | 0.47  | 0.55  | -0.25  | -0.23  | -0.22  | 0.55   |
|      | 60     | O             | 52592  | M         | 0.36  | 0.31  | -0.09  | -0.17  | 0.31   | -0.09  |
|      | 61     | O             | 52593  | M         | 0.46  | 0.47  | 0.47   | -0.15  | -0.29  | -0.14  |
|      | 63     | O             | 60528  | M         | 0.34  | 0.13  | -0.29  | 0.09   | 0.13   | 0.00   |
|      | 64     | L             | 67633  | J         | 0.065 | 0.75  |        |        |        |        |
|      | 67     | O             | 68282  | M         | 0.4   | 0.38  | 0.38   | -0.09  | -0.12  | -0.24  |
|      | 68     | O             | 68281  | M         | 0.47  | 0.42  | 0.42   | -0.22  | -0.15  | -0.14  |
|      | 69     | O             | 68191  | M         | 0.42  | 0.51  | -0.22  | -0.14  | -0.20  | 0.51   |
|      | 70     | O             | 65118  | M         | 0.39  | 0.59  | 0.59   | -0.17  | -0.25  | -0.30  |
|      | 71     | O             | 68150  | M         | 0.48  | 0.67  | -0.26  | -0.51  | 0.67   | -0.15  |

Table A37. Summary Item Statistics - Operational Items  
English - July MakeUp1

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| Q    | 1      | O             | 130029 | J         | 0.43  | 0.55  |        |        |        |        |
|      | 2      | O             | 130038 | M         | 0.50  | 0.36  | 0.36   | -0.24  | -0.21  | -0.01  |
|      | 3      | O             | 130039 | M         | 0.48  | 0.28  | -0.09  | 0.28   | -0.24  | -0.06  |
|      | 4      | O             | 130292 | M         | 0.38  | 0.36  | -0.06  | -0.21  | 0.36   | -0.19  |
|      | 5      | O             | 130040 | M         | 0.57  | 0.47  | 0.47   | -0.27  | -0.20  | -0.16  |
|      | 6      | O             | 130041 | M         | 0.54  | 0.37  | -0.27  | -0.09  | 0.37   | -0.15  |
|      | 7      | O             | 96175  | M         | 0.67  | 0.51  | -0.25  | -0.28  | -0.19  | 0.51   |
|      | 8      | O             | 96176  | M         | 0.73  | 0.52  | 0.52   | -0.24  | -0.28  | -0.23  |
|      | 9      | O             | 96177  | M         | 0.62  | 0.46  | -0.38  | 0.46   | -0.22  | -0.04  |
|      | 10     | O             | 96178  | M         | 0.51  | 0.38  | -0.18  | 0.38   | -0.20  | -0.14  |
|      | 11     | O             | 96179  | M         | 0.53  | 0.50  | -0.21  | -0.34  | -0.13  | 0.50   |
|      | 12     | O             | 96180  | M         | 0.54  | 0.46  | -0.08  | -0.29  | -0.28  | 0.46   |
|      | 13     | O             | 96181  | M         | 0.48  | 0.42  | -0.20  | 0.42   | -0.35  | -0.03  |
|      | 20     | O             | 130043 | M         | 0.37  | 0.38  | -0.23  | -0.18  | 0.01   | 0.38   |
|      | 21     | O             | 130044 | M         | 0.31  | 0.27  | -0.18  | -0.12  | 0.01   | 0.27   |
|      | 22     | O             | 135485 | M         | 0.44  | 0.39  | -0.13  | -0.15  | 0.39   | -0.19  |
|      | 23     | O             | 130047 | M         | 0.50  | 0.46  | -0.12  | 0.46   | -0.28  | -0.18  |
|      | 24     | O             | 130045 | M         | 0.43  | 0.34  | -0.15  | -0.02  | 0.34   | -0.23  |
|      | 25     | O             | 130046 | J         | 0.27  | 0.66  |        |        |        |        |
|      | 26     | O             | 135483 | J         | 0.30  | 0.62  |        |        |        |        |
|      | 27     | O             | 95570  | M         | 0.56  | 0.47  | -0.12  | -0.25  | -0.27  | 0.47   |
|      | 28     | O             | 95571  | M         | 0.56  | 0.40  | -0.26  | -0.28  | 0.40   | -0.01  |
|      | 29     | O             | 95572  | M         | 0.44  | 0.30  | 0.00   | 0.30   | -0.23  | -0.13  |
|      | 30     | O             | 95573  | M         | 0.37  | 0.30  | 0.30   | -0.05  | -0.14  | -0.16  |
|      | 31     | O             | 95574  | M         | 0.24  | 0.14  | -0.13  | 0.14   | 0.16   | -0.22  |
|      | 32     | O             | 95575  | M         | 0.51  | 0.31  | -0.21  | 0.31   | 0.00   | -0.18  |
|      | 33     | O             | 95576  | M         | 0.31  | 0.34  | -0.06  | -0.27  | -0.01  | 0.34   |
|      | 34     | O             | 95577  | M         | 0.60  | 0.56  | 0.56   | -0.32  | -0.25  | -0.19  |
|      | 35     | O             | 95578  | M         | 0.47  | 0.42  | -0.20  | -0.06  | -0.30  | 0.42   |
|      | 36     | O             | 95579  | M         | 0.52  | 0.50  | -0.30  | -0.21  | 0.50   | -0.13  |
|      | 37     | O             | 95580  | M         | 0.55  | 0.49  | -0.22  | 0.49   | -0.31  | -0.09  |
|      | 49     | O             | 108918 | M         | 0.42  | 0.36  | -0.24  | -0.35  | 0.36   | 0.13   |
|      | 50     | O             | 108784 | M         | 0.22  | 0.30  | -0.13  | -0.01  | -0.11  | 0.30   |
|      | 51     | O             | 108925 | M         | 0.59  | 0.47  | -0.20  | -0.24  | 0.47   | -0.19  |
|      | 52     | O             | 108783 | M         | 0.39  | 0.33  | -0.16  | 0.00   | -0.24  | 0.33   |
|      | 53     | O             | 108921 | M         | 0.39  | 0.32  | -0.04  | 0.32   | -0.21  | -0.12  |
|      | 54     | O             | 108919 | M         | 0.42  | 0.36  | -0.12  | -0.23  | -0.07  | 0.36   |
|      | 55     | O             | 108924 | M         | 0.41  | 0.39  | -0.12  | 0.39   | -0.27  | -0.04  |





Table A37. Summary Item Statistics - Operational Items (Continued)  
English - July MakeUp1

| <b>Form</b> | <b>Pos_No</b> | <b>Anchor_Status</b> | <b>ItemID</b> | <b>Item Type</b> | <b>P_Val</b> | <b>R_ITT</b> | <b>P_BIS1</b> | <b>P_BIS2</b> | <b>P_BIS3</b> | <b>P_BIS4</b> |
|-------------|---------------|----------------------|---------------|------------------|--------------|--------------|---------------|---------------|---------------|---------------|
| Q           | 56            | O                    | 108922        | M                | 0.20         | 0.17         | -0.15         | 0.04          | -0.03         | 0.17          |
|             | 57            | O                    | 109739        | M                | 0.45         | 0.39         | 0.39          | -0.15         | -0.14         | -0.20         |
|             | 58            | O                    | 108927        | J                | 0.22         | 0.55         |               |               |               |               |
|             | 59            | O                    | 96106         | M                | 0.46         | 0.23         | -0.16         | -0.07         | 0.23          | -0.04         |
|             | 60            | O                    | 96107         | M                | 0.66         | 0.40         | 0.40          | -0.18         | -0.17         | -0.20         |
|             | 61            | O                    | 96108         | M                | 0.45         | 0.39         | -0.07         | 0.39          | -0.22         | -0.16         |
|             | 62            | O                    | 96109         | M                | 0.53         | 0.42         | 0.42          | -0.23         | -0.20         | -0.10         |
|             | 63            | O                    | 96110         | M                | 0.62         | 0.49         | -0.18         | 0.49          | -0.26         | -0.24         |
|             | 64            | O                    | 130050        | M                | 0.42         | 0.36         | -0.12         | 0.36          | -0.22         | -0.05         |
|             | 65            | O                    | 130049        | M                | 0.42         | 0.26         | 0.26          | -0.21         | -0.09         | 0.04          |
|             | 67            | O                    | 130030        | M                | 0.61         | 0.52         | -0.23         | -0.29         | 0.52          | -0.22         |
|             | 68            | O                    | 130031        | M                | 0.44         | 0.49         | -0.22         | -0.14         | -0.25         | 0.49          |

Table A38. Summary Item Statistics - Operational Items  
English - July MakeUp2

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| R    | 1      | O             | 130029 | J         | 0.43  | 0.55  |        |        |        |        |
|      | 2      | O             | 130038 | M         | 0.50  | 0.36  | 0.36   | -0.24  | -0.21  | -0.01  |
|      | 3      | O             | 130039 | M         | 0.48  | 0.28  | -0.09  | 0.28   | -0.24  | -0.06  |
|      | 4      | O             | 130292 | M         | 0.38  | 0.36  | -0.06  | -0.21  | 0.36   | -0.19  |
|      | 5      | O             | 130040 | M         | 0.57  | 0.47  | 0.47   | -0.27  | -0.20  | -0.16  |
|      | 6      | O             | 130041 | M         | 0.54  | 0.37  | -0.27  | -0.09  | 0.37   | -0.15  |
|      | 7      | O             | 96175  | M         | 0.67  | 0.51  | -0.25  | -0.28  | -0.19  | 0.51   |
|      | 8      | O             | 96176  | M         | 0.73  | 0.52  | 0.52   | -0.24  | -0.28  | -0.23  |
|      | 9      | O             | 96177  | M         | 0.62  | 0.46  | -0.38  | 0.46   | -0.22  | -0.04  |
|      | 10     | O             | 96178  | M         | 0.51  | 0.38  | -0.18  | 0.38   | -0.20  | -0.14  |
|      | 11     | O             | 96179  | M         | 0.53  | 0.50  | -0.21  | -0.34  | -0.13  | 0.50   |
|      | 12     | O             | 96180  | M         | 0.54  | 0.46  | -0.08  | -0.29  | -0.28  | 0.46   |
|      | 13     | O             | 96181  | M         | 0.48  | 0.42  | -0.20  | 0.42   | -0.35  | -0.03  |
|      | 20     | O             | 130043 | M         | 0.37  | 0.38  | -0.23  | -0.18  | 0.01   | 0.38   |
|      | 21     | O             | 130044 | M         | 0.31  | 0.27  | -0.18  | -0.12  | 0.01   | 0.27   |
|      | 22     | O             | 135485 | M         | 0.44  | 0.39  | -0.13  | -0.15  | 0.39   | -0.19  |
|      | 23     | O             | 130047 | M         | 0.50  | 0.46  | -0.12  | 0.46   | -0.28  | -0.18  |
|      | 24     | O             | 130045 | M         | 0.43  | 0.34  | -0.15  | -0.02  | 0.34   | -0.23  |
|      | 25     | O             | 130046 | J         | 0.27  | 0.66  |        |        |        |        |
|      | 26     | O             | 135483 | J         | 0.30  | 0.62  |        |        |        |        |
|      | 27     | O             | 95570  | M         | 0.56  | 0.47  | -0.12  | -0.25  | -0.27  | 0.47   |
|      | 28     | O             | 95571  | M         | 0.56  | 0.40  | -0.26  | -0.28  | 0.40   | -0.01  |
|      | 29     | O             | 95572  | M         | 0.44  | 0.30  | 0.00   | 0.30   | -0.23  | -0.13  |
|      | 30     | O             | 95573  | M         | 0.37  | 0.30  | 0.30   | -0.05  | -0.14  | -0.16  |
|      | 31     | O             | 95574  | M         | 0.24  | 0.14  | -0.13  | 0.14   | 0.16   | -0.22  |
|      | 32     | O             | 95575  | M         | 0.51  | 0.31  | -0.21  | 0.31   | 0.00   | -0.18  |
|      | 33     | O             | 95576  | M         | 0.31  | 0.34  | -0.06  | -0.27  | -0.01  | 0.34   |
|      | 34     | O             | 95577  | M         | 0.60  | 0.56  | 0.56   | -0.32  | -0.25  | -0.19  |
|      | 35     | O             | 95578  | M         | 0.47  | 0.42  | -0.20  | -0.06  | -0.30  | 0.42   |
|      | 36     | O             | 95579  | M         | 0.52  | 0.50  | -0.30  | -0.21  | 0.50   | -0.13  |
|      | 37     | O             | 95580  | M         | 0.55  | 0.49  | -0.22  | 0.49   | -0.31  | -0.09  |
|      | 49     | O             | 108918 | M         | 0.42  | 0.36  | -0.24  | -0.35  | 0.36   | 0.13   |
|      | 50     | O             | 108784 | M         | 0.22  | 0.30  | -0.13  | -0.01  | -0.11  | 0.30   |
|      | 51     | O             | 108925 | M         | 0.59  | 0.47  | -0.20  | -0.24  | 0.47   | -0.19  |
|      | 52     | O             | 108783 | M         | 0.39  | 0.33  | -0.16  | 0.00   | -0.24  | 0.33   |
|      | 53     | O             | 108921 | M         | 0.39  | 0.32  | -0.04  | 0.32   | -0.21  | -0.12  |
|      | 54     | O             | 108919 | M         | 0.42  | 0.36  | -0.12  | -0.23  | -0.07  | 0.36   |
|      | 55     | O             | 108924 | M         | 0.41  | 0.39  | -0.12  | 0.39   | -0.27  | -0.04  |

Table A38. Summary Item Statistics - Operational Items (Continued)  
English - July MakeUp2

| <b>Form</b> | <b>Pos_No</b> | <b>Anchor_Status</b> | <b>ItemID</b> | <b>Item Type</b> | <b>P_Val</b> | <b>R_ITT</b> | <b>P_BIS1</b> | <b>P_BIS2</b> | <b>P_BIS3</b> | <b>P_BIS4</b> |
|-------------|---------------|----------------------|---------------|------------------|--------------|--------------|---------------|---------------|---------------|---------------|
| R           | 56            | O                    | 108922        | M                | 0.20         | 0.17         | -0.15         | 0.04          | -0.03         | 0.17          |
|             | 57            | O                    | 109739        | M                | 0.45         | 0.39         | 0.39          | -0.15         | -0.14         | -0.20         |
|             | 58            | O                    | 108927        | J                | 0.22         | 0.55         |               |               |               |               |
|             | 59            | O                    | 96106         | M                | 0.46         | 0.23         | -0.16         | -0.07         | 0.23          | -0.04         |
|             | 60            | O                    | 96107         | M                | 0.66         | 0.40         | 0.40          | -0.18         | -0.17         | -0.20         |
|             | 61            | O                    | 96108         | M                | 0.45         | 0.39         | -0.07         | 0.39          | -0.22         | -0.16         |
|             | 62            | O                    | 96109         | M                | 0.53         | 0.42         | 0.42          | -0.23         | -0.20         | -0.10         |
|             | 63            | O                    | 96110         | M                | 0.62         | 0.49         | -0.18         | 0.49          | -0.26         | -0.24         |
|             | 64            | O                    | 130050        | M                | 0.42         | 0.36         | -0.12         | 0.36          | -0.22         | -0.05         |
|             | 65            | O                    | 130049        | M                | 0.42         | 0.26         | 0.26          | -0.21         | -0.09         | 0.04          |
|             | 67            | O                    | 130030        | M                | 0.61         | 0.52         | -0.23         | -0.29         | 0.52          | -0.22         |
|             | 68            | O                    | 130031        | M                | 0.44         | 0.49         | -0.22         | -0.14         | -0.25         | 0.49          |

Table A39. Summary Item Statistics - Operational Items  
Government - July MakeUp1

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| L    | 1      | O             | 51143  | M         | 0.73  | 0.38  | 0.38   | -0.18  | -0.27  | -0.16  |
|      | 2      | O             | 55715  | M         | 0.75  | 0.44  | -0.23  | -0.14  | -0.28  | 0.44   |
|      | 3      | O             | 68580  | M         | 0.49  | 0.46  | -0.15  | -0.15  | -0.27  | 0.46   |
|      | 4      | O             | 55583  | M         | 0.59  | 0.24  | 0.24   | -0.09  | -0.06  | -0.18  |
|      | 6      | L             | 51075  | J         | 0.25  | 0.71  |        |        |        |        |
|      | 7      | L             | 55642  | M         | 0.57  | 0.39  | -0.09  | -0.24  | 0.39   | -0.18  |
|      | 8      | O             | 68095  | M         | 0.53  | 0.52  | -0.24  | -0.34  | -0.10  | 0.52   |
|      | 9      | O             | 68554  | M         | 0.44  | 0.35  | 0.35   | -0.06  | -0.27  | -0.13  |
|      | 10     | O             | 55545  | M         | 0.50  | 0.53  | -0.12  | -0.35  | -0.29  | 0.53   |
|      | 11     | L             | 53651  | J         | 0.19  | 0.66  |        |        |        |        |
|      | 12     | L             | 55524  | M         | 0.65  | 0.38  | -0.17  | 0.38   | -0.13  | -0.24  |
|      | 13     | O             | 50922  | M         | 0.24  | 0.17  | -0.12  | 0.13   | -0.15  | 0.17   |
|      | 14     | L             | 68768  | M         | 0.30  | 0.22  | -0.11  | -0.16  | 0.22   | 0.05   |
|      | 15     | O             | 51134  | M         | 0.39  | 0.33  | -0.18  | -0.04  | -0.14  | 0.33   |
|      | 16     | L             | 67998  | J         | 0.17  | 0.63  |        |        |        |        |
|      | 19     | L             | 68759  | M         | 0.46  | 0.38  | -0.11  | -0.21  | -0.13  | 0.38   |
|      | 20     | L             | 51740  | J         | 0.23  | 0.68  |        |        |        |        |
|      | 21     | L             | 51077  | M         | 0.48  | 0.43  | 0.43   | -0.28  | -0.18  | -0.07  |
|      | 22     | L             | 68756  | M         | 0.46  | 0.40  | -0.19  | -0.10  | -0.20  | 0.40   |
|      | 23     | O             | 68750  | M         | 0.36  | 0.23  | -0.08  | -0.19  | 0.02   | 0.23   |
|      | 24     | O             | 68599  | M         | 0.43  | 0.47  | -0.31  | 0.47   | 0.00   | -0.29  |
|      | 25     | L             | 68496  | M         | 0.31  | 0.36  | -0.06  | -0.11  | -0.17  | 0.36   |
|      | 26     | O             | 68497  | M         | 0.45  | 0.30  | -0.08  | 0.30   | -0.23  | -0.03  |
|      | 27     | O             | 58288  | M         | 0.44  | 0.26  | -0.13  | -0.06  | 0.26   | -0.11  |
|      | 29     | O             | 68035  | M         | 0.27  | 0.26  | 0.08   | -0.21  | -0.11  | 0.26   |
|      | 30     | O             | 51723  | M         | 0.40  | 0.23  | 0.23   | -0.19  | -0.21  | 0.15   |
|      | 31     | L             | 68578  | M         | 0.30  | 0.32  | -0.06  | -0.11  | -0.10  | 0.32   |
|      | 32     | L             | 50984  | M         | 0.51  | 0.45  | -0.15  | -0.14  | 0.45   | -0.24  |
|      | 33     | O             | 51234  | M         | 0.26  | 0.20  | -0.03  | -0.15  | 0.20   | 0.01   |
|      | 35     | L             | 68701  | M         | 0.66  | 0.48  | -0.21  | -0.14  | -0.24  | 0.48   |
|      | 36     | L             | 68714  | M         | 0.56  | 0.50  | 0.50   | -0.28  | -0.13  | -0.21  |
|      | 37     | L             | 51087  | M         | 0.78  | 0.51  | -0.23  | -0.24  | 0.51   | -0.20  |
|      | 38     | L             | 68045  | J         | 0.16  | 0.70  |        |        |        |        |
|      | 39     | O             | 58405  | M         | 0.56  | 0.64  | -0.22  | -0.27  | -0.26  | 0.64   |
|      | 40     | O             | 51125  | M         | 0.33  | 0.25  | -0.11  | 0.00   | 0.25   | -0.03  |
|      | 42     | L             | 68541  | M         | 0.54  | 0.50  | -0.22  | -0.18  | -0.16  | 0.50   |
|      | 43     | L             | 58098  | M         | 0.57  | 0.53  | -0.19  | -0.20  | -0.22  | 0.53   |
|      | 44     | L             | 55599  | M         | 0.59  | 0.43  | -0.05  | 0.43   | -0.23  | -0.17  |
|      | 45     | L             | 51758  | M         | 0.56  | 0.47  | -0.15  | 0.47   | -0.23  | -0.12  |
|      | 46     | L             | 50893  | M         | 0.47  | 0.36  | 0.02   | 0.36   | -0.23  | -0.12  |

Table A39. Summary Item Statistics - Operational Items (Continued)  
Government - July MakeUp1

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| L    | 47     | L             | 51750  | M         | 0.46  | 0.49  | -0.08  | -0.18  | 0.49   | -0.25  |
|      | 48     | O             | 68629  | J         | 0.17  | 0.59  |        |        |        |        |
|      | 49     | L             | 58388  | M         | 0.56  | 0.43  | 0.43   | -0.21  | -0.14  | -0.10  |
|      | 50     | L             | 68656  | M         | 0.38  | 0.32  | -0.05  | -0.12  | 0.32   | -0.06  |
|      | 51     | L             | 67983  | M         | 0.55  | 0.58  | -0.23  | -0.18  | -0.26  | 0.58   |
|      | 52     | O             | 51172  | M         | 0.39  | 0.41  | -0.14  | 0.02   | 0.41   | -0.19  |
|      | 53     | L             | 67965  | J         | 0.24  | 0.76  |        |        |        |        |
|      | 54     | O             | 68628  | M         | 0.15  | 0.18  | -0.11  | -0.11  | 0.24   | 0.18   |
|      | 55     | O             | 68709  | M         | 0.43  | 0.42  | -0.23  | 0.00   | 0.42   | -0.11  |
|      | 56     | L             | 64954  | M         | 0.50  | 0.45  | -0.10  | -0.26  | 0.45   | -0.10  |
|      | 57     | L             | 68708  | M         | 0.35  | 0.30  | 0.02   | 0.30   | -0.10  | -0.12  |
|      | 58     | L             | 68635  | J         | 0.18  | 0.66  |        |        |        |        |
|      | 59     | L             | 58292  | M         | 0.56  | 0.53  | -0.29  | -0.25  | 0.53   | -0.02  |
|      | 60     | L             | 68059  | M         | 0.29  | 0.38  | 0.38   | -0.03  | -0.24  | 0.02   |
|      | 61     | O             | 68040  | M         | 0.37  | 0.49  | -0.18  | -0.03  | 0.49   | -0.18  |
|      | 62     | L             | 51257  | M         | 0.59  | 0.46  | 0.46   | -0.17  | -0.15  | -0.12  |
|      | 63     | L             | 68023  | M         | 0.34  | 0.34  | 0.34   | -0.11  | -0.03  | -0.06  |
|      | 64     | L             | 68782  | M         | 0.45  | 0.47  | -0.18  | -0.23  | -0.05  | 0.47   |

Table A40. Summary Item Statistics - Operational Items  
Government - July MakeUp2

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| M    | 1      | O             | 68719  | M         | 0.79  | 0.21  | -0.26  | -0.10  | 0.21   | 0.09   |
|      | 2      | O             | 51259  | M         | 0.87  | 0.36  | -0.12  | -0.29  | 0.36   | -0.17  |
|      | 3      | O             | 51180  | M         | 0.79  | 0.32  | 0.32   | -0.26  | -0.09  | -0.13  |
|      | 4      | O             | 50896  | M         | 0.56  | 0.27  | -0.18  | -0.19  | 0.27   | -0.08  |
|      | 6      | L             | 51075  | J         | 0.25  | 0.71  |        |        |        |        |
|      | 7      | L             | 55642  | M         | 0.57  | 0.39  | -0.09  | -0.24  | 0.39   | -0.18  |
|      | 8      | O             | 51800  | M         | 0.24  | 0.36  | -0.13  | -0.18  | -0.04  | 0.36   |
|      | 9      | O             | 55554  | M         | 0.33  | 0.31  | 0.31   | -0.15  | -0.14  | -0.05  |
|      | 10     | O             | 51765  | M         | 0.50  | 0.41  | -0.20  | 0.41   | -0.15  | -0.14  |
|      | 11     | L             | 53651  | J         | 0.19  | 0.66  |        |        |        |        |
|      | 12     | L             | 55524  | M         | 0.65  | 0.38  | -0.17  | 0.38   | -0.13  | -0.24  |
|      | 13     | O             | 58147  | M         | 0.53  | 0.33  | 0.33   | -0.13  | -0.19  | -0.07  |
|      | 14     | L             | 68768  | M         | 0.30  | 0.22  | -0.11  | -0.16  | 0.22   | 0.05   |
|      | 15     | O             | 64962  | M         | 0.48  | 0.37  | -0.15  | -0.23  | -0.11  | 0.37   |
|      | 16     | L             | 67998  | J         | 0.17  | 0.63  |        |        |        |        |
|      | 19     | L             | 68759  | M         | 0.46  | 0.38  | -0.11  | -0.21  | -0.13  | 0.38   |
|      | 20     | L             | 51740  | J         | 0.23  | 0.68  |        |        |        |        |
|      | 21     | L             | 51077  | M         | 0.48  | 0.43  | 0.43   | -0.28  | -0.18  | -0.07  |
|      | 22     | L             | 68756  | M         | 0.46  | 0.40  | -0.19  | -0.10  | -0.20  | 0.40   |
|      | 23     | O             | 55666  | M         | 0.36  | 0.39  | -0.16  | -0.13  | -0.13  | 0.39   |
|      | 24     | O             | 68725  | M         | 0.60  | 0.46  | -0.13  | 0.46   | -0.25  | -0.22  |
|      | 25     | L             | 68496  | M         | 0.31  | 0.36  | -0.06  | -0.11  | -0.17  | 0.36   |
|      | 26     | O             | 55589  | M         | 0.49  | 0.51  | -0.24  | -0.24  | -0.13  | 0.51   |
|      | 27     | O             | 50894  | M         | 0.59  | 0.44  | -0.18  | -0.23  | 0.44   | -0.17  |
|      | 28     | O             | 68693  | J         | 0.18  | 0.65  |        |        |        |        |
|      | 29     | O             | 68608  | M         | 0.33  | 0.29  | -0.19  | -0.02  | 0.29   | -0.06  |
|      | 30     | O             | 64951  | M         | 0.51  | 0.48  | -0.24  | 0.48   | -0.15  | -0.16  |
|      | 32     | L             | 50984  | M         | 0.51  | 0.45  | -0.15  | -0.14  | 0.45   | -0.24  |
|      | 33     | O             | 55491  | M         | 0.37  | 0.34  | 0.34   | -0.25  | 0.00   | -0.05  |
|      | 35     | L             | 68701  | M         | 0.66  | 0.48  | -0.21  | -0.14  | -0.24  | 0.48   |
|      | 36     | L             | 68714  | M         | 0.56  | 0.50  | 0.50   | -0.28  | -0.13  | -0.21  |
|      | 37     | L             | 51087  | M         | 0.78  | 0.51  | -0.23  | -0.24  | 0.51   | -0.20  |
|      | 38     | L             | 68045  | J         | 0.16  | 0.70  |        |        |        |        |
|      | 39     | O             | 68532  | M         | 0.56  | 0.46  | 0.46   | -0.28  | -0.09  | -0.15  |
|      | 40     | O             | 68020  | M         | 0.43  | 0.47  | 0.47   | -0.23  | -0.22  | -0.01  |
|      | 42     | L             | 68541  | M         | 0.54  | 0.50  | -0.22  | -0.18  | -0.16  | 0.50   |
|      | 43     | L             | 58098  | M         | 0.57  | 0.53  | -0.19  | -0.20  | -0.22  | 0.53   |
|      | 44     | L             | 55599  | M         | 0.59  | 0.43  | -0.05  | 0.43   | -0.23  | -0.17  |
|      | 45     | L             | 51758  | M         | 0.56  | 0.47  | -0.15  | 0.47   | -0.23  | -0.12  |
|      | 46     | L             | 50893  | M         | 0.47  | 0.36  | 0.02   | 0.36   | -0.23  | -0.12  |

Table A40. Summary Item Statistics - Operational Items (Continued)  
 Government - July MakeUp2

| Form | Pos_No | Anchor_Status | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|--------|---------------|--------|-----------|-------|-------|--------|--------|--------|--------|
| M    | 47     | L             | 51750  | M         | 0.46  | 0.49  | -0.08  | -0.18  | 0.49   | -0.25  |
|      | 48     | O             | 68629  | J         | 0.17  | 0.59  |        |        |        |        |
|      | 49     | L             | 58388  | M         | 0.56  | 0.43  | 0.43   | -0.21  | -0.14  | -0.10  |
|      | 50     | L             | 68656  | M         | 0.38  | 0.32  | -0.05  | -0.12  | 0.32   | -0.06  |
|      | 51     | L             | 67983  | M         | 0.55  | 0.58  | -0.23  | -0.18  | -0.26  | 0.58   |
|      | 52     | O             | 67976  | M         | 0.53  | 0.52  | 0.52   | -0.22  | -0.23  | -0.14  |
|      | 53     | L             | 67965  | J         | 0.24  | 0.76  |        |        |        |        |
|      | 54     | O             | 68544  | M         | 0.50  | 0.49  | -0.17  | 0.49   | -0.21  | -0.14  |
|      | 55     | O             | 68068  | M         | 0.26  | 0.28  | -0.20  | 0.03   | 0.28   | -0.03  |
|      | 56     | L             | 64954  | M         | 0.50  | 0.45  | -0.10  | -0.26  | 0.45   | -0.10  |
|      | 57     | L             | 68708  | M         | 0.35  | 0.30  | 0.02   | 0.30   | -0.10  | -0.12  |
|      | 58     | L             | 68635  | J         | 0.18  | 0.66  |        |        |        |        |
|      | 59     | L             | 58292  | M         | 0.56  | 0.53  | -0.29  | -0.25  | 0.53   | -0.02  |
|      | 60     | L             | 68059  | M         | 0.29  | 0.38  | 0.38   | -0.03  | -0.24  | 0.02   |
|      | 61     | O             | 67970  | M         | 0.38  | 0.38  | 0.38   | -0.11  | -0.15  | -0.05  |
|      | 62     | L             | 51257  | M         | 0.59  | 0.46  | 0.46   | -0.17  | -0.15  | -0.12  |
|      | 63     | L             | 68023  | M         | 0.34  | 0.34  | 0.34   | -0.11  | -0.03  | -0.06  |
|      | 64     | L             | 68782  | M         | 0.45  | 0.47  | -0.18  | -0.23  | -0.05  | 0.47   |

Table A41. Summary Item Statistics - Field Test Items  
Algebra - January

| Form | N    | Pos_No | ItemID | Item Type | P_Val       | R_ITT | P_BIS1      | P_BIS2      | P_BIS3      | P_BIS4 |
|------|------|--------|--------|-----------|-------------|-------|-------------|-------------|-------------|--------|
| A    | 3545 | 3      | 79071  | M         | 0.76        | 0.44  | -0.25       | 0.44        | -0.19       | -0.24  |
|      | 3545 | 12     | 79527  | J         | 0.40        | 0.68  |             |             |             |        |
|      | 3545 | 15     | 79022  | G         | 0.71        | 0.33  | 0.33        | -0.28       |             |        |
|      | 3545 | 18     | 79114  | M         | 0.64        | 0.35  | -0.14       | -0.19       | 0.35        | -0.14  |
|      | 3545 | 22     | 79096  | M         | <b>0.18</b> | 0.32  | -0.12       | <b>0.08</b> | -0.16       | 0.32   |
|      | 3545 | 28     | 79124  | M         | 0.47        | 0.56  | -0.28       | -0.23       | -0.21       | 0.56   |
|      | 3545 | 30     | 50418  | J         | 0.51        | 0.52  |             |             |             |        |
|      | 3545 | 32     | 79066  | M         | 0.45        | 0.26  | <b>0.01</b> | -0.26       | 0.26        | -0.16  |
|      | 3545 | 34     | 79029  | M         | 0.86        | 0.38  | -0.22       | -0.20       | 0.38        | -0.18  |
|      | 3545 | 38     | 43189  | G         | 0.73        | 0.51  | 0.51        | -0.44       |             |        |
|      |      |        |        |           |             |       |             |             |             |        |
| B    | 2605 | 3      | 79073  | M         | 0.52        | 0.25  | -0.18       | 0.25        | -0.22       | 0.00   |
|      | 2605 | 15     | 79087  | G         | 0.80        | 0.37  | 0.37        | -0.32       |             |        |
|      | 2605 | 18     | 79030  | M         | 0.60        | 0.37  | -0.10       | -0.19       | -0.24       | 0.37   |
|      | 2605 | 22     | 79099  | M         | 0.38        | 0.36  | 0.36        | -0.18       | <b>0.01</b> | -0.18  |
|      | 2605 | 28     | 79084  | M         | 0.52        | 0.41  | -0.29       | -0.13       | 0.41        | -0.20  |
|      | 2605 | 30     | 50445  | J         | 0.46        | 0.59  |             |             |             |        |
|      | 2605 | 32     | 79056  | M         | <b>0.94</b> | 0.26  | -0.11       | -0.18       | 0.26        | -0.15  |
|      | 2605 | 34     | 79037  | M         | 0.43        | 0.35  | 0.35        | -0.14       | -0.17       | -0.14  |
|      | 2605 | 38     | 43187  | G         | 0.37        | 0.50  | 0.50        | -0.42       |             |        |

Note: Values in bold are outside of the accepted range



Table A42. Summary Item Statistics - Field Test Items  
Biology - January

| Form | N    | Pos_No | ItemID | Item Type | P_Val       | R_ITT        | P_BIS1      | P_BIS2      | P_BIS3      | P_BIS4      |
|------|------|--------|--------|-----------|-------------|--------------|-------------|-------------|-------------|-------------|
| A    | 4409 | 8      | 79420  | M         | 0.37        | 0.15         | 0.15        | -0.14       | -0.08       | <b>0.07</b> |
|      | 4409 | 9      | 79486  | M         | 0.57        | 0.49         | 0.49        | -0.23       | -0.30       | -0.13       |
|      | 4409 | 26     | 79417  | M         | 0.74        | 0.51         | 0.51        | -0.25       | -0.33       | -0.18       |
|      | 4409 | 27     | 79475  | M         | 0.25        | 0.19         | -0.14       | -0.10       | <b>0.05</b> | 0.19        |
|      | 4409 | 28     | 79435  | M         | 0.59        | 0.39         | 0.39        | -0.28       | -0.12       | -0.15       |
|      | 4409 | 33     | 79444  | M         | 0.55        | 0.43         | -0.15       | 0.43        | -0.23       | -0.20       |
|      | 4409 | 34     | 65078  | M         | 0.76        | 0.49         | -0.30       | -0.21       | 0.49        | -0.25       |
|      | 4409 | 45     | 79308  | M         | 0.29        | <b>0.04</b>  | -0.16       | 0.04        | <b>0.16</b> | -0.14       |
|      | 4409 | 46     | 79307  | M         | <b>0.16</b> | 0.24         | -0.23       | -0.14       | <b>0.09</b> | 0.24        |
|      | 4409 | 51     | 79440  | M         | 0.58        | 0.30         | -0.11       | 0.30        | -0.20       | -0.12       |
|      | 4409 | 57     | 79515  | M         | 0.84        | 0.50         | -0.30       | -0.25       | -0.23       | 0.50        |
|      | 4409 | 67     | 79404  | M         | 0.31        | <b>-0.04</b> | <b>0.19</b> | -0.09       | -0.04       | -0.07       |
|      | 4409 | 68     | 65121  | M         | 0.53        | 0.44         | -0.12       | -0.24       | 0.44        | -0.22       |
|      |      |        |        |           |             |              |             |             |             |             |
| B    | 3433 | 8      | 79483  | M         | 0.37        | <b>-0.10</b> | -0.10       | <b>0.03</b> | <b>0.18</b> | -0.16       |
|      | 3433 | 9      | 79453  | M         | 0.47        | <b>-0.03</b> | -0.06       | <b>0.21</b> | -0.03       | -0.14       |
|      | 3433 | 26     | 79520  | M         | 0.55        | 0.40         | -0.14       | -0.17       | -0.22       | 0.40        |
|      | 3433 | 27     | 79498  | M         | 0.38        | <b>0.05</b>  | <b>0.17</b> | 0.05        | -0.03       | -0.24       |
|      | 3433 | 28     | 79401  | M         | 0.37        | 0.24         | <b>0.07</b> | -0.28       | 0.24        | -0.23       |
|      | 3433 | 33     | 65081  | M         | 0.46        | 0.29         | -0.16       | 0.29        | -0.14       | -0.08       |
|      | 3433 | 34     | 79474  | M         | 0.39        | 0.49         | 0.49        | -0.21       | -0.25       | -0.16       |
|      | 3433 | 45     | 79316  | M         | 0.79        | 0.47         | -0.23       | -0.21       | -0.31       | 0.47        |
|      | 3433 | 46     | 79317  | M         | 0.78        | 0.50         | -0.29       | -0.27       | 0.50        | -0.24       |
|      | 3433 | 51     | 79492  | M         | 0.41        | <b>-0.02</b> | -0.02       | <b>0.16</b> | -0.15       | <b>0.01</b> |
|      | 3433 | 57     | 79414  | M         | 0.77        | 0.43         | -0.22       | -0.28       | -0.21       | 0.43        |
|      | 3433 | 58     | 79466  | M         | 0.74        | 0.33         | -0.20       | 0.33        | -0.11       | -0.20       |
|      | 3433 | 67     | 79468  | M         | 0.62        | 0.52         | -0.20       | -0.28       | -0.25       | 0.52        |
|      | 3433 | 68     | 79438  | M         | 0.40        | 0.35         | -0.08       | -0.18       | -0.14       | 0.35        |

Note: Values in bold are outside of the accepted range.

Table A43. Summary Item Statistics - Field Test Items  
English - January

| Form | N    | Pos_No | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|------|--------|--------|-----------|-------|-------|--------|--------|--------|--------|
| A    | 3781 | 7      | 95627  | M         | 0.62  | 0.44  | -0.17  | 0.44   | -0.27  | -0.21  |
|      | 3781 | 8      | 95628  | M         | 0.51  | 0.33  | -0.25  | -0.10  | -0.20  | 0.33   |
|      | 3781 | 9      | 95629  | M         | 0.64  | 0.25  | -0.22  | 0.25   | -0.24  | -0.06  |
|      | 3781 | 12     | 95632  | M         | 0.59  | 0.34  | -0.20  | -0.21  | 0.34   | -0.15  |
|      | 3781 | 15     | 95635  | M         | 0.53  | 0.30  | -0.01  | 0.30   | -0.26  | -0.14  |
|      | 3781 | 16     | 132801 | M         | 0.61  | 0.43  | -0.25  | -0.19  | -0.22  | 0.43   |
|      | 3781 | 20     | 95640  | M         | 0.36  | 0.31  | 0.31   | -0.15  | -0.19  | -0.02  |
|      | 3781 | 21     | 95641  | M         | 0.63  | 0.40  | -0.19  | -0.25  | 0.40   | -0.19  |
|      | 3781 | 22     | 95642  | M         | 0.38  | 0.29  | -0.11  | -0.10  | 0.29   | -0.17  |
| ABCD | 8345 | 26     | 95572  | M         | 0.58  | 0.41  | -0.19  | 0.41   | -0.23  | -0.19  |
| ACD  | 8345 | 28     | 95574  | M         | 0.34  | 0.28  | -0.19  | 0.28   | -0.02  | -0.14  |
|      | 3781 | 44     | 95654  | M         | 0.66  | 0.38  | -0.13  | 0.38   | -0.25  | -0.14  |
|      | 3781 | 45     | 95653  | M         | 0.59  | 0.46  | -0.17  | -0.22  | -0.21  | 0.46   |
|      | 3781 | 54     | 95662  | M         | 0.46  | 0.35  | 0.35   | -0.24  | -0.05  | -0.21  |
|      | 3781 | 57     | 95665  | M         | 0.83  | 0.51  | -0.21  | -0.32  | 0.51   | -0.23  |
|      | 3781 | 64     | 95667  | M         | 0.46  | 0.43  | -0.08  | -0.21  | -0.23  | 0.43   |
|      | 3781 | 65     | 95668  | M         | 0.38  | 0.26  | 0.26   | -0.02  | -0.13  | -0.16  |
|      | 3781 | 66     | 95669  | M         | 0.64  | 0.43  | -0.21  | 0.43   | -0.19  | -0.21  |
|      | 3781 | 67     | 95670  | M         | 0.49  | 0.33  | -0.23  | -0.19  | 0.33   | -0.01  |

Table A43. Summary Item Statistics - Field Test Items(Continued)  
English - January

| Form | N    | Pos_No | ItemID | Item Type | P_Val       | R_ITT | P_BIS1 | P_BIS2      | P_BIS3 | P_BIS4 |
|------|------|--------|--------|-----------|-------------|-------|--------|-------------|--------|--------|
| B    | 3540 | 20     | 96027  | M         | 0.52        | 0.35  | -0.20  | -0.25       | -0.10  | 0.35   |
|      | 3540 | 21     | 96028  | M         | 0.61        | 0.45  | 0.45   | -0.26       | -0.26  | -0.12  |
|      | 3540 | 22     | 96029  | M         | 0.44        | 0.37  | 0.37   | -0.19       | -0.19  | -0.09  |
|      | 3540 | 35     | 96031  | M         | 0.55        | 0.28  | -0.21  | 0.28        | -0.07  | -0.12  |
|      | 3540 | 36     | 96032  | M         | 0.65        | 0.49  | 0.49   | -0.23       | -0.28  | -0.21  |
|      | 3540 | 39     | 96035  | M         | 0.61        | 0.24  | 0.24   | -0.13       | -0.27  | -0.02  |
|      | 3540 | 40     | 96036  | M         | 0.80        | 0.55  | 0.55   | -0.31       | -0.29  | -0.23  |
|      | 3540 | 41     | 96037  | M         | 0.58        | 0.39  | -0.21  | -0.24       | 0.39   | -0.08  |
|      | 3540 | 42     | 96038  | M         | 0.51        | 0.27  | -0.12  | -0.19       | 0.27   | -0.06  |
|      | 3540 | 43     | 96039  | M         | 0.70        | 0.50  | -0.22  | -0.25       | -0.28  | 0.50   |
|      | 3540 | 44     | 96040  | M         | 0.51        | 0.25  | 0.25   | -0.24       | -0.01  | -0.08  |
|      | 3540 | 45     | 96041  | M         | 0.78        | 0.45  | -0.23  | -0.24       | 0.45   | -0.22  |
|      | 3540 | 46     | 96042  | M         | 0.53        | 0.37  | 0.37   | -0.20       | -0.14  | -0.13  |
|      | 3540 | 47     | 96043  | M         | 0.61        | 0.50  | -0.22  | -0.28       | 0.50   | -0.17  |
|      | 3540 | 53     | 96049  | M         | 0.65        | 0.50  | -0.28  | -0.29       | -0.19  | 0.50   |
|      | 3540 | 56     | 96052  | M         | 0.78        | 0.42  | -0.22  | -0.24       | 0.42   | -0.16  |
|      | 3540 | 57     | 96053  | M         | <b>0.22</b> | 0.16  | 0.16   | <b>0.09</b> | -0.13  | -0.21  |
|      | 3540 | 67     | 96058  | M         | 0.79        | 0.53  | -0.26  | -0.27       | -0.26  | 0.53   |
|      | 3540 | 69     | 96060  | M         | 0.65        | 0.46  | -0.29  | -0.18       | 0.46   | -0.19  |
|      | 3540 | 70     | 96061  | M         | 0.54        | 0.52  | -0.31  | -0.20       | -0.22  | 0.52   |
|      | 3540 | 71     | 96062  | M         | 0.70        | 0.50  | -0.25  | 0.50        | -0.27  | -0.21  |
|      | 3540 | 72     | 96063  | M         | 0.67        | 0.49  | 0.49   | -0.25       | -0.25  | -0.19  |

Table A43. Summary Item Statistics - Field Test Items(Continued)  
English - January

| Form | N    | Pos_No | ItemID | Item Type | P_Val       | R_ITT       | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4      |
|------|------|--------|--------|-----------|-------------|-------------|--------|--------|--------|-------------|
| C    | 679  | 3      | 96293  | M         | 0.63        | 0.42        | -0.19  | 0.42   | -0.26  | -0.16       |
|      | 679  | 5      | 96291  | M         | 0.83        | 0.36        | -0.24  | -0.16  | 0.36   | -0.20       |
| CD   | 1024 | 13     | 96244  | M         | <b>0.23</b> | <b>0.09</b> | 0.00   | 0.09   | -0.16  | <b>0.07</b> |
|      | 679  | 35     | 96305  | M         | 0.51        | 0.33        | 0.33   | -0.24  | -0.14  | -0.03       |
|      | 679  | 37     | 96307  | M         | 0.48        | 0.50        | -0.25  | -0.25  | -0.16  | 0.50        |
|      | 679  | 47     | 96317  | M         | 0.45        | 0.30        | -0.17  | -0.09  | 0.30   | -0.12       |
|      | 679  | 48     | 96318  | M         | 0.45        | 0.49        | -0.17  | -0.20  | -0.23  | 0.49        |
|      | 679  | 49     | 96319  | M         | 0.35        | 0.34        | -0.16  | -0.10  | -0.11  | 0.34        |
|      | 679  | 50     | 96322  | M         | 0.28        | <b>0.01</b> | -0.08  | -0.06  | 0.01   | <b>0.17</b> |
|      | 679  | 51     | 96320  | M         | 0.41        | 0.40        | 0.40   | -0.25  | -0.24  | 0.00        |
|      | 679  | 52     | 96321  | M         | 0.53        | 0.37        | 0.37   | -0.25  | -0.08  | -0.18       |
|      | 679  | 53     | 96323  | M         | 0.41        | 0.33        | -0.22  | 0.33   | -0.09  | -0.07       |
|      | 679  | 54     | 96324  | M         | 0.44        | 0.34        | -0.15  | 0.34   | -0.25  | -0.02       |
|      | 679  | 55     | 96325  | M         | 0.40        | 0.45        | 0.45   | -0.19  | -0.17  | -0.17       |
|      | 679  | 57     | 96327  | M         | 0.62        | 0.44        | -0.22  | 0.44   | -0.23  | -0.16       |
|      | 679  | 65     | 96330  | M         | 0.50        | 0.48        | -0.24  | -0.22  | -0.16  | 0.48        |

Table A43. Summary Item Statistics - Field Test Items (Continued)  
English - January

| Form | N   | Pos_No | ItemID | Item Type | P_Val | R_ITT | P_BIS1      | P_BIS2      | P_BIS3 | P_BIS4      |
|------|-----|--------|--------|-----------|-------|-------|-------------|-------------|--------|-------------|
| D    | 345 | 2      | 96235  | M         | 0.48  | 0.31  | 0.31        | -0.28       | -0.13  | -0.01       |
|      | 345 | 3      | 96234  | M         | 0.75  | 0.37  | -0.15       | 0.37        | -0.27  | -0.17       |
|      | 345 | 5      | 96236  | M         | 0.49  | 0.28  | -0.23       | -0.16       | -0.07  | 0.28        |
|      | 345 | 20     | 96251  | M         | 0.35  | 0.27  | 0.27        | -0.10       | -0.10  | -0.06       |
|      | 345 | 21     | 96252  | M         | 0.62  | 0.46  | 0.46        | -0.17       | -0.26  | -0.20       |
|      | 345 | 22     | 96253  | M         | 0.39  | 0.28  | -0.11       | 0.28        | -0.09  | -0.10       |
|      | 345 | 35     | 96255  | M         | 0.54  | 0.44  | 0.44        | -0.26       | -0.14  | -0.12       |
|      | 345 | 36     | 96256  | M         | 0.47  | 0.30  | 0.07        | -0.25       | 0.30   | -0.17       |
|      | 345 | 37     | 96257  | M         | 0.58  | 0.52  | 0.52        | -0.26       | -0.22  | -0.19       |
|      | 345 | 38     | 96258  | M         | 0.38  | 0.25  | -0.06       | -0.08       | 0.25   | -0.09       |
|      | 345 | 39     | 96259  | M         | 0.27  | 0.34  | -0.15       | <b>0.06</b> | -0.22  | 0.34        |
|      | 345 | 40     | 96260  | M         | 0.43  | 0.37  | -0.13       | -0.20       | -0.07  | 0.37        |
|      | 345 | 41     | 132800 | M         | 0.50  | 0.42  | -0.06       | -0.25       | 0.42   | -0.22       |
|      | 345 | 42     | 96262  | M         | 0.34  | 0.32  | -0.18       | -0.06       | -0.07  | 0.32        |
|      | 345 | 67     | 96282  | M         | 0.33  | 0.30  | <b>0.03</b> | 0.30        | -0.18  | -0.10       |
|      | 345 | 68     | 96283  | M         | 0.43  | 0.47  | 0.47        | -0.24       | -0.15  | -0.08       |
|      | 345 | 69     | 96284  | M         | 0.40  | 0.31  | -0.15       | 0.31        | -0.16  | <b>0.06</b> |
|      | 345 | 70     | 96285  | M         | 0.48  | 0.41  | -0.14       | 0.41        | -0.15  | -0.13       |
|      | 345 | 71     | 96287  | M         | 0.38  | 0.39  | -0.05       | -0.20       | 0.39   | -0.08       |

Note: Values in bold are outside the accepted range.

Table A44. Summary Item Statistics - Field Test Items  
Government - January

| Form | N    | Pos_No | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4      |
|------|------|--------|--------|-----------|-------|-------|--------|--------|--------|-------------|
| A    | 3834 | 7      | 79645  | M         | 0.68  | 0.22  | -0.11  | 0.22   | -0.17  | -0.17       |
|      | 3834 | 8      | 79752  | M         | 0.30  | 0.21  | 0.21   | -0.13  | -0.13  | <b>0.04</b> |
|      | 3834 | 9      | 60431  | M         | 0.40  | 0.22  | -0.21  | -0.16  | -0.03  | 0.22        |
|      | 3834 | 39     | 79711  | M         | 0.75  | 0.40  | -0.26  | -0.14  | 0.40   | -0.24       |
|      | 3834 | 40     | 79683  | M         | 0.44  | 0.32  | -0.33  | 0.32   | -0.22  | <b>0.05</b> |
|      |      |        |        |           |       |       |        |        |        |             |
| B    | 4367 | 7      | 79721  | M         | 0.39  | 0.31  | -0.11  | -0.18  | 0.31   | -0.10       |
|      | 4367 | 8      | 79663  | M         | 0.48  | 0.35  | -0.02  | 0.35   | -0.25  | -0.30       |
|      | 4367 | 9      | 79617  | M         | 0.40  | 0.39  | 0.39   | -0.27  | -0.04  | -0.23       |
|      | 4367 | 39     | 79585  | M         | 0.78  | 0.40  | -0.20  | 0.40   | -0.28  | -0.16       |
|      | 4367 | 40     | 79637  | M         | 0.55  | 0.34  | -0.16  | 0.34   | -0.25  | -0.06       |

Note: Values in bold are outside of the accepted range.

Table A45. Summary Item Statistics - Field Test Items

## Algebra - May

| Form | N     | Pos_No | ItemID | Item Type | P_Val       | R_ITT       | P_BIS1 | P_BIS2      | P_BIS3      | P_BIS4      |
|------|-------|--------|--------|-----------|-------------|-------------|--------|-------------|-------------|-------------|
| E    | 14855 | 4      | 79035  | M         | 0.37        | 0.21        | 0.21   | <b>0.01</b> | -0.13       | -0.18       |
|      | 14855 | 10     | 106626 | M         | 0.55        | 0.35        | -0.22  | -0.13       | 0.35        | -0.19       |
|      | 14855 | 12     | 79526  | J         | 0.49        | 0.73        |        |             |             |             |
|      | 14855 | 15     | 106637 | G         | 0.68        | 0.54        | 0.54   | -0.50       |             |             |
|      | 14855 | 24     | 79088  | M         | 0.47        | 0.35        | -0.03  | -0.25       | 0.35        | -0.15       |
|      | 14855 | 29     | 79147  | M         | 0.34        | 0.36        | -0.15  | -0.19       | -0.08       | 0.36        |
|      | 14855 | 30     | 106645 | J         | 0.50        | 0.72        |        |             |             |             |
|      | 14855 | 32     | 106654 | M         | 0.37        | 0.29        | 0.29   | -0.24       | <b>0.03</b> | -0.25       |
|      | 14855 | 34     | 106652 | M         | 0.43        | 0.39        | 0.39   | -0.16       | -0.25       | -0.11       |
|      | 14855 | 39     | 106614 | G         | 0.66        | 0.51        | 0.51   | -0.46       |             |             |
|      |       |        |        |           |             |             |        |             |             |             |
| F    | 10995 | 4      | 106655 | M         | 0.55        | 0.39        | -0.16  | 0.39        | -0.19       | -0.21       |
|      | 10995 | 10     | 106578 | M         | 0.34        | 0.16        | -0.07  | 0.16        | -0.20       | <b>0.03</b> |
|      | 10995 | 12     | 50382  | J         | 0.41        | 0.70        |        |             |             |             |
|      | 10995 | 15     | 79016  | G         | <b>0.17</b> | 0.33        | 0.33   | -0.20       |             |             |
|      | 10995 | 24     | 79116  | M         | 0.65        | 0.32        | -0.11  | 0.32        | -0.16       | -0.15       |
|      | 10995 | 29     | 106542 | M         | 0.76        | 0.46        | 0.46   | -0.30       | -0.28       | -0.14       |
|      | 10995 | 32     | 79076  | M         | 0.75        | 0.48        | -0.37  | -0.22       | -0.12       | 0.48        |
|      | 10995 | 34     | 106631 | M         | 0.52        | 0.33        | -0.21  | -0.20       | -0.07       | 0.33        |
|      | 10995 | 39     | 106550 | G         | 0.27        | 0.44        | 0.44   | -0.39       |             |             |
|      |       |        |        |           |             |             |        |             |             |             |
| G    | 10800 | 4      | 79021  | M         | 0.40        | 0.25        | 0.25   | -0.19       | -0.09       | -0.05       |
|      | 10800 | 10     | 106627 | M         | 0.48        | 0.29        | -0.24  | 0.29        | -0.13       | -0.01       |
|      | 10800 | 12     | 79127  | J         | 0.32        | 0.62        |        |             |             |             |
|      | 10800 | 15     | 106616 | G         | 0.72        | 0.54        | 0.54   | -0.49       |             |             |
|      | 10800 | 24     | 79034  | M         | 0.32        | <b>0.11</b> | 0.11   | <b>0.03</b> | -0.08       | -0.03       |
|      | 10800 | 29     | 79113  | M         | 0.62        | 0.23        | -0.05  | 0.23        | -0.05       | -0.24       |
|      | 10800 | 30     | 106581 | J         | 0.42        | 0.64        |        |             |             |             |
|      | 10800 | 32     | 79083  | M         | 0.56        | 0.40        | 0.40   | -0.23       | -0.20       | -0.12       |
|      | 10800 | 34     | 106656 | M         | 0.77        | 0.45        | -0.25  | 0.45        | -0.24       | -0.22       |
|      | 10800 | 39     | 106559 | G         | 0.53        | 0.59        | 0.59   | -0.48       |             |             |

Table A45. Summary Item Statistics - Field Test Items (Continued)

## Algebra - May

| Form | N     | Pos_No | ItemID | Item Type | P_Val       | R_ITT       | P_BIS1 | P_BIS2      | P_BIS3      | P_BIS4 |
|------|-------|--------|--------|-----------|-------------|-------------|--------|-------------|-------------|--------|
| H    | 10771 | 4      | 50372  | M         | 0.27        | <b>0.13</b> | 0.13   | -0.24       | <b>0.13</b> | -0.16  |
|      | 10771 | 10     | 106577 | M         | 0.66        | 0.41        | -0.29  | -0.15       | -0.16       | 0.41   |
|      | 10771 | 12     | 79120  | J         | 0.38        | 0.72        |        |             |             |        |
|      | 10771 | 15     | 79012  | G         | 0.70        | 0.50        | 0.50   | -0.46       |             |        |
|      | 10771 | 24     | 106603 | M         | 0.29        | 0.25        | 0.25   | 0.00        | -0.15       | -0.05  |
|      | 10771 | 29     | 79036  | M         | <b>0.20</b> | 0.20        | -0.13  | <b>0.05</b> | -0.16       | 0.20   |
|      | 10771 | 30     | 106583 | J         | 0.45        | 0.61        |        |             |             |        |
|      | 10771 | 32     | 79131  | M         | 0.52        | 0.43        | -0.25  | 0.43        | -0.18       | -0.15  |
|      | 10771 | 34     | 106604 | M         | 0.70        | 0.27        | -0.15  | 0.27        | -0.11       | -0.17  |
|      | 10771 | 39     | 79048  | G         | <b>0.18</b> | 0.38        | 0.38   | -0.20       |             |        |
|      |       |        |        |           |             |             |        |             |             |        |
| J    | 10553 | 4      | 106557 | M         | 0.44        | 0.38        | 0.38   | -0.19       | -0.19       | -0.09  |
|      | 10553 | 10     | 106628 | M         | 0.81        | 0.37        | -0.17  | 0.37        | -0.24       | -0.19  |
|      | 10553 | 12     | 79128  | J         | 0.33        | 0.63        |        |             |             |        |
|      | 10553 | 15     | 106540 | G         | 0.76        | 0.33        | 0.33   | -0.31       |             |        |
|      | 10553 | 24     | 106549 | M         | 0.50        | 0.52        | 0.52   | -0.15       | -0.21       | -0.27  |
|      | 10553 | 29     | 106658 | M         | 0.50        | 0.34        | 0.34   | -0.10       | -0.19       | -0.16  |
|      | 10553 | 30     | 106574 | J         | 0.37        | 0.63        |        |             |             |        |
|      | 10553 | 32     | 79072  | M         | 0.46        | 0.49        | -0.11  | -0.32       | -0.26       | 0.49   |
|      | 10553 | 34     | 79533  | M         | 0.65        | 0.39        | -0.20  | 0.39        | -0.23       | -0.17  |
|      | 10553 | 39     | 106624 | G         | 0.42        | 0.40        | 0.40   | -0.36       |             |        |
|      |       |        |        |           |             |             |        |             |             |        |
| K    | 10405 | 4      | 79018  | M         | 0.31        | 0.27        | -0.13  | -0.15       | 0.27        | -0.04  |
|      | 10405 | 10     | 106579 | M         | 0.60        | 0.41        | -0.21  | -0.25       | 0.41        | -0.14  |
|      | 10405 | 12     | 106551 | J         | 0.44        | 0.69        |        |             |             |        |
|      | 10405 | 15     | 106607 | G         | 0.66        | 0.32        | 0.32   | -0.29       |             |        |
|      | 10405 | 24     | 79534  | M         | 0.52        | 0.35        | -0.05  | 0.35        | -0.24       | -0.16  |
|      | 10405 | 29     | 106611 | M         | 0.60        | 0.46        | -0.11  | -0.14       | -0.38       | 0.46   |
|      | 10405 | 30     | 79130  | J         | 0.37        | 0.67        |        |             |             |        |
|      | 10405 | 32     | 106620 | M         | 0.79        | 0.50        | -0.38  | 0.50        | -0.27       | -0.14  |
|      | 10405 | 34     | 106659 | M         | 0.56        | 0.43        | -0.12  | -0.16       | 0.43        | -0.31  |
|      | 10405 | 39     | 106635 | G         | 0.50        | 0.50        | 0.50   | -0.44       |             |        |

Note: Values in bold are outside of the accepted range.



Table A46. Summary Item Statistics - Field Test Items  
Biology - May

| Form  | N     | Pos_No | ItemID | Item Type | P_Val       | R_ITT | P_BIS1      | P_BIS2      | P_BIS3 | P_BIS4 |
|-------|-------|--------|--------|-----------|-------------|-------|-------------|-------------|--------|--------|
| E     | 11307 | 7      | 108537 | M         | 0.66        | 0.36  | -0.21       | -0.22       | 0.36   | -0.16  |
|       | 11307 | 8      | 108521 | M         | 0.73        | 0.46  | -0.21       | 0.46        | -0.26  | -0.25  |
|       | 11307 | 24     | 108593 | M         | 0.37        | 0.29  | -0.06       | 0.29        | -0.16  | -0.17  |
|       | 11307 | 25     | 108592 | M         | 0.81        | 0.46  | -0.26       | -0.23       | -0.23  | 0.46   |
|       | 11307 | 26     | 108594 | M         | 0.31        | 0.25  | 0.25        | <b>0.01</b> | -0.15  | -0.14  |
|       | 11307 | 31     | 108514 | M         | 0.56        | 0.46  | 0.46        | -0.25       | -0.27  | -0.12  |
|       | 11307 | 32     | 108597 | M         | 0.62        | 0.41  | -0.22       | 0.41        | -0.26  | -0.15  |
|       | 11307 | 45     | 108564 | M         | 0.47        | 0.36  | -0.27       | -0.06       | -0.17  | 0.36   |
| EGJK  | 34892 | 46     | 108625 | M         | 0.38        | 0.41  | 0.41        | -0.18       | -0.15  | -0.17  |
|       | 11307 | 55     | 108557 | M         | 0.29        | 0.26  | 0.26        | -0.13       | -0.04  | -0.11  |
|       | 11307 | 56     | 108579 | M         | 0.87        | 0.38  | -0.20       | -0.22       | 0.38   | -0.18  |
|       | 11307 | 57     | 108656 | J         | <b>0.18</b> | 0.73  |             |             |        |        |
|       | 11307 | 61     | 108561 | M         | 0.78        | 0.49  | -0.24       | -0.23       | -0.29  | 0.49   |
|       | 11307 | 66     | 108502 | M         | 0.65        | 0.49  | 0.49        | -0.28       | -0.24  | -0.18  |
|       | 11307 | 67     | 108497 | M         | 0.50        | 0.30  | -0.11       | -0.09       | 0.30   | -0.20  |
|       |       |        |        |           |             |       |             |             |        |        |
| F     | 8105  | 7      | 108599 | M         | 0.66        | 0.42  | -0.31       | -0.15       | 0.42   | -0.14  |
|       | 8105  | 8      | 108545 | M         | 0.64        | 0.47  | -0.23       | -0.32       | -0.16  | 0.47   |
|       | 8105  | 12     | 108670 | J         | 0.31        | 0.68  |             |             |        |        |
|       | 8105  | 24     | 108549 | M         | 0.68        | 0.40  | -0.15       | -0.20       | 0.40   | -0.24  |
|       | 8105  | 25     | 108649 | M         | 0.78        | 0.48  | 0.48        | -0.26       | -0.30  | -0.19  |
|       | 8105  | 26     | 108653 | M         | 0.86        | 0.46  | 0.46        | -0.24       | -0.28  | -0.23  |
|       | 8105  | 31     | 108580 | M         | 0.43        | 0.26  | <b>0.01</b> | -0.19       | -0.15  | 0.26   |
|       | 8105  | 32     | 108552 | M         | 0.38        | 0.34  | 0.34        | -0.26       | -0.11  | -0.04  |
| FGHJK | 31690 | 45     | 108563 | M         | 0.70        | 0.40  | -0.15       | -0.23       | 0.40   | -0.22  |
|       | 8105  | 46     | 108566 | M         | 0.51        | 0.36  | -0.16       | 0.36        | -0.26  | -0.12  |
|       | 8105  | 55     | 108532 | M         | 0.59        | 0.49  | -0.19       | -0.28       | 0.49   | -0.20  |
|       | 8105  | 56     | 108531 | M         | 0.62        | 0.49  | -0.19       | 0.49        | -0.24  | -0.29  |
|       | 8105  | 57     | 108663 | J         | 0.30        | 0.73  |             |             |        |        |
|       | 8105  | 61     | 108577 | M         | 0.47        | 0.36  | -0.17       | 0.36        | -0.23  | -0.08  |
|       | 8105  | 66     | 108559 | M         | 0.43        | 0.37  | -0.22       | 0.37        | -0.30  | -0.01  |
|       | 8105  | 67     | 108540 | M         | 0.75        | 0.43  | -0.22       | -0.25       | 0.43   | -0.19  |

Table A46. Summary Item Statistics - Field Test Items (Continued)

## Biology - May

| Form | N     | Pos_No | ItemID | Item Type | P_Val       | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4 |
|------|-------|--------|--------|-----------|-------------|-------|--------|--------|--------|--------|
| G    | 8020  | 7      | 108633 | M         | 0.54        | 0.39  | 0.39   | -0.09  | -0.21  | -0.26  |
|      | 8020  | 8      | 108631 | M         | 0.68        | 0.44  | 0.44   | -0.26  | -0.23  | -0.17  |
| GJK  | 23585 | 12     | 108668 | J         | 0.26        | 0.77  |        |        |        |        |
|      | 8020  | 24     | 108501 | M         | 0.66        | 0.50  | -0.29  | -0.25  | 0.50   | -0.20  |
|      | 8020  | 25     | 108495 | M         | 0.88        | 0.40  | -0.22  | 0.40   | -0.25  | -0.18  |
|      | 8020  | 26     | 108499 | M         | 0.45        | 0.30  | 0.30   | -0.24  | -0.23  | -0.01  |
|      | 8020  | 31     | 108671 | M         | 0.68        | 0.35  | -0.16  | 0.35   | -0.14  | -0.21  |
|      | 8020  | 32     | 108569 | M         | <b>0.93</b> | 0.29  | 0.29   | -0.17  | -0.17  | -0.14  |
|      | 8020  | 55     | 108585 | M         | 0.34        | 0.30  | -0.08  | 0.30   | -0.19  | -0.09  |
|      | 8020  | 56     | 108488 | M         | 0.69        | 0.38  | -0.18  | 0.38   | -0.21  | -0.20  |
|      | 8020  | 57     | 108655 | J         | 0.30        | 0.64  |        |        |        |        |
|      | 8020  | 61     | 108542 | M         | 0.84        | 0.43  | 0.43   | -0.23  | -0.25  | -0.21  |
|      | 8020  | 66     | 108572 | M         | 0.74        | 0.33  | -0.24  | 0.33   | -0.16  | -0.11  |
|      | 8020  | 67     | 108517 | M         | 0.49        | 0.32  | -0.11  | 0.32   | -0.20  | -0.19  |
|      |       |        |        |           |             |       |        |        |        |        |
| H    | 7905  | 7      | 108673 | M         | 0.48        | 0.37  | -0.22  | -0.14  | -0.12  | 0.37   |
|      | 7905  | 8      | 108519 | M         | 0.78        | 0.33  | -0.19  | 0.33   | -0.16  | -0.18  |
|      | 7905  | 12     | 108662 | J         | 0.33        | 0.69  |        |        |        |        |
|      | 7905  | 24     | 108556 | M         | 0.55        | 0.51  | -0.17  | -0.29  | -0.24  | 0.51   |
|      | 7905  | 25     | 108630 | M         | 0.54        | 0.40  | -0.27  | -0.19  | -0.13  | 0.40   |
|      | 7905  | 26     | 108635 | M         | 0.58        | 0.45  | 0.45   | -0.20  | -0.27  | -0.18  |
|      | 7905  | 31     | 108527 | M         | 0.52        | 0.24  | 0.00   | 0.24   | -0.14  | -0.18  |
|      | 7905  | 32     | 108487 | M         | 0.67        | 0.38  | -0.18  | -0.20  | 0.38   | -0.20  |
|      | 7905  | 45     | 108567 | M         | 0.80        | 0.44  | -0.24  | -0.25  | 0.44   | -0.21  |
|      | 7905  | 46     | 108565 | M         | 0.64        | 0.35  | -0.08  | -0.21  | -0.23  | 0.35   |
|      | 7905  | 55     | 108560 | M         | 0.48        | 0.44  | -0.23  | 0.44   | -0.20  | -0.14  |
|      | 7905  | 56     | 108483 | M         | 0.66        | 0.37  | -0.25  | -0.19  | 0.37   | -0.15  |
|      | 7905  | 57     | 108664 | J         | 0.27        | 0.71  |        |        |        |        |
|      | 7905  | 61     | 108646 | M         | 0.62        | 0.42  | -0.21  | 0.42   | -0.22  | -0.17  |
|      | 7905  | 66     | 108641 | M         | 0.50        | 0.48  | 0.48   | -0.26  | -0.22  | -0.14  |
|      | 7905  | 67     | 108639 | M         | 0.56        | 0.47  | -0.23  | -0.24  | 0.47   | -0.19  |

Table A46. Summary Item Statistics - Field Test Items (Continued)

## Biology - May

| Form | N    | Pos_No | ItemID | Item Type | P_Val       | R_ITT        | P_BIS1 | P_BIS2      | P_BIS3 | P_BIS4      |
|------|------|--------|--------|-----------|-------------|--------------|--------|-------------|--------|-------------|
| J    | 7846 | 7      | 108645 | M         | 0.38        | 0.51         | -0.25  | 0.51        | -0.15  | -0.22       |
|      | 7846 | 8      | 108596 | M         | 0.70        | 0.41         | -0.33  | -0.21       | 0.41   | -0.09       |
|      | 7846 | 24     | 108677 | M         | 0.41        | 0.33         | 0.33   | -0.14       | -0.19  | -0.07       |
|      | 7846 | 25     | 108676 | M         | 0.45        | 0.24         | 0.24   | <b>0.05</b> | -0.17  | -0.26       |
|      | 7846 | 26     | 108675 | M         | 0.30        | 0.21         | 0.21   | <b>0.05</b> | -0.02  | -0.25       |
|      | 7846 | 31     | 108510 | M         | 0.72        | 0.31         | -0.23  | -0.13       | 0.31   | -0.09       |
|      | 7846 | 32     | 108650 | M         | 0.81        | 0.44         | -0.22  | 0.44        | -0.22  | -0.27       |
|      | 7846 | 55     | 108644 | M         | 0.77        | 0.44         | 0.44   | -0.23       | -0.23  | -0.22       |
|      | 7846 | 56     | 108672 | M         | 0.57        | 0.50         | -0.25  | -0.15       | -0.30  | 0.50        |
|      | 7846 | 57     | 108665 | J         | <b>0.23</b> | 0.66         |        |             |        |             |
|      | 7846 | 61     | 108486 | M         | 0.65        | 0.25         | 0.25   | -0.06       | -0.16  | -0.15       |
|      | 7846 | 66     | 108493 | M         | 0.62        | 0.40         | -0.22  | 0.40        | -0.23  | -0.17       |
|      | 7846 | 67     | 108494 | M         | 0.54        | 0.44         | -0.27  | -0.21       | 0.44   | -0.13       |
|      |      |        |        |           |             |              |        |             |        |             |
| K    | 7719 | 7      | 108507 | M         | 0.76        | 0.37         | -0.21  | -0.14       | -0.26  | 0.37        |
|      | 7719 | 8      | 108504 | M         | 0.38        | <b>-0.03</b> | -0.28  | <b>0.30</b> | -0.14  | -0.03       |
|      | 7719 | 24     | 108535 | M         | 0.47        | 0.30         | -0.24  | -0.18       | 0.30   | <b>0.01</b> |
|      | 7719 | 25     | 108534 | M         | 0.49        | 0.35         | -0.20  | 0.35        | -0.14  | -0.11       |
|      | 7719 | 26     | 108533 | M         | 0.45        | 0.31         | -0.23  | -0.03       | 0.31   | -0.21       |
|      | 7719 | 31     | 108523 | M         | 0.88        | 0.42         | -0.24  | -0.21       | 0.42   | -0.23       |
|      | 7719 | 32     | 108520 | M         | 0.52        | 0.35         | -0.14  | 0.35        | -0.20  | -0.15       |
|      | 7719 | 55     | 108528 | M         | 0.80        | 0.38         | -0.21  | 0.38        | -0.21  | -0.18       |
|      | 7719 | 56     | 108530 | M         | 0.81        | 0.38         | -0.20  | -0.25       | 0.38   | -0.13       |
|      | 7719 | 61     | 108562 | M         | 0.54        | 0.45         | 0.45   | -0.30       | -0.14  | -0.16       |
|      | 7719 | 66     | 108515 | M         | 0.52        | 0.45         | -0.18  | 0.45        | -0.15  | -0.26       |
|      | 7719 | 67     | 108546 | M         | 0.67        | 0.52         | -0.32  | 0.52        | -0.24  | -0.18       |

Note: Values in bold are outside of the accepted range.

Table A47. Summary Item Statistics - Field Test Items

English - May

| Form | N    | Pos_No | ItemID | Item Type | P_Val | R_ITT       | P_BIS1 | P_BIS2      | P_BIS3 | P_BIS4 |
|------|------|--------|--------|-----------|-------|-------------|--------|-------------|--------|--------|
| E    | 6799 | 14     | 130036 | M         | 0.43  | 0.31        | -0.05  | 0.31        | -0.20  | -0.11  |
|      | 6799 | 15     | 130032 | M         | 0.67  | 0.43        | -0.29  | -0.07       | -0.31  | 0.43   |
|      | 6799 | 16     | 130033 | M         | 0.65  | 0.34        | 0.34   | -0.05       | -0.30  | -0.16  |
|      | 6799 | 17     | 130034 | M         | 0.42  | 0.42        | 0.42   | -0.27       | -0.15  | -0.09  |
|      | 6799 | 18     | 130037 | M         | 0.62  | 0.43        | -0.13  | -0.30       | -0.17  | 0.43   |
|      | 6799 | 19     | 130035 | M         | 0.65  | 0.51        | -0.27  | -0.20       | -0.29  | 0.51   |
|      | 6799 | 38     | 108857 | M         | 0.58  | 0.43        | -0.23  | -0.18       | 0.43   | -0.21  |
|      | 6799 | 39     | 108862 | M         | 0.63  | 0.52        | 0.52   | -0.28       | -0.29  | -0.18  |
|      | 6799 | 40     | 108861 | M         | 0.41  | 0.32        | -0.07  | -0.13       | -0.17  | 0.32   |
|      | 6799 | 41     | 108864 | M         | 0.74  | 0.58        | -0.30  | 0.58        | -0.25  | -0.32  |
|      | 6799 | 42     | 108863 | M         | 0.55  | 0.34        | 0.34   | -0.14       | -0.13  | -0.20  |
|      | 6799 | 44     | 108868 | M         | 0.57  | 0.41        | -0.11  | -0.25       | 0.41   | -0.22  |
|      | 6799 | 45     | 108866 | J         | 0.47  | 0.70        |        |             |        |        |
|      | 6799 | 46     | 108870 | M         | 0.32  | <b>0.14</b> | -0.11  | <b>0.08</b> | 0.14   | -0.12  |
|      | 6799 | 47     | 108872 | M         | 0.50  | 0.25        | -0.10  | -0.13       | 0.25   | -0.07  |
|      | 6799 | 48     | 108873 | M         | 0.62  | 0.45        | 0.45   | -0.22       | -0.23  | -0.18  |
|      | 6799 | 66     | 130048 | M         | 0.63  | 0.47        | -0.18  | -0.23       | 0.47   | -0.22  |
|      | 6799 | 69     | 130052 | M         | 0.69  | 0.44        | -0.22  | -0.24       | 0.44   | -0.17  |
|      | 6799 | 70     | 130051 | M         | 0.65  | 0.50        | -0.24  | -0.30       | -0.20  | 0.50   |
|      | 6799 | 72     | 130053 | M         | 0.65  | 0.50        | 0.50   | -0.30       | -0.18  | -0.25  |
|      | 6799 | 73     | 130055 | M         | 0.49  | 0.37        | -0.11  | 0.37        | -0.15  | -0.21  |
|      | 6799 | 74     | 130057 | M         | 0.58  | 0.48        | 0.48   | -0.28       | -0.23  | -0.15  |
|      | 6799 | 75     | 130058 | M         | 0.67  | 0.42        | 0.42   | -0.23       | -0.21  | -0.16  |

Table A47. Summary Item Statistics - Field Test Items (Continued)

## English - May

| Form | N    | Pos_No | ItemID | Item Type | P_Val | R_ITT       | P_BIS1 | P_BIS2      | P_BIS3      | P_BIS4 |
|------|------|--------|--------|-----------|-------|-------------|--------|-------------|-------------|--------|
| F    | 7781 | 20     | 108761 | M         | 0.74  | 0.45        | -0.19  | -0.30       | 0.45        | -0.20  |
|      | 7781 | 21     | 108760 | M         | 0.39  | <b>0.06</b> | -0.26  | <b>0.22</b> | -0.24       | 0.06   |
|      | 7781 | 22     | 108762 | M         | 0.66  | 0.44        | 0.44   | -0.18       | -0.25       | -0.20  |
|      | 7781 | 35     | 130068 | M         | 0.77  | 0.50        | 0.50   | -0.31       | -0.23       | -0.24  |
|      | 7781 | 36     | 130198 | M         | 0.84  | 0.52        | -0.29  | -0.29       | 0.52        | -0.24  |
|      | 7781 | 37     | 130202 | M         | 0.63  | 0.40        | -0.10  | 0.40        | -0.26       | -0.26  |
|      | 7781 | 38     | 108844 | M         | 0.63  | 0.46        | -0.18  | 0.46        | -0.25       | -0.26  |
|      | 7781 | 39     | 108845 | M         | 0.30  | 0.29        | -0.16  | <b>0.06</b> | -0.21       | 0.29   |
|      | 7781 | 40     | 108847 | M         | 0.45  | 0.39        | -0.11  | 0.39        | -0.30       | -0.12  |
|      | 7781 | 41     | 108848 | M         | 0.64  | 0.49        | 0.49   | -0.16       | -0.33       | -0.25  |
|      | 7781 | 42     | 108849 | M         | 0.73  | 0.49        | -0.25  | -0.21       | 0.49        | -0.28  |
|      | 7781 | 43     | 108846 | M         | 0.67  | 0.50        | 0.50   | -0.34       | -0.23       | -0.16  |
|      | 7781 | 44     | 130212 | M         | 0.63  | 0.48        | -0.26  | 0.48        | -0.25       | -0.17  |
|      | 7781 | 45     | 130070 | M         | 0.66  | 0.45        | 0.45   | -0.24       | -0.24       | -0.18  |
|      | 7781 | 46     | 130071 | M         | 0.63  | 0.45        | -0.24  | 0.45        | -0.21       | -0.20  |
|      | 7781 | 47     | 130072 | M         | 0.49  | 0.41        | -0.21  | -0.11       | -0.29       | 0.41   |
|      | 7781 | 48     | 130073 | M         | 0.35  | 0.17        | -0.02  | 0.00        | 0.17        | -0.25  |
|      | 7781 | 53     | 130203 | M         | 0.40  | 0.17        | 0.17   | -0.29       | <b>0.07</b> | -0.14  |
|      | 7781 | 69     | 130077 | M         | 0.56  | 0.39        | -0.12  | -0.28       | 0.39        | -0.15  |
|      | 7781 | 70     | 130078 | M         | 0.57  | 0.48        | -0.27  | -0.16       | -0.29       | 0.48   |
|      | 7781 | 71     | 130207 | M         | 0.71  | 0.53        | 0.53   | -0.30       | -0.27       | -0.21  |
|      | 7781 | 72     | 130079 | M         | 0.59  | 0.54        | -0.28  | -0.22       | -0.26       | 0.54   |
|      | 7781 | 73     | 130208 | M         | 0.61  | 0.48        | -0.20  | -0.28       | 0.48        | -0.18  |
|      | 7781 | 74     | 130209 | M         | 0.60  | 0.53        | -0.27  | -0.21       | -0.26       | 0.53   |
|      | 7781 | 75     | 130210 | M         | 0.63  | 0.48        | -0.25  | -0.22       | 0.48        | -0.21  |
|      | 7781 | 76     | 130080 | J         | 0.41  | 0.70        |        |             |             |        |

Table A47. Summary Item Statistics - Field Test Items (Continued)

## English - May

| Form | N    | Pos_No | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2      | P_BIS3      | P_BIS4      |
|------|------|--------|--------|-----------|-------|-------|--------|-------------|-------------|-------------|
| G    | 5521 | 14     | 108912 | M         | 0.71  | 0.39  | -0.16  | -0.26       | -0.21       | 0.39        |
|      | 5521 | 16     | 108914 | M         | 0.48  | 0.28  | -0.12  | -0.12       | -0.11       | 0.28        |
|      | 5521 | 17     | 108913 | M         | 0.44  | 0.29  | -0.21  | -0.04       | 0.29        | -0.14       |
|      | 5521 | 18     | 130216 | M         | 0.51  | 0.31  | 0.31   | -0.22       | -0.11       | -0.10       |
|      | 5521 | 19     | 109738 | J         | 0.44  | 0.63  |        |             |             |             |
|      | 5521 | 20     | 108722 | M         | 0.56  | 0.44  | 0.44   | -0.16       | -0.28       | -0.16       |
|      | 5521 | 21     | 108723 | M         | 0.65  | 0.43  | 0.43   | -0.21       | -0.24       | -0.15       |
|      | 5521 | 22     | 108724 | M         | 0.65  | 0.41  | -0.18  | 0.41        | -0.14       | -0.26       |
|      | 5521 | 35     | 130217 | M         | 0.56  | 0.32  | -0.09  | 0.32        | -0.27       | -0.07       |
|      | 5521 | 36     | 130218 | M         | 0.45  | 0.36  | -0.24  | -0.12       | 0.36        | -0.11       |
|      | 5521 | 42     | 130223 | M         | 0.54  | 0.35  | 0.35   | -0.16       | -0.19       | -0.09       |
|      | 5521 | 43     | 130227 | M         | 0.62  | 0.43  | -0.12  | -0.15       | -0.33       | 0.43        |
|      | 5521 | 44     | 130224 | M         | 0.61  | 0.44  | -0.23  | 0.44        | -0.26       | -0.13       |
|      | 5521 | 53     | 96153  | M         | 0.45  | 0.25  | 0.25   | -0.16       | -0.27       | <b>0.05</b> |
|      | 5521 | 54     | 96154  | M         | 0.63  | 0.26  | -0.26  | 0.26        | <b>0.03</b> | -0.23       |
|      | 5521 | 56     | 130089 | M         | 0.66  | 0.36  | -0.14  | -0.13       | -0.25       | 0.36        |
|      | 5521 | 66     | 108884 | M         | 0.74  | 0.54  | 0.54   | -0.31       | -0.27       | -0.20       |
|      | 5521 | 67     | 108885 | M         | 0.44  | 0.28  | -0.28  | -0.06       | 0.28        | -0.08       |
|      | 5521 | 68     | 108886 | M         | 0.45  | 0.29  | -0.10  | 0.29        | -0.13       | -0.10       |
|      | 5521 | 70     | 108887 | M         | 0.43  | 0.19  | -0.24  | <b>0.05</b> | 0.19        | -0.10       |

Table A47. Summary Item Statistics - Field Test Items (Continued)

## English - May

| Form | N    | Pos_No | ItemID | Item Type | P_Val | R_ITT | P_BIS1      | P_BIS2      | P_BIS3 | P_BIS4 |
|------|------|--------|--------|-----------|-------|-------|-------------|-------------|--------|--------|
| H    | 5920 | 14     | 108712 | M         | 0.62  | 0.15  | 0.15        | <b>0.03</b> | -0.23  | -0.10  |
|      | 5920 | 15     | 108713 | M         | 0.70  | 0.38  | -0.16       | -0.26       | 0.38   | -0.12  |
|      | 5920 | 16     | 108714 | M         | 0.60  | 0.44  | -0.20       | -0.24       | 0.44   | -0.17  |
|      | 5920 | 17     | 109730 | M         | 0.65  | 0.41  | -0.25       | -0.14       | 0.41   | -0.26  |
|      | 5920 | 18     | 109731 | M         | 0.64  | 0.48  | -0.23       | -0.24       | -0.21  | 0.48   |
|      | 5920 | 37     | 130096 | M         | 0.77  | 0.49  | -0.23       | 0.49        | -0.27  | -0.25  |
|      | 5920 | 38     | 130097 | M         | 0.54  | 0.33  | 0.33        | -0.14       | -0.10  | -0.20  |
|      | 5920 | 39     | 130306 | M         | 0.80  | 0.49  | -0.25       | 0.49        | -0.25  | -0.25  |
|      | 5920 | 40     | 130098 | M         | 0.75  | 0.43  | 0.43        | -0.29       | -0.22  | -0.18  |
|      | 5920 | 41     | 130099 | M         | 0.64  | 0.35  | -0.23       | -0.26       | -0.09  | 0.35   |
|      | 5920 | 42     | 130100 | M         | 0.74  | 0.54  | 0.54        | -0.26       | -0.31  | -0.23  |
|      | 5920 | 43     | 130101 | M         | 0.78  | 0.46  | 0.46        | -0.31       | -0.24  | -0.15  |
|      | 5920 | 44     | 130237 | M         | 0.62  | 0.46  | -0.11       | -0.31       | -0.26  | 0.46   |
|      | 5920 | 45     | 130303 | M         | 0.78  | 0.48  | -0.19       | 0.48        | -0.29  | -0.27  |
|      | 5920 | 46     | 130307 | J         | 0.50  | 0.67  |             |             |        |        |
|      | 5920 | 47     | 130102 | M         | 0.62  | 0.48  | 0.48        | -0.27       | -0.26  | -0.16  |
|      | 5920 | 48     | 130103 | M         | 0.64  | 0.47  | -0.25       | -0.24       | 0.47   | -0.19  |
|      | 5920 | 49     | 130104 | M         | 0.65  | 0.49  | -0.28       | -0.25       | -0.17  | 0.49   |
|      | 5920 | 50     | 130105 | M         | 0.66  | 0.41  | -0.25       | -0.12       | 0.41   | -0.21  |
|      | 5920 | 68     | 130240 | M         | 0.72  | 0.53  | -0.24       | 0.53        | -0.28  | -0.24  |
|      | 5920 | 69     | 108763 | M         | 0.66  | 0.47  | -0.27       | -0.25       | 0.47   | -0.19  |
|      | 5920 | 70     | 108764 | M         | 0.29  | 0.24  | -0.17       | <b>0.05</b> | 0.24   | -0.16  |
|      | 5920 | 73     | 130241 | M         | 0.69  | 0.55  | -0.21       | -0.28       | -0.31  | 0.55   |
|      | 5920 | 74     | 130242 | M         | 0.62  | 0.42  | -0.17       | -0.24       | 0.42   | -0.16  |
|      | 5920 | 75     | 130338 | M         | 0.64  | 0.48  | -0.20       | 0.48        | -0.23  | -0.25  |
|      | 5920 | 76     | 130243 | M         | 0.44  | 0.21  | <b>0.01</b> | -0.19       | 0.21   | -0.09  |
|      | 5920 | 77     | 130244 | M         | 0.54  | 0.37  | -0.07       | 0.37        | -0.26  | -0.16  |

Table A47. Summary Item Statistics - Field Test Items (Continued)

## English - May

| Form | N    | Pos_No | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3      | P_BIS4 |
|------|------|--------|--------|-----------|-------|-------|--------|--------|-------------|--------|
| J    | 5378 | 17     | 108809 | M         | 0.44  | 0.34  | -0.30  | -0.05  | 0.34        | -0.18  |
|      | 5378 | 18     | 108805 | M         | 0.68  | 0.46  | 0.46   | -0.31  | -0.23       | -0.14  |
|      | 5378 | 22     | 130109 | M         | 0.62  | 0.43  | 0.43   | -0.20  | -0.24       | -0.15  |
|      | 5378 | 23     | 130110 | M         | 0.62  | 0.46  | 0.46   | -0.27  | -0.24       | -0.13  |
|      | 5378 | 24     | 130111 | M         | 0.54  | 0.35  | -0.21  | -0.05  | -0.27       | 0.35   |
|      | 5378 | 37     | 130113 | M         | 0.88  | 0.40  | 0.40   | -0.21  | -0.23       | -0.20  |
|      | 5378 | 38     | 130114 | M         | 0.69  | 0.39  | 0.39   | -0.25  | -0.15       | -0.21  |
|      | 5378 | 39     | 130115 | M         | 0.67  | 0.41  | 0.41   | -0.23  | -0.23       | -0.17  |
|      | 5378 | 40     | 108820 | M         | 0.76  | 0.39  | -0.12  | 0.39   | -0.27       | -0.22  |
|      | 5378 | 41     | 109744 | M         | 0.72  | 0.49  | -0.21  | -0.29  | -0.23       | 0.49   |
|      | 5378 | 42     | 108822 | M         | 0.51  | 0.45  | -0.27  | -0.13  | -0.28       | 0.45   |
|      | 5378 | 43     | 108823 | M         | 0.57  | 0.37  | -0.19  | -0.14  | 0.37        | -0.20  |
|      | 5378 | 44     | 108827 | M         | 0.76  | 0.42  | -0.22  | 0.42   | -0.25       | -0.16  |
|      | 5378 | 45     | 108824 | M         | 0.75  | 0.48  | -0.27  | -0.21  | -0.29       | 0.48   |
|      | 5378 | 46     | 108826 | M         | 0.28  | 0.20  | 0.20   | -0.05  | -0.08       | -0.06  |
|      | 5378 | 48     | 130139 | M         | 0.57  | 0.32  | -0.07  | -0.27  | 0.32        | -0.18  |
|      | 5378 | 51     | 130119 | M         | 0.38  | 0.21  | -0.13  | 0.21   | <b>0.01</b> | -0.14  |
|      | 5378 | 59     | 135488 | M         | 0.80  | 0.33  | 0.33   | -0.21  | -0.13       | -0.16  |
|      | 5378 | 69     | 130130 | M         | 0.51  | 0.43  | 0.43   | -0.28  | -0.29       | -0.09  |
|      | 5378 | 70     | 130132 | M         | 0.61  | 0.36  | 0.36   | -0.14  | -0.24       | -0.11  |
|      | 5378 | 71     | 130136 | M         | 0.75  | 0.47  | -0.23  | -0.23  | 0.47        | -0.24  |
|      | 5378 | 72     | 130133 | M         | 0.57  | 0.33  | -0.12  | -0.09  | -0.29       | 0.33   |
|      | 5378 | 73     | 130294 | M         | 0.78  | 0.45  | -0.27  | -0.25  | 0.45        | -0.17  |
|      | 5378 | 74     | 130293 | M         | 0.76  | 0.54  | -0.27  | -0.31  | 0.54        | -0.24  |
|      | 5378 | 75     | 130135 | M         | 0.47  | 0.40  | -0.14  | -0.27  | 0.40        | -0.13  |
|      | 5378 | 76     | 130137 | J         | 0.47  | 0.65  |        |        |             |        |



Table A47. Summary Item Statistics - Field Test Items (Continued)

## English - May

| Form | N    | Pos_No | ItemID | Item Type | P_Val       | R_ITT | P_BIS1 | P_BIS2      | P_BIS3 | P_BIS4      |
|------|------|--------|--------|-----------|-------------|-------|--------|-------------|--------|-------------|
| K    | 5357 | 4      | 130300 | M         | <b>0.93</b> | 0.37  | -0.19  | 0.37        | -0.22  | -0.22       |
|      | 5357 | 17     | 108704 | M         | 0.41        | 0.21  | 0.21   | -0.19       | -0.28  | <b>0.07</b> |
|      | 5357 | 21     | 130296 | M         | 0.64        | 0.45  | -0.25  | 0.45        | -0.24  | -0.14       |
|      | 5357 | 22     | 130297 | M         | 0.63        | 0.35  | 0.35   | -0.10       | -0.19  | -0.20       |
|      | 5357 | 23     | 130298 | M         | 0.71        | 0.41  | 0.41   | -0.20       | -0.20  | -0.21       |
|      | 5357 | 37     | 108788 | M         | 0.78        | 0.53  | -0.28  | 0.53        | -0.31  | -0.25       |
|      | 5357 | 38     | 108785 | M         | 0.65        | 0.43  | -0.17  | -0.27       | -0.24  | 0.43        |
|      | 5357 | 39     | 108786 | M         | 0.39        | 0.19  | -0.27  | <b>0.02</b> | 0.19   | -0.25       |
|      | 5357 | 40     | 108790 | M         | 0.69        | 0.49  | -0.20  | -0.29       | -0.25  | 0.49        |
|      | 5357 | 41     | 108787 | M         | 0.83        | 0.51  | 0.51   | -0.30       | -0.31  | -0.21       |
|      | 5357 | 42     | 130252 | M         | 0.42        | 0.28  | 0.28   | -0.22       | -0.16  | <b>0.01</b> |
|      | 5357 | 43     | 108789 | M         | 0.37        | 0.26  | -0.24  | -0.15       | 0.26   | <b>0.01</b> |
|      | 5357 | 45     | 108794 | J         | 0.49        | 0.70  |        |             |        |             |
|      | 5357 | 52     | 130148 | M         | 0.74        | 0.43  | 0.43   | -0.18       | -0.24  | -0.25       |
|      | 5357 | 63     | 130255 | M         | 0.83        | 0.48  | -0.27  | -0.27       | 0.48   | -0.20       |
|      | 5357 | 66     | 108811 | M         | 0.76        | 0.46  | -0.21  | -0.27       | 0.46   | -0.20       |
|      | 5357 | 67     | 108812 | M         | 0.53        | 0.41  | -0.17  | -0.19       | 0.41   | -0.16       |
|      | 5357 | 68     | 108813 | M         | 0.54        | 0.42  | -0.26  | 0.42        | -0.25  | -0.05       |
|      | 5357 | 69     | 108815 | M         | 0.57        | 0.35  | -0.28  | <b>0.02</b> | -0.28  | 0.35        |
|      | 5357 | 70     | 108817 | M         | 0.72        | 0.50  | -0.28  | 0.50        | -0.27  | -0.19       |
|      | 5357 | 71     | 108816 | M         | 0.59        | 0.39  | -0.20  | -0.29       | 0.39   | -0.10       |
|      | 5357 | 72     | 108814 | M         | 0.49        | 0.38  | -0.19  | -0.21       | 0.38   | -0.06       |
|      | 5357 | 73     | 108818 | M         | 0.63        | 0.49  | -0.27  | -0.13       | -0.32  | 0.49        |

Table A47. Summary Item Statistics - Field Test Items (Continued)

## English - May

| Form | N    | Pos_No | ItemID | Item Type | P_Val       | R_ITT       | P_BIS1 | P_BIS2      | P_BIS3 | P_BIS4 |
|------|------|--------|--------|-----------|-------------|-------------|--------|-------------|--------|--------|
| L    | 5259 | 14     | 108718 | M         | 0.82        | 0.44        | -0.25  | -0.25       | 0.44   | -0.22  |
|      | 5259 | 15     | 108717 | M         | 0.73        | 0.30        | 0.30   | -0.22       | -0.11  | -0.21  |
|      | 5259 | 16     | 108719 | M         | 0.63        | 0.38        | -0.19  | 0.38        | -0.29  | -0.14  |
|      | 5259 | 17     | 108716 | M         | 0.79        | 0.48        | -0.22  | -0.28       | -0.24  | 0.48   |
|      | 5259 | 18     | 108715 | M         | 0.68        | 0.36        | 0.36   | -0.21       | -0.22  | -0.10  |
|      | 5259 | 19     | 96136  | M         | 0.72        | 0.44        | 0.44   | -0.28       | -0.21  | -0.15  |
|      | 5259 | 24     | 96141  | M         | <b>0.14</b> | <b>0.09</b> | 0.09   | <b>0.22</b> | -0.21  | -0.20  |
|      | 5259 | 38     | 130155 | M         | 0.85        | 0.46        | -0.22  | -0.31       | 0.46   | -0.20  |
|      | 5259 | 39     | 130158 | M         | 0.73        | 0.38        | -0.22  | -0.22       | 0.38   | -0.15  |
|      | 5259 | 40     | 130159 | M         | 0.78        | 0.42        | -0.29  | -0.24       | 0.42   | -0.16  |
|      | 5259 | 41     | 130259 | M         | 0.82        | 0.38        | -0.24  | 0.38        | -0.21  | -0.16  |
|      | 5259 | 42     | 130156 | M         | 0.81        | 0.46        | -0.30  | -0.26       | -0.22  | 0.46   |
|      | 5259 | 43     | 130157 | M         | 0.57        | 0.43        | -0.22  | -0.29       | -0.18  | 0.43   |
|      | 5259 | 44     | 130160 | M         | 0.80        | 0.44        | -0.24  | 0.44        | -0.26  | -0.23  |
|      | 5259 | 45     | 130161 | J         | 0.52        | 0.70        |        |             |        |        |
|      | 5259 | 46     | 130162 | M         | 0.64        | 0.36        | 0.36   | -0.23       | -0.25  | -0.08  |
|      | 5259 | 47     | 130163 | M         | 0.55        | 0.39        | -0.22  | -0.24       | -0.16  | 0.39   |
|      | 5259 | 48     | 130164 | M         | 0.66        | 0.34        | 0.34   | -0.23       | -0.23  | -0.05  |
|      | 5259 | 66     | 130264 | M         | 0.77        | 0.51        | 0.51   | -0.25       | -0.23  | -0.29  |
|      | 5259 | 69     | 96387  | M         | 0.70        | 0.42        | -0.27  | -0.21       | 0.42   | -0.13  |
|      | 5259 | 70     | 130265 | M         | 0.47        | 0.28        | -0.17  | -0.05       | 0.28   | -0.13  |
|      | 5259 | 71     | 96227  | M         | 0.77        | 0.42        | -0.20  | 0.42        | -0.24  | -0.20  |
|      | 5259 | 72     | 96228  | M         | 0.69        | 0.48        | 0.48   | -0.24       | -0.21  | -0.24  |
|      | 5259 | 74     | 96230  | M         | 0.71        | 0.53        | -0.25  | -0.25       | -0.27  | 0.53   |
|      | 5259 | 75     | 130267 | M         | 0.44        | 0.38        | -0.15  | 0.38        | -0.22  | -0.08  |

Table A47. Summary Item Statistics - Field Test Items (Continued)

## English - May

| Form | N    | Pos_No | ItemID | Item Type | P_Val | R_ITT | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4      |
|------|------|--------|--------|-----------|-------|-------|--------|--------|--------|-------------|
| M    | 5221 | 16     | 108903 | M         | 0.89  | 0.49  | 0.49   | -0.26  | -0.33  | -0.21       |
|      | 5221 | 18     | 108905 | M         | 0.30  | 0.24  | -0.13  | -0.09  | -0.05  | 0.24        |
|      | 5221 | 22     | 130308 | M         | 0.68  | 0.42  | -0.25  | 0.42   | -0.23  | -0.16       |
|      | 5221 | 23     | 130271 | M         | 0.58  | 0.42  | -0.23  | -0.15  | 0.42   | -0.19       |
|      | 5221 | 24     | 130302 | M         | 0.81  | 0.43  | -0.26  | -0.24  | 0.43   | -0.20       |
|      | 5221 | 37     | 130165 | M         | 0.77  | 0.46  | -0.24  | -0.32  | 0.46   | -0.14       |
|      | 5221 | 38     | 130166 | M         | 0.76  | 0.41  | 0.41   | -0.23  | -0.29  | -0.12       |
|      | 5221 | 39     | 130167 | M         | 0.80  | 0.50  | -0.22  | -0.29  | -0.30  | 0.50        |
|      | 5221 | 40     | 130274 | M         | 0.82  | 0.44  | -0.28  | 0.44   | -0.28  | -0.15       |
|      | 5221 | 42     | 130168 | M         | 0.83  | 0.55  | -0.30  | -0.32  | 0.55   | -0.24       |
|      | 5221 | 43     | 109093 | M         | 0.38  | 0.18  | -0.14  | 0.18   | -0.03  | -0.03       |
|      | 5221 | 44     | 109094 | M         | 0.63  | 0.40  | -0.23  | -0.14  | -0.27  | 0.40        |
|      | 5221 | 45     | 109732 | M         | 0.52  | 0.29  | -0.28  | 0.29   | -0.03  | -0.17       |
|      | 5221 | 46     | 109095 | M         | 0.47  | 0.25  | -0.13  | 0.25   | -0.04  | -0.23       |
|      | 5221 | 47     | 109096 | M         | 0.60  | 0.46  | -0.24  | -0.22  | -0.20  | 0.46        |
|      | 5221 | 50     | 130172 | M         | 0.79  | 0.50  | -0.30  | -0.29  | 0.50   | -0.18       |
|      | 5221 | 67     | 108795 | M         | 0.47  | 0.19  | -0.12  | -0.02  | 0.19   | -0.12       |
|      | 5221 | 68     | 108796 | M         | 0.52  | 0.43  | -0.25  | -0.18  | 0.43   | -0.14       |
|      | 5221 | 69     | 108797 | M         | 0.33  | 0.19  | 0.19   | -0.13  | -0.15  | <b>0.08</b> |
|      | 5221 | 70     | 108799 | M         | 0.55  | 0.35  | 0.35   | -0.25  | -0.08  | -0.15       |
|      | 5221 | 71     | 108798 | M         | 0.64  | 0.44  | 0.44   | -0.23  | -0.30  | -0.11       |
|      | 5221 | 73     | 108801 | M         | 0.70  | 0.49  | 0.49   | -0.25  | -0.27  | -0.19       |
|      | 5221 | 74     | 135491 | M         | 0.48  | 0.34  | 0.34   | -0.17  | -0.28  | -0.02       |
|      | 5221 | 75     | 108803 | M         | 0.45  | 0.36  | -0.17  | -0.23  | -0.08  | 0.36        |
|      | 5221 | 76     | 108804 | J         | 0.34  | 0.66  |        |        |        |             |

Note: Values in bold are outside of the accepted range.

Table A48. Summary Item Statistics - Field Test Items

## Government - May

| Form | N     | Pos_No | ItemID | Item Type | P_Val | R_ITT       | P_BIS1 | P_BIS2 | P_BIS3 | P_BIS4      |
|------|-------|--------|--------|-----------|-------|-------------|--------|--------|--------|-------------|
| E    | 9814  | 5      | 108338 | M         | 0.64  | 0.59        | -0.17  | -0.25  | -0.44  | 0.59        |
|      | 9814  | 17     | 108377 | M         | 0.40  | <b>0.10</b> | 0.10   | -0.01  | -0.19  | <b>0.01</b> |
|      | 9814  | 18     | 108375 | M         | 0.56  | 0.49        | 0.49   | -0.21  | -0.26  | -0.22       |
|      | 9814  | 34     | 108394 | M         | 0.43  | 0.48        | 0.48   | -0.26  | -0.21  | -0.14       |
|      | 9814  | 41     | 108457 | M         | 0.53  | 0.49        | -0.22  | 0.49   | -0.27  | -0.18       |
|      |       |        |        |           |       |             |        |        |        |             |
| F    | 8824  | 5      | 108345 | M         | 0.44  | 0.33        | -0.20  | -0.06  | -0.17  | 0.33        |
|      | 8824  | 17     | 108367 | M         | 0.76  | 0.35        | -0.19  | -0.25  | -0.16  | 0.35        |
|      | 8824  | 18     | 108438 | M         | 0.53  | 0.29        | -0.16  | -0.13  | -0.14  | 0.29        |
|      | 8824  | 34     | 108477 | M         | 0.76  | 0.42        | -0.20  | -0.23  | -0.21  | 0.42        |
|      | 8824  | 41     | 108422 | M         | 0.52  | 0.49        | -0.25  | 0.49   | -0.23  | -0.19       |
|      |       |        |        |           |       |             |        |        |        |             |
| G    | 10719 | 5      | 79573  | M         | 0.54  | 0.54        | -0.22  | -0.25  | 0.54   | -0.30       |
|      | 10719 | 17     | 79623  | M         | 0.58  | 0.17        | -0.09  | 0.17   | -0.05  | -0.11       |
|      | 10719 | 18     | 108403 | M         | 0.66  | 0.38        | -0.25  | -0.18  | 0.38   | -0.16       |
|      | 10719 | 34     | 108428 | M         | 0.39  | 0.27        | 0.27   | -0.19  | 0.00   | -0.17       |
|      | 10719 | 41     | 108415 | M         | 0.57  | 0.39        | -0.11  | -0.16  | -0.27  | 0.39        |
|      | 8690  | 48     | 79538  | J         | 0.36  | 0.70        |        |        |        |             |
|      |       |        |        |           |       |             |        |        |        |             |
| H    | 8687  | 5      | 79564  | M         | 0.62  | 0.45        | -0.20  | -0.23  | 0.45   | -0.26       |
|      | 8687  | 17     | 108429 | M         | 0.83  | 0.43        | -0.16  | -0.24  | -0.28  | 0.43        |
|      | 8687  | 18     | 79654  | M         | 0.36  | 0.19        | -0.11  | 0.19   | -0.16  | <b>0.01</b> |
|      | 8687  | 34     | 108470 | M         | 0.60  | 0.27        | -0.19  | 0.27   | -0.20  | -0.08       |
|      | 8687  | 41     | 79640  | M         | 0.76  | 0.47        | -0.26  | -0.20  | -0.29  | 0.47        |
|      |       |        |        |           |       |             |        |        |        |             |
| J    | 8574  | 5      | 79747  | M         | 0.41  | 0.24        | -0.07  | 0.24   | -0.16  | -0.07       |
|      | 8574  | 17     | 65215  | M         | 0.75  | 0.38        | 0.38   | -0.17  | -0.27  | -0.15       |
|      | 8574  | 18     | 108468 | M         | 0.84  | 0.50        | -0.28  | 0.50   | -0.31  | -0.21       |
|      | 8574  | 34     | 108396 | M         | 0.66  | 0.49        | -0.23  | -0.19  | -0.28  | 0.49        |
|      | 8574  | 41     | 108473 | M         | 0.66  | 0.45        | -0.24  | -0.21  | 0.45   | -0.23       |
|      | 8574  | 48     | 108361 | J         | 0.39  | 0.74        |        |        |        |             |
|      |       |        |        |           |       |             |        |        |        |             |
| K    | 8443  | 5      | 79591  | M         | 0.50  | 0.40        | -0.03  | -0.12  | 0.40   | -0.35       |
|      | 8443  | 17     | 108445 | M         | 0.40  | 0.35        | 0.35   | -0.15  | -0.17  | -0.12       |
|      | 8443  | 18     | 108460 | M         | 0.73  | 0.21        | -0.07  | -0.22  | 0.21   | -0.04       |
|      | 8443  | 34     | 108475 | M         | 0.73  | 0.48        | -0.24  | 0.48   | -0.27  | -0.23       |
|      | 8443  | 41     | 108467 | M         | 0.65  | 0.46        | 0.46   | -0.23  | -0.28  | -0.17       |
|      | 8443  | 48     | 60421  | J         | 0.32  | 0.69        |        |        |        |             |

Note: Values in bold are outside of the accepted range.