

Maryland High School Assessment
Summary of Field Test Results
January, 2001

Table 1. Proportion of Students in Each Sample

	Algebra	Biology	English	Geometry	Government
Female	-	49	49	50	50
Male	-	49	49	48	49
African American	-	35	29	31	32
American Indian	-	1	2	1	1
Asian	-	2	2	2	2
Hispanic	-	2	2	2	3
White	-	55	63	59	58
Other	-	6	3	5	4
Baltimore City	-	19	19	14	16

Table 2. Number of Items in Each Field Test Form

	Form		SR	SPR	BCR	ECR	
Algebra	L	Op	-	-	-	-	
		Ft	-	-	-	-	
	M	Anc	-	-	-	-	
		Ft	-	-	-	-	
	N	Ft	-	-	-	-	
	Biology	J	Op	48	0	7	-
Ft			11	0	2	-	
K		Anc	26	0	0	-	
		Ft	44 ^a	0	7	-	
English		K	Op	50	0	2	1
			Ft	12	0	1	0
	L	Anc	28	0	0	0	
		Ft	52	0	2	1	
Geometry	N	Op	33	9	4	3	
		Ft	5	5	1	1	
	P	Anc	30	0	0	0	
		Ft	33	9	4	3	
Government	K	Op	50	0	7	1	
		Ft	18	0	2	0	
	L	Anc	25	0	0	0	
		Ft	44	0	9	1	

Note. ^aAn additional 8 SR items from Form J were also included on Form K.

The following tables summarize data only from the field test items that will be added to the field test pool. Items that were designated as “pre-operational” are not included in these summaries. In addition, data for the Algebra items is not summarized here due to the low numbers of student responses. Data from the January administration will be added to the data collected during the May administration and summarized at that time.

Table 3. Distribution of Mean Percent Correct (p-values) for Selected-Response Items

Mean Percent Correct	Algebra (% of items)	Biology (% of items)	English (% of items)	Geometry (% of items)	Government (% of items)
>.80	-	0	6	0	0
.71 - .80	-	2	6	3	8
.61 - .70	-	7	14	3	19
.51 - .60	-	18	28	11	19
.41 - .50	-	22	23	13	26
.30 - .40	-	33	19	50	21
<.30	-	18	3	21	6
Total Number of Items	-	55	64	38	62
Mean	-	.42	.53	.38	.50
SD	-	.14	.14	.12	.14
Min	-	.12	.21	.14	.23
Max	-	.80	.83	.73	.76

Table 4. Distribution of Mean Percent Correct (p-values) for Student-Produced Response Items

Mean Percent Correct	Algebra (% of items)	Geometry (% of items)
>.80	-	0
.71 - .80	-	0
.61 - .70	-	0
.51 - .60	-	0
.41 - .50	-	14
.30 - .40	-	21
<.30	-	64
Total Number of Items	-	14
Mean	-	.25
SD	-	.11
Min	-	.06
Max	-	.43

Table 5. Distribution of Mean Percent of Total Possible Number of Points for Brief Constructed-Response Items

Mean of Percent Of Total Possible Points	Algebra (% of items)	Biology ^a (% of items)	English (% of items)	Geometry (% of items)	Government (% of items)
>.80	-	0	0	0	0
.71 - .80	-	0	0	0	0
.61 - .70	-	0	0	0	0
.51 - .60	-	0	0	0	0
.41 - .50	-	11	33	40	0
.30 - .40	-	0	67	40	64
<.30	-	89	0	20	36
Number of Points Possible per Item	3	4	4	3	4
Total Number of Items	-	9	3	5	11
Mean	-	.26	.39	.35	.31
SD	-	.09	.03	.13	.07
Min	-	.17	.37	.14	.19
Max	-	.46	.42	.48	.39

Note. ^aThere is no distinction between Biology BCR and ECR items; these Biology items are considered to be the same (CR). All Biology CR items are included in this table.

Table 6. Distribution of Mean Percent of Total Possible Number of Points for Extended Constructed-Response Items

Mean of Percent Of Total Possible Points	Algebra (% of items)	Biology ^a (% of items)	English (% of items)	Geometry (% of items)	Government (% of items)
>.80	-	-	0	0	0
.71 - .80	-	-	0	0	0
.61 - .70	-	-	0	0	0
.51 - .60	-	-	0	0	0
.41 - .50	-	-	1	0	0
.30 - .40	-	-	0	50	100
<.30	-	-	0	50	0
Number of Points Possible per Item	4	-	6	4	4
Total Number of Items	-	-	1	4	1
Mean	-	-	.47	.29	.30
SD	-	-	0	.11	0
Min	-	-	-	.14	-
Max	-	-	-	.40	-

Note. ^aThere is no distinction between Biology BCR and ECR items; these Biology items are considered to be the same (CR). All Biology CR items are included in Table 5.

Table 7. Percent Distributions of Item-Total Correlations for Selected-Response Items

Correlation	Algebra (% of items)	Biology (% of items)	English (% of items)	Geometry (% of items)	Government (% of items)
>.54	-	0	0	0	2
.45 - .54	-	7	23	3	26
.35 - .44	-	22	30	34	19
.25 - .34	-	33	31	21	26
.15 - .24	-	25	6	26	19
<.15	-	13	9	16	8
N of Items	-	55	64	38	62
Mean	-	.28	.34	.27	.33
SD	-	.12	.12	.13	.13
Min	-	-.10	.03	-.12	-.05
Max	-	.53	.51	.46	.56

Table 8. Percent Distributions of Item-Total Correlations for Student Produced Response Items

Correlation	Algebra (% of items)	Geometry (% of items)
>.54	-	43
.45 - .54	-	43
.35 - .44	-	7
.25 - .34	-	0
.15 - .24	-	7
<.15	-	0
N of Items	-	14
Mean	-	.53
SD	-	.11
Min	-	.23
Max	-	.66

Table 9. Distributions of Item-Total Correlations for Brief Constructed-Response Items

Correlation	Algebra (% of items)	Biology ^a (% of items)	English (% of items)	Geometry (% of items)	Government (% of items)
>.64	-	0	0	0	0
.55 - .64	-	67	33	80	82
.45 - .54	-	22	67	20	18
.35 - .44	-	11	0	0	0
.25 - .34	-	0	0	0	0
.15 - .24	-	0	0	0	0
<.15	-	0	0	0	0
N of Items	-	9	3	5	11
Mean	-	.56	.53	.60	.61
SD	-	.08	.08	.08	.07
Min	-	.42	.48	.50	.46
Max	-	.68	.62	.68	.70

Note. ^aThere is no distinction between Biology BCR and ECR items; these Biology items are considered to be the same (CR). All Biology CR items are included in this table.

Table 10. Distributions of Item-Total Correlations for Extended Constructed-Response Items

Correlation	Algebra (% of items)	Biology ^a (% of items)	English (% of items)	Geometry (% of items)	Government (% of items)
>.64	-	-	0	0	0
.55 - .64	-	-	1	4	0
.45 - .54	-	-	0	0	1
.35 - .44	-	-	0	0	0
.25 - .34	-	-	0	0	0
.15 - .24	-	-	0	0	0
<.15	-	-	0	0	0
N of Items	-	-	1	4	1
Mean	-	-	.56	.69	.52
SD	-	-	0	.07	0
Min	-	-	-	.60	-
Max	-	-	-	.74	-

Note. ^aThere is no distinction between Biology BCR and ECR items; these Biology items are considered to be the same (CR). All Biology CR items are included in Table 9.

Table 11. Number of Items Flagged for DIF Against the Group using Mantel Haenszel (SR/SPR items) and Mantel (CR items) Procedures^a

		African American	Asian	Hispanic	Female	Male	Number of Flagged Items ^b	Total Number Of Dif Flags
Algebra	SR SPR BCR ECR	-	-	-	-	-	-	-
Biology	SR CR	1	-	-	2	-	2	3
English	SR BCR ECR	-	-	-	-	-	-	-
Geometry	SR SPR BCR ECR	-	-	-	-	-	-	-
Government	SR BCR ECR	-	1	1		-	2	2

Note. ^aThe minimum focal group sample size used for both the Mantel and Mantel Haenszel procedure was 100. CR items were flagged if Mantel $\chi^2 > 0$ ($p < .05$) & $SMD \geq 0.25$, where SMD = mean difference divided by total standard deviation.

^bIf an item was flagged for DIF against more than one focal group the item was included only once in this column total.

The following table is based on the completion of the entire form and includes all items regardless of designation.

Table 12. Summary of Field Test Completion Rates.

	Percent Who Answered All Items	Percent Who Answered All SR and SPR Items	Percent Who Answered These Numbers of BCR Items											Percent Who Answered These Numbers of ECR Items					
			0	1	2	3	4	5	6	7	8	9	10	0	1	2	3	4	5
Algebra																			
Form L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Form M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Form N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biology																			
Form J	40	84	3	2	3	4	5	7	9	10	15	43	-	-	-	-	-	-	-
Form K	48	84	3	3	4	4	6	11	16	52	0	0	-	-	-	-	-	-	-
English																			
Form K	63	83	5	7	16	72	-	-	-	-	-	-	-	11	89	-	-	-	-
Form I	75	87	6	8	86	-	-	-	-	-	-	-	-	9	91	-	-	-	-
Geometry																			
Form N	1	31	10	8	13	18	24	28	-	-	-	-	-	10	10	15	22	43	-
Form P	0	35	13	13	17	22	34	-	-	-	-	-	-	16	16	25	43	-	-
Government																			
Form K	38	86	3	2	2	3	5	6	8	12	18	41	-	17	83	-	-	-	-
Form I	27	85	7	4	5	5	6	7	9	12	16	29	-	9	91	-	-	-	-