Maryland High School Assessment and Modified High School Assessment 2013 Technical Report

Algebra/Data Analysis
Biology
English
Government

Educational Testing Service
April 2014

Foreword

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).

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CHAPTER I: HIGH SCHOOL ASSESSMENTS

Section 1. Introduction

The current Maryland High School Assessments (MD HSAs) consist of end-of-course tests in Algebra/Data Analysis, Biology, and English. Prior to the Summer 2011 administration, the HSAs included a test in Government. From Summer 2011 to October 2012, the Government test was excluded from the MD HSAs. Starting in January 2013, the Government test was re-introduced into the MD HSAs. The MD HSAs are referred to as "end-of-course" tests because students take each test as they complete the appropriate coursework. In addition, results from the Algebra/Data Analysis, Biology, and English administrations are used in the Maryland State Department of Education (MSDE) Adequate Yearly Progress (AYP) reports, required under the No Child Left Behind (NCLB) Act for the 2013 school year.

With the reinstatement of Government tests in January 2013, students entering 9th grade in the 2012-2013 school year or in a prior year (including students who entered 9th grade in 2011-2012, 2010-2011, or 2009-2010) have the option of earning a combined score of 1602 on all four MD HSAs or a combined score of 1208 on three MD HSAs (excluding Government) to be granted a Maryland High School Diploma.[1] Students entering 9th grade in 2013-14 and beyond will be required to pass all four HSAs, including Government, or obtain a combined score of 1602 to fulfill the graduation requirement.

All MD HSAs are comprised of selected-response (SR) items, which require students to choose between four short response options. In addition, Algebra/Data Analysis tests include items that require a student-produced response (SPR); students must grid in their responses on an answer document or key them in for the online version of the assessment. All MD HSA items are based on content outlined in Maryland's Core Learning Goals (CLGs).[2] The SR and SPR items are machine-scored. Since May 2009, the MD HSAs have been administered online as well as in paper-and-pencil format. Studies of the comparability of online and paper forms of the MD HSAs were conducted in 2009 and 2010. The 2009 report is provided in the 2009 HSA Technical Report in Appendix 1C. The 2010 results were provided to the MSDE (Educational Testing Service, 2010). Further mode comparability studies have not been conducted.

This report provides information about the October 2012 administration and the January, April, May, and Summer 2013 administrations. For the October 2012 administration, one form was administered. For the January 2013 administration, three forms were administered: two forms for the primary administration, and one form for the makeup administration. For the April 2013 administration, one form was administered. For the May 2013 administration, seven test forms were administered: five for the primary testing window (each has the same core set with different

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[1] More information on the testing requirement for graduation is available on the Maryland State Department of Education website at http://mdk12.org/assessments/high_school/index.html.

[2] The HSA Core Learning Goals documents can be found on the Maryland School Improvement website at http://www.mdk12.org/assessments/standards/9-12.html.

field test sets) and two for each of two makeup testing windows. For the Summer 2013 administration, two primary forms were administered: one for the first week of testing and one for the second week of testing.

Each test form consisted of operational and field test items. The operational items were used to produce student scores. Field test items were scored along with the operational items, but examinees' scores on these items were not included in the computation of their total test scores. For the January and May administrations, performance on the field test items was analyzed, and all flagged items were reviewed. Field test items that were approved by ETS content specialists and Maryland Department of Education and calibrated were then marked as available for use in the item bank. Items that were deemed unacceptable were marked as "Unavailable" and may be revised and field tested again in the future. With the exception of items selected for public release, the operational items that are returned to the item bank must remain unused for at least one year to minimize item exposure.

The item response model used to calibrate the items on the MD HSAs is the three-parameter logistic (3PL) model. This model is used to generate both total test scores and subscores using item-pattern (IP) scoring. Total test results in the scale score metric are reported to students. Subscores are not reported to students but are aggregated at the classroom level to provide teachers and administrators with additional information about student performance in each of the subscore categories.

Preequated item parameters are used to generate student scores. When preequated item parameters are used, the parameters are not estimated following an administration; instead, existing bank parameters are used to produce student scores. Using this approach, scores can be calculated and assigned to students immediately after their answer documents have been processed. (Prior to 2004, students' scores were based on item parameters estimated after each administration.)

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 [AERA], American Psychological Association [APA], and National Council on Measurement in Education [NCME] (1999).

The MD HSA chapter of this technical report consists of seven sections and two appendices.
- Section 1 provides an introduction to the MD HSA program.
- Section 2 describes the procedures used for test construction and administration.
- Section 3 discusses the validity of the MD HSAs.
- Section 4 delineates the scoring procedures and score types.
- Section 5 summarizes the results of the analyses of test reliability, decision consistency and decision accuracy.
- Section 6 provides summary statistics and descriptive information about student characteristics.
- Section 7 gives the results of the analysis of field test data, including classical item analysis, differential item functioning, and item calibration and scaling.

- Appendix 1A provides classical item statistics for each operational test item by form administered.
- Appendix 1B provides classical item statistics for each field test item administered.

Section 2. 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 (CLGs) and the 2013 form construction templates provided by MSDE. Areas that contained low item counts were given priority when determining which indicators were to be addressed by the item writers. After these areas with critical need were defined and addressed, any remaining items to be developed (as determined by the requirements set forth in the RFP) were distributed among the indicators in a fashion that would best ensure sufficient numbers of items for use in the construction of forms for future administrations.

Item Types

As noted in Section 1, two item types were included on the 2013 MD HSA tests. These item types include the following:

- Selected response (SR)—questions in multiple-choice format with four answer options;
- Student-produced response (SPR)—an item type used in Algebra only, for which the student works the problem and records the solution in an answer grid.

Table 2.1 shows how these item types and associated points were distributed by content area. Each SR and SPR item is worth one point.

Table 2.1 Number of Operational Items by Item Type for Each MD HSA Content Area

| Content Area | Operational Items by Item Type | | |
	SR	SPR	Total
Algebra	43	10	53
Biology	76	-	76
English	60	-	60
Government	82	-	82

Test Specifications and Design

MSDE predetermined the basic test design and provided it to ETS in the form of the content-specific "Test Specifications—Test Form Matrix" document. This basic test design document provides 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 ETS and MSDE content specialists. Construction of the forms was based on test blueprints approved by MSDE. Blueprints for each content area are presented in Tables 2.2 to 2.5.

Table 2.2 MD HSA Algebra Blueprint

	Number of Items		Total Points per Category
	SR (1 pt)	SPR (1 pt)	
Expectation 1.1 Analyzing Pattern and Functions	11	2	13
Expectation 1.2 Modeling Real-World Situations	13	4	17
Expectation 3.1 Collecting, Organizing and Analyzing Data	8	4	12
Expectation 3.2 Using Data to Make Predictions	11	0	11
Total	43	10	53

Note. Information on the referenced indicators can be found in the Maryland Core Learning Goals for Algebra, available on the Maryland School Improvement website at http://www.mdk12.org/assessments/standards/9-12.html.

Table 2.3 MD HSA Biology Blueprint

	Number of Items	Total Points per Category
Goal 1 Skills and Processes of Biology	16	16
Expectation 3.1 Structure and Function of Biological Molecules	12	12
Expectation 3.2 Structure and Function of Cells and Organisms	13	13
Expectation 3.3 Inheritance of Traits	13	13
Expectation 3.4 Mechanism of Evolutionary Change	9	9
Expectation 3.5 Interdependence of Organisms in the Biosphere	13	13
Total	76	76

Note. Information on the referenced indicators can be found in the Maryland Core Learning Goals for Biology, available on the Maryland School Improvement website at http://www.mdk12.org/assessments/standards/9-12.html.

Table 2.4 MD HSA English Blueprint

	Number of Items	Total Points per Category
1: Reading and Literature: Comprehension and Interpretation (RC) Includes indicators 1.1.1, 1.1.2, 1.1.3, 1.2.1, 1.3.3, 3.2.2	16	16
2: Reading and Literature: Making Connections and Evaluation (RE) Includes indicators 1.1.4, 1.2.2, 1.2.3, 1.2.4, 1.2.5, 1.3.5, 4.2.1	14	14
3: Writing: Composing (WC) Includes indicators 2.2.1, 2.2.2, 2.2.3, 2.2.5, 2.3.1, 2.3.3, 4.3.1	16	16
4: Writing: Language Usage and Conventions (WL) Includes indicators 3.1.3, 3.1.4, 3.1.6, 3.1.8, 3.3.1, 3.3.2	14	14
Total	60	60

Note. Information on the referenced indicators can be found in the Maryland Core Learning Goals for English, available on the Maryland School Improvement website at http://www.mdk12.org/assessments/standards/9-12.html.

Table 2.5 MD HSA Government Blueprint

	Number of Items	Total Points per Category
Expectation1.1 U.S. Government Structure, Functions and Principles	23	23
Expectation 1.2 Protecting Rights and Maintaining Order	21	21
Goal 2 Systems of Government and U.S. Foreign Policy	12	12
Goal 3 Impact of Geography on Governmental Policy	11	11
Goal 4 Economic Principles, Institutions and Processes	15	15
Total	82	82

Note. Information on the referenced indicators can be found in the Maryland Core Learning Goals for English, available on the Maryland School Improvement website at http://www.mdk12.org/assessments/standards/9-12.html.

Item Writing

Item writers were employed to develop high-quality test items that were aligned with the Core Learning Goals. Nearly all item writers were Maryland educators. Only a small portion of the total number of items written was developed by ETS content specialists. Item writers were selected on the basis of their depth of content knowledge and familiarity with the MD HSA program. Many were experienced MD HSA item writers.

Item writers were trained on general item writing techniques as well as writing guidelines that are specific to the MD HSA program. Approximately one month after the initial item writer training, a follow-up training session was provided. The session was designed to evaluate how well the item writers' writing skills had developed to that point, to facilitate peer review of items, 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. Items that were accepted proceeded to the item review and revision process.

Item Review and Revision

All items underwent a series of editorial reviews in accordance with the following procedures:
- Items were edited according to standard rules developed in conjunction with MSDE.
- Items were reviewed for accuracy, organization, comprehension, style, usage, consistency, and fairness/sensitivity.
- Item content was reviewed to establish whether the item measured the intended Goal-Expectation-Indicator-Assessment Limit, with the Goal being the broadest category and Assessment Limit being the narrowest parameter of content being assessed.
- Copyright and/or trademark permissions were verified for any materials requiring permissions, for both field test and operational material.
- Internal reviews were conducted and historical records were established for all version changes.

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

MSDE content specialists performed a review of the items and provided feedback to ETS content specialists. The edits were incorporated into the items. MSDE and ETS content specialists then met to conduct a side-by-side review of the items. Any further edits to the items were made. Finally, the items were prepared for review by the Content and Bias/Sensitivity Review Committees.

The committees, selected by MSDE, were composed of diverse groups of Maryland educators. The committees reviewed each item to ensure that the content (a) accurately reflected what was taught in Maryland schools; (b) correctly matched the intended CLG indicator; and (c) did not unfairly favor or disadvantage an individual or group. A total of 1,121 items were taken to the 2012 summer meetings for all content areas. Of these items 43 (0.04%) were rejected by the Bias/Sensitivity Review Committee, while 70 (0.06 %) items were accepted with edits. In total the two committees accepted a total of 1,108 items of the 1,121 items taken to committee.

Upon completion of this final round of reviews, MSDE and ETS content specialists conducted another side-by-side meeting to evaluate the reviews and to reconcile the results of the various groups. ETS then made the requested edits to the items and/or revisions to the accompanying graphics. The items that survived this process were eligible for placement in the field test sections of the test forms.

Testing Accommodations

A number of alternate test formats are available to MD HSA examinees, including large-print, braille, online audio, and Kurzweil versions of the MD HSA developed for each content area. All four alternate test formats are available at each administration. Data from these alternate formats are included in the psychometric analyses.

Test Specifications

All 2013 test forms were constructed using items from the Maryland item bank. The pool of items available for use in the construction of the 2013 forms included all items that had been administered, calibrated, and linked to the operational scale. For Algebra, Biology, and Government, the MD HSA operational scale was defined in 2003 and included items administered in 2002 and 2003. For English, the scale was redefined in 2005 when the English test was updated to become an end-of-course assessment for English II. Items flagged for poor fit were excluded from the item pool. Items flagged for substantial differential item functioning (DIF) against one of the focal groups are marked as such in the item bank and they are not used unless required to fulfill content specifications, and then, only after review and approval by MSDE. (See Section 7 for a more detailed account of these analyses and flagging criteria.)

Each test form was constructed to meet specific test blueprint specifications. Tables 2.2 through 2.5 indicate the distribution of items within each reporting category by item type and the number of score points associated with each item type.

Item Selection and Form Design

To conserve the item pool, when multiple forms were included in an administration, each test form consisted of a common set of operational items shared across forms within an administration, as well as a unique set of items. Within these administrations (i.e., January, May, and Summer), approximately 60 percent of the operational items in each form were common across the test sections. The remaining items in the forms consisted of combinations of items that varied across forms. The guidelines used to construct the forms are provided in Tables 2.6 to 2.10. The exact composition of the forms varied slightly based on available items in the pool.

Table 2.6 Form Construction Specifications for the MD HSA October 2012 Administration

Primary Week Form R
Operational and Field Test items—
Reuse of intact form from a prior administration

Table 2.7 Form Construction Specifications for the MD HSA January 2013 Administration

Primary Week Form A	Primary Week Form B	Makeup 1 Form C
Common set—60%	Same as Form A	Common set—60%
Unique items—40%	Same as Form A	Unique items—40%
Field Test Section—Unique items	Field Test Section—Unique items	Field Test Section—Reuse of field test set from Form A or B, or a combination of both

Table 2.8 Form Construction Specifications for the MD HSA April 2013 Administration

Form S
Operational and Field Test items—
Reuse of intact form from a prior administration

Table 2.9 Form Construction Specifications for the MD HSA May 2013 Administration

Primary Week Forms D–N	Makeup 1 Form X	Makeup 2 Form Y
Common Set—60%	Common Set—60%	Common Set—60%
Unique Items—40%	Half of items from primary week's 40% unique items—20%	Half of items from primary week's 40% unique items—20%
	Unique items—20%	Unique items—20%
Field Test Section—Unique sets of items for Forms D–N	Field Test Section—Reuse of one or a combination of the field test sets used in forms D–N, with a preference for form D; however, the actual selection of field test items was determined by the constraints imposed by the operational items	Field Test Section—Reuse of one or a combination of the field test sets used in forms D-N, with a preference of using the same set used for form X; however, the actual selection of field test items was determined by the constraints imposed by the operational items

Table 2.10 Form Construction Specifications for the MD HSA Summer 2013 Administration

Primary Week 1 Form P	Primary Week 2 Form Q
Common Set—60%	Common Set—60%
Unique items—40%	Unique items—40%
Field Test Section—Reuse of prior administration field test set	Field Test Section— Reuse of prior administration field test set

In addition to the operational items, embedded field test items were included with each version of the test form, resulting in multiple versions of a test form containing different sets of field test items. The percentage of field test items per form varied by content area, as shown in Table 2.11.

Table 2.11 Number of Operational (OP) and Field Test (FT) Items by MD HSA Content Area

Content Area	OP Items	FT Items	% FT Items
Algebra	53	16	23%
Biology	76	23	23%
English	60	38	39%
Government	82	25	23%

Items being field tested were primarily newly written items, with a small number of previously administered items that had been revised due to content concerns or problematic item statistics. Items with problematic statistics were ones that were judged to be acceptable from a content perspective but had one or more of the following statistical characteristics: p-values less than 0.10; item-total correlations of less than 0.15; very high omit rates (5% or more); or SR items with a positive point-biserial correlation for one or more distractors. For administrations in which there was more than one primary form available at the same time (January and May), the forms were spiraled at the student level. Spiraling at the student level means that multiple forms of the test were packaged in order (e.g., D, E, F, etc.) and distributed to students according to this order. Spiraling at the student level helps ensure that all forms are randomly distributed throughout the state.

Forms were constructed using the test construction software associated with the customer item bank. The goal was to match the test characteristic curves (TCCs) and the conditional standard error of measurement (CSEM) curves with the "target" form defined as the base form used to set the operational scale. For Algebra, Biology, and Government, the base forms were originally developed in 2003; for English the base form was originally developed in 2005. These base forms contained constructed response (CR) items. However, in 2009, CR items were discontinued on the MD HSAs. Because of this change in test design, the target TCCs for the HSAs were revised so that they were no longer influenced by the characteristics of CR items. (Refer to ETS memorandum: *Considerations for Setting New Target Test Characteristic Curves for the Maryland High School Assessments (HSAs)*, (Educational Testing Service, 2009) for details on how new target TCCs were created.)

The following general steps were completed during the test construction process:

1. For each administration, all forms were constructed simultaneously in order to provide the best opportunity to construct parallel forms.
2. Items that matched the test blueprint were selected to match the target TCCs and CSEMs.
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[3] or clanging.[4]

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[3] 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] Clanging occurs when an identical or similar word(s) appears in both the item stem and one or more item distractors. Also, if two or more items that are near each other share common key words, even if the item content does not clue, the items are said to clang because the interpretation of the word in one item can affect the interpretation of another item.

4. After the operational items were selected for the test forms, the field test sets were constructed. Field test sets consisted of SR items in all content areas as well as SPR items for Algebra only. While the field test sets were not constructed to meet any psychometric criteria, they were constructed to meet content criteria. For Algebra, Biology, and Government, the field test sets were estimated to be able to be completed by students in approximately 30-35 minutes. For English, the field test sets were estimated to be able to be completed by students in approximately 60 minutes due to the additional time required to read the passages and stimuli. The field test items were embedded in the test according to a variety of content and template criteria, including, but not limited to, coverage of the reporting categories and assessment limits, cognitive balance, key balance/distribution, and clueing/clanging within the field test set and among the surrounding operational items.

Figures 2.1 to 2.8 show the plots of the TCCs and CSEMs for the target form and forms developed for each content area. It is important to note that the TCCs and CSEMs shown in the plots are based on preequated item parameters and therefore are curves calculated prior to administration of the tests. In general, the TCCs and CSEMs were similar to the target curves. The TCC plots indicate that all forms for each content area were within or very close to the acceptable range of the target curve for the full range of scale score values. Where forms varied in difficulty, differences between forms were typically less than 5 percent of the total raw score across the score range, especially in the range of the cut scores. Where forms had differences slightly greater than 5 percent, these larger differences were typically seen at the very low end of the scale score range and at the high end of the scale. As expected, the CSEM plots indicate that the CSEMs for each content area were lowest in the middle range of scale scores, where the majority of student scores are located. (Please refer to Figures 6.1 to 6.4 for histograms of student performance.)
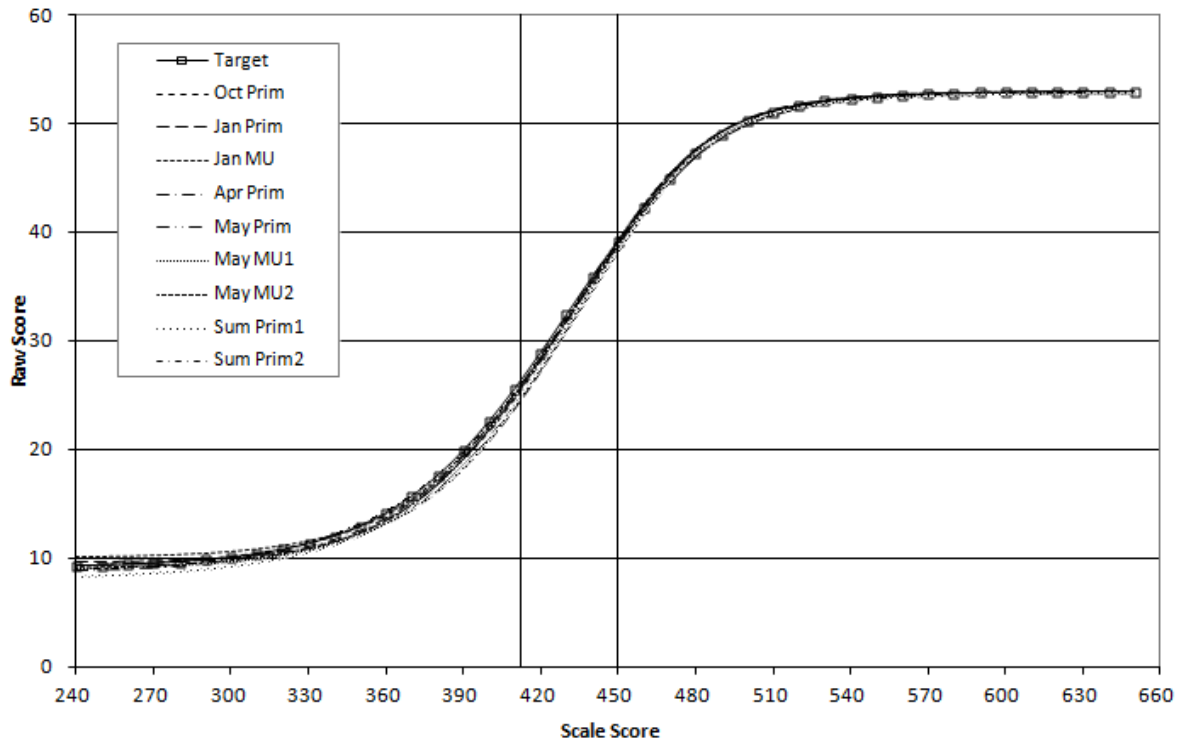
Note: Maximum possible raw score is 53.

Figure 2.1 Test Characteristic Curves for the MD HSA 2013 Algebra Forms
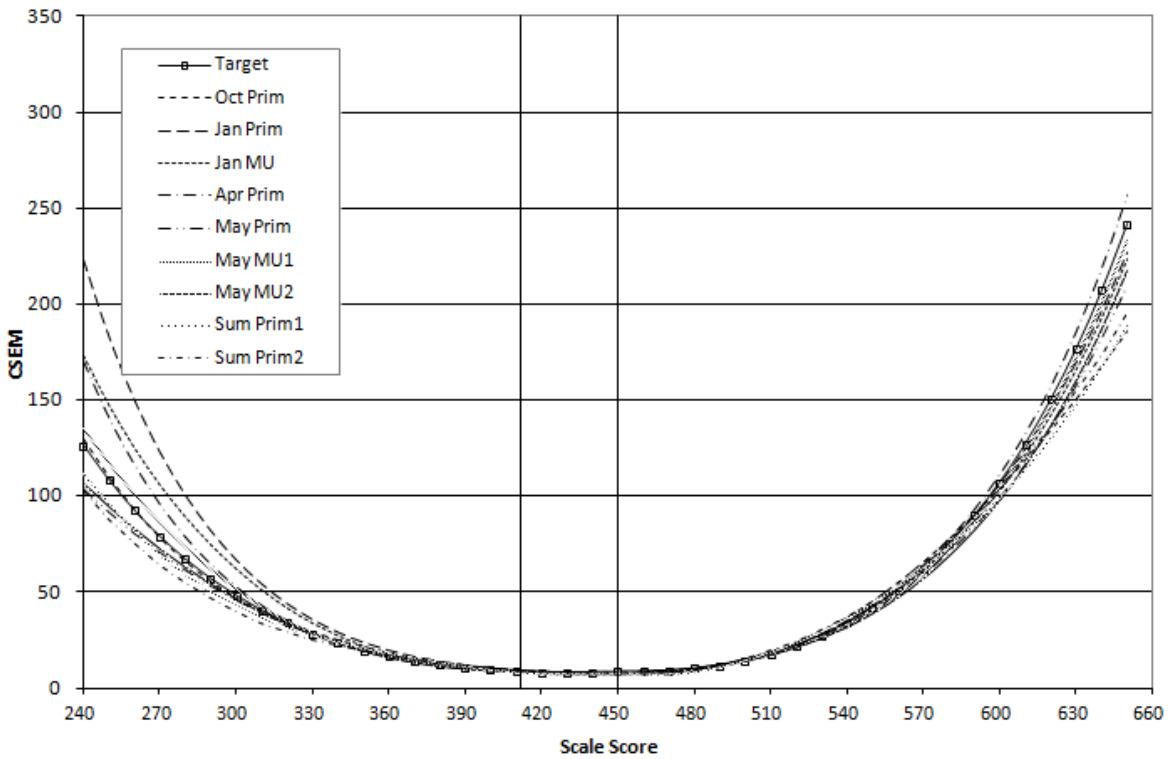
Figure 2.2 Conditional Standard Error of Measurement for the MD HSA 2013 Algebra Forms

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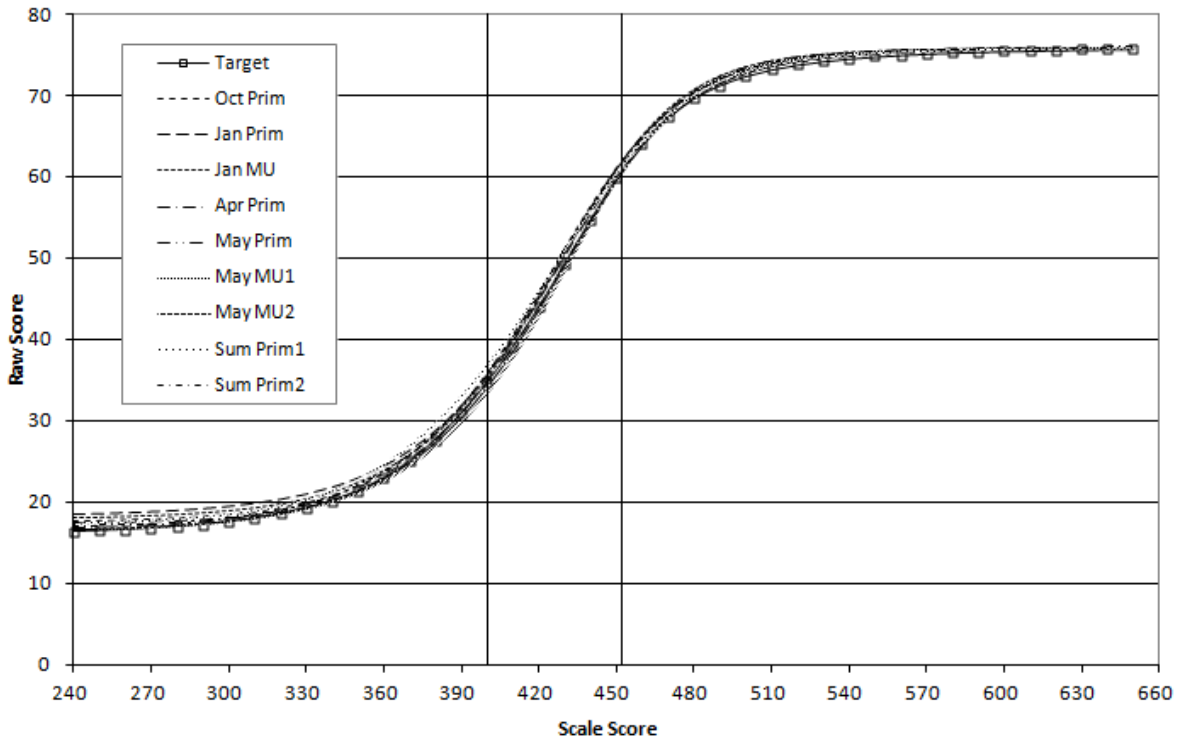
Note: Maximum possible raw score is 76.

Figure 2.3 Test Characteristic Curves for the MD HSA 2013 Biology Forms
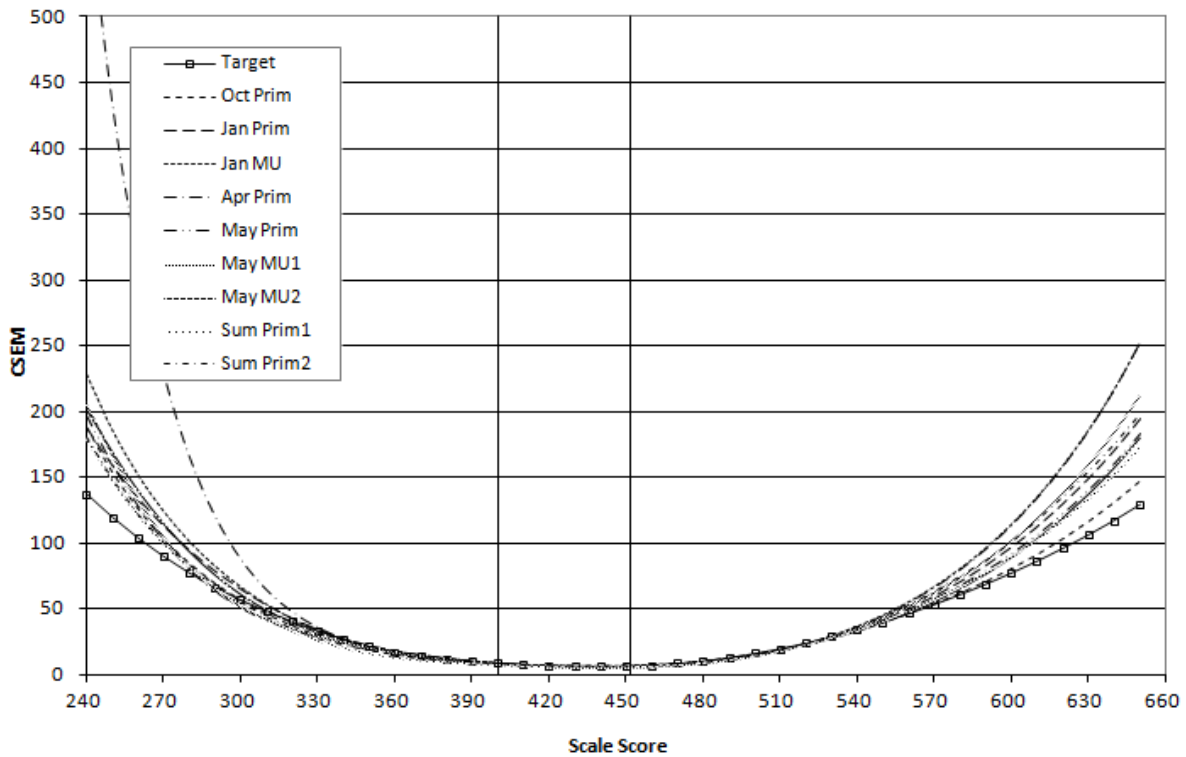
Figure 2.4 Conditional Standard Error Measurement for the MD HSA 2013 Biology Forms
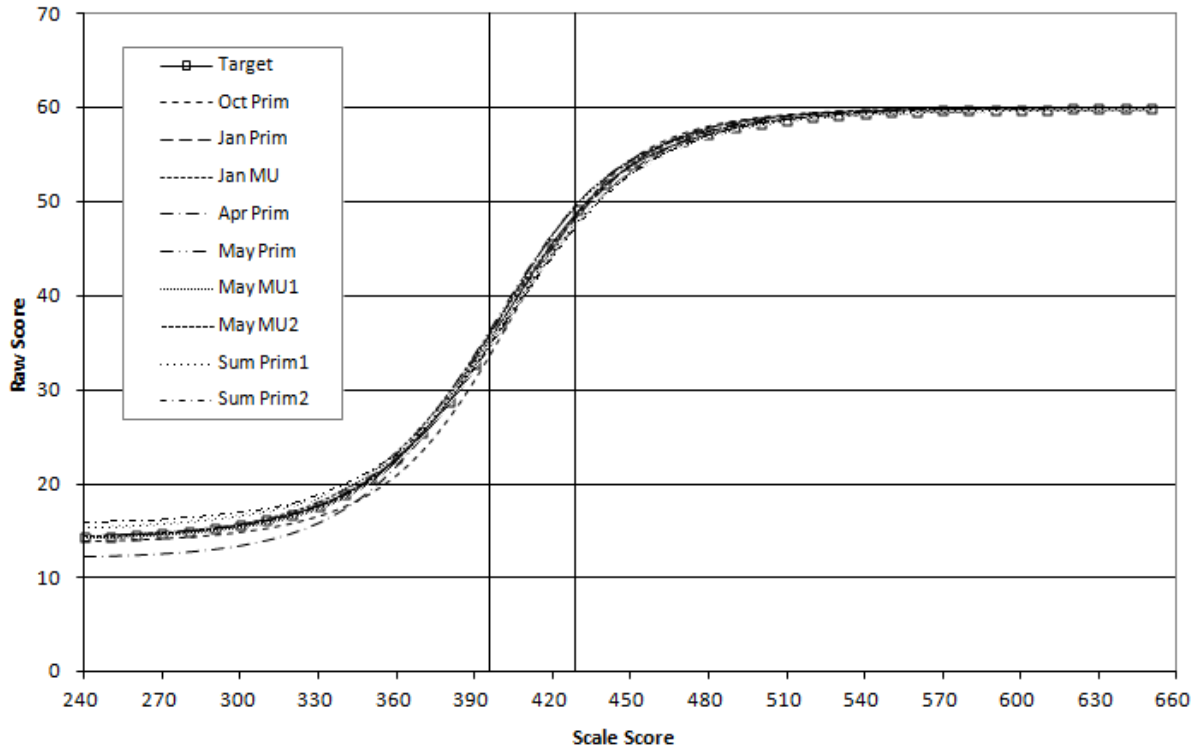
Note: Maximum possible raw score is 60.

Figure 2.5 Test Characteristic Curves for the MD HSA 2013 English Forms
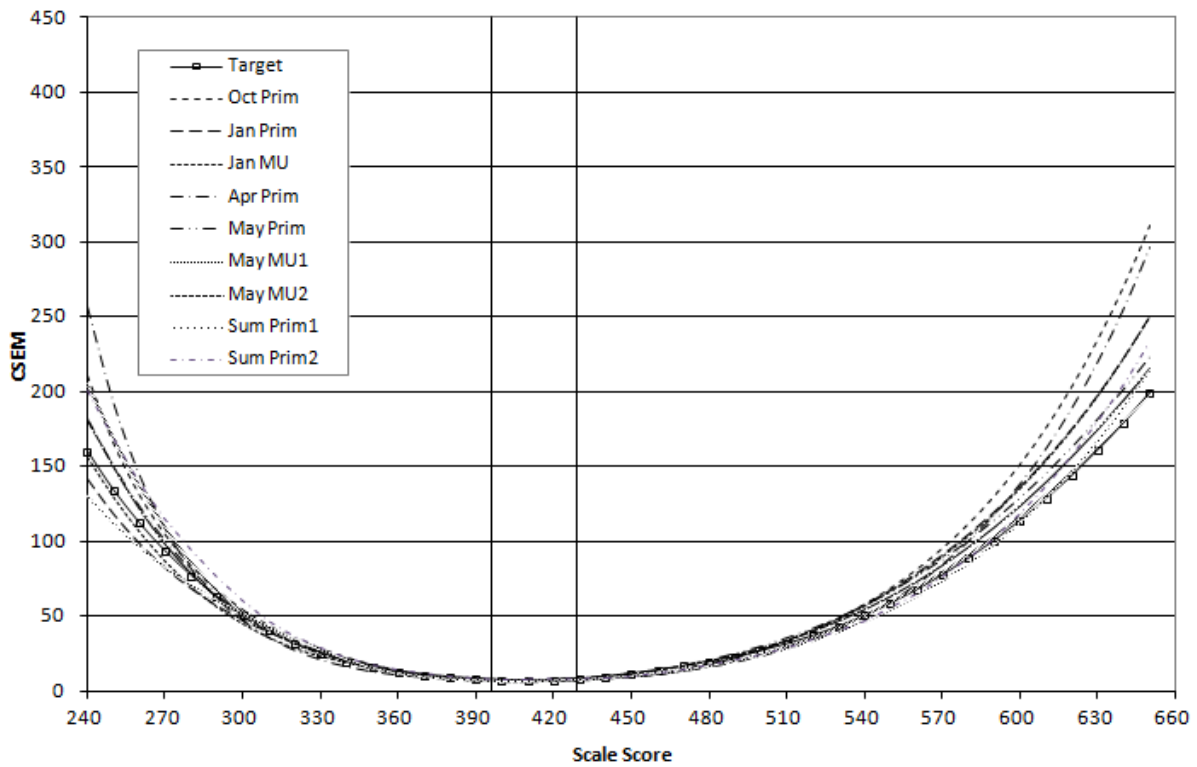
Figure 2.6 Conditional Standard Error of Measurement for the MD HSA 2013 English Forms

25
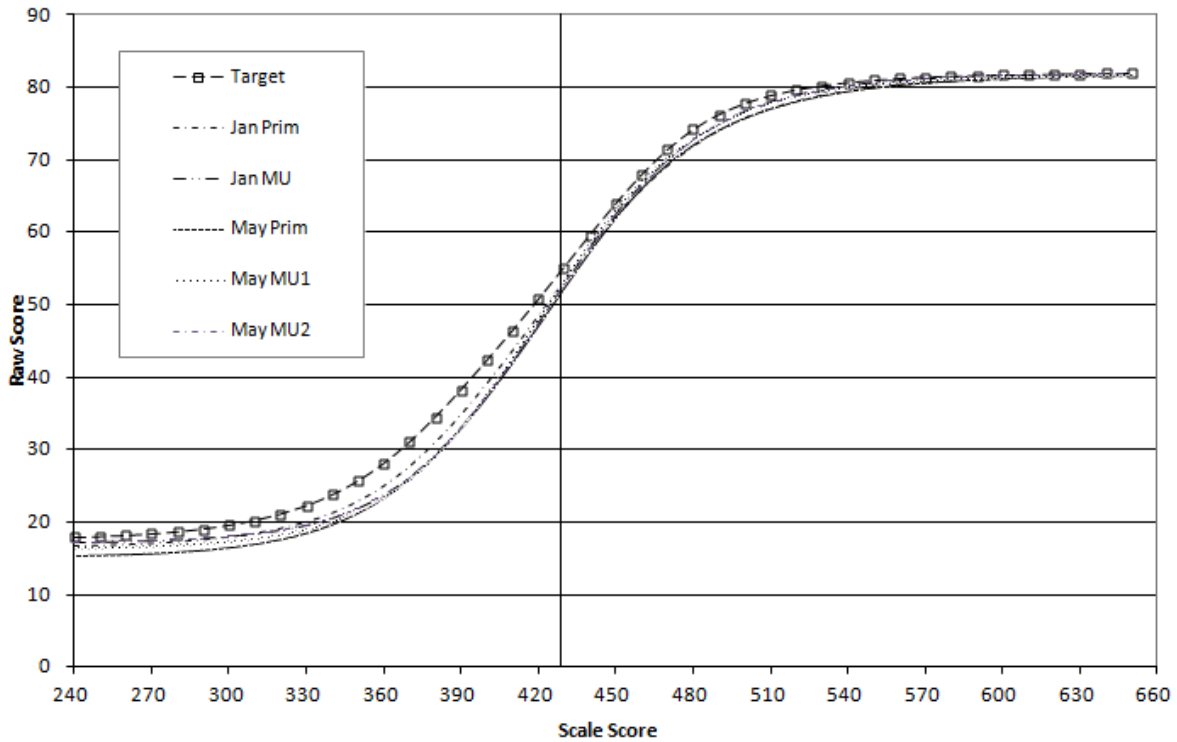
Note: Maximum possible raw score is 82.

Figure 2.7 Test Characteristic Curves for the MD HSA 2013 Government Forms
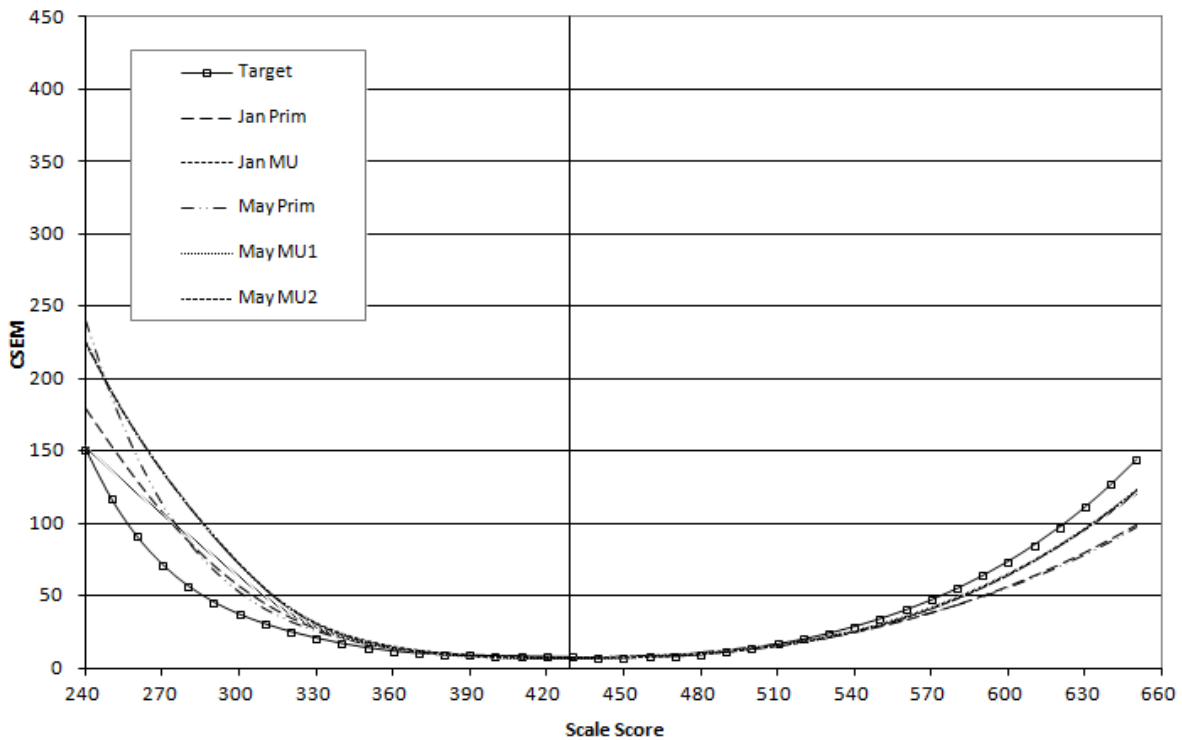
Figure 2.8 Conditional Standard Error of Measurement for the MD HSA 2013 Government Forms

Test Administration

For all MD HSA tests administered in 2013, both paper-and-pencil and online versions were available.

For all administrations, paper-and-pencil primary forms were given during the first week of testing. For the January and May administrations, Makeup Form 1 was offered during the second week. For the May administration only, Makeup Form 2 was administered in the third week of testing.

For the online versions in all administrations, the primary and makeup forms were spiraled equally throughout the testing window. In October, only one form was administered. In January, the two primary forms and one makeup form were spiraled over the two-week testing window. In April, only one form was administered. In May, the five primary and two makeup forms were spiraled over the three-week testing window. In the Summer administration, the two primary forms were spiraled over the two-week testing window. All forms administered without extended time accommodations had timing limits indicated in Table 2.12.

Table 2.12 Test Timing Schedule in Minutes by MD HSA Content Area

Content Area	Session One	Break	Session Two	Break	Session Three
Algebra	50	5	50	5	50
Biology	45	5	45	5	45
English	50	5	55	5	50
Government	45	5	45	5	45

Section 3. Validity

Validity is one of the most important attributes of assessment quality and is a fundamental consideration when tests are developed and evaluated (AERA, APA, & NCME, 1999; Messick, 1989). Validity refers to the degree to which logical, empirical, and judgmental evidence supports each proposed interpretation or use of a set of scores. Validity is not based on a single study or type of study but is an ongoing process of gathering evidence to support the interpretation or use of the resulting test scores. The process begins with the test design and continues throughout the entire assessment process, including content specifications, item development, psychometric quality, and inferences made from the test results.

Students' scores on an MD HSA are inferred to reflect students' level of knowledge and skills in a content area. The scores are used to classify students in terms of their level of proficiency using cut scores established by the state.

Evidence Based on Analyses of Test Content

The MD HSAs are referred to as end-of-course tests because students take each test as they complete the appropriate coursework. Consequently, items are developed to measure the knowledge and skills expected of students following completion of coursework. As discussed in Section 2, the development of test content for each MD HSA is overseen by a content expert who has a depth of knowledge and teaching experience related to the course in which the MD HSA is to be administered. Appropriate content leads who have similar qualifications review the test development work of these individuals.

Evidence based on analyses of test content includes logical analyses that determine the degree to which the items in a test represent the content domain that the test is intended to measure (AERA, APA, & NCME, 1999, p. 11). The test development process for the MD HSAs provides numerous opportunities for the MSDE to review test content and make changes to ensure that the items measure the knowledge and skills of Maryland students according to course standards. Every item that is created is referenced to a particular instructional standard (i.e., goal, expectation, or indicator). During the internal ETS development process, the specific reference is confirmed or changed to reflect changes to the item. When the item is sent to a committee of Maryland educators for a content review, the members of the committee make independent judgments about the match of the item content to the standard it is intended to measure and evaluate the appropriateness for the age of students being tested. These judgments are tabulated and reviewed by the content experts, who use the information to decide which items will advance to the field test stage of development.

Evidence Based on Analyses of Internal Test Structure

Analyses of the internal structure of a test typically involve studies of the relationship among test items and/or test components in the interest of establishing the degree to which the items or components appear to reflect the construct on which a test interpretation is based (AERA, APA

& NCME, 1999, p. 13). The term construct is used here to refer to the characteristic that a test is intended to measure; in the case of the MD HSAs, the characteristic of interest is the knowledge and skills defined by the test blueprint for each content area.

These test blueprints are derived from Maryland's Core Learning Goals for each course. The test blueprints are presented in Section 2 (see Tables 2.2 to 2.4); the CLGs can be found on the MSDE website at http://www.mdk12.org/assessments/high_school/index_a.html.

High total group internal consistencies as well as similar reliabilities between subgroups with roughly the same sample size provide additional evidence of validity. High reliability over items within a test implies that the test items within a domain are measuring the intended construct. Cronbach's alpha results for each administration for the overall population, as well as for subgroups can be found in Section 6 of this report, in Tables 6.5 through 6.24.

Another way to assess the internal structure of the test is through the evaluation of Pearson correlation matrices between the individual MD HSA subscores. If subscores within a content area are strongly related to each other, this is another indicator of validity. Tables 3.1 and 3.2 highlight the Pearson correlations found between subscores within each content area of the MD HSA tests. Results indicate that each subscore is significantly positively correlated with the total Scale Score as well as the individual subscores measured in each content area.

Table 3.1 Correlations between Subscores by MD HSA Content Area – Algebra & Biology

| | Algebra | | | | | | Biology | | | | | | |
	SS	1	2	3	4		SS	1	2	3	4	5	6
Overall SS	1						1						
Subscore 1	.77	1					.80	1					
Subscore 2	.87	.63	1				.73	.54	1				
Subscore 3	.79	.58	.62	1			.73	.55	.56	1			
Subscore 4	.73	.56	.60	.55	1		.72	.54	.53	.54	1		
Subscore 5	-	-	-	-	-		.72	.56	.52	.54	.52	1	
Subscore 6	-	-	-	-	-		.75	.57	.53	.54	.52	.54	1

Note. All correlations significant at the p < .001 level.

Table 3.2 Correlations between Subscores by MD HSA Content Area – English & Government

| | English | | | | | | Government | | | | | |
	SS	1	2	3	4		SS	1	2	3	4	5
Overall SS	1						1					
Subscore 1	.71	1					.85	1				
Subscore 2	.73	.50	1				.85	.69	1			
Subscore 3	.73	.47	.49	1			.70	.57	.57	1		
Subscore 4	.69	.46	.47	.51	1		.74	.61	.60	.51	1	
Subscore 5	-	-	-	-	-		.79	.64	.63	.54	.56	1

Note. All correlations significant at the p < .001 level.

Finally, the internal structure of the MD HSA tests can be assessed in relation to the degree to which these tests meet the requirements of the statistical models used throughout testing administrations. Confirmatory factor analyses (CFAs) for each test by content area can be conducted to examine the underlying domain structure of the MD HSA test. CFA is a useful statistical methodology as it can evaluate whether performance on items in each test reflects a single underlying characteristic or a set of distinct characteristics defined by the reporting categories for each content area. The findings from this type of analysis are helpful as they can establish whether the unidimensional model-based IRT used to calibrate the MD HSA items is appropriate.

Confirmatory Factor Analyses of the May 2013 Administration Data

To assess the dimensionality of the MD HSA tests, CFA's for each content area were conducted using test data from the primary forms of the May 2013 administration. The May administration was chosen for analysis because it is the largest and most representative administration of the MD HSAs. The May administration consisted of five primary forms; data from operational items were combined across forms within the content areas of Algebra, Biology, English, and Government.

Mplus (Muthén & Muthén, 2007) was used to evaluate unidimensional, or one-factor, CFA models for each content area. As item level data on the MD HSA tests are dichotomous, methods available in *Mplus* that take into account the categorical nature of the data were used (see Muthén, 1998-2004).

Model parameter estimation was accomplished using a weighted least-squares method with a mean and variance adjustment (*WLSMV*; Muthén, DuToit, & Spisic, 1997). This method leads to a consistent estimator of the model parameters and provides standard errors that are robust under model misspecification. For categorical data, this estimation method offers an alternative to full-weighted least squares (WLS) techniques that generally become computationally too demanding for models with more than a few observed variables (items).

Overall model fit for each CFA model by content area was examined using the scaled chi-square (χ^2) test of model fit in combination with supplemental fit indices. The Tucker-Lewis Index (TLI) compares the chi-square for the hypothesized model with that of the null or "independence" model, in which all correlations or covariances are zero. TLI values range from zero to 1.0, and values greater than 0.94 signify good fit (Hu & Bentler, 1999). The comparative fit index (CFI) and root mean square error of approximation (RMSEA) index both are based on noncentrality parameters. The CFI compares the covariance matrix predicted by the model with the observed covariance matrix, and the covariance matrix of the null model with the observed covariance matrix. A CFI value greater than 0.90 indicates acceptable model fit (Hu & Bentler, 1999). The RMSEA assesses the error in the hypothesized model predictions; values less than or equal to 0.06 indicate good fit (Hu & Bentler, 1999).

Table 3.3 shows the results of the analyses. The TLI, CFI, and RMSEA fit statistics indicated that the one-factor solutions fit the data well in all content areas. Though none of the χ^2 results indicated good fit using a criterion of $p > .05$, this was expected due to the extremely large sample sizes. These findings provide evidence that the tests for each content area measure a single dimension. This is a positive finding, given that IRT models assume unidimensionality.

Table 3.3 MD HSA Confirmatory Factor Analyses Fit Statistics

Content	Admin	Forms	# of Factors	# of Items	n	df	χ^{2*}	TLI	CFI	RMSEA
Algebra	May	D-H	1	53	65,699	1,325	46,859	**0.97**	**0.97**	**0.023**
Biology	May	D-H	1	76	50,602	2,774	45,146	**0.98**	**0.98**	**0.017**
English	May	D-H	1	60	50,771	1,710	25,943	**0.98**	**0.98**	**0.017**
Government	May	D-H	1	82	27,821	3,239	43,666	**0.97**	**0.97**	**0.021**

Note. Table entries that meet or exceed the criterion are in bold.
* $p < .0005$ for all χ^2

Speededness

If more than five percent of students omitted an SR or SPR item the item was flagged as having a high omit rate. Table 3.4 shows omit rates for each content area by administration and item type. As can be seen, several of the SPR items were flagged for having high omit rates. This pattern is consistent with findings from previous test years. Note that in general, SPR items tend to have higher omit rates because students have to generate a response rather than choose one from the available answer choices. None of the SR items were flagged.

Table 3.4 Number of MD HSA Operational Items Flagged for High Omit Rate

Content	October Item Types		January Item Types		April Item Types		May Item Types		Summer Item Types	
	SR	SPR	SR	SPR	SR	SPR	SR	SPR	SR	SPR
Algebra	0	4	0	5	0	3	0	0	0	2
Biology	0	--	0	--	0	--	0	--	0	--
English	0	--	0	--	0	--	0	--	0	--
Government	--	--	0	--	--	--	0	--	--	--

The percentage of students who respond to the last items in a test can also be used to assess the degree to which a test is speeded. When speededness occurs, a test is measuring not only students' knowledge and skills as defined by the construct of interest but also the speed at which the knowledge and skills are demonstrated, which is a second construct. In tests of achievement, it is desirable to find that speededness is not present in a test, which provides evidence that student scores on the test reflect only the intended construct. Evidence of speededness is

provided by the finding that the omit rates at the end of a test are notably higher than those observed elsewhere in the test.

Appendix 1.A presents the percentages of students who omitted items on the MD HSA operational forms. Across all content areas and administrations, the percentage of students who did not respond to the last ten SR items of a test was less than 2 percent per item. The SPR items (Algebra only) had omit rates ranging from 2 percent to 7 percent when placed within the last ten items of a test form. The higher omission rates for the SPR items are typical for this item type because students are required to solve a problem and then record the answer in an answer grid, rather than choose from among four answer choices presented by SR items. For all item types the percentage of students who omitted items located within the last ten positions on an MD HSA test form was not greater than omit rates throughout the test.

In addition to the factor analyses and the information regarding speededness presented here and the validation documentation gathered and maintained by MSDE, other information in support of the uses and interpretations of MD HSA scores appears in the following sections:

- Section 4 provides detailed information concerning the scores that were reported for the MD HSAs and the cut scores for each content area.

- Section 5 provides information concerning the test characteristics based on classical test theory for the administrations of the MD HSAs.

- Section 6 presents information regarding student characteristics for the administrations of the MD HSAs.

- Section 7 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-value and item-total correlation distributions are provided.

Section 4. Scoring Procedures

Scale Scores

The MD HSA reporting scale ranges from 240 to 650. For Algebra, Biology, and Government, the scale was established in 2003 and defined so that the scale scores had a mean of 400 and a standard deviation 40. In 2005 a scale for English was established that had the same range, mean, and standard deviation.

These scores represent ability estimates obtained using Item Response Theory (IRT, Yen & Fitzpatrick, 2006). (See IRT Calibration and Scaling in Section 7 for details about the three-parameter logistic model [3PL] used for the MD HSAs.) Students' total test scores and subscores are scale scores derived using the 3PL model and item-pattern scoring procedures. There are essentially two ways of scoring a test: number-correct (NC) or item-pattern (IP) scoring. NC scoring considers how many test items a student answered correctly in determining that student's total raw score. In contrast, the IP scoring method is based on an IRT model. IP scoring takes into account not only a student's total raw score, but also *which* test items the student answered correctly, as well as the psychometric characteristics of these items.

Test items are not equal in their characteristics. For example, some items are better at discriminating between students that know the tested content and those who do not; some items are more difficult; and low-ability students are more likely to guess correctly on some test items than on others.

Two students with exactly the same total raw score will get the same test score in NC scoring. It is very possible; however, that even though they have the same total raw score, the actual items they answered correctly were different, and their different sets of correctly answered items could have different item characteristics. In such a case, the students will very likely get different reported test scores in IP scoring even though they have the same total raw score. This would be applicable to both total test scores and subscore category scores reported using IP scoring.

Item-pattern scoring has been found to produce smaller standard errors of measurement (SEM) than number-correct scoring. The smaller the SEM, the more confidence we have about the accuracy of the test results. In addition, test reliability is higher with IP scoring than with NC scoring (Yen & Candell, 1991), which means that fewer questions are needed in IP scoring than NC scoring for equivalent scoring accuracy. For these reasons, both the HSA total test scores and test subscores are reported using IP scoring.

Conditional Standard Errors of Measurement

Corresponding conditional standard errors of measurement (CSEM) were produced and are equal to the inverse of the square root of the test information function.

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

where θ refers to the true location, CSEM($\hat{\theta}$) refers to the conditional standard error of measurement and I($\hat{\theta}$) refers to the test information function for $\hat{\theta}$. 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.

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).

Cut Scores

MSDE established the cut scores associated with each of the performance levels in the content areas other than English in 2003.[5] The English cut scores were established during the standard-setting meeting held in October 2005. One cut score was established for Biology and one was established for 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 for these content areas. To comply with NCLB requirements for secondary science, an Advanced cut score for Biology was established in 2008. These values are given in Table 4.1.

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[5] Technical documentation on the standard-setting method used to establish the MD HSA cut scores is available on the Maryland State Department of Education website at http://www.marylandpublicschools.org/msde/divisions/ planningresultstest/maryland+standard+setting+technical+reports.htm.

Table 4.1 MD HSA Cut Scores by Content Area

Content Area	Cut-Score	
	Proficient	Advanced
Algebra	412	450
Biology	400	452
English	396	429
Government	394	

With the reinstatement of Government tests in January 2013, students entering 9th grade in the 2012-2013 school year or in a prior year (including students who entered 9th grade in 2011-2012, 2010-2011, or 2009-2010) have the option of earning a combined score of 1602 on all four MD HSAs or a combined score of 1208 on three MD HSAs (excluding Government) to be granted a Maryland High School Diploma.[6] Students entering 9th grade in 2013-14 and beyond will be required to pass all four HSAs, including Government, or obtain a combined score of 1602 to fulfill the graduation requirement.

Year-to-Year Scale Maintenance

The MD HSAs for Algebra, Biology, and Government have been preequated since 2004; English has been preequated since 2005. In the preequated 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 bank-obtained item parameter estimates, thereby linking scores from one administration to the other.

To increase the item pool, the MD HSA embeds field test items in the operational test forms. The field test data for the January and May administration are calibrated with the operational items at that time. The calibrations are linked to the reporting scale using all operational items as anchors and the Stocking and Lord procedure (Stocking & Lord, 1983). Having all operational items serve as linking items ensures that the linking set is large enough to provide stable and reliable results. Item bank parameter estimates are established at the time of the field test and are not updated following each administration.

To ensure that items behave the same way across administrations, construction of new forms follows guidelines defined by Kolen and Brennan (2004, p.313). These guidelines are:

1. Items should appear in the same contexts and positions as when the item parameter estimates were established. Operational items are placed as close as possible to the same position they were in when parameters were estimated and within the same third of the total test form.
2. 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

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[6] More information on the testing requirement for graduation is available on the Maryland State Department of Education website at http://mdk12.org/assessments/high_school/index.html.

as at the beginning of the test on one form and at the end of the test on another form. Operational items that appear in more than one form occupy consistent positions across forms; MSDE must approve any deviations.

3. 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. All requests for minor editorial changes must undergo psychometric review to evaluate the implications for the response process.

Section 5. Test Characteristics

This section provides a discussion of the results of analyses of test reliability and decision consistency and accuracy for all MD HSA test forms administered.

Reliability

The general concept of reliability concerns the precision of a test score. Of interest is quantifying the degree to which a score will vary from an average result obtained over many testing occasions due to random factors (Haertel, 2006). A variety of theories and methods can be used to estimate reliability.

Classical test theory defines reliability as the proportion of total score variance that is true-score variance. Several different ways of estimating this proportion exist. One estimate of reliability that is commonly used is Cronbach's alpha (Cronbach, 1951), an internal consistency measure. It is derived from analysis of the consistency of performance over items within a test and provides a lower-bound estimate of a test's reliability. Cronbach's alpha can be expressed as:

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

where n is the number of items, σ_i^2 is the variance of scores on the i-th item, and σ_x^2 is the variance of the total score (sum of scores on the individual items). Sample estimates are substituted for the population variances in this formula to provide reliability estimates.

The results for the reliability analyses of the total test score are presented with the summary statistics in Tables 6.5 to 6.21. The tables show that the overall reliability of the MD HSAs administered during the January and May sessions ranged from 0.80 to 0.94 for the primary forms, and from 0.80 to 0.94 for the makeup forms. The overall reliability results for the October forms ranged from 0.68 to 0.79. The overall reliability results for the April forms ranged from 0.75 to 0.82. The overall reliability results for the Summer forms ranged from 0.82 to 0.87.

Lower reliability coefficients are sometimes seen for the smaller administrations typically taken by repeat test takers (October, April, and Summer). All forms are constructed to meet the same target specifications, one of which is to include only items that have point-biserials of at least 0.10. However, when items are administered to nonrepresentative samples of students, the point-biserials of some items may be lower in those samples, which leads to lower reliability coefficients when calculated for those administrations.

Decision Accuracy and Decision Consistency

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

> *Decision accuracy*, or 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?

> *Decision consistency*, or 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 nonoverlapping, 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 5.1 to 5.17 by content area for the October, January, April, May, and Summer forms. The tables show that decision accuracy values, which describe 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), ranged from 0.81 to 0.89 across all performance levels and from 0.86 to 0.94 for the Proficient and Above classifications in Algebra, Biology, and English. Decision consistency values, which 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), ranged from 0.75 to 0.85 across all performance levels and from 0.82 to 0.92 for the Proficient and Above classifications in Algebra, Biology, and English. In Government (January and May forms), decision accuracy and consistency were calculated across all performance levels, decision accuracy values ranged from 0.93 to 0.95, decision consistency values ranged from 0.90 to 0.93.

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 5.1 Decision Accuracy and Consistency: MD HSA Algebra October 2012 Form

	Placement Scores	Advanced	Proficient	Basic	Category Total
	450–650	.00	.00	.00	.00
Decision	412–449	.00	.07	.05	.12
Accuracy	240–411	.02	.07	.79	.88
	Estimated Proportion Correctly Classified*: Total = 0.87 , Proficient & Above = 0.87				
	450–650	.00	.00	.00	.00
Decision	412–449	.01	.06	.05	.12
Consistency	240–411	.02	.11	.75	.88
	Estimated Proportion Consistently Classified*: Total = 0.81 , Proficient & Above = 0.82				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 5.2 Decision Accuracy and Consistency: MD HSA Algebra January 2013 Forms

	Placement Scores	Advanced	Proficient	Basic	Category Total
January Primary					
	450–650	.02	.00	.00	.02
Decision	412–449	.03	.14	.06	.24
Accuracy	240–411	.01	.06	.67	.74
	Estimated Proportion Correctly Classified: Total*: = 0.83, Proficient & Above = 0.86				
	450–650	.02	.00	.00	.02
Decision	412–449	.05	.11	.08	.24
Consistency	240–411	.01	.09	.64	.74
	Estimated Proportion Consistently Classified*: Total = 0.77 ; Proficient & Above = 0.82				
January Form C					
	450–650	.02	.00	.00	.02
Decision	412–449	.02	.13	.06	.22
Accuracy	240–411	.01	.06	.69	.76
	Estimated Proportion Correctly Classified*: Total = 0.84 ; Proficient & Above = 0.87				
	450–650	.02	.00	.00	.02
Decision	412–449	.04	.11	.07	.22
Consistency	240–411	.01	.09	.66	.76
	Estimated Proportion Consistently Classified*: Total = 0.78, Proficient & Above = 0.82				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 5.3 Decision Accuracy and Consistency: MD HSA Algebra April 2013 Form

	Placement Scores	Advanced	Proficient	Basic	Category Total
	450–650	.01	.00	.00	.01
Decision	412–449	.00	.08	.04	.12
Accuracy	240–411	.01	.06	.79	.87
	Estimated Proportion Correctly Classified*: Total = 0.88, Proficient & Above = 0.89				
	450–650	.01	.00	.00	.01
Decision	412–449	.01	.06	.04	.12
Consistency	240–411	.02	.09	.76	.87
	Estimated Proportion Consistently Classified*: Total = 0.83, Proficient & Above = 0.84				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 5.4 Decision Accuracy and Consistency: MD HSA Algebra May 2013 Forms

	Placement Scores	Advanced	Proficient	Basic	Category Total
May Primary					
	450–650	.21	.03	.00	.24
Decision	412–449	.07	.30	.04	.40
Accuracy	240–411	.00	.05	.31	.36
	Estimated Proportion Correctly Classified*: Total = 0.82 , Proficient & Above = 0.91				
	450–650	.19	.05	.00	.24
Decision	412–449	.09	.26	.06	.40
Consistency	240–411	.00	.06	.30	.36
	Estimated Proportion Consistently Classified*: Total = 0.75 , Proficient & Above = 0.88				
May Form X					
	450–650	.18	.04	.00	.22
Decision	412–449	.04	.24	.07	.36
Accuracy	240–411	.00	.02	.41	.43
	Estimated Proportion Correctly Classified*: Total = 0.83, Proficient & Above = 0.91				
	450–650	.17	.04	.00	.22
Decision	412–449	.06	.21	.09	.36
Consistency	240–411	.00	.04	.39	.43
	Estimated Proportion Consistently Classified*: Total = 0.77, Proficient & Above = 0.87				
May Form Y					
	450–650	.20	.03	.00	.23
Decision	412–449	.06	.29	.04	.38
Accuracy	240–411	.01	.05	.33	.38
	Estimated Proportion Correctly Classified*: Total = 0.82, Proficient & Above = 0.91				
	450–650	.18	.05	.00	.23
Decision	412–449	.08	.25	.06	.38
Consistency	240–411	.01	.06	.32	.38
	Estimated Proportion Consistently Classified*: Total = 0.75, Proficient & Above = 0.88				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 5.5 Decision Accuracy and Consistency: MD HSA Algebra Summer 2013 Forms

	Placement Scores	Advanced	Proficient	Basic	Category Total
Summer Form P					
	450–650	.01	.00	.00	.01
Decision	412–449	.03	.19	.09	.31
Accuracy	240–411	.00	.04	.63	.68
	Estimated Proportion Correctly Classified*: Total = 0.83, Proficient & Above = 0.87				
	450–650	.01	.00	.00	.01
Decision	412–449	.05	.16	.10	.31
Consistency	240–411	.00	.08	.60	.68
	Estimated Proportion Consistently Classified*: Total = 0.77, Proficient & Above = 0.82				
Summer Form Q					
	450–650	.02	.00	.00	.02
Decision	412–449	.04	.18	.09	.31
Accuracy	240–411	.00	.03	.64	.67
	Estimated Proportion Correctly Classified*: Total = 0.84, Proficient & Above = 0.88				
	450–650	.02	.00	.00	.02
Decision	412–449	.05	.15	.10	.31
Consistency	240–411	.00	.06	.61	.67
	Estimated Proportion Consistently Classified*: Total = 0.78, Proficient & Above = 0.84				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 5.6 Decision Accuracy and Consistency: MD HSA Biology October 2012 Form

	Placement Scores	Advanced	Proficient	Basic	Category Total
	452–650	.00	.01	.00	.01
Decision	400–451	.00	.10	.04	.14
Accuracy	240–399	.01	.07	.78	.86
	Estimated Proportion Consistently Classified*: Total = 0.88, Proficient & Above = 0.88				
	452–650	.00	.01	.00	.01
Decision	400–451	.00	.09	.05	.14
Consistency	240–399	.01	.11	.73	.86
	Estimated Proportion Consistently Classified*: Total = 0.82, Proficient & Above = 0.83				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 5.7 Decision Accuracy and Consistency: MD HSA Biology January 2013 Forms

	Placement Scores	Advanced	Proficient	Basic	Category Total
January Primary					
	452–650	.09	.01	.00	.09
Decision	400–451	.03	.25	.05	.32
Accuracy	240–399	.00	.04	.54	.59
	Estimated Proportion Correctly Classified*: Total = 0.88, Proficient & Above = 0.91				
	452–650	.08	.01	.00	.09
Decision	400–451	.04	.22	.06	.32
Consistency	240–399	.00	.06	.53	.59
	Estimated Proportion Consistently Classified*: Total = 0.83, Proficient & Above = 0.88				
January Form C					
	452–650	.05	.06	.00	.11
Decision	400–451	.00	.31	.00	.31
Accuracy	240–399	.02	.07	.48	.58
	Estimated Proportion Correctly Classified*: Total = 0.84, Proficient & Above = 0.90				
	452–650	.05	.06	.00	.11
Decision	400–451	.02	.28	.01	.31
Consistency	240–399	.02	.08	.47	.58
	Estimated Proportion Consistently Classified*: Total = 0.80, Proficient & Above = 0.88				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 5.8 Decision Accuracy and Consistency: MD HSA Biology April 2013 Form

	Placement Scores	Advanced	Proficient	Basic	Category Total
	452–650	.00	.00	.00	.00
Decision	400–451	.00	.08	.03	.11
Accuracy	240–399	.01	.07	.80	.88
	Estimated Proportion Correctly Classified*: Total = 0.88, Proficient & Above = 0.89				
	452–650	.00	.00	.00	.00
Decision	400–451	.00	.07	.04	.11
Consistency	240–399	.02	.10	.76	.88
	Estimated Proportion Consistently Classified*: Total = 0.84, Proficient & Above = 0.84				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 5.9 Decision Accuracy and Consistency: MD HSA Biology May 2013 Forms

	Placement Scores	Advanced	Proficient	Basic	Category Total
May Primary					
Decision Accuracy	452–650	.19	.02	.00	.21
	400–451	.06	.44	.03	.53
	240–399	.00	.03	.23	.25
	Estimated Proportion Correctly Classified: Total = 0.86, Proficient & Above = 0.94				
Decision Consistency	452–650	.18	.04	.00	.21
	400–451	.07	.41	.05	.53
	240–399	.00	.04	.22	.25
	Estimated Proportion Consistently Classified*: Total = 0.81, Proficient & Above = 0.92				
May Form X					
Decision Accuracy	452–650	.17	.02	.00	.19
	400–451	.05	.43	.03	.51
	240–399	.00	.03	.26	.30
	Estimated Proportion Correctly Classified: Total = 0.86, Proficient & Above = 0.94				
Decision Consistency	452–650	.15	.04	.00	.19
	400–451	.07	.40	.04	.51
	240–399	.00	.04	.26	.30
	Estimated Proportion Consistently Classified*: Total = 0.80, Proficient & Above = 0.91				
May Form Y					
Decision Accuracy	452–650	.21	.02	.00	.23
	400–451	.06	.44	.04	.54
	240–399	.00	.02	.21	.23
	Estimated Proportion Correctly Classified: Total = 0.86, Proficient & Above = 0.94				
Decision Consistency	452–650	.19	.04	.00	.23
	400–451	.08	.41	.05	.54
	240–399	.00	.03	.20	.23
	Estimated Proportion Consistently Classified: Total = 0.81, Proficient & Above = 0.92				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 5.10 Decision Accuracy and Consistency: MD HSA Biology Summer 2013 Forms

	Placement Scores	Advanced	Proficient	Basic	Category Total
Summer Form P					
	452–650	.00	.00	.00	.00
Decision	400–451	.02	.21	.08	.31
Accuracy	240–399	.00	.05	.64	.69
	Estimated Proportion Correctly Classified*: Total = 0.85, Proficient & Above = 0.87				
	452–650	.00	.00	.00	.00
Decision	400–451	.03	.18	.09	.31
Consistency	240–399	.00	.08	.61	.69
	Estimated Proportion Consistently Classified*: Total = 0.79, Proficient & Above = 0.83				
Summer Form Q					
	452–650	.01	.00	.00	.01
Decision	400–451	.02	.24	.08	.35
Accuracy	240–399	.00	.04	.60	.64
	Estimated Proportion Correctly Classified*: Total = 0.85, Proficient & Above = 0.88				
	452–650	.01	.00	.00	.01
Decision	400–451	.03	.22	.10	.35
Consistency	240–399	.00	.07	.57	.64
	Estimated Proportion Consistently Classified*: Total = 0.80, Proficient & Above = 0.83				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 5.11 Decision Accuracy and Consistency: MD HSA English October 2012 Form

	Placement Scores	Advanced	Proficient	Basic	Category Total
	429–650	.01	.00	.00	.01
Decision	396–428	.03	.13	.06	.22
Accuracy	240–395	.01	.07	.70	.78
	Estimated Proportion Correctly Classified*: Total = 0.83, Proficient & Above = 0.86				
	429–650	.01	.00	.00	.01
Decision	396–428	.04	.10	.07	.22
Consistency	240–395	.02	.09	.66	.78
	Estimated Proportion Consistently Classified*: Total = 0.77, Proficient & Above = 0.82				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 5.12 Decision Accuracy and Consistency: MD HSA English January 2013 Forms

	Placement Scores	Advanced	Proficient	Basic	Category Total
January Primary					
Decision Accuracy	429–650	.08	.01	.00	.09
	396–428	.04	.16	.06	.26
	240–395	.00	.05	.61	.66
	Estimated Proportion Correctly Classified*: Total = 0.85, Proficient & Above = 0.90				
Decision Consistency	429–650	.08	.01	.00	.09
	396–428	.05	.13	.07	.26
	240–395	.00	.06	.59	.66
	Estimated Proportion Consistently Classified*: Total = 0.80, Proficient & Above = 0.86				
January Form C					
Decision Accuracy	429–650	.07	.01	.00	.08
	396–428	.03	.15	.06	.25
	240–395	.00	.05	.63	.68
	Estimated Proportion Correctly Classified*: Total = 0.85, Proficient & Above = 0.90				
Decision Consistency	429–650	.07	.01	.00	.08
	396–428	.05	.13	.07	.25
	240–395	.00	.07	.61	.68
	Estimated Proportion Consistently Classified*: Total = 0.80, Proficient & Above = 0.86				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 5.13 Decision Accuracy and Consistency: MD HSA English April 2013 Form

	Placement Scores	Advanced	Proficient	Basic	Category Total
Decision Accuracy	429–650	.01	.00	.00	.01
	396–428	.01	.08	.03	.12
	240–395	.01	.05	.80	.87
	Estimated Proportion Correctly Classified*: Total = 0.89, Proficient & Above = 0.90				
Decision Consistency	429–650	.01	.00	.00	.01
	396–428	.02	.06	.04	.12
	240–395	.02	.08	.77	.87
	Estimated Proportion Consistently Classified*: Total = 0.85, Proficient & Above = 0.86				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 5.14 Decision Accuracy and Consistency: MD HSA English May 2013 Forms

	Placement Scores	Advanced	Proficient	Basic	Category Total
May Primary					
Decision Accuracy	429–650	.20	.04	.00	.25
	396–428	.05	.30	.08	.43
	240–395	.00	.01	.32	.33
	Estimated Proportion Correctly Classified*: Total = 0.82, Proficient & Above = 0.91				
Decision Consistency	429–650	.19	.05	.00	.25
	396–428	.07	.26	.10	.43
	240–395	.00	.02	.30	.33
	Estimated Proportion Consistently Classified*: Total = 0.75, Proficient & Above = 0.88				
May Form X					
Decision Accuracy	429–650	.20	.05	.00	.25
	396–428	.05	.27	.08	.40
	240–395	.00	.01	.35	.35
	Estimated Proportion Correctly Classified*: Total = 0.82, Proficient & Above = 0.91				
Decision Consistency	429–650	.19	.06	.00	.25
	396–428	.07	.23	.10	.40
	240–395	.00	.02	.33	.35
	Estimated Proportion Consistently Classified*: Total = 0.75, Proficient & Above = 0.87				
May Form Y					
Decision Accuracy	429–650	.21	.04	.00	.25
	396–428	.05	.31	.08	.44
	240–395	.00	.01	.30	.31
	Estimated Proportion Correctly Classified*: Total = 0.82, Proficient & Above = 0.91				
Decision Consistency	429–650	.20	.05	.00	.25
	396–428	.07	.27	.10	.44
	240–395	.00	.03	.28	.31
	Estimated Proportion Consistently Classified*: Total = 0.75, Proficient & Above = 0.87				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 5.15 Decision Accuracy and Consistency: MD HSA English Summer 2013 Forms

	Placement Scores	Advanced	Proficient	Basic	Category Total
Summer Form P					
Decision Accuracy	429–650	.01	.00	.00	.01
	396–428	.04	.13	.07	.24
	240–395	.01	.05	.68	.74
	Estimated Proportion Correctly Classified*: Total = 0.83, Proficient & Above = 0.87				
Decision Consistency	429–650	.01	.00	.00	.01
	396–428	.05	.11	.08	.24
	240–395	.01	.08	.65	.74
	Estimated Proportion Consistently Classified*: Total = 0.77, Proficient & Above = 0.83				
Summer Form Q					
Decision Accuracy	429–650	.02	.00	.00	.02
	396–428	.07	.12	.07	.26
	240–395	.01	.04	.67	.72
	Estimated Proportion Correctly Classified*: Total = 0.81, Proficient & Above = 0.88				
Decision Consistency	429–650	.02	.00	.00	.02
	396–428	.08	.10	.08	.26
	240–395	.01	.06	.64	.72
	Estimated Proportion Consistently Classified*: Total = 0.76, Proficient & Above* = 0.84				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 5.16 Decision Accuracy and Consistency: MD HSA Government January 2013 Forms

	Placement Scores	Proficient	Basic	Category Total
January Form A				
Decision Accuracy	394–650	.60	.02	.62
	240–393	.04	.34	.38
	Estimated Proportion Correctly Classified*: Total = 0.94			
Decision Consistency	394–650	.59	.04	.62
	240–393	.05	.33	.38
	Estimated Proportion Consistently Classified*: Total = 0.91			
January Form C				
Decision Accuracy	394–650	.66	.06	.72
	240–395	.01	.27	.28
	Estimated Proportion Correctly Classified*: Total = 0.93			
Decision Consistency	394–650	.64	.08	.72
	240–393	.03	.25	.28
	Estimated Proportion Consistently Classified*: Total = 0.90			

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 5.17 Decision Accuracy and Consistency: MD HSA Government May 2013 Forms

	Placement Scores	Proficient	Basic	Category Total
May Form D				
Decision Accuracy	394–650	.70	.03	.73
	240–393	.02	.25	.27
	Estimated Proportion Correctly Classified*: Total = 0.95			
Decision Consistency	394–650	.68	.05	.73
	240–393	.03	.24	.27
	Estimated Proportion Consistently Classified*: Total = 0.92			
May Form X				
Decision Accuracy	394–650	.72	.03	.74
	240–395	.02	.24	.26
	Estimated Proportion Correctly Classified*: Total = 0.95			
Decision Consistency	394–650	.70	.04	.74
	240–393	.03	.23	.26
	Estimated Proportion Consistently Classified*: Total = 0.93			
May Form Y				
Decision Accuracy	394–650	.70	.06	.75
	240–395	.01	.23	.25
	Estimated Proportion Correctly Classified*: Total = 0.93			
Decision Consistency	394–650	.68	.07	.75
	240–393	.02	.22	.25
	Estimated Proportion Consistently Classified*: Total = 0.91			

Note. Inconsistencies between cell entries and totals are due to rounding.

Section 6. Student Characteristics

Summary Statistics

The results presented in Tables 6.1 and 6.3 to 6.5 are based on the combined results for students who took the tests in October 2012 and January, April, May, and Summer 2013. All results are based on the final Research files sent to MSDE. Scores in Table 6.1 are reported for all students and by grade. Table 6.2 reports the scores for all content areas by the October, January, April, May, and Summer administrations.

Table 6.1 MD HSA Means and Standard Deviations for 2012-2013 Overall and by Grade

			N	Mean	SD
Algebra	Overall		111,803	409.5	44.2
	Grade				
		7	11,592	460.2	27.9
		8	24,636	431.7	32.9
		9	33,528	406.9	38.3
		10	20,027	386.9	36.8
		11	12,588	382.8	37.9
		12	8,042	377.6	40.5
Biology	Overall		87,941	409.2	44.8
	Grade				
		9	25,571	431.7	39.2
		10	38,072	414.9	38.9
		11	14,565	382.6	39.7
		12	9,006	366.6	39.4
English	Overall		89,770	395.0	40.5
	Grade				
		9	3,887	375.4	39.4
		10	58,304	408.3	35.2
		11	17,037	371.8	37.3
		12	9,748	365.6	38.4
Government	Overall		51,558	414.7	42.7
	Grade				
		9	22,141	413.2	43.0
		10	25,052	416.7	41.7
		11	3,700	414.1	44.4
		12	503	386.5	55.1

Note. Government data is based on January and May 2013 administrations only.

Table 6.2 MD HSA Mean Scale Scores by Administration

Content Area	October			January			April			May			Summer		
	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD
Algebra	14,708	380.1	37.3	17,066	388.0	41.9	1,816	377.0	41.0	77,025	421.0	41.0	1,188	390.9	38.5
Biology	10,497	374.1	33.0	14,532	391.0	50.1	2,186	362.0	43.5	60,073	421.8	38.9	653	382.3	38.4
English	12,039	373.3	36.4	15,048	378.7	42.1	2,330	364.0	35.5	59,182	405.2	36.9	1,171	369.9	44.3
Government	-	-	-	6,651	407.2	45.8	-	-	-	44,907	415.8	42.2	-	-	-

The mean scale scores are presented for the years 2003 to 2013 by content area in Table 6.3. Table 6.4 presents the passing rates for these years.

Table 6.3 MD HSA Mean Scale Scores over Test Years

Content Area	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Algebra	408.3	411.9	409.5	421.5	421.2	420.5	414.3	408.1	410.9	408.7	409.5
Biology	400.8	406.2	404.7	415.0	414.5	414.7	409.0	408.7	406.9	410.7	409.2
English	--	--	--	393.0	412.0	404.3	399.7	398.2	396.8	398.3	395.0
Government	403.5	406.5	409.3	418.5	417.1	417.1	406.3	408.6	405.6	--	414.7

Note. The current English test was not administered prior to 2006. The Government test was not administered after the May 2011 administration. Starting in January 2013, Government was reintroduced into the HSAs.

Table 6.4 MD HSA Percentage Passing Rates (Proficient + Advanced) over Test Years

Content Area	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Algebra	53.1	59.3	54.5	66.6	63.3	62.0	53.3	46.6	49.1	50.3	49.4
Biology	54.3	62.0	58.4	67.8	70.1	68.4	60.0	59.1	57.9	60.9	60.0
English	--	--	--	60.1	70.6	61.0	55.3	54.8	54.0	55.0	53.8
Government	39.8	54.6	67.1	74.1	73.3	71.5	61.1	61.7	62.1	--	72.4

Note. The current English test was not administered prior to 2006. The Government test was not issued after the May 2011 administration. Starting in January 2013, Government was reintroduced into the HSAs.

The Algebra and English tests are used for the high school mathematics and English/language arts components of the MSDE Adequate Yearly Progress report as required under the NCLB Act. Beginning with the January 2008 administration, Biology has been used for the NCLB science component. Table 6.5 presents the percentage of Algebra, Biology, and English students classified as Basic, Proficient, and Advanced, and the percentage of students classified as Basic and Proficient for Government, in 2013.

Table 6.5 MD HSA Performance Classification Rates in 2013 for Algebra, Biology, English, and Government

Content Area	Basic	Proficient	Advanced
Algebra	50.6	32.9	16.5
Biology	40.0	43.7	16.3
English	46.2	36.0	17.8
Government	27.6	72.4	--

Summary statistics for all students and for subgroups based on gender, special education programs, ethnicity, and English language fluency are presented in Tables 6.6 through 6.22. The tables include the number of students tested for whom valid scores were available, mean scale scores, and standard deviations of scale scores. In addition, raw score reliabilities are provided for the overall group of examinees and for subgroups. Figures 6.1 through 6.4 show the distributions of total scale scores for each content area for the May 2013 administration.

N	77,025
Kurtosis	3.62
Skewness	-0.71
Mean	421
Median	425
Std Deviation	41
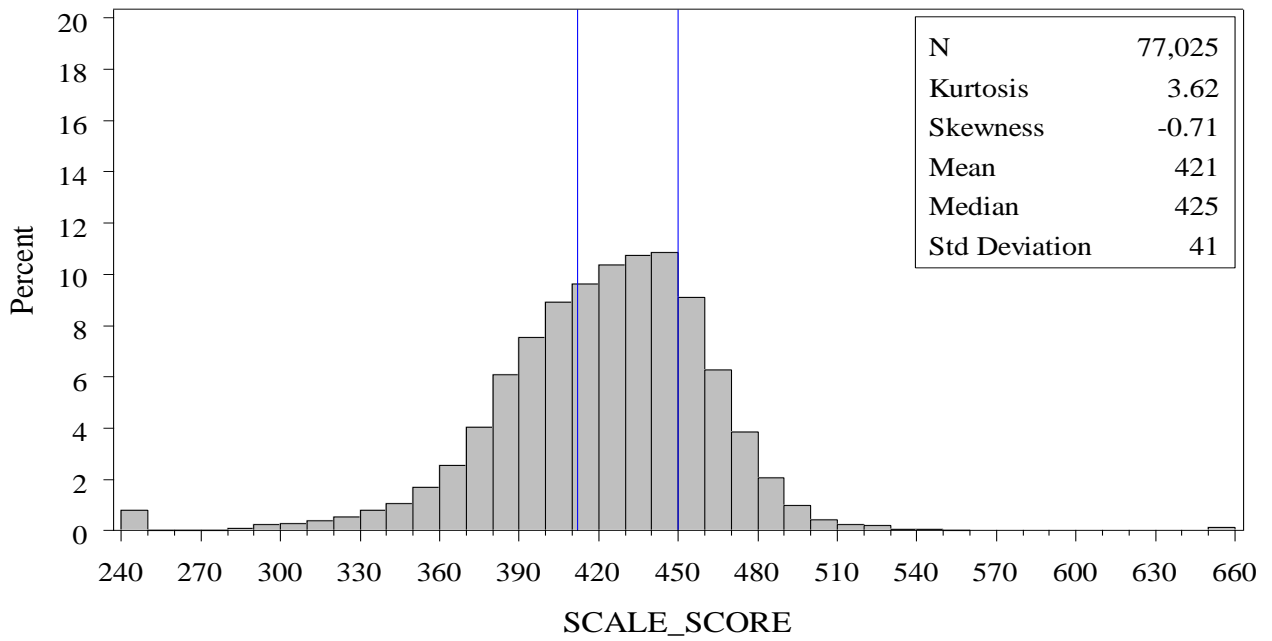
Figure 6.1 Histogram of Total Scale Scores for MD HSA May 2013 Algebra

N	60,073
Kurtosis	3.04
Skewness	-0.60
Mean	422
Median	425
Std Deviation	39
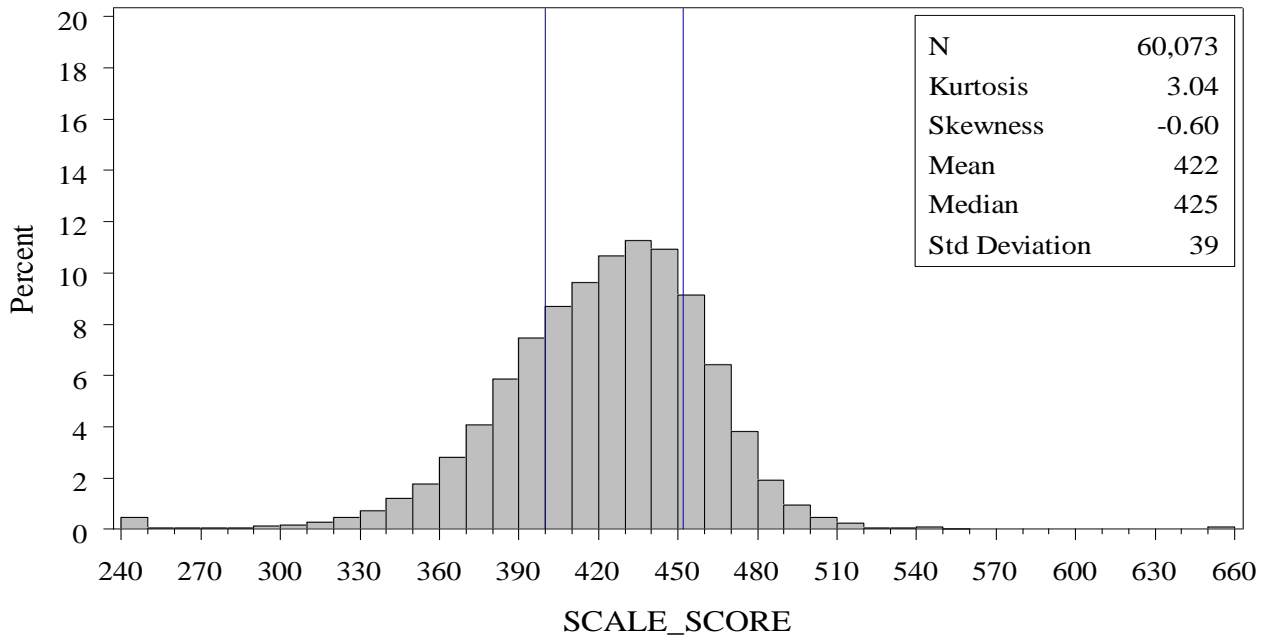
Figure 6.2 Histogram of Total Scale Scores for MD HSA May 2013 Biology
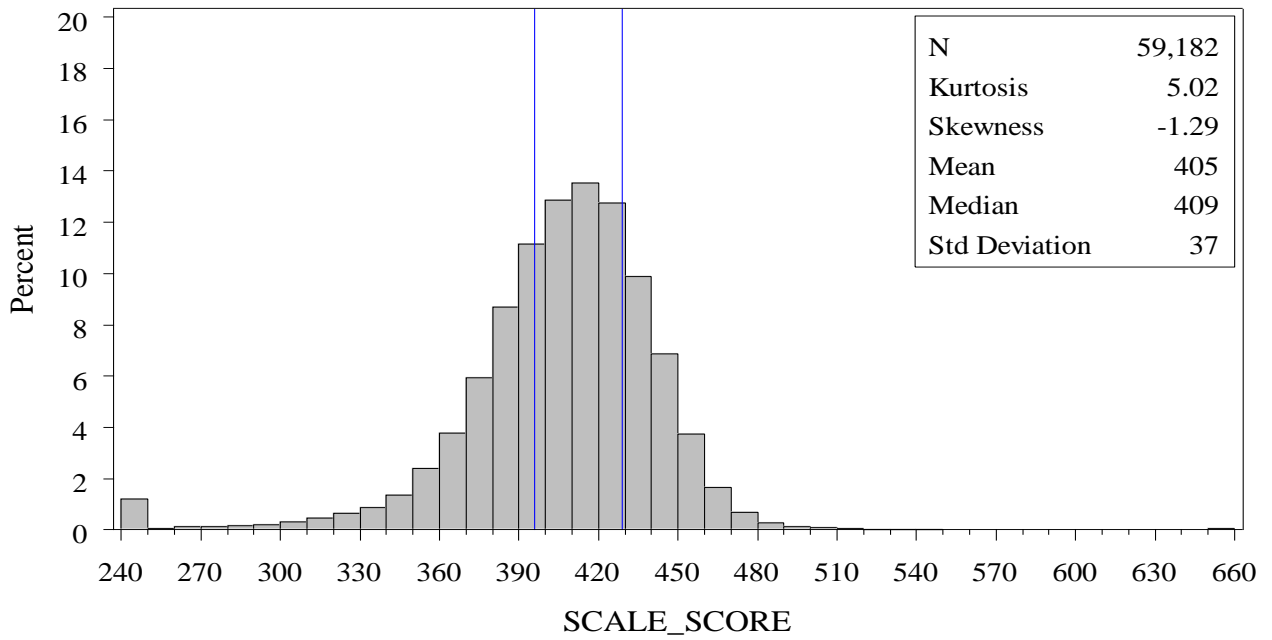
Figure 6.3 Histogram of Total Scale Scores for MD HSA May 2013 English
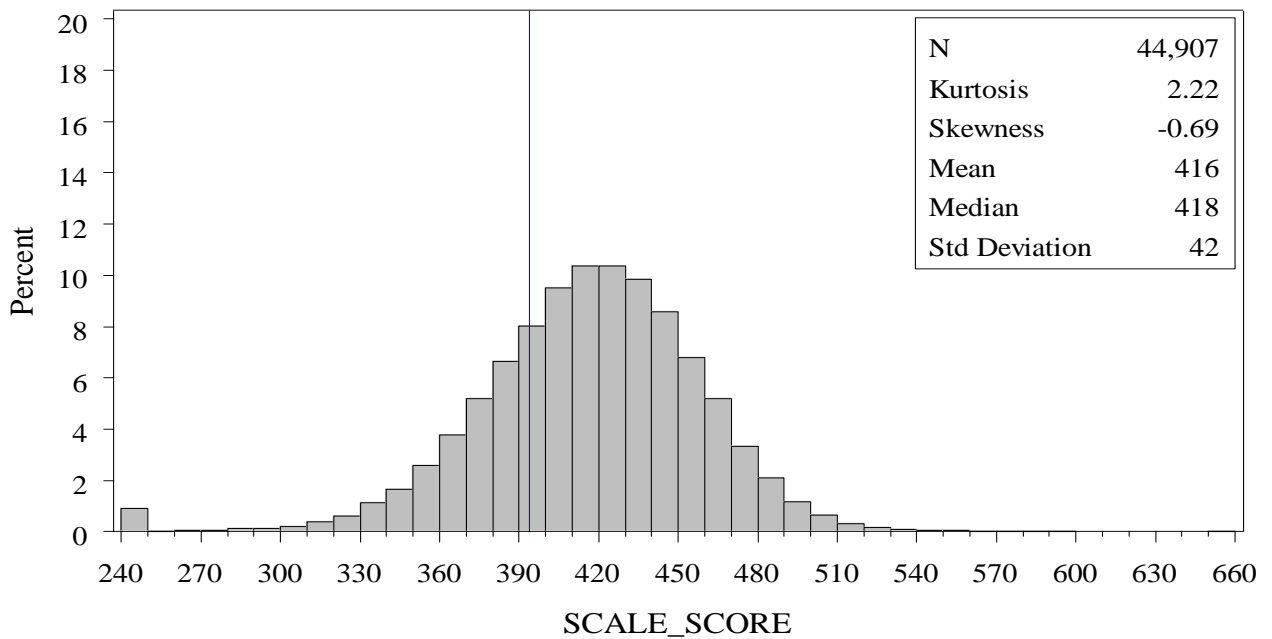
Figure 6.4 Histogram of Total Scale Scores for MD HSA May 2013 Government

Table 6.6 Summary Statistics for MD HSA Algebra: October 2012 Form

		Primary Form R				
		Mean	SD	N	%	Alpha
Overall		380.1	37.2	14,708	100.0	0.70
Gender	Male	379.3	38.8	7,468	50.8	0.71
	Female	380.9	35.5	7,150	48.6	0.68
	Missing	383.7	43.8	90	0.6	0.76
Grade	5	*	*	0	0.0	*
	6	*	*	2	0.0	*
	7	*	*	1	0.0	*
	8	*	*	49	0.3	*
	9	379.9	39.7	1,817	12.4	0.73
	10	381.7	37.0	5,194	35.3	0.70
	11	379.3	36.8	4,263	29.0	0.68
	12	378.7	36.4	3,261	22.2	0.70
	Missing	379.7	42.7	121	0.8	0.72
Special Education	Yes	367.6	45.7	2,061	14.0	0.70
	No	382.3	35.2	12,073	82.1	0.70
	Exited	362.8	42.2	146	1.0	0.65
	Exited and placed in 504[a]	*	*	20	0.1	*
	504	384.6	31.3	408	2.8	0.64
Ethnicity	American Indian	375.6	45.3	56	0.4	0.64
	Asian	383.0	37.6	356	2.4	0.76
	African American	377.7	37.8	9,286	63.1	0.68
	Hawaiian/ Pacific Islander	*	*	27	0.2	*
	White	385.1	36.3	2,864	19.5	0.72
	Hispanic	383.7	33.7	1,660	11.3	0.69
	Missing	383.3	38.0	459	3.1	0.75
Limited English Proficient	Yes	378.6	36.5	775	5.3	0.68
	No	380.2	37.3	13,850	94.2	0.70
	Exited[b]	381.0	31.4	83	0.6	0.69

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

[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.

[b] LEP Exited indicates students who have exited English language acquisition services.

Table 6.7 Summary Statistics for MD HSA Algebra: January 2013 Forms

		Primary Forms A-B					Makeup Form C				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		388.3	42.1	13,336	100.0	0.80	386.7	41	3,730	100.0	0.80
Gender	Male	386.4	45.6	6,545	49.1	0.82	384.3	44.3	1,802	48.3	0.81
	Female	390.6	38.1	6,469	48.5	0.78	389.3	37.0	1,907	51.1	0.78
	Missing	380.1	42.8	322	2.4	0.71	*	*	21	0.6	*
Grade	5	*	*	0	0.0	*	*	*	0	0.0	*
	6	*	*	0	0.0	*	*	*	0	0.0	*
	7	*	*	0	0.0	*	*	*	0	0.0	*
	8	*	*	24	0.2	*	*	*	10	0.3	*
	9	405.2	41.1	3,112	23.3	0.87	400.7	43.3	912	24.5	0.87
	10	386.3	38.7	4,410	33.1	0.72	384.6	37.6	1,207	32.4	0.72
	11	383.1	41.4	3,129	23.5	0.72	384.2	36.9	921	24.7	0.69
	12	377.4	44.3	2,266	17.0	0.72	375.1	43.2	651	17.5	0.74
	Missing	380.7	41.9	395	3.0	0.72	*	*	29	0.8	*
Special Education	Yes	373.3	48.1	1,912	14.3	0.74	371.2	45.4	358	9.6	0.76
	No	390.7	40.5	10,894	81.7	0.81	388.4	40.1	3,205	85.9	0.80
	Exited	*	*	48	0.4	*	*	*	25	0.7	*
	Exited and placed in 504[a]	*	*	28	0.2	*	*	*	7	0.2	*
	504	392.1	40.4	454	3.4	0.82	388.1	38.8	135	3.6	0.76
Ethnicity	American Indian	*	*	46	0.3	*	*	*	11	0.3	*
	Asian	390.7	43.6	245	1.8	0.84	384.8	52.1	73	2.0	0.80
	African American	381.9	42.2	7,264	54.5	0.72	380.1	41.3	2,180	58.4	0.72
	Hawaiian/ Pacific Islander	*	*	19	0.1	*	*	*	6	0.2	*
	White	403.6	38.8	3,361	25.2	0.86	404.8	33.5	914	24.5	0.85
	Hispanic	387.4	38.6	1,571	11.8	0.74	384.1	38.7	397	10.6	0.75
	Missing	383.6	44.0	830	6.2	0.79	381.6	46.4	149	4.0	0.84
Limited English Proficient	Yes	374.2	42.6	629	4.7	0.65	367.4	50.3	135	3.6	0.67
	No	388.9	42.0	12,641	94.8	0.81	387.4	40.5	3,577	95.9	0.80
	Exited[b]	397.2	33.4	66	0.5	0.78	*	*	18	0.5	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 6.8 Summary Statistics for MD HSA Algebra: April 2013 Form

| | | Primary Form S | | | | |
		Mean	SD	N	%	Alpha
Overall		376.7	41.0	1,816	100.0	0.77
Gender	Male	376.1	41.1	865	47.6	0.77
	Female	377.0	40.9	940	51.8	0.78
	Missing	*	*	11	0.6	*
Grade	5	*	*	0	0.0	*
	6	*	*	0	0.0	*
	7	*	*	0	0.0	*
	8	*	*	0	0.0	*
	9	*	*	2	0.1	*
	10	*	*	32	1.8	*
	11	374.2	44.8	95	5.2	0.69
	12	376.7	40.9	1,670	92.0	0.78
	Missing	*	*	17	0.9	*
Special Education	Yes	360.7	44.5	212	11.7	0.73
	No	379.1	39.9	1,561	86.0	0.77
	Exited	*	*	6	0.3	*
	Exited and placed in 504[a]	*	*	1	0.1	*
	504	*	*	36	2.0	*
Ethnicity	American Indian	*	*	6	0.3	*
	Asian	*	*	43	2.4	*
	African American	375.7	41.0	1,347	74.2	0.76
	Hawaiian/ Pacific Islander	*	*	1	0.1	*
	White	374.2	44.4	177	9.7	0.82
	Hispanic	384.2	36.3	204	11.2	0.72
	Missing	*	*	38	2.1	*
Limited English Proficient	Yes	379.6	32	100	5.5	0.69
	No	376.4	41.5	1,712	94.3	0.78
	Exited[b]	*	*	4	0.2	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 6.9 Summary Statistics for MD HSA Algebra: May 2013 Forms

		Primary Forms D-H					Makeup 1 Form X					Makeup 2 Form Y				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		421.6	40.4	65,699	100.0	0.92	414.7	46.8	6,573	100.0	0.92	420.4	41.0	4,753	100.0	0.91
Gender	Male	420.5	42.4	32,937	50.1	0.92	412.6	49.0	3,346	50.9	0.92	419.0	42.9	2,484	52.3	0.92
	Female	423.0	38.1	32,502	49.5	0.91	417.5	43.9	3,178	48.3	0.91	422.1	38.9	2,258	47.5	0.91
	Missing	392.1	37.6	260	0.4	0.84	*	*	49	0.7	*	*	*	11	0.2	*
Grade	5	*	*	1	0.0	*	*	*	0	0.0	*	*	*	0	0.0	*
	6	467.2	41.5	364	0.6	0.91	*	*	22	0.3	*	*	*	16	0.3	*
	7	460.2	27.7	9,918	15.1	0.82	459.1	28.7	1,021	15.5	0.84	462.5	29.5	652	13.7	0.82
	8	432.0	32.4	21,586	32.9	0.89	427	39.1	1,721	26.2	0.90	436.9	29.1	1,187	25.0	0.88
	9	409.7	36.4	22,859	34.8	0.88	405.6	42.6	2,313	35.2	0.88	411.5	35.5	1,968	41.4	0.87
	10	391.2	34.3	7,261	11.1	0.80	385.1	41.4	907	13.8	0.79	387.9	35.0	656	13.8	0.77
	11	386.5	34.9	3,261	5.0	0.79	382.7	40.7	509	7.7	0.76	387.1	38.6	248	5.2	0.84
	12	370.8	45.3	112	0.2	0.75	*	*	13	0.2	*	*	*	11	0.2	*
	Missing	388.0	42.3	337	0.5	0.85	371.3	60.7	67	1.0	0.89	*	*	15	0.3	*
Special Education	Yes	386.9	45.2	5,999	9.1	0.88	377.1	54.6	521	7.9	0.86	386.3	45.4	346	7.3	0.87
	No	425.5	38.0	56,897	86.6	0.91	418.6	44.5	5,724	87.1	0.92	423.6	39.6	4,176	87.9	0.91
	Exited	413.1	44.3	458	0.7	0.91	406.7	45.2	55	0.8	0.90	*	*	44	0.9	*
	Exited and placed in 504[a]	421.7	30.3	125	0.2	0.88	*	*	18	0.3	*	*	*	17	0.4	*
	504	417.7	40.1	2,220	3.4	0.91	408.1	45.8	255	3.9	0.90	411.2	34.2	170	3.6	0.89
Ethnicity	American Indian	415.5	37.4	216	0.3	0.90	*	*	16	0.2	*	*	*	17	0.4	*
	Asian	448.5	39.8	3,688	5.6	0.92	450.8	37.2	282	4.3	0.91	453.1	42.5	244	5.1	0.91
	African American	405.0	37.6	26,324	40.1	0.88	396.2	44.9	2,714	41.3	0.88	403.5	38.2	1,838	38.7	0.87
	Hawaiian/ Pacific Islander	417.2	39.7	81	0.1	0.90	*	*	6	0.1	*	*	*	8	0.2	*
	White	437.6	35.0	25,020	38.1	0.91	433.7	39.4	2,589	39.4	0.91	435.6	35.4	1,924	40.5	0.91
	Hispanic	412.2	38.8	7,842	11.9	0.90	403.2	44.6	662	10.1	0.89	408.4	41.0	533	11.2	0.89
	Missing	426.7	40.1	2,528	3.8	0.92	410.3	53.3	304	4.6	0.92	424.6	33.4	189	4.0	0.89
Limited English Proficient	Yes	392.4	44.2	2,732	4.2	0.89	378.7	50.0	142	2.2	0.87	380.7	56.8	118	2.5	0.90
	No	422.8	39.7	62,574	95.2	0.91	415.5	46.4	6,397	97.3	0.92	421.4	40.1	4,610	97.0	0.91
	Exited[b]	427.5	32.5	393	0.6	0.90	*	*	34	0.5	*	*	*	25	0.5	*

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

[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.

[b] LEP Exited indicates students who have exited English language acquisition services.

Table 6.10 Summary Statistics for MD HSA Algebra: Summer 2013 Forms

		Primary 1 Form P					Primary 2 Form Q				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		393.4	34.3	364	100.0	0.81	389.9	40.2	824	100.0	0.84
Gender	Male	392.3	34.0	206	56.6	0.80	388.8	41.3	449	54.5	0.84
	Female	395.1	34.5	157	43.1	0.81	391.3	39.0	373	45.3	0.84
	Missing	*	*	1	0.3		*	*	2	0.2	*
Grade	5	*	*	0	0.0	*	*	*	0	0.0	*
	6	*	*	0	0.0	*	*	*	1	0.4	*
	7	*	*	0	0.0	*	*	*	0	0.0	*
	8	*	*	22	6.0	*	*	*	37	4.5	*
	9	395.3	29.1	105	28.8	0.80	389.5	40.3	440	53.4	0.84
	10	391.4	35.9	162	44.5	0.79	392.9	38.9	198	24.0	0.82
	11	384.4	33.8	66	18.1	0.75	383.0	35.9	96	11.7	0.75
	12	*	*	9	2.5	*	*	*	49	5.9	*
	Missing	*	*	0	0.0	*	*	*	3	0.4	*
Special Education	Yes	*	*	38	10.4	*	359.1	48.8	92	11.2	0.82
	No	397.0	30.9	323	88.7	0.80	393.9	37.4	708	85.9	0.83
	Exited	*	*	0	0.0	*	*	*	1	0.1	*
	Exited and placed in 504[a]	*	*	0	0.0	*	*	*	2	0.2	*
	504	*	*	3	0.8	*	*	*	21	2.5	*
Ethnicity	American Indian	*	*	10	2.7	*	*	*	2	0.2	*
	Asian	*	*	4	1.1	*	*	*	21	2.5	*
	African American	394.7	32.2	205	56.3	0.80	383.3	40.5	530	64.3	0.82
	Hawaiian/ Pacific Islander	*	*	1	0.3	*	*	*	0	0.0	*
	White	393.8	35.8	86	23.6	0.82	401.3	36.1	204	24.8	0.83
	Hispanic	*	*	49	13.5	*	396.9	30.7	51	6.2	0.75
	Missing	*	*	9	2.5	*	*	*	20	2.4	*
Limited English Proficient	Yes	*	*	18	4.9	*	*	*	5	0.6	*
	No	393.5	34.3	342	94.0	0.81	390.1	40.2	816	99.0	0.84
	Exited[b]	*	*	4	1.1	*	*	*	3	0.4	*

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

[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.

[b] LEP Exited indicates students who have exited English language acquisition services.

Table 6.11 Summary Statistics for MD HSA Biology: October 2012 Form

		Primary Form R				
		Mean	SD	N	%	Alpha
Overall		374.0	33.0	10,497	100.0	0.74
Gender	Male	373.4	34.8	5,289	50.4	0.75
	Female	374.6	31.0	5,128	48.9	0.72
	Missing	382.8	26.6	80	0.8	0.72
Grade	5	*	*	0	0.0	*
	6	*	*	1	0.0	*
	7	*	*	0	0.0	*
	8	*	*	1	0.0	*
	9	374.1	32.4	653	6.2	0.70
	10	378.4	36.2	2,295	21.9	0.84
	11	373.7	31.4	3,949	37.6	0.67
	12	371.3	32.5	3,504	33.4	0.67
	Missing	384.9	20.7	94	0.9	0.68
Special Education	Yes	368.0	35.8	1,529	14.6	0.70
	No	375.2	32.1	8,548	81.4	0.74
	Exited	361.8	33.7	122	1.2	0.69
	Exited and placed in 504[a]	*	*	10	0.1	*
	504	375.4	37.0	288	2.7	0.80
Ethnicity	American Indian	*	*	40	0.4	*
	Asian	378.7	30.8	250	2.4	0.81
	African American	371.4	32.0	6,521	62.1	0.66
	Hawaiian/ Pacific Islander	*	*	8	0.1	*
	White	379.5	36.5	2,103	20.0	0.83
	Hispanic	376.2	31.1	1,260	12.0	0.72
	Missing	380.0	31.5	315	3.0	0.78
Limited English Proficient	Yes	372.5	29.2	459	4.4	0.64
	No	374.1	33.2	9,978	95.1	0.74
	Exited[b]	377.7	22.7	60	0.6	0.59

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 6.12 Summary Statistics for MD HSA Biology: January 2013 Forms

		Primary Forms A-B					Makeup Form C				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		390.5	50.2	11,296	100.0	0.93	392.8	49.8	3,236	100.0	0.94
Gender	Male	388.9	54.1	5,447	48.2	0.94	391.9	54.4	1,523	47.1	0.94
	Female	392.8	46.2	5,655	50.1	0.93	393.7	45.5	1,706	52.7	0.93
	Missing	367.3	36.3	194	1.7	0.52	*	*	7	0.2	*
Grade	5	*	*	0	0.0	*	*	*	0	0.0	*
	6	*	*	0	0.0	*	*	*	0	0.0	*
	7	*	*	0	0.0	*	*	*	0	0.0	*
	8	*	*	1	0.0	*	*	*	0	0.0	*
	9	418.8	48.7	1,268	11.2	0.95	428.5	44.0	367	11.3	0.94
	10	411.3	47.5	4,128	36.5	0.94	415.0	44.8	1,182	36.5	0.95
	11	374.5	41.9	3,193	28.3	0.83	374.0	42.3	888	27.4	0.84
	12	364.2	43.4	2,465	21.8	0.73	364.4	41.3	790	24.4	0.71
	Missing	364.7	39.7	241	2.1	0.59	*	*	9	0.3	*
Special Education	Yes	365.1	49.9	1,247	11.0	0.85	360.7	50.6	250	7.7	0.86
	No	393.8	49.2	9,632	85.3	0.93	395.5	49.1	2,863	88.5	0.94
	Exited	*	*	49	0.4	*	*	*	11	0.3	*
	Exited and placed in 504[a]	*	*	27	0.2	*	*	*	13	0.4	*
	504	388.7	52.4	341	3.0	0.93	389.9	44.2	99	3.1	0.91
Ethnicity	American Indian	*	*	44	0.4	*	*	*	13	0.4	*
	Asian	405.6	53.2	300	2.7	0.95	400.6	59.1	82	2.5	0.95
	African American	368.7	44.4	4,937	43.7	0.81	368.1	42.1	1,452	44.9	0.80
	Hawaiian/ Pacific Islander	*	*	8	0.1	*	*	*	3	0.1	*
	White	417.4	43.7	4,396	38.9	0.94	423.0	41.5	1,271	39.3	0.94
	Hispanic	380.7	45.6	1,048	9.3	0.89	383.3	44.9	308	9.5	0.91
	Missing	381.1	49.5	563	5.0	0.91	394.1	50.5	107	3.3	0.94
Limited English Proficient	Yes	359.8	47.0	330	2.9	0.72	349.7	47.8	98	3.0	0.58
	No	391.4	50.0	10,921	96.7	0.93	394.2	49.3	3,129	96.7	0.94
	Exited[b]	*	*	45	0.4	*	*	*	9	0.3	*

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

[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.

[b] LEP Exited indicates students who have exited English language acquisition services.

Table 6.13 Summary Statistics for MD HSA Biology: April 2013 Form

| | | Primary Form S | | | | |
		Mean	SD	N	%	Alpha
Overall		361.9	43.5	2,186	100.0	0.75
Gender	Male	361.5	45.1	1,013	46.3	0.76
	Female	362.1	42.0	1,159	53.0	0.72
	Missing	*	*	14	0.6	*
Grade	5	*	*	0	0.0	*
	6	*	*	0	0.0	*
	7	*	*	0	0.0	*
	8	*	*	0	0.0	*
	9	*	*	2	0.1	*
	10	*	*	28	1.3	*
	11	359.7	48.1	115	5.3	0.82
	12	361.9	43.2	2,028	92.8	0.74
	Missing	*	*	13	0.6	*
Special Education	Yes	349.3	45.6	260	11.9	0.70
	No	363.7	42.7	1,867	85.4	0.75
	Exited	*	*	6	0.3	*
	Exited and placed in 504[a]	*	*	2	0.1	*
	504	358.3	51.8	51	2.3	0.72
Ethnicity	American Indian	*	*	7	0.3	*
	Asian	375.9	35.4	51	2.3	0.89
	African American	360.0	43.7	1,592	72.8	0.71
	Hawaiian/ Pacific Islander	*	*	2	0.1	*
	White	365.4	48.2	233	10.7	0.84
	Hispanic	369.0	37.0	246	11.3	0.76
	Missing	363.3	39.7	55	2.5	0.62
Limited English Proficient	Yes	365.4	29.9	132	6.0	0.57
	No	361.6	44.2	2,044	93.5	0.76
	Exited[b]	*	*	10	0.5	*

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

[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.

[b] LEP Exited indicates students who have exited English language acquisition services.

Table 6.14 Summary Statistics for MD HSA Biology: May 2013 Forms

		Primary Forms D-H					Makeup 1 Form X					Makeup 2 Form Y				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		422.0	38.7	50,602	100.0	0.94	417.8	40.5	5,388	100.0	0.94	424.0	38.9	4,083	100.0	0.94
Gender	Male	422.8	40.7	24,871	49.2	0.94	417.3	42.7	2,718	50.4	0.94	424.5	41.4	2,048	50.2	0.94
	Female	421.5	36.6	25,592	50.6	0.93	418.4	38.4	2,652	49.2	0.94	423.5	36.2	2,031	49.7	0.94
	Missing	380.3	41.6	139	0.3	0.87	*	*	18	0.3	*	*	*	4	0.1	*
Grade	5	*	*	0	0.0	*	*	*	0	0.0	*	*	*	0	0.0	*
	6	*	*	0	0.0	*	*	*	0	0.0	*	*	*	0	0.0	*
	7	*	*	0	0.0	*	*	*	0	0.0	*	*	*	0	0.0	*
	8	450.0	21.5	99	0.2	0.86	*	*	2	0.0	*	*	*	0	0.0	*
	9	434.3	36.7	19,742	39.0	0.94	431.7	41.3	1,898	35.2	0.95	437.2	36.6	1,532	37.5	0.94
	10	418.5	36.0	25,147	49.7	0.93	416.0	35.1	2,848	52.9	0.93	421.7	35.2	2,151	52.7	0.93
	11	395.7	39.6	5,274	10.4	0.92	385.0	38.8	597	11.1	0.88	385.7	39.3	367	9.0	0.90
	12	369.2	39.1	128	0.3	0.76	*	*	21	0.4	*	*	*	11	0.3	*
	Missing	377.1	43.0	212	0.4	0.86	*	*	22	0.4	*	*	*	22	0.5	*
Special Education	Yes	390.3	42.8	3,796	7.5	0.91	390.6	46.1	310	5.8	0.92	385.5	49.6	234	5.7	0.92
	No	424.9	37.2	44,888	88.7	0.94	419.5	39.6	4,840	89.8	0.94	426.5	36.7	3,686	90.3	0.94
	Exited	412.2	33.8	244	0.5	0.92	*	*	33	0.6	*	*	*	25	0.6	*
	Exited and placed in 504[a]	416.9	26.3	77	0.2	0.90	*	*	11	0.2	*	*	*	5	0.1	*
	504	420.3	38.3	1,597	3.2	0.94	416.2	40.8	194	3.6	0.94	423.4	43.2	133	3.3	0.94
Ethnicity	American Indian	414.7	34.9	126	0.2	0.92	*	*	23	0.4	*	*	*	10	0.2	*
	Asian	446.2	36.1	3,180	6.3	0.94	446.0	41.3	268	5.0	0.94	445.1	34.0	279	6.8	0.94
	African American	404.4	36.9	19,351	38.2	0.91	399.8	39.2	2,265	42.0	0.91	403.5	38.1	1,333	32.6	0.92
	Hawaiian/ Pacific Islander	419.8	36.4	83	0.2	0.93	*	*	8	0.1	*	*	*	9	0.2	*
	White	436.9	33.2	20,304	40.1	0.93	434.0	32.4	2,120	39.3	0.93	435.4	34.6	1,907	46.7	0.93
	Hispanic	414.5	35.2	5,615	11.1	0.92	412.6	40.8	491	9.1	0.93	419.8	34.1	387	9.5	0.93
	Missing	425.1	40.5	1,943	3.8	0.94	425.0	39.2	213	4.0	0.95	432.7	35.0	158	3.9	0.94
Limited English Proficient	Yes	392.4	39.6	1,382	2.7	0.90	388.5	37.6	70	1.3	0.89	390.2	37.3	50	1.2	0.91
	No	422.9	38.4	48,886	96.6	0.94	418.2	40.5	5,283	98.1	0.94	424.4	38.8	4,010	98.2	0.94
	Exited[b]	426.1	33.3	334	0.7	0.92	*	*	35	0.6	*	*	*	23	0.6	*

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

[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.

[b] LEP Exited indicates students who have exited English language acquisition services.

Table 6.15 Summary Statistics for MD HSA Biology: Summer 2013 Forms

		Primary 1 Form P					Primary 2 Form Q				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		379.87	38.8	222	100.0	0.82	383.6	38.2	431	100.0	0.85
Gender	Male	376.4	42.1	130	58.6	0.83	377.5	40.8	241	55.9	0.83
	Female	383.7	33.7	87	39.2	0.82	391.4	33.2	188	43.6	0.86
	Missing	*	*	5	2.3	*	*	*	2	0.5	*
Grade	5	*	*	0	0.0	*	*	*	0	0.0	*
	6	*	*	0	0.0	*	*	*	0	0.0	*
	7	*	*	0	0.0	*	*	*	0	0.0	*
	8	*	*	0	0.0	*	*	*	0	0.0	*
	9	*	*	21	9.5	*	393.4	38.1	88	20.4	0.87
	10	388.7	32.2	108	48.6	0.81	384.6	37.3	185	42.9	0.85
	11	370.5	42.7	72	32.4	0.81	378.2	36.9	110	25.5	0.80
	12	*	*	14	6.3	*	*	*	45	10.4	*
	Missing	*	*	7	3.2	*	*	*	3	0.7	*
Special Education	Yes	*	*	26	11.7	*	359.4	48.9	72	16.7	0.81
	No	383.1	35.8	189	85.1	0.82	388.5	33.6	348	80.7	0.84
	Exited	*	*	2	0.9	*	*	*	1	0.2	*
	Exited and placed in 504[a]	*	*	1	0.5	*	*	*	1	0.2	*
	504	*	*	4	1.8	*	*	*	9	2.1	*
Ethnicity	American Indian	*	*	1	0.5	*	*	*	2	0. 5	*
	Asian	*	*	8	3.6	*	*	*	4	0.9	*
	African American	383.4	36.3	115	51.8	0.82	378.8	37.1	305	70.8	0.81
	Hawaiian/ Pacific Islander	*	*	1	0.5	*	*	*	1	0.2	*
	White	370.6	43.0	71	32	0.83	393.2	41.6	85	19.7	0.89
	Hispanic	*	*	18	8.1	*	*	*	27	6.3	*
	Missing	*	*	8	3.6	*	*	*	7	1.6	*
Limited English Proficient	Yes	*	*	8	3.6	*	*	*	3	0.7	*
	No	380.0	39.2	213	95.9	0.82	383.4	38.2	427	99.1	0.85
	Exited[b]	*	*	1	0.5	*	*	*	1	0.2	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 6.16 Summary Statistics for MD HSA English: October 2012 Form

| | | Primary Form R | | | | |
		Mean	SD	N	%	Alpha
Overall		373.3	36.4	12,039	100.0	0.80
Gender	Male	371.0	37.8	6,661	55.3	0.79
	Female	376.3	34.3	5,329	44.3	0.79
	Missing	*	*	49	0.4	*
Grade	5	*	*	0	0.0	*
	6	*	*	1	0.0	*
	7	*	*	0	0.0	*
	8	*	*	0	0.0	*
	9	373.2	36.0	626	5.2	0.78
	10	372.9	36.6	2,181	18.1	0.80
	11	374.9	36.3	5,441	45.2	0.80
	12	371.4	36.5	3,715	30.9	0.78
	Missing	368.8	44.5	75	0.6	0.83
Special Education	Yes	363.4	42.4	1,762	14.6	0.79
	No	375.4	34.8	9,786	81.3	0.79
	Exited	356.1	42.4	140	1.2	0.78
	Exited and placed in 504[a]	*	*	13	0.1	*
	504	372.5	38.2	338	2.8	0.79
Ethnicity	American Indian	*	*	42	0.3	*
	Asian	373.8	36.8	336	2.8	0.80
	African American	371.6	36.6	6,874	57.1	0.78
	Hawaiian/ Pacific Islander	*	*	18	0.1	*
	White	376.5	36.9	2,851	23.7	0.82
	Hispanic	375.4	33.7	1,574	13.1	0.79
	Missing	371.5	38.4	344	2.9	0.82
Limited English Proficient	Yes	372.0	31.7	598	5.0	0.75
	No	373.3	36.7	11,355	94.3	0.80
	Exited[b]	378.0	27.0	86	0.7	0.75

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 6.17 Summary Statistics for MD HSA English: January 2013 Forms

		Primary Forms A-B					Makeup Form C				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		379.3	42.1	11,775	100.0	0.90	376.9	42.1	3,273	100.0	0.89
Gender	Male	375.1	44.0	6,490	55.1	0.89	371.4	43.5	1,829	55.9	0.88
	Female	385.0	39.0	5,021	42.6	0.90	383.9	39.3	1,439	44.0	0.90
	Missing	370.3	36.6	264	2.2	0.80	*	*	5	0.2	*
Grade	5	*	*	0	0.0	*	*	*	0	0.0	*
	6	*	*	0	0.0	*	*	*	0	0.0	*
	7	*	*	0	0.0	*	*	*	0	0.0	*
	8	*	*	0	0.0	*	*	*	0	0.0	*
	9	362.1	48.0	217	1.8	0.90	363.1	41.5	54	1.6	0.87
	10	402.1	38.3	4,352	37.0	0.91	399.8	38.7	1,112	34.0	0.91
	11	368.6	36.5	4,110	34.9	0.78	367.8	36.8	1,205	36.8	0.80
	12	361.5	40.1	2,787	23.7	0.79	361.9	40.8	873	26.7	0.81
	Missing	371.8	32.9	309	2.6	0.78	*	*	29	0.9	*
Special Education	Yes	355.8	43.6	1,449	12.3	0.82	356.0	45.2	313	9.6	0.83
	No	382.8	40.7	9,884	83.9	0.90	379.4	41.2	2,861	87.4	0.89
	Exited	377.3	34.2	54	0.5	0.82	*	*	8	0.2	*
	Exited and placed in 504[a]	*	*	29	0.2	*	*	*	10	0.3	*
	504	375.7	44.8	359	3.0	0.89	368.3	44.7	81	2.5	0.88
Ethnicity	American Indian	*	*	36	0.3	*	*	*	7	0.2	*
	Asian	383.4	42.2	348	3.0	0.91	378.2	37.8	93	2.8	0.88
	African American	364.7	40.8	5,025	42.7	0.82	362.3	41.0	1,520	46.4	0.82
	Hawaiian/ Pacific Islander	*	*	8	0.1		*	*	5	0.2	*
	White	396.9	38.5	4,470	38.0	0.91	396.4	37.8	1,225	37.4	0.90
	Hispanic	373.9	38.0	1,226	10.4	0.85	370.3	35.8	332	10.1	0.83
	Missing	378.3	37.7	662	5.6	0.87	381.4	38.2	91	2.8	0.90
Limited English Proficient	Yes	357.7	38.0	480	4.1	0.74	351.1	37.0	137	4.2	0.65
	No	380.1	42.1	11,232	95.4	0.90	378.0	42.1	3,119	95.3	0.89
	Exited[b]	386.0	27.3	63	0.5	0.72	*	*	17	0.5	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 6.18 Summary Statistics for MD HSA English: April 2013 Form

		Primary Form S				
		Mean	SD	N	%	Alpha
Overall		363.8	35.5	2,330	100.0	0.82
Gender	Male	361.6	36.5	1,226	52.6	0.82
	Female	366.5	33.6	1,055	45.3	0.81
	Missing	*	*	49	2.1	*
Grade	5	*	*	0	0.0	*
	6	*	*	0	0.0	*
	7	*	*	0	0.0	*
	8	*	*	0	0.0	*
	9	*	*	3	0.1	*
	10	*	*	30	1.3	*
	11	363.4	30.6	120	5.2	0.79
	12	363.7	35.7	2,116	90.8	0.82
	Missing	361.3	39.9	61	2.6	0.85
Special Education	Yes	353.1	35.2	294	12.6	0.78
	No	365.6	35.0	1,976	84.8	0.81
	Exited	*	*	14	0.6	*
	Exited and placed in 504[a]	*	*	1	0.0	*
	504	*	*	45	1.9	*
Ethnicity	American Indian	*	*	6	0.3	*
	Asian	367.5	29.8	91	3.9	0.85
	African American	364.9	35.0	1,585	68.0	0.81
	Hawaiian/ Pacific Islander	*	*	2	0.1	*
	White	354.8	42.5	242	10.4	0.83
	Hispanic	362.7	32.4	311	13.3	0.79
	Missing	367.5	35.5	93	4.0	0.83
Limited English Proficient	Yes	360.2	31.3	198	8.5	0.76
	No	363.9	35.8	2,116	90.8	0.82
	Exited[b]	*	*	16	0.7	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 6.19 Summary Statistics for MD HSA English: May 2013 Forms

		Primary Forms D-H					Makeup 1 Form X					Makeup 2 Form Y				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		405.3	36.9	50,771	100.0	0.91	402.9	38.7	4,530	100.0	0.91	406.8	35.3	3,881	100.0	0.91
Gender	Male	400.2	39.0	25,615	50.5	0.91	397.4	40.9	2,332	51.5	0.91	401.3	37.0	1,992	51.3	0.91
	Female	410.8	33.5	24,943	49.1	0.91	408.9	35.2	2,181	48.1	0.91	412.6	32.4	1,887	48.6	0.90
	Missing	371.1	43.1	213	0.4	0.88	*	*	17	0.4	*	*	*	2	0.1	*
Grade	5	*	*	0	0.0	*	*	*	0	0.0	*	*	*	0	0.0	*
	6	*	*	0	0.0	*	*	*	0	0.0	*	*	*	0	0.0	*
	7	*	*	0	0.0	*	*	*	0	0.0	*	*	*	1	0.0	*
	8	*	*	0	0.0	*	*	*	0	0.0	*	*	*	0	0.0	*
	9	377.2	38.8	2,453	4.8	0.87	375.3	41.7	235	5.2	0.87	381.2	37.4	186	4.8	0.87
	10	411.0	33.4	43,053	84.8	0.90	410.5	34.0	3,634	80.2	0.90	412.1	32.4	3,275	84.4	0.90
	11	372.2	38.1	4,837	9.5	0.84	371.7	40.4	621	13.7	0.83	376.7	35.8	402	10.4	0.82
	12	348.9	48.8	154	0.3	0.78	*	*	15	0.3	*	*	*	10	0.3	*
	Missing	369.4	43.6	274	0.5	0.89	*	*	25	0.6	*	*	*	7	0.2	*
Special Education	Yes	370.4	42.7	3,927	7.7	0.88	368.5	44.3	320	7.1	0.87	375.5	38.6	259	6.7	0.86
	No	408.6	34.7	44,864	88.4	0.91	405.9	36.9	4,036	89.1	0.91	409.6	33.7	3,459	89.1	0.90
	Exited	386.4	33.9	248	0.5	0.87	*	*	22	0.5	*	*	*	23	0.6	*
	Exited and placed in 504[a]	396.5	27.6	70	0.1	0.86	*	*	8	0.2	*	*	*	8	0.2	*
	504	400.9	36.3	1,662	3.3	0.91	397.8	39.7	144	3.2	0.90	395.1	39.4	132	3.4	0.91
Ethnicity	American Indian	396.6	42.2	132	0.3	0.90	*	*	16	0.4	*	*	*	15	0.4	*
	Asian	421.4	34.2	3,239	6.4	0.91	424.6	30.7	255	5.6	0.90	421.3	30.2	252	6.5	0.90
	African American	392.5	36.8	19,478	38.4	0.90	389.7	37.3	1,697	37.5	0.89	394.5	35.0	1,270	32.7	0.89
	Hawaiian/Pacific Islander	398.5	41.3	83	0.2	0.92	*	*	6	0.1	*	*	*	7	0.2	*
	White	417.4	32.5	20,164	39.7	0.90	412.7	36.3	1,944	42.9	0.90	414.9	33.8	1,787	46.0	0.90
	Hispanic	396.6	35.1	5,692	11.2	0.90	395.7	38.9	434	9.6	0.90	399.9	32.6	409	10.5	0.89
	Missing	407.4	37.5	1,983	3.9	0.92	409.0	41.1	178	3.9	0.92	409.4	35.6	141	3.6	0.92
Limited English Proficient	Yes	364.6	41.9	1,256	2.5	0.85	360.9	36.1	63	1.4	0.82	360.3	47.5	57	1.5	0.86
	No	406.4	36.2	49,136	96.8	0.91	403.6	38.4	4,444	98.1	0.91	407.5	34.7	3,798	97.9	0.91
	Exited[b]	400.3	27.7	379	0.7	0.84	*	*	23	0.5	*	*	*	26	0.7	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 6.20 Summary Statistics for MD HSA English: Summer 2013 Forms

		Primary 1 Form P					Primary 2 Form Q				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		372.4	38.5	490	100.0	0.81	368.1	48.0	681	100.0	0.85
Gender	Male	369.8	43.6	320	65.3	0.83	364.9	50.2	430	63.1	0.86
	Female	377.4	25.7	170	34.7	0.75	373.6	43.7	249	36.6	0.83
	Missing	*	*	0	0.0	*	*	*	2	0.3	*
Grade	5	*	*	0	0.0	*	*	*	0	0.0	*
	6	*	*	0	0.0	*	*	*	0	0.0	*
	7	*	*	0	0.0	*	*	*	0	0.0	*
	8	*	*	0	0.0	*	*	*	0	0.0	*
	9	372.5	36.2	72	14.7	0.82	*	*	41	6.0	*
	10	374.5	39.8	292	59.6	0.81	368.9	47.2	375	55.1	0.85
	11	366.2	36.3	100	20.4	0.79	366.3	50.7	201	29.5	0.84
	12	*	*	16	3.3	*	368.7	41.2	62	9.1	0.82
	Missing	*	*	10	2.0	*	*	*	2	0.3	*
Special Education	Yes	356.5	45.4	50	10.2	0.86	328.1	59.4	81	11.9	0.83
	No	375.0	36.5	426	86.9	0.80	374.2	43.3	592	86.9	0.84
	Exited	*	*	1	0.2	*	*	*	1	0.1	*
	Exited and placed in 504[a]	*	*	0	0.0	*	*	*	1	0.1	*
	504	*	*	13	2.7	*	*	*	6	0.9	*
Ethnicity	American Indian	*	*	5	1.0	*	*	*	1	0.1	*
	Asian	*	*	9	1.8	*	*	*	15	2.2	*
	African American	372.8	40.0	277	56.5	0.82	363.4	49.9	395	58.0	0.84
	Hawaiian/ Pacific Islander	*	*	1	0.2	*	*	*	2	0.3	*
	White	368.7	39.2	100	20.4	0.82	377.2	43.4	200	29.4	0.85
	Hispanic	373.3	32.6	81	16.5	0.72	366.7	50.7	52	7.6	0.88
	Missing	*	*	17	3.5	*	*	*	16	2.3	*
Limited English Proficient	Yes	*	*	19	3.9	*	*	*	25	3.7	*
	No	372.2	39.0	468	95.5	0.81	369.1	48.0	653	95.9	0.85
	Exited[b]	*	*	3	0.6	*	*	*	3	0.4	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 6.21 Summary Statistics for MD HSA Government: January 2013 Forms

		Primary Form A					Makeup Form C				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		405.2	47.1	4,837	100.0	0.94	412.6	41.5	1,814	100.0	0.93
Gender	Male	405.6	49.9	2,494	51.6	0.94	414	43.8	968	53.4	0.93
	Female	405.0	43.9	2,331	48.2	0.93	411.1	38.8	845	46.6	0.93
	Missing	*	*	12	0.2	*	*	*	1	0.1	*
Grade	5	*	*	0	0.0	*	*	*	0	0.0	*
	6	*	*	0	0.0	*	*	*	0	0.0	*
	7	*	*	0	0.0	*	*	*	0	0.0	*
	8	*	*	0	0.0	*	*	*	0	0.0	*
	9	413.8	44.9	2,555	52.8	0.94	420.4	39.3	1,013	55.8	0.93
	10	400.5	46.0	1,721	35.6	0.94	405.8	39.7	584	32.2	0.92
	11	387.4	47.9	351	7.3	0.93	404.1	42.4	131	7.2	0.93
	12	370.9	51.6	192	4.0	0.91	381.5	51.5	84	4.6	0.93
	Missing	*	*	18	0.4	*	*	*	2	0.1	*
Special Education	Yes	369.5	48.4	636	13.1	0.90	375.6	45.1	126	6.9	0.89
	No	411.0	44.5	3,997	82.6	0.94	416	39.6	1,607	88.6	0.93
	Exited	*	*	28	0.6	*	*	*	12	0.7	*
	Exited and placed in 504[a]	*	*	19	0.4	*	*	*	11	0.6	*
	504	404.1	44.1	157	3.2	0.93	404.6	51.3	58	3.2	0.93
Ethnicity	American Indian	*	*	17	0.4	*	*	*	2	0.1	*
	Asian	419.9	48.1	109	2.3	0.95	*	*	40	2.2	*
	African American	377.5	44.8	1,464	30.3	0.90	386.6	45.3	370	20.4	0.91
	Hawaiian/ Pacific Islander	*	*	7	0.1	*	*	*	2	0.1	*
	White	420.8	40.9	2,753	56.9	0.94	421.7	36.3	1,202	66.3	0.92
	Hispanic	391.8	44.9	356	7.4	0.92	401.4	43.8	132	7.3	0.93
	Missing	411.9	48.6	131	2.7	0.95	410.2	39.2	66	3.6	0.92
Limited English Proficient	Yes	358.7	46.9	99	2.0	0.85	*	*	14	0.8	*
	No	406.3	46.6	4,720	97.6	0.94	413.0	41.5	1,790	98.7	0.93
	Exited[b]	*	*	18	0.4	*	*	*	10	0.6	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 6.22 Summary Statistics for MD HSA Government: May 2013 Forms

		Primary Form D					Makeup 1 Form X					Makeup 2 Form Y				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		414.8	41.5	27,821	100.0	0.94	416.8	43.5	8,849	100.0	0.94	417.7	42.7	8,237	100.0	0.94
Gender	Male	415.2	44.6	13,772	49.5	0.94	417.4	46.1	4,390	49.6	0.94	418.5	46.4	4,260	51.7	0.94
	Female	414.5	38.2	13,950	50.1	0.93	416.2	40.8	4,445	50.2	0.94	416.9	38.4	3,977	48.3	0.93
	Missing	403.3	39.3	99	0.4	0.91	*	*	14	0.2	*	*	*	0	0.0	*
Grade	5	*	*	0	0.0	*	*	*	0	0.0	*	*	*	0	0.0	*
	6	*	*	0	0.0	*	*	*	0	0.0	*	*	*	0	0.0	*
	7	*	*	0	0.0	*	*	*	0	0.0	*	*	*	0	0.0	*
	8	*	*	0	0.0	*	*	*	0	0.0	*	*	*	0	0.0	*
	9	413.0	41.8	11,026	39.6	0.94	412.1	44.9	3,818	43.1	0.94	412.8	43.8	3,729	45.3	0.94
	10	416.5	40.7	14,576	52.4	0.94	420.6	41.5	4,309	48.7	0.94	421.9	41.3	3,862	46.9	0.94
	11	415.4	43.2	1,959	7.0	0.94	419.8	45.1	662	7.5	0.94	421.7	40.0	597	7.2	0.93
	12	392.1	55.6	133	0.5	0.95	*	*	46	0.5	*	*	*	48	0.6	*
	Missing	396.8	43.2	126	0.5	0.92	*	*	14	0.2	*	*	*	1	0.0	*
Special Education	Yes	379.1	45.3	2,468	8.9	0.91	384.4	49.0	492	5.6	0.93	379.3	48.2	493	6.0	0.90
	No	418.7	39.2	24,334	87.5	0.94	418.9	42.4	8,006	90.5	0.94	420.6	41.1	7,420	90.1	0.93
	Exited	396.7	43.6	154	0.6	0.92	402.8	48.0	52	0.6	0.91	*	*	48	0.6	*
	Exited and placed in 504[a]	*	*	41	0.1	*	*	*	23	0.3	*	*	*	19	0.2	*
	504	411.4	42.5	824	3.0	0.94	415.7	40.2	276	3.1	0.94	413.3	41.8	257	3.1	0.93
Ethnicity	American Indian	409.9	35.2	63	0.2	0.93	*	*	23	0.3	*	*	*	32	0.4	*
	Asian	435.8	39.3	1,757	6.3	0.94	437.3	39.6	571	6.5	0.94	436.4	36.3	542	6.6	0.92
	African American	400.4	39.5	11,104	39.9	0.92	399.9	42.5	3,032	34.3	0.92	401.8	42.2	2,611	31.7	0.92
	Hawaiian/ Pacific Islander	*	*	36	0.1	*	*	*	14	0.2	*	*	*	13	0.2	*
	White	428.2	38.7	10,851	39.0	0.94	428.1	41.0	3,931	44.4	0.94	427.6	40.1	3,883	47.1	0.94
	Hispanic	406.8	39.3	3,035	10.9	0.93	409.4	38.6	911	10.3	0.92	407.2	42.5	849	10.3	0.93
	Missing	418.7	40.4	975	3.5	0.94	423.4	42.7	3567	4.1	0.94	425.1	40.0	307	3.7	0.93
Limited English Proficient	Yes	382.4	41.1	835	3.0	0.90	374.5	41.8	155	1.8	0.89	372.9	45.9	146	1.8	0.88
	No	415.8	41.2	26,776	96.2	0.94	417.6	43.2	8,651	97.8	0.94	418.6	42.2	8,037	97.6	0.94
	Exited[b]	418.8	32.6	210	0.8	0.92	*	*	43	0.5	*	407.9	38.8	54	0.7	0.92

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

[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.

[b] LEP Exited indicates students who have exited English language acquisition services.

Demographic Characteristics

Demographic characteristics of the students that took the October, January, April, May, and Summer MD HSAs are described in Tables 6.23 to 6.26. All demographic results are based on the final Research files delivered to MSDE.

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 October, April, and Summer administrations, those forms did not contain new field test items. Instead, previously administered field test sections were embedded in these forms to ensure that the test length was comparable to the January and May test forms.

Table 6.23 Demographic Information for 2013 MD HSA Algebra

		October Form		January Primary Forms		January Makeup Form		April Form		May Primary Forms		May Makeup Forms		Summer Forms	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%
Overall		14,708	100.0	13,336	100.0	3,730	100.0	1,816	100.0	65,699	100.0	11,326	100.0	1,188	100.0
Gender	Male	7,468	50.8	6,545	49.1	1,802	48.3	865	47.6	32,937	50.1	5,830	51.5	655	55.1
	Female	7,150	48.6	6,469	48.5	1,907	51.1	940	51.8	32,502	49.5	5,436	48.0	530	44.6
	Missing	90	0.6	322	2.4	21	0.6	11	0.6	260	0.4	60	0.5	3	0.3
Special Education	Yes	2,061	14.0	1,912	14.3	358	9.6	212	11.7	5,999	9.1	867	7.7	130	10.9
	No	12,073	82.1	10,894	81.7	3,205	85.9	1,561	86.0	56,897	86.6	9,900	87.4	1,031	86.8
	Exited	146	1.0	48	0.4	25	0.7	6	0.3	458	0.7	99	0.9	1	0.1
	Exited and placed in 504[a]	20	0.1	28	0.2	7	0.2	1	0.1	125	0.2	35	0.3	2	0.2
	504	408	2.8	454	3.4	135	3.6	36	2.0	2,220	3.4	425	3.8	24	2.0
Ethnicity	American Indian	56	0.4	46	0.3	11	0.3	6	0.3	216	0.3	33	0.3	12	1.0
	Asian	356	2.4	245	1.8	73	2.0	43	2.4	3,688	5.6	526	4.6	21	1.8
	African American	9,286	63.1	7,264	54.5	2,180	58.4	1,347	74.2	26,324	40.1	4,552	40.2	735	61.9
	Hawaiian/ Pacific Islander	27	0.2	19	0.1	6	0.2	1	0.1	81	0.1	14	0.1	1	0.1
	White	2,864	19.5	3,361	25.2	914	24.5	177	9.7	25,020	38.1	4,513	39.8	290	24.4
	Hispanic	1,660	11.3	1,571	11.8	397	10.6	204	11.2	7,842	11.9	1,195	10.6	100	8.4
	Missing	459	3.1	830	6.2	149	4.0	38	2.1	2,528	3.8	493	4.4	29	2.4
Limited English Proficient	Yes	775	5.3	629	4.7	135	3.6	100	5.5	2,732	4.2	260	2.3	23	1.9
	No	13,850	94.2	12,641	94.8	3,577	95.9	1,712	94.3	62,574	95.2	11,007	97.2	1,158	97.5
	Exited[b]	83	0.6	66	0.5	18	0.5	4	0.2	393	0.6	59	0.5	7	0.6

[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 6.24 Demographic Information for 2013 MD HSA Biology

		October Form		January Primary Forms		January Makeup Form		April Form		May Primary Forms		May Makeup Forms		Summer Forms	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%
Overall		10,497	100.0	11,296	100.0	3,236	100.0	2,186	100.0	50,602	100.0	9,471	100.0	653	100.0
Gender	Male	5,289	50.4	5,447	48.2	1,523	47.1	1,013	46.3	24,871	49.2	4,766	50.3	371	56.8
	Female	5,128	48.9	5,655	50.1	1,706	52.7	1,159	53.0	25,592	50.6	4,683	49.4	275	42.1
	Missing	80	0.8	194	1.7	7	0.2	14	0.6	139	0.3	22	0.2	7	1.1
Special Education	Yes	1,529	14.6	1,247	11	250	7.7	260	11.9	3,796	7.5	544	5.7	98	15.0
	No	8,548	81.4	9,632	85.3	2,863	88.5	1,867	85.4	44,888	88.7	8,526	90.0	537	82.2
	Exited	122	1.2	49	0.4	11	0.3	6	0.3	244	0.5	58	0.6	3	0.5
	Exited and placed in 504[a]	10	0.1	27	0.2	13	0.4	2	0.1	77	0.2	16	0.2	2	0.3
	504	288	2.7	341	3	99	3.1	51	2.3	1,597	3.2	327	3.5	13	2.0
Ethnicity	American Indian	40	0.4	44	0.4	13	0.4	7	0.3	126	0.2	33	0.3	3	0.5
	Asian	250	2.4	300	2.7	82	2.5	51	2.3	3,180	6.3	547	5.8	12	1.8
	African American	6,521	62.1	4,937	43.7	1,452	44.9	1,592	72.8	19,351	38.2	3,598	38.0	420	64.3
	Hawaiian/ Pacific Islander	8	0.1	8	0.1	3	0.1	2	0.1	83	0.2	17	0.2	2	0.3
	White	2,103	20.0	4,396	38.9	1,271	39.3	233	10.7	20,304	40.1	4,027	42.5	156	23.9
	Hispanic	1,260	12.0	1,048	9.3	308	9.5	246	11.3	5,615	11.1	878	9.3	45	6.9
	Missing	315	3.0	563	5.0	107	3.3	55	2.5	1,943	3.8	371	3.9	15	2.3
Limited English Proficient	Yes	459	4.4	330	2.9	98	3.0	132	6.0	1,382	2.7	120	1.3	11	1.7
	No	9,978	95.1	10,921	96.7	3,129	96.7	2,044	93.5	48,886	96.6	9,293	98.1	640	98.0
	Exited[b]	60	0.6	45	0.4	9	0.3	10	0.5	334	0.7	58	0.6	2	0.3

[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 6.25 Demographic Information for 2013 MD HSA English

		October Form		January Primary Forms		January Makeup Form		April Form		May Primary Forms		May Makeup Forms		Summer Forms	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%
Overall		12,039	100.0	11,775	100.0	3,273	100.0	2,330	100.0	50,771	100.0	8,411	100.0	1,171	100.0
Gender	Male	6,661	55.3	6,490	55.1	1,829	55.9	1,226	52.6	25,615	50.5	4,324	51.4	750	64.0
	Female	5,329	44.3	5,021	42.6	1,439	44.0	1,055	45.3	24,943	49.1	4,068	48.4	419	358
	Missing	49	0.4	264	2.2	5	0.2	49	2.1	213	0.4	19	0.2	2	0.2
Special Education	Yes	1,762	14.6	1,449	12.3	313	9.6	294	12.6	3,927	7.7	579	6.9	131	11.2
	No	9,786	81.3	9,884	83.9	2,861	87.4	1,976	84.8	44,864	88.4	7,495	89.1	1,018	86.9
	Exited	140	1.2	54	0.5	8	0.2	14	0.6	248	0.5	45	0.5	2	0.2
	Exited and placed in 504[a]	13	0.1	29	0.2	10	0.3	1	0.0	70	0.1	16	0.2	1	0.1
	504	338	2.8	359	3.0	81	2.5	45	1.9	1,662	3.3	276	3.3	19	1.6
Ethnicity	American Indian	42	0.3	36	0.3	7	0.2	6	0.3	132	0.3	31	0.4	6	0.5
	Asian	336	2.8	348	3.0	93	2.8	91	3.9	3,239	6.4	507	6.0	24	2.0
	African American	6,874	57.1	5,025	42.7	1,520	46.4	1,585	68.0	19,478	38.4	2,967	35.3	672	57.4
	Hawaiian/ Pacific Islander	18	0.1	8	0.1	5	0.2	2	0.1	83	0.2	13	0.2	3	0.3
	White	2,851	23.7	4,470	38.0	1,225	37.4	242	10.4	20,164	39.7	3,731	44.4	300	25.6
	Hispanic	1,574	13.1	1,226	10.4	332	10.1	311	13.3	5,692	11.2	843	10.0	133	11.4
	Missing	344	2.9	662	5.6	91	2.8	93	4.0	1,983	3.9	319	3.8	33	2.8
Limited English Proficient	Yes	598	5.0	480	4.1	137	4.2	198	8.5	1,256	2.5	120	1.4	44	3.8
	No	11,355	94.3	11,232	95.4	3,119	95.3	2,116	90.8	49,136	96.8	8,242	98.0	1,121	95.7
	Exited[b]	86	0.7	63	0.5	17	0.5	16	0.7	379	0.7	49	0.6	6	0.5

[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 6.26 Demographic Information for 2013 MD HSA Government

		October Form		January Primary Forms		January Makeup Form		April Form		May Primary Forms		May Makeup Forms		Summer Forms	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%
Overall		-	-	4,837	100.0	1,814	100.0	-	-	27,821	100.0	17,086	100.0	-	-
Gender	Male	-	-	2,494	51.6	968	53.4	-	-	13,772	49.5	8,650	50.6	-	-
	Female	-	-	2,331	48.2	845	46.6	-	-	13,950	50.1	8,422	49.3	-	-
	Missing	-	-	12	0.2	1	0.1	-	-	99	0.4	14	0.1	-	-
Special Education	Yes	-	-	636	13.1	126	6.9	-	-	2,468	8.9	985	5.8	-	-
	No	-	-	3,997	82.6	1,607	88.6	-	-	24,334	87.5	15,426	90.3	-	-
	Exited	-	-	28	0.6	12	0.7	-	-	154	0.6	100	0.6	-	-
	Exited and placed in 504[a]	-	-	19	0.4	11	0.6	-	-	41	0.1	42	0.2	-	-
	504	-	-	157	2.3	58	3.2	-	-	824	3.0	533	3.1	-	-
Ethnicity	American Indian	-	-	17	0.4	2	0.1	-	-	63	0.2	55	0.3	-	-
	Asian	-	-	109	2.3	40	2.2	-	-	1,757	6.3	1,113	6.5	-	-
	African American	-	-	1,464	30.3	370	20.4	-	-	11,104	39.9	5,643	33.0	-	-
	Hawaiian/ Pacific Islander	-	-	7	0.1	2	0.1	-	-	36	0.1	27	0.2	-	-
	White	-	-	2,753	56.9	1,202	66.3	-	-	10,851	39.0	7,814	45.7	-	-
	Hispanic	-	-	356	7.4	132	7.3	-	-	3,035	10.9	1,760	10.3	-	-
	Missing	-	-	131	2.7	66	3.6	-	-	975	3.5	674	3.9	-	-
Limited English Proficient	Yes	-	-	99	2.0	14	0.8	-	-	835	3.0	301	1.8	-	-
	No	-	-	4,720	97.6	1,790	98.7	-	-	26,776	96.2	16,688	97.7	-	-
	Exited[b]	-	-	18	0.4	10	0.6	-	-	210	0.8	97	0.6	-	-

[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Section 7. Field Test Analyses

Following the receipt of the final score file from Pearson for the January and May administrations, the field test analyses for SR and SPR items were completed. The analyses consisted of four components: classical item analyses, differential item functioning (DIF), item response theory (IRT) calibration, and scaling. All the analyses were completed using *GENASYS*, an ETS proprietary software program. The analysis procedures for each component are described in detail below. All valid records available were used as samples for the analyses, including English language learners, students with IEP or 504 plans, and students receiving accommodations. Only records invalidated by the test administrator and records with no item responses to the first five items 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 MD HSA 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 mean item score expressed as a proportion of the maximum obtainable item score. For SR and SPR items, it is equivalent to the proportion 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.

> *Item-total correlation of the correct response option* for SR and SPR items: This statistic describes the relationship between performance on the specific item and performance on the total test, including the item under study. It is sometimes referred to as a discrimination index. For SR and SPR items, the item-total correlation is the point-biserial correlation. Values less than 0.20 are generally considered to have a weaker than desired relationship, therefore these items receive careful consideration by ETS staff and MSDE before including them on future forms. Items with negative correlations can indicate there are serious problems with the item content (e.g., multiple correct answers, unusually complex content), there is an incorrect key, or students have not been taught the content.

> *Proportion of students choosing each response option* (SR items): This statistic indicates the proportion of examinees selecting each answer choice, or option. 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.

Point-biserial correlation of incorrect response option (SR items) with the total raw score: These statistics describe the relationship between selecting an incorrect response option for a specific item and performance on the total test, including the item under study. 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 a point-biserial correlation for an incorrect answer is strong relative to the correct answer, the item is carefully reviewed for content-related problems. Alternatively, positive point-biserial correlations on incorrect options may indicate that students have not had sufficient opportunity to learn the material.

Percentage 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, at least 95 percent of them should attempt to answer each question. When a pattern of omit percentages exceeds 5 percent 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. For individual items, if the omit percentage is greater than 5 percent for a single SR or SPR 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.

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 2012 assessments:

- *Difficulty flag*: *p*-values less than 0.10 or greater than 0.90.
- *Discrimination flag*: Item-total correlation less than 0.10.
- *Distractor flag*: SR point-biserial correlation positive for incorrect option.
- *Omit flag*: Percentage omitted is greater than 5 for SR and SPR items.

Distributions of *p*-values and item-total correlations for the field test items administered in January 2013 are shown in Tables 7.1 and 7.2, respectively. Corresponding results for the field test items administered in May 2013 are shown in Tables 7.3 and 7.4, respectively.

Following the classical item analyses, items with poor item statistics and items that were not scored as per MSDE's instructions were removed from further analyses (see Table 7.5). These items have been identified for revision and possible additional field testing. Table 7.6 presents the number of items that were retained for further analyses and evaluation after being flagged for statistical reasons, including extreme *p*-values, low item-total correlations, and/or high omit rates. Calibration results indicated the items were estimated reasonably well; therefore they were not removed from scaling.

Table 7.1 Distribution of Item Difficulty for the MD HSA January 2013 Field Test Items

| P-Value | Percentage and Number of Items | | | | | |
| | Algebra[a] | | Biology | | English | |
	%	N	%	N	%	N
P < 0.25	31	10	0	0	7	5
0.25 ≤ P < 0.35	25	8	17	8	18	14
0.35 ≤ P < 0.45	16	5	33	15	30	23
0.45 ≤ P < 0.55	16	5	33	15	26	20
0.55 ≤ P < 0.65	3	1	11	5	11	8
0.65 ≤ P < 0.75	6	2	7	3	4	3
0.75 ≤ P < 0.85	3	1	0	0	3	2
P ≥ 0.85[b]	0	0	0	0	1	1
Descriptive Statistics						
N Items	32		46		76	
Mean	0.33		0.46		0.44	
SD	0.20		0.11		0.14	
Min	0.01		0.25		0.15	
Max	0.78		0.71		0.85	

[a] SPR items included; [b] P-Value > 0.90: No items.

Table 7.2 Distribution of Item-Total Correlations for the MD HSA January 2013 Field Test Items

| Correlation | Percentage and Number of Items | | | | | |
| | Algebra[a] | | Biology | | English | |
	%	N	%	N	%	N
R < 0.15 [b]	19	6	4	2	22	17
0.15 ≤ R < 0.25	38	12	2	1	28	21
0.25 ≤ R < 0.35	25	8	28	13	30	23
0.35 ≤ R < 0.45	19	6	37	17	20	15
0.45 ≤ R < 0.55	0	0	26	12	0	0
0.55 ≤ R < 0.65	0	0	2	1	0	0
0.65 ≤ R < 0.75	0	0	0	0	0	0
R ≥ 0.75	0	0	0	0	0	0
Descriptive Statistics						
N Items	32		46		76	
Mean	0.24		0.38		0.25	
SD	0.11		0.11		0.12	
Min	0.05		0.07		0.01	
Max	0.43		0.57		0.44	

[a] SPR items included; [b] R < 0.10: 4 Algebra, 1 Biology, and 8 English items.

Table 7.3 Distribution of Item Difficulty for the MD HSA May 2013 Field Test Items

| P-Value | Percentage and Number of Items | | | | | |
| | Algebra[a] | | Biology | | English | |
	%	N	%	N	%	N
P < 0.25	13	10	1	1	4	8
$0.25 \leq P < 0.35$	13	10	3	4	6	12
$0.35 \leq P < 0.45$	19	15	10	11	16	31
$0.45 \leq P < 0.55$	20	16	22	25	13	25
$0.55 \leq P < 0.65$	21	17	34	39	22	41
$0.65 \leq P < 0.75$	4	3	17	20	20	38
$0.75 \leq P < 0.85$	9	7	6	7	13	25
$P \geq 0.85$[b]	3	2	7	8	5	10
Descriptive Statistics						
N Items	80		115		190	
Mean	0.48		0.59		0.57	
SD	0.19		0.14		0.18	
Min	0.09		0.22		0.13	
Max	0.90		0.90		0.93	

[a] SPR items included; [b] P-value > 0.90: 3 English items.

Table 7.4 Distribution of Item-Total Correlations for the MD HSA May 2013 Field Test Items

| Correlation | Percentage and Number of Items | | | | | |
| | Algebra[a] | | Biology | | English | |
	%	N	%	N	%	N
R < 0.15 [b]	5	4	3	4	17	32
$0.15 \leq R < 0.25$	8	6	8	9	12	23
$0.25 \leq R < 0.35$	14	11	15	17	31	58
$0.35 \leq R < 0.45$	44	35	33	38	31	59
$0.45 \leq R < 0.55$	24	19	37	43	9	18
$0.55 \leq R < 0.65$	6	5	3	4	0	0
$0.65 \leq R < 0.75$	0	0	0	0	0	0
$R \geq 0.75$	0	0	0	0	0	0
Descriptive Statistics						
N Items	80		115		190	
Mean	0.39		0.40		0.30	
SD	0.13		0.11		0.13	
Min	-0.14		0.02		-0.04	
Max	0.60		0.61		0.55	

[a] SPR items included; [b] $r < 0.10$: 1 Algebra, 1 Biology, and 11 English items.

Table 7.5 MD HSA Field Test Items Excluded from Calibration

Administration	Content	ItemID	Form	Sequence	Response Type	Reason
January	Algebra	366204	B	4	SR	Rbis = 0.07
	Algebra	328731	B	13	SR	Rbis = 0.07
	Algebra	397884	B	26	SR	Rbis = 0.08
	Algebra	338632	B	58	SR	Rbis = 0.08
	Biology	395723	B	79	SR	Rbis = 0.09
	English	395610	A	46	SR	Rbis = 0.02
	English	369274	A	61	SR	Rbis = 0.03
	English	369268	A	62	SR	Rbis = 0.07
	English	394564	A	80	SR	Rbis = 0.01
	English	395642	B	47	SR	Rbis = 0.05
	English	393745	B	76	SR	Rbis = 0.03
	English	393744	B	77	SR	Rbis = 0.03
	English	393740	B	78	SR	Rbis = 0.05
May	Algebra	394854	G	36	SR	Rbis=-0.18
	Biology	108574	D	31	SR	Rbis= 0.07
	Biology	414896	G	63	SR	Rbis= 0.03
	English	395675	E	42	SR	Rbis= 0.01
	English	417585	E	59	SR	Rbis= 0.04
	English	393797	E	86	SR	Rbis=-0.04
	English	416229	F	45	SR	Rbis= 0.04
	English	417518	F	56	SR	Rbis= 0.00
	English	393786	F	90	SR	Rbis= 0.07
	English	393751	G	92	SR	Rbis=-0.05
	English	400847	G	94	SR	Rbis=-0.01
	English	416271	H	42	SR	Rbis= 0.03
	English	417469	H	60	SR	Rbis= 0.09
	English	421374	H	88	SR	Rbis= 0.06

Table 7.6 MD HSA Field Test Items with Statistical Flags Retained in Calibration

January	p-value < 0.10	p-value > 0.90	R_ITT < 0.10	Distractor Pt-Bis > 0	Omit Rate > 5%	C-Level DIF	Missing Response[a]	Total Flags	N Items[b]
Algebra	5	0	2	5	4	3	0	19	11
Biology	0	0	1	3	0	2	0	6	5
English	0	0	3	19	0	4	0	26	23

May	p-value < 0.10	p-value > 0.90	R_ITT < 0.10	Distractor Pt-Bis > 0	Omit Rate > 5%	C-Level DIF	Missing Response[a]	Total Flags	N Items[b]
Algebra	1	0	0	7	2	3	0	13	13
Biology	0	0	0	9	0	3	0	12	12
English	0	3	6	37	0	2	0	48	41

[a] SR option with 0 students; [b] Represents total number of unique items.

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 in which focal groups (e.g., Females, African Americans, Hispanics) of students with the same underlying level of ability have different probabilities than reference groups (e.g., Males, Whites) of answering correctly. If the item is more difficult for identifiable focal subgroup, the item may be measuring something different from 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. A subsequent review by MSDE and ETS content experts is conducted to investigate the source and meaning of evident differences.

ETS used the Mantel-Haenszel DIF detection method. As part of the Mantel-Haenszel procedure, the statistic described by Holland & Thayer (1988), known as MH D-DIF, was used.[7] This

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[7] The formula for the estimate of constant odds ratio is

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

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 and 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. The male and white groups were treated as the reference groups for gender and ethnicity, respectively; the female and other race and 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 a lower mean item score than the focal group.

Among the items field tested in January, three Algebra items, two Biology items, four English items, and two Government were flagged for C-level DIF. Among the items field tested in May, three items each for Algebra and Biology, and two English items were flagged for C-level DIF. None of the Government items were flagged for C-level DIF. These flags were recorded in the item bank. Flagged items are reviewed by ETS and MSDE content specialists as well as by ETS senior staff to determine their availability for future use.

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. 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, which may be difficult to interpret. 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 model used to calibrate the MD HSA test items is the 3-parameter logistic (3PL) model. Item response theory expresses the probability that a student

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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, 1988):

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

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 3PL model relates the probability that a person with ability θ will respond correctly to item i as follows:

$$P_i(\theta) = c_i + \frac{1 - c_i}{1 + e^{-1.7a_i(\theta - b_i)}},$$

where

a_i is the slope parameter of item i, characterizing its discrimination;

b_i is the location parameter of item i, characterizing its difficulty; and

c_i is the lower asymptote parameter of item i, reflecting the chance that students with very low proficiency will select the correct answer, sometimes called the "pseudo-guessing" level.

A proprietary version of the *PARSCALE* computer program (Muraki & Bock, 1995) was used for all item calibration work. The resulting calibrations were then scaled to the bank estimates using Stocking and Lord's (1983) test characteristic curve (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, all items were calibrated using a sparse matrix design that places all items on a common scale. Essentially, this means that the data were set up using the following format. In the diagram below, X's represent items and spaces indicate 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 are denoted as "missing" in the diagram below.

Common	Unique 1	Unique 2	Unique 3	Unique 4	Unique 5
XXXXXXXX	XXXXXXXX				
XXXXXXXX		XXXXXXXX			
XXXXXXXX			XXXXXXXX		
XXXXXXXX				XXXXXXXX	
XXXXXXXX					XXXXXXXX

2. Once the items were calibrated, results were reviewed to determine if any items failed to calibrate appropriately.

3. After the final calibration, parameter estimates were obtained. The items were then linked to the bank scale using the TCC method. Specifically, the banked parameter estimates of the primary form 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, they were loaded into the item bank. Items that were not calibrated were listed as unavailable (see Table 7.5).

CHAPTER II: MODIFIED HIGH SCHOOL ASSESSMENTS

Section 8. Introduction

The Maryland Modified High School Assessments (MD Mod-HSAs) were introduced in May 2008. These assessments are a modified version of the MD HSAs designed for special education students with Individualized Education Programs (IEPs). Eligibility to take the MD Mod-HSAs is determined by a student's IEP and evidence of progress in learning course content.

The MD Mod-HSAs consist of end-of-course tests in Algebra/Data Analysis, Biology, English, and Government, and assess the same skills as the MD HSAs. From Summer 2011 to October 2012, the Government test was excluded from the MD Mod-HSAs. Starting in January 2013, the Government test was re-introduced into the MD Mod-HSAs. The MD Mod-HSAs may be taken in place of one or more of the MD HSAs.

With the reinstatement of Government tests in January 2013, students entering 9th grade in the 2012-2013 school year or in a prior year (including students who entered 9th grade in 2011-2012, 2010-2011, or 2009-2010) have the option of earning a combined score of 1602 on all four MD HSAs or a combined score of 1208 on three MD HSAs (excluding Government) to be granted a Maryland High School Diploma.[8] Students entering 9th grade in 2013-14 and beyond will be required to pass all four HSAs, including Government, or obtain a combined score of 1602 to fulfill the graduation requirement.

Results from the Algebra, Biology, and English administrations are used in the Maryland State Department of Education (MSDE) Adequate Yearly Progress (AYP) reports, required under the No Child Left Behind (NCLB) Act. Information on the interpretation of scores is provided to students, parents, schools, and other stakeholders via the MSDE website.

MD Mod-HSA items were derived from banked MD HSA items, with the question format simplified. For example, the MD Mod-HSAs contain selected response (SR) items that have three answer options instead of four, and the items have a reduced reading load and simplified graphics. All items are based on content outlined in Maryland's Core Learning Goals (CLGs).[9]

MD Mod-HSA forms are administered both online and in paper format. The goal is eventually to have most students test online, with only the special braille, Kurzweil, and large-print forms administered on paper.

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[8] More information on the testing requirement for graduation is available on the Maryland State Department of Education website at http://mdk12.org/assessments/high_school/index.html.

[9] The MD HSA Core Learning Goals documents can be found on the Maryland School Improvement website at http://www.mdk12.org/assessments/standards/9-12.html.

Detailed information regarding the development of MD Mod-HSA forms as well as descriptions of the methods used to align them to the MD HSA reporting scale are provided in the Maryland Modified High School Assessment 2008 Technical Report.[10]

This chapter of the 2013 technical report provides information about the October 2012 administration and the January, April, May, and Summer (July/August) 2013 administrations of the MD Mod-HSAs.

The item response model used to calibrate the items in the MD Mod-HSAs was the three-parameter logistic (3PL) model. Currently, this model is used to estimate both total test scores and subscores. Both total test scores and subscores were estimated using item-pattern (IP) scoring. Total test results in the scale score metric are reported to students. Subscores are not reported to students but are aggregated at the classroom level to provide teachers and administrators with information about student performance in each of the subscore categories.

The MD Mod-HSA forms are constructed using preequated item parameters. When preequated item parameters are used, the parameters are not estimated following an administration; instead, existing bank parameters are used to produce student scores. Using this approach, 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 (AERA, APA, & NCME, 1999).

This chapter of the technical report consists of five other sections and one appendix. Section 9 describes the procedures used for test construction and administration. Section 10 discusses the validity of the MD Mod-HSAs. Section 11 describes the scoring procedures and score types. Section 12 summarizes the results of analyses of the test reliability, decision consistency and decision accuracy. Section 13 presents summary statistics and descriptive information about student characteristics. Appendix 2 provides classical item statistics for each operational form.

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[10] The report is available at http://marylandpublicschools.org/MSDE/divisions/planningresultstest/ HSA+Technical+Reports.html.

Section 9. Test Construction and Administration

Test Development

Planning

Planning for the test development process began with the creation of the MD Mod-HSA blueprints and item modification/development plans for each content area. MSDE content specialists collaborated with Maryland educators, both special education and content area experts, to develop a plan for modifying and developing content for the modified assessments. The MD HSA item bank was reviewed to determine how well the available item pool could be modified to meet the item requirements of the MD Mod-HSAs and blueprint requirements as identified across the Core Learning Goals. Items, passages, and stimuli identified as modifiable were revised according to item plans, using such modifications as reducing the number of response options from four to three, simplifying language and graphics, grouping text within longer passages, and repeating critical passage text within an item. When deficits in the pool of modifiable items were identified, MSDE and its collaborative partners developed additional items.

Test Specifications and Design

MSDE defined the basic test design and provided it to Educational Testing Service (ETS). The blueprints for the 50-item test design are presented below in the section on test specifications. The basic test design defined the reporting categories and the number of items in each reporting category. Decisions about the distribution of items throughout the forms were left to the collaborative efforts of ETS and MSDE content specialists. Construction of the operational forms was based on test blueprints approved by MSDE.

Item Type

The MD Mod-HSAs consist of selected response items only. Each of the four content areas—Algebra, Biology, English, and Government —contained 50 operational items worth a total of 50 score points.

Item Modification, Development, Review, and Revision

MSDE oversaw the initial item modification and development. MSDE content and special education specialists worked with Maryland educators to modify existing MD HSA items and to develop new items written specifically for the MD Mod-HSA program. These items underwent review and revision at MSDE prior to their submission to ETS for inclusion in the MD Mod-HSA item bank.

Once received by ETS, all items were uploaded into the item bank and all graphics and stimulus materials were revised as requested. At this point, all items underwent a series of editorial reviews in accordance with the following procedures:

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

After ETS performed the required internal reviews, item revision recommendations were submitted to MSDE for their review. Any associated stimulus material, graphic, and/or art was provided as well as information regarding the Goal-Expectation-Indicator-Assessment Limit that each question addressed.

MSDE performed a final review of the items and provided feedback to ETS content specialists. Suggested edits were incorporated into the items. The items were then prepared for a final round of reviews by the Content Review and Bias/Sensitivity Review Committees.

The committees, selected by MSDE, were composed of diverse groups of Maryland educators. The committees reviewed each item to ensure that the content (a) accurately reflected what was taught in Maryland schools; (b) correctly matched the intended CLG indicator; and (c) did not unfairly favor or disadvantage an individual or group. A total of 699 items were reviewed across all content areas. Of these items 8 (0.01%) were rejected by the Bias/Sensitivity Review Committee, while 159 (22.7 %) items were accepted with edits. In total the two committees accepted a total of 532 (76.1%) items of the 699 MD Mod-HSA test items .

Upon completion of this final round of reviews, MSDE and ETS content specialists conducted another meeting to evaluate the reviews. The ETS content specialists then made any necessary final edits to the items and/or revisions to the accompanying graphics. The items that survived this process were then eligible for placement in the MD Mod-HSA forms.

Test Specifications

Tables 9.1 through 9.4 identify each reporting category and the number of items in each category for the four content area MD Mod-HSA tests.

Table 9.1 MD Mod-HSA Algebra Blueprint

Reporting Category	Number of items
Expectation 1.1 Analyzing Pattern and Functions	13
Expectation 1.2 Modeling Real-World Situations	16
Expectation 3.1 Collecting, Organizing, and Analyzing Data	11
Expectation 3.2 Using Data to Make Predictions	10
Total	50

Note. Information about the referenced expectations can be found in the Maryland Core Learning Goals for Algebra on the Maryland School Improvement website at http://www.mdk12.org/assessments/standards/9-12.html

Table 9.2 MD Mod-HSA Biology Blueprint

Reporting Category	Number of items
Goal 1 Skills and Processes of Biology	11
Expectation 3.1 Structure and Function of Biological Molecules	8
Expectation 3.2 Structure and Function of Cells and Organisms	9
Expectation 3.3 Inheritance of Traits	8
Expectation 3.4 Mechanism of Evolutionary Change	6
Expectation 3.5 Interdependence of Organisms in the Biosphere	8
Total	50

Note. Information about the referenced goal and expectations can be found in the Maryland Core Learning Goals for Biology on the Maryland School Improvement website at http://www.mdk12.org/assessments/standards/9-12.html

Table 9.3 MD Mod-HSA English Blueprint

Reporting Category	Number of Items
1: Reading and Literature: Comprehension and Interpretation Includes indicators 1.1.1; 1.1.2; 1.1.3; 1.2.1; 1.3.3; 3.2.2.	13
2: Reading and Literature: Making Connections and Evaluation Includes indicators 1.1.4; 1.2.2; 1.2.3; 1.2.4; 1.2.5; 1.3.5; 4.2.1.	13
3: Writing–Composing Includes indicators 2.2.1; 2.2.2; 2.2.3; 2.2.5; 2.3.1; 2.3.3; 4.3.1.	13
4: Writing—Language Usage and Conventions Includes indicators 3.1.3; 3.1.4; 3.1.6; 3.1.8; 3.3.1; 3.3.2.	11
Total	50

Note. Information about the referenced indicators can be found in the Maryland Core Learning Goals for English on the Maryland School Improvement website at http://www.mdk12.org/assessments/ standards/9-12.html

Table 9.4 MD Mod-HSA Government Blueprint

Reporting Category	Number of Items
Expectation1.1 U.S. Government Structure, Functions, and Principles	14
Expectation 1.2 Protecting Rights and Maintaining Order	12
Goal 2 Systems of Government and U.S. Foreign Policy	8
Goal 3 Impact of Geography on Governmental Policy	7
Goal 4 Economic Principles, Institutions and Processes	9
Total	50

Note. Information about the referenced expectations and goals can be found in the Maryland Core Learning Goals for Government on the Maryland School Improvement website at http://www.mdk12.org/assessments/standards/9-12.html

Figures 9.1 through 9.8 show the plots of the TCCs and CSEMs for the forms developed for each content area. It is important to note that the TCCs and CSEMs shown in the plots are based on preequated item parameters and therefore are curves calculated prior to administration of the tests. As expected, the CSEM plots indicate that the CSEMs for each content area were lowest in the middle range of scale scores (approximately 375 to 475 for Algebra and Biology, 340 to 450 for English, and 380 to 430 for Government). The majority of students score in the range where the CSEMs are smallest. (Refer to Section 13, figures 13.1 to 13.4 for histograms of student performance.)
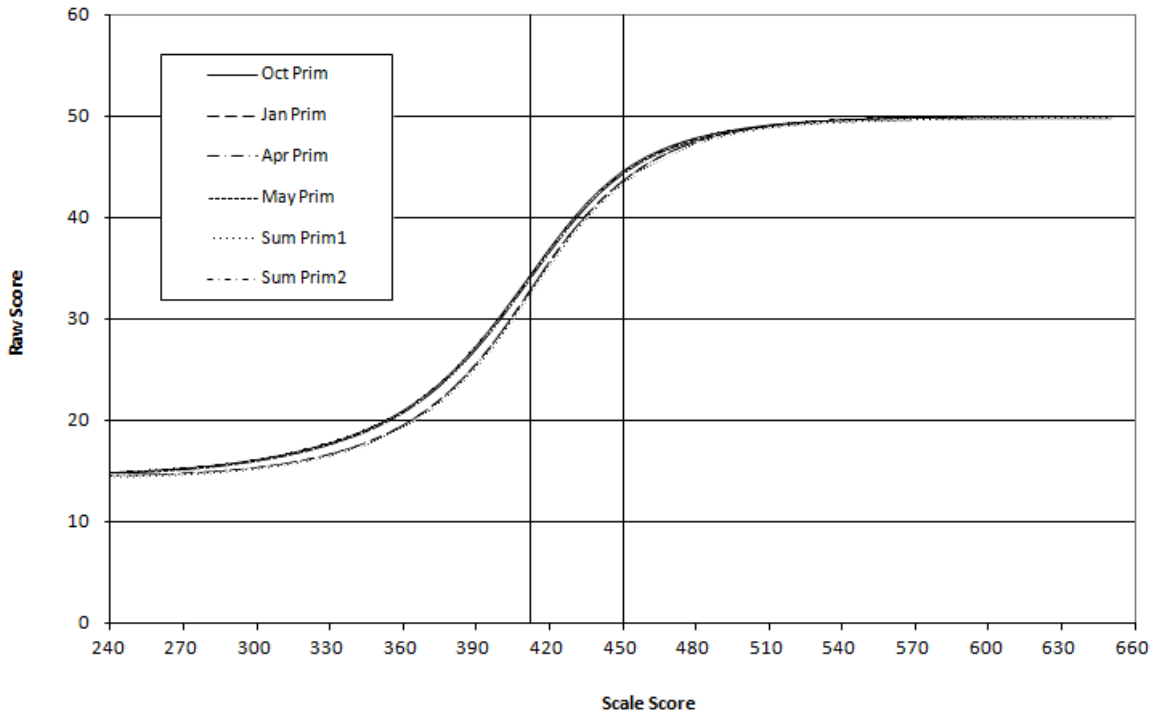
Note: Maximum possible raw score is 50.

Figure 9.1 Test Characteristic Curves for the MD Mod-HSA 2013 Algebra Forms
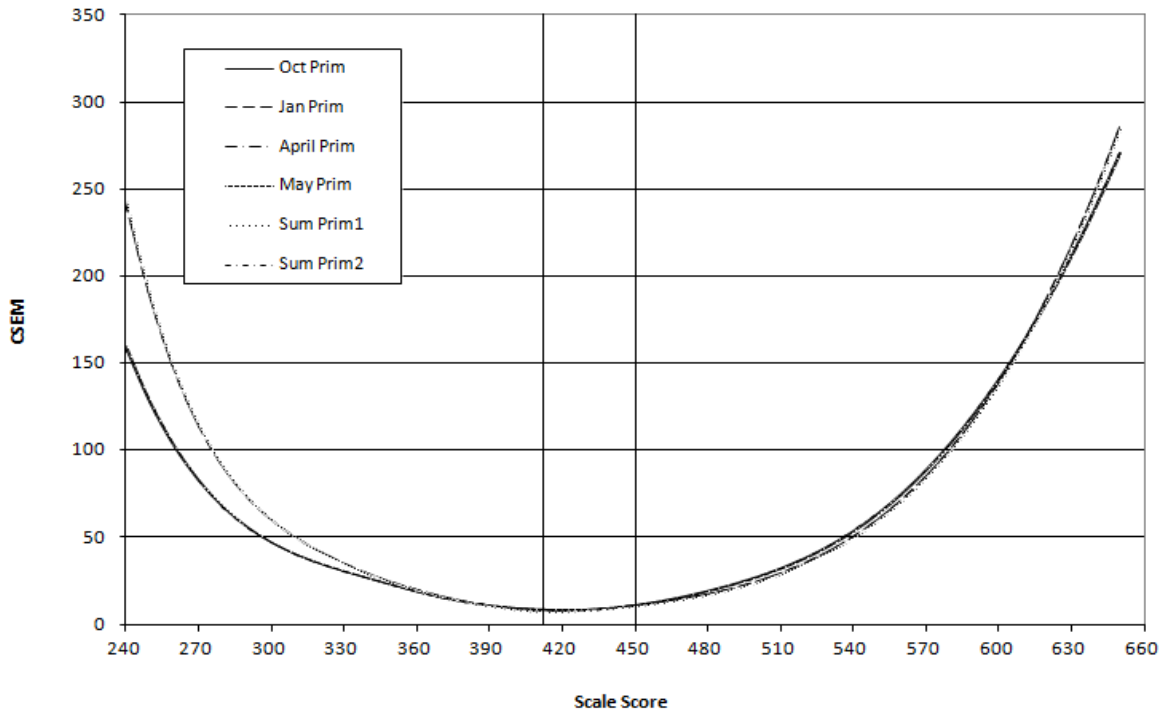
Figure 9.2 Conditional Standard Errors of Measurement for the MD Mod-HSA 2013 Algebra Forms
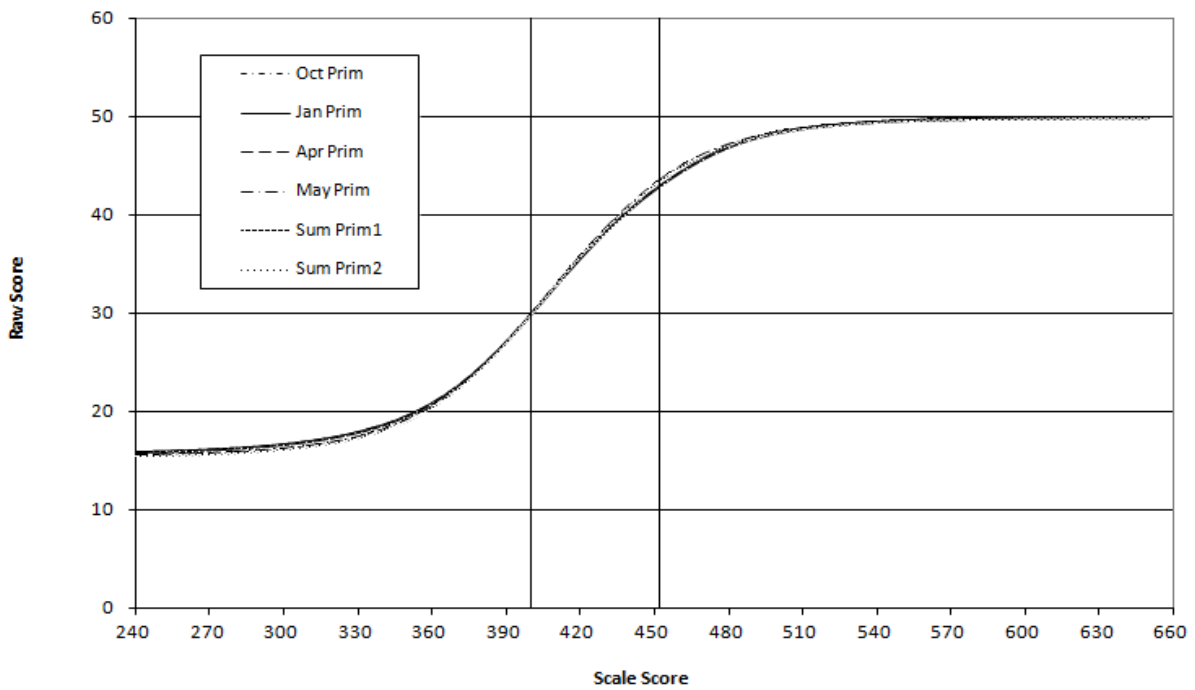
Note: Maximum possible raw score is 50.

Figure 9.3 Test Characteristic Curves for the MD Mod-HSA 2013 Biology Forms
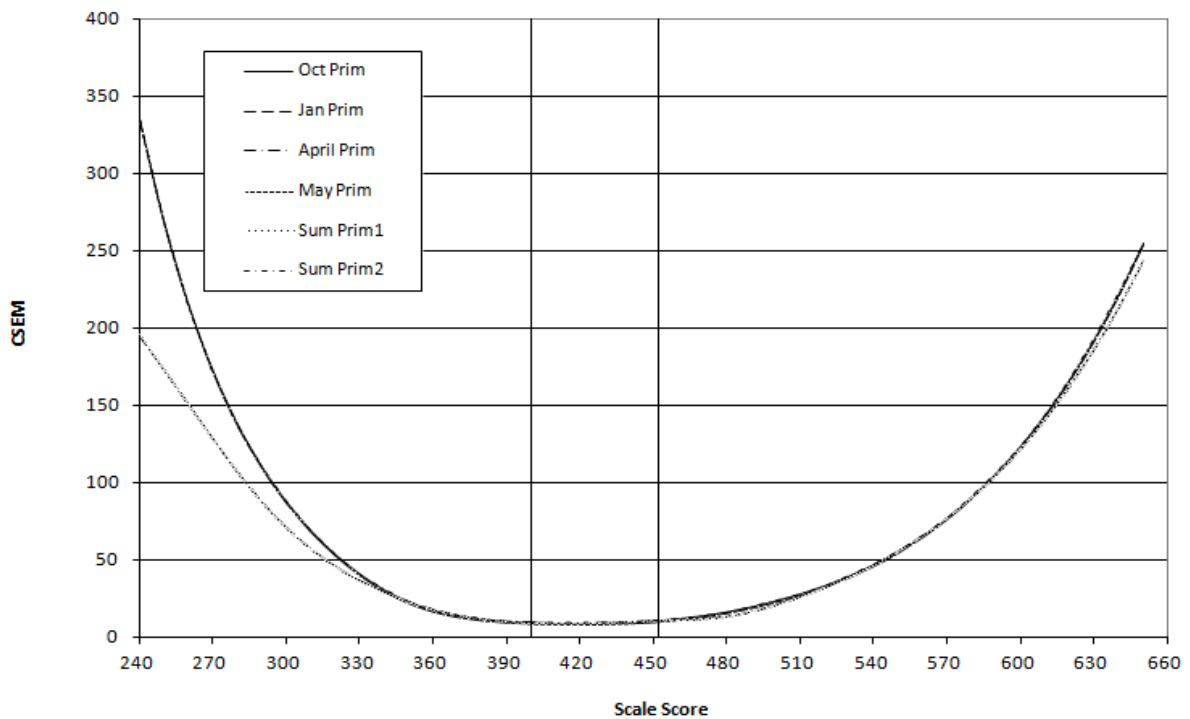
Figure 9.4 Conditional Standard Errors of Measurement for the MD Mod-HSA 2013 Biology Forms

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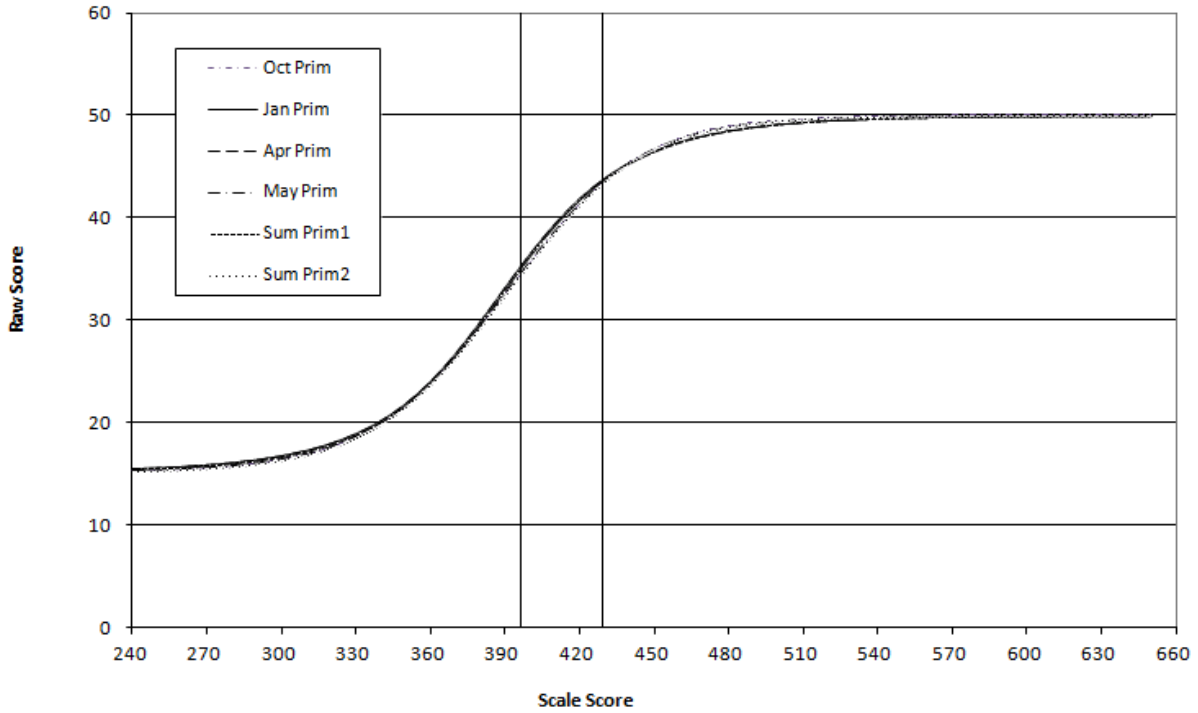
Note: Maximum possible raw score is 50.

Figure 9.5 Test Characteristic Curves for the MD Mod-HSA 2013 English Forms
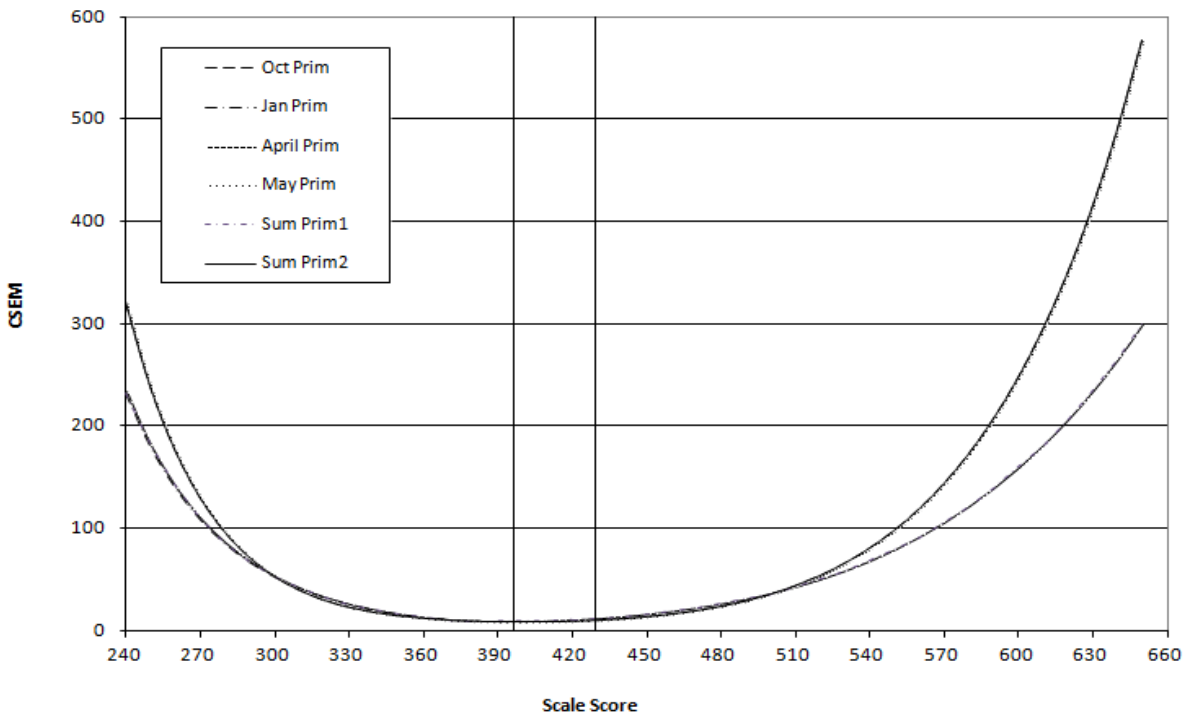
Figure 9.6 Conditional Standard Errors of Measurement for the MD Mod-HSA 2013 English Forms
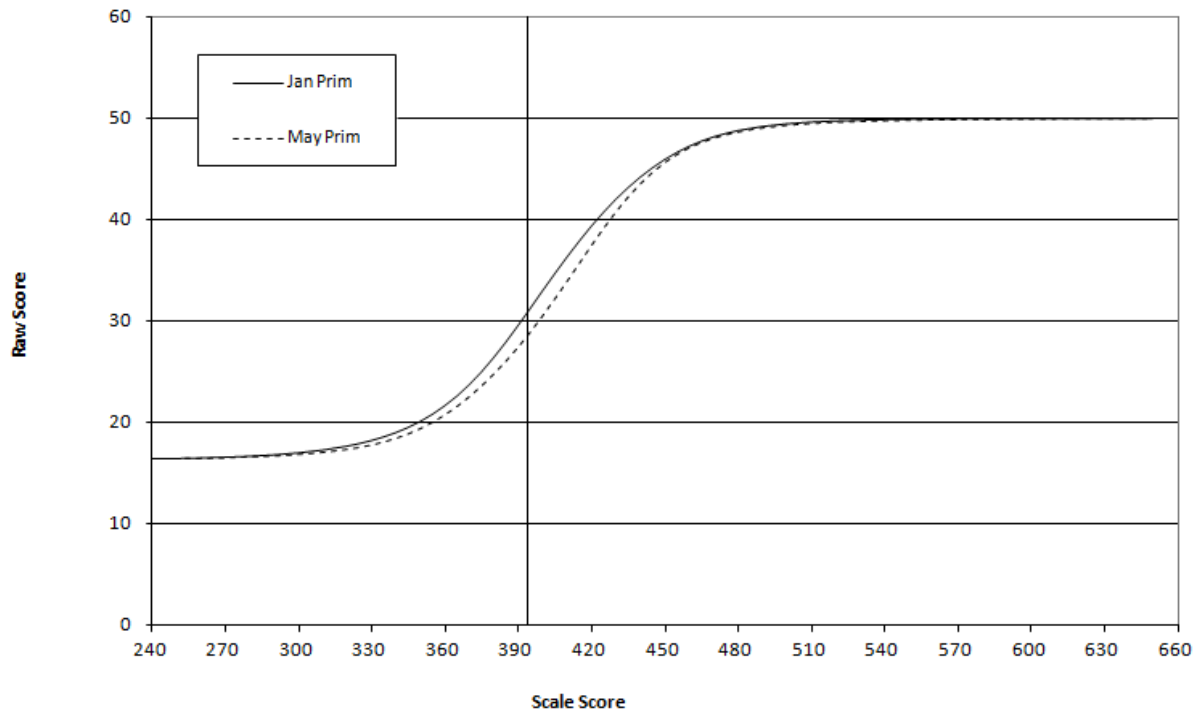
Note: Maximum possible raw score is 50.

Figure 9.7 Test Characteristic Curves for the MD Mod-HSA 2013 Government Forms
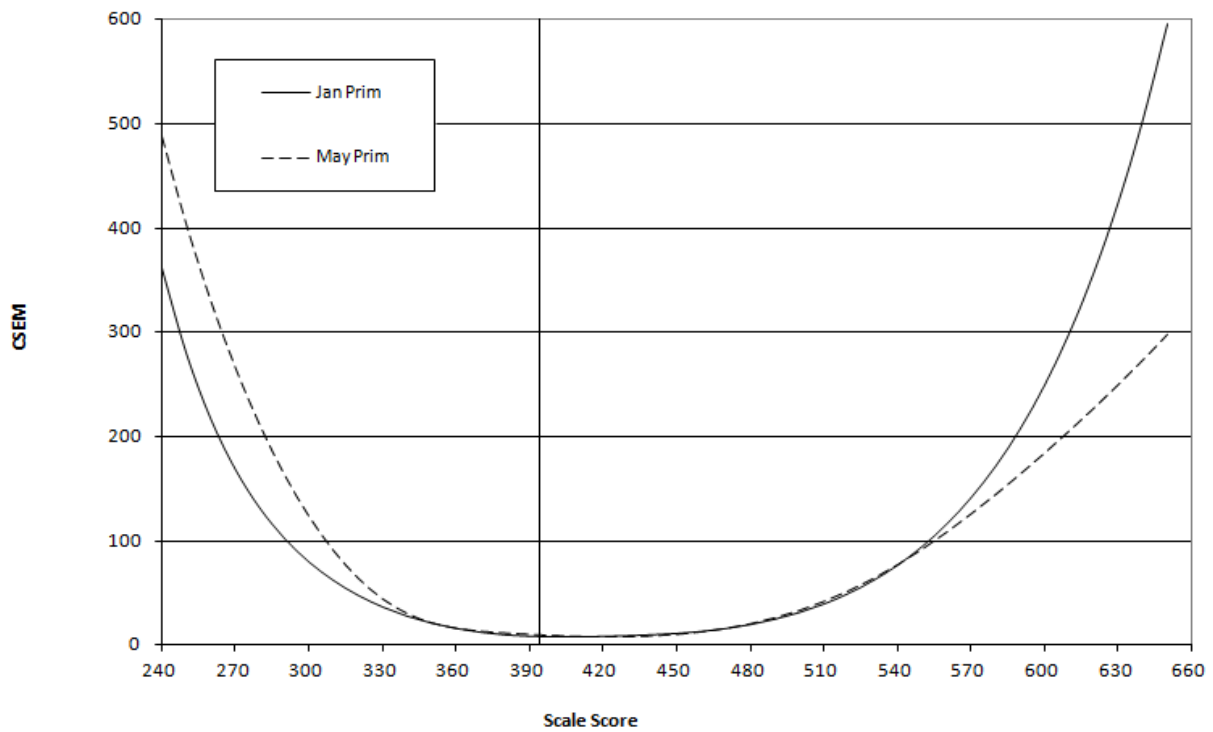
Figure 9.8 Conditional Standard Errors of Measurement for the MD Mod-HSA 2013 Government Forms

Test Administration

The MD Mod-HSA tests were administered both online and on paper in October 2012 and January, April, May, and Summer 2013. One paper and one online MD Mod-HSA form per content area was administered during each administration, with the exception of Summer 2013, when two paper and two online forms were administered.

The forms for Algebra, Biology, English, and Government, consist of two sessions administered within a single sitting. Sessions are separated by a short break. All forms administered without accommodations have the timing limits shown in Table 9.5.

Table 9.5 MD Mod-HSA Testing Timing Schedule in Minutes by Content Area

Content Area	Session 1	Break	Session 2
Algebra	50	5	50
Biology	30	5	30
English	50	5	40
Government	30	5	30

Section 10. Validity

Validity is one of the most important attributes of assessment quality. Validity refers to the degree to which logical, empirical, and judgmental evidence supports each 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; Messick, 1989). Validity is not based on a single study or type of study but is 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, which includes but is not limited to the design, content specifications, item development, psychometric quality assessment, and making inferences from the test results.

Students' scores on the MD Mod-HSA are inferred to reflect students' level of knowledge and skills in a content area. The scores are used to classify students in terms of their level of proficiency, based on cut scores established by the state.

Evidence Based on Analyses of Test Content

The Maryland Mod-HSAs are referred to as end-of-course tests because students take each test as they complete the appropriate coursework. Banked MD HSA items were selected and adapted for the MD Mod-HSAs to measure the knowledge and skills expected of students following completion of coursework.

The constructs measured by each MD Mod-HSA are described in detail in the Maryland high school curriculum standards, or Core Learning Goals. All ETS content staff working on item selection and development has been trained in the CLGs. The test blueprint documents presented in Section 9 (see Tables 9.1 to 9.3) were created in collaboration with committees of Maryland educators and were derived from the Maryland goals, expectations, and indicators.

The process of selecting and adapting banked MD HSA items for use as MD Mod-HSA items is summarized briefly in Section 9 and described in detail in the Maryland Modified High School Assessment 2008 Technical Report.[11] Banked items were 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 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 and cognitive ability of the students being tested.

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[11]Available at http://marylandpublicschools.org/MSDE/divisions/planningresultstest/HSA+Technical+Reports.htm.

Evidence Based on Analyses of Internal Test Structure

Analyses of the internal structure of a test typically involve studies of the relationship among test items and/or test components in the interest of establishing the degree to which the items or components appear to reflect the construct on which a test interpretation is based (AERA, APA & NCME, 1999, p. 13). The term construct is used here to refer to the characteristic that a test is intended to measure; in the case of the MD Mod-HSAs, the characteristic of interest is the knowledge and skills defined by the test blueprint for each content area.

These test blueprints are derived from Maryland's Core Learning Goals for each course. The test blueprints are presented in Section 9 (see Tables 9.1 through 9.4); the CLGs can be found on the MSDE website at http://www.mdk12.org/assessments/high_school/index_a.html

High internal consistency, as is discussed in Section 12, constitutes evidence of validity as high reliability over items within a test which implies that the test items within a domain are measuring a single construct. The internal structure of the test can also be assessed through the evaluation of correlations between individual MD Mod-HSA subscores. Subscores that are strongly related to each other are indicators of construct validity. Tables 10.1 and 10.2 contain the Pearson correlations found between subscores within each content area of the MD Mod-HSA tests. Results indicate that each subscore is significantly positively correlated with the total Scale Score as well as the individual subscores measured in each content area.

Table 10.1 Correlations between MD Mod-HSA Subscores by Content Area – Algebra & Biology

| | Algebra | | | | | Biology | | | | | | |
	SS	1	2	3	4	SS	1	2	3	4	5	6
Overall SS	1					1						
Subscore 1	.69	1				.68	1					
Subscore 2	.65	.40	1			.47	.23	1				
Subscore 3	.74	.41	.39	1		.54	.29	.30	1			
Subscore 4	.42	.30	.30	.28	1	.55	.29	.22	.32	1		
Subscore 5	-	-	-	-	-	.38	.23	.18	.22	.28	1	
Subscore 6	-	-	-	-	-	.46	.24	.25	.28	.26	.20	1

Note. All correlations significant at the p < .001 level.

Table 10.2 Correlations between MD Mod-HSA Subscores by Content Area – English & Government

	English						Government					
	SS	1	2	3	4		SS	1	2	3	4	5
Overall SS	1						1					
Subscore 1	.64	1					.64	1				
Subscore 2	.72	.41	1				.61	.41	1			
Subscore 3	.63	.35	.37	1			.46	.26	.30	1		
Subscore 4	.52	.25	.26	.27	1		.51	.30	.32	.24	1	
Subscore 5	-	-	-	-	-		.64	.34	.36	.30	.32	1

Note. All correlations significant at the p < .001 level.

Evidence of the internal structure of an assessment also comes from evaluation of the dimensionality of the test — whether performance on items that comprise each test reflects a single underlying characteristic or a set of distinct characteristics. Previous exploratory factor analytic (EFA) studies evaluating the dimensionality of the MD Mod-HSA operational forms have indicated a single underlying dimension.[12] To establish the validity of a single factor model over test content areas on the MD Mod-HSA, confirmatory factor analysis (CFA) can be used.

Confirmatory Factor Analyses of the May 2013 MD Mod-HSA Administration Data

To assess the dimensionality of the MD Mod-HSA tests, CFA's for each content area were conducted using test data from the primary form of the May 2013 administration. The May administration was chosen for analysis because it is the largest and most representative administration of the MD Mod-HSAs. The May administration consisted of one primary form; data from operational items were combined across forms within the content areas of Algebra, Biology, English, and Government.

Mplus (Muthén & Muthén, 2007) was used to evaluate unidimensional, or one-factor, CFA models for each content area. As item level data on the MD HSA tests are dichotomous, methods available in *Mplus* that take into account the categorical nature of the data were used (see Muthén, 1998-2004).

Model parameter estimation was accomplished using a weighted least-squares method with a mean and variance adjustment (*WLSMV*; Muthén, DuToit, & Spisic, 1997). This method leads to a consistent estimator of the model parameters and provides standard errors that are robust under model misspecification. For categorical data, this estimation method offers an alternative to the full-weighted least square (WLS) technique that generally becomes computationally too demanding for models with more than a few observed variables (items).

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[12] When the Mod-HSA was created in 2008, EFA was conducted. Please refer to the Maryland Modified High School Assessment 2008 Technical Report for details.

Overall model fit for each CFA model by content area was examined using the scaled chi-square (χ^2) test of model fit in combination with supplemental fit indices. The Tucker-Lewis Index (TLI) compares the chi-square for the hypothesized model with that of the null or "independence" model, in which all correlations or covariances are zero. TLI values range from zero to 1.0, and values around 0.94 signify good fit (Hu & Bentler, 1999). The comparative fit index (CFI) and root mean square error of approximation (RMSEA) index both are based on noncentrality parameters. The CFI compares the covariance matrix predicted by the model with the observed covariance matrix, and the covariance matrix of the null model with the observed covariance matrix. Higher CFI values indicate better model fit (Hu & Bentler, 1999). The RMSEA assesses the error in the hypothesized model predictions; values less than or equal to 0.06 indicate good fit (Hu & Bentler, 1999).

Table 10.3 shows the results of the analyses. Fit statistics indicated that the one-factor solutions generally fit the data well in all content areas. Although none of the χ^2 results indicated good fit given the criterion of $p > .05$, this was expected because of the large sample sizes. These findings provide evidence suggesting the tests for each content area measure a single underlying dimension. This is a positive finding, given that IRT models assume unidimensionality.

Table 10.3 MD Mod-HSA Confirmatory Factor Analyses Fit Statistics

Content	Forms	# of Factors	# of Items	n	df	χ^{2*}	TLI	CFI	RMSEA
Algebra	413	1	50	3,328	1,175	2,605	**0.91**	**0.92**	**0.019**
Biology	413	1	50	2,116	1,175	1,728	**0.90**	**0.91**	**0.015**
English	413	1	50	2,240	1,175	1,993	**0.91**	**0.91**	**0.018**
Government	413	1	50	805	1,175	1,332	**0.95**	**0.95**	**0.013**

Note. Table entries that meet or exceed the criterion are in bold.
* $p < .0005$ for all χ^2

Speededness

The percentage of students who respond to the last items in a test can be used to assess the degree to which a test is speeded. When speededness occurs, a test is measuring not only students' knowledge and skills as defined by the construct of interest but also the speed at which the knowledge and skills are demonstrated, which is a second construct. In tests of achievement, it is desirable to find that speededness is not present in a test, which provides evidence that student scores on the test reflect only the intended construct. Evidence of speededness is provided by the finding that the omit rates at the end of a test are notably higher than those observed elsewhere in the test.

Appendix 2A presents the percentages of students who omitted items on the MD Mod-HSA operational forms. The percentage of students who did not respond to the last ten items of a test was less than 1 percent for all content areas and sessions, with the exception of the summer forms. The summer administrations of Algebra had omit rates as high as 3.1 percent for items 13 through 50. One summer administration of Biology (Form 613) had omit rates of up to 2.6 percent for items 13 through 50. One summer administration of English (Form 513) had omit rates of 1.3 percent for several items. With those exceptions, the item level omit rates for the last ten items are quite low and are comparable to the omit rates for all items. This provides evidence that students had sufficient time to complete the entire test.

Further, if more than 5 percent of students omit a selected response item at any point in the test, the item is flagged as having a high omit rate. No MD Mod-HSA items were flagged for high omit rate in any content area for any administration.

Other information in support of the uses and interpretations of the MD Mod-HSA scores appears in the following sections:

- Section 11 provides detailed information concerning the scores that were reported and the cut scores for each content area.

- Section 12 provides information concerning test characteristics based on classical test theory.

- Section 13 presents information regarding student characteristics for the MD Mod-HSA administrations.

Section 11. Scoring Procedures

Scale Scores

The MD Mod-HSA reporting scale ranges from 240 to 650. This scale was aligned to the MD HSA scale, which was established in 2003. Scale scores describing both total test and subscore performance on the MD Mod-HSA are maximum likelihood estimates obtained using item-pattern (IP) scoring and the parameters estimated for the items in each operational test form.

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.

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 conditional standard errors of measurement (CSEMs), and differences between these extreme values have little meaning. Therefore, scores were established for these students based on the procedure used for the MD HSA (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). Starting with the summer 2005 administration of the MD HSA, MSDE decided that the LOSS and HOSS values would be 240 and 650, respectively, for all content areas. Since the MD Mod-HSA is on the same scale as the MD HSA, the same LOSS and HOSS values were used.

Cut Scores

MSDE requested that the MD Mod-HSAs be aligned with the MD HSA scales so that the cut scores established for the MD HSAs could be applied to the MD Mod-HSAs. The MD HSA cut scores associated with each performance level in the non-English content areas were established by MSDE in 2003.[13] The MD HSA English cut scores were established during a standard setting held in October 2005.

Two cut scores were established for the Algebra and English tests, enabling students to be classified as Basic, Proficient, or Advanced. Two cut scores were needed because the results for these tests are used as the high school mathematics and English/language arts components of

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[13] Technical documentation on the standard-setting method used to establish MD HSA cut scores is available on the Maryland State Department of Education website at ttp://www.marylandpublicschools.org/ /divisions/planningresultstest/maryland+standard+setting+technical+reports.htm.

Maryland's system of accountability under NCLB.[14] Prior to the 2007–2008 school year, Biology had only one cut score. In 2007 an Advanced cut score was set for Biology, and the results are now used as components of the MSDE accountability system. There is only one cut score for the Government test; it is used to classify students as Basic or Proficient

To verify that the cut scores established for the MD HSAs were appropriate for the MD Mod-HSAs, a standard setting was conducted in August 2008 using the MD Mod-HSA student results. The standard-setting panels, consisting of Maryland general and special educators, confirmed that the MD HSA cut scores were appropriate for the MD Mod-HSA.[15]

With the reinstatement of Government tests in January 2013, students entering 9th grade in the 2012-2013 school year or in a prior year (including students who entered 9th grade in 2011-2012, 2010-2011, or 2009-2010) have the option of earning a combined score of 1602 on all four MD HSAs or a combined score of 1208 on three MD HSAs (excluding Government) to be granted a Maryland High School Diploma.[16] Students entering 9th grade in 2013-14 and beyond will be required to pass all four HSAs, including Government, or obtain a combined score of 1602 to fulfill the graduation requirement. The Proficient cut scores are used to determine Pass/Fail classifications. The cut scores by content area are given in Table 11.1.

Table 11.1 MD Mod-HSA Cut Scores by Content Area

Content Area	Cut-Score	
	Proficient	Advanced
Algebra	412	450
Biology	400	452
English	396	429
Government	394	--

[14] Information regarding the system of accountability is available on the Maryland State Department of Education website at http://www.marylandpublicschools.org/NR/rdonlyres/0146EDA2-5F91-47DD-9A84-16164BDEA25C/18082/Acct_workbook_final_w_table_appendices_r_93008.doc.

[15] Information regarding the standard-setting process for the MD Mod-HSA is available at the MSDE website at http://www.marylandpublicschools.org/NR/rdonlyres/3253C1DD-CA2E-4E64-A066-D6F36EBADF9B/18003/ModHSA_SB_Final.ppt.

[16] More information on the testing requirement for graduation is available on the Maryland State Department of Education website at http://mdk12.org/assessments/high_school/index.html.

Section 12. Test Characteristics

Provided in this section is a discussion of the results of analyses of test reliability and decision consistency and decision accuracy for all test forms administered.

Reliability

The general concept of reliability concerns the precision of a test score. Of interest is quantifying the degree to which a score will vary from an average result obtained over many testing occasions due to random factors (Haertel, 2006). A variety of theories and methods can be used to estimate reliability.

Classical test theory defines reliability as the proportion of total score variance that is true-score variance. Several different ways of estimating this proportion exist. The estimate of reliability given in this report is Cronbach's alpha (Cronbach, 1951), an internal consistency measure. It is derived from analysis of the consistency of performance over items within a test and provides a lower-bound estimate of a test's reliability. Cronbach's alpha can be expressed as:

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

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

Values for Cronbach's alpha were calculated for each test form, each test group, and selected subgroups, using the sample variances in place of the variances in the above expression. The results for the reliability analyses are presented along with other summary statistics in Tables 13.5 to 13.23 of Section 13. The tables show that the overall reliability coefficients for the MD Mod-HSA ranged from 0.60 to 0.84.

Decision Accuracy and Decision Consistency

The accuracy of decisions based on specified cut scores was assessed for reliability of classification using the ETS computer program *RELCLASS*, which 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:

> ***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?

Decision consistency describes the extent to which examinees are classified in the same way 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 test 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 test and performance-level classifications on an 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 12.1 through 12.17 by content area for the October, January, April, May, and Summer administrations. The tables show decision accuracy values, which describe 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). Decision accuracy values ranged from 0.85 to 0.90 across all performance levels and content areas and from 0.86 to 0.90 for the Proficient and Advanced classifications in Algebra, Biology, and English. In Government, decision accuracy values were calculated across all the performance levels only, and ranged from 0.89 to 0.90.

Decision consistency values 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). Decision consistency values ranged from 0.79 to 0.93 across all performance levels and content areas and from 0.81 to 0.86 for the Proficient and Advanced classifications in Algebra, Biology, and English. In Government, decision consistency values were calculated across all performance levels only, and ranged from 0.84 to 0.86.

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 12.1 Decision Accuracy and Consistency: MD Mod-HSA Algebra October 2012

	Placement Scores	Advanced	Proficient	Basic	Category Total
	450–650	.00	.00	.00	.00
Decision	412–449	.01	.04	.03	.08
Accuracy	240–411	.02	.06	.85	.92
	Estimated Proportion Correctly Classified*: Total = 0.89, Proficient & Above = 0.90				
	450–650	.00	.00	.00	.00
Decision	412–449	.02	.03	.03	.08
Consistency	240–411	.03	.08	.81	.92
	Estimated Proportion Consistently Classified*: Total = 0.84, Proficient & Above = 0.86				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 12.2 Decision Accuracy and Consistency: MD Mod-HSA Algebra January 2013

	Placement Scores	Advanced	Proficient	Basic	Category Total
	450–650	.00	.00	.00	.00
Decision	412–449	.00	.03	.02	.06
Accuracy	240–411	.02	.06	.86	.94
	Estimated Proportion Correctly Classified: Total*: = 0.90, Proficient & Above = 0.90				
	450–650	.00	.00	.00	.00
Decision	412–449	.01	.02	.03	.06
Consistency	240–411	.03	.08	.83	.94
	Estimated Proportion Consistently Classified*: Total = 0.85; Proficient & Above = 0.86				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 12.3 Decision Accuracy and Consistency: MD Mod-HSA Algebra April 2013

	Placement Scores	Advanced	Proficient	Basic	Category Total
	450–650	.01	.00	.00	.01
Decision	412–449	.01	.04	.02	.07
Accuracy	240–411	.02	.06	.84	.92
	Estimated Proportion Correctly Classified*: Total = 0.89, Proficient & Above = 0.90				
	450–650	.01	.00	.00	.01
Decision	412–449	.02	.03	.02	.07
Consistency	240–411	.03	.08	.81	.92
	Estimated Proportion Consistently Classified*: Total = 0.84, Proficient & Above = 0.86				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 12.4 Decision Accuracy and Consistency: MD Mod-HSA Algebra May 2013

	Placement Scores	Advanced	Proficient	Basic	Category Total
	450–650	.00	.00	.00	.00
Decision	412–449	.01	.05	.03	.10
Accuracy	240–411	.01	.05	.83	.90
	Estimated Proportion Correctly Classified*: Total = 0.89, Proficient & Above = 0.90				
	450–650	.00	.00	.00	.00
Decision	412–449	.02	.04	.04	.10
Consistency	240–411	.02	.08	.80	.90
	Estimated Proportion Consistently Classified*: Total = 0.84, Proficient & Above = 0.86				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 12.5 Decision Accuracy and Consistency: MD Mod-HSA Algebra Summer 2013

	Placement Scores	Advanced	Proficient	Basic	Category Total
Summer Primary 1					
	450–650	.00	.00	.00	.00
Decision	412–449	.00	.03	.03	.06
Accuracy	240–411	.02	.06	.86	.94
	Estimated Proportion Correctly Classified*: Total = 0.89, Proficient & Above = 0.89				
	450–650	.00	.00	.00	.00
Decision	412–449	.01	.02	.03	.06
Consistency	240–411	.03	.09	.82	.94
	Estimated Proportion Consistently Classified*: Total = 0.84, Proficient & Above = 0.85				
Summer Primary 2					
	450–650	.00	.00	.00	.00
Decision	412–449	.01	.03	.02	.06
Accuracy	240–411	.02	.06	.85	.94
	Estimated Proportion Correctly Classified*: Total = 0.89, Proficient & Above = 0.90				
	450–650	.00	.00	.00	.00
Decision	412–449	.02	.02	.02	.06
Consistency	240–411	.04	.08	.82	.94
	Estimated Proportion Consistently Classified*: Total = 0.84, Proficient & Above = 0.86				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 12.6 Decision Accuracy and Consistency: MD Mod-HSA Biology October 2012

	Placement Scores	Advanced	Proficient	Basic	Category Total
	452–650	.00	.00	.00	.00
Decision	400–451	.00	.04	.04	.08
Accuracy	240–399	.01	.08	.83	.92
	Estimated Proportion Consistently Classified*: Total = 0.87, Proficient & Above = 0.87				
	452–650	.00	.00	.00	.00
Decision	400–451	.00	.04	.04	.08
Consistency	240–399	.03	.12	.77	.92
	Estimated Proportion Consistently Classified*: Total = 0.81, Proficient & Above = 0.81				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 12.7 Decision Accuracy and Consistency: MD Mod-HSA Biology January 2013

	Placement Scores	Advanced	Proficient	Basic	Category Total
	452–650	.00	.00	.00	.00
Decision	400–451	.00	.05	.05	.10
Accuracy	240–399	.01	.07	.82	.90
	Estimated Proportion Correctly Classified*: Total = 0.87, Proficient & Above = 0.87				
	452–650	.00	.00	.00	.00
Decision	400–451	.00	.05	.05	.10
Consistency	240–399	.02	.11	.77	.90
	Estimated Proportion Consistently Classified*: Total = 0.81, Proficient & Above = 0.81				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 12.8 Decision Accuracy and Consistency: MD Mod-HSA Biology April 2013

	Placement Scores	Advanced	Proficient	Basic	Category Total
	452–650	.00	.01	.00	.01
Decision	400–451	.00	.05	.04	.09
Accuracy	240–399	.01	.07	.82	.91
	Estimated Proportion Correctly Classified*: Total = 0.88, Proficient & Above = 0.88				
	452–650	.00	.00	.00	.01
Decision	400–451	.00	.05	.04	.09
Consistency	240–399	.02	.11	.77	.91
	Estimated Proportion Consistently Classified*: Total = 0.82, Proficient & Above = 0.83				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 12.9 Decision Accuracy and Consistency: MD Mod-HSA Biology May 2013

	Placement Scores	Advanced	Proficient	Basic	Category Total
Decision Accuracy	452–650	.00	.00	.00	.00
	400–451	.00	.09	.06	.15
	240–399	.01	.06	.77	.85
	Estimated Proportion Correctly Classified*: Total = 0.86, Proficient & Above = 0.87				
Decision Consistency	452–650	.00	.00	.00	.00
	400–451	.01	.07	.06	.15
	240–399	.02	.10	.73	.85
	Estimated Proportion Consistently Classified*: Total = 0.80, Proficient & Above = 0.82				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 12.10 Decision Accuracy and Consistency: MD Mod-HSA Biology 2013 Summer

	Placement Scores	Advanced	Proficient	Basic	Category Total
Summer Primary 1					
Decision Accuracy	452–650	.01	.01	.00	.01
	400–451	.00	.07	.05	.12
	240–399	.02	.07	.77	.86
	Estimated Proportion Correctly Classified*: Total = 0.85, Proficient & Above = 0.86				
Decision Consistency	452–650	.01	.00	.00	.01
	400–451	.01	.06	.05	.12
	240–399	.03	.11	.73	.86
	Estimated Proportion Consistently Classified*: Total = 0.80, Proficient & Above = 0.81				
Summer Primary 2					
Decision Accuracy	452–650	.00	.00	.00	.00
	400–451	.01	.06	.06	.13
	240–399	.02	.07	.79	.87
	Estimated Proportion Correctly Classified*: Total = 0.85, Proficient & Above = 0.86				
Decision Consistency	452–650	.00	.00	.00	.00
	400–451	.03	.05	.06	.13
	240–399	.03	.10	.74	.87
	Estimated Proportion Consistently Classified*: Total = 0.79, Proficient & Above = 0.81				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 12.11 Decision Accuracy and Consistency: MD Mod-HSA English October 2012

	Placement Scores	Advanced	Proficient	Basic	Category Total
	429–650	.01	.00	.00	.01
Decision	396–428	.01	.05	.03	.09
Accuracy	240–395	.02	.06	.83	.91
	Estimated Proportion Correctly Classified*: Total = 0.89, Proficient & Above = 0.89				
	429–650	.01	.00	.00	.01
Decision	396–428	.02	.04	.03	.09
Consistency	240–395	.03	.09	.79	.91
	Estimated Proportion Consistently Classified*: Total = 0.84, Proficient & Above = 0.85				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 12.12 Decision Accuracy and Consistency: MD Mod-HSA English January 2013

	Placement Scores	Advanced	Proficient	Basic	Category Total
	429–650	.01	.00	.00	.01
Decision	396–428	.01	.06	.04	.11
Accuracy	240–395	.02	.06	.81	.89
	Estimated Proportion Correctly Classified*: Total = 0.88, Proficient & Above = 0.89				
	429–650	.01	.00	.00	.01
Decision	396–428	.02	.05	.04	.11
Consistency	240–395	.02	.08	.78	.89
	Estimated Proportion Consistently Classified*: Total = 0.83, Proficient & Above = 0.85				

Note. Inconsistencies between cell entries and totals are due to rounding

Table 12.13 Decision Accuracy and Consistency: MD Mod-HSA English April 2013

	Placement Scores	Advanced	Proficient	Basic	Category Total
	429–650	.00	.00	.00	.00
Decision	396–428	.02	.07	.04	.12
Accuracy	240–395	.01	.05	.81	.88
	Estimated Proportion Correctly Classified*: Total = 0.88, Proficient & Above = 0.89				
	429–650	.00	.00	.00	.00
Decision	396–428	.03	.05	.05	.12
Consistency	240–395	.02	.08	.78	.88
	Estimated Proportion Consistently Classified*: Total = 0.93, Proficient & Above = 0.86				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 12.14 Decision Accuracy and Consistency: MD Mod-HSA English May 2013

	Placement Scores	Advanced	Proficient	Basic	Category Total
Decision Accuracy	429–650	.00	.00	.00	.00
	396–428	.01	.06	.04	.10
	240–395	.02	.06	.82	.90
	Estimated Proportion Correctly Classified*: Total = 0.88, Proficient & Above = 0.89				
Decision Consistency	429–650	.00	.00	.00	.00
	396–428	.02	.04	.04	.10
	240–395	.02	.09	.79	.90
	Estimated Proportion Consistently Classified*: Total = 0.83, Proficient & Above = 0.85				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 12.15 Decision Accuracy and Consistency: MD Mod-HSA English Summer 2013

	Placement Scores	Advanced	Proficient	Basic	Category Total
Summer Primary 1					
Decision Accuracy	429–650	.00	.00	.00	.00
	396–428	.01	.04	.03	.09
	240–395	.02	.06	.84	.91
	Estimated Proportion Correctly Classified*: Total = 0.87, Proficient & Above = 0.89				
Decision Consistency	429–650	.00	.00	.00	.00
	396–428	.02	.03	.04	.09
	240–395	.03	.08	.80	.91
	Estimated Proportion Consistently Classified*: Total = 0.83, Proficient & Above = 0.85				
Summer Primary 2					
Decision Accuracy	429–650	.00	.00	.00	.00
	396–428	.02	.05	.04	.11
	240–395	.02	.05	.82	.89
	Estimated Proportion Correctly Classified*: Total = 0.87, Proficient & Above = 0.89				
Decision Consistency	429–650	.00	.00	.00	.00
	396–428	.03	.04	.04	.11
	240–395	.03	.07	.79	.89
	Estimated Proportion Consistently Classified*: Total = 0.83, Proficient & Above* = 0.86				

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 12.16 Decision Accuracy and Consistency: MD Mod-HSA Government January 2013

	Placement Scores	Proficient	Basic	Category Total
Decision Accuracy	394–650	.09	.03	.12
	240–393	.07	.81	.88
	Estimated Proportion Correctly Classified*: Total = 0.90			
Decision Consistency	394–650	.09	.03	.12
	240–393	.11	.77	.88
	Estimated Proportion Consistently Classified*: Total = 0.86			

Note. Inconsistencies between cell entries and totals are due to rounding.

Table 12.17 Decision Accuracy and Consistency: MD Mod-HSA Government May 2013

	Placement Scores	Proficient	Basic	Category Total
Decision Accuracy	394–650	.15	.06	.21
	240–393	.05	.74	.79
	Estimated Proportion Correctly Classified*: Total = 0.89			
Decision Consistency	394–650	.14	.07	.21
	240–393	.09	.70	.79
	Estimated Proportion Consistently Classified*: Total = 0.84			

Note. Inconsistencies between cell entries and totals are due to rounding.

Section 13. Student Characteristics

Summary Statistics

The results presented in Tables 13.1 and 13.3 to 13.5 are based on the combined results for students who took the tests in October 2012 and January, April, May, and Summer 2013. Results from online and paper test takers were pooled for the analyses. All results are based on the final Research files sent to MSDE. Scores in Table 13.1 are reported for all students and by grade. Table 13.2 reports the scores for all content areas by the October, January, April, May, and Summer administrations.

Table 13.1 MD Mod-HSA Means and Standard Deviations for 2012-2013 Overall and by Grade

			N	Mean	SD
Algebra	Overall		8,108	362.7	47.7
	Grade				
		8	78	339.2	47.6
		9	1,534	362.6	48.3
		10	2,404	363.7	47.3
		11	2,249	365.1	45.6
		12	1,743	359.6	49.8
Biology	Overall		5,489	360.9	44.6
	Grade				
		9	381	353.5	49.0
		10	1,522	363.2	46.2
		11	1,931	362.9	42.3
		12	1,597	358.4	44.0
English	Overall		5,934	358.4	39.4
	Grade				
		9	282	352.1	42.3
		10	1,676	359.4	38.7
		11	2,261	359.0	38.5
		12	1,637	358.0	40.2
Government	Overall		947	353.3	53.6
	Grade				
		9	356	349.2	52.9
		10	448	357.2	53.3
		11	87	361.2	50.3
		12	51	335.5	61.2

Note. Government data is based on January and May 2013 administrations only.

Table 13.2 MD Mod-HSA Mean Scale Scores by Content Area and Test Administration

Content Area	October			January			April			May			Summer		
	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD
Algebra	2,113	361.9	48.0	2,133	360.0	48.0	356	358.9	52.7	3,328	365.6	46.3	178	355.8	53.4
Biology	1,427	359.4	44.1	1,437	360.2	43.4	360	362.7	40.9	2,116	362.5	45.5	149	355.3	54.8
English	1,581	357.6	39.6	1,594	358.6	40.1	354	358.8	38.7	2,240	359.1	38.5	165	351.7	44.5
Government	-	-	-	142	348.6	52.6	-	-	-	805	354.1	53.8	-	-	-

The mean scale scores are presented for the years 2008 through 2013 by content area in Table 13.3. Table 13.4 presents the passing rates for these years.

Table 13.3 MD Mod-HSA Mean Scale Scores by Content Area and Test Year

Content Area	2008	2009	2010	2011	2012	2013
Algebra	360.1	363.2	360.5	362.3	362.3	363.0
Biology	360.2	365.0	366.0	362.3	363.2	361.5
English	353.2	360.2	359.6	359.2	362.2	358.6
Government*	357.2	359.2	355.9	354.8	-	353.3

*Government was discontinued from Summer 2011 to October 2012. Starting in January 2013, Government was reintroduced into the MD Mod-HSAs.

Table 13.4 MD Mod-HSA Percentage Passing Rates (Proficient + Advanced) by Content Area and Test Year

Content Area	2008	2009	2010	2011	2012	2013
Algebra	9.8	9.2	8.8	9.4	8.1	8.4
Biology	16.1	14.5	13.8	13.2	13.3	12.6
English	10.4	12.2	12.6	12.0	13.9	10.8
Government*	19.9	20.3	17.1	17.2	-	19.8

* Government was discontinued from Summer 2011 to October 2012. Starting in January 2013, Government was reintroduced into the MD Mod-HSAs.

The Algebra and English tests are used for the high school mathematics and English/ language arts components of the MSDE Adequate Yearly Progress report as required under the NCLB Act. Beginning with the January 2008 administration, Biology was used for the NCLB science component. Table 13.5 presents the percentage of Algebra, English, and Biology students classified as Basic, Proficient, and Advanced in 2013. Figures 13.1 through 13.4 show the distributions of scale scores for the May 2013 administration for each content area.

Table 13.5 MD Mod-HSA Percentage of Students in Each Performance Category by Content Area

Content Area	Basic	Proficient	Advanced
Algebra	91.6	8.1	0.4
Biology	87.4	12.4	0.2
English	89.2	10.4	0.3
Government	80.3	19.7	

Summary statistics for all students and for subgroups based on gender, special education programs, ethnicity, and English language fluency are presented in Tables 13.6 through 13.22. The tables include the number of students tested for whom valid scores were available, mean scale scores, and standard deviations of scale scores. In addition, raw score reliabilities are provided for the overall group of examinees and for subgroups.
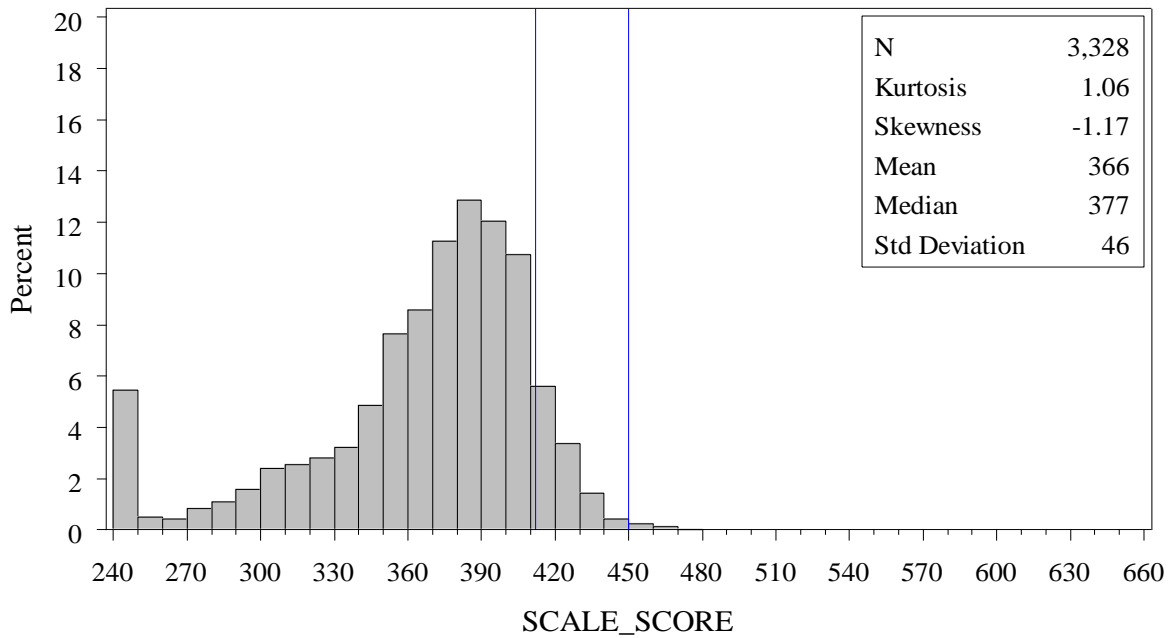
Figure 13.1 Histogram of Total Scale Scores for MD Mod-HSA May 2013 Algebra

N	3,328
Kurtosis	1.06
Skewness	-1.17
Mean	366
Median	377
Std Deviation	46
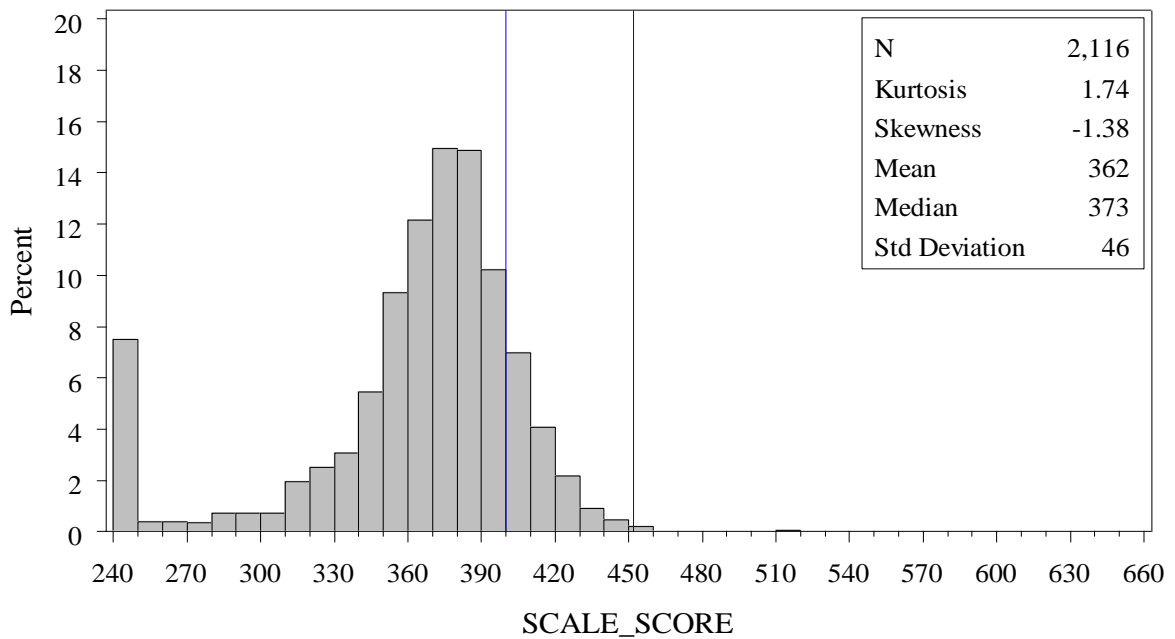
Figure 13.2 Histogram of Total Scale Scores for MD Mod-HSA May 2013 Biology

N	2,116
Kurtosis	1.74
Skewness	-1.38
Mean	362
Median	373
Std Deviation	46

N	2,240
Kurtosis	2.56
Skewness	-1.49
Mean	359
Median	367
Std Deviation	38
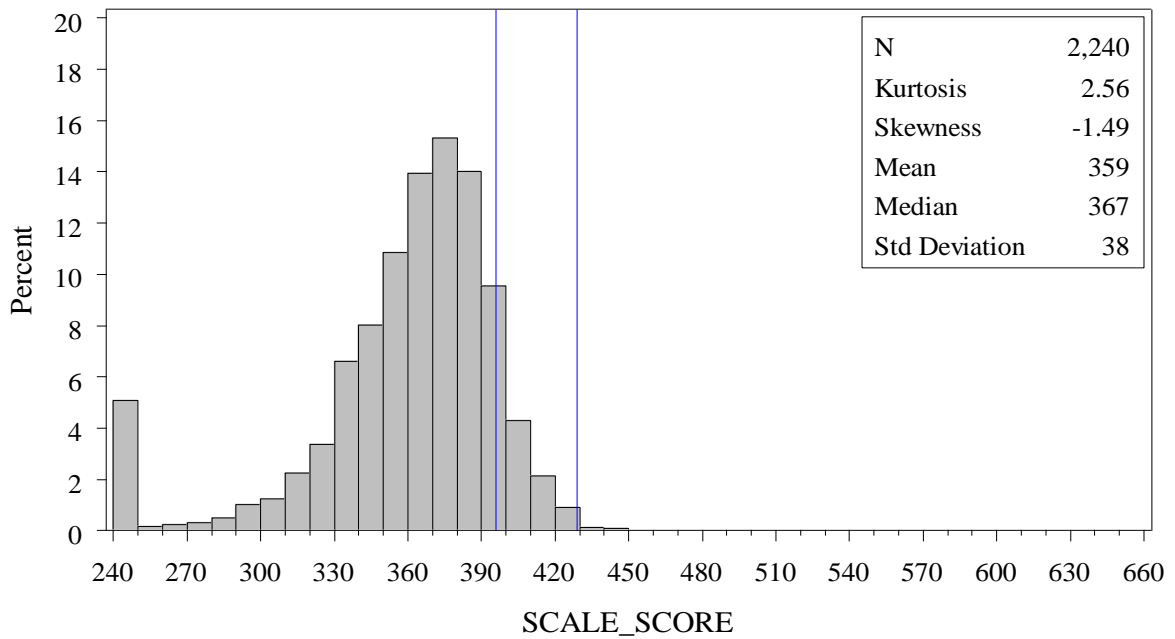
Figure 13.3 Histogram of Total Scale Scores for MD Mod-HSA May 2013 English

N	805
Kurtosis	0.20
Skewness	-1.04
Mean	354
Median	367
Std Deviation	54
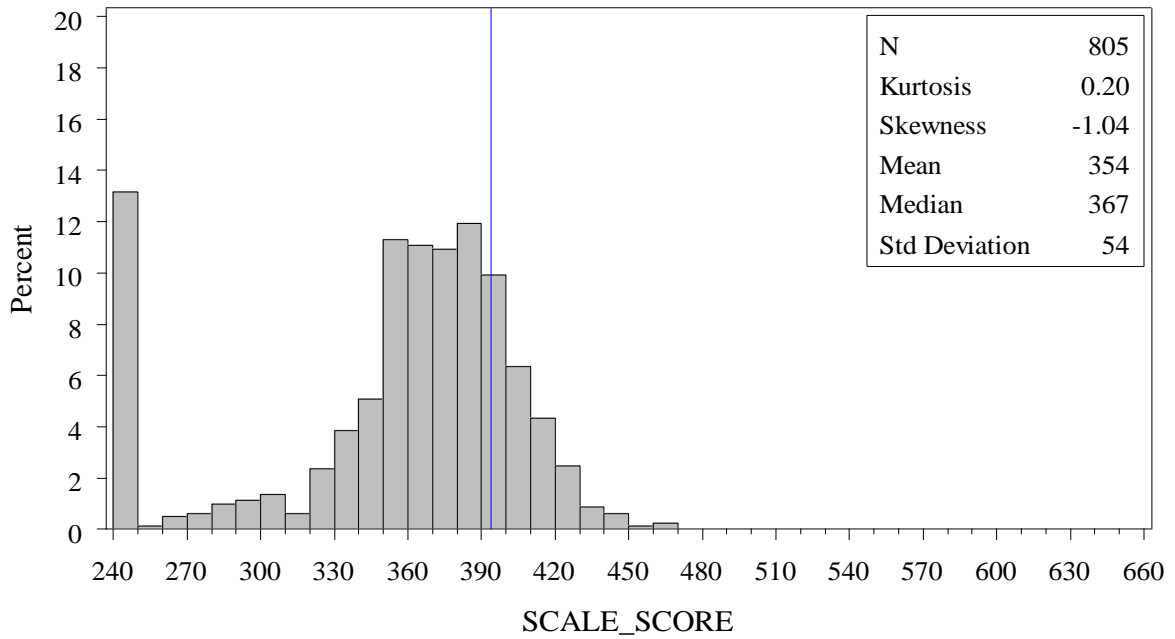
Figure 13.4 Histogram of Total Scale Scores for MD Mod-HSA May 2013 Government

Table 13.6 Summary Statistics for MD Mod-HSA Algebra: October 2012 Form

		Primary Form 113				
		Mean	SD	N	%	Alpha
Overall		361.9	48.0	2,113	100.0	0.74
Gender	Male	362.3	47.6	1,335	63.2	0.74
	Female	360.7	48.8	749	35.4	0.73
	Missing	*	*	29	1.4	*
Grade	8	*	*	1	0.0	*
	9	349.7	54.7	139	6.6	0.73
	10	361.2	47.5	583	27.6	0.71
	11	365.6	46.8	684	32.4	0.76
	12	360.9	48.2	677	32.0	0.73
	Missing	*	*	29	1.4	*
Special Education	Yes	362.2	47.3	1,722	81.5	0.73
	No	360.7	51.2	372	17.6	0.76
	Exited	*	*	18	0.9	*
	Exited and placed in 504[a]	*	*	1	0.0	*
	504	*	*	0	0.0	*
Ethnicity	American Indian	*	*	11	0.5	*
	Asian	*	*	23	1.1	*
	African American	355.5	49.5	1,264	59.8	0.73
	Hawaiian/ Pacific Islander	*	*	1	0.0	*
	White	373.4	42.2	519	24.6	0.74
	Hispanic	368.5	47.2	220	10.4	0.70
	Missing	369.4	44.2	75	3.5	0.70
Limited English Proficient	Yes	*	*	25	1.2	*
	No	362.0	48.0	2,086	98.7	0.74
	Exited[b]	*	*	2	0.1	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 13.7 Summary Statistics for MD Mod-HSA Algebra: January 2013 Form

		Primary Form 213				
		Mean	SD	N	%	Alpha
Overall		360.0	48.0	2,133	100.0	0.73
Gender	Male	359.4	48.7	1,374	64.4	0.73
	Female	361.9	46.5	739	34.6	0.73
	Missing	*	*	20	0.9	*
Grade	8	*	*	0	0.0	*
	9	353.6	49.6	128	6.0	0.68
	10	358.6	49.4	645	30.2	0.72
	11	362.4	45.5	711	33.3	0.73
	12	360.7	48.6	623	29.2	0.75
	Missing	*	*	26	1.2	*
Special Education	Yes	360.0	47.4	1,768	82.9	0.71
	No	360.0	51.3	365	17.1	0.79
	Exited	*	*	0	0.0	*
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	0	0.0	*
Ethnicity	American Indian	354.3	58.7	12	0.6	*
	Asian	*	*	28	1.3	*
	African American	354.2	50.6	1,293	60.6	0.73
	Hawaiian/ Pacific Islander	*	*	1	0.0	*
	White	372.3	40.6	525	24.6	0.72
	Hispanic	364.9	45.1	214	10.0	0.74
	Missing	357.5	42.4	60	2.8	0.68
Limited English Proficient	Yes	*	*	20	0.9	*
	No	360.1	48.1	2,113	99.1	0.73
	Exited[b]	*	*	0	0.0	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 13.8 Summary Statistics for MD Mod-HSA Algebra: April 2013 Form

		Primary Form 313				
		Mean	SD	N	%	Alpha
Overall		358.9	52.7	356	100.0	0.78
Gender	Male	358.1	54.4	223	62.6	0.80
	Female	359.9	49.9	132	37.1	0.71
	Missing	*	*	1	0.3	*
Grade	8	*	*	0	0.0	*
	9	*	*	0	0.0	*
	10	*	*	6	1.7	*
	11	*	*	9	2.5	*
	12	358.3	53.0	339	95.2	0.77
	Missing	*	*	2	0.6	*
Special Education	Yes	359.3	50.5	271	76.1	0.76
	No	357.3	59.4	85	23.9	0.81
	Exited	*	*	0	0.0	*
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	0	0.0	*
Ethnicity	American Indian	*	*	0	0.0	*
	Asian	*	*	3	0.8	*
	African American	355.5	53.4	245	68.8	0.78
	Hawaiian/ Pacific Islander	*	*	1	0.3	*
	White	370.2	49.6	70	19.7	0.75
	Hispanic	*	*	32	9.0	*
	Missing	*	*	5	1.4	*
Limited English Proficient	Yes	*	*	3	0.8	*
	No	359.1	52.4	353	99.2	0.78
	Exited[b]	*	*	0	0.0	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 13.9 Summary Statistics for MD Mod-HSA Algebra: May 2013 Form

		Primary Form 413				
		Mean	SD	N	%	Alpha
Overall		365.6	46.3	3,328	100.0	0.77
Gender	Male	366.6	47.1	2,106	63.3	0.78
	Female	364.2	44.2	1,188	35.7	0.73
	Missing	*	*	34	1.0	*
Grade	8	338.9	47.5	76	2.3	0.63
	9	365.0	47.0	1,235	37.1	0.79
	10	368.2	45.1	1,130	34.0	0.76
	11	367.3	44.1	780	23.4	0.74
	12	350.8	54.7	64	1.9	0.73
	Missing	*	*	43	1.3	*
Special Education	Yes	366.9	45.5	2,848	85.6	0.77
	No	358.3	50.2	479	14.4	0.78
	Exited	*	*	0	0.0	*
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	1	0.0	*
Ethnicity	American Indian	*	*	12	0.4	*
	Asian	375.2	47.6	58	1.7	0.79
	African American	360.2	47.6	1,882	56.6	0.75
	Hawaiian/ Pacific Islander	*	*	1	0.0	*
	White	374.2	41.9	789	23.7	0.78
	Hispanic	370.5	44.7	469	14.1	0.75
	Missing	370.2	46.7	117	3.5	0.80
Limited English Proficient	Yes	360.2	46.9	64	1.9	0.68
	No	365.7	46.3	3,252	97.7	0.77
	Exited[b]	*	*	12	0.4	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 13.10 Summary Statistics for MD Mod-HSA Algebra: Summer 2013 Forms

		Primary Form 513					Primary Form 613				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		357.8	50.9	81	100.0	0.68	354.2	55.6	97	100.0	0.76
Gender	Male	355.3	53.1	52	64.2	0.67	351.9	58.6	67	69.1	0.76
	Female	*	*	29	35.8	*	*	*	30	30.9	*
	Missing	*	*	0	0.0	*	*	*	0	0.0	*
Grade	8	*	*	1	1.2	*	*	*	0	0.0	*
	9	*	*	10	12.3	*	*	*	22	22.7	*
	10	*	*	23	28.4	*	*	*	17	17.5	*
	11	*	*	35	43.2	*	*	*	30	30.9	*
	12	*	*	12	14.8	*	*	*	28	28.9	*
	Missing	*	*	0	0.0	*	*	*	0	0.0	*
Special Education	Yes	*	*	45	55.6	*	*	*	48	49.5	*
	No	*	*	36	44.4	*	*	*	49	50.5	*
	Exited	*	*	0	0.0	*	*	*	0	0.0	*
	Exited and placed in 504[a]	*	*	0	0.0	*	*	*	0	0.0	*
	504	*	*	0	0.0	*	*	*	0	0.0	*
Ethnicity	American Indian	*	*	0	0.0	*	*	*	0	0.0	*
	Asian	*	*	0	0.0	*	*	*	1	1.0	*
	African American	*	*	39	48.1	*	339.5	59.5	54	55.7	0.78
	Hawaiian/ Pacific Islander	*	*	0	0.0	*	*	*	0	0.0	*
	White	*	*	35	43.2	*	*	*	33	34.0	*
	Hispanic	*	*	5	6.2	*	*	*	8	8.2	*
	Missing	*	*	2	2.5	*	*	*	1	1.0	*
Limited English Proficient	Yes	*	*	0	0.0	*	*	*	0	0.0	*
	No	357.8	50.9	81	100.0	0.68	353.3	55.8	95	97.9	0.76
	Exited[b]	*	*	0	0.0	*	*	*	2	2.1	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 13.11 Summary Statistics for MD Mod-HSA Biology: October 2012 Form

| | | Primary Form 113 | | | | |
		Mean	SD	N	%	Alpha
Overall		359.4	44.1	1,427	100.0	0.60
Gender	Male	359.0	45.8	918	64.3	0.64
	Female	360.3	40.9	504	35.3	0.51
	Missing	*	*	5	0.4	*
Grade	8	*	*	1	0.1	*
	9	360.9	40.6	63	4.4	0.56
	10	355.3	48.9	227	15.9	0.62
	11	361.9	43.2	538	37.7	0.62
	12	358.8	42.9	590	41.3	0.57
	Missing	*	*	8	0.6	*
Special Education	Yes	358.8	44.1	1,195	83.7	0.60
	No	363.5	44.4	208	14.6	0.63
	Exited	*	*	17	1.2	*
	Exited and placed in 504[a]	*	*	1	0.1	*
	504	*	*	6	0.4	*
Ethnicity	American Indian	*	*	3	0.2	*
	Asian	*	*	16	1.1	*
	African American	354.5	46.8	881	61.7	0.60
	Hawaiian/ Pacific Islander	*	*	0	0.0	*
	White	368.8	36.8	338	23.7	0.58
	Hispanic	367.4	38.2	161	11.3	0.61
	Missing	*	*	28	2.0	*
Limited English Proficient	Yes	*	*	23	1.6	*
	No	359.4	44.1	1,399	98.0	0.60
	Exited[b]	*	*	5	0.4	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 13.12 Summary Statistics for MD Mod-HSA Biology: January 2013 Form

		Primary Form 213				
		Mean	SD	N	%	Alpha
Overall		360.2	43.4	1,437	100.0	0.64
Gender	Male	361.2	43.7	925	64.4	0.65
	Female	358.8	42.9	485	33.8	0.61
	Missing	*	*	27	1.9	*
Grade	8	*	*	0	0.0	*
	9	*	*	29	2.0	*
	10	357.1	48.2	215	15.0	0.73
	11	364.1	40.1	587	40.8	0.60
	12	358.6	44.0	574	39.9	0.63
	Missing	*	*	32	2.2	*
Special Education	Yes	359.6	43.8	1,124	78.2	0.64
	No	362.7	41.5	313	21.8	0.63
	Exited	*	*	0	0.0	*
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	0	0.0	*
Ethnicity	American Indian	*	*	7	0.5	*
	Asian	*	*	19	1.3	*
	African American	355.5	45.4	862	60.0	0.61
	Hawaiian/ Pacific Islander	*	*	3	0.2	*
	White	372.5	35.5	338	23.5	0.67
	Hispanic	361.5	42.3	143	10.0	0.62
	Missing	360.8	38.2	65	4.5	0.63
Limited English Proficient	Yes	*	*	12	0.8	*
	No	360.3	43.2	1,423	99.0	0.63
	Exited[b]	*	*	2	0.1	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 13.13 Summary Statistics for MD Mod-HSA Biology: April 2013 Form

| | | Primary Form 313 | | | | |
		Mean	SD	N	%	Alpha
Overall		362.7	40.9	360	100.0	0.66
Gender	Male	362.8	42.0	233	64.7	0.69
	Female	362.1	39.1	124	34.4	0.60
	Missing	*	*	3	0.8	*
Grade	8	*	*	0	0.0	*
	9	*	*	0	0.0	*
	10	*	*	5	1.4	*
	11	*	8	6	1.7	*
	12	362.7	41.0	346	96.1	0.67
	Missing	*	*	3	0.8	*
Special Education	Yes	362.5	41.2	269	74.7	0.65
	No	363.4	39.9	91	25.3	0.69
	Exited	*	*	0	0.0	*
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	0	0.0	*
Ethnicity	American Indian	*	*	0	0.0	*
	Asian	*	*	4	1.1	*
	African American	360.9	41.3	248	68.9	0.68
	Hawaiian/ Pacific Islander	*	*	0	0.0	*
	White	363.7	48.4	59	16.4	0.70
	Hispanic	*	*	39	10.8	*
	Missing	*	*	10	2.8	*
Limited English Proficient	Yes	*	*	3	0.8	*
	No	362.8	41.0	357	99.2	0.67
	Exited[b]	*	*	0	0.0	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 13.14 Summary Statistics for MD Mod-HSA Biology: May 2013 Form

| | | Primary Form 413 | | | | |
		Mean	SD	N	%	Alpha
Overall		362.5	45.5	2,116	100.0	0.70
Gender	Male	363.0	46.2	1,366	64.6	0.71
	Female	361.8	43.8	742	35.1	0.66
	Missing	*	*	8	0.4	*
Grade	8	*	*	0	0.0	*
	9	352.6	50.1	282	13.3	0.67
	10	366.0	44.9	1,036	49.0	0.74
	11	363.4	42.3	739	34.9	0.62
	12	*	*	45	2.1	*
	Missing	*	*	14	0.7	*
Special Education	Yes	363.9	44.5	1,825	86.2	0.70
	No	353.9	50.8	291	13.8	0.67
	Exited	*	*	0	0.0	*
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	0	0.0	*
Ethnicity	American Indian	*	*	9	0.4	*
	Asian	*	*	48	2.3	*
	African American	357.8	45.9	1,229	58.1	0.65
	Hawaiian/ Pacific Islander	*	*	2	0.1	*
	White	373.3	42.8	487	23.0	0.75
	Hispanic	365.8	42.6	291	13.8	0.68
	Missing	359.1	51.5	50	2.4	0.80
Limited English Proficient	Yes	*	*	31	1.5	*
	No	362.7	45.4	2,080	98.3	0.70
	Exited[b]	*	*	5	0.2	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 13.15 Summary Statistics for MD Mod-HSA Biology: Summer 2013 Forms

		Primary Form 513					Primary Form 613				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		359.7	51.7	73	100.0	0.70	351.1	57.6	76	100.0	0.66
Gender	Male	*	*	48	65.8	*	347.9	61.1	54	71.1	0.67
	Female	*	*	25	34.2	*	*	*	22	28.9	*
	Missing	*	*	0	0.0	*	*	*	0	0.0	*
Grade	8	*	*	0	0.0	*	*	*	0	0.0	*
	9	*	*	1	1.4	*	*	*	6	7.9	*
	10	*	*	15	20.5	*	*	*	24	31.6	*
	11	*	*	39	53.4	*	*	*	22	28.9	*
	12	*	*	18	24.7	*	*	*	24	31.6	*
	Missing	*	*	0	0.0	*	*	*	0	0.0	*
Special Education	Yes	*	*	49	67.1	*	*	*	35	46.1	*
	No	*	*	24	32.9	*	*	*	41	53.9	*
	Exited	*	*	0	0.0	*	*	*	0	0.0	*
	Exited and placed in 504[a]	*	*	0	0.0	*	*	*	0	0.0	*
	504	*	*	0	0.0	*	*	*	0	0.0	*
Ethnicity	American Indian	*	*	0	0.0	*	*	*	0	0.0	*
	Asian	*	*	3	4.1	*	*	*	3	3.9	*
	African American	*	*	29	39.7	*	351.5	57.3	50	65.8	0.59
	Hawaiian/ Pacific Islander	*	*	0	0.0	*	*	*	0	0.0	*
	White	*	*	37	50.7	*	*	*	17	22.4	*
	Hispanic	*	*	4	5.5	*	*	*	6	7.9	*
	Missing	*	*	0	0.0	*	*	*	0	0.0	*
Limited English Proficient	Yes	*	*	1	1.4	*	*	*	1	1.3	*
	No	359.6	52.1	72	98.6	0.70	352.6	56.5	75	98.7	0.62
	Exited[b]	*	*	0	0.0	*	*	*	0	0.0	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 13.16 Summary Statistics for MD Mod-HSA English: October 2012 Form

		Primary Form 113				
		Mean	SD	N	%	Alpha
Overall		357.6	39.6	1,581	100.0	0.76
Gender	Male	357.3	39.7	1,011	63.9	0.75
	Female	358.3	38.9	551	34.9	0.75
	Missing	*	*	19	1.2	*
Grade	8	*	*	1	0.1	*
	9	360.1	35.6	62	3.9	0.71
	10	356.7	39.5	233	14.7	0.72
	11	358.8	37.8	656	41.5	0.76
	12	356.6	41.5	607	38.4	0.76
	Missing	*	*	22	1.4	*
Special Education	Yes	356.3	39.8	1,271	80.4	0.74
	No	364.0	38.1	290	18.3	0.79
	Exited	*	*	14	0.9	*
	Exited and placed in 504[a]	*	*	1	0.1	*
	504	*	*	5	0.3	*
Ethnicity	American Indian	*	*	4	0.3	*
	Asian	*	*	21	1.3	*
	African American	354.4	40.6	917	58.0	0.75
	Hawaiian/ Pacific Islander	*	*	0	0.0	*
	White	362.6	36.2	408	25.8	0.72
	Hispanic	363.9	35.2	179	11.3	0.76
	Missing	351.6	53.5	52	3.3	0.87
Limited English Proficient	Yes	*	*	21	1.3	*
	No	357.7	39.7	1,555	98.4	0.76
	Exited[b]	*	*	5	0.3	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 13.17 Summary Statistics for MD Mod-HSA English: January 2013 Form

| | | Primary Form 213 | | | | |
		Mean	SD	N	%	Alpha
Overall		358.6	40.1	1,594	100.0	0.77
Gender	Male	357.8	41.2	1,050	65.9	0.77
	Female	361.2	36.4	513	32.2	0.75
	Missing	*	*	31	1.9	*
Grade	8	*	*	0	0.0	*
	9	*	*	26	1.6	*
	10	351.6	45.0	184	11.5	0.76
	11	360.2	38.8	750	47.1	0.77
	12	360.4	38.2	598	37.5	0.76
	Missing	*	*	36	2.3	*
Special Education	Yes	359.2	38.8	1,222	76.7	0.75
	No	356.6	43.9	372	23.3	0.80
	Exited	*	*	0	0.0	*
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	0	0.0	*
Ethnicity	American Indian	*	*	5	0.3	*
	Asian	*	*	18	1.1	*
	African American	355.3	41.8	921	57.8	0.76
	Hawaiian/ Pacific Islander	*	*	1	0.1	*
	White	365	38.2	404	25.3	0.79
	Hispanic	365.8	30.3	171	10.7	0.72
	Missing	353.1	38.1	74	4.6	0.72
Limited English Proficient	Yes	*	*	13	0.8	*
	No	358.6	40.1	1,579	99.1	0.77
	Exited[b]	*	*	2	0.1	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 13.18 Summary Statistics for MD Mod-HSA English: April 2013 Form

| | | Primary Form 313 | | | | |
		Mean	SD	N	%	Alpha
Overall		358.8	38.7	354	100.0	0.77
Gender	Male	357.3	40.2	230	65.0	0.75
	Female	363.6	34.4	116	32.8	0.79
	Missing	*	*	8	2.3	*
Grade	8	*	*	0	0.0	*
	9	*	*	0	0.0	*
	10	*	*	6	1.7	*
	11	*	*	9	2.5	*
	12	359.0	38.3	330	93.2	0.77
	Missing	*	*	9	2.5	*
Special Education	Yes	358.8	39.0	261	73.7	0.77
	No	358.9	38.2	93	26.3	0.75
	Exited	*	*	7	2.0	*
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	0	0.0	*
Ethnicity	American Indian	*	*	0	0.0	*
	Asian	*	*	7	2.0	*
	African American	354.7	41.7	229	64.7	0.77
	Hawaiian/ Pacific Islander	*	*	1	0.3	*
	White	365.9	33.2	67	18.9	0.75
	Hispanic	*	*	38	10.7	*
	Missing	*	*	12	3.4	*
Limited English Proficient	Yes	*	*	3	0.8	*
	No	358.9	38.9	351	99.2	0.77
	Exited[b]	*	*	0	0.0	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 13.19 Summary Statistics for MD Mod-HSA English: May 2013 Form

		Primary Form 413				
		Mean	SD	N	%	Alpha
Overall		359.1	38.5	2,240	100.0	0.75
Gender	Male	358.0	39.8	1,497	66.8	0.76
	Female	361.3	35.6	736	32.9	0.73
	Missing	*	*	7	0.3	*
Grade	8	*	*	0	0.0	*
	9	351.9	41.4	184	8.2	0.75
	10	361.5	37.1	1,207	53.9	0.75
	11	358.3	38.1	780	34.8	0.74
	12	345.8	52.0	59	2.6	0.80
	Missing	*	*	10	0.4	*
Special Education	Yes	359.9	37.5	1,915	85.5	0.74
	No	354.7	43.4	325	14.5	0.78
	Exited	*	*	0	0.0	*
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	0	0.0	*
Ethnicity	American Indian	*	*	6	0.3	*
	Asian	*	*	48	2.1	*
	African American	355.6	39.3	1,261	56.3	0.75
	Hawaiian/ Pacific Islander	*	*	1	0.0	*
	White	363.2	38.6	553	24.7	0.75
	Hispanic	366.1	31.0	313	14.0	0.72
	Missing	357.9	46.8	58	2.6	0.83
Limited English Proficient	Yes	*	*	26	1.2	*
	No	359.2	38.6	2,208	98.6	0.75
	Exited[b]	*	*	6	0.3	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 13.20 Summary Statistics for MD Mod-HSA English: Summer 2013 Forms

		Primary Form 513					Primary Form 613				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		352.5	43.4	90	100.0	0.74	350.8	46.2	75	100.0	0.75
Gender	Male	350.5	47.1	56	62.2	0.76	346.6	51.2	50	66.7	0.77
	Female	*	*	34	37.8	*	*	*	25	33.3	*
	Missing	*	*	0	0.0	*	*	*	0	0.0	*
Grade	8	*	*	0	0.0	*	*	*	0	0.0	*
	9	*	*	4	4.4	*	*	*	6	8.0	*
	10	*	*	23	25.6	*	*	*	23	30.7	*
	11	352.6	44.3	50	55.6	0.73	*	*	16	21.3	*
	12	*	*	13	14.4	*	*	*	30	40.0	*
	Missing	*	*	0	0.0	*	*	*	0	0.0	*
Special Education	Yes	345.7	48.6	54	60.0	0.75	*	*	26	34.7	*
	No	*	*	36	40.0	*	*	*	49	65.3	*
	Exited	*	*	0	0.0	*	*	*	0	0.0	*
	Exited and placed in 504[a]	*	*	0	0.0	*	*	*	0	0.0	*
	504	*	*	0	0.0	*	*	*	0	0.0	*
Ethnicity	American Indian	*	*	0	0.0	*	*	*	0	0.0	*
	Asian	*	*	1	1.1	*	*	*	2	2.7	*
	African American	*	*	34	37.8	*	*	*	40	53.3	*
	Hawaiian/ Pacific Islander	*	*	0	0.0		*	*	0	0.0	*
	White	347.2	45.9	50	55.6	0.73	*	*	26	34.7	*
	Hispanic	*	*	4	4.4	*	*	*	6	8.0	*
	Missing	*	*	1	1.1	*	*	*	1	1.3	*
Limited English Proficient	Yes	*	*	1	1.1	*	*	*	0	0.0	*
	No	351.9	43.3	89	98.9	0.73	350.8	46.2	75	100.0	0.75
	Exited[b]	*	*	0	0.0	*	*	*	0	0.0	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 13.21 Summary Statistics for MD Mod-HSA Government: January 2013 Form

		Primary Form 213				
		Mean	SD	N	%	Alpha
Overall		348.6	52.6	142	100.0	0.75
Gender	Male	351.5	52.9	107	75.4	0.76
	Female	*	*	35	24.6	*
	Missing	*	*	0	0.0	*
Grade	8	*	*	0	0.0	*
	9	*	*	44	31.0	*
	10	*	*	44	31.0	*
	11	*	*	20	14.1	*
	12	*	*	34	23.9	*
	Missing	*	*	0	0.0	*
Special Education	Yes	345.4	54.4	113	79.6	0.75
	No	*	*	29	20.4	*
	Exited	*	*	0	0.0	*
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	0	0.0	*
Ethnicity	American Indian	*	*	0	0.0	*
	Asian	*	*	3	2.1	*
	African American	337.9	58.5	70	49.3	0.72
	Hawaiian/ Pacific Islander	*	*	0	0.0	*
	White	360.5	45.0	60	42.3	0.79
	Hispanic	*	*	7	4.9	*
	Missing	*	*	2	1.4	*
Limited English Proficient	Yes	*	*	0	0.0	*
	No	348.6	52.6	142	100.0	0.75
	Exited[b]	*	*	0	0.0	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 13.22 Summary Statistics for MD Mod-HSA Government: May 2013 Form

| | | Primary Form 413 | | | | |
		Mean	SD	N	%	Alpha
Overall		354.1	53.8	805	100.0	0.76
Gender	Male	355.0	55.6	525	65.2	0.78
	Female	352.8	50.1	277	34.4	0.72
	Missing	*	*	3	0.4	*
Grade	8	*	*	0	0.0	*
	9	349.5	52.8	312	38.8	*
	10	357.3	53.7	404	50.2	*
	11	364.3	52.2	67	8.3	*
	12	*	*	17	2.1	*
	Missing	*	*	5	0.6	*
Special Education	Yes	355.7	52.8	706	87.7	0.76
	No	342.5	59.3	97	12.0	0.76
	Exited	*	*	2	0.2	*
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	0	0.0	*
Ethnicity	American Indian	*	*	4	0.5	*
	Asian	*	*	23	2.9	*
	African American	349.2	53.4	466	57.9	0.72
	Hawaiian/ Pacific Islander	*	*	0	0.0	*
	White	359.1	56.7	181	22.5	0.82
	Hispanic	361.8	49.0	108	13.4	0.76
	Missing	*	*	23	2.9	0.64
Limited English Proficient	Yes	*	*	10	1.2	*
	No	354.1	54.0	791	98.3	0.77
	Exited[b]	*	*	4	0.5	*

*Statistics not reported for sample size less than 50 (N < 50).
[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Demographic Characteristics

Summary statistics describing the demographic characteristics of the students who received scores on the MD Mod-HSAs are provided in Tables 13.23 through 13.26. Statistics are provided for the October 2012 and the January, April, May, and Summer 2013 administrations of Algebra, Biology, and English. For Government, only January and May statistics are provided. The results from online and paper test takers were pooled for the analyses. All demographic results are based on the final Research file sent to MSDE.

Table 13.23 Demographic Information for MD Mod-HSA Algebra

		October Form		January Form		April Form		May Form		Summer Forms	
		N	%	N	%	N	%	N	%	N	%
Overall		2,113	100.0	2,133	100.0	356	100.0	3,328	100.0	178	100.0
Gender	Male	1,335	63.2	1,374	64.4	223	62.6	2,106	63.3	119	66.9
	Female	749	35.4	739	34.6	132	37.1	1,188	35.7	59	33.1
	Missing	29	1.4	20	0.9	1	0.3	34	1.0	0	0.0
Special Education	Yes	1,722	81.5	1,768	82.9	271	76.1	2,848	85.6	93	52.2
	No	372	17.6	365	17.1	85	23.9	479	14.4	85	47.8
	Exited	18	0.9	0	0.0	0	0.0	0	0.0	0	0.0
	Exited and placed in 504[a]	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	504	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0
Ethnicity	American Indian	11	0.5	12	0.6	0	0.0	12	0.4	0	0.0
	Asian	23	1.1	28	1.3	3	0.8	58	1.7	1	1.0
	African American	1,264	59.8	1,293	60.6	245	68.8	1,882	56.6	93	52.2
	Hawaiian/Pacific Islander	1	0.0	1	0.0	1	0.3	1	0.0	0	0.0
	White	519	24.6	525	24.6	70	19.7	789	23.7	68	38.2
	Hispanic	220	10.4	214	10.0	32	9.0	469	14.1	13	7.3
	Missing	75	3.5	60	2.8	5	1.4	117	3.5	3	1.7
Limited English Proficient	Yes	25	1.2	20	0.9	3	0.8	64	1.9	0	0.0
	No	2,086	98.7	2,113	99.1	353	99.2	3,252	97.7	176	98.9
	Exited[b]	2	0.1	0	0.0	0	0.0	12	0.4	2	1.1

[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 13.24 Demographic Information for MD Mod-HSA Biology

		October Form		January Form		April Form		May Form		Summer Forms	
		N	%	N	%	N	%	N	%	N	%
Overall		1,427	100.0	1,437	100.0	360	100.0	2,116	100.0	149	100.0
Gender	Male	918	64.3	925	64.4	233	64.7	1,366	64.6	102	68.5
	Female	504	35.3	485	33.8	124	34.4	742	35.1	47	31.5
	Missing	5	0.4	27	1.9	3	0.8	8	0.4	0	0.0
Special Education	Yes	1,195	83.7	1,124	78.2	269	74.7	1,825	86.2	84	56.4
	No	208	14.6	313	21.8	91	25.3	291	13.8	65	43.6
	Exited	17	1.2	0	0.0	0	0.0	0	0.0	0	0.0
	Exited and placed in 504[a]	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
	504	6	0.4	0	0.0	0	0.0	0	0.0	0	0.0
Ethnicity	American Indian	3	0.2	7	0.5	0	0.0	9	0.4	0	0.0
	Asian	16	1.1	19	1.3	4	1.1	48	2.3	6	4.0
	African American	881	61.7	862	60.0	248	68.9	1,229	58.1	79	53.0
	Hawaiian/Pacific Islander	0	0.0	3	0.2	0	0.0	2	0.1	0	0.0
	White	338	23.7	338	23.5	59	16.4	487	23.0	54	36.2
	Hispanic	161	11.3	143	10.0	39	10.8	291	13.8	10	6.7
	Missing	28	2.0	65	4.5	10	2.8	50	2.4	0	0.0
Limited English Proficient	Yes	23	1.6	12	0.8	3	0.8	31	1.5	2	1.3
	No	1,399	98.0	1,423	99.0	357	99.2	2,080	98.3	147	98.7
	Exited[b]	5	0.4	2	0.1	0	0.0	5	0.2	0	0.0

[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 13.25 Demographic Information for MD Mod-HSA English

		October Form		January Form		April Form		May Form		Summer Forms	
		N	%	N	%	N	%	N	%	N	%
Overall		1,581	100.0	1,594	100.0	354	100.0	2,240	100.0	165	100.0
Gender	Male	1,011	63.9	1,050	65.9	230	65.0	1,497	66.8	106	64.2
	Female	551	34.9	513	32.2	116	32.8	736	32.9	59	35.8
	Missing	19	1.2	31	1.9	8	2.3	7	0.3	0	0.0
Special Education	Yes	1,271	80.4	1,222	76.7	261	73.7	1,915	85.5	80	48.5
	No	290	18.3	372	23.3	93	26.3	325	14.5	85	51.5
	Exited	14	0.9	0	0.0	0	0.0	0	0.0	0	0.0
	Exited and placed in 504[a]	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
	504	5	0.3	0	0.0	0	0.0	0	0.0	0	0.0
Ethnicity	American Indian	4	0.3	5	0.3	0	0.0	6	0.3	0	0.0
	Asian	21	1.3	18	1.1	7	2.0	48	2.1	3	1.8
	African American	917	58.0	921	57.8	229	64.7	1,261	56.3	74	44.8
	Hawaiian/Pacific Islander	0	0.0	1	0.1	1	0.3	1	0.0	0	0.0
	White	408	25.8	404	25.3	67	18.9	553	24.7	76	46.1
	Hispanic	179	11.3	171	10.7	38	10.7	313	14.0	10	6.1
	Missing	52	3.3	74	4.6	12	3.4	58	2.6	2	1.2
Limited English Proficient	Yes	21	1.3	13	0.8	3	0.8	26	1.2	1	1.1
	No	1,555	98.4	1,579	99.1	351	99.2	2,208	98.6	164	99.4
	Exited[b]	5	0.3	2	0.1	0	0.0	6	0.3	0	0.0

[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

Table 13.26 Demographic Information for MD Mod-HSA Government

		October Form		January Form		April Form		May Form		Summer Forms	
		N	%	N	%	N	%	N	%	N	%
Overall		-	-	142	100.0	-	-	805	100.0	-	-
Gender	Male	-	-	107	75.4	-	-	525	65.2	-	-
	Female	-	-	35	24.6	-	-	277	34.4	-	-
	Missing	-	-	0	0.0	-	-	3	0.4	-	-
Special Education	Yes	-	-	113	79.6	-	-	706	87.7	-	-
	No	-	-	29	20.4	-	-	97	12.0	-	-
	Exited	-	-	0	0.0	-	-	0	0.0	-	-
	Exited and placed in 504[a]	-	-	0	0.0	-	-	0	0.0	-	-
	504	-	-	0	0.0	-	-	2	0.2	-	-
Ethnicity	American Indian	-	-	0	0.0	-	-	4	0.5	-	-
	Asian	-	-	3	2.1	-	-	23	2.9	-	-
	African American	-	-	70	49.3	-	-	466	57.9	-	-
	Hawaiian/Pacific Islander	-	-	0	0.0	-	-	0	0.0	-	-
	White	-	-	60	42.3	-	-	181	22.5	-	-
	Hispanic	-	-	7	4.9	-	-	108	13.4	-	-
	Missing	-	-	2	1.4	-	-	23	2.9	-	-
Limited English Proficient	Yes	-	-	0	0.0	-	-	10	1.2	-	-
	No	-	-	142	100.0	-	-	791	98.3	-	-
	Exited[b]	-	-	0	0.0	-	-	4	0.5	-	-

[a] A 504 plan is a legal document falling under the provisions of the Rehabilitation Act of 1973 that provides a program of instructional services to assist students with special needs who are in a regular education setting.
[b] LEP Exited indicates students who have exited English language acquisition services.

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Appendix 1A. MD HSA Classical Item Statistics: Operational Forms

Table 1.A1 Item Statistics, Operational Items: MD HSA Algebra—October Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
R	1	O	56428	SR	0.28	0.33	0.33	-0.04	-0.12	-0.18	0.2
R	2	O	79009	SR	0.68	0.31	-0.14	-0.23	0.31	-0.08	0.2
R	4	O	106579	SR	0.33	0.20	-0.07	-0.15	0.20	-0.01	0.5
R	6	O	51416	SPR	0.37	0.36	0.36	-0.31			2.9
R	7	O	56639	SR	0.33	0.09	-0.01	0.09	-0.07	0.00	0.2
R	8	O	282372	SR	0.68	0.29	0.29	-0.22	-0.12	-0.08	0.1
R	9	O	79044	SR	0.12	0.01	0.13	-0.17	-0.02	0.01	0.2
R	11	O	255113	SR	0.48	0.15	0.01	0.15	-0.14	-0.07	0.9
R	13	O	79144	SR	0.29	0.29	-0.14	-0.01	-0.14	0.29	0.3
R	14	O	133404	SR	0.23	0.21	-0.06	-0.09	-0.05	0.21	0.5
R	15	O	51358	SR	0.18	0.17	0.01	-0.02	-0.12	0.17	0.6
R	16	O	79110	SPR	0.21	0.29	0.29	-0.23			5.8
R	17	O	348341	SPR	0.04	0.18	0.18	-0.07			8.8
R	19	O	260756	SR	0.74	0.29	-0.21	0.29	-0.11	-0.11	0.8
R	20	O	282362	SR	0.23	0.15	0.03	-0.10	-0.06	0.15	1.0
R	21	O	51425	SR	0.38	0.19	0.19	-0.02	-0.10	-0.13	1.3
R	22	O	263292	SR	0.32	0.13	0.01	0.13	-0.07	-0.10	1.4
R	23	O	223234	SR	0.41	0.21	-0.10	-0.08	-0.07	0.21	1.5
R	24	O	56598	SR	0.42	0.15	-0.06	0.15	-0.11	-0.06	0.4
R	25	O	79091	SR	0.55	0.33	0.33	-0.15	-0.23	-0.06	0.3
R	26	O	255108	SR	0.62	0.30	-0.13	0.30	-0.16	-0.12	0.7
R	28	O	79124	SR	0.16	0.19	-0.04	-0.08	-0.03	0.19	0.8
R	29	O	255067	SPR	0.34	0.29	0.29	-0.23			3.3
R	31	O	106607	SPR	0.55	0.34	0.34	-0.30			2.6
R	32	O	51400	SR	0.57	0.27	-0.05	-0.22	0.27	-0.12	0.3
R	33	O	79063	SR	0.66	0.42	0.42	-0.18	-0.21	-0.22	0.4
R	35	O	56815	SR	0.31	0.07	-0.02	-0.01	0.07	-0.03	0.8
R	36	O	54822	SR	0.27	0.16	0.16	-0.10	-0.01	-0.05	0.7
R	37	O	51413	SR	0.22	0.18	-0.03	0.18	-0.02	-0.13	0.5
R	39	O	79100	SR	0.28	0.19	-0.04	-0.08	-0.08	0.19	0.5
R	40	O	79533	SR	0.35	0.23	-0.01	0.23	-0.13	-0.12	0.6
R	42	O	215931	SPR	0.36	0.43	0.43	-0.34			7.4
R	43	O	135096	SPR	0.16	0.20	0.20	-0.10			5.3
R	45	O	56694	SR	0.46	0.31	-0.15	-0.15	0.31	-0.09	0.8
R	46	O	135107	SR	0.15	0.08	-0.16	0.08	-0.17	0.20	0.9
R	47	O	257123	SR	0.80	0.33	-0.19	-0.19	0.33	-0.14	0.4
R	48	O	56562	SR	0.28	0.39	-0.17	-0.16	-0.06	0.39	0.6
R	50	O	132844	SR	0.66	0.35	-0.17	-0.19	0.35	-0.16	0.4
R	51	O	211011	SR	0.17	0.13	-0.04	0.03	-0.07	0.13	0.8
R	53	O	263281	SPR	0.68	0.42	0.42	-0.37			3.1
R	54	O	328766	SR	0.43	0.33	0.33	-0.09	-0.21	-0.09	0.5
R	55	O	54721	SR	0.22	0.13	-0.12	-0.02	0.13	0.03	0.6
R	56	O	79037	SR	0.21	0.17	0.17	-0.02	-0.09	-0.03	0.9
R	58	O	263283	SPR	0.03	0.18	0.18	-0.02			3.6

Table 1.A1 Item Statistics, Operational Items: MD HSA Algebra—October Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
R	59	O	106617	SPR	0.26	0.39	0.39	-0.31			4.5
R	61	O	67556	SR	0.39	0.37	0.37	-0.21	-0.16	-0.04	0.5
R	62	O	64688	SR	0.22	0.20	-0.07	0.20	-0.10	-0.03	0.6
R	63	O	54906	SR	0.54	0.34	-0.16	0.34	-0.16	-0.13	0.7
R	64	O	260758	SR	0.39	0.18	-0.14	-0.12	0.18	0.04	0.7
R	66	O	282310	SR	0.22	0.15	0.15	0.02	-0.12	-0.05	0.7
R	67	O	67437	SR	0.17	0.08	0.02	-0.01	0.08	-0.05	0.6
R	68	O	319441	SR	0.44	0.30	-0.09	-0.14	-0.14	0.30	0.7
R	69	O	54767	SR	0.40	0.33	0.33	-0.13	-0.14	-0.15	0.7
Mean					0.36	0.24	0.07	-0.07	-0.03	0.00	1.4
SD					0.19	0.10	0.20	0.17	0.16	0.15	1.9

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4=option-total correlation, %Omits=percent of omitted responses.

Table 1.A2 Item Statistics, Operational Items: MD HSA Biology—October Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
R	1	O	297527	SR	0.78	0.18	-0.06	-0.11	0.18	-0.12	0.1
R	2	O	52485	SR	0.66	0.29	-0.15	-0.16	-0.14	0.29	0.1
R	5	O	271127	SR	0.53	0.17	-0.10	0.17	-0.04	-0.10	0.1
R	6	O	57003	SR	0.16	0.11	0.11	0.04	0.01	-0.16	0.1
R	8	O	52726	SR	0.51	0.24	-0.11	-0.12	0.24	-0.10	0.1
R	9	O	52728	SR	0.37	0.31	-0.09	-0.07	-0.22	0.31	0.0
R	10	O	354962	SR	0.37	0.15	-0.02	-0.10	0.15	-0.06	0.1
R	11	O	214555	SR	0.36	0.13	0.13	0.02	-0.14	-0.07	0.2
R	12	O	133027	SR	0.34	0.16	-0.07	0.16	-0.07	-0.06	0.2
R	13	O	133026	SR	0.37	0.18	-0.14	0.18	-0.08	0.00	0.1
R	15	O	52406	SR	0.34	0.21	-0.09	-0.07	0.21	-0.08	0.3
R	16	O	251258	SR	0.21	0.23	-0.05	-0.11	-0.08	0.23	0.1
R	19	O	323280	SR	0.46	0.21	-0.06	0.21	-0.14	-0.08	0.2
R	20	O	323282	SR	0.31	0.23	-0.06	-0.11	0.23	-0.09	0.3
R	21	O	108590	SR	0.28	0.16	-0.10	0.16	0.06	-0.13	0.2
R	22	O	79506	SR	0.38	0.29	-0.17	-0.11	0.29	-0.10	0.1
R	23	O	137253	SR	0.53	0.31	-0.12	-0.17	-0.14	0.31	0.2
R	24	O	137252	SR	0.43	0.26	0.26	-0.09	-0.15	-0.11	0.2
R	25	O	271088	SR	0.23	0.16	-0.11	0.16	-0.05	0.00	0.3
R	26	O	271089	SR	0.31	0.19	0.19	-0.10	-0.10	-0.01	0.2
R	28	O	67669	SR	0.12	0.16	-0.04	0.02	0.16	-0.09	0.3
R	29	O	52663	SR	0.34	0.26	-0.08	0.26	-0.12	-0.10	0.3
R	30	O	135131	SR	0.32	0.19	-0.08	-0.06	0.19	-0.06	0.4
R	31	O	136107	SR	0.50	0.19	-0.16	0.19	-0.13	0.00	0.5
R	32	O	52433	SR	0.36	0.27	0.27	-0.14	-0.09	-0.09	0.5
R	33	O	52434	SR	0.27	0.17	0.17	-0.02	-0.12	-0.07	0.5
R	34	O	136159	SR	0.59	0.29	-0.14	-0.15	-0.13	0.29	0.1
R	35	O	136157	SR	0.71	0.23	-0.14	0.23	-0.09	-0.12	0.2
R	36	O	133062	SR	0.21	0.25	-0.02	-0.08	-0.13	0.25	0.2
R	37	O	68177	SR	0.35	0.16	-0.06	0.16	-0.08	-0.05	0.2
R	38	O	79474	SR	0.10	0.16	0.16	-0.15	-0.02	0.02	0.2
R	39	O	55086	SR	0.25	0.07	0.02	0.07	-0.18	0.06	0.2
R	40	O	55083	SR	0.66	0.34	-0.16	-0.20	0.34	-0.14	0.2
R	43	O	279604	SR	0.19	0.21	0.21	-0.13	-0.05	-0.01	0.2
R	44	O	279653	SR	0.44	0.20	-0.08	-0.13	0.20	-0.03	0.2
R	46	O	65081	SR	0.43	0.21	-0.11	0.21	-0.09	-0.07	0.2
R	47	O	55212	SR	0.32	0.14	-0.03	-0.10	0.14	-0.01	0.5
R	48	O	55213	SR	0.25	0.13	-0.13	0.13	0.08	-0.10	0.3
R	49	O	68295	SR	0.35	0.26	-0.09	-0.13	-0.09	0.26	0.3
R	50	O	323336	SR	0.35	0.22	-0.09	-0.05	0.22	-0.13	0.3
R	51	O	55078	SR	0.70	0.33	-0.13	-0.16	-0.21	0.33	0.2
R	53	O	133484	SR	0.24	0.20	-0.09	-0.13	0.20	0.01	0.3
R	54	O	133450	SR	0.38	0.23	0.23	-0.14	-0.11	-0.03	0.2
R	55	O	54982	SR	0.38	0.17	-0.13	0.17	-0.01	-0.08	0.4

Table 1.A2 Item Statistics, Operational Items: MD HSA Biology—October Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
R	56	O	52169	SR	0.25	0.05	0.05	-0.05	-0.09	0.06	0.3
R	57	O	263146	SR	0.35	0.23	-0.02	-0.14	-0.10	0.23	0.3
R	61	O	271150	SR	0.41	0.32	0.32	-0.14	-0.19	-0.04	0.4
R	62	O	271149	SR	0.35	0.26	-0.04	-0.13	-0.12	0.26	0.4
R	64	O	65122	SR	0.41	0.17	-0.13	0.17	0.01	-0.09	0.4
R	65	O	57158	SR	0.46	0.28	0.28	-0.15	-0.13	-0.08	0.5
R	66	O	57159	SR	0.59	0.31	-0.17	0.31	-0.14	-0.13	0.5
R	67	O	55220	SR	0.40	0.31	0.31	-0.13	-0.15	-0.09	0.2
R	68	O	55221	SR	0.43	0.34	-0.14	0.34	-0.15	-0.14	0.3
R	69	O	68156	SR	0.43	0.30	0.30	-0.17	-0.17	-0.04	0.2
R	70	O	68157	SR	0.21	0.27	-0.09	-0.05	-0.10	0.27	0.2
R	71	O	65057	SR	0.32	0.09	0.01	-0.09	0.09	-0.03	0.3
R	72	O	79470	SR	0.44	0.23	-0.04	-0.12	-0.12	0.23	0.3
R	73	O	256524	SR	0.39	0.18	-0.09	0.18	-0.08	-0.05	0.2
R	74	O	256525	SR	0.36	0.17	0.01	-0.10	0.17	-0.11	0.3
R	76	O	279640	SR	0.53	0.34	0.34	-0.16	-0.18	-0.10	0.3
R	80	O	65069	SR	0.28	0.10	-0.03	-0.14	0.10	0.07	0.4
R	81	O	65145	SR	0.29	0.09	0.00	0.09	-0.03	-0.06	0.3
R	82	O	64709	SR	0.25	0.22	-0.04	-0.05	-0.12	0.22	0.4
R	83	O	64711	SR	0.28	0.24	-0.11	-0.12	0.24	-0.05	0.4
R	84	O	52586	SR	0.44	0.19	0.19	-0.08	-0.07	-0.09	0.3
R	85	O	108561	SR	0.61	0.38	-0.17	-0.17	-0.20	0.38	0.2
R	86	O	67594	SR	0.42	0.27	0.27	-0.15	-0.12	-0.06	0.3
R	87	O	64748	SR	0.33	0.22	0.22	-0.11	-0.07	-0.06	0.3
R	90	O	214567	SR	0.49	0.17	-0.01	-0.10	0.17	-0.12	0.3
R	91	O	214569	SR	0.42	0.28	-0.11	-0.15	-0.09	0.28	0.3
R	94	O	286615	SR	0.32	0.17	-0.11	-0.05	0.17	-0.04	0.3
R	95	O	133433	SR	0.29	0.32	-0.05	-0.11	-0.17	0.32	0.4
R	96	O	279545	SR	0.30	0.21	0.21	0.00	-0.12	-0.13	0.3
R	97	O	279541	SR	0.34	0.16	-0.09	-0.01	0.16	-0.10	0.4
R	98	O	279644	SR	0.39	0.25	-0.05	0.25	-0.13	-0.12	0.4
R	99	O	52456	SR	0.56	0.28	-0.09	-0.17	0.28	-0.12	0.4
Mean					0.38	0.22	-0.01	-0.03	-0.02	0.01	0.3
SD					0.14	0.07	0.15	0.14	0.15	0.15	0.1

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A3 Item Statistics, Operational Items: MD HSA English—October Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
R	1	O	285438	SR	0.50	0.29	0.29	-0.14	-0.16	-0.09	0.1
R	2	O	285433	SR	0.60	0.24	-0.15	0.24	-0.19	-0.05	0.1
R	3	O	285437	SR	0.66	0.28	-0.12	-0.17	0.28	-0.15	0.1
R	4	O	285439	SR	0.39	0.24	-0.07	0.24	-0.13	-0.13	0.1
R	5	O	285434	SR	0.84	0.29	-0.15	-0.19	0.29	-0.16	0.1
R	6	O	285436	SR	0.73	0.32	-0.16	-0.19	-0.15	0.32	0.1
R	12	O	338877	SR	0.43	0.25	-0.12	-0.06	-0.17	0.25	0.2
R	13	O	338879	SR	0.42	0.26	-0.03	-0.15	-0.18	0.26	0.2
R	14	O	338873	SR	0.67	0.34	-0.14	0.34	-0.22	-0.16	0.2
R	15	O	338872	SR	0.48	0.24	-0.08	-0.14	0.24	-0.11	0.1
R	16	O	338876	SR	0.31	0.21	-0.05	-0.02	-0.20	0.21	0.2
R	17	O	338881	SR	0.56	0.29	-0.08	0.29	-0.25	-0.07	0.2
R	18	O	209809	SR	0.58	0.25	-0.12	-0.16	0.25	-0.06	0.3
R	19	O	209810	SR	0.41	0.24	-0.01	0.24	-0.18	-0.13	0.3
R	20	O	209811	SR	0.69	0.37	-0.17	0.37	-0.22	-0.18	0.3
R	30	O	130138	SR	0.60	0.32	0.32	-0.17	-0.17	-0.13	1.1
R	31	O	130140	SR	0.26	0.22	0.02	-0.06	-0.17	0.22	1.2
R	32	O	349418	SR	0.64	0.31	-0.10	-0.15	0.31	-0.20	1.3
R	33	O	223295	SR	0.39	0.24	0.24	-0.10	-0.13	-0.04	0.2
R	34	O	223296	SR	0.21	0.11	0.04	-0.09	-0.05	0.11	0.2
R	35	O	223293	SR	0.45	0.28	-0.10	-0.16	0.28	-0.13	0.2
R	36	O	223294	SR	0.41	0.29	0.29	-0.16	-0.20	-0.05	0.3
R	38	O	256300	SR	0.65	0.41	-0.15	0.41	-0.24	-0.20	0.2
R	39	O	251161	SR	0.75	0.34	0.34	-0.21	-0.16	-0.14	0.2
R	40	O	251142	SR	0.66	0.36	-0.16	-0.19	0.36	-0.18	0.2
R	41	O	349316	SR	0.19	0.08	0.08	-0.12	-0.12	0.17	0.4
R	42	O	349307	SR	0.23	0.15	0.15	-0.01	-0.01	-0.12	0.4
R	43	O	349311	SR	0.30	0.17	-0.20	-0.08	0.17	0.06	0.3
R	44	O	349312	SR	0.39	0.26	-0.12	-0.19	-0.04	0.26	0.3
R	45	O	349310	SR	0.36	0.35	-0.14	-0.09	-0.19	0.35	0.3
R	46	O	349305	SR	0.36	0.32	-0.19	0.32	-0.10	-0.09	0.3
R	47	O	349306	SR	0.55	0.33	0.33	-0.22	-0.12	-0.14	0.3
R	51	O	169248	SR	0.33	0.37	-0.12	-0.15	-0.19	0.37	0.4
R	52	O	169250	SR	0.55	0.41	-0.20	-0.17	-0.19	0.41	0.4
R	53	O	169249	SR	0.30	0.20	0.02	0.20	-0.13	-0.15	0.4
R	54	O	169258	SR	0.68	0.36	0.36	-0.23	-0.16	-0.16	0.3
R	55	O	169251	SR	0.55	0.33	-0.13	-0.21	0.33	-0.17	0.4
R	56	O	169252	SR	0.31	0.21	-0.05	-0.10	-0.08	0.21	0.5
R	57	O	169254	SR	0.29	0.21	0.21	-0.05	-0.09	-0.07	0.4
R	58	O	169256	SR	0.60	0.42	-0.21	0.42	-0.21	-0.18	0.4
R	59	O	169257	SR	0.46	0.34	-0.07	-0.16	-0.21	0.34	0.5
R	60	O	169260	SR	0.58	0.45	-0.19	-0.21	-0.22	0.45	0.5
R	61	O	338845	SR	0.49	0.30	0.30	-0.12	-0.18	-0.11	0.5
R	62	O	338929	SR	0.60	0.40	0.40	-0.19	-0.20	-0.17	0.6

Table 1.A3 Item Statistics, Operational Items: MD HSA English—October Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
R	63	O	338931	SR	0.24	0.14	0.06	0.14	-0.15	-0.19	0.6
R	64	O	338927	SR	0.29	0.25	-0.05	-0.06	-0.16	0.25	0.7
R	65	O	338928	SR	0.38	0.20	0.20	-0.17	0.05	-0.14	0.8
R	66	O	331899	SR	0.30	0.09	-0.05	0.09	-0.04	0.00	0.3
R	67	O	331900	SR	0.61	0.20	-0.15	0.20	-0.08	-0.10	0.2
R	68	O	331901	SR	0.48	0.32	-0.15	-0.21	0.32	-0.06	0.3
R	86	O	243346	SR	0.29	0.25	-0.01	-0.19	-0.07	0.25	0.4
R	87	O	243345	SR	0.37	0.24	-0.13	0.24	-0.08	-0.07	0.5
R	88	O	218584	SR	0.44	0.32	-0.15	0.32	-0.21	-0.03	0.4
R	89	O	251071	SR	0.35	0.36	0.36	-0.13	-0.17	-0.11	0.5
R	90	O	218582	SR	0.31	0.23	-0.10	-0.01	-0.16	0.23	0.5
R	91	O	218583	SR	0.28	0.22	-0.03	0.22	-0.12	-0.08	0.4
R	92	O	218589	SR	0.29	0.10	0.07	0.10	-0.08	-0.09	0.5
R	93	O	218587	SR	0.35	0.29	-0.15	-0.05	-0.13	0.29	0.5
R	97	O	256969	SR	0.64	0.34	-0.18	-0.15	-0.17	0.34	0.7
R	98	O	256970	SR	0.37	0.25	-0.16	-0.01	0.25	-0.18	0.7
Mean					0.46	0.27	-0.01	-0.02	-0.07	0.01	0.4
SD					0.16	0.08	0.18	0.19	0.18	0.20	0.3

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A4 Item Statistics, Operational Items: MD HSA Algebra—January Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
A-B	1	L	67520	SR	0.57	0.35	0.35	-0.19	-0.20	-0.11	0.2
A-B	2	L	362272	SR	0.41	0.33	-0.09	-0.19	0.33	-0.14	0.1
A-B	3	O	106621	SR	0.57	0.35	0.35	-0.19	-0.18	-0.14	0.2
A-B	5	O	51503	SR	0.48	0.35	-0.23	0.35	-0.09	-0.15	0.3
A-B	6	O	263285	SR	0.66	0.41	-0.16	-0.22	-0.23	0.41	0.2
A-B	7	L	366226	SR	0.44	0.20	-0.15	-0.04	0.20	-0.17	0.2
A-B	9	L	348441	SPR	0.38	0.47	0.47	-0.40			3.9
A-B	10	O	268721	SPR	0.16	0.40	0.40	-0.26			6.7
A-B	11	L	362287	SR	0.70	0.32	-0.24	-0.14	0.32	-0.09	0.1
A-B	12	L	268764	SR	0.45	0.18	0.04	0.18	-0.20	-0.10	0.3
A-B	14	L	56756	SR	0.58	0.33	0.33	-0.10	-0.18	-0.19	0.3
A-B	15	O	56597	SR	0.37	0.38	0.38	-0.21	-0.15	-0.08	0.7
A-B	16	O	282351	SR	0.30	0.18	-0.13	0.18	-0.13	0.04	0.6
A-B	18	L	366195	SR	0.27	0.18	-0.07	-0.10	0.18	0.00	0.5
A-B	19	L	79137	SR	0.31	0.28	0.28	-0.11	-0.09	-0.11	0.4
A-B	20	L	79108	SPR	0.14	0.31	0.31	-0.16			9.6
A-B	22	O	328765	SR	0.39	0.32	-0.13	0.32	-0.23	0.01	0.9
A-B	23	L	56612	SR	0.62	0.36	0.36	-0.17	-0.18	-0.16	1.0
A-B	24	O	263302	SR	0.49	0.35	-0.24	-0.14	0.35	-0.04	0.2
A-B	25	L	51385	SR	0.34	0.33	0.33	-0.10	-0.14	-0.13	0.3
A-B	27	O	366201	SR	0.61	0.37	-0.17	-0.20	0.37	-0.15	0.6
A-B	28	L	268690	SR	0.21	0.25	0.25	-0.13	-0.13	0.04	0.3
A-B	29	L	79147	SR	0.18	0.21	-0.04	-0.10	-0.04	0.21	0.6
A-B	31	O	255079	SPR	0.04	0.37	0.37	-0.14			6.6
A-B	32	O	215927	SR	0.41	0.29	-0.29	0.29	0.01	-0.07	0.4
A-B	34	L	133407	SR	0.39	0.14	0.14	-0.11	-0.17	0.11	0.4
A-B	35	L	369159	SR	0.30	0.38	-0.18	-0.18	-0.08	0.38	0.7
A-B	37	L	133400	SR	0.53	0.23	-0.07	0.23	-0.13	-0.15	0.4
A-B	38	O	56809	SR	0.34	0.33	0.33	-0.14	-0.12	-0.12	0.5
A-B	40	O	67480	SPR	0.26	0.35	0.35	-0.25			9.1
A-B	41	L	133390	SPR	0.05	0.27	0.27	-0.09			6.3
A-B	42	O	51442	SPR	0.33	0.47	0.47	-0.38			4.9
A-B	44	L	211066	SR	0.46	0.28	-0.07	-0.13	-0.14	0.28	1.1
A-B	45	O	282361	SR	0.54	0.35	0.35	-0.14	-0.13	-0.19	1.0
A-B	46	L	366241	SR	0.67	0.38	-0.15	0.38	-0.21	-0.18	1.1
A-B	47	L	67547	SR	0.36	0.37	-0.11	-0.18	-0.18	0.37	0.5
A-B	48	L	64700	SR	0.72	0.38	-0.13	-0.22	-0.22	0.38	0.5
A-B	50	O	67467	SR	0.40	0.28	-0.12	-0.20	-0.08	0.28	0.5
A-B	51	L	52347	SR	0.27	0.13	-0.05	-0.11	0.13	0.03	0.8
A-B	52	O	106635	SPR	0.23	0.40	0.40	-0.32			3.8
A-B	53	O	338642	SPR	0.39	0.45	0.45	-0.38			3.7

Table 1.A4 Item Statistics, Operational Items: MD HSA Algebra—January Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
A-B	55	O	369153	SR	0.24	0.19	-0.14	0.02	0.19	-0.04	0.9
A-B	56	L	135112	SR	0.39	0.19	-0.07	-0.06	0.19	-0.09	0.5
A-B	57	L	43154	SR	0.13	0.17	-0.06	-0.13	0.05	0.17	0.5
A-B	59	L	366202	SR	0.36	0.15	-0.15	0.15	0.02	-0.04	0.6
A-B	60	L	67424	SR	0.23	0.21	-0.14	-0.11	0.01	0.21	0.6
A-B	61	L	106565	SR	0.52	0.36	0.36	-0.18	-0.17	-0.13	0.6
A-B	62	O	132841	SPR	0.62	0.42	0.42	-0.37			3.1
A-B	64	L	257111	SR	0.36	0.18	-0.06	-0.07	0.18	-0.07	0.6
A-B	65	O	56724	SR	0.33	0.27	0.06	0.27	-0.19	-0.18	0.6
A-B	67	L	268724	SR	0.28	0.14	-0.14	0.06	0.14	-0.11	0.7
A-B	68	L	106546	SR	0.43	0.27	-0.09	-0.13	-0.11	0.27	0.6
A-B	69	O	43150	SR	0.50	0.31	-0.06	0.31	-0.22	-0.16	0.7
Mean					0.39	0.30	0.08	-0.08	-0.04	0.00	1.5
SD					0.16	0.09	0.24	0.19	0.18	0.18	2.3

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A5 Item Statistics, Operational Items: MD HSA Algebra—January Makeup

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
C	1	L	67520	SR	0.57	0.35	0.35	-0.19	-0.20	-0.11	0.2
C	2	L	362272	SR	0.41	0.33	-0.09	-0.19	0.33	-0.14	0.1
C	3	O	268677	SR	0.25	0.36	-0.09	-0.23	-0.02	0.36	0.3
C	5	O	328781	SR	0.48	0.18	-0.12	-0.19	0.18	0.04	0.2
C	6	O	54732	SR	0.50	0.41	-0.21	0.41	-0.20	-0.15	0.1
C	7	L	366226	SR	0.44	0.20	-0.15	-0.04	0.20	-0.17	0.2
C	9	L	348441	SPR	0.38	0.47	0.47	-0.40			3.9
C	10	O	135123	SPR	0.64	0.39	0.39	-0.35			1.7
C	11	L	362287	SR	0.70	0.32	-0.24	-0.14	0.32	-0.09	0.1
C	12	L	268764	SR	0.45	0.18	0.04	0.18	-0.20	-0.10	0.3
C	14	L	56756	SR	0.58	0.33	0.33	-0.10	-0.18	-0.19	0.3
C	15	O	51469	SR	0.47	0.46	-0.14	-0.23	-0.23	0.46	0.4
C	16	O	263291	SR	0.33	0.18	0.18	-0.01	-0.16	-0.07	0.4
C	18	L	366195	SR	0.27	0.18	-0.07	-0.10	0.18	0.00	0.5
C	19	L	79137	SR	0.31	0.28	0.28	-0.11	-0.09	-0.11	0.4
C	20	L	79108	SPR	0.14	0.31	0.31	-0.16			9.6
C	22	O	361332	SR	0.60	0.39	0.39	-0.21	-0.23	-0.12	0.5
C	23	L	56612	SR	0.62	0.36	0.36	-0.17	-0.18	-0.16	1.0
C	24	O	282356	SR	0.72	0.36	-0.20	0.36	-0.21	-0.12	0.2
C	25	L	51385	SR	0.34	0.33	0.33	-0.10	-0.14	-0.13	0.3
C	27	O	132823	SR	0.57	0.33	-0.15	-0.17	0.33	-0.14	0.3
C	28	L	268690	SR	0.21	0.25	0.25	-0.13	-0.13	0.04	0.3
C	29	L	79147	SR	0.18	0.21	-0.04	-0.10	-0.04	0.21	0.6
C	31	O	348442	SPR	0.04	0.31	0.31	-0.15			2.7
C	32	O	136703	SR	0.40	0.25	-0.04	0.25	-0.12	-0.17	0.2
C	34	L	133407	SR	0.39	0.14	0.14	-0.11	-0.17	0.11	0.4
C	35	L	369159	SR	0.30	0.38	-0.18	-0.18	-0.08	0.38	0.7
C	37	L	133400	SR	0.53	0.23	-0.07	0.23	-0.13	-0.15	0.4
C	38	O	54898	SR	0.53	0.32	-0.12	-0.16	-0.15	0.32	0.3
C	40	O	67420	SPR	0.24	0.38	0.38	-0.29			4.9
C	41	L	133390	SPR	0.05	0.27	0.27	-0.09			6.3
C	42	O	64691	SPR	0.40	0.54	0.54	-0.47			3.8
C	44	L	211066	SR	0.46	0.28	-0.07	-0.13	-0.14	0.28	1.1
C	45	O	372573	SR	0.54	0.33	-0.19	-0.11	-0.13	0.33	0.6
C	46	L	366241	SR	0.67	0.38	-0.15	0.38	-0.21	-0.18	1.1
C	47	L	67547	SR	0.36	0.37	-0.11	-0.18	-0.18	0.37	0.5
C	48	L	64700	SR	0.72	0.38	-0.13	-0.22	-0.22	0.38	0.5
C	50	O	67405	SR	0.32	0.18	-0.14	0.18	-0.01	-0.11	0.3
C	51	L	52347	SR	0.27	0.13	-0.05	-0.11	0.13	0.03	0.8
C	52	O	263304	SPR	0.27	0.44	0.44	-0.36			3.2
C	53	O	322116	SPR	0.53	0.47	0.47	-0.41			2.7
C	55	O	106597	SR	0.38	0.19	0.01	0.19	-0.16	-0.07	0.4
C	56	L	135112	SR	0.39	0.19	-0.07	-0.06	0.19	-0.09	0.5

Table 1.A5 Item Statistics, Operational Items: MD HSA Algebra—January Makeup

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
C	57	L	43154	SR	0.13	0.17	-0.06	-0.13	0.05	0.17	0.5
C	59	L	366202	SR	0.36	0.15	-0.15	0.15	0.02	-0.04	0.6
C	60	L	67424	SR	0.23	0.21	-0.14	-0.11	0.01	0.21	0.6
C	61	L	106565	SR	0.52	0.36	0.36	-0.18	-0.17	-0.13	0.6
C	62	O	106589	SPR	0.26	0.33	0.33	-0.25			4.2
C	64	L	257111	SR	0.36	0.18	-0.06	-0.07	0.18	-0.07	0.6
C	65	O	51494	SR	0.37	0.22	0.05	0.22	-0.21	-0.10	0.3
C	67	L	268724	SR	0.28	0.14	-0.14	0.06	0.14	-0.11	0.7
C	68	L	106546	SR	0.43	0.27	-0.09	-0.13	-0.11	0.27	0.6
C	69	O	50394	SR	0.80	0.35	-0.18	-0.18	-0.20	0.35	0.5
Mean					0.41	0.30	0.06	-0.09	-0.05	0.03	1.2
SD					0.17	0.10	0.23	0.20	0.17	0.21	1.8

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A6 Item Statistics, Operational Items: MD HSA Biology—January Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
A-B	1	L	322200	SR	0.80	0.31	-0.13	0.31	-0.24	-0.10	0.0
A-B	2	L	55170	SR	0.66	0.41	-0.24	-0.23	0.41	-0.15	0.0
A-B	3	L	52404	SR	0.69	0.40	-0.26	0.40	-0.14	-0.20	0.1
A-B	4	O	79478	SR	0.48	0.32	-0.27	0.32	0.01	-0.17	0.1
A-B	7	O	279641	SR	0.64	0.33	-0.18	0.33	-0.17	-0.16	0.1
A-B	9	L	53708	SR	0.54	0.46	-0.19	-0.23	-0.23	0.46	0.1
A-B	10	L	53709	SR	0.35	0.40	-0.15	0.40	-0.16	-0.17	0.1
A-B	11	L	52742	SR	0.43	0.50	-0.16	-0.19	0.50	-0.28	0.1
A-B	12	O	349095	SR	0.42	0.58	-0.29	-0.25	0.58	-0.19	0.1
A-B	14	L	108677	SR	0.30	0.31	0.31	-0.13	-0.18	-0.03	0.2
A-B	15	L	108675	SR	0.30	0.16	0.16	-0.03	0.00	-0.14	0.1
A-B	16	O	279690	SR	0.35	0.47	-0.15	-0.21	-0.17	0.47	0.2
A-B	17	O	322183	SR	0.29	0.58	-0.20	-0.25	-0.18	0.58	0.2
A-B	21	L	373074	SR	0.55	0.49	0.49	-0.29	-0.22	-0.16	0.3
A-B	22	L	373071	SR	0.41	0.33	-0.11	-0.07	-0.22	0.33	0.3
A-B	23	O	108580	SR	0.46	0.30	-0.01	-0.18	-0.19	0.30	0.3
A-B	24	O	52407	SR	0.29	0.37	-0.18	0.37	-0.02	-0.22	0.3
A-B	25	O	279607	SR	0.57	0.48	-0.22	-0.28	-0.17	0.48	0.4
A-B	26	L	279603	SR	0.57	0.49	-0.15	-0.29	-0.25	0.49	0.4
A-B	27	L	366625	SR	0.61	0.47	0.47	-0.23	-0.23	-0.22	0.4
A-B	28	L	366622	SR	0.28	0.50	-0.17	0.50	-0.21	-0.15	0.4
A-B	30	L	136101	SR	0.71	0.34	-0.17	-0.24	0.34	-0.11	0.5
A-B	31	L	136096	SR	0.43	0.35	0.35	-0.22	-0.05	-0.18	0.5
A-B	32	O	223431	SR	0.40	0.36	0.36	-0.10	-0.19	-0.17	0.6
A-B	33	O	338768	SR	0.56	0.48	-0.18	-0.29	0.48	-0.20	0.6
A-B	34	L	68133	SR	0.75	0.30	-0.16	-0.17	-0.17	0.30	0.1
A-B	35	L	279631	SR	0.61	0.37	-0.15	-0.19	-0.21	0.37	0.2
A-B	36	O	282461	SR	0.71	0.39	-0.19	0.39	-0.24	-0.16	0.1
A-B	39	L	223452	SR	0.52	0.51	-0.16	-0.14	-0.42	0.51	0.1
A-B	40	O	79514	SR	0.46	0.34	-0.13	-0.26	0.34	-0.03	0.2
A-B	41	L	133024	SR	0.37	0.44	-0.22	-0.19	-0.12	0.44	0.2
A-B	42	L	133021	SR	0.52	0.46	-0.19	-0.23	-0.21	0.46	0.2
A-B	43	O	369400	SR	0.44	0.35	-0.12	-0.26	0.35	-0.06	0.3
A-B	44	L	369399	SR	0.51	0.42	-0.14	0.42	-0.24	-0.20	0.2
A-B	46	O	57065	SR	0.36	0.31	-0.09	0.31	-0.14	-0.13	0.2
A-B	47	L	271078	SR	0.42	0.43	-0.10	0.43	-0.21	-0.23	0.2
A-B	48	L	271077	SR	0.30	0.07	0.07	-0.24	0.22	-0.20	0.2
A-B	49	L	373076	SR	0.66	0.37	-0.16	-0.20	-0.19	0.37	0.3
A-B	50	L	373078	SR	0.48	0.35	-0.10	0.35	-0.23	-0.15	0.2
A-B	52	L	271069	SR	0.42	0.32	-0.13	-0.22	0.32	-0.10	0.2
A-B	53	L	215941	SR	0.67	0.40	-0.22	-0.18	0.40	-0.19	0.2
A-B	54	L	215939	SR	0.51	0.38	-0.14	-0.22	0.38	-0.17	0.2
A-B	55	L	68143	SR	0.38	0.44	-0.14	0.44	-0.25	-0.13	0.2
A-B	56	L	68144	SR	0.71	0.43	0.43	-0.27	-0.22	-0.15	0.2
A-B	58	O	67605	SR	0.31	0.35	0.35	-0.16	-0.24	0.02	0.2

Table 1.A6 Item Statistics, Operational Items: MD HSA Biology—January Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
A-B	61	L	68150	SR	0.34	0.32	-0.16	-0.20	0.32	-0.04	0.2
A-B	62	O	279637	SR	0.31	0.32	-0.10	0.32	-0.18	-0.12	0.3
A-B	63	O	108651	SR	0.50	0.41	-0.18	-0.11	-0.25	0.41	0.2
A-B	64	O	279649	SR	0.63	0.26	-0.02	0.26	-0.24	-0.17	0.3
A-B	65	L	67617	SR	0.60	0.49	-0.25	-0.24	0.49	-0.21	0.3
A-B	66	L	67618	SR	0.46	0.54	0.54	-0.26	-0.27	-0.16	0.4
A-B	67	L	366628	SR	0.72	0.43	-0.19	-0.21	-0.26	0.43	0.2
A-B	68	L	366629	SR	0.66	0.39	0.39	-0.19	-0.25	-0.12	0.2
A-B	69	O	279591	SR	0.49	0.44	-0.17	0.44	-0.24	-0.18	0.2
A-B	70	L	279589	SR	0.39	0.37	-0.11	-0.21	0.37	-0.12	0.2
A-B	71	O	223412	SR	0.36	0.49	-0.20	-0.22	-0.16	0.49	0.2
A-B	73	O	64735	SR	0.43	0.37	-0.03	-0.28	0.37	-0.14	0.1
A-B	74	L	373138	SR	0.60	0.41	-0.19	0.41	-0.23	-0.16	0.2
A-B	75	L	373136	SR	0.65	0.43	-0.22	-0.21	0.43	-0.22	0.2
A-B	77	O	64981	SR	0.56	0.42	-0.17	0.42	-0.26	-0.17	0.2
A-B	78	L	64728	SR	0.56	0.55	0.55	-0.30	-0.23	-0.24	0.2
A-B	82	O	214522	SR	0.30	0.40	-0.20	-0.06	-0.18	0.40	0.1
A-B	83	O	67688	SR	0.54	0.37	-0.22	-0.13	-0.16	0.37	0.3
A-B	84	O	79502	SR	0.36	0.47	-0.23	-0.17	0.47	-0.20	0.2
A-B	87	L	354959	SR	0.36	0.47	0.47	-0.26	-0.17	-0.12	0.2
A-B	88	O	349143	SR	0.30	0.44	-0.19	-0.16	-0.12	0.44	0.2
A-B	89	O	57188	SR	0.47	0.49	0.49	-0.24	-0.18	-0.21	0.2
A-B	90	L	331350	SR	0.57	0.38	-0.23	0.38	-0.17	-0.14	0.2
A-B	91	O	338735	SR	0.45	0.56	-0.18	-0.31	-0.23	0.56	0.3
A-B	93	L	136138	SR	0.72	0.45	-0.23	-0.27	0.45	-0.19	0.2
A-B	94	L	136137	SR	0.45	0.44	-0.07	0.44	-0.25	-0.26	0.2
A-B	95	L	373070	SR	0.49	0.45	-0.29	-0.14	0.45	-0.16	0.3
A-B	96	L	373067	SR	0.33	0.40	-0.14	0.40	-0.13	-0.19	0.3
A-B	97	O	79462	SR	0.66	0.44	-0.16	-0.29	0.44	-0.20	0.3
A-B	98	L	279638	SR	0.36	0.38	-0.02	-0.24	-0.23	0.38	0.3
A-B	99	O	349109	SR	0.54	0.36	-0.29	0.36	-0.05	-0.20	0.2
Mean					0.49	0.40	-0.07	-0.04	-0.03	0.00	0.2
SD					0.14	0.09	0.23	0.27	0.27	0.27	0.1

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A7 Item Statistics, Operational Items: MD HSA Biology—January Makeup

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
C	1	L	322200	SR	0.80	0.31	-0.13	0.31	-0.24	-0.10	0.0
C	2	L	55170	SR	0.66	0.41	-0.24	-0.23	0.41	-0.15	0.0
C	3	L	52404	SR	0.69	0.40	-0.26	0.40	-0.14	-0.20	0.1
C	4	O	322196	SR	0.58	0.26	-0.16	-0.02	-0.18	0.26	0.0
C	7	O	214541	SR	0.37	0.33	-0.13	-0.18	0.33	-0.12	0.1
C	9	L	53708	SR	0.54	0.46	-0.19	-0.23	-0.23	0.46	0.1
C	10	L	53709	SR	0.35	0.40	-0.15	0.40	-0.16	-0.17	0.1
C	11	L	52742	SR	0.43	0.50	-0.16	-0.19	0.50	-0.28	0.1
C	12	O	279618	SR	0.45	0.49	-0.07	-0.25	0.49	-0.31	0.2
C	14	L	108677	SR	0.30	0.31	0.31	-0.13	-0.18	-0.03	0.2
C	15	L	108675	SR	0.30	0.16	0.16	-0.03	0.00	-0.14	0.1
C	16	O	52678	SR	0.47	0.49	-0.21	-0.21	0.49	-0.23	0.1
C	17	O	373150	SR	0.49	0.37	-0.19	-0.17	0.37	-0.16	0.2
C	21	L	373074	SR	0.55	0.49	0.49	-0.29	-0.22	-0.16	0.3
C	22	L	373071	SR	0.41	0.33	-0.11	-0.07	-0.22	0.33	0.3
C	23	O	323335	SR	0.29	0.40	0.00	-0.27	-0.13	0.40	0.2
C	24	O	255055	SR	0.20	0.22	0.03	-0.04	-0.16	0.22	0.2
C	25	O	279605	SR	0.43	0.39	0.39	-0.21	-0.25	-0.01	0.2
C	26	L	279603	SR	0.57	0.49	-0.15	-0.29	-0.25	0.49	0.4
C	27	L	366625	SR	0.61	0.47	0.47	-0.23	-0.23	-0.22	0.4
C	28	L	366622	SR	0.28	0.50	-0.17	0.50	-0.21	-0.15	0.4
C	30	L	136101	SR	0.71	0.34	-0.17	-0.24	0.34	-0.11	0.5
C	31	L	136096	SR	0.43	0.35	0.35	-0.22	-0.05	-0.18	0.5
C	32	O	55137	SR	0.33	0.72	0.72	-0.31	-0.33	-0.14	0.4
C	33	O	55138	SR	0.55	0.49	-0.17	0.49	-0.22	-0.32	0.4
C	34	L	68133	SR	0.75	0.30	-0.16	-0.17	-0.17	0.30	0.1
C	35	L	279631	SR	0.61	0.37	-0.15	-0.19	-0.21	0.37	0.2
C	36	O	52735	SR	0.37	0.43	-0.20	-0.22	-0.09	0.43	0.1
C	39	L	223452	SR	0.52	0.51	-0.16	-0.14	-0.42	0.51	0.1
C	40	O	366590	SR	0.48	0.45	0.45	-0.27	-0.10	-0.22	0.2
C	41	L	133024	SR	0.37	0.44	-0.22	-0.19	-0.12	0.44	0.2
C	42	L	133021	SR	0.52	0.46	-0.19	-0.23	-0.21	0.46	0.2
C	43	O	369396	SR	0.41	0.43	-0.16	-0.17	-0.20	0.43	0.2
C	44	L	369399	SR	0.51	0.42	-0.14	0.42	-0.24	-0.20	0.2
C	46	O	52559	SR	0.39	0.53	0.53	-0.22	-0.28	-0.14	0.1
C	47	L	271078	SR	0.42	0.43	-0.10	0.43	-0.21	-0.23	0.2
C	48	L	271077	SR	0.30	0.07	0.07	-0.24	0.22	-0.20	0.2
C	49	L	373076	SR	0.66	0.37	-0.16	-0.20	-0.19	0.37	0.3
C	50	L	373078	SR	0.48	0.35	-0.10	0.35	-0.23	-0.15	0.2
C	52	L	271069	SR	0.42	0.32	-0.13	-0.22	0.32	-0.10	0.2
C	53	L	215941	SR	0.67	0.40	-0.22	-0.18	0.40	-0.19	0.2
C	54	L	215939	SR	0.51	0.38	-0.14	-0.22	0.38	-0.17	0.2
C	55	L	68143	SR	0.38	0.44	-0.14	0.44	-0.25	-0.13	0.2

Table 1.A7 Item Statistics, Operational Items: MD HSA Biology—January Makeup

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
C	56	L	68144	SR	0.71	0.43	0.43	-0.27	-0.22	-0.15	0.2
C	58	O	79439	SR	0.25	0.37	-0.12	0.37	-0.12	-0.13	0.2
C	61	L	68150	SR	0.34	0.32	-0.16	-0.20	0.32	-0.04	0.2
C	62	O	79414	SR	0.60	0.46	-0.16	-0.23	-0.28	0.46	0.3
C	63	O	65146	SR	0.51	0.40	-0.12	-0.31	0.40	-0.07	0.3
C	64	O	271104	SR	0.40	0.59	-0.20	-0.26	-0.26	0.59	0.2
C	65	L	67617	SR	0.60	0.49	-0.25	-0.24	0.49	-0.21	0.3
C	66	L	67618	SR	0.46	0.54	0.54	-0.26	-0.27	-0.16	0.4
C	67	L	366628	SR	0.72	0.43	-0.19	-0.21	-0.26	0.43	0.2
C	68	L	366629	SR	0.66	0.39	0.39	-0.19	-0.25	-0.12	0.2
C	69	O	279593	SR	0.31	0.30	-0.18	0.30	-0.06	-0.11	0.2
C	70	L	279589	SR	0.39	0.37	-0.11	-0.21	0.37	-0.12	0.2
C	71	O	79473	SR	0.54	0.55	0.55	-0.28	-0.28	-0.19	0.2
C	73	O	338758	SR	0.42	0.43	-0.04	-0.24	0.43	-0.31	0.2
C	74	L	373138	SR	0.60	0.41	-0.19	0.41	-0.23	-0.16	0.2
C	75	L	373136	SR	0.65	0.43	-0.22	-0.21	0.43	-0.22	0.2
C	77	O	79441	SR	0.42	0.43	-0.24	0.43	-0.14	-0.16	0.2
C	78	L	64728	SR	0.56	0.55	0.55	-0.30	-0.23	-0.24	0.2
C	82	O	271114	SR	0.65	0.42	-0.23	-0.23	0.42	-0.17	0.2
C	83	O	67687	SR	0.47	0.53	-0.23	-0.27	0.53	-0.19	0.2
C	84	O	65141	SR	0.45	0.41	-0.23	-0.21	0.41	-0.06	0.2
C	87	L	354959	SR	0.36	0.47	0.47	-0.26	-0.17	-0.12	0.2
C	88	O	348994	SR	0.45	0.28	-0.09	-0.16	0.28	-0.11	0.2
C	89	O	364150	SR	0.60	0.42	-0.17	0.42	-0.17	-0.29	0.2
C	90	L	331350	SR	0.57	0.38	-0.23	0.38	-0.17	-0.14	0.2
C	91	O	338826	SR	0.49	0.49	-0.21	-0.26	0.49	-0.18	0.3
C	93	L	136138	SR	0.72	0.45	-0.23	-0.27	0.45	-0.19	0.2
C	94	L	136137	SR	0.45	0.44	-0.07	0.44	-0.25	-0.26	0.2
C	95	L	373070	SR	0.49	0.45	-0.29	-0.14	0.45	-0.16	0.3
C	96	L	373067	SR	0.33	0.40	-0.14	0.40	-0.13	-0.19	0.3
C	97	O	65118	SR	0.56	0.54	0.54	-0.35	-0.26	-0.13	0.2
C	98	L	279638	SR	0.36	0.38	-0.02	-0.24	-0.23	0.38	0.3
C	99	O	260073	SR	0.54	0.46	-0.25	-0.19	-0.19	0.46	0.4
Mean					0.49	0.42	-0.03	-0.08	-0.01	-0.02	0.2
SD					0.13	0.09	0.27	0.27	0.29	0.26	0.1

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A8 Item Statistics, Operational Items: MD HSA English—January Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
A-B	1	L	130272	SR	0.24	0.27	0.00	-0.07	-0.18	0.27	0.1
A-B	2	L	130273	SR	0.64	0.34	-0.14	-0.19	0.34	-0.16	0.1
A-B	3	L	130279	SR	0.49	0.36	-0.18	-0.19	0.36	-0.13	0.1
A-B	4	L	130169	SR	0.68	0.36	-0.13	0.36	-0.26	-0.14	0.0
A-B	5	L	256282	SR	0.55	0.41	0.41	-0.25	-0.19	-0.16	0.1
A-B	6	L	349364	SR	0.46	0.37	0.37	-0.17	-0.14	-0.17	0.1
A-B	7	L	349456	SR	0.39	0.28	-0.09	0.28	-0.19	-0.06	0.1
A-B	8	L	349365	SR	0.74	0.27	-0.08	-0.15	-0.20	0.27	0.1
A-B	9	L	349369	SR	0.53	0.40	-0.11	0.40	-0.29	-0.15	0.1
A-B	10	L	349366	SR	0.15	0.03	-0.04	0.01	0.03	0.01	0.1
A-B	11	L	349368	SR	0.73	0.41	-0.20	-0.26	-0.18	0.41	0.1
A-B	12	L	349372	SR	0.47	0.30	-0.14	0.30	-0.14	-0.14	0.1
A-B	13	L	349370	SR	0.32	0.18	-0.08	0.00	-0.18	0.18	0.1
A-B	17	L	272861	SR	0.38	0.43	-0.18	-0.12	-0.25	0.43	0.1
A-B	18	L	272862	SR	0.71	0.40	-0.19	-0.22	0.40	-0.19	0.3
A-B	19	L	272864	SR	0.68	0.35	-0.20	-0.21	-0.14	0.35	0.2
A-B	20	L	272865	SR	0.68	0.45	0.45	-0.20	-0.24	-0.24	0.2
A-B	22	L	272945	SR	0.58	0.40	-0.18	0.40	-0.23	-0.16	0.3
A-B	23	L	285544	SR	0.62	0.50	-0.24	0.50	-0.26	-0.23	0.3
A-B	24	L	285545	SR	0.67	0.47	0.47	-0.25	-0.26	-0.20	0.3
A-B	27	L	251132	SR	0.56	0.39	-0.21	-0.19	-0.14	0.39	0.5
A-B	28	L	251134	SR	0.50	0.32	-0.19	-0.14	0.32	-0.12	0.6
A-B	29	L	251136	SR	0.49	0.29	0.29	-0.20	-0.08	-0.11	0.8
A-B	30	L	251137	SR	0.63	0.31	0.31	-0.13	-0.20	-0.13	0.7
A-B	31	L	251140	SR	0.35	0.26	-0.20	-0.03	-0.16	0.26	0.8
A-B	32	L	251139	SR	0.34	0.33	0.33	-0.19	-0.07	-0.14	0.9
A-B	39	O	175720	SR	0.60	0.33	-0.19	-0.19	0.33	-0.12	0.3
A-B	40	O	175721	SR	0.63	0.41	-0.22	0.41	-0.24	-0.18	0.2
A-B	41	O	175722	SR	0.80	0.34	0.34	-0.19	-0.22	-0.15	0.2
A-B	42	O	175723	SR	0.59	0.38	0.38	-0.15	-0.20	-0.19	0.2
A-B	43	O	175725	SR	0.54	0.52	-0.26	0.52	-0.27	-0.18	0.2
A-B	44	O	175726	SR	0.69	0.41	-0.21	0.41	-0.23	-0.18	0.2
A-B	45	L	349436	SR	0.65	0.38	-0.19	-0.23	-0.19	0.38	0.2
A-B	57	O	95666	SR	0.43	0.32	0.00	0.32	-0.21	-0.19	0.4
A-B	58	O	209819	SR	0.49	0.38	-0.23	-0.18	0.38	-0.14	0.4
A-B	59	O	251169	SR	0.66	0.49	-0.25	-0.25	0.49	-0.22	0.4
A-B	65	O	338917	SR	0.60	0.44	0.44	-0.24	-0.26	-0.15	0.7
A-B	66	O	338958	SR	0.57	0.44	0.44	-0.18	-0.27	-0.19	0.7
A-B	67	O	338959	SR	0.27	0.29	-0.17	-0.03	-0.12	0.29	0.7
A-B	68	L	338853	SR	0.28	0.31	-0.15	0.06	-0.26	0.31	0.3
A-B	69	L	338854	SR	0.61	0.38	-0.12	-0.23	0.38	-0.19	0.3
A-B	70	L	338852	SR	0.37	0.32	-0.16	-0.17	0.32	-0.03	0.3
A-B	71	L	338857	SR	0.69	0.50	-0.25	-0.23	-0.28	0.50	0.3

Table 1.A8 Item Statistics, Operational Items: MD HSA English—January Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
A-B	72	L	338855	SR	0.53	0.48	-0.20	0.48	-0.26	-0.19	0.3
A-B	73	L	338856	SR	0.51	0.40	-0.14	-0.25	0.40	-0.14	0.3
A-B	82	O	332109	SR	0.23	0.30	-0.01	-0.15	0.30	-0.20	0.3
A-B	83	O	332121	SR	0.49	0.35	-0.16	-0.08	-0.25	0.35	0.3
A-B	84	O	349241	SR	0.33	0.44	-0.12	-0.19	-0.20	0.44	0.4
A-B	85	O	349242	SR	0.51	0.32	0.32	-0.08	-0.25	-0.23	0.3
A-B	86	O	349246	SR	0.52	0.33	0.33	-0.26	-0.18	-0.05	0.4
A-B	87	O	349249	SR	0.40	0.38	-0.15	-0.16	0.38	-0.15	0.4
A-B	88	O	349245	SR	0.56	0.48	-0.16	-0.23	-0.27	0.48	0.4
A-B	89	O	349244	SR	0.39	0.46	-0.20	-0.15	-0.21	0.46	0.4
A-B	90	O	349243	SR	0.64	0.46	0.46	-0.22	-0.25	-0.21	0.4
A-B	91	O	349248	SR	0.46	0.32	0.32	-0.25	-0.02	-0.18	0.3
A-B	92	O	349250	SR	0.52	0.34	0.34	-0.20	-0.16	-0.08	0.3
A-B	93	O	349251	SR	0.49	0.42	-0.19	0.42	-0.18	-0.20	0.4
A-B	96	L	256437	SR	0.49	0.46	-0.16	-0.22	-0.25	0.46	0.5
A-B	97	L	256439	SR	0.65	0.44	-0.20	-0.25	0.44	-0.20	0.5
A-B	98	L	256438	SR	0.42	0.39	0.39	-0.22	-0.17	-0.08	0.5
Mean					0.52	0.37	-0.01	-0.06	-0.07	-0.01	0.3
SD					0.14	0.08	0.25	0.24	0.25	0.25	0.2

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A9 Item Statistics, Operational Items: MD HSA English—January Makeup

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
C	1	L	130272	SR	0.24	0.27	0.00	-0.07	-0.18	0.27	0.1
C	2	L	130273	SR	0.64	0.34	-0.14	-0.19	0.34	-0.16	0.1
C	3	L	130279	SR	0.49	0.36	-0.18	-0.19	0.36	-0.13	0.1
C	4	L	130169	SR	0.68	0.36	-0.13	0.36	-0.26	-0.14	0.0
C	5	L	256282	SR	0.55	0.41	0.41	-0.25	-0.19	-0.16	0.1
C	6	L	349364	SR	0.46	0.37	0.37	-0.17	-0.14	-0.17	0.1
C	7	L	349456	SR	0.39	0.28	-0.09	0.28	-0.19	-0.06	0.1
C	8	L	349365	SR	0.74	0.27	-0.08	-0.15	-0.20	0.27	0.1
C	9	L	349369	SR	0.53	0.40	-0.11	0.40	-0.29	-0.15	0.1
C	10	L	349366	SR	0.15	0.03	-0.04	0.01	0.03	0.01	0.1
C	11	L	349368	SR	0.73	0.41	-0.20	-0.26	-0.18	0.41	0.1
C	12	L	349372	SR	0.47	0.30	-0.14	0.30	-0.14	-0.14	0.1
C	13	L	349370	SR	0.32	0.18	-0.08	0.00	-0.18	0.18	0.1
C	17	L	272861	SR	0.38	0.43	-0.18	-0.12	-0.25	0.43	0.1
C	18	L	272862	SR	0.71	0.40	-0.19	-0.22	0.40	-0.19	0.3
C	19	L	272864	SR	0.68	0.35	-0.20	-0.21	-0.14	0.35	0.2
C	20	L	272865	SR	0.68	0.45	0.45	-0.20	-0.24	-0.24	0.2
C	22	L	272945	SR	0.58	0.40	-0.18	0.40	-0.23	-0.16	0.3
C	23	L	285544	SR	0.62	0.50	-0.24	0.50	-0.26	-0.23	0.3
C	24	L	285545	SR	0.67	0.47	0.47	-0.25	-0.26	-0.20	0.3
C	27	L	251132	SR	0.56	0.39	-0.21	-0.19	-0.14	0.39	0.5
C	28	L	251134	SR	0.50	0.32	-0.19	-0.14	0.32	-0.12	0.6
C	29	L	251136	SR	0.49	0.29	0.29	-0.20	-0.08	-0.11	0.8
C	30	L	251137	SR	0.63	0.31	0.31	-0.13	-0.20	-0.13	0.7
C	31	L	251140	SR	0.35	0.26	-0.20	-0.03	-0.16	0.26	0.8
C	32	L	251139	SR	0.34	0.33	0.33	-0.19	-0.07	-0.14	0.9
C	39	O	191342	SR	0.30	0.43	-0.12	-0.19	-0.14	0.43	0.3
C	40	O	191343	SR	0.59	0.33	-0.24	-0.20	0.33	-0.06	0.3
C	41	O	191344	SR	0.71	0.46	-0.23	-0.26	0.46	-0.22	0.3
C	42	O	191346	SR	0.43	0.36	0.36	-0.23	-0.11	-0.12	0.2
C	43	O	191347	SR	0.44	0.39	-0.18	-0.16	0.39	-0.20	0.2
C	44	O	191349	SR	0.50	0.34	-0.14	-0.14	-0.20	0.34	0.2
C	45	L	349436	SR	0.65	0.38	-0.19	-0.23	-0.19	0.38	0.2
C	57	O	130089	SR	0.56	0.37	-0.11	-0.19	-0.24	0.37	0.3
C	58	O	95664	SR	0.67	0.46	0.46	-0.27	-0.21	-0.23	0.2
C	59	O	373847	SR	0.71	0.43	-0.23	-0.26	0.43	-0.17	0.3
C	65	O	256268	SR	0.57	0.40	-0.23	0.40	-0.24	-0.11	0.8
C	66	O	256266	SR	0.38	0.46	-0.13	-0.20	-0.23	0.46	0.8
C	67	O	256267	SR	0.59	0.49	-0.22	-0.24	0.49	-0.24	0.8
C	68	L	338853	SR	0.28	0.31	-0.15	0.06	-0.26	0.31	0.3
C	69	L	338854	SR	0.61	0.38	-0.12	-0.23	0.38	-0.19	0.3

Table 1.A9 Item Statistics, Operational Items: MD HSA English—January Makeup

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
C	70	L	338852	SR	0.37	0.32	-0.16	-0.17	0.32	-0.03	0.3
C	71	L	338857	SR	0.69	0.50	-0.25	-0.23	-0.28	0.50	0.3
C	72	L	338855	SR	0.53	0.48	-0.20	0.48	-0.26	-0.19	0.3
C	73	L	338856	SR	0.51	0.40	-0.14	-0.25	0.40	-0.14	0.3
C	82	O	130170	SR	0.65	0.40	-0.20	0.40	-0.21	-0.17	0.4
C	83	O	130171	SR	0.61	0.27	0.27	-0.08	-0.18	-0.11	0.2
C	84	O	338938	SR	0.65	0.46	-0.22	-0.22	-0.24	0.46	0.4
C	85	O	338932	SR	0.42	0.19	-0.12	-0.20	0.19	0.06	0.4
C	86	O	338935	SR	0.49	0.36	-0.24	0.36	-0.25	-0.05	0.3
C	87	O	338939	SR	0.45	0.30	-0.07	0.30	-0.14	-0.18	0.3
C	88	O	338936	SR	0.48	0.50	-0.19	-0.28	-0.24	0.50	0.3
C	89	O	338937	SR	0.39	0.36	-0.22	-0.09	0.36	-0.11	0.3
C	90	O	338934	SR	0.65	0.40	-0.14	-0.27	0.40	-0.18	0.3
C	91	O	338940	SR	0.73	0.44	-0.22	-0.26	0.44	-0.20	0.3
C	92	O	338941	SR	0.33	0.17	0.17	-0.14	-0.10	0.06	0.5
C	93	O	338882	SR	0.43	0.42	0.42	-0.17	-0.25	-0.09	0.3
C	96	L	256437	SR	0.49	0.46	-0.16	-0.22	-0.25	0.46	0.5
C	97	L	256439	SR	0.65	0.44	-0.20	-0.25	0.44	-0.20	0.5
C	98	L	256438	SR	0.42	0.39	0.39	-0.22	-0.17	-0.08	0.5
Mean					0.53	0.37	-0.05	-0.08	-0.03	0.02	0.3
SD					0.14	0.09	0.23	0.23	0.27	0.25	0.2

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A10 Item Statistics, Operational Items: MD HSA Government—January Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
A-B	1	O	68674	SR	0.71	0.40	-0.19	-0.14	-0.29	0.40	0.0
A-B	2	O	68033	SR	0.69	0.40	-0.23	0.40	-0.21	-0.17	0.0
A-B	3	O	52191	SR	0.75	0.46	-0.24	-0.25	-0.24	0.46	0.0
A-B	4	O	256403	SR	0.80	0.35	-0.22	0.35	-0.18	-0.18	0.0
A-B	5	O	135581	SR	0.52	0.41	0.41	-0.16	-0.26	-0.14	0.1
A-B	8	O	79573	SR	0.48	0.59	-0.17	-0.25	0.59	-0.34	0.0
A-B	9	O	55632	SR	0.75	0.45	-0.20	-0.34	0.45	-0.15	0.1
A-B	10	O	108482	SR	0.57	0.33	0.33	-0.12	-0.20	-0.14	0.2
A-B	11	O	108371	SR	0.40	0.29	-0.05	0.29	-0.21	-0.18	0.1
A-B	12	O	60431	SR	0.43	0.35	-0.19	-0.17	-0.15	0.35	0.1
A-B	13	O	51733	SR	0.74	0.49	0.49	-0.26	-0.24	-0.26	0.1
A-B	16	O	58423	SR	0.50	0.41	0.41	-0.20	-0.25	-0.15	0.1
A-B	17	O	108433	SR	0.52	0.38	-0.21	0.38	-0.25	-0.08	0.2
A-B	18	O	50943	SR	0.63	0.38	-0.20	0.38	-0.21	-0.17	0.1
A-B	19	O	79729	SR	0.56	0.44	-0.18	-0.17	-0.27	0.44	0.2
A-B	20	O	79713	SR	0.52	0.47	-0.15	0.47	-0.26	-0.23	0.2
A-B	21	O	256378	SR	0.74	0.40	-0.20	-0.24	-0.21	0.40	0.2
A-B	24	O	223252	SR	0.42	0.47	-0.19	-0.20	-0.20	0.47	0.2
A-B	25	O	60555	SR	0.43	0.17	0.09	-0.15	0.17	-0.17	0.3
A-B	26	O	79587	SR	0.73	0.54	0.54	-0.27	-0.28	-0.28	0.3
A-B	27	O	79623	SR	0.47	0.19	-0.13	0.19	-0.03	-0.09	0.3
A-B	28	O	256341	SR	0.64	0.40	-0.24	-0.21	0.40	-0.16	0.4
A-B	29	O	79748	SR	0.44	0.51	-0.28	0.51	-0.22	-0.14	0.3
A-B	32	O	65184	SR	0.57	0.46	-0.16	-0.27	0.46	-0.23	0.4
A-B	33	O	58204	SR	0.24	0.20	0.20	-0.09	-0.07	-0.02	0.4
A-B	34	O	68555	SR	0.74	0.52	0.52	-0.29	-0.28	-0.23	0.5
A-B	35	O	137320	SR	0.41	0.50	-0.29	-0.14	-0.17	0.50	0.5
A-B	36	O	68686	SR	0.47	0.42	-0.24	-0.29	0.42	-0.11	0.5
A-B	37	O	223264	SR	0.84	0.44	-0.30	0.44	-0.25	-0.14	0.1
A-B	38	O	51094	SR	0.61	0.38	-0.10	-0.12	-0.33	0.38	0.2
A-B	39	O	79603	SR	0.36	0.36	-0.17	0.36	-0.19	-0.05	0.2
A-B	40	O	79592	SR	0.22	0.21	-0.11	0.21	-0.22	0.01	0.1
A-B	41	O	79648	SR	0.44	0.32	-0.12	-0.14	0.32	-0.15	0.2
A-B	42	O	68758	SR	0.63	0.54	-0.28	-0.26	-0.27	0.54	0.2
A-B	45	O	68759	SR	0.59	0.50	-0.18	-0.25	-0.29	0.50	0.2
A-B	46	O	108451	SR	0.48	0.44	-0.15	-0.27	0.44	-0.16	0.2
A-B	47	O	137308	SR	0.56	0.44	-0.21	0.44	-0.21	-0.25	0.2
A-B	48	O	68050	SR	0.47	0.43	-0.16	0.43	-0.25	-0.14	0.2
A-B	49	O	108394	SR	0.41	0.46	0.46	-0.28	-0.20	-0.11	0.1
A-B	50	O	55505	SR	0.46	0.27	-0.01	-0.20	0.27	-0.15	0.2
A-B	51	O	50894	SR	0.75	0.44	-0.25	-0.19	0.44	-0.25	0.1

Table 1.A10 Item Statistics, Operational Items: MD HSA Government—January Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
A-B	54	O	58223	SR	0.50	0.39	0.39	-0.14	-0.21	-0.17	0.2
A-B	55	O	50836	SR	0.71	0.56	0.56	-0.31	-0.30	-0.23	0.1
A-B	56	O	79753	SR	0.41	0.47	-0.15	-0.23	-0.23	0.47	0.2
A-B	57	O	51115	SR	0.67	0.51	-0.22	-0.25	-0.30	0.51	0.2
A-B	58	O	241963	SR	0.43	0.36	-0.28	-0.27	0.36	-0.02	0.2
A-B	59	O	108422	SR	0.47	0.47	-0.23	0.47	-0.25	-0.13	0.2
A-B	62	O	68059	SR	0.44	0.50	0.50	-0.23	-0.17	-0.24	0.2
A-B	63	O	51764	SR	0.63	0.47	-0.26	0.47	-0.22	-0.26	0.2
A-B	64	O	79719	SR	0.48	0.30	0.30	-0.05	-0.25	-0.11	0.3
A-B	65	O	108435	SR	0.70	0.47	-0.26	-0.21	-0.26	0.47	0.3
A-B	66	O	65208	SR	0.50	0.37	-0.14	-0.20	0.37	-0.15	0.2
A-B	70	O	108440	SR	0.67	0.46	-0.19	-0.32	0.46	-0.17	0.4
A-B	71	O	79621	SR	0.54	0.46	-0.23	0.46	-0.25	-0.19	0.4
A-B	72	O	68529	SR	0.64	0.53	-0.23	-0.27	0.53	-0.27	0.5
A-B	73	O	65182	SR	0.72	0.52	-0.29	-0.27	-0.23	0.52	0.1
A-B	74	O	68068	SR	0.43	0.41	-0.14	-0.16	0.41	-0.22	0.1
A-B	75	O	79710	SR	0.60	0.43	-0.16	-0.27	0.43	-0.17	0.2
A-B	76	O	52211	SR	0.49	0.45	-0.25	0.45	-0.14	-0.22	0.2
A-B	77	O	68532	SR	0.65	0.46	0.46	-0.26	-0.23	-0.20	0.1
A-B	78	O	65205	SR	0.38	0.29	-0.05	0.29	-0.12	-0.21	0.1
A-B	81	O	64798	SR	0.51	0.34	-0.13	-0.23	0.34	-0.08	0.2
A-B	82	O	256343	SR	0.68	0.40	0.40	-0.25	-0.12	-0.28	0.2
A-B	83	O	58343	SR	0.75	0.58	0.58	-0.27	-0.35	-0.27	0.1
A-B	84	O	58364	SR	0.48	0.34	-0.15	-0.27	0.34	-0.04	0.4
A-B	85	O	214493	SR	0.25	0.19	-0.20	-0.09	0.01	0.19	0.2
A-B	86	O	64793	SR	0.67	0.51	0.51	-0.25	-0.30	-0.20	0.3
A-B	89	O	51748	SR	0.46	0.35	-0.26	0.35	-0.06	-0.25	0.2
A-B	90	O	64804	SR	0.64	0.49	-0.19	-0.30	0.49	-0.23	0.2
A-B	91	O	108421	SR	0.59	0.54	-0.25	0.54	-0.21	-0.31	0.4
A-B	92	O	214500	SR	0.54	0.51	-0.15	-0.26	-0.29	0.51	0.2
A-B	93	O	68790	SR	0.31	0.34	-0.04	-0.18	0.34	-0.22	0.2
A-B	94	O	51196	SR	0.39	0.09	-0.18	0.17	-0.20	0.09	0.2
A-B	97	O	108348	SR	0.38	0.43	-0.23	-0.25	-0.10	0.43	0.3
A-B	98	O	50998	SR	0.55	0.42	-0.18	0.42	-0.24	-0.15	0.4
A-B	99	O	256505	SR	0.23	0.28	0.09	0.28	-0.23	-0.21	0.3
A-B	100	O	79658	SR	0.38	0.41	-0.20	-0.13	0.41	-0.16	0.3
A-B	101	O	256348	SR	0.67	0.49	-0.21	0.49	-0.32	-0.21	0.3
A-B	102	O	50985	SR	0.70	0.50	0.50	-0.29	-0.26	-0.24	0.3
A-B	105	O	50910	SR	0.48	0.49	0.49	-0.14	-0.29	-0.21	0.4
A-B	106	O	214492	SR	0.36	0.32	-0.29	-0.19	0.32	0.05	0.3
A-B	107	O	50911	SR	0.39	0.40	0.40	-0.18	-0.12	-0.18	0.3

Table 1.A10 Item Statistics, Operational Items: MD HSA Government—January Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
Mean					0.54	0.41	-0.04	-0.04	-0.05	-0.04	0.2
SD					0.14	0.10	0.28	0.29	0.28	0.26	0.1

Note. Tabled item position number is based on Form A and varies somewhat on Form B.

Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A11 Item Statistics, Operational Items: MD HSA Government—January Makeup 1

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
C	1	O	60458	SR	0.72	0.51	0.51	-0.23	-0.30	-0.27	0.2
C	2	L	215818	SR	0.57	0.42	-0.19	-0.26	0.42	-0.15	0.0
C	3	O	68541	SR	0.80	0.40	-0.14	-0.23	-0.26	0.40	0.0
C	4	L	55622	SR	0.25	0.14	-0.12	0.14	-0.06	0.09	0.1
C	5	O	58124	SR	0.51	0.55	-0.32	-0.24	0.55	-0.20	0.0
C	6	O	51154	SR	0.46	0.27	0.27	-0.26	-0.27	0.04	0.0
C	7	L	79550	SR	0.47	0.49	-0.25	-0.25	0.49	-0.18	0.0
C	8	L	256407	SR	0.81	0.38	-0.20	-0.22	0.38	-0.19	0.1
C	9	O	214499	SR	0.55	0.39	-0.07	-0.28	0.39	-0.22	0.0
C	12	L	68102	SR	0.26	0.36	0.36	-0.15	-0.01	-0.18	0.1
C	13	O	68100	SR	0.63	0.35	-0.09	-0.23	0.35	-0.22	0.0
C	14	L	68608	SR	0.31	0.45	-0.23	-0.19	0.45	-0.13	0.1
C	15	O	79673	SR	0.65	0.52	0.52	-0.20	-0.26	-0.31	0.1
C	16	O	79604	SR	0.74	0.35	-0.22	-0.14	0.35	-0.19	0.0
C	17	L	223249	SR	0.45	0.52	-0.34	0.52	-0.24	-0.09	0.0
C	18	L	79742	SR	0.57	0.33	-0.20	-0.14	0.33	-0.18	0.0
C	19	O	214479	SR	0.62	0.40	0.40	-0.21	-0.25	-0.13	0.0
C	23	L	214496	SR	0.53	0.53	0.53	-0.20	-0.18	-0.35	0.0
C	24	L	241960	SR	0.54	0.34	-0.13	-0.13	-0.21	0.34	0.1
C	25	O	68057	SR	0.60	0.48	0.48	-0.31	-0.20	-0.19	0.0
C	26	O	68609	SR	0.75	0.47	-0.22	-0.29	0.47	-0.22	0.0
C	27	O	68552	SR	0.51	0.46	0.46	-0.14	-0.17	-0.29	0.0
C	28	O	68766	SR	0.65	0.55	-0.26	-0.32	-0.24	0.55	0.1
C	29	O	68642	SR	0.84	0.42	-0.18	-0.25	0.42	-0.25	0.0
C	33	O	60461	SR	0.42	0.25	0.25	-0.22	-0.11	-0.04	0.2
C	34	O	214482	SR	0.68	0.43	-0.03	-0.33	-0.26	0.43	0.3
C	35	O	55600	SR	0.48	0.37	-0.27	-0.09	-0.12	0.37	0.3
C	36	L	256347	SR	0.46	0.28	-0.14	0.28	-0.07	-0.20	0.3
C	37	O	256362	SR	0.79	0.44	-0.19	-0.21	-0.29	0.44	0.1
C	38	L	256342	SR	0.47	0.28	0.28	-0.08	-0.21	-0.09	0.1
C	39	L	108405	SR	0.39	0.23	0.23	-0.15	-0.18	0.04	0.1
C	40	O	256366	SR	0.81	0.35	-0.13	-0.20	-0.26	0.35	0.1
C	41	O	68497	SR	0.70	0.31	-0.11	0.31	-0.25	-0.13	0.1
C	42	O	79683	SR	0.48	0.39	-0.27	0.39	-0.31	-0.05	0.1
C	46	O	256339	SR	0.45	0.43	-0.17	-0.16	-0.24	0.43	0.1
C	47	L	79593	SR	0.57	0.43	-0.21	-0.29	-0.17	0.43	0.1
C	48	L	68509	SR	0.44	0.41	-0.10	0.41	-0.24	-0.17	0.1
C	49	O	58410	SR	0.63	0.26	0.26	-0.10	-0.26	-0.15	0.1
C	50	L	79544	SR	0.62	0.47	-0.25	-0.22	0.47	-0.21	0.1
C	51	L	68708	SR	0.56	0.36	-0.15	0.36	-0.24	-0.12	0.1
C	52	L	67970	SR	0.58	0.55	0.55	-0.24	-0.24	-0.31	0.2

Table 1.A11 Item Statistics, Operational Items: MD HSA Government—January Makeup 1

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
C	53	L	68073	SR	0.41	0.36	0.36	-0.26	-0.02	-0.20	0.1
C	54	L	51171	SR	0.64	0.42	-0.21	-0.19	-0.26	0.42	0.1
C	55	L	68520	SR	0.63	0.31	-0.13	-0.16	0.31	-0.17	0.1
C	56	O	55519	SR	0.36	0.25	0.00	-0.11	-0.18	0.25	0.1
C	57	L	51087	SR	0.93	0.37	-0.21	-0.22	0.37	-0.18	0.1
C	58	O	50839	SR	0.52	0.49	-0.20	-0.25	-0.23	0.49	0.1
C	62	O	79582	SR	0.70	0.45	-0.27	-0.22	-0.19	0.45	0.1
C	63	L	223260	SR	0.83	0.48	-0.30	-0.26	0.48	-0.21	0.2
C	64	L	79578	SR	0.60	0.54	0.54	-0.30	-0.29	-0.21	0.1
C	65	L	52270	SR	0.55	0.49	0.49	-0.31	-0.20	-0.18	0.1
C	66	L	79671	SR	0.44	0.40	0.40	-0.24	-0.17	-0.14	0.2
C	70	L	51741	SR	0.38	0.33	0.00	-0.30	-0.26	0.33	0.1
C	71	L	51258	SR	0.73	0.56	-0.26	-0.29	-0.32	0.56	0.1
C	72	L	68592	SR	0.48	0.41	-0.17	-0.24	0.41	-0.19	0.2
C	73	L	79629	SR	0.42	0.42	0.42	-0.23	-0.24	-0.10	0.1
C	76	O	68535	SR	0.89	0.38	0.38	-0.19	-0.28	-0.14	0.1
C	77	L	65194	SR	0.64	0.44	-0.19	-0.26	0.44	-0.19	0.1
C	78	L	58294	SR	0.46	0.25	0.25	-0.20	-0.12	-0.02	0.1
C	79	L	51243	SR	0.49	0.41	-0.09	-0.21	-0.28	0.41	0.1
C	83	O	51745	SR	0.30	0.18	-0.09	0.18	0.01	-0.12	0.2
C	84	L	60465	SR	0.83	0.47	-0.26	0.47	-0.27	-0.22	0.1
C	85	L	64989	SR	0.34	0.13	-0.04	0.07	-0.24	0.13	0.1
C	86	L	256388	SR	0.64	0.44	0.44	-0.24	-0.27	-0.16	0.1
C	87	L	132975	SR	0.43	0.43	0.43	-0.18	-0.13	-0.25	0.1
C	88	L	79559	SR	0.47	0.43	-0.19	-0.17	0.43	-0.20	0.1
C	89	O	133463	SR	0.41	0.34	-0.07	0.34	-0.24	-0.18	0.1
C	90	O	214580	SR	0.58	0.42	-0.14	-0.26	0.42	-0.21	0.1
C	94	L	58438	SR	0.68	0.45	-0.16	-0.21	-0.29	0.45	0.1
C	95	L	51202	SR	0.44	0.47	-0.20	-0.23	-0.16	0.47	0.1
C	96	O	52204	SR	0.45	0.35	-0.24	-0.01	0.35	-0.25	0.2
C	97	O	68581	SR	0.78	0.53	-0.25	0.53	-0.30	-0.28	0.1
C	98	O	79650	SR	0.48	0.36	-0.13	0.36	-0.15	-0.24	0.1
C	99	O	64817	SR	0.42	0.38	0.38	-0.12	-0.24	-0.10	0.2
C	100	L	108446	SR	0.72	0.51	-0.22	-0.26	0.51	-0.30	0.2
C	101	L	256353	SR	0.36	0.30	0.30	-0.21	-0.23	-0.08	0.1
C	102	O	52279	SR	0.45	0.39	-0.24	0.39	-0.22	-0.12	0.2
C	103	L	51178	SR	0.40	0.34	0.34	-0.01	-0.21	-0.21	0.2
C	104	L	52230	SR	0.52	0.23	0.23	-0.22	-0.06	-0.08	0.2
C	105	L	79586	SR	0.59	0.42	-0.25	-0.22	0.42	-0.16	0.3
C	106	L	108471	SR	0.61	0.36	-0.22	-0.13	0.36	-0.24	0.3
C	107	L	52258	SR	0.46	0.37	-0.09	-0.26	0.37	-0.13	0.2

Table 1.A11 Item Statistics, Operational Items: MD HSA Government—January Makeup 1

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
Mean					0.56	0.39	0.00	-0.12	-0.03	-0.04	0.1
SD					0.15	0.09	0.28	0.22	0.29	0.26	0.1

Note. Tabled item position number is based on Form A and varies somewhat on Form B.

Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A12 Item Statistics, Operational Items: MD HSA Algebra—April Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
S	1	O	56611	SR	0.41	0.31	-0.11	-0.14	-0.14	0.31	0.1
S	2	L	328773	SR	0.43	0.26	-0.10	0.26	-0.05	-0.17	0.0
S	4	O	51534	SR	0.36	0.30	-0.14	-0.14	-0.07	0.30	1.0
S	5	L	328711	SR	0.46	0.19	-0.13	0.19	-0.15	0.03	0.1
S	7	L	319427	SPR	0.26	0.33	0.33	-0.30			4.1
S	8	L	268737	SR	0.37	0.26	-0.07	0.26	-0.17	-0.06	0.1
S	9	L	319432	SR	0.16	0.18	0.18	-0.02	-0.07	-0.05	0.6
S	11	L	56734	SR	0.44	0.33	-0.17	0.33	-0.10	-0.17	0.6
S	12	O	348333	SR	0.32	0.31	-0.14	-0.10	-0.11	0.31	0.4
S	13	O	132819	SR	0.15	0.18	0.18	-0.03	-0.04	-0.09	0.7
S	15	L	52338	SR	0.57	0.38	-0.16	-0.26	0.38	-0.12	0.2
S	16	O	348352	SR	0.25	0.21	0.21	-0.07	-0.07	-0.12	0.4
S	17	L	338684	SR	0.35	0.14	-0.09	0.14	-0.02	-0.05	0.7
S	18	L	255072	SPR	0.31	0.40	0.40	-0.34			3.7
S	19	O	260754	SPR	0.20	0.35	0.35	-0.27			4.3
S	21	O	51452	SR	0.64	0.37	-0.24	0.37	-0.19	-0.10	0.8
S	22	L	275469	SR	0.12	0.10	0.11	-0.11	-0.10	0.10	1.0
S	23	O	54803	SR	0.85	0.29	-0.14	-0.15	0.29	-0.18	1.0
S	24	O	322114	SR	0.77	0.28	-0.15	-0.14	-0.16	0.28	0.3
S	26	O	106650	SR	0.16	0.23	0.23	-0.07	-0.08	-0.03	0.8
S	27	O	211025	SR	0.31	0.21	-0.07	0.21	-0.06	-0.10	0.8
S	28	L	348321	SR	0.42	0.12	-0.06	0.12	-0.06	-0.02	0.6
S	29	O	67496	SPR	0.45	0.47	0.47	-0.40			4.2
S	30	O	275481	SPR	0.26	0.36	0.36	-0.29			3.1
S	32	L	79093	SR	0.22	0.28	-0.08	0.01	-0.20	0.28	0.6
S	33	O	79042	SR	0.39	0.27	0.27	-0.09	-0.14	-0.08	0.5
S	35	L	132839	SR	0.33	0.18	-0.11	-0.02	0.18	-0.07	0.7
S	37	L	328710	SR	0.52	0.35	0.35	-0.15	-0.11	-0.20	0.6
S	38	L	338678	SR	0.20	0.12	-0.11	-0.02	0.05	0.12	0.4
S	40	O	136691	SR	0.35	0.31	-0.12	-0.14	0.31	-0.10	0.7
S	42	L	268729	SPR	0.45	0.49	0.49	-0.43			3.6
S	43	O	67460	SPR	0.08	0.45	0.45	-0.26			9.8
S	44	L	132832	SR	0.19	0.14	0.14	0.00	-0.08	-0.04	0.5
S	45	L	106568	SR	0.33	0.30	0.30	-0.13	-0.12	-0.07	0.6
S	46	L	43195	SR	0.60	0.32	-0.20	-0.13	0.32	-0.10	0.7
S	47	L	319465	SR	0.54	0.41	-0.21	-0.21	-0.15	0.41	0.6
S	49	O	67414	SR	0.36	0.23	-0.07	-0.18	0.23	-0.04	0.7
S	50	L	79136	SR	0.23	0.08	-0.08	0.08	-0.08	0.07	0.7
S	52	O	268735	SR	0.20	0.16	-0.12	-0.14	0.07	0.16	0.6
S	53	L	319449	SR	0.52	0.22	-0.16	-0.05	0.22	-0.12	0.6
S	54	L	282319	SR	0.20	0.09	-0.11	-0.05	0.09	0.09	1.0
S	55	L	67471	SPR	0.43	0.47	0.47	-0.41			4.1
S	57	O	282376	SR	0.16	0.20	0.01	-0.06	-0.11	0.20	0.8

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Table 1.A12 Item Statistics, Operational Items: MD HSA Algebra—April Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
S	58	O	322120	SR	0.48	0.35	-0.15	-0.10	-0.21	0.35	0.6
S	59	L	319455	SR	0.33	0.20	-0.08	-0.08	0.20	-0.05	0.9
S	60	L	67478	SR	0.51	0.30	-0.15	0.30	-0.16	-0.08	0.6
S	62	O	56752	SR	0.45	0.26	-0.08	-0.14	0.26	-0.11	0.9
S	64	L	132834	SPR	0.26	0.46	0.46	-0.35			6.7
S	65	L	322014	SPR	0.36	0.44	0.44	-0.35			8.4
S	66	L	51578	SR	0.27	0.23	0.00	-0.10	-0.13	0.23	0.7
S	67	O	67438	SR	0.47	0.26	-0.06	-0.12	0.26	-0.14	0.8
S	68	L	50369	SR	0.28	0.15	-0.09	0.15	-0.08	0.04	0.9
S	69	L	54677	SR	0.59	0.33	-0.16	-0.16	0.33	-0.15	0.9
Mean					0.36	0.28	0.04	-0.08	0.00	0.02	1.5
SD					0.16	0.11	0.23	0.19	0.18	0.17	2.1

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A13 Item Statistics, Operational Items: MD HSA Biology—April Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
S	1	L	133425	SR	0.54	0.32	-0.09	-0.13	-0.23	0.32	0.1
S	2	O	133432	SR	0.54	0.31	0.31	-0.17	-0.19	-0.07	0.0
S	3	L	59855	SR	0.47	0.30	-0.08	-0.17	-0.15	0.30	0.1
S	4	L	59856	SR	0.30	0.13	-0.08	0.13	-0.09	0.02	0.3
S	6	O	323342	SR	0.41	0.20	-0.13	0.20	-0.15	-0.01	0.1
S	7	O	332076	SR	0.29	0.10	-0.03	0.10	-0.08	0.01	0.0
S	8	L	332077	SR	0.19	0.20	-0.02	-0.10	-0.06	0.20	0.3
S	9	L	282412	SR	0.31	0.07	-0.01	-0.03	0.07	-0.05	0.1
S	10	L	282410	SR	0.33	0.16	-0.07	-0.12	0.16	0.00	0.1
S	12	L	253644	SR	0.14	0.17	-0.08	-0.04	-0.02	0.17	0.2
S	15	O	223405	SR	0.27	0.14	0.02	0.14	-0.02	-0.14	0.0
S	16	L	68213	SR	0.34	0.26	-0.05	0.26	-0.14	-0.10	0.0
S	17	L	79311	SR	0.32	0.31	-0.11	0.31	-0.19	-0.09	0.2
S	18	L	79312	SR	0.25	0.20	-0.12	-0.11	-0.01	0.20	0.1
S	19	O	214551	SR	0.36	0.27	0.27	-0.11	-0.12	-0.09	0.0
S	20	O	68264	SR	0.49	0.36	-0.14	-0.15	-0.18	0.36	0.3
S	23	L	322138	SR	0.16	0.14	0.14	-0.01	-0.02	-0.09	0.1
S	24	L	322135	SR	0.41	0.31	-0.14	-0.08	-0.17	0.31	0.3
S	25	O	279554	SR	0.36	0.27	0.27	-0.03	-0.13	-0.17	0.3
S	26	O	67658	SR	0.31	0.30	-0.15	-0.19	0.30	0.02	0.3
S	27	L	136129	SR	0.57	0.29	-0.11	0.29	-0.21	-0.05	0.4
S	28	L	136130	SR	0.21	0.04	-0.10	0.07	0.04	-0.03	0.6
S	29	L	349089	SR	0.46	0.22	0.22	-0.04	-0.15	-0.12	0.6
S	31	L	349046	SR	0.49	0.28	-0.10	-0.16	-0.12	0.28	0.7
S	32	O	349047	SR	0.48	0.28	0.28	-0.10	-0.19	-0.08	0.7
S	33	L	79408	SR	0.53	0.29	-0.13	-0.13	0.29	-0.15	0.7
S	34	O	277326	SR	0.28	0.23	0.23	-0.13	-0.06	-0.06	0.2
S	35	L	214543	SR	0.42	0.20	-0.10	0.20	-0.10	-0.04	0.1
S	36	O	322176	SR	0.43	0.26	-0.10	0.26	-0.12	-0.10	0.1
S	41	O	67679	SR	0.23	0.20	0.20	0.03	-0.17	-0.13	0.2
S	42	O	68138	SR	0.41	0.18	-0.15	0.00	-0.13	0.18	0.1
S	43	L	214558	SR	0.29	0.17	-0.07	-0.05	0.17	-0.11	0.1
S	44	L	214559	SR	0.20	0.20	-0.09	-0.10	0.20	0.01	0.3
S	45	L	214560	SR	0.46	0.29	0.29	-0.10	-0.17	-0.10	0.2
S	46	O	55005	SR	0.26	0.26	0.26	-0.11	-0.09	-0.06	0.3
S	49	L	271112	SR	0.24	0.25	-0.05	-0.06	-0.13	0.25	0.2
S	50	O	349021	SR	0.15	0.23	0.08	-0.16	-0.14	0.23	0.5
S	51	L	349025	SR	0.47	0.27	0.27	-0.13	-0.16	-0.06	0.3
S	52	L	271051	SR	0.16	0.11	-0.14	0.06	0.11	-0.03	0.2
S	53	L	65061	SR	0.34	0.21	0.21	0.03	-0.18	-0.13	0.2
S	54	L	256551	SR	0.34	0.24	-0.02	0.24	-0.15	-0.10	0.4
S	55	L	256522	SR	0.18	0.00	-0.12	0.06	0.00	0.06	0.2
S	56	L	256523	SR	0.39	0.21	-0.11	-0.05	0.21	-0.09	0.4
S	59	L	55268	SR	0.24	0.18	0.04	-0.16	0.18	-0.08	0.4

Table 1.A13 Item Statistics, Operational Items: MD HSA Biology—April Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
S	60	O	55014	SR	0.13	0.16	0.16	-0.01	-0.04	-0.12	0.4
S	61	L	64730	SR	0.27	0.10	-0.08	0.10	-0.06	0.06	0.3
S	62	L	64733	SR	0.48	0.30	-0.17	0.30	-0.11	-0.12	0.3
S	63	L	256539	SR	0.17	0.07	0.07	0.07	-0.05	-0.08	0.4
S	64	L	256538	SR	0.35	0.16	-0.09	-0.12	0.16	0.02	0.6
S	65	O	79440	SR	0.43	0.18	-0.07	0.18	-0.14	-0.02	0.3
S	66	O	67860	SR	0.45	0.23	-0.10	0.23	-0.08	-0.12	0.3
S	67	O	349113	SR	0.53	0.30	-0.14	-0.16	0.30	-0.09	0.4
S	68	O	282441	SR	0.43	0.30	0.30	-0.10	-0.20	-0.09	0.3
S	69	O	338746	SR	0.46	0.32	-0.16	-0.10	-0.16	0.32	0.1
S	70	O	68300	SR	0.34	0.23	-0.05	0.23	-0.14	-0.05	0.3
S	71	L	270998	SR	0.36	0.17	0.00	-0.17	0.17	-0.03	0.2
S	72	O	270996	SR	0.53	0.27	-0.06	0.27	-0.16	-0.17	0.2
S	76	L	241127	SR	0.30	0.13	-0.07	0.13	0.00	-0.08	0.2
S	77	O	338784	SR	0.45	0.33	0.33	-0.15	-0.15	-0.14	0.2
S	78	L	322144	SR	0.30	0.19	-0.08	-0.07	0.19	-0.04	0.3
S	79	O	322146	SR	0.42	0.19	0.19	-0.16	-0.03	-0.05	0.3
S	80	O	260070	SR	0.39	0.28	-0.10	-0.12	0.28	-0.10	0.3
S	81	L	260068	SR	0.61	0.37	-0.18	-0.20	-0.16	0.37	0.2
S	83	L	52716	SR	0.26	0.04	-0.04	-0.04	0.04	0.05	0.7
S	86	L	52775	SR	0.39	0.35	-0.14	-0.16	-0.13	0.35	0.2
S	87	L	52776	SR	0.39	0.38	-0.17	-0.16	-0.12	0.38	0.3
S	88	L	65049	SR	0.31	0.15	0.01	-0.10	0.15	-0.08	0.6
S	89	L	349084	SR	0.37	0.31	-0.16	-0.13	-0.07	0.31	0.4
S	91	O	65137	SR	0.24	0.17	0.17	-0.02	-0.08	-0.08	0.4
S	92	L	331300	SR	0.19	0.20	-0.03	-0.09	-0.05	0.20	0.4
S	93	O	331298	SR	0.28	0.09	0.04	0.09	-0.06	-0.06	0.4
S	95	O	279585	SR	0.15	0.18	-0.01	0.02	-0.16	0.18	0.4
S	96	O	332034	SR	0.28	0.17	0.17	-0.15	0.01	-0.03	0.5
S	97	L	332031	SR	0.41	0.31	-0.10	-0.15	0.31	-0.13	0.3
S	98	L	279647	SR	0.32	0.34	-0.13	-0.11	-0.13	0.34	0.4
S	99	L	53469	SR	0.64	0.27	-0.16	0.27	-0.15	-0.10	0.5
Mean					0.35	0.22	-0.01	-0.02	-0.04	0.02	0.3
SD					0.12	0.08	0.15	0.15	0.14	0.16	0.2

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A14 Item Statistics, Operational Items: MD HSA English—April Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
S	1	L	273031	SR	0.57	0.35	0.35	-0.22	-0.23	-0.05	0.1
S	2	L	273034	SR	0.56	0.30	-0.15	-0.17	-0.13	0.30	0.0
S	3	L	273032	SR	0.21	0.11	-0.05	-0.01	-0.07	0.11	0.1
S	4	L	273035	SR	0.27	0.19	0.19	-0.06	-0.08	-0.05	0.2
S	5	L	273036	SR	0.22	0.14	0.14	-0.04	-0.01	-0.13	0.2
S	6	L	273037	SR	0.52	0.30	-0.10	-0.16	0.30	-0.16	0.1
S	12	L	108722	SR	0.28	0.23	0.23	-0.07	-0.13	-0.03	0.1
S	13	L	108723	SR	0.48	0.37	0.37	-0.15	-0.17	-0.17	0.1
S	14	L	108724	SR	0.54	0.34	-0.11	0.34	-0.19	-0.17	0.1
S	24	O	272943	SR	0.44	0.26	-0.01	0.26	-0.21	-0.12	0.6
S	25	L	272871	SR	0.47	0.34	-0.10	0.34	-0.16	-0.18	0.6
S	26	O	285619	SR	0.57	0.40	-0.16	-0.22	0.40	-0.19	0.6
S	27	O	108901	SR	0.57	0.36	-0.16	-0.19	0.36	-0.17	0.7
S	28	O	108902	SR	0.36	0.28	-0.18	-0.10	0.28	-0.05	0.9
S	29	O	108903	SR	0.65	0.46	0.46	-0.23	-0.27	-0.17	1.0
S	30	O	108904	SR	0.53	0.41	0.41	-0.21	-0.26	-0.10	1.2
S	31	O	108905	SR	0.12	0.04	-0.09	0.09	-0.04	0.04	1.1
S	32	O	108906	SR	0.52	0.36	-0.18	-0.22	-0.13	0.36	1.2
S	33	O	349431	SR	0.69	0.36	-0.17	-0.24	0.36	-0.14	0.3
S	34	O	130987	SR	0.53	0.39	-0.18	-0.10	-0.27	0.39	0.3
S	35	O	349435	SR	0.56	0.34	-0.10	0.34	-0.22	-0.19	0.3
S	37	L	95963	SR	0.39	0.32	0.32	-0.20	-0.16	-0.03	0.2
S	38	L	95964	SR	0.39	0.37	-0.12	-0.19	-0.12	0.37	0.2
S	39	L	95965	SR	0.41	0.23	0.23	-0.13	-0.09	-0.07	0.3
S	40	L	95966	SR	0.50	0.43	0.43	-0.21	-0.18	-0.18	0.3
S	41	L	95991	SR	0.38	0.23	-0.10	0.23	-0.05	-0.14	0.3
S	42	L	95992	SR	0.48	0.43	-0.21	-0.29	-0.10	0.43	0.3
S	43	L	95993	SR	0.53	0.28	0.28	-0.07	-0.26	-0.14	0.2
S	44	L	95994	SR	0.48	0.38	0.38	-0.20	-0.20	-0.09	0.3
S	45	L	95995	SR	0.56	0.35	-0.18	0.35	-0.14	-0.19	0.3
S	46	L	108820	SR	0.52	0.33	-0.13	0.33	-0.17	-0.14	0.3
S	47	L	109744	SR	0.48	0.39	-0.12	-0.14	-0.26	0.39	0.3
S	48	L	108822	SR	0.22	0.13	-0.09	0.11	-0.19	0.13	0.3
S	49	L	108823	SR	0.38	0.21	-0.10	-0.04	0.21	-0.11	0.4
S	50	L	108827	SR	0.56	0.33	-0.16	0.33	-0.16	-0.13	0.3
S	51	L	108824	SR	0.50	0.38	-0.21	-0.11	-0.20	0.38	0.3
S	52	L	108826	SR	0.19	0.03	0.03	0.05	-0.07	0.00	0.4
S	56	L	130955	SR	0.44	0.25	0.25	0.00	-0.22	-0.15	0.3
S	57	L	132497	SR	0.49	0.30	-0.18	-0.06	0.30	-0.19	0.4
S	58	L	130956	SR	0.21	0.06	0.06	-0.18	-0.02	0.13	0.3
S	59	L	130971	SR	0.37	0.41	-0.07	-0.23	-0.18	0.41	0.4
S	60	L	130972	SR	0.42	0.33	-0.13	-0.13	-0.14	0.33	0.4
S	61	L	130973	SR	0.22	0.10	-0.11	0.10	0.12	-0.15	0.6
S	62	L	132496	SR	0.44	0.26	0.26	-0.06	-0.22	-0.07	0.4

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Table 1.A14 Item Statistics, Operational Items: MD HSA English—April Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
S	63	L	130200	SR	0.39	0.22	0.22	-0.01	-0.21	-0.10	0.7
S	64	L	130974	SR	0.49	0.45	0.45	-0.26	-0.19	-0.14	0.9
S	65	L	130975	SR	0.35	0.19	-0.05	0.19	-0.16	0.01	0.9
S	66	O	264649	SR	0.62	0.33	-0.20	0.33	-0.20	-0.07	0.5
S	67	O	264650	SR	0.63	0.41	-0.19	-0.23	-0.18	0.41	0.3
S	68	O	264651	SR	0.48	0.39	0.39	-0.11	-0.23	-0.17	0.3
S	69	O	285499	SR	0.51	0.29	-0.13	-0.17	0.29	-0.09	0.5
S	70	O	285501	SR	0.48	0.42	-0.16	-0.17	-0.23	0.42	0.4
S	71	O	285502	SR	0.51	0.32	-0.17	-0.16	0.32	-0.10	0.4
S	72	O	285506	SR	0.19	0.15	0.01	0.03	-0.19	0.15	0.6
S	73	O	285507	SR	0.25	0.19	0.19	-0.07	-0.15	0.02	0.5
S	74	O	285508	SR	0.20	0.04	-0.02	0.04	-0.18	0.15	0.6
S	75	O	285509	SR	0.19	0.09	-0.06	0.10	-0.17	0.09	0.4
S	76	O	285510	SR	0.44	0.27	0.27	-0.09	-0.16	-0.09	0.3
S	97	O	130248	SR	0.49	0.27	-0.08	0.27	-0.19	-0.08	1.1
S	98	O	130249	SR	0.23	0.11	-0.08	0.11	0.03	-0.06	1.1
Mean					0.43	0.28	0.02	-0.03	-0.09	0.00	0.4
SD					0.14	0.11	0.21	0.19	0.19	0.20	0.3

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A15 Item Statistics, Operational Items: MD HSA Algebra—May Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
D-H	1	L	363904	SR	0.76	0.44	0.44	-0.32	-0.22	-0.15	0.1
D-H	2	O	67517	SR	0.48	0.34	-0.22	-0.17	0.34	-0.13	0.0
D-H	3	L	361336	SR	0.80	0.43	-0.20	0.43	-0.16	-0.31	0.1
D-H	5	L	362293	SR	0.44	0.38	-0.24	0.38	-0.19	-0.04	0.3
D-H	6	L	348443	SPR	0.60	0.52	0.52	-0.49			1.2
D-H	8	O	362356	SR	0.35	0.33	0.33	-0.04	-0.19	-0.17	0.2
D-H	9	O	79015	SR	0.43	0.35	-0.24	-0.16	0.35	-0.02	0.6
D-H	11	L	268732	SR	0.60	0.47	-0.29	-0.31	0.47	-0.08	0.1
D-H	12	O	79145	SR	0.53	0.46	-0.32	-0.31	-0.03	0.46	0.2
D-H	13	L	260773	SR	0.33	0.38	-0.10	-0.19	-0.13	0.38	0.5
D-H	14	O	362299	SR	0.59	0.49	-0.20	-0.21	-0.32	0.49	0.2
D-H	16	L	362359	SR	0.48	0.36	-0.16	0.36	-0.27	-0.09	0.2
D-H	17	O	54796	SR	0.61	0.46	-0.27	-0.25	-0.15	0.46	0.3
D-H	18	O	51419	SPR	0.82	0.45	0.45	-0.41			1.7
D-H	19	L	79025	SPR	0.40	0.36	0.36	-0.33			1.3
D-H	20	L	51465	SPR	0.62	0.59	0.59	-0.54			3.0
D-H	22	O	366244	SR	0.58	0.47	-0.12	-0.25	-0.28	0.47	0.8
D-H	23	L	348348	SR	0.54	0.61	0.61	-0.21	-0.27	-0.35	1.0
D-H	24	L	79133	SR	0.85	0.42	-0.20	-0.31	0.42	-0.15	0.1
D-H	25	O	51428	SR	0.73	0.35	-0.11	0.35	-0.29	-0.15	0.1
D-H	27	L	371769	SR	0.59	0.37	-0.14	0.37	-0.28	-0.12	0.3
D-H	28	L	257146	SR	0.37	0.46	0.46	-0.06	-0.25	-0.23	0.3
D-H	30	O	328777	SPR	0.41	0.40	0.40	-0.38			0.9
D-H	31	L	275447	SPR	0.77	0.39	0.39	-0.36			1.8
D-H	33	L	67544	SR	0.64	0.65	-0.36	-0.26	-0.33	0.65	0.1
D-H	34	O	79097	SR	0.61	0.50	-0.23	0.50	-0.34	-0.15	0.2
D-H	35	O	263298	SR	0.62	0.54	0.54	-0.35	-0.31	-0.10	0.2
D-H	37	O	215926	SR	0.60	0.59	0.59	-0.18	-0.34	-0.31	0.2
D-H	38	L	79045	SR	0.34	0.31	0.31	-0.10	-0.21	-0.04	0.3
D-H	39	O	132837	SR	0.72	0.40	-0.13	-0.21	0.40	-0.29	0.2
D-H	40	L	348434	SR	0.40	0.43	-0.10	0.43	-0.29	-0.21	0.3
D-H	41	L	133391	SPR	0.65	0.42	0.42	-0.38			1.7
D-H	42	L	255082	SPR	0.25	0.45	0.45	-0.36			3.4
D-H	44	L	257108	SR	0.75	0.43	-0.27	-0.27	0.43	-0.12	0.4
D-H	45	L	257109	SR	0.38	0.22	0.22	-0.22	0.02	-0.07	0.6
D-H	46	O	67473	SR	0.67	0.52	-0.20	0.52	-0.37	-0.23	0.6
D-H	47	O	54840	SR	0.87	0.10	-0.12	0.10	-0.11	0.02	0.1
D-H	48	L	56689	SR	0.65	0.46	-0.13	0.46	-0.21	-0.34	0.1
D-H	50	L	361353	SR	0.24	0.29	-0.10	-0.20	0.03	0.29	0.3
D-H	51	O	268725	SR	0.42	0.51	-0.19	-0.19	0.51	-0.34	0.2
D-H	53	L	67421	SPR	0.79	0.44	0.44	-0.41			1.2
D-H	54	L	362278	SR	0.45	0.29	-0.10	-0.20	0.29	-0.11	0.2
D-H	55	O	43160	SR	0.74	0.53	0.53	-0.32	-0.28	-0.23	0.2
D-H	56	O	51485	SR	0.46	0.42	-0.13	-0.17	-0.25	0.42	0.4

Table 1.A15 Item Statistics, Operational Items: MD HSA Algebra—May Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
D-H	58	L	363934	SR	0.54	0.53	-0.24	-0.18	-0.33	0.53	0.2
D-H	59	L	276436	SR	0.74	0.56	0.56	-0.36	-0.27	-0.23	0.2
D-H	61	O	363914	SR	0.47	0.36	-0.21	-0.17	0.36	-0.11	0.4
D-H	62	O	328723	SPR	0.68	0.65	0.65	-0.60			3.0
D-H	64	L	67458	SR	0.43	0.34	-0.13	-0.04	-0.31	0.34	0.2
D-H	66	O	67487	SR	0.69	0.52	-0.29	-0.23	-0.26	0.52	0.3
D-H	67	L	43186	SR	0.59	0.33	-0.05	0.33	-0.26	-0.18	0.3
D-H	68	L	50388	SR	0.71	0.45	-0.19	-0.24	-0.25	0.45	0.3
D-H	69	L	67425	SR	0.43	0.26	-0.06	-0.10	0.26	-0.18	0.4
Mean					0.57	0.43	0.06	-0.13	-0.09	0.01	0.6
SD					0.16	0.11	0.33	0.29	0.28	0.30	0.8

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A16 Item Statistics, Operational Items: MD HSA Algebra—May Makeup 1

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
X	1	L	363904	SR	0.76	0.44	0.44	-0.32	-0.22	-0.15	0.1
X	2	O	67517	SR	0.48	0.34	-0.22	-0.17	0.34	-0.13	0.0
X	3	L	361336	SR	0.80	0.43	-0.20	0.43	-0.16	-0.31	0.1
X	5	L	362293	SR	0.44	0.38	-0.24	0.38	-0.19	-0.04	0.3
X	6	L	348443	SPR	0.60	0.52	0.52	-0.49			1.2
X	8	O	362356	SR	0.35	0.33	0.33	-0.04	-0.19	-0.17	0.2
X	9	O	79018	SR	0.30	0.36	-0.17	-0.16	0.36	-0.09	0.6
X	11	L	268732	SR	0.60	0.47	-0.29	-0.31	0.47	-0.08	0.1
X	12	O	79145	SR	0.53	0.46	-0.32	-0.31	-0.03	0.46	0.2
X	13	L	260773	SR	0.33	0.38	-0.10	-0.19	-0.13	0.38	0.5
X	14	O	362299	SR	0.59	0.49	-0.20	-0.21	-0.32	0.49	0.2
X	16	L	362359	SR	0.48	0.36	-0.16	0.36	-0.27	-0.09	0.2
X	17	O	363906	SR	0.77	0.36	0.36	-0.18	-0.21	-0.18	0.2
X	18	O	56664	SPR	0.48	0.64	0.64	-0.58			4.5
X	19	L	79025	SPR	0.40	0.36	0.36	-0.33			1.3
X	20	L	51465	SPR	0.62	0.59	0.59	-0.54			3.0
X	22	O	79531	SR	0.53	0.40	0.40	-0.27	-0.19	-0.07	1.4
X	23	L	348348	SR	0.54	0.61	0.61	-0.21	-0.27	-0.35	1.0
X	24	L	79133	SR	0.85	0.42	-0.20	-0.31	0.42	-0.15	0.1
X	25	O	51428	SR	0.73	0.35	-0.11	0.35	-0.29	-0.15	0.1
X	27	L	371769	SR	0.59	0.37	-0.14	0.37	-0.28	-0.12	0.3
X	28	L	257146	SR	0.37	0.46	0.46	-0.06	-0.25	-0.23	0.3
X	30	O	348315	SPR	0.37	0.41	0.41	-0.38			1.3
X	31	L	275447	SPR	0.77	0.39	0.39	-0.36			1.8
X	33	L	67544	SR	0.64	0.65	-0.36	-0.26	-0.33	0.65	0.1
X	34	O	79097	SR	0.61	0.50	-0.23	0.50	-0.34	-0.15	0.2
X	35	O	263298	SR	0.62	0.54	0.54	-0.35	-0.31	-0.10	0.2
X	37	O	215926	SR	0.60	0.59	0.59	-0.18	-0.34	-0.31	0.2
X	38	L	79045	SR	0.34	0.31	0.31	-0.10	-0.21	-0.04	0.3
X	39	O	54814	SR	0.92	0.34	-0.21	0.34	-0.19	-0.16	0.2
X	40	L	348434	SR	0.40	0.43	-0.10	0.43	-0.29	-0.21	0.3
X	41	L	133391	SPR	0.65	0.42	0.42	-0.38			1.7
X	42	L	255082	SPR	0.25	0.45	0.45	-0.36			3.4
X	44	L	257108	SR	0.75	0.43	-0.27	-0.27	0.43	-0.12	0.4
X	45	L	257109	SR	0.38	0.22	0.22	-0.22	0.02	-0.07	0.6
X	46	O	366199	SR	0.40	0.44	-0.13	-0.22	-0.19	0.44	0.7
X	47	O	223433	SR	0.76	0.46	-0.29	-0.27	0.46	-0.15	0.3
X	48	L	56689	SR	0.65	0.46	-0.13	0.46	-0.21	-0.34	0.1
X	50	L	361353	SR	0.24	0.29	-0.10	-0.20	0.03	0.29	0.3
X	51	O	268725	SR	0.42	0.51	-0.19	-0.19	0.51	-0.34	0.2
X	53	L	67421	SPR	0.79	0.44	0.44	-0.41			1.2
X	54	L	362278	SR	0.45	0.29	-0.10	-0.20	0.29	-0.11	0.2
X	55	O	50443	SR	0.58	0.49	-0.17	-0.33	0.49	-0.17	0.3
X	56	O	51485	SR	0.46	0.42	-0.13	-0.17	-0.25	0.42	0.4

Table 1.A16 Item Statistics, Operational Items: MD HSA Algebra—May Makeup 1

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
X	58	L	363934	SR	0.54	0.53	-0.24	-0.18	-0.33	0.53	0.2
X	59	L	276436	SR	0.74	0.56	0.56	-0.36	-0.27	-0.23	0.2
X	61	O	361351	SR	0.28	0.20	-0.03	-0.01	-0.24	0.20	0.3
X	62	O	328723	SPR	0.68	0.65	0.65	-0.60			3.0
X	64	L	67458	SR	0.43	0.34	-0.13	-0.04	-0.31	0.34	0.2
X	66	O	56802	SR	0.58	0.45	0.45	-0.23	-0.23	-0.18	0.4
X	67	L	43186	SR	0.59	0.33	-0.05	0.33	-0.26	-0.18	0.3
X	68	L	50388	SR	0.71	0.45	-0.19	-0.24	-0.25	0.45	0.3
X	69	L	67425	SR	0.43	0.26	-0.06	-0.10	0.26	-0.18	0.4
Mean					0.55	0.43	0.09	-0.14	-0.08	-0.02	0.7
SD					0.17	0.10	0.33	0.29	0.28	0.28	0.9

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A17 Item Statistics, Operational Items: MD HSA Algebra—May Makeup 2

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
Y	1	L	363904	SR	0.76	0.44	0.44	-0.32	-0.22	-0.15	0.1
Y	2	O	54730	SR	0.67	0.37	-0.28	-0.18	0.37	-0.13	0.0
Y	3	L	361336	SR	0.80	0.43	-0.20	0.43	-0.16	-0.31	0.1
Y	5	L	362293	SR	0.44	0.38	-0.24	0.38	-0.19	-0.04	0.3
Y	6	L	348443	SPR	0.60	0.52	0.52	-0.49			1.2
Y	8	O	319467	SR	0.54	0.50	-0.29	-0.27	-0.13	0.50	0.1
Y	9	O	79015	SR	0.43	0.35	-0.24	-0.16	0.35	-0.02	0.6
Y	11	L	268732	SR	0.60	0.47	-0.29	-0.31	0.47	-0.08	0.1
Y	12	O	223336	SR	0.51	0.55	-0.07	-0.30	-0.32	0.55	0.1
Y	13	L	260773	SR	0.33	0.38	-0.10	-0.19	-0.13	0.38	0.5
Y	14	O	56366	SR	0.76	0.47	-0.25	-0.24	0.47	-0.25	0.1
Y	16	L	362359	SR	0.48	0.36	-0.16	0.36	-0.27	-0.09	0.2
Y	17	O	54796	SR	0.61	0.46	-0.27	-0.25	-0.15	0.46	0.3
Y	18	O	51419	SPR	0.82	0.45	0.45	-0.41			1.7
Y	19	L	79025	SPR	0.40	0.36	0.36	-0.33			1.3
Y	20	L	51465	SPR	0.62	0.59	0.59	-0.54			3.0
Y	22	O	366244	SR	0.58	0.47	-0.12	-0.25	-0.28	0.47	0.8
Y	23	L	348348	SR	0.54	0.61	0.61	-0.21	-0.27	-0.35	1.0
Y	24	L	79133	SR	0.85	0.42	-0.20	-0.31	0.42	-0.15	0.1
Y	25	O	56538	SR	0.33	0.38	0.38	-0.21	-0.11	-0.16	0.1
Y	27	L	371769	SR	0.59	0.37	-0.14	0.37	-0.28	-0.12	0.3
Y	28	L	257146	SR	0.37	0.46	0.46	-0.06	-0.25	-0.23	0.3
Y	30	O	328777	SPR	0.41	0.40	0.40	-0.38			0.9
Y	31	L	275447	SPR	0.77	0.39	0.39	-0.36			1.8
Y	33	L	67544	SR	0.64	0.65	-0.36	-0.26	-0.33	0.65	0.1
Y	34	O	67546	SR	0.56	0.31	0.02	-0.21	-0.26	0.31	0.0
Y	35	O	133414	SR	0.49	0.60	-0.08	-0.25	-0.43	0.60	0.1
Y	37	O	348436	SR	0.41	0.43	0.43	-0.20	-0.19	-0.14	0.1
Y	38	L	79045	SR	0.34	0.31	0.31	-0.10	-0.21	-0.04	0.3
Y	39	O	132837	SR	0.72	0.40	-0.13	-0.21	0.40	-0.29	0.2
Y	40	L	348434	SR	0.40	0.43	-0.10	0.43	-0.29	-0.21	0.3
Y	41	L	133391	SPR	0.65	0.42	0.42	-0.38			1.7
Y	42	L	255082	SPR	0.25	0.45	0.45	-0.36			3.4
Y	44	L	257108	SR	0.75	0.43	-0.27	-0.27	0.43	-0.12	0.4
Y	45	L	257109	SR	0.38	0.22	0.22	-0.22	0.02	-0.07	0.6
Y	46	O	67473	SR	0.67	0.52	-0.20	0.52	-0.37	-0.23	0.6
Y	47	O	54840	SR	0.87	0.10	-0.12	0.10	-0.11	0.02	0.1
Y	48	L	56689	SR	0.65	0.46	-0.13	0.46	-0.21	-0.34	0.1
Y	50	L	361353	SR	0.24	0.29	-0.10	-0.20	0.03	0.29	0.3
Y	51	O	338671	SR	0.35	0.24	0.24	-0.22	-0.11	0.04	0.1
Y	53	L	67421	SPR	0.79	0.44	0.44	-0.41			1.2
Y	54	L	362278	SR	0.45	0.29	-0.10	-0.20	0.29	-0.11	0.2
Y	55	O	43160	SR	0.74	0.53	0.53	-0.32	-0.28	-0.23	0.2
Y	56	O	67408	SR	0.61	0.51	-0.13	0.51	-0.32	-0.31	0.1

Table 1.A17 Item Statistics, Operational Items: MD HSA Algebra—May Makeup 2

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
Y	58	L	363934	SR	0.54	0.53	-0.24	-0.18	-0.33	0.53	0.2
Y	59	L	276436	SR	0.74	0.56	0.56	-0.36	-0.27	-0.23	0.2
Y	61	O	363914	SR	0.47	0.36	-0.21	-0.17	0.36	-0.11	0.4
Y	62	O	132840	SPR	0.68	0.64	0.64	-0.61			1.5
Y	64	L	67458	SR	0.43	0.34	-0.13	-0.04	-0.31	0.34	0.2
Y	66	O	67487	SR	0.69	0.52	-0.29	-0.23	-0.26	0.52	0.3
Y	67	L	43186	SR	0.59	0.33	-0.05	0.33	-0.26	-0.18	0.3
Y	68	L	50388	SR	0.71	0.45	-0.19	-0.24	-0.25	0.45	0.3
Y	69	L	67425	SR	0.43	0.26	-0.06	-0.10	0.26	-0.18	0.4
Mean					0.57	0.43	0.06	-0.14	-0.09	0.03	0.6
SD					0.16	0.11	0.32	0.28	0.28	0.31	0.7

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A18 Item Statistics, Operational Items: MD HSA Biology—May Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
D-H	1	L	133458	SR	0.72	0.47	-0.19	-0.21	-0.33	0.47	0.0
D-H	2	O	214520	SR	0.87	0.37	-0.15	-0.23	-0.22	0.37	0.0
D-H	3	L	364210	SR	0.88	0.33	-0.09	-0.30	0.33	-0.09	0.0
D-H	4	L	373058	SR	0.54	0.39	0.39	-0.27	-0.13	-0.13	0.1
D-H	5	L	373057	SR	0.34	0.43	-0.25	-0.23	0.43	-0.07	0.0
D-H	6	L	263179	SR	0.68	0.54	-0.23	-0.25	-0.34	0.54	0.0
D-H	7	O	263178	SR	0.44	0.45	-0.20	-0.28	-0.24	0.45	0.0
D-H	10	L	52481	SR	0.52	0.43	-0.20	-0.21	0.43	-0.18	0.1
D-H	11	O	55051	SR	0.94	0.26	-0.13	0.26	-0.18	-0.14	0.0
D-H	12	O	223418	SR	0.36	0.28	-0.09	0.28	-0.16	-0.12	0.1
D-H	13	L	133461	SR	0.80	0.28	0.28	-0.18	-0.17	-0.13	0.0
D-H	14	L	133462	SR	0.75	0.45	0.45	-0.23	-0.21	-0.27	0.0
D-H	17	O	215956	SR	0.43	0.31	-0.15	-0.14	0.31	-0.14	0.1
D-H	18	L	215943	SR	0.67	0.48	-0.17	0.48	-0.33	-0.26	0.1
D-H	22	O	279848	SR	0.30	0.24	-0.03	-0.23	0.24	0.02	0.1
D-H	23	L	55200	SR	0.60	0.55	-0.23	-0.22	-0.36	0.55	0.1
D-H	24	O	108570	SR	0.64	0.44	-0.20	0.44	-0.24	-0.25	0.1
D-H	25	L	223439	SR	0.59	0.55	-0.17	-0.27	0.55	-0.37	0.1
D-H	26	O	223438	SR	0.50	0.22	0.22	-0.07	-0.19	-0.11	0.1
D-H	27	L	260080	SR	0.47	0.46	-0.20	-0.15	-0.28	0.46	0.1
D-H	28	O	79430	SR	0.77	0.46	0.46	-0.25	-0.28	-0.20	0.1
D-H	29	L	136093	SR	0.27	0.28	-0.08	-0.15	0.28	-0.11	0.2
D-H	30	L	136094	SR	0.65	0.45	-0.15	0.45	-0.35	-0.16	0.1
D-H	32	O	79443	SR	0.62	0.50	0.50	-0.24	-0.22	-0.29	0.2
D-H	33	O	108597	SR	0.66	0.45	-0.22	0.45	-0.25	-0.26	0.2
D-H	34	L	363016	SR	0.67	0.34	-0.12	0.34	-0.20	-0.23	0.1
D-H	35	O	352583	SR	0.76	0.44	-0.20	-0.23	-0.27	0.44	0.1
D-H	36	L	55195	SR	0.31	0.46	-0.08	-0.28	-0.16	0.46	0.2
D-H	37	L	55196	SR	0.60	0.37	0.37	-0.24	-0.20	-0.20	0.1
D-H	38	L	279669	SR	0.73	0.39	-0.13	0.39	-0.27	-0.19	0.1
D-H	39	L	279514	SR	0.74	0.45	0.45	-0.24	-0.29	-0.16	0.1
D-H	40	L	362991	SR	0.81	0.49	0.49	-0.30	-0.29	-0.21	0.1
D-H	41	O	57093	SR	0.58	0.32	0.32	-0.21	-0.12	-0.22	0.1
D-H	44	O	52765	SR	0.83	0.45	-0.19	-0.30	-0.25	0.45	0.1
D-H	45	O	241129	SR	0.65	0.25	-0.09	-0.10	-0.18	0.25	0.1
D-H	46	L	373096	SR	0.65	0.44	-0.23	0.44	-0.29	-0.19	0.1
D-H	47	L	373095	SR	0.67	0.36	-0.19	-0.17	0.36	-0.19	0.1
D-H	50	L	53479	SR	0.75	0.38	-0.19	0.38	-0.26	-0.21	0.1
D-H	51	L	108644	SR	0.78	0.43	0.43	-0.24	-0.22	-0.24	0.1
D-H	52	L	108672	SR	0.56	0.54	-0.26	-0.17	-0.33	0.54	0.1
D-H	53	L	332016	SR	0.41	0.42	-0.20	-0.16	-0.19	0.42	0.1
D-H	54	O	332015	SR	0.70	0.48	-0.25	0.48	-0.29	-0.19	0.1
D-H	55	L	373052	SR	0.50	0.38	-0.18	-0.17	0.38	-0.16	0.1
D-H	56	O	373055	SR	0.53	0.45	0.45	-0.28	-0.27	-0.08	0.1

Table 1.A18 Item Statistics, Operational Items: MD HSA Biology—May Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
D-H	58	O	52771	SR	0.61	0.54	-0.35	-0.19	0.54	-0.25	0.1
D-H	59	L	271074	SR	0.53	0.43	-0.19	-0.17	-0.26	0.43	0.1
D-H	60	O	271075	SR	0.53	0.55	-0.22	-0.35	0.55	-0.22	0.1
D-H	61	L	108486	SR	0.70	0.22	0.22	-0.04	-0.15	-0.15	0.1
D-H	62	L	79291	SR	0.38	0.37	0.37	-0.06	-0.29	-0.12	0.2
D-H	65	L	60547	SR	0.29	0.28	0.28	-0.22	-0.13	-0.11	0.2
D-H	66	L	331349	SR	0.67	0.51	-0.25	-0.26	-0.27	0.51	0.2
D-H	67	L	133051	SR	0.80	0.31	-0.17	0.31	-0.15	-0.18	0.1
D-H	68	L	133049	SR	0.74	0.31	-0.16	0.31	-0.24	-0.13	0.1
D-H	69	L	271070	SR	0.65	0.51	0.51	-0.26	-0.24	-0.29	0.1
D-H	70	O	64702	SR	0.56	0.47	0.47	-0.23	-0.23	-0.19	0.1
D-H	71	O	52680	SR	0.64	0.48	-0.24	-0.30	0.48	-0.18	0.1
D-H	72	L	349030	SR	0.36	0.32	-0.07	0.32	-0.14	-0.17	0.1
D-H	73	O	349032	SR	0.41	0.39	-0.22	-0.29	-0.01	0.39	0.2
D-H	74	L	68261	SR	0.57	0.40	-0.18	-0.25	0.40	-0.21	0.1
D-H	75	L	68259	SR	0.64	0.31	-0.14	-0.21	-0.22	0.31	0.1
D-H	77	O	64703	SR	0.66	0.49	-0.24	0.49	-0.30	-0.19	0.1
D-H	78	L	68145	SR	0.51	0.45	0.45	-0.16	-0.13	-0.35	0.1
D-H	79	L	223445	SR	0.76	0.49	-0.22	0.49	-0.34	-0.20	0.1
D-H	80	L	223446	SR	0.65	0.57	-0.28	-0.27	-0.33	0.57	0.1
D-H	81	L	64990	SR	0.89	0.29	0.29	-0.15	-0.15	-0.20	0.1
D-H	82	L	322197	SR	0.45	0.56	-0.17	-0.19	0.56	-0.35	0.1
D-H	86	O	65107	SR	0.68	0.49	-0.26	-0.27	0.49	-0.22	0.1
D-H	88	O	79509	SR	0.57	0.41	-0.17	-0.27	0.41	-0.13	0.1
D-H	91	O	57164	SR	0.84	0.44	-0.23	-0.28	-0.20	0.44	0.1
D-H	92	O	288200	SR	0.48	0.44	-0.22	-0.17	0.44	-0.22	0.1
D-H	94	O	271000	SR	0.66	0.51	-0.25	0.51	-0.34	-0.15	0.1
D-H	95	L	270999	SR	0.53	0.46	0.46	-0.30	-0.25	-0.05	0.1
D-H	96	O	279582	SR	0.64	0.34	-0.28	0.34	-0.24	-0.07	0.1
D-H	97	O	279609	SR	0.56	0.33	0.03	0.33	-0.32	-0.23	0.1
D-H	98	L	369463	SR	0.67	0.50	-0.30	0.50	-0.27	-0.20	0.1
D-H	99	L	369449	SR	0.51	0.53	-0.24	-0.20	-0.27	0.53	0.2
Mean					0.61	0.42	-0.03	-0.06	-0.09	-0.02	0.1
SD					0.15	0.09	0.27	0.28	0.29	0.29	0.0

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A19 Item Statistics, Operational Items: MD HSA Biology—May Makeup 1

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
X	1	L	133458	SR	0.72	0.47	-0.19	-0.21	-0.33	0.47	0.0
X	2	O	52599	SR	0.64	0.40	-0.22	0.40	-0.15	-0.22	0.0
X	3	L	364210	SR	0.88	0.33	-0.09	-0.30	0.33	-0.09	0.0
X	4	L	373058	SR	0.54	0.39	0.39	-0.27	-0.13	-0.13	0.1
X	5	L	373057	SR	0.34	0.43	-0.25	-0.23	0.43	-0.07	0.0
X	6	L	263179	SR	0.68	0.54	-0.23	-0.25	-0.34	0.54	0.0
X	7	O	263178	SR	0.44	0.45	-0.20	-0.28	-0.24	0.45	0.0
X	10	L	52481	SR	0.52	0.43	-0.20	-0.21	0.43	-0.18	0.1
X	11	O	55051	SR	0.94	0.26	-0.13	0.26	-0.18	-0.14	0.0
X	12	O	260077	SR	0.59	0.52	-0.28	-0.31	0.52	-0.15	0.1
X	13	L	133461	SR	0.80	0.28	0.28	-0.18	-0.17	-0.13	0.0
X	14	L	133462	SR	0.75	0.45	0.45	-0.23	-0.21	-0.27	0.0
X	17	O	215956	SR	0.43	0.31	-0.15	-0.14	0.31	-0.14	0.1
X	18	L	215943	SR	0.67	0.48	-0.17	0.48	-0.33	-0.26	0.1
X	22	O	279848	SR	0.30	0.24	-0.03	-0.23	0.24	0.02	0.1
X	23	L	55200	SR	0.60	0.55	-0.23	-0.22	-0.36	0.55	0.1
X	24	O	79442	SR	0.45	0.57	-0.35	-0.14	0.57	-0.22	0.1
X	25	L	223439	SR	0.59	0.55	-0.17	-0.27	0.55	-0.37	0.1
X	26	O	223438	SR	0.50	0.22	0.22	-0.07	-0.19	-0.11	0.1
X	27	L	260080	SR	0.47	0.46	-0.20	-0.15	-0.28	0.46	0.1
X	28	O	79430	SR	0.77	0.46	0.46	-0.25	-0.28	-0.20	0.1
X	29	L	136093	SR	0.27	0.28	-0.08	-0.15	0.28	-0.11	0.2
X	30	L	136094	SR	0.65	0.45	-0.15	0.45	-0.35	-0.16	0.1
X	32	O	79437	SR	0.67	0.52	0.52	-0.29	-0.29	-0.21	0.1
X	33	O	279615	SR	0.53	0.56	-0.36	-0.23	-0.20	0.56	0.1
X	34	L	363016	SR	0.67	0.34	-0.12	0.34	-0.20	-0.23	0.1
X	35	O	352583	SR	0.76	0.44	-0.20	-0.23	-0.27	0.44	0.1
X	36	L	55195	SR	0.31	0.46	-0.08	-0.28	-0.16	0.46	0.2
X	37	L	55196	SR	0.60	0.37	0.37	-0.24	-0.20	-0.20	0.1
X	38	L	279669	SR	0.73	0.39	-0.13	0.39	-0.27	-0.19	0.1
X	39	L	279514	SR	0.74	0.45	0.45	-0.24	-0.29	-0.16	0.1
X	40	L	362991	SR	0.81	0.49	0.49	-0.30	-0.29	-0.21	0.1
X	41	O	52621	SR	0.54	0.49	-0.23	0.49	-0.27	-0.20	0.1
X	44	O	52765	SR	0.83	0.45	-0.19	-0.30	-0.25	0.45	0.1
X	45	O	214525	SR	0.46	0.46	0.46	-0.25	-0.35	-0.06	0.1
X	46	L	373096	SR	0.65	0.44	-0.23	0.44	-0.29	-0.19	0.1
X	47	L	373095	SR	0.67	0.36	-0.19	-0.17	0.36	-0.19	0.1
X	50	L	53479	SR	0.75	0.38	-0.19	0.38	-0.26	-0.21	0.1
X	51	L	108644	SR	0.78	0.43	0.43	-0.24	-0.22	-0.24	0.1
X	52	L	108672	SR	0.56	0.54	-0.26	-0.17	-0.33	0.54	0.1
X	53	L	332016	SR	0.41	0.42	-0.20	-0.16	-0.19	0.42	0.1
X	54	O	332015	SR	0.70	0.48	-0.25	0.48	-0.29	-0.19	0.1
X	55	L	373052	SR	0.50	0.38	-0.18	-0.17	0.38	-0.16	0.1
X	56	O	373051	SR	0.64	0.42	-0.24	0.42	-0.29	-0.11	0.1

Table 1.A19 Item Statistics, Operational Items: MD HSA Biology—May Makeup 1

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
X	58	O	52771	SR	0.61	0.54	-0.35	-0.19	0.54	-0.25	0.1
X	59	L	271074	SR	0.53	0.43	-0.19	-0.17	-0.26	0.43	0.1
X	60	O	271075	SR	0.53	0.55	-0.22	-0.35	0.55	-0.22	0.1
X	61	L	108486	SR	0.70	0.22	0.22	-0.04	-0.15	-0.15	0.1
X	62	L	79291	SR	0.38	0.37	0.37	-0.06	-0.29	-0.12	0.2
X	65	L	60547	SR	0.29	0.28	0.28	-0.22	-0.13	-0.11	0.2
X	66	L	331349	SR	0.67	0.51	-0.25	-0.26	-0.27	0.51	0.2
X	67	L	133051	SR	0.80	0.31	-0.17	0.31	-0.15	-0.18	0.1
X	68	L	133049	SR	0.74	0.31	-0.16	0.31	-0.24	-0.13	0.1
X	69	L	271070	SR	0.65	0.51	0.51	-0.26	-0.24	-0.29	0.1
X	70	O	64702	SR	0.56	0.47	0.47	-0.23	-0.23	-0.19	0.1
X	71	O	79489	SR	0.51	0.53	-0.19	-0.26	-0.28	0.53	0.1
X	72	L	349030	SR	0.36	0.32	-0.07	0.32	-0.14	-0.17	0.1
X	73	O	349031	SR	0.51	0.42	-0.17	-0.29	0.42	-0.10	0.3
X	74	L	68261	SR	0.57	0.40	-0.18	-0.25	0.40	-0.21	0.1
X	75	L	68259	SR	0.64	0.31	-0.14	-0.21	-0.22	0.31	0.1
X	77	O	79461	SR	0.47	0.35	0.35	-0.16	-0.24	-0.15	0.2
X	78	L	68145	SR	0.51	0.45	0.45	-0.16	-0.13	-0.35	0.1
X	79	L	223445	SR	0.76	0.49	-0.22	0.49	-0.34	-0.20	0.1
X	80	L	223446	SR	0.65	0.57	-0.28	-0.27	-0.33	0.57	0.1
X	81	L	64990	SR	0.89	0.29	0.29	-0.15	-0.15	-0.20	0.1
X	82	L	322197	SR	0.45	0.56	-0.17	-0.19	0.56	-0.35	0.1
X	86	O	65070	SR	0.50	0.62	-0.33	-0.28	-0.22	0.62	0.1
X	88	O	60552	SR	0.78	0.36	-0.18	-0.22	0.36	-0.18	0.1
X	91	O	57164	SR	0.84	0.44	-0.23	-0.28	-0.20	0.44	0.1
X	92	O	288200	SR	0.48	0.44	-0.22	-0.17	0.44	-0.22	0.1
X	94	O	271001	SR	0.30	0.33	0.33	-0.21	-0.04	-0.18	0.2
X	95	L	270999	SR	0.53	0.46	0.46	-0.30	-0.25	-0.05	0.1
X	96	O	279582	SR	0.64	0.34	-0.28	0.34	-0.24	-0.07	0.1
X	97	O	279611	SR	0.61	0.30	-0.02	-0.19	0.30	-0.25	0.1
X	98	L	369463	SR	0.67	0.50	-0.30	0.50	-0.27	-0.20	0.1
X	99	L	369449	SR	0.51	0.53	-0.24	-0.20	-0.27	0.53	0.2
Mean					0.60	0.42	-0.04	-0.08	-0.08	-0.01	0.1
SD					0.15	0.09	0.28	0.27	0.30	0.30	0.0

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A20 Item Statistics, Operational Items: MD HSA Biology—May Makeup 2

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
Y	1	L	133458	SR	0.72	0.47	-0.19	-0.21	-0.33	0.47	0.0
Y	2	O	214520	SR	0.87	0.37	-0.15	-0.23	-0.22	0.37	0.0
Y	3	L	364210	SR	0.88	0.33	-0.09	-0.30	0.33	-0.09	0.0
Y	4	L	373058	SR	0.54	0.39	0.39	-0.27	-0.13	-0.13	0.1
Y	5	L	373057	SR	0.34	0.43	-0.25	-0.23	0.43	-0.07	0.0
Y	6	L	263179	SR	0.68	0.54	-0.23	-0.25	-0.34	0.54	0.0
Y	7	O	263167	SR	0.58	0.57	-0.33	-0.28	0.57	-0.24	0.0
Y	10	L	52481	SR	0.52	0.43	-0.20	-0.21	0.43	-0.18	0.1
Y	11	O	56982	SR	0.84	0.39	-0.16	-0.22	0.39	-0.26	0.0
Y	12	O	223418	SR	0.36	0.28	-0.09	0.28	-0.16	-0.12	0.1
Y	13	L	133461	SR	0.80	0.28	0.28	-0.18	-0.17	-0.13	0.0
Y	14	L	133462	SR	0.75	0.45	0.45	-0.23	-0.21	-0.27	0.0
Y	17	O	215955	SR	0.78	0.42	-0.21	0.42	-0.27	-0.18	0.0
Y	18	L	215943	SR	0.67	0.48	-0.17	0.48	-0.33	-0.26	0.1
Y	22	O	52551	SR	0.52	0.45	0.45	-0.30	-0.16	-0.24	0.0
Y	23	L	55200	SR	0.60	0.55	-0.23	-0.22	-0.36	0.55	0.1
Y	24	O	108570	SR	0.64	0.44	-0.20	0.44	-0.24	-0.25	0.1
Y	25	L	223439	SR	0.59	0.55	-0.17	-0.27	0.55	-0.37	0.1
Y	26	O	223440	SR	0.39	0.34	0.34	-0.06	-0.21	-0.14	0.1
Y	27	L	260080	SR	0.47	0.46	-0.20	-0.15	-0.28	0.46	0.1
Y	28	O	68286	SR	0.26	0.30	0.30	0.00	-0.34	-0.07	0.1
Y	29	L	136093	SR	0.27	0.28	-0.08	-0.15	0.28	-0.11	0.2
Y	30	L	136094	SR	0.65	0.45	-0.15	0.45	-0.35	-0.16	0.1
Y	32	O	79443	SR	0.62	0.50	0.50	-0.24	-0.22	-0.29	0.2
Y	33	O	108597	SR	0.66	0.45	-0.22	0.45	-0.25	-0.26	0.2
Y	34	L	363016	SR	0.67	0.34	-0.12	0.34	-0.20	-0.23	0.1
Y	35	O	338759	SR	0.81	0.47	-0.24	-0.27	0.47	-0.27	0.0
Y	36	L	55195	SR	0.31	0.46	-0.08	-0.28	-0.16	0.46	0.2
Y	37	L	55196	SR	0.60	0.37	0.37	-0.24	-0.20	-0.20	0.1
Y	38	L	279669	SR	0.73	0.39	-0.13	0.39	-0.27	-0.19	0.1
Y	39	L	279514	SR	0.74	0.45	0.45	-0.24	-0.29	-0.16	0.1
Y	40	L	362991	SR	0.81	0.49	0.49	-0.30	-0.29	-0.21	0.1
Y	41	O	57093	SR	0.58	0.32	0.32	-0.21	-0.12	-0.22	0.1
Y	44	O	68196	SR	0.8	0.44	-0.32	-0.16	-0.20	0.44	0.0
Y	45	O	241129	SR	0.65	0.25	-0.09	-0.10	-0.18	0.25	0.1
Y	46	L	373096	SR	0.65	0.44	-0.23	0.44	-0.29	-0.19	0.1
Y	47	L	373095	SR	0.67	0.36	-0.19	-0.17	0.36	-0.19	0.1
Y	50	L	53479	SR	0.75	0.38	-0.19	0.38	-0.26	-0.21	0.1
Y	51	L	108644	SR	0.78	0.43	0.43	-0.24	-0.22	-0.24	0.1
Y	52	L	108672	SR	0.56	0.54	-0.26	-0.17	-0.33	0.54	0.1
Y	53	L	332016	SR	0.41	0.42	-0.20	-0.16	-0.19	0.42	0.1
Y	54	O	332017	SR	0.49	0.46	-0.20	-0.17	0.46	-0.25	0.0
Y	55	L	373052	SR	0.50	0.38	-0.18	-0.17	0.38	-0.16	0.1
Y	56	O	373055	SR	0.53	0.45	0.45	-0.28	-0.27	-0.08	0.1

Table 1.A20 Item Statistics, Operational Items: MD HSA Biology—May Makeup 2

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
Y	58	O	57103	SR	0.68	0.53	-0.23	-0.37	-0.24	0.53	0.0
Y	59	L	271074	SR	0.53	0.43	-0.19	-0.17	-0.26	0.43	0.1
Y	60	O	271073	SR	0.53	0.42	0.42	-0.15	-0.34	-0.12	0.1
Y	61	L	108486	SR	0.70	0.22	0.22	-0.04	-0.15	-0.15	0.1
Y	62	L	79291	SR	0.38	0.37	0.37	-0.06	-0.29	-0.12	0.2
Y	65	L	60547	SR	0.29	0.28	0.28	-0.22	-0.13	-0.11	0.2
Y	66	L	331349	SR	0.67	0.51	-0.25	-0.26	-0.27	0.51	0.2
Y	67	L	133051	SR	0.80	0.31	-0.17	0.31	-0.15	-0.18	0.1
Y	68	L	133049	SR	0.74	0.31	-0.16	0.31	-0.24	-0.13	0.1
Y	69	L	271070	SR	0.65	0.51	0.51	-0.26	-0.24	-0.29	0.1
Y	70	O	52707	SR	0.77	0.49	-0.22	-0.33	0.49	-0.22	0.1
Y	71	O	52680	SR	0.64	0.48	-0.24	-0.30	0.48	-0.18	0.1
Y	72	L	349030	SR	0.36	0.32	-0.07	0.32	-0.14	-0.17	0.1
Y	73	O	349032	SR	0.41	0.39	-0.22	-0.29	-0.01	0.39	0.2
Y	74	L	68261	SR	0.57	0.40	-0.18	-0.25	0.40	-0.21	0.1
Y	75	L	68259	SR	0.64	0.31	-0.14	-0.21	-0.22	0.31	0.1
Y	77	O	64703	SR	0.66	0.49	-0.24	0.49	-0.30	-0.19	0.1
Y	78	L	68145	SR	0.51	0.45	0.45	-0.16	-0.13	-0.35	0.1
Y	79	L	223445	SR	0.76	0.49	-0.22	0.49	-0.34	-0.20	0.1
Y	80	L	223446	SR	0.65	0.57	-0.28	-0.27	-0.33	0.57	0.1
Y	81	L	64990	SR	0.89	0.29	0.29	-0.15	-0.15	-0.20	0.1
Y	82	L	322197	SR	0.45	0.56	-0.17	-0.19	0.56	-0.35	0.1
Y	86	O	65107	SR	0.68	0.49	-0.26	-0.27	0.49	-0.22	0.1
Y	88	O	79509	SR	0.57	0.41	-0.17	-0.27	0.41	-0.13	0.1
Y	91	O	79480	SR	0.80	0.37	-0.17	0.37	-0.27	-0.17	0.1
Y	92	O	279600	SR	0.58	0.48	-0.23	-0.21	-0.26	0.48	0.1
Y	94	O	271000	SR	0.66	0.51	-0.25	0.51	-0.34	-0.15	0.1
Y	95	L	270999	SR	0.53	0.46	0.46	-0.30	-0.25	-0.05	0.1
Y	96	O	338754	SR	0.64	0.60	-0.35	-0.27	0.60	-0.27	0.1
Y	97	O	279609	SR	0.56	0.33	0.03	0.33	-0.32	-0.23	0.1
Y	98	L	369463	SR	0.67	0.50	-0.30	0.50	-0.27	-0.20	0.1
Y	99	L	369449	SR	0.51	0.53	-0.24	-0.20	-0.27	0.53	0.2
		Mean			0.61	0.42	-0.03	-0.06	-0.08	-0.04	0.1
		SD			0.15	0.09	0.27	0.28	0.30	0.29	0.0

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A21 Item Statistics, Operational Items: MD HSA English—May Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
D-H	1	O	96184	SR	0.69	0.44	-0.22	-0.29	0.44	-0.20	0.0
D-H	2	O	96185	SR	0.47	0.19	0.00	-0.14	0.19	-0.15	0.0
D-H	3	O	96182	SR	0.61	0.49	-0.21	-0.31	0.49	-0.18	0.1
D-H	4	O	96183	SR	0.70	0.30	-0.17	0.30	-0.18	-0.15	0.0
D-H	5	O	96186	SR	0.83	0.42	0.42	-0.26	-0.24	-0.21	0.1
D-H	9	L	281440	SR	0.73	0.43	-0.17	-0.30	0.43	-0.21	0.0
D-H	10	L	281435	SR	0.91	0.45	0.45	-0.24	-0.29	-0.21	0.1
D-H	11	L	281436	SR	0.74	0.25	-0.18	0.25	-0.17	-0.08	0.1
D-H	12	L	281437	SR	0.80	0.40	-0.28	-0.15	-0.24	0.40	0.1
D-H	13	L	281442	SR	0.40	0.29	-0.08	-0.20	-0.20	0.29	0.1
D-H	14	L	281444	SR	0.55	0.45	-0.23	-0.25	0.45	-0.17	0.1
D-H	15	L	281443	SR	0.74	0.31	-0.14	-0.22	0.31	-0.19	0.1
D-H	16	L	281445	SR	0.60	0.48	-0.14	0.48	-0.32	-0.22	0.1
D-H	18	O	272946	SR	0.76	0.47	0.47	-0.22	-0.24	-0.27	0.1
D-H	19	L	251152	SR	0.81	0.45	-0.27	-0.27	0.45	-0.16	0.1
D-H	20	L	272868	SR	0.67	0.40	0.40	-0.20	-0.27	-0.11	0.1
D-H	23	L	223365	SR	0.82	0.47	-0.32	-0.23	-0.20	0.47	0.3
D-H	24	L	223366	SR	0.59	0.39	0.39	-0.17	-0.22	-0.16	0.3
D-H	25	L	223367	SR	0.51	0.32	-0.13	-0.11	-0.17	0.32	0.4
D-H	26	L	223318	SR	0.83	0.44	-0.26	-0.25	-0.24	0.44	0.3
D-H	27	L	215898	SR	0.38	0.33	0.33	-0.23	-0.27	-0.04	0.6
D-H	28	L	215896	SR	0.65	0.40	-0.23	0.40	-0.16	-0.18	0.8
D-H	29	L	215894	SR	0.53	0.39	-0.20	-0.02	-0.34	0.39	0.8
D-H	30	L	215895	SR	0.55	0.18	-0.20	-0.11	0.18	0.00	0.9
D-H	31	L	215897	SR	0.70	0.45	-0.23	-0.24	0.45	-0.21	1.0
D-H	32	L	215908	SR	0.79	0.51	0.51	-0.28	-0.29	-0.23	1.0
D-H	33	O	130214	SR	0.83	0.37	-0.18	0.37	-0.26	-0.18	0.1
D-H	34	O	96105	SR	0.74	0.39	0.39	-0.22	-0.23	-0.22	0.1
D-H	35	O	130257	SR	0.80	0.48	0.48	-0.23	-0.26	-0.28	0.1
D-H	53	L	338918	SR	0.77	0.41	-0.24	-0.17	0.41	-0.26	0.1
D-H	54	L	338919	SR	0.85	0.47	0.47	-0.27	-0.27	-0.22	0.1
D-H	55	L	338920	SR	0.62	0.32	-0.09	-0.20	0.32	-0.19	0.1
D-H	61	O	332088	SR	0.80	0.48	0.48	-0.28	-0.28	-0.20	0.3
D-H	62	O	331810	SR	0.62	0.52	-0.24	-0.24	-0.26	0.52	0.3
D-H	63	O	331812	SR	0.64	0.46	0.46	-0.21	-0.20	-0.27	0.3
D-H	64	O	332089	SR	0.82	0.30	-0.25	-0.17	0.30	-0.10	0.3
D-H	65	O	331814	SR	0.71	0.46	-0.26	0.46	-0.29	-0.18	0.4
D-H	66	O	331811	SR	0.72	0.46	-0.24	-0.27	0.46	-0.20	0.4
D-H	67	O	331813	SR	0.75	0.48	-0.21	-0.28	-0.27	0.48	0.4
D-H	68	O	331839	SR	0.70	0.47	-0.19	-0.30	0.47	-0.22	0.1
D-H	69	O	331840	SR	0.39	0.35	0.35	-0.15	-0.18	-0.08	0.2
D-H	70	O	331835	SR	0.60	0.52	0.52	-0.29	-0.32	-0.23	0.1
D-H	71	O	331834	SR	0.69	0.43	-0.18	0.43	-0.28	-0.17	0.1
D-H	72	O	331836	SR	0.78	0.33	-0.29	-0.26	0.33	-0.04	0.1

Table 1.A21 Item Statistics, Operational Items: MD HSA English—May Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
D-H	73	O	331837	SR	0.41	0.29	-0.16	0.29	-0.17	-0.08	0.1
D-H	74	L	323230	SR	0.53	0.21	-0.12	-0.14	0.21	-0.05	0.2
D-H	75	L	323234	SR	0.81	0.49	0.49	-0.30	-0.24	-0.23	0.1
D-H	76	L	323359	SR	0.57	0.42	-0.21	0.42	-0.19	-0.20	0.2
D-H	77	L	323227	SR	0.68	0.47	-0.24	0.47	-0.29	-0.15	0.2
D-H	78	L	323232	SR	0.69	0.55	-0.22	-0.32	0.55	-0.29	0.2
D-H	79	L	323360	SR	0.39	0.30	-0.15	-0.03	-0.16	0.30	0.2
D-H	80	L	323358	SR	0.58	0.44	-0.25	-0.26	-0.13	0.44	0.2
D-H	81	L	323226	SR	0.69	0.42	0.42	-0.36	-0.09	-0.18	0.1
D-H	82	L	323223	SR	0.74	0.53	-0.26	-0.34	-0.25	0.53	0.2
D-H	83	L	323233	SR	0.75	0.46	0.46	-0.26	-0.25	-0.24	0.2
D-H	84	O	338921	SR	0.68	0.54	0.54	-0.37	-0.21	-0.24	0.1
D-H	85	O	338922	SR	0.84	0.48	-0.25	-0.26	-0.28	0.48	0.2
D-H	96	L	256431	SR	0.63	0.39	-0.10	-0.30	0.39	-0.18	0.3
D-H	97	L	256432	SR	0.66	0.38	-0.20	-0.26	-0.17	0.38	0.3
D-H	98	L	256433	SR	0.53	0.40	-0.11	-0.23	-0.21	0.40	0.3
Mean					0.67	0.41	0.00	-0.13	-0.05	-0.04	0.2
SD					0.13	0.09	0.30	0.24	0.29	0.26	0.2

Note. Tabled item position number is based on Form D and varies somewhat on Forms E-N.
Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A22 Item Statistics, Operational Items: MD HSA English—May Makeup 1

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
X	1	O	108731	SR	0.74	0.43	-0.34	-0.20	0.43	-0.12	0.0
X	2	O	108732	SR	0.55	0.21	-0.20	-0.15	-0.05	0.21	0.0
X	3	O	108735	SR	0.73	0.38	-0.16	-0.23	-0.21	0.38	0.0
X	4	O	108733	SR	0.64	0.46	0.46	-0.27	-0.28	-0.14	0.1
X	5	O	108734	SR	0.45	0.29	-0.18	0.29	-0.26	0.00	0.0
X	9	L	281440	SR	0.73	0.43	-0.17	-0.30	0.43	-0.21	0.0
X	10	L	281435	SR	0.91	0.45	0.45	-0.24	-0.29	-0.21	0.1
X	11	L	281436	SR	0.74	0.25	-0.18	0.25	-0.17	-0.08	0.1
X	12	L	281437	SR	0.80	0.40	-0.28	-0.15	-0.24	0.40	0.1
X	13	L	281442	SR	0.40	0.29	-0.08	-0.20	-0.20	0.29	0.1
X	14	L	281444	SR	0.55	0.45	-0.23	-0.25	0.45	-0.17	0.1
X	15	L	281443	SR	0.74	0.31	-0.14	-0.22	0.31	-0.19	0.1
X	16	L	281445	SR	0.60	0.48	-0.14	0.48	-0.32	-0.22	0.1
X	18	O	272946	SR	0.76	0.47	0.47	-0.22	-0.24	-0.27	0.1
X	19	L	251152	SR	0.81	0.45	-0.27	-0.27	0.45	-0.16	0.1
X	20	L	272868	SR	0.67	0.40	0.40	-0.20	-0.27	-0.11	0.1
X	23	L	223365	SR	0.82	0.47	-0.32	-0.23	-0.20	0.47	0.3
X	24	L	223366	SR	0.59	0.39	0.39	-0.17	-0.22	-0.16	0.3
X	25	L	223367	SR	0.51	0.32	-0.13	-0.11	-0.17	0.32	0.4
X	26	L	223318	SR	0.83	0.44	-0.26	-0.25	-0.24	0.44	0.3
X	27	L	215898	SR	0.38	0.33	0.33	-0.23	-0.27	-0.04	0.6
X	28	L	215896	SR	0.65	0.40	-0.23	0.40	-0.16	-0.18	0.8
X	29	L	215894	SR	0.53	0.39	-0.20	-0.02	-0.34	0.39	0.8
X	30	L	215895	SR	0.55	0.18	-0.20	-0.11	0.18	0.00	0.9
X	31	L	215897	SR	0.70	0.45	-0.23	-0.24	0.45	-0.21	1.0
X	32	L	215908	SR	0.79	0.51	0.51	-0.28	-0.29	-0.23	1.0
X	33	O	130214	SR	0.83	0.37	-0.18	0.37	-0.26	-0.18	0.1
X	34	O	96105	SR	0.74	0.39	0.39	-0.22	-0.23	-0.22	0.1
X	35	O	130257	SR	0.80	0.48	0.48	-0.23	-0.26	-0.28	0.1
X	53	L	338918	SR	0.77	0.41	-0.24	-0.17	0.41	-0.26	0.1
X	54	L	338919	SR	0.85	0.47	0.47	-0.27	-0.27	-0.22	0.1
X	55	L	338920	SR	0.62	0.32	-0.09	-0.20	0.32	-0.19	0.1
X	61	O	285449	SR	0.24	0.17	0.04	-0.01	0.17	-0.26	0.2
X	62	O	285450	SR	0.53	0.30	-0.04	-0.25	0.30	-0.17	0.2
X	63	O	285442	SR	0.75	0.45	-0.24	0.45	-0.29	-0.19	0.2
X	64	O	285447	SR	0.72	0.41	-0.07	0.41	-0.25	-0.31	0.2
X	65	O	285452	SR	0.57	0.47	-0.19	-0.33	-0.12	0.47	0.3
X	66	O	285443	SR	0.44	0.42	-0.17	-0.27	0.42	-0.13	0.2
X	67	O	285444	SR	0.72	0.50	-0.31	-0.23	0.50	-0.23	0.3
X	68	O	331839	SR	0.70	0.47	-0.19	-0.30	0.47	-0.22	0.1
X	69	O	331840	SR	0.39	0.35	0.35	-0.15	-0.18	-0.08	0.2
X	70	O	331835	SR	0.60	0.52	0.52	-0.29	-0.32	-0.23	0.1
X	71	O	331834	SR	0.69	0.43	-0.18	0.43	-0.28	-0.17	0.1
X	72	O	331836	SR	0.78	0.33	-0.29	-0.26	0.33	-0.04	0.1

Table 1.A22 Item Statistics, Operational Items: MD HSA English—May Makeup 1

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
X	73	O	331837	SR	0.41	0.29	-0.16	0.29	-0.17	-0.08	0.1
X	74	L	323230	SR	0.53	0.21	-0.12	-0.14	0.21	-0.05	0.2
X	75	L	323234	SR	0.81	0.49	0.49	-0.30	-0.24	-0.23	0.1
X	76	L	323359	SR	0.57	0.42	-0.21	0.42	-0.19	-0.20	0.2
X	77	L	323227	SR	0.68	0.47	-0.24	0.47	-0.29	-0.15	0.2
X	78	L	323232	SR	0.69	0.55	-0.22	-0.32	0.55	-0.29	0.2
X	79	L	323360	SR	0.39	0.30	-0.15	-0.03	-0.16	0.30	0.2
X	80	L	323358	SR	0.58	0.44	-0.25	-0.26	-0.13	0.44	0.2
X	81	L	323226	SR	0.69	0.42	0.42	-0.36	-0.09	-0.18	0.1
X	82	L	323223	SR	0.74	0.53	-0.26	-0.34	-0.25	0.53	0.2
X	83	L	323233	SR	0.75	0.46	0.46	-0.26	-0.25	-0.24	0.2
X	84	O	338921	SR	0.68	0.54	0.54	-0.37	-0.21	-0.24	0.1
X	85	O	338922	SR	0.84	0.48	-0.25	-0.26	-0.28	0.48	0.2
X	96	L	256431	SR	0.63	0.39	-0.10	-0.30	0.39	-0.18	0.3
X	97	L	256432	SR	0.66	0.38	-0.20	-0.26	-0.17	0.38	0.3
X	98	L	256433	SR	0.53	0.40	-0.11	-0.23	-0.21	0.40	0.3
Mean					0.65	0.40	-0.02	-0.12	-0.05	-0.03	0.2
SD					0.14	0.09	0.29	0.25	0.29	0.26	0.2

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A23 Item Statistics, Operational Items: MD HSA English—May Makeup 2

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
Y	1	O	96184	SR	0.69	0.44	-0.22	-0.29	0.44	-0.20	0.0
Y	2	O	96185	SR	0.47	0.19	0.00	-0.14	0.19	-0.15	0.0
Y	3	O	96182	SR	0.61	0.49	-0.21	-0.31	0.49	-0.18	0.1
Y	4	O	96183	SR	0.70	0.30	-0.17	0.30	-0.18	-0.15	0.0
Y	5	O	96186	SR	0.83	0.42	0.42	-0.26	-0.24	-0.21	0.1
Y	9	L	281440	SR	0.73	0.43	-0.17	-0.30	0.43	-0.21	0.0
Y	10	L	281435	SR	0.91	0.45	0.45	-0.24	-0.29	-0.21	0.1
Y	11	L	281436	SR	0.74	0.25	-0.18	0.25	-0.17	-0.08	0.1
Y	12	L	281437	SR	0.80	0.40	-0.28	-0.15	-0.24	0.40	0.1
Y	13	L	281442	SR	0.40	0.29	-0.08	-0.20	-0.20	0.29	0.1
Y	14	L	281444	SR	0.55	0.45	-0.23	-0.25	0.45	-0.17	0.1
Y	15	L	281443	SR	0.74	0.31	-0.14	-0.22	0.31	-0.19	0.1
Y	16	L	281445	SR	0.60	0.48	-0.14	0.48	-0.32	-0.22	0.1
Y	18	O	256302	SR	0.61	0.32	-0.13	-0.22	-0.12	0.32	0.1
Y	19	L	251152	SR	0.81	0.45	-0.27	-0.27	0.45	-0.16	0.1
Y	20	L	272868	SR	0.67	0.40	0.40	-0.20	-0.27	-0.11	0.1
Y	23	L	223365	SR	0.82	0.47	-0.32	-0.23	-0.20	0.47	0.3
Y	24	L	223366	SR	0.59	0.39	0.39	-0.17	-0.22	-0.16	0.3
Y	25	L	223367	SR	0.51	0.32	-0.13	-0.11	-0.17	0.32	0.4
Y	26	L	223318	SR	0.83	0.44	-0.26	-0.25	-0.24	0.44	0.3
Y	27	L	215898	SR	0.38	0.33	0.33	-0.23	-0.27	-0.04	0.6
Y	28	L	215896	SR	0.65	0.40	-0.23	0.40	-0.16	-0.18	0.8
Y	29	L	215894	SR	0.53	0.39	-0.20	-0.02	-0.34	0.39	0.8
Y	30	L	215895	SR	0.55	0.18	-0.20	-0.11	0.18	0.00	0.9
Y	31	L	215897	SR	0.70	0.45	-0.23	-0.24	0.45	-0.21	1.0
Y	32	L	215908	SR	0.79	0.51	0.51	-0.28	-0.29	-0.23	1.0
Y	33	O	130276	SR	0.50	0.33	-0.15	-0.17	0.33	-0.17	0.0
Y	34	O	209817	SR	0.84	0.38	-0.22	0.38	-0.25	-0.21	0.0
Y	35	O	96157	SR	0.77	0.46	-0.24	-0.28	0.46	-0.22	0.1
Y	53	L	338918	SR	0.77	0.41	-0.24	-0.17	0.41	-0.26	0.1
Y	54	L	338919	SR	0.85	0.47	0.47	-0.27	-0.27	-0.22	0.1
Y	55	L	338920	SR	0.62	0.32	-0.09	-0.20	0.32	-0.19	0.1
Y	61	O	332088	SR	0.80	0.48	0.48	-0.28	-0.28	-0.20	0.3
Y	62	O	331810	SR	0.62	0.52	-0.24	-0.24	-0.26	0.52	0.3
Y	63	O	331812	SR	0.64	0.46	0.46	-0.21	-0.20	-0.27	0.3
Y	64	O	332089	SR	0.82	0.30	-0.25	-0.17	0.30	-0.10	0.3
Y	65	O	331814	SR	0.71	0.46	-0.26	0.46	-0.29	-0.18	0.4
Y	66	O	331811	SR	0.72	0.46	-0.24	-0.27	0.46	-0.20	0.4
Y	67	O	331813	SR	0.75	0.48	-0.21	-0.28	-0.27	0.48	0.4
Y	68	O	214684	SR	0.75	0.41	-0.15	0.41	-0.31	-0.21	0.1
Y	69	O	214685	SR	0.74	0.43	-0.20	0.43	-0.29	-0.23	0.0
Y	70	O	214687	SR	0.58	0.37	-0.17	0.37	-0.29	-0.11	0.1
Y	71	O	256287	SR	0.82	0.37	-0.29	-0.20	0.37	-0.10	0.0
Y	72	O	214688	SR	0.64	0.46	-0.26	-0.21	0.46	-0.26	0.1

Table 1.A23 Item Statistics, Operational Items: MD HSA English—May Makeup 2

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
Y	73	O	214690	SR	0.67	0.47	-0.27	0.47	-0.20	-0.23	0.1
Y	74	L	323230	SR	0.53	0.21	-0.12	-0.14	0.21	-0.05	0.2
Y	75	L	323234	SR	0.81	0.49	0.49	-0.30	-0.24	-0.23	0.1
Y	76	L	323359	SR	0.57	0.42	-0.21	0.42	-0.19	-0.20	0.2
Y	77	L	323227	SR	0.68	0.47	-0.24	0.47	-0.29	-0.15	0.2
Y	78	L	323232	SR	0.69	0.55	-0.22	-0.32	0.55	-0.29	0.2
Y	79	L	323360	SR	0.39	0.30	-0.15	-0.03	-0.16	0.30	0.2
Y	80	L	323358	SR	0.58	0.44	-0.25	-0.26	-0.13	0.44	0.2
Y	81	L	323226	SR	0.69	0.42	0.42	-0.36	-0.09	-0.18	0.1
Y	82	L	323223	SR	0.74	0.53	-0.26	-0.34	-0.25	0.53	0.2
Y	83	L	323233	SR	0.75	0.46	0.46	-0.26	-0.25	-0.24	0.2
Y	84	O	130087	SR	0.90	0.42	0.42	-0.25	-0.25	-0.20	0.0
Y	85	O	130088	SR	0.80	0.48	-0.21	-0.29	-0.26	0.48	0.0
Y	96	L	256431	SR	0.63	0.39	-0.10	-0.30	0.39	-0.18	0.3
Y	97	L	256432	SR	0.66	0.38	-0.20	-0.26	-0.17	0.38	0.3
Y	98	L	256433	SR	0.53	0.40	-0.11	-0.23	-0.21	0.40	0.3
Mean					0.68	0.41	-0.06	-0.10	-0.03	-0.03	0.2
SD					0.13	0.08	0.27	0.26	0.30	0.27	0.2

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A24 Item Statistics, Operational Items: MD HSA Government—May Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
D	1	O	223258	SR	0.92	0.32	-0.16	-0.21	-0.17	0.32	0.0
D	2	O	51122	SR	0.65	0.36	-0.18	0.36	-0.26	-0.13	0.1
D	3	O	256368	SR	0.57	0.47	0.47	-0.09	-0.43	-0.09	0.1
D	4	L	79635	SR	0.58	0.44	0.44	-0.25	-0.11	-0.28	0.0
D	5	L	223259	SR	0.38	0.18	-0.11	0.18	-0.10	0.04	0.0
D	8	L	50912	SR	0.47	0.43	0.43	-0.24	-0.29	-0.09	0.1
D	9	O	51765	SR	0.59	0.59	-0.23	0.59	-0.35	-0.25	0.1
D	10	O	58147	SR	0.59	0.54	0.54	-0.19	-0.31	-0.28	0.1
D	11	O	68032	SR	0.54	0.45	-0.17	-0.20	-0.27	0.45	0.0
D	12	L	55554	SR	0.46	0.41	0.41	-0.16	-0.16	-0.21	0.1
D	13	L	214483	SR	0.42	0.43	-0.16	-0.12	0.43	-0.26	0.2
D	16	L	79543	SR	0.80	0.48	-0.27	0.48	-0.27	-0.22	0.1
D	17	L	55549	SR	0.42	0.25	0.25	-0.05	-0.18	-0.09	0.0
D	18	L	79610	SR	0.38	0.45	-0.17	-0.22	0.45	-0.16	0.1
D	19	L	223257	SR	0.63	0.36	-0.14	-0.18	0.36	-0.21	0.1
D	20	L	55572	SR	0.49	0.35	-0.13	0.35	-0.27	-0.09	0.1
D	21	L	137288	SR	0.74	0.38	-0.19	-0.26	0.38	-0.16	0.1
D	24	O	79617	SR	0.38	0.34	0.34	-0.27	0.01	-0.25	0.1
D	25	O	79589	SR	0.76	0.41	0.41	-0.24	-0.19	-0.22	0.1
D	26	L	79654	SR	0.40	0.22	-0.10	0.22	-0.20	-0.03	0.1
D	27	L	51059	SR	0.39	0.44	-0.27	0.44	-0.13	-0.13	0.1
D	28	L	58098	SR	0.74	0.44	-0.21	-0.25	-0.23	0.44	0.1
D	29	L	214578	SR	0.64	0.58	-0.32	-0.25	-0.30	0.58	0.1
D	32	L	51231	SR	0.82	0.41	-0.27	-0.22	0.41	-0.17	0.1
D	33	O	256371	SR	0.57	0.38	0.38	-0.22	-0.17	-0.18	0.2
D	34	L	132972	SR	0.44	0.33	-0.25	-0.03	0.33	-0.13	0.2
D	35	L	79638	SR	0.46	0.25	0.25	-0.10	-0.12	-0.12	0.2
D	36	L	79701	SR	0.51	0.50	-0.22	0.50	-0.27	-0.19	0.2
D	37	O	55469	SR	0.66	0.51	-0.32	0.51	-0.29	-0.18	0.1
D	38	O	68688	SR	0.59	0.43	-0.14	-0.30	0.43	-0.18	0.2
D	39	O	108397	SR	0.31	0.31	-0.12	-0.08	-0.15	0.31	0.1
D	40	L	51235	SR	0.49	0.25	0.00	-0.15	0.25	-0.26	0.1
D	41	O	55650	SR	0.70	0.45	-0.20	-0.19	-0.29	0.45	0.1
D	42	L	68573	SR	0.50	0.48	-0.14	0.48	-0.27	-0.26	0.1
D	45	L	68051	SR	0.58	0.43	-0.09	-0.27	0.43	-0.26	0.2
D	46	L	108430	SR	0.70	0.52	-0.27	0.52	-0.27	-0.27	0.1
D	47	O	215815	SR	0.84	0.41	-0.22	-0.20	0.41	-0.25	0.1
D	48	L	256365	SR	0.34	0.45	-0.16	-0.05	-0.31	0.45	0.1
D	49	L	51045	SR	0.57	0.60	-0.27	-0.31	-0.28	0.60	0.1
D	50	O	68636	SR	0.46	0.28	-0.06	-0.21	0.28	-0.11	0.1
D	51	O	65178	SR	0.73	0.45	-0.22	-0.23	-0.24	0.45	0.1
D	54	O	68579	SR	0.52	0.41	-0.17	0.41	-0.26	-0.22	0.1
D	55	L	51721	SR	0.32	0.16	-0.02	0.16	-0.09	-0.07	0.2
D	56	L	79679	SR	0.59	0.48	-0.30	-0.20	0.48	-0.17	0.1

Table 1.A24 Item Statistics, Operational Items: MD HSA Government—May Primary

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
D	57	O	58409	SR	0.41	0.36	-0.25	-0.12	-0.12	0.36	0.1
D	58	L	79737	SR	0.30	0.34	-0.18	0.34	-0.17	-0.08	0.2
D	59	L	108350	SR	0.52	0.46	-0.21	-0.18	-0.26	0.46	0.1
D	62	L	137302	SR	0.38	0.31	0.31	-0.12	-0.27	0.00	0.1
D	63	O	55587	SR	0.81	0.42	0.42	-0.21	-0.26	-0.20	0.1
D	64	O	58388	SR	0.73	0.44	0.44	-0.20	-0.25	-0.22	0.1
D	65	L	108479	SR	0.58	0.39	-0.11	-0.28	0.39	-0.18	0.1
D	66	O	137284	SR	0.85	0.47	0.47	-0.23	-0.27	-0.28	0.1
D	70	L	79670	SR	0.45	0.51	0.51	-0.26	-0.22	-0.19	0.1
D	71	L	68787	SR	0.54	0.39	-0.09	0.39	-0.23	-0.23	0.2
D	72	O	214513	SR	0.36	0.26	-0.19	-0.03	-0.11	0.26	0.2
D	73	L	68726	SR	0.80	0.41	-0.28	0.41	-0.26	-0.16	0.1
D	74	O	60451	SR	0.74	0.53	-0.28	-0.30	0.53	-0.24	0.1
D	75	L	68023	SR	0.59	0.56	0.56	-0.30	-0.19	-0.32	0.1
D	76	L	79703	SR	0.82	0.49	-0.24	-0.24	-0.31	0.49	0.1
D	77	L	67996	SR	0.62	0.45	-0.18	-0.29	0.45	-0.20	0.1
D	78	O	215811	SR	0.83	0.50	-0.25	-0.26	-0.29	0.50	0.1
D	81	L	214481	SR	0.45	0.45	-0.25	0.45	-0.20	-0.18	0.1
D	82	O	79572	SR	0.48	0.46	-0.17	-0.21	-0.28	0.46	0.1
D	83	O	256364	SR	0.43	0.34	-0.23	-0.29	-0.09	0.34	0.1
D	84	L	215809	SR	0.38	0.49	-0.24	0.49	-0.20	-0.17	0.1
D	85	O	68009	SR	0.54	0.50	0.50	-0.19	-0.29	-0.24	0.1
D	86	L	214580	SR	0.63	0.47	-0.20	-0.26	0.47	-0.23	0.1
D	89	O	52257	SR	0.67	0.46	0.46	-0.31	-0.19	-0.20	0.1
D	90	L	79634	SR	0.32	0.24	-0.13	-0.26	0.24	0.00	0.2
D	91	L	64952	SR	0.37	0.11	0.01	0.11	-0.14	-0.04	0.1
D	92	L	52248	SR	0.43	0.17	-0.19	0.08	0.17	-0.13	0.1
D	93	L	214509	SR	0.55	0.49	0.49	-0.20	-0.25	-0.25	0.2
D	94	L	108444	SR	0.75	0.46	-0.22	0.46	-0.27	-0.22	0.1
D	97	O	256382	SR	0.78	0.50	-0.30	0.50	-0.27	-0.23	0.1
D	98	L	79746	SR	0.56	0.51	-0.18	-0.22	-0.32	0.51	0.1
D	99	L	65174	SR	0.35	0.31	0.31	-0.05	-0.28	-0.17	0.2
D	100	L	256346	SR	0.32	0.20	0.01	-0.26	-0.02	0.20	0.2
D	101	L	108441	SR	0.77	0.50	0.50	-0.28	-0.23	-0.28	0.1
D	102	O	51257	SR	0.71	0.42	0.42	-0.27	-0.24	-0.16	0.1
D	105	L	132967	SR	0.64	0.55	-0.27	-0.25	-0.29	0.55	0.1
D	106	O	50848	SR	0.40	0.43	0.43	-0.18	-0.16	-0.20	0.2
D	107	O	256354	SR	0.72	0.43	-0.20	-0.23	-0.23	0.43	0.2
Mean					0.56	0.41	-0.02	-0.05	-0.09	-0.03	0.1
SD					0.16	0.10	0.29	0.28	0.27	0.28	0.0

Note. Tabled item position number is based on Form D and varies somewhat on Forms E-N.
Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A25 Item Statistics, Operational Items: MD HSA Government—May Makeup 1

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
X	1	O	79661	SR	0.93	0.30	0.30	-0.23	-0.14	-0.11	0.0
X	2	L	215818	SR	0.62	0.44	-0.24	-0.26	0.44	-0.14	0.0
X	3	O	51134	SR	0.56	0.51	-0.37	-0.18	-0.16	0.51	0.1
X	4	L	55622	SR	0.26	0.22	-0.13	0.22	-0.10	0.05	0.1
X	5	O	58121	SR	0.44	0.24	-0.12	-0.20	0.24	0.01	0.1
X	6	O	68731	SR	0.75	0.34	-0.17	0.34	-0.16	-0.22	0.0
X	7	L	79550	SR	0.50	0.48	-0.28	-0.24	0.48	-0.15	0.1
X	8	L	256407	SR	0.84	0.42	-0.20	-0.25	0.42	-0.23	0.1
X	9	O	79684	SR	0.55	0.38	0.38	-0.28	-0.16	-0.12	0.0
X	12	L	68102	SR	0.31	0.37	0.37	-0.19	0.01	-0.20	0.1
X	13	O	51774	SR	0.66	0.42	-0.25	-0.12	-0.24	0.42	0.1
X	14	L	68608	SR	0.38	0.47	-0.24	-0.24	0.47	-0.14	0.1
X	15	O	51166	SR	0.62	0.42	0.42	-0.22	-0.20	-0.21	0.1
X	16	L	79654	SR	0.40	0.22	-0.10	0.22	-0.20	-0.03	0.1
X	17	L	223249	SR	0.45	0.52	-0.34	0.52	-0.24	-0.11	0.1
X	18	L	79742	SR	0.54	0.35	-0.23	-0.13	0.35	-0.20	0.1
X	19	O	50859	SR	0.76	0.33	-0.14	0.33	-0.21	-0.18	0.1
X	23	L	214496	SR	0.55	0.55	0.55	-0.20	-0.18	-0.38	0.1
X	24	L	241960	SR	0.55	0.35	-0.14	-0.14	-0.20	0.35	0.1
X	25	O	51102	SR	0.63	0.36	-0.30	0.36	-0.19	-0.01	0.1
X	26	O	50988	SR	0.69	0.55	-0.22	-0.27	-0.35	0.55	0.1
X	27	O	108427	SR	0.50	0.54	-0.18	-0.39	0.54	-0.13	0.1
X	28	O	55656	SR	0.75	0.39	-0.26	0.39	-0.23	-0.15	0.2
X	29	O	65177	SR	0.43	0.41	-0.18	0.41	-0.17	-0.19	0.1
X	33	O	60429	SR	0.56	0.33	-0.20	-0.20	-0.12	0.33	0.2
X	34	O	79646	SR	0.52	0.40	-0.21	0.40	-0.28	-0.04	0.2
X	35	O	52262	SR	0.66	0.39	-0.17	-0.25	0.39	-0.20	0.2
X	36	L	256347	SR	0.51	0.33	-0.18	0.33	-0.11	-0.21	0.3
X	37	O	50896	SR	0.74	0.44	-0.21	-0.25	0.44	-0.24	0.1
X	38	L	256342	SR	0.50	0.32	0.32	-0.13	-0.23	-0.07	0.1
X	39	L	108405	SR	0.41	0.27	0.27	-0.18	-0.18	0.00	0.1
X	40	O	55686	SR	0.59	0.51	-0.28	-0.19	-0.25	0.51	0.1
X	41	O	132971	SR	0.62	0.43	0.43	-0.16	-0.29	-0.16	0.1
X	42	O	68639	SR	0.67	0.51	0.51	-0.28	-0.20	-0.28	0.1
X	46	O	51081	SR	0.73	0.50	-0.29	0.50	-0.27	-0.22	0.1
X	47	L	79593	SR	0.65	0.53	-0.32	-0.27	-0.22	0.53	0.1
X	48	L	68509	SR	0.49	0.43	-0.16	0.43	-0.24	-0.17	0.1
X	49	O	108378	SR	0.86	0.46	-0.25	0.46	-0.30	-0.19	0.2
X	50	L	79544	SR	0.64	0.49	-0.26	-0.24	0.49	-0.23	0.1
X	51	L	68708	SR	0.58	0.37	-0.12	0.37	-0.28	-0.15	0.1
X	52	L	67970	SR	0.61	0.55	0.55	-0.23	-0.26	-0.32	0.1
X	53	L	68073	SR	0.45	0.40	0.40	-0.31	-0.04	-0.20	0.2
X	54	L	51171	SR	0.66	0.42	-0.22	-0.22	-0.24	0.42	0.1
X	55	L	68520	SR	0.64	0.35	-0.15	-0.23	0.35	-0.17	0.1

Table 1.A25 Item Statistics, Operational Items: MD HSA Government—May Makeup 1

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
X	56	O	65183	SR	0.66	0.52	0.52	-0.30	-0.26	-0.22	0.1
X	57	L	51087	SR	0.93	0.36	-0.21	-0.21	0.36	-0.16	0.1
X	58	O	68714	SR	0.80	0.42	0.42	-0.23	-0.25	-0.23	0.1
X	62	O	68778	SR	0.55	0.42	0.42	-0.21	-0.20	-0.20	0.1
X	63	L	223260	SR	0.84	0.49	-0.31	-0.28	0.49	-0.21	0.2
X	64	L	79578	SR	0.64	0.54	0.54	-0.26	-0.26	-0.28	0.1
X	65	L	52270	SR	0.60	0.50	0.50	-0.34	-0.18	-0.21	0.2
X	66	L	79671	SR	0.44	0.41	0.41	-0.26	-0.18	-0.12	0.2
X	70	L	51741	SR	0.36	0.34	-0.01	-0.29	-0.27	0.34	0.2
X	71	L	51258	SR	0.74	0.55	-0.24	-0.28	-0.32	0.55	0.2
X	72	L	68592	SR	0.48	0.40	-0.16	-0.23	0.40	-0.19	0.2
X	73	L	79629	SR	0.52	0.43	0.43	-0.25	-0.26	-0.10	0.1
X	76	O	68729	SR	0.57	0.49	-0.18	-0.27	-0.28	0.49	0.1
X	77	L	65194	SR	0.67	0.46	-0.19	-0.29	0.46	-0.21	0.1
X	78	L	58294	SR	0.45	0.26	0.26	-0.25	-0.06	-0.04	0.1
X	79	L	51243	SR	0.47	0.34	-0.08	-0.15	-0.25	0.34	0.1
X	83	O	55612	SR	0.51	0.39	-0.18	-0.15	0.39	-0.21	0.1
X	84	L	60465	SR	0.85	0.45	-0.26	0.45	-0.26	-0.20	0.1
X	85	L	64989	SR	0.35	0.16	-0.06	0.06	-0.24	0.16	0.1
X	86	L	256388	SR	0.68	0.47	0.47	-0.29	-0.27	-0.17	0.1
X	87	L	132975	SR	0.44	0.40	0.40	-0.17	-0.15	-0.21	0.1
X	88	L	79559	SR	0.48	0.41	-0.13	-0.19	0.41	-0.23	0.1
X	89	O	51750	SR	0.67	0.49	-0.20	-0.28	0.49	-0.29	0.1
X	90	O	52240	SR	0.79	0.47	-0.27	0.47	-0.27	-0.21	0.1
X	94	L	58438	SR	0.70	0.48	-0.17	-0.22	-0.31	0.48	0.2
X	95	L	51202	SR	0.48	0.51	-0.20	-0.24	-0.23	0.51	0.1
X	96	O	108414	SR	0.67	0.55	-0.26	0.55	-0.32	-0.23	0.1
X	97	O	68517	SR	0.67	0.58	-0.28	-0.30	0.58	-0.29	0.1
X	98	O	214504	SR	0.49	0.43	-0.10	0.43	-0.16	-0.28	0.1
X	99	O	51200	SR	0.67	0.49	-0.30	0.49	-0.23	-0.22	0.1
X	100	L	108446	SR	0.74	0.52	-0.22	-0.30	0.52	-0.29	0.1
X	101	L	256353	SR	0.34	0.22	0.22	-0.22	-0.25	0.02	0.1
X	102	O	215820	SR	0.70	0.54	-0.24	-0.35	-0.23	0.54	0.2
X	103	L	51178	SR	0.46	0.37	0.37	-0.04	-0.24	-0.23	0.2
X	104	L	52230	SR	0.50	0.22	0.22	-0.22	-0.02	-0.11	0.2
X	105	L	79586	SR	0.62	0.43	-0.27	-0.22	0.43	-0.18	0.2
X	106	L	108471	SR	0.63	0.38	-0.21	-0.15	0.38	-0.25	0.2
X	107	L	52258	SR	0.50	0.39	-0.14	-0.25	0.39	-0.13	0.2
Mean					0.59	0.42	-0.03	-0.08	-0.03	-0.06	0.1
SD					0.14	0.09	0.29	0.28	0.30	0.26	0.0

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A26 Item Statistics, Operational Items: MD HSA Government—May Makeup 2

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
Y	1	O	60458	SR	0.75	0.51	0.51	-0.23	-0.28	-0.30	0.0
Y	2	L	215818	SR	0.62	0.44	-0.24	-0.26	0.44	-0.14	0.0
Y	3	O	68541	SR	0.81	0.39	-0.16	-0.17	-0.28	0.39	0.0
Y	4	L	55622	SR	0.26	0.22	-0.13	0.22	-0.10	0.05	0.1
Y	5	O	58124	SR	0.58	0.59	-0.35	-0.27	0.59	-0.23	0.0
Y	6	O	51154	SR	0.46	0.27	0.27	-0.25	-0.23	0.01	0.0
Y	7	L	79550	SR	0.50	0.48	-0.28	-0.24	0.48	-0.15	0.1
Y	8	L	256407	SR	0.84	0.42	-0.20	-0.25	0.42	-0.23	0.1
Y	9	O	214499	SR	0.54	0.35	-0.09	-0.24	0.35	-0.16	0.0
Y	12	L	68102	SR	0.31	0.37	0.37	-0.19	0.01	-0.20	0.1
Y	13	O	68100	SR	0.66	0.42	-0.14	-0.25	0.42	-0.25	0.0
Y	14	L	68608	SR	0.38	0.47	-0.24	-0.24	0.47	-0.14	0.1
Y	15	O	79673	SR	0.66	0.55	0.55	-0.23	-0.27	-0.32	0.1
Y	16	O	79604	SR	0.70	0.29	-0.22	-0.10	0.29	-0.15	0.0
Y	17	L	223249	SR	0.45	0.52	-0.34	0.52	-0.24	-0.11	0.1
Y	18	L	79742	SR	0.54	0.35	-0.23	-0.13	0.35	-0.20	0.1
Y	19	O	214479	SR	0.62	0.42	0.42	-0.18	-0.27	-0.16	0.1
Y	23	L	214496	SR	0.55	0.55	0.55	-0.20	-0.18	-0.38	0.1
Y	24	L	241960	SR	0.55	0.35	-0.14	-0.14	-0.20	0.35	0.1
Y	25	O	68057	SR	0.59	0.47	0.47	-0.32	-0.21	-0.15	0.1
Y	26	O	68609	SR	0.78	0.46	-0.23	-0.29	0.46	-0.21	0.1
Y	27	O	68552	SR	0.51	0.42	0.42	-0.14	-0.11	-0.30	0.1
Y	28	O	68766	SR	0.68	0.56	-0.24	-0.34	-0.26	0.56	0.1
Y	29	O	68642	SR	0.85	0.45	-0.19	-0.29	0.45	-0.24	0.1
Y	33	O	60461	SR	0.48	0.33	0.33	-0.23	-0.13	-0.11	0.2
Y	34	O	214482	SR	0.72	0.44	-0.08	-0.31	-0.26	0.44	0.2
Y	35	O	55600	SR	0.51	0.36	-0.23	-0.14	-0.10	0.36	0.2
Y	36	L	256347	SR	0.51	0.33	-0.18	0.33	-0.11	-0.21	0.3
Y	37	O	256362	SR	0.80	0.42	-0.16	-0.19	-0.30	0.42	0.1
Y	38	L	256342	SR	0.50	0.32	0.32	-0.13	-0.23	-0.07	0.1
Y	39	L	108405	SR	0.41	0.27	0.27	-0.18	-0.18	0.00	0.1
Y	40	O	256366	SR	0.84	0.34	-0.17	-0.16	-0.23	0.34	0.1
Y	41	O	68497	SR	0.71	0.34	-0.10	0.34	-0.25	-0.17	0.1
Y	42	O	79683	SR	0.51	0.38	-0.29	0.38	-0.28	-0.06	0.1
Y	46	O	256339	SR	0.45	0.47	-0.20	-0.17	-0.25	0.47	0.1
Y	47	L	79593	SR	0.65	0.53	-0.32	-0.27	-0.22	0.53	0.1
Y	48	L	68509	SR	0.49	0.43	-0.16	0.43	-0.24	-0.17	0.1
Y	49	O	58410	SR	0.66	0.32	0.32	-0.15	-0.28	-0.18	0.1
Y	50	L	79544	SR	0.64	0.49	-0.26	-0.24	0.49	-0.23	0.1
Y	51	L	68708	SR	0.58	0.37	-0.12	0.37	-0.28	-0.15	0.1
Y	52	L	67970	SR	0.61	0.55	0.55	-0.23	-0.26	-0.32	0.1
Y	53	L	68073	SR	0.45	0.40	0.40	-0.31	-0.04	-0.20	0.2
Y	54	L	51171	SR	0.66	0.42	-0.22	-0.22	-0.24	0.42	0.1
Y	55	L	68520	SR	0.64	0.35	-0.15	-0.23	0.35	-0.17	0.1

Table 1.A26 Item Statistics, Operational Items: MD HSA Government—May Makeup 2

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
Y	56	O	55519	SR	0.38	0.27	-0.01	-0.11	-0.21	0.27	0.1
Y	57	L	51087	SR	0.93	0.36	-0.21	-0.21	0.36	-0.16	0.1
Y	58	O	50839	SR	0.56	0.52	-0.21	-0.24	-0.30	0.52	0.2
Y	62	O	79582	SR	0.72	0.44	-0.29	-0.24	-0.16	0.44	0.2
Y	63	L	223260	SR	0.84	0.49	-0.31	-0.28	0.49	-0.21	0.2
Y	64	L	79578	SR	0.64	0.54	0.54	-0.26	-0.26	-0.28	0.1
Y	65	L	52270	SR	0.60	0.50	0.50	-0.34	-0.18	-0.21	0.2
Y	66	L	79671	SR	0.44	0.41	0.41	-0.26	-0.18	-0.12	0.2
Y	70	L	51741	SR	0.36	0.34	-0.01	-0.29	-0.27	0.34	0.2
Y	71	L	51258	SR	0.74	0.55	-0.24	-0.28	-0.32	0.55	0.2
Y	72	L	68592	SR	0.48	0.40	-0.16	-0.23	0.40	-0.19	0.2
Y	73	L	79629	SR	0.52	0.43	0.43	-0.25	-0.26	-0.10	0.1
Y	76	O	68535	SR	0.91	0.37	0.37	-0.20	-0.26	-0.16	0.1
Y	77	L	65194	SR	0.67	0.46	-0.19	-0.29	0.46	-0.21	0.1
Y	78	L	58294	SR	0.45	0.26	0.26	-0.25	-0.06	-0.04	0.1
Y	79	L	51243	SR	0.47	0.34	-0.08	-0.15	-0.25	0.34	0.1
Y	83	O	51745	SR	0.32	0.26	-0.13	0.26	-0.01	-0.15	0.1
Y	84	L	60465	SR	0.85	0.45	-0.26	0.45	-0.26	-0.20	0.1
Y	85	L	64989	SR	0.35	0.16	-0.06	0.06	-0.24	0.16	0.1
Y	86	L	256388	SR	0.68	0.47	0.47	-0.29	-0.27	-0.17	0.1
Y	87	L	132975	SR	0.44	0.40	0.40	-0.17	-0.15	-0.21	0.1
Y	88	L	79559	SR	0.48	0.41	-0.13	-0.19	0.41	-0.23	0.1
Y	89	O	133463	SR	0.43	0.33	-0.07	0.33	-0.23	-0.19	0.2
Y	90	L	214580	SR	0.63	0.47	-0.20	-0.26	0.47	-0.23	0.1
Y	94	L	58438	SR	0.70	0.48	-0.17	-0.22	-0.31	0.48	0.2
Y	95	L	51202	SR	0.48	0.51	-0.20	-0.24	-0.23	0.51	0.1
Y	96	O	52204	SR	0.48	0.37	-0.24	-0.05	0.37	-0.22	0.1
Y	97	O	68581	SR	0.81	0.53	-0.27	0.53	-0.30	-0.27	0.1
Y	98	O	79650	SR	0.54	0.42	-0.17	0.42	-0.22	-0.22	0.1
Y	99	O	64817	SR	0.41	0.43	0.43	-0.11	-0.26	-0.15	0.1
Y	100	L	108446	SR	0.74	0.52	-0.22	-0.30	0.52	-0.29	0.1
Y	101	L	256353	SR	0.34	0.22	0.22	-0.22	-0.25	0.02	0.1
Y	102	O	52279	SR	0.48	0.45	-0.25	0.45	-0.27	-0.17	0.2
Y	103	L	51178	SR	0.46	0.37	0.37	-0.04	-0.24	-0.23	0.2
Y	104	L	52230	SR	0.50	0.22	0.22	-0.22	-0.02	-0.11	0.2
Y	105	L	79586	SR	0.62	0.43	-0.27	-0.22	0.43	-0.18	0.2
Y	106	L	108471	SR	0.63	0.38	-0.21	-0.15	0.38	-0.25	0.2
Y	107	L	52258	SR	0.50	0.39	-0.14	-0.25	0.39	-0.13	0.2
Mean					0.58	0.41	0.00	-0.12	-0.03	-0.04	0.1
SD					0.15	0.09	0.29	0.23	0.30	0.27	0.0

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A27 Item Statistics, Operational Items: MD HSA Algebra—Summer Primary 1

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
P	1	L	362363	SR	0.49	0.42	-0.20	-0.26	0.42	-0.06	0.5
P	2	L	67490	SR	0.27	0.26	0.26	-0.09	-0.04	-0.14	0.6
P	3	O	260763	SR	0.39	0.41	0.41	-0.22	-0.17	-0.11	0.5
P	5	L	268768	SR	0.22	0.13	0.08	0.13	-0.16	-0.04	0.4
P	6	O	106615	SPR	0.34	0.43	0.43	-0.41			0.8
P	7	L	268698	SPR	0.10	0.28	0.28	-0.21			2.4
P	9	O	106627	SR	0.32	0.19	-0.07	0.19	-0.08	-0.05	0.0
P	10	L	257125	SR	0.61	0.32	-0.10	-0.13	0.32	-0.20	0.4
P	11	L	215925	SR	0.58	0.32	-0.07	-0.20	-0.19	0.32	0.3
P	12	L	54861	SR	0.17	0.20	-0.01	-0.05	-0.12	0.20	0.4
P	14	L	338675	SR	0.32	0.27	-0.11	-0.14	0.27	-0.03	0.8
P	15	L	363907	SR	0.29	0.21	0.04	-0.18	0.21	-0.07	0.8
P	16	O	56625	SR	0.56	0.33	-0.08	0.33	-0.13	-0.26	0.5
P	18	O	56718	SR	0.44	0.32	0.32	-0.07	-0.25	-0.11	0.0
P	19	L	319474	SR	0.52	0.44	-0.15	-0.17	-0.25	0.44	0.9
P	20	O	79024	SPR	0.56	0.34	0.34	-0.33			0.8
P	22	O	51513	SR	0.33	0.35	0.35	-0.08	-0.20	-0.13	0.3
P	23	L	79123	SR	0.24	0.32	-0.12	-0.08	-0.07	0.32	2.1
P	24	L	132822	SR	0.54	0.39	-0.18	-0.14	-0.24	0.39	0.5
P	25	O	136705	SR	0.49	0.40	0.40	-0.22	-0.28	0.02	0.0
P	27	L	362291	SR	0.15	0.14	-0.10	-0.06	0.04	0.14	0.4
P	28	L	133406	SPR	0.39	0.48	0.48	-0.40			3.7
P	29	O	275464	SPR	0.48	0.38	0.38	-0.36			0.8
P	31	O	257115	SR	0.40	0.26	-0.16	-0.09	0.26	-0.17	0.0
P	32	O	371766	SR	0.69	0.30	-0.15	0.30	-0.19	-0.11	0.3
P	34	L	51372	SR	0.66	0.47	-0.22	0.47	-0.22	-0.22	0.7
P	35	L	348343	SR	0.85	0.38	-0.15	0.38	-0.23	-0.19	0.7
P	37	O	79033	SR	0.68	0.28	-0.07	-0.19	0.28	-0.17	0.3
P	38	L	106548	SR	0.41	0.40	0.40	-0.06	-0.22	-0.22	0.9
P	40	O	371760	SPR	0.42	0.46	0.46	-0.44			1.9
P	41	O	282359	SPR	0.50	0.46	0.46	-0.43			0.8
P	42	L	275446	SR	0.30	0.40	-0.09	-0.06	-0.25	0.40	0.8
P	44	O	106542	SR	0.53	0.39	0.39	-0.19	-0.19	-0.15	0.3
P	45	L	260761	SR	0.47	0.39	0.39	-0.08	-0.19	-0.21	1.1
P	46	L	51365	SR	0.51	0.33	0.33	-0.14	-0.15	-0.12	1.3
P	47	O	371764	SR	0.15	0.35	-0.07	-0.14	-0.06	0.35	0.3
P	48	L	66002	SR	0.30	0.13	0.13	-0.06	-0.07	0.03	0.8
P	50	O	211005	SR	0.69	0.37	-0.14	-0.27	0.37	-0.12	0.3
P	51	L	50370	SR	0.26	0.02	-0.12	0.02	0.00	0.09	0.8
P	52	L	366196	SPR	0.10	0.33	0.33	-0.17			3.7
P	53	O	371775	SPR	0.07	0.08	0.08	-0.07			2.2
P	55	L	54756	SR	0.41	0.28	-0.09	-0.03	-0.20	0.28	0.7
P	56	O	52335	SR	0.39	0.14	0.10	0.14	-0.21	-0.13	0.0
P	57	L	348335	SR	0.22	-0.10	0.23	-0.10	-0.07	-0.08	0.7

Table 1.A27 Item Statistics, Operational Items: MD HSA Algebra—Summer Primary 1

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
P	59	L	51368	SR	0.23	0.15	0.15	0.02	-0.08	-0.06	0.8
P	60	O	43200	SR	0.52	0.40	-0.26	-0.17	0.40	-0.15	0.0
P	61	L	67558	SR	0.44	0.34	-0.19	-0.14	0.34	-0.07	0.8
P	62	O	282375	SPR	0.55	0.42	0.42	-0.39			1.4
P	64	O	363921	SR	0.47	0.39	-0.07	-0.19	0.39	-0.24	0.3
P	65	L	43140	SR	0.37	0.22	-0.14	-0.01	0.22	-0.08	0.8
P	67	L	54841	SR	0.32	0.37	-0.08	-0.13	-0.18	0.37	1.0
P	68	L	363938	SR	0.27	0.05	-0.09	0.05	-0.12	0.14	1.1
P	69	L	56477	SR	0.54	0.38	-0.16	-0.18	0.38	-0.15	1.1
Mean					0.41	0.30	0.08	-0.10	-0.02	-0.01	0.8
SD					0.17	0.13	0.24	0.19	0.23	0.20	0.8

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A28 Item Statistics, Operational Items: MD HSA Algebra—Summer Primary 2

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
Q	1	L	362363	SR	0.49	0.42	-0.20	-0.26	0.42	-0.06	0.5
Q	2	L	67490	SR	0.27	0.26	0.26	-0.09	-0.04	-0.14	0.6
Q	3	O	54846	SR	0.67	0.28	-0.11	0.28	-0.22	-0.11	0.1
Q	5	L	268768	SR	0.22	0.13	0.08	0.13	-0.16	-0.04	0.4
Q	6	O	321998	SPR	0.45	0.44	0.44	-0.39			2.2
Q	7	L	268698	SPR	0.10	0.28	0.28	-0.21			2.4
Q	9	O	363915	SR	0.49	0.34	-0.12	0.34	-0.20	-0.11	0.6
Q	10	L	257125	SR	0.61	0.32	-0.10	-0.13	0.32	-0.20	0.4
Q	11	L	215925	SR	0.58	0.32	-0.07	-0.20	-0.19	0.32	0.3
Q	12	L	54861	SR	0.17	0.20	-0.01	-0.05	-0.12	0.20	0.4
Q	14	L	338675	SR	0.32	0.27	-0.11	-0.14	0.27	-0.03	0.8
Q	15	L	363907	SR	0.29	0.21	0.04	-0.18	0.21	-0.07	0.8
Q	16	O	322024	SR	0.42	0.34	0.34	-0.05	-0.18	-0.18	1.3
Q	18	O	54900	SR	0.37	0.23	-0.04	0.23	-0.13	-0.12	1.2
Q	19	L	319474	SR	0.52	0.44	-0.15	-0.17	-0.25	0.44	0.9
Q	20	O	79022	SPR	0.60	0.40	0.40	-0.32			3.5
Q	22	O	321997	SR	0.52	0.40	-0.18	0.40	-0.19	-0.13	2.6
Q	23	L	79123	SR	0.24	0.32	-0.12	-0.08	-0.07	0.32	2.1
Q	24	L	132822	SR	0.54	0.39	-0.18	-0.14	-0.24	0.39	0.5
Q	25	O	54766	SR	0.61	0.45	-0.19	-0.26	0.45	-0.15	0.6
Q	27	L	362291	SR	0.15	0.14	-0.10	-0.06	0.04	0.14	0.4
Q	28	L	133406	SPR	0.39	0.48	0.48	-0.40			3.7
Q	29	O	136685	SPR	0.26	0.34	0.34	-0.23			3.3
Q	31	O	268822	SR	0.56	0.51	-0.27	-0.21	0.51	-0.19	0.9
Q	32	O	371767	SR	0.70	0.39	-0.16	-0.24	0.39	-0.14	0.7
Q	34	L	51372	SR	0.66	0.47	-0.22	0.47	-0.22	-0.22	0.7
Q	35	L	348343	SR	0.85	0.38	-0.15	0.38	-0.23	-0.19	0.7
Q	37	O	54815	SR	0.65	0.36	0.36	-0.19	-0.18	-0.20	1.1
Q	38	L	106548	SR	0.41	0.40	0.40	-0.06	-0.22	-0.22	0.9
Q	40	O	362347	SPR	0.52	0.45	0.45	-0.36			3.3
Q	41	O	64681	SPR	0.48	0.40	0.40	-0.29			3.8
Q	42	L	275446	SR	0.30	0.40	-0.09	-0.06	-0.25	0.40	0.8
Q	44	O	56551	SR	0.71	0.37	-0.24	-0.20	0.37	-0.12	1.3
Q	45	L	260761	SR	0.47	0.39	0.39	-0.08	-0.19	-0.21	1.1
Q	46	L	51365	SR	0.51	0.33	0.33	-0.14	-0.15	-0.12	1.3
Q	47	O	106643	SR	0.56	0.36	-0.24	0.36	-0.16	-0.02	1.3
Q	48	L	66002	SR	0.30	0.13	0.13	-0.06	-0.07	0.03	0.8
Q	50	O	79151	SR	0.42	0.42	-0.18	-0.13	-0.17	0.42	1.1
Q	51	L	50370	SR	0.26	0.02	-0.12	0.02	0.00	0.09	0.8
Q	52	L	366196	SPR	0.10	0.33	0.33	-0.17			3.7
Q	53	O	363933	SPR	0.11	0.42	0.42	-0.21			8.0
Q	55	L	54756	SR	0.41	0.28	-0.09	-0.03	-0.20	0.28	0.7
Q	56	O	67439	SR	0.42	0.36	-0.15	-0.19	-0.07	0.36	1.0
Q	57	L	348335	SR	0.22	-0.10	0.23	-0.10	-0.07	-0.08	0.7

Table 1.A28 Item Statistics, Operational Items: MD HSA Algebra—Summer Primary 2

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
Q	59	L	51368	SR	0.23	0.15	0.15	0.02	-0.08	-0.06	0.8
Q	60	O	50368	SR	0.37	0.43	0.43	-0.14	-0.14	-0.20	1.1
Q	61	L	67558	SR	0.44	0.34	-0.19	-0.14	0.34	-0.07	0.8
Q	62	O	257155	SPR	0.54	0.53	0.53	-0.41			5.7
Q	64	O	56777	SR	0.36	0.17	-0.08	-0.15	0.17	0.09	1.1
Q	65	L	43140	SR	0.37	0.22	-0.14	-0.01	0.22	-0.08	0.8
Q	67	L	54841	SR	0.32	0.37	-0.08	-0.13	-0.18	0.37	1.0
Q	68	L	363938	SR	0.27	0.05	-0.09	0.05	-0.12	0.14	1.1
Q	69	L	56477	SR	0.54	0.38	-0.16	-0.18	0.38	-0.15	1.1
Mean					0.42	0.32	0.05	-0.09	-0.01	0.01	1.5
SD					0.17	0.13	0.25	0.21	0.23	0.21	1.5

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A29 Item Statistics, Operational Items: MD HSA Biology—Summer Primary 1

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
P	1	L	366620	SR	0.71	0.33	-0.24	0.33	-0.18	-0.09	0.0
P	2	O	52598	SR	0.32	0.21	0.10	-0.19	-0.13	0.21	0.5
P	3	O	52419	SR	0.26	0.26	0.26	-0.12	-0.08	-0.05	0.5
P	4	L	322201	SR	0.52	0.33	-0.19	-0.13	0.33	-0.13	0.2
P	7	O	52691	SR	0.35	0.18	-0.07	-0.13	0.18	0.00	0.5
P	9	L	251269	SR	0.49	0.25	-0.16	-0.06	0.25	-0.15	0.2
P	10	L	251268	SR	0.40	0.15	0.15	0.05	-0.18	-0.14	0.3
P	11	L	54980	SR	0.59	0.36	-0.20	0.36	-0.17	-0.14	0.3
P	12	L	54981	SR	0.43	0.15	-0.11	-0.08	0.15	0.03	0.2
P	14	L	55177	SR	0.78	0.39	-0.21	-0.22	0.39	-0.19	0.2
P	15	L	55178	SR	0.31	0.22	-0.02	0.22	-0.10	-0.15	0.2
P	16	O	263106	SR	0.57	0.23	0.03	0.23	-0.18	-0.15	0.5
P	17	O	67645	SR	0.62	0.40	-0.21	0.40	-0.20	-0.14	0.5
P	21	O	52544	SR	0.43	0.36	0.36	-0.19	-0.23	-0.03	0.5
P	22	O	52749	SR	0.63	0.34	0.34	-0.13	-0.12	-0.23	0.9
P	23	L	52750	SR	0.50	0.34	-0.20	0.34	-0.20	-0.07	0.3
P	24	L	54970	SR	0.19	-0.02	0.10	-0.02	-0.03	-0.02	0.5
P	25	L	54971	SR	0.41	0.22	0.22	-0.16	-0.02	-0.08	0.5
P	26	O	369410	SR	0.64	0.41	0.41	-0.21	-0.19	-0.19	0.5
P	27	O	263104	SR	0.26	0.14	-0.15	-0.03	0.07	0.14	1.4
P	28	O	349101	SR	0.38	0.27	-0.14	0.27	-0.16	-0.03	0.5
P	30	L	369404	SR	0.31	0.18	-0.09	-0.04	0.18	-0.05	0.6
P	31	L	369401	SR	0.39	0.20	-0.16	0.20	-0.09	0.01	0.8
P	32	L	263112	SR	0.50	0.40	-0.11	0.40	-0.31	-0.08	0.5
P	33	L	52493	SR	0.76	0.44	-0.26	-0.22	0.44	-0.20	0.8
P	34	O	108650	SR	0.64	0.29	-0.19	0.29	-0.18	-0.13	0.0
P	35	O	349093	SR	0.42	-0.05	-0.07	-0.05	0.01	0.14	0.5
P	36	L	79411	SR	0.24	0.11	-0.13	-0.10	0.08	0.11	0.2
P	39	L	271023	SR	0.28	0.39	-0.13	-0.23	-0.04	0.39	0.2
P	40	O	271022	SR	0.36	0.29	-0.05	-0.14	-0.12	0.29	0.5
P	41	O	68294	SR	0.32	0.20	0.07	0.20	-0.13	-0.15	0.5
P	42	O	79521	SR	0.63	0.33	-0.22	0.33	-0.20	-0.03	0.5
P	43	L	108501	SR	0.55	0.45	-0.25	-0.22	0.45	-0.19	0.2
P	44	L	108499	SR	0.34	0.35	0.35	-0.16	-0.21	-0.05	0.2
P	46	O	338786	SR	0.40	0.47	-0.10	-0.31	0.47	-0.12	0.5
P	47	L	264036	SR	0.41	0.30	-0.06	0.30	-0.17	-0.15	0.5
P	48	L	264044	SR	0.33	0.18	0.18	0.01	-0.20	-0.04	0.3
P	49	O	60543	SR	0.32	0.15	-0.15	0.00	0.15	-0.02	0.5
P	50	L	108510	SR	0.75	0.35	-0.23	-0.13	0.35	-0.16	0.5
P	52	L	369456	SR	0.74	0.35	0.35	-0.16	-0.17	-0.19	0.3
P	53	L	369457	SR	0.24	0.10	-0.03	-0.02	0.10	-0.04	0.3
P	54	L	251264	SR	0.25	0.19	0.10	-0.26	0.19	-0.10	0.5
P	55	L	251265	SR	0.46	0.35	0.35	-0.25	-0.18	-0.05	0.3
P	56	L	53446	SR	0.32	0.26	0.26	-0.10	-0.06	-0.14	0.3

Table 1.A29 Item Statistics, Operational Items: MD HSA Biology—Summer Primary 1

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
P	58	O	282424	SR	0.49	0.32	-0.23	-0.14	0.32	-0.05	0.5
P	61	L	373112	SR	0.25	0.11	-0.03	0.02	-0.08	0.11	0.8
P	62	L	373113	SR	0.38	0.26	0.26	-0.07	-0.16	-0.07	0.3
P	63	O	279684	SR	0.22	0.26	0.26	-0.14	0.00	-0.08	0.5
P	64	L	279561	SR	0.28	0.25	-0.11	-0.09	-0.06	0.25	0.3
P	65	O	79515	SR	0.73	0.46	-0.27	-0.21	-0.20	0.46	0.5
P	66	O	65084	SR	0.55	0.34	-0.17	-0.14	-0.14	0.34	0.5
P	67	L	64716	SR	0.75	0.30	-0.16	0.30	-0.20	-0.14	0.2
P	68	O	52457	SR	0.53	0.28	-0.09	-0.17	0.28	-0.20	0.0
P	69	O	338780	SR	0.36	0.25	0.18	0.25	-0.17	-0.30	0.0
P	70	L	55164	SR	0.41	0.37	-0.17	0.37	-0.18	-0.15	0.3
P	71	L	55165	SR	0.25	0.23	0.23	-0.22	0.06	-0.16	0.5
P	73	O	364153	SR	0.38	0.33	0.01	-0.24	-0.17	0.33	0.5
P	74	L	286617	SR	0.32	0.07	0.08	0.07	-0.07	-0.18	0.6
P	75	L	288373	SR	0.16	0.26	0.01	-0.02	-0.21	0.26	0.5
P	77	O	53512	SR	0.55	0.30	0.30	-0.01	-0.10	-0.36	0.0
P	78	L	68148	SR	0.26	0.15	0.15	0.00	-0.06	-0.08	0.6
P	82	O	65151	SR	0.30	-0.13	0.25	-0.01	-0.13	-0.13	0.0
P	83	O	214517	SR	0.46	0.24	-0.06	0.24	-0.22	-0.03	0.5
P	84	O	64994	SR	0.27	0.19	0.07	0.19	-0.07	-0.20	0.0
P	87	L	52468	SR	0.35	0.35	-0.08	0.35	-0.17	-0.15	0.9
P	88	L	52470	SR	0.57	0.34	-0.21	0.34	-0.10	-0.16	0.8
P	89	L	364191	SR	0.47	0.43	0.43	-0.24	-0.16	-0.14	0.5
P	90	L	364189	SR	0.50	0.36	-0.11	0.36	-0.25	-0.14	0.5
P	91	O	338763	SR	0.52	0.28	-0.23	-0.19	0.04	0.28	0.0
P	93	L	263149	SR	0.38	0.36	-0.17	-0.23	0.36	-0.02	0.5
P	94	L	263150	SR	0.39	0.30	0.30	-0.08	-0.10	-0.21	0.5
P	95	O	338767	SR	0.59	0.45	0.45	-0.21	-0.25	-0.18	0.0
P	96	L	271030	SR	0.32	0.24	-0.13	-0.12	0.24	-0.01	0.8
P	97	L	349082	SR	0.76	0.42	-0.20	-0.25	-0.19	0.42	0.5
P	98	L	364172	SR	0.61	0.43	0.43	-0.16	-0.23	-0.22	0.5
P	99	L	364169	SR	0.52	0.19	0.13	0.19	-0.22	-0.19	0.9
Mean					0.44	0.27	0.01	0.00	-0.04	-0.05	0.4
SD					0.16	0.12	0.21	0.21	0.20	0.17	0.3

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A30 Item Statistics, Operational Items: MD HSA Biology—Summer Primary 2

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
Q	1	L	366620	SR	0.71	0.33	-0.24	0.33	-0.18	-0.09	0.0
Q	2	O	363005	SR	0.36	0.21	-0.14	-0.04	-0.15	0.21	0.0
Q	3	O	55172	SR	0.36	0.26	0.06	0.26	-0.19	-0.20	0.0
Q	4	L	322201	SR	0.52	0.33	-0.19	-0.13	0.33	-0.13	0.2
Q	7	O	52671	SR	0.40	0.42	-0.08	-0.26	-0.16	0.42	0.2
Q	9	L	251269	SR	0.49	0.25	-0.16	-0.06	0.25	-0.15	0.2
Q	10	L	251268	SR	0.40	0.15	0.15	0.05	-0.18	-0.14	0.3
Q	11	L	54980	SR	0.59	0.36	-0.20	0.36	-0.17	-0.14	0.3
Q	12	L	54981	SR	0.43	0.15	-0.11	-0.08	0.15	0.03	0.2
Q	14	L	55177	SR	0.78	0.39	-0.21	-0.22	0.39	-0.19	0.2
Q	15	L	55178	SR	0.31	0.22	-0.02	0.22	-0.10	-0.15	0.2
Q	16	O	271064	SR	0.65	0.27	-0.19	-0.08	0.27	-0.16	0.0
Q	17	O	271101	SR	0.62	0.28	-0.14	-0.18	0.28	-0.11	0.0
Q	21	O	68163	SR	0.54	0.31	-0.10	-0.19	-0.15	0.31	0.2
Q	22	O	52748	SR	0.47	0.31	0.31	-0.18	-0.12	-0.15	0.0
Q	23	L	52750	SR	0.50	0.34	-0.20	0.34	-0.20	-0.07	0.3
Q	24	L	54970	SR	0.19	-0.02	0.10	-0.02	-0.03	-0.02	0.5
Q	25	L	54971	SR	0.41	0.22	0.22	-0.16	-0.02	-0.08	0.5
Q	26	O	57055	SR	0.37	0.26	-0.19	0.26	-0.09	-0.03	0.7
Q	27	O	79402	SR	0.18	0.02	-0.07	0.07	-0.01	0.02	0.7
Q	28	O	279574	SR	0.35	0.30	-0.22	0.30	-0.09	-0.08	0.5
Q	30	L	369404	SR	0.31	0.18	-0.09	-0.04	0.18	-0.05	0.6
Q	31	L	369401	SR	0.39	0.20	-0.16	0.20	-0.09	0.01	0.8
Q	32	L	263112	SR	0.50	0.40	-0.11	0.40	-0.31	-0.08	0.5
Q	33	L	52493	SR	0.76	0.44	-0.26	-0.22	0.44	-0.20	0.8
Q	34	O	67663	SR	0.47	0.31	-0.26	0.31	-0.02	-0.10	0.0
Q	35	O	52673	SR	0.38	0.33	-0.21	0.33	-0.01	-0.19	0.0
Q	36	L	79411	SR	0.24	0.11	-0.13	-0.10	0.08	0.11	0.2
Q	39	L	271023	SR	0.28	0.39	-0.13	-0.23	-0.04	0.39	0.2
Q	40	O	271024	SR	0.56	0.20	-0.14	0.20	-0.20	0.07	0.0
Q	41	O	68193	SR	0.20	0.00	-0.11	0.12	0.00	-0.07	0.5
Q	42	O	108513	SR	0.59	0.36	-0.15	-0.18	-0.19	0.36	0.0
Q	43	L	108501	SR	0.55	0.45	-0.25	-0.22	0.45	-0.19	0.2
Q	44	L	108499	SR	0.34	0.35	0.35	-0.16	-0.21	-0.05	0.2
Q	46	O	279654	SR	0.26	-0.05	-0.18	0.11	-0.05	0.07	0.2
Q	47	L	264036	SR	0.41	0.30	-0.06	0.30	-0.17	-0.15	0.5
Q	48	L	264044	SR	0.33	0.18	0.18	0.01	-0.20	-0.04	0.3
Q	49	O	322187	SR	0.26	0.26	-0.08	-0.06	-0.13	0.26	0.2
Q	50	L	108510	SR	0.75	0.35	-0.23	-0.13	0.35	-0.16	0.5
Q	52	L	369456	SR	0.74	0.35	0.35	-0.16	-0.17	-0.19	0.3
Q	53	L	369457	SR	0.24	0.10	-0.03	-0.02	0.10	-0.04	0.3
Q	54	L	251264	SR	0.25	0.19	0.10	-0.26	0.19	-0.10	0.5
Q	55	L	251265	SR	0.46	0.35	0.35	-0.25	-0.18	-0.05	0.3
Q	56	L	53446	SR	0.32	0.26	0.26	-0.10	-0.06	-0.14	0.3

Table 1.A30 Item Statistics, Operational Items: MD HSA Biology—Summer Primary 2

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
Q	58	O	52513	SR	0.30	0.20	-0.08	-0.01	-0.15	0.20	0.2
Q	61	L	373112	SR	0.25	0.11	-0.03	0.02	-0.08	0.11	0.8
Q	62	L	373113	SR	0.38	0.26	0.26	-0.07	-0.16	-0.07	0.3
Q	63	O	279560	SR	0.31	0.21	-0.05	0.21	-0.12	-0.08	0.2
Q	64	L	279561	SR	0.28	0.25	-0.11	-0.09	-0.06	0.25	0.3
Q	65	O	64734	SR	0.33	0.23	-0.04	-0.12	-0.09	0.23	0.2
Q	66	O	381680	SR	0.61	0.26	-0.23	-0.04	0.26	-0.13	0.2
Q	67	L	64716	SR	0.75	0.30	-0.16	0.30	-0.20	-0.14	0.2
Q	68	O	331368	SR	0.41	0.33	-0.13	0.33	-0.11	-0.16	0.7
Q	69	O	338757	SR	0.32	0.38	-0.15	-0.20	-0.09	0.38	0.5
Q	70	L	55164	SR	0.41	0.37	-0.17	0.37	-0.18	-0.15	0.3
Q	71	L	55165	SR	0.25	0.23	0.23	-0.22	0.06	-0.16	0.5
Q	73	O	331352	SR	0.56	0.35	-0.12	-0.21	0.35	-0.12	0.7
Q	74	L	286617	SR	0.32	0.07	0.08	0.07	-0.07	-0.18	0.6
Q	75	L	288373	SR	0.16	0.26	0.01	-0.02	-0.21	0.26	0.5
Q	77	O	65076	SR	0.54	0.30	-0.17	0.30	-0.21	-0.03	0.7
Q	78	L	68148	SR	0.26	0.15	0.15	0.00	-0.06	-0.08	0.6
Q	82	O	65075	SR	0.59	0.47	-0.22	-0.22	-0.21	0.47	0.9
Q	83	O	338766	SR	0.36	0.25	-0.10	-0.13	0.25	-0.05	0.7
Q	84	O	52651	SR	0.63	0.41	0.41	-0.21	-0.21	-0.17	0.9
Q	87	L	52468	SR	0.35	0.35	-0.08	0.35	-0.17	-0.15	0.9
Q	88	L	52470	SR	0.57	0.34	-0.21	0.34	-0.10	-0.16	0.8
Q	89	L	364191	SR	0.47	0.43	0.43	-0.24	-0.16	-0.14	0.5
Q	90	L	364189	SR	0.50	0.36	-0.11	0.36	-0.25	-0.14	0.5
Q	91	O	65125	SR	0.64	0.35	-0.21	-0.23	0.35	-0.14	0.7
Q	93	L	263149	SR	0.38	0.36	-0.17	-0.23	0.36	-0.02	0.5
Q	94	L	263150	SR	0.39	0.30	0.30	-0.08	-0.10	-0.21	0.5
Q	95	O	271053	SR	0.61	0.43	-0.18	0.43	-0.22	-0.20	0.7
Q	96	L	271030	SR	0.32	0.24	-0.13	-0.12	0.24	-0.01	0.8
Q	97	L	349082	SR	0.76	0.42	-0.20	-0.25	-0.19	0.42	0.5
Q	98	L	364172	SR	0.61	0.43	0.43	-0.16	-0.23	-0.22	0.5
Q	99	L	364169	SR	0.52	0.19	0.13	0.19	-0.22	-0.19	0.9
Mean					0.44	0.28	-0.04	0.01	-0.03	-0.03	0.4
SD					0.16	0.11	0.19	0.22	0.20	0.18	0.3

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A31 Item Statistics, Operational Items: MD HSA English–Summer Primary 1

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
P	1	L	130038	SR	0.40	0.35	0.35	-0.14	-0.15	-0.15	0.0
P	2	L	130039	SR	0.44	0.30	-0.08	0.30	-0.22	-0.13	0.0
P	3	L	130292	SR	0.43	0.29	-0.06	-0.20	0.29	-0.23	0.0
P	4	L	130040	SR	0.67	0.36	0.36	-0.18	-0.21	-0.16	0.0
P	5	L	130041	SR	0.56	0.39	-0.14	-0.21	0.39	-0.18	0.0
P	6	O	281350	SR	0.55	0.27	-0.17	0.27	-0.10	-0.11	0.2
P	7	O	281353	SR	0.30	0.18	-0.24	-0.25	0.18	0.16	0.0
P	8	O	281356	SR	0.53	0.26	-0.13	-0.11	0.26	-0.12	0.2
P	9	O	281351	SR	0.47	0.24	-0.15	0.24	-0.12	-0.05	0.0
P	10	O	281352	SR	0.28	0.16	0.12	0.16	-0.22	-0.19	0.0
P	11	O	281355	SR	0.38	0.22	0.22	-0.15	-0.05	-0.06	0.0
P	12	O	281357	SR	0.67	0.43	-0.17	-0.22	-0.26	0.43	0.0
P	13	O	281359	SR	0.26	0.19	0.19	0.05	-0.14	-0.11	0.0
P	17	L	369119	SR	0.58	0.24	-0.14	0.24	-0.18	-0.02	0.2
P	18	L	369121	SR	0.46	0.25	-0.10	-0.15	0.25	-0.07	0.2
P	19	L	369122	SR	0.28	0.22	0.04	-0.18	-0.14	0.22	0.2
P	20	L	369123	SR	0.65	0.37	-0.20	-0.20	0.37	-0.13	0.1
P	22	L	373868	SR	0.66	0.38	-0.20	0.38	-0.23	-0.14	0.3
P	23	O	251157	SR	0.75	0.40	-0.24	-0.18	-0.21	0.40	0.4
P	24	O	272873	SR	0.77	0.48	-0.28	0.48	-0.25	-0.22	0.4
P	27	O	223327	SR	0.38	0.26	-0.13	-0.20	0.26	0.03	0.8
P	28	O	223328	SR	0.66	0.30	-0.15	0.30	-0.21	-0.09	0.8
P	29	O	223330	SR	0.32	0.30	0.30	-0.18	-0.03	-0.16	1.4
P	30	O	223329	SR	0.56	0.22	0.22	-0.18	-0.07	-0.07	1.6
P	31	O	223332	SR	0.40	0.17	0.17	-0.13	-0.12	0.03	1.6
P	32	O	223370	SR	0.49	0.24	-0.07	-0.19	0.24	-0.05	1.6
P	39	L	353425	SR	0.51	0.27	0.27	-0.04	-0.23	-0.10	0.2
P	40	L	353423	SR	0.41	0.27	-0.12	-0.04	-0.19	0.27	0.2
P	41	L	353424	SR	0.48	0.24	-0.17	0.24	-0.05	-0.10	0.3
P	42	L	353421	SR	0.42	0.13	-0.01	0.13	-0.18	0.02	0.2
P	43	L	353419	SR	0.57	0.36	-0.19	-0.20	0.36	-0.10	0.2
P	44	L	353420	SR	0.56	0.26	-0.02	-0.23	0.26	-0.25	0.3
P	45	L	353418	SR	0.49	0.37	-0.06	-0.27	-0.22	0.37	0.2
P	57	O	281764	SR	0.63	0.32	-0.15	-0.09	0.32	-0.27	0.2
P	58	O	281762	SR	0.35	0.26	0.26	-0.10	-0.10	-0.11	0.4
P	59	O	281763	SR	0.65	0.37	-0.11	-0.20	-0.22	0.37	0.2
P	65	O	349419	SR	0.64	0.29	-0.07	0.29	-0.15	-0.21	0.4
P	66	O	349415	SR	0.73	0.44	-0.20	-0.23	0.44	-0.24	0.6
P	67	O	209818	SR	0.68	0.45	-0.22	-0.21	-0.26	0.45	0.4
P	68	L	323373	SR	0.38	0.40	-0.09	-0.25	-0.14	0.40	0.2
P	69	L	323372	SR	0.67	0.47	-0.20	-0.21	-0.30	0.47	0.2
P	70	L	323371	SR	0.66	0.36	-0.22	-0.19	0.36	-0.13	0.1
P	71	L	323374	SR	0.51	0.39	0.39	-0.15	-0.19	-0.19	0.3
P	72	L	323370	SR	0.61	0.44	-0.23	0.44	-0.21	-0.19	0.1

Table 1.A31 Item Statistics, Operational Items: MD HSA English–Summer Primary 1

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
P	73	L	323375	SR	0.43	0.43	0.43	-0.17	-0.17	-0.19	0.2
P	82	O	256974	SR	0.75	0.20	-0.19	-0.01	0.20	-0.21	0.2
P	83	O	256975	SR	0.39	0.30	-0.11	0.30	-0.14	-0.14	0.2
P	84	L	338871	SR	0.23	0.05	0.11	0.05	-0.18	-0.03	0.3
P	85	L	338858	SR	0.27	0.11	-0.07	0.09	0.11	-0.21	0.2
P	86	L	338859	SR	0.40	0.24	-0.13	-0.05	0.24	-0.11	0.3
P	87	L	338863	SR	0.41	0.42	-0.15	-0.17	-0.19	0.42	0.3
P	88	L	338868	SR	0.54	0.28	-0.11	0.28	-0.13	-0.15	0.3
P	89	L	338864	SR	0.42	0.26	-0.15	-0.03	0.26	-0.17	0.7
P	90	L	338862	SR	0.50	0.26	-0.12	0.26	-0.09	-0.17	0.3
P	91	L	338867	SR	0.42	0.26	-0.04	0.26	-0.12	-0.18	0.4
P	92	L	338869	SR	0.51	0.33	-0.10	-0.18	0.33	-0.20	0.2
P	93	L	338870	SR	0.45	0.39	0.39	-0.23	-0.11	-0.18	0.3
P	96	L	256428	SR	0.54	0.34	0.34	-0.20	-0.21	-0.05	0.4
P	97	L	256429	SR	0.40	0.22	-0.06	0.22	-0.12	-0.11	0.3
P	98	L	256430	SR	0.25	0.07	-0.08	-0.01	0.07	0.02	0.4
Mean					0.50	0.29	-0.03	-0.03	-0.03	-0.04	0.3
SD					0.14	0.10	0.19	0.21	0.22	0.21	0.4

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.A32 Item Statistics, Operational Items: MD HSA English–Summer Primary 2

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
Q	1	L	130038	SR	0.40	0.35	0.35	-0.14	-0.15	-0.15	0.0
Q	2	L	130039	SR	0.44	0.30	-0.08	0.30	-0.22	-0.13	0.0
Q	3	L	130292	SR	0.43	0.29	-0.06	-0.20	0.29	-0.23	0.0
Q	4	L	130040	SR	0.67	0.36	0.36	-0.18	-0.21	-0.16	0.0
Q	5	L	130041	SR	0.56	0.39	-0.14	-0.21	0.39	-0.18	0.0
Q	6	O	323212	SR	0.57	0.42	-0.10	-0.25	-0.26	0.42	0.3
Q	7	O	323209	SR	0.22	0.07	0.07	0.00	-0.15	0.07	0.1
Q	8	O	323208	SR	0.32	0.22	0.22	-0.03	-0.13	-0.08	0.3
Q	9	O	323210	SR	0.48	0.37	-0.15	-0.12	-0.21	0.37	0.1
Q	10	O	323206	SR	0.35	0.22	0.03	-0.09	-0.19	0.22	0.3
Q	11	O	323207	SR	0.30	0.16	-0.07	0.06	-0.20	0.16	0.3
Q	12	O	323213	SR	0.38	0.23	-0.11	-0.12	0.23	-0.05	0.3
Q	13	O	323211	SR	0.57	0.30	-0.24	-0.08	-0.16	0.30	0.3
Q	17	L	369119	SR	0.58	0.24	-0.14	0.24	-0.18	-0.02	0.2
Q	18	L	369121	SR	0.46	0.25	-0.10	-0.15	0.25	-0.07	0.2
Q	19	L	369122	SR	0.28	0.22	0.04	-0.18	-0.14	0.22	0.2
Q	20	L	369123	SR	0.65	0.37	-0.20	-0.20	0.37	-0.13	0.1
Q	22	L	373868	SR	0.66	0.38	-0.20	0.38	-0.23	-0.14	0.3
Q	23	O	251145	SR	0.62	0.36	-0.20	0.36	-0.18	-0.14	0.4
Q	24	O	251162	SR	0.70	0.47	-0.26	-0.23	-0.23	0.47	0.3
Q	27	O	349206	SR	0.38	0.27	-0.13	-0.04	0.27	-0.17	1.2
Q	28	O	349207	SR	0.46	0.39	0.39	-0.17	-0.15	-0.18	1.0
Q	29	O	349210	SR	0.45	0.26	-0.09	-0.01	-0.24	0.26	1.0
Q	30	O	349205	SR	0.37	0.24	-0.05	-0.20	0.24	-0.04	1.2
Q	31	O	349203	SR	0.55	0.41	-0.24	-0.18	0.41	-0.17	1.0
Q	32	O	349209	SR	0.53	0.33	-0.17	-0.14	0.33	-0.13	1.2
Q	39	L	353425	SR	0.51	0.27	0.27	-0.04	-0.23	-0.10	0.2
Q	40	L	353423	SR	0.41	0.27	-0.12	-0.04	-0.19	0.27	0.2
Q	41	L	353424	SR	0.48	0.24	-0.17	0.24	-0.05	-0.10	0.3
Q	42	L	353421	SR	0.42	0.13	-0.01	0.13	-0.18	0.02	0.2
Q	43	L	353419	SR	0.57	0.36	-0.19	-0.20	0.36	-0.10	0.2
Q	44	L	353420	SR	0.56	0.26	-0.02	-0.23	0.26	-0.25	0.3
Q	45	L	353418	SR	0.49	0.37	-0.06	-0.27	-0.22	0.37	0.2
Q	57	O	369115	SR	0.38	0.19	0.19	-0.18	-0.01	-0.04	0.3
Q	58	O	369114	SR	0.72	0.40	-0.17	0.40	-0.23	-0.24	0.1
Q	59	O	369113	SR	0.62	0.36	-0.21	-0.14	0.36	-0.18	0.1
Q	65	O	373843	SR	0.64	0.49	-0.29	0.49	-0.27	-0.15	0.3
Q	66	O	96328	SR	0.60	0.48	0.48	-0.21	-0.27	-0.19	0.3
Q	67	O	209820	SR	0.67	0.50	-0.27	-0.26	-0.21	0.50	0.4
Q	68	L	323373	SR	0.38	0.40	-0.09	-0.25	-0.14	0.40	0.2
Q	69	L	323372	SR	0.67	0.47	-0.20	-0.21	-0.30	0.47	0.2
Q	70	L	323371	SR	0.66	0.36	-0.22	-0.19	0.36	-0.13	0.1
Q	71	L	323374	SR	0.51	0.39	0.39	-0.15	-0.19	-0.19	0.3
Q	72	L	323370	SR	0.61	0.44	-0.23	0.44	-0.21	-0.19	0.1

Table 1.A32 Item Statistics, Operational Items: MD HSA English–Summer Primary 2

Form	Pos_No	Anchor Status	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
Q	73	L	323375	SR	0.43	0.43	0.43	-0.17	-0.17	-0.19	0.2
Q	82	O	256985	SR	0.33	0.29	0.29	-0.26	-0.18	0.05	0.0
Q	83	O	256986	SR	0.74	0.39	-0.18	0.39	-0.16	-0.29	0.0
Q	84	L	338871	SR	0.23	0.05	0.11	0.05	-0.18	-0.03	0.3
Q	85	L	338858	SR	0.27	0.11	-0.07	0.09	0.11	-0.21	0.2
Q	86	L	338859	SR	0.40	0.24	-0.13	-0.05	0.24	-0.11	0.3
Q	87	L	338863	SR	0.41	0.42	-0.15	-0.17	-0.19	0.42	0.3
Q	88	L	338868	SR	0.54	0.28	-0.11	0.28	-0.13	-0.15	0.3
Q	89	L	338864	SR	0.42	0.26	-0.15	-0.03	0.26	-0.17	0.7
Q	90	L	338862	SR	0.50	0.26	-0.12	0.26	-0.09	-0.17	0.3
Q	91	L	338867	SR	0.42	0.26	-0.04	0.26	-0.12	-0.18	0.4
Q	92	L	338869	SR	0.51	0.33	-0.10	-0.18	0.33	-0.20	0.2
Q	93	L	338870	SR	0.45	0.39	0.39	-0.23	-0.11	-0.18	0.3
Q	96	L	256428	SR	0.54	0.34	0.34	-0.20	-0.21	-0.05	0.4
Q	97	L	256429	SR	0.40	0.22	-0.06	0.22	-0.12	-0.11	0.3
Q	98	L	256430	SR	0.25	0.07	-0.08	-0.01	0.07	0.02	0.4
Mean					0.49	0.31	-0.03	-0.03	-0.04	-0.02	0.3
SD					0.13	0.11	0.21	0.21	0.23	0.22	0.3

Note. Anchor Status: L=item is common across all forms in this administration, O=item is in 1 or more but not all forms in this administration; P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Appendix 1B. MD HSA Classical Item Statistics: Field Test Items

Table 1.B1 Item Statistics, Field Test Items: MDHSA Algebra—January Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
A	10957	366200	SR	0.31	0.15	-0.09	-0.10	**0.01**	**0.15**	0.2
A	10957	106638	SPR	0.40	0.37	0.37	-0.34			2.2
A	10957	363924	SR	0.78	0.21	-0.13	-0.14	**0.21**	-0.09	0.2
A	10957	263300	SR	0.28	0.23	-0.17	**0.03**	-0.20	**0.23**	0.3
A	10957	328753	SPR	0.42	0.37	0.37	-0.32			3.1
A	10957	395569	SR	0.47	0.23	-0.10	**0.23**	-0.14	-0.03	0.8
A	10957	392340	SPR	**0.05**	0.20	0.20	-0.10			**6.8**
A	10957	362268	SR	0.24	0.17	**0.17**	-0.08	-0.09	**0.02**	0.4
A	10957	319412	SR	0.71	0.27	-0.15	-0.16	**0.27**	-0.11	0.4
A	10957	397878	SR	0.49	0.28	-0.13	-0.11	**0.28**	-0.13	0.8
A	10957	395588	SR	0.48	0.31	-0.04	**0.31**	-0.22	-0.16	0.9
A	10957	282313	SR	0.32	0.26	-0.10	-0.12	**0.26**	-0.08	0.5
A	10957	322017	SPR	**0.04**	0.29	0.29	-0.12			**5.9**
A	10957	363961	SR	0.42	0.35	-0.16	**0.35**	-0.14	-0.12	0.5
A	10957	328722	SPR	**0.09**	0.43	0.43	-0.26			4.6
A	10957	400159	SR	0.30	0.23	-0.01	-0.11	-0.11	**0.23**	0.6
B	6092	366204	SR	0.34	**0.05**	-0.11	**0.02**	**0.05**	**0.02**	0.6
B	6092	319463	SPR	0.38	0.40	0.40	-0.34			3.4
B	6092	328731	SR	0.27	**0.06**	**0.06**	**0.03**	-0.05	-0.03	0.5
B	6092	79052	SR	0.49	0.19	-0.06	-0.18	-0.04	**0.19**	0.5
B	6092	371762	SPR	0.37	0.23	0.23	-0.15			4.7
B	6092	397884	SR	0.20	**0.06**	-0.10	-0.11	**0.12**	**0.06**	0.3
B	6092	79014	SPR	**0.01**	0.19	0.19	**0.01**			**7.7**
B	6092	366208	SR	0.65	0.33	-0.17	**0.33**	-0.19	-0.11	0.3
B	6092	132833	SR	0.27	0.27	-0.09	-0.15	**0.27**	-0.04	0.3
B	6092	394841	SR	0.53	0.22	-0.08	-0.10	**0.22**	-0.13	0.7
B	6092	394824	SR	0.63	0.21	-0.08	-0.14	**0.21**	-0.08	0.9
B	6092	362352	SR	0.29	**0.08**	**0.10**	**0.08**	-0.16	-0.04	0.4
B	6092	397850	SPR	0.10	0.38	0.38	-0.23			3.9
B	6092	338632	SR	0.18	**0.06**	**0.06**	-0.09	**0.02**	**0.03**	0.8
B	6092	393641	SPR	0.10	0.39	0.39	-0.18			**11.8**
B	6092	362350	SR	**0.09**	**0.09**	-0.09	0.00	**0.05**	**0.09**	0.8
Mean				0.33	0.24	0.06	-0.07	0.03	-0.01	2.1
SD				0.20	0.11	0.21	0.18	0.18	0.12	2.7

Note. Values in bold are outside of the accepted range. Statistics for items on multiple forms are listed under the first form on which the item appeared. P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.B2 Item Statistics, Field Test Items: MDHSA Biology—January Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
A	6043	395720	SR	0.42	0.29	-0.16	-0.15	**0.29**	-0.07	0.1
A	6043	395718	SR	0.43	0.27	-0.23	**0.27**	-0.11	**0.02**	0.1
A	6043	392437	SR	0.50	0.32	**0.32**	-0.09	-0.25	-0.10	0.0
A	6043	363172	SR	0.46	0.41	-0.11	-0.21	**0.41**	-0.24	0.2
A	6043	338802	SR	0.34	0.36	**0.36**	-0.26	-0.13	-0.03	0.2
A	6043	338800	SR	0.56	0.29	-0.18	**0.29**	-0.11	-0.13	0.2
A	6043	338799	SR	0.42	0.47	-0.23	-0.17	-0.21	**0.47**	0.2
A	6043	363162	SR	0.52	0.26	-0.06	**0.26**	-0.13	-0.19	0.5
A	6043	395709	SR	0.44	0.42	-0.13	**0.42**	-0.25	-0.14	0.2
A	6043	395713	SR	0.32	0.26	-0.08	**0.26**	-0.07	-0.14	0.2
A	6043	392464	SR	0.44	0.44	-0.22	-0.17	-0.19	**0.44**	0.1
A	6043	392455	SR	0.71	0.37	-0.17	**0.37**	-0.24	-0.17	0.1
A	6043	392446	SR	0.52	0.41	-0.19	-0.17	-0.22	**0.41**	0.1
A	6043	394868	SR	0.34	0.41	-0.20	**0.41**	-0.22	-0.06	0.2
A	6043	394869	SR	0.28	0.45	-0.24	-0.01	-0.27	**0.45**	0.2
A	6043	407383	SR	0.36	0.27	-0.20	**0.27**	**0.02**	-0.18	0.1
A	6043	363020	SR	0.49	0.36	-0.20	**0.36**	-0.10	-0.18	0.1
A	6043	395763	SR	0.66	0.41	-0.18	**0.41**	-0.26	-0.18	0.2
A	6043	395762	SR	0.39	0.41	-0.01	-0.30	**0.41**	-0.18	0.2
A	6043	395886	SR	0.35	0.34	**0.34**	-0.15	-0.13	-0.11	0.2
A	6043	369362	SR	0.52	0.35	-0.08	-0.24	**0.35**	-0.16	0.3
A	6043	369364	SR	0.41	0.42	**0.42**	-0.12	-0.24	-0.19	0.2
A	6043	369423	SR	0.33	0.32	-0.13	-0.05	-0.21	**0.32**	0.2
B	8475	395719	SR	0.46	0.35	**0.35**	-0.14	-0.20	-0.11	0.2
B	8475	395717	SR	0.32	0.54	-0.19	-0.22	-0.21	**0.54**	0.1
B	8475	392441	SR	0.45	0.49	**0.49**	-0.23	-0.24	-0.17	0.1
B	8475	320466	SR	0.59	0.28	**0.28**	-0.06	-0.23	-0.10	0.2
B	8475	394780	SR	0.47	0.20	-0.10	**0.20**	-0.04	-0.16	0.3
B	8475	394774	SR	0.45	0.57	-0.22	-0.28	-0.23	**0.57**	0.2
B	8475	394782	SR	0.50	0.34	-0.17	**0.34**	-0.22	-0.11	0.3
B	8475	394902	SR	0.71	0.37	-0.18	-0.14	-0.25	**0.37**	0.3
B	8475	395711	SR	0.54	0.46	-0.26	-0.21	**0.46**	-0.15	0.2
B	8475	395712	SR	0.42	0.45	-0.19	-0.22	-0.19	**0.45**	0.1
B	8475	373175	SR	0.50	0.54	-0.20	-0.31	-0.21	**0.54**	0.2
B	8475	369412	SR	0.26	**0.09**	**0.09**	-0.21	**0.00**	**0.11**	0.2
B	8475	392434	SR	0.51	0.51	-0.19	-0.24	**0.51**	-0.26	0.2
B	8475	394867	SR	0.37	0.29	-0.17	-0.02	**0.29**	-0.18	0.3
B	8475	394870	SR	0.61	0.50	-0.26	**0.50**	-0.26	-0.19	0.3
B	8475	385482	SR	0.53	0.46	**0.46**	-0.24	-0.19	-0.19	0.2
B	8475	393876	SR	0.41	0.47	-0.30	-0.21	**0.47**	-0.09	0.2
B	8475	395723	SR	0.25	**0.07**	-0.08	**0.07**	-0.02	**0.04**	0.2
B	8475	395725	SR	0.44	0.30	-0.02	-0.23	**0.30**	-0.17	0.2
B	8475	395724	SR	0.62	0.50	**0.50**	-0.24	-0.26	-0.22	0.3

Table 1.B2 Item Statistics, Field Test Items: MDHSA Biology—January Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
B	8475	395890	SR	0.44	0.51	**0.51**	-0.28	-0.22	-0.15	0.2
B	8475	395777	SR	0.42	0.37	-0.19	**0.37**	-0.17	-0.10	0.2
B	8475	392481	SR	0.63	0.46	-0.27	-0.17	-0.23	**0.46**	0.2
Mean				0.46	0.38	-0.04	-0.02	-0.07	0.01	0.2
SD				0.11	0.11	0.25	0.25	0.24	0.27	0.1

Note. Values in bold are outside of the accepted range. Statistics for items on multiple forms are listed under the first form on which the item appeared. P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.B3 Item Statistics, Field Test Items: MDHSA English—January Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
A	6252	397737	SR	0.31	0.27	**0.27**	-0.21	-0.24	**0.08**	0.2
A	6252	397736	SR	0.77	0.26	-0.11	-0.17	**0.26**	-0.17	0.1
A	6252	397735	SR	0.40	0.34	-0.13	-0.19	-0.10	**0.34**	0.2
A	6252	373871	SR	0.52	0.38	**0.38**	-0.22	-0.15	-0.13	0.2
A	6252	400478	SR	0.46	0.18	-0.18	**0.18**	-0.17	**0.00**	0.3
A	6252	392649	SR	0.56	0.30	-0.09	**0.30**	-0.22	-0.13	0.1
A	6252	393775	SR	0.49	0.30	-0.14	-0.11	-0.15	**0.30**	0.1
A	6252	393771	SR	0.44	0.24	-0.07	**0.24**	-0.10	-0.16	0.2
A	6252	393772	SR	0.49	0.43	**0.43**	-0.18	-0.25	-0.18	0.2
A	6252	393774	SR	0.42	0.22	-0.14	-0.11	**0.22**	-0.01	0.3
A	6252	393773	SR	0.54	0.34	**0.34**	-0.16	-0.15	-0.16	0.1
A	6252	393770	SR	0.55	0.39	-0.18	-0.22	**0.39**	-0.15	0.2
A	6252	395610	SR	0.15	**0.02**	**0.14**	-0.07	-0.11	**0.02**	0.3
A	6252	395620	SR	0.43	0.35	-0.15	**0.35**	-0.19	-0.09	0.3
A	6252	395611	SR	0.25	0.26	-0.08	-0.15	-0.05	**0.26**	0.2
A	6252	395616	SR	0.72	0.44	-0.20	**0.44**	-0.28	-0.19	0.3
A	6252	395617	SR	0.56	0.38	-0.11	-0.24	-0.19	**0.38**	0.3
A	6252	395615	SR	0.64	0.43	-0.28	**0.43**	-0.17	-0.16	0.2
A	6252	395622	SR	0.58	0.31	-0.11	-0.20	**0.31**	-0.13	0.2
A	6252	395613	SR	0.54	0.34	**0.34**	-0.17	-0.19	-0.10	0.3
A	6252	395614	SR	0.42	0.20	**0.20**	-0.04	-0.12	-0.08	0.3
A	6252	395612	SR	0.32	0.12	-0.18	**0.01**	-0.01	**0.12**	0.3
A	6252	395621	SR	0.38	0.31	**0.31**	-0.11	-0.17	-0.08	0.3
A	6252	369271	SR	0.33	0.32	-0.02	-0.23	-0.17	**0.32**	0.3
A	6252	369274	SR	0.38	**0.02**	-0.02	**0.02**	-0.13	**0.09**	0.3
A	6252	369268	SR	0.33	**0.05**	**0.09**	-0.10	**0.05**	-0.04	0.4
A	6252	369269	SR	0.33	0.11	-0.18	**0.11**	**0.08**	-0.11	0.4
A	6252	369267	SR	0.44	0.21	-0.09	**0.21**	-0.19	0.00	0.4
A	6252	394558	SR	0.53	0.23	-0.20	-0.01	**0.23**	-0.11	0.4
A	6252	394562	SR	0.51	0.35	-0.20	**0.35**	-0.20	-0.09	0.2
A	6252	394561	SR	0.71	0.41	-0.18	**0.41**	-0.24	-0.19	0.3
A	6252	394560	SR	0.41	0.21	**0.06**	-0.18	-0.17	**0.21**	0.3
A	6252	394566	SR	0.25	0.12	-0.07	**0.12**	**0.06**	-0.12	0.3
A	6252	394567	SR	0.37	**0.09**	**0.09**	**0.04**	-0.11	-0.04	0.2
A	6252	394564	SR	0.33	**0.01**	**0.01**	-0.19	**0.08**	**0.08**	0.3
A	6252	394559	SR	0.47	0.34	-0.14	**0.34**	-0.16	-0.14	0.2
A	6252	394595	SR	0.41	0.25	-0.24	**0.10**	**0.25**	-0.13	0.4
A	6252	394596	SR	0.27	0.34	-0.06	-0.19	-0.12	**0.34**	0.4
B	8780	366362	SR	0.43	0.12	**0.12**	-0.11	**0.08**	-0.22	0.1
B	8780	366360	SR	0.40	0.23	-0.02	**0.23**	-0.19	-0.07	0.1
B	8780	366361	SR	0.69	0.44	-0.22	-0.26	**0.44**	-0.19	0.1
B	8780	392639	SR	0.40	0.23	-0.15	-0.18	**0.23**	**0.02**	0.2
B	8780	400486	SR	0.52	0.35	-0.22	**0.35**	-0.20	-0.08	0.5
B	8780	392653	SR	0.33	0.20	**0.20**	**0.08**	-0.10	-0.21	0.5

Table 1.B3 Item Statistics, Field Test Items: MDHSA English—January Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
B	8780	394605	SR	0.50	0.39	-0.15	**0.39**	-0.22	-0.17	0.2
B	8780	394606	SR	0.28	0.32	**0.32**	-0.03	-0.21	-0.21	0.1
B	8780	394603	SR	0.43	0.29	-0.19	-0.13	**0.29**	-0.02	0.2
B	8780	394607	SR	0.38	0.17	-0.10	-0.20	**0.17**	**0.08**	0.2
B	8780	394602	SR	0.40	0.19	0.00	**0.19**	-0.16	-0.05	0.2
B	8780	394604	SR	0.50	0.40	-0.21	-0.20	-0.16	**0.40**	0.2
B	8780	395637	SR	0.22	**0.09**	-0.18	-0.19	**0.22**	**0.09**	0.3
B	8780	395642	SR	0.34	**0.04**	**0.03**	**0.04**	**0.07**	-0.13	0.3
B	8780	395639	SR	0.22	**0.08**	-0.17	**0.19**	-0.15	**0.08**	0.3
B	8780	395643	SR	0.36	0.22	-0.10	-0.15	**0.22**	-0.01	0.3
B	8780	395644	SR	0.34	0.24	-0.07	-0.14	**0.24**	-0.06	0.4
B	8780	395645	SR	0.49	0.44	-0.20	-0.22	-0.18	**0.44**	0.3
B	8780	395641	SR	0.19	0.15	**0.15**	-0.04	-0.10	**0.01**	0.4
B	8780	395708	SR	0.57	0.27	-0.20	**0.27**	-0.08	-0.10	0.3
B	8780	395640	SR	0.47	0.21	-0.12	**0.21**	-0.14	-0.01	0.4
B	8780	395649	SR	0.47	0.38	-0.15	-0.17	-0.17	**0.38**	0.3
B	8780	395648	SR	0.35	0.15	-0.03	-0.23	**0.15**	0.03	0.3
B	8780	373814	SR	0.47	0.43	-0.12	-0.24	-0.23	**0.43**	0.6
B	8780	373813	SR	0.85	0.40	-0.21	**0.40**	-0.24	-0.19	0.6
B	8780	373818	SR	0.39	0.33	-0.18	-0.04	-0.18	**0.33**	0.6
B	8780	373819	SR	0.41	0.20	-0.22	**0.12**	-0.22	**0.20**	0.8
B	8780	373822	SR	0.38	0.27	**0.27**	-0.04	-0.24	-0.02	0.8
B	8780	393743	SR	0.45	0.18	-0.13	**0.18**	-0.20	**0.10**	0.3
B	8780	393741	SR	0.54	0.28	-0.24	-0.18	-0.03	**0.28**	0.4
B	8780	393745	SR	0.26	**0.02**	-0.21	**0.02**	-0.25	**0.24**	0.3
B	8780	393744	SR	0.49	**0.03**	**0.20**	**0.03**	-0.13	-0.16	0.3
B	8780	393740	SR	0.15	**0.03**	**0.15**	-0.14	-0.04	**0.03**	0.4
B	8780	393739	SR	0.43	0.31	-0.05	-0.20	**0.31**	-0.18	0.4
B	8780	393742	SR	0.76	0.38	-0.22	**0.38**	-0.16	-0.21	0.4
B	8780	393747	SR	0.63	0.24	-0.16	**0.24**	-0.14	-0.05	0.4
B	8780	369302	SR	0.51	0.14	**0.16**	-0.22	-0.24	**0.14**	0.5
B	8780	369303	SR	0.61	0.22	**0.22**	-0.05	-0.21	-0.05	0.4
Mean				0.44	0.25	-0.04	0.00	-0.06	0.01	0.3
SD				0.14	0.12	0.18	0.21	0.18	0.18	0.1

Note. Values in bold are outside of the accepted range. Statistics for items on multiple forms are listed under the first form on which the item appeared. P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.B4 Item Statistics, Field Test Items: MDHSA Government—January Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
A	4836	60456	SR	0.61	0.34	**0.34**	-0.09	-0.27	-0.18	0.1
A	4836	223256	SR	0.51	0.45	-0.09	**0.45**	-0.28	-0.29	0.1
A	4836	52231	SR	0.47	0.19	-0.04	**0.19**	-0.17	-0.13	0.1
A	4836	68575	SR	0.90	0.31	-0.21	-0.17	-0.13	**0.31**	0.1
A	4836	51180	SR	0.80	0.40	**0.40**	-0.22	-0.22	-0.20	0.2
A	4836	79678	SR	0.50	0.36	-0.16	-0.25	**0.36**	-0.07	0.2
A	4836	58202	SR	0.61	0.45	-0.20	-0.27	**0.45**	-0.20	0.4
A	4836	51130	SR	0.45	0.13	-0.09	**0.08**	**0.13**	-0.19	0.5
A	4836	50978	SR	0.81	0.45	-0.30	-0.20	**0.45**	-0.20	0.1
A	4836	108375	SR	0.55	0.56	**0.56**	-0.20	-0.27	-0.30	0.1
A	4836	55636	SR	0.82	0.46	-0.27	-0.25	-0.22	**0.46**	0.1
A	4836	50840	SR	0.44	0.41	-0.22	**0.41**	-0.15	-0.16	0.2
A	4836	108377	SR	0.40	0.14	**0.14**	**0.04**	-0.21	-0.05	0.2
A	4836	68083	SR	0.31	0.20	**0.03**	-0.17	-0.13	**0.20**	0.3
A	4836	256502	SR	0.53	0.23	-0.02	**0.23**	-0.22	-0.10	0.3
A	4836	68539	SR	0.43	0.39	**0.39**	-0.24	-0.23	-0.01	0.4
A	4836	260954	SR	0.81	0.39	**0.39**	-0.25	-0.18	-0.21	0.4
A	4836	108420	SR	0.23	**0.10**	-0.14	-0.22	**0.20**	**0.10**	0.1
A	4836	51107	SR	0.29	0.22	-0.09	**0.22**	-0.11	-0.05	0.2
A	4836	51246	SR	**0.94**	0.30	-0.14	-0.16	-0.19	**0.30**	0.2
A	4836	50954	SR	0.65	0.53	-0.23	-0.32	-0.25	**0.53**	0.2
A	4836	52242	SR	0.46	0.25	**0.25**	-0.06	-0.13	-0.18	0.2
A	4836	52217	SR	0.34	0.11	**0.11**	-0.18	-0.05	**0.10**	0.3
A	4836	58275	SR	0.86	0.42	**0.42**	-0.22	-0.23	-0.24	0.2
A	4836	55618	SR	0.40	0.22	-0.16	-0.02	-0.11	**0.22**	0.3
C	1814	348470	SR	0.41	0.43	-0.17	-0.26	-0.12	**0.43**	0.0
C	1814	324392	SR	0.61	0.19	-0.17	**0.19**	-0.25	0.04	0.0
C	1814	339085	SR	0.54	0.46	-0.12	**0.46**	-0.29	-0.23	0.1
C	1814	353532	SR	0.37	0.31	-0.22	**0.31**	-0.24	-0.05	0.1
C	1814	324434	SR	0.27	0.38	**0.38**	-0.25	-0.07	-0.07	0.1
C	1814	324388	SR	0.69	0.43	-0.29	**0.43**	-0.20	-0.17	0.2
C	1814	348450	SR	0.40	0.36	-0.15	-0.23	-0.10	**0.36**	0.1
C	1814	331401	SR	0.60	0.47	-0.19	**0.47**	-0.28	-0.21	0.2
C	1814	348517	SR	0.66	0.34	**0.34**	-0.24	-0.07	-0.21	0.1
C	1814	348561	SR	0.51	0.38	-0.14	**0.38**	-0.22	-0.17	0.1
C	1814	348528	SR	0.86	0.42	-0.20	-0.24	-0.26	**0.42**	0.1
C	1814	348505	SR	0.75	0.43	-0.30	**0.43**	-0.24	-0.16	0.1
C	1814	348478	SR	0.58	0.22	-0.14	-0.06	**0.22**	-0.19	0.1
C	1814	324440	SR	0.45	0.39	-0.18	-0.20	**0.39**	-0.11	0.1
C	1814	348486	SR	0.84	0.49	-0.29	-0.28	-0.22	**0.49**	0.1
C	1814	353548	SR	0.42	0.14	-0.06	**0.14**	-0.06	-0.05	0.1
C	1814	324721	SR	0.41	0.15	**0.01**	-0.19	-0.02	**0.15**	0.2
C	1814	324736	SR	0.33	**0.06**	**0.04**	**0.06**	-0.10	-0.03	0.1
C	1814	324718	SR	0.56	0.32	**0.32**	-0.12	-0.18	-0.23	0.1

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Table 1.B4 Item Statistics, Field Test Items: MDHSA Government—January Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
C	1814	348501	SR	0.62	0.43	-0.19	-0.28	**0.43**	-0.17	0.1
C	1814	324437	SR	0.78	0.50	-0.26	-0.29	-0.24	**0.50**	0.1
C	1814	339066	SR	0.43	0.33	-0.17	**0.33**	-0.26	-0.02	0.2
C	1814	348471	SR	0.56	0.39	-0.15	-0.20	**0.39**	-0.21	0.1
C	1814	339084	SR	0.51	0.37	-0.16	-0.27	**0.37**	-0.08	0.1
C	1814	339036	SR	0.69	0.45	**0.45**	-0.28	-0.18	-0.23	0.1
Mean				0.56	0.34	-0.03	-0.04	-0.08	-0.01	0.2
SD				0.18	0.13	0.24	0.26	0.23	0.24	0.1

Note. Values in bold are outside of the accepted range. Statistics for items on multiple forms are listed under the first form on which the item appeared. P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.B5 Item Statistics, Field Test Items: MDHSA Algebra—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
D	23997	421314	SR	0.62	0.30	-0.15	-0.25	0.30	-0.04	0.3
D	23997	423616	SPR	0.51	0.40	0.40	-0.37			1.6
D	23997	415264	SR	0.35	0.39	-0.18	-0.06	-0.23	0.39	0.3
D	23997	415993	SR	0.46	0.51	0.51	-0.23	-0.28	-0.15	0.3
D	23997	363947	SR	0.61	0.52	0.52	-0.30	-0.25	-0.21	1.0
D	23997	415967	SR	0.22	0.27	-0.01	-0.18	0.27	-0.11	0.2
D	23997	423594	SR	0.83	0.45	0.45	-0.24	-0.26	-0.23	0.2
D	23997	417526	SPR	0.19	0.45	0.45	-0.35			3.5
D	23997	416023	SR	0.50	0.42	-0.18	-0.15	-0.22	0.42	0.3
D	23997	276434	SPR	0.27	0.57	0.57	-0.49			4.6
D	23997	423589	SR	0.40	0.37	0.37	-0.21	-0.10	-0.15	0.4
D	23997	415204	SPR	0.32	0.55	0.55	-0.45			4.9
D	23997	422600	SR	0.57	0.44	0.44	-0.26	-0.23	-0.12	0.2
D	23997	422591	SR	0.44	0.37	-0.09	-0.26	0.37	-0.09	0.3
D	23997	361334	SPR	0.60	0.60	0.60	-0.54			3.3
D	23997	421326	SR	0.68	0.50	-0.20	0.50	-0.31	-0.24	0.3
E	15491	417561	SR	0.52	0.27	-0.15	-0.17	0.27	-0.15	0.0
E	15491	393639	SPR	0.16	0.43	0.43	-0.32			4.7
E	15491	421302	SR	0.41	0.42	0.42	-0.21	-0.16	-0.14	0.2
E	15491	423598	SR	0.50	0.35	-0.04	0.35	-0.29	-0.26	0.2
E	15491	421328	SR	0.63	0.43	-0.17	-0.32	-0.13	0.43	0.6
E	15491	415975	SR	0.53	0.25	-0.04	0.25	-0.15	-0.14	0.2
E	15491	417542	SR	0.35	0.30	**0.04**	0.30	-0.28	-0.10	0.3
E	15491	415287	SPR	0.14	0.31	0.31	-0.20			5.0
E	15491	423605	SR	0.37	0.17	-0.05	0.17	**0.05**	-0.22	0.3
E	15491	257113	SPR	0.22	0.48	0.48	-0.41			**6.0**
E	15491	415976	SR	0.61	0.48	-0.24	-0.24	0.48	-0.25	0.2
E	15491	416019	SPR	0.37	0.51	0.51	-0.45			3.9
E	15491	415289	SR	0.39	0.29	-0.17	-0.02	-0.20	0.29	0.3
E	15491	423618	SR	0.65	0.43	-0.23	-0.25	0.43	-0.16	0.3
E	15491	421333	SPR	0.62	0.37	0.37	-0.33			1.8
E	15491	421343	SR	0.38	0.40	-0.22	-0.12	-0.15	0.40	0.3
F	12644	366225	SR	0.55	0.37	-0.24	-0.13	0.37	-0.18	0.3
F	12644	422580	SPR	0.47	0.55	0.55	-0.49			3.3
F	12644	421320	SR	0.44	0.13	**0.05**	0.13	-0.16	-0.05	0.8
F	12644	415254	SR	0.33	0.15	-0.03	-0.12	0.15	-0.03	0.2
F	12644	417436	SR	**0.09**	0.17	-0.01	-0.01	-0.09	0.17	1.3
F	12644	416024	SR	0.57	0.39	-0.15	-0.24	0.39	-0.22	0.1
F	12644	423595	SR	0.81	0.41	-0.19	-0.21	0.41	-0.26	0.2
F	12644	421316	SPR	0.44	0.59	0.59	-0.54			2.6
F	12644	416006	SR	0.90	0.28	-0.16	-0.13	-0.17	0.28	0.1
F	12644	422602	SPR	0.60	0.50	0.50	-0.45			2.7
F	12644	415284	SR	0.49	0.50	-0.22	-0.20	0.50	-0.25	0.6
F	12644	421299	SPR	0.40	0.45	0.45	-0.37			3.9

Table 1.B5 Item Statistics, Field Test Items: MDHSA Algebra—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
F	12644	416004	SR	0.47	0.35	0.35	-0.16	-0.14	-0.16	0.2
F	12644	421305	SR	0.52	0.41	0.41	-0.22	-0.19	-0.12	0.2
F	12644	415277	SPR	0.64	0.43	0.43	-0.39			2.8
F	12644	422605	SR	0.48	0.39	0.39	-0.24	-0.14	-0.17	0.2
G	12557	422590	SR	0.41	0.55	-0.21	0.55	-0.35	-0.13	0.2
G	12557	417541	SPR	0.58	0.51	0.51	-0.48			1.5
G	12557	421301	SR	0.71	0.38	-0.23	0.38	-0.24	-0.11	0.2
G	12557	416003	SR	0.28	0.22	0.22	**0.00**	-0.19	-0.12	0.3
G	12557	422608	SR	0.76	0.47	-0.36	-0.20	0.47	-0.12	0.7
G	12557	415970	SR	0.79	0.39	-0.27	-0.24	0.39	-0.14	0.1
G	12557	415269	SR	0.84	0.41	-0.18	-0.22	0.41	-0.27	0.1
G	12557	415250	SPR	0.34	0.46	0.46	-0.40			2.5
G	12557	394854	SR	0.27	**-0.14**	-0.19	-0.14	**0.33**	-0.17	0.4
G	12557	423615	SPR	0.59	0.37	0.37	-0.33			2.2
G	12557	417530	SR	0.78	0.40	-0.30	-0.23	0.40	-0.07	0.3
G	12557	415279	SPR	0.30	0.53	0.53	-0.44			4.9
G	12557	421332	SR	0.57	0.37	-0.11	-0.24	-0.25	0.37	0.2
G	12557	421304	SR	0.45	0.47	-0.12	-0.25	-0.24	0.47	0.5
G	12557	415251	SPR	0.17	0.42	0.42	-0.32			3.5
G	12557	415252	SR	0.54	0.22	-0.18	-0.17	-0.02	0.22	0.3
H	12296	415267	SR	0.40	0.45	-0.20	-0.29	-0.04	0.45	0.0
H	12296	422604	SPR	0.20	0.47	0.47	-0.35			4.7
H	12296	422576	SR	0.36	0.21	0.21	-0.05	-0.14	-0.08	0.3
H	12296	416013	SR	0.48	0.36	0.36	-0.19	-0.11	-0.16	0.5
H	12296	415978	SR	0.28	0.35	-0.05	-0.18	0.35	-0.16	0.6
H	12296	417531	SR	0.45	0.19	0.19	-0.23	**0.04**	-0.14	0.2
H	12296	415988	SR	0.86	0.38	-0.17	0.38	-0.25	-0.20	0.1
H	12296	423611	SPR	0.25	0.55	0.55	-0.47			2.6
H	12296	417549	SR	0.61	0.34	-0.20	-0.10	-0.19	0.34	0.2
H	12296	421300	SPR	0.23	0.45	0.45	-0.35			4.3
H	12296	421308	SR	0.80	0.40	-0.20	-0.31	0.40	-0.12	0.1
H	12296	421306	SPR	0.55	0.59	0.59	-0.56			2.1
H	12296	423613	SR	0.34	0.12	-0.18	-0.02	**0.06**	0.12	0.2
H	12296	415268	SR	0.58	0.40	-0.12	-0.25	0.40	-0.21	0.3
H	12296	421322	SPR	0.16	0.47	0.47	-0.34			**6.9**
H	12296	393652	SR	0.46	0.31	-0.14	-0.25	0.31	**0.01**	0.4
Mean				0.48	0.39	0.13	-0.20	0.03	-0.04	1.3
SD				0.19	0.13	0.31	0.23	0.28	0.22	1.7

Note. Values in bold are outside of the accepted range. Statistics for items on multiple forms are listed under the first form on which the item appeared. P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.B6 Item Statistics, Field Test Items: MDHSA Biology—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
D	19326	417643	SR	0.58	0.39	0.39	-0.17	-0.24	-0.13	0.1
D	19326	417642	SR	0.72	0.29	-0.16	-0.20	0.29	-0.13	0.0
D	19326	373143	SR	0.57	0.32	-0.14	-0.19	0.32	-0.17	0.1
D	19326	373160	SR	0.52	0.23	-0.21	-0.18	0.23	0.00	0.1
D	19326	392603	SR	0.57	0.47	0.47	-0.16	-0.13	-0.35	0.1
D	19326	392607	SR	0.59	0.48	-0.20	-0.30	0.48	-0.19	0.1
D	19326	392605	SR	0.56	0.47	-0.17	-0.32	-0.15	0.47	0.2
D	19326	108574	SR	0.34	**0.05**	-0.16	0.05	-0.23	**0.21**	0.2
D	19326	393846	SR	0.61	0.40	-0.30	0.40	-0.20	-0.06	0.1
D	19326	393843	SR	0.59	0.55	-0.25	-0.32	-0.22	0.55	0.0
D	19326	369415	SR	0.66	0.49	-0.18	-0.28	-0.30	0.49	0.1
D	19326	338743	SR	0.72	0.36	-0.20	0.36	-0.15	-0.21	0.1
D	19326	366598	SR	0.69	0.50	-0.24	-0.35	0.50	-0.20	0.0
D	19326	414799	SR	0.58	0.39	-0.19	-0.21	-0.17	0.39	0.1
D	19326	414801	SR	0.71	0.46	-0.18	0.46	-0.31	-0.21	0.2
D	19326	338736	SR	0.87	0.36	-0.27	-0.16	-0.14	0.36	0.1
D	19326	394876	SR	0.63	0.46	0.46	-0.26	-0.29	-0.13	0.2
D	19326	394877	SR	0.53	0.51	-0.08	0.51	-0.40	-0.21	0.1
D	19326	394879	SR	0.65	0.44	-0.22	-0.21	-0.23	0.44	0.1
D	19326	392486	SR	0.57	0.46	-0.24	-0.21	0.46	-0.20	0.1
D	19326	394028	SR	0.46	0.46	-0.16	0.46	-0.28	-0.21	0.2
D	19326	394031	SR	0.67	0.45	-0.25	-0.22	0.45	-0.21	0.1
D	19326	393883	SR	0.58	0.40	-0.20	0.40	-0.26	-0.14	0.1
E	11473	417646	SR	0.51	0.33	-0.19	0.33	-0.31	**0.03**	0.1
E	11473	417644	SR	0.40	0.23	-0.14	-0.26	**0.08**	0.23	0.1
E	11473	352588	SR	0.86	0.36	-0.19	-0.20	-0.21	0.36	0.1
E	11473	366639	SR	0.49	0.47	-0.26	-0.22	-0.20	0.47	0.1
E	11473	361407	SR	0.60	0.47	-0.12	0.47	-0.32	-0.22	0.1
E	11473	361405	SR	0.85	0.42	-0.22	-0.26	-0.21	0.42	0.1
E	11473	361424	SR	0.56	0.50	-0.22	-0.19	-0.32	0.50	0.2
E	11473	366568	SR	0.89	0.26	-0.13	0.26	-0.15	-0.15	0.2
E	11473	393844	SR	0.44	0.28	-0.05	0.28	-0.09	-0.23	0.1
E	11473	393845	SR	0.68	0.48	0.48	-0.26	-0.26	-0.19	0.1
E	11473	363008	SR	0.63	0.42	-0.23	-0.29	0.42	-0.19	0.1
E	11473	322177	SR	0.38	0.43	-0.20	-0.24	-0.15	0.43	0.1
E	11473	392498	SR	0.65	0.46	-0.13	-0.35	0.46	-0.17	0.1
E	11473	414800	SR	0.61	0.47	-0.27	-0.20	0.47	-0.22	0.2
E	11473	414803	SR	0.64	0.47	-0.18	-0.31	-0.20	0.47	0.2
E	11473	363164	SR	0.61	0.51	-0.29	-0.34	0.51	-0.15	0.2
E	11473	398045	SR	0.68	0.44	0.44	-0.31	-0.18	-0.17	0.3
E	11473	398044	SR	0.76	0.51	-0.32	-0.26	0.51	-0.22	0.1
E	11473	398047	SR	0.22	0.20	**0.02**	-0.22	-0.01	0.20	0.1
E	11473	393884	SR	0.71	0.40	-0.19	-0.19	0.40	-0.23	0.1
E	11473	395774	SR	0.58	0.54	-0.14	0.54	-0.34	-0.29	0.2

Table 1.B6 Item Statistics, Field Test Items: MDHSA Biology—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
E	11473	395889	SR	0.84	0.38	-0.22	-0.17	-0.23	0.38	0.2
E	11473	260075	SR	0.45	0.39	**0.00**	0.39	-0.36	-0.16	0.2
F	9839	394741	SR	0.54	0.39	-0.19	-0.27	0.39	-0.08	0.1
F	9839	394740	SR	0.73	0.50	-0.19	0.50	-0.34	-0.23	0.1
F	9839	364179	SR	0.57	0.56	-0.29	0.56	-0.25	-0.26	0.1
F	9839	373154	SR	0.65	0.34	-0.18	0.34	-0.09	-0.24	0.1
F	9839	392621	SR	0.42	0.17	-0.05	-0.14	0.17	-0.08	0.1
F	9839	392645	SR	0.90	0.38	-0.19	-0.22	-0.22	0.38	0.1
F	9839	392618	SR	0.47	0.46	-0.21	0.46	-0.22	-0.18	0.1
F	9839	331364	SR	0.51	0.61	0.61	-0.28	-0.38	-0.12	0.1
F	9839	394887	SR	0.45	0.38	-0.19	-0.24	0.38	-0.05	0.2
F	9839	394886	SR	0.62	0.45	-0.34	0.45	-0.30	-0.07	0.1
F	9839	108628	SR	0.64	0.43	-0.12	-0.23	0.43	-0.28	0.1
F	9839	393872	SR	0.51	0.17	-0.10	-0.13	0.17	-0.01	0.2
F	9839	338756	SR	0.54	0.55	-0.27	-0.28	0.55	-0.22	0.2
F	9839	395749	SR	0.47	0.45	0.45	-0.18	-0.26	-0.18	0.2
F	9839	395750	SR	0.63	0.46	-0.23	-0.18	-0.27	0.46	0.2
F	9839	349100	SR	0.65	0.42	-0.20	-0.25	-0.18	0.42	0.1
F	9839	400671	SR	0.52	0.46	-0.20	0.46	-0.26	-0.15	0.2
F	9839	400670	SR	0.82	0.46	0.46	-0.30	-0.26	-0.17	0.1
F	9839	400673	SR	0.79	0.46	-0.21	-0.26	0.46	-0.25	0.1
F	9839	363023	SR	0.55	0.39	0.39	-0.19	-0.28	-0.09	0.2
F	9839	395773	SR	0.75	0.33	0.33	-0.25	-0.13	-0.17	0.2
F	9839	395888	SR	0.70	0.43	-0.16	-0.22	0.43	-0.27	0.1
F	9839	373185	SR	0.57	0.52	-0.18	-0.26	-0.29	0.52	0.2
G	9720	395746	SR	0.61	0.47	-0.23	-0.31	0.47	-0.15	0.0
G	9720	395745	SR	0.25	0.15	-0.15	**0.07**	-0.16	0.15	0.1
G	9720	79505	SR	0.58	0.48	-0.22	-0.32	0.48	-0.13	0.0
G	9720	331370	SR	0.89	0.37	-0.18	-0.23	-0.20	0.37	0.0
G	9720	361404	SR	0.75	0.45	-0.28	-0.21	0.45	-0.22	0.0
G	9720	361403	SR	0.46	0.50	-0.21	-0.33	-0.13	0.50	0.1
G	9720	361409	SR	0.83	0.36	0.36	-0.15	-0.25	-0.22	0.1
G	9720	400695	SR	0.34	0.11	**0.03**	-0.16	-0.01	0.11	0.1
G	9720	394889	SR	0.50	0.52	-0.27	-0.16	-0.30	0.52	0.1
G	9720	394888	SR	0.35	0.25	0.25	-0.18	-0.14	**0.03**	0.1
G	9720	353222	SR	0.44	0.52	-0.17	-0.33	0.52	-0.18	0.0
G	9720	392435	SR	0.54	0.34	-0.21	-0.29	0.34	-0.05	0.0
G	9720	366616	SR	0.48	0.35	-0.19	-0.28	-0.03	0.35	0.1
G	9720	414896	SR	0.46	**0.02**	-0.21	-0.24	0.02	**0.23**	0.2
G	9720	414893	SR	0.64	0.32	-0.22	0.32	-0.07	-0.19	0.2
G	9720	373162	SR	0.40	0.38	-0.18	0.38	-0.16	-0.15	0.1
G	9720	398036	SR	0.70	0.41	0.41	-0.24	-0.24	-0.13	0.2
G	9720	398038	SR	0.63	0.41	-0.21	0.41	-0.24	-0.15	0.1
G	9720	398037	SR	0.62	0.45	-0.29	-0.21	-0.19	0.45	0.1

Table 1.B6 Item Statistics, Field Test Items: MDHSA Biology—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
G	9720	338765	SR	0.86	0.43	0.43	-0.26	-0.25	-0.21	0.1
G	9720	394030	SR	0.63	0.50	-0.30	-0.20	0.50	-0.23	0.1
G	9720	394029	SR	0.37	0.29	-0.21	-0.13	0.29	-0.11	0.1
G	9720	352876	SR	0.60	0.33	-0.13	-0.13	0.33	-0.24	0.1
H	9687	395744	SR	0.73	0.33	0.33	-0.16	-0.27	-0.12	0.0
H	9687	395747	SR	0.40	0.42	-0.26	0.42	-0.14	-0.13	0.1
H	9687	395767	SR	0.46	0.23	-0.26	**0.04**	0.23	-0.12	0.1
H	9687	366561	SR	0.62	0.33	-0.06	0.33	-0.25	-0.21	0.1
H	9687	393910	SR	0.58	0.33	-0.15	-0.18	-0.15	0.33	0.1
H	9687	393913	SR	0.70	0.27	-0.21	-0.14	0.27	-0.05	0.1
H	9687	393911	SR	0.62	0.45	-0.21	0.45	-0.23	-0.21	0.2
H	9687	392449	SR	0.47	0.56	-0.21	-0.25	-0.30	0.56	0.1
H	9687	395887	SR	0.25	0.17	-0.14	-0.25	**0.10**	0.17	0.1
H	9687	395771	SR	0.71	0.41	-0.19	-0.20	0.41	-0.25	0.1
H	9687	369421	SR	0.48	0.51	-0.31	-0.25	0.51	-0.09	0.1
H	9687	373165	SR	0.53	0.42	0.42	-0.28	-0.09	-0.23	0.1
H	9687	369422	SR	0.57	0.24	-0.08	-0.14	0.24	-0.12	0.1
H	9687	395748	SR	0.54	0.50	-0.24	-0.19	-0.28	0.50	0.2
H	9687	395885	SR	0.60	0.53	-0.12	-0.34	-0.31	0.53	0.2
H	9687	323347	SR	0.88	0.38	-0.21	-0.24	0.38	-0.19	0.1
H	9687	400677	SR	0.64	0.43	-0.24	-0.29	0.43	-0.09	0.1
H	9687	400678	SR	0.44	0.52	-0.14	-0.23	0.52	-0.29	0.0
H	9687	400674	SR	0.63	0.48	-0.25	0.48	-0.33	-0.17	0.1
H	9687	407378	SR	0.48	0.41	0.41	-0.27	-0.14	-0.16	0.1
H	9687	394747	SR	0.38	0.32	-0.23	0.32	-0.21	-0.09	0.1
H	9687	394748	SR	0.66	0.44	-0.24	0.44	-0.23	-0.18	0.1
H	9687	407377	SR	0.57	0.52	-0.22	-0.25	-0.28	0.52	0.0
Mean				0.59	0.40	-0.10	-0.07	-0.01	0.00	0.1
SD				0.14	0.11	0.23	0.28	0.30	0.27	0.1

Note. Values in bold are outside of the accepted range. Statistics for items on multiple forms are listed under the first form on which the item appeared. P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.B7 Item Statistics, Field Test Items: MDHSA English—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
D	18351	397747	SR	0.46	0.25	**0.02**	0.25	-0.16	-0.22	0.0
D	18351	397748	SR	0.55	0.26	0.26	-0.23	-0.01	-0.24	0.0
D	18351	397746	SR	0.40	0.34	-0.18	0.34	-0.13	-0.16	0.0
D	18351	373875	SR	0.59	0.31	0.31	-0.18	-0.13	-0.13	0.1
D	18351	392642	SR	0.87	0.36	-0.19	-0.20	-0.22	0.36	0.2
D	18351	392657	SR	**0.93**	0.28	-0.15	-0.16	0.28	-0.18	0.1
D	18351	400856	SR	0.47	0.44	-0.17	0.44	-0.28	-0.18	0.1
D	18351	400858	SR	0.13	0.28	-0.17	-0.22	-0.03	0.28	0.1
D	18351	400857	SR	0.43	0.37	-0.10	-0.25	-0.10	0.37	0.1
D	18351	400861	SR	0.87	0.29	0.29	-0.22	-0.25	-0.09	0.1
D	18351	400860	SR	0.36	0.29	-0.23	-0.09	-0.13	0.29	0.0
D	18351	400859	SR	0.49	0.28	-0.20	-0.10	0.28	-0.12	0.1
D	18351	395623	SR	0.58	0.33	-0.17	-0.19	0.33	-0.11	0.1
D	18351	395627	SR	0.39	0.34	0.34	-0.08	-0.30	-0.07	0.1
D	18351	395625	SR	0.17	**0.07**	0.07	**0.21**	-0.20	-0.13	0.1
D	18351	395629	SR	0.56	0.30	0.30	-0.17	-0.13	-0.11	0.1
D	18351	395628	SR	0.77	0.34	-0.26	-0.23	0.34	-0.12	0.1
D	18351	395631	SR	0.57	0.16	-0.08	-0.16	0.16	-0.01	0.1
D	18351	395632	SR	0.66	0.47	-0.24	-0.22	-0.25	0.47	0.1
D	18351	395634	SR	0.37	0.17	-0.07	**0.01**	-0.15	0.17	0.1
D	18351	395633	SR	0.44	0.15	**0.02**	-0.27	0.15	-0.03	0.2
D	18351	395635	SR	0.60	0.32	0.32	-0.10	-0.23	-0.18	0.1
D	18351	395636	SR	0.64	0.34	-0.24	-0.08	-0.28	0.34	0.1
D	18351	417477	SR	0.81	0.38	-0.23	-0.26	0.38	-0.12	0.1
D	18351	417478	SR	0.62	0.44	-0.21	-0.27	-0.22	0.44	0.1
D	18351	417479	SR	0.46	0.38	-0.09	-0.20	-0.28	0.38	0.1
D	18351	417480	SR	0.69	0.55	0.55	-0.25	-0.33	-0.28	0.2
D	18351	417481	SR	0.65	0.30	-0.19	-0.06	0.30	-0.24	0.2
D	18351	415142	SR	0.38	0.24	-0.16	-0.04	-0.15	0.24	0.2
D	18351	415143	SR	0.75	0.44	-0.20	-0.30	0.44	-0.18	0.2
D	18351	415144	SR	0.28	0.15	**0.01**	-0.08	0.15	-0.11	0.2
D	18351	415145	SR	0.72	0.47	-0.20	0.47	-0.28	-0.26	0.2
D	18351	415146	SR	0.51	0.31	-0.06	-0.25	0.31	-0.11	0.2
D	18351	415147	SR	0.43	0.28	**0.01**	0.28	-0.18	-0.28	0.2
D	18351	415148	SR	0.37	0.15	-0.13	0.15	**0.11**	-0.22	0.2
D	18351	415150	SR	0.36	0.40	0.40	-0.29	-0.02	-0.19	0.2
D	18351	393765	SR	0.55	0.30	-0.24	0.30	-0.02	-0.20	0.2
D	18351	393820	SR	0.64	0.44	-0.22	0.44	-0.21	-0.21	0.2
E	11517	397752	SR	0.36	0.22	**0.02**	-0.07	-0.21	0.22	0.0
E	11517	397754	SR	0.72	0.15	-0.11	-0.11	0.15	-0.06	0.0
E	11517	397753	SR	0.60	0.45	-0.22	-0.27	0.45	-0.22	0.1
E	11517	392643	SR	0.65	0.42	-0.14	-0.26	-0.22	0.42	0.1
E	11517	395687	SR	0.69	0.16	**0.08**	0.16	-0.22	-0.26	0.2
E	11517	393825	SR	0.88	0.40	-0.19	0.40	-0.20	-0.25	0.1

Table 1.B7 Item Statistics, Field Test Items: MDHSA English—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
E	11517	394592	SR	0.55	0.40	0.40	-0.16	-0.25	-0.16	0.1
E	11517	394590	SR	0.43	**0.10**	-0.08	**0.05**	-0.16	0.10	0.0
E	11517	394591	SR	0.69	0.36	-0.22	0.36	-0.19	-0.22	0.0
E	11517	394594	SR	0.63	0.48	0.48	-0.23	-0.23	-0.24	0.1
E	11517	394589	SR	0.36	0.32	-0.04	-0.16	-0.16	0.32	0.2
E	11517	394593	SR	0.82	0.46	0.46	-0.28	-0.26	-0.22	0.1
E	11517	395675	SR	0.32	**0.01**	**0.04**	**0.06**	-0.15	0.01	0.1
E	11517	395669	SR	0.25	0.15	-0.11	**0.07**	-0.20	0.15	0.1
E	11517	395673	SR	0.67	0.30	0.30	-0.20	-0.17	-0.08	0.1
E	11517	395676	SR	0.52	0.36	-0.09	-0.21	0.36	-0.19	0.1
E	11517	395664	SR	0.27	0.11	-0.01	-0.26	**0.10**	0.11	0.2
E	11517	395670	SR	0.61	0.20	0.20	-0.17	-0.03	-0.20	0.1
E	11517	395674	SR	0.48	0.13	-0.07	0.13	-0.11	**0.01**	0.1
E	11517	395677	SR	0.81	0.47	0.47	-0.25	-0.27	-0.24	0.1
E	11517	395667	SR	0.33	0.14	**0.12**	-0.24	-0.17	0.14	0.2
E	11517	395671	SR	0.69	0.37	-0.20	-0.17	0.37	-0.20	0.1
E	11517	395666	SR	0.44	0.22	-0.06	-0.11	-0.11	0.22	0.2
E	11517	417582	SR	0.65	0.49	-0.22	-0.25	-0.25	0.49	0.1
E	11517	417583	SR	0.19	0.11	-0.27	0.11	-0.17	**0.14**	0.2
E	11517	417584	SR	0.45	0.15	-0.12	**0.04**	0.15	-0.16	0.3
E	11517	417585	SR	0.22	**0.03**	-0.15	0.03	**0.22**	-0.16	0.2
E	11517	417586	SR	0.62	0.38	0.38	-0.12	-0.16	-0.29	0.2
E	11517	393797	SR	0.26	**-0.03**	**0.11**	-0.03	-0.08	-0.03	0.4
E	11517	393795	SR	0.71	0.41	0.41	-0.22	-0.23	-0.20	0.2
E	11517	393798	SR	0.43	0.18	-0.11	**0.01**	0.18	-0.23	0.2
E	11517	393792	SR	0.66	0.40	-0.23	-0.12	-0.27	0.40	0.3
E	11517	393794	SR	0.65	0.34	-0.20	0.34	-0.10	-0.23	0.3
E	11517	393793	SR	0.65	0.46	-0.20	-0.18	-0.29	0.46	0.3
E	11517	393816	SR	0.61	0.44	-0.17	0.44	-0.23	-0.23	0.3
E	11517	393817	SR	0.73	0.39	-0.12	0.39	-0.27	-0.22	0.3
E	11517	394611	SR	0.51	0.34	-0.21	**0.00**	-0.30	0.34	0.3
E	11517	394610	SR	0.53	0.35	-0.12	-0.23	0.35	-0.17	0.4
F	9764	397755	SR	0.80	0.26	0.26	-0.15	-0.11	-0.20	0.0
F	9764	397757	SR	0.87	0.33	0.33	-0.16	-0.23	-0.15	0.0
F	9764	397756	SR	0.75	0.37	-0.15	-0.21	0.37	-0.22	0.0
F	9764	395683	SR	0.71	0.43	-0.22	-0.26	0.43	-0.20	0.1
F	9764	395690	SR	0.69	0.25	-0.13	0.25	-0.16	-0.11	0.2
F	9764	393828	SR	0.45	0.13	-0.22	0.13	-0.24	**0.18**	0.2
F	9764	397739	SR	0.76	0.44	0.44	-0.26	-0.20	-0.24	0.0
F	9764	397741	SR	0.79	0.38	-0.16	0.38	-0.22	-0.23	0.1
F	9764	397740	SR	0.69	0.31	-0.07	-0.21	0.31	-0.23	0.0
F	9764	397738	SR	0.67	0.44	0.44	-0.26	-0.22	-0.20	0.1
F	9764	397742	SR	0.45	0.28	-0.05	0.28	-0.23	-0.07	0.2
F	9764	397743	SR	0.57	0.29	-0.21	-0.13	0.29	-0.22	0.1

Table 1.B7 Item Statistics, Field Test Items: MDHSA English—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
F	9764	416225	SR	0.55	0.36	-0.25	-0.12	-0.27	0.36	0.1
F	9764	416228	SR	0.67	0.25	-0.13	-0.14	0.25	-0.12	0.1
F	9764	416227	SR	0.21	0.14	-0.08	-0.06	**0.02**	0.14	0.2
F	9764	416229	SR	0.35	**0.03**	-0.11	-0.24	0.03	**0.26**	0.2
F	9764	416231	SR	0.50	0.37	0.37	-0.13	-0.21	-0.21	0.1
F	9764	416232	SR	0.61	0.38	-0.15	-0.14	-0.28	0.38	0.1
F	9764	416233	SR	0.68	0.30	-0.12	-0.22	-0.18	0.30	0.1
F	9764	416234	SR	0.79	0.36	-0.19	0.36	-0.25	-0.22	0.1
F	9764	416235	SR	0.68	0.31	-0.09	-0.29	0.31	-0.17	0.1
F	9764	416236	SR	0.44	0.14	0.14	-0.17	**0.11**	-0.24	0.1
F	9764	416238	SR	0.70	0.35	-0.23	0.35	-0.28	-0.13	0.1
F	9764	417518	SR	0.18	**0.00**	**0.18**	-0.08	0.00	-0.17	0.2
F	9764	417519	SR	0.76	0.29	-0.20	0.29	-0.23	-0.07	0.1
F	9764	417520	SR	0.61	0.38	-0.20	-0.24	0.38	-0.13	0.1
F	9764	417521	SR	0.77	0.50	-0.24	-0.29	-0.27	0.50	0.2
F	9764	417522	SR	0.77	0.29	0.29	-0.22	-0.13	-0.13	0.2
F	9764	393783	SR	0.78	0.32	-0.28	-0.19	0.32	-0.09	0.2
F	9764	393787	SR	0.67	0.20	-0.04	0.20	-0.25	-0.17	0.2
F	9764	393784	SR	0.59	0.45	-0.34	-0.20	0.45	-0.16	0.2
F	9764	393818	SR	0.54	0.28	-0.11	-0.29	-0.02	0.28	0.2
F	9764	393786	SR	0.53	**0.06**	-0.22	**0.05**	0.06	**0.04**	0.2
F	9764	393785	SR	0.29	**0.09**	**0.03**	0.09	-0.26	**0.09**	0.2
F	9764	393788	SR	0.79	0.36	-0.16	-0.20	-0.25	0.36	0.2
F	9764	393791	SR	0.61	0.38	-0.12	0.38	-0.25	-0.19	0.1
F	9764	364027	SR	0.50	0.34	0.34	-0.06	-0.26	-0.20	0.2
F	9764	364028	SR	0.85	0.36	-0.16	-0.26	0.36	-0.17	0.1
G	9864	397781	SR	0.59	0.47	-0.28	-0.26	-0.16	0.47	0.1
G	9864	397782	SR	0.73	0.39	0.39	-0.18	-0.22	-0.24	0.1
G	9864	397783	SR	0.80	0.48	-0.25	-0.27	-0.25	0.48	0.1
G	9864	395691	SR	0.85	0.40	-0.19	-0.27	0.40	-0.19	0.1
G	9864	395699	SR	0.55	0.27	-0.09	0.27	-0.20	-0.13	0.2
G	9864	400494	SR	0.89	0.10	-0.08	-0.02	0.10	-0.05	0.2
G	9864	373767	SR	0.43	0.30	-0.09	-0.19	-0.10	0.30	0.1
G	9864	373768	SR	0.57	0.43	-0.35	-0.19	0.43	-0.09	0.0
G	9864	373765	SR	0.56	0.52	-0.21	-0.29	-0.24	0.52	0.1
G	9864	373766	SR	0.72	0.49	0.49	-0.28	-0.27	-0.23	0.1
G	9864	373762	SR	0.69	0.37	-0.26	0.37	-0.19	-0.14	0.1
G	9864	373763	SR	0.78	0.42	-0.24	0.42	-0.24	-0.25	0.1
G	9864	395656	SR	0.61	0.32	0.32	-0.20	-0.19	-0.06	0.2
G	9864	395655	SR	0.48	0.10	-0.20	-0.01	0.10	-0.01	0.1
G	9864	395662	SR	0.72	0.39	-0.29	-0.15	0.39	-0.17	0.1
G	9864	395651	SR	0.64	0.45	0.45	-0.18	-0.25	-0.24	0.1
G	9864	395660	SR	0.41	0.25	0.25	**0.00**	-0.20	-0.25	0.1
G	9864	395663	SR	0.70	0.35	0.35	-0.21	-0.24	-0.08	0.1

Table 1.B7 Item Statistics, Field Test Items: MDHSA English—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
G	9864	395653	SR	0.45	**0.10**	0.00	**0.03**	0.10	-0.17	0.2
G	9864	395650	SR	0.28	0.15	-0.11	-0.01	0.15	-0.04	0.2
G	9864	395652	SR	0.57	0.41	-0.23	-0.12	-0.21	0.41	0.2
G	9864	395654	SR	0.47	0.23	-0.02	0.23	-0.18	-0.07	0.2
G	9864	395657	SR	0.53	0.13	-0.26	0.13	-0.27	**0.10**	0.2
G	9864	417594	SR	0.27	0.22	-0.22	0.22	**0.03**	-0.07	0.2
G	9864	417595	SR	0.38	0.26	-0.22	0.26	-0.26	**0.03**	0.2
G	9864	417596	SR	0.50	0.42	-0.20	-0.14	-0.26	0.42	0.3
G	9864	417597	SR	0.62	0.25	0.25	-0.20	-0.29	-0.05	0.2
G	9864	417598	SR	0.72	0.32	-0.11	-0.19	0.32	-0.17	0.3
G	9864	393753	SR	0.74	0.27	-0.29	0.27	-0.15	**0.02**	0.3
G	9864	393756	SR	0.71	0.37	-0.13	-0.27	0.37	-0.22	0.3
G	9864	393752	SR	0.82	0.43	0.43	-0.25	-0.24	-0.22	0.2
G	9864	393749	SR	0.62	0.42	-0.22	0.42	-0.23	-0.18	0.2
G	9864	393755	SR	0.44	0.22	0.22	-0.26	-0.20	**0.12**	0.3
G	9864	393750	SR	0.78	0.45	-0.25	-0.35	-0.10	0.45	0.3
G	9864	393751	SR	0.43	**-0.04**	-0.04	-0.21	**0.17**	-0.01	0.3
G	9864	393758	SR	0.35	0.27	0.27	-0.03	-0.15	-0.22	0.2
G	9864	400847	SR	0.30	**-0.01**	**0.11**	-0.09	-0.01	-0.03	0.3
G	9864	400846	SR	0.60	0.43	0.43	-0.18	-0.30	-0.15	0.3
H	9659	397749	SR	0.80	0.41	-0.18	0.41	-0.20	-0.29	0.0
H	9659	397751	SR	0.49	0.30	0.30	-0.19	-0.14	-0.06	0.0
H	9659	397750	SR	0.75	0.37	-0.23	-0.18	0.37	-0.20	0.1
H	9659	395700	SR	0.73	0.28	-0.08	-0.24	0.28	-0.13	0.1
H	9659	400472	SR	**0.92**	0.36	-0.19	0.36	-0.19	-0.22	0.1
H	9659	400505	SR	**0.92**	0.29	-0.27	0.29	-0.12	-0.06	0.1
H	9659	393819	SR	0.41	0.35	-0.07	0.35	-0.31	-0.12	0.1
H	9659	393777	SR	0.17	0.16	0.16	0.00	**0.02**	-0.14	0.1
H	9659	393779	SR	0.66	0.43	-0.26	0.43	-0.19	-0.20	0.1
H	9659	393776	SR	0.75	0.43	-0.26	0.43	-0.26	-0.14	0.1
H	9659	393778	SR	0.56	0.39	-0.10	0.39	-0.26	-0.19	0.1
H	9659	393780	SR	0.40	0.20	-0.07	-0.18	-0.01	0.20	0.2
H	9659	416271	SR	0.34	**0.03**	0.03	-0.26	**0.06**	**0.13**	0.2
H	9659	416270	SR	0.73	0.47	-0.27	0.47	-0.25	-0.21	0.1
H	9659	416273	SR	0.43	0.45	-0.32	-0.17	0.45	-0.07	0.2
H	9659	416274	SR	0.81	0.35	-0.17	-0.23	0.35	-0.16	0.1
H	9659	416275	SR	0.41	0.15	**0.16**	-0.29	0.15	-0.15	0.1
H	9659	416277	SR	0.48	0.28	-0.19	0.28	-0.16	-0.07	0.2
H	9659	416279	SR	0.61	0.35	0.35	-0.24	-0.11	-0.16	0.1
H	9659	416283	SR	0.69	0.32	-0.19	-0.28	-0.10	0.32	0.2
H	9659	416284	SR	0.77	0.39	-0.24	0.39	-0.27	-0.15	0.1
H	9659	416281	SR	0.45	0.27	-0.23	-0.22	0.27	**0.03**	0.2
H	9659	416285	SR	0.49	0.29	-0.16	0.29	-0.26	**0.02**	0.1
H	9659	417465	SR	0.57	0.29	-0.13	0.29	-0.17	-0.22	0.1

Table 1.B7 Item Statistics, Field Test Items: MDHSA English—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
H	9659	417466	SR	0.70	0.18	-0.14	-0.20	0.18	-0.02	0.2
H	9659	417467	SR	0.44	0.21	0.00	0.21	-0.11	-0.15	0.2
H	9659	417468	SR	0.76	0.50	-0.23	-0.24	-0.30	0.50	0.1
H	9659	417469	SR	0.24	**0.06**	-0.20	**0.15**	-0.13	0.06	0.2
H	9659	421371	SR	0.62	0.31	-0.05	-0.26	0.31	-0.18	0.2
H	9659	421373	SR	0.29	**0.10**	0.10	-0.30	**0.01**	**0.11**	0.2
H	9659	421374	SR	0.58	**0.05**	**0.17**	0.05	-0.25	-0.24	0.2
H	9659	421375	SR	0.42	0.21	-0.20	**0.12**	-0.28	0.21	0.3
H	9659	421376	SR	0.60	0.26	-0.08	-0.17	0.26	-0.19	0.3
H	9659	421377	SR	0.64	0.46	-0.21	-0.28	-0.23	0.46	0.4
H	9659	421378	SR	0.43	0.28	0.28	**0.06**	-0.28	-0.22	0.4
H	9659	421379	SR	0.60	0.44	-0.22	0.44	-0.22	-0.20	0.4
H	9659	397744	SR	0.36	**0.08**	**0.08**	-0.13	-0.11	0.08	0.4
H	9659	397745	SR	0.59	0.33	-0.10	0.33	-0.23	-0.16	0.4
Mean				0.57	0.30	-0.04	-0.04	-0.06	-0.03	0.2
SD				0.18	0.13	0.22	0.24	0.23	0.22	0.1

Note. Values in bold are outside of the accepted range. Statistics for items on multiple forms are listed under the first form on which the item appeared. P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Table 1.B8 Item Statistics, Field Test Items: MDHSA Government—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
D	18351	397747	SR	0.46	0.25	**0.02**	0.25	-0.16	-0.22	0.0
D	18351	397748	SR	0.55	0.26	0.26	-0.23	-0.01	-0.24	0.0
D	18351	397746	SR	0.40	0.34	-0.18	0.34	-0.13	-0.16	0.0
D	18351	373875	SR	0.59	0.31	0.31	-0.18	-0.13	-0.13	0.1
D	18351	392642	SR	0.87	0.36	-0.19	-0.20	-0.22	0.36	0.2
D	18351	392657	SR	**0.93**	0.28	-0.15	-0.16	0.28	-0.18	0.1
D	18351	400856	SR	0.47	0.44	-0.17	0.44	-0.28	-0.18	0.1
D	18351	400858	SR	0.13	0.28	-0.17	-0.22	-0.03	0.28	0.1
D	18351	400857	SR	0.43	0.37	-0.10	-0.25	-0.10	0.37	0.1
D	18351	400861	SR	0.87	0.29	0.29	-0.22	-0.25	-0.09	0.1
D	18351	400860	SR	0.36	0.29	-0.23	-0.09	-0.13	0.29	0.0
D	18351	400859	SR	0.49	0.28	-0.20	-0.10	0.28	-0.12	0.1
D	18351	395623	SR	0.58	0.33	-0.17	-0.19	0.33	-0.11	0.1
D	18351	395627	SR	0.39	0.34	0.34	-0.08	-0.30	-0.07	0.1
D	18351	395625	SR	0.17	**0.07**	0.07	**0.21**	-0.20	-0.13	0.1
D	18351	395629	SR	0.56	0.30	0.30	-0.17	-0.13	-0.11	0.1
D	18351	395628	SR	0.77	0.34	-0.26	-0.23	0.34	-0.12	0.1
D	18351	395631	SR	0.57	0.16	-0.08	-0.16	0.16	-0.01	0.1
D	18351	395632	SR	0.66	0.47	-0.24	-0.22	-0.25	0.47	0.1
D	18351	395634	SR	0.37	0.17	-0.07	**0.01**	-0.15	0.17	0.1
D	18351	395633	SR	0.44	0.15	**0.02**	-0.27	0.15	-0.03	0.2
D	18351	395635	SR	0.60	0.32	0.32	-0.10	-0.23	-0.18	0.1
D	18351	395636	SR	0.64	0.34	-0.24	-0.08	-0.28	0.34	0.1
D	18351	417477	SR	0.81	0.38	-0.23	-0.26	0.38	-0.12	0.1
D	18351	417478	SR	0.62	0.44	-0.21	-0.27	-0.22	0.44	0.1
D	18351	417479	SR	0.46	0.38	-0.09	-0.20	-0.28	0.38	0.1
D	18351	417480	SR	0.69	0.55	0.55	-0.25	-0.33	-0.28	0.2
D	18351	417481	SR	0.65	0.30	-0.19	-0.06	0.30	-0.24	0.2
D	18351	415142	SR	0.38	0.24	-0.16	-0.04	-0.15	0.24	0.2
D	18351	415143	SR	0.75	0.44	-0.20	-0.30	0.44	-0.18	0.2
D	18351	415144	SR	0.28	0.15	**0.01**	-0.08	0.15	-0.11	0.2
D	18351	415145	SR	0.72	0.47	-0.20	0.47	-0.28	-0.26	0.2
D	18351	415146	SR	0.51	0.31	-0.06	-0.25	0.31	-0.11	0.2
D	18351	415147	SR	0.43	0.28	**0.01**	0.28	-0.18	-0.28	0.2
D	18351	415148	SR	0.37	0.15	-0.13	0.15	**0.11**	-0.22	0.2
D	18351	415150	SR	0.36	0.40	0.40	-0.29	-0.02	-0.19	0.2
D	18351	393765	SR	0.55	0.30	-0.24	0.30	-0.02	-0.20	0.2
D	18351	393820	SR	0.64	0.44	-0.22	0.44	-0.21	-0.21	0.2
E	11517	397752	SR	0.36	0.22	**0.02**	-0.07	-0.21	0.22	0.0
E	11517	397754	SR	0.72	0.15	-0.11	-0.11	0.15	-0.06	0.0
E	11517	397753	SR	0.60	0.45	-0.22	-0.27	0.45	-0.22	0.1
E	11517	392643	SR	0.65	0.42	-0.14	-0.26	-0.22	0.42	0.1
E	11517	395687	SR	0.69	0.16	**0.08**	0.16	-0.22	-0.26	0.2
E	11517	393825	SR	0.88	0.40	-0.19	0.40	-0.20	-0.25	0.1

Table 1.B8 Item Statistics, Field Test Items: MDHSA Government—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
E	11517	394592	SR	0.55	0.40	0.40	-0.16	-0.25	-0.16	0.1
E	11517	394590	SR	0.43	**0.10**	-0.08	**0.05**	-0.16	0.10	0.0
E	11517	394591	SR	0.69	0.36	-0.22	0.36	-0.19	-0.22	0.0
E	11517	394594	SR	0.63	0.48	0.48	-0.23	-0.23	-0.24	0.1
E	11517	394589	SR	0.36	0.32	-0.04	-0.16	-0.16	0.32	0.2
E	11517	394593	SR	0.82	0.46	0.46	-0.28	-0.26	-0.22	0.1
E	11517	395675	SR	0.32	**0.01**	**0.04**	**0.06**	-0.15	0.01	0.1
E	11517	395669	SR	0.25	0.15	-0.11	**0.07**	-0.20	0.15	0.1
E	11517	395673	SR	0.67	0.30	0.30	-0.20	-0.17	-0.08	0.1
E	11517	395676	SR	0.52	0.36	-0.09	-0.21	0.36	-0.19	0.1
E	11517	395664	SR	0.27	0.11	-0.01	-0.26	**0.10**	0.11	0.2
E	11517	395670	SR	0.61	0.20	0.20	-0.17	-0.03	-0.20	0.1
E	11517	395674	SR	0.48	0.13	-0.07	0.13	-0.11	**0.01**	0.1
E	11517	395677	SR	0.81	0.47	0.47	-0.25	-0.27	-0.24	0.1
E	11517	395667	SR	0.33	0.14	**0.12**	-0.24	-0.17	0.14	0.2
E	11517	395671	SR	0.69	0.37	-0.20	-0.17	0.37	-0.20	0.1
E	11517	395666	SR	0.44	0.22	-0.06	-0.11	-0.11	0.22	0.2
E	11517	417582	SR	0.65	0.49	-0.22	-0.25	-0.25	0.49	0.1
E	11517	417583	SR	0.19	0.11	-0.27	0.11	-0.17	**0.14**	0.2
E	11517	417584	SR	0.45	0.15	-0.12	**0.04**	0.15	-0.16	0.3
E	11517	417585	SR	0.22	**0.03**	-0.15	0.03	**0.22**	-0.16	0.2
E	11517	417586	SR	0.62	0.38	0.38	-0.12	-0.16	-0.29	0.2
E	11517	393797	SR	0.26	**-0.03**	**0.11**	-0.03	-0.08	-0.03	0.4
E	11517	393795	SR	0.71	0.41	0.41	-0.22	-0.23	-0.20	0.2
E	11517	393798	SR	0.43	0.18	-0.11	**0.01**	0.18	-0.23	0.2
E	11517	393792	SR	0.66	0.40	-0.23	-0.12	-0.27	0.40	0.3
E	11517	393794	SR	0.65	0.34	-0.20	0.34	-0.10	-0.23	0.3
E	11517	393793	SR	0.65	0.46	-0.20	-0.18	-0.29	0.46	0.3
E	11517	393816	SR	0.61	0.44	-0.17	0.44	-0.23	-0.23	0.3
E	11517	393817	SR	0.73	0.39	-0.12	0.39	-0.27	-0.22	0.3
E	11517	394611	SR	0.51	0.34	-0.21	**0.00**	-0.30	0.34	0.3
E	11517	394610	SR	0.53	0.35	-0.12	-0.23	0.35	-0.17	0.4
F	9764	397755	SR	0.80	0.26	0.26	-0.15	-0.11	-0.20	0.0
F	9764	397757	SR	0.87	0.33	0.33	-0.16	-0.23	-0.15	0.0
F	9764	397756	SR	0.75	0.37	-0.15	-0.21	0.37	-0.22	0.0
F	9764	395683	SR	0.71	0.43	-0.22	-0.26	0.43	-0.20	0.1
F	9764	395690	SR	0.69	0.25	-0.13	0.25	-0.16	-0.11	0.2
F	9764	393828	SR	0.45	0.13	-0.22	0.13	-0.24	**0.18**	0.2
F	9764	397739	SR	0.76	0.44	0.44	-0.26	-0.20	-0.24	0.0
F	9764	397741	SR	0.79	0.38	-0.16	0.38	-0.22	-0.23	0.1
F	9764	397740	SR	0.69	0.31	-0.07	-0.21	0.31	-0.23	0.0
F	9764	397738	SR	0.67	0.44	0.44	-0.26	-0.22	-0.20	0.1
F	9764	397742	SR	0.45	0.28	-0.05	0.28	-0.23	-0.07	0.2
F	9764	397743	SR	0.57	0.29	-0.21	-0.13	0.29	-0.22	0.1

Table 1.B8 Item Statistics, Field Test Items: MDHSA Government—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
F	9764	416225	SR	0.55	0.36	-0.25	-0.12	-0.27	0.36	0.1
F	9764	416228	SR	0.67	0.25	-0.13	-0.14	0.25	-0.12	0.1
F	9764	416227	SR	0.21	0.14	-0.08	-0.06	**0.02**	0.14	0.2
F	9764	416229	SR	0.35	**0.03**	-0.11	-0.24	0.03	**0.26**	0.2
F	9764	416231	SR	0.50	0.37	0.37	-0.13	-0.21	-0.21	0.1
F	9764	416232	SR	0.61	0.38	-0.15	-0.14	-0.28	0.38	0.1
F	9764	416233	SR	0.68	0.30	-0.12	-0.22	-0.18	0.30	0.1
F	9764	416234	SR	0.79	0.36	-0.19	0.36	-0.25	-0.22	0.1
F	9764	416235	SR	0.68	0.31	-0.09	-0.29	0.31	-0.17	0.1
F	9764	416236	SR	0.44	0.14	0.14	-0.17	**0.11**	-0.24	0.1
F	9764	416238	SR	0.70	0.35	-0.23	0.35	-0.28	-0.13	0.1
F	9764	417518	SR	0.18	**0.00**	**0.18**	-0.08	0.00	-0.17	0.2
F	9764	417519	SR	0.76	0.29	-0.20	0.29	-0.23	-0.07	0.1
F	9764	417520	SR	0.61	0.38	-0.20	-0.24	0.38	-0.13	0.1
F	9764	417521	SR	0.77	0.50	-0.24	-0.29	-0.27	0.50	0.2
F	9764	417522	SR	0.77	0.29	0.29	-0.22	-0.13	-0.13	0.2
F	9764	393783	SR	0.78	0.32	-0.28	-0.19	0.32	-0.09	0.2
F	9764	393787	SR	0.67	0.20	-0.04	0.20	-0.25	-0.17	0.2
F	9764	393784	SR	0.59	0.45	-0.34	-0.20	0.45	-0.16	0.2
F	9764	393818	SR	0.54	0.28	-0.11	-0.29	-0.02	0.28	0.2
F	9764	393786	SR	0.53	**0.06**	-0.22	**0.05**	0.06	**0.04**	0.2
F	9764	393785	SR	0.29	**0.09**	**0.03**	0.09	-0.26	**0.09**	0.2
F	9764	393788	SR	0.79	0.36	-0.16	-0.20	-0.25	0.36	0.2
F	9764	393791	SR	0.61	0.38	-0.12	0.38	-0.25	-0.19	0.1
F	9764	364027	SR	0.50	0.34	0.34	-0.06	-0.26	-0.20	0.2
F	9764	364028	SR	0.85	0.36	-0.16	-0.26	0.36	-0.17	0.1
G	9864	397781	SR	0.59	0.47	-0.28	-0.26	-0.16	0.47	0.1
G	9864	397782	SR	0.73	0.39	0.39	-0.18	-0.22	-0.24	0.1
G	9864	397783	SR	0.80	0.48	-0.25	-0.27	-0.25	0.48	0.1
G	9864	395691	SR	0.85	0.40	-0.19	-0.27	0.40	-0.19	0.1
G	9864	395699	SR	0.55	0.27	-0.09	0.27	-0.20	-0.13	0.2
G	9864	400494	SR	0.89	0.10	-0.08	-0.02	0.10	-0.05	0.2
G	9864	373767	SR	0.43	0.30	-0.09	-0.19	-0.10	0.30	0.1
G	9864	373768	SR	0.57	0.43	-0.35	-0.19	0.43	-0.09	0.0
G	9864	373765	SR	0.56	0.52	-0.21	-0.29	-0.24	0.52	0.1
G	9864	373766	SR	0.72	0.49	0.49	-0.28	-0.27	-0.23	0.1
G	9864	373762	SR	0.69	0.37	-0.26	0.37	-0.19	-0.14	0.1
G	9864	373763	SR	0.78	0.42	-0.24	0.42	-0.24	-0.25	0.1
G	9864	395656	SR	0.61	0.32	0.32	-0.20	-0.19	-0.06	0.2
G	9864	395655	SR	0.48	0.10	-0.20	-0.01	0.10	-0.01	0.1
G	9864	395662	SR	0.72	0.39	-0.29	-0.15	0.39	-0.17	0.1
G	9864	395651	SR	0.64	0.45	0.45	-0.18	-0.25	-0.24	0.1
G	9864	395660	SR	0.41	0.25	0.25	**0.00**	-0.20	-0.25	0.1
G	9864	395663	SR	0.70	0.35	0.35	-0.21	-0.24	-0.08	0.1

Table 1.B8 Item Statistics, Field Test Items: MDHSA Government—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
G	9864	395653	SR	0.45	**0.10**	0.00	**0.03**	0.10	-0.17	0.2
G	9864	395650	SR	0.28	0.15	-0.11	-0.01	0.15	-0.04	0.2
G	9864	395652	SR	0.57	0.41	-0.23	-0.12	-0.21	0.41	0.2
G	9864	395654	SR	0.47	0.23	-0.02	0.23	-0.18	-0.07	0.2
G	9864	395657	SR	0.53	0.13	-0.26	0.13	-0.27	**0.10**	0.2
G	9864	417594	SR	0.27	0.22	-0.22	0.22	**0.03**	-0.07	0.2
G	9864	417595	SR	0.38	0.26	-0.22	0.26	-0.26	**0.03**	0.2
G	9864	417596	SR	0.50	0.42	-0.20	-0.14	-0.26	0.42	0.3
G	9864	417597	SR	0.62	0.25	0.25	-0.20	-0.29	-0.05	0.2
G	9864	417598	SR	0.72	0.32	-0.11	-0.19	0.32	-0.17	0.3
G	9864	393753	SR	0.74	0.27	-0.29	0.27	-0.15	**0.02**	0.3
G	9864	393756	SR	0.71	0.37	-0.13	-0.27	0.37	-0.22	0.3
G	9864	393752	SR	0.82	0.43	0.43	-0.25	-0.24	-0.22	0.2
G	9864	393749	SR	0.62	0.42	-0.22	0.42	-0.23	-0.18	0.2
G	9864	393755	SR	0.44	0.22	0.22	-0.26	-0.20	**0.12**	0.3
G	9864	393750	SR	0.78	0.45	-0.25	-0.35	-0.10	0.45	0.3
G	9864	393751	SR	0.43	**-0.04**	-0.04	-0.21	**0.17**	-0.01	0.3
G	9864	393758	SR	0.35	0.27	0.27	-0.03	-0.15	-0.22	0.2
G	9864	400847	SR	0.30	**-0.01**	**0.11**	-0.09	-0.01	-0.03	0.3
G	9864	400846	SR	0.60	0.43	0.43	-0.18	-0.30	-0.15	0.3
H	9659	397749	SR	0.80	0.41	-0.18	0.41	-0.20	-0.29	0.0
H	9659	397751	SR	0.49	0.30	0.30	-0.19	-0.14	-0.06	0.0
H	9659	397750	SR	0.75	0.37	-0.23	-0.18	0.37	-0.20	0.1
H	9659	395700	SR	0.73	0.28	-0.08	-0.24	0.28	-0.13	0.1
H	9659	400472	SR	**0.92**	0.36	-0.19	0.36	-0.19	-0.22	0.1
H	9659	400505	SR	**0.92**	0.29	-0.27	0.29	-0.12	-0.06	0.1
H	9659	393819	SR	0.41	0.35	-0.07	0.35	-0.31	-0.12	0.1
H	9659	393777	SR	0.17	0.16	0.16	0.00	**0.02**	-0.14	0.1
H	9659	393779	SR	0.66	0.43	-0.26	0.43	-0.19	-0.20	0.1
H	9659	393776	SR	0.75	0.43	-0.26	0.43	-0.26	-0.14	0.1
H	9659	393778	SR	0.56	0.39	-0.10	0.39	-0.26	-0.19	0.1
H	9659	393780	SR	0.40	0.20	-0.07	-0.18	-0.01	0.20	0.2
H	9659	416271	SR	0.34	**0.03**	0.03	-0.26	**0.06**	**0.13**	0.2
H	9659	416270	SR	0.73	0.47	-0.27	0.47	-0.25	-0.21	0.1
H	9659	416273	SR	0.43	0.45	-0.32	-0.17	0.45	-0.07	0.2
H	9659	416274	SR	0.81	0.35	-0.17	-0.23	0.35	-0.16	0.1
H	9659	416275	SR	0.41	0.15	**0.16**	-0.29	0.15	-0.15	0.1
H	9659	416277	SR	0.48	0.28	-0.19	0.28	-0.16	-0.07	0.2
H	9659	416279	SR	0.61	0.35	0.35	-0.24	-0.11	-0.16	0.1
H	9659	416283	SR	0.69	0.32	-0.19	-0.28	-0.10	0.32	0.2
H	9659	416284	SR	0.77	0.39	-0.24	0.39	-0.27	-0.15	0.1
H	9659	416281	SR	0.45	0.27	-0.23	-0.22	0.27	**0.03**	0.2
H	9659	416285	SR	0.49	0.29	-0.16	0.29	-0.26	**0.02**	0.1
H	9659	417465	SR	0.57	0.29	-0.13	0.29	-0.17	-0.22	0.1

Table 1.B8 Item Statistics, Field Test Items: MDHSA Government—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
H	9659	417466	SR	0.70	0.18	-0.14	-0.20	0.18	-0.02	0.2
H	9659	417467	SR	0.44	0.21	0.00	0.21	-0.11	-0.15	0.2
H	9659	417468	SR	0.76	0.50	-0.23	-0.24	-0.30	0.50	0.1
H	9659	417469	SR	0.24	**0.06**	-0.20	**0.15**	-0.13	0.06	0.2
H	9659	421371	SR	0.62	0.31	-0.05	-0.26	0.31	-0.18	0.2
H	9659	421373	SR	0.29	**0.10**	0.10	-0.30	**0.01**	**0.11**	0.2
H	9659	421374	SR	0.58	**0.05**	**0.17**	0.05	-0.25	-0.24	0.2
H	9659	421375	SR	0.42	0.21	-0.20	**0.12**	-0.28	0.21	0.3
H	9659	421376	SR	0.60	0.26	-0.08	-0.17	0.26	-0.19	0.3
H	9659	421377	SR	0.64	0.46	-0.21	-0.28	-0.23	0.46	0.4
H	9659	421378	SR	0.43	0.28	0.28	**0.06**	-0.28	-0.22	0.4
H	9659	421379	SR	0.60	0.44	-0.22	0.44	-0.22	-0.20	0.4
H	9659	397744	SR	0.36	**0.08**	**0.08**	-0.13	-0.11	0.08	0.4
H	9659	397745	SR	0.59	0.33	-0.10	0.33	-0.23	-0.16	0.4
Mean				0.57	0.30	-0.04	-0.04	-0.06	-0.03	0.2
SD				0.18	0.13	0.22	0.24	0.23	0.22	0.1

Note. Values in bold are outside of the accepted range. Statistics for items on multiple forms are listed under the first form on which the item appeared. P_Val=P-Value, R_ITT=item-total correlation, P_BIS1—P_BIS4 =option-total correlation, %Omits=percent of omitted responses.

Appendix 2A. MD Mod-HSA Classical Item Statistics: Operational Forms

Table 2.A1 Item Statistics: MD Mod-HSA Algebra—October

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
113	1	258090	0.60	0.38	-0.23	-0.24	0.38	0.0
	2	258095	0.71	0.36	0.36	-0.20	-0.27	0.0
	3	258166	0.73	0.33	-0.25	0.33	-0.19	0.1
	4	258312	0.48	0.29	0.29	-0.16	-0.19	0.1
	5	258173	0.55	0.29	-0.13	0.29	-0.22	0.0
	6	258115	0.44	0.32	0.32	-0.20	-0.15	0.1
	7	258223	0.30	0.10	-0.12	0.10	0.00	0.1
	8	258230	0.51	0.23	0.23	-0.23	-0.06	0.1
	9	258147	0.49	0.29	0.29	-0.16	-0.19	0.1
	10	261560	0.65	0.34	-0.19	0.34	-0.24	0.1
	11	258227	0.64	0.25	0.25	-0.14	-0.18	0.0
	12	258308	0.42	0.29	0.29	-0.13	-0.19	0.1
	13	258101	0.52	0.30	-0.23	0.30	-0.11	0.2
	14	258210	0.79	0.37	-0.27	0.37	-0.21	0.1
	15	258116	0.46	0.19	0.19	-0.17	-0.09	0.1
	16	258089	0.22	0.16	-0.09	0.16	-0.04	0.2
	17	261556	0.43	0.27	0.27	-0.24	-0.06	0.2
	18	258309	0.84	0.36	-0.23	-0.25	0.36	0.3
	19	258098	0.62	0.36	-0.26	-0.21	0.36	0.2
	20	258208	0.37	0.11	0.01	-0.13	0.11	0.4
	21	258161	0.57	0.46	0.46	-0.39	-0.15	0.3
	22	258159	0.40	0.25	-0.09	-0.18	0.25	0.4
	23	258184	0.52	0.28	-0.07	0.28	-0.24	0.4
	24	258136	0.52	0.30	-0.14	0.30	-0.19	0.4
	25	258102	0.48	0.30	-0.16	0.30	-0.17	0.4
	26	258226	0.40	0.28	-0.09	-0.20	0.28	0.1
	27	258188	0.66	0.29	-0.15	0.29	-0.22	0.1
	28	258174	0.46	0.27	-0.10	-0.19	0.27	0.3
	29	258209	0.65	0.23	-0.09	-0.22	0.23	0.1
	30	258154	0.42	0.43	-0.28	-0.18	0.43	0.1
	31	258113	0.56	0.35	-0.22	0.35	-0.19	0.1
	32	258198	0.36	0.24	-0.15	-0.09	0.24	0.1
	33	258120	0.49	0.34	-0.16	-0.23	0.34	0.1
	34	258169	0.43	0.22	-0.11	-0.13	0.22	0.2
	35	258119	0.47	0.29	0.29	-0.11	-0.25	0.1
	36	258160	0.43	0.22	0.22	-0.10	-0.13	0.2
	37	258241	0.56	0.34	-0.17	0.34	-0.25	0.2
	38	258130	0.50	0.23	0.23	-0.14	-0.11	0.3
	39	258131	0.23	0.00	0.00	0.10	-0.12	0.3
	40	258128	0.61	0.39	-0.25	0.39	-0.23	0.3
	41	258509	0.38	0.22	0.22	-0.22	-0.01	0.3

Table 2.A1 Item Statistics: MD Mod-HSA Algebra—October

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
113	42	258231	0.59	0.43	-0.23	-0.28	0.43	0.4
	43	258111	0.61	0.34	-0.22	0.34	-0.22	0.3
	44	258096	0.27	0.08	0.08	0.09	-0.19	0.3
	45	258125	0.36	0.14	-0.16	0.14	0.00	0.3
	46	258144	0.34	0.14	0.14	0.00	-0.14	0.4
	47	261558	0.39	0.22	-0.16	0.22	-0.07	0.5
	48	261562	0.41	0.25	0.25	-0.14	-0.11	0.3
	49	258220	0.33	0.11	-0.05	-0.04	0.11	0.5
	50	258135	0.52	0.17	-0.12	0.17	-0.06	0.4
Mean			0.49	0.27	-0.02	0.00	-0.03	0.2
SD			0.14	0.10	0.21	0.23	0.21	0.1

Note. P_Val = P-Value, R_ITT = item-total correlation, P_BIS1 to P_BIS3 = option-total correlation, %Omits = percent of omitted responses.

Table 2.A2 Item Statistics: MD Mod-HSA Biology—October

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
113	1	258636	0.62	0.33	-0.21	0.33	-0.19	0.0
	2	258653	0.35	0.24	0.24	-0.07	-0.18	0.1
	3	258690	0.42	0.16	0.04	-0.19	0.16	0.1
	4	258702	0.58	0.34	-0.25	0.34	-0.16	0.0
	5	258662	0.35	0.22	-0.12	-0.11	0.22	0.0
	6	258659	0.30	0.07	0.07	-0.12	0.06	0.0
	7	258673	0.62	0.26	-0.17	-0.16	0.26	0.1
	8	258701	0.41	0.23	-0.19	0.23	-0.08	0.0
	9	258628	0.63	0.23	0.23	-0.15	-0.13	0.1
	10	258685	0.28	0.24	0.24	-0.18	-0.10	0.1
	11	261611	0.12	0.01	0.00	-0.02	0.01	0.1
	12	258615	0.44	0.15	-0.09	0.15	-0.07	0.0
	13	258683	0.66	0.36	-0.25	0.36	-0.19	0.2
	14	258641	0.45	0.12	-0.07	0.12	-0.07	0.0
	15	258676	0.45	0.16	-0.12	0.16	-0.05	0.0
	16	258607	0.62	0.23	-0.10	0.23	-0.19	0.1
	17	258645	0.52	0.36	-0.21	-0.21	0.36	0.1
	18	258666	0.57	0.20	-0.09	0.20	-0.18	0.0
	19	258675	0.44	0.15	-0.11	0.15	-0.07	0.0
	20	261609	0.58	0.23	-0.08	-0.23	0.23	0.1
	21	258665	0.20	0.15	0.15	-0.04	-0.09	0.1
	22	258682	0.46	0.09	-0.08	0.09	-0.03	0.0
	23	258648	0.37	0.21	-0.08	0.21	-0.15	0.0
	24	258614	0.41	0.28	-0.14	-0.17	0.28	0.1
	25	258680	0.45	0.26	-0.11	-0.18	0.26	0.1
	26	258681	0.36	0.09	-0.01	-0.08	0.09	0.1
	27	258642	0.55	0.16	-0.10	0.16	-0.10	0.0
	28	261623	0.64	0.27	-0.13	-0.25	0.27	0.0
	29	258649	0.29	0.15	0.15	-0.28	0.10	0.0
	30	258687	0.38	0.23	-0.16	0.23	-0.11	0.1
	31	258646	0.35	0.20	0.20	-0.17	-0.05	0.1
	32	261626	0.64	0.30	-0.23	-0.17	0.30	0.1
	33	258707	0.49	0.31	0.31	-0.24	-0.11	0.1
	34	258643	0.57	0.20	0.20	-0.12	-0.15	0.0
	35	258698	0.32	0.14	-0.13	0.00	0.14	0.0
	36	258728	0.25	0.12	-0.10	-0.06	0.12	0.0
	37	258734	0.57	0.33	-0.19	-0.21	0.33	0.0
	38	258735	0.49	0.25	-0.25	0.25	-0.06	0.1
	39	258704	0.52	0.24	-0.08	0.24	-0.20	0.0
	40	258624	0.55	0.31	0.31	-0.20	-0.17	0.0
	41	258697	0.45	0.20	0.20	-0.14	-0.08	0.1
	42	258616	0.22	-0.02	-0.10	-0.02	0.12	0.1
	43	258617	0.41	0.19	0.19	-0.20	-0.03	0.1

Table 2.A2 Item Statistics: MD Mod-HSA Biology—October

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
113	44	258688	0.39	0.17	-0.14	-0.05	0.17	0.1
	45	258669	0.64	0.27	-0.16	-0.18	0.27	0.0
	46	261621	0.66	0.31	0.31	-0.19	-0.21	0.0
	47	258703	0.41	0.30	-0.13	0.30	-0.19	0.1
	48	258692	0.50	0.24	-0.07	-0.20	0.24	0.0
	49	258635	0.52	0.33	-0.26	-0.14	0.33	0.1
	50	261616	0.48	0.28	-0.20	-0.12	0.28	0.2
Mean			0.46	0.22	-0.04	-0.02	0.02	0.1
SD			0.13	0.09	0.17	0.19	0.18	0.1

Note. P_Val = P-Value, R_ITT = item-total correlation, P_BIS1 to P_BIS3 = option-total correlation, %Omits = percent of omitted responses.

Table 2.A3 Item Statistics: MD Mod-HSA English—October

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
113	1	259429	0.48	0.25	0.25	-0.18	-0.10	0.0
	2	259426	0.59	0.31	0.31	-0.19	-0.19	0.1
	3	259349	0.66	0.31	-0.20	0.31	-0.19	0.1
	4	259427	0.43	0.19	-0.04	0.19	-0.16	0.3
	5	259312	0.65	0.33	0.33	-0.25	-0.16	0.1
	6	259368	0.37	0.25	0.25	-0.18	-0.09	0.1
	7	259371	0.72	0.35	-0.22	-0.22	0.35	0.1
	8	259367	0.69	0.24	-0.22	0.24	-0.12	0.1
	9	259370	0.47	0.17	-0.19	0.17	-0.03	0.1
	10	259432	0.66	0.29	0.29	-0.18	-0.17	0.1
	11	259433	0.53	0.33	0.33	-0.20	-0.20	0.4
	12	259354	0.44	0.23	-0.14	-0.11	0.23	0.3
	13	259407	0.17	0.06	-0.15	0.06	0.11	0.2
	14	259335	0.37	0.22	-0.20	-0.07	0.22	0.2
	15	259410	0.70	0.35	-0.26	0.35	-0.17	0.2
	16	259413	0.50	0.23	-0.14	0.23	-0.15	0.3
	17	259411	0.45	0.29	-0.14	-0.18	0.29	0.3
	18	259414	0.41	0.20	-0.08	-0.12	0.20	0.3
	19	259338	0.39	0.14	0.14	-0.02	-0.11	0.6
	20	259339	0.64	0.36	-0.23	0.36	-0.23	0.3
	21	259340	0.75	0.41	-0.26	-0.26	0.41	0.4
	22	259362	0.61	0.40	0.40	-0.31	-0.16	0.4
	23	259436	0.32	0.19	0.19	-0.05	-0.17	0.4
	24	259347	0.42	0.27	0.27	-0.15	-0.15	0.3
	25	259424	0.60	0.35	-0.14	-0.28	0.35	0.6
	26	259423	0.48	0.27	-0.16	-0.13	0.27	0.4
	27	259425	0.47	0.19	-0.07	0.19	-0.12	0.5
	28	259422	0.41	0.25	-0.12	0.25	-0.14	0.6
	29	259445	0.65	0.26	-0.24	0.26	-0.06	0.4
	30	259374	0.43	0.33	-0.20	-0.17	0.33	0.3
	31	259450	0.41	0.34	-0.19	-0.17	0.34	0.5
	32	259376	0.62	0.38	-0.20	-0.29	0.38	0.3
	33	259310	0.61	0.36	-0.20	0.36	-0.23	0.4
	34	259365	0.58	0.29	-0.10	0.29	-0.25	0.4
	35	259449	0.62	0.32	0.32	-0.15	-0.25	0.3
	36	259441	0.29	0.17	0.17	-0.13	-0.02	0.4
	37	259443	0.56	0.28	-0.14	0.28	-0.17	0.4
	38	259437	0.45	0.23	0.23	-0.06	-0.19	0.3
	39	259457	0.47	0.25	0.25	-0.17	-0.09	0.4
	40	259330	0.71	0.35	-0.18	0.35	-0.25	0.4
	41	259458	0.36	0.23	0.23	-0.20	-0.03	0.3

Table 2.A3 Item Statistics: MD Mod-HSA English—October

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
113	42	259466	0.67	0.42	-0.24	-0.29	0.42	0.4
	43	259395	0.45	0.30	-0.06	0.30	-0.27	0.3
	44	259459	0.51	0.34	-0.18	-0.21	0.34	0.4
	45	259396	0.37	0.20	-0.08	-0.10	0.20	0.3
	46	259460	0.66	0.35	0.35	-0.28	-0.14	0.3
	47	259398	0.57	0.34	-0.25	0.34	-0.14	0.4
	48	259397	0.46	0.25	-0.22	-0.05	0.25	0.4
	49	259360	0.49	0.27	0.27	-0.19	-0.10	0.4
	50	259435	0.27	0.19	-0.12	-0.05	0.19	0.3
Mean			0.51	0.28	-0.02	-0.02	0.00	0.3
SD			0.13	0.08	0.22	0.22	0.22	0.1

Note. P_Val = P-Value, R_ITT = item-total correlation, P_BIS1 to P_BIS3 = option-total correlation, %Omits = percent of omitted responses.

Table 2.A4 Item Statistics: MD Mod-HSA Algebra—January

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
213	1	258190	0.36	0.26	-0.11	-0.16	0.26	0.1
	2	258164	0.39	0.26	-0.16	-0.12	0.26	0.0
	3	258224	0.32	0.27	0.00	0.27	-0.26	0.1
	4	258107	0.26	0.15	-0.08	-0.07	0.15	0.1
	5	258126	0.50	0.34	0.34	-0.22	-0.17	0.1
	6	258239	0.31	0.19	-0.04	0.19	-0.16	0.0
	7	258123	0.57	0.36	0.36	-0.25	-0.19	0.1
	8	258124	0.29	0.31	-0.12	-0.17	0.31	0.1
	9	258141	0.41	0.34	0.34	-0.19	-0.19	0.1
	10	258200	0.31	0.28	0.28	-0.05	-0.22	0.1
	11	258179	0.34	0.19	-0.11	-0.09	0.19	0.1
	12	258235	0.59	0.35	-0.21	0.35	-0.21	0.1
	13	258105	0.32	0.19	0.19	-0.24	0.03	0.1
	14	258236	0.50	0.22	-0.19	0.22	-0.09	0.1
	15	261559	0.34	0.15	0.15	-0.11	-0.05	0.1
	16	258211	0.58	0.43	-0.36	0.43	-0.15	0.1
	17	258209	0.63	0.27	-0.17	-0.19	0.27	0.1
	18	258182	0.63	0.40	-0.20	-0.29	0.40	0.1
	19	258238	0.27	0.24	-0.14	-0.08	0.24	0.1
	20	261561	0.49	0.26	0.26	-0.13	-0.17	0.2
	21	258132	0.50	0.24	-0.15	0.24	-0.13	0.3
	22	258158	0.52	0.33	-0.14	-0.24	0.33	0.3
	23	258145	0.56	0.34	-0.27	0.34	-0.14	0.3
	24	261563	0.35	0.15	0.00	-0.14	0.15	0.4
	25	258229	0.67	0.28	-0.20	0.28	-0.14	0.4
	26	258197	0.58	0.30	-0.24	0.30	-0.11	0.3
	27	258097	0.29	0.30	0.30	-0.10	-0.20	0.3
	28	258310	0.66	0.33	-0.15	-0.25	0.33	0.4
	29	258109	0.47	0.32	0.32	-0.17	-0.18	0.3
	30	258110	0.38	0.16	0.02	0.16	-0.18	0.3
	31	258103	0.30	0.18	0.18	-0.17	0.01	0.4
	32	258108	0.49	0.17	-0.06	0.17	-0.11	0.3
	33	258196	0.58	0.20	-0.05	0.20	-0.20	0.3
	34	261564	0.51	0.34	0.34	-0.21	-0.16	0.3
	35	258153	0.39	0.25	0.25	-0.08	-0.17	0.3
	36	258122	0.80	0.32	-0.23	0.32	-0.18	0.3
	37	258240	0.67	0.28	-0.15	0.28	-0.21	0.3
	38	258157	0.20	0.12	0.12	-0.05	-0.04	0.3
	39	258091	0.23	0.15	-0.04	0.15	-0.08	0.3
	40	258118	0.46	0.28	0.28	-0.15	-0.16	0.3
	41	258225	0.55	0.27	-0.15	0.27	-0.15	0.4

Table 2.A4 Item Statistics: MD Mod-HSA Algebra—January

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
213	42	261557	0.41	0.22	0.22	-0.21	-0.01	0.4
	43	258152	0.41	0.21	0.21	-0.14	-0.07	0.4
	44	258133	0.37	0.28	0.28	-0.21	-0.07	0.3
	45	258214	0.35	0.27	0.27	-0.10	-0.16	0.4
	46	258178	0.68	0.29	-0.14	-0.21	0.29	0.3
	47	258100	0.58	0.32	-0.24	0.32	-0.14	0.4
	48	258171	0.47	0.31	-0.15	0.31	-0.18	0.4
	49	258142	0.44	0.32	-0.16	-0.20	0.32	0.3
	50	258150	0.40	0.23	0.23	-0.05	-0.19	0.4
Mean			0.45	0.26	0.01	0.00	-0.03	0.2
SD			0.14	0.07	0.21	0.22	0.19	0.1

Note. P_Val = P-Value, R_ITT = item-total correlation, P_BIS1 to P_BIS3 = option-total correlation, %Omits = percent of omitted responses.

Table 2.A5 Item Statistics: MD Mod-HSA Biology—January

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
213	1	258627	0.74	0.28	-0.20	0.28	-0.16	0.0
	2	258733	0.56	0.15	0.15	-0.03	-0.16	0.1
	3	258684	0.50	0.17	-0.03	-0.17	0.17	0.1
	4	258644	0.34	0.26	0.26	-0.11	-0.15	0.1
	5	258634	0.44	0.26	-0.17	0.26	-0.11	0.1
	6	261644	0.76	0.28	0.28	-0.14	-0.21	0.1
	7	261645	0.34	0.24	-0.05	-0.19	0.24	0.1
	8	258619	0.35	0.31	0.31	-0.20	-0.11	0.1
	9	258700	0.53	0.29	-0.17	-0.17	0.29	0.2
	10	258618	0.33	0.21	-0.10	-0.10	0.21	0.3
	11	261627	0.63	0.27	-0.18	0.27	-0.13	0.2
	12	258639	0.38	0.24	0.24	-0.14	-0.11	0.2
	13	258732	0.55	0.25	0.25	-0.16	-0.12	0.2
	14	258727	0.49	0.27	-0.12	0.27	-0.17	0.1
	15	258622	0.53	0.26	0.26	-0.20	-0.09	0.1
	16	258695	0.42	0.15	-0.09	0.15	-0.07	0.3
	17	258631	0.78	0.29	0.29	-0.20	-0.17	0.2
	18	258699	0.24	-0.02	-0.14	-0.02	0.17	0.2
	19	261607	0.68	0.21	-0.20	0.21	-0.07	0.2
	20	261624	0.44	0.33	-0.15	-0.21	0.33	0.2
	21	258612	0.63	0.27	-0.17	0.27	-0.15	0.3
	22	261610	0.41	0.28	-0.10	-0.19	0.28	0.3
	23	258714	0.29	0.28	0.28	-0.12	-0.14	0.5
	24	258725	0.61	0.28	-0.14	0.28	-0.20	0.4
	25	258664	0.61	0.33	-0.16	0.33	-0.24	0.6
	26	258638	0.29	0.18	-0.06	-0.11	0.18	0.3
	27	258650	0.43	0.28	-0.06	-0.23	0.28	0.3
	28	261614	0.60	0.33	0.33	-0.24	-0.17	0.3
	29	261622	0.81	0.25	-0.16	0.25	-0.16	0.3
	30	258705	0.28	0.14	-0.11	-0.01	0.14	0.3
	31	258678	0.62	0.29	-0.10	0.29	-0.23	0.4
	32	261642	0.41	0.20	0.20	-0.18	0.00	0.3
	33	258654	0.62	0.24	-0.23	-0.06	0.24	0.3
	34	258670	0.34	0.08	-0.01	-0.05	0.08	0.3
	35	258660	0.45	0.22	-0.16	-0.09	0.22	0.3
	36	258637	0.49	0.32	-0.16	0.32	-0.20	0.3
	37	258640	0.56	0.19	-0.09	0.19	-0.14	0.3
	38	258674	0.45	0.21	-0.05	-0.16	0.21	0.3
	39	258697	0.40	0.23	0.23	-0.11	-0.12	0.3
	40	258616	0.23	0.03	-0.09	0.03	0.08	0.4

Table 2.A5 Item Statistics: MD Mod-HSA Biology—January

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
213	41	258630	0.26	0.21	-0.11	-0.06	0.21	0.4
	42	261617	0.38	0.14	0.14	-0.03	-0.14	0.3
	43	258726	0.39	0.16	0.16	-0.06	-0.09	0.3
	44	258730	0.46	0.22	0.22	-0.09	-0.14	0.6
	45	258657	0.22	0.13	-0.09	-0.02	0.13	0.3
	46	258651	0.44	0.32	0.32	-0.18	-0.16	0.3
	47	258712	0.44	0.20	-0.15	-0.07	0.20	0.3
	48	258731	0.32	0.19	-0.08	-0.09	0.19	0.6
	49	261608	0.51	0.33	-0.15	-0.21	0.33	0.4
	50	258693	0.34	0.23	0.23	-0.10	-0.13	0.3
Mean			0.47	0.23	0.00	-0.02	0.00	0.3
SD			0.15	0.08	0.18	0.18	0.18	0.1

Note. P_Val = P-Value, R_ITT = item-total correlation, P_BIS1 to P_BIS3 = option-total correlation, %Omits = percent of omitted responses.

Table 2.A6 Item Statistics: MD Mod-HSA English—January

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
213	1	259343	0.58	0.33	-0.20	-0.21	0.33	0.0
	2	259415	0.62	0.27	0.27	-0.24	-0.10	0.3
	3	259417	0.50	0.18	0.18	-0.12	-0.09	0.0
	4	259416	0.77	0.32	-0.18	0.32	-0.24	0.1
	5	259323	0.42	0.31	0.31	-0.19	-0.13	0.2
	6	259453	0.41	0.17	-0.01	-0.23	0.17	0.2
	7	259382	0.61	0.27	-0.19	0.27	-0.14	0.2
	8	259452	0.38	0.21	-0.15	0.21	-0.09	0.1
	9	259465	0.40	0.18	0.18	-0.15	-0.05	0.1
	10	259351	0.44	0.21	-0.15	0.21	-0.10	0.1
	11	259430	0.75	0.24	-0.22	0.24	-0.08	0.2
	12	259431	0.68	0.36	0.36	-0.23	-0.22	0.1
	13	259318	0.61	0.38	0.38	-0.24	-0.22	0.3
	14	259319	0.33	0.12	0.01	-0.14	0.12	0.2
	15	259320	0.70	0.38	-0.24	0.38	-0.25	0.2
	16	259419	0.57	0.27	-0.13	0.27	-0.19	0.2
	17	259421	0.59	0.27	0.27	-0.21	-0.12	0.2
	18	259463	0.36	0.22	0.22	-0.13	-0.09	0.3
	19	259345	0.49	0.36	-0.15	-0.26	0.36	0.2
	20	259325	0.56	0.33	-0.20	0.33	-0.18	0.2
	21	259385	0.58	0.33	-0.17	-0.22	0.33	0.3
	22	259390	0.58	0.29	-0.16	-0.18	0.29	0.3
	23	259383	0.51	0.26	-0.17	0.26	-0.12	0.2
	24	259386	0.42	0.31	-0.19	-0.14	0.31	0.3
	25	259388	0.50	0.31	0.31	-0.13	-0.21	0.3
	26	259389	0.36	0.25	-0.17	0.25	-0.08	0.4
	27	259438	0.46	0.16	-0.12	0.16	-0.06	0.1
	28	259439	0.49	0.26	-0.22	0.26	-0.11	0.2
	29	259437	0.48	0.29	0.29	-0.12	-0.22	0.1
	30	259332	0.62	0.22	-0.14	0.22	-0.12	0.3
	31	259403	0.36	0.20	-0.08	-0.14	0.20	0.1
	32	259401	0.42	0.25	0.25	-0.14	-0.12	0.2
	33	259402	0.39	0.34	-0.28	-0.07	0.34	0.2
	34	259399	0.73	0.34	-0.21	-0.23	0.34	0.1
	35	259400	0.53	0.32	-0.17	-0.24	0.32	0.1
	36	259404	0.58	0.23	0.23	-0.12	-0.16	0.2
	37	259461	0.68	0.35	-0.25	-0.19	0.35	0.2
	38	259446	0.56	0.38	-0.21	-0.24	0.38	0.2
	39	259447	0.51	0.32	-0.21	0.32	-0.17	0.1
	40	259448	0.57	0.34	-0.18	-0.22	0.34	0.1

Table 2.A6 Item Statistics: MD Mod-HSA English—January

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
213	41	259358	0.50	0.34	-0.16	-0.23	0.34	0.1
	42	259434	0.42	0.20	-0.09	0.20	-0.20	0.1
	43	259391	0.54	0.35	-0.19	0.35	-0.21	0.3
	44	259454	0.37	0.20	0.20	-0.13	-0.07	0.1
	45	259455	0.48	0.34	-0.23	-0.15	0.34	0.2
	46	259392	0.44	0.35	-0.19	-0.20	0.35	0.3
	47	259394	0.65	0.39	0.39	-0.26	-0.23	0.3
	48	259393	0.48	0.34	0.34	-0.17	-0.21	0.2
	49	259444	0.62	0.27	-0.13	0.27	-0.19	0.3
	50	259356	0.53	0.24	-0.17	-0.12	0.24	0.3
Mean			0.52	0.28	-0.03	-0.03	0.01	0.2
SD			0.11	0.07	0.22	0.22	0.23	0.1

Note. P_Val = P-Value, R_ITT = item-total correlation, P_BIS1 to P_BIS3 = option-total correlation, %Omits = percent of omitted responses.

Table 2.A7 Item Statistics: MD Mod-HSA Gov—January

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
213	1	258401	0.54	0.41	-0.28	-0.20	0.41	0.0
	2	258459	0.68	0.38	-0.20	0.38	-0.28	0.0
	3	258402	0.53	0.34	-0.21	-0.24	0.34	0.0
	4	258406	0.68	0.42	-0.27	0.42	-0.26	0.0
	5	258347	0.45	0.28	0.28	-0.38	0.02	0.0
	6	258328	0.61	0.46	0.46	-0.30	-0.28	0.0
	7	258422	0.47	0.22	-0.21	-0.05	0.22	0.0
	8	258357	0.23	0.19	-0.06	0.19	-0.12	0.0
	9	258452	0.43	0.39	0.39	-0.23	-0.21	0.7
	10	258330	0.53	0.23	0.23	-0.18	-0.09	0.0
	11	258454	0.42	0.23	-0.28	-0.04	0.23	0.0
	12	258364	0.63	0.34	-0.30	0.34	-0.14	0.0
	13	258361	0.50	0.16	0.16	-0.14	-0.04	0.0
	14	258336	0.35	0.26	-0.13	-0.14	0.26	0.0
	15	258376	0.46	0.27	0.27	-0.12	-0.18	0.0
	16	258419	0.33	0.03	-0.13	0.03	0.09	0.0
	17	258425	0.51	0.29	-0.19	0.29	-0.15	0.0
	18	258715	0.68	0.35	-0.26	0.35	-0.20	0.0
	19	258473	0.46	0.24	-0.08	-0.19	0.24	0.0
	20	258478	0.38	0.15	-0.06	0.15	-0.07	0.7
	21	258501	0.49	0.33	-0.22	-0.16	0.33	0.0
	22	258450	0.41	0.34	0.34	-0.29	-0.06	0.0
	23	258498	0.42	0.30	0.30	-0.17	-0.16	0.0
	24	258388	0.35	0.21	-0.13	0.21	-0.08	0.0
	25	258351	0.40	0.38	0.38	-0.28	-0.13	0.0
	26	258488	0.71	0.33	0.33	-0.25	-0.17	0.0
	27	258479	0.45	0.26	-0.19	0.26	-0.14	0.0
	28	258375	0.52	0.43	0.43	-0.24	-0.26	0.0
	29	258414	0.49	0.22	-0.06	0.22	-0.19	0.0
	30	258495	0.28	0.13	0.13	-0.11	-0.01	0.0
	31	258321	0.48	0.18	0.18	-0.18	-0.03	0.0
	32	258426	0.23	0.43	0.43	-0.17	-0.20	0.0
	33	258722	0.52	0.26	-0.13	0.26	-0.18	0.0
	34	258407	0.32	0.11	0.11	-0.03	-0.08	0.0
	35	258412	0.57	0.37	0.37	-0.14	-0.31	0.0
	36	258369	0.51	0.30	-0.26	-0.10	0.30	0.0
	37	258483	0.45	0.31	0.31	-0.21	-0.14	0.0
	38	258719	0.66	0.37	0.37	-0.33	-0.14	0.0
	39	258345	0.21	-0.02	0.21	-0.02	-0.23	0.0
	40	258390	0.52	0.26	-0.15	0.26	-0.16	0.0

Table 2.A7 Item Statistics: MD Mod-HSA Gov—January

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
213	41	258329	0.27	0.28	0.28	-0.06	-0.23	0.0
	42	258409	0.61	0.18	-0.07	0.18	-0.16	0.0
	43	258434	0.44	0.25	-0.02	-0.23	0.25	0.0
	44	258391	0.58	0.26	0.26	-0.19	-0.13	0.0
	45	258316	0.48	0.22	-0.18	0.22	-0.08	0.0
	46	258404	0.56	0.37	0.37	-0.23	-0.23	0.0
	47	258468	0.54	0.37	0.37	-0.20	-0.26	0.0
	48	258491	0.42	0.39	-0.15	0.39	-0.28	0.0
	49	258341	0.47	0.10	0.10	-0.18	0.05	0.0
	50	258502	0.35	0.12	0.12	-0.01	-0.11	0.0
Mean			0.47	0.27	0.06	-0.04	-0.07	0.0
SD			0.12	0.11	0.25	0.23	0.19	0.1

Note. P_Val = P-Value, R_ITT = item-total correlation, P_BIS1 to P_BIS3 = option-total correlation, %Omits = percent of omitted responses.

Table 2.A8 Item Statistics: MD Mod-HSA Algebra—April

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
313	1	258190	0.33	0.28	-0.08	-0.20	0.28	0.0
	2	258164	0.40	0.19	-0.15	-0.05	0.19	0.0
	3	258224	0.33	0.29	-0.05	0.29	-0.24	0.3
	4	258107	0.31	0.12	-0.11	-0.01	0.12	0.3
	5	258126	0.49	0.38	0.38	-0.22	-0.22	0.0
	6	258239	0.36	0.18	-0.11	0.18	-0.08	0.0
	7	258123	0.56	0.44	0.44	-0.28	-0.25	0.0
	8	258124	0.30	0.28	-0.21	-0.05	0.28	0.0
	9	258141	0.39	0.34	0.34	-0.21	-0.16	0.3
	10	258200	0.32	0.34	0.34	-0.13	-0.20	0.0
	11	258179	0.32	0.34	-0.18	-0.17	0.34	0.0
	12	258235	0.62	0.45	-0.27	0.45	-0.28	0.0
	13	258105	0.33	0.13	0.13	-0.16	0.02	0.0
	14	258236	0.53	0.24	-0.18	0.24	-0.11	0.0
	15	261559	0.32	0.17	0.17	-0.04	-0.13	0.0
	16	258211	0.57	0.41	-0.36	0.41	-0.12	0.0
	17	258209	0.65	0.20	-0.12	-0.16	0.20	0.0
	18	258182	0.63	0.37	-0.17	-0.28	0.37	0.0
	19	258238	0.29	0.37	-0.14	-0.21	0.37	0.0
	20	261561	0.49	0.30	0.30	-0.12	-0.23	0.0
	21	258132	0.51	0.30	-0.22	0.30	-0.14	0.0
	22	258158	0.55	0.29	-0.18	-0.17	0.29	0.0
	23	258145	0.56	0.34	-0.26	0.34	-0.16	0.0
	24	261563	0.34	0.24	-0.04	-0.19	0.24	0.3
	25	258229	0.61	0.38	-0.21	0.38	-0.25	0.0
	26	258197	0.60	0.39	-0.32	0.39	-0.15	0.3
	27	258097	0.28	0.41	0.41	-0.15	-0.27	0.3
	28	258310	0.60	0.43	-0.24	-0.31	0.43	0.3
	29	258109	0.52	0.28	0.28	-0.19	-0.15	0.3
	30	258110	0.36	0.19	-0.08	0.19	-0.12	0.3
	31	258103	0.34	0.09	0.09	-0.18	0.09	0.6
	32	258108	0.48	0.15	-0.09	0.15	-0.08	0.0
	33	258196	0.63	0.28	-0.15	0.28	-0.21	0.0
	34	261564	0.57	0.44	0.44	-0.31	-0.23	0.0
	35	258153	0.35	0.19	0.19	-0.02	-0.18	0.3
	36	258122	0.78	0.38	-0.27	0.38	-0.22	0.0
	37	258240	0.67	0.26	-0.18	0.26	-0.15	0.3
	38	258157	0.23	0.13	0.13	-0.03	-0.07	0.3
	39	258091	0.23	0.13	0.03	0.13	-0.15	0.0
	40	258118	0.48	0.32	0.32	-0.15	-0.23	0.0
	41	258225	0.56	0.27	-0.07	0.27	-0.26	0.0
	42	261557	0.41	0.23	0.23	-0.22	-0.02	0.0
	43	258152	0.37	0.26	0.26	-0.16	-0.10	0.0

Table 2.A8 Item Statistics: MD Mod-HSA Algebra—April

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
313	44	258133	0.43	0.25	0.25	-0.14	-0.14	0.0
	45	258214	0.36	0.31	0.31	-0.16	-0.16	0.0
	46	258178	0.68	0.34	-0.26	-0.18	0.34	0.3
	47	258100	0.59	0.39	-0.34	0.39	-0.12	0.3
	48	258171	0.49	0.35	-0.24	0.35	-0.16	0.3
	49	258142	0.47	0.37	-0.27	-0.18	0.37	0.3
	50	258150	0.42	0.21	0.21	0.00	-0.23	0.3
Mean			0.46	0.29	-0.01	0.01	-0.04	0.1
SD			0.13	0.10	0.24	0.24	0.22	0.2

Note. P_Val = P-Value, R_ITT = item-total correlation, P_BIS1 to P_BIS3 = option-total correlation, %Omits = percent of omitted responses.

Table 2.A9 Item Statistics: MD Mod-HSA Biology—April

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
313	1	258627	0.81	0.19	-0.10	0.19	-0.16	0.0
	2	258733	0.55	0.09	0.09	0.05	-0.16	0.3
	3	258684	0.43	0.13	0.04	-0.16	0.13	0.3
	4	258644	0.40	0.26	0.26	-0.13	-0.12	0.3
	5	258634	0.44	0.19	-0.12	0.19	-0.07	0.3
	6	261644	0.77	0.32	0.32	-0.15	-0.25	0.3
	7	261645	0.34	0.25	-0.10	-0.13	0.25	0.3
	8	258619	0.33	0.25	0.25	-0.08	-0.14	0.3
	9	258700	0.55	0.32	-0.12	-0.23	0.32	0.3
	10	258618	0.32	0.16	-0.03	-0.10	0.16	0.3
	11	261627	0.67	0.26	-0.17	0.26	-0.13	0.3
	12	258639	0.35	0.24	0.24	-0.02	-0.21	0.3
	13	258732	0.52	0.28	0.28	-0.21	-0.10	0.6
	14	258727	0.47	0.33	-0.18	0.33	-0.17	0.3
	15	258622	0.51	0.31	0.31	-0.21	-0.13	0.3
	16	258695	0.45	0.14	-0.08	0.14	-0.06	0.3
	17	258631	0.82	0.29	0.29	-0.26	-0.09	0.3
	18	258699	0.25	0.02	-0.19	0.02	0.19	0.3
	19	261607	0.61	0.15	-0.11	0.15	-0.05	0.3
	20	261624	0.44	0.38	-0.22	-0.18	0.38	0.3
	21	258612	0.61	0.32	-0.18	0.32	-0.19	0.3
	22	261610	0.52	0.27	-0.13	-0.16	0.27	0.3
	23	258714	0.28	0.20	0.20	-0.04	-0.11	0.3
	24	258725	0.59	0.26	-0.20	0.26	-0.10	0.3
	25	258664	0.58	0.29	-0.10	0.29	-0.22	0.3
	26	258638	0.34	0.24	-0.15	-0.07	0.24	0.3
	27	258650	0.46	0.30	-0.17	-0.15	0.30	0.3
	28	261614	0.60	0.28	0.28	-0.15	-0.18	0.6
	29	261622	0.81	0.27	-0.17	0.27	-0.17	0.6
	30	258705	0.24	0.10	-0.04	-0.01	0.10	0.8
	31	258678	0.65	0.30	-0.18	0.30	-0.16	0.3
	32	261642	0.41	0.30	0.30	-0.21	-0.10	0.3
	33	258654	0.61	0.26	-0.29	-0.01	0.26	0.3
	34	258670	0.38	0.12	-0.08	-0.03	0.12	0.3
	35	258660	0.41	0.33	-0.21	-0.13	0.33	0.6
	36	258637	0.44	0.26	-0.10	0.26	-0.17	0.3
	37	258640	0.60	0.30	-0.19	0.30	-0.18	0.8
	38	258674	0.47	0.24	-0.12	-0.14	0.24	0.6
	39	258697	0.45	0.21	0.21	-0.13	-0.08	0.3
	40	258616	0.26	-0.04	-0.05	-0.04	0.11	0.3
	41	258630	0.23	0.24	-0.15	-0.04	0.24	0.3
	42	261617	0.36	0.25	0.25	-0.10	-0.20	0.3
	43	258726	0.39	0.22	0.22	-0.11	-0.10	0.3

Table 2.A9 Item Statistics: MD Mod-HSA Biology—April

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
313	44	258730	0.46	0.21	0.21	-0.10	-0.12	0.3
	45	258657	0.22	0.09	-0.07	0.01	0.09	0.6
	46	258651	0.44	0.37	0.37	-0.18	-0.21	0.3
	47	258712	0.42	0.30	-0.21	-0.12	0.30	0.3
	48	258731	0.27	0.17	0.02	-0.15	0.17	0.6
	49	261608	0.50	0.38	-0.27	-0.15	0.38	0.3
	50	258693	0.39	0.27	0.27	-0.20	-0.06	0.3
Mean			0.47	0.24	0.00	-0.02	0.01	0.3
SD			0.15	0.09	0.20	0.18	0.20	0.2

Note. P_Val = P-Value, R_ITT = item-total correlation, P_BIS1 to P_BIS3 = option-total correlation, %Omits = percent of omitted responses.

Table 2.A10 Item Statistics: MD Mod-HSA English—April

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
313	1	259343	0.57	0.34	-0.16	-0.24	0.34	0.0
	2	259415	0.64	0.23	0.23	-0.17	-0.12	0.3
	3	259417	0.45	0.13	0.13	-0.05	-0.11	0.0
	4	259416	0.75	0.34	-0.23	0.34	-0.22	0.0
	5	259323	0.45	0.34	0.34	-0.23	-0.14	0.0
	6	259453	0.40	0.23	-0.07	-0.22	0.23	0.0
	7	259382	0.61	0.16	-0.15	0.16	-0.06	0.0
	8	259452	0.40	0.25	-0.25	0.25	-0.07	0.0
	9	259465	0.36	0.23	0.23	-0.23	0.00	0.3
	10	259351	0.40	0.15	-0.12	0.15	-0.04	0.6
	11	259430	0.72	0.26	-0.26	0.26	-0.06	0.3
	12	259431	0.68	0.28	0.28	-0.16	-0.18	0.3
	13	259318	0.64	0.40	0.40	-0.31	-0.16	0.6
	14	259319	0.32	0.14	-0.03	-0.11	0.14	0.3
	15	259320	0.72	0.31	-0.22	0.31	-0.15	0.8
	16	259419	0.56	0.28	-0.21	0.28	-0.10	0.3
	17	259421	0.56	0.25	0.25	-0.23	-0.06	0.3
	18	259463	0.33	0.12	0.12	-0.09	-0.02	0.6
	19	259345	0.50	0.30	-0.14	-0.19	0.30	0.3
	20	259325	0.60	0.41	-0.21	0.41	-0.27	0.3
	21	259385	0.53	0.38	-0.21	-0.21	0.38	0.3
	22	259390	0.53	0.39	-0.20	-0.23	0.39	0.3
	23	259383	0.42	0.28	-0.21	0.28	-0.06	0.6
	24	259386	0.41	0.35	-0.18	-0.19	0.35	0.6
	25	259388	0.51	0.25	0.25	-0.09	-0.18	0.3
	26	259389	0.36	0.31	-0.05	0.31	-0.26	0.3
	27	259438	0.46	0.27	-0.14	0.27	-0.14	0.6
	28	259439	0.48	0.16	-0.23	0.16	0.03	0.6
	29	259437	0.47	0.26	0.26	-0.09	-0.20	0.3
	30	259332	0.61	0.24	-0.21	0.24	-0.07	0.3
	31	259403	0.35	0.22	-0.06	-0.15	0.22	0.3
	32	259401	0.39	0.22	0.22	0.04	-0.27	0.3
	33	259402	0.38	0.35	-0.26	-0.08	0.35	0.3
	34	259399	0.73	0.48	-0.28	-0.31	0.48	0.3
	35	259400	0.51	0.26	-0.12	-0.20	0.26	0.3
	36	259404	0.58	0.23	0.23	-0.16	-0.10	0.3
	37	259461	0.69	0.30	-0.11	-0.24	0.30	0.3
	38	259446	0.56	0.38	-0.19	-0.25	0.38	0.3
	39	259447	0.54	0.32	-0.18	0.32	-0.19	0.3
	40	259448	0.60	0.32	-0.16	-0.20	0.32	0.3
	41	259358	0.54	0.35	-0.19	-0.19	0.35	0.3
	42	259434	0.41	0.16	-0.04	0.16	-0.22	0.3

Table 2.A10 Item Statistics: MD Mod-HSA English—April

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
313	43	259391	0.57	0.38	-0.17	0.38	-0.27	0.6
	44	259454	0.34	0.14	0.14	-0.06	-0.07	0.3
	45	259455	0.53	0.34	-0.20	-0.18	0.34	0.3
	46	259392	0.45	0.42	-0.27	-0.19	0.42	0.3
	47	259394	0.65	0.42	0.42	-0.30	-0.22	0.3
	48	259393	0.49	0.30	0.30	-0.23	-0.09	0.3
	49	259444	0.63	0.33	-0.27	0.33	-0.13	0.3
	50	259356	0.54	0.25	-0.20	-0.08	0.25	0.3
Mean			0.52	0.28	-0.05	-0.02	0.03	0.3
SD			0.12	0.08	0.21	0.23	0.23	0.2

Note. P_Val = P-Value, R_ITT = item-total correlation, P_BIS1 to P_BIS3 = option-total correlation, %Omits = percent of omitted responses.

Table 2.A11 Item Statistics: MD Mod-HSA Algebra—May

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
413	1	258090	0.60	0.31	-0.18	-0.20	0.31	0.0
	2	258095	0.73	0.33	0.33	-0.18	-0.25	0.1
	3	258166	0.75	0.33	-0.27	0.33	-0.17	0.0
	4	258312	0.50	0.39	0.39	-0.26	-0.21	0.2
	5	258173	0.55	0.32	-0.17	0.32	-0.22	0.0
	6	258115	0.43	0.34	0.34	-0.19	-0.18	0.3
	7	258223	0.32	0.13	-0.10	0.13	-0.05	0.1
	8	258230	0.53	0.23	0.23	-0.23	-0.06	0.1
	9	258147	0.49	0.29	0.29	-0.14	-0.22	0.2
	10	261560	0.67	0.32	-0.20	0.32	-0.20	0.0
	11	258227	0.67	0.32	0.32	-0.20	-0.20	0.2
	12	258308	0.42	0.29	0.29	-0.08	-0.23	0.2
	13	258101	0.54	0.28	-0.21	0.28	-0.12	0.2
	14	258210	0.80	0.35	-0.24	0.35	-0.22	0.2
	15	258116	0.48	0.26	0.26	-0.18	-0.15	0.2
	16	258089	0.21	0.17	-0.07	0.17	-0.07	0.2
	17	261556	0.44	0.26	0.26	-0.22	-0.08	0.3
	18	258309	0.84	0.32	-0.20	-0.23	0.32	0.2
	19	258098	0.59	0.35	-0.22	-0.23	0.35	0.2
	20	258208	0.39	0.17	-0.04	-0.14	0.17	0.3
	21	258161	0.55	0.47	0.47	-0.38	-0.16	0.2
	22	258159	0.42	0.27	-0.10	-0.20	0.27	0.4
	23	258184	0.53	0.29	-0.10	0.29	-0.23	0.4
	24	258136	0.51	0.36	-0.18	0.36	-0.24	0.3
	25	258102	0.50	0.29	-0.12	0.29	-0.21	0.4
	26	258226	0.43	0.27	-0.14	-0.15	0.27	0.2
	27	258188	0.69	0.30	-0.15	0.30	-0.23	0.2
	28	258174	0.50	0.28	-0.11	-0.20	0.28	0.4
	29	258209	0.68	0.24	-0.13	-0.18	0.24	0.2
	30	258154	0.44	0.47	-0.29	-0.22	0.47	0.2
	31	258113	0.54	0.32	-0.21	0.32	-0.16	0.2
	32	258198	0.37	0.27	-0.17	-0.11	0.27	0.4
	33	258120	0.49	0.36	-0.19	-0.23	0.36	0.3
	34	258169	0.44	0.21	-0.08	-0.15	0.21	0.3
	35	258119	0.47	0.32	0.32	-0.14	-0.24	0.3
	36	258160	0.47	0.27	0.27	-0.15	-0.14	0.3
	37	258241	0.55	0.36	-0.20	0.36	-0.23	0.2
	38	258130	0.50	0.29	0.29	-0.17	-0.16	0.3
	39	258131	0.23	0.01	0.01	0.06	-0.08	0.3
	40	258128	0.62	0.39	-0.21	0.39	-0.27	0.2
	41	258509	0.36	0.21	0.21	-0.23	0.01	0.3
	42	258231	0.61	0.41	-0.23	-0.27	0.41	0.3

Table 2.A11 Item Statistics: MD Mod-HSA Algebra—May

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
413	43	258111	0.62	0.37	-0.23	0.37	-0.24	0.2
	44	258096	0.25	0.08	0.08	0.12	-0.22	0.3
	45	258125	0.38	0.16	-0.18	0.16	-0.01	0.2
	46	258144	0.37	0.16	0.16	-0.01	-0.15	0.2
	47	261558	0.41	0.27	-0.13	0.27	-0.15	0.2
	48	261562	0.42	0.30	0.30	-0.19	-0.12	0.2
	49	258220	0.35	0.20	-0.07	-0.12	0.20	0.4
	50	258135	0.56	0.22	-0.15	0.22	-0.10	0.3
Mean			0.50	0.28	-0.01	0.00	-0.04	0.2
SD			0.14	0.09	0.22	0.24	0.22	0.1

Note. P_Val = P-Value, R_ITT = item-total correlation, P_BIS1 to P_BIS3 = option-total correlation, %Omits = percent of omitted responses.

Table 2.A12 Item Statistics: MD Mod-HSA Biology—May

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
413	1	258636	0.63	0.34	-0.22	0.34	-0.19	0.0
	2	258653	0.40	0.28	0.28	-0.04	-0.27	0.0
	3	258690	0.44	0.20	0.00	-0.21	0.20	0.0
	4	258702	0.59	0.33	-0.25	0.33	-0.15	0.0
	5	258662	0.37	0.30	-0.15	-0.15	0.30	0.0
	6	258659	0.31	0.15	0.15	-0.15	0.01	0.0
	7	258673	0.62	0.28	-0.17	-0.19	0.28	0.0
	8	258701	0.43	0.25	-0.20	0.25	-0.09	0.0
	9	258628	0.66	0.26	0.26	-0.21	-0.12	0.0
	10	258685	0.32	0.26	0.26	-0.11	-0.18	0.0
	11	261611	0.14	0.11	-0.03	-0.05	0.11	0.0
	12	258615	0.46	0.16	-0.09	0.16	-0.09	0.0
	13	258683	0.68	0.38	-0.27	0.38	-0.22	0.1
	14	258641	0.49	0.17	-0.05	0.17	-0.15	0.0
	15	258676	0.45	0.14	-0.08	0.14	-0.07	0.1
	16	258607	0.60	0.27	-0.11	0.27	-0.23	0.0
	17	258645	0.54	0.38	-0.19	-0.26	0.38	0.0
	18	258666	0.58	0.21	-0.11	0.21	-0.16	0.0
	19	258675	0.46	0.21	-0.11	0.21	-0.13	0.0
	20	261609	0.58	0.19	-0.07	-0.22	0.19	0.0
	21	258665	0.23	0.21	0.21	-0.04	-0.14	0.1
	22	258682	0.48	0.22	-0.13	0.22	-0.12	0.1
	23	258648	0.42	0.34	-0.16	0.34	-0.21	0.1
	24	258614	0.44	0.34	-0.19	-0.19	0.34	0.2
	25	258680	0.44	0.29	-0.13	-0.19	0.29	0.1
	26	258681	0.37	0.07	-0.02	-0.05	0.07	0.3
	27	258642	0.56	0.21	-0.06	0.21	-0.18	0.0
	28	261623	0.66	0.24	-0.11	-0.23	0.24	0.0
	29	258649	0.30	0.19	0.19	-0.32	0.09	0.0
	30	258687	0.42	0.19	-0.15	0.19	-0.08	0.2
	31	258646	0.39	0.29	0.29	-0.20	-0.11	0.0
	32	261626	0.66	0.27	-0.21	-0.15	0.27	0.0
	33	258707	0.51	0.33	0.33	-0.24	-0.14	0.0
	34	258643	0.57	0.21	0.21	-0.11	-0.18	0.0
	35	258698	0.36	0.18	-0.12	-0.06	0.18	0.0
	36	258728	0.23	0.20	-0.14	-0.09	0.20	0.0
	37	258734	0.56	0.35	-0.21	-0.22	0.35	0.0
	38	258735	0.48	0.29	-0.22	0.29	-0.13	0.1
	39	258704	0.52	0.31	-0.17	0.31	-0.20	0.1
	40	258624	0.57	0.34	0.34	-0.23	-0.18	0.0
	41	258697	0.43	0.19	0.19	-0.14	-0.06	0.0
	42	258616	0.24	0.06	-0.14	0.06	0.09	0.0

Table 2.A12 Item Statistics: MD Mod-HSA Biology—May

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
413	43	258617	0.45	0.13	0.13	-0.14	-0.02	0.1
	44	258688	0.44	0.23	-0.10	-0.16	0.23	0.1
	45	258669	0.65	0.35	-0.22	-0.22	0.35	0.1
	46	261621	0.65	0.34	0.34	-0.25	-0.20	0.0
	47	258703	0.46	0.29	-0.18	0.29	-0.15	0.0
	48	258692	0.51	0.26	-0.12	-0.18	0.26	0.1
	49	258635	0.53	0.35	-0.25	-0.17	0.35	0.0
	50	261616	0.52	0.34	-0.24	-0.17	0.34	0.1
Mean			0.48	0.25	-0.04	-0.02	0.02	0.1
SD			0.13	0.08	0.19	0.21	0.21	0.1

Note. P_Val = P-Value, R_ITT = item-total correlation, P_BIS1 to P_BIS3 = option-total correlation, %Omits = percent of omitted responses.

Table 2.A13 Item Statistics: MD Mod-HSA English—May

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
413	1	259429	0.48	0.21	0.21	-0.18	-0.07	0.0
	2	259426	0.63	0.29	0.29	-0.19	-0.17	0.0
	3	259349	0.67	0.30	-0.21	0.30	-0.16	0.0
	4	259427	0.47	0.23	-0.10	0.23	-0.17	0.0
	5	259312	0.63	0.37	0.37	-0.25	-0.20	0.1
	6	259368	0.36	0.26	0.26	-0.15	-0.12	0.1
	7	259371	0.71	0.35	-0.22	-0.23	0.35	0.1
	8	259367	0.70	0.27	-0.18	0.27	-0.18	0.3
	9	259370	0.49	0.21	-0.19	0.21	-0.08	0.0
	10	259432	0.65	0.28	0.28	-0.18	-0.17	0.1
	11	259433	0.54	0.31	0.31	-0.21	-0.16	0.2
	12	259354	0.42	0.25	-0.17	-0.10	0.25	0.1
	13	259407	0.16	0.00	-0.12	0.00	0.12	0.2
	14	259335	0.38	0.21	-0.20	-0.06	0.21	0.2
	15	259410	0.70	0.32	-0.26	0.32	-0.14	0.1
	16	259413	0.51	0.24	-0.11	0.24	-0.20	0.1
	17	259411	0.49	0.26	-0.18	-0.13	0.26	0.3
	18	259414	0.40	0.24	-0.14	-0.11	0.24	0.1
	19	259338	0.40	0.20	0.20	-0.01	-0.19	0.2
	20	259339	0.63	0.34	-0.21	0.34	-0.25	0.1
	21	259340	0.75	0.39	-0.25	-0.26	0.39	0.2
	22	259362	0.62	0.41	0.41	-0.31	-0.19	0.2
	23	259436	0.33	0.17	0.17	0.00	-0.20	0.4
	24	259347	0.43	0.27	0.27	-0.15	-0.15	0.4
	25	259424	0.60	0.31	-0.15	-0.23	0.31	0.4
	26	259423	0.47	0.22	-0.16	-0.09	0.22	0.6
	27	259425	0.48	0.21	-0.15	0.21	-0.08	0.5
	28	259422	0.39	0.19	-0.07	0.19	-0.13	0.5
	29	259445	0.66	0.31	-0.27	0.31	-0.10	0.1
	30	259374	0.45	0.31	-0.17	-0.21	0.31	0.1
	31	259450	0.41	0.29	-0.17	-0.14	0.29	0.2
	32	259376	0.65	0.38	-0.21	-0.28	0.38	0.1
	33	259310	0.60	0.36	-0.23	0.36	-0.21	0.1
	34	259365	0.63	0.34	-0.18	0.34	-0.25	0.1
	35	259449	0.65	0.31	0.31	-0.16	-0.23	0.1
	36	259441	0.32	0.19	0.19	-0.16	-0.03	0.2
	37	259443	0.57	0.26	-0.15	0.26	-0.16	0.2
	38	259437	0.46	0.23	0.23	-0.09	-0.18	0.1
	39	259457	0.45	0.25	0.25	-0.19	-0.07	0.4
	40	259330	0.72	0.34	-0.21	0.34	-0.23	0.2
	41	259458	0.37	0.22	0.22	-0.21	-0.02	0.2

Table 2.A13 Item Statistics: MD Mod-HSA English—May

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
413	42	259466	0.68	0.44	-0.20	-0.35	0.44	0.3
	43	259395	0.43	0.24	-0.02	0.24	-0.24	0.3
	44	259459	0.53	0.34	-0.19	-0.21	0.34	0.3
	45	259396	0.38	0.22	-0.15	-0.07	0.22	0.2
	46	259460	0.66	0.34	0.34	-0.27	-0.15	0.2
	47	259398	0.59	0.31	-0.22	0.31	-0.14	0.3
	48	259397	0.45	0.24	-0.17	-0.09	0.24	0.3
	49	259360	0.48	0.30	0.30	-0.20	-0.14	0.2
	50	259435	0.24	0.16	-0.06	-0.10	0.16	0.3
Mean			0.52	0.27	-0.02	-0.02	-0.01	0.2
SD			0.14	0.08	0.22	0.22	0.22	0.1

Note. P_Val = P-Value, R_ITT = item-total correlation, P_BIS1 to P_BIS3 = option-total correlation, %Omits = percent of omitted responses.

Table 2.A14 Item Statistics: MD Mod-HSA Government—May

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
413	1	258363	0.43	0.45	-0.31	-0.19	0.45	0.1
	2	258500	0.28	0.26	0.26	-0.11	-0.15	0.0
	3	258327	0.45	0.17	0.17	-0.01	-0.21	0.0
	4	258338	0.43	0.25	-0.08	0.25	-0.21	0.0
	5	258408	0.43	0.34	0.34	-0.25	-0.11	0.0
	6	258463	0.39	0.24	0.24	-0.14	-0.12	0.0
	7	258458	0.45	0.35	0.35	-0.17	-0.22	0.0
	8	258506	0.58	0.32	-0.17	-0.22	0.32	0.0
	9	258505	0.44	0.22	0.22	-0.11	-0.15	0.0
	10	258349	0.57	0.36	0.36	-0.25	-0.19	0.1
	11	258429	0.43	0.24	-0.11	-0.16	0.24	0.1
	12	258353	0.30	0.11	-0.06	0.11	-0.05	0.0
	13	258396	0.49	0.19	0.19	-0.10	-0.13	0.0
	14	258410	0.50	0.31	-0.22	-0.15	0.31	0.0
	15	258386	0.45	0.48	0.48	-0.30	-0.23	0.0
	16	258350	0.38	0.25	0.25	-0.14	-0.13	0.1
	17	258378	0.54	0.18	-0.11	-0.10	0.18	0.0
	18	258503	0.38	0.28	-0.17	-0.12	0.28	0.0
	19	258440	0.59	0.29	-0.16	0.29	-0.19	0.0
	20	258400	0.45	0.34	-0.26	-0.13	0.34	0.0
	21	258421	0.37	0.27	0.27	-0.10	-0.19	0.0
	22	258446	0.38	0.23	-0.20	0.23	-0.04	0.0
	23	258344	0.37	0.23	0.23	-0.07	-0.17	0.0
	24	258432	0.51	0.28	-0.18	-0.15	0.28	0.0
	25	258428	0.50	0.22	-0.11	-0.14	0.22	0.0
	26	258360	0.45	0.24	-0.12	0.24	-0.14	0.2
	27	258343	0.52	0.35	-0.18	0.35	-0.22	0.1
	28	258438	0.58	0.37	0.37	-0.22	-0.23	0.1
	29	258718	0.70	0.46	0.46	-0.28	-0.30	0.2
	30	258424	0.37	0.22	-0.02	0.22	-0.20	0.2
	31	258323	0.40	0.23	-0.12	0.23	-0.12	0.1
	32	258324	0.66	0.43	-0.26	-0.28	0.43	0.1
	33	258437	0.49	0.31	-0.18	-0.17	0.31	0.1
	34	258319	0.37	0.20	-0.13	0.20	-0.07	0.1
	35	258389	0.54	0.25	-0.12	0.25	-0.20	0.2
	36	258379	0.53	0.24	-0.02	-0.25	0.24	0.1
	37	258413	0.41	0.16	-0.08	0.16	-0.08	0.1
	38	258448	0.52	0.36	0.36	-0.23	-0.19	0.2
	39	258721	0.36	0.08	0.08	-0.04	-0.04	0.1
	40	258439	0.45	0.27	-0.19	0.27	-0.12	0.1
	41	258368	0.41	0.20	0.20	-0.17	-0.03	0.1

Table 2.A14 Item Statistics: MD Mod-HSA Government—May

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
413	42	258320	0.37	0.26	-0.05	0.26	-0.21	0.1
	43	258436	0.59	0.45	0.45	-0.34	-0.19	0.1
	44	258384	0.56	0.33	-0.17	0.33	-0.22	0.2
	45	258486	0.46	0.24	-0.10	0.24	-0.16	0.1
	46	258411	0.34	0.19	-0.11	-0.07	0.19	0.2
	47	258313	0.59	0.31	-0.20	0.31	-0.18	0.1
	48	258716	0.45	0.40	0.40	-0.17	-0.27	0.2
	49	258335	0.50	0.38	-0.22	-0.22	0.38	0.2
	50	258377	0.63	0.30	0.30	-0.17	-0.19	0.2
Mean			0.47	0.28	0.03	-0.04	-0.03	0.1
SD			0.09	0.09	0.24	0.21	0.22	0.1

Note. P_Val = P-Value, R_ITT = item-total correlation, P_BIS1 to P_BIS3 = option-total correlation, %Omits = percent of omitted responses.

Table 2.A15 Item Statistics: MD Mod-HSA Algebra—Summer Primary 1

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
513	1	258190	0.41	0.31	-0.16	-0.18	0.31	0.0
	2	258164	0.47	-0.06	0.02	0.04	-0.06	0.0
	3	258224	0.35	0.13	0.07	0.13	-0.19	0.0
	4	258107	0.38	0.21	0.00	-0.21	0.21	0.0
	5	258126	0.43	0.17	0.17	-0.05	-0.15	0.0
	6	258239	0.30	0.11	0.09	0.11	-0.27	0.0
	7	258123	0.47	0.29	0.29	-0.22	-0.11	0.0
	8	258124	0.33	0.41	-0.02	-0.41	0.41	0.0
	9	258141	0.51	0.16	0.16	-0.20	-0.02	0.0
	10	258200	0.27	0.34	0.34	0.01	-0.33	0.0
	11	258179	0.33	0.28	-0.21	-0.06	0.28	1.2
	12	258235	0.54	0.26	-0.30	0.26	0.02	0.0
	13	258105	0.27	0.08	0.08	-0.16	0.07	0.0
	14	258236	0.52	0.30	-0.10	0.30	-0.24	0.0
	15	261559	0.41	0.11	0.11	0.05	-0.14	0.0
	16	258211	0.60	0.32	-0.34	0.32	0.00	0.0
	17	258209	0.74	0.35	-0.21	-0.26	0.35	0.0
	18	258182	0.64	0.35	-0.28	-0.19	0.35	0.0
	19	258238	0.30	0.43	-0.18	-0.23	0.43	0.0
	20	261561	0.49	0.25	0.25	-0.02	-0.25	0.0
	21	258132	0.51	0.31	-0.16	0.31	-0.20	0.0
	22	258158	0.52	0.24	-0.05	-0.24	0.24	0.0
	23	258145	0.52	0.38	-0.20	0.38	-0.25	0.0
	24	261563	0.41	0.22	-0.02	-0.21	0.22	0.0
	25	258229	0.58	0.34	-0.22	0.34	-0.20	0.0
	26	258197	0.56	0.10	-0.05	0.10	-0.10	0.0
	27	258097	0.36	0.32	0.32	-0.13	-0.21	0.0
	28	258310	0.67	0.45	-0.32	-0.30	0.45	0.0
	29	258109	0.38	0.32	0.32	-0.24	-0.10	0.0
	30	258110	0.31	0.23	-0.15	0.23	-0.07	0.0
	31	258103	0.31	0.39	0.39	-0.25	-0.14	0.0
	32	258108	0.51	0.13	-0.11	0.13	-0.04	0.0
	33	258196	0.65	0.12	-0.01	0.12	-0.14	0.0
	34	261564	0.53	0.11	0.11	-0.09	-0.03	0.0
	35	258153	0.46	0.31	0.31	-0.24	-0.11	0.0
	36	258122	0.79	0.30	-0.24	0.30	-0.16	0.0
	37	258240	0.59	0.15	-0.02	0.15	-0.16	1.2
	38	258157	0.26	0.15	0.15	0.09	-0.21	0.0
	39	258091	0.28	0.03	-0.01	0.03	-0.01	0.0
	40	258118	0.47	0.19	0.19	-0.09	-0.16	0.0
	41	258225	0.69	0.22	-0.15	0.22	-0.14	0.0
	42	261557	0.43	0.21	0.21	-0.20	-0.05	0.0
	43	258152	0.44	0.29	0.29	-0.14	-0.20	0.0

Table 2.A15 Item Statistics: MD Mod-HSA Algebra—Summer Primary 1

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
513	44	258133	0.40	0.24	0.24	-0.12	-0.13	0.0
	45	258214	0.32	0.26	0.26	0.07	-0.34	0.0
	46	258178	0.59	0.38	-0.21	-0.25	0.38	0.0
	47	258100	0.53	0.40	-0.26	0.40	-0.20	0.0
	48	258171	0.53	0.28	-0.35	0.28	0.05	0.0
	49	258142	0.32	0.34	-0.22	-0.13	0.34	0.0
	50	258150	0.51	0.09	0.09	-0.15	0.04	0.0
Mean			0.46	0.25	0.00	-0.01	-0.02	0.0
SD			0.13	0.11	0.21	0.21	0.22	0.2

Note. P_Val = P-Value, R_ITT = item-total correlation, P_BIS1 to P_BIS3 = option-total correlation, %Omits = percent of omitted responses.

Table 2.A16 Item Statistics: MD Mod-HSA Algebra—Summer Primary 2

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
613	1	258090	0.61	0.47	-0.39	-0.18	0.47	0.0
	2	258095	0.68	0.56	0.56	-0.40	-0.32	0.0
	3	258166	0.67	0.39	-0.45	0.39	0.00	0.0
	4	258312	0.36	0.31	0.31	-0.10	-0.25	1.0
	5	258173	0.53	0.28	-0.11	0.28	-0.22	0.0
	6	258115	0.49	0.43	0.43	-0.17	-0.30	1.0
	7	258223	0.34	0.14	-0.15	0.14	-0.02	0.0
	8	258230	0.44	0.32	0.32	-0.18	-0.16	1.0
	9	258147	0.39	0.30	0.30	-0.01	-0.32	1.0
	10	261560	0.60	0.54	-0.38	0.54	-0.26	1.0
	11	258227	0.64	0.38	0.38	-0.16	-0.31	0.0
	12	258308	0.36	0.01	0.01	0.03	-0.04	0.0
	13	258101	0.59	0.27	-0.17	0.27	-0.15	0.0
	14	258210	0.80	0.41	-0.28	0.41	-0.27	0.0
	15	258116	0.47	0.30	0.30	-0.27	-0.13	0.0
	16	258089	0.19	-0.13	-0.12	-0.13	0.21	0.0
	17	261556	0.43	0.33	0.33	-0.26	-0.13	0.0
	18	258309	0.88	0.28	-0.21	-0.13	0.28	1.0
	19	258098	0.57	0.41	-0.31	-0.20	0.41	0.0
	20	258208	0.39	-0.03	0.06	-0.04	-0.03	1.0
	21	258161	0.56	0.42	0.42	-0.35	-0.14	0.0
	22	258159	0.37	0.47	-0.06	-0.43	0.47	0.0
	23	258184	0.45	0.19	0.03	0.19	-0.22	0.0
	24	258136	0.35	0.33	-0.37	0.33	0.02	0.0
	25	258102	0.41	0.07	0.10	0.07	-0.15	0.0
	26	258226	0.35	0.23	-0.30	0.05	0.23	0.0
	27	258188	0.61	0.38	-0.09	0.38	-0.35	0.0
	28	258174	0.43	0.28	-0.18	-0.14	0.28	0.0
	29	258209	0.74	0.35	-0.21	-0.26	0.35	0.0
	30	258154	0.48	0.37	-0.20	-0.22	0.37	0.0
	31	258113	0.47	0.29	-0.20	0.29	-0.12	0.0
	32	258198	0.41	0.02	-0.12	0.10	0.02	0.0
	33	258120	0.51	0.45	-0.27	-0.24	0.45	0.0
	34	258169	0.44	0.11	-0.28	0.13	0.11	0.0
	35	258119	0.34	0.35	0.35	0.00	-0.33	2.1
	36	258160	0.52	0.27	0.27	-0.08	-0.23	0.0
	37	258241	0.48	0.31	-0.24	0.31	-0.11	0.0
	38	258130	0.56	0.30	0.30	-0.08	-0.28	0.0
	39	258131	0.26	-0.03	-0.03	0.13	-0.14	1.0
	40	258128	0.55	0.42	-0.27	0.42	-0.22	1.0
	41	258509	0.43	0.25	0.25	-0.20	-0.06	1.0
	42	258231	0.65	0.53	-0.37	-0.27	0.53	1.0
	43	258111	0.62	0.30	-0.09	0.30	-0.29	1.0

Table 2.A16 Item Statistics: MD Mod-HSA Algebra—Summer Primary 2

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
613	44	258096	0.22	-0.07	-0.07	0.04	0.04	1.0
	45	258125	0.30	0.39	-0.20	0.39	-0.17	1.0
	46	258144	0.39	0.07	0.07	0.12	-0.17	1.0
	47	261558	0.43	0.22	-0.02	0.22	-0.18	3.1
	48	261562	0.48	0.09	0.09	0.01	-0.09	1.0
	49	258220	0.40	0.30	-0.19	-0.12	0.30	1.0
	50	258135	0.49	0.28	-0.09	0.28	-0.22	1.0
Mean			0.48	0.28	-0.03	0.02	-0.04	0.5
SD			0.14	0.16	0.26	0.25	0.25	0.7

Note. P_Val = P-Value, R_ITT = item-total correlation, P_BIS1 to P_BIS3 = option-total correlation, %Omits = percent of omitted responses.

Table 2.A17 Item Statistics: MD Mod-HSA Biology—Summer Primary 1

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
513	1	258627	0.85	0.19	-0.10	0.19	-0.16	0.0
	2	258733	0.44	-0.19	-0.19	0.28	-0.06	1.4
	3	258684	0.48	0.22	-0.20	-0.05	0.22	0.0
	4	258644	0.37	0.26	0.26	-0.12	-0.15	0.0
	5	258634	0.41	0.18	-0.23	0.18	0.03	0.0
	6	261644	0.74	0.38	0.38	-0.16	-0.32	0.0
	7	261645	0.36	0.23	-0.07	-0.17	0.23	0.0
	8	258619	0.42	0.28	0.28	-0.24	-0.08	0.0
	9	258700	0.59	0.38	-0.05	-0.37	0.38	0.0
	10	258618	0.37	0.12	-0.02	-0.11	0.12	0.0
	11	261627	0.68	0.16	-0.25	0.16	0.11	1.4
	12	258639	0.44	0.14	0.14	-0.15	-0.01	0.0
	13	258732	0.48	0.29	0.29	-0.05	-0.26	0.0
	14	258727	0.53	0.15	-0.35	0.15	0.16	0.0
	15	258622	0.62	0.48	0.48	-0.26	-0.33	0.0
	16	258695	0.48	0.27	-0.26	0.27	-0.06	0.0
	17	258631	0.81	0.29	0.29	-0.14	-0.25	0.0
	18	258699	0.19	-0.10	-0.24	-0.10	0.32	0.0
	19	261607	0.66	0.17	-0.09	0.17	-0.12	0.0
	20	261624	0.42	0.35	-0.20	-0.19	0.35	0.0
	21	258612	0.71	0.32	-0.05	0.32	-0.38	0.0
	22	261610	0.48	-0.02	-0.07	0.09	-0.02	0.0
	23	258714	0.29	0.36	0.36	-0.06	-0.29	0.0
	24	258725	0.62	0.38	-0.39	0.38	-0.11	0.0
	25	258664	0.64	0.25	-0.10	0.25	-0.22	0.0
	26	258638	0.36	0.31	-0.24	-0.07	0.31	0.0
	27	258650	0.38	0.18	-0.16	-0.03	0.18	0.0
	28	261614	0.59	0.42	0.42	-0.26	-0.26	0.0
	29	261622	0.71	0.27	-0.20	0.27	-0.16	0.0
	30	258705	0.29	0.11	-0.08	-0.02	0.11	0.0
	31	258678	0.60	0.40	-0.29	0.40	-0.20	0.0
	32	261642	0.34	0.35	0.35	-0.27	-0.08	0.0
	33	258654	0.64	0.27	-0.22	-0.12	0.27	0.0
	34	258670	0.30	0.11	0.10	-0.14	0.11	1.4
	35	258660	0.45	0.53	-0.21	-0.38	0.53	0.0
	36	258637	0.55	0.28	-0.19	0.28	-0.14	0.0
	37	258640	0.51	0.12	0.09	0.12	-0.29	0.0
	38	258674	0.51	0.34	-0.17	-0.22	0.34	0.0
	39	258697	0.35	0.20	0.20	-0.05	-0.15	0.0
	40	258616	0.30	0.00	-0.12	0.00	0.13	0.0
	41	258630	0.26	0.52	-0.16	-0.32	0.52	0.0
	42	261617	0.45	0.07	0.07	0.07	-0.19	0.0
	43	258726	0.33	0.10	0.10	-0.02	-0.08	0.0

Table 2.A17 Item Statistics: MD Mod-HSA Biology—Summer Primary 1

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
513	44	258730	0.55	0.20	0.20	-0.16	-0.06	0.0
	45	258657	0.22	0.48	-0.26	-0.18	0.48	0.0
	46	258651	0.52	0.41	0.41	-0.16	-0.32	0.0
	47	258712	0.48	0.25	-0.12	-0.17	0.25	0.0
	48	258731	0.23	0.32	-0.04	-0.24	0.32	0.0
	49	261608	0.55	0.35	-0.21	-0.21	0.35	0.0
	50	258693	0.32	0.37	0.37	-0.19	-0.21	0.0
Mean			0.48	0.25	-0.02	-0.04	0.02	0.1
SD			0.16	0.15	0.24	0.20	0.25	0.3

Note. P_Val = P-Value, R_ITT = item-total correlation, P_BIS1 to P_BIS3 = option-total correlation, %Omits = percent of omitted responses.

Table 2.A18 Item Statistics: MD Mod-HSA Biology—Summer Primary 2

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
613	1	258636	0.66	0.36	-0.26	0.36	-0.15	1.3
	2	258653	0.45	0.30	0.30	-0.16	-0.15	1.3
	3	258690	0.51	0.15	-0.09	-0.06	0.15	1.3
	4	258702	0.49	0.34	-0.30	0.34	-0.08	0.0
	5	258662	0.39	0.32	-0.22	-0.12	0.32	0.0
	6	258659	0.29	0.08	0.08	-0.17	0.08	0.0
	7	258673	0.61	0.40	-0.16	-0.37	0.40	0.0
	8	258701	0.46	0.17	-0.34	0.17	0.12	0.0
	9	258628	0.62	0.40	0.40	-0.24	-0.33	1.3
	10	258685	0.36	0.11	0.11	-0.15	-0.05	1.3
	11	261611	0.18	0.04	-0.09	0.00	0.04	1.3
	12	258615	0.39	0.08	0.02	0.08	-0.16	1.3
	13	258683	0.70	0.47	-0.25	0.47	-0.32	2.6
	14	258641	0.57	0.41	-0.46	0.41	-0.01	0.0
	15	258676	0.46	0.17	0.02	0.17	-0.21	0.0
	16	258607	0.67	0.08	-0.20	0.08	0.04	0.0
	17	258645	0.51	0.35	-0.16	-0.25	0.35	0.0
	18	258666	0.43	0.20	-0.06	0.20	-0.18	0.0
	19	258675	0.50	0.08	-0.13	0.08	0.02	0.0
	20	261609	0.51	0.27	-0.17	-0.14	0.27	0.0
	21	258665	0.28	0.19	0.19	-0.02	-0.16	0.0
	22	258682	0.41	0.36	-0.33	0.36	-0.05	0.0
	23	258648	0.61	0.21	-0.12	0.21	-0.14	0.0
	24	258614	0.42	0.33	-0.29	-0.09	0.33	0.0
	25	258680	0.49	0.34	-0.18	-0.21	0.34	0.0
	26	258681	0.25	0.24	-0.15	-0.06	0.24	0.0
	27	258642	0.54	0.17	-0.08	0.17	-0.12	0.0
	28	261623	0.58	0.43	-0.27	-0.25	0.43	0.0
	29	258649	0.24	0.21	0.21	-0.34	0.10	0.0
	30	258687	0.28	0.19	-0.18	0.19	-0.01	0.0
	31	258646	0.36	0.02	0.02	-0.34	0.27	0.0
	32	261626	0.61	0.33	-0.13	-0.26	0.33	0.0
	33	258707	0.41	0.40	0.40	-0.25	-0.17	0.0
	34	258643	0.55	0.04	0.04	-0.08	0.06	0.0
	35	258698	0.33	0.05	0.09	-0.13	0.05	0.0
	36	258728	0.13	0.05	-0.28	0.18	0.05	0.0
	37	258734	0.51	0.39	-0.28	-0.12	0.39	1.3
	38	258735	0.46	0.25	-0.05	0.25	-0.22	0.0
	39	258704	0.55	0.32	-0.31	0.32	-0.08	0.0
	40	258624	0.64	0.31	0.31	-0.23	-0.15	0.0
	41	258697	0.35	0.20	0.20	-0.05	-0.15	0.0
	42	258616	0.30	0.00	-0.12	0.00	0.13	0.0
	43	258617	0.45	-0.07	-0.07	-0.15	0.18	0.0

Table 2.A18 Item Statistics: MD Mod-HSA Biology—Summer Primary 2

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
613	44	258688	0.41	0.14	-0.08	-0.07	0.14	0.0
	45	258669	0.59	0.33	-0.22	-0.18	0.33	0.0
	46	261621	0.66	0.30	0.30	-0.42	0.03	0.0
	47	258703	0.51	0.42	-0.40	0.42	-0.11	0.0
	48	258692	0.28	0.13	-0.06	-0.05	0.13	0.0
	49	258635	0.45	0.23	-0.20	-0.05	0.23	0.0
	50	261616	0.54	0.47	-0.28	-0.28	0.47	0.0
Mean			0.46	0.24	-0.09	-0.02	0.06	0.3
SD			0.14	0.14	0.21	0.23	0.21	0.6

Note. P_Val = P-Value, R_ITT = item-total correlation, P_BIS1 to P_BIS3 = option-total correlation, %Omits = percent of omitted responses.

Table 2.A19 Item Statistics: MD Mod-HSA English—Summer Primary 1

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
513	1	259343	0.60	0.33	-0.06	-0.35	0.33	0.0
	2	259415	0.70	0.18	0.18	0.00	-0.21	1.1
	3	259417	0.51	0.11	0.11	0.03	-0.26	1.1
	4	259416	0.73	0.44	-0.39	0.44	-0.20	0.0
	5	259323	0.38	0.42	0.42	-0.24	-0.20	0.0
	6	259453	0.49	0.05	-0.05	0.01	0.05	0.0
	7	259382	0.60	0.24	-0.19	0.24	-0.10	0.0
	8	259452	0.40	0.38	-0.32	0.38	-0.13	0.0
	9	259465	0.29	0.00	0.00	-0.13	0.10	0.0
	10	259351	0.31	0.23	-0.24	0.23	-0.01	0.0
	11	259430	0.70	0.23	-0.01	0.23	-0.30	0.0
	12	259431	0.60	0.29	0.29	-0.22	-0.14	0.0
	13	259318	0.54	0.35	0.35	-0.26	-0.15	0.0
	14	259319	0.36	0.14	-0.18	0.06	0.14	0.0
	15	259320	0.54	0.41	-0.20	0.41	-0.28	0.0
	16	259419	0.54	0.34	-0.22	0.34	-0.18	0.0
	17	259421	0.53	0.35	0.35	-0.39	-0.02	0.0
	18	259463	0.36	0.04	0.04	-0.21	0.18	0.0
	19	259345	0.47	0.24	-0.22	-0.04	0.24	0.0
	20	259325	0.47	0.31	-0.10	0.31	-0.26	0.0
	21	259385	0.51	0.31	-0.05	-0.30	0.31	0.0
	22	259390	0.51	0.29	-0.14	-0.20	0.29	0.0
	23	259383	0.51	0.36	-0.38	0.36	0.00	0.0
	24	259386	0.41	0.38	-0.33	-0.08	0.38	0.0
	25	259388	0.49	0.15	0.15	0.04	-0.23	0.0
	26	259389	0.31	0.30	-0.21	0.30	-0.08	0.0
	27	259438	0.50	0.14	-0.03	0.14	-0.13	0.0
	28	259439	0.53	0.15	0.00	0.15	-0.16	0.0
	29	259437	0.44	0.13	0.13	-0.02	-0.14	0.0
	30	259332	0.62	0.14	-0.21	0.14	0.04	0.0
	31	259403	0.43	0.26	-0.15	-0.14	0.26	0.0
	32	259401	0.48	0.18	0.18	-0.05	-0.17	0.0
	33	259402	0.42	0.34	-0.15	-0.22	0.34	0.0
	34	259399	0.76	0.38	-0.29	-0.20	0.38	0.0
	35	259400	0.57	0.28	-0.11	-0.28	0.28	0.0
	36	259404	0.52	0.33	0.33	-0.46	0.09	0.0
	37	259461	0.7	0.17	-0.10	-0.12	0.17	0.0
	38	259446	0.58	0.26	0.01	-0.33	0.26	0.0
	39	259447	0.43	0.41	-0.25	0.41	-0.21	0.0
	40	259448	0.59	0.42	-0.31	-0.21	0.42	0.0
	41	259358	0.50	0.38	-0.26	-0.18	0.38	0.0
	42	259434	0.47	0.15	-0.15	0.15	-0.01	0.0

Table 2.A19 Item Statistics: MD Mod-HSA English—Summer Primary 1

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
513	43	259391	0.51	0.43	-0.27	0.43	-0.24	0.0
	44	259454	0.28	0.11	0.11	-0.03	-0.09	0.0
	45	259455	0.51	0.30	-0.19	-0.16	0.30	0.0
	46	259392	0.42	0.27	-0.38	0.04	0.27	0.0
	47	259394	0.67	0.39	0.39	-0.31	-0.18	0.0
	48	259393	0.41	0.45	0.45	-0.09	-0.38	0.0
	49	259444	0.59	0.26	-0.01	0.26	-0.29	0.0
	50	259356	0.49	0.16	-0.08	-0.10	0.16	0.0
Mean			0.51	0.27	-0.05	0.00	0.01	0.0
SD			0.11	0.12	0.23	0.25	0.23	0.2

Note. P_Val = P-Value, R_ITT = item-total correlation, P_BIS1 to P_BIS3 = option-total correlation, %Omits = percent of omitted responses.

Table 2.A20 Item Statistics: MD Mod-HSA English—Summer Primary 2

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
613	1	259429	0.52	0.36	0.36	-0.20	-0.23	0.0
	2	259426	0.55	0.38	0.38	-0.24	-0.21	0.0
	3	259349	0.69	0.43	-0.24	0.43	-0.31	0.0
	4	259427	0.48	0.19	-0.10	0.19	-0.12	0.0
	5	259312	0.57	0.47	0.47	-0.33	-0.24	0.0
	6	259368	0.25	0.24	0.24	-0.11	-0.11	0.0
	7	259371	0.64	0.29	-0.27	-0.08	0.29	0.0
	8	259367	0.60	0.34	-0.43	0.34	-0.11	0.0
	9	259370	0.44	0.10	-0.13	0.10	-0.02	0.0
	10	259432	0.53	0.25	0.25	-0.02	-0.28	0.0
	11	259433	0.52	0.36	0.36	-0.22	-0.20	1.3
	12	259354	0.49	0.25	-0.17	-0.11	0.25	0.0
	13	259407	0.15	-0.08	-0.41	-0.08	0.47	0.0
	14	259335	0.33	-0.02	-0.17	0.15	-0.02	0.0
	15	259410	0.69	0.27	-0.05	0.27	-0.30	0.0
	16	259413	0.53	0.33	-0.31	0.33	-0.05	1.3
	17	259411	0.47	0.16	0.06	-0.20	0.16	1.3
	18	259414	0.47	0.04	-0.01	-0.04	0.04	0.0
	19	259338	0.28	0.16	0.16	0.18	-0.33	0.0
	20	259339	0.61	0.30	-0.16	0.30	-0.28	0.0
	21	259340	0.68	0.58	-0.36	-0.38	0.58	0.0
	22	259362	0.60	0.32	0.32	-0.30	-0.07	0.0
	23	259436	0.39	0.20	0.20	0.01	-0.27	0.0
	24	259347	0.43	0.17	0.17	-0.08	-0.11	0.0
	25	259424	0.64	0.39	-0.19	-0.32	0.39	0.0
	26	259423	0.53	0.21	-0.25	0.00	0.21	0.0
	27	259425	0.47	0.35	-0.05	0.35	-0.37	0.0
	28	259422	0.47	0.15	-0.12	0.15	-0.06	0.0
	29	259445	0.65	0.17	-0.19	0.17	-0.03	0.0
	30	259374	0.39	0.25	-0.02	-0.28	0.25	0.0
	31	259450	0.33	0.06	-0.11	0.04	0.06	0.0
	32	259376	0.64	0.37	-0.19	-0.34	0.37	0.0
	33	259310	0.61	0.42	-0.33	0.42	-0.18	0.0
	34	259365	0.68	0.41	-0.19	0.41	-0.33	1.3
	35	259449	0.57	0.43	0.43	-0.28	-0.24	0.0
	36	259441	0.33	0.24	0.24	-0.24	-0.01	0.0
	37	259443	0.44	0.43	-0.35	0.43	-0.12	0.0
	38	259437	0.44	0.13	0.13	-0.02	-0.14	0.0
	39	259457	0.32	0.18	0.18	0.01	-0.20	0.0
	40	259330	0.69	0.52	-0.45	0.52	-0.19	0.0
	41	259458	0.31	0.19	0.19	-0.17	-0.04	0.0
	42	259466	0.67	0.46	-0.13	-0.42	0.46	0.0
	43	259395	0.41	0.36	-0.06	0.36	-0.32	0.0

Table 2.A20 Item Statistics: MD Mod-HSA English—Summer Primary 2

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
613	44	259459	0.44	0.33	-0.06	-0.32	0.33	0.0
	45	259396	0.36	0.19	-0.15	-0.05	0.19	0.0
	46	259460	0.57	0.37	0.37	-0.20	-0.25	0.0
	47	259398	0.61	0.28	-0.20	0.28	-0.14	0.0
	48	259397	0.52	0.27	-0.40	0.06	0.27	0.0
	49	259360	0.37	0.14	0.14	-0.09	-0.05	0.0
	50	259435	0.27	0.40	-0.20	-0.18	0.40	0.0
Mean			0.49	0.28	-0.04	0.00	-0.02	0.1
SD			0.13	0.14	0.25	0.26	0.25	0.4

Note. P_Val = P-Value, R_ITT = item-total correlation, P_BIS1 to P_BIS3 = option-total correlation, %Omits = percent of omitted responses.