Maryland High School Assessment and Modified High School Assessment 2012 Technical Report

Algebra/Data Analysis

Biology

English

Educational Testing Service

March 2013

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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. May 2011 was the last administration of the Government HSA. 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 2012 school year.

Beginning with students who entered ninth grade in the 2005–2006 school year, passing scores on all four MD HSAs are required in order to earn a Maryland High School Diploma.[1] There are also combined score and Bridge Plan options to meet the graduation requirement. Students who graduated in June 2011 were the last class required to meet the Government HSA requirement, regardless of the year they entered grade 9. Information on the interpretation of scores is provided to students, parents, schools, and other stakeholders via the MSDE website.

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. Beginning in May 2009, the MD HSAs are 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, October 29, 2010). Further mode comparability studies have not been conducted.

This report provides information about the October 2011 administration and the January, April, May, and Summer 2012 administrations. For the October 2011 administration, one form was administered. For the January 2012 administration, three forms were administered: two forms for the primary administration, and one form for the makeup administration. For the April 2012 administration, one form was administered. For the May 2012 administration, twelve test forms were administered: ten for the primary testing window and one for each of two makeup testing windows. For the Summer 2012 administration, two primary forms were administered: one for the first week of testing and one for the second week of testing.

[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

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 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 2011–2012 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 2011-2012 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

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 2.4.

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

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. Edits resulting from this review 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 based on this review were made. Finally, the items were prepared for review by the Content and Bias/Sensitivity Review Committees.

The Content and Bias/Sensitivity Review Committees are diverse groups of Maryland educators who reviewed each item to ensure that its 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.

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 2012 test forms were constructed using items from the Maryland item bank. The pool of items available for use in the construction of the 2012 forms included all items that had been administered, calibrated, and linked to the operational scale. For Algebra and Biology, 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 2.4 starting on page 13 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 2.5 to 2.9. The exact composition of the forms varied slightly based on available items in the pool.

Table 2.5 Form Construction Specifications for the MD HSA October 2011 Administration

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

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

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

Table 2.7 Form Construction Specifications for the MD HSA April 2012 Administration

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

Table 2.8 Form Construction Specifications for the MD HSA May 2012 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% Unique items—20%	Other half of items from primary week's 40% 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 2.9 Form Construction Specifications for the MD HSA Summer 2012 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 and administration, as shown in Table 2.10.

Table 2.10 Number of Operational (OP) and Field Test (FT) Items by Administration and MD HSA Content Area

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

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 and Biology, 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)*, October 5, 2009 for details on how new target TCCs were created.)

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

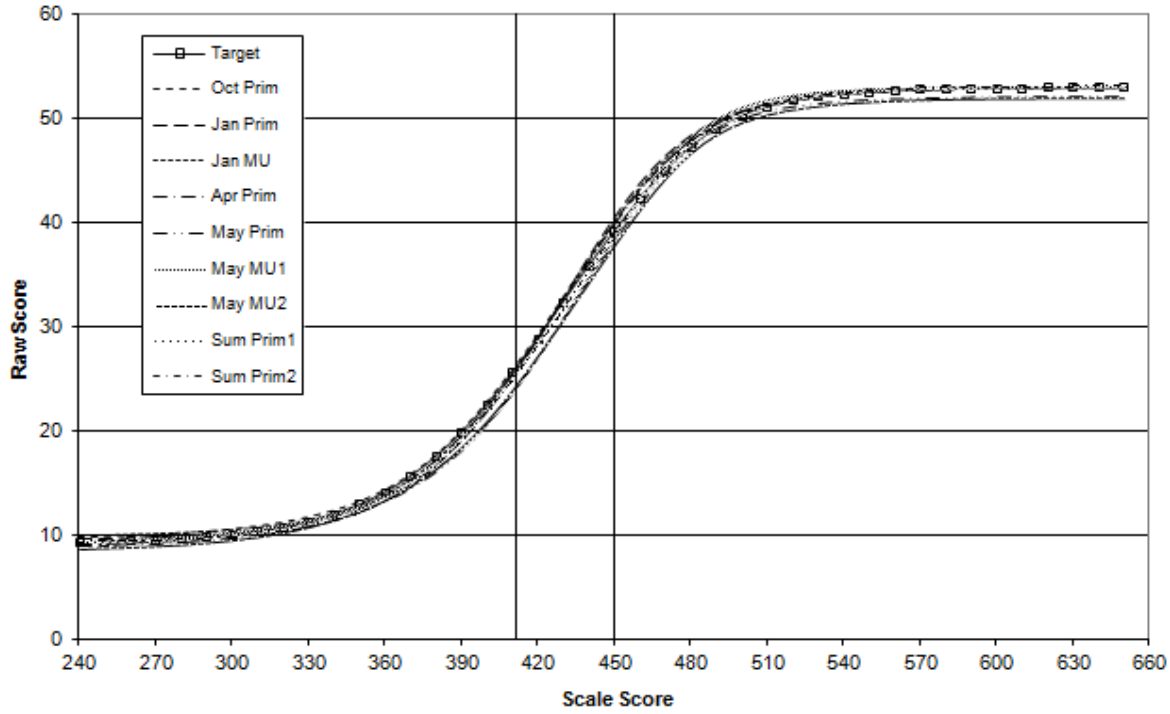
1. For each administration, all forms were constructed simultaneously in order to provide the best opportunity to construct parallel forms.
2. Items that matched the test blueprint were selected to match the target TCCs and CSEMs.
3. Test developers were careful to ensure that the item selections met all content specifications, including matching items to the test blueprint, distribution of keys, and avoidance of clueing[3] or clanging.[4]

[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. 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 and Biology, 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 2.6 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. Note that in the April administration, intact forms from previous administrations were used. Those forms were built to the previous target TCCs, so in some cases deviate more from the current target TCC than is typically seen. 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 6.3 for histograms of student performance.)

[4] Clanging occurs when an identical or resembling 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.



Note: Maximum possible raw score is 53.

Figure 2.1 Test Characteristic Curves for the MD HSA 2012 Algebra Forms

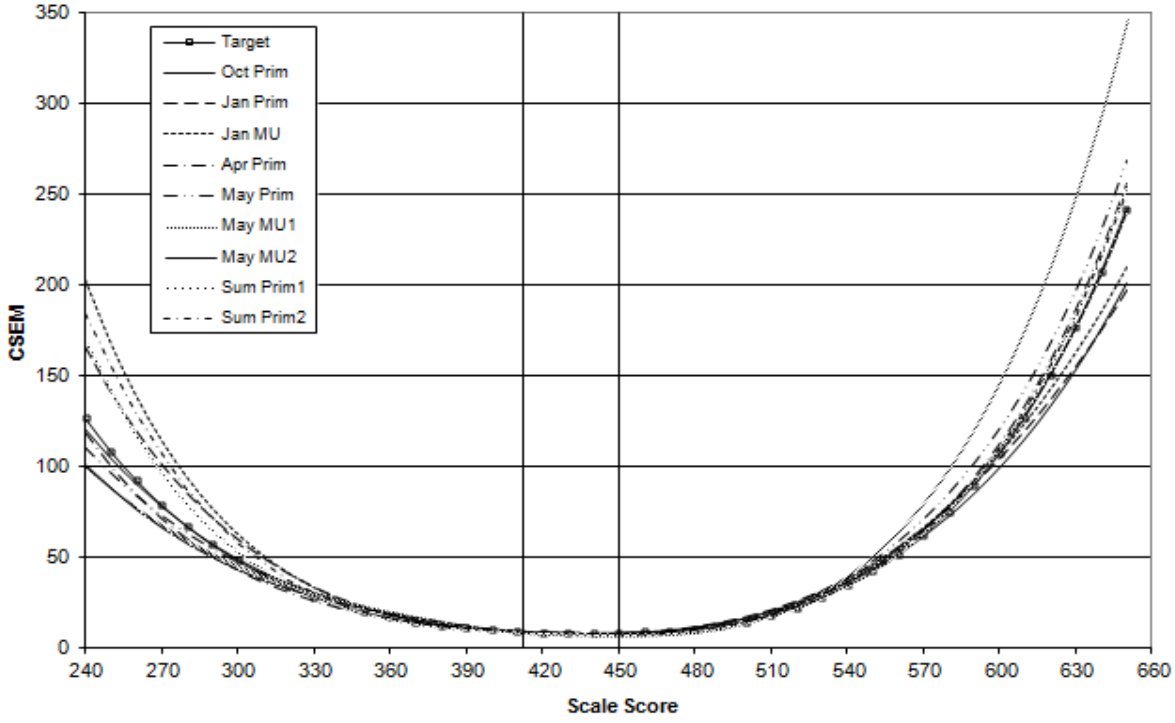
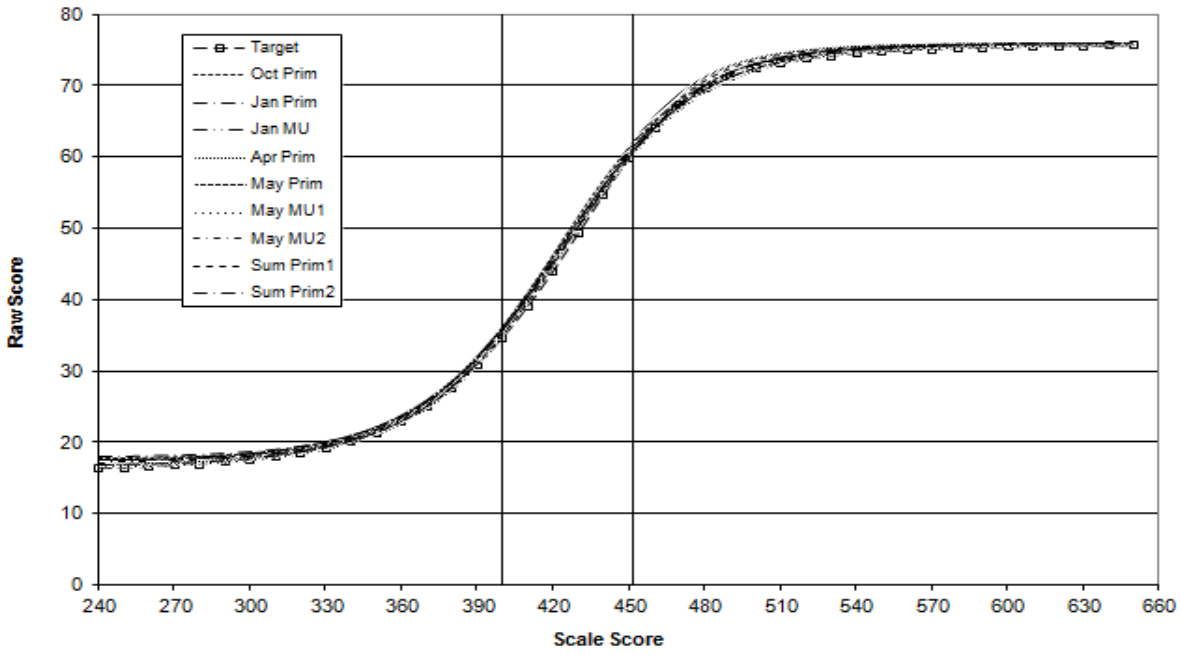


Figure 2.2 Conditional Standard Error of Measurement for the MD HSA 2012 Algebra Forms



Note: Maximum possible raw score is 76.

Figure 2.3 Test Characteristic Curves for the MD HSA 2012 Biology Forms

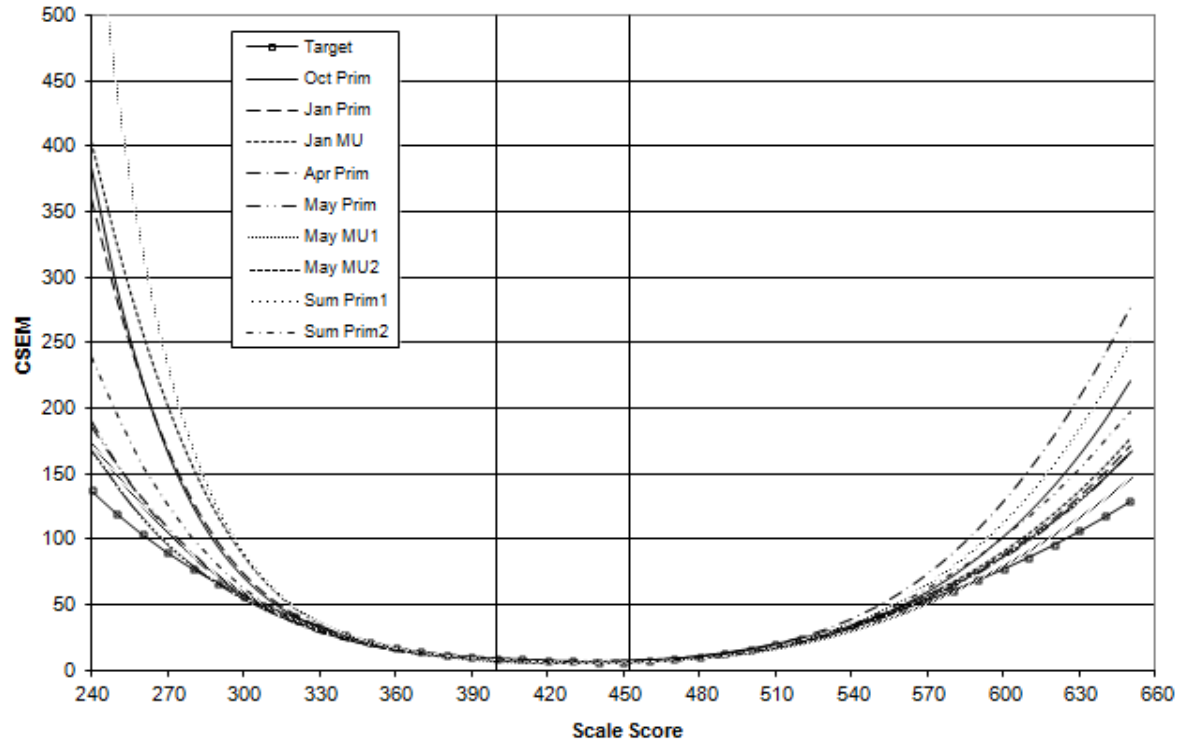
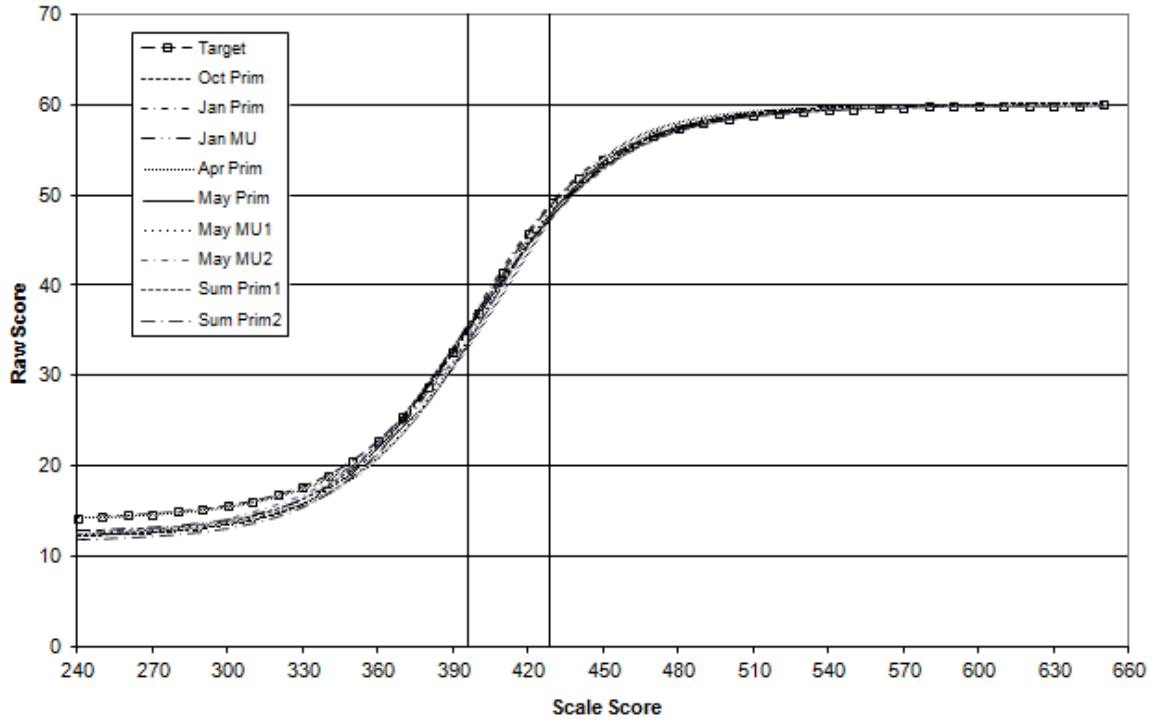


Figure 2.4 Conditional Standard Error Measurement for the MD HSA 2012 Biology Form



Note: Maximum possible raw score is 60.

Figure 2.5 Test Characteristic Curves for the MD HSA 2012 English Forms

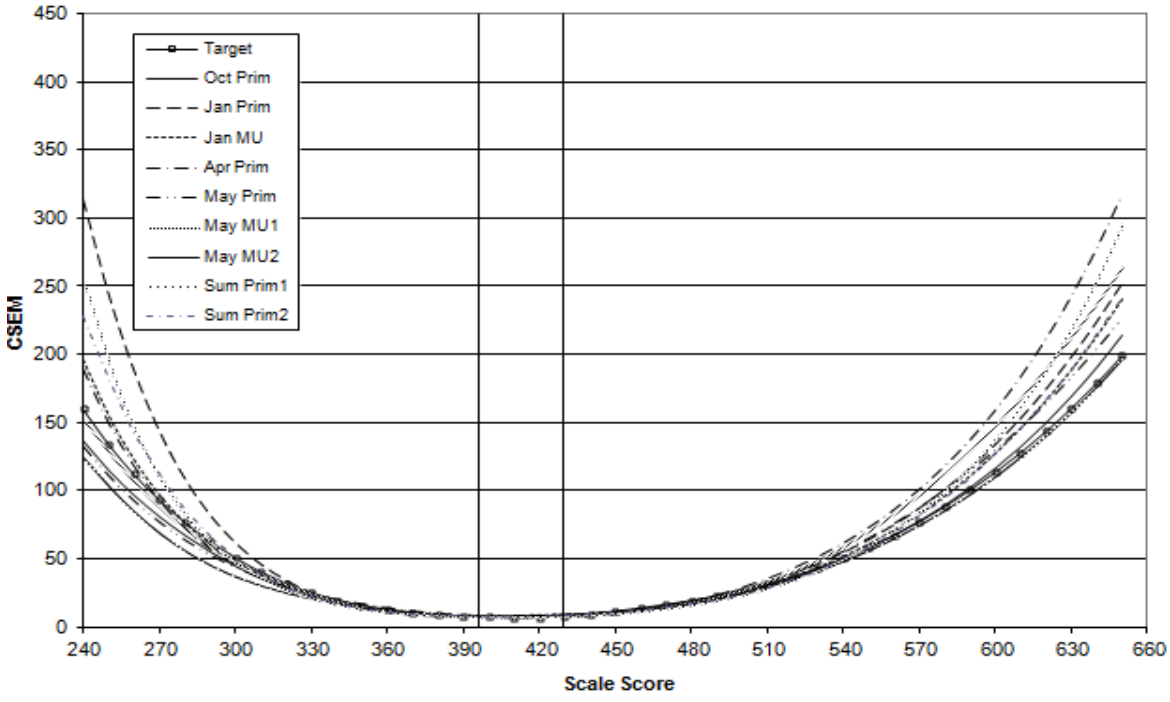


Figure 2.6 Conditional Standard Error of Measurement for the MD HSA 2012 English Forms

Test Administration

For all MD HSA tests administered in 2011-2012, 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 ten primary and two makeup forms were spiraled over the three-week testing window. In Summer, 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 2.11. The percent of students taking HSAs online by content area and administration is reported in Table 2.12.

Table 2.11 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

Table 2.12 Percent of Online MD HSAs by Content Area and Administration

Content Area	October	January	April	May	Summer
Algebra	42%	52%	39%	35%	75%
Biology	45%	54%	47%	46%	66%
English	47%	48%	44%	41%	79%

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 (1951) 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 6.19.

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	.75	1				.80	1					
Subscore 2	.85	.60	1			.72	.55	1				
Subscore 3	.79	.55	.63	1		.76	.59	.57	1			
Subscore 4	.71	.51	.59	.57	1	.75	.57	.55	.57	1		
Subscore 5	-	-	-	-	-	.70	.54	.49	.54	.52	1	
Subscore 6	-	-	-	-	-	.72	.56	.51	.55	.52	.51	1

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

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

	English				
	SS	1	2	3	4
Overall SS	1				
Subscore 1	.73	1			
Subscore 2	.77	.53	1		
Subscore 3	.68	.47	.48	1	
Subscore 4	.68	.44	.45	.46	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 2012 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 2012 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 ten primary forms; data from operational items were combined across forms within the content areas of Algebra, Biology, and English.

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-square 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; Tucker & Lewis, 1973) 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, J-N	1	52	66,651	1,168	36,724	**0.99**	**0.96**	**0.021**
Biology	May	D-H, J-N	1	76	53,893	2,424	43,507	**0.99**	**0.96**	**0.018**
English	May	D-H, J-N	1	60	55,124	1,565	28,802	**0.99**	**0.96**	**0.018**

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		January		April		May		Summer	
	Item Types		Item Types		Item Types		Item Types		Item Types	
	SR	SPR	SR	SPR	SR	SPR	SR	SPR	SR	SPR
Algebra	0	6	0	5	0	9	0	1	0	3
Biology	0	--	0	--	0	--	0	--	0	--
English	0	--	0	--	0	--	0	--	0	--

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 1.A presents the percentage 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 equal to or less than 1% per item. The SPR items (Algebra only) had omit rates ranging from 2.0 percent to 8.7 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 (IP) scoring procedures. When the 3PL model is used, the likelihood equation can have multiple maxima. Therefore, a numerical method was developed to find the scale score at the global maximum in the likelihood function (Yen, 1984).

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 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 at that time. 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.

Table 4.1 MD HSA Cut Scores by Content Area

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

Passing status is achieved when a student's score meets or exceeds the Proficient cut score, as listed in Table 4.1. Students graduating prior to 2009 were not required to pass the MD HSAs to graduate from high school, but were required to take the tests. Beginning with the class of 2009, students must obtain either a passing score on each of the four MD HSAs (including Government) or an overall combined score of 1602 as part of the requirements for a high school diploma. Students who graduated in June 2011 were the last class required to meet the Government HSA requirement, regardless of the year they entered grade 9.

However, students scheduled to graduate in 2012 and beyond who have already taken the Government HSA could meet the graduation requirement by reaching a combined score of 1602 on the four HSAs. For those taking only the three current HSAs (Algebra, Biology, and English), a combined total of 1208 is necessary to meet the graduation requirement.

Year-to-Year Scale Maintenance

The MD HSAs for Algebra and Biology 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.

[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

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 (1995). 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 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 (1951) alpha, 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 6.19. The tables show that the overall reliability of the MD HSAs administered during the January and May sessions ranged from 0.83 to 0.94 for the primary forms, and from 0.81 to 0.94 for the makeup forms. The overall reliability results for the October forms ranged from 0.75 to 0.79. The overall reliability results for the April forms ranged from 0.77 to 0.76. 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 somewhat 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 5.15 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 0.80 to 0.88 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 0.74 to 0.86 across all performance levels and from 0.74 to 0.92 for the Proficient and Above classifications in Algebra, Biology, and English.

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 2011 Form

	Placement Scores	Advanced	Proficient	Basic	Category Total*
Decision Accuracy	450–650	.01	.00	.00	.01
	412–449	.01	.11	.06	.18
	240–411	.01	.07	.73	.81
	Estimated Proportion Correctly Classified*: Total = 0.85 , Proficient & Above = 0.86				
Decision Consistency	450–650	.01	.00	.00	.01
	412–449	.03	.09	.07	.18
	240–411	.02	.10	.69	.81
	Estimated Proportion Consistently Classified*: Total = 0.79 , Proficient & Above = 0.81				

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

Table 5.2 Decision Accuracy and Consistency: MD HSA Algebra January 2012 Forms

	Placement Scores	Advanced	Proficient	Basic	Category Total*
January Primary					
Decision Accuracy	450–650	.02	.00	.00	.02
	412–449	.03	.13	.05	.21
	240–411	.01	.06	.70	.77
	Estimated Proportion Correctly Classified: Total*: = 0.85, Proficient & Above = 0.87				
Decision Consistency	450–650	.02	.00	.00	.02
	412–449	.04	.11	.06	.21
	240–411	.02	.09	.67	.77
	Estimated Proportion Consistently Classified*: Total = 0.79 ; Proficient & Above = 0.83				
January Form C					
Decision Accuracy	450–650	.02	.00	.00	.02
	412–449	.02	.15	.06	.23
	240–411	.01	.06	.68	.75
	Estimated Proportion Correctly Classified*: Total = 0.85 ; Proficient & Above = 0.87				
Decision Consistency	450–650	.02	.00	.00	.02
	412–449	.04	.12	.07	.23
	240–411	.01	.09	.65	.75
	Estimated Proportion Consistently Classified*: Total = 0.79, Proficient & Above = 0.83				

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

Table 5.3 Decision Accuracy and Consistency: MD HSA Algebra April 2012 Form

	Placement Scores	Advanced	Proficient	Basic	Category Total*
Decision Accuracy	450–650	.01	.00	.00	.01
	412–449	.00	.07	.04	.12
	240–411	.01	.06	.80	.87
	Estimated Proportion Correctly Classified*: Total = 0.88, Proficient & Above = 0.89				
Decision Consistency	450–650	.01	.00	.00	.01
	412–449	.01	.06	.04	.12
	240–411	.02	.09	.77	.87
	Estimated Proportion Consistently Classified*: Total = 0.83, Proficient & Above = 0.85				

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

Table 5.4 Decision Accuracy and Consistency: MD HSA Algebra May 2012 Forms

	Placement Scores	Advanced	Proficient	Basic	Category Total*
May Primary					
Decision Accuracy	450–650	.20	.05	.00	.25
	412–449	.04	.28	.08	.40
	240–411	.00	.01	.34	.35
	Estimated Proportion Correctly Classified*: Total = 0.83 , Proficient & Above = 0.91				
Decision Consistency	450–650	.19	.05	.00	.25
	412–449	.06	.24	.10	.40
	240–411	.00	.02	.33	.35
	Estimated Proportion Consistently Classified*: Total = 0.76 , Proficient & Above = 0.88				
May Form X					
Decision Accuracy	450–650	.14	.03	.00	.17
	412–449	.04	.22	.08	.34
	240–411	.00	.02	.47	.49
	Estimated Proportion Correctly Classified*: Total = 0.83, Proficient & Above = 0.90				
Decision Consistency	450–650	.13	.04	.00	.17
	412–449	.06	.19	.09	.34
	240–411	.00	.04	.45	.49
	Estimated Proportion Consistently Classified*: Total = 0.77, Proficient & Above = 0.87				
May Form Y					
Decision Accuracy	450–650	.19	.05	.00	.24
	412–449	.04	.28	.08	.39
	240–411	.00	.01	.36	.37
	Estimated Proportion Correctly Classified*: Total = 0.82, Proficient & Above = 0.91				
Decision Consistency	450–650	.18	.06	.00	.24
	412–449	.06	.24	.09	.39
	240–411	.00	.03	.34	.37
	Estimated Proportion Consistently Classified*: Total = 0.76, Proficient & Above = 0.87				

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

Table 5.5 Decision Accuracy and Consistency: MD HSA Algebra Summer 2012 Forms

	Placement Scores	Advanced	Proficient	Basic	Category Total*
Summer Form P					
	450–650	.01	.00	.00	.01
Decision	412–449	.05	.16	.07	.28
Accuracy	240–411	.00	.04	.67	.71
	Estimated Proportion Correctly Classified*: Total = 0.83, Proficient & Above = 0.88				
	450–650	.01	.00	.00	.01
Decision	412–449	.06	.13	.09	.28
Consistency	240–411	.01	.07	.64	.71
	Estimated Proportion Consistently Classified*: Total = 0.78, Proficient & Above = 0.84				
Summer Form Q					
	450–650	.03	.00	.00	.04
Decision	412–449	.03	.18	.06	.26
Accuracy	240–411	.00	.05	.65	.70
	Estimated Proportion Correctly Classified*: Total = 0.86, Proficient & Above = 0.89				
	450–650	.03	.01	.00	.04
Decision	412–449	.04	.15	.07	.26
Consistency	240–411	.00	.07	.62	.70
	Estimated Proportion Consistently Classified*: Total = 0.81, Proficient & Above = 0.85				

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

Table 5.6 Decision Accuracy and Consistency: MD HSA Biology October 2011 Form

	Placement Scores	Advanced	Proficient	Basic	Category Total*
	452–650	.00	.01	.00	.01
Decision	400–451	.00	.12	.05	.16
Accuracy	240–399	.01	.07	.75	.83
	Estimated Proportion Consistently Classified*: Total = 0.87, Proficient & Above = 0.88				
	452–650	.00	.00	.00	.01
Decision	400–451	.00	.11	.06	.16
Consistency	240–399	.01	.11	.71	.83
	Estimated Proportion Consistently Classified*: Total = 0.82, Proficient & Above = 0.83				

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

Table 5.7 Decision Accuracy and Consistency: MD HSA Biology January 2012 Forms

	Placement Scores	Advanced	Proficient	Basic	Category Total*
January Primary					
	452–650	.07	.04	.00	.12
Decision	400–451	.00	.31	.00	.31
Accuracy	240–399	.02	.07	.48	.57
	Estimated Proportion Correctly Classified*: Total = 0.86, Proficient & Above = 0.91				
	452–650	.06	.05	.00	.12
Decision	400–451	.02	.27	.02	.31
Consistency	240–399	.02	.08	.47	.57
	Estimated Proportion Consistently Classified*: Total = 0.80, Proficient & Above = 0.88				
January Form C					
	452–650	.03	.08	.00	.11
Decision	400–451	.00	.33	.00	.33
Accuracy	240–399	.02	.09	.45	.56
	Estimated Proportion Correctly Classified*: Total = 0.82, Proficient & Above = 0.89				
	452–650	.04	.06	.01	.11
Decision	400–451	.01	.31	.00	.33
Consistency	240–399	.03	.09	.45	.56
	Estimated Proportion Consistently Classified*: Total = 0.80, Proficient & Above = 0.88				

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

Table 5.8 Decision Accuracy and Consistency: MD HSA Biology April 2012 Form

	Placement Scores	Advanced	Proficient	Basic	Category Total*
	452–650	.00	.00	.00	.00
Decision	400–451	.00	.10	.04	.14
Accuracy	240–399	.01	.06	.79	.85
	Estimated Proportion Correctly Classified*: Total = 0.88, Proficient & Above = 0.89				
	452–650	.00	.00	.00	.00
Decision	400–451	.00	.09	.05	.14
Consistency	240–399	.01	.10	.75	.85
	Estimated Proportion Consistently Classified*: Total = 0.84, Proficient & Above = 0.84				

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

Table 5.9 Decision Accuracy and Consistency: MD HSA Biology May 2012 Forms

	Placement Scores	Advanced	Proficient	Basic	Category Total*
May Primary					
	452–650	.21	.02	.00	.23
Decision	400–451	.07	.42	.03	.53
Accuracy	240–399	.00	.03	.22	.25
	Estimated Proportion Correctly Classified*: Total = 0.85, Proficient & Above = 0.94				
	452–650	.19	.04	.00	.23
Decision	400–451	.09	.39	.04	.53
Consistency	240–399	.00	.03	.21	.25
	Estimated Proportion Consistently Classified*: Total = 0.79, Proficient & Above = 0.92				
May Form X					
	452–650	.16	.03	.00	.19
Decision	400–451	.04	.40	.06	.49
Accuracy	240–399	.00	.01	.30	.31
	Estimated Proportion Correctly Classified*: Total = 0.86, Proficient & Above = 0.93				
	452–650	.16	.04	.00	.19
Decision	400–451	.05	.37	.08	.49
Consistency	240–399	.00	.03	.29	.31
	Estimated Proportion Consistently Classified*: Total = 0.81, Proficient & Above = 0.90				
May Form Y					
	452–650	.22	.02	.00	.24
Decision	400–451	.06	.42	.04	.52
Accuracy	240–399	.00	.03	.22	.25
	Estimated Proportion Correctly Classified*: Total = 0.87, Proficient & Above = 0.94				
	452–650	.21	.03	.00	.24
Decision	400–451	.07	.39	.05	.52
Consistency	240–399	.00	.03	.21	.25
	Estimated Proportion Consistently Classified*: Total = 0.81, Proficient & Above = 0.92				

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

Table 5.10 Decision Accuracy and Consistency: MD HSA Biology Summer 2012 Forms

	Placement Scores	Advanced	Proficient	Basic	Category Total*
Summer Form P					
	452–650	.01	.00	.00	.02
Decision	400–451	.01	.16	.05	.22
Accuracy	240–399	.01	.06	.70	.76
	Estimated Proportion Correctly Classified*: Total = 0.87, Proficient & Above = 0.88				
	452–650	.01	.00	.00	.02
Decision	400–451	.02	.13	.06	.22
Consistency	240–399	.01	.09	.67	.76
	Estimated Proportion Consistently Classified*: Total = 0.82, Proficient & Above = 0.84				
Summer Form Q					
	452–650	.01	.00	.00	.01
Decision	400–451	.01	.21	.06	.28
Accuracy	240–399	.00	.05	.65	.71
	Estimated Proportion Correctly Classified*: Total = 0.87, Proficient & Above = 0.89				
	452–650	.01	.00	.00	.01
Decision	400–451	.02	.18	.08	.28
Consistency	240–399	.00	.08	.62	.71
	Estimated Proportion Consistently Classified*: Total = 0.82, Proficient & Above = 0.84				

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

Table 5.11 Decision Accuracy and Consistency: MD HSA English October 2010 Form

	Placement Scores	Advanced	Proficient	Basic	Category Total*
	429–650	.01	.00	.00	.01
Decision	396–428	.01	.12	.05	.18
Accuracy	240–395	.01	.06	.74	.81
	Estimated Proportion Correctly Classified*: Total = 0.87, Proficient & Above = 0.88				
	429–650	.01	.00	.00	.01
Decision	396–428	.02	.10	.06	.18
Consistency	240–395	.01	.09	.71	.81
	Estimated Proportion Consistently Classified*: Total = 0.81, Proficient & Above = 0.83				

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

Table 5.12 Decision Accuracy and Consistency: MD HSA English January 2012 Forms

	Placement Scores	Advanced	Proficient	Basic	Category Total*
January Primary					
	429–650	.09	.02	.00	.10
Decision	396–428	.03	.21	.05	.29
Accuracy	240–395	.00	.06	.55	.61
	Estimated Proportion Correctly Classified*: Total = 0.85, Proficient & Above = 0.89				
	429–650	.08	.02	.00	.10
Decision	396–428	.04	.18	.06	.29
Consistency	240–395	.01	.08	.53	.61
	Estimated Proportion Consistently Classified*: Total = 0.79, Proficient & Above = 0.85				
January Form C					
	429–650	.00	.08	.01	.09
Decision	396–428	.00	.30	.00	.30
Accuracy	240–395	.00	.11	.51	.61
	Estimated Proportion Correctly Classified*: Total = 0.80, Proficient & Above = 0.88				
	429–650	.03	.05	.01	.09
Decision	396–428	.02	.23	.04	.30
Consistency	240–395	.02	.11	.48	.61
	Estimated Proportion Consistently Classified*: Total = 0.74, Proficient & Above = 0.82				

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

Table 5.13 Decision Accuracy and Consistency: MD HSA English April 2012 Form

	Placement Scores	Advanced	Proficient	Basic	Category Total*
	429–650	.01	.00	.00	.01
Decision	396–428	.01	.06	.03	.12
Accuracy	240–395	.02	.06	.81	.89
	Estimated Proportion Correctly Classified*: Total = 0.87, Proficient & Above = 0.88				
	429–650	.01	.00	.00	.01
Decision	396–428	.02	.05	.04	.11
Consistency	240–395	.03	.09	.77	.89
	Estimated Proportion Consistently Classified*: Total = 0.82, Proficient & Above = 0.84				

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

Table 5.14 Decision Accuracy and Consistency: MD HSA English May 2012 Forms

	Placement Scores	Advanced	Proficient	Basic	Category Total*
May Primary					
	429–650	.22	.05	.00	.27
Decision	396–428	.04	.33	.06	.44
Accuracy	240–395	.00	.02	.27	.30
	Estimated Proportion Correctly Classified*: Total = 0.82, Proficient & Above = 0.91				
	429–650	.21	.06	.00	.27
Decision	396–428	.06	.29	.08	.44
Consistency	240–395	.00	.04	.26	.30
	Estimated Proportion Consistently Classified*: Total = 0.76, Proficient & Above = 0.88				
May Form X					
	429–650	.19	.04	.00	.22
Decision	396–428	.04	.27	.07	.39
Accuracy	240–395	.00	.02	.37	.39
	Estimated Proportion Correctly Classified*: Total = 0.83, Proficient & Above = 0.91				
	429–650	.18	.04	.00	.22
Decision	396–428	.06	.23	.09	.39
Consistency	240–395	.00	.04	.36	.39
	Estimated Proportion Consistently Classified*: Total = 0.77, Proficient & Above = 0.88				
May Form Y					
	429–650	.22	.05	.00	.27
Decision	396–428	.04	.31	.06	.42
Accuracy	240–395	.00	.02	.29	.31
	Estimated Proportion Correctly Classified*: Total = 0.82, Proficient & Above = 0.91				
	429–650	.21	.06	.00	.27
Decision	396–428	.06	.27	.08	.42
Consistency	240–395	.00	.04	.27	.31
	Estimated Proportion Consistently Classified*: Total = 0.75, Proficient & Above = 0.87				

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

Table 5.15 Decision Accuracy and Consistency: MD HSA English Summer 2012 Forms

	Placement Scores	Advanced	Proficient	Basic	Category Total*
Summer Form P					
Decision Accuracy	429–650	.01	.00	.00	.01
	396–428	.03	.15	.06	.24
	240–395	.01	.06	.68	.75
	Estimated Proportion Correctly Classified*: Total = 0.84, Proficient & Above = 0.87				
Decision Consistency	429–650	.01	.00	.00	.01
	396–428	.05	.12	.07	.24
	240–395	.01	.09	.65	.75
	Estimated Proportion Consistently Classified*: Total = 0.78, Proficient & Above = 0.83				
Summer Form Q					
Decision Accuracy	429–650	.02	.00	.00	.02
	396–428	.02	.16	.06	.24
	240–395	.00	.05	.68	.74
	Estimated Proportion Correctly Classified*: Total = 0.86, Proficient & Above = 0.88				
Decision Consistency	429–650	.02	.00	.00	.02
	396–428	.03	.13	.07	.24
	240–395	.01	.08	.65	.74
	Estimated Proportion Consistently Classified*: Total = 0.80, Proficient & Above* = 0.84				

* 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 2011 and January, April, May, and Summer 2012. 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 shows that scores for all content areas were higher on average for the May administration compared with the October, January, April, and Summer administrations.

Table 6.1 MD HSA Means and Standard Deviations for 2011-2012 Overall and by Grade

			N	Mean	SD
Algebra	Overall		108,371	408.7	45.5
	Grade				
		7	11,511	457.8	24.2
		8	21,966	435.3	30.4
		9	33,568	405.1	41.7
		10	18,951	385.1	40.1
		11	12,989	382.6	39.4
		12	8,356	378.9	40.8
Biology	Overall		87,590	410.7	44.8
	Grade				
		9	23,448	433.5	40.5
		10	38,657	417.5	39.7
		11	16,764	383.9	38.3
		12	8,233	369.5	35.7
English	Overall		94,744	398.3	37.9
	Grade				
		9	4,680	391.3	37.9
		10	58,607	411.5	31.2
		11	19,725	377.7	29.0
		12	11,156	369.6	33.9

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	14,680	385.6	37.6	16,916	386.2	42.3	1,973	375.7	40.6	73,435	419.7	43.7	1,367	390.4	39.6
Biology	11,003	375.9	32.4	14,978	395.1	47.9	1,542	367.9	37.7	59,334	422.6	40.6	733	379.0	38.2
English	13,200	373.4	30.6	17,108	387.9	34.7	2,424	360.1	40.3	60,628	408.6	32.3	1,384	376.6	32.6

The mean scale scores for the years 2003 to 2012 are presented 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
Algebra	408.3	411.9	409.5	421.5	421.2	420.5	414.3	408.1	410.9	408.7
Biology	400.8	406.2	404.7	415.0	414.5	414.7	409.0	408.7	406.9	410.7
English	--	--	--	393.0	412.0	404.3	399.7	398.2	396.8	398.3
Government	403.5	406.5	409.3	418.5	417.1	417.1	406.3	408.6	405.6	--

Note. The current English test was not administered prior to 2006. The Government test was not administered after the May 2011 administration.

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
Algebra	53.1	59.3	54.5	66.6	63.3	62.0	53.3	46.6	49.1	50.3
Biology	54.3	62.0	58.4	67.8	70.1	68.4	60.0	59.1	57.9	60.9
English	--	--	--	60.1	70.6	61.0	55.3	54.8	54.0	55.0
Government	39.8	54.6	67.1	74.1	73.3	71.5	61.1	61.7	62.1	--

Note. The current English test was not administered prior to 2006. The Government test was not issued after the May 2011 administration.

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 in 2012.

Table 6.5 MD HSA Performance Classification Rates in 2012 for Algebra, Biology, and English

Content Area	Basic	Proficient	Advanced
Algebra	49.7	33.4	17.0
Biology	39.1	43.4	17.5
English	45.0	36.0	19.0

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 6.20. 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 6.3 show the distributions of total scale scores for each content area for the May 2012 administration.

Table 6.6 Summary Statistics for MD HSA Algebra: October 2011 Form

		Primary Form R				
		Mean	SD	N	%	Alpha
Overall		385.6	37.6	14,680	100.0	0.75
Gender						
	Male	383.7	40.3	7,250	49.4	0.77
	Female	387.5	34.6	7,343	50.0	0.73
	Missing	384.2	37.4	87	0.6	0.76
Special Education						
	Yes	368.1	47.6	2,057	14.0	0.74
	No	388.7	34.8	12,094	82.4	0.74
	Exited	384.7	37.4	116	0.8	0.73
	Exited and placed in 504	*	*	21	0.1	*
	504	382.5	35.5	392	2.7	0.68
Ethnicity						
	American Indian	389.7	27.3	58	0.4	0.67
	Asian	399.1	35.8	348	2.4	0.83
	African American	382.9	38.1	9,382	63.9	0.73
	Hawaiian/Pacific Islander	*	*	14	0.1	*
	White	391.4	36.6	2,759	18.8	0.77
	Hispanic	387.9	35.0	1,762	12.0	0.74
	Missing	386.2	36.5	357	2.4	0.76
Limited English Proficient						
	Yes	384.4	36.3	899	6.1	0.75
	No	385.6	37.7	13,640	92.9	0.75
	Exited	396.5	31.6	141	1.0	0.78

* 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 2012 Forms

		Primary Forms A-B					Makeup Form C				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		385.6	43.0	13,936	100.0	0.83	389.1	38.8	2,980	100.0	0.81
Gender											
	Male	383.2	45.0	7,164	51.4	0.84	388.2	40.5	1,542	51.7	0.83
	Female	388.5	40.2	6,670	47.9	0.81	390.2	37.0	1,436	48.2	0.79
	Missing	372.8	57.6	102	0.7	0.88	*	*	2	0.1	*
Special Education											
	Yes	368.2	49.3	2,014	14.5	0.77	375.2	44.0	292	9.8	0.80
	No	388.7	41.0	11,354	81.5	0.83	390.8	37.6	2,558	85.8	0.81
	Exited	386.7	49.0	89	0.6	0.84	*	*	20	0.7	*
	Exited and placed in 504	*	*	21	0.2	*	*	*	10	0.3	*
	504	386.1	41.9	458	3.3	0.80	388.1	40.4	100	3.4	0.84
Ethnicity											
	American Indian	376.6	45.3	58	0.4	0.77	*	*	10	0.3	*
	Asian	393.7	45.0	273	2.0	0.86	398.7	38.4	73	2.4	0.88
	African American	378.5	43.6	8,103	58.1	0.76	380.9	38.3	1,632	54.8	0.72
	Hawaiian/ Pacific Islander	*	*	17	0.1	*	*	*	5	0.2	*
	White	400.4	39.0	3,589	25.8	0.87	403.9	33.3	932	31.3	0.85
	Hispanic	388.5	36.7	1,430	10.3	0.76	386.6	39.4	257	8.6	0.76
	Missing	383.9	47.3	466	3.3	0.87	381.7	55.6	71	2.4	0.86
Limited English Proficient											
	Yes	381.0	40.0	649	4.7	0.75	373.2	45.3	88	3.0	0.74
	No	385.8	43.2	13,214	94.8	0.83	389.5	38.5	2,863	96.1	0.82
	Exited	403.7	19.4	73	0.5	0.73	*	*	29	1.0	*

* 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 6.8 Summary Statistics for MD HSA Algebra: April 2012 Form

		Primary Form S				
		Mean	SD	N	%	Alpha
Overall		375.7	40.6	1,973	100.0	0.77
Gender						
	Male	375.7	41.7	960	48.7	0.78
	Female	376.1	39.3	997	50.5	0.75
	Missing	*	*	16	0.8	*
Special Education						
	Yes	361.9	45.6	219	11.1	0.72
	No	377.7	39.5	1,696	86.0	0.77
	Exited	*	*	6	0.3	*
	Exited and placed in 504	*	*	3	0.2	*
	504	*	*	49	2.5	*
Ethnicity						
	American Indian	*	*	7	0.4	*
	Asian	*	*	29	1.5	*
	African American	374.0	42.0	1,432	72.6	0.77
	Hawaiian/ Pacific Islander	*	*	0	0.0	*
	White	381.9	30.8	151	7.7	0.73
	Hispanic	380.7	37.1	265	13.4	0.73
	Missing	368.7	39.6	89	4.5	0.71
Limited English Proficient						
	Yes	377.8	36.9	139	7.0	0.77
	No	375.5	40.9	1,830	92.8	0.77
	Exited	*	*	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 2012 Forms

	Primary Forms D-H, J-N					Makeup 1 Form X					Makeup 2 Form Y				
	Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall	420.6	43.4	66,651	100.0	0.92	407.2	47.5	4,408	100.0	0.91	419.3	42.4	2,376	100.0	0.91
Gender															
Male	420.5	45.2	33,356	50.0	0.92	407.4	50.5	2,196	49.8	0.92	418.3	44.8	1,225	51.6	0.92
Female	420.8	41.4	33,116	49.7	0.92	407.4	44.4	2,174	49.3	0.91	420.6	39.1	1,141	48.0	0.91
Missing	392.1	48.6	179	0.3	0.90	*	*	38	0.9	*	*	*	10	0.4	*
Special Education															
Yes	385.2	53.3	5,307	8.0	0.89	381.6	49.3	268	6.1	0.85	390.7	49.6	137	5.8	0.90
No	423.9	41.0	58,791	88.2	0.92	409.0	46.9	3,992	90.6	0.91	421.7	41.1	2,141	90.1	0.91
Exited	421.5	38.0	412	0.6	0.91	*	*	29	0.7	*	*	*	21	0.9	*
Exited and placed in 504	417.3	49.8	127	0.2	0.91	*	*	3	0.1	*	*	*	0	0.0	*
504	417.7	41.5	2,014	3.0	0.91	404.5	50.0	116	2.6	0.92	406.1	46.6	77	3.2	0.90
Ethnicity															
American Indian	414.7	41.6	206	0.3	0.90	*	*	22	0.5	*	*	*	5	0.2	*
Asian	445.3	37.7	3,728	5.6	0.91	441.1	48.1	156	3.5	0.93	442.1	34.5	110	4.6	0.92
African American	401.3	43.3	26,157	39.2	0.88	390.4	45.5	2,234	50.7	0.86	402.3	40.2	845	35.6	0.88
Hawaiian/ Pacific Islander	409.8	45.1	103	0.1	0.90	*	*	5	0.1	*	*	*	9	0.4	*
White	438.5	34.6	26,415	39.6	0.90	433.9	38.6	1,343	30.5	0.91	434.4	36.0	1,065	44.8	0.90
Hispanic	411.5	41.1	7,468	11.2	0.89	402.9	39.9	442	10.0	0.87	403.6	43.7	255	10.7	0.89
Missing	424.2	44.9	2,574	3.9	0.92	401.2	46.2	206	4.7	0.90	418.5	54.3	87	3.7	0.92
Limited English Proficient															
Yes	388.6	51.8	2,453	3.7	0.88	381.0	52.7	131	3.0	0.88	387.8	46.9	73	3.1	0.84
No	421.8	42.7	63,375	95.1	0.92	408.0	47.2	4,244	96.3	0.91	420.4	42.0	2,284	96.1	0.92
Exited	418.8	35.6	823	1.2	0.90	*	*	33	0.7	*	*	*	19	0.8	*

* 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 2012 Forms

	Primary 1 Form P					Primary 2 Form Q				
	Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall	387.5	41.2	497	100.0	0.84	392.0	38.6	870	100.0	0.87
Gender										
Male	384.4	45.7	282	56.7	0.85	391.0	39.3	468	53.8	0.88
Female	392.0	33.9	213	42.9	0.82	393.9	37.2	386	44.4	0.86
Missing	*	*	2	0.4	*	*	*	16	1.8	*
Special Education										
Yes	363.0	54.9	94	18.9	0.86	365.7	42.1	65	7.5	0.78
No	393.1	35.4	386	77.7	0.83	394.1	37.6	779	89.5	0.87
Exited	*	*	2	0.4	*	*	*	0	0.0	*
Exited and placed in 504	*	*	0	0.0	*	*	*	0	0.0	*
504	*	*	15	3.0	*	*	*	26	3.0	*
Ethnicity										
American Indian	*	*	1	0.2	*	*	*	5	0.6	*
Asian	*	*	10	2.0	*	*	*	19	2.2	*
African American	382.3	42.6	256	51.5	0.84	388.8	38.3	519	59.7	0.85
Hawaiian/ Pacific Islander	*	*	0	0.0	*	*	*	3	0.3	*
White	393.2	42.6	146	29.4	0.86	395.2	39.4	227	26.1	0.88
Hispanic	391.6	34.4	64	12.9	0.78	395.9	33.6	51	5.9	0.84
Missing	*	*	20	4.0	*	*	*	46	5.3	*
Limited English Proficient										
Yes	*	*	19	3.8	*	*	*	10	1.1	*
No	387.4	41.2	476	95.8	0.84	392.1	38.6	858	98.6	0.87
Exited	*	*	2	0.4	*	*	*	2	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 service

Table 6.11 Summary Statistics for MD HSA Biology: October 2011 Form

		Primary Form R				
		Mean	SD	N	%	Alpha
Overall		375.9	32.4	11,003	100.0	0.75
Gender						
	Male	376.0	34.4	5,337	48.5	0.79
	Female	376.0	30.0	5,617	51.0	0.71
	Missing	*	*	49	0.4	*
Special Education						
	Yes	365.7	37.2	1,457	13.2	0.72
	No	377.5	31.2	9,124	82.9	0.75
	Exited	375.8	22.8	98	0.9	0.43
	Exited and placed in 504	*	*	15	0.1	*
	504	377.4	35.2	309	2.8	0.78
Ethnicity						
	American Indian	*	*	39	0.4	*
	Asian	375.2	35.6	258	2.3	0.80
	African American	372.8	31.9	7,135	64.8	0.68
	Hawaiian/ Pacific Islander	*	*	16	0.1	*
	White	386.0	32.8	2,109	19.2	0.85
	Hispanic	376.2	28.8	1,161	10.6	0.69
	Missing	377.8	34.7	285	2.6	0.78
Limited English Proficient						
	Yes	366.8	33.2	559	5.1	0.60
	No	376.4	32.3	10,324	93.8	0.76
	Exited	377.0	29.2	120	1.1	0.67

* 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 2012 Forms

	Primary Forms A-B					Makeup Form C				
	Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall	394.7	48.4	12,179	100.0	0.94	396.4	45.9	2,799	100.0	0.94
Gender										
Male	393.3	51.9	6,136	50.4	0.94	396.9	48.0	1,330	47.5	0.94
Female	396.4	44.4	6,004	49.3	0.93	395.9	43.7	1,468	52.4	0.93
Missing	*	*	39	0.3	*	*	*	1	0.0	*
Special Education										
Yes	370.9	46.3	1,413	11.6	0.86	378.8	36.7	215	7.7	0.86
No	398.0	48.0	10,302	84.6	0.94	398.0	46.3	2,476	88.5	0.94
Exited	387.6	36.1	71	0.6	0.91	*	*	17	0.6	*
Exited and placed in 504	*	*	21	0.2	*	*	*	4	0.1	*
504	393.8	44.8	372	3.1	0.93	392.3	41.9	87	3.1	0.92
Ethnicity										
American Indian	379.0	58.3	61	0.5	0.93	*	*	14	0.5	*
Asian	408.2	50.9	306	2.5	0.95	407.9	42.2	71	2.5	0.95
African American	372.0	40.0	5,557	45.6	0.81	373.7	39.2	1,232	44.0	0.83
Hawaiian/ Pacific Islander	*	*	14	0.1	*	*	*	2	0.1	*
White	421.1	44.8	4,890	40.2	0.95	420.1	40.6	1,197	42.8	0.94
Hispanic	388.3	41.1	968	7.9	0.90	388.7	42.5	196	7.0	0.91
Missing	395.6	46.6	383	3.1	0.94	398.4	46.7	87	3.1	0.94
Limited English Proficient										
Yes	370.1	41.1	368	3.0	0.77	369.8	33.1	59	2.1	0.67
No	395.5	48.5	11,760	96.6	0.94	397.0	46.0	2,725	97.4	0.94
Exited	394.5	37.7	51	0.4	0.90	*	*	15	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 6.13 Summary Statistics for MD HSA Biology: April 2012 Form

		Primary Form S				
		Mean	SD	N	%	Alpha
Overall		367.9	37.7	1,542	100.0	0.76
Gender						
	Male	366.1	40.6	704	45.7	0.77
	Female	369.7	34.3	823	53.4	0.74
	Missing	*	*	15	1.0	*
Special Education						
	Yes	352.5	43.0	154	10.0	0.71
	No	369.7	36.8	1,357	88.0	0.76
	Exited	*	*	5	0.3	*
	Exited and placed in 504	*	*	1	0.1	*
	504	*	*	25	1.6	*
Ethnicity						
	American Indian	*	*	2	0.1	*
	Asian	*	*	40	2.6	*
	African American	366.2	37.9	1,116	72.4	0.74
	Hawaiian/Pacific Islander	*	*	1	0.1	*
	White	376.5	38.0	129	8.4	0.84
	Hispanic	372.6	34.8	170	11.0	0.74
	Missing	368.4	35.7	84	5.4	0.71
Limited English Proficient						
	Yes	372.1	31.5	96	6.2	0.76
	No	367.5	38.2	1,438	93.3	0.76
	Exited	*	*	8	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 service.

Table 6.14 Summary Statistics for MD HSA Biology: May 2012 Forms

	Primary Forms D-H, J-N					Makeup 1 Form X					Makeup 2 Form Y				
	Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall	422.9	40.5	53,893	100.0	0.94	415.9	43.0	3,126	100.0	0.94	424.3	40.6	2,315	100.0	0.94
Gender															
Male	423.3	43.0	26,497	49.2	0.94	415.7	45.5	1,559	49.9	0.94	425.3	41.3	1,156	49.9	0.94
Female	422.7	37.8	27,254	50.6	0.94	416.5	40.1	1,552	49.6	0.94	423.6	39.9	1,150	49.7	0.94
Missing	400.5	38.7	142	0.3	0.90	*	*	15	0.5	*	*	*	9	0.4	*
Special Education															
Yes	393.8	44.7	3,685	6.8	0.92	395.1	41.1	162	5.2	0.92	400.0	51.1	115	5.0	0.94
No	425.3	39.2	48,262	89.6	0.94	417.0	42.7	2,846	91.0	0.94	425.8	39.7	2,116	91.4	0.94
Exited	416.1	35.8	278	0.5	0.93	*	*	19	0.6	*	*	*	8	0.3	*
Exited and placed in 504	424.6	39.9	68	0.1	0.94	*	*	5	0.2	*	*	*	4	0.2	*
504	418.9	41.1	1,600	3.0	0.94	421.1	45.4	94	3.0	0.94	421.7	37.9	72	3.1	0.94
Ethnicity															
American Indian	411.4	38.3	160	0.3	0.93	*	*	10	0.3	*	*	*	10	0.4	*
Asian	445.7	37.0	3,432	6.4	0.94	446.8	34.8	163	5.2	0.94	448.7	48.1	132	5.7	0.95
African American	404.7	39.0	20,822	38.6	0.92	397.3	40.7	1,338	42.8	0.91	404.0	39.9	849	36.7	0.92
Hawaiian/ Pacific Islander	429.0	38.8	70	0.1	0.93	*	*	6	0.2	*	*	*	4	0.2	*
White	437.7	35.2	21,982	40.8	0.93	433.7	38.2	1,152	36.9	0.94	438.5	34.4	980	42.3	0.93
Hispanic	416.5	36.5	5,626	10.4	0.93	413.0	37.4	341	10.9	0.93	424.8	31.1	246	10.6	0.93
Missing	430.6	40.3	1,801	3.3	0.94	418.1	43.4	116	3.7	0.95	424.7	36.7	94	4.1	0.95
Limited English Proficient															
Yes	399.1	39.1	1,576	2.9	0.92	400.9	31.5	87	2.8	0.88	*	*	40	1.7	*
No	423.7	40.3	51,871	96.2	0.94	416.4	43.2	3,008	96.2	0.94	425.2	40.0	2,262	97.7	0.94
Exited	420.3	34.5	446	0.8	0.93	*	*	31	1.0	*	*	*	13	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 2012 Forms

		Primary 1 Form P					Primary 2 Form Q				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		373.7	43.1	229	100.0	0.83	381.4	35.5	504	100.0	0.84
Gender											
	Male	370.3	48.2	123	53.7	0.88	381.3	38.9	262	52.0	0.86
	Female	377.6	36.0	106	46.3	0.74	381.7	31.6	240	47.6	0.81
	Missing	*	*	0	0.0	*	*	*	12	0.4	*
Special Education											
	Yes	359.2	44.9	52	22.7	0.72	*	*	34	6.7	*
	No	378.6	42.3	170	74.2	0.85	382.1	34.9	459	91.1	0.84
	Exited	*	*	3	1.3	*	*	*	0	0.0	*
	Exited and placed in 504	*	*	0	0.0	*	*	*	0	0.0	*
	504	*	*	4	1.7	*	*	*	11	2.2	*
Ethnicity											
	American Indian	*	*	4	1.7	*	*	*	1	0.2	*
	Asian	*	*	2	0.9	*	*	*	15	3.0	*
	African American	369.5	47.6	119	52.0	0.83	379.1	33.9	310	61.5	0.80
	Hawaiian/ Pacific Islander	*	*	0	0.0	*	*	*	0	0.0	*
	White	379.5	40.4	67	29.3	0.86	382.4	38.1	129	25.6	0.87
	Hispanic	*	*	32	14.0	*	*	*	27	5.4	*
	Missing	*	*	5	2.2	*	*	*	22	4.4	*
Limited English Proficient											
	Yes	*	*	3	1.3	*	*	*	5	1.0	*
	No	373.9	43.1	226	98.7	0.84	381.3	35.7	499	99.0	0.84
	Exited	*	*	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 6.16 Summary Statistics for MD HSA English: October 2011 Form

		Primary Form R				
		Mean	SD	N	%	Alpha
Overall		373.4	30.6	13,200	100.0	0.79
Gender						
	Male	371.8	32.5	7,495	56.8	0.80
	Female	375.6	27.8	5,642	42.7	0.78
	Missing	371.9	23.1	63	0.5	0.72
Special Education						
	Yes	363.2	34.4	1,876	14.2	0.77
	No	375.3	29.5	10,816	81.9	0.79
	Exited	370.2	30.6	126	1.0	0.78
	Exited and placed in 504	*	*	17	0.1	*
	504	371.5	32.0	365	2.8	0.80
Ethnicity						
	American Indian	*	*	46	0.3	*
	Asian	374.7	34.1	442	3.3	0.83
	African American	371.4	30.0	7,602	57.6	0.77
	Hawaiian/ Pacific Islander	*	*	18	0.1	*
	White	377.6	30.9	3,120	23.6	0.81
	Hispanic	374.0	31.2	1,613	12.2	0.80
	Missing	376.1	27.4	359	2.7	0.79
Limited English Proficient						
	Yes	362.7	34.3	833	6.3	0.77
	No	374.1	30.2	12,198	92.4	0.79
	Exited	379.1	25.7	169	1.3	0.77

* 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 2012 Forms

		Primary Forms A-B					Makeup Form C				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		388.1	34.9	14,219	100.0	0.90	386.9	33.6	2,889	100.0	0.88
Gender											
	Male	384.0	35.6	7,802	54.9	0.89	383.8	34.4	1,588	55.0	0.88
	Female	393.5	33.0	6,356	44.7	0.90	390.8	32.1	1,298	44.9	0.88
	Missing	365.8	47.2	61	0.4	0.88	*	*	3	0.1	*
Special Education											
	Yes	371.1	34.2	1,754	12.3	0.83	373.2	32.1	251	8.7	0.83
	No	390.7	34.3	11,917	83.8	0.90	388.5	33.2	2,516	87.1	0.88
	Exited	383.2	32.5	74	0.5	0.86	*	*	20	0.7	*
	Exited and placed in 504	*	*	30	0.2	*	*	*	9	0.3	*
	504	387.3	34.4	444	3.1	0.90	384.9	36.7	93	3.2	0.89
Ethnicity											
	American Indian	382.3	38.0	59	0.4	0.92	*	*	13	0.4	*
	Asian	389.9	37.5	436	3.1	0.91	383.9	36.8	89	3.1	0.89
	African American	375.7	30.2	6,176	43.4	0.82	377.0	29.2	1,263	43.7	0.81
	Hawaiian/Pacific Islander	*	*	30	0.2	*	*	*	1	0.0	*
	White	402.1	34.9	5,794	40.7	0.92	398.9	34.5	1,150	39.8	0.90
	Hispanic	384.8	30.1	1,317	9.3	0.86	383.6	31.2	274	9.5	0.84
	Missing	388.0	36.8	407	2.9	0.91	386.0	33.1	99	3.4	0.90
Limited English Proficient											
	Yes	372.0	26.3	648	4.6	0.77	366.4	27.5	84	2.9	0.77
	No	389.0	35.1	13,476	94.8	0.90	387.6	33.6	2,783	96.3	0.88
	Exited	383.3	26.0	95	0.7	0.77	*	*	22	0.8	*

* 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 2012 Form

		Primary Form S				
		Mean	SD	N	%	Alpha
Overall		360.1	40.3	2,424	100.0	0.76
Gender						
	Male	357.2	42.4	1,344	55.4	0.77
	Female	364.1	36.8	1,065	43.9	0.75
	Missing	*	*	15	0.6	*
Special Education						
	Yes	352.5	44.3	270	11.1	0.79
	No	361.4	39.4	2,085	86.0	0.76
	Exited	*	*	8	0.3	*
	Exited and placed in 504	*	*	3	0.1	*
	504	352.0	45.9	58	2.4	0.75
Ethnicity						
	American Indian	*	*	6	0.2	*
	Asian	360.0	41.0	82	3.4	0.75
	African American	359.6	41.1	1,631	67.3	0.77
	Hawaiian/Pacific Islander	*	*	0	0.0	*
	White	362.4	40.2	229	9.4	0.78
	Hispanic	360.6	37.7	382	15.8	0.73
	Missing	362.4	37.3	94	3.9	0.73
Limited English Proficient						
	Yes	359.1	32.1	249	10.3	0.65
	No	360.2	41.2	2,162	89.2	0.77
	Exited	*	*	13	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 6.19 Summary Statistics for MD HSA English: May 2012 Forms

	Primary Forms D-H, J-N					Makeup 1 Form X					Makeup 2 Form Y				
	Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall	409.1	31.9	55,124	100.0	0.91	401.9	37.7	3,295	100.0	0.92	408.3	33.4	2,209	100.0	0.90
Gender															
Male	404.1	32.8	27,830	50.5	0.91	396.3	39.1	1,681	51.0	0.92	402.4	35.5	1,160	52.5	0.90
Female	414.3	30.0	27,154	49.3	0.91	407.9	34.9	1,602	48.6	0.92	414.7	29.7	1,044	47.3	0.90
Missing	383.0	37.8	140	0.3	0.89	*	*	12	0.4	*	*	*	5	0.2	*
Special Education															
Yes	380.4	35.4	4,038	7.3	0.87	373.8	40.2	214	6.5	0.89	378.8	39.8	113	5.1	0.88
No	411.6	30.4	49,033	89.0	0.90	404.1	36.8	2,961	89.9	0.92	410.3	32.0	2,020	91.4	0.90
Exited	397.6	27.7	269	0.5	0.87	*	*	15	0.5	*	*	*	13	0.6	*
Exited and placed in 504	401.1	30.1	80	0.1	0.91	*	*	3	0.1	*	*	*	2	0.1	*
504	405.2	31.1	1,704	3.1	0.90	400.7	32.3	102	3.1	0.89	396.9	41.3	61	2.8	0.92
Ethnicity															
American Indian	406.2	29.8	202	0.4	0.90	*	*	12	0.4	*	*	*	8	0.4	*
Asian	422.6	31.3	3,472	6.3	0.91	424.0	36.7	151	4.6	0.93	424.0	36.0	132	6.0	0.91
African American	397.0	30.4	20,799	37.7	0.89	387.2	37.2	1,349	40.9	0.90	392.5	31.6	771	34.9	0.87
Hawaiian/ Pacific Islander	404.6	37.4	82	0.1	0.92	*	*	3	0.1	*	*	*	1	0.0	*
White	419.4	29.3	22,887	41.5	0.90	415.5	33.2	1,334	40.5	0.91	418.0	30.0	984	44.5	0.90
Hispanic	402.4	29.8	5,873	10.7	0.89	396.5	31.0	320	9.7	0.89	405.0	32.6	211	9.6	0.89
Missing	412.8	32.6	1,809	3.3	0.91	404.8	37.7	126	3.8	0.92	420.0	28.4	102	4.6	0.89
Limited English Proficient															
Yes	375.8	34.7	1,538	2.8	0.86	376.8	30.3	88	2.7	0.87	368.1	46.6	53	2.4	0.89
No	410.1	31.3	53,156	96.4	0.91	402.6	37.7	3,179	96.5	0.92	409.3	32.4	2,142	97.0	0.90
Exited	400.4	24.5	430	0.8	0.86	*	*	28	0.8	*	*	*	14	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 6.20 Summary Statistics for MD HSA English: Summer 2012 Forms

		Primary 1 Form P					Primary 2 Form Q				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		376.2	33.5	593	100.0	0.82	376.9	31.9	791	100.0	0.83
Gender											
	Male	373.3	37.2	360	60.7	0.83	374.7	32.5	512	64.7	0.83
	Female	380.7	26.3	232	39.1	0.79	381.0	30.4	277	35.0	0.84
	Missing	*	*	1	0.2	*	*	*	2	0.3	*
Special Education											
	Yes	357.0	41.1	83	14.0	0.83	357.8	32.0	54	6.8	0.74
	No	379.3	31.5	486	82.0	0.81	378.2	31.1	718	90.8	0.83
	Exited	*	*	10	1.7	*	*	*	1	0.1	*
	Exited and placed in 504	*	*	0	0.0	*	*	*	0	0.0	*
	504	*	*	14	2.4	*	*	*	18	2.3	*
Ethnicity											
	American Indian	*	*	2	0.3	*	*	*	0	0.0	*
	Asian	*	*	9	1.5	*	*	*	19	2.4	*
	African American	374.8	35.3	326	55.0	0.83	375.2	32.4	445	56.3	0.82
	Hawaiian/ Pacific Islander	*	*	0		*	*	*	0	0.0	*
	White	381.2	26.0	153	25.8	0.78	379.6	30.6	247	31.2	0.85
	Hispanic	371.3	38.4	83	14.0	0.84	377.1	37.0	52	6.6	0.87
	Missing	*	*	20	3.4	*	*	*	28	3.5	*
Limited English Proficient											
	Yes	*	*	13	2.2	*	*	*	14	1.8	*
	No	376.3	33.8	575	97.0	0.82	377.2	31.7	777	98.2	0.83
	Exited	*	*	5	0.8	*	*	*	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.

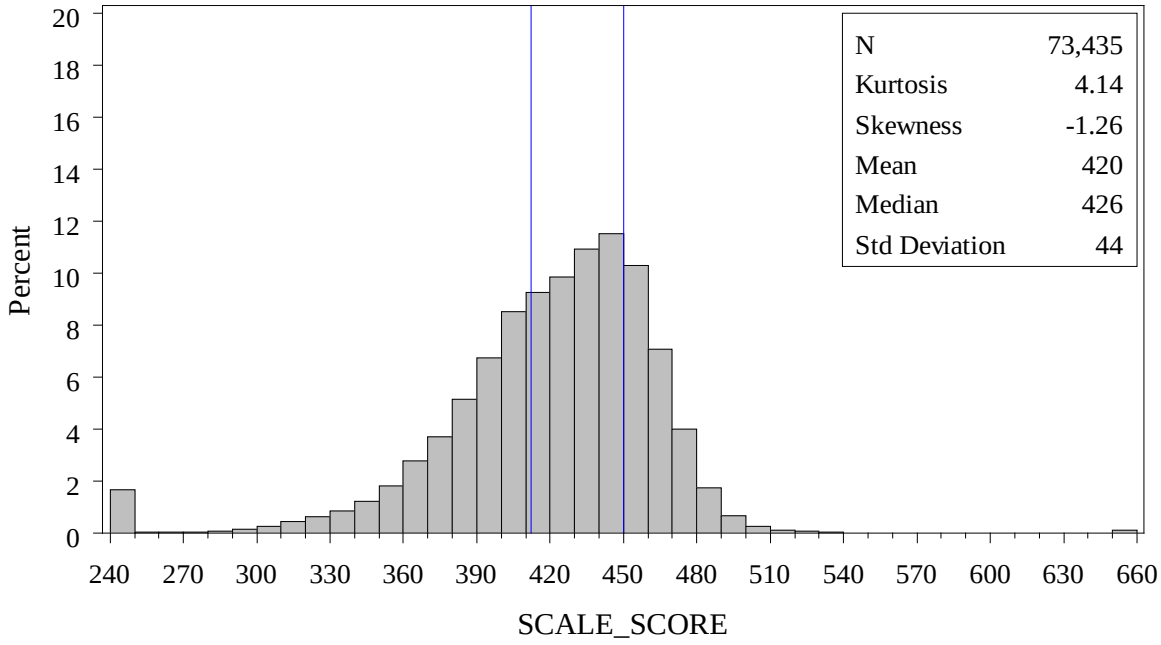


Figure 6.1 Histogram of Total Scale Scores for MD HSA May 2012 Algebra

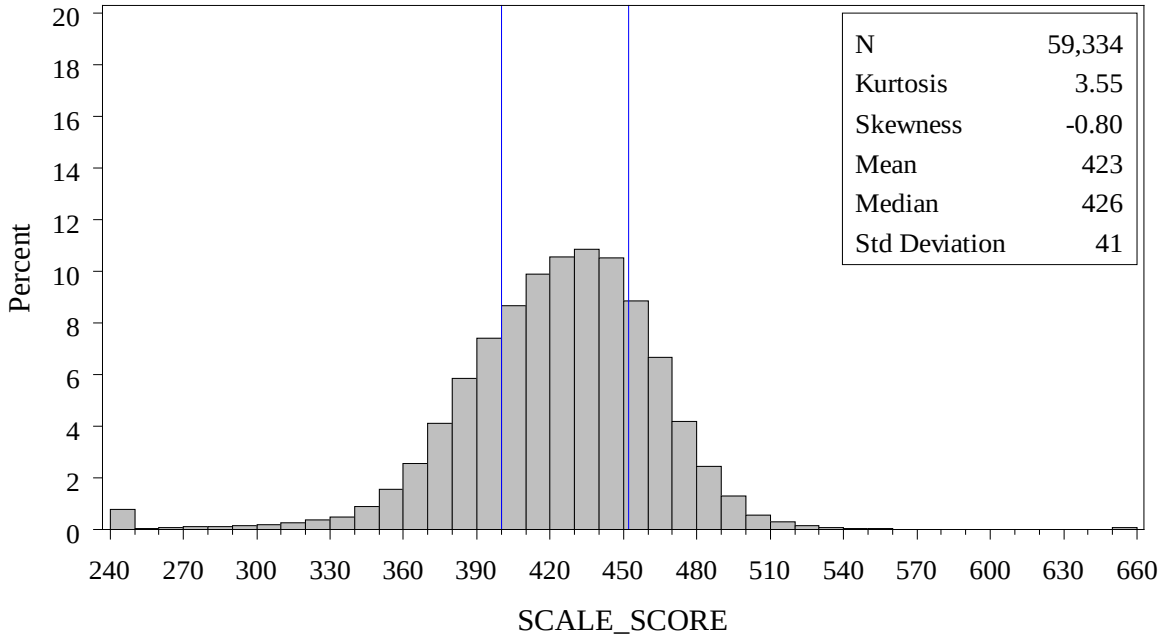


Figure 6.2 Histogram of Total Scale Scores for MD HSA May 2012 Biology

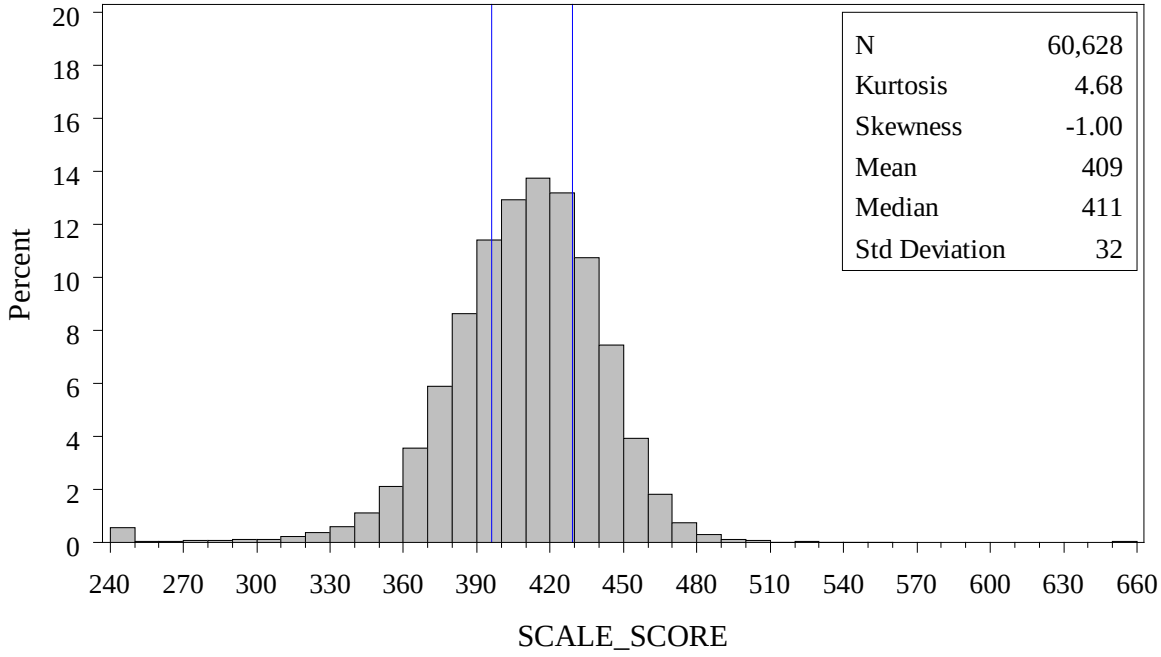


Figure 6.3 Histogram of Total Scale Scores for MD HSA May 2012 English

Demographic Characteristics

Demographic characteristics of the students that took the October, January, April, May, and Summer MD HSAs are described in Tables 6.21 to 6.23. 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 one field test version was 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 6.21 Demographic Information for 2012 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		14,680	100.0	13,936	100.0	2,980	100.0	1,973	100.0	66,651	100.0	6,784	100.0	1,367	100.0
Gender															
	Male	7,250	49.4	7,164	51.4	1,542	51.7	960	48.7	33,356	50.0	3,421	50.4	750	54.9
	Female	7,343	50.0	6,670	47.9	1,436	48.2	997	50.5	33,116	49.7	3,315	48.9	599	43.8
	Missing	87	0.6	102	0.7	2	0.1	16	0.8	179	0.3	48	0.7	18	1.3
Special Education															
	Yes	2,057	14.0	2,014	14.5	292	9.8	219	11.1	5,307	8.0	405	6.0	159	11.6
	No	12,094	82.4	11,354	81.5	2,558	85.8	1,696	86.0	58,791	88.2	6,133	90.4	1,165	85.2
	Exited	116	0.8	89	0.6	20	0.7	6	0.3	412	0.6	50	0.7	2	0.1
	Exited and placed in 504[a]	21	0.1	21	0.2	10	0.3	3	0.2	127	0.2	3	0.0	0	0.0
	504	392	2.7	458	3.3	100	3.4	49	2.5	2,014	3.0	193	2.8	41	3.0
Ethnicity															
	American Indian	58	0.4	58	0.4	10	0.3	7	0.4	206	0.3	27	0.4	6	0.4
	Asian	348	2.4	273	2.0	73	2.4	29	1.5	3,728	5.6	266	3.9	29	2.1
	African American	9,382	63.9	8,103	58.1	1,632	54.8	1,432	72.6	26,157	39.2	3,079	45.4	775	56.7
	Hawaiian/ Pacific Islander	14	0.1	17	0.1	5	0.2	0	0.0	103	0.2	14	0.2	3	0.2
	White	2,759	18.8	3,589	25.8	932	31.3	151	7.7	26,415	39.6	2,408	35.5	373	27.3
	Hispanic	1,762	12.0	1,430	10.3	257	8.6	265	13.4	7,468	11.2	697	10.3	115	8.4
	Missing	357	2.4	466	3.3	71	2.4	89	4.5	2,574	3.9	293	4.3	66	4.8
Limited English Proficient															
	Yes	899	6.1	649	4.7	88	3.0	139	7.0	2,453	3.7	204	3.0	29	2.1
	No	13,640	92.9	13,214	94.8	2,863	96.1	1,830	92.8	63,375	95.1	6,528	96.2	1,334	97.6
	Exited[b]	141	1.0	73	0.5	29	1.0	4	0.2	823	1.2	52	0.8	4	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 6.22 Demographic Information for 2012 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		11,003	100.0	12,179	100.0	2,799	100.0	1,542	100.0	53,893	100.0	5,441	100.0	733	100.0
Gender															
	Male	5,337	48.5	6,136	50.4	1,330	47.5	704	45.7	26,497	49.2	2,715	49.9	385	52.5
	Female	5,617	51.0	6,004	49.3	1,468	52.4	823	53.4	27,254	50.6	2,702	49.7	346	47.2
	Missing	49	0.4	39	0.3	1	0.0	15	1.0	142	0.3	24	0.4	2	0.3
Special Education															
	Yes	1,457	13.2	1,413	11.6	215	7.7	154	10.0	3,685	6.8	277	5.1	86	11.7
	No	9,124	82.9	10,302	84.6	2,476	88.5	1,357	88.0	48,262	89.6	4,962	91.2	629	85.8
	Exited	98	0.9	71	0.6	17	0.6	5	0.3	278	0.5	27	0.5	3	0.4
	Exited and placed in 504[a]	15	0.1	21	0.2	4	0.1	1	0.1	68	0.1	9	0.2	0	0.0
	504	309	2.8	372	3.1	87	3.1	25	1.6	1,600	3.0	166	3.1	15	2.0
Ethnicity															
	American Indian	39	0.4	61	0.5	14	0.5	2	0.1	160	0.3	20	0.4	5	0.7
	Asian	258	2.3	306	2.5	71	2.5	40	2.6	3,432	6.4	295	5.4	17	2.3
	African American	7,135	64.8	5,557	45.6	1,232	44.0	1,116	72.4	20,822	38.6	2,187	40.2	429	58.5
	Hawaiian/ Pacific Islander	16	0.1	14	0.1	2	0.1	1	0.1	70	0.1	10	0.2	0	0.0
	White	2,109	19.2	4,890	40.2	1,197	42.8	129	8.4	21,982	40.8	2,132	39.2	196	26.7
	Hispanic	1,161	10.6	968	7.9	196	7.0	170	11.0	5,626	10.4	587	10.8	59	8.0
	Missing	285	2.6	383	3.1	87	3.1	84	5.4	1,801	3.3	210	3.9	27	3.7
Limited English Proficient															
	Yes	559	5.1	368	3.0	59	2.1	96	6.2	1,576	2.9	127	2.3	8	1.1
	No	10,324	93.8	11,760	96.6	2,725	97.4	1,438	93.3	51,871	96.2	5,270	96.9	725	98.9
	Exited[b]	120	1.1	51	0.4	15	0.5	8	0.5	446	0.8	44	0.8	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 6.23 Demographic Information for 2012 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		13,200	100.0	14,219	100.0	2,889	100.0	2,424	100.0	55,124	100.0	5,504	100.0	1,384	100.0
Gender															
	Male	7,495	56.8	7,802	54.9	1,588	55.0	1,344	55.4	27,830	50.5	2,841	51.6	872	63.0
	Female	5,642	42.7	6,356	44.7	1,298	44.9	1,065	43.9	27,154	49.3	2,646	48.1	509	36.8
	Missing	63	0.5	61	0.4	3	0.1	15	0.6	140	0.3	17	0.3	3	0.2
Special Education															
	Yes	1,876	14.2	1,754	12.3	251	8.7	270	11.1	4,038	7.3	327	5.9	137	9.9
	No	10,816	81.9	11,917	83.8	2,516	87.1	2,085	86.0	49,033	89.0	4,981	90.5	1204	87.0
	Exited	126	1.0	74	0.5	20	0.7	8	0.3	269	0.5	28	0.5	11	0.8
	Exited and placed in 504[a]	17	0.1	30	0.2	9	0.3	3	0.1	80	0.1	5	0.1	0	0.0
	504	365	2.8	444	3.1	93	3.2	58	2.4	1,704	3.1	163	3.0	32	2.3
Ethnicity															
	American Indian	46	0.3	59	0.4	13	0.4	6	0.2	202	0.4	20	0.4	2	0.1
	Asian	442	3.3	436	3.1	89	3.1	82	3.4	3,472	6.3	283	5.1	28	2.0
	African American	7,602	57.6	6,176	43.4	1,263	43.7	1,631	67.3	20,799	37.7	2,120	38.5	771	55.7
	Hawaiian/ Pacific Islander	18	0.1	30	0.2	1	0.0	0	0.0	82	0.1	4	0.1	0	0.0
	White	3,120	23.6	5,794	40.7	1,150	39.8	229	9.4	22,887	41.5	2,318	42.1	400	28.9
	Hispanic	1,613	12.2	1,317	9.3	274	9.5	382	15.8	5,873	10.7	531	9.6	135	9.8
	Missing	359	2.7	407	2.9	99	3.4	94	3.9	1,809	3.3	228	4.1	48	3.5
Limited English Proficient															
	Yes	833	6.3	648	4.6	84	2.9	249	10.3	1,538	2.8	141	2.6	27	2.0
	No	12,198	92.4	13,476	94.8	2,783	96.3	2,162	89.2	53,156	96.4	5,321	96.7	1352	97.7
	Exited[b]	169	1.3	95	0.7	22	0.8	13	0.5	430	0.8	42	0.8	5	0.4

[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 those for students learning English as a second language, 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 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 review 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 percent 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 these point-biserial correlations for the incorrect answer is stronger relative to the correct answer, the item will be carefully reviewed for content-related problems. Alternatively, positive point-biserial correlations on incorrect options may indicate that students have not had sufficient opportunity to learn the material.

Percent of students omitting an item: This statistic is useful for identifying problems with test features, such as testing time and item/test layout. Typically, it is assumed that if students have an adequate amount of testing time, 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*: Percent 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 2012 are shown in Tables 7.1 and 7.2, respectively. Corresponding results for the field test items administered in May 2012 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; therefore they were not removed from scaling.

Table 7.1 Distribution of *p* -Values for the MD HSA January 2012 Field Test Items

	Percentage and Number of Items					
	Algebra[a]		Biology		English	
p-Value	%	N	%	N	%	N
$p < 0.25$	38	12	2	1	9	7
$0.25 \leq p < 0.35$	19	6	7	3	16	12
$0.35 \leq p < 0.45$	16	5	24	11	22	17
$0.45 \leq p < 0.55$	16	5	26	12	21	16
$0.55 \leq p < 0.65$	3	1	28	13	20	15
$0.65 \leq p < 0.75$	6	2	11	5	8	6
$0.75 \leq p < 0.85$	3	1	2	1	3	2
$p \geq 0.85$	0	0	0	0	1	1
Descriptive Statistics						
N Items	32		46		76	
Mean	0.32		0.50		0.46	
SD	0.20		0.13		0.16	
Min	0.04		0.23		0.11	
Max	0.77		0.78		0.86	

[a] SPR items included

Table 7.2 Distribution of Item-Total Correlations for the MD HSA January 2012 Field Test Items

	Percentage and Number of Items					
	Algebra[a]		Biology		English	
Correlation	%	N	%	N	%	N
$r < 0.15$ [c]	22	7	4	2	18	14
$0.15 \leq r < 0.25$	16	5	2	1	32	24
$0.25 \leq r < 0.35$	47	15	20	9	21	16
$0.35 \leq r < 0.45$	16	5	41	19	28	21
$0.45 \leq r < 0.55$	0	0	33	15	1	1
$0.55 \leq r < 0.65$	0	0	0	0	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	32		46		76	
Mean	0.25		0.40		0.26	
SD	0.11		0.10		0.13	
Min	-0.04		0.13		-0.09	
Max	0.44		0.54		0.47	

[a] SPR items included; [c] $r < 0.10$: 4 Algebra, and 7 English items

Table 7.3 Distribution of *p* -Values for the MD HSA May 2012 Field Test Items

	Percentage and Number of Items					
	Algebra[a]		Biology		English	
p -Value	%	N	%	N	%	N
$p < 0.25$	11	18	0	1	6	21
$0.25 \leq p < 0.35$	9	15	1	3	7	28
$0.35 \leq p < 0.45$	17	27	11	25	16	61
$0.45 \leq p < 0.55$	20	32	25	57	18	70
$0.55 \leq p < 0.65$	15	24	26	60	19	74
$0.65 \leq p < 0.75$	16	26	19	44	16	59
$0.75 \leq p < 0.85$	8	12	12	28	15	56
$p \geq 0.85$[b]	4	6	5	12	3	11
Descriptive Statistics						
N Items	160		230		380	
Mean	0.51		0.60		0.55	
SD	0.19		0.14		0.18	
Min	0.09		0.23		0.12	
Max	0.92		0.97		0.89	

[a] SPR items included; [b] *p* -value > 0.90: 1 Algebra, and 3 Biology

Table 7.4 Distribution of Item-Total Correlations for the MD HSA May 2012 Field Test Items

	Percentage and Number of Items					
	Algebra[a]		Biology		English	
Correlation	%	N	%	N	%	N
$r < 0.15$[c]	3	4	1	3	13	51
$0.15 \leq r < 0.25$	7	11	5	12	19	72
$0.25 \leq r < 0.35$	20	32	19	43	26	97
$0.35 \leq r < 0.45$	41	66	44	101	28	107
$0.45 \leq r < 0.55$	22	35	28	65	14	52
$0.55 \leq r < 0.65$	8	12	3	6	0	1
$0.65 \leq r < 0.75$	0	0	0	0	0	0
$r \geq 0.75$	0	0	0	0	0	0
Descriptive Statistics						
N Items	160		230		380	
Mean	0.39		0.40		0.30	
SD	0.11		0.10		0.14	
Min	0.03		0.02		-0.15	
Max	0.62		0.59		0.55	

[a] SPR items included; [c] $r < 0.10$: 4 Algebra, 1 Biology, and 34 English items

Table 7.5 MD HSA Field Test Items Excluded from Calibration

Administration	Content	ItemID	Form	Sequence	Response Type[a]	Reason[b]
January	Algebra	369144	A	48	SR	Rbis = 0.09
	Algebra	408223	A	51	SR	Rbis = -0.05
	Algebra	257134	B	63	SR	Rbis = 0.05
	English	364048	A	96	SR	Rbis = 0.07
	English	369280	B	7	SR	Rbis = -0.15
	English	369279	B	8	SR	Rbis = -0.07
	English	369278	B	9	SR	Rbis = 0.00
	English	369282	B	10	SR	Rbis = -0.03
May	Algebra	393647	E	3	SR	Rbis= 0.04
	Algebra	393644	G	18	SPR	Do Not Score : invalid content
	Algebra	393688	G	44	SR	Rbis= 0.08
	Biology	394746	J	78	SR	Rbis= 0.02
	English	397713	D	11	SR	Rbis= -0.02
	English	392559	D	26	SR	Rbis= -0.04
	English	364053	D	49	SR	Rbis= 0.04
	English	369019	D	73	SR	Rbis= -0.04
	English	363069	D	80	SR	Rbis= -0.10
	English	373705	E	21	SR	Rbis= 0.09
	English	373708	E	24	SR	Rbis= -0.10
	English	366280	E	79	SR	Rbis= -0.18
	English	363111	E	80	SR	Rbis= 0.04
	English	397731	F	9	SR	Rbis= 0.09
	English	363082	F	83	SR	Rbis= 0.00
	English	369294	G	71	SR	Rbis= 0.04
	English	369299	G	75	SR	Rbis= -0.22
	English	359859	G	81	SR	Rbis= -0.09
	English	364110	K	77	SR	Rbis= 0.08
	English	366311	L	71	SR	Rbis= 0.04
	English	366321	L	79	SR	Rbis= 0.05
	English	393698	M	21	SR	Rbis= 0.07
	English	364009	M	75	SR	Rbis= -0.03
	English	364035	M	83	SR	Rbis= 0.01
	English	364065	N	73	SR	Rbis= -0.16
	English	364059	N	77	SR	Rbis= 0.09

[a]SR = Selected-response item; SPR = Student-produced response item; [b] Rbis = Biserial correlation

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

January	*p*-Value < 0.10	*p*-Value > 0.90	Point Biserial < 0.10	Distractor Pt-Bis > 0	Omit Rate > 5%	C-Level DIF	Missing Response[a]	Total Flags	N Items[b]
Algebra	6	0	1	5	5	3	0	20	14
Biology	0	0	0	2	0	0	0	2	2
English	0	0	2	20	0	4	0	26	24

May	*p*-Value < 0.10	*p*-Value > 0.90	Point Biserial < 0.10	Distractor Pt-Bis > 0	Omit Rate > 5%	C-Level DIF	Missing Response[a]	Total Flags	N Items[b]
Algebra	0	1	2	9	9	2	0	23	20
Biology	0	3	0	6	0	5	0	14	14
English	0	0	12	76	0	15	0	103	91

[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 whereby identifiable (focal) groups of students with the same underlying level of ability (e.g., Females, African Americans, Asians, and Hispanics) have different probabilities of answering correctly than reference groups (Males, White students). If the item is more difficult for an identifiable 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[6]. This statistic is expressed as the difference between the focal and reference group

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

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

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 items for Algebra, none in Biology, and four English items were flagged for C-level DIF. Among the items field tested in May, two items for Algebra, five Biology items, and fifteen English 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 suitability 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. Therefore, the scale is usually transformed to a reporting scale (also

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where

RB_{rmB} = number in reference group at ability level *m* answering the item right,
WB_{fmB} = number in focal group at ability level *m* answering the item wrong,
RB_{fmB} = number in focal group at ability level *m* answering the item right,
WB_{rmB} = number in reference group at ability level *m* answering the item wrong,
NB_{mB} = total group at ability level *m*.

This can then be used in the following formula (Holland & Thayer, 1988):

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

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 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 administered" .

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 have been calibrated, results were reviewed to determine if any items failed to correctly calibrate.

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, and English, and assess the same skills as the MD HSAs. (In May 2011, the MD Mod-HSA Government test was administered for the last time.) The MD Mod-HSAs may be taken in place of one or more of the MD HSAs.

Students who entered ninth grade in the 2005–2006 school year or subsequent school years were required to earn satisfactory scores on all four content areas measured by the MD Mod-HSAs or HSAs (or earn a combined score of 1602) or complete a Bridge program in order to earn a Maryland High School Diploma.[7] Currently, students only must pass the Algebra, Biology, and English, or earn a combined score of 1208, or complete the Bridge program to graduate.

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).[8]

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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[7] More information on state graduation requirements is available on the Maryland State Department of Education website at http://www.marylandpublicschools.org/MSDE/testing/hsa/

[8] 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.[9]

This chapter of the 2012 technical report provides information about the October 2011 administration and the January, April, May, and Summer (July/August) 2012 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.

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

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 three content areas—Algebra, Biology, and English—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%) were accepted with edits. In total, the two committees accepted a total of 532 (76.1%) of the 699 MD Mod-HSA test items.

Upon completion of this final round of reviews, MSDE and ETS content specialists conducted another side-by-side 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 9.3 identify each reporting category and the number of items in each category for the three 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

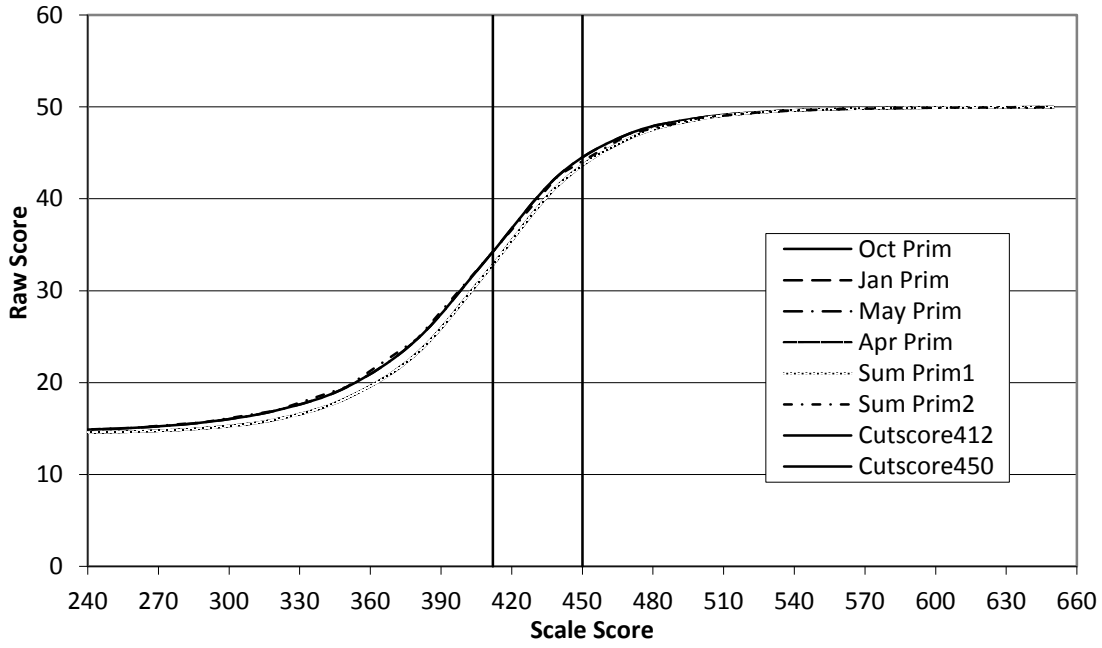
Note. Information about the referenced goal and expectations can be found in the Maryland Core Learning Goals for Biology on the Maryland School Improvement website at http://www.mdk12.org/assessments/standards/9-12.html

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

Figures 9.1 through 9.6 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 and 340 to 450 for English). The majority of students score in the range where the CSEMs are smallest. (Refer to Section 13, figures 13.1 to 13.3 for histograms of student performance.)



Note: Maximum possible raw score is 50.

Figure 9.1 Test Characteristic Curves for the MD Mod-HSA 2012 Algebra Forms

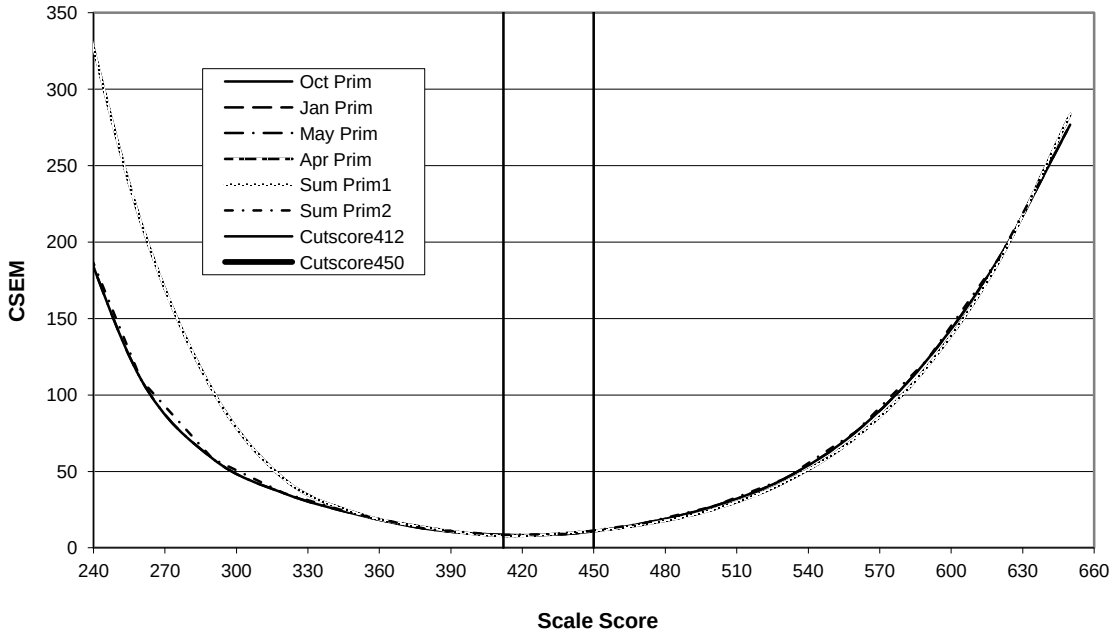
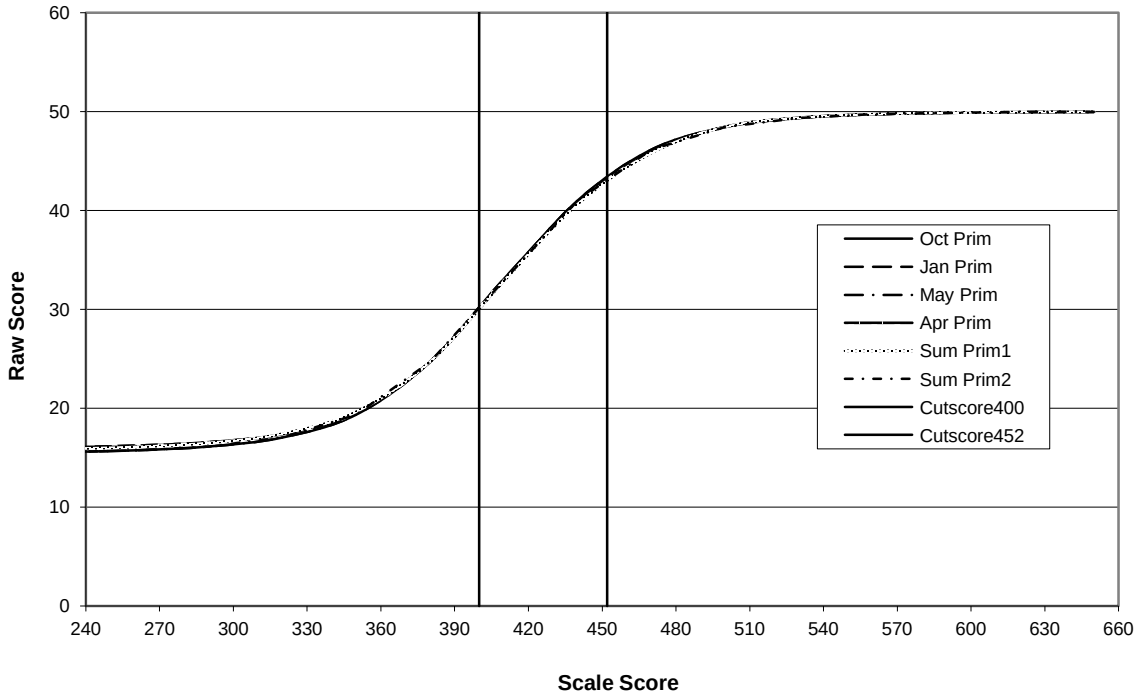


Figure 9.2 Conditional Standard Errors of Measurement for the MD Mod-HSA 2012 Algebra Forms



Note: Maximum possible raw score is 50.

Figure 9.3 Test Characteristic Curves for the MD Mod-HSA 2012 Biology Forms

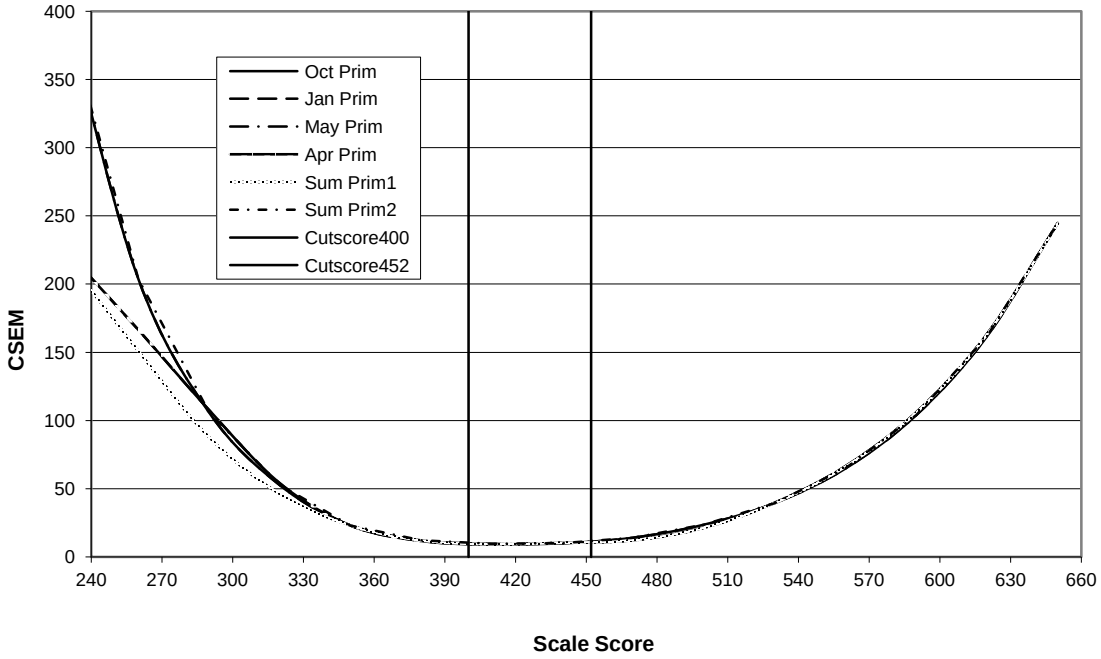
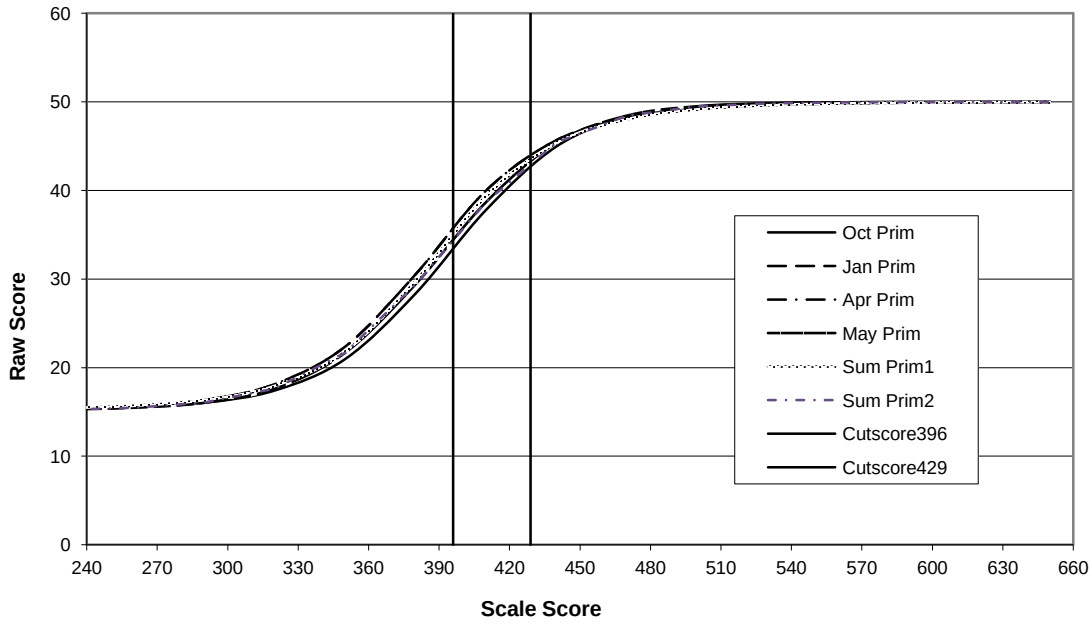


Figure 9.4 Conditional Standard Errors of Measurement for the MD Mod-HSA 2012 Biology Forms



Note: Maximum possible raw score is 50.

Figure 9.5 Test Characteristic Curves for the MD Mod-HSA 2012 English Forms

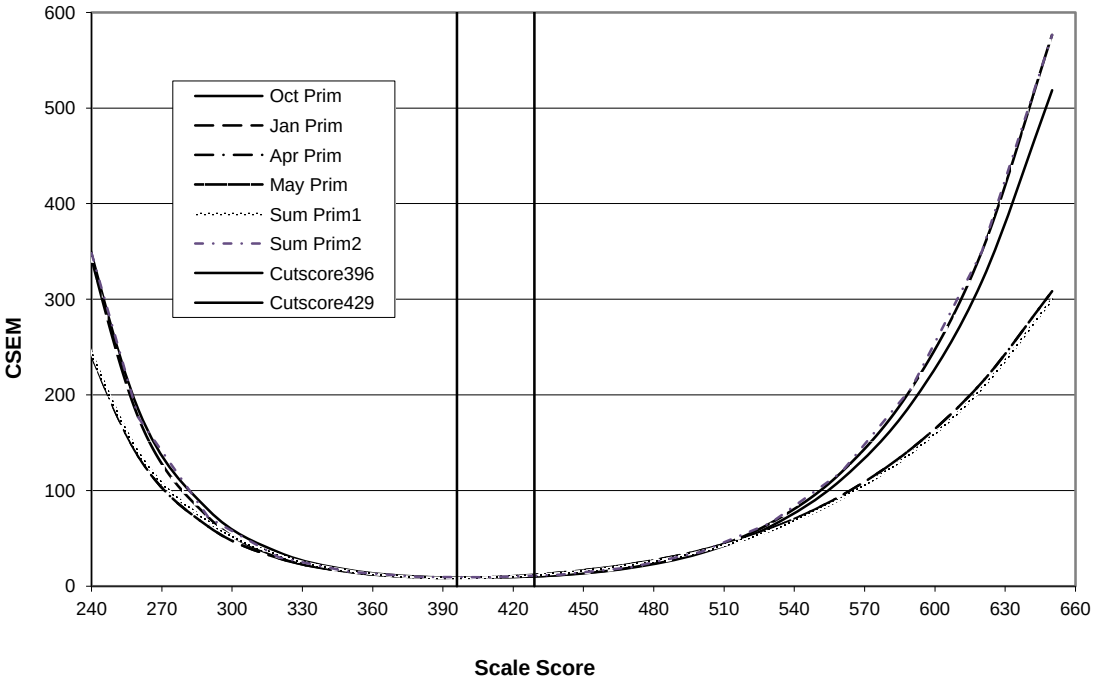


Figure 9.6 Conditional Standard Errors of Measurement for the MD Mod-HSA 2012 English Forms

Test Administration

The MD Mod-HSA tests were administered both online and on paper in October 2011 and January, April, May, and Summer 2012. One paper and one online MD Mod-HSA form per content area were administered during each administration, with the exception of Summer 2012, where two paper and two online forms were administered.

The forms for Algebra, Biology, and English, were administered in two sessions 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. The percent of students taking Mod-HSAs online by content area and administration is reported in Table 9.5.

Table 9.4 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

Table 9.5 Percent of Online MD Mod-HSAs by Content Area and Administration

Content Area	October	January	April	May	Summer
Algebra	50%	55%	48%	49%	52%
Biology	49%	56%	52%	53%	48%
English	52%	55%	49%	53%	58%

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, including design, content specifications, item development, psychometric quality, and inferences made 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 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 have 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.[10] 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.

[10]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 9.3); 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 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 correlation matrices 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	.63	1				.65	1					
Subscore 2	.58	.35	1			.39	.23	1				
Subscore 3	.76	.34	.32	1		.56	.27	.20	1			
Subscore 4	.39	.25	.27	.26	1	.50	.27	.22	.26	1		
Subscore 5	-	-	-	-	-	.45	.24	.18	.23	.21	1	
Subscore 6	-	-	-	-	-	.49	.24	.21	.27	.25	.22	1

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

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

	English				
	SS	1	2	3	4
Overall SS	1				
Subscore 1	.63	1			
Subscore 2	.64	.42	1		
Subscore 3	.69	.37	.39	1	
Subscore 4	.58	.29	.27	.33	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[11]. 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 2012 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 2012 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, and English.

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-square 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).

[11] When the Mod-HSA was created in 2008, exploratory factor analysis (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	412	1	50	3,491	827	2,673	0.87	**0.84**	**0.025**
Biology	412	1	50	2,369	754	1,172	**0.93**	**0.92**	**0.015**
English	412	1	50	2,526	768	1,303	**0.95**	**0.94**	**0.017**

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 percentage 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. One Summer administrations of Algebra (Form 512) had one item with an omit rate of 2.3 percent. The Summer administration of Biology had one omit rate of 1.4 percent. One summer administration of English (Form 612) had omit rates of 2.7 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.[12] The MD HSA English cut scores were established during a standard setting held in October 2005.

[12] 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

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 Maryland's system of accountability under NCLB.[13] 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.

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.[14]

Beginning with the class of 2009, students eligible to take an MD Mod-HSA must obtain either a passing score on each of the four tests (including Government) or an overall combined score of 1602 as part of the requirements for a high school diploma. Students who graduated in June 2011 were the last class required to meet the Government requirement, regardless of the year they entered grade 9.

However, students scheduled to graduate in 2012 and beyond who have already taken the Government Mod-HSA could meet the graduation requirement by reaching a combined score of 1602 on the four tests. For those taking only the three current tests (Algebra, Biology, and English), a combined total of 1208 is necessary to meet 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

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

[13] 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

[14] 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

Section 12. Test Characteristics

Provided in this section is a discussion of the results of analyses of test reliability, 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 13.19 of Section 13. The tables show that the overall reliability coefficients for the MD Mod-HSA ranged from 0.56 to 0.82.

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 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 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.

RELCLASS results were calculated using student scale scores derived from item-pattern score distributions for each form and content area. In a six cases, the *RELCLASS* program would not converge due to the nature of the data (i.e., small sample sizes, skewed scale score distributions). The six cases were January and April Biology, and four Summer populations, one for Algebra, two for Biology and one for English. The output provided in those tables was obtained by setting *RELCLASS* to override the convergence error and report results.

The results are provided in Tables 12.1 through 12.15 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 0.71 to 0.90 across all performance levels and content areas and from 0.85 to 0.91 for the Proficient and Advanced classifications in Algebra, Biology, and English.

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 0.61 to 0.86 across all performance levels and content areas and from 0.78 to 0.87 for the Proficient and Advanced classifications in Algebra, Biology, and English.

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 2011

	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				

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

Table 12.2 Decision Accuracy and Consistency: MD Mod-HSA Algebra January 2012

	Placement Scores	Advanced	Proficient	Basic	Category Total*
	450–650	.00	.00	.00	.00
Decision	412–449	.00	.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	.01	.03	.03	.08
Consistency	240–411	.03	.08	.81	.92
	Estimated Proportion Consistently Classified*: Total = 0.85; Proficient & Above = 0.86				

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

Table 12.3 Decision Accuracy and Consistency: MD Mod-HSA Algebra April 2012

	Placement Scores	Advanced	Proficient	Basic	Category Total*
	450–650	.01	.00	.00	.01
Decision	412–449	.01	.05	.03	.10
Accuracy	240–411	.01	.05	.82	.89
	Estimated Proportion Correctly Classified*: Total = 0.89, Proficient & Above = 0.90				
	450–650	.01	.00	.00	.01
Decision	412–449	.02	.04	.04	.10
Consistency	240–411	.02	.08	.79	.89
	Estimated Proportion Consistently Classified*: Total = 0.84, Proficient & Above = 0.86				

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

Table 12.4 Decision Accuracy and Consistency: MD Mod-HSA Algebra May 2012

	Placement Scores	Advanced	Proficient	Basic	Category Total*
Decision Accuracy	450–650	.17	.08	.00	.25
	412–449	.06	.24	.11	.40
	240–411	.00	.05	.30	.35
	Estimated Proportion Correctly Classified*: Total = 0.71, Proficient & Above = 0.85				
Decision Consistency	450–650	.16	.07	.01	.25
	412–449	.10	.18	.13	.40
	240–411	.00	.07	.28	.35
	Estimated Proportion Consistently Classified*: Total = 0.62, Proficient & Above = 0.79				

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

Table 12.5 Decision Accuracy and Consistency: MD Mod-HSA Algebra Summer 2012

	Placement Scores	Advanced	Proficient	Basic	Category Total*
Summer Primary 1					
Decision Accuracy	450–650	.00	.00	.00	.00
	412–449	.00	.01	.03	.03
	240–411	.02	.07	.88	.97
	Estimated Proportion Correctly Classified*: Total = 0.88, Proficient & Above = 0.88				
Decision Consistency	450–650	.00	.00	.00	.00
	412–449	.01	.01	.02	.03
	240–411	.03	.08	.85	.97
	Estimated Proportion Consistently Classified*: Total = 0.86, Proficient & Above = 0.87				
Summer Primary 2					
Decision Accuracy	450–650	.00	.00	.00	.00
	412–449	.03	.06	.03	.12
	240–411	.02	.05	.82	.88
	Estimated Proportion Correctly Classified*: Total = 0.88, Proficient & Above = 0.91				
Decision Consistency	450–650	.00	.00	.00	.00
	412–449	.03	.04	.04	.12
	240–411	.02	.07	.80	.88
	Estimated Proportion Consistently Classified*: Total = 0.84, Proficient & Above = 0.87				

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

Table 12.6 Decision Accuracy and Consistency: MD Mod-HSA Biology October 2011

	Placement Scores	Advanced	Proficient	Basic	Category Total*
Decision Accuracy	452–650	.00	.00	.00	.00
	400–451	.00	.05	.05	.10
	240–399	.01	.07	.82	.90
	Estimated Proportion Consistently Classified*: Total = 0.87, Proficient & Above = 0.87				
Decision Consistency	452–650	.00	.00	.00	.00
	400–451	.00	.05	.05	.10
	240–399	.02	.11	.76	.90
	Estimated Proportion Consistently Classified*: Total = 0.81, Proficient & Above = 0.81				

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

Table 12.7 Decision Accuracy and Consistency: MD Mod-HSA Biology January 2012

	Placement Scores	Advanced	Proficient	Basic	Category Total*
Decision Accuracy	452–650	.00	.00	.00	.00
	400–451	.00	.05	.05	.10
	240–399	.01	.08	.81	.90
	Estimated Proportion Correctly Classified*: Total = 0.86, Proficient & Above = 0.86				
Decision Consistency	452–650	.00	.00	.00	.00
	400–451	.00	.05	.05	.10
	240–399	.02	.11	.76	.90
	Estimated Proportion Consistently Classified*: Total = 0.81, Proficient & Above = 0.81				

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

Table 12.8 Decision Accuracy and Consistency: MD Mod-HSA Biology April 2012

	Placement Scores	Advanced	Proficient	Basic	Category Total*
Decision Accuracy	452–650	.00	.00	.00	.00
	400–451	.00	.04	.05	.09
	240–399	.01	.08	.82	.91
	Estimated Proportion Correctly Classified*: Total = 0.86, Proficient & Above = 0.86				
Decision Consistency	452–650	.00	.00	.00	.00
	400–451	.00	.03	.06	.09
	240–399	.03	.12	.77	.91
	Estimated Proportion Consistently Classified*: Total = 0.80, Proficient & Above = 0.80				

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

Table 12.9 Decision Accuracy and Consistency: MD Mod-HSA Biology May 2012

	Placement Scores	Advanced	Proficient	Basic	Category Total*
Decision Accuracy	452–650	.15	.08	.00	.23
	400–451	.06	.39	.08	.53
	240–399	.00	.07	.18	.25
	Estimated Proportion Correctly Classified*: Total = 0.71, Proficient & Above = 0.85				
Decision Consistency	452–650	.14	.09	.00	.23
	400–451	.10	.30	.12	.53
	240–399	.00	.08	.17	.25
	Estimated Proportion Consistently Classified*: Total = 0.61, Proficient & Above = 0.80				

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

Table 12.10 Decision Accuracy and Consistency: MD Mod-HSA Biology 2012 Summer

	Placement Scores	Advanced	Proficient	Basic	Category Total*
Summer Primary 1					
Decision Accuracy	452–650	.00	.00	.00	.00
	400–451	.01	.09	.06	.16
	240–399	.01	.06	.78	.84
	Estimated Proportion Correctly Classified*: Total = 0.86, Proficient & Above = 0.88				
Decision Consistency	452–650	.00	.00	.00	.00
	400–451	.02	.07	.06	.16
	240–399	.02	.09	.74	.84
	Estimated Proportion Consistently Classified*: Total = 0.81, Proficient & Above = 0.83				
Summer Primary 2					
Decision Accuracy	452–650	.00	.00	.00	.00
	400–451	.00	.05	.07	.12
	240–399	.00	.09	.79	.88
	Estimated Proportion Correctly Classified*: Total = 0.84, Proficient & Above = 0.84				
Decision Consistency	452–650	.00	.00	.00	.00
	400–451	.00	.06	.06	.12
	240–399	.01	.14	.73	.88
	Estimated Proportion Consistently Classified*: Total = 0.78, Proficient & Above = 0.78				

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

Table 12.11 Decision Accuracy and Consistency: MD Mod-HSA English October 2011

	Placement Scores	Advanced	Proficient	Basic	Category Total*
Decision Accuracy	429–650	.01	.00	.00	.01
	396–428	.01	.07	.04	.12
	240–395	.02	.06	.80	.87
	Estimated Proportion Correctly Classified*: Total = 0.87, Proficient & Above = 0.89				
Decision Consistency	429–650	.01	.00	.00	.01
	396–428	.02	.05	.04	.12
	240–395	.02	.08	.77	.87
	Estimated Proportion Consistently Classified*: Total = 0.82, Proficient & Above = 0.85				

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

Table 12.12 Decision Accuracy and Consistency: MD Mod-HSA English January 2012

	Placement Scores	Advanced	Proficient	Basic	Category Total*
Decision Accuracy	429–650	.00	.00	.00	.00
	396–428	.02	.07	.04	.13
	240–395	.01	.06	.80	.87
	Estimated Proportion Correctly Classified*: Total = 0.87, Proficient & Above = 0.89				
Decision Consistency	429–650	.00	.00	.00	.01
	396–428	.03	.06	.05	.13
	240–395	.02	.08	.77	.87
	Estimated Proportion Consistently Classified*: Total = 0.82, Proficient & Above = 0.85				

* Inconsistencies between cell entries and totals are due to rounding

Table 12.13 Decision Accuracy and Consistency: MD Mod-HSA English April 2012

	Placement Scores	Advanced	Proficient	Basic	Category Total*
Decision Accuracy	429–650	.01	.00	.00	.01
	396–428	.02	.08	.05	.15
	240–395	.01	.05	.77	.84
	Estimated Proportion Correctly Classified*: Total = 0.87, Proficient & Above = 0.89				
Decision Consistency	429–650	.01	.00	.00	.01
	396–428	.03	.07	.05	.15
	240–395	.02	.08	.74	.84
	Estimated Proportion Consistently Classified*: Total = 0.82, Proficient & Above = 0.85				

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

Table 12.14 Decision Accuracy and Consistency: MD Mod-HSA English May 2012

	Placement Scores	Advanced	Proficient	Basic	Category Total*
Decision Accuracy	429–650	.19	.08	.00	.27
	396–428	.06	.30	.08	.44
	240–395	.00	.06	.24	.30
	Estimated Proportion Correctly Classified*: Total = 0.72, Proficient & Above = 0.86				
Decision Consistency	429–650	.18	.08	.01	.27
	396–428	.09	.23	.11	.44
	240–395	.00	.07	.22	.30
	Estimated Proportion Consistently Classified*: Total = 0.63, Proficient & Above = 0.81				

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

Table 12.15 Decision Accuracy and Consistency: MD Mod-HSA English Summer 2012

	Placement Scores	Advanced	Proficient	Basic	Category Total*
Summer Form 5					
Decision Accuracy	429–650	.00	.01	.00	.01
	396–428	.00	.04	.03	.06
	240–395	.01	.06	.85	.92
	Estimated Proportion Correctly Classified*: Total = 0.89, Proficient & Above = 0.90				
Decision Consistency	429–650	.01	.00	.00	.01
	396–428	.00	.03	.03	.06
	240–395	.02	.09	.81	.92
	Estimated Proportion Consistently Classified*: Total = 0.85, Proficient & Above = 0.85				
Summer Form 6					
Decision Accuracy	429–650	.00	.00	.00	.00
	396–428	.03	.08	.05	.16
	240–395	.01	.05	.78	.84
	Estimated Proportion Correctly Classified*: Total = 0.87, Proficient & Above = 0.89				
Decision Consistency	429–650	.00	.00	.00	.00
	396–428	.04	.07	.06	.16
	240–395	.02	.07	.75	.84
	Estimated Proportion Consistently Classified*: Total = 0.82, Proficient & Above* = 0.86				

* 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 2011 and January, April, May, and Summer 2012. All results are based on the final Research files sent to MSDE. Students' scale score means and standard deviations are presented in Table 13.1 to 13.2.

Table 13.1 MD Mod-HSA Means and Standard Deviations for 2011-2012 Overall and by Grade

			N	Mean	SD
Algebra	Overall		8,670	362.3	48.0
	Grade				
		8	35	358.3	54.4
		9	1,540	360.6	50.1
		10	2,430	365.0	45.3
		11	2,449	361.9	47.4
		12	2,088	361.0	49.5
Biology	Overall		5,955	363.2	43.6
	Grade				
		9	353	358.9	45.8
		10	1,654	369.4	42.6
		11	2,211	363.5	42.1
		12	1,683	358.0	45.1
English	Overall		6,824	362.2	38.9
	Grade				
		9	255	353.9	46.8
		10	1,786	364.2	38.7
		11	2,592	363.7	36.6
		12	2,117	361.3	40.5

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	2,234	358.2	49.6	2,217	364.6	45.8	524	362.6	50.1	3,491	363.7	47.5	206	356.0	52.6
Biology	1,640	360.8	43.5	1,454	359.7	44.2	338	357.3	45.1	2,369	367.7	42.8	154	365.8	42.4
English	1,886	359.9	40.6	1,736	361.0	39.0	524	362.5	40.2	2,526	364.9	37.1	152	360.3	37.7

The mean scale scores are presented for the years 2008 through 2012 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
Algebra	360.1	363.2	360.5	362.3	362.3
Biology	360.2	365.0	366.0	362.3	363.2
English	353.2	360.2	359.6	359.2	362.2
Government*	357.2	359.2	355.9	354.8	-

*May 2011 was the last administration of the Government HSA.

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

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

*May 2011 was the last administration of the Government HSA.

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, Biology, and English students classified as Basic, Proficient, and Advanced in 2012. Figures 13.1 through 13.3 show the distribution of scale scores for the May 2012 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	91.9	7.8	0.3
Biology	86.7	13.2	0.1
English	86.1	13.3	0.6

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 13.20. 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.

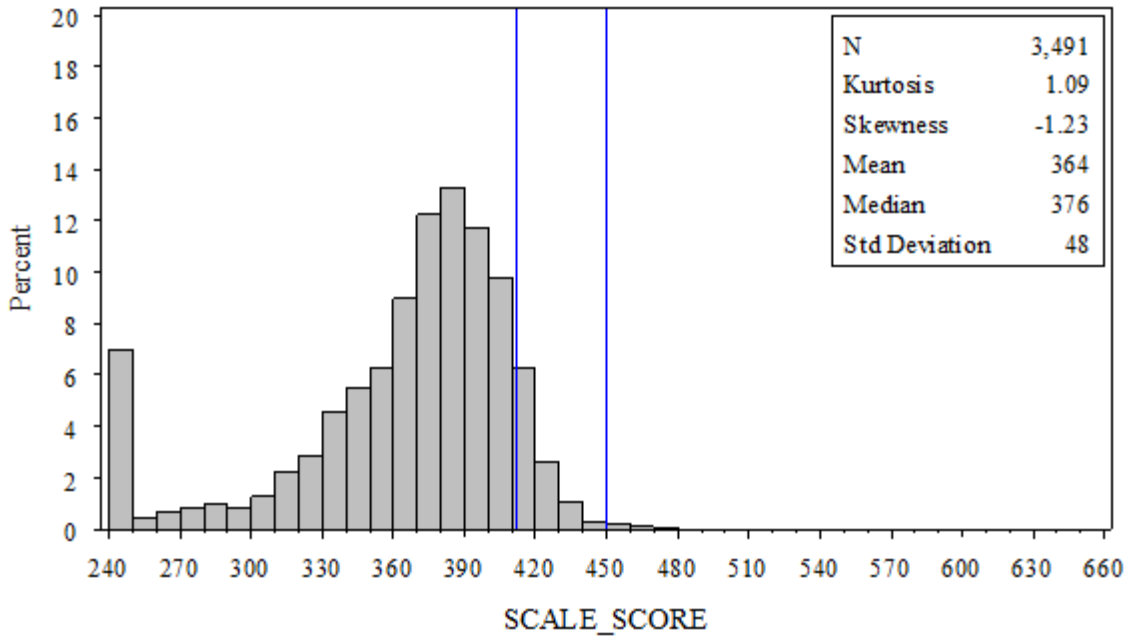


Figure 13.1 Histogram of Total Scale Scores for MD Mod-HSA May 2012 Algebra

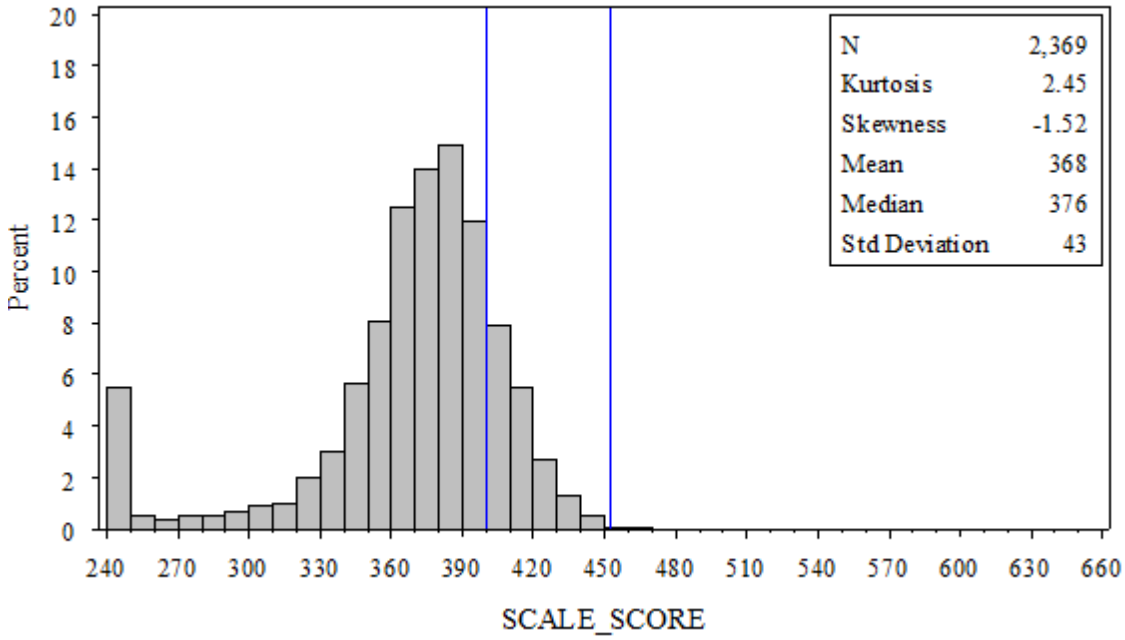


Figure 13.2 Histogram of Total Scale Scores for MD Mod-HSA May 2012 Biology

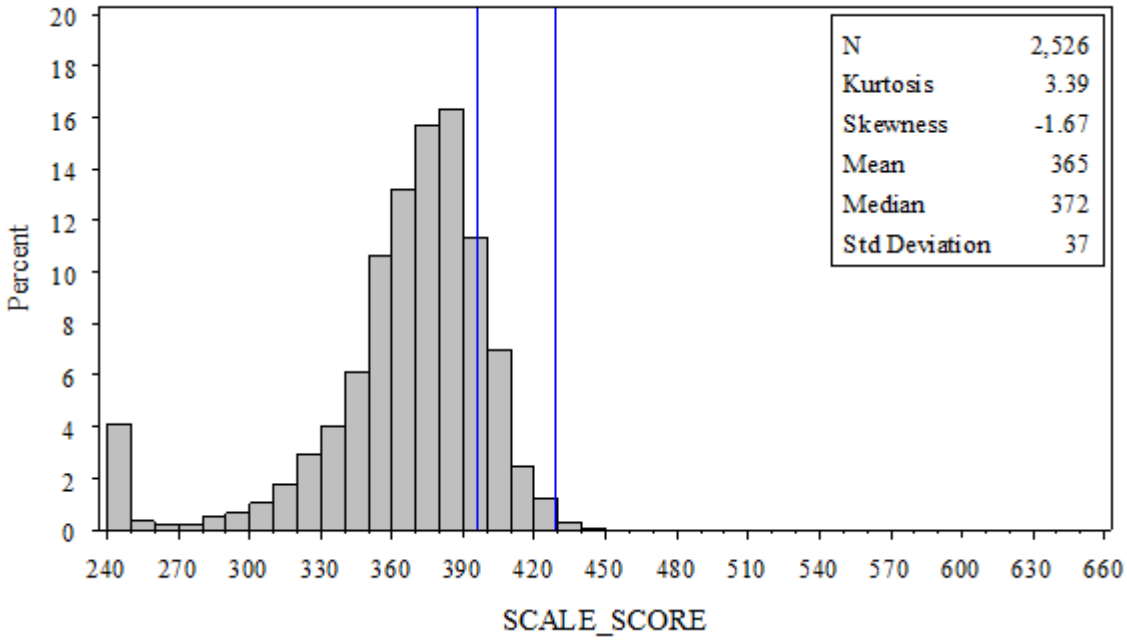


Figure 13.3 Histogram of Total Scale Scores for MD Mod-HSA May 2012 English

Table 13.6 Summary Statistics for MD Mod-HSA Algebra: October 2011 Form

		Form 112				
		Mean	SD	N	%	Alpha
Overall		358.2	49.6	2,232	100.0	0.73
Gender						
	Male	358.8	48.9	1,422	63.7	0.73
	Female	357.2	50.6	786	35.2	0.74
	Missing	*	*	24	1.1	*
Special Education						
	Yes	358.1	49.2	1,958	87.7	0.72
	No	358.3	51.9	269	12.1	0.79
	Exited	*	*	1	0.0	*
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	4	0.2	*
Ethnicity						
	American Indian	*	*	5	0.2	*
	Asian	*	*	21	0.9	*
	African American	353.9	51.2	1,343	60.2	0.73
	Hawaiian/Pacific Islander	*	*	3	0.1	*
	White	366.7	45.7	561	25.1	0.73
	Hispanic	359.4	48.4	244	10.9	0.72
	Missing	362.6	49.0	55	2.5	0.68
Limited English Proficient						
	Yes	*	*	19	0.9	*
	No	358.2	49.6	2,203	98.7	0.73
	Exited[b]	*	*	10	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 13.7 Summary Statistics for MD Mod-HSA Algebra: January 2012 Form

		Form 212				
		Mean	SD	N	%	Alpha
Overall		364.6	45.8	2,217	100.0	0.74
Gender						
	Male	365.9	45.9	1,409	63.6	0.75
	Female	362.3	45.4	800	36.1	0.73
	Missing	*	*	8	0.4	*
Special Education						
	Yes	366.0	44.3	1,851	83.5	0.73
	No	357.6	52.5	363	16.4	0.80
	Exited	*	*	3	0.1	*
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	0	0.0	*
Ethnicity						
	American Indian	*	*	9	0.4	*
	Asian	*	*	21	0.9	*
	African American	359.6	47.5	1,324	59.7	0.74
	Hawaiian/Pacific Islander	*	*	3	0.1	*
	White	373.7	42.3	589	26.6	0.75
	Hispanic	369.3	41.3	206	9.3	0.71
	Missing	368.7	40.7	65	2.9	0.76
Limited English Proficient						
	Yes	*	*	16	0.7	*
	No	364.5	45.9	2,199	99.2	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 13.8 Summary Statistics for MD Mod-HSA Algebra: April 2012 Form

		Form 312				
		Mean	SD	N	%	Alpha
Overall		362.6	50.1	524	100.0	0.78
Gender						
	Male	364.4	50.0	308	58.8	0.79
	Female	359.7	50.7	210	40.1	0.75
	Missing	*	*	6	1.1	*
Special Education						
	Yes	361.9	50.2	415	79.2	0.76
	No	365.3	49.9	109	20.8	0.82
	Exited	*	*	0	0.0	*
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	0	0.0	*
Ethnicity						
	American Indian	*	*	4	0.8	*
	Asian	*	*	6	1.1	*
	African American	360.4	51.6	373	71.2	0.79
	Hawaiian/ Pacific Islander	*	*	1	0.2	*
	White	372.5	43.0	78	14.9	0.71
	Hispanic	*	*	46	8.8	*
	Missing	*	*	16	3.1	*
Limited English Proficient						
	Yes	*	*	7	1.3	*
	No	362.7	50.0	517	98.7	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 2012 Form

		Form 412				
		Mean	SD	N	%	Alpha
Overall		363.7	47.5	3,491	100.0	0.76
Gender						
	Male	364.4	48.2	2,218	63.5	0.76
	Female	362.8	46.0	1,209	34.6	0.74
	Missing	356.8	54.4	64	1.8	0.80
Special Education						
	Yes	365.2	46.9	2,958	84.7	0.76
	No	355.8	50.3	532	15.2	0.75
	Exited	*	*	0	0.0	
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	1	0.0	*
Ethnicity						
	American Indian	*	*	15	0.4	*
	Asian	378.9	37.0	62	1.8	0.82
	African American	357.5	49.0	1,946	55.7	0.72
	Hawaiian/Pacific Islander	*	*	5	0.1	*
	White	373.4	43.9	826	23.7	0.78
	Hispanic	370.4	44.2	483	13.8	0.76
	Missing	364.0	48.3	154	4.4	0.80
Limited English Proficient						
	Yes	*	*	48	1.4	*
	No	363.8	47.4	3,432	98.3	0.75
	Exited[b]	*	*	11	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 13.10 Summary Statistics for MD Mod-HSA Algebra: Summer 2012 Forms

		Form 512					Form 612				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		350.9	52.7	86	100.0	0.68	359.7	52.5	120	100.0	0.82
Gender											
	Male	347.4	54.7	60	69.8	0.67	355.8	54.4	77	64.2	0.81
	Female	*	*	26	30.2	*	*	*	43	35.8	*
	Missing	*	*	0	0.0	*	*	*	0	0.0	*
Special Education											
	Yes	348.4	54.2	69	80.2	0.69	344.8	52.4	57	47.5	0.71
	No	*	*	17	19.8	*	373.2	49.2	63	52.5	0.85
	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	*	*	*	2	1.7	*
	African American	*	*	42	48.8	*	350.2	56.2	57	47.5	0.81
	Hawaiian/Pacific Islander	*	*	0	0.0	*	*	*	0	0.0	*
	White	*	*	35	40.7	*	365.0	49.7	54	45.0	0.82
	Hispanic	*	*	8	9.3	*	*	*	4	3.3	*
	Missing	*	*	1	1.2	*	*	*	3	2.5	*
Limited English Proficient											
	Yes	*	*	2	2.3	*	*	*	0	0.0	*
	No	350.1	53.0	84	97.7	0.68	359.7	52.5	120	100.0	0.82
	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 13.11 Summary Statistics for MD Mod-HSA Biology: October 2011 Form

		Form 112				
		Mean	SD	N	%	Alpha
Overall		360.8	43.5	1,640	100.0	0.62
Gender						
	Male	361.0	43.8	1,028	62.7	0.63
	Female	360.6	42.9	602	36.7	0.61
	Missing	*	*	10	0.6	*
Special Education						
	Yes	360.6	43.2	1,442	87.9	0.61
	No	362.4	45.3	198	12.1	0.70
	Exited	*	*	0	0.0	*
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	0	0.0	*
Ethnicity						
	American Indian	*	*	5	0.3	*
	Asian	*	*	20	1.2	*
	African American	358.3	44.9	1,068	65.1	0.62
	Hawaiian/Pacific Islander	*	*	0	0.0	*
	White	367.0	40.5	367	22.4	0.65
	Hispanic	363.1	41.3	153	9.3	0.58
	Missing	*	*	27	1.6	*
Limited English Proficient						
	Yes	*	*	14	0.9	*
	No	360.9	43.4	1,619	98.7	0.63
	Exited[b]	*	*	7	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 2012 Form

		Form 212				
		Mean	SD	N	%	Alpha
Overall		359.7	44.2	1,454	100.0	0.63
Gender						
	Male	360.0	45.6	922	63.4	0.66
	Female	359.3	41.3	529	36.4	0.58
	Missing	*	*	3	0.2	*
Special Education						
	Yes	360.3	43.6	1,226	84.3	0.63
	No	356.1	47.4	227	15.6	0.64
	Exited	*	*	1	0.1	*
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	0	0.0	*
Ethnicity						
	American Indian	*	*	7	0.5	*
	Asian	*	*	18	1.2	*
	African American	355.1	45.8	910	62.6	0.58
	Hawaiian/Pacific Islander	*	*	3	0.2	*
	White	369.0	39.6	363	25.0	0.68
	Hispanic	362.8	44.6	110	7.6	0.70
	Missing	*	*	43	3.0	*
Limited English Proficient						
	Yes	*	*	13	0.9	*
	No	359.6	44.4	1,438	98.9	0.63
	Exited[b]	*	*	3	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 13.13 Summary Statistics for MD Mod-HSA Biology: April 2012 Form

		Form 312				
		Mean	SD	N	%	Alpha
Overall		357.3	45.1	338	100.0	0.62
Gender						
	Male	354.6	48.9	210	62.1	0.65
	Female	361.9	38.0	127	37.6	0.56
	Missing	*	*	1	0.3	*
Special Education						
	Yes	356.2	45.5	259	76.6	0.59
	No	360.9	44.1	79	23.4	0.69
	Exited	*	*	0	0.0	*
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	0	0.0	*
Ethnicity						
	American Indian	*	*	1	0.3	*
	Asian	*	*	7	2.1	*
	African American	353.6	48.1	259	76.6	0.66
	Hawaiian/Pacific Islander	*	*	1	0.3	*
	White	*	*	38	11.2	*
	Hispanic	*	*	23	6.8	*
	Missing	*	*	9	2.7	*
Limited English Proficient						
	Yes	*	*	4	1.2	*
	No	357.4	44.9	333	98.5	0.62
	Exited[b]	*	*	1	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 13.14 Summary Statistics for MD Mod-HSA Biology: May 2012 Form

		Form 412				
		Mean	SD	N	%	Alpha
Overall		367.7	42.8	2,369	100.0	0.71
Gender						
	Male	367.9	44.3	1,572	66.4	0.73
	Female	367.7	39.2	778	32.8	0.65
	Missing	*	*	19	0.8	*
Special Education						
	Yes	368.8	42.0	2,053	86.7	0.71
	No	359.9	47.0	315	13.3	0.70
	Exited	*	*	0	0.0	*
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	1	0.0	*
Ethnicity						
	American Indian	*	*	9	0.4	*
	Asian	*	*	39	1.6	*
	African American	362.0	44.4	1,357	57.3	0.69
	Hawaiian/Pacific Islander	*	*	2	0.1	*
	White	377.4	39.5	574	24.2	0.73
	Hispanic	372.1	39.2	321	13.6	0.69
	Missing	371.9	40.4	67	2.8	0.75
Limited English Proficient						
	Yes	*	*	28	1.2	*
	No	367.7	42.7	2,339	98.7	0.71
	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 13.15 Summary Statistics for MD Mod-HSA Biology: Summer 2012 Forms

		Form 512					Form 612				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		357.5	49.9	70	100.0	0.72	372.7	33.9	84	100.0	0.56
Gender											
	Male	*	*	42	60.0	*	372.7	32.7	58	69.0	0.53
	Female	*	*	27	38.6	*	*	*	26	31.0	*
	Missing	*	*	1	1.4	*	*	*	0		*
Special Education											
	Yes	360.8	45.8	60	85.7	0.67	372.3	31.0	51	60.7	0.48
	No	*	*	10	14.3	*	*	*	33	39.3	*
	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	*	*	0	0.0	*	*	*	0	0.0	*
	African American	*	*	32	45.7	*	*	*	45	53.6	*
	Hawaiian/Pacific Islander	*	*	0	0.0	*	*	*	0	0.0	*
	White	*	*	31	44.3	*	*	*	32	38.1	*
	Hispanic	*	*	5	7.1	*	*	*	5	6.0	*
	Missing	*	*	2	2.9	*	*	*	2	2.4	*
Limited English Proficient											
	Yes	*	*	2	2.9	*	*	*	0	0.0	*
	No	357.2	50.6	68	97.1	0.73	372.7	33.9	84	100.0	0.56
	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 2011 Form

		Form 112				
		Mean	SD	N	%	Alpha
Overall		359.9	40.6	1,886	100.0	0.78
Gender						
	Male	359.3	41.8	1,216	64.5	0.78
	Female	360.7	38.1	653	34.6	0.76
	Missing	*	*	17	0.9	*
Special Education						
	Yes	359.2	40.8	1,617	85.7	0.77
	No	363.8	39.1	267	14.2	0.79
	Exited	*	*	0	0.0	*
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	2	0.1	*
Ethnicity						
	American Indian	*	*	3	0.2	*
	Asian	*	*	27	1.4	*
	African American	357.3	41.8	1,127	59.8	0.78
	Hawaiian/Pacific Islander	*	*	3	0.2	*
	White	363.2	40.3	481	25.5	0.78
	Hispanic	364.8	35.8	205	10.9	0.72
	Missing	*	*	40	2.1	*
Limited English Proficient						
	Yes	*	*	15	0.8	*
	No	359.9	40.7	1,861	98.7	0.78
	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 13.17 Summary Statistics for MD Mod-HSA English: January 2012 Form

		Form 212				
		Mean	SD	N	%	Alpha
Overall		361.0	39.0	1,736	100.0	0.78
Gender						
	Male	360.7	39.5	1,118	64.4	0.78
	Female	362.0	37.8	606	34.9	0.77
	Missing	*	*	12	0.7	*
Special Education						
	Yes	361.3	38.5	1,409	81.2	0.77
	No	359.9	41.4	325	18.7	0.80
	Exited	*	*	2	0.1	*
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	0	0.0	*
Ethnicity						
	American Indian	*	*	4	0.2	*
	Asian	*	*	29	1.7	*
	African American	357.8	41.0	976	56.2	0.78
	Hawaiian/Pacific Islander	*	*	2	0.1	*
	White	365.9	36.4	491	28.3	0.78
	Hispanic	364.9	33.5	173	10.0	0.74
	Missing	359.6	41.6	61	3.5	0.81
Limited English Proficient						
	Yes	*	*	19	1.1	*
	No	361.0	39.0	1,716	98.8	0.78
	Exited[b]	*	*	1	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 2012 Form

		Form 312				
		Mean	SD	N	%	Alpha
Overall		362.5	40.2	524	100.0	0.80
Gender						
	Male	362.0	41.3	329	62.8	0.81
	Female	363.4	38.6	195	37.2	0.78
	Missing	*	*	0	0.0	*
Special Education						
	Yes	361.5	41.1	409	78.1	0.81
	No	366.0	36.9	115	21.9	0.80
	Exited	*	*	0	0.0	*
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	0	0.0	*
Ethnicity						
	American Indian	*	*	1	0.2	*
	Asian	*	*	8	1.5	*
	African American	361.7	40.3	372	71.0	0.81
	Hawaiian/Pacific Islander	*	*	1	0.2	*
	White	362.0	46.7	75	14.3	0.83
	Hispanic	369.4	30.5	56	10.7	0.73
	Missing	*	*	11	2.1	*
Limited English Proficient						
	Yes	*	*	6	1.1	*
	No	362.5	39.9	518	98.9	0.80
	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 2012 Form

		Form 412				
		Mean	SD	N	%	Alpha
Overall		364.9	37.1	2,526	100.0	0.77
Gender						
	Male	364.2	38.1	1,664	65.9	0.76
	Female	366.8	34.9	837	33.1	0.77
	Missing	*	*	25	1.0	*
Special Education						
	Yes	365.7	36.6	2,156	85.4	0.76
	No	359.9	40.1	370	14.6	0.79
	Exited	*	*	0	0.0	*
	Exited and placed in 504[a]	*	*	0	0.0	*
	504	*	*	0	0.0	*
Ethnicity						
	American Indian	*	*	7	0.3	*
	Asian	*	*	47	1.9	*
	African American	360.8	38.8	1,359	53.8	0.76
	Hawaiian/Pacific Islander	*	*	2	0.1	*
	White	371.1	36.4	653	25.9	0.77
	Hispanic	369.5	31.9	381	15.1	0.74
	Missing	361.2	32.6	77	3.0	0.75
Limited English Proficient						
	Yes	*	*	30	1.2	*
	No	365.0	37.1	2,492	98.7	0.77
	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 13.20 Summary Statistics for MD Mod-HSA English: Summer 2012 Forms

		Form 512					Form 612				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		359.4	36.3	77	100.0	0.73	361.3	39.4	75	100.0	0.80
Gender											
	Male	355.6	40.6	50	64.9	0.75	359.6	40.0	54	72.0	0.79
	Female	*	*	27	35.1	*	*	*	21	28.0	*
	Missing	*	*	0	0.0	*	*	*	0	0.0	*
Special Education											
	Yes	360.2	37.3	68	88.3	0.73	*	*	29	38.7	*
	No	*	*	9	11.7	*	*	*	46	61.3	*
	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	1.3	*	*	*	1	1.3	*
	African American	*	*	37	48.1	*	*	*	37	49.3	*
	Hawaiian/Pacific Islander	*	*	1	1.3		*	*	0	0.0	*
	White	*	*	28	36.4	*	*	*	30	40.0	*
	Hispanic	*	*	10	13.0	*	*	*	3	4.0	*
	Missing	*	*	0	0.0	*	*	*	4	5.3	*
Limited English Proficient											
	Yes	*	*	1	1.3	*	*	*	0	0.0	*
	No	359.0	36.4	76	98.7	0.73	361.3	39.4	75	100.0	0.80
	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.

Demographic Characteristics

Summary statistics describing the demographic characteristics of the students who received scores on the MD Mod-HSAs are provided in Tables 13.20 through 13.22. Statistics are provided for the October 2011 and the January, April, May, and Summer 2012 administrations of Algebra, Biology, and English. 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 13.21 Demographic Information for MD Mod-HSA Algebra

	October Form		January Form		April Form		May Form		Summer Forms	
	N	%	N	%	N	%	N	%	N	%
Overall	2,232	100.0	2,217	100.0	524	100.0	3,491	100.0	206	100.0
Gender										
Male	1,422	63.7	1,409	63.6	308	58.8	2,218	63.5	137	66.5
Female	786	35.2	800	36.1	210	40.1	1,209	34.6	69	33.5
Missing	24	1.1	8	0.4	6	1.1	64	1.8	0	0.0
Special Education										
Yes	1,958	87.7	1,851	83.5	415	79.2	2,958	84.7	126	61.2
No	269	12.1	363	16.4	109	20.8	532	15.2	80	38.8
Exited	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0
Exited and placed in 504[a]	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
504	4	0.2	0	0.0	0	0.0	1	0.0	0	0.0
Ethnicity										
American Indian	5	0.2	9	0.4	4	0.8	15	0.4	0	0.0
Asian	21	0.9	21	0.9	6	1.1	62	1.8	2	1.0
African American	1,343	60.2	1,324	59.7	373	71.2	1,946	55.7	99	48.1
Hawaiian/Pacific Islander	3	0.1	3	0.1	1	0.2	5	0.1	0	0.0
White	561	25.1	589	26.6	78	14.9	826	23.7	89	43.2
Hispanic	244	10.9	206	9.3	46	8.8	483	13.8	12	5.8
Missing	55	2.5	65	2.9	16	3.1	154	4.4	4	1.9
Limited English Proficient										
Yes	19	0.9	16	0.7	7	1.3	48	1.4	2	1.0
No	2,203	98.7	2,199	99.2	517	98.7	3,432	98.3	204	99.0
Exited[b]	10	0.4	2	0.1	0	0.0	11	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 13.22 Demographic Information for MD Mod-HSA Biology

	October Form		January Form		April Form		May Form		Summer Forms	
	N	%	N	%	N	%	N	%	N	%
Overall	1,640	100.0	1,454	100.0	338	100.0	2,369	100.0	154	100.0
Gender										
Male	1,028	62.7	922	63.4	210	62.1	1,572	66.4	100	64.9
Female	602	36.7	529	36.4	127	37.6	778	32.8	53	34.4
Missing	10	0.6	3	0.2	1	0.3	19	0.8	1	0.6
Special Education										
Yes	1,442	87.9	1,226	84.3	259	76.6	2,053	86.7	111	72.1
No	198	12.1	227	15.6	79	23.4	315	13.3	43	27.9
Exited	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0
Exited and placed in 504[a]	0	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	5	0.3	7	0.5	1	0.3	9	0.4	0	0.0
Asian	20	1.2	18	1.2	7	2.1	39	1.6	0	0.0
African American	1,068	65.1	910	62.6	259	76.6	1,357	57.3	77	50.0
Hawaiian/Pacific Islander	0	0.0	3	0.2	1	0.3	2	0.1	0	0.0
White	367	22.4	363	25.0	38	11.2	574	24.2	63	40.9
Hispanic	153	9.3	110	7.6	23	6.8	321	13.6	10	6.5
Missing	27	1.6	43	3.0	9	2.7	67	2.8	4	2.6
Limited English Proficient										
Yes	14	0.9	13	0.9	4	1.2	28	1.2	2	1.3
No	1,619	98.7	1,438	98.9	333	98.5	2,339	98.7	152	98.7
Exited[b]	7	0.4	3	0.2	1	0.3	2	0.1	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 13.23 Demographic Information for MD Mod-HSA English

	October Form		January Form		April Form		May Form		Summer Forms	
	N	%	N	%	N	%	N	%	N	%
Overall	1,886	100.0	1,736	100.0	524	100.0	2,526	100.0	152	100.0
Gender										
Male	1,216	64.5	1,118	64.4	329	62.8	1,664	65.9	104	68.4
Female	653	34.6	606	34.9	195	37.2	837	33.1	48	31.6
Missing	17	0.9	12	0.7	0	0.0	25	1.0	0	0.0
Special Education										
Yes	1,617	85.7	1,409	81.2	409	78.1	2,156	85.4	97	63.8
No	267	14.2	325	18.7	115	21.9	370	14.6	55	36.2
Exited	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0
Exited and placed in 504[a]	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
504	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0
Ethnicity										
American Indian	3	0.2	4	0.2	1	0.2	7	0.3	0	0.0
Asian	27	1.4	29	1.7	8	1.5	47	1.9	2	1.3
African American	1127	59.8	976	56.2	372	71.0	1359	53.8	74	48.7
Hawaiian/Pacific Islander	3	0.2	2	0.1	1	0.2	2	0.1	1	0.7
White	481	25.5	491	28.3	75	14.3	653	25.9	58	38.2
Hispanic	205	10.9	173	10.0	56	10.7	381	15.1	13	8.6
Missing	40	2.1	61	3.5	11	2.1	77	3.0	4	2.6
Limited English Proficient										
Yes	15	0.8	19	1.1	6	1.1	30	1.2	1	0.7
No	1,861	98.7	1,716	98.8	518	98.9	2,492	98.7	151	99.3
Exited[b]	10	0.5	1	0.1	0	0.0	4	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.

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

Table 1.A 1 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	56632	SR	0.25	0.31	-0.04	-0.29	0.31	-0.01	0.0
R	2	O	257110	SR	0.58	0.28	-0.17	-0.18	0.28	-0.08	0.1
R	4	O	223238	SR	0.18	0.26	-0.01	-0.14	-0.10	0.26	0.5
R	5	O	263294	SPR	0.03	0.20	0.20	-0.12			6.6
R	6	O	338644	SPR	0.04	0.24	0.24	-0.12			12.9
R	8	O	223241	SR	0.37	0.30	-0.05	0.30	-0.10	-0.18	0.2
R	9	O	51539	SR	0.36	0.09	-0.06	0.02	0.09	-0.08	0.9
R	11	O	79035	SR	0.32	0.17	0.17	-0.03	-0.08	-0.08	0.3
R	13	O	106584	SR	0.50	0.25	-0.13	-0.11	0.25	-0.13	0.2
R	14	O	54735	SR	0.32	0.21	0.21	-0.07	-0.16	-0.01	0.6
R	15	O	211029	SR	0.45	0.28	-0.14	-0.12	0.28	-0.11	0.7
R	16	O	79026	SR	0.37	0.36	-0.04	-0.16	-0.22	0.36	0.4
R	17	O	263277	SR	0.28	0.16	-0.11	-0.03	0.16	-0.02	1.0
R	18	O	255076	SPR	0.16	0.38	0.38	-0.29			5.8
R	20	O	79059	SR	0.28	0.17	0.02	-0.13	0.17	-0.11	1.3
R	21	O	211049	SR	0.25	0.16	0.16	-0.03	-0.08	-0.05	1.4
R	22	O	282380	SR	0.46	0.28	-0.14	0.28	-0.11	-0.12	1.5
R	23	O	136694	SR	0.61	0.30	-0.12	-0.13	-0.19	0.30	1.7
R	24	O	54618	SR	0.60	0.32	-0.16	-0.16	0.32	-0.13	0.2
R	25	O	263279	SR	0.35	0.17	0.17	-0.08	-0.05	-0.06	1.0
R	26	O	79113	SR	0.47	0.14	-0.04	0.14	-0.06	-0.06	0.3
R	28	O	275448	SPR	0.04	0.14	0.14	0.00			5.2
R	29	O	348331	SPR	0.10	0.32	0.32	-0.17			9.0
R	30	O	348444	SPR	0.03	0.20	0.20	-0.01			8.7
R	32	O	54696	SR	0.41	0.21	-0.13	-0.15	-0.06	0.21	0.3
R	33	O	282466	SR	0.49	0.33	-0.15	-0.18	0.33	-0.11	0.4
R	34	O	106654	SR	0.19	0.06	0.06	-0.15	0.15	-0.09	0.4
R	35	O	136693	SR	0.16	0.14	-0.02	-0.03	-0.06	0.14	0.6
R	36	O	223434	SR	0.45	0.15	-0.06	0.15	-0.09	-0.03	1.0
R	38	O	268673	SPR	0.76	0.40	0.40	-0.35			3.0
R	40	O	50379	SR	0.28	0.12	0.06	-0.13	0.12	-0.06	0.5
R	41	O	79076	SR	0.42	0.38	-0.19	-0.17	-0.15	0.38	0.3
R	42	O	215920	SR	0.66	0.35	-0.14	-0.21	0.35	-0.16	0.5
R	45	O	257130	SR	0.68	0.35	-0.18	0.35	-0.18	-0.16	0.5
R	46	O	54832	SR	0.47	0.42	-0.18	-0.22	-0.17	0.42	0.7
R	47	O	135124	SR	0.79	0.32	-0.19	-0.17	-0.17	0.32	0.3
R	48	O	54557	SR	0.63	0.37	0.37	-0.20	-0.21	-0.13	0.4
R	50	O	56453	SR	0.34	0.10	-0.06	0.10	-0.03	-0.02	0.5
R	51	O	135114	SR	0.29	0.23	-0.02	-0.15	-0.07	0.23	0.6
R	53	O	223437	SR	0.32	0.20	-0.01	-0.12	-0.08	0.20	0.4
R	54	O	223240	SR	0.49	0.39	0.39	-0.14	-0.20	-0.16	0.6
R	56	O	64245	SPR	0.65	0.39	0.39	-0.33			2.9
R	57	O	260772	SR	0.45	0.31	0.31	-0.11	-0.20	-0.11	0.3

Table 1.A 1 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	58	O	255111	SR	0.62	0.38	-0.22	-0.18	0.38	-0.15	0.5
R	59	O	268656	SR	0.68	0.36	-0.18	0.36	-0.19	-0.15	0.4
R	61	O	51402	SR	0.54	0.29	-0.12	0.29	-0.18	-0.08	0.4
R	62	O	67455	SR	0.35	0.15	-0.06	-0.05	0.15	-0.06	0.9
R	63	O	52348	SR	0.55	0.34	-0.13	0.34	-0.18	-0.14	0.6
R	64	O	67481	SPR	0.52	0.42	0.42	-0.36			3.3
R	65	O	257118	SPR	0.40	0.39	0.39	-0.31			4.6
R	67	O	67423	SR	0.48	0.37	-0.11	-0.19	-0.18	0.37	0.6
R	68	O	67454	SR	0.40	0.26	-0.02	0.26	-0.16	-0.12	0.5
R	69	O	51447	SR	0.31	0.17	-0.12	0.17	-0.12	0.06	0.6
Mean					0.40	0.27	0.03	-0.07	-0.01	0.01	1.6
SD					0.19	0.10	0.20	0.19	0.19	0.18	2.6

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	192081	SR	0.61	0.25	-0.13	0.25	-0.16	-0.11	0.1
R	2	O	79415	SR	0.59	0.28	-0.10	-0.19	0.28	-0.12	0.1
R	5	O	251274	SR	0.38	0.23	0.23	-0.02	-0.20	-0.07	0.1
R	6	O	251257	SR	0.49	0.31	-0.13	0.31	-0.12	-0.17	0.1
R	7	O	52729	SR	0.57	0.22	0.22	-0.10	-0.10	-0.11	0.1
R	8	O	52739	SR	0.17	0.11	0.11	-0.11	-0.05	0.05	0.1
R	9	O	192077	SR	0.19	0.22	0.00	-0.20	-0.06	0.22	0.2
R	10	O	192084	SR	0.36	0.18	-0.15	0.01	-0.09	0.18	0.2
R	11	O	79482	SR	0.43	0.13	-0.04	0.13	-0.08	-0.05	0.3
R	13	O	52405	SR	0.29	0.12	0.12	-0.03	-0.03	-0.07	0.3
R	14	O	282388	SR	0.22	-0.02	-0.11	0.15	-0.02	-0.13	0.1
R	15	O	282458	SR	0.52	0.28	-0.16	-0.14	0.28	-0.09	0.2
R	17	O	223425	SR	0.35	0.15	-0.06	0.15	-0.06	-0.06	0.2
R	18	O	135004	SR	0.35	0.32	-0.17	-0.07	-0.18	0.32	0.1
R	19	O	332051	SR	0.24	0.32	0.32	-0.09	-0.13	-0.09	0.2
R	20	O	332047	SR	0.28	0.16	-0.12	-0.14	0.16	0.04	0.2
R	21	O	133437	SR	0.41	0.19	-0.07	-0.11	-0.05	0.19	0.2
R	22	O	52685	SR	0.65	0.30	-0.20	0.30	-0.14	-0.10	0.2
R	25	O	263156	SR	0.33	0.22	0.05	0.22	-0.17	-0.17	0.3
R	26	O	263161	SR	0.74	0.33	-0.17	-0.17	-0.18	0.33	0.2
R	27	O	108578	SR	0.62	0.26	0.26	-0.11	-0.15	-0.10	0.2
R	28	O	133060	SR	0.53	0.25	-0.17	-0.05	0.25	-0.10	0.3
R	29	O	218482	SR	0.14	0.16	0.06	-0.13	-0.04	0.16	0.5

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	30	O	218483	SR	0.35	0.22	-0.08	0.22	-0.16	-0.02	0.4
R	32	O	279568	SR	0.35	0.19	0.19	-0.06	-0.14	-0.01	0.5
R	33	O	279566	SR	0.31	0.22	-0.07	-0.07	-0.09	0.22	0.5
R	34	O	277325	SR	0.31	0.10	-0.03	-0.07	0.10	0.00	0.2
R	36	O	108523	SR	0.79	0.32	-0.18	-0.18	0.32	-0.15	0.2
R	37	O	68227	SR	0.39	0.20	0.06	0.20	-0.16	-0.16	0.1
R	38	O	68229	SR	0.40	0.06	-0.02	0.06	0.02	-0.09	0.2
R	39	O	271131	SR	0.33	0.20	-0.07	-0.07	0.20	-0.09	0.3
R	42	O	223416	SR	0.28	0.29	-0.07	-0.14	-0.09	0.29	0.2
R	43	O	223415	SR	0.41	0.32	-0.12	-0.12	-0.15	0.32	0.2
R	44	O	223422	SR	0.62	0.21	-0.13	-0.10	0.21	-0.08	0.1
R	46	O	79289	SR	0.32	0.13	-0.04	0.13	-0.04	-0.05	0.2
R	47	O	79290	SR	0.41	0.34	-0.14	-0.16	-0.13	0.34	0.2
R	48	O	79424	SR	0.60	0.31	-0.08	0.31	-0.20	-0.15	0.2
R	49	O	67680	SR	0.23	0.18	-0.03	-0.10	-0.05	0.18	0.2
R	53	O	296120	SR	0.50	0.29	-0.12	0.29	-0.14	-0.13	0.2
R	54	O	296119	SR	0.36	0.33	0.33	-0.09	-0.18	-0.12	0.2
R	56	O	65134	SR	0.25	0.27	-0.01	-0.14	-0.12	0.27	0.2
R	57	O	108583	SR	0.30	0.21	-0.03	0.21	-0.11	-0.09	0.2
R	58	O	64993	SR	0.32	0.09	-0.04	-0.05	0.09	0.00	0.3
R	59	O	67671	SR	0.18	0.06	-0.02	-0.13	0.09	0.06	0.2
R	60	O	79322	SR	0.20	0.07	0.07	0.01	-0.05	-0.02	0.3
R	61	O	79472	SR	0.25	0.16	0.16	-0.12	-0.03	-0.01	0.3
R	62	O	68251	SR	0.32	0.14	-0.13	0.03	0.14	-0.08	0.2
R	63	O	79495	SR	0.47	0.28	-0.15	-0.16	0.28	-0.05	0.3
R	64	O	136114	SR	0.48	0.32	-0.20	-0.03	-0.19	0.32	0.3
R	65	O	53508	SR	0.56	0.35	0.35	-0.19	-0.16	-0.13	0.3
R	66	O	53488	SR	0.52	0.33	-0.18	-0.15	0.33	-0.11	0.3
R	67	O	68253	SR	0.41	0.34	-0.10	-0.15	-0.17	0.34	0.3
R	68	O	79407	SR	0.52	0.37	0.37	-0.18	-0.20	-0.14	0.2
R	69	O	135597	SR	0.27	0.24	-0.06	-0.12	-0.06	0.24	0.4
R	70	O	136144	SR	0.39	0.24	-0.05	0.24	-0.10	-0.13	0.4
R	74	O	297096	SR	0.30	0.31	-0.06	-0.13	-0.14	0.31	0.3
R	75	O	282451	SR	0.40	0.28	-0.03	0.28	-0.19	-0.13	0.3
R	77	O	67641	SR	0.25	0.14	-0.03	-0.04	-0.05	0.14	0.4
R	78	O	67642	SR	0.47	0.27	-0.15	-0.12	0.27	-0.08	0.3
R	79	O	108532	SR	0.28	0.18	-0.10	-0.14	0.18	0.07	0.3
R	80	O	108531	SR	0.32	0.18	-0.14	0.18	-0.13	0.02	0.3
R	81	O	64984	SR	0.31	0.19	-0.05	-0.01	0.19	-0.14	0.3
R	83	O	52648	SR	0.29	0.21	0.21	-0.06	-0.13	-0.01	0.5
R	84	O	52649	SR	0.35	0.23	-0.16	-0.20	0.02	0.23	0.3
R	86	O	55099	SR	0.66	0.37	-0.17	0.37	-0.20	-0.16	0.3
R	87	O	53459	SR	0.27	0.23	-0.04	-0.08	-0.11	0.23	0.3

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	90	O	297534	SR	0.33	0.16	-0.10	0.04	0.16	-0.16	0.4
R	91	O	297532	SR	0.34	0.23	-0.05	-0.08	0.23	-0.12	0.4
R	92	O	65048	SR	0.32	0.21	0.21	-0.05	-0.07	-0.13	0.5
R	93	O	207713	SR	0.68	0.20	-0.13	-0.09	0.20	-0.08	0.4
R	94	O	214538	SR	0.39	0.28	-0.10	-0.17	0.28	-0.05	0.4
R	95	O	256493	SR	0.26	0.16	-0.07	0.16	-0.07	-0.01	0.5
R	96	O	256491	SR	0.29	0.20	0.20	-0.02	-0.10	-0.08	0.5
R	97	O	60537	SR	0.42	0.22	-0.08	-0.05	-0.14	0.22	0.5
R	98	O	279630	SR	0.31	0.10	0.10	-0.04	-0.10	0.06	0.4
R	99	O	282399	SR	0.39	0.31	0.31	-0.09	-0.16	-0.12	0.5
Mean					0.39	0.22	-0.02	-0.02	-0.03	0.01	0.3
SD					0.14	0.08	0.15	0.15	0.16	0.16	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	96009	SR	0.56	0.28	-0.15	-0.17	0.28	-0.11	0.1
R	2	O	96010	SR	0.55	0.24	0.24	-0.05	-0.17	-0.13	0.0
R	3	O	96011	SR	0.66	0.37	-0.13	-0.21	-0.22	0.37	0.1
R	4	O	96012	SR	0.50	0.23	0.23	-0.01	-0.18	-0.16	0.1
R	5	O	96013	SR	0.33	0.22	0.22	-0.13	-0.09	-0.04	0.2
R	6	O	96175	SR	0.78	0.31	-0.21	-0.23	-0.08	0.31	0.2
R	7	O	96176	SR	0.82	0.33	0.33	-0.16	-0.19	-0.19	0.1
R	8	O	96177	SR	0.66	0.25	-0.24	0.25	-0.21	-0.02	0.1
R	9	O	96178	SR	0.59	0.36	-0.17	0.36	-0.17	-0.23	0.1
R	10	O	96179	SR	0.53	0.32	-0.11	-0.25	-0.11	0.32	0.1
R	11	O	96180	SR	0.66	0.30	-0.15	-0.16	-0.18	0.30	0.1
R	12	O	251148	SR	0.33	0.25	-0.15	-0.16	0.25	0.01	0.2
R	13	O	251146	SR	0.35	0.15	0.15	-0.06	-0.07	-0.05	0.2
R	14	O	251144	SR	0.21	0.09	-0.10	0.09	0.06	-0.04	0.2
R	16	O	223371	SR	0.58	0.36	-0.14	-0.23	0.36	-0.14	0.3
R	17	O	223322	SR	0.29	0.24	-0.04	0.24	-0.16	-0.10	0.3
R	18	O	223323	SR	0.30	0.20	-0.14	0.03	-0.11	0.20	0.3
R	19	O	223325	SR	0.61	0.36	-0.19	-0.14	-0.21	0.36	0.3
R	25	O	95581	SR	0.70	0.37	-0.21	-0.18	0.37	-0.18	0.5
R	26	O	95582	SR	0.40	0.34	-0.24	-0.10	0.34	-0.06	0.6
R	27	O	95583	SR	0.60	0.44	-0.21	-0.24	-0.17	0.44	0.7
R	28	O	95584	SR	0.67	0.39	-0.19	0.39	-0.19	-0.18	0.7

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	29	O	95585	SR	0.36	0.25	0.03	-0.16	-0.17	0.25	1.1
R	30	O	95586	SR	0.51	0.33	0.33	-0.22	-0.24	0.01	1.2
R	31	O	95587	SR	0.49	0.26	-0.09	0.26	-0.12	-0.12	1.4
R	32	O	95588	SR	0.52	0.43	-0.13	-0.21	-0.26	0.43	1.5
R	33	O	130139	SR	0.45	0.17	0.03	-0.23	0.17	-0.09	0.3
R	34	O	130277	SR	0.46	0.27	-0.07	-0.15	-0.11	0.27	0.2
R	35	O	96045	SR	0.28	0.16	0.16	-0.06	-0.07	-0.04	0.3
R	47	O	281767	SR	0.36	0.14	-0.16	-0.06	0.14	0.01	0.4
R	48	O	281766	SR	0.60	0.16	0.16	-0.03	-0.11	-0.08	0.3
R	49	O	281765	SR	0.30	0.16	-0.02	-0.13	0.16	0.00	0.4
R	61	O	130130	SR	0.27	0.23	0.23	-0.18	-0.20	0.09	0.9
R	62	O	130132	SR	0.51	0.30	0.30	-0.11	-0.16	-0.10	1.1
R	63	O	130136	SR	0.54	0.32	-0.14	-0.14	0.32	-0.15	1.0
R	64	O	130133	SR	0.37	0.26	-0.03	-0.11	-0.20	0.26	1.1
R	65	O	130294	SR	0.64	0.34	-0.18	-0.18	0.34	-0.13	1.2
R	66	O	130293	SR	0.58	0.38	-0.15	-0.24	0.38	-0.17	1.2
R	67	O	130135	SR	0.44	0.20	-0.03	-0.15	0.20	-0.12	1.2
R	68	O	256294	SR	0.70	0.33	-0.15	-0.24	0.33	-0.10	0.5
R	69	O	251223	SR	0.27	0.19	0.00	-0.08	-0.10	0.19	0.5
R	70	O	251224	SR	0.34	0.19	-0.11	-0.05	0.19	-0.06	0.4
R	71	O	251225	SR	0.21	0.20	0.20	0.00	-0.13	-0.02	0.5
R	72	O	251226	SR	0.32	0.25	-0.03	-0.18	0.25	-0.06	0.4
R	73	O	251227	SR	0.51	0.30	-0.12	0.30	-0.21	-0.09	0.5
R	76	O	130977	SR	0.41	0.35	0.35	-0.11	-0.20	-0.11	0.5
R	77	O	130978	SR	0.57	0.31	-0.16	0.31	-0.21	-0.04	0.7
R	78	O	130979	SR	0.54	0.29	0.29	-0.09	-0.12	-0.18	0.5
R	79	O	130982	SR	0.61	0.42	-0.19	0.42	-0.25	-0.14	0.5
R	80	O	130984	SR	0.57	0.42	-0.17	-0.22	-0.17	0.42	0.5
R	81	O	130985	SR	0.53	0.42	-0.14	-0.21	0.42	-0.21	0.5
R	82	O	130965	SR	0.54	0.29	-0.18	0.29	-0.21	-0.01	0.5
R	83	O	130980	SR	0.35	0.21	-0.14	-0.13	0.21	0.03	0.5
R	84	O	130966	SR	0.31	0.29	0.02	-0.17	-0.17	0.29	0.5
R	85	O	130967	SR	0.39	0.22	-0.03	0.22	-0.15	-0.07	0.5
R	86	O	285599	SR	0.43	0.20	-0.16	0.20	-0.11	0.05	0.5
R	87	O	285600	SR	0.41	0.22	-0.11	-0.17	0.22	0.03	0.6
R	88	O	285601	SR	0.39	0.30	0.01	-0.15	-0.24	0.30	0.6
R	97	O	108720	SR	0.19	0.07	0.07	-0.13	0.12	-0.07	0.8
R	98	O	108721	SR	0.43	0.14	-0.05	0.02	-0.15	0.14	0.8
Mean					0.47	0.27	-0.04	-0.06	-0.02	0.02	0.5
SD					0.15	0.09	0.17	0.18	0.21	0.19	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.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	106628	SR	0.62	0.28	-0.13	0.28	-0.18	-0.11	0.0
A-B	2	O	106648	SR	0.48	0.27	-0.14	-0.16	0.27	-0.04	0.8
A-B	4	O	322003	SR	0.58	0.34	-0.12	0.34	-0.19	-0.17	0.2
A-B	5	L	338630	SR	0.36	0.35	0.35	-0.13	-0.21	-0.11	0.2
A-B	7	O	268686	SPR	0.11	0.43	0.43	-0.32			3.7
A-B	8	L	211044	SR	0.52	0.18	-0.10	-0.18	0.18	-0.03	0.2
A-B	9	L	275456	SR	0.22	0.27	-0.11	-0.08	-0.07	0.27	0.6
A-B	11	L	51411	SR	0.55	0.28	-0.07	0.28	-0.15	-0.17	0.1
A-B	12	L	135106	SR	0.25	0.23	-0.17	0.10	-0.17	0.23	0.3
A-B	13	O	263280	SR	0.40	0.42	-0.19	-0.15	-0.17	0.42	0.5
A-B	15	L	54863	SR	0.55	0.41	0.41	-0.19	-0.23	-0.17	0.2
A-B	16	O	319409	SR	0.33	0.21	-0.06	0.21	-0.15	-0.02	0.5
A-B	17	L	54864	SR	0.63	0.46	0.46	-0.27	-0.24	-0.15	0.4
A-B	18	L	215933	SPR	0.50	0.48	0.48	-0.42			4.4
A-B	19	O	263289	SPR	0.20	0.40	0.40	-0.28			6.5
A-B	21	O	260759	SR	0.20	0.43	-0.16	-0.19	-0.04	0.43	1.1
A-B	22	L	106603	SR	0.19	0.15	0.15	0.03	-0.09	-0.06	1.4
A-B	23	O	51427	SR	0.55	0.39	0.39	-0.18	-0.20	-0.15	1.6
A-B	24	L	257133	SR	0.66	0.40	-0.22	-0.26	-0.12	0.40	0.2
A-B	26	L	319434	SR	0.59	0.43	-0.22	0.43	-0.22	-0.17	0.3
A-B	27	O	348358	SR	0.31	0.21	0.21	-0.18	-0.19	0.11	0.4
A-B	28	L	79053	SR	0.67	0.33	-0.11	-0.22	0.33	-0.15	0.5
A-B	29	O	322115	SPR	0.14	0.41	0.41	-0.31			3.7
A-B	31	L	215929	SPR	0.39	0.46	0.46	-0.38			4.5
A-B	32	L	328732	SR	0.34	0.18	-0.03	-0.14	0.18	-0.02	0.5
A-B	33	L	319450	SR	0.28	0.17	-0.13	0.17	0.03	-0.14	0.6
A-B	35	O	54902	SR	0.35	0.34	-0.18	-0.05	-0.19	0.34	0.3
A-B	37	L	106576	SR	0.25	0.15	-0.01	0.15	-0.08	-0.04	0.5
A-B	38	L	52342	SR	0.46	0.29	-0.13	0.29	-0.12	-0.13	0.5
A-B	40	L	348318	SR	0.70	0.37	-0.24	-0.16	0.37	-0.13	0.4
A-B	42	O	319448	SPR	0.11	0.43	0.43	-0.27			8.5
A-B	43	O	319437	SPR	0.34	0.48	0.48	-0.39			7.0
A-B	44	O	223334	SR	0.27	0.18	0.18	-0.02	-0.09	-0.07	0.8
A-B	45	O	328761	SR	0.38	0.18	-0.14	0.18	-0.03	-0.06	0.9
A-B	46	L	328778	SR	0.57	0.39	-0.18	-0.20	-0.16	0.39	1.0
A-B	47	O	348314	SR	0.64	0.31	-0.17	0.31	-0.21	-0.09	0.4
A-B	49	L	51401	SR	0.82	0.34	-0.16	-0.18	-0.20	0.34	0.3
A-B	50	O	268745	SR	0.48	0.34	0.34	-0.17	-0.15	-0.11	0.4
A-B	52	L	79109	SR	0.25	0.24	-0.10	-0.15	-0.02	0.24	0.6
A-B	53	O	54772	SR	0.48	0.22	-0.08	-0.18	0.22	-0.04	0.4
A-B	54	O	338679	SR	0.34	0.15	-0.10	0.15	0.03	-0.11	0.5
A-B	55	O	338663	SPR	0.09	0.44	0.44	-0.29			4.8
A-B	57	L	268744	SR	0.31	0.34	0.34	-0.15	-0.03	-0.19	0.3

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	58	L	132825	SR	0.38	0.16	-0.06	-0.06	0.16	-0.06	0.5
A-B	59	L	328762	SR	0.33	0.23	0.23	-0.10	-0.05	-0.13	0.5
A-B	60	L	54889	SR	0.24	0.40	-0.18	-0.13	-0.09	0.40	0.4
A-B	62	L	106642	SR	0.24	0.32	-0.14	-0.09	-0.08	0.32	0.5
A-B	64	L	319460	SPR	0.29	0.50	0.50	-0.39			5.4
A-B	65	O	268720	SPR	0.55	0.41	0.41	-0.35			4.3
A-B	66	O	348319	SR	0.49	0.34	0.34	-0.11	-0.20	-0.13	0.5
A-B	67	L	43218	SR	0.44	0.35	-0.13	-0.12	-0.19	0.35	0.6
A-B	68	L	328718	SR	0.26	0.17	-0.12	-0.04	0.17	-0.01	0.5
A-B	69	L	338676	SR	0.40	0.26	-0.13	0.26	-0.10	-0.09	0.7
Mean					0.40	0.32	0.07	-0.08	-0.06	0.03	1.4
SD					0.17	0.10	0.26	0.21	0.16	0.21	2.0

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.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	106628	SR	0.62	0.28	-0.13	0.28	-0.18	-0.11	0.0
C	2	O	133393	SR	0.50	0.26	-0.14	-0.13	0.26	-0.09	0.1
C	4	O	319410	SR	0.28	0.32	-0.07	0.32	-0.19	-0.07	0.1
C	5	L	338630	SR	0.36	0.35	0.35	-0.13	-0.21	-0.11	0.2
C	7	O	263286	SPR	0.09	0.39	0.39	-0.30			2.3
C	8	L	211044	SR	0.52	0.18	-0.10	-0.18	0.18	-0.03	0.2
C	9	L	275456	SR	0.22	0.27	-0.11	-0.08	-0.07	0.27	0.6
C	11	L	51411	SR	0.55	0.28	-0.07	0.28	-0.15	-0.17	0.1
C	12	L	135106	SR	0.25	0.23	-0.17	0.10	-0.17	0.23	0.3
C	13	O	282378	SR	0.51	0.31	-0.10	-0.12	-0.21	0.31	0.1
C	15	L	54863	SR	0.55	0.41	0.41	-0.19	-0.23	-0.17	0.2
C	16	O	348336	SR	0.50	0.25	-0.14	0.25	-0.16	-0.02	0.2
C	17	L	54864	SR	0.63	0.46	0.46	-0.27	-0.24	-0.15	0.4
C	18	L	215933	SPR	0.50	0.48	0.48	-0.42			4.4
C	19	O	260752	SPR	0.55	0.50	0.50	-0.45			3.3
C	21	O	56440	SR	0.60	0.29	-0.16	0.29	-0.17	-0.11	0.8
C	22	L	106603	SR	0.19	0.15	0.15	0.03	-0.09	-0.06	1.4
C	23	O	348438	SR	0.55	0.30	-0.09	-0.22	0.30	-0.13	1.3
C	24	L	257133	SR	0.66	0.40	-0.22	-0.26	-0.12	0.40	0.2
C	26	L	319434	SR	0.59	0.43	-0.22	0.43	-0.22	-0.17	0.3
C	27	O	51414	SR	0.39	0.37	0.37	-0.13	-0.22	-0.09	0.3

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	28	L	79053	SR	0.67	0.33	-0.11	-0.22	0.33	-0.15	0.5
C	29	O	322117	SPR	0.06	0.29	0.29	-0.19			4.1
C	31	L	215929	SPR	0.39	0.46	0.46	-0.38			4.5
C	32	L	328732	SR	0.34	0.18	-0.03	-0.14	0.18	-0.02	0.5
C	33	L	319450	SR	0.28	0.17	-0.13	0.17	0.03	-0.14	0.6
C	35	O	79032	SR	0.45	0.12	-0.04	0.12	-0.07	-0.04	0.5
C	37	L	106576	SR	0.25	0.15	-0.01	0.15	-0.08	-0.04	0.5
C	38	L	52342	SR	0.46	0.29	-0.13	0.29	-0.12	-0.13	0.5
C	40	L	348318	SR	0.70	0.37	-0.24	-0.16	0.37	-0.13	0.4
C	42	O	338667	SPR	0.06	0.22	0.22	-0.09			4.5
C	43	O	106614	SPR	0.36	0.53	0.53	-0.47			2.7
C	44	O	106656	SR	0.46	0.35	-0.15	0.35	-0.18	-0.10	0.7
C	45	O	328708	SR	0.53	0.24	-0.03	-0.12	0.24	-0.18	0.7
C	46	L	328778	SR	0.57	0.39	-0.18	-0.20	-0.16	0.39	1.0
C	47	O	133413	SR	0.44	0.18	-0.07	-0.11	0.18	-0.04	0.4
C	49	L	51401	SR	0.82	0.34	-0.16	-0.18	-0.20	0.34	0.3
C	50	O	106552	SR	0.46	0.32	-0.13	-0.17	0.32	-0.15	0.2
C	52	L	79109	SR	0.25	0.24	-0.10	-0.15	-0.02	0.24	0.6
C	53	O	338677	SR	0.39	0.24	-0.07	0.24	-0.14	-0.09	0.3
C	54	O	338658	SR	0.19	0.11	0.11	-0.04	0.04	-0.13	0.4
C	55	O	255080	SPR	0.26	0.40	0.40	-0.34			2.3
C	57	L	268744	SR	0.31	0.34	0.34	-0.15	-0.03	-0.19	0.3
C	58	L	132825	SR	0.38	0.16	-0.06	-0.06	0.16	-0.06	0.5
C	59	L	328762	SR	0.33	0.23	0.23	-0.10	-0.05	-0.13	0.5
C	60	L	54889	SR	0.24	0.40	-0.18	-0.13	-0.09	0.40	0.4
C	62	L	106642	SR	0.24	0.32	-0.14	-0.09	-0.08	0.32	0.5
C	64	L	319460	SPR	0.29	0.50	0.50	-0.39			5.4
C	65	O	328724	SPR	0.08	0.34	0.34	-0.21			5.0
C	66	O	211019	SR	0.50	0.39	0.39	-0.21	-0.18	-0.12	0.3
C	67	L	43218	SR	0.44	0.35	-0.13	-0.12	-0.19	0.35	0.6
C	68	L	328718	SR	0.26	0.17	-0.12	-0.04	0.17	-0.01	0.5
C	69	L	338676	SR	0.40	0.26	-0.13	0.26	-0.10	-0.09	0.7
Mean					0.41	0.31	0.05	-0.07	-0.04	0.00	1.1
SD					0.17	0.10	0.25	0.22	0.18	0.19	1.4

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.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	223449	SR	0.81	0.36	-0.20	-0.20	0.36	-0.18	0.1
A-B	2	O	223450	SR	0.68	0.44	-0.21	-0.29	-0.17	0.44	0.0
A-B	3	L	323288	SR	0.57	0.47	-0.15	-0.26	-0.25	0.47	0.0
A-B	4	L	323287	SR	0.36	0.34	-0.22	0.34	-0.02	-0.15	0.1
A-B	6	O	133059	SR	0.54	0.46	-0.22	0.46	-0.24	-0.19	0.1
A-B	7	O	54988	SR	0.49	0.54	-0.19	-0.33	-0.18	0.54	0.1
A-B	8	L	338714	SR	0.59	0.40	0.40	-0.22	-0.21	-0.14	0.1
A-B	9	O	338713	SR	0.39	0.33	-0.25	-0.12	-0.06	0.33	0.1
A-B	10	O	52552	SR	0.55	0.51	-0.21	-0.25	-0.25	0.51	0.2
A-B	14	O	331307	SR	0.57	0.44	-0.20	-0.25	0.44	-0.17	0.2
A-B	15	L	331304	SR	0.63	0.49	-0.22	0.49	-0.27	-0.21	0.2
A-B	16	O	79458	SR	0.43	0.49	0.49	-0.19	-0.30	-0.11	0.2
A-B	17	O	57029	SR	0.41	0.41	0.41	-0.24	-0.10	-0.17	0.3
A-B	18	L	271056	SR	0.69	0.21	-0.06	-0.27	0.21	0.05	0.1
A-B	19	O	214545	SR	0.46	0.49	-0.19	-0.20	-0.25	0.49	0.2
A-B	22	O	322164	SR	0.34	0.31	-0.10	0.31	-0.17	-0.08	0.2
A-B	23	L	322163	SR	0.40	0.50	-0.10	-0.25	-0.28	0.50	0.3
A-B	24	O	322175	SR	0.47	0.50	0.50	-0.32	-0.17	-0.16	0.3
A-B	25	O	79484	SR	0.40	0.43	-0.19	0.43	-0.21	-0.13	0.3
A-B	26	O	332083	SR	0.50	0.47	-0.22	-0.28	0.47	-0.12	0.4
A-B	27	L	332081	SR	0.47	0.34	-0.12	0.34	-0.17	-0.15	0.4
A-B	28	L	218479	SR	0.42	0.51	0.51	-0.17	-0.29	-0.18	0.5
A-B	29	L	218480	SR	0.38	0.58	-0.12	-0.34	-0.23	0.58	0.5
A-B	31	L	108514	SR	0.50	0.51	0.51	-0.29	-0.28	-0.11	0.5
A-B	32	O	108521	SR	0.51	0.57	-0.22	0.57	-0.29	-0.27	0.6
A-B	33	L	55004	SR	0.55	0.49	-0.26	0.49	-0.21	-0.19	0.7
A-B	34	L	68110	SR	0.78	0.40	0.40	-0.23	-0.25	-0.14	0.2
A-B	35	O	67660	SR	0.54	0.44	-0.21	-0.20	-0.21	0.44	0.2
A-B	36	L	323296	SR	0.35	0.33	0.06	-0.20	-0.22	0.33	0.3
A-B	37	L	323294	SR	0.67	0.42	-0.24	0.42	-0.21	-0.19	0.2
A-B	39	L	55265	SR	0.26	0.18	0.18	-0.03	-0.03	-0.12	0.2
A-B	43	L	57024	SR	0.58	0.46	-0.21	-0.29	0.46	-0.13	0.2
A-B	44	O	56978	SR	0.40	0.40	0.40	-0.13	-0.25	-0.10	0.3
A-B	45	O	52754	SR	0.80	0.36	-0.20	0.36	-0.21	-0.16	0.2
A-B	46	L	352590	SR	0.53	0.35	-0.03	0.35	-0.26	-0.21	0.2
A-B	49	L	133015	SR	0.47	0.44	-0.18	-0.20	-0.23	0.44	0.3
A-B	50	L	133016	SR	0.37	0.45	-0.18	-0.17	-0.19	0.45	0.3
A-B	51	O	57142	SR	0.21	0.30	0.30	0.07	-0.19	-0.16	0.3
A-B	52	L	55149	SR	0.49	0.39	-0.20	-0.10	-0.23	0.39	0.3
A-B	53	O	136132	SR	0.54	0.51	0.51	-0.26	-0.29	-0.15	0.3
A-B	54	L	136134	SR	0.38	0.26	-0.11	-0.05	0.26	-0.17	0.3
A-B	55	O	68147	SR	0.42	0.52	-0.18	-0.16	-0.29	0.52	0.4
A-B	56	O	214530	SR	0.26	0.30	0.30	-0.16	-0.01	-0.16	0.4
A-B	59	L	64743	SR	0.76	0.38	0.38	-0.25	-0.17	-0.14	0.3

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	60	O	64744	SR	0.43	0.49	-0.19	0.49	-0.31	-0.13	0.4
A-B	61	L	68197	SR	0.51	0.21	0.21	-0.16	-0.23	0.07	0.4
A-B	62	L	53449	SR	0.57	0.49	-0.16	0.49	-0.26	-0.27	0.4
A-B	63	L	256479	SR	0.67	0.49	-0.19	0.49	-0.25	-0.29	0.4
A-B	64	L	256481	SR	0.50	0.46	-0.08	-0.18	-0.31	0.46	0.4
A-B	65	L	279622	SR	0.36	0.41	0.41	-0.15	-0.11	-0.22	0.4
A-B	66	O	65126	SR	0.53	0.50	0.50	-0.24	-0.20	-0.24	0.5
A-B	67	L	256531	SR	0.74	0.44	-0.28	-0.22	0.44	-0.17	0.3
A-B	68	L	256534	SR	0.69	0.45	-0.22	-0.24	-0.22	0.45	0.3
A-B	69	L	263152	SR	0.40	0.25	0.25	0.02	-0.22	-0.14	0.3
A-B	70	O	55016	SR	0.47	0.43	-0.23	-0.26	0.43	-0.08	0.3
A-B	74	L	323308	SR	0.45	0.54	-0.19	-0.29	0.54	-0.21	0.3
A-B	75	L	323307	SR	0.74	0.44	-0.26	-0.17	-0.23	0.44	0.3
A-B	76	O	64718	SR	0.46	0.47	-0.19	-0.23	0.47	-0.18	0.3
A-B	77	O	271117	SR	0.36	0.39	-0.10	-0.13	-0.23	0.39	0.3
A-B	78	L	68207	SR	0.47	0.44	-0.20	-0.25	0.44	-0.15	0.3
A-B	79	O	68208	SR	0.43	0.39	-0.05	-0.29	0.39	-0.16	0.4
A-B	80	L	64701	SR	0.52	0.46	-0.17	-0.25	0.46	-0.19	0.3
A-B	82	L	64739	SR	0.55	0.41	-0.16	-0.23	0.41	-0.17	0.3
A-B	83	L	52577	SR	0.63	0.45	-0.21	0.45	-0.27	-0.20	0.4
A-B	86	L	52463	SR	0.67	0.47	0.47	-0.24	-0.26	-0.20	0.4
A-B	87	L	352586	SR	0.76	0.36	-0.24	0.36	-0.19	-0.13	0.3
A-B	88	O	320458	SR	0.65	0.35	-0.12	0.35	-0.27	-0.09	0.3
A-B	89	L	320455	SR	0.41	0.36	-0.21	-0.07	-0.19	0.36	0.3
A-B	91	L	65142	SR	0.58	0.42	-0.17	-0.23	0.42	-0.19	0.3
A-B	92	L	331294	SR	0.46	0.36	-0.17	0.36	-0.24	-0.05	0.4
A-B	93	O	331295	SR	0.37	0.24	-0.11	-0.14	0.24	-0.01	0.5
A-B	95	L	67692	SR	0.41	0.42	-0.10	0.42	-0.25	-0.18	0.4
A-B	96	O	175495	SR	0.34	0.18	0.18	-0.13	0.03	-0.09	0.4
A-B	97	L	349116	SR	0.62	0.38	-0.22	-0.21	0.38	-0.16	0.4
A-B	98	L	349027	SR	0.27	0.32	-0.12	-0.16	0.32	-0.03	0.5
A-B	99	L	349028	SR	0.37	0.57	-0.16	-0.24	-0.26	0.57	0.5
Mean					0.50	0.42	-0.03	-0.05	-0.07	0.01	0.3
SD					0.14	0.09	0.26	0.28	0.27	0.28	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	223449	SR	0.81	0.36	-0.20	-0.20	0.36	-0.18	0.1
C	2	O	223451	SR	0.71	0.40	-0.22	0.40	-0.20	-0.19	0.0
C	3	L	323288	SR	0.57	0.47	-0.15	-0.26	-0.25	0.47	0.0
C	4	L	323287	SR	0.36	0.34	-0.22	0.34	-0.02	-0.15	0.1
C	6	O	67647	SR	0.21	0.26	-0.05	0.26	-0.05	-0.15	0.1
C	7	O	349097	SR	0.49	0.55	0.55	-0.24	-0.22	-0.30	0.1
C	8	L	338714	SR	0.59	0.40	0.40	-0.22	-0.21	-0.14	0.1
C	9	O	338712	SR	0.41	0.53	-0.03	0.53	-0.35	-0.24	0.0
C	10	O	52608	SR	0.55	0.44	-0.25	-0.26	0.44	-0.10	0.0
C	14	O	331305	SR	0.42	0.51	0.51	-0.23	-0.21	-0.21	0.3
C	15	L	331304	SR	0.63	0.49	-0.22	0.49	-0.27	-0.21	0.2
C	16	O	214536	SR	0.46	0.42	0.42	-0.13	-0.28	-0.17	0.1
C	17	O	79520	SR	0.46	0.44	-0.16	-0.20	-0.21	0.44	0.1
C	18	L	271056	SR	0.69	0.21	-0.06	-0.27	0.21	0.05	0.1
C	19	O	67684	SR	0.57	0.37	-0.14	-0.21	0.37	-0.16	0.4
C	22	O	322165	SR	0.42	0.42	0.42	-0.19	-0.22	-0.14	0.3
C	23	L	322163	SR	0.40	0.50	-0.10	-0.25	-0.28	0.50	0.3
C	24	O	279612	SR	0.40	0.54	-0.26	-0.21	0.54	-0.22	0.3
C	25	O	68178	SR	0.25	0.32	0.06	-0.21	-0.22	0.32	0.3
C	26	O	332082	SR	0.37	0.54	0.54	-0.23	-0.24	-0.16	0.4
C	27	L	332081	SR	0.47	0.34	-0.12	0.34	-0.17	-0.15	0.4
C	28	L	218479	SR	0.42	0.51	0.51	-0.17	-0.29	-0.18	0.5
C	29	L	218480	SR	0.38	0.58	-0.12	-0.34	-0.23	0.58	0.5
C	31	L	108514	SR	0.50	0.51	0.51	-0.29	-0.28	-0.11	0.5
C	32	O	79490	SR	0.42	0.47	-0.20	0.47	-0.24	-0.13	0.7
C	33	L	55004	SR	0.55	0.49	-0.26	0.49	-0.21	-0.19	0.7
C	34	L	68110	SR	0.78	0.40	0.40	-0.23	-0.25	-0.14	0.2
C	35	O	214524	SR	0.61	0.45	-0.19	0.45	-0.22	-0.24	0.1
C	36	L	323296	SR	0.35	0.33	0.06	-0.20	-0.22	0.33	0.3
C	37	L	323294	SR	0.67	0.42	-0.24	0.42	-0.21	-0.19	0.2
C	39	L	55265	SR	0.26	0.18	0.18	-0.03	-0.03	-0.12	0.2
C	43	L	57024	SR	0.58	0.46	-0.21	-0.29	0.46	-0.13	0.2
C	44	O	55152	SR	0.61	0.50	-0.19	-0.29	0.50	-0.23	0.1
C	45	O	79401	SR	0.44	0.28	0.05	-0.26	0.28	-0.23	0.1
C	46	L	352590	SR	0.53	0.35	-0.03	0.35	-0.26	-0.21	0.2
C	49	L	133015	SR	0.47	0.44	-0.18	-0.20	-0.23	0.44	0.3
C	50	L	133016	SR	0.37	0.45	-0.18	-0.17	-0.19	0.45	0.3
C	51	O	79481	SR	0.38	0.23	-0.17	-0.10	0.23	-0.02	0.1
C	52	L	55149	SR	0.49	0.39	-0.20	-0.10	-0.23	0.39	0.3
C	53	O	136133	SR	0.48	0.36	-0.07	-0.25	-0.16	0.36	0.2
C	54	L	136134	SR	0.38	0.26	-0.11	-0.05	0.26	-0.17	0.3
C	55	O	67681	SR	0.40	0.49	-0.18	-0.27	-0.14	0.49	0.2
C	56	O	68285	SR	0.53	0.37	-0.09	0.37	-0.22	-0.19	0.3

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	59	L	64743	SR	0.76	0.38	0.38	-0.25	-0.17	-0.14	0.3
C	60	O	64745	SR	0.55	0.48	-0.30	0.48	-0.23	-0.12	0.2
C	61	L	68197	SR	0.51	0.21	0.21	-0.16	-0.23	0.07	0.4
C	62	L	53449	SR	0.57	0.49	-0.16	0.49	-0.26	-0.27	0.4
C	63	L	256479	SR	0.67	0.49	-0.19	0.49	-0.25	-0.29	0.4
C	64	L	256481	SR	0.50	0.46	-0.08	-0.18	-0.31	0.46	0.4
C	65	L	279622	SR	0.36	0.41	0.41	-0.15	-0.11	-0.22	0.4
C	66	O	67675	SR	0.59	0.51	-0.22	-0.27	-0.24	0.51	0.2
C	67	L	256531	SR	0.74	0.44	-0.28	-0.22	0.44	-0.17	0.3
C	68	L	256534	SR	0.69	0.45	-0.22	-0.24	-0.22	0.45	0.3
C	69	L	263152	SR	0.40	0.25	0.25	0.02	-0.22	-0.14	0.3
C	70	O	57070	SR	0.40	0.49	-0.24	-0.24	-0.14	0.49	0.1
C	74	L	323308	SR	0.45	0.54	-0.19	-0.29	0.54	-0.21	0.3
C	75	L	323307	SR	0.74	0.44	-0.26	-0.17	-0.23	0.44	0.3
C	76	O	64721	SR	0.45	0.38	-0.17	-0.17	0.38	-0.14	0.2
C	77	O	108646	SR	0.50	0.38	-0.19	0.38	-0.22	-0.09	0.1
C	78	L	68207	SR	0.47	0.44	-0.20	-0.25	0.44	-0.15	0.3
C	79	O	68209	SR	0.55	0.55	0.55	-0.26	-0.31	-0.19	0.2
C	80	L	64701	SR	0.52	0.46	-0.17	-0.25	0.46	-0.19	0.3
C	82	L	64739	SR	0.55	0.41	-0.16	-0.23	0.41	-0.17	0.3
C	83	L	52577	SR	0.63	0.45	-0.21	0.45	-0.27	-0.20	0.4
C	86	L	52463	SR	0.67	0.47	0.47	-0.24	-0.26	-0.20	0.4
C	87	L	352586	SR	0.76	0.36	-0.24	0.36	-0.19	-0.13	0.3
C	88	O	320457	SR	0.34	0.52	0.52	-0.30	-0.16	-0.14	0.4
C	89	L	320455	SR	0.41	0.36	-0.21	-0.07	-0.19	0.36	0.3
C	91	L	65142	SR	0.58	0.42	-0.17	-0.23	0.42	-0.19	0.3
C	92	L	331294	SR	0.46	0.36	-0.17	0.36	-0.24	-0.05	0.4
C	93	O	331293	SR	0.35	0.55	-0.12	-0.25	-0.24	0.55	0.4
C	95	L	67692	SR	0.41	0.42	-0.10	0.42	-0.25	-0.18	0.4
C	96	O	65127	SR	0.51	0.42	-0.21	0.42	-0.20	-0.17	0.4
C	97	L	349116	SR	0.62	0.38	-0.22	-0.21	0.38	-0.16	0.4
C	98	L	349027	SR	0.27	0.32	-0.12	-0.16	0.32	-0.03	0.5
C	99	L	349028	SR	0.37	0.57	-0.16	-0.24	-0.26	0.57	0.5
Mean					0.50	0.42	-0.03	-0.04	-0.07	-0.01	0.3
SD					0.13	0.09	0.26	0.29	0.27	0.28	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	O	130066	SR	0.70	0.27	-0.04	0.27	-0.05	-0.25	0.0
A-B	2	O	130067	SR	0.35	0.43	-0.26	-0.18	0.43	-0.08	0.0
A-B	3	O	130069	SR	0.48	0.38	-0.22	-0.09	-0.18	0.38	0.1
A-B	4	O	130074	SR	0.59	0.35	-0.18	0.35	-0.23	-0.13	0.0
A-B	5	O	256286	SR	0.70	0.32	-0.13	-0.19	0.32	-0.19	0.1
A-B	6	O	130199	SR	0.74	0.35	0.35	-0.24	-0.20	-0.12	0.1
A-B	12	O	96027	SR	0.46	0.35	-0.18	-0.21	-0.15	0.35	0.1
A-B	13	O	96028	SR	0.59	0.43	0.43	-0.23	-0.23	-0.15	0.1
A-B	14	O	96029	SR	0.39	0.39	0.39	-0.21	-0.20	-0.07	0.2
A-B	24	O	256303	SR	0.69	0.45	-0.24	-0.22	0.45	-0.21	0.3
A-B	25	L	256416	SR	0.64	0.44	-0.21	0.44	-0.23	-0.22	0.3
A-B	26	L	272879	SR	0.57	0.43	0.43	-0.25	-0.13	-0.23	0.4
A-B	27	O	285489	SR	0.54	0.47	0.47	-0.22	-0.20	-0.23	0.8
A-B	28	O	285488	SR	0.69	0.47	-0.26	0.47	-0.25	-0.21	0.7
A-B	29	O	285491	SR	0.41	0.43	0.43	-0.17	-0.23	-0.11	0.9
A-B	30	O	285494	SR	0.38	0.47	-0.22	0.47	-0.22	-0.19	0.9
A-B	31	O	285612	SR	0.47	0.39	-0.19	-0.24	0.39	-0.09	1.0
A-B	32	O	285492	SR	0.54	0.45	-0.27	-0.11	-0.25	0.45	1.1
A-B	33	O	349416	SR	0.71	0.35	-0.20	-0.20	0.35	-0.14	0.2
A-B	34	O	96382	SR	0.94	0.33	-0.18	0.33	-0.20	-0.16	0.1
A-B	35	O	130048	SR	0.59	0.35	-0.16	-0.16	0.35	-0.17	0.2
A-B	37	L	108806	SR	0.64	0.41	-0.20	-0.17	-0.24	0.41	0.2
A-B	38	L	108808	SR	0.53	0.19	-0.08	0.19	-0.07	-0.13	0.2
A-B	39	L	108779	SR	0.71	0.43	-0.22	-0.25	0.43	-0.19	0.2
A-B	40	L	108809	SR	0.35	0.32	-0.23	-0.07	0.32	-0.13	0.2
A-B	41	L	108805	SR	0.56	0.43	0.43	-0.25	-0.20	-0.15	0.1
A-B	42	L	130246	SR	0.45	0.42	-0.15	-0.27	-0.11	0.42	0.1
A-B	43	L	108810	SR	0.64	0.33	-0.20	-0.19	0.33	-0.12	0.2
A-B	44	L	109093	SR	0.38	0.18	-0.08	0.18	-0.11	-0.01	0.1
A-B	45	L	109094	SR	0.56	0.35	-0.15	-0.13	-0.24	0.35	0.2
A-B	46	L	109732	SR	0.47	0.33	-0.24	0.33	-0.06	-0.19	0.2
A-B	47	L	109095	SR	0.40	0.27	-0.10	0.27	-0.08	-0.20	0.2
A-B	48	L	109096	SR	0.49	0.42	-0.20	-0.19	-0.17	0.42	0.2
A-B	49	L	175704	SR	0.66	0.47	-0.24	-0.27	0.47	-0.19	0.2
A-B	50	L	175705	SR	0.30	0.30	0.30	-0.12	-0.05	-0.19	0.2
A-B	51	L	175707	SR	0.38	0.26	-0.05	-0.22	-0.16	0.26	0.2
A-B	52	L	175708	SR	0.70	0.32	-0.23	-0.24	0.32	-0.08	0.2
A-B	56	L	130142	SR	0.60	0.36	-0.20	-0.16	0.36	-0.15	0.4
A-B	57	L	130143	SR	0.60	0.36	-0.06	-0.23	0.36	-0.21	0.4
A-B	58	L	130144	SR	0.60	0.48	-0.25	-0.22	-0.22	0.48	0.4
A-B	59	L	130145	SR	0.38	0.30	-0.05	-0.23	-0.07	0.30	0.3
A-B	60	L	130146	SR	0.74	0.45	-0.20	-0.20	-0.28	0.45	0.4
A-B	61	L	130147	SR	0.58	0.49	0.49	-0.25	-0.25	-0.19	0.5
A-B	62	L	130148	SR	0.58	0.39	0.39	-0.15	-0.20	-0.22	0.5

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	63	L	130150	SR	0.75	0.51	-0.24	-0.27	-0.28	0.51	0.5
A-B	64	L	130151	SR	0.40	0.33	0.33	-0.09	-0.21	-0.18	0.5
A-B	65	L	130152	SR	0.38	0.41	-0.19	-0.10	-0.22	0.41	0.6
A-B	66	O	264652	SR	0.50	0.38	-0.18	-0.26	0.38	-0.07	0.2
A-B	67	O	264653	SR	0.51	0.44	0.44	-0.16	-0.27	-0.17	0.2
A-B	68	O	355150	SR	0.79	0.46	-0.22	-0.26	-0.25	0.46	0.2
A-B	69	L	130173	SR	0.72	0.35	0.35	-0.24	-0.17	-0.12	0.2
A-B	70	L	130174	SR	0.52	0.48	-0.15	0.48	-0.26	-0.22	0.3
A-B	71	L	130280	SR	0.57	0.42	0.42	-0.25	-0.25	-0.13	0.3
A-B	72	L	135492	SR	0.45	0.31	0.31	-0.22	-0.08	-0.08	0.2
A-B	73	L	130175	SR	0.64	0.48	-0.18	0.48	-0.25	-0.27	0.3
A-B	74	L	130176	SR	0.71	0.46	0.46	-0.23	-0.27	-0.18	0.3
A-B	75	L	130177	SR	0.68	0.41	-0.21	-0.23	0.41	-0.19	0.3
A-B	76	L	130178	SR	0.62	0.40	0.40	-0.25	-0.17	-0.16	0.3
A-B	97	O	256979	SR	0.37	0.21	-0.15	0.01	0.21	-0.09	0.6
A-B	98	O	256980	SR	0.22	0.22	0.22	-0.12	-0.14	0.03	0.7
Mean					0.56	0.38	-0.01	-0.09	-0.04	-0.03	0.3
SD					0.14	0.08	0.27	0.23	0.26	0.25	0.2

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.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	O	130230	SR	0.39	0.29	-0.13	0.29	-0.06	-0.20	0.1
C	2	O	130231	SR	0.80	0.34	-0.22	-0.17	-0.16	0.34	0.0
C	3	O	130233	SR	0.26	0.17	-0.11	-0.17	-0.01	0.17	0.1
C	4	O	130232	SR	0.60	0.30	0.30	-0.20	-0.22	-0.04	0.0
C	5	O	130234	SR	0.77	0.36	0.36	-0.19	-0.21	-0.16	0.1
C	6	O	256283	SR	0.62	0.32	-0.14	-0.16	-0.17	0.32	0.1
C	12	O	130109	SR	0.53	0.36	0.36	-0.13	-0.22	-0.13	0.0
C	13	O	130110	SR	0.49	0.44	0.44	-0.23	-0.27	-0.08	0.1
C	14	O	130111	SR	0.41	0.25	-0.12	-0.03	-0.20	0.25	0.1
C	24	O	251143	SR	0.61	0.46	0.46	-0.17	-0.27	-0.22	0.3
C	25	L	256416	SR	0.64	0.44	-0.21	0.44	-0.23	-0.22	0.3
C	26	L	272879	SR	0.57	0.43	0.43	-0.25	-0.13	-0.23	0.4
C	27	O	321008	SR	0.40	0.25	0.25	-0.20	-0.04	-0.14	0.4
C	28	O	320968	SR	0.66	0.30	-0.18	0.30	-0.18	-0.08	0.4

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	29	O	321007	SR	0.18	0.09	0.10	0.09	-0.10	-0.12	0.6
C	30	O	321005	SR	0.58	0.40	0.40	-0.28	-0.15	-0.17	0.8
C	31	O	320970	SR	0.47	0.42	-0.17	0.42	-0.19	-0.20	0.8
C	32	O	321006	SR	0.65	0.42	-0.25	-0.24	0.42	-0.12	0.9
C	33	O	209815	SR	0.75	0.40	-0.18	-0.28	0.40	-0.17	0.2
C	34	O	209822	SR	0.72	0.27	-0.16	0.27	-0.16	-0.13	0.2
C	35	O	130050	SR	0.72	0.39	-0.17	0.39	-0.23	-0.19	0.1
C	37	L	108806	SR	0.64	0.41	-0.20	-0.17	-0.24	0.41	0.2
C	38	L	108808	SR	0.53	0.19	-0.08	0.19	-0.07	-0.13	0.2
C	39	L	108779	SR	0.71	0.43	-0.22	-0.25	0.43	-0.19	0.2
C	40	L	108809	SR	0.35	0.32	-0.23	-0.07	0.32	-0.13	0.2
C	41	L	108805	SR	0.56	0.43	0.43	-0.25	-0.20	-0.15	0.1
C	42	L	130246	SR	0.45	0.42	-0.15	-0.27	-0.11	0.42	0.1
C	43	L	108810	SR	0.64	0.33	-0.20	-0.19	0.33	-0.12	0.2
C	44	L	109093	SR	0.38	0.18	-0.08	0.18	-0.11	-0.01	0.1
C	45	L	109094	SR	0.56	0.35	-0.15	-0.13	-0.24	0.35	0.2
C	46	L	109732	SR	0.47	0.33	-0.24	0.33	-0.06	-0.19	0.2
C	47	L	109095	SR	0.40	0.27	-0.10	0.27	-0.08	-0.20	0.2
C	48	L	109096	SR	0.49	0.42	-0.20	-0.19	-0.17	0.42	0.2
C	49	L	175704	SR	0.66	0.47	-0.24	-0.27	0.47	-0.19	0.2
C	50	L	175705	SR	0.30	0.30	0.30	-0.12	-0.05	-0.19	0.2
C	51	L	175707	SR	0.38	0.26	-0.05	-0.22	-0.16	0.26	0.2
C	52	L	175708	SR	0.70	0.32	-0.23	-0.24	0.32	-0.08	0.2
C	56	L	130142	SR	0.60	0.36	-0.20	-0.16	0.36	-0.15	0.4
C	57	L	130143	SR	0.60	0.36	-0.06	-0.23	0.36	-0.21	0.4
C	58	L	130144	SR	0.60	0.48	-0.25	-0.22	-0.22	0.48	0.4
C	59	L	130145	SR	0.38	0.30	-0.05	-0.23	-0.07	0.30	0.3
C	60	L	130146	SR	0.74	0.45	-0.20	-0.20	-0.28	0.45	0.4
C	61	L	130147	SR	0.58	0.49	0.49	-0.25	-0.25	-0.19	0.5
C	62	L	130148	SR	0.58	0.39	0.39	-0.15	-0.20	-0.22	0.5
C	63	L	130150	SR	0.75	0.51	-0.24	-0.27	-0.28	0.51	0.5
C	64	L	130151	SR	0.40	0.33	0.33	-0.09	-0.21	-0.18	0.5
C	65	L	130152	SR	0.38	0.41	-0.19	-0.10	-0.22	0.41	0.6
C	66	O	285602	SR	0.78	0.34	-0.13	-0.27	0.34	-0.11	0.3
C	67	O	285604	SR	0.60	0.38	0.38	-0.22	-0.17	-0.15	0.1
C	68	O	355157	SR	0.39	0.27	0.27	-0.16	-0.12	-0.03	0.1
C	69	L	130173	SR	0.72	0.35	0.35	-0.24	-0.17	-0.12	0.2
C	70	L	130174	SR	0.52	0.48	-0.15	0.48	-0.26	-0.22	0.3
C	71	L	130280	SR	0.57	0.42	0.42	-0.25	-0.25	-0.13	0.3
C	72	L	135492	SR	0.45	0.31	0.31	-0.22	-0.08	-0.08	0.2
C	73	L	130175	SR	0.64	0.48	-0.18	0.48	-0.25	-0.27	0.3
C	74	L	130176	SR	0.71	0.46	0.46	-0.23	-0.27	-0.18	0.3
C	75	L	130177	SR	0.68	0.41	-0.21	-0.23	0.41	-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	76	L	130178	SR	0.62	0.40	0.40	-0.25	-0.17	-0.16	0.3
C	97	O	214670	SR	0.41	0.27	0.00	0.27	-0.17	-0.18	0.3
C	98	O	214811	SR	0.35	0.26	0.26	0.00	-0.24	-0.17	0.3
Mean					0.55	0.36	0.03	-0.08	-0.07	-0.03	0.3
SD					0.14	0.09	0.27	0.23	0.23	0.23	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 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	L	135118	SR	0.28	0.32	-0.18	-0.14	0.32	0.01	0.4
S	2	O	79103	SR	0.32	0.31	0.31	-0.09	-0.10	-0.17	0.0
S	3	O	268692	SR	0.41	0.15	-0.03	0.15	-0.08	-0.09	0.8
S	5	O	51535	SR	0.30	0.16	0.16	-0.08	-0.04	-0.06	0.1
S	6	L	67525	SPR	0.50	0.45	0.45	-0.40			4.0
S	8	L	257122	SR	0.11	0.14	0.14	-0.11	-0.09	0.10	0.5
S	9	L	282464	SR	0.21	0.22	-0.02	-0.07	-0.11	0.22	0.6
S	10	L	268770	SR	0.31	0.26	0.26	-0.12	-0.12	-0.05	0.9
S	11	O	67491	SR	0.31	0.14	-0.15	0.04	-0.10	0.14	0.4
S	12	L	263299	SR	0.40	0.15	-0.09	0.15	-0.04	-0.04	1.0
S	14	L	275468	SR	0.26	0.19	-0.05	-0.11	-0.04	0.19	0.4
S	15	O	79030	SR	0.51	0.34	-0.14	-0.18	-0.16	0.34	0.2
S	16	L	257117	SR	0.34	0.33	-0.06	0.33	-0.19	-0.12	0.4
S	18	O	211042	SR	0.33	0.10	-0.02	0.10	-0.07	-0.01	0.5
S	19	O	54789	SPR	0.31	0.32	0.32	-0.26			5.2
S	20	L	106616	SPR	0.28	0.48	0.48	-0.37			6.6
S	21	L	268675	SR	0.40	0.14	-0.09	0.14	-0.15	0.08	1.0
S	23	O	79534	SR	0.32	0.21	-0.03	0.21	-0.09	-0.12	1.2
S	24	L	282334	SR	0.69	0.31	-0.19	-0.13	0.31	-0.14	0.1
S	25	O	282382	SR	0.41	0.23	-0.10	-0.08	0.23	-0.10	0.9
S	27	L	56443	SR	0.36	0.29	-0.08	-0.16	-0.09	0.29	0.5
S	29	L	106637	SPR	0.33	0.47	0.47	-0.39			5.1
S	30	L	263642	SPR	0.39	0.49	0.49	-0.41			5.5
S	31	L	56651	SR	0.55	0.39	-0.23	-0.22	0.39	-0.08	0.3
S	33	L	54809	SR	0.67	0.39	-0.14	-0.21	0.39	-0.24	0.2
S	34	O	132818	SR	0.26	0.12	0.07	-0.08	-0.13	0.12	0.6
S	36	O	133410	SR	0.39	0.20	-0.09	0.20	-0.14	-0.01	0.5
S	37	L	133416	SR	0.23	0.22	0.22	-0.04	-0.10	-0.08	0.6

Table 1.A10 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	38	L	52343	SR	0.24	0.20	-0.01	-0.15	-0.03	0.20	0.5
S	39	L	79023	SR	0.36	0.22	-0.11	0.22	-0.04	-0.12	0.4
S	41	O	50425	SPR	0.69	0.40	0.40	-0.33			5.4
S	42	L	255083	SPR	0.22	0.40	0.40	-0.26			7.9
S	44	O	50385	SR	0.30	0.20	-0.21	-0.04	0.20	0.00	0.9
S	45	O	51445	SR	0.45	0.26	0.26	-0.07	-0.16	-0.11	1.1
S	46	O	64694	SR	0.28	0.26	-0.12	-0.12	-0.04	0.26	1.0
S	47	L	215911	SR	0.72	0.34	-0.19	0.34	-0.20	-0.11	0.4
S	48	O	64695	SR	0.51	0.34	-0.12	-0.23	0.34	-0.08	0.7
S	49	O	54771	SR	0.22	0.29	-0.09	-0.09	-0.09	0.29	0.4
S	50	O	268763	SR	0.39	0.23	-0.05	0.23	-0.18	-0.03	0.7
S	52	O	43153	SR	0.33	0.27	-0.15	-0.14	0.27	0.00	0.6
S	53	L	276433	SR	0.36	0.20	0.20	-0.13	-0.15	0.02	0.7
S	54	L	64699	SR	0.24	0.20	0.20	-0.02	-0.12	-0.05	0.8
S	56	L	257121	SPR	0.35	0.42	0.42	-0.32			7.1
S	57	L	282360	SPR	0.24	0.34	0.34	-0.22			8.7
S	58	L	51367	SR	0.41	0.34	-0.13	-0.13	-0.15	0.34	0.5
S	60	L	43215	SR	0.43	0.22	-0.09	-0.11	0.22	-0.07	0.6
S	61	O	268753	SR	0.26	0.22	0.22	-0.07	-0.13	0.00	0.7
S	63	L	67485	SR	0.22	0.16	0.00	-0.10	0.16	-0.04	0.8
S	65	L	263295	SPR	0.43	0.41	0.41	-0.31			8.2
S	66	O	56743	SR	0.55	0.40	-0.19	-0.21	0.40	-0.15	0.7
S	67	L	268755	SR	0.34	0.23	-0.12	-0.05	0.23	-0.10	0.7
S	68	L	56759	SR	0.25	0.25	0.25	-0.16	-0.02	-0.09	0.5
S	69	L	51576	SR	0.22	0.17	-0.12	0.17	-0.04	0.00	0.7
Mean					0.36	0.27	0.06	-0.09	0.01	0.01	1.7
SD					0.13	0.10	0.22	0.18	0.19	0.15	2.4

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.A11 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	O	133052	SR	0.53	0.30	-0.11	-0.13	-0.17	0.30	0.1
S	2	L	54995	SR	0.38	0.15	-0.08	0.15	-0.07	-0.03	0.1
S	4	L	192095	SR	0.24	0.20	0.01	-0.16	0.20	-0.08	0.1
S	5	L	133047	SR	0.16	0.14	0.14	-0.14	-0.13	0.04	0.0
S	6	O	55055	SR	0.32	0.07	0.07	-0.13	0.07	-0.06	0.2
S	7	L	68216	SR	0.50	0.32	0.32	-0.16	-0.15	-0.13	0.0
S	8	L	136102	SR	0.28	0.18	-0.12	-0.04	0.18	-0.09	0.0
S	9	L	136103	SR	0.28	0.25	0.25	-0.10	-0.11	-0.09	0.1
S	11	O	55247	SR	0.42	0.25	0.25	-0.12	-0.07	-0.13	0.1

Table 1.A11 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	12	L	137270	SR	0.60	0.32	-0.15	-0.15	-0.17	0.32	0.2
S	13	O	137330	SR	0.59	0.22	0.22	-0.17	-0.20	-0.01	0.4
S	14	O	297092	SR	0.30	0.18	-0.04	-0.11	0.18	-0.04	0.1
S	17	O	52600	SR	0.26	0.23	0.23	-0.10	-0.11	-0.04	0.4
S	18	O	79418	SR	0.52	0.25	0.25	-0.16	-0.08	-0.12	0.2
S	19	L	136117	SR	0.26	0.29	0.29	-0.08	-0.19	-0.02	0.5
S	20	L	136119	SR	0.38	0.31	-0.16	-0.06	-0.16	0.31	0.1
S	22	O	65119	SR	0.57	0.25	0.25	-0.17	-0.19	0.01	0.3
S	23	L	133012	SR	0.30	0.12	-0.18	0.01	0.12	0.03	0.4
S	24	L	133013	SR	0.41	0.13	-0.16	-0.08	0.13	0.06	0.3
S	25	O	57072	SR	0.27	0.22	-0.03	-0.09	-0.12	0.22	0.4
S	26	L	133420	SR	0.41	0.28	-0.12	-0.12	-0.09	0.28	0.4
S	30	L	251265	SR	0.32	0.21	0.21	-0.12	-0.13	0.00	0.5
S	31	L	251264	SR	0.27	0.04	0.12	-0.16	0.04	-0.05	0.6
S	32	O	55124	SR	0.49	0.26	-0.04	0.26	-0.15	-0.17	0.5
S	33	O	52633	SR	0.37	0.06	0.07	-0.04	0.06	-0.17	0.5
S	34	O	55048	SR	0.55	0.25	-0.14	-0.09	0.25	-0.12	0.0
S	36	L	277330	SR	0.31	0.31	-0.07	-0.07	-0.23	0.31	0.1
S	37	O	260076	SR	0.29	0.15	0.02	-0.14	0.15	-0.06	0.1
S	38	L	133447	SR	0.50	0.33	-0.17	0.33	-0.17	-0.11	0.1
S	39	L	133448	SR	0.27	0.10	-0.05	-0.04	0.10	-0.02	0.0
S	40	O	271097	SR	0.50	0.27	-0.06	-0.10	-0.20	0.27	0.0
S	41	L	271098	SR	0.31	0.09	0.07	-0.08	0.09	-0.15	0.0
S	42	O	68277	SR	0.22	0.16	-0.08	-0.12	0.02	0.16	0.1
S	44	O	282430	SR	0.34	0.14	-0.03	0.14	-0.11	-0.01	0.2
S	45	O	57183	SR	0.33	0.14	-0.17	0.04	0.14	-0.09	0.1
S	46	L	65078	SR	0.54	0.35	-0.19	-0.16	0.35	-0.13	0.3
S	47	O	279652	SR	0.45	0.24	-0.06	0.24	-0.10	-0.14	0.3
S	48	L	271091	SR	0.37	0.30	0.30	-0.10	-0.14	-0.11	0.3
S	49	L	271094	SR	0.22	0.31	-0.15	-0.15	0.01	0.31	0.3
S	50	L	52568	SR	0.35	0.17	-0.06	-0.13	0.17	-0.01	0.3
S	52	L	263117	SR	0.63	0.38	0.38	-0.20	-0.21	-0.14	0.3
S	53	L	263119	SR	0.30	0.30	0.30	-0.10	-0.13	-0.10	0.1
S	54	L	219937	SR	0.49	0.31	-0.11	-0.19	0.31	-0.12	0.2
S	55	L	219936	SR	0.33	0.25	0.25	-0.09	-0.18	-0.01	0.3
S	56	L	271099	SR	0.25	0.26	-0.10	-0.18	-0.02	0.26	0.3
S	57	L	286698	SR	0.21	0.09	-0.02	-0.09	0.09	0.03	0.2
S	58	L	286699	SR	0.21	0.23	0.23	-0.07	-0.12	-0.06	0.2
S	59	O	214549	SR	0.27	0.28	-0.07	-0.13	-0.09	0.28	0.3
S	60	O	79447	SR	0.38	0.25	-0.08	0.25	-0.10	-0.13	0.3
S	65	L	137326	SR	0.26	0.23	0.23	0.02	-0.11	-0.16	0.5
S	66	L	137328	SR	0.33	0.27	-0.04	0.27	-0.16	-0.10	0.5
S	67	O	108546	SR	0.32	0.21	-0.08	0.21	-0.10	-0.06	0.1
S	68	L	263162	SR	0.30	0.26	-0.10	0.26	-0.12	-0.06	0.1

Table 1.A11 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	69	L	263164	SR	0.19	0.15	-0.10	0.05	-0.12	0.15	0.1
S	70	L	52541	SR	0.56	0.32	-0.12	0.32	-0.19	-0.15	0.1
S	72	O	55013	SR	0.53	0.35	-0.15	0.35	-0.18	-0.16	0.2
S	73	O	79459	SR	0.62	0.34	-0.17	-0.16	0.34	-0.18	0.2
S	74	O	263153	SR	0.17	0.23	-0.09	-0.01	-0.10	0.23	0.2
S	75	L	271148	SR	0.31	0.26	-0.09	-0.03	-0.15	0.26	0.4
S	76	L	79496	SR	0.55	0.32	-0.15	0.32	-0.17	-0.12	0.2
S	77	O	79507	SR	0.27	0.21	0.21	-0.09	-0.02	-0.13	0.1
S	78	L	64720	SR	0.28	0.30	-0.12	-0.06	-0.15	0.30	0.2
S	79	L	279596	SR	0.37	0.05	-0.16	0.05	0.10	-0.05	0.1
S	80	L	279598	SR	0.51	0.30	0.30	-0.17	-0.13	-0.11	0.4
S	83	O	64706	SR	0.52	0.19	-0.07	-0.06	0.19	-0.12	0.4
S	84	O	67603	SR	0.55	0.28	0.28	-0.19	-0.09	-0.11	0.3
S	85	L	256515	SR	0.22	0.23	-0.02	-0.04	-0.15	0.23	0.3
S	86	L	256517	SR	0.59	0.34	-0.16	0.34	-0.17	-0.16	0.6
S	90	O	271137	SR	0.27	0.16	0.00	0.16	-0.09	-0.08	0.3
S	91	L	271135	SR	0.21	0.22	-0.09	-0.03	-0.07	0.22	0.3
S	92	L	263176	SR	0.68	0.34	0.34	-0.21	-0.18	-0.12	0.4
S	93	L	263177	SR	0.21	0.09	-0.02	0.09	-0.08	0.02	0.3
S	94	L	218467	SR	0.24	0.13	-0.01	0.13	-0.07	-0.04	0.4
S	95	L	218466	SR	0.38	0.18	-0.02	-0.06	0.18	-0.13	0.5
S	96	O	65117	SR	0.40	0.26	-0.10	0.26	-0.12	-0.08	0.5
S	99	O	271071	SR	0.33	0.14	-0.11	-0.04	0.14	-0.02	0.6
Mean					0.37	0.23	0.01	-0.02	-0.04	0.00	0.2
SD					0.13	0.08	0.16	0.16	0.15	0.15	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.A12 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	O	96235	SR	0.39	0.25	0.25	-0.16	-0.12	-0.02	0.1
S	2	O	96234	SR	0.77	0.32	-0.16	0.32	-0.20	-0.16	0.0
S	3	O	96233	SR	0.46	0.21	-0.10	-0.06	-0.11	0.21	0.1
S	4	O	96236	SR	0.39	0.23	-0.19	-0.13	-0.06	0.23	0.2
S	5	O	96237	SR	0.39	0.28	0.28	-0.09	-0.17	-0.08	0.0
S	6	O	130061	SR	0.44	0.22	0.22	-0.13	-0.19	-0.01	0.2
S	7	O	130062	SR	0.21	0.17	-0.05	-0.07	-0.03	0.17	0.0
S	8	O	130063	SR	0.45	0.28	-0.05	-0.20	0.28	-0.20	0.2
S	9	O	130201	SR	0.39	0.28	-0.15	-0.12	0.28	-0.08	0.1

Table 1.A12 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	13	L	318476	SR	0.61	0.33	-0.12	-0.27	0.33	-0.10	0.3
S	14	L	281365	SR	0.54	0.29	-0.10	0.29	-0.17	-0.13	0.3
S	15	L	281367	SR	0.36	0.25	0.25	-0.06	-0.14	-0.09	0.4
S	16	L	281363	SR	0.36	0.27	-0.11	-0.16	-0.05	0.27	0.4
S	17	L	281364	SR	0.48	0.23	-0.15	0.23	0.00	-0.16	0.4
S	18	L	281362	SR	0.13	0.10	-0.18	-0.01	0.06	0.10	0.5
S	19	L	281366	SR	0.17	0.17	0.09	-0.11	-0.16	0.17	0.5
S	20	L	281368	SR	0.27	0.13	-0.15	-0.01	0.13	0.00	0.5
S	21	O	251153	SR	0.43	0.31	-0.14	-0.15	0.31	-0.09	0.3
S	22	O	272876	SR	0.50	0.41	0.41	-0.19	-0.22	-0.14	0.4
S	24	O	272942	SR	0.48	0.43	-0.16	-0.15	-0.24	0.43	0.5
S	27	O	264682	SR	0.34	0.21	0.21	-0.11	-0.03	-0.12	1.0
S	28	O	264677	SR	0.24	0.26	-0.12	-0.04	-0.08	0.26	0.7
S	29	O	264678	SR	0.28	0.08	-0.05	-0.15	0.08	0.09	0.9
S	30	O	264681	SR	0.45	0.32	0.32	-0.12	-0.21	-0.06	1.0
S	31	O	264683	SR	0.31	0.19	-0.14	-0.03	0.19	-0.01	1.1
S	32	O	264684	SR	0.41	0.20	0.05	0.20	-0.20	-0.12	1.2
S	33	O	130255	SR	0.69	0.34	-0.18	-0.26	0.34	-0.07	0.5
S	34	O	130239	SR	0.70	0.37	-0.14	0.37	-0.26	-0.16	0.2
S	35	O	130263	SR	0.60	0.30	-0.15	-0.13	0.30	-0.14	0.3
S	41	O	261658	SR	0.28	0.13	0.10	-0.12	0.13	-0.15	0.2
S	42	O	261659	SR	0.45	0.31	-0.20	0.31	-0.15	-0.06	0.2
S	43	O	261660	SR	0.55	0.37	0.37	-0.15	-0.20	-0.15	0.3
S	44	L	130217	SR	0.33	0.21	-0.06	0.21	-0.12	-0.02	0.4
S	45	L	130218	SR	0.25	0.13	-0.15	-0.03	0.13	0.04	0.7
S	46	L	130219	SR	0.54	0.30	-0.09	-0.19	0.30	-0.13	0.5
S	47	L	130222	SR	0.52	0.32	-0.13	-0.14	0.32	-0.15	0.5
S	48	L	130220	SR	0.40	0.34	-0.17	0.34	-0.10	-0.16	0.5
S	49	L	130221	SR	0.52	0.38	-0.23	0.38	-0.21	-0.08	0.5
S	50	L	130226	SR	0.34	0.27	-0.03	-0.17	0.27	-0.13	0.5
S	68	L	96160	SR	0.54	0.32	-0.12	-0.21	0.32	-0.09	0.4
S	69	L	96161	SR	0.77	0.35	-0.18	-0.21	0.35	-0.15	0.3
S	78	L	257138	SR	0.20	0.09	-0.01	0.09	0.05	-0.16	0.6
S	79	L	257142	SR	0.54	0.39	-0.16	-0.20	0.39	-0.15	0.4
S	80	L	257143	SR	0.29	0.26	0.26	-0.11	-0.08	-0.07	0.5
S	81	L	257139	SR	0.56	0.44	-0.16	-0.23	-0.22	0.44	0.4
S	82	L	257140	SR	0.30	0.21	-0.20	0.21	0.01	-0.18	0.5
S	83	L	257141	SR	0.24	0.18	-0.10	-0.17	0.08	0.18	0.5
S	84	L	264660	SR	0.25	0.08	0.08	0.05	-0.10	-0.03	0.5
S	85	L	264663	SR	0.62	0.42	-0.20	0.42	-0.22	-0.17	0.5
S	86	L	264665	SR	0.51	0.30	-0.20	-0.11	0.30	-0.07	0.5
S	87	L	264657	SR	0.18	0.17	-0.09	-0.13	0.08	0.17	0.7
S	88	L	264661	SR	0.21	0.05	0.05	-0.10	0.02	0.05	0.7

Table 1.A12 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	89	L	264658	SR	0.42	0.25	-0.12	-0.14	0.25	-0.03	0.7
S	90	L	264656	SR	0.30	0.14	0.14	-0.09	0.01	-0.03	0.7
S	91	L	264666	SR	0.36	0.22	-0.06	0.22	-0.11	-0.07	0.6
S	92	L	288873	SR	0.42	0.30	-0.19	-0.11	0.30	-0.07	0.7
S	93	L	264664	SR	0.31	0.28	-0.06	-0.16	-0.07	0.28	0.6
S	96	L	256434	SR	0.42	0.21	-0.08	-0.04	0.21	-0.12	1.0
S	97	L	256435	SR	0.24	0.07	-0.15	0.07	0.11	-0.03	0.8
S	98	L	256436	SR	0.56	0.33	-0.16	0.33	-0.17	-0.12	0.8
Mean					0.41	0.25	-0.05	-0.03	0.03	-0.02	0.5
SD					0.15	0.10	0.16	0.19	0.20	0.15	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.A13 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-N	1	L	51407	SR	0.81	0.36	-0.18	0.36	-0.20	-0.22	0.0
D-N	2	O	79138	SR	0.58	0.38	0.38	-0.25	-0.15	-0.21	0.2
D-N	4	O	54729	SR	0.71	0.37	-0.12	0.37	-0.18	-0.27	0.1
D-N	6	L	54788	SPR	0.57	0.57	0.57	-0.54			2.0
D-N	7	O	54877	SR	0.73	0.50	-0.27	-0.23	0.50	-0.27	0.1
D-N	8	L	319406	SR	0.56	0.33	0.02	-0.31	-0.19	0.33	0.1
D-N	9	L	328735	SR	0.44	0.41	-0.02	0.41	-0.23	-0.27	0.2
D-N	11	L	348337	SR	0.34	0.25	0.04	-0.23	0.25	-0.17	0.3
D-N	13	O	328747	SR	0.43	0.53	-0.13	-0.24	-0.31	0.53	0.2
D-N	14	L	338680	SR	0.49	0.40	-0.20	-0.13	0.40	-0.22	0.2
D-N	15	L	132836	SR	0.81	0.38	-0.22	-0.20	0.38	-0.20	0.2
D-N	16	L	328776	SR	0.75	0.56	-0.22	0.56	-0.38	-0.25	0.3
D-N	17	L	223233	SPR	0.76	0.29	0.29	-0.27			1.0
D-N	19	O	268756	SPR	0.64	0.64	0.64	-0.60			2.4
D-N	20	O	268717	SR	0.45	0.50	0.50	-0.23	-0.17	-0.25	0.5
D-N	21	O	275457	SR	0.58	0.53	-0.25	-0.28	-0.23	0.53	0.7
D-N	22	L	338628	SR	0.45	0.37	-0.15	-0.19	0.37	-0.16	0.7
D-N	23	L	322119	SR	0.82	0.40	-0.27	-0.20	0.40	-0.15	0.7
D-N	24	O	79090	SR	0.38	0.27	-0.15	0.27	-0.09	-0.11	0.3
D-N	25	L	348345	SR	0.27	0.35	0.35	-0.16	-0.22	-0.06	0.6
D-N	26	L	56770	SR	0.66	0.66	-0.46	-0.23	-0.28	0.66	0.1
D-N	28	L	52339	SR	0.58	0.44	0.44	-0.29	-0.24	-0.07	0.5
D-N	29	O	211057	SR	0.26	0.48	-0.05	-0.09	-0.37	0.48	0.1
D-N	31	O	255070	SPR	0.54	0.51	0.51	-0.47			2.4

Table 1.A13 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-N	32	L	106622	SPR	0.72	0.41	0.41	-0.37			2.2
D-N	33	L	56675	SR	0.74	0.53	0.53	-0.35	-0.27	-0.20	0.2
D-N	35	O	338653	SR	0.51	0.37	-0.20	-0.20	0.37	-0.10	0.2
D-N	37	L	319417	SR	0.66	0.52	-0.40	-0.21	-0.13	0.52	0.2
D-N	39	O	338655	SR	0.66	0.40	0.40	-0.25	-0.27	-0.09	0.6
D-N	40	O	328719	SPR	0.40	0.45	0.45	-0.39			3.7
D-N	42	L	215935	SPR	0.18	0.47	0.47	-0.36			5.1
D-N	43	O	223246	SR	0.52	0.38	0.38	-0.21	-0.19	-0.23	0.6
D-N	45	L	106562	SR	0.72	0.46	-0.16	0.46	-0.25	-0.28	0.9
D-N	46	L	328716	SR	0.39	0.34	-0.01	0.34	-0.25	-0.17	1.2
D-N	47	L	54749	SR	0.91	0.33	-0.14	-0.17	-0.22	0.33	0.1
D-N	48	L	338624	SR	0.38	0.37	0.37	-0.18	-0.15	-0.14	0.4
D-N	50	L	79017	SR	0.35	0.40	-0.15	-0.25	0.40	-0.03	0.7
D-N	51	O	319471	SR	0.72	0.51	-0.32	-0.22	-0.23	0.51	0.3
D-N	53	O	255071	SPR	0.56	0.55	0.55	-0.50			3.0
D-N	54	O	322011	SR	0.48	0.54	-0.24	-0.31	0.54	-0.14	0.4
D-N	55	L	319453	SR	0.36	0.27	-0.07	0.27	-0.24	0.00	0.4
D-N	56	L	319433	SR	0.57	0.56	-0.29	-0.30	0.56	-0.18	0.2
D-N	58	L	321991	SR	0.48	0.46	-0.16	-0.25	-0.23	0.46	0.3
D-N	59	O	64685	SR	0.65	0.57	-0.15	0.57	-0.45	-0.22	0.2
D-N	61	L	67427	SR	0.68	0.47	-0.22	0.47	-0.29	-0.19	0.3
D-N	62	O	275461	SR	0.34	0.37	-0.18	0.37	-0.06	-0.18	0.5
D-N	63	L	338649	SPR	0.80	0.46	0.46	-0.42			2.0
D-N	64	O	348332	SPR	0.52	0.57	0.57	-0.51			3.5
D-N	66	L	328707	SR	0.18	0.28	-0.28	-0.21	0.13	0.28	0.4
D-N	67	O	319442	SR	0.55	0.51	-0.27	-0.30	0.51	-0.15	0.5
D-N	68	L	338625	SR	0.62	0.41	-0.22	0.41	-0.25	-0.14	0.4
D-N	69	L	64690	SR	0.74	0.33	-0.22	-0.17	0.33	-0.17	0.5
Mean					0.56	0.44	0.04	-0.12	-0.04	-0.02	0.8
SD					0.17	0.10	0.33	0.31	0.31	0.29	1.1

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.A14 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	51407	SR	0.81	0.36	-0.18	0.36	-0.20	-0.22	0.0
X	2	O	319407	SR	0.57	0.41	-0.29	-0.12	-0.17	0.41	0.1
X	4	O	54729	SR	0.71	0.37	-0.12	0.37	-0.18	-0.27	0.1
X	6	L	54788	SPR	0.57	0.57	0.57	-0.54			2.0
X	7	O	56614	SR	0.78	0.33	-0.24	0.33	-0.17	-0.10	0.0

Table 1.A14 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	8	L	319406	SR	0.56	0.33	0.02	-0.31	-0.19	0.33	0.1
X	9	L	328735	SR	0.44	0.41	-0.02	0.41	-0.23	-0.27	0.2
X	11	L	348337	SR	0.34	0.25	0.04	-0.23	0.25	-0.17	0.3
X	13	O	257124	SR	0.47	0.57	0.57	-0.22	-0.26	-0.27	0.1
X	14	L	338680	SR	0.49	0.40	-0.20	-0.13	0.40	-0.22	0.2
X	15	L	132836	SR	0.81	0.38	-0.22	-0.20	0.38	-0.20	0.2
X	16	L	328776	SR	0.75	0.56	-0.22	0.56	-0.38	-0.25	0.3
X	17	L	223233	SPR	0.76	0.29	0.29	-0.27			1.0
X	19	O	268756	SPR	0.64	0.64	0.64	-0.60			2.4
X	20	O	268717	SR	0.45	0.50	0.50	-0.23	-0.17	-0.25	0.5
X	21	O	275457	SR	0.58	0.53	-0.25	-0.28	-0.23	0.53	0.7
X	22	L	338628	SR	0.45	0.37	-0.15	-0.19	0.37	-0.16	0.7
X	23	L	322119	SR	0.82	0.40	-0.27	-0.20	0.40	-0.15	0.7
X	24	O	79114	SR	0.72	0.32	-0.14	-0.23	0.32	-0.10	0.3
X	25	L	348345	SR	0.27	0.35	0.35	-0.16	-0.22	-0.06	0.6
X	26	L	56770	SR	0.66	0.66	-0.46	-0.23	-0.28	0.66	0.1
X	28	L	52339	SR	0.58	0.44	0.44	-0.29	-0.24	-0.07	0.5
X	29	O	106629	SR	0.32	0.39	-0.17	-0.02	0.39	-0.22	0.3
X	31	O	255070	SPR	0.54	0.51	0.51	-0.47			2.4
X	32	L	106622	SPR	0.72	0.41	0.41	-0.37			2.2
X	33	L	56675	SR	0.74	0.53	0.53	-0.35	-0.27	-0.20	0.2
X	35	O	319430	SR	0.68	0.47	0.47	-0.24	-0.25	-0.22	0.2
X	36	O	51477	SR	0.49	0.56	-0.25	-0.36	0.56	-0.14	0.4
X	37	L	319417	SR	0.66	0.52	-0.40	-0.21	-0.13	0.52	0.2
X	39	O	338655	SR	0.66	0.40	0.40	-0.25	-0.27	-0.09	0.6
X	40	O	328719	SPR	0.40	0.45	0.45	-0.39			3.7
X	42	L	215935	SPR	0.18	0.47	0.47	-0.36			5.1
X	43	O	215913	SR	0.24	0.35	0.35	-0.14	-0.15	-0.06	0.8
X	45	L	106562	SR	0.72	0.46	-0.16	0.46	-0.25	-0.28	0.9
X	46	L	328716	SR	0.39	0.34	-0.01	0.34	-0.25	-0.17	1.2
X	47	L	54749	SR	0.91	0.33	-0.14	-0.17	-0.22	0.33	0.1
X	48	L	338624	SR	0.38	0.37	0.37	-0.18	-0.15	-0.14	0.4
X	50	L	79017	SR	0.35	0.40	-0.15	-0.25	0.40	-0.03	0.7
X	51	O	319471	SR	0.72	0.51	-0.32	-0.22	-0.23	0.51	0.3
X	53	O	106550	SPR	0.19	0.59	0.59	-0.48			3.6
X	54	O	322011	SR	0.48	0.54	-0.24	-0.31	0.54	-0.14	0.4
X	55	L	319453	SR	0.36	0.27	-0.07	0.27	-0.24	0.00	0.4
X	56	L	319433	SR	0.57	0.56	-0.29	-0.30	0.56	-0.18	0.2
X	58	L	321991	SR	0.48	0.46	-0.16	-0.25	-0.23	0.46	0.3
X	59	O	54586	SR	0.41	0.46	0.46	-0.21	-0.20	-0.15	0.4
X	61	L	67427	SR	0.68	0.47	-0.22	0.47	-0.29	-0.19	0.3
X	62	O	275461	SR	0.34	0.37	-0.18	0.37	-0.06	-0.18	0.5
X	63	L	338649	SPR	0.80	0.46	0.46	-0.42			2.0

Table 1.A14 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	64	O	263287	SPR	0.28	0.59	0.59	-0.49			4.1
X	66	L	328707	SR	0.18	0.28	-0.28	-0.21	0.13	0.28	0.4
X	67	O	319442	SR	0.55	0.51	-0.27	-0.30	0.51	-0.15	0.5
X	68	L	338625	SR	0.62	0.41	-0.22	0.41	-0.25	-0.14	0.4
X	69	L	64690	SR	0.74	0.33	-0.22	-0.17	0.33	-0.17	0.5
Mean					0.55	0.44	0.06	-0.14	-0.02	-0.04	0.8
SD					0.19	0.10	0.34	0.30	0.30	0.27	1.1

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.A15 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	51407	SR	0.81	0.36	-0.18	0.36	-0.20	-0.22	0.0
Y	2	O	79138	SR	0.58	0.38	0.38	-0.25	-0.15	-0.21	0.2
Y	4	O	260748	SR	0.5	0.42	-0.26	-0.17	0.42	-0.13	0.0
Y	6	L	54788	SPR	0.57	0.57	0.57	-0.54			2.0
Y	7	O	54877	SR	0.73	0.50	-0.27	-0.23	0.50	-0.27	0.1
Y	8	L	319406	SR	0.56	0.33	0.02	-0.31	-0.19	0.33	0.1
Y	9	L	328735	SR	0.44	0.41	-0.02	0.41	-0.23	-0.27	0.2
Y	11	L	348337	SR	0.34	0.25	0.04	-0.23	0.25	-0.17	0.3
Y	13	O	328747	SR	0.43	0.53	-0.13	-0.24	-0.31	0.53	0.2
Y	14	L	338680	SR	0.49	0.40	-0.20	-0.13	0.40	-0.22	0.2
Y	15	L	132836	SR	0.81	0.38	-0.22	-0.20	0.38	-0.20	0.2
Y	16	L	328776	SR	0.75	0.56	-0.22	0.56	-0.38	-0.25	0.3
Y	17	L	223233	SPR	0.76	0.29	0.29	-0.27			1.0
Y	19	O	275473	SPR	0.77	0.44	0.44	-0.43			0.8
Y	20	O	106630	SR	0.56	0.41	-0.21	-0.09	0.41	-0.30	0.4
Y	21	O	319473	SR	0.54	0.59	-0.19	-0.32	-0.29	0.59	0.6
Y	22	L	338628	SR	0.45	0.37	-0.15	-0.19	0.37	-0.16	0.7
Y	23	L	322119	SR	0.82	0.40	-0.27	-0.20	0.40	-0.15	0.7
Y	24	O	79090	SR	0.38	0.27	-0.15	0.27	-0.09	-0.11	0.3
Y	25	L	348345	SR	0.27	0.35	0.35	-0.16	-0.22	-0.06	0.6
Y	26	L	56770	SR	0.66	0.66	-0.46	-0.23	-0.28	0.66	0.1
Y	28	L	52339	SR	0.58	0.44	0.44	-0.29	-0.24	-0.07	0.5
Y	29	O	211057	SR	0.26	0.48	-0.05	-0.09	-0.37	0.48	0.1
Y	31	O	255086	SPR	0.29	0.46	0.46	-0.42			2.1
Y	32	L	106622	SPR	0.72	0.41	0.41	-0.37			2.2

Table 1.A15 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	33	L	56675	SR	0.74	0.53	0.53	-0.35	-0.27	-0.20	0.2
Y	35	O	338653	SR	0.51	0.37	-0.20	-0.20	0.37	-0.10	0.2
Y	37	L	319417	SR	0.66	0.52	-0.40	-0.21	-0.13	0.52	0.2
Y	39	O	79116	SR	0.69	0.33	-0.11	0.33	-0.23	-0.16	0.1
Y	40	O	328749	SPR	0.55	0.46	0.46	-0.43			1.6
Y	42	L	215935	SPR	0.18	0.47	0.47	-0.36			5.1
Y	43	O	223246	SR	0.52	0.38	0.38	-0.21	-0.19	-0.23	0.6
Y	45	L	106562	SR	0.72	0.46	-0.16	0.46	-0.25	-0.28	0.9
Y	46	L	328716	SR	0.39	0.34	-0.01	0.34	-0.25	-0.17	1.2
Y	47	L	54749	SR	0.91	0.33	-0.14	-0.17	-0.22	0.33	0.1
Y	48	L	338624	SR	0.38	0.37	0.37	-0.18	-0.15	-0.14	0.4
Y	50	L	79017	SR	0.35	0.40	-0.15	-0.25	0.40	-0.03	0.7
Y	51	O	51484	SR	0.56	0.50	-0.24	-0.24	-0.22	0.50	0.1
Y	53	O	255071	SPR	0.56	0.55	0.55	-0.50			3.0
Y	54	O	51482	SR	0.64	0.53	0.53	-0.29	-0.32	-0.17	0.1
Y	55	L	319453	SR	0.36	0.27	-0.07	0.27	-0.24	0.00	0.4
Y	56	L	319433	SR	0.57	0.56	-0.29	-0.30	0.56	-0.18	0.2
Y	58	L	321991	SR	0.48	0.46	-0.16	-0.25	-0.23	0.46	0.3
Y	59	O	64685	SR	0.65	0.57	-0.15	0.57	-0.45	-0.22	0.2
Y	61	L	67427	SR	0.68	0.47	-0.22	0.47	-0.29	-0.19	0.3
Y	62	O	348347	SR	0.66	0.58	0.58	-0.26	-0.34	-0.28	0.2
Y	63	L	338649	SPR	0.80	0.46	0.46	-0.42			2.0
Y	64	O	348332	SPR	0.52	0.57	0.57	-0.51			3.5
Y	66	L	328707	SR	0.18	0.28	-0.28	-0.21	0.13	0.28	0.4
Y	67	O	56757	SR	0.31	0.43	0.20	-0.08	0.43	-0.51	0.3
Y	68	L	338625	SR	0.62	0.41	-0.22	0.41	-0.25	-0.14	0.4
Y	69	L	64690	SR	0.74	0.33	-0.22	-0.17	0.33	-0.17	0.5
Mean					0.56	0.43	0.05	-0.12	-0.04	-0.03	0.7
SD					0.18	0.10	0.32	0.30	0.31	0.30	1.0

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.A16 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-N	1	L	279651	SR	0.79	0.41	-0.19	-0.26	0.41	-0.22	0.1
D-N	2	O	253642	SR	0.79	0.46	0.46	-0.32	-0.25	-0.16	0.1
D-N	5	L	331289	SR	0.75	0.58	0.58	-0.22	-0.39	-0.29	0.0
D-N	6	L	331285	SR	0.75	0.43	-0.21	0.43	-0.25	-0.22	0.0
D-N	8	O	349118	SR	0.66	0.55	-0.20	0.55	-0.28	-0.34	0.1
D-N	9	L	323310	SR	0.41	0.24	0.24	-0.22	0.06	-0.19	0.1

Table 1.A16 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-N	10	O	323312	SR	0.4	0.32	-0.10	0.32	-0.08	-0.20	0.1
D-N	11	L	52593	SR	0.68	0.31	0.31	-0.21	-0.15	-0.12	0.1
D-N	12	O	52594	SR	0.61	0.30	-0.26	-0.13	0.30	-0.05	0.1
D-N	13	O	52681	SR	0.56	0.50	-0.16	-0.33	0.50	-0.19	0.1
D-N	15	L	56959	SR	0.82	0.30	-0.14	-0.20	-0.16	0.30	0.1
D-N	16	L	271043	SR	0.6	0.41	-0.19	0.41	-0.26	-0.14	0.1
D-N	19	L	55108	SR	0.81	0.47	0.47	-0.20	-0.25	-0.30	0.1
D-N	20	L	57021	SR	0.47	0.43	-0.27	-0.13	-0.21	0.43	0.1
D-N	21	L	108581	SR	0.35	0.30	-0.03	-0.11	-0.23	0.30	0.1
D-N	22	L	271026	SR	0.24	0.31	-0.20	0.31	-0.06	-0.04	0.1
D-N	23	L	338693	SR	0.64	0.53	-0.23	-0.21	-0.33	0.53	0.2
D-N	24	L	338692	SR	0.64	0.54	0.54	-0.37	-0.24	-0.17	0.2
D-N	25	L	323326	SR	0.58	0.43	-0.14	-0.26	0.43	-0.26	0.2
D-N	26	L	323323	SR	0.66	0.55	0.55	-0.24	-0.35	-0.25	0.2
D-N	28	O	338739	SR	0.48	0.31	-0.12	-0.18	0.31	-0.17	0.2
D-N	29	O	331336	SR	0.65	0.44	0.44	-0.31	-0.27	-0.06	0.2
D-N	30	L	331334	SR	0.67	0.41	-0.24	0.41	-0.24	-0.11	0.3
D-N	31	L	192083	SR	0.74	0.38	-0.25	-0.29	-0.13	0.38	0.3
D-N	32	O	52403	SR	0.82	0.49	-0.23	-0.28	-0.27	0.49	0.4
D-N	33	O	68122	SR	0.74	0.57	-0.28	0.57	-0.31	-0.29	0.4
D-N	34	L	108649	SR	0.83	0.49	0.49	-0.28	-0.34	-0.15	0.1
D-N	35	L	108653	SR	0.93	0.40	0.40	-0.21	-0.27	-0.17	0.1
D-N	36	L	65150	SR	0.63	0.42	-0.22	-0.16	0.42	-0.24	0.1
D-N	37	O	282423	SR	0.83	0.45	-0.24	-0.31	0.45	-0.18	0.1
D-N	38	O	263105	SR	0.58	0.42	0.42	-0.22	-0.19	-0.22	0.1
D-N	39	O	323330	SR	0.41	0.31	-0.20	-0.17	0.31	-0.08	0.1
D-N	40	L	323329	SR	0.6	0.44	-0.18	0.44	-0.25	-0.23	0.1
D-N	43	O	338710	SR	0.64	0.53	-0.26	0.53	-0.25	-0.27	0.1
D-N	44	L	338709	SR	0.45	0.46	-0.32	-0.12	-0.14	0.46	0.1
D-N	46	L	68244	SR	0.42	0.24	-0.04	-0.27	-0.13	0.24	0.1
D-N	47	O	68287	SR	0.84	0.34	-0.18	0.34	-0.19	-0.19	0.1
D-N	48	O	55216	SR	0.47	0.40	-0.18	-0.19	-0.15	0.40	0.1
D-N	49	L	323300	SR	0.8	0.51	-0.34	-0.25	0.51	-0.22	0.1
D-N	50	O	323298	SR	0.58	0.40	0.40	-0.13	-0.23	-0.22	0.1
D-N	51	O	52705	SR	0.85	0.43	-0.20	-0.28	-0.22	0.43	0.1
D-N	53	O	53511	SR	0.42	0.46	-0.22	0.46	-0.24	-0.11	0.1
D-N	54	L	251270	SR	0.51	0.46	-0.22	-0.25	-0.14	0.46	0.1
D-N	55	L	251271	SR	0.65	0.56	-0.24	-0.33	0.56	-0.26	0.2
D-N	56	L	263139	SR	0.49	0.37	-0.27	0.37	-0.08	-0.28	0.1
D-N	57	O	52652	SR	0.65	0.49	-0.21	0.49	-0.27	-0.25	0.1
D-N	61	O	331318	SR	0.48	0.35	-0.10	-0.29	-0.12	0.35	0.2
D-N	62	L	331315	SR	0.53	0.46	-0.15	-0.27	0.46	-0.19	0.2
D-N	64	O	279576	SR	0.55	0.26	-0.23	0.26	0.04	-0.22	0.2
D-N	65	O	65082	SR	0.82	0.50	0.50	-0.31	-0.25	-0.25	0.1

Table 1.A16 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-N	66	O	65054	SR	0.86	0.48	-0.25	0.48	-0.31	-0.23	0.2
D-N	67	L	64740	SR	0.64	0.21	0.21	-0.15	-0.06	-0.18	0.1
D-N	68	O	65065	SR	0.72	0.39	-0.19	0.39	-0.26	-0.20	0.1
D-N	69	L	322143	SR	0.53	0.41	-0.04	-0.33	-0.21	0.41	0.1
D-N	70	L	322142	SR	0.63	0.51	-0.28	-0.24	0.51	-0.23	0.1
D-N	71	O	108555	SR	0.34	0.41	-0.14	-0.09	-0.26	0.41	0.1
D-N	72	L	338762	SR	0.53	0.37	-0.28	0.37	-0.09	-0.23	0.1
D-N	73	O	338706	SR	0.8	0.43	-0.23	-0.27	0.43	-0.18	0.2
D-N	74	L	338707	SR	0.56	0.44	0.44	-0.14	-0.31	-0.15	0.1
D-N	76	O	52645	SR	0.3	0.23	-0.19	-0.03	-0.20	0.23	0.1
D-N	80	L	108579	SR	0.94	0.33	-0.19	-0.21	0.33	-0.15	0.1
D-N	81	L	67623	SR	0.71	0.58	0.58	-0.41	-0.24	-0.25	0.1
D-N	82	O	297531	SR	0.52	0.39	-0.05	-0.36	0.39	-0.22	0.1
D-N	83	L	108562	SR	0.48	0.49	0.49	-0.34	-0.14	-0.16	0.1
D-N	84	L	55160	SR	0.83	0.44	0.44	-0.25	-0.24	-0.22	0.1
D-N	85	L	55100	SR	0.74	0.53	-0.24	0.53	-0.35	-0.24	0.1
D-N	86	L	133457	SR	0.45	0.47	-0.11	-0.29	-0.22	0.47	0.1
D-N	87	L	349090	SR	0.55	0.46	-0.16	-0.24	-0.24	0.46	0.1
D-N	90	L	332079	SR	0.73	0.54	0.54	-0.26	-0.29	-0.28	0.1
D-N	91	L	331302	SR	0.68	0.50	-0.19	0.50	-0.36	-0.19	0.2
D-N	94	O	279852	SR	0.74	0.57	-0.30	-0.37	0.57	-0.21	0.2
D-N	95	L	323338	SR	0.61	0.46	-0.30	-0.24	0.46	-0.12	0.2
D-N	96	O	338718	SR	0.91	0.34	-0.20	0.34	-0.19	-0.18	0.1
D-N	97	L	338716	SR	0.6	0.63	-0.28	-0.37	-0.28	0.63	0.1
D-N	98	L	323284	SR	0.65	0.41	-0.17	0.41	-0.22	-0.23	0.1
D-N	99	L	323286	SR	0.74	0.43	-0.22	-0.26	0.43	-0.22	0.2
Mean					0.63	0.43	-0.04	-0.06	-0.06	-0.05	0.1
SD					0.16	0.09	0.29	0.31	0.29	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.A17 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	279651	SR	0.79	0.41	-0.19	-0.26	0.41	-0.22	0.1
X	2	O	253642	SR	0.79	0.46	0.46	-0.32	-0.25	-0.16	0.1
X	5	L	331289	SR	0.75	0.58	0.58	-0.22	-0.39	-0.29	0.0
X	6	L	331285	SR	0.75	0.43	-0.21	0.43	-0.25	-0.22	0.0
X	8	O	349118	SR	0.66	0.55	-0.20	0.55	-0.28	-0.34	0.1
X	9	L	323310	SR	0.41	0.24	0.24	-0.22	0.06	-0.19	0.1

Table 1.A17 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	10	O	323312	SR	0.40	0.32	-0.10	0.32	-0.08	-0.20	0.1
X	11	L	52593	SR	0.68	0.31	0.31	-0.21	-0.15	-0.12	0.1
X	12	O	52592	SR	0.51	0.26	-0.08	-0.22	0.26	-0.11	0.0
X	13	O	288370	SR	0.39	0.18	-0.01	0.02	-0.20	0.18	0.0
X	15	L	56959	SR	0.82	0.30	-0.14	-0.20	-0.16	0.30	0.1
X	16	L	271043	SR	0.60	0.41	-0.19	0.41	-0.26	-0.14	0.1
X	19	L	55108	SR	0.81	0.47	0.47	-0.20	-0.25	-0.30	0.1
X	20	L	57021	SR	0.47	0.43	-0.27	-0.13	-0.21	0.43	0.1
X	21	L	108581	SR	0.35	0.30	-0.03	-0.11	-0.23	0.30	0.1
X	22	L	271026	SR	0.24	0.31	-0.20	0.31	-0.06	-0.04	0.1
X	23	L	338693	SR	0.64	0.53	-0.23	-0.21	-0.33	0.53	0.2
X	24	L	338692	SR	0.64	0.54	0.54	-0.37	-0.24	-0.17	0.2
X	25	L	323326	SR	0.58	0.43	-0.14	-0.26	0.43	-0.26	0.2
X	26	L	323323	SR	0.66	0.55	0.55	-0.24	-0.35	-0.25	0.2
X	28	O	108552	SR	0.38	0.40	0.40	-0.26	-0.18	-0.04	0.3
X	29	O	331337	SR	0.63	0.48	-0.17	-0.35	0.48	-0.17	0.3
X	30	L	331334	SR	0.67	0.41	-0.24	0.41	-0.24	-0.11	0.3
X	31	L	192083	SR	0.74	0.38	-0.25	-0.29	-0.13	0.38	0.3
X	32	O	55066	SR	0.52	0.50	-0.15	-0.30	-0.27	0.50	0.4
X	33	O	68122	SR	0.74	0.57	-0.28	0.57	-0.31	-0.29	0.4
X	34	L	108649	SR	0.83	0.49	0.49	-0.28	-0.34	-0.15	0.1
X	35	L	108653	SR	0.93	0.40	0.40	-0.21	-0.27	-0.17	0.1
X	36	L	65150	SR	0.63	0.42	-0.22	-0.16	0.42	-0.24	0.1
X	37	O	55057	SR	0.59	0.52	0.52	-0.31	-0.32	-0.12	0.2
X	38	O	277329	SR	0.68	0.56	0.56	-0.26	-0.32	-0.26	0.2
X	39	O	323330	SR	0.41	0.31	-0.20	-0.17	0.31	-0.08	0.1
X	40	L	323329	SR	0.6	0.44	-0.18	0.44	-0.25	-0.23	0.1
X	43	O	352874	SR	0.3	0.26	-0.21	0.04	0.26	-0.23	0.1
X	44	L	338709	SR	0.45	0.46	-0.32	-0.12	-0.14	0.46	0.1
X	46	L	68244	SR	0.42	0.24	-0.04	-0.27	-0.13	0.24	0.1
X	47	O	68287	SR	0.84	0.34	-0.18	0.34	-0.19	-0.19	0.1
X	48	O	55216	SR	0.47	0.40	-0.18	-0.19	-0.15	0.40	0.1
X	49	L	323300	SR	0.8	0.51	-0.34	-0.25	0.51	-0.22	0.1
X	50	O	323299	SR	0.56	0.48	-0.21	0.48	-0.25	-0.23	0.1
X	51	O	52757	SR	0.76	0.49	0.49	-0.27	-0.26	-0.24	0.1
X	53	O	53511	SR	0.42	0.46	-0.22	0.46	-0.24	-0.11	0.1
X	54	L	251270	SR	0.51	0.46	-0.22	-0.25	-0.14	0.46	0.1
X	55	L	251271	SR	0.65	0.56	-0.24	-0.33	0.56	-0.26	0.2
X	56	L	263139	SR	0.49	0.37	-0.27	0.37	-0.08	-0.28	0.1
X	57	O	52652	SR	0.65	0.49	-0.21	0.49	-0.27	-0.25	0.1
X	61	O	331317	SR	0.49	0.38	-0.18	0.38	-0.16	-0.15	0.1
X	62	L	331315	SR	0.53	0.46	-0.15	-0.27	0.46	-0.19	0.2
X	64	O	108540	SR	0.73	0.47	-0.25	-0.29	0.47	-0.18	0.1
X	65	O	65082	SR	0.82	0.50	0.50	-0.31	-0.25	-0.25	0.1

Table 1.A17 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	66	O	65062	SR	0.8	0.42	-0.33	-0.19	0.42	-0.17	0.1
X	67	L	64740	SR	0.64	0.21	0.21	-0.15	-0.06	-0.18	0.1
X	68	O	65065	SR	0.72	0.39	-0.19	0.39	-0.26	-0.20	0.1
X	69	L	322143	SR	0.53	0.41	-0.04	-0.33	-0.21	0.41	0.1
X	70	L	322142	SR	0.63	0.51	-0.28	-0.24	0.51	-0.23	0.1
X	71	O	108555	SR	0.34	0.41	-0.14	-0.09	-0.26	0.41	0.1
X	72	L	338762	SR	0.53	0.37	-0.28	0.37	-0.09	-0.23	0.1
X	73	O	338706	SR	0.8	0.43	-0.23	-0.27	0.43	-0.18	0.2
X	74	L	338707	SR	0.56	0.44	0.44	-0.14	-0.31	-0.15	0.1
X	76	O	52645	SR	0.3	0.23	-0.19	-0.03	-0.20	0.23	0.1
X	80	L	108579	SR	0.94	0.33	-0.19	-0.21	0.33	-0.15	0.1
X	81	L	67623	SR	0.71	0.58	0.58	-0.41	-0.24	-0.25	0.1
X	82	O	297097	SR	0.48	0.43	-0.02	-0.32	0.43	-0.28	0.1
X	83	L	108562	SR	0.48	0.49	0.49	-0.34	-0.14	-0.16	0.1
X	84	L	55160	SR	0.83	0.44	0.44	-0.25	-0.24	-0.22	0.1
X	85	L	55100	SR	0.74	0.53	-0.24	0.53	-0.35	-0.24	0.1
X	86	L	133457	SR	0.45	0.47	-0.11	-0.29	-0.22	0.47	0.1
X	87	L	349090	SR	0.55	0.46	-0.16	-0.24	-0.24	0.46	0.1
X	90	L	332079	SR	0.73	0.54	0.54	-0.26	-0.29	-0.28	0.1
X	91	L	331302	SR	0.68	0.50	-0.19	0.50	-0.36	-0.19	0.2
X	94	O	108517	SR	0.63	0.45	-0.26	0.45	-0.24	-0.20	0.2
X	95	L	323338	SR	0.61	0.46	-0.30	-0.24	0.46	-0.12	0.2
X	96	O	338718	SR	0.91	0.34	-0.20	0.34	-0.19	-0.18	0.1
X	97	L	338716	SR	0.6	0.63	-0.28	-0.37	-0.28	0.63	0.1
X	98	L	323284	SR	0.65	0.41	-0.17	0.41	-0.22	-0.23	0.1
X	99	L	323286	SR	0.74	0.43	-0.22	-0.26	0.43	-0.22	0.2
Mean					0.62	0.43	-0.02	-0.05	-0.07	-0.06	0.1
SD					0.16	0.10	0.30	0.31	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.A18 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	279651	SR	0.79	0.41	-0.19	-0.26	0.41	-0.22	0.1
Y	2	O	52734	SR	0.64	0.39	0.39	-0.22	-0.26	-0.13	0.0
Y	5	L	331289	SR	0.75	0.58	0.58	-0.22	-0.39	-0.29	0.0
Y	6	L	331285	SR	0.75	0.43	-0.21	0.43	-0.25	-0.22	0.0
Y	8	O	79494	SR	0.51	0.37	-0.21	-0.21	0.37	-0.14	0.0

Table 1.A18 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	9	L	323310	SR	0.41	0.24	0.24	-0.22	0.06	-0.19	0.1
Y	10	O	323314	SR	0.38	0.35	-0.27	-0.07	-0.18	0.35	0.0
Y	11	L	52593	SR	0.68	0.31	0.31	-0.21	-0.15	-0.12	0.1
Y	12	O	52594	SR	0.61	0.30	-0.26	-0.13	0.30	-0.05	0.1
Y	13	O	52681	SR	0.56	0.50	-0.16	-0.33	0.50	-0.19	0.1
Y	15	L	56959	SR	0.82	0.30	-0.14	-0.20	-0.16	0.30	0.1
Y	16	L	271043	SR	0.6	0.41	-0.19	0.41	-0.26	-0.14	0.1
Y	19	L	55108	SR	0.81	0.47	0.47	-0.20	-0.25	-0.30	0.1
Y	20	L	57021	SR	0.47	0.43	-0.27	-0.13	-0.21	0.43	0.1
Y	21	L	108581	SR	0.35	0.30	-0.03	-0.11	-0.23	0.30	0.1
Y	22	L	271026	SR	0.24	0.31	-0.20	0.31	-0.06	-0.04	0.1
Y	23	L	338693	SR	0.64	0.53	-0.23	-0.21	-0.33	0.53	0.2
Y	24	L	338692	SR	0.64	0.54	0.54	-0.37	-0.24	-0.17	0.2
Y	25	L	323326	SR	0.58	0.43	-0.14	-0.26	0.43	-0.26	0.2
Y	26	L	323323	SR	0.66	0.55	0.55	-0.24	-0.35	-0.25	0.2
Y	28	O	338739	SR	0.48	0.31	-0.12	-0.18	0.31	-0.17	0.2
Y	29	O	331336	SR	0.65	0.44	0.44	-0.31	-0.27	-0.06	0.2
Y	30	L	331334	SR	0.67	0.41	-0.24	0.41	-0.24	-0.11	0.3
Y	31	L	192083	SR	0.74	0.38	-0.25	-0.29	-0.13	0.38	0.3
Y	32	O	52403	SR	0.82	0.49	-0.23	-0.28	-0.27	0.49	0.4
Y	33	O	108522	SR	0.36	0.45	-0.15	0.45	-0.28	-0.13	0.3
Y	34	L	108649	SR	0.83	0.49	0.49	-0.28	-0.34	-0.15	0.1
Y	35	L	108653	SR	0.93	0.40	0.40	-0.21	-0.27	-0.17	0.1
Y	36	L	65150	SR	0.63	0.42	-0.22	-0.16	0.42	-0.24	0.1
Y	37	O	282423	SR	0.83	0.45	-0.24	-0.31	0.45	-0.18	0.1
Y	38	O	263105	SR	0.58	0.42	0.42	-0.22	-0.19	-0.22	0.1
Y	39	O	323331	SR	0.63	0.57	0.57	-0.34	-0.29	-0.20	0.0
Y	40	L	323329	SR	0.6	0.44	-0.18	0.44	-0.25	-0.23	0.1
Y	43	O	338710	SR	0.64	0.53	-0.26	0.53	-0.25	-0.27	0.1
Y	44	L	338709	SR	0.45	0.46	-0.32	-0.12	-0.14	0.46	0.1
Y	46	L	68244	SR	0.42	0.24	-0.04	-0.27	-0.13	0.24	0.1
Y	47	O	214533	SR	0.64	0.54	-0.21	-0.27	-0.32	0.54	0.0
Y	48	O	108671	SR	0.72	0.38	-0.16	0.38	-0.19	-0.24	0.0
Y	49	L	323300	SR	0.8	0.51	-0.34	-0.25	0.51	-0.22	0.1
Y	50	O	323298	SR	0.58	0.40	0.40	-0.13	-0.23	-0.22	0.1
Y	51	O	52705	SR	0.85	0.43	-0.20	-0.28	-0.22	0.43	0.1
Y	53	O	55012	SR	0.59	0.36	0.36	-0.24	-0.15	-0.25	0.0
Y	54	L	251270	SR	0.51	0.46	-0.22	-0.25	-0.14	0.46	0.1
Y	55	L	251271	SR	0.65	0.56	-0.24	-0.33	0.56	-0.26	0.2
Y	56	L	263139	SR	0.49	0.37	-0.27	0.37	-0.08	-0.28	0.1
Y	57	O	108560	SR	0.54	0.50	-0.24	0.50	-0.22	-0.23	0.1
Y	61	O	331318	SR	0.48	0.35	-0.10	-0.29	-0.12	0.35	0.2
Y	62	L	331315	SR	0.53	0.46	-0.15	-0.27	0.46	-0.19	0.2
Y	64	O	279576	SR	0.55	0.26	-0.23	0.26	0.04	-0.22	0.2

Table 1.A18 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	65	O	67622	SR	0.89	0.31	-0.19	-0.19	-0.15	0.31	0.2
Y	66	O	65054	SR	0.86	0.48	-0.25	0.48	-0.31	-0.23	0.2
Y	67	L	64740	SR	0.64	0.21	0.21	-0.15	-0.06	-0.18	0.1
Y	68	O	55119	SR	0.73	0.38	-0.21	0.38	-0.19	-0.24	0.1
Y	69	L	322143	SR	0.53	0.41	-0.04	-0.33	-0.21	0.41	0.1
Y	70	L	322142	SR	0.63	0.51	-0.28	-0.24	0.51	-0.23	0.1
Y	71	O	64724	SR	0.43	0.50	-0.15	-0.29	-0.29	0.50	0.0
Y	72	L	338762	SR	0.53	0.37	-0.28	0.37	-0.09	-0.23	0.1
Y	73	O	338703	SR	0.6	0.44	-0.22	0.44	-0.28	-0.12	0.1
Y	74	L	338707	SR	0.56	0.44	0.44	-0.14	-0.31	-0.15	0.1
Y	76	O	52654	SR	0.74	0.42	0.42	-0.33	-0.28	-0.07	0.1
Y	80	L	108579	SR	0.94	0.33	-0.19	-0.21	0.33	-0.15	0.1
Y	81	L	67623	SR	0.71	0.58	0.58	-0.41	-0.24	-0.25	0.1
Y	82	O	297531	SR	0.52	0.39	-0.05	-0.36	0.39	-0.22	0.1
Y	83	L	108562	SR	0.48	0.49	0.49	-0.34	-0.14	-0.16	0.1
Y	84	L	55160	SR	0.83	0.44	0.44	-0.25	-0.24	-0.22	0.1
Y	85	L	55100	SR	0.74	0.53	-0.24	0.53	-0.35	-0.24	0.1
Y	86	L	133457	SR	0.45	0.47	-0.11	-0.29	-0.22	0.47	0.1
Y	87	L	349090	SR	0.55	0.46	-0.16	-0.24	-0.24	0.46	0.1
Y	90	L	332079	SR	0.73	0.54	0.54	-0.26	-0.29	-0.28	0.1
Y	91	L	331302	SR	0.68	0.50	-0.19	0.50	-0.36	-0.19	0.2
Y	94	O	279852	SR	0.74	0.57	-0.30	-0.37	0.57	-0.21	0.2
Y	95	L	323338	SR	0.61	0.46	-0.30	-0.24	0.46	-0.12	0.2
Y	96	O	338717	SR	0.62	0.60	0.60	-0.22	-0.48	-0.16	0.1
Y	97	L	338716	SR	0.6	0.63	-0.28	-0.37	-0.28	0.63	0.1
Y	98	L	323284	SR	0.65	0.41	-0.17	0.41	-0.22	-0.23	0.1
Y	99	L	323286	SR	0.74	0.43	-0.22	-0.26	0.43	-0.22	0.2
Mean					0.63	0.43	-0.01	-0.09	-0.08	-0.04	0.1
SD					0.14	0.09	0.31	0.30	0.29	0.28	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.A19 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-N	1	O	190853	SR	0.81	0.37	-0.21	-0.22	-0.18	0.37	0.0
D-N	2	O	190854	SR	0.57	0.43	0.43	-0.25	-0.23	-0.15	0.1
D-N	3	O	190855	SR	0.93	0.20	-0.11	-0.10	-0.15	0.20	0.0
D-N	4	O	190856	SR	0.87	0.27	-0.16	0.27	-0.25	-0.03	0.0
D-N	5	O	190858	SR	0.66	0.52	-0.39	-0.23	-0.16	0.52	0.1

Table 1.A19 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-N	6	O	190857	SR	0.76	0.41	-0.15	-0.25	0.41	-0.29	0.0
D-N	12	L	349288	SR	0.58	0.25	-0.24	0.25	0.01	-0.21	0.1
D-N	13	L	349291	SR	0.62	0.44	-0.15	0.44	-0.21	-0.29	0.2
D-N	14	L	349294	SR	0.67	0.52	-0.24	-0.29	-0.27	0.52	0.2
D-N	15	L	349289	SR	0.83	0.36	0.36	-0.13	-0.15	-0.28	0.1
D-N	16	L	349296	SR	0.69	0.38	-0.09	-0.31	0.38	-0.17	0.1
D-N	17	L	349297	SR	0.63	0.49	0.49	-0.23	-0.25	-0.24	0.1
D-N	18	O	331884	SR	0.58	0.46	-0.20	0.46	-0.23	-0.27	0.1
D-N	19	O	331885	SR	0.74	0.43	0.43	-0.19	-0.26	-0.25	0.2
D-N	20	O	331883	SR	0.74	0.49	0.49	-0.28	-0.26	-0.23	0.2
D-N	30	L	251151	SR	0.65	0.33	-0.10	0.33	-0.19	-0.19	0.9
D-N	31	L	256308	SR	0.63	0.44	0.44	-0.15	-0.27	-0.23	1.0
D-N	32	L	285546	SR	0.62	0.40	-0.18	-0.16	-0.26	0.40	1.1
D-N	33	L	108912	SR	0.72	0.35	-0.09	-0.18	-0.28	0.35	0.1
D-N	34	L	108914	SR	0.54	0.29	-0.16	-0.10	-0.12	0.29	0.2
D-N	35	L	108913	SR	0.41	0.38	-0.25	-0.12	0.38	-0.11	0.1
D-N	36	L	130216	SR	0.5	0.33	0.33	-0.22	-0.11	-0.15	0.1
D-N	38	O	251171	SR	0.71	0.51	-0.25	0.51	-0.29	-0.24	0.1
D-N	39	O	96220	SR	0.55	0.48	0.48	-0.21	-0.25	-0.20	0.1
D-N	40	O	130240	SR	0.8	0.46	-0.24	0.46	-0.26	-0.23	0.1
D-N	41	O	96031	SR	0.55	0.27	-0.17	0.27	-0.05	-0.18	0.1
D-N	42	O	96032	SR	0.71	0.47	0.47	-0.24	-0.21	-0.26	0.2
D-N	43	O	96034	SR	0.91	0.35	-0.27	0.35	-0.21	-0.09	0.1
D-N	44	O	96035	SR	0.7	0.25	0.25	-0.14	-0.21	-0.11	0.2
D-N	45	O	96036	SR	0.86	0.48	0.48	-0.31	-0.21	-0.25	0.1
D-N	46	O	96037	SR	0.64	0.48	-0.21	-0.26	0.48	-0.24	0.1
D-N	47	O	96038	SR	0.41	0.20	-0.13	-0.13	0.20	-0.05	0.1
D-N	51	L	130185	SR	0.77	0.45	-0.30	0.45	-0.26	-0.18	0.1
D-N	52	L	130186	SR	0.55	0.27	-0.15	-0.11	0.27	-0.20	0.1
D-N	53	L	130187	SR	0.44	0.28	-0.24	0.28	-0.06	-0.22	0.1
D-N	54	L	130188	SR	0.79	0.40	-0.14	0.40	-0.27	-0.25	0.1
D-N	55	L	130286	SR	0.55	0.56	-0.34	-0.18	0.56	-0.26	0.2
D-N	56	L	130189	SR	0.64	0.45	-0.26	-0.23	0.45	-0.17	0.2
D-N	57	L	130190	SR	0.7	0.48	-0.22	-0.33	0.48	-0.15	0.2
D-N	58	L	130181	SR	0.45	0.44	0.44	-0.22	-0.16	-0.18	0.2
D-N	59	L	130182	SR	0.77	0.38	-0.10	-0.22	-0.32	0.38	0.3
D-N	60	L	130183	SR	0.59	0.41	-0.32	0.41	-0.16	-0.13	0.2
D-N	61	L	96106	SR	0.56	0.23	-0.16	-0.10	0.23	-0.09	0.3
D-N	62	L	96107	SR	0.8	0.29	0.29	-0.14	-0.18	-0.15	0.3
D-N	63	L	96108	SR	0.7	0.49	-0.24	0.49	-0.23	-0.27	0.3
D-N	64	L	96109	SR	0.73	0.46	0.46	-0.25	-0.28	-0.21	0.3
D-N	65	L	96110	SR	0.89	0.46	-0.24	0.46	-0.26	-0.25	0.3
D-N	66	O	332122	SR	0.84	0.42	-0.24	0.42	-0.21	-0.25	0.1
D-N	67	O	332123	SR	0.65	0.52	-0.24	-0.32	0.52	-0.24	0.1

Table 1.A19 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-N	68	O	332125	SR	0.66	0.55	-0.28	-0.35	0.55	-0.20	0.1
D-N	86	L	285470	SR	0.66	0.46	-0.18	-0.24	-0.25	0.46	0.2
D-N	87	L	285467	SR	0.44	0.38	-0.29	-0.19	-0.04	0.38	0.3
D-N	88	L	285471	SR	0.4	0.30	-0.03	0.30	-0.27	-0.14	0.3
D-N	89	L	285466	SR	0.67	0.50	-0.27	-0.23	0.50	-0.24	0.3
D-N	90	L	285473	SR	0.34	0.26	-0.27	0.26	-0.06	-0.07	0.3
D-N	91	L	285469	SR	0.58	0.45	-0.22	-0.27	-0.16	0.45	0.4
D-N	92	L	285472	SR	0.41	0.31	-0.19	-0.25	0.31	0.01	0.4
D-N	93	L	285475	SR	0.65	0.46	0.46	-0.25	-0.20	-0.22	0.3
D-N	97	O	109088	SR	0.81	0.31	0.31	-0.20	-0.23	-0.10	0.4
D-N	98	O	109087	SR	0.71	0.36	-0.21	-0.11	0.36	-0.27	0.5
Mean					0.66	0.40	-0.04	-0.03	-0.05	-0.08	0.2
SD					0.14	0.09	0.29	0.28	0.28	0.24	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.A20 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	190853	SR	0.81	0.37	-0.21	-0.22	-0.18	0.37	0.0
X	2	O	190854	SR	0.57	0.43	0.43	-0.25	-0.23	-0.15	0.1
X	3	O	190855	SR	0.93	0.20	-0.11	-0.10	-0.15	0.20	0.0
X	4	O	190856	SR	0.87	0.27	-0.16	0.27	-0.25	-0.03	0.0
X	5	O	190858	SR	0.66	0.52	-0.39	-0.23	-0.16	0.52	0.1
X	6	O	190857	SR	0.76	0.41	-0.15	-0.25	0.41	-0.29	0.0
X	12	L	349288	SR	0.58	0.25	-0.24	0.25	0.01	-0.21	0.1
X	13	L	349291	SR	0.62	0.44	-0.15	0.44	-0.21	-0.29	0.2
X	14	L	349294	SR	0.67	0.52	-0.24	-0.29	-0.27	0.52	0.2
X	15	L	349289	SR	0.83	0.36	0.36	-0.13	-0.15	-0.28	0.1
X	16	L	349296	SR	0.69	0.38	-0.09	-0.31	0.38	-0.17	0.1
X	17	L	349297	SR	0.63	0.49	0.49	-0.23	-0.25	-0.24	0.1
X	18	O	331884	SR	0.58	0.46	-0.20	0.46	-0.23	-0.27	0.1
X	19	O	331885	SR	0.74	0.43	0.43	-0.19	-0.26	-0.25	0.2
X	20	O	331883	SR	0.74	0.49	0.49	-0.28	-0.26	-0.23	0.2
X	30	L	251151	SR	0.65	0.33	-0.10	0.33	-0.19	-0.19	0.9
X	31	L	256308	SR	0.63	0.44	0.44	-0.15	-0.27	-0.23	1.0
X	32	L	285546	SR	0.62	0.40	-0.18	-0.16	-0.26	0.40	1.1
X	33	L	108912	SR	0.72	0.35	-0.09	-0.18	-0.28	0.35	0.1
X	34	L	108914	SR	0.54	0.29	-0.16	-0.10	-0.12	0.29	0.2
X	35	L	108913	SR	0.41	0.38	-0.25	-0.12	0.38	-0.11	0.1

Table 1.A20 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	36	L	130216	SR	0.5	0.33	0.33	-0.22	-0.11	-0.15	0.1
X	38	O	251171	SR	0.71	0.51	-0.25	0.51	-0.29	-0.24	0.1
X	39	O	96220	SR	0.55	0.48	0.48	-0.21	-0.25	-0.20	0.1
X	40	O	130240	SR	0.8	0.46	-0.24	0.46	-0.26	-0.23	0.1
X	41	O	130155	SR	0.82	0.50	-0.25	-0.33	0.50	-0.23	0.1
X	42	O	130158	SR	0.68	0.38	-0.19	-0.24	0.38	-0.15	0.2
X	43	O	130159	SR	0.76	0.44	-0.29	-0.25	0.44	-0.17	0.1
X	44	O	130259	SR	0.82	0.46	-0.28	0.46	-0.27	-0.18	0.1
X	45	O	130156	SR	0.84	0.48	-0.32	-0.24	-0.24	0.48	0.1
X	46	O	130157	SR	0.51	0.49	-0.25	-0.25	-0.24	0.49	0.2
X	47	O	130160	SR	0.76	0.46	-0.24	0.46	-0.22	-0.28	0.1
X	51	L	130185	SR	0.77	0.45	-0.30	0.45	-0.26	-0.18	0.1
X	52	L	130186	SR	0.55	0.27	-0.15	-0.11	0.27	-0.20	0.1
X	53	L	130187	SR	0.44	0.28	-0.24	0.28	-0.06	-0.22	0.1
X	54	L	130188	SR	0.79	0.40	-0.14	0.40	-0.27	-0.25	0.1
X	55	L	130286	SR	0.55	0.56	-0.34	-0.18	0.56	-0.26	0.2
X	56	L	130189	SR	0.64	0.45	-0.26	-0.23	0.45	-0.17	0.2
X	57	L	130190	SR	0.7	0.48	-0.22	-0.33	0.48	-0.15	0.2
X	58	L	130181	SR	0.45	0.44	0.44	-0.22	-0.16	-0.18	0.2
X	59	L	130182	SR	0.77	0.38	-0.10	-0.22	-0.32	0.38	0.3
X	60	L	130183	SR	0.59	0.41	-0.32	0.41	-0.16	-0.13	0.2
X	61	L	96106	SR	0.56	0.23	-0.16	-0.10	0.23	-0.09	0.3
X	62	L	96107	SR	0.8	0.29	0.29	-0.14	-0.18	-0.15	0.3
X	63	L	96108	SR	0.7	0.49	-0.24	0.49	-0.23	-0.27	0.3
X	64	L	96109	SR	0.73	0.46	0.46	-0.25	-0.28	-0.21	0.3
X	65	L	96110	SR	0.89	0.46	-0.24	0.46	-0.26	-0.25	0.3
X	66	O	285606	SR	0.65	0.40	-0.17	-0.24	-0.20	0.40	0.1
X	67	O	285605	SR	0.61	0.49	-0.24	0.49	-0.24	-0.23	0.1
X	68	O	285607	SR	0.56	0.45	0.45	-0.23	-0.22	-0.19	0.2
X	86	L	285470	SR	0.66	0.46	-0.18	-0.24	-0.25	0.46	0.2
X	87	L	285467	SR	0.44	0.38	-0.29	-0.19	-0.04	0.38	0.3
X	88	L	285471	SR	0.4	0.30	-0.03	0.30	-0.27	-0.14	0.3
X	89	L	285466	SR	0.67	0.50	-0.27	-0.23	0.50	-0.24	0.3
X	90	L	285473	SR	0.34	0.26	-0.27	0.26	-0.06	-0.07	0.3
X	91	L	285469	SR	0.58	0.45	-0.22	-0.27	-0.16	0.45	0.4
X	92	L	285472	SR	0.41	0.31	-0.19	-0.25	0.31	0.01	0.4
X	93	L	285475	SR	0.65	0.46	0.46	-0.25	-0.20	-0.22	0.3
X	97	O	109106	SR	0.75	0.56	-0.32	-0.32	0.56	-0.23	0.5
X	98	O	109107	SR	0.49	0.49	-0.25	0.49	-0.20	-0.19	0.5
Mean					0.65	0.41	-0.08	-0.02	-0.06	-0.05	0.2
SD					0.13	0.09	0.28	0.30	0.28	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.A21 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	130295	SR	0.83	0.32	-0.17	-0.26	-0.15	0.32	0.0
Y	2	O	130299	SR	0.44	0.32	0.00	-0.31	-0.18	0.32	0.0
Y	3	O	130300	SR	0.94	0.29	-0.15	0.29	-0.17	-0.18	0.0
Y	4	O	130254	SR	0.63	0.47	-0.32	-0.17	0.47	-0.24	0.1
Y	5	O	130301	SR	0.58	0.48	-0.25	0.48	-0.24	-0.23	0.0
Y	6	O	256280	SR	0.5	0.28	0.28	-0.23	0.01	-0.14	0.0
Y	12	L	349288	SR	0.58	0.25	-0.24	0.25	0.01	-0.21	0.1
Y	13	L	349291	SR	0.62	0.44	-0.15	0.44	-0.21	-0.29	0.2
Y	14	L	349294	SR	0.67	0.52	-0.24	-0.29	-0.27	0.52	0.2
Y	15	L	349289	SR	0.83	0.36	0.36	-0.13	-0.15	-0.28	0.1
Y	16	L	349296	SR	0.69	0.38	-0.09	-0.31	0.38	-0.17	0.1
Y	17	L	349297	SR	0.63	0.49	0.49	-0.23	-0.25	-0.24	0.1
Y	18	O	96251	SR	0.51	0.31	0.31	-0.18	-0.04	-0.22	0.2
Y	19	O	96252	SR	0.92	0.33	0.33	-0.21	-0.17	-0.21	0.0
Y	20	O	96253	SR	0.73	0.50	-0.22	0.50	-0.30	-0.26	0.0
Y	30	L	251151	SR	0.65	0.33	-0.10	0.33	-0.19	-0.19	0.9
Y	31	L	256308	SR	0.63	0.44	0.44	-0.15	-0.27	-0.23	1.0
Y	32	L	285546	SR	0.62	0.40	-0.18	-0.16	-0.26	0.40	1.1
Y	33	L	108912	SR	0.72	0.35	-0.09	-0.18	-0.28	0.35	0.1
Y	34	L	108914	SR	0.54	0.29	-0.16	-0.10	-0.12	0.29	0.2
Y	35	L	108913	SR	0.41	0.38	-0.25	-0.12	0.38	-0.11	0.1
Y	36	L	130216	SR	0.5	0.33	0.33	-0.22	-0.11	-0.15	0.1
Y	38	O	96044	SR	0.81	0.44	-0.23	0.44	-0.29	-0.22	0.0
Y	39	O	349424	SR	0.8	0.49	0.49	-0.18	-0.32	-0.29	0.0
Y	40	O	209821	SR	0.58	0.32	-0.04	0.32	-0.17	-0.28	0.0
Y	41	O	96031	SR	0.55	0.27	-0.17	0.27	-0.05	-0.18	0.1
Y	42	O	96032	SR	0.71	0.47	0.47	-0.24	-0.21	-0.26	0.2
Y	43	O	96034	SR	0.91	0.35	-0.27	0.35	-0.21	-0.09	0.1
Y	44	O	96035	SR	0.7	0.25	0.25	-0.14	-0.21	-0.11	0.2
Y	45	O	96036	SR	0.86	0.48	0.48	-0.31	-0.21	-0.25	0.1
Y	46	O	96037	SR	0.64	0.48	-0.21	-0.26	0.48	-0.24	0.1
Y	47	O	96038	SR	0.41	0.20	-0.13	-0.13	0.20	-0.05	0.1
Y	51	L	130185	SR	0.77	0.45	-0.30	0.45	-0.26	-0.18	0.1
Y	52	L	130186	SR	0.55	0.27	-0.15	-0.11	0.27	-0.20	0.1
Y	53	L	130187	SR	0.44	0.28	-0.24	0.28	-0.06	-0.22	0.1
Y	54	L	130188	SR	0.79	0.40	-0.14	0.40	-0.27	-0.25	0.1
Y	55	L	130286	SR	0.55	0.56	-0.34	-0.18	0.56	-0.26	0.2
Y	56	L	130189	SR	0.64	0.45	-0.26	-0.23	0.45	-0.17	0.2
Y	57	L	130190	SR	0.7	0.48	-0.22	-0.33	0.48	-0.15	0.2
Y	58	L	130181	SR	0.45	0.44	0.44	-0.22	-0.16	-0.18	0.2
Y	59	L	130182	SR	0.77	0.38	-0.10	-0.22	-0.32	0.38	0.3
Y	60	L	130183	SR	0.59	0.41	-0.32	0.41	-0.16	-0.13	0.2
Y	61	L	96106	SR	0.56	0.23	-0.16	-0.10	0.23	-0.09	0.3
Y	62	L	96107	SR	0.8	0.29	0.29	-0.14	-0.18	-0.15	0.3

Table 1.A21 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	63	L	96108	SR	0.7	0.49	-0.24	0.49	-0.23	-0.27	0.3
Y	64	L	96109	SR	0.73	0.46	0.46	-0.25	-0.28	-0.21	0.3
Y	65	L	96110	SR	0.89	0.46	-0.24	0.46	-0.26	-0.25	0.3
Y	66	O	332122	SR	0.84	0.42	-0.24	0.42	-0.21	-0.25	0.1
Y	67	O	332123	SR	0.65	0.52	-0.24	-0.32	0.52	-0.24	0.1
Y	68	O	332125	SR	0.66	0.55	-0.28	-0.35	0.55	-0.20	0.1
Y	86	L	285470	SR	0.66	0.46	-0.18	-0.24	-0.25	0.46	0.2
Y	87	L	285467	SR	0.44	0.38	-0.29	-0.19	-0.04	0.38	0.3
Y	88	L	285471	SR	0.4	0.30	-0.03	0.30	-0.27	-0.14	0.3
Y	89	L	285466	SR	0.67	0.50	-0.27	-0.23	0.50	-0.24	0.3
Y	90	L	285473	SR	0.34	0.26	-0.27	0.26	-0.06	-0.07	0.3
Y	91	L	285469	SR	0.58	0.45	-0.22	-0.27	-0.16	0.45	0.4
Y	92	L	285472	SR	0.41	0.31	-0.19	-0.25	0.31	0.01	0.4
Y	93	L	285475	SR	0.65	0.46	0.46	-0.25	-0.20	-0.22	0.3
Y	97	O	109088	SR	0.81	0.31	0.31	-0.20	-0.23	-0.10	0.4
Y	98	O	109087	SR	0.71	0.36	-0.21	-0.11	0.36	-0.27	0.5
Mean					0.65	0.39	-0.04	-0.03	-0.04	-0.10	0.2
SD					0.15	0.09	0.27	0.28	0.28	0.23	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.A22 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	O	56611	SR	0.51	0.33	-0.12	-0.15	-0.19	0.33	0.2
P	2	L	328773	SR	0.59	0.33	-0.20	0.33	-0.06	-0.21	0.1
P	4	O	51534	SR	0.47	0.34	-0.08	-0.24	-0.11	0.34	0.2
P	5	L	328711	SR	0.51	0.22	-0.13	0.22	-0.20	0.02	0.1
P	7	L	319427	SPR	0.47	0.45	0.45	-0.41			2.3
P	8	L	268737	SR	0.45	0.36	-0.14	0.36	-0.21	-0.10	0.1
P	9	L	319432	SR	0.22	0.28	0.28	-0.05	-0.14	-0.08	0.2
P	11	L	56734	SR	0.55	0.43	-0.29	0.43	-0.16	-0.14	0.2
P	12	O	348333	SR	0.41	0.38	-0.21	-0.11	-0.15	0.38	0.6
P	13	O	132819	SR	0.14	0.20	0.20	-0.07	-0.07	-0.01	0.2
P	15	L	52338	SR	0.65	0.40	-0.12	-0.29	0.40	-0.16	0.2
P	16	O	348352	SR	0.28	0.10	0.10	0.00	-0.09	0.01	0.6
P	17	L	338684	SR	0.39	0.17	-0.10	0.17	-0.05	-0.06	0.7
P	18	L	255072	SPR	0.46	0.45	0.45	-0.40			2.6
P	19	O	260754	SPR	0.28	0.45	0.45	-0.33			4.0
P	21	O	51452	SR	0.66	0.37	-0.19	0.37	-0.21	-0.14	1.6

Table 1.A22 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	22	L	275469	SR	0.17	0.19	0.10	-0.09	-0.23	0.19	1.7
P	23	O	54803	SR	0.88	0.28	-0.18	-0.17	0.28	-0.14	2.2
P	24	O	322114	SR	0.82	0.36	-0.23	-0.16	-0.23	0.36	0.0
P	26	O	106650	SR	0.21	0.19	0.19	-0.03	-0.11	-0.04	0.2
P	27	O	211025	SR	0.31	0.22	-0.12	0.22	-0.01	-0.13	0.2
P	28	L	348321	SR	0.42	0.16	-0.05	0.16	-0.12	-0.04	0.1
P	29	O	67496	SPR	0.47	0.52	0.52	-0.44			3.2
P	30	O	275481	SPR	0.38	0.43	0.43	-0.35			2.4
P	32	L	79093	SR	0.25	0.36	-0.13	-0.05	-0.19	0.36	0.4
P	33	O	79042	SR	0.52	0.35	0.35	-0.13	-0.20	-0.13	0.4
P	35	L	132839	SR	0.46	0.24	-0.14	-0.09	0.24	-0.08	0.3
P	37	L	328710	SR	0.56	0.39	0.39	-0.13	-0.21	-0.19	0.2
P	38	L	338678	SR	0.2	0.14	-0.11	-0.02	0.03	0.14	0.4
P	40	O	136691	SR	0.4	0.31	-0.06	-0.16	0.31	-0.20	0.4
P	42	L	268729	SPR	0.53	0.46	0.46	-0.41			2.4
P	43	O	67460	SPR	0.12	0.42	0.42	-0.24			6.3
P	44	L	132832	SR	0.2	0.11	0.11	0.02	-0.08	-0.03	0.7
P	45	L	106568	SR	0.37	0.33	0.33	-0.21	-0.15	-0.03	0.5
P	46	L	43195	SR	0.64	0.36	-0.22	-0.16	0.36	-0.12	0.8
P	47	L	319465	SR	0.58	0.40	-0.20	-0.22	-0.16	0.40	0.3
P	49	O	67414	SR	0.47	0.35	-0.15	-0.16	0.35	-0.14	0.2
P	50	L	79136	SR	0.23	0.01	-0.03	0.01	-0.12	0.13	0.1
P	52	O	268735	SR	0.22	0.18	-0.11	-0.18	0.05	0.18	0.4
P	53	L	319449	SR	0.64	0.33	-0.20	-0.17	0.33	-0.14	0.3
P	54	L	282319	SR	0.22	0.20	-0.09	-0.12	0.20	0.02	0.2
P	55	L	67471	SPR	0.53	0.49	0.49	-0.44			2.9
P	57	O	282376	SR	0.16	0.19	0.00	-0.07	-0.08	0.19	0.2
P	58	O	322120	SR	0.51	0.34	-0.23	-0.07	-0.18	0.34	0.2
P	59	L	319455	SR	0.32	0.17	-0.06	-0.06	0.17	-0.07	0.3
P	60	L	67478	SR	0.57	0.36	-0.22	0.36	-0.18	-0.11	0.1
P	62	O	56752	SR	0.46	0.22	0.01	-0.23	0.22	-0.06	0.2
P	64	L	132834	SPR	0.36	0.55	0.55	-0.45			4.2
P	65	L	322014	SPR	0.45	0.53	0.53	-0.44			5.3
P	66	L	51578	SR	0.38	0.22	-0.04	-0.09	-0.14	0.22	0.3
P	67	O	67438	SR	0.47	0.29	-0.11	-0.10	0.29	-0.17	0.6
P	68	L	50369	SR	0.28	0.14	-0.14	0.14	-0.10	0.10	0.4
P	69	L	54677	SR	0.66	0.38	-0.20	-0.21	0.38	-0.18	0.4
Mean					0.42	0.31	0.04	-0.10	-0.01	0.02	1.0
SD					0.17	0.12	0.26	0.22	0.21	0.19	1.4

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.A23 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	O	223236	SR	0.52	0.31	-0.09	-0.15	-0.19	0.31	0.5
Q	2	L	328773	SR	0.59	0.33	-0.20	0.33	-0.06	-0.21	0.1
Q	4	O	136689	SR	0.51	0.39	0.39	-0.28	-0.16	-0.08	0.1
Q	5	L	328711	SR	0.51	0.22	-0.13	0.22	-0.20	0.02	0.1
Q	7	L	319427	SPR	0.47	0.45	0.45	-0.41			2.3
Q	8	L	268737	SR	0.45	0.36	-0.14	0.36	-0.21	-0.10	0.1
Q	9	L	319432	SR	0.22	0.28	0.28	-0.05	-0.14	-0.08	0.2
Q	11	L	56734	SR	0.55	0.43	-0.29	0.43	-0.16	-0.14	0.2
Q	12	O	51542	SR	0.4	0.35	0.35	-0.13	-0.29	-0.14	0.1
Q	13	O	268762	SR	0.26	0.29	-0.04	-0.14	0.29	-0.12	0.2
Q	15	L	52338	SR	0.65	0.40	-0.12	-0.29	0.40	-0.16	0.2
Q	16	O	54684	SR	0.31	0.42	0.42	-0.28	-0.14	0.00	0.6
Q	17	L	338684	SR	0.39	0.17	-0.10	0.17	-0.05	-0.06	0.7
Q	18	L	255072	SPR	0.46	0.45	0.45	-0.40			2.6
Q	19	O	319462	SPR	0.05	0.35	0.35	-0.20			7.9
Q	21	O	79150	SR	0.15	0.13	0.06	-0.08	-0.11	0.13	1.5
Q	22	L	275469	SR	0.17	0.19	0.10	-0.09	-0.23	0.19	1.7
Q	23	O	54869	SR	0.49	0.19	-0.13	0.19	-0.07	-0.12	2.0
Q	24	O	67536	SR	0.73	0.22	-0.17	-0.15	-0.08	0.22	0.1
Q	26	O	79532	SR	0.46	0.28	0.28	-0.10	-0.17	-0.08	0.1
Q	27	O	54755	SR	0.53	0.32	-0.23	0.32	-0.09	-0.11	0.1
Q	28	L	348321	SR	0.42	0.16	-0.05	0.16	-0.12	-0.04	0.1
Q	29	O	328755	SPR	0.34	0.48	0.48	-0.43			1.7
Q	30	O	56540	SPR	0.54	0.44	0.44	-0.41			2.8
Q	32	L	79093	SR	0.25	0.36	-0.13	-0.05	-0.19	0.36	0.4
Q	33	O	328714	SR	0.27	0.30	0.04	-0.18	0.30	-0.17	0.2
Q	35	L	132839	SR	0.46	0.24	-0.14	-0.09	0.24	-0.08	0.3
Q	37	L	328710	SR	0.56	0.39	0.39	-0.13	-0.21	-0.19	0.2
Q	38	L	338678	SR	0.2	0.14	-0.11	-0.02	0.03	0.14	0.4
Q	40	O	348322	SR	0.31	0.29	-0.06	-0.18	0.29	-0.08	0.2
Q	42	L	268729	SPR	0.53	0.46	0.46	-0.41			2.4
Q	43	O	338664	SPR	0.47	0.53	0.53	-0.47			3.2
Q	44	L	132832	SR	0.2	0.11	0.11	0.02	-0.08	-0.03	0.7
Q	45	L	106568	SR	0.37	0.33	0.33	-0.21	-0.15	-0.03	0.5
Q	46	L	43195	SR	0.64	0.36	-0.22	-0.16	0.36	-0.12	0.8
Q	47	L	319465	SR	0.58	0.40	-0.20	-0.22	-0.16	0.40	0.3
Q	49	O	67555	SR	0.15	0.29	0.29	-0.01	-0.18	-0.02	0.2
Q	50	L	79136	SR	0.23	0.01	-0.03	0.01	-0.12	0.13	0.1
Q	52	O	106652	SR	0.36	0.36	0.36	-0.13	-0.19	-0.10	0.1
Q	53	L	319449	SR	0.64	0.33	-0.20	-0.17	0.33	-0.14	0.3
Q	54	L	282319	SR	0.22	0.20	-0.09	-0.12	0.20	0.02	0.2
Q	55	L	67471	SPR	0.53	0.49	0.49	-0.44			2.9
Q	57	O	67443	SR	0.26	0.27	-0.07	0.27	-0.08	-0.12	0.2

Table 1.A23 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	58	O	260762	SR	0.4	0.38	-0.18	-0.15	-0.15	0.38	0.1
Q	59	L	319455	SR	0.32	0.17	-0.06	-0.06	0.17	-0.07	0.3
Q	60	L	67478	SR	0.57	0.36	-0.22	0.36	-0.18	-0.11	0.1
Q	62	O	67475	SR	0.45	0.42	0.42	-0.20	-0.22	-0.11	0.2
Q	64	L	132834	SPR	0.36	0.55	0.55	-0.45			4.2
Q	65	L	322014	SPR	0.45	0.53	0.53	-0.44			5.3
Q	66	L	51578	SR	0.38	0.22	-0.04	-0.09	-0.14	0.22	0.3
Q	67	O	56685	SR	0.72	0.35	-0.15	-0.20	-0.19	0.35	0.2
Q	68	L	50369	SR	0.28	0.14	-0.14	0.14	-0.10	0.10	0.4
Q	69	L	54677	SR	0.66	0.38	-0.20	-0.21	0.38	-0.18	0.4
Mean					0.41	0.32	0.09	-0.10	-0.04	0.00	1.0
SD					0.16	0.12	0.27	0.23	0.20	0.17	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.A24 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	133425	SR	0.64	0.36	-0.15	-0.12	-0.26	0.36	0.0
P	2	O	133432	SR	0.59	0.30	0.30	-0.06	-0.21	-0.16	0.0
P	3	L	59855	SR	0.51	0.31	-0.12	-0.22	-0.08	0.31	0.1
P	4	L	59856	SR	0.34	0.24	-0.15	0.24	-0.12	-0.02	0.0
P	6	O	323342	SR	0.48	0.32	-0.17	0.32	-0.24	-0.09	0.9
P	7	O	332076	SR	0.28	0.07	0.12	0.07	-0.09	-0.10	0.0
P	8	L	332077	SR	0.22	0.18	-0.01	-0.10	-0.06	0.18	0.3
P	9	L	282412	SR	0.28	0.21	-0.08	-0.10	0.21	-0.04	0.0
P	10	L	282410	SR	0.39	0.18	-0.07	-0.17	0.18	0.02	0.1
P	12	L	253644	SR	0.15	0.37	-0.06	-0.12	-0.11	0.37	0.0
P	15	O	223405	SR	0.37	0.27	0.08	0.27	-0.14	-0.26	1.3
P	16	L	68213	SR	0.34	0.28	-0.05	0.28	-0.17	-0.10	0.1
P	17	L	79311	SR	0.57	0.37	-0.12	0.37	-0.13	-0.25	0.3
P	18	L	79312	SR	0.31	0.25	-0.12	-0.11	-0.07	0.25	0.4
P	19	O	214551	SR	0.44	0.28	0.28	-0.07	-0.17	-0.11	0.0
P	20	O	68264	SR	0.57	0.38	-0.20	-0.17	-0.17	0.38	0.0
P	23	L	322138	SR	0.18	0.25	0.25	-0.03	-0.05	-0.14	0.7
P	24	L	322135	SR	0.49	0.31	-0.15	-0.07	-0.19	0.31	0.5
P	25	O	279554	SR	0.44	0.24	0.24	-0.10	-0.17	-0.03	0.4
P	26	O	67658	SR	0.44	0.37	-0.28	-0.22	0.37	-0.01	0.9
P	27	L	136129	SR	0.62	0.33	-0.14	0.33	-0.23	-0.09	0.5
P	28	L	136130	SR	0.22	0.15	-0.10	0.01	0.15	-0.09	0.5

Table 1.A24 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	29	L	349089	SR	0.52	0.26	0.26	-0.11	-0.14	-0.12	0.8
P	31	L	349046	SR	0.58	0.26	-0.12	-0.18	-0.10	0.26	0.8
P	32	O	349047	SR	0.56	0.33	0.33	-0.07	-0.22	-0.19	1.8
P	33	L	79408	SR	0.63	0.33	-0.14	-0.18	0.33	-0.19	0.8
P	34	O	277326	SR	0.37	0.39	0.39	-0.20	-0.15	-0.12	0.0
P	35	L	214543	SR	0.45	0.20	-0.03	0.20	-0.14	-0.07	0.4
P	36	O	322176	SR	0.53	0.28	-0.08	0.28	-0.17	-0.12	0.4
P	41	O	67679	SR	0.29	0.36	0.36	-0.05	-0.13	-0.31	0.0
P	42	O	68138	SR	0.48	0.17	-0.12	0.00	-0.18	0.17	0.0
P	43	L	214558	SR	0.32	0.26	0.04	-0.18	0.26	-0.15	0.3
P	44	L	214559	SR	0.25	0.21	-0.14	-0.14	0.21	0.05	0.3
P	45	L	214560	SR	0.55	0.33	0.33	-0.11	-0.19	-0.15	0.3
P	46	O	55005	SR	0.32	0.35	0.35	-0.23	-0.06	-0.11	0.0
P	49	L	271112	SR	0.31	0.29	-0.05	-0.12	-0.14	0.29	0.1
P	50	O	349021	SR	0.19	0.37	0.00	-0.19	-0.20	0.37	0.0
P	51	L	349025	SR	0.53	0.36	0.36	-0.18	-0.23	-0.08	0.3
P	52	L	271051	SR	0.15	0.26	-0.17	-0.05	0.26	-0.02	0.3
P	53	L	65061	SR	0.41	0.32	0.32	-0.04	-0.21	-0.19	0.3
P	54	L	256551	SR	0.37	0.25	-0.10	0.25	-0.07	-0.13	0.3
P	55	L	256522	SR	0.21	0.17	-0.20	-0.01	0.17	0.03	0.3
P	56	L	256523	SR	0.44	0.27	-0.16	-0.08	0.27	-0.11	0.4
P	59	L	55268	SR	0.27	0.27	-0.04	-0.23	0.27	-0.03	0.1
P	60	O	55014	SR	0.11	0.26	0.26	0.03	-0.10	-0.21	0.0
P	61	L	64730	SR	0.31	0.09	-0.06	0.09	-0.02	-0.02	0.3
P	62	L	64733	SR	0.54	0.32	-0.17	0.32	-0.14	-0.14	0.4
P	63	L	256539	SR	0.14	0.10	-0.02	0.10	-0.01	-0.05	0.4
P	64	L	256538	SR	0.38	0.22	-0.08	-0.18	0.22	0.00	0.5
P	65	O	79440	SR	0.46	0.11	-0.11	0.11	-0.14	0.08	0.4
P	66	O	67860	SR	0.57	0.25	-0.17	0.25	-0.09	-0.11	0.4
P	67	O	349113	SR	0.49	0.30	-0.15	-0.14	0.30	-0.10	0.4
P	68	O	282441	SR	0.5	0.29	0.29	-0.09	-0.22	-0.11	0.0
P	69	O	338746	SR	0.55	0.32	-0.07	-0.13	-0.26	0.32	0.0
P	70	O	68300	SR	0.37	0.31	-0.13	0.31	-0.16	-0.07	0.4
P	71	L	270998	SR	0.45	0.25	-0.02	-0.22	0.25	-0.06	0.5
P	72	O	270996	SR	0.57	0.26	-0.07	0.26	-0.15	-0.18	0.4
P	76	L	241127	SR	0.41	0.17	-0.12	0.17	0.01	-0.11	0.1
P	77	O	338784	SR	0.5	0.37	0.37	-0.06	-0.31	-0.16	0.0
P	78	L	322144	SR	0.38	0.31	-0.07	-0.17	0.31	-0.12	0.5
P	79	O	322146	SR	0.47	0.28	0.28	-0.22	-0.03	-0.15	0.0
P	80	O	260070	SR	0.45	0.20	-0.11	-0.14	0.20	-0.01	0.0
P	81	L	260068	SR	0.71	0.43	-0.18	-0.21	-0.25	0.43	0.3
P	83	L	52716	SR	0.26	0.07	0.01	-0.13	0.07	0.07	0.3
P	86	L	52775	SR	0.48	0.44	-0.14	-0.25	-0.18	0.44	0.3
P	87	L	52776	SR	0.51	0.39	-0.17	-0.22	-0.12	0.39	0.3

Table 1.A24 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	88	L	65049	SR	0.31	0.20	-0.01	-0.16	0.20	-0.06	0.5
P	89	L	349084	SR	0.45	0.35	-0.18	-0.14	-0.11	0.35	0.5
P	91	O	65137	SR	0.24	0.31	0.31	-0.02	-0.05	-0.25	0.0
P	92	L	331300	SR	0.25	0.26	-0.08	-0.12	-0.05	0.26	0.4
P	93	O	331298	SR	0.37	0.15	0.02	0.15	-0.17	-0.01	0.0
P	95	O	279585	SR	0.2	0.26	-0.09	-0.07	-0.06	0.26	0.4
P	96	O	332034	SR	0.3	0.22	0.22	-0.15	-0.02	-0.09	0.0
P	97	L	332031	SR	0.48	0.37	-0.15	-0.17	0.37	-0.17	0.3
P	98	L	279647	SR	0.39	0.41	-0.18	-0.15	-0.16	0.41	0.3
P	99	L	53469	SR	0.69	0.30	-0.15	0.30	-0.13	-0.16	0.5
Mean					0.41	0.27	0.00	-0.03	-0.04	0.01	0.3
SD					0.14	0.08	0.19	0.18	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.A25 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	133425	SR	0.64	0.36	-0.15	-0.12	-0.26	0.36	0.0
Q	2	O	322172	SR	0.55	0.42	0.42	-0.28	-0.19	-0.13	0.0
Q	3	L	59855	SR	0.51	0.31	-0.12	-0.22	-0.08	0.31	0.1
Q	4	L	59856	SR	0.34	0.24	-0.15	0.24	-0.12	-0.02	0.0
Q	6	O	263108	SR	0.55	0.24	-0.12	-0.15	0.24	-0.07	0.0
Q	7	O	332075	SR	0.3	0.10	-0.07	-0.06	0.10	0.02	0.2
Q	8	L	332077	SR	0.22	0.18	-0.01	-0.10	-0.06	0.18	0.3
Q	9	L	282412	SR	0.28	0.21	-0.08	-0.10	0.21	-0.04	0.0
Q	10	L	282410	SR	0.39	0.18	-0.07	-0.17	0.18	0.02	0.1
Q	12	L	253644	SR	0.15	0.37	-0.06	-0.12	-0.11	0.37	0.0
Q	15	O	354960	SR	0.37	0.25	0.25	-0.19	-0.02	-0.11	0.2
Q	16	L	68213	SR	0.34	0.28	-0.05	0.28	-0.17	-0.10	0.1
Q	17	L	79311	SR	0.57	0.37	-0.12	0.37	-0.13	-0.25	0.3
Q	18	L	79312	SR	0.31	0.25	-0.12	-0.11	-0.07	0.25	0.4
Q	19	O	52687	SR	0.28	0.28	-0.04	0.28	-0.15	-0.12	0.4
Q	20	O	57034	SR	0.42	0.40	-0.06	0.40	-0.19	-0.25	0.2
Q	23	L	322138	SR	0.18	0.25	0.25	-0.03	-0.05	-0.14	0.7
Q	24	L	322135	SR	0.49	0.31	-0.15	-0.07	-0.19	0.31	0.5
Q	25	O	52557	SR	0.42	0.35	-0.09	-0.17	-0.17	0.35	0.6
Q	26	O	68175	SR	0.4	0.32	0.32	-0.18	-0.10	-0.15	0.6
Q	27	L	136129	SR	0.62	0.33	-0.14	0.33	-0.23	-0.09	0.5
Q	28	L	136130	SR	0.22	0.15	-0.10	0.01	0.15	-0.09	0.5

Table 1.A25 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	29	L	349089	SR	0.52	0.26	0.26	-0.11	-0.14	-0.12	0.8
Q	31	L	349046	SR	0.58	0.26	-0.12	-0.18	-0.10	0.26	0.8
Q	32	O	349043	SR	0.42	0.33	-0.16	0.33	-0.18	-0.09	0.6
Q	33	L	79408	SR	0.63	0.33	-0.14	-0.18	0.33	-0.19	0.8
Q	34	O	52501	SR	0.58	0.38	-0.15	-0.18	-0.22	0.38	0.2
Q	35	L	214543	SR	0.45	0.20	-0.03	0.20	-0.14	-0.07	0.4
Q	36	O	223429	SR	0.4	0.26	0.26	-0.11	-0.05	-0.18	0.2
Q	41	O	52700	SR	0.2	0.17	0.17	-0.15	0.00	0.00	0.4
Q	42	O	67662	SR	0.46	0.15	-0.05	-0.14	-0.01	0.15	0.4
Q	43	L	214558	SR	0.32	0.26	0.04	-0.18	0.26	-0.15	0.3
Q	44	L	214559	SR	0.25	0.21	-0.14	-0.14	0.21	0.05	0.3
Q	45	L	214560	SR	0.55	0.33	0.33	-0.11	-0.19	-0.15	0.3
Q	46	O	271062	SR	0.42	0.35	0.35	-0.16	-0.16	-0.10	0.4
Q	49	L	271112	SR	0.31	0.29	-0.05	-0.12	-0.14	0.29	0.1
Q	50	O	349022	SR	0.48	0.40	-0.15	0.40	-0.21	-0.16	0.2
Q	51	L	349025	SR	0.53	0.36	0.36	-0.18	-0.23	-0.08	0.3
Q	52	L	271051	SR	0.15	0.26	-0.17	-0.05	0.26	-0.02	0.3
Q	53	L	65061	SR	0.41	0.32	0.32	-0.04	-0.21	-0.19	0.3
Q	54	L	256551	SR	0.37	0.25	-0.10	0.25	-0.07	-0.13	0.3
Q	55	L	256522	SR	0.21	0.17	-0.20	-0.01	0.17	0.03	0.3
Q	56	L	256523	SR	0.44	0.27	-0.16	-0.08	0.27	-0.11	0.4
Q	59	L	55268	SR	0.27	0.27	-0.04	-0.23	0.27	-0.03	0.1
Q	60	O	52436	SR	0.65	0.41	0.41	-0.19	-0.23	-0.18	0.4
Q	61	L	64730	SR	0.31	0.09	-0.06	0.09	-0.02	-0.02	0.3
Q	62	L	64733	SR	0.54	0.32	-0.17	0.32	-0.14	-0.14	0.4
Q	63	L	256539	SR	0.14	0.10	-0.02	0.10	-0.01	-0.05	0.4
Q	64	L	256538	SR	0.38	0.22	-0.08	-0.18	0.22	0.00	0.5
Q	65	O	271042	SR	0.24	0.40	-0.10	-0.15	-0.15	0.40	0.2
Q	66	O	68192	SR	0.61	0.30	0.30	-0.14	-0.14	-0.16	0.4
Q	67	O	282439	SR	0.68	0.31	-0.20	-0.13	-0.13	0.31	0.4
Q	68	O	67632	SR	0.45	0.22	-0.12	0.22	-0.10	-0.04	0.2
Q	69	O	67683	SR	0.35	0.33	-0.12	0.33	-0.20	-0.04	0.4
Q	70	O	271155	SR	0.64	0.27	0.27	-0.10	-0.15	-0.14	0.2
Q	71	L	270998	SR	0.45	0.25	-0.02	-0.22	0.25	-0.06	0.5
Q	72	O	271147	SR	0.62	0.30	-0.13	0.30	-0.20	-0.09	0.2
Q	76	L	241127	SR	0.41	0.17	-0.12	0.17	0.01	-0.11	0.1
Q	77	O	108515	SR	0.28	0.25	-0.07	0.25	-0.09	-0.10	0.4
Q	78	L	322144	SR	0.38	0.31	-0.07	-0.17	0.31	-0.12	0.5
Q	79	O	322145	SR	0.31	0.30	-0.10	0.30	-0.06	-0.17	0.4
Q	80	O	260069	SR	0.57	0.38	-0.14	0.38	-0.18	-0.22	0.6
Q	81	L	260068	SR	0.71	0.43	-0.18	-0.21	-0.25	0.43	0.3
Q	83	L	52716	SR	0.26	0.07	0.01	-0.13	0.07	0.07	0.3
Q	86	L	52775	SR	0.48	0.44	-0.14	-0.25	-0.18	0.44	0.3
Q	87	L	52776	SR	0.51	0.39	-0.17	-0.22	-0.12	0.39	0.3

Table 1.A25 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	88	L	65049	SR	0.31	0.20	-0.01	-0.16	0.20	-0.06	0.5
Q	89	L	349084	SR	0.45	0.35	-0.18	-0.14	-0.11	0.35	0.5
Q	91	O	67631	SR	0.21	-0.01	-0.15	0.29	-0.01	-0.21	0.8
Q	92	L	331300	SR	0.25	0.26	-0.08	-0.12	-0.05	0.26	0.4
Q	93	O	331299	SR	0.55	0.31	-0.08	-0.16	0.31	-0.18	0.8
Q	95	O	349091	SR	0.2	0.10	0.10	0.20	-0.23	-0.10	0.4
Q	96	O	332030	SR	0.36	0.27	0.27	-0.23	-0.04	-0.06	0.6
Q	97	L	332031	SR	0.48	0.37	-0.15	-0.17	0.37	-0.17	0.3
Q	98	L	279647	SR	0.39	0.41	-0.18	-0.15	-0.16	0.41	0.3
Q	99	L	53469	SR	0.69	0.30	-0.15	0.30	-0.13	-0.16	0.5
Mean					0.41	0.28	-0.02	-0.02	-0.04	0.01	0.4
SD					0.15	0.09	0.17	0.21	0.17	0.20	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.A26 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	273031	SR	0.65	0.24	0.24	-0.22	-0.17	-0.01	0.3
P	2	L	273034	SR	0.62	0.27	-0.20	-0.19	-0.07	0.27	0.2
P	3	L	273032	SR	0.28	0.09	-0.09	0.03	-0.02	0.09	0.2
P	4	L	273035	SR	0.33	0.23	0.23	-0.09	-0.07	-0.11	0.1
P	5	L	273036	SR	0.25	0.17	0.17	-0.09	-0.01	-0.09	0.1
P	6	L	273037	SR	0.62	0.38	-0.15	-0.24	0.38	-0.18	0.2
P	12	L	108722	SR	0.32	0.24	0.24	-0.06	-0.14	-0.07	0.2
P	13	L	108723	SR	0.57	0.35	0.35	-0.16	-0.17	-0.16	0.1
P	14	L	108724	SR	0.58	0.37	-0.10	0.37	-0.23	-0.19	0.3
P	24	O	272943	SR	0.48	0.29	-0.05	0.29	-0.18	-0.17	1.2
P	25	L	272871	SR	0.52	0.36	-0.10	0.36	-0.23	-0.15	0.7
P	26	O	285619	SR	0.66	0.36	-0.15	-0.17	0.36	-0.22	1.5
P	27	O	108901	SR	0.66	0.37	-0.21	-0.17	0.37	-0.16	1.7
P	28	O	108902	SR	0.43	0.33	-0.05	-0.19	0.33	-0.15	2.0
P	29	O	108903	SR	0.73	0.44	0.44	-0.30	-0.20	-0.18	2.2
P	30	O	108904	SR	0.61	0.43	0.43	-0.15	-0.28	-0.16	2.6
P	31	O	108905	SR	0.13	0.11	-0.13	0.09	-0.05	0.11	2.4
P	32	O	108906	SR	0.63	0.34	-0.08	-0.24	-0.16	0.34	2.6
P	33	O	349431	SR	0.73	0.37	-0.22	-0.16	0.37	-0.18	0.3
P	34	O	130987	SR	0.63	0.41	-0.15	-0.18	-0.29	0.41	0.2
P	35	O	349435	SR	0.65	0.32	-0.16	0.32	-0.09	-0.24	0.2
P	37	L	95963	SR	0.48	0.28	0.28	-0.11	-0.22	-0.04	0.1

Table 1.A26 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	38	L	95964	SR	0.53	0.39	-0.19	-0.20	-0.14	0.39	0.1
P	39	L	95965	SR	0.51	0.36	0.36	-0.19	-0.17	-0.14	0.2
P	40	L	95966	SR	0.66	0.46	0.46	-0.24	-0.27	-0.18	0.1
P	41	L	95991	SR	0.45	0.24	-0.12	0.24	-0.10	-0.09	0.1
P	42	L	95992	SR	0.6	0.37	-0.20	-0.27	-0.13	0.37	0.3
P	43	L	95993	SR	0.64	0.25	0.25	-0.10	-0.22	-0.15	0.2
P	44	L	95994	SR	0.58	0.40	0.40	-0.20	-0.24	-0.11	0.2
P	45	L	95995	SR	0.6	0.33	-0.16	0.33	-0.12	-0.24	0.3
P	46	L	108820	SR	0.61	0.35	-0.17	0.35	-0.21	-0.12	0.4
P	47	L	109744	SR	0.56	0.37	-0.15	-0.17	-0.20	0.37	0.4
P	48	L	108822	SR	0.27	0.22	-0.17	0.06	-0.20	0.22	0.3
P	49	L	108823	SR	0.47	0.28	-0.13	-0.11	0.28	-0.12	0.2
P	50	L	108827	SR	0.65	0.32	-0.16	0.32	-0.15	-0.15	0.2
P	51	L	108824	SR	0.58	0.37	-0.21	-0.15	-0.19	0.37	0.6
P	52	L	108826	SR	0.2	0.09	0.09	0.05	-0.12	0.01	0.3
P	56	L	130955	SR	0.47	0.29	0.29	-0.10	-0.19	-0.13	0.3
P	57	L	132497	SR	0.56	0.33	-0.18	-0.11	0.33	-0.23	0.2
P	58	L	130956	SR	0.2	0.12	0.12	-0.16	-0.08	0.11	0.2
P	59	L	130971	SR	0.44	0.38	-0.14	-0.25	-0.11	0.38	0.4
P	60	L	130972	SR	0.5	0.38	-0.16	-0.22	-0.11	0.38	0.4
P	61	L	130973	SR	0.2	0.11	-0.15	0.11	0.15	-0.18	0.9
P	62	L	132496	SR	0.44	0.23	0.23	0.01	-0.21	-0.13	0.8
P	63	L	130200	SR	0.47	0.28	0.28	-0.04	-0.26	-0.15	0.8
P	64	L	130974	SR	0.64	0.47	0.47	-0.29	-0.24	-0.17	0.9
P	65	L	130975	SR	0.38	0.18	-0.05	0.18	-0.15	0.01	1.3
P	66	O	264649	SR	0.68	0.34	-0.20	0.34	-0.23	-0.05	0.3
P	67	O	264650	SR	0.78	0.36	-0.23	-0.25	-0.06	0.36	0.3
P	68	O	264651	SR	0.58	0.32	0.32	-0.15	-0.18	-0.10	0.7
P	69	O	285499	SR	0.58	0.26	-0.12	-0.16	0.26	-0.09	0.3
P	70	O	285501	SR	0.6	0.45	-0.20	-0.13	-0.31	0.45	0.3
P	71	O	285502	SR	0.58	0.34	-0.16	-0.21	0.34	-0.09	0.9
P	72	O	285506	SR	0.18	0.17	-0.06	0.09	-0.20	0.17	0.3
P	73	O	285507	SR	0.28	0.21	0.21	-0.11	-0.14	0.03	0.3
P	74	O	285508	SR	0.24	0.09	0.00	0.09	-0.16	0.05	0.3
P	75	O	285509	SR	0.2	0.04	-0.03	0.11	-0.17	0.04	0.3
P	76	O	285510	SR	0.45	0.28	0.28	-0.11	-0.13	-0.12	0.3
P	97	O	130248	SR	0.55	0.33	-0.14	0.33	-0.21	-0.09	0.7
P	98	O	130249	SR	0.26	0.20	-0.07	0.20	-0.03	-0.11	0.5
Mean					0.50	0.29	0.01	-0.04	-0.08	-0.01	0.6
SD					0.16	0.10	0.22	0.20	0.19	0.21	0.6

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 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	273031	SR	0.65	0.24	0.24	-0.22	-0.17	-0.01	0.3
Q	2	L	273034	SR	0.62	0.27	-0.20	-0.19	-0.07	0.27	0.2
Q	3	L	273032	SR	0.28	0.09	-0.09	0.03	-0.02	0.09	0.2
Q	4	L	273035	SR	0.33	0.23	0.23	-0.09	-0.07	-0.11	0.1
Q	5	L	273036	SR	0.25	0.17	0.17	-0.09	-0.01	-0.09	0.1
Q	6	L	273037	SR	0.62	0.38	-0.15	-0.24	0.38	-0.18	0.2
Q	12	L	108722	SR	0.32	0.24	0.24	-0.06	-0.14	-0.07	0.2
Q	13	L	108723	SR	0.57	0.35	0.35	-0.16	-0.17	-0.16	0.1
Q	14	L	108724	SR	0.58	0.37	-0.10	0.37	-0.23	-0.19	0.3
Q	24	O	256301	SR	0.37	0.39	0.39	-0.12	-0.18	-0.15	0.4
Q	25	L	272871	SR	0.52	0.36	-0.10	0.36	-0.23	-0.15	0.7
Q	26	O	256298	SR	0.48	0.26	-0.10	-0.16	0.26	-0.09	0.5
Q	27	O	223369	SR	0.33	0.30	0.30	-0.07	-0.15	-0.18	0.8
Q	28	O	223303	SR	0.54	0.36	-0.14	-0.22	0.36	-0.17	0.8
Q	29	O	223304	SR	0.27	0.12	-0.08	0.12	-0.10	0.06	1.0
Q	30	O	223305	SR	0.14	0.05	-0.05	-0.09	0.05	0.09	1.1
Q	31	O	223306	SR	0.13	0.21	-0.14	-0.22	0.12	0.21	1.1
Q	32	O	223307	SR	0.48	0.43	-0.29	-0.15	-0.17	0.43	1.5
Q	33	O	95665	SR	0.78	0.41	-0.17	-0.31	0.41	-0.18	0.0
Q	34	O	96104	SR	0.71	0.40	-0.24	-0.22	0.40	-0.17	0.1
Q	35	O	130256	SR	0.72	0.31	-0.23	0.31	-0.11	-0.19	0.0
Q	37	L	95963	SR	0.48	0.28	0.28	-0.11	-0.22	-0.04	0.1
Q	38	L	95964	SR	0.53	0.39	-0.19	-0.20	-0.14	0.39	0.1
Q	39	L	95965	SR	0.51	0.36	0.36	-0.19	-0.17	-0.14	0.2
Q	40	L	95966	SR	0.66	0.46	0.46	-0.24	-0.27	-0.18	0.1
Q	41	L	95991	SR	0.45	0.24	-0.12	0.24	-0.10	-0.09	0.1
Q	42	L	95992	SR	0.6	0.37	-0.20	-0.27	-0.13	0.37	0.3
Q	43	L	95993	SR	0.64	0.25	0.25	-0.10	-0.22	-0.15	0.2
Q	44	L	95994	SR	0.58	0.40	0.40	-0.20	-0.24	-0.11	0.2
Q	45	L	95995	SR	0.6	0.33	-0.16	0.33	-0.12	-0.24	0.3
Q	46	L	108820	SR	0.61	0.35	-0.17	0.35	-0.21	-0.12	0.4
Q	47	L	109744	SR	0.56	0.37	-0.15	-0.17	-0.20	0.37	0.4
Q	48	L	108822	SR	0.27	0.22	-0.17	0.06	-0.20	0.22	0.3
Q	49	L	108823	SR	0.47	0.28	-0.13	-0.11	0.28	-0.12	0.2
Q	50	L	108827	SR	0.65	0.32	-0.16	0.32	-0.15	-0.15	0.2
Q	51	L	108824	SR	0.58	0.37	-0.21	-0.15	-0.19	0.37	0.6
Q	52	L	108826	SR	0.2	0.09	0.09	0.05	-0.12	0.01	0.3
Q	56	L	130955	SR	0.47	0.29	0.29	-0.10	-0.19	-0.13	0.3
Q	57	L	132497	SR	0.56	0.33	-0.18	-0.11	0.33	-0.23	0.2
Q	58	L	130956	SR	0.2	0.12	0.12	-0.16	-0.08	0.11	0.2
Q	59	L	130971	SR	0.44	0.38	-0.14	-0.25	-0.11	0.38	0.4
Q	60	L	130972	SR	0.5	0.38	-0.16	-0.22	-0.11	0.38	0.4
Q	61	L	130973	SR	0.2	0.11	-0.15	0.11	0.15	-0.18	0.9
Q	62	L	132496	SR	0.44	0.23	0.23	0.01	-0.21	-0.13	0.8

Table 1.A27 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	63	L	130200	SR	0.47	0.28	0.28	-0.04	-0.26	-0.15	0.8
Q	64	L	130974	SR	0.64	0.47	0.47	-0.29	-0.24	-0.17	0.9
Q	65	L	130975	SR	0.38	0.18	-0.05	0.18	-0.15	0.01	1.3
Q	66	O	256419	SR	0.57	0.33	-0.17	-0.18	0.33	-0.11	0.4
Q	67	O	256420	SR	0.56	0.33	-0.16	-0.18	-0.12	0.33	0.1
Q	68	O	256421	SR	0.59	0.39	-0.17	0.39	-0.18	-0.23	0.1
Q	69	O	109142	SR	0.43	0.21	0.04	0.21	-0.15	-0.20	0.4
Q	70	O	109144	SR	0.58	0.27	-0.12	-0.23	0.27	-0.06	0.3
Q	71	O	109148	SR	0.45	0.38	-0.13	0.38	-0.19	-0.16	0.3
Q	72	O	109145	SR	0.4	0.36	-0.11	-0.11	-0.24	0.36	0.1
Q	73	O	109146	SR	0.47	0.24	-0.16	-0.04	0.24	-0.14	0.5
Q	74	O	109150	SR	0.48	0.34	-0.09	-0.17	0.34	-0.22	0.3
Q	75	O	109147	SR	0.52	0.42	-0.17	-0.22	-0.18	0.42	0.3
Q	76	O	109149	SR	0.35	0.15	-0.12	-0.09	0.15	0.04	0.3
Q	97	O	256977	SR	0.58	0.27	-0.07	-0.18	0.27	-0.15	1.0
Q	98	O	256978	SR	0.39	0.26	-0.07	0.26	-0.14	-0.13	1.0
Mean					0.48	0.30	-0.01	-0.05	-0.05	-0.02	0.4
SD					0.15	0.10	0.21	0.20	0.21	0.21	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: MD HSA Algebra—January Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
A	10512	263301	SR		0.14	0.14	**0.04**	-0.11	-0.10	0.3
A	10512	369132	SPR	0.40	0.27	0.27	-0.24			1.7
A	10512	363919	SR	0.15	0.13	0.13	**0.01**	-0.05	-0.06	0.4
A	10512	257129	SR	0.32	**0.10**	-0.03	-0.01	0.10	-0.07	0.3
A	10512	132842	SPR	0.16	0.44	0.44	-0.33			**7.7**
A	10512	363901	SR	0.51	0.31	-0.13	-0.19	0.31	-0.09	0.3
A	10512	319426	SPR	**0.05**	0.36	0.36	-0.19			3.9
A	10512	363958	SR	0.37	0.29	0.29	-0.07	-0.18	-0.08	0.3
A	10512	363926	SR	0.70	0.34	-0.11	-0.20	0.34	-0.19	0.4
A	10512	362271	SR	0.67	0.33	-0.13	0.33	-0.22	-0.14	0.4
A	10512	322010	SPR	**0.09**	0.34	0.34	-0.21			4.4
A	10512	369144	SR	0.28	**0.07**	**0.09**	-0.10	0.07	-0.07	0.6
A	10512	408223	SR	0.27	**-0.04**	-0.04	-0.10	**0.01**	**0.10**	0.4
A	10512	328751	SPR	**0.06**	0.33	0.33	-0.14			**8.1**
A	10512	319414	SR	0.50	0.27	-0.02	-0.17	-0.22	0.27	0.4
A	10512	366210	SR	0.48	0.28	-0.16	-0.13	0.28	-0.08	0.7
B	6386	371779	SR	0.22	0.11	-0.10	-0.11	**0.09**	0.11	0.6
B	6386	319428	SPR	0.14	0.33	0.33	-0.23			4.3
B	6386	268751	SR	0.59	0.28	0.28	-0.19	-0.11	-0.12	0.3
B	6386	255112	SR	0.26	0.36	0.36	-0.16	-0.13	-0.08	0.4
B	6386	338682	SPR	**0.06**	0.33	0.33	-0.12			**7.0**
B	6386	395594	SR	0.20	0.21	-0.02	-0.09	-0.08	0.21	0.7
B	6386	414758	SPR	**0.04**	0.29	0.29	-0.12			4.5
B	6386	319431	SR	0.51	0.37	0.37	-0.17	-0.18	-0.14	0.5
B	6386	372572	SR	0.23	0.16	0.16	-0.20	**0.08**	-0.11	0.4
B	6386	257126	SR	0.77	0.33	-0.08	-0.20	-0.21	0.33	0.6
B	6386	255074	SPR	0.36	0.42	0.42	-0.34			**5.0**
B	6386	211020	SR	0.40	0.24	-0.11	0.24	-0.12	-0.07	0.4
B	6386	363954	SR	0.44	0.21	-0.02	0.21	-0.12	-0.14	0.6
B	6386	363942	SPR	**0.04**	0.28	0.28	-0.11			**9.2**
B	6386	329080	SR	0.50	0.16	-0.10	-0.14	0.16	**0.01**	0.6
B	6386	257134	SR	0.30	**0.04**	0.00	-0.05	0.04	**0.03**	1.1
Mean				0.32	0.25	0.13	-0.11	-0.01	-0.02	2.1
SD				0.20	0.12	0.20	0.15	0.17	0.14	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: MD HSA Biology—January Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
A	6526	369414	SR	0.35	0.39	-0.13	0.39	-0.19	-0.15	0.2
A	6526	364194	SR	0.31	0.35	-0.10	-0.06	0.35	-0.26	0.0
A	6526	398163	SR	0.55	0.48	-0.19	-0.20	-0.27	0.48	0.1
A	6526	398166	SR	0.57	0.43	-0.21	-0.24	0.43	-0.16	0.1
A	6526	395892	SR	0.70	0.32	-0.17	0.32	-0.18	-0.14	0.1
A	6526	395736	SR	0.47	0.26	-0.15	-0.17	-0.05	0.26	0.2
A	6526	373158	SR	0.46	0.33	0.33	-0.14	-0.22	-0.10	0.4
A	6526	366613	SR	0.78	0.39	-0.22	0.39	-0.19	-0.19	0.1
A	6526	361416	SR	0.59	0.45	-0.18	-0.21	-0.26	0.45	0.3
A	6526	361420	SR	0.66	0.45	-0.22	-0.24	0.45	-0.20	0.3
A	6526	361418	SR	0.35	0.46	-0.15	0.46	-0.18	-0.22	0.4
A	6526	363013	SR	0.48	0.47	0.47	-0.20	-0.20	-0.22	0.2
A	6526	373183	SR	0.51	0.54	-0.20	-0.32	-0.20	0.54	0.3
A	6526	369470	SR	0.45	0.50	-0.15	-0.24	-0.24	0.50	0.3
A	6526	369472	SR	0.56	0.37	-0.18	0.37	-0.21	-0.11	0.3
A	6526	369434	SR	0.69	0.41	-0.17	0.41	-0.26	-0.18	0.4
A	6526	369435	SR	0.54	0.26	-0.17	-0.11	0.26	-0.09	0.3
A	6526	369433	SR	0.38	0.38	-0.13	-0.12	-0.22	0.38	0.4
A	6526	79410	SR	0.39	0.13	-0.09	0.13	-0.05	-0.01	0.4
A	6526	400715	SR	0.61	0.39	-0.21	0.39	-0.21	-0.13	0.4
A	6526	400662	SR	0.62	0.46	-0.21	0.46	-0.25	-0.20	0.4
A	6526	373148	SR	0.36	0.20	0.20	-0.21	-0.15	**0.10**	0.4
A	6526	373147	SR	0.37	0.30	-0.08	-0.25	0.30	-0.03	0.4
B	8437	363019	SR	0.33	0.39	-0.29	0.39	-0.15	**0.02**	0.1
B	8437	362989	SR	0.67	0.49	0.49	-0.26	-0.25	-0.23	0.1
B	8437	398165	SR	0.23	0.44	-0.16	-0.17	-0.13	0.44	0.2
B	8437	398164	SR	0.68	0.42	0.42	-0.26	-0.15	-0.21	0.1
B	8437	395734	SR	0.57	0.40	0.40	-0.28	-0.24	-0.02	0.1
B	8437	395735	SR	0.45	0.27	-0.11	-0.13	0.27	-0.12	0.2
B	8437	363012	SR	0.61	0.53	-0.24	-0.29	-0.22	0.53	0.5
B	8437	366583	SR	0.37	0.34	-0.16	0.34	-0.10	-0.15	0.2
B	8437	361386	SR	0.59	0.49	0.49	-0.26	-0.25	-0.18	0.2
B	8437	361390	SR	0.48	0.48	-0.21	-0.31	0.48	-0.11	0.2
B	8437	361387	SR	0.31	0.51	-0.11	-0.28	-0.17	0.51	0.2
B	8437	363015	SR	0.38	0.14	-0.02	0.14	-0.10	-0.03	0.5
B	8437	373174	SR	0.59	0.37	0.37	-0.15	-0.22	-0.20	0.2
B	8437	369469	SR	0.46	0.52	0.52	-0.27	-0.23	-0.16	0.5
B	8437	369471	SR	0.59	0.46	-0.22	-0.23	0.46	-0.21	0.4
B	8437	398023	SR	0.56	0.43	-0.15	0.43	-0.29	-0.14	0.3
B	8437	398024	SR	0.53	0.44	-0.22	-0.22	0.44	-0.15	0.3
B	8437	398022	SR	0.38	0.31	-0.11	-0.13	-0.12	0.31	0.2
B	8437	363174	SR	0.61	0.50	0.50	-0.27	-0.23	-0.23	0.2

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

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
B	8437	400661	SR	0.36	0.41	-0.18	-0.23	-0.08	0.41	0.3
B	8437	400663	SR	0.43	0.50	0.50	-0.19	-0.23	-0.20	0.3
B	8437	363176	SR	0.48	0.31	-0.25	0.31	-0.01	-0.20	0.3
B	8437	363014	SR	0.51	0.39	-0.18	-0.18	0.39	-0.15	0.4
Mean				0.50	0.40	-0.03	-0.04	-0.06	0.00	0.3
SD				0.13	0.10	0.27	0.27	0.25	0.26	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: MD HSA English—January Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
A	7656	373678	SR	0.73	0.31	0.31	-0.13	-0.20	-0.16	0.1
A	7656	373679	SR	0.36	**0.10**	-0.18	0.10	**0.09**	-0.05	0.1
A	7656	373680	SR	0.23	0.22	0.22	-0.20	**0.05**	-0.15	0.1
A	7656	373677	SR	0.30	**0.09**	-0.02	-0.03	-0.11	0.09	0.1
A	7656	373682	SR	0.55	0.41	-0.23	0.41	-0.20	-0.15	0.1
A	7656	373782	SR	0.59	0.40	-0.17	-0.22	-0.20	0.40	0.2
A	7656	373776	SR	0.46	0.14	-0.02	-0.22	0.14	**0.04**	0.1
A	7656	373780	SR	0.46	0.24	0.24	-0.17	-0.25	**0.06**	0.2
A	7656	373784	SR	0.40	0.17	-0.21	**0.04**	0.17	-0.17	0.2
A	7656	373778	SR	0.29	0.22	**0.04**	0.22	-0.23	-0.19	0.2
A	7656	373777	SR	0.61	0.44	0.44	-0.21	-0.26	-0.23	0.2
A	7656	373783	SR	0.79	0.29	-0.16	0.29	-0.18	-0.15	0.2
A	7656	373785	SR	0.71	0.39	0.39	-0.25	-0.25	-0.15	0.2
A	7656	373874	SR	0.28	0.14	-0.10	0.14	-0.03	-0.04	0.3
A	7656	373841	SR	0.53	0.29	-0.21	-0.10	0.29	-0.14	0.1
A	7656	364116	SR	0.35	0.36	0.36	-0.18	-0.21	-0.08	0.3
A	7656	364117	SR	0.60	0.38	-0.19	0.38	-0.17	-0.19	0.3
A	7656	364118	SR	0.45	0.20	-0.12	0.20	-0.09	-0.02	0.2
A	7656	285723	SR	0.44	0.11	-0.15	0.11	**0.03**	-0.07	0.3
A	7656	285724	SR	0.54	0.36	-0.14	-0.20	0.36	-0.15	0.3
A	7656	285725	SR	0.43	0.34	-0.22	-0.22	-0.07	0.34	0.3
A	7656	366266	SR	0.61	0.23	0.23	-0.26	-0.18	**0.06**	0.4
A	7656	366269	SR	0.42	0.30	-0.21	-0.03	-0.16	0.30	0.4
A	7656	366268	SR	0.52	0.41	-0.16	0.41	-0.24	-0.15	0.4
A	7656	366271	SR	0.23	0.28	-0.07	-0.18	-0.02	0.28	0.5
A	7656	366273	SR	0.48	0.24	-0.05	-0.14	0.24	-0.12	0.4
A	7656	366275	SR	0.52	0.45	0.45	-0.24	-0.18	-0.19	0.4

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

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
A	7656	366279	SR	0.41	0.21	-0.04	-0.11	0.21	-0.09	0.4
A	7656	366278	SR	0.39	0.17	-0.19	0.17	-0.14	**0.11**	0.4
A	7656	366277	SR	0.50	0.23	-0.16	-0.02	0.23	-0.14	0.4
A	7656	366270	SR	0.25	0.22	0.22	**0.04**	-0.19	-0.10	0.4
A	7656	366276	SR	0.36	0.17	-0.11	0.17	-0.12	**0.05**	0.5
A	7656	364046	SR	0.33	0.38	0.38	-0.15	-0.19	-0.07	0.5
A	7656	364045	SR	0.46	0.47	-0.18	-0.22	-0.19	0.47	0.5
A	7656	364043	SR	0.31	0.27	-0.10	**0.03**	0.27	-0.22	0.5
A	7656	364044	SR	0.49	0.41	0.41	-0.22	-0.20	-0.12	0.5
A	7656	364047	SR	0.50	0.29	-0.15	-0.21	0.29	-0.01	0.5
A	7656	364048	SR	0.31	**0.05**	-0.20	0.05	**0.07**	**0.04**	0.5
B	9437	369280	SR	0.12	**-0.09**	**0.06**	**0.08**	-0.09	-0.12	0.0
B	9437	369279	SR	0.22	**-0.05**	-0.02	-0.05	**0.06**	**0.00**	0.1
B	9437	369278	SR	0.16	**0.00**	-0.13	0.00	**0.17**	-0.12	0.2
B	9437	369282	SR	0.26	**-0.02**	**0.24**	-0.17	-0.02	-0.20	0.1
B	9437	369284	SR	0.33	0.23	-0.21	0.23	**0.06**	-0.16	0.1
B	9437	374420	SR	0.60	0.22	-0.07	-0.12	0.22	-0.16	0.2
B	9437	374422	SR	0.70	0.38	-0.14	0.38	-0.25	-0.20	0.3
B	9437	374423	SR	0.46	0.18	-0.14	0.18	-0.04	-0.08	0.1
B	9437	374425	SR	0.86	0.43	0.43	-0.23	-0.24	-0.22	0.2
B	9437	374424	SR	0.61	0.31	-0.16	-0.15	0.31	-0.15	0.2
B	9437	374429	SR	0.55	0.17	-0.01	0.17	-0.20	-0.14	0.2
B	9437	374426	SR	0.55	0.29	**0.01**	-0.23	-0.26	0.29	0.3
B	9437	374428	SR	0.54	0.40	-0.16	-0.25	0.40	-0.16	0.3
B	9437	373872	SR	0.33	0.11	-0.06	-0.05	0.11	**0.00**	0.3
B	9437	373842	SR	0.44	0.33	-0.09	0.33	-0.18	-0.15	0.1
B	9437	364057	SR	0.71	0.22	-0.01	-0.18	0.22	-0.18	0.2
B	9437	364056	SR	0.57	0.43	-0.18	-0.23	-0.19	0.43	0.3
B	9437	364055	SR	0.73	0.44	-0.20	0.44	-0.26	-0.20	0.3
B	9437	332115	SR	0.62	0.26	-0.15	-0.06	-0.19	0.26	0.3
B	9437	332116	SR	0.57	0.41	-0.22	0.41	-0.21	-0.15	0.3
B	9437	332117	SR	0.38	0.20	-0.13	**0.02**	0.20	-0.20	0.3
B	9437	366289	SR	0.30	0.33	-0.08	-0.11	-0.16	0.33	0.4
B	9437	366288	SR	0.48	0.19	-0.10	-0.04	-0.09	0.19	0.4
B	9437	366290	SR	0.68	0.39	-0.17	-0.25	0.39	-0.18	0.4
B	9437	366291	SR	0.76	0.42	0.42	-0.23	-0.25	-0.17	0.3
B	9437	366286	SR	0.55	0.23	-0.19	-0.19	-0.05	0.23	0.3
B	9437	366284	SR	0.42	0.12	-0.03	0.12	-0.20	**0.10**	0.3
B	9437	366285	SR	0.11	0.14	-0.03	-0.11	**0.05**	0.14	0.3
B	9437	366283	SR	0.40	0.21	-0.22	-0.18	0.21	**0.06**	0.4
B	9437	366293	SR	0.38	0.20	0.20	-0.04	-0.09	-0.17	0.4
B	9437	366292	SR	0.52	0.44	-0.19	-0.22	-0.22	0.44	0.4
B	9437	366382	SR	0.23	0.18	-0.03	-0.13	-0.01	0.18	0.4

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

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
B	9437	369102	SR	0.43	0.27	-0.13	0.27	-0.14	-0.04	0.5
B	9437	369098	SR	0.64	0.17	-0.01	-0.16	0.17	-0.14	0.4
B	9437	369103	SR	0.29	0.14	0.14	-0.09	-0.20	**0.06**	0.5
B	9437	369099	SR	0.40	0.37	-0.07	-0.15	-0.21	0.37	0.5
B	9437	369100	SR	0.40	0.28	-0.03	0.28	-0.16	-0.16	0.6
B	9437	369101	SR	0.57	0.31	-0.20	-0.20	-0.06	0.31	0.5
Mean				0.46	0.26	-0.03	-0.03	-0.04	-0.01	0.3
SD				0.16	0.13	0.20	0.20	0.19	0.19	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: MD HSA Algebra—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
D	9359	395570	SR	0.26	0.44	0.44	-0.16	-0.25	-0.07	0.1
D	9359	394791	SPR	0.24	0.55	0.55	-0.50			3.7
D	9359	392318	SR	0.12	0.16	-0.23	-0.17	**0.17**	0.16	0.1
D	9359	393646	SR	0.73	0.26	-0.16	-0.07	0.26	-0.19	0.1
D	9359	322001	SPR	0.81	0.37	0.37	-0.35			1.5
D	9359	400162	SR	0.48	0.35	0.35	-0.23	-0.17	-0.03	0.2
D	9359	393674	SPR	0.19	0.41	0.41	-0.36			4.4
D	9359	392356	SR	0.57	0.41	-0.17	-0.21	-0.24	0.41	0.3
D	9359	397903	SR	0.49	0.47	-0.17	-0.22	-0.25	0.47	0.4
D	9359	395592	SPR	0.27	0.55	0.55	-0.49			3.5
D	9359	397858	SR	0.48	0.36	-0.20	-0.14	0.36	-0.14	1.0
D	9359	394832	SR	0.44	0.38	-0.02	0.38	-0.35	-0.14	0.2
D	9359	395591	SPR	0.37	0.44	0.44	-0.39			2.7
D	9359	392357	SR	0.53	0.50	0.50	-0.22	-0.28	-0.19	0.3
D	9359	394909	SR	0.65	0.36	-0.18	-0.27	0.36	-0.12	0.3
D	9359	392353	SR	0.85	0.39	0.39	-0.22	-0.24	-0.17	0.3
E	6132	393647	SR	0.22	**0.03**	0.03	-0.13	-0.26	**0.21**	0.2
E	6132	338662	SPR	0.77	0.42	0.42	-0.39			1.2
E	6132	395582	SR	0.32	0.29	-0.09	-0.10	-0.15	0.29	0.1
E	6132	393692	SR	0.83	0.32	-0.17	-0.14	0.32	-0.23	0.2
E	6132	393671	SPR	0.16	0.33	0.33	-0.28			1.7
E	6132	400444	SR	0.66	0.34	-0.15	-0.30	0.34	-0.06	0.2
E	6132	393669	SPR	0.42	0.48	0.48	-0.44			2.1
E	6132	392344	SR	**0.92**	0.39	-0.28	0.39	-0.21	-0.13	0.1
E	6132	393685	SR	0.75	0.46	-0.16	-0.24	-0.30	0.46	0.3

Table 1.B4 Item Statistics, Field Test Items: MD HSA Algebra—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
E	6132	338650	SPR	0.41	0.29	0.29	-0.25			2.3
E	6132	394830	SR	0.62	0.44	0.44	-0.21	-0.33	-0.12	0.8
E	6132	395567	SR	0.45	0.32	-0.20	0.32	-0.27	**0.04**	0.4
E	6132	392368	SPR	0.80	0.52	0.52	-0.49			1.5
E	6132	393687	SR	0.74	0.37	-0.20	-0.19	-0.24	0.37	0.2
E	6132	395583	SR	0.43	0.42	0.42	-0.25	-0.23	-0.04	0.3
E	6132	393649	SR	0.35	0.25	-0.02	0.25	-0.17	-0.08	0.4
F	6476	394819	SR	0.57	0.39	-0.11	-0.23	0.39	-0.19	0.6
F	6476	338681	SPR	0.46	0.58	0.58	-0.53			2.7
F	6476	362365	SR	0.50	0.35	0.35	-0.14	-0.25	-0.17	0.3
F	6476	366240	SR	0.32	0.43	-0.19	-0.15	-0.14	0.43	0.3
F	6476	394792	SPR	0.54	0.49	0.49	-0.44			2.4
F	6476	393679	SR	0.39	**0.08**	-0.13	**0.06**	0.08	-0.07	0.6
F	6476	394787	SPR	0.51	0.55	0.55	-0.51			1.7
F	6476	394802	SR	0.61	0.40	-0.15	-0.21	-0.24	0.40	0.2
F	6476	394812	SR	0.53	0.47	-0.28	0.47	-0.26	-0.17	0.3
F	6476	397851	SPR	0.43	0.52	0.52	-0.47			3.1
F	6476	392325	SR	0.67	0.51	-0.25	-0.27	-0.25	0.51	0.9
F	6476	366229	SR	0.56	0.51	0.51	-0.18	-0.35	-0.19	0.2
F	6476	395577	SPR	0.23	0.39	0.39	-0.33			4.9
F	6476	397904	SR	0.44	0.49	0.49	-0.25	-0.18	-0.25	0.4
F	6476	393684	SR	0.53	0.32	-0.20	-0.17	0.32	-0.08	0.6
F	6476	393693	SR	0.63	0.25	-0.02	-0.21	-0.19	0.25	0.3
G	6620	133412	SR	0.73	0.52	0.52	-0.31	-0.24	-0.24	0.3
G	6620	397848	SPR	0.50	0.54	0.54	-0.51			1.7
G	6620	362270	SR	0.44	0.35	-0.17	-0.16	-0.12	0.35	0.3
G	6620	394808	SR	0.74	0.36	0.36	-0.27	-0.14	-0.13	0.2
G	6620	393644	SPR	**0.09**	0.31	0.31	-0.22			2.0
G	6620	395564	SR	0.85	0.35	-0.19	0.35	-0.23	-0.14	0.2
G	6620	392375	SPR	0.24	0.49	0.49	-0.40			**5.6**
G	6620	392374	SR	0.78	0.30	-0.12	-0.19	0.30	-0.16	0.3
G	6620	393664	SR	0.64	0.41	-0.07	-0.29	0.41	-0.22	0.3
G	6620	397853	SPR	0.36	0.46	0.46	-0.36			**5.2**
G	6620	393688	SR	0.41	**0.07**	**0.10**	0.07	-0.15	-0.12	1.1
G	6620	397894	SR	0.63	0.41	-0.20	0.41	-0.29	-0.12	0.2
G	6620	393642	SPR	0.60	0.59	0.59	-0.54			3.9
G	6620	400158	SR	0.54	0.49	0.49	-0.26	-0.22	-0.20	0.4
G	6620	394814	SR	0.48	0.42	-0.20	-0.17	0.42	-0.17	0.5
G	6620	392310	SR	0.60	0.27	-0.15	-0.08	-0.17	0.27	0.5
H	6533	392314	SR	0.43	0.34	-0.15	-0.15	-0.14	0.34	0.8
H	6533	393673	SPR	0.23	0.47	0.47	-0.42			1.5
H	6533	395581	SR	0.47	0.37	-0.13	0.37	-0.18	-0.22	0.3
H	6533	394813	SR	0.80	0.41	0.41	-0.29	-0.21	-0.14	0.2

Table 1.B4 Item Statistics, Field Test Items: MD HSA Algebra—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
H	6533	395575	SPR	0.84	0.31	0.31	-0.28			1.2
H	6533	366230	SR	0.58	0.40	-0.05	0.40	-0.28	-0.25	0.2
H	6533	394786	SPR	0.59	0.53	0.53	-0.48			2.9
H	6533	400156	SR	0.50	0.32	-0.03	-0.20	-0.18	0.32	0.2
H	6533	394840	SR	0.76	0.38	0.38	-0.18	-0.24	-0.19	0.2
H	6533	394827	SPR	0.86	0.42	0.42	-0.38			2.2
H	6533	392323	SR	0.90	0.29	-0.17	-0.17	0.29	-0.13	0.4
H	6533	392346	SR	0.24	0.24	-0.08	0.24	-0.10	-0.07	0.5
H	6533	338661	SPR	0.62	0.60	0.60	-0.56			1.7
H	6533	397893	SR	0.57	0.47	0.47	-0.25	-0.14	-0.33	0.2
H	6533	392332	SR	0.35	0.26	-0.22	**0.03**	0.26	-0.14	0.6
H	6533	395606	SR	0.67	0.43	0.43	-0.24	-0.26	-0.18	0.3
J	5969	392312	SR	0.67	0.31	-0.16	0.31	-0.12	-0.20	0.1
J	5969	394784	SPR	0.22	0.46	0.46	-0.34			**7.6**
J	5969	397899	SR	0.33	0.40	0.40	-0.32	0.00	-0.10	0.2
J	5969	392324	SR	0.55	0.46	-0.23	-0.17	-0.24	0.46	0.5
J	5969	328728	SPR	0.63	0.58	0.58	-0.52			3.7
J	5969	393682	SR	0.43	0.37	0.37	-0.06	-0.20	-0.22	0.3
J	5969	394828	SPR	0.34	0.54	0.54	-0.43			**5.8**
J	5969	393635	SR	0.45	0.30	-0.11	0.30	-0.13	-0.15	0.3
J	5969	397907	SR	0.74	0.41	-0.27	0.41	-0.29	-0.09	0.5
J	5969	392322	SPR	0.70	0.40	0.40	-0.35			2.3
J	5969	393681	SR	0.57	0.43	-0.25	-0.22	-0.21	0.43	0.7
J	5969	363902	SR	0.59	0.38	0.38	-0.18	-0.28	-0.09	0.3
J	5969	393640	SPR	0.43	0.62	0.62	-0.52			**5.7**
J	5969	393660	SR	0.27	0.19	-0.17	**0.12**	-0.20	0.19	0.3
J	5969	397860	SR	0.73	0.36	-0.23	-0.25	0.36	-0.08	0.3
J	5969	393658	SR	0.71	0.46	-0.24	-0.24	-0.21	0.46	0.3
K	6460	393694	SR	0.74	0.41	-0.23	-0.23	-0.18	0.41	0.2
K	6460	319464	SPR	0.15	0.41	0.41	-0.23			**8.5**
K	6460	395599	SR	0.49	0.32	0.32	-0.10	-0.17	-0.16	0.2
K	6460	394816	SR	0.52	0.42	0.42	-0.11	-0.32	-0.27	0.1
K	6460	392338	SPR	0.68	0.51	0.51	-0.47			2.0
K	6460	392362	SR	0.62	0.52	-0.18	0.52	-0.29	-0.30	0.4
K	6460	392363	SPR	0.54	0.30	0.30	-0.27			1.3
K	6460	392316	SR	0.63	0.38	-0.13	-0.19	-0.24	0.38	0.3
K	6460	394831	SR	0.50	0.32	-0.18	0.32	-0.11	-0.14	0.6
K	6460	319429	SPR	0.39	0.40	0.40	-0.35			2.6
K	6460	363910	SR	0.46	0.21	-0.17	-0.08	0.21	-0.04	1.2
K	6460	400155	SR	0.52	0.36	-0.08	-0.24	-0.17	0.36	0.5
K	6460	363952	SPR	0.87	0.40	0.40	-0.36			1.5
K	6460	319436	SR	0.80	0.43	0.43	-0.31	-0.21	-0.13	0.3
K	6460	394796	SR	0.80	0.43	0.43	-0.23	-0.23	-0.23	0.2

Table 1.B4 Item Statistics, Field Test Items: MD HSA Algebra—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
K	6460	397905	SR	0.58	0.32	-0.21	-0.20	0.32	-0.04	0.6
L	6370	392333	SR	0.36	0.20	-0.09	-0.12	0.20	-0.04	0.6
L	6370	392367	SPR	0.32	0.45	0.45	-0.40			2.6
L	6370	394806	SR	0.43	0.35	0.35	-0.15	-0.17	-0.13	0.2
L	6370	394809	SR	0.58	0.41	-0.19	-0.19	0.41	-0.21	0.2
L	6370	397847	SPR	0.10	0.34	0.34	-0.25			2.2
L	6370	392343	SR	0.68	0.50	-0.29	0.50	-0.28	-0.17	0.4
L	6370	392366	SPR	0.48	0.59	0.59	-0.51			**6.4**
L	6370	397898	SR	0.66	0.42	-0.11	-0.17	-0.31	0.42	0.1
L	6370	393656	SR	0.48	0.30	-0.18	0.30	-0.18	-0.03	0.7
L	6370	392336	SPR	0.74	0.29	0.29	-0.26			2.2
L	6370	392329	SR	0.51	0.44	-0.22	-0.30	0.44	-0.06	0.9
L	6370	395568	SR	0.42	0.58	-0.41	-0.10	-0.18	0.58	0.2
L	6370	321995	SPR	0.15	0.37	0.37	-0.27			3.5
L	6370	397879	SR	0.46	0.43	0.43	-0.16	-0.07	-0.29	0.2
L	6370	393648	SR	0.42	0.41	-0.11	-0.24	-0.15	0.41	0.8
L	6370	393636	SR	0.54	0.23	0.23	-0.09	-0.20	-0.02	0.3
M	13134	392352	SR	0.20	0.38	-0.20	-0.09	-0.04	0.38	0.8
M	13134	135115	SPR	0.34	0.57	0.57	-0.49			3.9
M	13134	394834	SR	0.22	**0.07**	0.07	-0.15	**0.01**	**0.07**	0.3
M	13134	394837	SR	0.31	0.35	0.35	-0.15	-0.24	-0.01	0.2
M	13134	393668	SPR	0.65	0.44	0.44	-0.42			1.4
M	13134	397906	SR	0.37	0.18	**0.16**	0.18	-0.26	-0.16	0.7
M	13134	394789	SPR	0.67	0.61	0.61	-0.57			1.8
M	13134	400163	SR	0.25	0.28	**0.11**	-0.27	-0.26	0.28	0.2
M	13134	392349	SR	0.71	0.24	-0.10	0.24	-0.18	-0.11	0.2
M	13134	319428	SPR	0.28	0.53	0.53	-0.45			3.3
M	13134	394811	SR	0.66	0.34	-0.12	-0.21	-0.23	0.34	0.7
M	13134	393653	SR	0.45	0.45	-0.36	-0.19	0.45	-0.03	0.3
M	13134	392337	SPR	0.13	0.39	0.39	-0.24			**7.4**
M	13134	394788	SR	0.17	0.20	0.20	**0.12**	-0.22	-0.10	0.3
M	13134	394829	SR	0.72	0.43	-0.23	-0.25	0.43	-0.19	0.2
M	13134	394825	SR	0.33	0.45	0.45	-0.21	-0.29	-0.03	0.4
N	6339	392334	SR	0.45	0.40	-0.18	-0.25	-0.10	0.40	0.2
N	6339	393676	SPR	0.47	0.45	0.45	-0.38			**5.9**
N	6339	392350	SR	0.79	0.37	0.37	-0.18	-0.24	-0.17	0.1
N	6339	397870	SR	0.29	0.36	-0.23	0.36	-0.01	-0.19	0.0
N	6339	393670	SPR	0.43	0.50	0.50	-0.45			2.7
N	6339	393677	SR	0.26	0.35	-0.15	-0.12	-0.10	0.35	0.9
N	6339	393672	SPR	0.35	0.51	0.51	-0.45			4.3
N	6339	393659	SR	0.59	0.36	-0.14	0.36	-0.26	-0.13	0.2
N	6339	395579	SR	0.73	0.42	-0.30	-0.20	0.42	-0.13	0.3
N	6339	106639	SPR	0.68	0.49	0.49	-0.46			2.8

Table 1.B4 Item Statistics, Field Test Items: MD HSA Algebra—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
N	6339	397862	SR	0.42	0.17	-0.18	0.00	0.17	-0.03	0.9
N	6339	394838	SR	0.68	0.26	-0.14	0.26	-0.17	-0.05	0.2
N	6339	394790	SPR	0.57	0.60	0.60	-0.56			3.0
N	6339	395574	SR	0.43	0.45	-0.23	-0.09	-0.28	0.45	0.3
N	6339	393689	SR	0.42	0.36	0.36	-0.10	-0.20	-0.17	0.3
N	6339	397892	SR	0.51	0.44	0.44	-0.18	-0.22	-0.24	0.3
Mean				0.51	0.39	0.15	-0.18	-0.09	0.01	1.26
SD				0.19	0.11	0.31	0.25	0.23	0.24	1.68

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: MD HSA Biology—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
D	7093	394027	SR	0.51	0.38	0.38	-0.09	-0.29	-0.15	0.1
D	7093	394026	SR	0.49	0.44	-0.22	0.44	-0.28	-0.09	0.1
D	7093	366558	SR	0.73	0.36	-0.17	0.36	-0.24	-0.18	0.1
D	7093	393874	SR	0.61	0.16	0.16	-0.21	-0.04	-0.15	0.1
D	7093	398161	SR	0.69	0.48	-0.22	-0.28	-0.24	0.48	0.1
D	7093	398162	SR	0.43	0.50	0.50	-0.29	-0.26	-0.10	0.1
D	7093	395766	SR	0.76	0.36	-0.14	0.36	-0.26	-0.17	0.2
D	7093	393859	SR	0.43	0.34	0.34	-0.04	-0.30	-0.11	0.2
D	7093	393858	SR	0.47	0.36	-0.16	-0.17	0.36	-0.15	0.1
D	7093	94193	SR	0.45	0.41	-0.15	-0.18	0.41	-0.23	0.3
D	7093	363170	SR	0.67	0.44	-0.24	-0.20	0.44	-0.22	0.2
D	7093	279698	SR	0.59	0.48	-0.21	-0.28	-0.20	0.48	0.2
D	7093	279695	SR	0.58	0.37	-0.08	0.37	-0.31	-0.11	0.2
D	7093	279697	SR	0.47	0.44	0.44	-0.16	-0.23	-0.18	0.2
D	7093	392459	SR	0.61	0.50	-0.25	-0.28	0.50	-0.19	0.2
D	7093	338744	SR	0.38	0.31	-0.08	-0.23	0.31	-0.04	0.2
D	7093	394034	SR	0.60	0.44	-0.27	-0.15	-0.25	0.44	0.1
D	7093	394036	SR	0.46	0.42	-0.22	-0.21	-0.15	0.42	0.2
D	7093	394038	SR	0.57	0.27	-0.02	0.27	-0.27	-0.17	0.2
D	7093	398150	SR	0.62	0.53	-0.25	-0.24	-0.29	0.53	0.3
D	7093	398152	SR	0.90	0.38	-0.21	-0.22	0.38	-0.19	0.2
D	7093	392442	SR	0.37	0.23	-0.16	0.23	-0.11	-0.06	0.2
D	7093	369417	SR	0.68	0.48	0.48	-0.22	-0.30	-0.20	0.3
E	5295	394892	SR	0.62	0.44	0.44	-0.23	-0.28	-0.15	0.1

Table 1.B5 Item Statistics, Field Test Items: MD HSA Biology—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
E	5295	394894	SR	0.65	0.30	-0.16	-0.15	-0.16	0.30	0.0
E	5295	363011	SR	0.75	0.39	-0.27	0.39	-0.23	-0.08	0.1
E	5295	392470	SR	0.67	0.50	-0.24	-0.26	-0.28	0.50	0.1
E	5295	394733	SR	0.38	0.34	-0.25	0.34	-0.10	-0.19	0.1
E	5295	394735	SR	0.68	0.57	-0.34	-0.36	0.57	-0.16	0.1
E	5295	364178	SR	0.57	0.44	**0.04**	0.44	-0.18	-0.45	0.1
E	5295	393863	SR	0.78	0.45	-0.32	0.45	-0.24	-0.16	0.1
E	5295	393866	SR	0.46	0.35	0.35	-0.07	-0.19	-0.23	0.1
E	5295	392453	SR	0.64	0.50	-0.28	-0.36	0.50	-0.12	0.1
E	5295	392482	SR	0.80	0.50	0.50	-0.28	-0.30	-0.23	0.0
E	5295	338701	SR	0.76	0.47	-0.29	0.47	-0.23	-0.24	0.1
E	5295	338699	SR	0.41	0.37	0.37	-0.28	-0.11	-0.13	0.1
E	5295	338696	SR	0.54	0.47	-0.23	-0.21	0.47	-0.20	0.1
E	5295	392450	SR	0.52	0.47	-0.18	-0.31	0.47	-0.14	0.2
E	5295	392466	SR	0.74	0.37	0.37	-0.18	-0.24	-0.23	0.1
E	5295	398034	SR	0.56	0.36	-0.11	-0.24	0.36	-0.17	0.4
E	5295	398031	SR	0.41	0.43	0.43	-0.14	-0.25	-0.15	0.1
E	5295	398030	SR	0.58	0.44	-0.16	-0.25	-0.24	0.44	0.1
E	5295	394037	SR	0.40	0.33	-0.09	-0.09	0.33	-0.22	0.1
E	5295	394035	SR	0.59	0.39	0.39	-0.15	-0.26	-0.17	0.0
E	5295	288369	SR	0.47	0.39	-0.15	0.39	-0.30	-0.06	0.1
E	5295	392461	SR	0.68	0.52	0.52	-0.26	-0.26	-0.32	0.0
F	5214	394893	SR	0.77	0.17	-0.13	-0.20	0.17	0.00	0.1
F	5214	394895	SR	0.32	0.32	0.32	-0.06	-0.26	-0.14	0.0
F	5214	393868	SR	0.78	0.40	-0.19	-0.27	0.40	-0.19	0.1
F	5214	410104	SR	0.75	0.53	-0.29	-0.29	-0.24	0.53	0.1
F	5214	393855	SR	0.53	0.48	-0.22	-0.22	-0.23	0.48	0.2
F	5214	393856	SR	0.60	0.35	0.35	-0.18	-0.19	-0.17	0.1
F	5214	392483	SR	0.57	0.46	-0.24	0.46	-0.30	-0.10	0.2
F	5214	393865	SR	**0.91**	0.23	-0.11	-0.18	0.23	-0.10	0.1
F	5214	393867	SR	0.44	0.43	-0.26	-0.13	-0.22	0.43	0.1
F	5214	392494	SR	0.60	0.58	0.58	-0.24	-0.39	-0.19	0.2
F	5214	392484	SR	0.71	0.43	0.43	-0.25	-0.23	-0.18	0.1
F	5214	362997	SR	0.69	0.47	-0.17	-0.25	-0.29	0.47	0.2
F	5214	362995	SR	0.49	0.47	-0.19	-0.07	-0.33	0.47	0.2
F	5214	362993	SR	0.45	0.41	-0.08	-0.28	0.41	-0.21	0.2
F	5214	394906	SR	0.71	0.45	0.45	-0.28	-0.23	-0.21	0.2
F	5214	392443	SR	0.74	0.51	-0.15	-0.31	-0.35	0.51	0.2
F	5214	398052	SR	0.47	0.38	-0.10	-0.21	0.38	-0.19	0.2
F	5214	398048	SR	0.36	0.35	0.35	-0.14	-0.23	-0.05	0.2
F	5214	398050	SR	0.61	0.49	-0.27	-0.27	0.49	-0.18	0.2
F	5214	398033	SR	0.68	0.52	0.52	-0.31	-0.30	-0.18	0.2
F	5214	398032	SR	0.65	0.53	-0.27	-0.24	-0.27	0.53	0.1

Table 1.B5 Item Statistics, Field Test Items: MD HSA Biology—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
F	5214	394903	SR	0.86	0.42	-0.21	0.42	-0.25	-0.22	0.2
F	5214	282398	SR	0.63	0.36	-0.19	0.36	-0.10	-0.27	0.2
G	5270	398070	SR	0.61	0.33	-0.23	0.33	-0.24	-0.06	0.0
G	5270	398071	SR	0.81	0.40	-0.19	-0.24	-0.22	0.40	0.1
G	5270	363166	SR	0.46	0.30	0.30	-0.17	-0.10	-0.14	0.2
G	5270	392496	SR	0.50	0.13	-0.01	0.13	-0.09	-0.08	0.1
G	5270	395753	SR	0.74	0.52	0.52	-0.44	-0.21	-0.09	0.1
G	5270	395755	SR	0.52	0.26	-0.12	0.26	-0.21	-0.05	0.2
G	5270	373161	SR	0.64	0.43	-0.22	-0.21	-0.19	0.43	0.2
G	5270	393805	SR	0.53	0.26	-0.24	**0.03**	-0.28	0.26	0.2
G	5270	393830	SR	0.68	0.48	-0.27	-0.26	0.48	-0.22	0.1
G	5270	393878	SR	0.61	0.31	-0.17	-0.14	-0.19	0.31	0.1
G	5270	392477	SR	0.74	0.44	-0.31	0.44	-0.22	-0.19	0.1
G	5270	394757	SR	0.56	0.34	0.34	-0.24	-0.24	-0.04	0.2
G	5270	394758	SR	0.78	0.46	-0.26	-0.24	0.46	-0.25	0.1
G	5270	394755	SR	0.62	0.52	-0.25	0.52	-0.33	-0.19	0.2
G	5270	385483	SR	0.56	0.45	-0.27	-0.16	-0.26	0.45	0.2
G	5270	392495	SR	0.55	0.45	-0.23	-0.31	0.45	-0.07	0.2
G	5270	395760	SR	0.57	0.42	-0.21	-0.23	0.42	-0.15	0.2
G	5270	395757	SR	0.72	0.48	-0.26	-0.28	0.48	-0.19	0.2
G	5270	395758	SR	0.63	0.45	-0.19	-0.19	-0.33	0.45	0.2
G	5270	398051	SR	0.48	0.34	0.34	-0.17	-0.27	-0.09	0.2
G	5270	398049	SR	0.66	0.49	-0.20	0.49	-0.26	-0.27	0.2
G	5270	385480	SR	0.61	0.13	-0.02	-0.08	0.13	-0.11	0.1
G	5270	373157	SR	0.63	0.49	0.49	-0.36	-0.26	-0.07	0.3
H	5256	398073	SR	**0.97**	0.23	0.23	-0.14	-0.14	-0.10	0.0
H	5256	398076	SR	0.47	0.45	-0.17	0.45	-0.19	-0.25	0.0
H	5256	338776	SR	0.60	0.41	-0.20	0.41	-0.24	-0.15	0.1
H	5256	392471	SR	0.53	0.38	0.38	-0.22	-0.10	-0.21	0.0
H	5256	393854	SR	0.88	0.20	-0.09	0.20	-0.18	-0.08	0.1
H	5256	393853	SR	0.71	0.41	-0.16	-0.31	0.41	-0.16	0.1
H	5256	392492	SR	0.35	0.33	0.33	-0.18	-0.04	-0.19	0.2
H	5256	393804	SR	0.48	0.40	-0.17	0.40	-0.28	-0.14	0.1
H	5256	393831	SR	0.55	0.46	0.46	-0.15	-0.34	-0.13	0.1
H	5256	393880	SR	0.31	0.28	-0.14	-0.29	0.28	0.00	0.2
H	5256	364180	SR	0.84	0.50	-0.25	-0.28	-0.28	0.50	0.0
H	5256	361410	SR	0.58	0.42	0.42	-0.29	-0.25	-0.13	0.0
H	5256	361415	SR	0.58	0.21	-0.24	-0.23	0.21	-0.01	0.1
H	5256	361411	SR	0.61	0.46	-0.17	-0.26	0.46	-0.23	0.0
H	5256	392465	SR	0.47	0.57	-0.28	-0.27	-0.23	0.57	0.1
H	5256	392661	SR	0.66	0.43	0.43	-0.15	-0.29	-0.21	0.0
H	5256	394865	SR	0.32	0.27	0.27	-0.08	-0.14	-0.07	0.5
H	5256	394861	SR	0.41	0.32	-0.14	-0.15	-0.10	0.32	0.1

Table 1.B5 Item Statistics, Field Test Items: MD HSA Biology—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
H	5256	394864	SR	0.87	0.45	0.45	-0.24	-0.25	-0.25	0.1
H	5256	395893	SR	0.71	0.41	-0.23	-0.23	-0.18	0.41	0.1
H	5256	395761	SR	0.70	0.54	-0.30	-0.25	0.54	-0.27	0.1
H	5256	392472	SR	0.46	0.43	-0.22	0.43	-0.13	-0.28	0.1
H	5256	410081	SR	0.80	0.53	-0.25	-0.29	-0.29	0.53	0.1
J	5211	400682	SR	0.62	0.27	-0.11	-0.20	0.27	-0.17	0.1
J	5211	400680	SR	**0.95**	0.23	0.23	-0.15	-0.14	-0.11	0.0
J	5211	393882	SR	0.53	0.53	-0.21	-0.29	-0.25	0.53	0.0
J	5211	395769	SR	0.53	0.44	0.44	-0.22	-0.07	-0.34	0.1
J	5211	394881	SR	0.78	0.39	-0.17	0.39	-0.26	-0.18	0.2
J	5211	394884	SR	0.75	0.53	-0.23	-0.29	-0.30	0.53	0.1
J	5211	369424	SR	0.23	0.31	0.31	-0.10	-0.15	-0.04	0.2
J	5211	393851	SR	0.89	0.39	-0.16	0.39	-0.26	-0.22	0.1
J	5211	393848	SR	0.87	0.39	-0.20	-0.21	-0.24	0.39	0.0
J	5211	392476	SR	0.57	0.45	-0.23	0.45	-0.20	-0.21	0.1
J	5211	364151	SR	0.57	0.27	0.27	-0.24	-0.12	-0.10	0.1
J	5211	369467	SR	0.54	0.57	-0.18	-0.33	-0.28	0.57	0.1
J	5211	369369	SR	0.50	0.35	-0.15	-0.15	0.35	-0.18	0.1
J	5211	369367	SR	0.57	0.31	-0.11	0.31	-0.16	-0.21	0.1
J	5211	392485	SR	0.83	0.49	0.49	-0.26	-0.34	-0.18	0.2
J	5211	407373	SR	0.84	0.28	0.28	-0.18	-0.20	-0.10	0.0
J	5211	394744	SR	0.57	0.46	-0.25	-0.22	-0.21	0.46	0.2
J	5211	394746	SR	0.42	**0.02**	0.02	-0.19	-0.21	**0.22**	0.3
J	5211	394745	SR	0.59	0.34	-0.19	-0.16	-0.15	0.34	0.1
J	5211	394862	SR	0.40	0.31	-0.13	-0.18	0.31	-0.08	0.2
J	5211	394863	SR	0.63	0.45	-0.24	0.45	-0.23	-0.20	0.1
J	5211	362980	SR	0.48	0.31	0.31	-0.12	-0.15	-0.17	0.1
J	5211	373152	SR	0.45	0.31	-0.22	0.31	-0.08	-0.17	0.2
K	5164	400683	SR	0.77	0.44	0.44	-0.25	-0.26	-0.18	0.1
K	5164	400681	SR	0.41	0.15	-0.25	**0.07**	-0.12	0.15	0.0
K	5164	392430	SR	0.44	0.42	-0.19	0.42	-0.24	-0.13	0.1
K	5164	392432	SR	0.70	0.52	-0.22	0.52	-0.28	-0.29	0.1
K	5164	395752	SR	0.88	0.15	0.15	-0.16	-0.02	-0.04	0.2
K	5164	395754	SR	0.40	0.30	-0.11	0.30	-0.14	-0.11	0.3
K	5164	373171	SR	0.79	0.38	0.38	-0.19	-0.23	-0.18	0.3
K	5164	393852	SR	0.47	0.41	-0.22	0.41	-0.17	-0.18	0.1
K	5164	393850	SR	0.49	0.39	0.39	-0.21	-0.10	-0.22	0.2
K	5164	394910	SR	0.76	0.54	0.54	-0.26	-0.29	-0.29	0.2
K	5164	369418	SR	0.49	0.46	-0.19	-0.25	-0.17	0.46	0.2
K	5164	393892	SR	0.39	0.32	**0.05**	-0.21	-0.28	0.32	0.2
K	5164	393889	SR	0.41	0.44	-0.26	0.44	-0.09	-0.22	0.2
K	5164	393888	SR	0.53	0.41	-0.16	-0.18	0.41	-0.22	0.3
K	5164	392438	SR	0.48	0.43	-0.17	-0.21	-0.20	0.43	0.3

Table 1.B5 Item Statistics, Field Test Items: MD HSA Biology—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
K	5164	338741	SR	0.46	0.49	-0.24	-0.32	0.49	-0.14	0.2
K	5164	398053	SR	0.64	0.43	0.43	-0.15	-0.20	-0.28	0.2
K	5164	398077	SR	0.78	0.52	0.52	-0.26	-0.27	-0.28	0.2
K	5164	398056	SR	0.80	0.51	-0.26	-0.28	-0.27	0.51	0.1
K	5164	398040	SR	0.71	0.59	-0.27	-0.31	-0.31	0.59	0.3
K	5164	398042	SR	0.38	0.22	0.22	-0.12	-0.03	-0.21	0.3
K	5164	369419	SR	0.54	0.41	-0.25	-0.23	0.41	-0.13	0.2
K	5164	392436	SR	0.51	0.36	-0.09	0.36	-0.18	-0.24	0.2
L	5193	400667	SR	0.58	0.31	-0.17	-0.21	0.31	-0.07	0.1
L	5193	400665	SR	0.53	0.40	-0.21	0.40	-0.16	-0.22	0.1
L	5193	407379	SR	0.62	0.42	-0.21	0.42	-0.24	-0.17	0.1
L	5193	392469	SR	0.90	0.38	-0.23	-0.23	-0.17	0.38	0.0
L	5193	394844	SR	0.64	0.37	-0.20	-0.26	0.37	-0.16	0.0
L	5193	394850	SR	0.66	0.39	-0.29	0.39	-0.10	-0.18	0.1
L	5193	363018	SR	0.76	0.50	-0.26	-0.28	-0.25	0.50	0.2
L	5193	400658	SR	0.70	0.52	0.52	-0.28	-0.31	-0.20	0.1
L	5193	400656	SR	0.63	0.37	-0.17	0.37	-0.28	-0.16	0.1
L	5193	392433	SR	0.70	0.41	-0.22	-0.22	0.41	-0.21	0.1
L	5193	366617	SR	0.73	0.38	-0.21	-0.23	0.38	-0.15	0.1
L	5193	393894	SR	0.46	0.47	-0.18	-0.21	-0.26	0.47	0.2
L	5193	393890	SR	0.48	0.41	-0.12	-0.17	-0.23	0.41	0.1
L	5193	393893	SR	0.51	0.34	0.34	-0.28	-0.10	-0.11	0.1
L	5193	362979	SR	0.72	0.53	0.53	-0.40	-0.20	-0.20	0.1
L	5193	394905	SR	0.74	0.43	-0.23	-0.27	0.43	-0.17	0.1
L	5193	394751	SR	0.55	0.30	0.30	-0.18	-0.22	-0.08	0.1
L	5193	394750	SR	0.63	0.36	0.36	-0.19	-0.23	-0.14	0.1
L	5193	394754	SR	0.62	0.51	-0.15	-0.27	0.51	-0.32	0.1
L	5193	398041	SR	0.84	0.35	-0.19	0.35	-0.23	-0.14	0.1
L	5193	398043	SR	0.48	0.45	-0.20	-0.28	0.45	-0.14	0.1
L	5193	392431	SR	0.53	0.46	-0.26	-0.16	-0.24	0.46	0.1
L	5193	366596	SR	0.38	0.37	-0.12	-0.20	-0.13	0.37	0.2
M	5097	394872	SR	0.83	0.35	0.35	-0.16	-0.25	-0.14	0.1
M	5097	394873	SR	0.46	0.48	-0.16	-0.27	-0.19	0.48	0.1
M	5097	392439	SR	0.49	0.43	-0.18	-0.19	0.43	-0.23	0.1
M	5097	392458	SR	0.59	0.55	-0.24	-0.31	-0.25	0.55	0.1
M	5097	394847	SR	0.70	0.50	-0.29	-0.25	-0.22	0.50	0.2
M	5097	394846	SR	0.66	0.39	0.39	-0.22	-0.23	-0.15	0.2
M	5097	392444	SR	0.69	0.38	-0.08	-0.32	0.38	-0.14	0.2
M	5097	400659	SR	0.80	0.35	-0.21	-0.21	0.35	-0.15	0.1
M	5097	400657	SR	0.50	0.34	0.34	-0.18	-0.11	-0.19	0.1
M	5097	407372	SR	0.65	0.44	-0.20	0.44	-0.27	-0.18	0.1
M	5097	392489	SR	0.70	0.53	-0.30	-0.23	-0.29	0.53	0.1
M	5097	366605	SR	0.56	0.44	-0.11	0.44	-0.29	-0.21	0.2

Table 1.B5 Item Statistics, Field Test Items: MD HSA Biology—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
M	5097	366650	SR	0.64	0.33	-0.17	-0.27	0.33	-0.04	0.2
M	5097	366606	SR	0.69	0.34	0.34	-0.10	-0.19	-0.22	0.1
M	5097	323348	SR	0.52	0.43	-0.04	-0.31	-0.31	0.43	0.3
M	5097	373153	SR	0.49	0.34	-0.17	0.34	-0.17	-0.10	0.1
M	5097	393836	SR	0.74	0.39	0.39	-0.26	-0.17	-0.20	0.2
M	5097	393837	SR	0.64	0.39	-0.07	0.39	-0.16	-0.31	0.1
M	5097	393833	SR	0.53	0.43	-0.27	-0.08	0.43	-0.25	0.1
M	5097	400690	SR	0.68	0.50	-0.28	0.50	-0.33	-0.13	0.1
M	5097	400691	SR	0.81	0.39	0.39	-0.18	-0.24	-0.20	0.1
M	5097	392427	SR	0.53	0.25	-0.08	-0.22	0.25	-0.17	0.2
M	5097	400694	SR	0.70	0.43	-0.28	0.43	-0.21	-0.16	0.1
N	10515	394901	SR	0.46	0.25	0.25	-0.10	-0.22	-0.01	0.2
N	10515	394898	SR	0.45	0.36	-0.21	-0.11	0.36	-0.21	0.0
N	10515	381681	SR	0.40	0.21	**0.12**	-0.29	0.21	-0.17	0.0
N	10515	108674	SR	0.90	0.39	-0.22	0.39	-0.19	-0.23	0.1
N	10515	398059	SR	0.75	0.41	-0.15	-0.27	-0.20	0.41	0.1
N	10515	398061	SR	0.57	0.57	-0.18	0.57	-0.24	-0.37	0.1
N	10515	349117	SR	0.58	0.36	0.36	-0.19	-0.22	-0.12	0.2
N	10515	398169	SR	0.66	0.52	-0.24	-0.24	-0.30	0.52	0.1
N	10515	398168	SR	0.55	0.44	0.44	-0.16	-0.24	-0.21	0.1
N	10515	373159	SR	0.38	0.38	-0.18	0.38	-0.09	-0.23	0.1
N	10515	369450	SR	0.45	0.45	-0.23	-0.16	-0.22	0.45	0.1
N	10515	279661	SR	0.58	0.46	0.46	-0.20	-0.30	-0.16	0.2
N	10515	279663	SR	0.61	0.44	-0.25	-0.20	0.44	-0.17	0.2
N	10515	279664	SR	0.72	0.43	-0.20	0.43	-0.27	-0.18	0.2
N	10515	369413	SR	0.41	0.26	-0.10	-0.05	-0.19	0.26	0.2
N	10515	392490	SR	0.46	0.32	-0.14	-0.29	-0.01	0.32	0.1
N	10515	395891	SR	0.75	0.50	0.50	-0.30	-0.27	-0.22	0.1
N	10515	395783	SR	0.53	0.41	-0.21	-0.22	-0.14	0.41	0.1
N	10515	395779	SR	0.65	0.27	-0.17	-0.18	0.27	-0.08	0.1
N	10515	398020	SR	0.58	0.45	0.45	-0.19	-0.32	-0.11	0.2
N	10515	398018	SR	0.50	0.45	-0.18	-0.25	-0.19	0.45	0.1
N	10515	369416	SR	0.64	0.42	-0.18	0.42	-0.24	-0.23	0.2
N	10515	363175	SR	0.35	0.34	**0.04**	-0.12	-0.32	0.34	0.2
Mean				0.60	0.40	-0.02	-0.07	-0.08	-0.02	0.13
SD				0.14	0.10	0.28	0.27	0.27	0.27	0.07

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: MD HSA English—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
D	10865	397711	SR	0.70	0.26	-0.10	0.26	-0.11	-0.18	0.1
D	10865	397715	SR	0.46	0.35	-0.16	0.35	-0.13	-0.19	0.1
D	10865	397712	SR	0.40	0.19	-0.07	-0.20	0.19	-0.03	0.1
D	10865	397714	SR	0.73	0.25	-0.08	-0.18	0.25	-0.14	0.1
D	10865	397713	SR	0.41	**-0.02**	**0.16**	-0.14	-0.07	-0.02	0.1
D	10865	392557	SR	0.46	0.39	-0.11	0.39	-0.26	-0.19	0.3
D	10865	392554	SR	0.69	0.41	-0.21	0.41	-0.20	-0.21	0.3
D	10865	392553	SR	0.61	0.30	0.30	-0.09	-0.19	-0.14	0.3
D	10865	392552	SR	0.54	0.33	-0.12	-0.22	-0.12	0.33	0.4
D	10865	392551	SR	0.63	0.31	-0.25	0.31	-0.15	-0.08	0.5
D	10865	392559	SR	0.26	**-0.03**	**0.02**	-0.03	-0.21	**0.16**	0.7
D	10865	392558	SR	0.66	0.49	0.49	-0.30	-0.25	-0.17	0.7
D	10865	392556	SR	0.66	0.37	0.37	-0.22	-0.27	-0.12	0.7
D	10865	285542	SR	0.57	0.43	-0.08	-0.30	-0.26	0.43	0.8
D	10865	373844	SR	0.76	0.45	-0.21	-0.23	-0.28	0.45	0.1
D	10865	364054	SR	0.52	0.33	-0.22	0.33	-0.27	-0.06	0.1
D	10865	364053	SR	0.27	**0.03**	**0.06**	-0.08	-0.16	0.03	0.1
D	10865	364052	SR	0.83	0.46	0.46	-0.28	-0.26	-0.21	0.1
D	10865	369017	SR	0.76	0.43	-0.25	0.43	-0.28	-0.16	0.1
D	10865	369014	SR	0.81	0.44	0.44	-0.25	-0.22	-0.23	0.1
D	10865	369015	SR	0.47	0.37	0.37	-0.12	-0.13	-0.25	0.2
D	10865	369016	SR	0.69	0.26	-0.25	0.26	-0.25	**0.09**	0.1
D	10865	369019	SR	0.22	**-0.03**	-0.13	**0.19**	-0.03	-0.11	0.1
D	10865	369018	SR	0.49	0.26	-0.09	-0.12	-0.15	0.26	0.1
D	10865	369026	SR	0.75	0.40	-0.20	-0.25	0.40	-0.17	0.1
D	10865	369021	SR	0.20	0.19	0.19	-0.17	-0.17	**0.07**	0.2
D	10865	369022	SR	0.62	0.55	-0.24	-0.32	-0.26	0.55	0.1
D	10865	369023	SR	0.36	0.23	0.23	-0.25	-0.29	**0.11**	0.1
D	10865	369024	SR	0.48	0.33	-0.11	0.33	-0.19	-0.14	0.1
D	10865	363069	SR	0.12	**-0.07**	**0.21**	-0.33	**0.05**	-0.07	0.1
D	10865	363071	SR	0.35	0.17	0.17	-0.05	-0.17	-0.10	0.1
D	10865	363074	SR	0.55	0.22	**0.00**	0.22	-0.12	-0.23	0.1
D	10865	363070	SR	0.69	0.38	-0.16	0.38	-0.26	-0.22	0.2
D	10865	363073	SR	0.63	0.49	0.49	-0.27	-0.33	-0.17	0.2
D	10865	363072	SR	0.66	0.49	-0.15	-0.25	-0.34	0.49	0.2
D	10865	256460	SR	0.56	0.17	-0.11	0.17	**0.02**	-0.23	0.3
D	10865	256461	SR	0.81	0.41	0.41	-0.23	-0.28	-0.15	0.3
D	10865	256462	SR	0.77	0.51	0.51	-0.20	-0.34	-0.27	0.3
E	5290	397723	SR	0.89	0.22	-0.04	-0.18	0.22	-0.12	0.2
E	5290	397724	SR	0.56	0.12	-0.19	0.12	-0.02	-0.03	0.1
E	5290	397726	SR	0.68	0.32	0.32	-0.21	-0.14	-0.18	0.1
E	5290	397727	SR	0.78	0.33	-0.32	-0.14	0.33	-0.10	0.1
E	5290	397725	SR	0.86	0.37	-0.18	-0.21	0.37	-0.24	0.0
E	5290	373705	SR	0.42	**0.07**	-0.16	-0.26	**0.10**	0.07	0.2

Table 1.B6 Item Statistics, Field Test Items: MD HSA English—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
E	5290	373709	SR	0.67	0.43	-0.13	-0.26	-0.28	0.43	0.4
E	5290	373712	SR	0.53	0.48	-0.31	-0.14	-0.18	0.48	0.4
E	5290	373708	SR	0.19	**-0.07**	-0.21	**0.09**	-0.07	**0.15**	0.6
E	5290	373704	SR	0.28	0.26	-0.29	**0.01**	0.26	-0.07	0.6
E	5290	373703	SR	0.59	0.45	0.45	-0.23	-0.28	-0.15	0.6
E	5290	373710	SR	0.63	0.32	0.32	-0.19	-0.24	-0.06	0.6
E	5290	373711	SR	0.27	0.31	-0.08	-0.21	-0.11	0.31	0.6
E	5290	285543	SR	0.46	0.12	0.12	-0.16	-0.06	**0.04**	0.7
E	5290	373849	SR	0.74	0.48	-0.20	0.48	-0.31	-0.25	0.1
E	5290	369306	SR	0.50	0.40	-0.33	0.40	**0.02**	-0.22	0.2
E	5290	369304	SR	0.69	0.53	0.53	-0.26	-0.31	-0.24	0.2
E	5290	369305	SR	0.87	0.42	-0.25	-0.24	0.42	-0.18	0.2
E	5290	366379	SR	0.78	0.42	-0.20	-0.24	-0.24	0.42	0.1
E	5290	366370	SR	0.29	0.15	-0.07	-0.11	0.15	**0.02**	0.4
E	5290	366371	SR	0.38	0.27	-0.15	-0.22	0.27	**0.04**	0.1
E	5290	366376	SR	0.72	0.27	-0.08	0.27	-0.20	-0.13	0.2
E	5290	366380	SR	0.76	0.46	-0.26	-0.23	-0.24	0.46	0.1
E	5290	366375	SR	0.80	0.35	-0.20	-0.22	0.35	-0.14	0.1
E	5290	366378	SR	0.39	0.36	-0.19	0.36	-0.10	-0.16	0.2
E	5290	366377	SR	0.82	0.27	-0.17	0.27	-0.10	-0.15	0.1
E	5290	366372	SR	0.27	0.31	-0.01	-0.25	-0.22	0.31	0.1
E	5290	366374	SR	0.35	**0.10**	**0.06**	0.10	-0.18	-0.01	0.2
E	5290	366280	SR	0.13	**-0.11**	-0.11	-0.25	-0.15	**0.31**	0.2
E	5290	363111	SR	0.26	**0.03**	**0.21**	0.03	-0.21	-0.15	0.1
E	5290	363112	SR	0.46	0.17	-0.21	0.17	**0.06**	-0.17	0.1
E	5290	363114	SR	0.45	0.31	0.31	-0.24	-0.09	-0.21	0.2
E	5290	363116	SR	0.36	0.14	-0.16	**0.05**	-0.15	0.14	0.1
E	5290	363113	SR	0.68	0.40	-0.18	0.40	-0.25	-0.16	0.3
E	5290	363115	SR	0.64	0.50	-0.22	-0.27	0.50	-0.24	0.2
E	5290	256447	SR	0.47	0.17	-0.17	-0.12	0.17	**0.05**	0.4
E	5290	256448	SR	0.67	0.32	-0.16	0.32	-0.20	-0.12	0.4
E	5290	256449	SR	0.69	0.42	0.42	-0.17	-0.23	-0.27	0.4
F	5447	397730	SR	0.68	0.23	-0.15	0.23	-0.11	-0.10	0.1
F	5447	397729	SR	0.41	0.21	-0.04	-0.11	-0.11	0.21	0.1
F	5447	397731	SR	0.42	**0.07**	**0.02**	0.07	-0.06	-0.12	0.2
F	5447	397732	SR	0.81	0.41	-0.14	0.41	-0.29	-0.21	0.1
F	5447	397733	SR	0.77	0.34	-0.21	-0.11	-0.20	0.34	0.2
F	5447	392521	SR	0.48	0.29	-0.14	-0.07	0.29	-0.18	0.3
F	5447	392528	SR	0.72	0.22	-0.12	-0.21	0.22	-0.14	0.3
F	5447	392530	SR	0.66	0.30	0.30	-0.24	-0.08	-0.21	0.5
F	5447	392523	SR	0.61	0.46	-0.23	-0.25	0.46	-0.22	0.4
F	5447	392522	SR	0.65	0.39	-0.17	0.39	-0.21	-0.22	0.5
F	5447	392524	SR	0.67	0.46	-0.22	0.46	-0.19	-0.26	0.7
F	5447	392525	SR	0.49	0.39	0.39	-0.19	-0.25	-0.16	0.6

Table 1.B6 Item Statistics, Field Test Items: MD HSA English—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
F	5447	392526	SR	0.52	0.24	-0.20	-0.04	-0.16	0.24	0.7
F	5447	373866	SR	0.53	0.45	0.45	-0.22	-0.16	-0.24	0.8
F	5447	373836	SR	0.77	0.37	0.37	-0.17	-0.22	-0.20	0.1
F	5447	366352	SR	0.55	0.18	-0.08	-0.16	-0.07	0.18	0.1
F	5447	366353	SR	0.77	0.43	0.43	-0.28	-0.24	-0.19	0.1
F	5447	366351	SR	0.75	0.35	0.35	-0.18	-0.22	-0.17	0.1
F	5447	369041	SR	0.42	0.26	-0.20	-0.25	**0.04**	0.26	0.2
F	5447	369044	SR	0.81	0.49	-0.26	-0.24	-0.29	0.49	0.1
F	5447	369042	SR	0.80	0.17	-0.13	0.17	**0.01**	-0.21	0.1
F	5447	369045	SR	0.80	0.43	0.43	-0.18	-0.28	-0.24	0.1
F	5447	369049	SR	0.60	0.29	-0.05	-0.11	-0.32	0.29	0.1
F	5447	369046	SR	0.40	0.22	-0.24	-0.09	0.22	-0.13	0.1
F	5447	369050	SR	0.76	0.40	-0.21	-0.21	0.40	-0.20	0.2
F	5447	369048	SR	0.42	0.38	-0.04	0.38	-0.24	-0.26	0.2
F	5447	369052	SR	0.45	0.25	-0.14	-0.13	0.25	-0.04	0.1
F	5447	369053	SR	0.25	**0.07**	**0.13**	-0.28	0.07	-0.16	0.1
F	5447	369051	SR	0.37	0.18	**0.08**	0.18	-0.27	-0.18	0.1
F	5447	363119	SR	0.56	0.35	-0.13	0.35	-0.25	-0.21	0.1
F	5447	363118	SR	0.65	0.55	0.55	-0.32	-0.28	-0.21	0.2
F	5447	363081	SR	0.43	0.34	0.34	-0.21	-0.11	-0.13	0.3
F	5447	363082	SR	0.12	**0.00**	0.00	**0.13**	-0.21	**0.03**	0.1
F	5447	363120	SR	0.58	0.26	-0.22	-0.06	-0.16	0.26	0.2
F	5447	363117	SR	0.62	0.41	-0.25	-0.28	0.41	-0.10	0.1
F	5447	285608	SR	0.88	0.43	-0.19	0.43	-0.27	-0.22	0.3
F	5447	285610	SR	0.67	0.42	-0.15	-0.26	0.42	-0.20	0.4
F	5447	285611	SR	0.82	0.49	0.49	-0.26	-0.28	-0.25	0.3
G	7334	373676	SR	0.59	0.47	0.47	-0.21	-0.30	-0.19	0.1
G	7334	373681	SR	0.58	0.54	0.54	-0.30	-0.31	-0.15	0.2
G	7334	373683	SR	0.48	0.35	0.35	-0.19	-0.15	-0.15	0.1
G	7334	373684	SR	0.36	0.17	-0.09	**0.05**	0.17	-0.20	0.1
G	7334	373685	SR	0.62	0.38	0.38	-0.20	-0.23	-0.14	0.1
G	7334	392531	SR	0.24	0.14	-0.06	0.14	**0.02**	-0.15	0.3
G	7334	392538	SR	0.55	0.47	-0.13	-0.27	-0.28	0.47	0.5
G	7334	392532	SR	0.44	0.21	-0.08	-0.11	-0.07	0.21	0.4
G	7334	392533	SR	0.21	0.14	**0.17**	0.14	-0.18	-0.17	0.4
G	7334	392537	SR	0.75	0.41	-0.22	-0.26	-0.15	0.41	0.5
G	7334	392535	SR	0.70	0.32	0.32	-0.11	-0.24	-0.11	0.6
G	7334	392539	SR	0.42	0.25	-0.18	-0.08	0.25	-0.14	0.6
G	7334	392540	SR	0.54	0.38	-0.21	-0.22	-0.13	0.38	0.7
G	7334	373869	SR	0.47	0.33	0.33	-0.10	-0.23	-0.10	0.9
G	7334	373837	SR	0.84	0.22	-0.19	-0.06	0.22	-0.15	0.0
G	7334	373751	SR	0.52	0.42	-0.22	-0.21	-0.22	0.42	0.1
G	7334	373750	SR	0.51	0.46	0.46	-0.26	-0.24	-0.18	0.1
G	7334	373752	SR	0.58	0.49	-0.22	-0.25	0.49	-0.27	0.1

Table 1.B6 Item Statistics, Field Test Items: MD HSA English—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
G	7334	369290	SR	0.25	**0.08**	-0.06	0.08	**0.08**	-0.13	0.3
G	7334	369292	SR	0.48	0.36	0.36	-0.05	-0.25	-0.20	0.2
G	7334	369294	SR	0.23	**0.03**	-0.04	0.03	-0.07	**0.07**	0.1
G	7334	369293	SR	0.26	0.26	-0.29	-0.11	0.26	**0.11**	0.1
G	7334	369298	SR	0.45	0.28	**0.02**	-0.26	-0.20	0.28	0.1
G	7334	369300	SR	0.44	0.51	-0.24	0.51	-0.27	-0.11	0.1
G	7334	369299	SR	0.17	**-0.15**	**0.40**	-0.22	-0.15	-0.16	0.1
G	7334	369297	SR	0.66	0.36	-0.20	-0.17	0.36	-0.18	0.2
G	7334	369286	SR	0.38	0.19	-0.23	-0.27	0.19	**0.16**	0.2
G	7334	369287	SR	0.43	0.13	0.13	-0.26	-0.13	**0.18**	0.2
G	7334	369289	SR	0.43	0.32	**0.00**	-0.26	-0.20	0.32	0.2
G	7334	359857	SR	0.59	0.18	-0.17	-0.22	0.18	**0.00**	0.1
G	7334	359859	SR	0.24	**-0.06**	**0.17**	-0.06	-0.14	**0.01**	0.3
G	7334	359860	SR	0.59	0.37	-0.08	-0.26	0.37	-0.21	0.2
G	7334	359858	SR	0.55	0.51	0.51	-0.26	-0.22	-0.25	0.3
G	7334	359861	SR	0.34	0.17	-0.10	**0.02**	0.17	-0.14	0.2
G	7334	359862	SR	0.38	0.15	-0.24	**0.21**	-0.28	0.15	0.2
G	7334	256464	SR	0.39	0.32	0.32	-0.13	-0.21	-0.05	0.4
G	7334	256465	SR	0.42	0.31	-0.01	-0.22	0.31	-0.19	0.4
G	7334	256466	SR	0.80	0.39	-0.24	-0.22	0.39	-0.15	0.5
H	5329	397769	SR	0.64	0.41	-0.20	-0.14	0.41	-0.25	0.1
H	5329	397770	SR	0.72	0.42	-0.16	0.42	-0.26	-0.24	0.0
H	5329	397771	SR	0.70	0.40	-0.15	0.40	-0.26	-0.21	0.1
H	5329	397772	SR	0.66	0.26	-0.22	-0.23	-0.07	0.26	0.0
H	5329	397773	SR	0.61	0.38	-0.20	-0.12	0.38	-0.24	0.0
H	5329	392545	SR	0.23	0.12	-0.20	**0.10**	-0.10	0.12	0.3
H	5329	392543	SR	0.52	0.37	0.37	-0.09	-0.23	-0.23	0.3
H	5329	392544	SR	0.64	0.41	-0.25	-0.22	0.41	-0.14	0.3
H	5329	392541	SR	0.59	0.49	0.49	-0.23	-0.21	-0.26	0.4
H	5329	392546	SR	0.74	0.47	-0.28	0.47	-0.23	-0.24	0.4
H	5329	392549	SR	0.71	0.38	-0.24	-0.15	-0.17	0.38	0.5
H	5329	392548	SR	0.47	0.22	-0.08	0.22	-0.23	-0.02	0.6
H	5329	392547	SR	0.81	0.43	-0.22	-0.22	0.43	-0.25	0.5
H	5329	373870	SR	0.42	0.21	-0.22	-0.14	**0.08**	0.21	0.7
H	5329	373845	SR	0.53	0.33	0.33	-0.12	-0.24	-0.13	0.1
H	5329	366356	SR	0.76	0.47	-0.28	-0.24	0.47	-0.26	0.1
H	5329	366355	SR	0.82	0.27	0.27	-0.15	-0.21	-0.12	0.1
H	5329	366354	SR	0.82	0.42	-0.23	-0.24	0.42	-0.21	0.2
H	5329	366306	SR	0.70	0.43	-0.21	-0.24	-0.23	0.43	0.2
H	5329	366304	SR	0.62	0.28	-0.05	-0.25	0.28	-0.13	0.3
H	5329	366307	SR	0.23	0.21	0.21	-0.19	-0.15	**0.08**	0.2
H	5329	366308	SR	0.39	0.21	0.21	-0.24	**0.03**	-0.06	0.2
H	5329	366299	SR	0.70	0.23	-0.21	-0.21	**0.01**	0.23	0.2
H	5329	366300	SR	0.59	0.43	-0.08	0.43	-0.32	-0.26	0.3

Table 1.B6 Item Statistics, Field Test Items: MD HSA English—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
H	5329	366303	SR	0.81	0.44	-0.27	0.44	-0.24	-0.21	0.2
H	5329	366301	SR	0.45	0.23	-0.24	-0.21	-0.01	0.23	0.2
H	5329	366295	SR	0.83	0.42	-0.19	-0.24	0.42	-0.25	0.2
H	5329	366296	SR	0.63	0.39	-0.30	0.39	-0.16	-0.14	0.3
H	5329	366298	SR	0.45	0.24	**0.02**	0.24	-0.27	-0.22	0.2
H	5329	364073	SR	0.57	0.42	0.42	-0.23	-0.25	-0.11	0.4
H	5329	364072	SR	0.56	0.43	-0.17	-0.12	-0.32	0.43	0.2
H	5329	364076	SR	0.79	0.50	-0.25	-0.29	0.50	-0.24	0.3
H	5329	364119	SR	0.65	0.26	-0.18	-0.22	0.26	-0.04	0.2
H	5329	364074	SR	0.40	0.40	-0.16	-0.25	0.40	-0.14	0.2
H	5329	364075	SR	0.62	0.41	0.41	-0.29	-0.16	-0.14	0.2
H	5329	285585	SR	0.56	0.46	-0.18	-0.28	-0.21	0.46	0.3
H	5329	285586	SR	0.30	0.20	**0.02**	-0.17	-0.10	0.20	0.3
H	5329	285587	SR	0.61	0.45	-0.20	-0.24	0.45	-0.22	0.3
J	5365	397778	SR	0.22	**0.08**	**0.04**	-0.19	-0.03	0.08	0.0
J	5365	397776	SR	0.41	0.24	0.24	-0.08	-0.15	-0.13	0.1
J	5365	397775	SR	0.57	0.31	-0.20	-0.16	0.31	-0.12	0.1
J	5365	397777	SR	0.35	0.27	**0.03**	-0.27	0.27	-0.06	0.1
J	5365	397779	SR	0.63	0.28	-0.26	0.28	-0.16	-0.09	0.1
J	5365	374410	SR	0.68	0.35	-0.14	-0.24	-0.15	0.35	0.2
J	5365	374414	SR	0.21	0.17	**0.01**	-0.12	0.17	-0.04	0.3
J	5365	374416	SR	0.39	0.22	-0.15	-0.01	0.22	-0.11	0.5
J	5365	374412	SR	0.49	0.19	0.19	-0.25	**0.06**	-0.21	0.5
J	5365	374413	SR	0.46	0.28	0.28	**0.00**	-0.20	-0.18	0.6
J	5365	374415	SR	0.39	0.14	-0.14	-0.13	0.14	**0.02**	0.5
J	5365	374411	SR	0.70	0.20	-0.17	**0.01**	0.20	-0.23	0.7
J	5365	374419	SR	0.67	0.43	-0.25	-0.18	-0.21	0.43	0.7
J	5365	373877	SR	0.48	0.32	-0.16	0.32	-0.13	-0.12	0.8
J	5365	373853	SR	0.50	0.36	0.36	-0.28	-0.09	-0.14	0.0
J	5365	369109	SR	0.60	0.25	-0.18	-0.08	-0.16	0.25	0.0
J	5365	369108	SR	0.64	0.40	-0.14	0.40	-0.28	-0.18	0.0
J	5365	369107	SR	0.80	0.46	-0.22	-0.30	0.46	-0.21	0.1
J	5365	363973	SR	0.68	0.35	0.35	-0.26	-0.20	-0.07	0.1
J	5365	363971	SR	0.24	**0.07**	0.07	**0.17**	-0.13	-0.09	0.1
J	5365	363972	SR	0.47	0.47	-0.29	-0.08	-0.26	0.47	0.1
J	5365	363974	SR	0.60	0.30	-0.15	-0.28	-0.04	0.30	0.1
J	5365	363976	SR	0.57	0.28	-0.24	0.28	-0.19	**0.03**	0.0
J	5365	363975	SR	0.37	0.12	-0.12	0.12	-0.13	**0.09**	0.1
J	5365	363981	SR	0.63	0.29	-0.24	-0.25	0.29	-0.02	0.1
J	5365	363977	SR	0.72	0.41	0.41	-0.18	-0.23	-0.23	0.0
J	5365	363979	SR	0.84	0.43	-0.31	-0.19	-0.20	0.43	0.1
J	5365	363983	SR	0.82	0.32	0.32	-0.13	-0.29	-0.10	0.1
J	5365	363982	SR	0.83	0.46	0.46	-0.28	-0.31	-0.15	0.1
J	5365	363080	SR	0.48	0.23	-0.09	0.23	-0.14	-0.08	0.1

Table 1.B6 Item Statistics, Field Test Items: MD HSA English—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
J	5365	363077	SR	0.68	0.39	-0.24	-0.23	-0.17	0.39	0.1
J	5365	363076	SR	0.55	0.35	-0.20	-0.28	-0.09	0.35	0.1
J	5365	363075	SR	0.44	0.48	-0.30	0.48	-0.09	-0.23	0.0
J	5365	363078	SR	0.69	0.47	-0.22	-0.25	0.47	-0.26	0.1
J	5365	363079	SR	0.35	0.28	-0.05	-0.22	0.28	-0.20	0.2
J	5365	332112	SR	0.81	0.33	-0.18	0.33	-0.23	-0.17	0.3
J	5365	332113	SR	0.87	0.41	0.41	-0.20	-0.30	-0.17	0.4
J	5365	332114	SR	0.64	0.24	-0.21	-0.07	0.24	-0.10	0.3
K	5240	400839	SR	0.89	0.36	0.36	-0.15	-0.30	-0.12	0.0
K	5240	400840	SR	0.88	0.32	-0.14	-0.13	0.32	-0.25	0.0
K	5240	400844	SR	0.78	0.44	-0.30	0.44	-0.19	-0.22	0.1
K	5240	400842	SR	0.46	**0.08**	**0.04**	0.00	-0.16	0.08	0.2
K	5240	400845	SR	0.81	0.44	-0.17	0.44	-0.35	-0.16	0.1
K	5240	392567	SR	0.40	0.18	-0.24	-0.19	**0.03**	0.18	0.4
K	5240	392563	SR	0.56	0.34	0.34	-0.26	-0.07	-0.17	0.4
K	5240	392561	SR	0.74	0.42	0.42	-0.25	-0.20	-0.20	0.5
K	5240	392562	SR	0.85	0.45	-0.24	-0.20	0.45	-0.26	0.6
K	5240	392564	SR	0.17	0.19	-0.02	**0.07**	-0.32	0.19	0.6
K	5240	392565	SR	0.78	0.42	-0.21	-0.21	-0.22	0.42	0.8
K	5240	392570	SR	0.45	0.36	-0.18	0.36	-0.13	-0.13	0.7
K	5240	392569	SR	0.52	0.40	0.40	-0.16	-0.20	-0.19	0.8
K	5240	373880	SR	0.29	0.16	-0.19	**0.11**	-0.17	0.16	0.9
K	5240	373854	SR	0.81	0.36	-0.22	0.36	-0.20	-0.20	0.1
K	5240	366394	SR	0.51	0.15	**0.07**	-0.22	-0.17	0.15	0.1
K	5240	366392	SR	0.60	**0.09**	**0.10**	0.09	-0.22	-0.16	0.0
K	5240	366393	SR	0.45	0.38	-0.19	-0.19	-0.11	0.38	0.1
K	5240	364104	SR	0.52	0.37	-0.05	-0.21	-0.25	0.37	0.2
K	5240	364106	SR	0.38	0.14	0.14	-0.16	-0.08	**0.05**	0.2
K	5240	364107	SR	0.61	0.37	-0.20	-0.17	0.37	-0.19	0.1
K	5240	364105	SR	0.76	0.39	-0.22	0.39	-0.21	-0.20	0.1
K	5240	364100	SR	0.27	**0.07**	**0.01**	**0.01**	0.07	-0.10	0.4
K	5240	364101	SR	0.61	0.36	-0.16	-0.14	0.36	-0.21	0.1
K	5240	364102	SR	0.62	0.46	-0.19	-0.21	-0.27	0.46	0.2
K	5240	364103	SR	0.82	0.45	0.45	-0.24	-0.31	-0.16	0.1
K	5240	364110	SR	0.34	**0.06**	-0.01	-0.20	0.06	**0.08**	0.2
K	5240	364109	SR	0.44	0.29	-0.03	-0.19	-0.15	0.29	0.2
K	5240	364108	SR	0.35	0.19	-0.02	-0.07	0.19	-0.13	0.3
K	5240	369097	SR	0.77	0.34	-0.27	0.34	-0.06	-0.23	0.1
K	5240	369093	SR	0.69	0.35	0.35	-0.23	-0.20	-0.09	0.2
K	5240	369092	SR	0.73	0.48	-0.28	0.48	-0.27	-0.19	0.1
K	5240	369096	SR	0.54	0.34	0.34	-0.24	-0.11	-0.18	0.2
K	5240	369094	SR	0.58	0.41	-0.22	0.41	-0.30	-0.09	0.3
K	5240	369095	SR	0.69	0.37	-0.10	0.37	-0.27	-0.24	0.2
K	5240	285589	SR	0.70	0.42	-0.20	0.42	-0.24	-0.17	0.6

Table 1.B6 Item Statistics, Field Test Items: MD HSA English—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
K	5240	285590	SR	0.49	0.44	0.44	-0.22	-0.26	-0.08	0.8
K	5240	285591	SR	0.86	0.41	-0.15	-0.22	0.41	-0.28	0.8
L	5262	397717	SR	0.26	0.11	-0.10	-0.16	0.11	**0.11**	0.1
L	5262	397721	SR	0.51	0.28	-0.10	-0.15	0.28	-0.17	0.1
L	5262	397720	SR	0.42	0.35	-0.08	-0.20	-0.15	0.35	0.2
L	5262	397719	SR	0.35	0.18	-0.02	-0.11	-0.07	0.18	0.2
L	5262	397722	SR	0.46	0.42	0.42	-0.18	-0.24	-0.13	0.1
L	5262	392591	SR	0.50	0.16	-0.13	0.16	-0.05	-0.15	0.3
L	5262	392585	SR	0.45	0.42	-0.22	0.42	-0.19	-0.13	0.3
L	5262	392590	SR	0.40	**0.08**	-0.18	-0.03	0.08	**0.03**	0.4
L	5262	392592	SR	0.43	0.39	0.39	-0.18	-0.27	-0.12	0.5
L	5262	392589	SR	0.54	0.31	-0.12	-0.21	0.31	-0.08	0.8
L	5262	392587	SR	0.76	0.23	-0.12	-0.21	-0.08	0.23	0.6
L	5262	392586	SR	0.71	0.30	-0.23	0.30	-0.15	-0.14	0.7
L	5262	392588	SR	0.53	0.35	0.35	-0.13	-0.24	-0.16	0.8
L	5262	373881	SR	0.68	0.32	-0.10	-0.22	0.32	-0.15	0.9
L	5262	392641	SR	0.48	0.15	-0.15	-0.23	-0.01	0.15	0.1
L	5262	366395	SR	0.43	0.14	-0.16	**0.09**	0.14	-0.13	0.2
L	5262	366397	SR	0.54	0.36	0.36	-0.16	-0.14	-0.29	0.1
L	5262	366396	SR	0.84	0.46	-0.28	-0.25	0.46	-0.22	0.2
L	5262	366310	SR	0.56	0.26	-0.15	0.26	-0.13	-0.11	0.1
L	5262	366313	SR	0.51	0.18	-0.28	-0.04	0.18	**0.01**	0.1
L	5262	366311	SR	0.24	**0.03**	0.03	-0.12	**0.13**	-0.05	0.1
L	5262	366314	SR	0.57	0.33	-0.21	0.33	-0.24	-0.05	0.1
L	5262	366315	SR	0.55	0.17	-0.07	-0.14	-0.06	0.17	0.1
L	5262	366320	SR	0.61	0.34	0.34	-0.15	-0.20	-0.17	0.1
L	5262	366316	SR	0.39	0.29	-0.21	-0.11	-0.07	0.29	0.2
L	5262	366319	SR	0.49	0.46	-0.13	-0.22	0.46	-0.27	0.1
L	5262	366312	SR	0.47	0.43	-0.24	-0.17	-0.16	0.43	0.1
L	5262	366322	SR	0.38	**0.09**	-0.16	-0.08	0.09	**0.06**	0.1
L	5262	366321	SR	0.21	**0.04**	-0.21	**0.06**	**0.02**	0.04	0.1
L	5262	359863	SR	0.44	0.34	-0.17	0.34	-0.23	-0.19	0.1
L	5262	359867	SR	0.40	0.28	0.28	-0.25	-0.01	-0.22	0.1
L	5262	359865	SR	0.32	0.31	-0.11	0.31	-0.08	-0.15	0.1
L	5262	359866	SR	0.62	0.45	-0.20	-0.25	0.45	-0.22	0.2
L	5262	359868	SR	0.54	0.51	-0.19	-0.27	-0.23	0.51	0.3
L	5262	359864	SR	0.58	0.12	**0.11**	0.12	-0.31	-0.20	0.2
L	5262	285597	SR	0.66	0.29	0.29	-0.26	-0.08	-0.09	0.5
L	5262	285596	SR	0.70	0.46	-0.20	-0.28	-0.20	0.46	0.5
L	5262	285598	SR	0.56	0.24	0.24	-0.17	-0.18	**0.03**	0.6
M	5262	397765	SR	0.65	0.24	-0.14	-0.07	-0.16	0.24	0.1
M	5262	397762	SR	0.76	0.30	-0.12	-0.24	0.30	-0.12	0.1
M	5262	397763	SR	0.75	0.34	-0.25	0.34	-0.14	-0.13	0.1
M	5262	397767	SR	0.48	0.14	-0.05	-0.02	-0.11	0.14	0.2

Table 1.B6 Item Statistics, Field Test Items: MD HSA English—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
M	5262	397766	SR	0.77	0.39	0.39	-0.26	-0.23	-0.12	0.0
M	5262	393698	SR	0.30	**0.05**	**0.23**	-0.16	0.05	-0.25	0.3
M	5262	393700	SR	0.34	**0.09**	-0.02	0.09	**0.01**	-0.09	0.3
M	5262	393701	SR	0.38	0.46	-0.17	0.46	-0.30	-0.18	0.4
M	5262	393702	SR	0.60	0.33	-0.17	-0.23	0.33	-0.08	0.5
M	5262	393703	SR	0.68	0.39	-0.18	0.39	-0.12	-0.31	0.4
M	5262	393699	SR	0.60	0.39	0.39	-0.17	-0.16	-0.25	0.6
M	5262	393706	SR	0.57	0.26	-0.28	0.26	-0.05	-0.13	0.7
M	5262	393707	SR	0.39	**0.08**	-0.10	-0.03	0.08	**0.02**	0.7
M	5262	373882	SR	0.60	0.28	-0.09	-0.17	0.28	-0.13	1.0
M	5262	395682	SR	0.44	0.19	-0.12	-0.07	-0.06	0.19	0.0
M	5262	369106	SR	0.87	0.23	-0.18	-0.15	0.23	-0.13	0.1
M	5262	369104	SR	0.63	0.47	0.47	-0.29	-0.23	-0.20	0.0
M	5262	369105	SR	0.68	0.48	-0.25	-0.25	-0.21	0.48	0.1
M	5262	364001	SR	0.42	0.42	-0.15	0.42	-0.18	-0.22	0.2
M	5262	364002	SR	0.56	0.14	-0.06	0.14	-0.06	-0.14	0.1
M	5262	364004	SR	0.40	0.11	-0.08	-0.24	0.11	**0.06**	0.1
M	5262	364005	SR	0.74	0.47	0.47	-0.27	-0.26	-0.20	0.1
M	5262	364007	SR	0.53	0.18	0.18	-0.15	-0.01	-0.07	0.2
M	5262	364008	SR	0.29	0.15	**0.11**	-0.22	0.15	-0.22	0.1
M	5262	364009	SR	0.28	**-0.02**	-0.02	**0.03**	-0.14	**0.11**	0.2
M	5262	364010	SR	0.46	0.34	0.34	-0.17	-0.24	-0.07	0.1
M	5262	363997	SR	0.54	0.29	-0.04	-0.23	0.29	-0.23	0.2
M	5262	364000	SR	0.47	0.26	-0.23	-0.18	0.26	-0.03	0.1
M	5262	363998	SR	0.59	0.20	0.20	**0.00**	-0.22	-0.15	0.1
M	5262	364032	SR	0.40	0.21	-0.05	-0.12	0.21	-0.20	0.1
M	5262	364036	SR	0.56	0.50	-0.18	-0.25	-0.29	0.50	0.1
M	5262	364034	SR	0.77	0.45	-0.23	0.45	-0.27	-0.20	0.2
M	5262	364035	SR	0.43	**0.01**	-0.23	0.01	**0.19**	-0.12	0.1
M	5262	364031	SR	0.71	0.43	-0.23	0.43	-0.30	-0.14	0.2
M	5262	364033	SR	0.33	0.16	0.16	-0.04	-0.18	-0.04	0.2
M	5262	392650	SR	0.35	0.22	0.22	-0.19	-0.25	**0.06**	0.1
M	5262	392651	SR	0.52	0.30	-0.12	-0.24	0.30	-0.10	0.2
M	5262	392656	SR	0.74	0.52	-0.24	0.52	-0.28	-0.28	0.2
N	5207	251188	SR	0.77	0.45	-0.22	-0.23	0.45	-0.27	0.1
N	5207	251194	SR	0.59	0.29	-0.16	-0.17	0.29	-0.11	0.1
N	5207	251196	SR	0.87	0.34	0.34	-0.19	-0.23	-0.15	0.1
N	5207	251190	SR	0.82	0.20	-0.15	-0.20	0.20	-0.03	0.2
N	5207	251192	SR	0.45	0.35	-0.12	0.35	-0.22	-0.13	0.1
N	5207	393808	SR	0.31	0.22	**0.06**	-0.17	-0.14	0.22	0.6
N	5207	393807	SR	0.74	0.36	-0.21	-0.04	-0.26	0.36	0.5
N	5207	393811	SR	0.54	0.36	-0.05	0.36	-0.27	-0.17	0.5

Table 1.B6 Item Statistics, Field Test Items: MD HSA English—May Forms

Form	N	ItemID	Item Type	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	P_BIS4	%Omits
N	5207	393810	SR	0.39	0.31	0.31	-0.05	-0.18	-0.12	0.5
N	5207	393829	SR	0.44	0.34	-0.23	0.34	-0.31	-0.06	0.6
N	5207	393809	SR	0.51	0.30	-0.12	0.30	-0.25	-0.03	0.7
N	5207	393814	SR	0.79	0.43	-0.21	0.43	-0.23	-0.22	0.7
N	5207	393815	SR	0.66	0.31	0.31	-0.16	-0.14	-0.14	0.8
N	5207	373885	SR	0.59	0.27	-0.12	-0.24	0.27	-0.06	0.9
N	5207	392638	SR	0.64	0.18	**0.01**	0.18	-0.15	-0.15	0.2
N	5207	366389	SR	0.61	0.33	-0.13	-0.12	0.33	-0.23	0.1
N	5207	366387	SR	0.33	0.22	-0.14	0.22	-0.04	-0.06	0.1
N	5207	366388	SR	0.43	0.36	-0.22	-0.19	-0.14	0.36	0.2
N	5207	364058	SR	0.54	0.30	-0.16	0.30	-0.13	-0.14	0.3
N	5207	364066	SR	0.84	0.40	-0.24	0.40	-0.22	-0.20	0.2
N	5207	364062	SR	0.46	0.23	-0.10	-0.09	0.23	-0.10	0.3
N	5207	364064	SR	0.60	0.22	-0.24	0.22	**0.02**	-0.15	0.2
N	5207	364065	SR	0.17	**-0.11**	-0.22	-0.20	**0.36**	-0.11	0.3
N	5207	364063	SR	0.61	0.28	-0.15	0.28	-0.25	-0.04	0.2
N	5207	364070	SR	0.73	0.37	0.37	-0.19	-0.20	-0.19	0.2
N	5207	364071	SR	0.38	0.17	0.17	-0.16	**0.06**	-0.22	0.2
N	5207	364059	SR	0.23	**0.07**	**0.14**	-0.17	0.07	-0.07	0.2
N	5207	364068	SR	0.34	0.15	**0.03**	-0.22	0.15	-0.11	0.2
N	5207	364069	SR	0.32	0.27	0.27	-0.20	-0.20	**0.04**	0.3
N	5207	366343	SR	0.45	0.23	0.23	-0.25	**0.08**	-0.27	0.2
N	5207	366345	SR	0.54	0.43	-0.21	-0.26	-0.13	0.43	0.2
N	5207	366346	SR	0.30	0.35	-0.21	0.35	-0.03	-0.24	0.2
N	5207	366344	SR	0.76	0.49	-0.28	-0.27	0.49	-0.19	0.3
N	5207	366347	SR	0.58	0.47	-0.19	-0.21	-0.27	0.47	0.2
N	5207	366391	SR	0.65	0.53	0.53	-0.26	-0.20	-0.34	0.3
N	5207	392652	SR	0.30	0.19	0.19	-0.24	-0.22	**0.12**	0.5
N	5207	392655	SR	0.45	0.32	-0.15	-0.09	-0.26	0.32	0.5
N	5207	392660	SR	0.82	0.47	0.47	-0.25	-0.28	-0.20	0.5
Mean				0.55	0.30	-0.02	-0.05	-0.05	-0.04	0.26
SD				0.18	0.14	0.24	0.23	0.23	0.21	0.21

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
112	1	258190	0.37	0.28	-0.15	-0.14	0.28	0.0
	2	258164	0.41	0.26	-0.19	-0.10	0.26	0.1
	3	258224	0.34	0.28	-0.02	0.28	-0.25	0.1
	4	258107	0.29	0.17	-0.07	-0.09	0.17	0.1
	5	258126	0.51	0.26	0.26	-0.15	-0.16	0.1
	6	258239	0.33	0.22	-0.08	0.22	-0.15	0.1
	7	258123	0.56	0.36	0.36	-0.24	-0.19	0.1
	8	258124	0.29	0.29	-0.14	-0.13	0.29	0.1
	9	258141	0.40	0.30	0.30	-0.19	-0.14	0.1
	10	258200	0.31	0.27	0.27	-0.05	-0.21	0.2
	11	258179	0.33	0.23	-0.12	-0.10	0.23	0.2
	12	258235	0.56	0.38	-0.24	0.38	-0.21	0.2
	13	258105	0.33	0.16	0.16	-0.18	0.02	0.3
	14	258236	0.48	0.23	-0.16	0.23	-0.10	0.1
	15	261559	0.35	0.16	0.16	-0.11	-0.06	0.2
	16	258211	0.58	0.44	-0.36	0.44	-0.16	0.1
	17	258209	0.63	0.24	-0.12	-0.20	0.24	0.1
	18	258182	0.62	0.39	-0.19	-0.28	0.39	0.2
	19	258238	0.29	0.29	-0.17	-0.10	0.29	0.1
	20	261561	0.49	0.30	0.30	-0.13	-0.22	0.2
	21	258132	0.49	0.23	-0.15	0.23	-0.11	0.1
	22	258158	0.53	0.33	-0.15	-0.23	0.33	0.1
	23	258145	0.57	0.32	-0.24	0.32	-0.15	0.1
	24	261563	0.34	0.20	-0.04	-0.15	0.20	0.1
	25	258229	0.66	0.32	-0.23	0.32	-0.17	0.3
	26	258197	0.56	0.31	-0.22	0.31	-0.15	0.2
	27	258097	0.30	0.30	0.30	-0.09	-0.22	0.2
	28	258310	0.65	0.36	-0.17	-0.27	0.36	0.2
	29	258109	0.49	0.24	0.24	-0.12	-0.15	0.2
	30	258110	0.42	0.22	-0.06	0.22	-0.18	0.2
	31	258103	0.32	0.13	0.13	-0.19	0.08	0.4
	32	258108	0.46	0.13	-0.04	0.13	-0.10	0.2
	33	258196	0.60	0.21	-0.10	0.21	-0.16	0.2
	34	261564	0.49	0.33	0.33	-0.19	-0.17	0.3
	35	258153	0.39	0.18	0.18	-0.04	-0.14	0.2
	36	258122	0.78	0.34	-0.24	0.34	-0.19	0.2
	37	258240	0.63	0.28	-0.18	0.28	-0.16	0.2
	38	258157	0.20	0.15	0.15	-0.02	-0.10	0.2
	39	258091	0.25	0.20	-0.08	0.20	-0.09	0.2
	40	258118	0.47	0.28	0.28	-0.15	-0.18	0.3
	41	258225	0.53	0.29	-0.19	0.29	-0.14	0.2

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
112	42	261557	0.40	0.20	0.20	-0.15	-0.05	0.2
	43	258152	0.40	0.23	0.23	-0.14	-0.10	0.2
	44	258133	0.40	0.26	0.26	-0.19	-0.08	0.2
	45	258214	0.35	0.25	0.25	-0.09	-0.16	0.2
	46	258178	0.67	0.33	-0.20	-0.22	0.33	0.2
	47	258100	0.57	0.32	-0.22	0.32	-0.15	0.2
	48	258171	0.48	0.33	-0.20	0.33	-0.17	0.2
	49	258142	0.42	0.30	-0.14	-0.19	0.30	0.3
	50	258150	0.42	0.21	0.21	-0.03	-0.18	0.2
Mean			0.45	0.27	-0.01	0.01	-0.03	0.2
SD			0.13	0.07	0.21	0.22	0.20	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
112	1	258627	0.77	0.23	-0.17	0.23	-0.13	0.1
	2	258733	0.54	0.16	0.16	-0.03	-0.17	0.2
	3	258684	0.48	0.18	-0.04	-0.16	0.18	0.1
	4	258644	0.33	0.25	0.25	-0.11	-0.13	0.0
	5	258634	0.43	0.25	-0.14	0.25	-0.12	0.1
	6	261644	0.77	0.26	0.26	-0.18	-0.15	0.2
	7	261645	0.37	0.22	-0.08	-0.14	0.22	0.1
	8	258619	0.36	0.23	0.23	-0.12	-0.10	0.2
	9	258700	0.55	0.28	-0.19	-0.15	0.28	0.2
	10	258618	0.34	0.14	-0.06	-0.07	0.14	0.1
	11	261627	0.61	0.22	-0.13	0.22	-0.13	0.2
	12	258639	0.39	0.21	0.21	-0.07	-0.14	0.2
	13	258732	0.55	0.18	0.18	-0.13	-0.06	0.3
	14	258727	0.47	0.29	-0.21	0.29	-0.11	0.1
	15	258622	0.52	0.32	0.32	-0.22	-0.15	0.2
	16	258695	0.44	0.16	-0.12	0.16	-0.06	0.1
	17	258631	0.78	0.31	0.31	-0.22	-0.17	0.3
	18	258699	0.23	-0.02	-0.14	-0.02	0.16	0.2
	19	261607	0.64	0.19	-0.13	0.19	-0.09	0.2
	20	261624	0.45	0.28	-0.13	-0.17	0.28	0.2
	21	258612	0.65	0.29	-0.19	0.29	-0.16	0.3
	22	261610	0.43	0.32	-0.15	-0.19	0.32	0.3
	23	258714	0.31	0.30	0.30	-0.12	-0.15	0.4
	24	258725	0.60	0.27	-0.17	0.27	-0.15	0.5
	25	258664	0.57	0.30	-0.18	0.30	-0.17	0.4
	26	258638	0.30	0.17	-0.03	-0.12	0.17	0.3
	27	258650	0.47	0.26	-0.08	-0.20	0.26	0.3
	28	261614	0.62	0.35	0.35	-0.22	-0.21	0.4
	29	261622	0.81	0.31	-0.20	0.31	-0.19	0.4
	30	258705	0.27	0.11	-0.12	0.03	0.11	0.4
	31	258678	0.64	0.27	-0.15	0.27	-0.17	0.4
	32	261642	0.42	0.27	0.27	-0.20	-0.07	0.3
	33	258654	0.60	0.26	-0.24	-0.06	0.26	0.4
	34	258670	0.35	0.08	0.01	-0.06	0.08	0.5
	35	258660	0.44	0.25	-0.18	-0.09	0.25	0.4
	36	258637	0.50	0.30	-0.15	0.30	-0.17	0.4
	37	258640	0.55	0.17	-0.08	0.17	-0.11	0.4
	38	258674	0.48	0.22	-0.12	-0.11	0.22	0.5
	39	258697	0.42	0.18	0.18	-0.11	-0.06	0.5
	40	258616	0.23	0.03	-0.10	0.03	0.10	0.4
	41	258630	0.26	0.21	-0.06	-0.10	0.21	0.5
	42	261617	0.37	0.18	0.18	-0.03	-0.18	0.6
	43	258726	0.39	0.18	0.18	-0.11	-0.06	0.4

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
112	44	258730	0.48	0.24	0.24	-0.14	-0.11	0.4
	45	258657	0.24	0.15	-0.08	-0.05	0.15	0.4
	46	258651	0.44	0.35	0.35	-0.18	-0.18	0.6
	47	258712	0.40	0.28	-0.19	-0.11	0.28	0.5
	48	258731	0.33	0.14	-0.05	-0.06	0.14	0.4
	49	261608	0.51	0.29	-0.14	-0.17	0.29	0.5
	50	258693	0.34	0.26	0.26	-0.14	-0.10	0.5
Mean			0.47	0.23	0.00	-0.02	0.00	0.3
SD			0.15	0.08	0.19	0.17	0.18	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.A3 Item Statistics: MD Mod-HSA English—October

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
112	1	259343	0.61	0.32	-0.17	-0.23	0.32	0.1
	2	259415	0.62	0.30	0.30	-0.22	-0.16	0.1
	3	259417	0.52	0.21	0.21	-0.17	-0.08	0.1
	4	259416	0.76	0.35	-0.17	0.35	-0.28	0.1
	5	259323	0.45	0.30	0.30	-0.16	-0.17	0.1
	6	259453	0.42	0.19	-0.05	-0.21	0.19	0.1
	7	259382	0.61	0.26	-0.16	0.26	-0.16	0.0
	8	259452	0.39	0.19	-0.20	0.19	-0.05	0.1
	9	259465	0.39	0.21	0.21	-0.17	-0.06	0.1
	10	259351	0.43	0.25	-0.19	0.25	-0.11	0.0
	11	259430	0.75	0.21	-0.18	0.21	-0.08	0.2
	12	259431	0.68	0.30	0.30	-0.20	-0.18	0.1
	13	259318	0.59	0.37	0.37	-0.24	-0.21	0.2
	14	259319	0.33	0.09	0.02	-0.14	0.09	0.1
	15	259320	0.69	0.37	-0.22	0.37	-0.26	0.0
	16	259419	0.63	0.22	-0.11	0.22	-0.17	0.1
	17	259421	0.61	0.29	0.29	-0.20	-0.15	0.3
	18	259463	0.38	0.20	0.20	-0.12	-0.09	0.2
	19	259345	0.49	0.38	-0.18	-0.26	0.38	0.1
	20	259325	0.57	0.33	-0.19	0.33	-0.20	0.3
	21	259385	0.58	0.31	-0.19	-0.18	0.31	0.2
	22	259390	0.58	0.31	-0.18	-0.20	0.31	0.3
	23	259383	0.52	0.33	-0.24	0.33	-0.12	0.4
	24	259386	0.43	0.40	-0.24	-0.19	0.40	0.3
	25	259388	0.51	0.29	0.29	-0.14	-0.18	0.3
	26	259389	0.40	0.23	-0.15	0.23	-0.09	0.3
	27	259438	0.45	0.22	-0.13	0.22	-0.11	0.4
	28	259439	0.50	0.20	-0.19	0.20	-0.08	0.3
	29	259437	0.48	0.26	0.26	-0.09	-0.20	0.3
	30	259332	0.63	0.28	-0.22	0.28	-0.11	0.4
	31	259403	0.37	0.27	-0.07	-0.21	0.27	0.3
	32	259401	0.42	0.22	0.22	-0.06	-0.18	0.4
	33	259402	0.41	0.33	-0.27	-0.06	0.33	0.4
	34	259399	0.74	0.39	-0.20	-0.30	0.39	0.3
	35	259400	0.50	0.38	-0.20	-0.27	0.38	0.4
	36	259404	0.58	0.25	0.25	-0.13	-0.16	0.3
	37	259461	0.70	0.35	-0.26	-0.18	0.35	0.3
	38	259446	0.56	0.39	-0.21	-0.24	0.39	0.3
	39	259447	0.52	0.28	-0.14	0.28	-0.22	0.4
	40	259448	0.55	0.34	-0.19	-0.20	0.34	0.3
	41	259358	0.56	0.37	-0.17	-0.25	0.37	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
112	42	259434	0.41	0.16	-0.07	0.16	-0.15	0.3
	43	259391	0.56	0.34	-0.16	0.34	-0.24	0.4
	44	259454	0.36	0.24	0.24	-0.16	-0.07	0.3
	45	259455	0.50	0.33	-0.24	-0.13	0.33	0.3
	46	259392	0.47	0.35	-0.20	-0.19	0.35	0.4
	47	259394	0.70	0.38	0.38	-0.24	-0.23	0.3
	48	259393	0.48	0.36	0.36	-0.20	-0.20	0.3
	49	259444	0.65	0.29	-0.16	0.29	-0.19	0.3
	50	259356	0.53	0.29	-0.21	-0.15	0.29	0.3
Mean			0.53	0.29	-0.04	-0.03	0.02	0.2
SD			0.11	0.07	0.22	0.22	0.24	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
212	1	258090	0.61	0.35	-0.24	-0.19	0.35	0.1
	2	258095	0.73	0.35	0.35	-0.23	-0.24	0.1
	3	258166	0.74	0.33	-0.29	0.33	-0.14	0.1
	4	258312	0.48	0.33	0.33	-0.21	-0.18	0.2
	5	258173	0.53	0.34	-0.16	0.34	-0.24	0.0
	6	258115	0.42	0.32	0.32	-0.22	-0.14	0.2
	7	258223	0.32	0.11	-0.09	0.11	-0.04	0.0
	8	258230	0.52	0.20	0.20	-0.21	-0.05	0.0
	9	258147	0.46	0.28	0.28	-0.15	-0.20	0.0
	10	261560	0.65	0.32	-0.18	0.32	-0.23	0.0
	11	258227	0.62	0.29	0.29	-0.17	-0.20	0.0
	12	258308	0.43	0.27	0.27	-0.13	-0.17	0.0
	13	258101	0.53	0.29	-0.21	0.29	-0.13	0.1
	14	258210	0.82	0.35	-0.25	0.35	-0.22	0.0
	15	258116	0.48	0.20	0.20	-0.15	-0.10	0.0
	16	258089	0.23	0.17	-0.05	0.17	-0.09	0.0
	17	261556	0.44	0.26	0.26	-0.23	-0.06	0.1
	18	258309	0.83	0.33	-0.22	-0.23	0.33	0.0
	19	258098	0.63	0.34	-0.21	-0.23	0.34	0.1
	20	258208	0.37	0.09	0.00	-0.09	0.09	0.1
	21	258161	0.59	0.48	0.48	-0.40	-0.16	0.1
	22	258159	0.41	0.29	-0.12	-0.19	0.29	0.1
	23	258184	0.54	0.26	-0.10	0.26	-0.20	0.1
	24	258136	0.51	0.35	-0.20	0.35	-0.20	0.3
	25	258102	0.49	0.29	-0.16	0.29	-0.17	0.2
	26	258226	0.42	0.28	-0.16	-0.15	0.28	0.3
	27	258188	0.67	0.28	-0.16	0.28	-0.19	0.2
	28	258174	0.47	0.25	-0.12	-0.16	0.25	0.4
	29	258209	0.66	0.22	-0.09	-0.21	0.22	0.1
	30	258154	0.42	0.40	-0.28	-0.15	0.40	0.3
	31	258113	0.56	0.35	-0.23	0.35	-0.17	0.2
	32	258198	0.38	0.23	-0.12	-0.11	0.23	0.3
	33	258120	0.46	0.35	-0.21	-0.18	0.35	0.2
	34	258169	0.44	0.23	-0.10	-0.15	0.23	0.2
	35	258119	0.46	0.29	0.29	-0.10	-0.25	0.2
	36	258160	0.44	0.22	0.22	-0.10	-0.13	0.3
	37	258241	0.54	0.32	-0.19	0.32	-0.19	0.2
	38	258130	0.51	0.24	0.24	-0.16	-0.10	0.2
	39	258131	0.22	0.03	0.03	0.07	-0.11	0.2
	40	258128	0.64	0.38	-0.21	0.38	-0.25	0.2
	41	258509	0.39	0.22	0.22	-0.22	-0.01	0.2
	42	258231	0.59	0.39	-0.19	-0.27	0.39	0.2
	43	258111	0.61	0.36	-0.22	0.36	-0.24	0.2

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
212	44	258096	0.25	0.11	0.11	0.07	-0.19	0.2
	45	258125	0.39	0.13	-0.17	0.13	0.01	0.2
	46	258144	0.36	0.20	0.20	0.00	-0.21	0.2
	47	261558	0.40	0.23	-0.10	0.23	-0.13	0.3
	48	261562	0.41	0.26	0.26	-0.16	-0.11	0.2
	49	258220	0.34	0.16	-0.09	-0.06	0.16	0.2
	50	258135	0.53	0.21	-0.13	0.21	-0.11	0.3
Mean			0.50	0.27	-0.01	0.00	-0.03	0.2
SD			0.14	0.09	0.22	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.A5 Item Statistics: MD Mod-HSA Biology—January

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
212	1	258636	0.61	0.28	-0.17	0.28	-0.17	0.0
	2	258653	0.36	0.26	0.26	-0.07	-0.20	0.0
	3	258690	0.42	0.17	-0.01	-0.17	0.17	0.1
	4	258702	0.56	0.36	-0.28	0.36	-0.15	0.1
	5	258662	0.35	0.24	-0.09	-0.15	0.24	0.1
	6	258659	0.30	0.08	0.08	-0.15	0.08	0.1
	7	258673	0.62	0.25	-0.15	-0.15	0.25	0.1
	8	258701	0.40	0.30	-0.25	0.30	-0.09	0.1
	9	258628	0.58	0.25	0.25	-0.23	-0.07	0.1
	10	258685	0.30	0.18	0.18	-0.12	-0.09	0.1
	11	261611	0.14	-0.06	0.04	0.00	-0.06	0.1
	12	258615	0.47	0.20	-0.12	0.20	-0.10	0.1
	13	258683	0.66	0.37	-0.24	0.37	-0.22	0.3
	14	258641	0.49	0.20	-0.10	0.20	-0.13	0.1
	15	258676	0.43	0.08	-0.05	0.08	-0.03	0.1
	16	258607	0.63	0.23	-0.13	0.23	-0.18	0.1
	17	258645	0.55	0.35	-0.23	-0.19	0.35	0.3
	18	258666	0.59	0.22	-0.13	0.22	-0.15	0.1
	19	258675	0.46	0.22	-0.08	0.22	-0.16	0.1
	20	261609	0.61	0.19	-0.07	-0.20	0.19	0.1
	21	258665	0.26	0.24	0.24	-0.08	-0.14	0.1
	22	258682	0.48	0.15	-0.11	0.15	-0.05	0.1
	23	258648	0.38	0.22	-0.15	0.22	-0.09	0.2
	24	258614	0.40	0.30	-0.12	-0.20	0.30	0.1
	25	258680	0.43	0.27	-0.18	-0.12	0.27	0.1
	26	258681	0.38	0.04	0.01	-0.03	0.04	0.3
	27	258642	0.55	0.14	-0.05	0.14	-0.11	0.3
	28	261623	0.66	0.27	-0.14	-0.23	0.27	0.0
	29	258649	0.27	0.12	0.12	-0.27	0.12	0.1
	30	258687	0.43	0.25	-0.14	0.25	-0.14	0.1
	31	258646	0.37	0.19	0.19	-0.19	-0.03	0.1
	32	261626	0.64	0.29	-0.19	-0.19	0.29	0.0
	33	258707	0.51	0.32	0.32	-0.23	-0.15	0.1
	34	258643	0.56	0.22	0.22	-0.13	-0.15	0.0
	35	258698	0.32	0.17	-0.17	0.00	0.17	0.0
	36	258728	0.27	0.23	-0.16	-0.12	0.23	0.0
	37	258734	0.56	0.31	-0.24	-0.13	0.31	0.2
	38	258735	0.46	0.26	-0.17	0.26	-0.13	0.1
	39	258704	0.52	0.30	-0.14	0.30	-0.22	0.1
	40	258624	0.57	0.34	0.34	-0.23	-0.17	0.0
	41	258697	0.42	0.17	0.17	-0.09	-0.10	0.1
	42	258616	0.24	0.10	-0.13	0.10	0.05	0.1
212	43	258617	0.46	0.15	0.15	-0.14	-0.04	0.0

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
	44	258688	0.38	0.15	-0.07	-0.09	0.15	0.1
	45	258669	0.64	0.32	-0.17	-0.22	0.32	0.1
	46	261621	0.65	0.34	0.34	-0.20	-0.24	0.1
	47	258703	0.44	0.24	-0.13	0.24	-0.13	0.2
	48	258692	0.48	0.17	-0.07	-0.12	0.17	0.1
	49	258635	0.51	0.34	-0.21	-0.19	0.34	0.1
	50	261616	0.46	0.35	-0.19	-0.20	0.35	0.2
Mean			0.46	0.23	-0.04	-0.01	0.02	0.1
SD			0.13	0.09	0.17	0.20	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.A6 Item Statistics: MD Mod-HSA English—January

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
212	1	259429	0.49	0.29	0.29	-0.20	-0.13	0.0
	2	259426	0.62	0.31	0.31	-0.19	-0.18	0.1
	3	259349	0.66	0.32	-0.21	0.32	-0.19	0.2
	4	259427	0.47	0.22	-0.09	0.22	-0.15	0.2
	5	259312	0.69	0.38	0.38	-0.29	-0.18	0.1
	6	259368	0.38	0.21	0.21	-0.13	-0.09	0.2
	7	259371	0.73	0.41	-0.28	-0.25	0.41	0.1
	8	259367	0.70	0.30	-0.24	0.30	-0.17	0.2
	9	259370	0.50	0.23	-0.20	0.23	-0.08	0.2
	10	259432	0.66	0.29	0.29	-0.14	-0.21	0.2
	11	259433	0.54	0.35	0.35	-0.21	-0.20	0.2
	12	259354	0.43	0.27	-0.14	-0.15	0.27	0.2
	13	259407	0.18	0.04	-0.18	0.04	0.15	0.1
	14	259335	0.38	0.23	-0.20	-0.08	0.23	0.2
	15	259410	0.71	0.37	-0.28	0.37	-0.18	0.2
	16	259413	0.52	0.27	-0.14	0.27	-0.20	0.3
	17	259411	0.50	0.29	-0.18	-0.16	0.29	0.3
	18	259414	0.42	0.26	-0.16	-0.11	0.26	0.5
	19	259338	0.41	0.21	0.21	-0.07	-0.14	0.4
	20	259339	0.65	0.36	-0.21	0.36	-0.25	0.5
	21	259340	0.76	0.39	-0.26	-0.23	0.39	0.5
	22	259362	0.64	0.44	0.44	-0.32	-0.21	0.5
	23	259436	0.35	0.21	0.21	-0.01	-0.23	0.5
	24	259347	0.44	0.29	0.29	-0.16	-0.15	0.5
	25	259424	0.62	0.32	-0.15	-0.24	0.32	0.7
	26	259423	0.47	0.16	-0.14	-0.04	0.16	0.6
	27	259425	0.48	0.26	-0.16	0.26	-0.12	0.7
	28	259422	0.42	0.21	-0.08	0.21	-0.14	0.8
	29	259445	0.66	0.29	-0.29	0.29	-0.05	0.2
	30	259374	0.46	0.30	-0.16	-0.20	0.30	0.2
	31	259450	0.41	0.33	-0.23	-0.14	0.33	0.2
	32	259376	0.65	0.37	-0.19	-0.29	0.37	0.2
	33	259310	0.62	0.37	-0.24	0.37	-0.21	0.2
	34	259365	0.61	0.36	-0.17	0.36	-0.27	0.2
	35	259449	0.67	0.29	0.29	-0.18	-0.19	0.2
	36	259441	0.30	0.20	0.20	-0.14	-0.05	0.2
	37	259443	0.57	0.27	-0.17	0.27	-0.15	0.2
	38	259437	0.48	0.26	0.26	-0.10	-0.19	0.2
	39	259457	0.44	0.32	0.32	-0.25	-0.09	0.2
	40	259330	0.74	0.38	-0.24	0.38	-0.24	0.2
	41	259458	0.38	0.22	0.22	-0.23	0.00	0.3
	42	259466	0.69	0.44	-0.22	-0.34	0.44	0.2
	43	259395	0.46	0.29	-0.07	0.29	-0.25	0.2

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
212	44	259459	0.54	0.30	-0.14	-0.20	0.30	0.2
	45	259396	0.36	0.21	-0.11	-0.10	0.21	0.3
	46	259460	0.67	0.35	0.35	-0.28	-0.14	0.2
	47	259398	0.60	0.32	-0.21	0.32	-0.17	0.2
	48	259397	0.45	0.29	-0.24	-0.09	0.29	0.3
	49	259360	0.50	0.32	0.32	-0.21	-0.14	0.3
	50	259435	0.24	0.20	-0.10	-0.09	0.20	0.3
Mean			0.53	0.29	-0.02	-0.02	-0.01	0.3
SD			0.14	0.08	0.23	0.24	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.A7 Item Statistics: MD Mod-HSA Algebra—April

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
312	1	258090	0.64	0.38	-0.16	-0.31	0.38	0.0
	2	258095	0.69	0.42	0.42	-0.28	-0.27	0.0
	3	258166	0.77	0.34	-0.25	0.34	-0.21	0.0
	4	258312	0.50	0.37	0.37	-0.22	-0.23	0.2
	5	258173	0.59	0.28	-0.19	0.28	-0.15	0.0
	6	258115	0.43	0.30	0.30	-0.18	-0.15	0.0
	7	258223	0.33	0.16	-0.03	0.16	-0.13	0.0
	8	258230	0.52	0.24	0.24	-0.18	-0.12	0.0
	9	258147	0.47	0.36	0.36	-0.21	-0.23	0.0
	10	261560	0.64	0.34	-0.24	0.34	-0.18	0.0
	11	258227	0.61	0.31	0.31	-0.15	-0.24	0.2
	12	258308	0.43	0.27	0.27	-0.13	-0.15	0.2
	13	258101	0.54	0.31	-0.21	0.31	-0.14	0.2
	14	258210	0.80	0.40	-0.27	0.40	-0.24	0.2
	15	258116	0.49	0.26	0.26	-0.21	-0.13	0.2
	16	258089	0.26	0.21	-0.13	0.21	-0.05	0.2
	17	261556	0.45	0.28	0.28	-0.23	-0.08	0.2
	18	258309	0.83	0.36	-0.23	-0.24	0.36	0.2
	19	258098	0.60	0.41	-0.24	-0.27	0.41	0.2
	20	258208	0.38	0.17	-0.03	-0.14	0.17	0.2
	21	258161	0.59	0.48	0.48	-0.41	-0.13	0.2
	22	258159	0.40	0.32	-0.10	-0.22	0.32	0.2
	23	258184	0.56	0.32	-0.08	0.32	-0.28	0.2
	24	258136	0.55	0.36	-0.25	0.36	-0.16	0.4
	25	258102	0.48	0.29	-0.15	0.29	-0.17	0.4
	26	258226	0.40	0.20	-0.13	-0.09	0.20	0.2
	27	258188	0.62	0.37	-0.21	0.37	-0.25	0.2
	28	258174	0.47	0.29	-0.14	-0.19	0.29	0.4
	29	258209	0.66	0.31	-0.17	-0.23	0.31	0.2
	30	258154	0.41	0.43	-0.28	-0.17	0.43	0.2
	31	258113	0.59	0.32	-0.17	0.32	-0.21	0.2
	32	258198	0.36	0.28	-0.08	-0.19	0.28	0.2
	33	258120	0.49	0.36	-0.18	-0.23	0.36	0.2
	34	258169	0.43	0.26	-0.14	-0.14	0.26	0.4
	35	258119	0.44	0.35	0.35	-0.13	-0.26	0.4
	36	258160	0.46	0.20	0.20	-0.17	-0.04	0.2
	37	258241	0.60	0.31	-0.17	0.31	-0.22	0.2
	38	258130	0.48	0.26	0.26	-0.13	-0.16	0.4
	39	258131	0.22	0.01	0.01	0.11	-0.14	0.2
	40	258128	0.64	0.35	-0.19	0.35	-0.23	0.2
	41	258509	0.41	0.19	0.19	-0.19	-0.01	0.2
	42	258231	0.58	0.45	-0.25	-0.28	0.45	0.2
	43	258111	0.64	0.36	-0.25	0.36	-0.20	0.2

Table 2.A7 Item Statistics: MD Mod-HSA Algebra—April

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
312	44	258096	0.26	0.18	0.18	0.01	-0.21	0.2
	45	258125	0.41	0.10	-0.09	0.10	-0.02	0.2
	46	258144	0.34	0.18	0.18	0.01	-0.19	0.2
	47	261558	0.39	0.24	-0.14	0.24	-0.10	0.4
	48	261562	0.40	0.21	0.21	-0.17	-0.03	0.2
	49	258220	0.33	0.11	-0.04	-0.05	0.11	0.4
	50	258135	0.52	0.23	-0.15	0.23	-0.11	0.2
Mean			0.50	0.29	-0.01	-0.01	-0.03	0.2
SD			0.14	0.09	0.23	0.25	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.A8 Item Statistics: MD Mod-HSA Biology—April

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
312	1	258636	0.55	0.20	-0.08	0.20	-0.18	0.0
	2	258653	0.36	0.17	0.17	-0.02	-0.16	0.0
	3	258690	0.43	0.11	-0.06	-0.06	0.11	0.0
	4	258702	0.54	0.33	-0.29	0.33	-0.11	0.0
	5	258662	0.34	0.29	-0.10	-0.19	0.29	0.0
	6	258659	0.30	0.15	0.15	-0.15	0.01	0.0
	7	258673	0.64	0.24	-0.17	-0.13	0.24	0.0
	8	258701	0.44	0.22	-0.25	0.22	0.00	0.0
	9	258628	0.56	0.35	0.35	-0.27	-0.15	0.0
	10	258685	0.27	0.10	0.10	-0.14	0.00	0.0
	11	261611	0.16	0.11	0.04	-0.13	0.11	0.0
	12	258615	0.50	0.28	-0.15	0.28	-0.18	0.0
	13	258683	0.64	0.29	-0.22	0.29	-0.13	0.6
	14	258641	0.46	0.13	0.00	0.13	-0.16	0.0
	15	258676	0.45	0.21	-0.12	0.21	-0.11	0.0
	16	258607	0.65	0.27	-0.16	0.27	-0.21	0.0
	17	258645	0.55	0.41	-0.28	-0.21	0.41	0.0
	18	258666	0.56	0.28	-0.15	0.28	-0.20	0.0
	19	258675	0.49	0.27	-0.15	0.27	-0.17	0.0
	20	261609	0.58	0.15	-0.01	-0.24	0.15	0.0
	21	258665	0.27	0.23	0.23	-0.19	-0.02	0.0
	22	258682	0.49	0.19	-0.08	0.19	-0.14	0.0
	23	258648	0.41	0.24	-0.14	0.24	-0.13	0.0
	24	258614	0.38	0.28	-0.20	-0.09	0.28	0.0
	25	258680	0.48	0.29	-0.13	-0.19	0.29	0.0
	26	258681	0.35	0.19	-0.18	-0.02	0.19	0.3
	27	258642	0.51	0.22	-0.15	0.22	-0.13	0.3
	28	261623	0.62	0.34	-0.22	-0.23	0.34	0.0
	29	258649	0.29	0.11	0.11	-0.32	0.17	0.3
	30	258687	0.42	0.28	-0.15	0.28	-0.16	0.0
	31	258646	0.38	0.17	0.17	-0.15	-0.05	0.0
	32	261626	0.62	0.25	-0.04	-0.25	0.25	0.0
	33	258707	0.47	0.31	0.31	-0.23	-0.12	0.0
	34	258643	0.59	0.27	0.27	-0.23	-0.09	0.0
	35	258698	0.36	0.04	-0.03	-0.01	0.04	0.0
	36	258728	0.30	0.14	-0.08	-0.08	0.14	0.3
	37	258734	0.56	0.32	-0.14	-0.24	0.32	0.0
	38	258735	0.46	0.09	-0.16	0.09	0.04	0.0
	39	258704	0.52	0.34	-0.22	0.34	-0.18	0.0
	40	258624	0.58	0.28	0.28	-0.21	-0.13	0.0
	41	258697	0.42	0.27	0.27	-0.20	-0.10	0.0
	42	258616	0.25	0.00	-0.08	0.00	0.09	0.0
	43	258617	0.39	0.12	0.12	-0.20	0.05	0.0

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

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
312	44	258688	0.38	0.11	-0.02	-0.10	0.11	0.0
	45	258669	0.59	0.18	-0.02	-0.21	0.18	0.0
	46	261621	0.60	0.38	0.38	-0.19	-0.27	0.0
	47	258703	0.41	0.21	-0.11	0.21	-0.12	0.0
	48	258692	0.46	0.23	-0.13	-0.13	0.23	0.0
	49	258635	0.53	0.28	-0.17	-0.17	0.28	0.0
	50	261616	0.46	0.29	-0.17	-0.15	0.29	0.0
Mean			0.46	0.22	-0.04	-0.03	0.02	0.0
SD			0.12	0.09	0.18	0.20	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.A9 Item Statistics: MD Mod-HSA English—April

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
312	1	259429	0.47	0.31	0.31	-0.26	-0.10	0.0
	2	259426	0.65	0.33	0.33	-0.16	-0.26	0.0
	3	259349	0.63	0.39	-0.25	0.39	-0.23	0.0
	4	259427	0.48	0.22	-0.05	0.22	-0.20	0.2
	5	259312	0.71	0.33	0.33	-0.22	-0.20	0.2
	6	259368	0.40	0.22	0.22	-0.14	-0.11	0.0
	7	259371	0.70	0.40	-0.26	-0.26	0.40	0.0
	8	259367	0.66	0.37	-0.24	0.37	-0.25	0.0
	9	259370	0.50	0.24	-0.27	0.24	-0.07	0.0
	10	259432	0.70	0.28	0.28	-0.19	-0.17	0.0
	11	259433	0.57	0.27	0.27	-0.14	-0.21	0.2
	12	259354	0.47	0.28	-0.20	-0.12	0.28	0.0
	13	259407	0.23	0.08	-0.15	0.08	0.09	0.2
	14	259335	0.42	0.36	-0.19	-0.22	0.36	0.2
	15	259410	0.72	0.38	-0.27	0.38	-0.22	0.0
	16	259413	0.53	0.27	-0.19	0.27	-0.17	0.0
	17	259411	0.49	0.27	-0.13	-0.19	0.27	0.0
	18	259414	0.41	0.31	-0.17	-0.16	0.31	0.0
	19	259338	0.42	0.17	0.17	0.02	-0.22	0.0
	20	259339	0.62	0.36	-0.26	0.36	-0.19	0.0
	21	259340	0.76	0.38	-0.23	-0.26	0.38	0.4
	22	259362	0.68	0.44	0.44	-0.30	-0.25	0.4
	23	259436	0.31	0.22	0.22	-0.08	-0.17	0.4
	24	259347	0.47	0.29	0.29	-0.15	-0.17	0.2
	25	259424	0.63	0.32	-0.17	-0.23	0.32	0.2
	26	259423	0.48	0.17	-0.16	-0.04	0.17	0.2
	27	259425	0.49	0.21	-0.18	0.21	-0.05	0.2
	28	259422	0.42	0.33	-0.13	0.33	-0.23	0.4
	29	259445	0.66	0.37	-0.33	0.37	-0.13	0.0
	30	259374	0.44	0.36	-0.20	-0.25	0.36	0.0
	31	259450	0.45	0.40	-0.19	-0.26	0.40	0.0
	32	259376	0.62	0.40	-0.20	-0.31	0.40	0.0
	33	259310	0.66	0.39	-0.24	0.39	-0.26	0.0
	34	259365	0.61	0.30	-0.17	0.30	-0.20	0.0
	35	259449	0.66	0.31	0.31	-0.14	-0.26	0.2
	36	259441	0.35	0.19	0.19	-0.14	-0.06	0.0
	37	259443	0.57	0.21	-0.14	0.21	-0.12	0.2
	38	259437	0.53	0.32	0.32	-0.12	-0.27	0.0
	39	259457	0.51	0.36	0.36	-0.28	-0.13	0.0
	40	259330	0.71	0.39	-0.27	0.39	-0.24	0.0
	41	259458	0.40	0.28	0.28	-0.24	-0.06	0.0
	42	259466	0.70	0.47	-0.31	-0.31	0.47	0.0
312	43	259395	0.48	0.31	-0.10	0.31	-0.25	0.0

Table 2.A9 Item Statistics: MD Mod-HSA English—April

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
	44	259459	0.54	0.40	-0.25	-0.23	0.40	0.0
	45	259396	0.38	0.26	-0.14	-0.13	0.26	0.2
	46	259460	0.65	0.41	0.41	-0.34	-0.17	0.0
	47	259398	0.60	0.38	-0.26	0.38	-0.20	0.0
	48	259397	0.52	0.28	-0.15	-0.18	0.28	0.0
	49	259360	0.54	0.21	0.21	-0.12	-0.13	0.0
	50	259435	0.26	0.19	-0.09	-0.11	0.19	0.0
Mean			0.54	0.31	-0.03	-0.02	-0.01	0.1
SD			0.13	0.08	0.24	0.25	0.25	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.A10 Item Statistics: MD Mod-HSA Algebra—May

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
412	1	258190	0.37	0.30	-0.15	-0.17	0.30	0.0
	2	258164	0.40	0.26	-0.16	-0.12	0.26	0.1
	3	258224	0.31	0.26	0.04	0.26	-0.29	0.1
	4	258107	0.29	0.15	-0.09	-0.06	0.15	0.1
	5	258126	0.52	0.31	0.31	-0.21	-0.15	0.1
	6	258239	0.30	0.16	-0.02	0.16	-0.15	0.2
	7	258123	0.60	0.40	0.40	-0.30	-0.19	0.1
	8	258124	0.30	0.34	-0.15	-0.18	0.34	0.1
	9	258141	0.45	0.35	0.35	-0.21	-0.19	0.1
	10	258200	0.30	0.29	0.29	-0.02	-0.26	0.1
	11	258179	0.35	0.21	-0.13	-0.10	0.21	0.2
	12	258235	0.58	0.38	-0.25	0.38	-0.20	0.1
	13	258105	0.36	0.19	0.19	-0.20	-0.01	0.4
	14	258236	0.52	0.27	-0.18	0.27	-0.15	0.2
	15	261559	0.41	0.19	0.19	-0.12	-0.09	0.2
	16	258211	0.62	0.44	-0.36	0.44	-0.16	0.1
	17	258209	0.66	0.25	-0.15	-0.18	0.25	0.1
	18	258182	0.64	0.39	-0.18	-0.29	0.39	0.2
	19	258238	0.29	0.34	-0.17	-0.14	0.34	0.3
	20	261561	0.51	0.28	0.28	-0.12	-0.20	0.2
	21	258132	0.46	0.24	-0.13	0.24	-0.15	0.2
	22	258158	0.53	0.32	-0.13	-0.24	0.32	0.3
	23	258145	0.60	0.31	-0.26	0.31	-0.13	0.3
	24	261563	0.36	0.18	-0.01	-0.18	0.18	0.3
	25	258229	0.69	0.31	-0.24	0.31	-0.15	0.3
	26	258197	0.57	0.33	-0.27	0.33	-0.13	0.0
	27	258097	0.32	0.34	0.34	-0.12	-0.24	0.1
	28	258310	0.68	0.38	-0.19	-0.29	0.38	0.1
	29	258109	0.52	0.28	0.28	-0.15	-0.19	0.0
	30	258110	0.39	0.18	-0.04	0.18	-0.16	0.0
	31	258103	0.33	0.12	0.12	-0.18	0.07	0.2
	32	258108	0.49	0.16	-0.04	0.16	-0.14	0.1
	33	258196	0.58	0.21	-0.09	0.21	-0.19	0.1
	34	261564	0.52	0.35	0.35	-0.23	-0.18	0.0
	35	258153	0.41	0.26	0.26	-0.08	-0.19	0.1
	36	258122	0.81	0.33	-0.24	0.33	-0.20	0.1
	37	258240	0.65	0.32	-0.18	0.32	-0.22	0.1
	38	258157	0.22	0.17	0.17	-0.01	-0.13	0.1
	39	258091	0.23	0.20	-0.10	0.20	-0.07	0.1
	40	258118	0.52	0.29	0.29	-0.16	-0.19	0.1
	41	258225	0.55	0.27	-0.15	0.27	-0.18	0.0
	42	261557	0.39	0.25	0.25	-0.22	-0.05	0.1

Table 2.A10 Item Statistics: MD Mod-HSA Algebra—May

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
412	43	258152	0.42	0.17	0.17	-0.12	-0.06	0.1
	44	258133	0.41	0.27	0.27	-0.21	-0.09	0.1
	45	258214	0.36	0.30	0.30	-0.12	-0.19	0.1
	46	258178	0.70	0.32	-0.18	-0.23	0.32	0.1
	47	258100	0.58	0.34	-0.25	0.34	-0.15	0.1
	48	258171	0.47	0.32	-0.19	0.32	-0.17	0.0
	49	258142	0.45	0.35	-0.15	-0.25	0.35	0.1
	50	258150	0.42	0.25	0.25	-0.05	-0.21	0.3
Mean			0.47	0.28	0.01	0.00	-0.04	0.1
SD			0.14	0.07	0.22	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.A11 Item Statistics: MD Mod-HSA Biology—May

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
412	1	258627	0.79	0.22	-0.13	0.22	-0.16	0.0
	2	258733	0.58	0.12	0.12	-0.03	-0.14	0.1
	3	258684	0.51	0.15	-0.02	-0.16	0.15	0.1
	4	258644	0.35	0.31	0.31	-0.17	-0.14	0.0
	5	258634	0.44	0.26	-0.19	0.26	-0.11	0.0
	6	261644	0.78	0.27	0.27	-0.14	-0.21	0.0
	7	261645	0.38	0.27	-0.06	-0.22	0.27	0.1
	8	258619	0.35	0.28	0.28	-0.12	-0.16	0.2
	9	258700	0.61	0.36	-0.18	-0.26	0.36	0.0
	10	258618	0.35	0.17	-0.06	-0.11	0.17	0.1
	11	261627	0.67	0.26	-0.18	0.26	-0.15	0.0
	12	258639	0.41	0.25	0.25	-0.09	-0.18	0.0
	13	258732	0.57	0.24	0.24	-0.19	-0.10	0.3
	14	258727	0.50	0.26	-0.17	0.26	-0.14	0.1
	15	258622	0.55	0.36	0.36	-0.29	-0.13	0.1
	16	258695	0.43	0.22	-0.10	0.22	-0.14	0.3
	17	258631	0.80	0.29	0.29	-0.18	-0.21	0.2
	18	258699	0.24	0.00	-0.18	0.00	0.16	0.2
	19	261607	0.67	0.25	-0.15	0.25	-0.16	0.2
	20	261624	0.45	0.33	-0.17	-0.21	0.33	0.3
	21	258612	0.65	0.32	-0.21	0.32	-0.19	0.2
	22	261610	0.46	0.37	-0.17	-0.24	0.37	0.3
	23	258714	0.33	0.37	0.37	-0.18	-0.19	0.3
	24	258725	0.65	0.30	-0.17	0.30	-0.20	0.5
	25	258664	0.63	0.32	-0.16	0.32	-0.24	0.6
	26	258638	0.32	0.19	-0.05	-0.16	0.19	0.1
	27	258650	0.48	0.30	-0.14	-0.20	0.30	0.1
	28	261614	0.65	0.34	0.34	-0.21	-0.22	0.2
	29	261622	0.82	0.24	-0.14	0.24	-0.19	0.2
	30	258705	0.30	0.20	-0.14	-0.05	0.20	0.1
	31	258678	0.66	0.35	-0.20	0.35	-0.23	0.1
	32	261642	0.42	0.24	0.24	-0.23	-0.01	0.1
	33	258654	0.64	0.19	-0.24	-0.02	0.19	0.1
	34	258670	0.38	0.14	-0.02	-0.12	0.14	0.1
	35	258660	0.47	0.29	-0.20	-0.13	0.29	0.2
	36	258637	0.53	0.35	-0.22	0.35	-0.19	0.1
	37	258640	0.60	0.21	-0.11	0.21	-0.16	0.1
	38	258674	0.47	0.23	-0.10	-0.16	0.23	0.1
	39	258697	0.44	0.24	0.24	-0.16	-0.10	0.1
	40	258616	0.21	0.05	-0.10	0.05	0.07	0.1
	41	258630	0.27	0.25	-0.13	-0.10	0.25	0.1
	42	261617	0.41	0.20	0.20	-0.07	-0.21	0.1
412	43	258726	0.42	0.25	0.25	-0.10	-0.17	0.1

Table 2.A11 Item Statistics: MD Mod-HSA Biology—May

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
	44	258730	0.51	0.25	0.25	-0.12	-0.19	0.2
	45	258657	0.24	0.12	-0.09	-0.03	0.12	0.2
	46	258651	0.49	0.39	0.39	-0.23	-0.21	0.2
	47	258712	0.48	0.33	-0.21	-0.18	0.33	0.1
	48	258731	0.35	0.22	-0.09	-0.13	0.22	0.3
	49	261608	0.58	0.34	-0.16	-0.26	0.34	0.3
	50	258693	0.42	0.34	0.34	-0.24	-0.13	0.3
Mean			0.49	0.26	0.00	-0.04	-0.01	0.2
SD			0.15	0.08	0.21	0.20	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.A12 Item Statistics: MD Mod-HSA English—May

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
412	1	259343	0.62	0.32	-0.18	-0.22	0.32	0.0
	2	259415	0.67	0.29	0.29	-0.23	-0.15	0.0
	3	259417	0.52	0.16	0.16	-0.13	-0.04	0.0
	4	259416	0.80	0.31	-0.18	0.31	-0.24	0.0
	5	259323	0.46	0.32	0.32	-0.18	-0.18	0.1
	6	259453	0.43	0.16	-0.05	-0.17	0.16	0.2
	7	259382	0.62	0.25	-0.19	0.25	-0.12	0.0
	8	259452	0.40	0.20	-0.13	0.20	-0.11	0.0
	9	259465	0.39	0.18	0.18	-0.13	-0.07	0.0
	10	259351	0.45	0.21	-0.13	0.21	-0.11	0.0
	11	259430	0.78	0.16	-0.20	0.16	-0.02	0.0
	12	259431	0.69	0.32	0.32	-0.19	-0.22	0.1
	13	259318	0.59	0.39	0.39	-0.26	-0.22	0.2
	14	259319	0.35	0.12	-0.01	-0.14	0.12	0.1
	15	259320	0.72	0.34	-0.19	0.34	-0.25	0.0
	16	259419	0.62	0.27	-0.15	0.27	-0.19	0.1
	17	259421	0.60	0.26	0.26	-0.21	-0.11	0.2
	18	259463	0.38	0.21	0.21	-0.13	-0.09	0.1
	19	259345	0.52	0.38	-0.20	-0.24	0.38	0.2
	20	259325	0.59	0.36	-0.21	0.36	-0.23	0.1
	21	259385	0.59	0.33	-0.16	-0.24	0.33	0.1
	22	259390	0.61	0.32	-0.15	-0.24	0.32	0.1
	23	259383	0.52	0.22	-0.19	0.22	-0.06	0.2
	24	259386	0.44	0.38	-0.24	-0.17	0.38	0.3
	25	259388	0.51	0.29	0.29	-0.08	-0.26	0.2
	26	259389	0.41	0.24	-0.15	0.24	-0.10	0.3
	27	259438	0.46	0.17	-0.12	0.17	-0.08	0.3
	28	259439	0.50	0.26	-0.21	0.26	-0.12	0.2
	29	259437	0.50	0.25	0.25	-0.08	-0.21	0.2
	30	259332	0.64	0.20	-0.15	0.20	-0.09	0.3
	31	259403	0.40	0.19	-0.03	-0.19	0.19	0.1
	32	259401	0.43	0.24	0.24	-0.09	-0.18	0.2
	33	259402	0.44	0.31	-0.29	-0.04	0.31	0.2
	34	259399	0.75	0.33	-0.20	-0.22	0.33	0.2
	35	259400	0.54	0.36	-0.21	-0.25	0.36	0.1
	36	259404	0.60	0.29	0.29	-0.16	-0.19	0.2
	37	259461	0.72	0.36	-0.25	-0.21	0.36	0.2
	38	259446	0.62	0.38	-0.20	-0.26	0.38	0.3
	39	259447	0.55	0.35	-0.23	0.35	-0.19	0.2
	40	259448	0.61	0.34	-0.21	-0.20	0.34	0.2
	41	259358	0.54	0.36	-0.18	-0.23	0.36	0.2

Table 2.A12 Item Statistics: MD Mod-HSA English—May

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
412	42	259434	0.42	0.14	-0.06	0.14	-0.13	0.2
	43	259391	0.59	0.36	-0.17	0.36	-0.27	0.4
	44	259454	0.35	0.23	0.23	-0.14	-0.09	0.2
	45	259455	0.50	0.35	-0.22	-0.17	0.35	0.2
	46	259392	0.49	0.37	-0.21	-0.21	0.37	0.3
	47	259394	0.71	0.42	0.42	-0.28	-0.26	0.2
	48	259393	0.53	0.37	0.37	-0.21	-0.21	0.2
	49	259444	0.67	0.26	-0.14	0.26	-0.18	0.2
	50	259356	0.57	0.29	-0.22	-0.16	0.29	0.2
Mean			0.55	0.28	-0.04	-0.04	0.01	0.2
SD			0.11	0.08	0.22	0.22	0.24	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 Algebra—Summer Primary 1

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
512	1	258090	0.59	0.20	-0.12	-0.13	0.20	0.0
	2	258095	0.74	0.49	0.49	-0.33	-0.30	0.0
	3	258166	0.74	0.25	-0.30	0.25	-0.02	0.0
	4	258312	0.48	0.32	0.32	-0.15	-0.26	0.0
	5	258173	0.53	0.26	-0.23	0.26	-0.08	0.0
	6	258115	0.30	0.23	0.23	-0.11	-0.11	0.0
	7	258223	0.19	0.08	-0.24	0.08	0.14	0.0
	8	258230	0.51	0.21	0.21	-0.41	0.15	0.0
	9	258147	0.49	0.17	0.17	0.00	-0.22	0.0
	10	261560	0.62	0.49	-0.22	0.49	-0.38	0.0
	11	258227	0.56	0.21	0.21	-0.05	-0.21	0.0
	12	258308	0.40	0.30	0.30	-0.05	-0.26	0.0
	13	258101	0.55	0.05	-0.15	0.05	0.06	0.0
	14	258210	0.77	0.43	-0.33	0.43	-0.24	0.0
	15	258116	0.40	0.17	0.17	-0.15	-0.06	1.2
	16	258089	0.17	0.18	-0.04	0.18	-0.09	0.0
	17	261556	0.50	0.34	0.34	-0.17	-0.22	0.0
	18	258309	0.78	0.28	-0.23	-0.17	0.28	0.0
	19	258098	0.47	0.17	-0.30	0.04	0.17	0.0
	20	258208	0.36	0.29	-0.01	-0.29	0.29	0.0
	21	258161	0.50	0.39	0.39	-0.27	-0.18	0.0
	22	258159	0.33	0.28	-0.09	-0.19	0.28	0.0
	23	258184	0.45	0.26	-0.08	0.26	-0.19	1.2
	24	258136	0.43	0.19	-0.18	0.19	-0.02	2.3
	25	258102	0.38	0.17	-0.11	0.17	-0.06	1.2
	26	258226	0.40	0.26	-0.04	-0.22	0.26	0.0
	27	258188	0.58	0.27	-0.18	0.27	-0.15	0.0
	28	258174	0.48	0.22	-0.13	-0.12	0.22	0.0
	29	258209	0.67	0.30	-0.21	-0.18	0.30	0.0
	30	258154	0.38	0.33	-0.21	-0.14	0.33	0.0
	31	258113	0.59	0.30	-0.28	0.30	-0.08	0.0
	32	258198	0.31	0.14	-0.11	-0.03	0.14	0.0
	33	258120	0.42	0.15	-0.07	-0.11	0.15	0.0
	34	258169	0.53	0.26	-0.13	-0.19	0.26	0.0
	35	258119	0.48	0.27	0.27	0.02	-0.32	0.0
	36	258160	0.38	0.14	0.14	-0.12	-0.02	0.0
	37	258241	0.57	0.32	-0.02	0.32	-0.40	0.0
	38	258130	0.51	0.17	0.17	-0.12	-0.07	0.0
	39	258131	0.22	-0.18	-0.18	0.14	0.02	0.0
	40	258128	0.59	0.31	-0.27	0.31	-0.12	0.0
	41	258509	0.44	0.21	0.21	-0.08	-0.12	1.2
	42	258231	0.52	0.33	-0.31	-0.05	0.33	1.2
	43	258111	0.60	0.36	-0.24	0.36	-0.25	0.0

Table 2.A13 Item Statistics: MD Mod-HSA Algebra—Summer Primary 1

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
512	44	258096	0.16	-0.01	-0.01	0.20	-0.22	0.0
	45	258125	0.36	0.32	-0.18	0.32	-0.16	0.0
	46	258144	0.33	0.27	0.27	-0.12	-0.15	0.0
	47	261558	0.35	0.23	-0.26	0.23	0.03	0.0
	48	261562	0.38	0.28	0.28	-0.30	0.01	0.0
	49	258220	0.35	0.24	-0.09	-0.15	0.24	0.0
	50	258135	0.50	0.29	-0.22	0.29	-0.11	0.0
Mean			0.47	0.24	-0.03	0.01	-0.02	0.2
SD			0.15	0.11	0.22	0.22	0.21	0.5

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 Algebra—Summer Primary 2

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
612	1	258190	0.43	0.47	-0.15	-0.36	0.47	0.0
	2	258164	0.43	0.29	-0.27	-0.06	0.29	0.0
	3	258224	0.32	0.19	0.09	0.19	-0.28	0.0
	4	258107	0.27	0.20	-0.08	-0.11	0.20	0.0
	5	258126	0.53	0.31	0.31	-0.26	-0.10	0.0
	6	258239	0.32	0.25	-0.02	0.25	-0.24	0.0
	7	258123	0.58	0.48	0.48	-0.34	-0.24	0.0
	8	258124	0.43	0.34	-0.22	-0.16	0.34	0.0
	9	258141	0.42	0.35	0.35	-0.15	-0.24	0.0
	10	258200	0.33	0.20	0.20	-0.01	-0.19	0.0
	11	258179	0.33	0.16	-0.19	0.02	0.16	0.0
	12	258235	0.65	0.33	-0.22	0.33	-0.21	0.0
	13	258105	0.38	0.31	0.31	-0.22	-0.12	0.0
	14	258236	0.51	0.34	-0.06	0.34	-0.31	0.0
	15	261559	0.40	0.23	0.23	-0.24	-0.04	0.0
	16	258211	0.60	0.48	-0.38	0.48	-0.19	0.0
	17	258209	0.67	0.30	-0.21	-0.18	0.30	0.0
	18	258182	0.65	0.48	-0.28	-0.32	0.48	0.0
	19	258238	0.29	0.43	-0.31	-0.09	0.43	0.0
	20	261561	0.53	0.34	0.34	-0.18	-0.22	0.0
	21	258132	0.43	0.40	-0.10	0.40	-0.33	0.0
	22	258158	0.58	0.22	-0.25	0.00	0.22	0.0
	23	258145	0.60	0.34	-0.23	0.34	-0.19	0.0
	24	261563	0.38	0.19	-0.10	-0.10	0.19	0.0
	25	258229	0.66	0.33	-0.27	0.33	-0.15	0.0
	26	258197	0.48	0.48	-0.40	0.48	-0.14	0.0
	27	258097	0.22	0.34	0.34	0.04	-0.37	0.0
	28	258310	0.64	0.41	-0.09	-0.39	0.41	0.0
	29	258109	0.53	0.24	0.24	-0.16	-0.12	0.0
	30	258110	0.31	0.20	0.12	0.20	-0.30	0.0
	31	258103	0.32	0.29	0.29	-0.45	0.17	0.0
	32	258108	0.53	0.26	-0.04	0.26	-0.27	0.8
	33	258196	0.60	0.22	-0.09	0.22	-0.20	0.0
	34	261564	0.60	0.37	0.37	-0.28	-0.17	0.0
	35	258153	0.51	0.30	0.30	-0.03	-0.31	0.0
	36	258122	0.76	0.35	-0.26	0.35	-0.20	0.0
	37	258240	0.63	0.36	-0.22	0.36	-0.23	0.0
	38	258157	0.18	0.07	0.07	-0.02	-0.04	0.0
	39	258091	0.28	0.31	-0.09	0.31	-0.21	0.0
	40	258118	0.46	0.19	0.19	-0.01	-0.23	0.0
	41	258225	0.56	0.36	-0.14	0.36	-0.33	0.0
	42	261557	0.38	0.24	0.24	-0.24	-0.01	0.0
	43	258152	0.38	0.20	0.20	-0.09	-0.13	0.0

Table 2.A14 Item Statistics: MD Mod-HSA Algebra—Summer Primary 2

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
612	44	258133	0.45	0.34	0.34	-0.21	-0.17	0.0
	45	258214	0.47	0.18	0.18	-0.18	-0.02	0.0
	46	258178	0.62	0.50	-0.21	-0.40	0.50	0.0
	47	258100	0.53	0.43	-0.32	0.43	-0.19	0.0
	48	258171	0.43	0.44	-0.26	0.44	-0.23	0.0
	49	258142	0.47	0.39	-0.21	-0.25	0.39	0.0
	50	258150	0.37	0.41	0.41	-0.08	-0.31	0.8
Mean			0.47	0.32	0.00	0.01	-0.05	0.0
SD			0.13	0.10	0.25	0.27	0.26	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.A15 Item Statistics: MD Mod-HSA Biology—Summer Primary 1

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
512	1	258636	0.66	0.37	-0.39	0.37	-0.03	0.0
	2	258653	0.40	0.31	0.31	-0.19	-0.13	0.0
	3	258690	0.34	0.14	-0.03	-0.12	0.14	0.0
	4	258702	0.60	0.40	-0.26	0.40	-0.24	0.0
	5	258662	0.36	0.25	0.13	-0.36	0.25	0.0
	6	258659	0.26	0.20	0.20	-0.03	-0.15	0.0
	7	258673	0.63	0.18	-0.20	-0.02	0.18	0.0
	8	258701	0.47	0.43	-0.33	0.43	-0.15	0.0
	9	258628	0.57	0.44	0.44	-0.22	-0.31	0.0
	10	258685	0.37	0.09	0.09	-0.12	0.00	0.0
	11	261611	0.19	-0.02	-0.11	0.15	-0.02	0.0
	12	258615	0.43	0.44	-0.25	0.44	-0.25	0.0
	13	258683	0.70	0.25	-0.19	0.25	-0.13	0.0
	14	258641	0.43	0.22	-0.15	0.22	-0.08	0.0
	15	258676	0.39	0.21	-0.23	0.21	-0.01	0.0
	16	258607	0.60	0.43	-0.16	0.43	-0.35	1.4
	17	258645	0.46	0.50	-0.24	-0.32	0.50	0.0
	18	258666	0.54	0.25	-0.04	0.25	-0.33	0.0
	19	258675	0.41	0.18	-0.11	0.18	-0.09	0.0
	20	261609	0.54	0.16	0.00	-0.30	0.16	0.0
	21	258665	0.31	0.41	0.41	-0.07	-0.33	0.0
	22	258682	0.46	0.24	-0.17	0.24	-0.10	0.0
	23	258648	0.33	0.25	-0.11	0.25	-0.14	0.0
	24	258614	0.31	0.31	-0.24	-0.08	0.31	0.0
	25	258680	0.51	0.37	-0.31	-0.13	0.37	0.0
	26	258681	0.37	0.32	-0.33	-0.02	0.32	0.0
	27	258642	0.63	0.38	-0.25	0.38	-0.25	0.0
	28	261623	0.64	0.25	0.05	-0.42	0.25	0.0
	29	258649	0.33	0.11	0.11	-0.39	0.19	0.0
	30	258687	0.41	0.25	-0.36	0.25	0.05	0.0
	31	258646	0.39	0.16	0.16	-0.29	0.10	0.0
	32	261626	0.67	0.39	-0.28	-0.23	0.39	0.0
	33	258707	0.47	0.37	0.37	-0.27	-0.15	0.0
	34	258643	0.66	0.10	0.10	-0.01	-0.16	0.0
	35	258698	0.24	0.10	-0.13	0.10	0.10	1.4
	36	258728	0.34	-0.02	0.03	0.00	-0.02	0.0
	37	258734	0.56	0.32	-0.17	-0.21	0.32	0.0
	38	258735	0.41	0.42	-0.20	0.42	-0.27	0.0
	39	258704	0.46	0.37	-0.24	0.37	-0.18	0.0
	40	258624	0.67	0.44	0.44	-0.30	-0.26	0.0
	41	258697	0.34	0.08	0.08	-0.03	-0.03	0.7
	42	258616	0.23	0.00	0.04	0.00	-0.02	0.7
	43	258617	0.51	-0.11	-0.11	-0.19	0.25	0.0

Table 2.A15 Item Statistics: MD Mod-HSA Biology—Summer Primary 1

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
512	44	258688	0.27	-0.03	0.02	0.01	-0.03	0.0
	45	258669	0.63	0.48	-0.40	-0.19	0.48	0.0
	46	261621	0.73	0.49	0.49	-0.28	-0.36	0.0
	47	258703	0.44	0.33	-0.30	0.33	-0.08	0.0
	48	258692	0.51	0.25	0.13	-0.40	0.25	0.0
	49	258635	0.56	0.08	-0.10	-0.01	0.08	0.0
	50	261616	0.46	0.29	-0.30	-0.04	0.29	0.0
Mean			0.46	0.26	-0.06	0.01	0.01	0.1
SD			0.14	0.15	0.24	0.26	0.23	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.A16 Item Statistics: MD Mod-HSA Biology—Summer Primary 2

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
612	1	258627	0.75	0.49	-0.32	0.49	-0.32	0.0
	2	258733	0.57	0.21	0.21	-0.06	-0.24	0.0
	3	258684	0.58	0.09	0.04	-0.16	0.09	0.0
	4	258644	0.29	0.09	0.09	-0.06	-0.02	0.0
	5	258634	0.37	0.21	-0.22	0.21	-0.01	0.0
	6	261644	0.77	0.27	0.27	-0.21	-0.14	0.0
	7	261645	0.36	0.03	0.01	-0.04	0.03	1.2
	8	258619	0.39	0.21	0.21	0.00	-0.22	0.0
	9	258700	0.70	0.32	-0.27	-0.18	0.32	0.0
	10	258618	0.35	0.26	-0.23	-0.04	0.26	0.0
	11	261627	0.57	0.18	-0.14	0.18	-0.09	0.0
	12	258639	0.43	0.37	0.37	-0.22	-0.20	0.0
	13	258732	0.55	0.34	0.34	-0.28	-0.13	0.0
	14	258727	0.57	0.18	0.02	0.18	-0.21	0.0
	15	258622	0.52	0.33	0.33	-0.17	-0.22	0.0
	16	258695	0.45	0.21	-0.19	0.21	-0.05	0.0
	17	258631	0.83	0.19	0.19	-0.16	-0.11	0.0
	18	258699	0.24	0.04	-0.27	0.04	0.22	0.0
	19	261607	0.69	0.12	-0.23	0.12	0.05	0.0
	20	261624	0.40	0.36	-0.10	-0.30	0.36	0.0
	21	258612	0.75	0.51	-0.18	0.51	-0.45	0.0
	22	261610	0.51	0.28	-0.15	-0.18	0.28	0.0
	23	258714	0.36	0.18	0.18	0.10	-0.30	0.0
	24	258725	0.70	0.33	-0.28	0.33	-0.18	0.0
	25	258664	0.57	0.35	-0.25	0.35	-0.17	0.0
	26	258638	0.35	0.23	-0.12	-0.14	0.23	0.0
	27	258650	0.56	0.14	0.03	-0.20	0.14	0.0
	28	261614	0.68	0.12	0.12	-0.08	-0.08	0.0
	29	261622	0.87	0.02	-0.08	0.02	0.07	0.0
	30	258705	0.30	-0.01	0.16	-0.13	-0.01	0.0
	31	258678	0.62	0.40	-0.16	0.40	-0.32	0.0
	32	261642	0.49	0.23	0.23	-0.12	-0.16	0.0
	33	258654	0.57	0.18	-0.18	-0.04	0.18	0.0
	34	258670	0.35	0.08	-0.07	-0.01	0.08	0.0
	35	258660	0.43	0.09	-0.21	0.08	0.09	0.0
	36	258637	0.58	0.38	-0.23	0.38	-0.23	0.0
	37	258640	0.64	0.24	-0.04	0.24	-0.30	0.0
	38	258674	0.42	-0.01	-0.02	0.02	-0.01	0.0
	39	258697	0.34	0.08	0.08	-0.03	-0.03	0.6
	40	258616	0.23	0.00	0.04	0.00	-0.02	0.6
	41	258630	0.19	-0.01	0.03	-0.03	-0.01	0.0
	42	261617	0.38	0.16	0.16	0.03	-0.23	0.0
	43	258726	0.36	0.32	0.32	-0.16	-0.17	0.0

Table 2.A16 Item Statistics: MD Mod-HSA Biology—Summer Primary 2

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
612	44	258730	0.56	0.01	0.01	0.01	-0.03	0.0
	45	258657	0.24	-0.09	0.08	0.01	-0.09	0.0
	46	258651	0.62	0.32	0.32	-0.12	-0.29	0.0
	47	258712	0.60	0.25	-0.17	-0.15	0.25	0.0
	48	258731	0.31	0.30	-0.05	-0.23	0.30	0.0
	49	261608	0.60	0.50	-0.29	-0.34	0.50	0.0
	50	258693	0.40	0.36	0.36	-0.18	-0.22	0.0
Mean			0.50	0.21	0.00	0.00	-0.04	0.0
SD			0.17	0.14	0.20	0.21	0.21	0.2

* Statistics not reported for sample size less than 50 (N < 50).
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 English—Summer Primary 1

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
512	1	259429	0.58	0.35	0.35	-0.22	-0.21	0.0
	2	259426	0.60	0.34	0.34	-0.31	-0.10	0.0
	3	259349	0.66	0.38	-0.26	0.38	-0.23	0.0
	4	259427	0.47	0.32	-0.21	0.32	-0.15	0.0
	5	259312	0.61	0.32	0.32	-0.20	-0.19	0.0
	6	259368	0.31	0.25	0.25	-0.08	-0.17	0.0
	7	259371	0.70	0.29	-0.28	-0.07	0.29	0.0
	8	259367	0.73	0.21	-0.26	0.21	-0.05	0.0
	9	259370	0.44	0.28	-0.09	0.28	-0.23	0.0
	10	259432	0.69	0.14	0.14	0.03	-0.14	1.3
	11	259433	0.60	0.27	0.27	-0.21	-0.12	0.0
	12	259354	0.49	0.16	-0.11	-0.09	0.16	0.0
	13	259407	0.19	0.10	-0.14	0.10	0.05	0.0
	14	259335	0.42	0.44	-0.31	-0.21	0.44	0.0
	15	259410	0.68	0.26	-0.21	0.26	-0.11	0.0
	16	259413	0.55	0.20	-0.13	0.20	-0.19	0.0
	17	259411	0.51	0.39	-0.13	-0.31	0.39	0.0
	18	259414	0.43	0.25	-0.04	-0.23	0.25	0.0
	19	259338	0.39	0.12	0.12	-0.06	-0.07	0.0
	20	259339	0.62	0.41	-0.37	0.41	-0.12	0.0
	21	259340	0.73	0.47	-0.14	-0.43	0.47	0.0
	22	259362	0.71	0.34	0.34	-0.19	-0.25	0.0
	23	259436	0.36	0.02	0.02	0.20	-0.26	0.0
	24	259347	0.34	0.36	0.36	-0.07	-0.27	1.3
	25	259424	0.60	0.50	-0.17	-0.45	0.50	0.0
	26	259423	0.42	0.03	-0.15	0.07	0.03	0.0
	27	259425	0.42	0.15	-0.02	0.15	-0.15	0.0
	28	259422	0.35	-0.01	0.05	-0.01	-0.04	0.0
	29	259445	0.64	0.17	-0.20	0.17	-0.02	0.0
	30	259374	0.38	0.32	-0.23	-0.11	0.32	0.0
	31	259450	0.47	0.33	-0.29	-0.09	0.33	0.0
	32	259376	0.57	0.34	-0.07	-0.46	0.34	1.3
	33	259310	0.58	0.39	-0.21	0.39	-0.26	0.0
	34	259365	0.64	0.14	0.02	0.14	-0.19	0.0
	35	259449	0.55	0.32	0.32	-0.13	-0.31	0.0
	36	259441	0.30	0.33	0.33	-0.23	-0.10	0.0
	37	259443	0.58	0.32	-0.21	0.32	-0.18	0.0
	38	259437	0.46	0.25	0.25	-0.02	-0.29	0.0
	39	259457	0.47	0.39	0.39	-0.29	-0.15	0.0
	40	259330	0.70	0.36	-0.31	0.36	-0.14	0.0
	41	259458	0.36	-0.02	-0.02	-0.18	0.21	0.0
	42	259466	0.71	0.23	0.02	-0.25	0.23	0.0

Table 2.A17 Item Statistics: MD Mod-HSA English—Summer Primary 1

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
	43	259395	0.51	0.31	-0.06	0.31	-0.31	0.0
512	44	259459	0.56	0.15	-0.10	-0.08	0.15	0.0
	45	259396	0.31	0.32	-0.02	-0.28	0.32	0.0
	46	259460	0.66	0.38	0.38	-0.31	-0.17	0.0
	47	259398	0.55	0.39	-0.35	0.39	-0.09	0.0
	48	259397	0.43	0.09	-0.11	0.00	0.09	0.0
	49	259360	0.55	0.24	0.24	-0.07	-0.22	0.0
	50	259435	0.22	0.14	-0.09	-0.09	0.14	0.0
Mean			0.52	0.26	-0.02	-0.02	-0.02	0.1
SD			0.14	0.12	0.23	0.24	0.23	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 English—Summer Primary 2

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
612	1	259343	0.63	0.31	-0.22	-0.12	0.31	1.3
	2	259415	0.61	0.33	0.33	-0.36	-0.10	0.0
	3	259417	0.57	0.34	0.34	-0.29	-0.10	0.0
	4	259416	0.75	0.44	-0.30	0.44	-0.27	0.0
	5	259323	0.47	0.34	0.34	-0.23	-0.15	0.0
	6	259453	0.29	0.14	-0.08	-0.12	0.14	0.0
	7	259382	0.65	0.15	-0.17	0.15	-0.03	0.0
	8	259452	0.39	0.21	-0.08	0.21	-0.11	1.3
	9	259465	0.43	0.12	0.12	-0.17	0.03	0.0
	10	259351	0.40	0.18	-0.06	0.18	-0.14	0.0
	11	259430	0.85	0.28	-0.32	0.28	-0.03	0.0
	12	259431	0.64	0.42	0.42	-0.32	-0.22	0.0
	13	259318	0.65	0.39	0.39	-0.43	-0.05	0.0
	14	259319	0.35	0.20	-0.18	-0.01	0.20	0.0
	15	259320	0.67	0.25	-0.17	0.25	-0.16	0.0
	16	259419	0.65	0.07	-0.05	0.07	-0.03	0.0
	17	259421	0.55	0.26	0.26	-0.20	-0.11	0.0
	18	259463	0.33	0.31	0.31	-0.18	-0.17	0.0
	19	259345	0.57	0.52	-0.31	-0.32	0.52	0.0
	20	259325	0.48	0.20	0.07	0.20	-0.30	0.0
	21	259385	0.52	0.32	-0.19	-0.19	0.32	0.0
	22	259390	0.63	0.41	-0.23	-0.28	0.41	0.0
	23	259383	0.52	0.32	-0.28	0.32	-0.08	0.0
	24	259386	0.44	0.42	-0.23	-0.24	0.42	0.0
	25	259388	0.52	0.29	0.29	-0.01	-0.32	0.0
	26	259389	0.37	0.14	-0.30	0.14	0.18	0.0
	27	259438	0.44	-0.02	-0.02	-0.02	0.03	0.0
	28	259439	0.45	0.38	-0.34	0.38	-0.15	0.0
	29	259437	0.46	0.25	0.25	-0.02	-0.29	0.0
	30	259332	0.75	0.30	-0.23	0.30	-0.07	1.3
	31	259403	0.35	0.09	0.14	-0.19	0.09	1.3
	32	259401	0.49	0.20	0.20	-0.12	-0.05	1.3
	33	259402	0.45	0.23	-0.11	-0.08	0.23	1.3
	34	259399	0.72	0.43	-0.15	-0.34	0.43	1.3
	35	259400	0.43	0.40	-0.25	-0.11	0.40	2.7
	36	259404	0.57	0.33	0.33	-0.27	-0.10	1.3
	37	259461	0.72	0.47	-0.30	-0.22	0.47	1.3
	38	259446	0.68	0.58	-0.24	-0.43	0.58	1.3
	39	259447	0.56	0.37	-0.17	0.37	-0.23	1.3
	40	259448	0.60	0.37	-0.17	-0.22	0.37	1.3
	41	259358	0.45	0.39	0.00	-0.41	0.39	0.0
	42	259434	0.47	0.30	-0.28	0.30	-0.05	0.0
	43	259391	0.60	0.45	-0.30	0.45	-0.17	2.7

Table 2.A18 Item Statistics: MD Mod-HSA English—Summer Primary 2

Form	Pos_No	ItemID	P_Val	R_ITT	P_BIS1	P_BIS2	P_BIS3	%Omits
612	44	259454	0.33	0.23	0.23	-0.13	-0.02	2.7
	45	259455	0.57	0.36	-0.20	-0.16	0.36	2.7
	46	259392	0.43	0.21	-0.09	-0.05	0.21	4.0
	47	259394	0.68	0.51	0.51	-0.34	-0.23	2.7
	48	259393	0.53	0.48	0.48	-0.25	-0.24	2.7
	49	259444	0.61	0.34	0.00	0.34	-0.33	2.7
	50	259356	0.49	0.10	-0.11	0.05	0.10	2.7
Mean			0.54	0.30	-0.02	-0.05	0.04	0.8
SD			0.13	0.13	0.25	0.25	0.25	1.1

* Statistics not reported for sample size less than 50 (N < 50).
Note: P_Val = P-Value, R_ITT = item-total correlation, P_BIS1 to P_BIS3 = option-total correlation, %Omits = percent of omitted responses.