

# **APPENDIX J**

## **ANALYSIS OF EQUATING ITEMS**

**Table J-1. 2016 MCAS: Delta Analysis Results –  
ELA Grade 3**

Item Number	P		Delta		Discard	Std
	<i>Old</i>	<i>New</i>	<i>Old</i>	<i>New</i>		
298228	0.82000	0.85000	9.33854	8.85427	False	-0.69570
298229	0.89000	0.92000	8.09389	7.37971	False	0.54786
298231	0.80000	0.83000	9.63352	9.18334	False	-0.83299
298236	0.87000	0.90000	8.49444	7.87379	False	-0.00326
298240	0.89000	0.91000	8.09389	7.63698	False	-1.43856
303620	0.91000	0.92000	7.63698	7.37971	False	-0.15225
303624	0.52000	0.51000	12.79939	12.89972	False	0.40414
303625	0.62000	0.67000	11.77808	11.24035	False	0.75893
303629	0.93000	0.93000	7.09684	7.09684	False	2.06485
303634	0.54500	0.55000	12.54785	12.49735	False	-0.65302

**Table J-2. 2016 MCAS: Delta Analysis Results –  
ELA Grade 4**

Item Number	P		Delta		Discard	Std
	<i>Old</i>	<i>New</i>	<i>Old</i>	<i>New</i>		
307616	0.64000	0.71000	11.56616	10.78646	False	2.00174
307618	0.54000	0.56000	12.59827	12.39612	False	-0.71338
307621	0.70000	0.70000	10.90240	10.90240	False	1.95061
307625	0.71000	0.75000	10.78646	10.30204	False	-0.61473
307627	0.41000	0.42250	13.91018	13.78201	False	-0.71867
308993	0.83000	0.85000	9.18334	8.85427	False	0.97855
308995	0.77000	0.81000	10.04461	9.48841	False	-0.67827
308996	0.90000	0.93000	7.87379	7.09684	False	-0.79044
309001	0.92000	0.94000	7.37971	6.78091	False	0.47810
309002	0.84000	0.88000	9.02217	8.30005	False	-0.30510
309004	0.87000	0.90000	8.49444	7.87379	False	-0.50932
309005	0.91000	0.94000	7.63698	6.78091	False	-0.42418
309013	0.90000	0.93000	7.87379	7.09684	False	-0.79044
309014	0.89000	0.93000	8.09389	7.09684	False	0.88858
309015	0.46500	0.47750	13.35138	13.22572	False	-0.75305

**Table J-3. 2016 MCAS: Delta Analysis Results –  
ELA Grade 5**

Item Number	P		Delta		Discard	Std
	<i>Old</i>	<i>New</i>	<i>Old</i>	<i>New</i>		
283312	0.88000	0.89000	8.30005	8.09389	False	-0.58693
283314	0.84000	0.84000	9.02217	9.02217	False	0.32410
283323	0.94000	0.95000	6.78091	6.42059	False	-0.89141
283324	0.88000	0.91000	8.30005	7.63698	False	0.53443
283325	0.71000	0.76000	10.78646	10.17479	False	0.38597
283339	0.62000	0.67000	11.77808	11.24035	False	0.08422
283358	0.69000	0.73000	11.01660	10.54875	False	-0.25889
283363	0.73000	0.75000	10.54875	10.30204	False	-0.84764

continued

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
283370	0.62000	0.63000	11.77808	11.67259	False	-0.24868
283382	0.46500	0.50250	13.35138	12.97493	False	-0.59407
313036	0.81000	0.84000	9.48841	9.02217	False	-0.31831
313039	0.74000	0.69000	10.42662	11.01660	False	2.95376
313048	0.40000	0.43750	14.01339	13.62924	False	-0.53655

**Table J-4. 2016 MCAS: Delta Analysis Results –  
ELA Grade 6**

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
302777	0.68000	0.72000	11.12920	10.66863	False	-0.88304
302782	0.73000	0.77000	10.54875	10.04461	False	-0.14197
302785	0.72000	0.76000	10.66863	10.17479	False	-0.31199
302788	0.78000	0.82000	9.91123	9.33854	False	0.94351
302790	0.39500	0.43250	14.06524	13.68005	False	-1.20270
303465	0.56000	0.59000	12.39612	12.08982	False	-0.65605
303466	0.90000	0.90000	7.87379	7.87379	False	2.03905
303471	0.85000	0.87000	8.85427	8.49444	False	-1.53916
303472	0.62000	0.67000	11.77808	11.24035	False	-0.06078
303474	0.87000	0.88000	8.49444	8.30005	False	-0.32889
303478	0.85000	0.88000	8.85427	8.30005	False	1.01023
303485	0.82000	0.83000	9.33854	9.18334	False	0.43178
303489	0.55750	0.57750	12.42146	12.21799	False	0.70001

**Table J-5. 2016 MCAS: Delta Analysis Results –  
ELA Grade 7**

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
297189	0.89000	0.91000	8.09389	7.63698	False	-0.17739
297191	0.88000	0.91000	8.30005	7.63698	False	-0.98952
297192	0.78000	0.83000	9.91123	9.18334	False	-0.80412
297195	0.76000	0.78000	10.17479	9.91123	False	0.57362
297198	0.58000	0.66000	12.19243	11.35015	False	-0.34339
297202	0.92000	0.96000	7.37971	5.99726	False	1.75950
314025	0.73000	0.79000	10.54875	9.77432	False	-0.61801
314031	0.72000	0.79000	10.66863	9.77432	False	-0.14575
314034	0.90000	0.90000	7.87379	7.87379	False	1.62137
314035	0.50250	0.57250	12.97493	12.26903	False	-0.87631

**Table J-6. 2016 MCAS: Delta Analysis Results –  
ELA Grade 8**

Item Number	P		Delta		Discard	Std
	<i>Old</i>	<i>New</i>	<i>Old</i>	<i>New</i>		
302289	0.91000	0.92000	7.63698	7.37971	False	-0.39046
302290	0.85000	0.85000	8.85427	8.85427	False	1.92226
302292	0.77000	0.78000	10.04461	9.91123	False	0.92933
302294	0.75000	0.78000	10.30204	9.91123	False	-0.79531
302295	0.89000	0.90000	8.09389	7.87379	False	-1.41606
302296	0.74000	0.78000	10.42662	9.91123	False	1.06946
302300	0.68000	0.70000	11.12920	10.90240	False	0.47212
302302	0.83000	0.85000	9.18334	8.85427	False	-0.71582
302305	0.63000	0.66000	11.67259	11.35015	False	-0.53419
302310	0.62000	0.67000	11.77808	11.24035	False	0.14173
302312	0.59750	0.64500	12.01247	11.51258	False	-0.68306

**Table J-7. 2016 MCAS: Delta Analysis Results –  
ELA Grade 10**

Item Number	P		Delta		Discard	Std
	<i>Old</i>	<i>New</i>	<i>Old</i>	<i>New</i>		
290898	0.79000	0.79000	9.77432	9.77432	False	-0.95839
290900	0.95000	0.94000	6.42059	6.78091	False	-0.16087
290902	0.74000	0.78000	10.42662	9.91123	False	2.01064
290905	0.70000	0.69000	10.90240	11.01660	False	-0.84723
290909	0.48000	0.44250	13.20061	13.57854	False	1.13364
299075	0.93000	0.92000	7.09684	7.37971	False	-0.50557
299076	0.84000	0.83000	9.02217	9.18334	False	-0.89601
299077	0.86000	0.85000	8.67872	8.85427	False	-0.87026
299078	0.85000	0.82000	8.85427	9.33854	False	1.00757
299079	0.61000	0.60000	11.88272	11.98661	False	-0.73698
299080	0.70000	0.69000	10.90240	11.01660	False	-0.84723
299081	0.55000	0.58000	12.49735	12.19243	False	0.38830
299082	0.81000	0.80000	9.48841	9.63352	False	-0.91038
299083	0.74500	0.70750	10.36465	10.81562	False	1.07323
302639	0.72000	0.71000	10.66863	10.78646	False	-0.86654
302642	0.81000	0.78000	9.48841	9.91123	False	0.75110
302645	0.87000	0.86000	8.49444	8.67872	False	-0.85028
302646	0.77000	0.81000	10.04461	9.48841	False	2.32178
302652	0.64000	0.63750	11.56616	11.59286	False	-1.25431
302860	0.55000	0.60000	12.49735	11.98661	False	1.61963
302863	0.80000	0.82000	9.63352	9.33854	False	0.83107
302868	0.79000	0.80000	9.77432	9.63352	False	-0.11602
302869	0.73000	0.71000	10.54875	10.78646	False	-0.17032
302873	0.74000	0.76000	10.42662	10.17479	False	0.43382
302877	0.65000	0.66000	11.45872	11.35015	False	-0.60428
302878	0.83000	0.81000	9.18334	9.48841	False	-0.00680
302883	0.80000	0.81000	9.63352	9.48841	False	-0.06560
302886	0.63000	0.64250	11.67259	11.53940	False	-0.49454
303654	0.68000	0.71000	11.12920	10.78646	False	0.85451

continued

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
303660	0.72000	0.70000	10.66863	10.90240	False	-0.17292
303662	0.96000	0.96000	5.99726	5.99726	False	-0.29589
303663	0.66000	0.67000	11.35015	11.24035	False	-0.57788
303666	0.54000	0.47250	12.59827	13.27595	False	2.82138
303872	0.71000	0.73000	10.78646	10.54875	False	0.28625
303873	0.88000	0.85000	8.30005	8.85427	False	1.32880
304010	0.85000	0.85000	8.85427	8.85427	False	-0.79701
304011	0.94000	0.94000	6.78091	6.78091	False	-0.43335
304013	0.90000	0.89000	7.87379	8.09389	False	-0.74492
304017	0.79000	0.79000	9.77432	9.77432	False	-0.95839
304021	0.80000	0.78000	9.63352	9.91123	False	-0.09155
304029	0.58500	0.59500	12.14119	12.03830	False	-0.75793
304291	0.86000	0.85000	8.67872	8.85427	False	-0.87026

**Table J-8. 2016 MCAS: Delta Analysis Results –  
Mathematics Grade 3**

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
202992	0.76000	0.83000	10.17479	9.18334	False	1.36100
207791	0.87000	0.86000	8.49444	8.67872	False	2.05120
212474	0.78000	0.84000	9.91123	9.02217	False	0.80697
225833	0.76000	0.80000	10.17479	9.63352	False	-0.46382
293503	0.67000	0.71500	11.24035	10.72779	False	-0.01839
297404	0.75000	0.77500	10.30204	9.97834	False	-0.96111
297439	0.81000	0.84000	9.48841	9.02217	False	-1.10991
297446	0.89000	0.91000	8.09389	7.63698	False	-0.33673
298985	0.81000	0.84000	9.48841	9.02217	False	-1.10991
300728	0.74000	0.73000	10.42662	10.54875	False	0.78041
306309	0.87000	0.91000	8.49444	7.63698	False	-0.06819
306317	0.75000	0.79000	10.30204	9.77432	False	-0.45164
306371	0.45000	0.46000	13.50265	13.40173	False	-0.49412
309921	0.78000	0.80000	9.91123	9.63352	False	-0.56862
310857	0.50000	0.52000	13.00000	12.79939	False	-0.35501
310887	0.71000	0.74000	10.78646	10.42662	False	-0.87674
310894	0.58000	0.52000	12.19243	12.79939	False	1.81461

**Table J-9. 2016 MCAS: Delta Analysis Results –  
Mathematics Grade 4**

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
247750	0.86000	0.84000	8.67872	9.02217	False	2.43443
250416	0.90000	0.89000	7.87379	8.09389	False	1.08651
258221	0.62000	0.66000	11.77808	11.35015	False	-0.51354
293453	0.88000	0.88000	8.30005	8.30005	False	-0.06333
297625	0.93000	0.94000	7.09684	6.78091	False	0.30689
298098	0.87000	0.90000	8.49444	7.87379	False	1.35463

continued

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
301796	0.97000	0.97000	5.47683	5.47683	False	-0.66420
301804	0.61000	0.69000	11.88272	11.01660	False	0.67401
303333	0.76000	0.79000	10.17479	9.77432	False	-1.21544
307030	0.64000	0.70000	11.56616	10.90240	False	-0.43397
307039	0.59250	0.66750	12.06408	11.26792	False	0.09493
307065	0.44000	0.52000	13.60388	12.79939	False	-0.88840
307072	0.68000	0.74000	11.12920	10.42662	False	0.11400
307077	0.81000	0.83000	9.48841	9.18334	False	-1.25446
311541	0.48000	0.52000	13.20061	12.79939	False	0.61952
311555	0.72000	0.75000	10.66863	10.30204	False	-0.86074
311558	0.78000	0.80000	9.91123	9.63352	False	-0.79083

**Table J-10. 2016 MCAS: Delta Analysis Results –  
Mathematics Grade 5**

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
204708	0.89000	0.91000	8.09389	7.63698	False	-0.48293
206953	0.74000	0.77000	10.42662	10.04461	False	-0.13684
221205	0.90000	0.90000	7.87379	7.87379	False	-0.66570
248907	0.79000	0.82000	9.77432	9.33854	False	0.01184
262105	0.89000	0.91000	8.09389	7.63698	False	-0.48293
262140	0.85000	0.84000	8.85427	9.02217	False	0.20896
272901	0.67000	0.70750	11.24035	10.81562	False	0.49876
280733	0.87000	0.86000	8.49444	8.67872	False	0.47127
301167	0.50000	0.45000	13.00000	13.50265	False	1.10164
301183	0.70000	0.70000	10.90240	10.90240	False	-1.84222
303315	0.73000	0.79000	10.54875	9.77432	False	2.84513
303765	0.67250	0.64750	11.21269	11.48568	False	0.07861
306428	0.53000	0.56000	12.69892	12.39612	False	0.15357
311281	0.78000	0.77000	9.91123	10.04461	False	-0.45974
311298	0.81000	0.80000	9.48841	9.63352	False	-0.20789
311308	0.50000	0.51000	13.00000	12.89972	False	-1.24390
311323	0.74000	0.72000	10.42662	10.66863	False	0.15236

**Table J-11. 2016 MCAS: Delta Analysis Results –  
Mathematics Grade 6**

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
251299	0.66000	0.72000	11.35015	10.66863	False	-0.00876
264407	0.68000	0.71000	11.12920	10.78646	False	-0.84816
265893	0.66000	0.58000	11.35015	12.19243	False	2.03166
266113	0.85000	0.86000	8.85427	8.67872	False	-0.69947
272174	0.84000	0.77000	9.02217	10.04461	False	1.90351
272290	0.57000	0.71000	12.29450	10.78646	False	1.93387
272300	0.68000	0.75000	11.12920	10.30204	False	0.43426
282128	0.95000	0.95000	6.42059	6.42059	False	-0.53160

continued

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
296396	0.61500	0.60500	11.83050	11.93476	False	0.20274
298145	0.82000	0.83000	9.33854	9.18334	False	-0.87920
298163	0.71000	0.74000	10.78646	10.42662	False	-0.71380
311656	0.93000	0.92000	7.09684	7.37971	False	-0.55482
311659	0.82000	0.86000	9.33854	8.67872	False	0.45668
311690	0.74000	0.76000	10.42662	10.17479	False	-0.90622
311694	0.69750	0.70750	10.93111	10.81562	False	-0.61278
311708	0.37000	0.44000	14.32741	13.60388	False	-0.67139
311709	0.83000	0.81000	9.18334	9.48841	False	0.04629
314808	0.67000	0.71000	11.24035	10.78646	False	-0.58282

**Table J-12. 2016 MCAS: Delta Analysis Results –  
Mathematics Grade 7**

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
205493	0.77000	0.80000	10.04461	9.63352	False	-1.20423
219436	0.71000	0.76000	10.78646	10.17479	False	-0.75979
259107	0.62000	0.70000	11.77808	10.90240	False	-0.11830
272156	0.40500	0.48750	13.96170	13.12535	False	-0.86785
281419	0.49000	0.59000	13.10028	12.08982	False	-0.01971
281606	0.70000	0.74000	10.90240	10.42662	False	-1.18892
298181	0.86000	0.88000	8.67872	8.30005	False	-0.98017
298195	0.49000	0.50000	13.10028	13.00000	False	0.73569
298209	0.54000	0.65000	12.59827	11.45872	False	0.57080
298212	0.61000	0.64500	11.88272	11.51258	False	-0.54595
301860	0.71000	0.68000	10.78646	11.12920	False	1.62986
302316	0.64000	0.70000	11.56616	10.90240	False	-0.79704
302318	0.78000	0.75000	9.91123	10.30204	False	1.55179
306572	0.45000	0.54000	13.50265	12.59827	False	-0.50210
306606	0.63000	0.76000	11.67259	10.17479	False	2.07843
306615	0.59000	0.62000	12.08982	11.77808	False	-0.28441
311080	0.66000	0.74000	11.35015	10.42662	False	0.16843
311137	0.56000	0.57000	12.39612	12.29450	False	0.53348

**Table J-13. 2016 MCAS: Delta Analysis Results –  
Mathematics Grade 8**

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
219562	0.50000	0.66000	13.00000	11.35015	False	1.85145
219585	0.69000	0.75000	11.01660	10.30204	False	-0.14675
219587	0.80000	0.84000	9.63352	9.02217	False	0.31679
253753	0.72000	0.75000	10.66863	10.30204	False	-1.11927
263846	0.74000	0.70000	10.42662	10.90240	False	1.37237
264725	0.81000	0.80000	9.48841	9.63352	False	-0.29738
272928	0.73000	0.75000	10.54875	10.30204	False	-0.99963

continued

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
273670	0.86000	0.79000	8.67872	9.77432	False	2.44185
284880	0.80000	0.80000	9.63352	9.63352	False	-0.70292
296114	0.75000	0.80000	10.30204	9.63352	False	0.11739
297516	0.45000	0.49000	13.50265	13.10028	False	0.20945
297663	0.68000	0.71000	11.12920	10.78646	False	-0.98341
298039	0.62500	0.64750	11.72544	11.48568	False	-0.28476
301689	0.39000	0.50000	14.11728	13.00000	False	-0.60643
301713	0.56500	0.61500	12.34537	11.83050	False	-0.85103
307424	0.61000	0.68000	11.88272	11.12920	False	-0.52387
307500	0.86000	0.85000	8.67872	8.85427	False	-0.67015
307553	0.77000	0.77000	10.04461	10.04461	False	-0.46137
307585	0.82000	0.87000	9.33854	8.49444	False	1.27739
311451	0.82000	0.85000	9.33854	8.85427	False	0.06029

**Table J-14. 2016 MCAS: Delta Analysis Results –  
Mathematics Grade 10**

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
281614	0.61000	0.64000	11.88272	11.56616	False	0.85867
287679	0.68000	0.69000	11.12920	11.01660	False	-0.25218
287699	0.74000	0.67000	10.42662	11.24035	True	3.22214
294009	0.77000	0.75000	10.04461	10.30204	False	-0.18030
294151	0.73000	0.71000	10.54875	10.78646	False	-0.22177
294292	0.71000	0.71000	10.78646	10.78646	False	-0.87670
294480	0.66000	0.65000	11.35015	11.45872	False	-0.87560
294697	0.63750	0.64500	11.59286	11.51258	False	-0.51732
298055	0.43500	0.42500	13.65463	13.75647	False	-0.56387
301388	0.89000	0.89000	8.09389	8.09389	False	-0.46521
301440	0.43000	0.45000	13.70550	13.50265	False	-0.10342
301486	0.56000	0.55250	12.39612	12.47208	False	-0.91180
301997	0.75000	0.74000	10.30204	10.42662	False	-0.93956
302007	0.50000	0.52000	13.00000	12.79939	False	-0.00905
302040	0.63000	0.64000	11.67259	11.56616	False	-0.37240
302047	0.72000	0.76000	10.66863	10.17479	False	2.10992
302057	0.44000	0.46000	13.60388	13.40173	False	-0.09215
302066	0.58750	0.59250	12.11553	12.06408	False	-0.77055
303248	0.76000	0.72000	10.17479	10.66863	False	1.26075
303270	0.77000	0.77000	10.04461	10.04461	False	-0.76333
303274	0.74000	0.76000	10.42662	10.17479	False	0.69209
303296	0.61000	0.63000	11.88272	11.67259	False	0.21895
303308	0.65000	0.65000	11.45872	11.45872	False	-0.97944
303431	0.59000	0.55000	12.08982	12.49735	False	1.03459
303444	0.53000	0.53000	12.69892	12.69892	False	-1.16898
304337	0.65000	0.62000	11.45872	11.77808	False	0.40809
308020	0.58000	0.56000	12.19243	12.39612	False	-0.17505
308721	0.58000	0.55000	12.19243	12.49735	False	0.43348



**Table J-15. 2016 MCAS: Delta Analysis Results –  
STE Grade 5**

Item Number	P		Delta		Discard	Std
	<i>Old</i>	<i>New</i>	<i>Old</i>	<i>New</i>		
288208	0.60000	0.67000	11.98661	11.24035	False	1.97021
288212	0.71000	0.71000	10.78646	10.78646	False	-1.13289
289407	0.69000	0.69000	11.01660	11.01660	False	-1.09244
289409	0.93000	0.94000	7.09684	6.78091	False	-0.55700
289418	0.59000	0.59000	12.08982	12.08982	False	-0.90381
289448	0.77000	0.75000	10.04461	10.30204	False	-0.07653
289506	0.42000	0.42000	13.80757	13.80757	False	-0.60189
291065	0.78000	0.76000	9.91123	10.17479	False	-0.02932
291183	0.66000	0.66000	11.35015	11.35015	False	-1.03382
291229	0.81000	0.83000	9.48841	9.18334	False	-0.17872
291234	0.83000	0.85000	9.18334	8.85427	False	-0.13934
291290	0.87000	0.87000	8.49444	8.49444	False	-0.80174
291330	0.53000	0.55000	12.69892	12.49735	False	-0.01558
291387	0.70000	0.66000	10.90240	11.35015	False	0.51029
291591	0.41000	0.41000	13.91018	13.91018	False	-0.58386
291625	0.60500	0.55250	11.93476	12.47208	False	0.67598
294474	0.74000	0.69000	10.42662	11.01660	False	1.14513
299533	0.74000	0.69000	10.42662	11.01660	False	1.14513
299576	0.63000	0.61000	11.67259	11.88272	False	-0.54595
301136	0.75000	0.82000	10.30204	9.33854	False	2.51602
309980	0.84000	0.83000	9.02217	9.18334	False	-0.26988

**Table J-16. 2016 MCAS: Delta Analysis Results –  
STE Grade 8**

Item Number	P		Delta		Discard	Std
	<i>Old</i>	<i>New</i>	<i>Old</i>	<i>New</i>		
288320	0.74000	0.72000	10.42662	10.66863	False	0.35946
289584	0.40000	0.38000	14.01339	14.22192	False	-1.04047
289768	0.70000	0.66000	10.90240	11.35015	False	1.08889
291691	0.56000	0.62000	12.39612	11.77808	False	1.67147
291720	0.57000	0.65000	12.29450	11.45872	False	2.58400
291776	0.72000	0.76000	10.66863	10.17479	False	0.52664
291789	0.79000	0.80000	9.77432	9.63352	False	-1.07928
291839	0.56000	0.60000	12.39612	11.98661	False	0.76348
291994	0.49000	0.46000	13.10028	13.40173	False	-0.31659
291997	0.60000	0.60000	11.98661	11.98661	False	-1.16278
292014	0.74000	0.73000	10.42662	10.54875	False	-0.16253
292021	0.63500	0.61750	11.61950	11.80431	False	-0.30669
294058	0.50000	0.48000	13.00000	13.20061	False	-0.72062
294072	0.64000	0.67000	11.56616	11.24035	False	0.10886
294092	0.76000	0.75000	10.17479	10.30204	False	-0.05218
294239	0.63000	0.64000	11.67259	11.56616	False	-0.80921
299487	0.68000	0.68000	11.12920	11.12920	False	-0.93997
304516	0.72000	0.72000	10.66863	10.66863	False	-0.77893

continued

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
304558	0.78000	0.80000	9.91123	9.63352	False	-0.67927
304793	0.50500	0.44250	12.94987	13.57854	False	1.16072
310231	0.63000	0.61000	11.67259	11.88272	False	-0.21501

**Table J-17. 2016 MCAS: Delta Analysis Results –  
High School Biology**

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
261212	0.86000	0.87000	8.67872	8.49444	False	-1.27316
276542	0.83000	0.84000	9.18334	9.02217	False	-1.10821
279799	0.70000	0.68000	10.90240	11.12920	False	1.18995
281144	0.84000	0.85000	9.02217	8.85427	False	-1.15723
283173	0.56000	0.57000	12.39612	12.29450	False	-0.55004
289126	0.39250	0.41000	14.09124	13.91018	False	-0.87797
289264	0.67000	0.66000	11.24035	11.35015	False	0.55652
290013	0.72000	0.74000	10.66863	10.42662	False	-1.14746
290928	0.70000	0.74000	10.90240	10.42662	False	0.14879
290951	0.77000	0.77000	10.04461	10.04461	False	-0.14328
290971	0.60000	0.59000	11.98661	12.08982	False	0.57150
290985	0.69000	0.74000	11.01660	10.42662	False	0.78204
294761	0.72000	0.74000	10.66863	10.42662	False	-1.14746
296121	0.66000	0.70000	11.35015	10.90240	False	-0.03979
296151	0.79000	0.80000	9.77432	9.63352	False	-0.95267
299750	0.69000	0.77000	11.01660	10.04461	False	2.92691
299800	0.74000	0.73000	10.42662	10.54875	False	0.56906
299856	0.60000	0.57000	11.98661	12.29450	False	1.72075
299859	0.65000	0.61000	11.45872	11.88272	False	2.33593
299860	0.72000	0.70000	10.66863	10.90240	False	1.21272
299865	0.83000	0.83000	9.18334	9.18334	False	-0.20328
300665	0.92000	0.92000	7.37971	7.37971	False	-0.32892
301333	0.83000	0.86000	9.18334	8.67872	False	0.43045
301334	0.79000	0.82000	9.77432	9.33854	False	0.00276
301342	0.87000	0.88000	8.49444	8.30005	False	-1.26345
301354	0.39500	0.47750	14.06524	13.22572	False	1.97081
301371	0.77000	0.78000	10.04461	9.91123	False	-0.89221
301386	0.69000	0.72000	11.01660	10.66863	False	-0.57682
301396	0.69000	0.67000	11.01660	11.24035	False	1.18073
304272	0.35250	0.39750	14.51432	14.03929	False	-0.10706
304873	0.85000	0.85000	8.85427	8.85427	False	-0.22620
304882	0.77000	0.81000	10.04461	9.48841	False	0.66007
304899	0.74000	0.74000	10.42662	10.42662	False	-0.11667
304925	0.84000	0.86000	9.02217	8.67872	False	-0.46325
304938	0.73000	0.77000	10.54875	10.04461	False	0.33263
304944	0.82000	0.83000	9.33854	9.18334	False	-1.06388
304985	0.77000	0.78000	10.04461	9.91123	False	-0.89221
305800	0.84000	0.85000	9.02217	8.85427	False	-1.15723
310079	0.87000	0.89000	8.49444	8.09389	False	-0.10588

continued

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
310086	0.93000	0.93000	7.09684	7.09684	False	-0.34863
310212	0.90000	0.92000	7.87379	7.37971	False	0.46252
310755	0.72000	0.76000	10.66863	10.17479	False	0.26650
310764	0.47000	0.51250	13.30108	12.87465	False	-0.29539
312655	0.58000	0.61000	12.19243	11.88272	False	-0.87357
314638	0.47750	0.52500	13.22572	12.74917	False	-0.00877

**Table J-18. 2016 MCAS: Delta Analysis Results – High School Chemistry**

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
208259	0.86000	0.88000	8.67872	8.30005	False	-0.40052
244914	0.74000	0.80000	10.42662	9.63352	False	0.31841
246788	0.69000	0.88000	11.01660	8.30005	True	3.94547
246829	0.61000	0.68000	11.88272	11.12920	False	0.18708
246844	0.88000	0.86000	8.30005	8.67872	False	-0.61756
252681	0.46000	0.56000	13.40173	12.39612	False	0.60679
258936	0.59000	0.62000	12.08982	11.77808	False	-0.65921
258948	0.83000	0.86000	9.18334	8.67872	False	-0.18101
260896	0.69000	0.65000	11.01660	11.45872	False	-0.39228
261167	0.47000	0.49000	13.30108	13.10028	False	-0.91649
261170	0.69000	0.72000	11.01660	10.66863	False	-0.54904
261461	0.64000	0.82000	11.56616	9.33854	False	2.99650
261486	0.40250	0.47750	13.98753	13.22572	False	0.12155
273193	0.52000	0.39000	12.79939	14.11728	False	1.33837
275886	0.62000	0.60000	11.77808	11.98661	False	-0.80612
281183	0.50000	0.55000	13.00000	12.49735	False	-0.33210
281315	0.71000	0.76000	10.78646	10.17479	False	-0.03976
281321	0.55000	0.53000	12.49735	12.69892	False	-0.79158
281922	0.64000	0.68000	11.56616	11.12920	False	-0.40139
287291	0.58000	0.62000	12.19243	11.77808	False	-0.46847
287950	0.67000	0.61000	11.24035	11.88272	False	-0.00364
288229	0.54000	0.59000	12.59827	12.08982	False	-0.30559
288234	0.60000	0.62500	11.98661	11.72544	False	-0.75119
288237	0.29500	0.33250	15.15534	14.73208	False	-0.56595
294590	0.74000	0.74000	10.42662	10.42662	False	-1.18655
294598	0.68000	0.69000	11.12920	11.01660	False	-1.00000
294649	0.59000	0.52000	12.08982	12.79939	False	0.15665
294670	0.68000	0.65000	11.12920	11.45872	False	-0.60161
294698	0.84000	0.73000	9.02217	10.54875	False	1.58854
294705	0.77000	0.69000	10.04461	11.01660	False	0.57564
294712	0.81000	0.79000	9.48841	9.77432	False	-0.74772
294715	0.75000	0.67000	10.30204	11.24035	False	0.52167
298318	0.49000	0.44000	13.10028	13.60388	False	-0.19517
298979	0.78000	0.82000	9.91123	9.33854	False	-0.07994
299698	0.80000	0.71000	9.63352	10.78646	False	0.90315
300073	0.77000	0.82000	10.04461	9.33854	False	0.16801

continued

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
300076	0.86000	0.78000	8.67872	9.91123	False	1.01726
300095	0.86000	0.79000	8.67872	9.77432	False	0.75746
300129	0.75000	0.75000	10.30204	10.30204	False	-1.18174
300141	0.81000	0.77000	9.48841	10.04461	False	-0.23481
300145	0.58500	0.59000	12.14119	12.08982	False	-1.15526
300170	0.80000	0.77000	9.63352	10.04461	False	-0.50454
304361	0.90000	0.87000	7.87379	8.49444	False	-0.17486
305195	0.63000	0.56000	11.67259	12.39612	False	0.16705
309496	0.46000	0.40750	13.40173	13.93592	False	-0.12549

**Table J-19. 2016 MCAS: Delta Analysis Results – High School Introductory Physics**

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
246576	0.46500	0.52250	13.35138	12.77428	False	-0.23771
261148	0.64000	0.77000	11.56616	10.04461	True	4.13253
272741	0.37000	0.47000	14.32741	13.30108	False	1.44597
273427	0.59000	0.67000	12.08982	11.24035	False	1.18427
273436	0.54000	0.54000	12.59827	12.59827	False	0.09877
280453	0.60000	0.62000	11.98661	11.77808	False	-0.91324
280455	0.53000	0.59000	12.69892	12.08982	False	0.03851
280470	0.58000	0.57000	12.19243	12.29450	False	0.44151
280963	0.73000	0.67000	10.54875	11.24035	False	2.57242
287218	0.63000	0.60000	11.67259	11.98661	False	1.22301
287224	0.48000	0.53750	13.20061	12.62345	False	-0.20479
287371	0.82000	0.81000	9.33854	9.48841	False	0.02541
287389	0.55000	0.56000	12.49735	12.39612	False	-0.35007
287403	0.51000	0.54000	12.89972	12.59827	False	-1.10757
287404	0.35250	0.37750	14.51432	14.24821	False	-0.60897
293939	0.69000	0.71000	11.01660	10.78646	False	-1.19587
293950	0.50000	0.50750	13.00000	12.92480	False	-0.13149
293973	0.65000	0.68000	11.45872	11.12920	False	-0.87239
295846	0.53000	0.58000	12.69892	12.19243	False	-0.39430
295865	0.56000	0.59000	12.39612	12.08982	False	-1.17319
297417	0.63000	0.68000	11.67259	11.12920	False	-0.01655
299384	0.37250	0.38000	14.30096	14.22192	False	0.13394
301717	0.82000	0.86000	9.33854	8.67872	False	0.97978
301731	0.87000	0.86000	8.49444	8.67872	False	-0.01214
301772	0.65000	0.69000	11.45872	11.01660	False	-0.39740
301785	0.70000	0.73000	10.90240	10.54875	False	-0.65016
301786	0.80000	0.83000	9.63352	9.18334	False	0.03164
301789	0.79000	0.81000	9.77432	9.48841	False	-0.69177
304763	0.69000	0.72000	11.01660	10.66863	False	-0.69886
304782	0.70000	0.68000	10.90240	11.12920	False	0.68841
305440	0.73000	0.76000	10.54875	10.17479	False	-0.48795
305478	0.72000	0.74000	10.66863	10.42662	False	-1.07045
305493	0.78000	0.80000	9.91123	9.63352	False	-0.75594

continued

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
305495	0.68000	0.67000	11.12920	11.24035	False	0.24962
305514	0.67000	0.70000	11.24035	10.90240	False	-0.78954
310433	0.82000	0.80000	9.33854	9.63352	False	0.63746
310455	0.88000	0.88000	8.30005	8.30005	False	-0.83156
310486	0.73000	0.73000	10.54875	10.54875	False	-0.34484
310499	0.78000	0.81000	9.91123	9.48841	False	-0.14389
311023	0.78000	0.81000	9.91123	9.48841	False	-0.14389
311056	0.76000	0.79000	10.17479	9.77432	False	-0.29516
311313	0.89000	0.90000	8.09389	7.87379	False	-0.60563
311371	0.82000	0.81000	9.33854	9.48841	False	0.02541
313006	0.78000	0.75000	9.91123	10.30204	False	1.16568
314840	0.80000	0.79000	9.63352	9.77432	False	0.05098

**Table J-20. 2016 MCAS: Delta Analysis Results – High School Technology/Engineering**

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
206772	0.43000	0.63000	13.70550	11.67259	True	4.15640
208126	0.69000	0.68000	11.01660	11.12920	False	-0.88910
221684	0.68000	0.66000	11.12920	11.35015	False	-0.63617
268467	0.90000	0.94000	7.87379	6.78091	False	0.82517
271562	0.57000	0.49000	12.29450	13.10028	False	0.63615
273146	0.60000	0.66000	11.98661	11.35015	False	0.36694
279914	0.54500	0.61000	12.54785	11.88272	False	0.53251
281930	0.84000	0.85000	9.02217	8.85427	False	-1.25973
283463	0.76000	0.83000	10.17479	9.18334	False	0.95486
287802	0.71000	0.68000	10.78646	11.12920	False	-0.27346
289975	0.66000	0.66000	11.35015	11.35015	False	-1.22722
290764	0.52000	0.43000	12.79939	13.70550	False	0.80354
293186	0.68000	0.58000	11.12920	12.19243	False	1.47641
294343	0.79000	0.79000	9.77432	9.77432	False	-0.96416
294344	0.63000	0.67000	11.67259	11.24035	False	-0.19771
294349	0.65000	0.58000	11.45872	12.19243	False	0.59492
294386	0.49000	0.57000	13.10028	12.29450	False	0.97750
294402	0.75000	0.71000	10.30204	10.78646	False	0.16276
294413	0.63000	0.55000	11.67259	12.49735	False	0.78762
297426	0.75000	0.74000	10.30204	10.42662	False	-0.73979
299265	0.72000	0.76000	10.66863	10.17479	False	-0.21079
299306	0.35500	0.41500	14.48742	13.85881	False	0.76473
299351	0.70000	0.67000	10.90240	11.24035	False	-0.30484
299352	0.79000	0.78000	9.77432	9.91123	False	-0.62076
300263	0.48250	0.38500	13.17552	14.16950	False	0.96114
300267	0.86000	0.85000	8.67872	8.85427	False	-0.34097
300286	0.57000	0.54000	12.29450	12.59827	False	-0.62297
300288	0.88000	0.90000	8.30005	7.87379	False	-0.77569
300295	0.64000	0.68000	11.56616	11.12920	False	-0.20363
300305	0.64000	0.55000	11.56616	12.49735	False	1.07231

continued

Item Number	P		Delta		Discard	Std
	Old	New	Old	New		
300330	0.46000	0.41000	13.40173	13.91018	False	-0.29443
305095	0.42500	0.46250	13.75647	13.37655	False	0.01894
305105	0.76000	0.77000	10.17479	10.04461	False	-1.20536
305143	0.63000	0.61000	11.67259	11.88272	False	-0.75398
305145	0.67000	0.61000	11.24035	11.88272	False	0.40230
305151	0.49000	0.48000	13.10028	13.20061	False	-1.26770
306801	0.73000	0.79000	10.54875	9.77432	False	0.47297
306803	0.66000	0.64000	11.35015	11.56616	False	-0.68541
306842	0.33000	0.40500	14.75965	13.96170	False	1.23488
309909	0.82000	0.83000	9.33854	9.18334	False	-1.28068
310010	0.69000	0.72000	11.01660	10.66863	False	-0.51859
310015	0.58000	0.56000	12.19243	12.39612	False	-0.85691
310038	0.88000	0.88000	8.30005	8.30005	False	-0.71806
310045	0.57000	0.61000	12.29450	11.88272	False	-0.14521
310314	0.64000	0.60000	11.56616	11.98661	False	-0.20872

**Table J-21. 2016 MCAS: Rescore Analysis Results –  
ELA Grade 3**

Item Number	Max	Mean		StDev		Effect Size	Discard
		Old	New	Old	New		
303634	2	1.07843	0.96078	0.76482	0.68656	-0.15382	False
298241	2	0.99512	1.09268	0.67517	0.57411	0.14450	False

**Table J-22. 2016 MCAS: Rescore Analysis Results –  
ELA Grade 4**

Item Number	Max	Mean		StDev		Effect Size	Discard
		Old	New	Old	New		
307627	4	1.52451	1.53922	0.79678	0.78998	0.01846	False
309015	4	1.83333	1.74020	0.87193	0.97564	-0.10682	False

**Table J-23. 2016 MCAS: Rescore Analysis Results –  
ELA Grade 5**

Item Number	Max	Mean		StDev		Effect Size	Discard
		Old	New	Old	New		
283382	4	1.86765	1.98529	0.98117	0.87931	0.11991	False
313048	4	1.53171	1.76098	0.83737	0.94269	0.27379	False

**Table J-24. 2016 MCAS: Rescore Analysis Results –  
ELA Grade 6**

Item Number	Max	Mean		StDev		Effect Size	Discard
		Old	New	Old	New		
303489	4	2.23645	2.16749	0.81645	0.95000	-0.08447	False
302790	4	1.56098	1.53171	1.09921	1.08249	-0.02663	False

**Table J-25. 2016 MCAS: Rescore Analysis Results –  
ELA Grade 7**

Item Number	Max	Mean		StDev		Effect Size	Discard
		Old	New	Old	New		
314035	4	1.98049	2.11707	1.00957	1.03182	0.13529	False

**Table J-26. 2016 MCAS: Rescore Analysis Results –  
ELA Grade 8**

Item Number	Max	Mean		StDev		Effect Size	Discard
		Old	New	Old	New		
302312	4	2.36765	2.46078	1.02536	0.97427	0.09083	False

**Table J-27. 2016 MCAS: Rescore Analysis Results –  
ELA Grade 10**

Item Number	Max	Mean		StDev		Effect Size	Discard
		Old	New	Old	New		
290909	4	1.83415	1.61951	1.13837	1.15538	-0.18855	False
303666	4	1.89268	1.82927	1.21599	1.20258	-0.05215	False
302652	4	2.37745	2.43627	0.91495	0.92628	0.06429	False
302886	4	2.31707	2.46829	1.03940	0.92631	0.14549	False
304029	4	2.14216	2.18137	0.96968	0.93716	0.04044	False
299083	4	2.85294	2.66176	0.90316	0.89239	-0.21167	False

**Table J-28. 2016 MCAS: Rescore Analysis Results –  
Mathematics Grade 3**

Item Number	Max	Mean		StDev		Effect Size	Discard
		Old	New	Old	New		
293503	2	1.26961	1.20588	0.79460	0.81656	-0.08020	False
297404	2	1.50244	1.46829	0.79597	0.81962	-0.04290	False

**Table J-29. 2016 MCAS: Rescore Analysis Results –  
Mathematics Grade 4**

Item Number	Max	Mean		StDev		Effect Size	Discard
		Old	New	Old	New		
302489	4	2.99024	2.93659	1.06638	1.09852	-0.05032	False
307039	4	2.30102	2.47449	1.27549	1.24627	0.13600	False

**Table J-30. 2016 MCAS: Rescore Analysis Results –  
Mathematics Grade 5**

Item Number	Max	Mean		StDev		Effect Size	Discard
		Old	New	Old	New		
272901	4	2.60294	2.74510	1.59870	1.55482	0.08892	False
303765	4	2.46341	2.49268	1.38085	1.33439	0.02120	False

**Table J-31. 2016 MCAS: Rescore Analysis Results –  
Mathematics Grade 6**

Item Number	Max	Mean		StDev		Effect Size	Discard
		Old	New	Old	New		
296396	4	2.36585	2.33659	1.45110	1.48485	-0.02017	False
311694	4	2.74146	2.66829	1.34911	1.38168	-0.05424	False

**Table J-32. 2016 MCAS: Rescore Analysis Results –  
Mathematics Grade 7**

Item Number	Max	Mean		StDev		Effect Size	Discard
		Old	New	Old	New		
272156	4	1.51220	1.49268	1.24306	1.23121	-0.01570	False
298212	4	2.45098	2.42157	1.62873	1.62454	-0.01806	False

**Table J-33. 2016 MCAS: Rescore Analysis Results –  
Mathematics Grade 8**

Item Number	Max	Mean		StDev		Effect Size	Discard
		Old	New	Old	New		
301713	4	2.28571	2.33990	1.16769	1.16370	0.04641	False
298039	4	2.36683	2.33166	1.11514	1.15494	-0.03154	False

**Table J-34. 2016 MCAS: Rescore Analysis Results –  
Mathematics Grade 10**

Item Number	Max	Mean		StDev		Effect Size	Discard
		Old	New	Old	New		
294697	4	2.51707	2.51707	1.21911	1.25868	0.00000	False
298055	4	1.69756	1.68780	1.07842	1.08017	-0.00905	False
301486	4	2.15122	2.18537	1.14256	1.15673	0.02989	False
302066	4	2.32683	2.34146	1.33413	1.33963	0.01097	False

**Table J-35. 2016 MCAS: Rescore Analysis Results –  
STE Grade 5**

Item Number	Max	Mean		StDev		Effect Size	Discard
		Old	New	Old	New		
291625	4	2.46231	2.47236	1.10432	1.13172	0.00910	False
291591	4	1.69608	1.75980	1.18936	1.23022	0.05358	False

**Table J-36. 2016 MCAS: Rescore Analysis Results –  
STE Grade 8**

Item Number	Max	Mean		StDev		Effect Size	Discard
		Old	New	Old	New		
304793	4	2.03483	1.98010	1.29375	1.24483	-0.04230	False
292021	4	2.51220	2.42439	1.26262	1.33959	-0.06954	False



**Table J-37. 2016 MCAS: Rescore Analysis Results –  
High School Biology**

Item Number	Max	Mean		StDev		Effect Size	Discard
		Old	New	Old	New		
304272	4	1.23645	1.26601	1.24410	1.23808	0.02376	False
289126	4	1.60784	1.61765	1.18826	1.16216	0.00825	False
301354	4	1.70244	1.84390	1.08657	1.20254	0.13019	False
310764	4	2.01951	2.03415	1.27557	1.28483	0.01147	False
314638	4	1.95074	1.84729	1.34883	1.31305	-0.07669	False

**Table J-38. 2016 MCAS: Rescore Analysis Results –  
High School Chemistry**

Item Number	Max	Mean		StDev		Effect Size	Discard
		Old	New	Old	New		
309496	4	1.62189	1.55224	1.22324	1.18259	-0.05694	False
300145	4	2.05392	2.21569	1.20836	1.18386	0.13387	False
261486	4	1.53659	1.53659	1.42968	1.43653	0.00000	False
288234	4	2.01990	2.10448	1.19147	1.18492	0.07099	False
288237	4	1.05941	1.00990	1.26035	1.20112	-0.03928	False

**Table J-39. 2016 MCAS: Rescore Analysis Results –  
High School Introductory Physics**

Item Number	Max	Mean		StDev		Effect Size	Discard
		Old	New	Old	New		
293950	4	1.95522	1.93532	1.01143	1.02995	-0.01968	False
287224	4	2.04433	1.97537	1.24400	1.18755	-0.05544	False
299384	4	1.38974	1.39487	1.07065	1.03693	0.00479	False
287404	4	1.32195	1.25854	1.02122	0.91098	-0.06210	False

**Table J-40. 2016 MCAS: Rescore Analysis Results –  
High School Technology/Engineering**

Item Number	Max	Mean		StDev		Effect Size	Discard
		Old	New	Old	New		
306842	4	1.19512	1.29756	0.99063	0.96723	0.10341	False
299306	4	1.42574	1.42079	0.93942	0.91214	-0.00527	False
305095	4	1.66502	1.70936	1.05122	0.96947	0.04217	False
279914	4	2.18137	2.25000	1.06046	1.07879	0.06471	False
300263	4	1.77000	1.46000	1.25097	1.11111	-0.24781	False