

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

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

### **Demographic Distributions**

All eligible students completed the MDHSAs. The demographic characteristics of the students are given in Tables 4.1 to 4.4 for the October 2007 administration, and the January, May, and Summer 2008 administrations of Algebra, Biology, English, and Government, respectively. The number of students participating in the May administration was greater than the number of students participating in the January administration. As a result, only two field test versions were included in the January administration to ensure sufficient sample sizes for the analyses of the field test items. Due to the small numbers of students participating in the October and Summer administrations, the October and Summer forms did not contain new field test items. Instead, previously administered field test sections were embedded in the October and Summer forms to ensure that the test length was comparable. All demographic results are based on updated participation files received from MSDE.

Table 4.1 Demographic Information for Algebra

		October Form		January Primary Forms		January Make-Up Form		May Primary Forms		May Make-Up Forms		Summer Forms	
		N	%	N	%	N	%	N	%	N	%	N	%
Overall		4,547	100.00	10,183	100.00	1,030	100.00	71,835	100.00	4,008	100.00	1,586	100.00
Gender													
	Male	2,203	48.45	5,099	50.07	494	47.96	35,917	50.00	2,039	50.87	887	55.93
	Female	2,344	51.55	5,084	49.93	536	52.04	35,913	49.99	1,969	49.13	697	43.95
	Missing	0	0.00	0	0.00	0	0.00	5	0.01	0	0.00	2	0.13
Special Education													
	Yes	626	13.77	185	1.82	13	1.26	0	0.00	0	0.00	0	0.00
	No	3,868	85.07	9,998	98.18	1,017	98.74	71,835	100.00	4,008	100.00	1,586	100.00
	504 <sup>a</sup>	53	1.17	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Ethnicity													
	American Indian	14	0.31	52	0.51	8	0.78	264	0.37	28	0.70	11	0.69
	Asian/Pacific Islander	97	2.13	227	2.23	23	2.23	4,071	5.67	118	2.94	62	3.91
	African American	2,893	63.62	6,146	60.36	765	74.27	29,435	40.98	2,477	61.80	1,045	65.89
	White	1,282	28.19	2,977	29.23	191	18.54	31,954	44.48	1,107	27.62	326	20.55
	Hispanic	261	5.74	781	7.67	43	4.17	6,105	8.50	276	6.89	139	8.76
	Missing	0	0.00	0	0.00	0	0.00	6	0.01	2	0.05	3	0.19
Limited English													
Proficient	Yes	99	2.18	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	No	4,420	97.21	10,183	100.00	1,030	100.00	71,835	100.00	4,008	100.00	1,586	100.00
	Exited <sup>b</sup>	28	0.62	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00

<sup>a</sup> 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.

<sup>b</sup> LEP Exited indicates students who have exited English language acquisition services

Table 4.2 Demographic Information for Biology

		October Form		January Primary Forms		January Make-Up Form		May Primary Forms		May Make-Up Forms		Summer Forms	
		N	%	N	%	N	%	N	%	N	%	N	%
Overall		2,277	100.00	10,088	100.00	1,022	100.00	58,083	100.00	2,603	100.00	882	100.00
Gender													
	Male	1,118	49.10	5,078	50.34	500	48.92	28,635	49.30	1,292	49.64	481	54.54
	Female	1,159	50.90	5,010	49.66	522	51.08	29,448	50.70	1,311	50.36	400	45.35
	Missing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.11
Special Education													
	Yes	329	14.45	142	1.41	11	1.08	0	0.00	0	0.00	0	0.00
	No	1,908	83.79	9,946	98.59	1,011	98.92	58,083	100.00	2,603	100.00	882	100.00
	504	40	1.76	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Ethnicity													
	American Indian	4	0.18	30	0.30	7	0.68	203	0.35	15	0.58	4	0.45
	Asian/Pacific Islander	63	2.77	280	2.78	14	1.37	3,492	6.01	95	3.65	20	2.27
	African American	1,359	59.68	3,856	38.22	694	67.91	23,107	39.78	1,358	52.17	567	64.29
	White	687	30.17	5,384	53.37	261	25.54	27,033	46.54	931	35.77	186	21.09
	Hispanic	164	7.20	538	5.33	46	4.50	4,248	7.31	204	7.84	104	11.79
	Missing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.11
Limited English													
Proficient	Yes	38	1.67	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	No	2,224	97.67	10,088	100.00	1,022	100.00	58,083	100.00	2,603	100.00	882	100.00
	Exited	15	0.66	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00

Table 4.3 Demographic Information for English

		October Form		January Primary Forms		January Make-Up Form		May Primary Forms		May Make-Up Forms		Summer Forms	
		N	%	N	%	N	%	N	%	N	%	N	%
Overall		3,371	100.00	10,017	100.00	1,107	100.00	60,336	100.00	3,138	100.00	1,398	100.00
Gender													
	Male	1,810	53.69	5,300	52.91	575	51.94	30,204	50.06	1,660	52.90	772	55.22
	Female	1,561	46.31	4,717	47.09	532	48.06	30,126	49.93	1,478	47.10	625	44.71
	Missing	0	0.00	0	0.00	0	0.00	6	0.01	0	0.00	1	0.07
Special Education													
	Yes	611	18.13	146	1.46	10	0.90	0	0.00	0	0.00	0	0.00
	No	2,710	80.39	9,871	98.54	1,097	99.10	60,336	100.00	3,138	100.00	1,398	100.00
	504	50	1.48	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Ethnicity													
	American Indian	12	0.36	41	0.41	6	0.54	188	0.31	24	0.76	9	0.64
	Asian/Pacific Islander	87	2.58	282	2.82	17	1.54	3,533	5.86	72	2.29	36	2.58
	African American	1,844	54.70	3,917	39.10	734	66.31	24,270	40.22	1,763	56.18	907	64.88
	White	1,245	36.93	5,136	51.27	304	27.46	27,965	46.35	1,035	32.98	302	21.60
	Hispanic	183	5.43	641	6.40	46	4.16	4,374	7.25	244	7.78	143	10.23
	Missing	0	0.00	0	0.00	0	0.00	6	0.01	0	0.00	1	0.07
Limited English													
Proficient	Yes	42	1.25	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	No	3,292	97.66	10,017	100.00	1,107	100.00	60,336	100.00	3,138	100.00	1,398	100.00
	Exited	37	1.10	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00

Table 4.4 Demographic Information for Government

		October Form		January Primary Forms		January Make-Up Form		May Primary Forms		May Make-Up Forms		Summer Forms	
		N	%	N	%	N	%	N	%	N	%	N	%
Overall		3,220	100.00	12,279	100.00	1,483	100.00	61,304	100.00	3,072	100.00	977	100.00
Gender													
	Male	1,622	50.37	6,294	51.26	783	52.80	30,378	49.55	1,602	52.15	574	58.75
	Female	1,598	49.63	5,985	48.74	700	47.20	30,918	50.43	1,470	47.85	403	41.25
	Missing	0	0.00	0	0.00	0	0.00	8	0.01	0	0.00	0	0.00
Special Education													
	Yes	583	18.11	150	1.22	14	0.94	0	0.00	0	0.00	0	0.00
	No	2,603	80.84	12,129	98.78	1,469	99.06	61,304	100.00	3,072	100.00	977	100.00
	504	34	1.06	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Ethnicity													
	American Indian	5	0.16	61	0.50	13	0.88	225	0.37	19	0.62	12	1.23
	Asian/Pacific Islander	68	2.11	269	2.19	26	1.75	3,609	5.89	77	2.51	26	2.66
	African American	1,814	56.34	4,550	37.06	925	62.37	25,300	41.27	1,700	55.34	660	67.55
	White	1,164	36.15	6,786	55.27	452	30.48	27,712	45.20	1,066	34.70	219	22.42
	Hispanic	169	5.25	613	4.99	67	4.52	4,450	7.26	210	6.84	59	6.04
	Missing	0	0.00	0	0.00	0	0.00	8	0.01	0	0.00	1	0.10
Limited English													
Proficient	Yes	40	1.24	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	No	3,160	98.14	12,279	100.00	1,483	100.00	61,304	100.00	3,072	100.00	977	100.00
	Exited	20	0.62	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00

## 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). There are a variety of theories and methods that can be used to estimate reliability.

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

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

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

Since all four content areas contain mixed item types (dichotomous and polytomous items), it is more appropriate to report stratified alpha (Feldt & Brennan, 1989). Stratified alpha is a weighted average of Cronbach's alpha for item sets with different maximum score points or "strata." For the HSA tests, strata are defined by item type and, where applicable, score points within item type. The Biology, English and Government tests have three strata: one stratum comprises the SR items, one comprises the 3-point CR items, and the third comprises the 4-point CR items. For the Algebra tests, a fourth stratum is comprised of the SPR items.

The formula for calculating the stratified alpha is:

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

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

The results for the reliability analyses of the total test score are presented with the summary statistics in Tables 4.9 to 4.24. The tables show that the overall reliability of the MDHSAs administered during the January, May and Summer sessions ranged from 0.88 to 0.95 for the primary forms, and from 0.86 to 0.94 for the make-up forms. The overall reliability results for the October forms ranged from 0.77 to 0.85. It should be noted the score variance for the October administration is restricted (see Table 4.5), which would

have an impact on reliability estimates and could explain the lower values for October compared to the other administrations.

### Summary Statistics

The mean scale scores by content area for the 2008 administrations are presented in Table 4.5. Scores for all content areas were higher on average for the May administration compared to the October, January and Summer administrations.

Table 4.5 Mean Scale Scores by Administration

	October			January			May			Summer		
	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD
Algebra	4,547	398.54	27.07	11,213	391.64	37.67	75,843	426.60	37.44	1,586	395.55	38.17
Biology	2,277	382.09	29.97	11,110	400.90	41.88	60,686	418.82	35.28	882	385.77	36.47
English	3,371	383.21	25.62	11,124	391.90	36.98	63,474	408.23	34.81	1,398	376.84	34.37
Government	3,220	388.51	23.93	13,762	400.18	40.67	64,376	422.67	40.86	977	383.27	39.54

The results presented in Tables 4.6 to 4.8 are based on the combined results for students who took the tests in October 2007, and January, May, and Summer 2008. The mean scale scores are presented for the years 2003 to 2008 by content area in Table 4.6. Table 4.7 presents the passing rates for these years.

Table 4.6 Comparison of Mean Scores

	2003	2004	2005	2006	2007	2008
Algebra	408.3	411.9	409.5	421.5	421.2	420.5
Biology	400.8	406.2	404.7	415.0	414.5	414.7
English	--	--	--	393.0	412.0	404.3
Government	403.5	406.5	409.3	418.5	417.1	417.1

Note: The current English test was not administered prior to 2006.

Table 4.7 Comparison of Percentage Passing Rates (Proficient + Advanced)

	2003	2004	2005	2006	2007	2008
Algebra	53.1	59.3	54.5	66.6	63.3	62.0
Biology	54.3	62.0	58.4	67.8	70.1	68.4
English	--	--	--	60.1	70.6	61.0
Government	39.8	54.6	67.1	74.1	73.3	71.5

Note: The current English test was not administered prior to 2006.

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 4.8 presents the percentage of Algebra, English and Biology students classified as Basic, Proficient, and Advanced in 2008.

Table 4.8 Performance Classification Rates in 2008 for Algebra, Biology and English

	Algebra	Biology	English
Basic	38.0	31.7	39.0
Proficient	40.2	52.0	38.3
Advanced	21.8	16.4	22.7

Summary statistics for all students and for subgroups based on gender, special education programs, ethnicity, and English language fluency are presented in Tables 4.9 through 4.24. 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.



Table 4.9 Summary Statistics for Algebra: October Form

Algebra		Primary Form R				
		Mean	SD	N	%	Alpha
Overall		398.54	27.07	4,547	100.00	0.77
Gender						
	Male	396.73	29.47	2,203	48.45	0.80
	Female	400.24	24.50	2,344	51.55	0.74
	Missing	*	*	0	0.00	*
Special Education						
	Yes	387.20	35.78	626	13.77	0.81
	No	400.44	24.95	3,868	85.07	0.76
	504	394.19	23.79	53	1.17	0.69
Ethnicity						
	American Indian	*	*	14	0.31	*
	Asian/Pacific Islander	405.14	26.06	97	2.13	0.82
	African American	396.18	27.39	2,893	63.62	0.76
	White	403.02	26.24	1,282	28.19	0.79
	Hispanic	400.22	25.19	261	5.74	0.77
	Missing	*	*	0	0.00	*
Limited English Proficient						
	Yes	398.85	27.02	99	2.18	0.83
	No	398.50	27.13	4,420	97.21	0.77
	Exited	*	*	28	0.62	*

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

Table 4.10 Summary Statistics for Algebra: January Forms

Algebra		Primary Forms A, B					Make-Up Form C				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		392.55	37.33	10,183	100.00	0.88	382.64	39.74	1,030	100.00	0.86
Gender											
	Male	390.13	41.63	5,099	50.07	0.90	376.79	45.17	494	47.96	0.87
	Female	394.98	32.28	5,084	49.93	0.87	388.03	33.11	536	52.04	0.85
	Missing	*	*	0	0.00	*	*	*	0	0.00	*
Special Education											
	Yes	352.71	56.79	185	1.82	0.89	*	*	13	1.26	*
	No	393.29	36.47	9,998	98.18	0.88	383.26	38.95	1,017	98.74	0.86
	504	*	*	0	0.00	*	*	*	0	0.00	*
Ethnicity											
	American Indian	393.96	36.62	52	0.51	0.88	*	*	8	0.78	*
	Asian/Pacific Islander	403.36	35.02	227	2.23	0.90	*	*	23	2.23	*
	African American	384.01	35.99	6,146	60.36	0.84	377.29	40.71	765	74.27	0.84
	White	409.97	34.94	2,977	29.23	0.90	400.52	32.91	191	18.54	0.84
	Hispanic	390.10	33.43	781	7.67	0.85	*	*	43	4.17	*
	Missing	*	*	0	0.00	*	*	*	0	0.00	*
Limited English Proficient											
	Yes	*	*	0	0.00	*	*	*	0	0.00	*
	No	392.55	37.33	10,183	100.00	0.88	382.64	39.74	1,030	100.00	0.86
	Exited	*	*	0	0.00	*	*	*	0	0.00	*

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

Table 4.11 Summary Statistics for Algebra: May Forms

Algebra		Primary Forms D-H, J-N					Make-Up 1 Form X					Make-Up 2 Form Y				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		427.97	36.89	71,835	100.00	0.91	403.66	37.92	3,464	100.00	0.91	391.48	41.02	544	100.00	0.90
Gender																
	Male	427.23	39.44	35,917	50.00	0.92	402.39	40.81	1,763	50.89	0.91	391.46	45.22	276	50.74	0.91
	Female	428.72	34.12	35,913	49.99	0.91	404.97	34.65	1,701	49.11	0.90	391.50	36.28	268	49.26	0.89
	Missing	*	*	5	0.01	*	*	*	0	0.00	*	*	*	0	0.00	*
Special Education																
	Yes	*	*	0	0.00	*	*	*	0	0.00	*	*	*	0	0.00	*
	No	427.97	36.89	71,835	100.00	0.91	403.66	37.92	3,464	100.00	0.91	391.48	41.02	544	100.00	0.90
	504	*	*	0	0.00	*	*	*	0	0.00	*	*	*	0	0.00	*
Ethnicity												*	*			
	American Indian	424.38	36.77	264	0.37	0.91	*	*	25	0.72	*	*	*	3	0.55	*
	Asian/Pacific Islander	452.17	32.73	4,071	5.67	0.89	413.04	35.45	102	2.94	0.92	*	*	16	2.94	*
	African American	411.46	35.01	29,435	40.98	0.89	395.10	35.38	2,148	62.01	0.87	383.83	41.60	329	60.48	0.88
	White	441.77	32.13	31,954	44.48	0.89	422.53	38.50	937	27.05	0.92	405.68	37.57	170	31.25	0.91
	Hispanic	419.48	33.86	6,105	8.50	0.90	402.97	30.64	250	7.22	0.87	*	*	26	4.78	*
	Missing	*	*	6	0.01	*	*	*	2	0.06	*	*	*	0	0.00	*
Limited English Proficient																
	Yes	*	*	0	0.00	*	*	*	0	0.00	*	*	*	0	0.00	*
	No	427.97	36.89	71,835	100.00	0.91	403.66	37.92	3,464	100.00	0.91	391.48	41.02	544	100.00	0.90
	Exited	*	*	0	0.00	*	*	*	0	0.00	*	*	*	0	0.00	*

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

Table 4.12 Summary Statistics for Algebra: Summer Forms

Algebra		Primary 1 Form P					Primary 2 Form Q				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		396.52	37.39	1,473	100.00	0.88	382.91	45.52	113	100.00	0.90
Gender											
	Male	394.15	41.66	821	55.74	0.89	379.02	47.97	66	58.41	0.89
	Female	399.46	31.01	650	44.13	0.86	*	*	47	41.59	*
	Missing	*	*	2	0.14	*	*	*	0	0.00	*
Special Education											
	Yes	*	*	0	0.00	*	*	*	0	0.00	*
	No	396.52	37.39	1,473	100.00	0.88	382.91	45.52	113	100.00	0.90
	504	*	*	0	0.00	*	*	*	0	0.00	*
Ethnicity											
	American Indian	*	*	11	0.75	*	*	*	0	0.00	*
	Asian/Pacific Islander	*	*	49	3.33	*	*	*	13	11.50	*
	African American	391.90	36.64	995	67.55	0.85	380.18	33.20	50	44.25	0.83
	White	405.41	38.80	302	20.50	0.90	*	*	24	21.24	*
	Hispanic	397.41	26.14	113	7.67	0.82	*	*	26	23.01	*
	Missing	*	*	3	0.20	*	*	*	0	0.00	*
Limited English Proficient											
	Yes	*	*	0	0.00	*	*	*	0	0.00	*
	No	396.52	37.39	1,473	100.00	0.88	382.91	45.52	113	100.00	0.90
	Exited	*	*	0	0.00	*	*	*	0	0.00	*

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

Table 4.13 Summary Statistics for Biology: October Form

Biology		Primary Form R				
		Mean	SD	N	%	Alpha
Overall		382.09	29.97	2,277	100.00	0.78
Gender						
	Male	381.21	32.60	1,118	49.10	0.79
	Female	382.94	27.19	1,159	50.90	0.76
	Missing	*	*	0	0.00	*
Special Education						
	Yes	374.49	33.29	329	14.45	0.76
	No	383.36	29.18	1,908	83.79	0.78
	504	*	*	40	1.76	*
Ethnicity						
	American Indian	*	*	4	0.18	*
	Asian/Pacific Islander	393.13	32.27	63	2.77	0.86
	African American	379.08	29.32	1,359	59.68	0.72
	White	386.15	30.49	687	30.17	0.82
	Hispanic	385.34	29.28	164	7.20	0.82
	Missing	*	*	0	0.00	*
Limited English Proficient						
	Yes	*	*	38	1.67	*
	No	381.99	29.95	2,224	97.67	0.78
	Exited	*	*	15	0.66	*

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

Table 4.14 Summary Statistics for Biology: January Forms

Biology		Primary Forms A, B					Make-Up Form C				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		403.47	41.01	10,088	100	0.94	375.48	41.90	1,022	100	0.91
Gender											
	Male	402.01	43.56	5,078	50.34	0.95	372.73	45.83	500	48.92	0.91
	Female	404.95	38.19	5,010	49.66	0.94	378.12	37.61	522	51.08	0.90
	Missing	*	*	0	0.00	*	*	*	0	0.00	*
Special Education											
	Yes	356.09	52.77	142	1.41	0.91	*	*	11	1.08	*
	No	404.15	40.42	9,946	98.59	0.94	375.81	41.74	1,011	98.92	0.91
	504	*	*	0	0.00	*	*	*	0	0.00	*
Ethnicity											
	American Indian	*	*	30	0.30	*	*	*	7	0.68	*
	Asian/Pacific Islander	413.63	45.49	280	2.78	0.95	*	*	14	1.37	*
	African American	377.32	34.41	3,856	38.22	0.87	365.18	40.04	694	67.91	0.85
	White	422.79	34.46	5,384	53.37	0.93	401.95	37.51	261	25.54	0.93
	Hispanic	392.40	35.18	538	5.33	0.92	*	*	46	4.50	*
	Missing	*	*	0	0.00	*	*	*	0	0.00	*
Limited English Proficient											
	Yes	*	*	0	0.00	*	*	*	0	0.00	*
	No	403.47	41.01	10,088	100.00	0.94	375.48	41.90	1,022	100.00	0.91
	Exited	*	*	0	0.00	*	*	*	0	0.00	*

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

Table 4.15 Summary Statistics for Biology: May Forms

Biology		Primary Forms D-H, J-N					Make-Up 1 Form X					Make-Up 2 Form Y				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		420.01	34.57	58,083	100.00	0.93	393.59	40.55	2,200	100.00	0.93	385.54	37.60	403	100.00	0.91
Gender																
	Male	419.35	35.94	28,635	49.30	0.94	391.02	44.07	1,086	49.36	0.94	381.95	38.25	206	51.12	0.91
	Female	420.65	33.17	29,448	50.70	0.93	396.09	36.65	1,114	50.64	0.92	389.30	36.62	197	48.88	0.91
	Missing	*	*	0	0.00	*	*	*	0	0.00	*	*	*	0	0.00	*
Special Education																
	Yes	*	*	0	0.00	*	*	*	0	0.00	*	*	*	0	0.00	*
	No	420.01	34.57	58,083	100.00	0.93	393.59	40.55	2,200	100.00	0.93	385.54	37.60	403	100.00	0.91
	504	*	*	0	0.00	*	*	*	0	0.00	*	*	*	0	0.00	*
Ethnicity																
	American Indian	416.81	31.46	203	0.35	0.93	*	*	12	0.55	*	*	*	3	0.74	*
	Asian/Pacific Islander	441.13	31.71	3,492	6.01	0.93	429.32	41.06	87	3.95	0.96	*	*	8	1.99	*
	African American	403.25	32.07	23,107	39.78	0.91	379.59	37.44	1,110	50.45	0.88	378.64	35.37	248	61.54	0.88
	White	432.86	30.43	27,033	46.54	0.92	408.67	38.19	801	36.41	0.93	396.97	39.83	130	32.26	0.93
	Hispanic	412.12	31.18	4,248	7.31	0.92	396.27	33.32	190	8.64	0.91	*	*	14	3.47	*
	Missing	*	*	0	0.00	*	*	*	0	0.00	*	*	*	0	0.00	*
Limited English Proficient																
	Yes	*	*	0	0.00	*	*	*	0	0.00	*	*	*	0	0.00	*
	No	420.01	34.57	58,083	100.00	0.93	393.59	40.55	2,200	100.00	0.93	385.54	37.60	403	100.00	0.91
	Exited	*	*	0	0.00	*	*	*	0	0.00	*	*	*	0	0.00	*

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

Table 4.16 Summary Statistics for Biology: Summer Forms

Biology		Primary 1 Form P					Primary 2 Form Q				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		386.59	35.71	866	100.00	0.90	*	*	16	100.00	*
Gender											
	Male	383.81	38.93	471	54.39	0.90	*	*	10	62.50	*
	Female	389.83	31.17	394	45.50	0.89	*	*	6	37.50	*
	Missing	*	*	1	0.12	*	*	*	0	0.00	*
Special Education											
	Yes	*	*	0	0.00	*	*	*	0	0.00	*
	No	386.59	35.71	866	100.00	0.90	*	*	16	100.00	*
	504	*	*	0	0.00	*	*	*	0	0.00	*
Ethnicity											
	American Indian	*	*	4	0.46	*	*	*	0	0.00	*
	Asian/Pacific Islander	*	*	20	2.31	*	*	*	0	0.00	*
	African American	380.72	37.21	557	64.32	0.89	*	*	10	62.50	*
	White	398.84	31.51	180	20.79	0.91	*	*	6	37.50	*
	Hispanic	389.84	26.94	104	12.01	0.88	*	*	0	0.00	*
	Missing	*	*	1	0.12	*	*	*	0	0.00	*
Limited English Proficient											
	Yes	*	*	0	0.00	*	*	*	0	0.00	*
	No	386.59	35.71	866	100.00	0.90	*	*	16	100.00	*
	Exited	*	*	0	0.00	*	*	*	0	0.00	*

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



Table 4.17 Summary Statistics for English: October Form

English		Primary Forms A,B				
		Mean	SD	N	%	Alpha
Overall		383.21	25.62	3,371	100.00	0.84
Gender						
	Male	380.55	27.79	1,810	53.69	0.85
	Female	386.29	22.47	1,561	46.31	0.82
	Missing	*	*	0	0.00	*
Special Education						
	Yes	372.95	27.53	611	18.13	0.85
	No	385.53	24.67	2,710	80.39	0.82
	504	382.70	21.48	50	1.48	0.82
Ethnicity						
	American Indian	*	*	12	0.36	*
	Asian/Pacific Islander	387.14	20.77	87	2.58	0.81
	African American	382.48	25.30	1,844	54.70	0.83
	White	384.45	26.07	1,245	36.93	0.85
	Hispanic	379.94	27.59	183	5.43	0.85
	Missing	*	*	0	0.00	*
Limited English Proficient						
	Yes	*	*	42	1.25	*
	No	383.29	25.65	3,292	97.66	0.84
	Exited	*	*	37	1.10	*

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

Table 4.18 Summary Statistics for English: January Forms

English		Primary Forms A,B					Make-Up Form C				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		393.81	36.39	10,017	100.00	0.93	374.62	37.78	1,107	100.00	0.89
Gender											
	Male	387.89	37.17	5,300	52.91	0.92	367.21	40.60	575	51.94	0.90
	Female	400.46	34.30	4,717	47.09	0.92	382.62	32.66	532	48.06	0.88
	Missing	*	*	0	0.00	*	*	*	0	0.00	*
Special Education											
	Yes	360.53	53.61	146	1.46	0.93	*	*	10	0.90	*
	No	394.30	35.84	9,871	98.54	0.93	374.84	37.71	1,097	99.10	0.89
	504	*	*	0	0.00	*	*	*	0	0.00	*
Ethnicity											
	American Indian	*	*	41	0.41	*	*	*	6	0.54	*
	Asian/Pacific Islander	397.87	38.69	282	2.82	0.92	*	*	17	1.54	*
	African American	376.33	31.13	3,917	39.10	0.88	369.94	37.39	734	66.31	0.87
	White	408.10	34.43	5,136	51.27	0.93	385.28	38.34	304	27.46	0.92
	Hispanic	384.98	31.08	641	6.40	0.89	*	*	46	4.16	*
	Missing	*	*	0	0.00	*	*	*	0	0.00	*
Limited English Proficient											
	Yes	*	*	0	0.00	*	*	*	0	0.00	*
	No	393.81	36.39	10,017	100.00	0.93	374.62	37.78	1,107	100.00	0.89
	Exited	*	*	0	0.00	*	*	*	0	0.00	*

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

Table 4.19 Summary Statistics for English: May Forms

English		Primary Forms D-H, J-N					Make-Up 1 Form X					Make-Up 2 Form Y				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		409.57	34.19	60,336	100.00	0.92	383.61	36.38	2,633	100.00	0.92	376.60	36.45	505	100.00	0.90
Gender																
	Male	403.65	34.79	30,204	50.06	0.92	377.32	39.22	1,390	52.79	0.92	369.07	40.42	270	53.47	0.90
	Female	415.51	32.50	30,126	49.93	0.91	390.65	31.46	1,243	47.21	0.91	385.24	29.04	235	46.53	0.89
	Missing	*	*	6	0.01	*	*	*	0	0.00	*	*	*	0	0.00	*
Special Education																
	Yes	*	*	0	0.00	*	*	*	0	0.00	*	*	*	0	0.00	*
	No	409.57	34.19	60,336	100.00	0.92	383.61	36.38	2,633	100.00	0.92	376.60	36.45	505	100.00	0.90
	504	*	*	0	0.00	*	*	*	0	0.00	*	*	*	0	0.00	*
Ethnicity																
	American Indian	408.11	31.44	188	0.31	0.91	*	*	20	0.76	*	*	*	4	0.79	*
	Asian/Pacific Islander	426.73	36.22	3,533	5.86	0.92	395.67	40.83	63	2.39	0.94	*	*	9	1.78	*
	African American	396.03	29.81	24,270	40.22	0.90	377.13	33.26	1,467	55.72	0.89	373.20	36.04	296	58.61	0.89
	White	420.78	32.93	27,965	46.35	0.91	394.30	39.64	865	32.85	0.94	382.08	37.68	170	33.66	0.92
	Hispanic	399.28	31.43	4,374	7.25	0.91	380.61	31.54	218	8.28	0.90	*	*	26	5.15	*
	Missing	*	*	6	0.01	*	*	*	0	0.00	*	*	*	0	0.00	*
Limited English Proficient																
	Yes	*	*	0	0.00	*	*	*	0	0.00	*	*	*	0	0.00	*
	No	409.57	34.19	60,336	100.00	0.92	383.61	36.38	2,633	100.00	0.92	376.60	36.45	505	100.00	0.90
	Exited	*	*	0	0.00	*	*	*	0	0.00	*	*	*	0	0.00	*

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

Table 4.20 Summary Statistics for English: Summer Forms

English		Primary 1 Form P					Primary 2 Form Q				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		377.77	33.13	1,323	100.00	0.90	360.40	49.05	75	100.00	0.92
Gender											
	Male	372.55	36.17	728	55.03	0.90	*	*	44	58.67	*
	Female	384.25	27.62	594	44.90	0.88	*	*	31	41.33	*
	Missing	*	*	1	0.08	*	*	*	0	0.00	*
Special Education											
	Yes	*	*	0	0.00	*	*	*	0	0.00	*
	No	377.77	33.13	1,323	100.00	0.90	360.40	49.05	75	100.00	0.92
	504	*	*	0	0.00	*	*	*	0	0.00	*
Ethnicity											
	American Indian	*	*	9	0.68	*	*	*	0	0.00	*
	Asian/Pacific Islander	*	*	33	2.49	*	*	*	3	4.00	*
	African American	375.05	32.64	875	66.14	0.89	*	*	32	42.67	*
	White	384.03	35.69	287	21.69	0.91	*	*	15	20.00	*
	Hispanic	381.42	29.19	118	8.92	0.89	*	*	25	33.33	*
	Missing	*	*	1	0.08	*	*	*	0	0.00	*
Limited English Proficient											
	Yes	*	*	0	0.00	*	*	*	0	0.00	*
	No	377.77	33.13	1,323	100.00	0.90	360.40	49.05	75	100.00	0.92
	Exited	*	*	0	0.00	*	*	*	0	0.00	*

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

Table 4.21 Summary Statistics for Government: October Form

Gov		Primary Form R				
		Mean	SD	N	%	Alpha
Overall		388.51	23.93	3,220	100.00	0.85
Gender						
	Male	387.33	27.57	1,622	50.37	0.87
	Female	389.71	19.50	1,598	49.63	0.82
	Missing	*	*	0	0.00	*
Special Education						
	Yes	381.02	24.93	583	18.11	0.82
	No	390.17	23.43	2,603	80.84	0.85
	504	*	*	34	1.06	*
Ethnicity						
	American Indian	*	*	5	0.16	*
	Asian/Pacific Islander	392.24	25.01	68	2.11	0.87
	African American	388.28	22.65	1,814	56.34	0.83
	White	388.69	24.72	1,164	36.15	0.86
	Hispanic	387.89	30.56	169	5.25	0.87
	Missing	*	*	0	0.00	*
Limited English Proficient						
	Yes	*	*	40	1.24	*
	No	388.51	24.01	3,160	98.14	0.85
	Exited	*	*	20	0.62	*

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

Table 4.22 Summary Statistics for Government: January Forms

Gov		Primary Forms A,B					Make-Up Form C				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		402.90	40.17	12,279	100.00	0.94	377.70	37.69	1,483	100.00	0.91
Gender											
	Male	400.47	42.76	6,294	51.26	0.95	374.21	41.59	783	52.80	0.92
	Female	405.45	37.08	5,985	48.74	0.94	381.60	32.37	700	47.20	0.90
	Missing	*	*	0	0.00	*	*	*	0	0.00	*
Special Education											
	Yes	347.57	51.83	150	1.22	0.92	*	*	14	0.94	*
	No	403.58	39.53	12,129	98.78	0.94	377.64	37.60	1,469	99.06	0.91
	504	*	*	0	0.00	*	*	*	0	0.00	*
Ethnicity											
	American Indian	396.36	39.73	61	0.50	0.94	*	*	13	0.88	*
	Asian/Pacific Islander	419.95	42.63	269	2.19	0.96	*	*	26	1.75	*
	African American	382.08	35.35	4,550	37.06	0.91	370.23	34.98	925	62.37	0.88
	White	417.11	37.26	6,786	55.27	0.94	391.79	40.19	452	30.48	0.94
	Hispanic	393.34	32.56	613	4.99	0.92	383.21	29.76	67	4.52	0.88
	Missing	*	*	0	0.00	*	*	*	0	0.00	*
Limited English Proficient											
	Yes	*	*	0	0.00	*	*	*	0	0.00	*
	No	402.90	40.17	12,279	100.00	0.94	377.70	37.69	1,483	100.00	0.91
	Exited	*	*	0	0.00	*	*	*	0	0.00	*

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

Table 4.23 Summary Statistics for Government: May Forms

Gov		Primary Forms D-H, J-N					Make-Up 1 Form X					Make-Up 2 Form Y				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		424.23	40.18	61,304	100.00	0.95	392.13	42.51	2,463	100.00	0.94	388.92	38.54	609	100.00	0.93
Gender																
	Male	423.27	41.13	30,378	49.55	0.95	387.74	45.40	1,290	52.38	0.95	386.33	42.79	312	51.23	0.94
	Female	425.19	39.16	30,918	50.43	0.94	396.97	38.53	1,173	47.62	0.94	391.64	33.34	297	48.77	0.91
	Missing	*	*	8	0.01	*	*	*	0	0.00	*	*	*	0	0.00	*
Special Education																
	Yes	*	*	0	0.00	*	*	*	0	0.00	*	*	*	0	0.00	*
	No	424.23	40.18	61,304	100.00	0.95	392.13	42.51	2,463	100.00	0.94	388.92	38.54	609	100.00	0.93
	504	*	*	0	0.00	*	*	*	0	0.00	*	*	*	0	0.00	*
Ethnicity																
	American Indian	416.39	41.78	225	0.37	0.95	*	*	13	0.53	*	*	*	6	0.99	*
	Asian/Pacific Islander	449.30	40.53	3,609	5.89	0.95	414.09	50.46	67	2.72	0.96	*	*	10	1.64	*
	African American	408.52	35.60	25,300	41.27	0.93	383.84	38.14	1,370	55.62	0.93	382.72	37.58	330	54.19	0.91
	White	436.70	38.67	27,712	45.20	0.95	403.10	46.22	850	34.51	0.95	398.49	38.77	216	35.47	0.94
	Hispanic	416.10	36.46	4,450	7.26	0.94	396.60	37.00	163	6.62	0.93	*	*	47	7.72	*
	Missing	*	*	8	0.01	*	*	*	0	0.00	*	*	*	0	0.00	*
Limited English Proficient																
	Yes	*	*	0	0.00	*	*	*	0	0.00	*	*	*	0	0.00	*
	No	424.23	40.18	61,304	100.00	0.95	392.13	42.51	2,463	100.00	0.94	388.92	38.54	609	100.00	0.93
	Exited	*	*	0	0.00	*	*	*	0	0.00	*	*	*	0	0.00	*

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

Table 4.24. Summary Statistics for Government: Summer Forms

Gov		Primary 1 Form P					Primary 2 Form Q				
		Mean	SD	N	%	Alpha	Mean	SD	N	%	Alpha
Overall		384.45	38.36	942	100.00	0.92	*	*	35	100.00	*
Gender											
	Male	382.52	41.56	551	58.49	0.93	*	*	23	65.71	*
	Female	387.15	33.21	391	41.51	0.90	*	*	12	34.29	*
	Missing	*	*	0	0.00	*	*	*	0	0.00	*
Special Education											
	Yes	*	*	0	0.00	*	*	*	0	0.00	*
	No	384.45	38.36	942	100.00	0.92	*	*	35	100.00	*
	504	*	*	0	0.00	*	*	*	0	0.00	*
Ethnicity											
	American Indian	*	*	12	1.27	*	*	*	0	0.00	*
	Asian/Pacific Islander	*	*	26	2.76	*	*	*	0	0.00	*
	African American	381.62	37.73	640	67.94	0.91	*	*	20	57.14	*
	White	387.95	38.59	208	22.08	0.92	*	*	11	31.43	*
	Hispanic	392.00	32.78	55	5.84	0.92	*	*	4	11.43	*
	Missing	*	*	1	0.11	*	*	*	0	0.00	*
Limited English Proficient											
	Yes	*	*	0	0.00	*	*	*	0	0.00	*
	No	384.45	38.36	942	100.00	0.92	*	*	35	100.00	*
	Exited	*	*	0	0.00	*	*	*	0	0.00	*

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



## Decision Accuracy and Consistency

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

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

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

The results are provided in Tables 4.25 to 4.40 by content area for the October, January, 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 0.82 to 0.95 across all performance levels and from 0.85 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 0.76 to 0.93 across all performance levels and from 0.80 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 4.25 Decision Accuracy and Consistency: Algebra October Form

Algebra	Placement Scores	Advanced	Proficient	Basic	Category Total*
October Form R					
Decision Accuracy	450-650	0.00	0.00	0.00	0.01
	412-449	0.01	0.20	0.07	0.27
	240-411	0.01	0.07	0.64	0.72
	Estimated Proportion Correctly Classified*: Total = 0.84, Proficient & Above = 0.85				
Decision Consistency	450-650	0.01	0.00	0.00	0.01
	412-449	0.02	0.17	0.08	0.27
	240-411	0.01	0.11	0.61	0.72
	Estimated Proportion Consistently Classified*: Total = 0.78, Proficient & Above = 0.80				

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

Table 4.26 Decision Accuracy and Consistency: Algebra January Forms

Algebra	Placement Scores	Advanced	Proficient	Basic	Category Total*
January Primary					
Decision Accuracy	450-650	0.03	0.00	0.00	0.04
	412-449	0.02	0.18	0.04	0.24
	240-411	0.01	0.06	0.67	0.73
	Estimated Proportion Correctly Classified: Total = 0.87, Proficient & Above = 0.89				
Decision Consistency	450-650	0.03	0.00	0.00	0.04
	412-449	0.03	0.15	0.06	0.24
	240-411	0.01	0.08	0.64	0.73
	Estimated Proportion Consistently Classified*: Total = 0.82 ; Proficient & Above = 0.86				
January Form C					
Decision Accuracy	450-650	0.02	0.00	0.00	0.02
	412-449	0.01	0.12	0.03	0.17
	240-411	0.01	0.06	0.75	0.82
	Estimated Proportion Correctly Classified*: Total = 0.88, Proficient & Above = 0.90				
Decision Consistency	450-650	0.02	0.00	0.00	0.02
	412-449	0.02	0.10	0.04	0.17
	240-411	0.01	0.08	0.72	0.82
	Estimated Proportion Consistently Classified*: Total = 0.84, Proficient & Above = 0.86				

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

Table 4.27 Decision Accuracy and Consistency: Algebra May Forms

Algebra	Placement Scores	Advanced	Proficient	Basic	Category Total*
May Primary					
Decision Accuracy	450-650	0.25	0.02	0.00	0.27
	412-449	0.08	0.33	0.04	0.44
	240-411	0.00	0.04	0.25	0.28
	Estimated Proportion Correctly Classified*: Total = 0.82, Proficient & Above = 0.92				
Decision Consistency	450-650	0.23	0.04	0.00	0.27
	412-449	0.10	0.29	0.06	0.44
	240-411	0.00	0.05	0.24	0.28
	Estimated Proportion Consistently Classified*: Total = 0.76, Proficient & Above = 0.90				
May Form X					
Decision Accuracy	450-650	0.08	0.01	0.00	0.09
	412-449	0.03	0.24	0.06	0.33
	240-411	0.00	0.04	0.53	0.58
	Estimated Proportion Correctly Classified*: Total = 0.85, Proficient & Above = 0.90				
Decision Consistency	450-650	0.07	0.02	0.00	0.09
	412-449	0.05	0.21	0.08	0.33
	240-411	0.00	0.06	0.51	0.58
	Estimated Proportion Consistently Classified*: Total = 0.80, Proficient & Above = 0.86				
May Form Y					
Decision Accuracy	450-650	0.04	0.00	0.00	0.04
	412-449	0.03	0.19	0.06	0.28
	240-411	0.00	0.04	0.64	0.68
	Estimated Proportion Correctly Classified*: Total = 0.87, Proficient & Above = 0.90				
Decision Consistency	450-650	0.04	0.00	0.00	0.04
	412-449	0.04	0.16	0.08	0.28
	240-411	0.00	0.06	0.62	0.68
	Estimated Proportion Consistently Classified*: Total = 0.82, Proficient & Above = 0.87				

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

Table 4.28 Decision Accuracy and Consistency: Algebra Summer Forms

Algebra	Placement Scores	Advanced	Proficient	Basic	Category Total*
Summer Form P					
Decision Accuracy	450-650	0.04	0.00	0.00	0.04
	412-449	0.03	0.20	0.06	0.29
	240-411	0.00	0.05	0.61	0.67
	Estimated Proportion Correctly Classified*: Total = 0.86, Proficient & Above = 0.89				
Decision Consistency	450-650	0.04	0.00	0.00	0.04
	412-449	0.04	0.17	0.07	0.29
	240-411	0.00	0.08	0.59	0.67
	Estimated Proportion Consistently Classified: Total = 0.80 , Proficient & Above = 0.85				
Summer Form Q					
Decision Accuracy	450-650	0.03	0.00	0.00	0.03
	412-449	0.04	0.15	0.06	0.26
	240-411	0.00	0.03	0.69	0.72
	Estimated Proportion Correctly Classified*: Total = 0.87, Proficient & Above = 0.91				
Decision Consistency	450-650	0.03	0.00	0.00	0.03
	412-449	0.05	0.13	0.07	0.26
	240-411	0.00	0.05	0.67	0.72
	Estimated Proportion Consistently Classified*: Total = 0.83 , Proficient & Above = 0.88				

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

Table 4.29 Decision Accuracy and Consistency: Biology October Form

Biology	Placement Scores	Proficient	Basic	Category Total*
October Form R				
Decision Accuracy	400-650	0.18	0.06	0.24
	240-399	0.07	0.69	0.75
	Estimated Proportion Correctly Classified*: Total = 0.87			
Decision Consistency	400-650	0.16	0.08	0.24
	240-399	0.11	0.65	0.75
	Estimated Proportion Consistently Classified*: Total = 0.81			

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

Table 4.30 Decision Accuracy and Consistency: Biology January Forms

Biology	Placement Scores	Advanced	Proficient	Basic	Category Total*
January Primary					
Decision Accuracy	452 - 650	0.07	0.04	0.00	0.12
	400 - 451	0.01	0.40	0.01	0.42
	240 - 399	0.01	0.05	0.40	0.47
	Estimated Proportion Correctly Classified: Total = 0.87, Proficient & Above = 0.92				
Decision Consistency	452 - 650	0.06	0.05	0.00	0.12
	400 - 451	0.03	0.37	0.02	0.42
	240 - 399	0.01	0.07	0.39	0.47
	Estimated Proportion Consistently Classified*: Total = 0.82, Proficient & Above = 0.89				
January Form C					
Decision Accuracy	452-650	0.02	0.00	0.00	0.02
	400-451	0.01	0.19	0.04	0.23
	240-399	0.01	0.05	0.70	0.75
	Estimated Proportion Correctly Classified*: Total = 0.90, Proficient & Above = 0.91				
Decision Consistency	452-650	0.02	0.00	0.00	0.02
	400-451	0.02	0.17	0.05	0.23
	240-399	0.01	0.07	0.68	0.75
	Estimated Proportion Consistently Classified*: Total = 0.86, Proficient & Above = 0.88				

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

Note: An Advanced Biology cut score was implemented starting with the January, 2008 administration.

Table 4.31 Decision Accuracy and Consistency: Biology May Forms

Biology	Placement Scores	Advanced	Proficient	Basic	Category Total*
May Primary					
Decision Accuracy	452-650	0.15	0.03	0.00	0.18
	400-451	0.04	0.49	0.03	0.55
	240-399	0.00	0.03	0.23	0.27
	Estimated Proportion Correctly Classified*: Total = 0.87, Proficient & Above = 0.94				
Decision Consistency	452-650	0.14	0.04	0.00	0.18
	400-451	0.06	0.46	0.04	0.55
	240-399	0.00	0.04	0.22	0.27
	Estimated Proportion Consistently Classified*: Total = 0.82, Proficient & Above = 0.92				
May Form X					
Decision Accuracy	452-650	0.06	0.01	0.00	0.07
	400-451	0.02	0.30	0.04	0.36
	240-399	0.00	0.04	0.53	0.57
	Estimated Proportion Correctly Classified*: Total = 0.88, Proficient & Above = 0.91				
Decision Consistency	452-650	0.05	0.01	0.00	0.07
	400-451	0.03	0.27	0.06	0.36
	240-399	0.00	0.06	0.51	0.57
	Estimated Proportion Consistently Classified*: Total = 0.84, Proficient & Above = 0.88				
May Form Y					
Decision Accuracy	452-650	0.02	0.00	0.00	0.02
	400-451	0.02	0.25	0.05	0.32
	240-399	0.00	0.05	0.61	0.66
	Estimated Proportion Correctly Classified*: Total = 0.89, Proficient & Above = 0.90				
Decision Consistency	452-650	0.02	0.00	0.00	0.02
	400-451	0.03	0.23	0.06	0.32
	240-399	0.00	0.07	0.59	0.66
	Estimated Proportion Consistently Classified*: Total = 0.84, Proficient & Above = 0.87				

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

Table 4.32 Decision Accuracy and Consistency: Biology Summer Forms

Biology	Placement Scores	Advanced	Proficient	Basic	Category Total*
Summer Form P					
Decision Accuracy	452-650	0.02	0.00	0.00	0.02
	400-451	0.02	0.27	0.06	0.34
	240-399	0.00	0.04	0.60	0.64
	Estimated Proportion Correctly Classified*: Total = 0.88, Proficient & Above = 0.90				
Decision Consistency	452-650	0.02	0.00	0.00	0.02
	400-451	0.02	0.24	0.07	0.34
	240-399	0.00	0.07	0.58	0.64
	Estimated Proportion Consistently Classified: Total = 0.84, Proficient & Above = 0.86				
Summer Form Q					
Decision Accuracy	452-650	-	-	-	-
	400-451	-	-	-	-
	240-399	-	-	-	-
	Estimated Proportion Correctly Classified*: Total = -, Proficient & Above = -				
Decision Consistency	452-650	-	-	-	-
	400-451	-	-	-	-
	240-399	-	-	-	-
	Estimated Proportion Consistently Classified*: Total = -, Proficient & Above = -				

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

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

Table 4.33 Decision Accuracy and Consistency: English October Form

English	Placement Scores	Advanced	Proficient	Basic	Category Total*
October Form C					
Decision Accuracy	429-650	0.01	0.00	0.00	0.01
	396-428	0.01	0.20	0.06	0.27
	240-395	0.01	0.06	0.65	0.71
	Estimated Proportion Correctly Classified*: Total = 0.86, Proficient & Above = 0.88				
Decision Consistency	429-650	0.01	0.00	0.00	0.01
	396-428	0.02	0.17	0.07	0.27
	240-395	0.01	0.09	0.62	0.71
	Estimated Proportion Consistently Classified*: Total = 0.80, Proficient & Above = 0.83				

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

Table 4.34 Decision Accuracy and Consistency: English January Forms

English	Placement Scores	Advanced	Proficient	Basic	Category Total*
January Primary					
Decision Accuracy	429 - 650	0.13	0.02	0.00	0.14
	396 - 428	0.03	0.26	0.03	0.32
	240 - 395	0.01	0.06	0.46	0.53
	Estimated Proportion Correctly Classified*: Total = 0.85, Proficient & Above = 0.90				
Decision Consistency	429 - 650	0.12	0.02	0.00	0.14
	396 - 428	0.05	0.22	0.05	0.32
	240 - 395	0.01	0.07	0.45	0.53
	Estimated Proportion Consistently Classified*: Total = 0.79, Proficient & Above = 0.87				
January Form C					
Decision Accuracy	429-650	0.03	0.00	0.00	0.03
	396-428	0.03	0.15	0.04	0.21
	240-395	0.01	0.05	0.69	0.75
	Estimated Proportion Correctly Classified*: Total = 0.87, Proficient & Above = 0.90				
Decision Consistency	429-650	0.03	0.00	0.00	0.03
	396-428	0.04	0.12	0.05	0.21
	240-395	0.01	0.08	0.67	0.75
	Estimated Proportion Consistently Classified*: Total = 0.82, Proficient & Above = 0.86				

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



Table 4.35 Decision Accuracy and Consistency: English May Forms

English	Placement Scores	Advanced	Proficient	Basic	Category Total*
May Primary					
Decision Accuracy	429-650	0.24	0.03	0.00	0.27
	396-428	0.05	0.31	0.05	0.41
	240-395	0.00	0.03	0.29	0.32
	Estimated Proportion Correctly Classified*: Total = 0.83, Proficient & Above = 0.92				
Decision Consistency	429-650	0.23	0.04	0.00	0.27
	396-428	0.07	0.27	0.07	0.41
	240-395	0.00	0.05	0.27	0.32
	Estimated Proportion Consistently Classified*: Total = 0.77 , Proficient & Above = 0.88				
May Form X					
Decision Accuracy	429-650	0.07	0.01	0.00	0.08
	396-428	0.03	0.20	0.05	0.28
	240-395	0.00	0.04	0.59	0.64
	Estimated Proportion Correctly Classified*: Total = 0.87, Proficient & Above = 0.91				
Decision Consistency	429-650	0.07	0.01	0.00	0.08
	396-428	0.04	0.17	0.06	0.28
	240-395	0.00	0.06	0.57	0.64
	Estimated Proportion Consistently Classified*: Total = 0.82 , Proficient & Above = 0.87				
May Form Y					
Decision Accuracy	429-650	0.05	0.00	0.00	0.05
	396-428	0.03	0.17	0.05	0.24
	240-395	0.00	0.04	0.66	0.71
	Estimated Proportion Correctly Classified*: Total =0.88, Proficient & Above = 0.90				
Decision Consistency	429-650	0.04	0.00	0.00	0.05
	396-428	0.04	0.14	0.06	0.24
	240-395	0.00	0.07	0.64	0.71
	Estimated Proportion Consistently Classified*: Total = 0.83 , Proficient & Above = 0.87				

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

Table 4.36 Decision Accuracy and Consistency: English Summer Forms

English	Placement Scores	Advanced	Proficient	Basic	Category Total*
Summer Form P					
Decision Accuracy	429-650	0.03	0.00	0.00	0.03
	396-428	0.03	0.18	0.06	0.27
	240-395	0.00	0.04	0.66	0.70
	Estimated Proportion Correctly Classified: Total = 0.87, Proficient & Above = 0.90				
Decision Consistency	429-650	0.03	0.00	0.00	0.03
	396-428	0.04	0.16	0.07	0.27
	240-395	0.00	0.06	0.64	0.70
	Estimated Proportion Consistently Classified: Total = 0.83, Proficient & Above = 0.87				
Summer Form Q					
Decision Accuracy	429-650	0.03	0.00	0.00	0.03
	396-428	0.05	0.10	0.04	0.19
	240-395	0.01	0.04	0.74	0.79
	Estimated Proportion Correctly Classified: Total = 0.87, Proficient & Above = 0.92				
Decision Consistency	429-650	0.03	0.00	0.00	0.03
	396-428	0.05	0.09	0.05	0.19
	240-395	0.01	0.05	0.72	0.79
	Estimated Proportion Consistently Classified: Total = 0.84, Proficient & Above* = 0.89				

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

Table 4.37 Decision Accuracy and Consistency: Government October Form

Government	Placement Scores	Proficient	Basic	Category Total*
October Form R				
Decision Accuracy	394-650	0.36	0.08	0.44
	240-393	0.05	0.51	0.56
	Estimated Proportion Correctly Classified*: Total = 0.87			
Decision Consistency	394-650	0.34	0.10	0.44
	240-393	0.07	0.49	0.56
	Estimated Proportion Consistently Classified*: Total = 0.83			

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

Table 4.38 Decision Accuracy and Consistency: Government January Forms

Government	Placement Scores	Proficient	Basic	Category Total*
January Primary				
Decision Accuracy	394 - 650	0.57	0.02	0.59
	240 - 393	0.05	0.36	0.41
	Estimated Proportion Correctly Classified*: Total = 0.93			
Decision Consistency	394 - 650	0.55	0.04	0.59
	240 - 393	0.06	0.35	0.41
	Estimated Proportion Consistently Classified*: Total = 0.91			
January Form C				
Decision Accuracy	394-650	0.27	0.03	0.31
	240-393	0.05	0.64	0.69
	Estimated Proportion Correctly Classified*: Total = 0.92			
Decision Consistency	394-650	0.26	0.05	0.31
	240-393	0.07	0.62	0.69
	Estimated Proportion Consistently Classified*: Total = 0.88			

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

Table 4.39 Decision Accuracy and Consistency: Government May Forms

Government	Placement Scores	Proficient	Basic	Category Total*
May Primary				
Decision Accuracy	394-650	0.76	0.03	0.78
	240-393	0.02	0.19	0.22
	Estimated Proportion Correctly Classified*: Total = 0.95			
Decision Consistency	394-650	0.74	0.04	0.78
	240-393	0.03	0.19	0.22
	Estimated Proportion Consistently Classified*: Total = 0.93			
May Form X				
Decision Accuracy	394-650	0.47	0.00	0.47
	240-393	0.07	0.46	0.53
	Estimated Proportion Correctly Classified*: Total = 0.93			
Decision Consistency	394-650	0.45	0.02	0.47
	240-393	0.08	0.45	0.53
	Estimated Proportion Consistently Classified*: Total = 0.90			
May Form Y				
Decision Accuracy	394-650	0.43	0.00	0.43
	240-393	0.10	0.47	0.57
	Estimated Proportion Correctly Classified*: Total = 0.90			
Decision Consistency	394-650	0.42	0.01	0.43
	240-393	0.10	0.47	0.57
	Estimated Proportion Consistently Classified*: Total = 0.88			

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

Table 4.40 Decision Accuracy and Consistency: Government Summer Forms

Government	Placement Scores	Proficient	Basic	Category Total*
Summer Form P				
Decision Accuracy	394-650	0.37	0.07	0.43
	240-393	0.03	0.54	0.57
	Estimated Proportion Correctly Classified: Total = 0.91			
Decision Consistency	394-650	0.35	0.08	0.43
	240-393	0.04	0.52	0.57
	Estimated Proportion Consistently Classified: Total = 0.87			
Summer Form Q				
Decision Accuracy	394-650	-	-	-
	240-393	-	-	-
	Estimated Proportion Correctly Classified*: Total = -			
Decision Consistency	394-650	-	-	-
	240-393	-	-	-
	Estimated Proportion Consistently Classified*: Total = -			

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

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