

APPENDIX A: THE 2008 MSA-MATH STRATIFIED RANDOM SAMPLING

Reporting deadlines made it impossible to use almost 100% of the 2008 population as the 2008 calibration and equating data set, MSDE and NPC recommended that Pearson use equating samples instead of the 2008 population. Pearson chose Local Education Agency (LEA) as one of the most important variables for stratification. Based on the population percentage of each LEA, Pearson randomly selected about 3,000 students for each grade from first-waved documents (i.e., 50% of the statewide population) which were randomly distributed and completely scored. It should be noted that this method has been applied since the 2006 assessment.

To verify that the sample was representative of the statewide examinee population in terms of gender and ethnicity, the distributions of gender and ethnicity of the 2008 samples were compared with the 2008 population. The results are shown in this appendix. The percentages of male and female students were within 2.5 percentage points of the target values across all grades. The percentages of students from the five major ethnic groups were all within 2 percentage points of the target values across all grades. We conclude that the 2008 equating samples were representative of the 2008 statewide examinee population in terms of LEA, gender, and ethnicity.

Table A.1 2008 MSA-Math Population and Stratified Random Sampling (S.R.S.): Grade 3 LEA

LEA	Operational Form A				Operational Form F			
	2008 Pop.	2008	% of 2008	% of Differ.	2008 Pop.	2008	% of 2008	
	%	S. R. S.	S. R. S.		%	S. R. S.	S. R. S.	
1	1.08	32	1.07	0.01	1.08	32	1.07	0.01
2	8.92	268	8.99	-0.07	8.92	268	8.94	-0.02
3	12.59	378	12.68	-0.09	12.59	378	12.60	-0.01
4	2.00	60	2.01	-0.01	2.00	60	2.00	0.00
5	0.58	18	0.60	-0.02	0.58	18	0.60	-0.02
6	3.18	95	3.19	-0.01	3.18	95	3.17	0.01
7	1.97	59	1.98	-0.01	1.97	59	1.97	0.00
8	2.88	86	2.88	0.00	2.88	86	2.87	0.01
9	0.51	15	0.50	0.01	0.51	15	0.50	0.01
10	4.80	144	4.83	-0.03	4.80	144	4.80	0.00
11	0.53	16	0.54	-0.01	0.53	16	0.53	0.00
12	4.71	141	4.73	-0.02	4.71	141	4.70	0.01
13	5.75	172	5.77	-0.02	5.75	172	5.74	0.01
14	0.26	8	0.27	-0.01	0.26	8	0.27	-0.01
15	16.26	488	16.37	-0.11	16.26	488	16.27	-0.01
16	14.53	436	14.63	-0.10	14.53	436	14.54	-0.01
17	0.90	27	0.91	-0.01	0.90	27	0.90	0.00
18	1.99	60	2.01	-0.02	1.99	60	2.00	-0.01
19	0.35	0	0.00	0.35	0.35	10	0.33	0.02
20	0.48	15	0.50	-0.02	0.48	15	0.5	-0.02
21	2.68	80	2.68	0.00	2.68	80	2.67	0.01
22	1.92	58	1.95	-0.03	1.92	58	1.93	-0.01
23	0.77	15	0.50	0.27	0.77	23	0.77	0.00
24	0.21	6	0.20	0.01	0.21	6	0.20	0.01
30	10.13	304	10.20	-0.07	10.13	304	10.14	-0.01
Total	100.00	2,981	100.00	0.00	100.00	2,999	100.00	0.00

Note. 1. Allegany; 2. Anne Arundel; 3. Baltimore; 4. Calvert; 5. Caroline; 6. Carroll; 7. Cecil; 8. Charles; 9. Dorchester; 10. Frederick; 11. Garrett; 12. Harford; 13. Howard; 14. Kent; 15. Montgomery; 16. Prince George's; 17. Queen Anne's; 18. St. Mary's; 19. Somerset; 20. Talbot; 21. Washington; 22. Wicomico; 23. Worcester; 24. LEA 24; 30. Baltimore City; 31. Edison Partnership

Table A.2 2008 MSA-Math Population and Stratified Random Sampling (S.R.S.): Grade 3 Ethnicity

Race	Operational Form A				Operational Form F			
	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.
1	0.41	11	0.37	0.04	0.41	13	0.43	-0.02
2	5.92	172	5.77	0.15	5.92	178	5.94	-0.02
3	37.75	1131	37.94	-0.19	37.75	1119	37.31	0.43
4	46.31	1373	46.06	0.25	46.31	1419	47.32	-1.01
5	9.42	288	9.66	-0.24	9.42	264	8.80	0.61
Miss	0.20	6	0.20	0.00	0.20	6	0.20	0.00
Total	100.00	2,981	100.00	0.00	100.00	2,999	100.00	0.00

Note. 1. American Indian; 2. Asian American; 3. African American; 4. White; 5. Hispanic; Miss: Missing

Table A.3 2008 MSA- Mathematics Population and Stratified Random Sampling (S.R.S.): Grade 3 Gender

Gender	Operational Form A				Operational Form F			
	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.
F	51.35	1492	50.05	1.30	51.35	1545	51.52	-0.17
M	48.49	1486	49.85	-1.36	48.49	1447	48.25	0.24
Miss	0.16	3	0.10	0.06	0.16	7	0.23	-0.08
Total	100.00	2,981	100.00	0.00	100.00	2,999	100.00	0.00

Note. F. Female; M. Male; Miss: Missing

Table A.4 2008 MSA-Mathematics Population and Stratified Random Sampling (S.R.S.): Grade 4 LEA

LEA	Operational Form A				Operational Form F			
	2008 Pop.	2008	% of 2008	% of Differ.	2008 Pop.	2008	% of 2008	
	%	S. R. S.	S. R. S.		%	S. R. S.	S. R. S.	
1	1.11	33	1.10	0.01	1.11	33	1.10	0.01
2	9.04	271	9.06	-0.02	9.04	271	9.04	0.00
3	12.34	370	12.37	-0.03	12.34	370	12.35	-0.01
4	2.05	61	2.04	0.01	2.05	61	2.04	0.01
5	0.60	18	0.60	0.00	0.60	18	0.60	0.00
6	3.37	101	3.38	-0.01	3.37	101	3.37	0.00
7	2.02	61	2.04	-0.02	2.02	61	2.04	-0.02
8	3.04	91	3.04	0.00	3.04	91	3.04	0.00
9	0.46	14	0.47	-0.01	0.46	14	0.47	-0.01
10	4.85	145	4.85	0.00	4.85	145	4.84	0.01
11	0.53	16	0.53	0.00	0.53	16	0.53	0.00
12	4.79	144	4.81	-0.02	4.79	144	4.80	-0.01
13	6.06	182	6.08	-0.02	6.06	182	6.07	-0.01
14	0.24	7	0.23	0.01	0.24	7	0.23	0.01
15	16.06	482	16.11	-0.05	16.06	482	16.08	-0.02
16	14.75	442	14.77	-0.02	14.75	442	14.75	0.00
17	0.88	26	0.87	0.01	0.88	26	0.87	0.01
18	1.91	57	1.91	0.00	1.91	57	1.90	0.01
19	0.28	8	0.27	0.01	0.28	8	0.27	0.01
20	0.48	14	0.47	0.01	0.48	14	0.47	0.01
21	2.64	79	2.64	0.00	2.64	79	2.64	0.00
22	1.83	55	1.84	-0.01	1.83	55	1.84	-0.01
23	0.74	17	0.57	0.17	0.74	22	0.73	0.01
24	0.26	8	0.27	-0.01	0.26	8	0.27	-0.01
30	9.66	290	9.69	-0.03	9.66	290	9.68	-0.02
Total	100.00	2,992	100.01	-0.01	100.00	2,997	100.02	-0.02

Note. 1. Allegany; 2. Anne Arundel; 3. Baltimore; 4. Calvert; 5. Caroline; 6. Carroll; 7. Cecil; 8. Charles; 9. Dorchester; 10. Frederick; 11. Garrett; 12. Harford; 13. Howard; 14. Kent; 15. Montgomery; 16. Prince George's; 17. Queen Anne's; 18. St. Mary's; 19. Somerset; 20. Talbot; 21. Washington; 22. Wicomico; 23. Worcester; 24. LEA 24; 30. Baltimore City; 31. Edison Partnership

Table A.5 2008 MSA-Mathematics Population and Stratified Random Sampling (S.R.S.): Grade 4 Ethnicity

Race	Operational Form A				Operational Form F			
	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.
1	0.39	15	0.50	-0.11	0.39	10	0.33	0.06
2	5.89	176	5.88	0.00	5.89	159	5.31	0.58
3	37.53	1135	37.93	-0.40	37.53	1129	37.67	-0.14
4	46.85	1370	45.79	1.06	46.85	1400	46.71	0.14
5	9.13	292	9.76	-0.63	9.13	291	9.71	-0.58
Miss	0.20	4	0.13	0.07	0.20	8	0.27	-0.06
Total	100.00	2,992	100.00	0.00	100.00	2,997	100.00	0.00

Note. 1. American Indian; 2. Asian American; 3. African American; 4. White; 5. Hispanic; Miss: Missing

Table A.6 2008 MSA-Mathematics Population and Stratified Random Sampling (S.R.S.): Grade 4 Gender

Gender	Operational Form A				Operational Form F			
	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.
F	50.90	1479	49.43	1.47	50.90	1538	51.32	-0.42
M	48.95	1509	50.43	-1.48	48.95	1453	48.48	0.47
Miss	0.15	4	0.13	0.01	0.15	6	0.20	-0.05
Total	100.00	2,992	100.00	0.00	100.00	2,997	100.00	0.00

Note. F. Female; M. Male; Miss: Missing

Table A.7 2008 MSA-Math Population and Stratified Random Sampling (S.R.S.): Grade 5 LEA

LEA	Operational Form A				Operational Form F			
	2008 Pop.	2008	% of 2008	% of Differ.	2008 Pop.	2008	% of 2008	
	%	S. R. S.	S. R. S.		%	S. R. S.	S. R. S.	
1	1.11	33	1.11	0.00	1.11	33	1.13	-0.02
2	8.80	264	8.89	-0.09	8.80	264	9.04	-0.24
3	12.23	367	12.36	-0.13	12.23	367	12.56	-0.33
4	2.02	61	2.05	-0.03	2.02	61	2.09	-0.07
5	0.71	21	0.71	0.00	0.71	21	0.72	-0.01
6	3.26	98	3.30	-0.04	3.26	98	3.36	-0.10
7	1.92	58	1.95	-0.03	1.92	58	1.99	-0.07
8	3.23	97	3.27	-0.04	3.23	97	3.32	-0.09
9	0.58	17	0.57	0.01	0.58	17	0.58	0.00
10	4.84	145	4.88	-0.04	4.84	145	4.96	-0.12
11	0.50	15	0.51	-0.01	0.50	15	0.51	-0.01
12	4.81	144	4.85	-0.04	4.81	144	4.93	-0.12
13	6.12	183	6.16	-0.04	6.12	183	6.26	-0.14
14	0.27	8	0.27	0.00	0.27	8	0.27	0.00
15	16.31	489	16.47	-0.16	16.31	420	14.38	1.93
16	14.93	448	15.09	-0.16	14.93	448	15.34	-0.41
17	0.90	27	0.91	-0.01	0.90	27	0.92	-0.02
18	2.04	61	2.05	-0.01	2.04	61	2.09	-0.05
19	0.30	2	0.07	0.23	0.30	1	0.03	0.27
20	0.48	14	0.47	0.01	0.48	14	0.48	0.00
21	2.67	80	2.69	-0.02	2.67	80	2.74	-0.07
22	1.86	56	1.89	-0.03	1.86	56	1.92	-0.06
23	0.75	0	0	0.75	0.75	22	0.75	0.00
24	0.29	9	0.30	-0.01	0.29	9	0.31	-0.02
30	9.07	272	9.16	-0.09	9.07	272	9.31	-0.24
Total	100.00	2,969	99.98	0.02	100.00	2,921	99.99	0.01

Note. 1. Allegany; 2. Anne Arundel; 3. Baltimore; 4. Calvert; 5. Caroline; 6. Carroll; 7. Cecil; 8. Charles; 9. Dorchester; 10. Frederick; 11. Garrett; 12. Harford; 13. Howard; 14. Kent; 15. Montgomery; 16. Prince George's; 17. Queen Anne's; 18. St. Mary's; 19. Somerset; 20. Talbot; 21. Washington; 22. Wicomico; 23. Worcester; 24. LEA 24; 30. Baltimore City; 31. Edison Partnership

Table A.8 2008 MSA-Mathematics Population and Stratified Random Sampling (S.R.S.): Grade 5 Ethnicity

Race	Operational Form A				Operational Form F			
	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.
1	0.37	5	0.17	0.20	0.37	15	0.51	-0.15
2	5.91	161	5.42	0.49	5.91	181	6.20	-0.29
3	37.34	1160	39.07	-1.73	37.34	1074	36.77	0.57
4	46.95	1365	45.98	0.97	46.95	1402	48.00	-1.05
5	9.25	277	9.33	-0.08	9.25	241	8.25	1.00
Miss	0.18	1	0.03	0.15	0.18	8	0.27	-0.09
Total	100.00	2,969	100.00	0.00	100.00	2,921	100.00	0.00

Note. 1. American Indian; 2. Asian American; 3. African American; 4. White; 5. Hispanic; Miss: Missing

Table A.9 2008 MSA-Mathematics Population and Stratified Random Sampling (S.R.S.): Grade 5 Gender

Gender	Operational Form A				Operational Form F			
	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.
F	51.32	1514	50.99	0.32	51.32	1464	50.12	1.20
M	48.53	1453	48.94	-0.41	48.53	1451	49.67	-1.15
Miss	0.15	2	0.07	0.09	0.15	6	0.21	-0.05
Total	100.00	2,969	100.00	0.00	100.00	2,921	100.00	0.00

Note. F. Female; M. Male; Miss: Missing

Table A.10 2008 MSA-Mathematics Population and Stratified Random Sampling (S.R.S.): Grade 6 LEA

LEA	Operational Form A				Operational Form F			
	2008 Pop.	2008	% of 2008	% of Differ.	2008 Pop.	2008	% of 2008	
	%	S. R. S.	S. R. S.		%	S. R. S.	S. R. S.	
1	1.06	32	1.07	-0.01	1.06	32	1.07	-0.01
2	8.84	265	8.83	0.01	8.84	265	8.84	0.00
3	12.23	367	12.23	0.00	12.23	367	12.25	-0.02
4	2.16	65	2.17	-0.01	2.16	65	2.17	-0.01
5	0.59	18	0.60	-0.01	0.59	18	0.60	-0.01
6	3.49	105	3.50	-0.01	3.49	105	3.50	-0.01
7	1.97	59	1.97	0.00	1.97	59	1.97	0.00
8	3.25	97	3.23	0.02	3.25	97	3.24	0.01
9	0.52	16	0.53	-0.01	0.52	16	0.53	-0.01
10	4.93	148	4.93	0.00	4.93	148	4.94	-0.01
11	0.53	16	0.53	0.00	0.53	16	0.53	0.00
12	4.83	145	4.83	0.00	4.83	145	4.84	-0.01
13	6.22	186	6.20	0.02	6.22	186	6.21	0.01
14	0.23	7	0.23	0.00	0.23	7	0.23	0.00
15	15.78	473	15.76	0.02	15.78	473	15.78	0.00
16	15.32	460	15.32	0.00	15.32	460	15.35	-0.03
17	1.02	31	1.03	-0.01	1.02	31	1.03	-0.01
18	1.97	59	1.97	0.00	1.97	59	1.97	0.00
19	0.36	11	0.37	-0.01	0.36	11	0.37	-0.01
20	0.53	16	0.53	0.00	0.53	16	0.53	0.00
21	2.66	80	2.66	0.00	2.66	80	2.67	-0.01
22	1.53	46	1.53	0.00	1.53	46	1.53	0.00
23	0.74	22	0.73	0.01	0.74	22	0.73	0.01
24	0.39	12	0.40	-0.01	0.39	7	0.23	0.16
30	8.86	266	8.86	0.00	8.86	266	8.88	-0.02
Total	100.00	3,002	100.01	-0.01	100.00	2,997	99.99	0.01

Note. 1. Allegany; 2. Anne Arundel; 3. Baltimore; 4. Calvert; 5. Caroline; 6. Carroll; 7. Cecil; 8. Charles; 9. Dorchester; 10. Frederick; 11. Garrett; 12. Harford; 13. Howard; 14. Kent; 15. Montgomery; 16. Prince George's; 17. Queen Anne's; 18. St. Mary's; 19. Somerset; 20. Talbot; 21. Washington; 22. Wicomico; 23. Worcester; 24. LEA 24; 30. Baltimore City; 31. Edison Partnership

Table A.11 2008 MSA-Mathematics Population and Stratified Random Sampling (S.R.S.): Grade 6 Ethnicity

Race	Operational Form A				Operational Form F			
	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.
1	0.31	16	0.53	-0.22	0.31	8	0.27	0.05
2	5.68	156	5.20	0.49	5.68	177	5.91	-0.22
3	37.25	1150	38.31	-1.06	37.25	1124	37.50	-0.26
4	47.44	1421	47.34	0.10	47.44	1432	47.78	-0.34
5	9.04	244	8.13	0.91	9.04	249	8.31	0.73
Miss	0.28	15	0.50	-0.22	0.28	7	0.23	0.05
Total	100.00	3,002	100.00	0.00	100.00	2,997	100.00	0.00

Note. 1. American Indian; 2. Asian American; 3. African American; 4. White; 5. Hispanic; Miss: Missing

Table A.12 2008 MSA-Mathematics Population and Stratified Random Sampling (S.R.S.): Grade 6 Gender

Gender	Operational Form A				Operational Form F			
	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.
F	50.82	1581	52.66	-1.85	50.82	1502	50.12	0.70
M	48.94	1408	46.90	2.04	48.94	1490	49.72	-0.78
Miss	0.24	13	0.43	-0.19	0.24	5	0.17	0.07
Total	100.00	3,002	100.00	0.00	100.00	2,997	100.00	0.00

Note. F. Female; M. Male; Miss: Missing

Table A.13 2008 MSA-Math Population and Stratified Random Sampling (S.R.S.): Grade 7 LEA

LEA	Operational Form A				Operational Form F			
	2008 Pop.	2008	% of 2008	% of Differ.	2008 Pop.	2008	% of 2008	
	%	S. R. S.	S. R. S.		%	S. R. S.	S. R. S.	
1	1.06	32	1.09	-0.03	1.06	32	1.07	-0.01
2	8.81	264	9.02	-0.21	8.81	264	8.84	-0.03
3	12.29	369	12.61	-0.32	12.29	369	12.36	-0.07
4	2.17	65	2.22	-0.05	2.17	65	2.18	-0.01
5	0.64	19	0.65	-0.01	0.64	19	0.64	0.00
6	3.37	101	3.45	-0.08	3.37	101	3.38	-0.01
7	1.97	59	2.02	-0.05	1.97	59	1.98	-0.01
8	3.26	98	3.35	-0.09	3.26	98	3.28	-0.02
9	0.51	15	0.51	0.00	0.51	15	0.50	0.01
10	4.99	150	5.13	-0.14	4.99	150	5.03	-0.04
11	0.57	17	0.58	-0.01	0.57	17	0.57	0.00
12	4.79	144	4.92	-0.13	4.79	144	4.82	-0.03
13	6.52	195	6.66	-0.14	6.52	195	6.53	-0.01
14	0.25	8	0.27	-0.02	0.25	8	0.27	-0.02
15	16.33	427	14.59	1.74	16.33	490	16.42	-0.09
16	14.80	444	15.17	-0.37	14.80	444	14.87	-0.07
17	0.91	27	0.92	-0.01	0.91	27	0.90	0.01
18	1.89	57	1.95	-0.06	1.89	57	1.91	-0.02
19	0.36	3	0.10	0.26	0.36	0	0	0.36
20	0.50	15	0.51	-0.01	0.50	15	0.50	0.00
21	2.43	73	2.49	-0.06	2.43	73	2.45	-0.02
22	1.49	45	1.54	-0.05	1.49	45	1.51	-0.02
23	0.72	22	0.75	-0.03	0.72	22	0.74	-0.02
24	0.51	11	0.38	0.13	0.51	10	0.34	0.17
30	8.85	266	9.09	-0.24	8.85	266	8.91	-0.06
Total	100.00	2,926	99.97	0.03	100.00	2,985	100.00	0.00

Note. 1. Allegany; 2. Anne Arundel; 3. Baltimore; 4. Calvert; 5. Caroline; 6. Carroll; 7. Cecil; 8. Charles; 9. Dorchester; 10. Frederick; 11. Garrett; 12. Harford; 13. Howard; 14. Kent; 15. Montgomery; 16. Prince George's; 17. Queen Anne's; 18. St. Mary's; 19. Somerset; 20. Talbot; 21. Washington; 22. Wicomico; 23. Worcester; 24. LEA 24; 30. Baltimore City

Table A.14 2008 MSA-Mathematics Population and Stratified Random Sampling (S.R.S.): Grade 7 Ethnicity

Race	Operational Form A				Operational Form F			
	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.
1	0.41	9	0.31	0.10	0.41	5	0.17	0.24
2	5.52	139	4.75	0.77	5.52	175	5.86	-0.34
3	37.92	1133	38.72	-0.81	37.92	1156	38.73	-0.81
4	47.45	1394	47.64	-0.20	47.45	1380	46.23	1.22
5	8.53	246	8.41	0.12	8.53	260	8.71	-0.18
Miss	0.18	5	0.17	0.01	0.18	9	0.30	-0.12
Total	100.00	2,926	100.00	0.00	100.00	2,985	100.00	0.00

Note. 1. American Indian; 2. Asian American; 3. African American; 4. White; 5. Hispanic; Miss: Missing

Table A.15 2008 MSA-Mathematics Population and Stratified Random Sampling (S.R.S.): Grade 7 Gender

Gender	Operational Form A				Operational Form F			
	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.
F	51.25	1435	49.04	2.20	51.25	1460	48.91	2.34
M	48.64	1488	50.85	-2.22	48.64	1522	50.99	-2.35
Miss	0.11	3	0.10	0.01	0.11	3	0.10	0.01
Total	100.00	2,926	100.00	0.00	100.00	2,985	100.00	0.00

Note. F. Female; M. Male; Miss: Missing

Table A.16 2008 MSA-Mathematics Population and Stratified Random Sampling (S.R.S.): Grade 8 LEA

LEA	Operational Form A				Operational Form F			
	2008 Pop.	2008	% of 2008	% of Differ.	2008 Pop.	2008	% of 2008	
	%	S. R. S.	S. R. S.		%	S. R. S.	S. R. S.	
1	1.01	30	1.00	0.01	1.01	30	1.00	0.01
2	8.55	257	8.60	-0.05	8.55	257	8.59	-0.04
3	12.19	366	12.24	-0.05	12.19	366	12.24	-0.05
4	2.08	62	2.07	0.01	2.08	62	2.07	0.01
5	0.63	19	0.64	-0.01	0.63	19	0.64	-0.01
6	3.51	105	3.51	0.00	3.51	105	3.51	0.00
7	1.97	59	1.97	0.00	1.97	59	1.97	0.00
8	3.35	101	3.38	-0.03	3.35	101	3.38	-0.03
9	0.57	17	0.57	0.00	0.57	17	0.57	0.00
10	4.71	141	4.72	-0.01	4.71	141	4.71	0.00
11	0.57	17	0.57	0.00	0.57	17	0.57	0.00
12	4.70	141	4.72	-0.02	4.70	141	4.71	-0.01
13	6.06	182	6.09	-0.03	6.06	182	6.08	-0.02
14	0.25	8	0.27	-0.02	0.25	8	0.27	-0.02
15	16.09	483	16.16	-0.07	16.09	483	16.15	-0.06
16	15.52	466	15.59	-0.07	15.52	466	15.58	-0.06
17	0.98	29	0.97	0.01	0.98	29	0.97	0.01
18	2.03	61	2.04	-0.01	2.03	61	2.04	-0.01
19	0.32	0	0	0.32	0.32	0	0	0.32
20	0.50	15	0.50	0.00	0.50	15	0.50	0.00
21	2.54	76	2.54	0.00	2.54	76	2.54	0.00
22	1.54	46	1.54	0.00	1.54	46	1.54	0.00
23	0.82	25	0.84	-0.02	0.82	25	0.84	-0.02
24	0.71	19	0.64	0.07	0.71	21	0.70	0.01
30	8.79	264	8.83	-0.04	8.79	264	8.83	-0.04
Total	100.00	2,989	100.00	0.00	100.00	2,991	100.00	0.00

Note. 1. Allegany; 2. Anne Arundel; 3. Baltimore; 4. Calvert; 5. Caroline; 6. Carroll; 7. Cecil; 8. Charles; 9. Dorchester; 10. Frederick; 11. Garrett; 12. Harford; 13. Howard; 14. Kent; 15. Montgomery; 16. Prince George's; 17. Queen Anne's; 18. St. Mary's; 19. Somerset; 20. Talbot; 21. Washington; 22. Wicomico; 23. Worcester; 24. LEA 24; 30. Baltimore City

Table A.17 2008 MSA-Mathematics Population and Stratified Random Sampling (S.R.S.): Grade 8 Ethnicity

Race	Operational Form A				Operational Form F			
	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.
1	0.41	13	0.43	-0.03	0.41	12	0.40	0.00
2	5.37	145	4.85	0.52	5.37	169	5.65	-0.28
3	38.85	1161	38.84	0.01	38.85	1173	39.22	-0.36
4	47.08	1374	45.97	1.11	47.08	1385	46.31	0.78
5	8.10	289	9.67	-1.57	8.10	246	8.22	-0.13
Miss	0.20	7	0.23	-0.04	0.20	6	0.20	0.00
Total	100.00	2,989	100.00	0.00	100.00	2,991	100.00	0.00

Note. 1. American Indian; 2. Asian American; 3. African American; 4. White; 5. Hispanic; Miss: Missing

Table A.18 2008 MSA-Mathematics Population and Stratified Random Sampling (S.R.S.): Grade 8 Gender

Gender	Operational Form A				Operational Form F			
	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.	2008 Pop. %	2008 S. R. S.	% of 2008 S. R. S.	% of Differ.
F	51.38	1585	53.03	-1.65	51.38	1514	50.62	0.76
M	48.49	1398	46.77	1.72	48.49	1473	49.25	-0.75
Miss	0.12	6	0.20	-0.08	0.12	4	0.13	-0.01
Total	100.00	2,989	100.00	0.00	100.00	2,991	100.00	0.00

Note. F. Female; M. Male; Miss: Missing