

# **APPENDIX H**

## **ITEM RESPONSE THEORY PARAMETERS**

**Table H-1. 2016 MCAS: IRT Parameters for Dichotomous Items –  
ELA Grade 3**

Item Number	Parameters and Measures of Standard Error						Item Number	Parameters and Measures of Standard Error					
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>		<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>
308862	1.09252	0.03007	-1.01162	0.03710	0.27483	0.01732	303629	1.15014	0.00000	-1.75541	0.00000	0.43319	0.00000
308864	0.84068	0.02360	-0.10346	0.02755	0.12457	0.01167	308791	0.74678	0.02644	-2.25559	0.10033	0.28876	0.03730
308866	1.19258	0.03349	-1.37964	0.03965	0.28895	0.01961	308793	1.20893	0.03228	-0.86057	0.03091	0.27132	0.01525
308868	1.22038	0.03226	-1.31923	0.03503	0.24192	0.01814	308794	1.07462	0.03237	-0.56742	0.03481	0.32527	0.01484
308873	0.96627	0.02792	-1.39541	0.04968	0.27796	0.02179	308795	0.42772	0.01778	-2.85679	0.20777	0.17732	0.06023
308876	0.86954	0.02532	-1.29995	0.05260	0.25238	0.02191	308797	0.89073	0.02789	-2.01861	0.06875	0.26612	0.02896
308879	0.90092	0.02663	-1.73262	0.05906	0.25456	0.02536	308799	0.97421	0.02442	-0.60255	0.02901	0.15134	0.01339
308880	0.88445	0.02714	-1.55442	0.06057	0.29734	0.02473	308807	1.00803	0.02992	-1.51602	0.05154	0.30515	0.02275
308867	1.16183	0.03057	-0.89293	0.03165	0.25022	0.01554	308808	1.01525	0.02845	-1.65408	0.04858	0.24080	0.02267
308883	0.59407	0.02472	-1.63589	0.12248	0.35205	0.03521	308811	1.10652	0.03087	-1.86382	0.04585	0.21030	0.02263
298229	1.13664	0.00000	-1.48881	0.00000	0.30385	0.00000	308812	0.71543	0.02809	-0.42361	0.05992	0.32867	0.01919
298230	1.30987	0.03271	-0.98967	0.02748	0.22285	0.01478	307187	0.68455	0.02503	-1.02220	0.07524	0.31233	0.02452
298231	1.28364	0.00000	-0.83869	0.00000	0.27823	0.00000	307190	1.17828	0.03589	-0.16620	0.02620	0.31605	0.01159
298228	1.30769	0.00000	-0.87623	0.00000	0.34830	0.00000	307180	1.30159	0.03460	-0.38221	0.02304	0.26220	0.01155
298236	1.10918	0.00000	-1.53671	0.00000	0.24691	0.00000	307183	0.96207	0.02539	-1.76384	0.04709	0.16428	0.02180
298240	1.16956	0.00000	-1.78442	0.00000	0.17849	0.00000	307192	1.02691	0.02534	-0.95266	0.03222	0.16924	0.01544
303620	0.86883	0.00000	-2.03384	0.00000	0.26241	0.00000							
303625	0.58751	0.00000	-0.55377	0.00000	0.09345	0.00000							
303624	1.05326	0.00000	0.09609	0.00000	0.14265	0.00000							
303626	0.93273	0.03383	-1.47688	0.07081	0.46364	0.02420							

**Table H-2. 2016 MCAS: IRT Parameters for Polytomous Items –  
ELA Grade 3**

Item Number	Parameters and Measures of Standard Error													
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>D0</i>	<i>SE (D0)</i>	<i>D1</i>	<i>SE (D1)</i>	<i>D2</i>	<i>SE (D2)</i>	<i>D3</i>	<i>SE (D3)</i>	<i>D4</i>	<i>SE (D4)</i>
298241	0.62944	0.00579	-0.95317	0.01383	1.72400	0.02555	-1.72400	0.01528	0.00000	0.00000	n/a	n/a	n/a	n/a
303634	0.72335	0.00000	-0.41059	0.00000	0.99498	0.00000	-0.99498	0.00000	0.00000	0.00000	n/a	n/a	n/a	n/a
308814	0.46013	0.00620	-3.11444	0.02606	1.86965	0.05453	-1.86965	0.02102	0.00000	0.00000	n/a	n/a	n/a	n/a
308817	0.50002	0.00490	-1.55383	0.01705	2.02924	0.03519	-2.02924	0.01809	0.00000	0.00000	n/a	n/a	n/a	n/a
308893	0.69444	0.00485	-0.09399	0.01176	3.49430	0.03625	1.07248	0.01541	-1.32740	0.01542	-3.23938	0.03339	0.00000	0.00000

**Table H-3. 2016 MCAS: IRT Parameters for Dichotomous Items –  
ELA Grade 4**

Item Number	Parameters and Measures of Standard Error						Item Number	Parameters and Measures of Standard Error					
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>		<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>
298587	0.76034	0.02409	-0.12654	0.04625	0.22538	0.01701	307620	1.00739	0.02482	-0.47313	0.03075	0.15847	0.01429
298591	0.89675	0.03142	-1.77755	0.08794	0.34068	0.03768	312728	0.79624	0.02080	-1.19957	0.05274	0.11747	0.02324
298593	0.50529	0.02126	-0.79242	0.12166	0.22707	0.03521	312731	0.92949	0.02711	0.29392	0.02844	0.21236	0.01154
298594	0.82298	0.02462	-1.52896	0.07083	0.20512	0.03176	312733	0.61525	0.01860	-0.55573	0.06041	0.11384	0.02168
298595	0.61416	0.01957	-1.47550	0.09438	0.15642	0.03584	312737	0.79031	0.02756	-0.03384	0.04898	0.31545	0.01665
298598	0.86723	0.02583	-2.10784	0.07560	0.15633	0.03815	312738	0.55056	0.02070	-2.17410	0.16034	0.21867	0.05764
308993	0.62556	0.00000	-1.43466	0.00000	0.17080	0.00000	312742	1.14857	0.03533	-1.75392	0.05501	0.23291	0.03005
308995	0.85466	0.00000	-0.88206	0.00000	0.12994	0.00000	312745	0.80651	0.02060	-0.76368	0.04300	0.11454	0.01836
308996	0.70540	0.00000	-1.91270	0.00000	0.24247	0.00000	312746	0.78005	0.02369	0.48249	0.02998	0.14617	0.01150
309007	0.63345	0.02046	-2.08005	0.11240	0.16549	0.04621	312752	0.88572	0.03113	-2.03455	0.09524	0.30735	0.04346
309001	0.76760	0.00000	-2.11743	0.00000	0.18514	0.00000	312750	0.66819	0.01916	-1.40010	0.07375	0.12354	0.02982
309002	0.69280	0.00000	-1.46048	0.00000	0.17452	0.00000	312779	0.62735	0.01166	-0.87284	0.02293	0.00000	0.00000
309004	0.66175	0.00000	-1.80228	0.00000	0.15480	0.00000	312785	0.83689	0.02574	-0.90424	0.05865	0.26668	0.02352
309005	0.75152	0.00000	-1.98195	0.00000	0.21985	0.00000	312788	0.50085	0.01774	0.39307	0.05241	0.07196	0.01641
309013	0.55954	0.00000	-2.39557	0.00000	0.14510	0.00000	312789	0.78787	0.02418	-1.22221	0.06898	0.22897	0.02851
309014	0.69566	0.00000	-2.05298	0.00000	0.13172	0.00000	312792	0.75968	0.02594	-0.04126	0.04913	0.27714	0.01703
307616	0.42829	0.00981	-1.06632	0.03436	0.00000	0.00000							
307618	0.55198	0.00000	0.37158	0.00000	0.16261	0.00000							
307621	0.58883	0.00000	-0.45057	0.00000	0.22352	0.00000							
307625	0.83995	0.00000	-0.55848	0.00000	0.15151	0.00000							

**Table H-4. 2016 MCAS: IRT Parameters for Polytomous Items –  
ELA Grade 4**

Item Number	Parameters and Measures of Standard Error													
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>D0</i>	<i>SE (D0)</i>	<i>D1</i>	<i>SE (D1)</i>	<i>D2</i>	<i>SE (D2)</i>	<i>D3</i>	<i>SE (D3)</i>	<i>D4</i>	<i>SE (D4)</i>
298601	0.63638	0.00453	-0.09093	0.01267	4.06187	0.05188	0.96055	0.01729	-1.37999	0.01567	-3.64243	0.03210	0.00000	0.00000
307627	0.89159	0.00000	0.83113	0.00000	3.36166	0.00000	0.95539	0.00000	-0.97928	0.00000	-3.33778	0.00000	0.00000	0.00000
309015	0.80962	0.00000	0.36766	0.00000	3.10687	0.00000	0.72002	0.00000	-0.91087	0.00000	-2.91602	0.00000	0.00000	0.00000
312753	0.74520	0.00526	0.32989	0.01100	3.18352	0.03008	1.04424	0.01452	-1.24418	0.01481	-2.98358	0.02927	0.00000	0.00000

**Table H-5. 2016 MCAS: IRT Parameters for Dichotomous Items –  
ELA Grade 5**

Item Number	Parameters and Measures of Standard Error						Item Number	Parameters and Measures of Standard Error					
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>		<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>
302377	0.76268	0.02338	-0.98031	0.06589	0.22928	0.02643	307257	0.67936	0.02109	-1.39940	0.08479	0.18099	0.03441
302376	0.49011	0.02347	-1.64405	0.20796	0.34126	0.05626	307262	0.52179	0.01709	-2.00225	0.12755	0.13710	0.04644
302382	0.67603	0.02327	-1.73290	0.11034	0.24368	0.04403	307264	0.84369	0.02366	-0.46371	0.04326	0.20058	0.01788
302385	0.49227	0.01624	-1.34595	0.10906	0.11469	0.03610	307276	1.07121	0.02753	-0.73826	0.03491	0.20024	0.01703
302386	0.85968	0.02622	0.58152	0.02760	0.19003	0.01055	307278	0.89819	0.02449	-0.76700	0.04493	0.20100	0.01992
283311	0.64718	0.02205	-1.70856	0.11140	0.21976	0.04389	307279	1.05961	0.02919	-1.04240	0.04340	0.23748	0.02132
283312	0.77232	0.00000	-1.69512	0.00000	0.23480	0.00000	307281	0.69160	0.02063	-1.50760	0.08127	0.15737	0.03434
283314	0.85517	0.00000	-1.35113	0.00000	0.15434	0.00000	307282	0.75259	0.02371	-0.03969	0.04510	0.21744	0.01650
283323	0.82519	0.00000	-2.62637	0.00000	0.00000	0.00000	307288	0.67499	0.02245	-0.62657	0.06977	0.23033	0.02475
283324	1.10676	0.00000	-1.40736	0.00000	0.20534	0.00000	307289	0.37752	0.00899	-0.08106	0.02485	0.00000	0.00000
283325	0.97532	0.00000	-0.37528	0.00000	0.21875	0.00000	297171	0.48999	0.01524	-0.50116	0.07119	0.07225	0.02237
283339	0.83443	0.00000	0.05146	0.00000	0.22863	0.00000	297172	0.61867	0.02121	-1.03674	0.09162	0.21285	0.03246
283358	0.78980	0.00000	-0.42582	0.00000	0.17576	0.00000	297174	0.78894	0.02433	-1.29756	0.07255	0.23791	0.03071
283363	0.32040	0.00000	-1.91957	0.00000	0.00000	0.00000	297177	0.61240	0.02114	-0.17580	0.06336	0.18113	0.02122
283370	0.71618	0.00000	0.21407	0.00000	0.28371	0.00000	297178	1.13510	0.02608	0.12792	0.01926	0.12745	0.00899
313040	0.62501	0.02368	0.22223	0.05760	0.22846	0.01825	297181	0.51344	0.01684	-1.68068	0.11809	0.12924	0.04137
313036	0.95773	0.00000	-0.67066	0.00000	0.31672	0.00000							
313046	0.81283	0.02436	-1.05762	0.06248	0.23532	0.02624							
313039	0.55987	0.00000	-0.71902	0.00000	0.19204	0.00000							
313033	0.49758	0.01895	-0.17472	0.08299	0.13276	0.02515							

**Table H-6. 2016 MCAS: IRT Parameters for Polytomous Items –  
ELA Grade 5**

Item Number	Parameters and Measures of Standard Error													
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>D0</i>	<i>SE (D0)</i>	<i>D1</i>	<i>SE (D1)</i>	<i>D2</i>	<i>SE (D2)</i>	<i>D3</i>	<i>SE (D3)</i>	<i>D4</i>	<i>SE (D4)</i>
283382	0.74582	0.00000	0.38214	0.00000	2.66873	0.00000	0.99984	0.00000	-0.85446	0.00000	-2.81411	0.00000	0.00000	0.00000
302388	0.74769	0.00536	-0.65160	0.01076	3.28381	0.04992	0.96464	0.01829	-1.07080	0.01276	-3.17765	0.02012	0.00000	0.00000
307290	0.92571	0.00657	0.36203	0.00859	2.29442	0.01925	0.74312	0.01161	-0.72796	0.01140	-2.30959	0.02050	0.00000	0.00000
313048	0.71202	0.00000	1.07941	0.00000	3.41661	0.00000	1.17099	0.00000	-1.19087	0.00000	-3.39672	0.00000	0.00000	0.00000

**Table H-7. 2016 MCAS: IRT Parameters for Dichotomous Items –  
ELA Grade 6**

Item Number	Parameters and Measures of Standard Error						Item Number	Parameters and Measures of Standard Error					
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>		<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>
308508	0.29087	0.01640	0.35403	0.17062	0.11205	0.03406	302788	0.93588	0.00000	-0.66938	0.00000	0.21478	0.00000
308512	0.54798	0.01743	-1.89041	0.11672	0.15186	0.04173	302748	0.91789	0.03079	-2.55929	0.08846	0.18318	0.04515
308511	0.89536	0.02705	-1.87121	0.07127	0.22419	0.03320	302749	0.58509	0.02061	-0.19524	0.07145	0.23573	0.02167
308518	1.08280	0.03284	-1.76849	0.05639	0.24213	0.02845	302752	0.61430	0.01682	-0.38586	0.05151	0.10190	0.01805
308517	0.75031	0.02523	-1.97239	0.10226	0.28008	0.04128	302764	0.90092	0.03086	-1.64194	0.08040	0.37535	0.03163
303465	0.67460	0.00000	0.54042	0.00000	0.21955	0.00000	302759	0.83269	0.02744	0.51846	0.03587	0.30787	0.01195
303466	0.69240	0.00000	-1.76427	0.00000	0.31242	0.00000	302762	0.55436	0.01873	-1.10778	0.10014	0.19818	0.03250
303471	0.87018	0.00000	-1.26811	0.00000	0.16431	0.00000	302758	0.64013	0.01967	-1.08050	0.07863	0.19960	0.02814
303472	0.91674	0.00000	0.03318	0.00000	0.15508	0.00000	302766	0.75119	0.02082	-1.49906	0.06768	0.16305	0.02852
303474	0.68459	0.00000	-1.64309	0.00000	0.21851	0.00000	302755	0.72880	0.02352	-0.49979	0.06176	0.30466	0.02067
303481	1.09589	0.02678	-0.42322	0.02892	0.20697	0.01343	302768	0.84057	0.02511	-1.03703	0.06018	0.29027	0.02359
303480	0.61163	0.01745	-1.24716	0.07608	0.12975	0.02800	312568	0.36614	0.01529	-1.62631	0.19938	0.15785	0.05013
303478	1.02077	0.00000	-1.01165	0.00000	0.29714	0.00000	312569	0.46954	0.01491	-2.13232	0.13182	0.12167	0.04308
303485	0.33022	0.00000	-2.76888	0.00000	0.00000	0.00000	312570	0.76027	0.02152	-0.95258	0.05883	0.21089	0.02308
303486	0.67276	0.02190	-0.23947	0.05938	0.25871	0.01940	312577	0.85567	0.02233	-0.83716	0.04560	0.18868	0.01931
302777	1.19248	0.00000	-0.02802	0.00000	0.22655	0.00000	312580	0.70206	0.02071	-1.92658	0.08752	0.16233	0.03684
302779	0.59622	0.01762	-0.82678	0.07074	0.14112	0.02463							
302782	0.59411	0.00000	-0.84105	0.00000	0.11090	0.00000							
302785	0.46478	0.00000	-1.21480	0.00000	0.00000	0.00000							
302786	0.51917	0.01574	-0.97721	0.08379	0.10874	0.02727							

**Table H-8. 2016 MCAS: IRT Parameters for Polytomous Items –  
ELA Grade 6**

Item Number	Parameters and Measures of Standard Error													
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>D0</i>	<i>SE (D0)</i>	<i>D1</i>	<i>SE (D1)</i>	<i>D2</i>	<i>SE (D2)</i>	<i>D3</i>	<i>SE (D3)</i>	<i>D4</i>	<i>SE (D4)</i>
302772	0.83823	0.00591	-0.21171	0.00927	2.72315	0.03095	0.66477	0.01404	-0.85564	0.01151	-2.53229	0.01656	0.00000	0.00000
302790	1.02969	0.00000	0.80814	0.00000	1.68295	0.00000	0.73283	0.00000	-0.53689	0.00000	-1.87889	0.00000	0.00000	0.00000
303489	0.93506	0.00000	-0.29467	0.00000	2.84899	0.00000	0.86880	0.00000	-1.03884	0.00000	-2.67895	0.00000	0.00000	0.00000
308521	0.73498	0.00524	-0.81031	0.01066	3.27191	0.05184	0.89208	0.01920	-1.08306	0.01285	-3.08094	0.01728	0.00000	0.00000

**Table H-9. 2016 MCAS: IRT Parameters for Dichotomous Items –  
ELA Grade 7**

Item Number	Parameters and Measures of Standard Error						Item Number	Parameters and Measures of Standard Error					
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>		<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>
309755	0.57915	0.02574	-0.90432	0.13226	0.29196	0.04197	302935	0.83375	0.03146	-1.36965	0.09980	0.36119	0.04073
309098	1.11604	0.04226	-2.13328	0.09107	0.26887	0.05572	302936	0.68146	0.02429	-0.84253	0.08626	0.22208	0.03332
309104	1.05555	0.02847	-0.37714	0.03399	0.20655	0.01682	302933	0.80500	0.02539	0.06150	0.04070	0.18897	0.01678
309109	0.60577	0.01915	-0.67894	0.07120	0.10194	0.02718	302924	0.52221	0.01919	-0.83366	0.10367	0.12454	0.03553
309112	0.61577	0.01683	-2.60392	0.06518	0.00000	0.00000	302929	0.78104	0.02408	-0.69304	0.05986	0.18399	0.02586
309113	1.05490	0.03286	-1.89741	0.06899	0.16663	0.04196	302932	1.11793	0.02829	-0.74493	0.03471	0.15976	0.01884
299682	0.51251	0.02169	-0.56089	0.11378	0.16731	0.03632	302927	0.88371	0.02884	-1.08079	0.07007	0.27631	0.03164
297189	0.99501	0.00000	-1.29339	0.00000	0.29433	0.00000	302939	0.62031	0.01998	-0.38063	0.06263	0.10547	0.02376
297191	0.72107	0.00000	-1.57942	0.00000	0.20536	0.00000	302938	0.63376	0.02400	-1.93992	0.14900	0.22920	0.06222
297192	0.62789	0.00000	-0.69260	0.00000	0.29537	0.00000	302944	0.63518	0.01976	-1.62049	0.09714	0.12624	0.04165
297195	0.73811	0.00000	-0.42781	0.00000	0.31249	0.00000	297219	0.52273	0.01366	-2.22861	0.05888	0.00000	0.00000
297198	0.81651	0.00000	0.27955	0.00000	0.17001	0.00000	297226	0.81617	0.02630	-0.42017	0.05423	0.23777	0.02238
297202	0.77770	0.00000	-2.04942	0.00000	0.20355	0.00000	297224	0.85700	0.02268	-1.44404	0.05774	0.10128	0.02950
297207	0.50009	0.02283	-0.30364	0.11300	0.18087	0.03431	297238	0.85828	0.03078	0.07165	0.04631	0.32606	0.01720
297211	0.85013	0.02730	-0.97606	0.06771	0.25110	0.03015	297228	0.84670	0.02708	0.33265	0.03395	0.19984	0.01408
314021	0.69526	0.01430	-1.45426	0.03156	0.00000	0.00000	297233	0.49374	0.01252	-1.92107	0.05231	0.00000	0.00000
314025	1.15824	0.00000	-0.55965	0.00000	0.17867	0.00000							
314034	0.76354	0.00000	-1.90250	0.00000	0.17712	0.00000							
314029	0.59282	0.01310	-1.54575	0.03738	0.00000	0.00000							
314031	1.09041	0.00000	-0.36212	0.00000	0.28281	0.00000							

**Table H-10. 2016 MCAS: IRT Parameters for Polytomous Items –  
ELA Grade 7**

Item Number	Parameters and Measures of Standard Error													
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>D0</i>	<i>SE (D0)</i>	<i>D1</i>	<i>SE (D1)</i>	<i>D2</i>	<i>SE (D2)</i>	<i>D3</i>	<i>SE (D3)</i>	<i>D4</i>	<i>SE (D4)</i>
297214	1.19694	0.00899	-0.50427	0.00693	2.07004	0.02900	0.85522	0.01454	-0.69044	0.00865	-2.23481	0.01168	0.00000	0.00000
302946	1.15884	0.00859	-0.42528	0.00707	2.09324	0.02799	0.81529	0.01387	-0.71339	0.00876	-2.19514	0.01207	0.00000	0.00000
309114	0.99668	0.00720	-0.39866	0.00805	2.10608	0.02753	0.87050	0.01478	-0.68843	0.00980	-2.28815	0.01365	0.00000	0.00000
314035	1.12797	0.00000	0.01345	0.00000	1.90260	0.00000	0.75671	0.00000	-0.51177	0.00000	-2.14754	0.00000	0.00000	0.00000

**Table H-11. 2016 MCAS: IRT Parameters for Dichotomous Items –  
ELA Grade 8**

Item Number	Parameters and Measures of Standard Error						Item Number	Parameters and Measures of Standard Error					
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>		<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>
297561	0.62983	0.02550	-1.96284	0.14994	0.32476	0.05052	293274	0.45911	0.02180	-0.82966	0.14723	0.23666	0.03871
297562	1.15945	0.03748	-1.45104	0.05437	0.34720	0.02478	293278	0.33882	0.00983	-2.23735	0.07094	0.00000	0.00000
297567	1.12653	0.03041	-0.45191	0.03174	0.27476	0.01456	303829	0.90958	0.02926	-1.58528	0.07183	0.29344	0.03056
297570	1.03931	0.03770	-1.01455	0.06152	0.48705	0.02108	303832	1.12943	0.03222	-0.79907	0.03892	0.30988	0.01755
297572	0.99009	0.02922	0.00482	0.03188	0.28150	0.01310	303833	1.13218	0.02858	-0.31011	0.02704	0.21859	0.01289
302289	0.92871	0.00000	-1.68033	0.00000	0.29443	0.00000	303855	0.89579	0.02978	-0.10366	0.04253	0.34645	0.01532
302290	0.70375	0.00000	-1.37681	0.00000	0.24012	0.00000	303860	0.82763	0.02389	-0.40554	0.04278	0.21269	0.01706
302292	0.78737	0.00000	-0.72929	0.00000	0.22070	0.00000	303848	1.08978	0.03197	-0.72059	0.04058	0.33203	0.01746
302294	0.73910	0.00000	-0.43714	0.00000	0.31419	0.00000	303849	0.41669	0.01121	-2.61132	0.07059	0.00000	0.00000
302295	0.96920	0.00000	-1.49746	0.00000	0.24318	0.00000	303852	1.12239	0.02595	-0.10514	0.02160	0.14231	0.01046
302296	0.53724	0.00000	-0.65812	0.00000	0.26826	0.00000	303864	0.86676	0.02994	-1.38416	0.07745	0.36706	0.02893
302300	0.42619	0.00000	-1.10725	0.00000	0.00000	0.00000	303863	1.13864	0.03040	0.19329	0.02264	0.22952	0.01041
302302	0.94166	0.00000	-1.07898	0.00000	0.20011	0.00000	307673	1.06327	0.02859	-0.17972	0.02924	0.24697	0.01308
302305	0.42282	0.00000	-0.74025	0.00000	0.00000	0.00000	307677	0.86656	0.02491	-0.12409	0.03590	0.21445	0.01453
302310	0.95475	0.00000	0.51398	0.00000	0.37789	0.00000	307678	0.84045	0.02356	0.24287	0.02841	0.14743	0.01165
293267	0.52055	0.01115	-1.56057	0.03727	0.00000	0.00000	307679	0.74512	0.02216	-0.84620	0.05798	0.19219	0.02248
293270	0.63153	0.01944	-1.42541	0.08401	0.13823	0.03168	307684	1.09422	0.03278	-1.03001	0.04623	0.32829	0.02030
293271	0.64121	0.01934	-1.70701	0.08835	0.12905	0.03461							
293273	0.64408	0.02212	0.09238	0.04893	0.16931	0.01696							

**Table H-12. 2016 MCAS: IRT Parameters for Polytomous Items –  
ELA Grade 8**

Item Number	Parameters and Measures of Standard Error													
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>D0</i>	<i>SE (D0)</i>	<i>D1</i>	<i>SE (D1)</i>	<i>D2</i>	<i>SE (D2)</i>	<i>D3</i>	<i>SE (D3)</i>	<i>D4</i>	<i>SE (D4)</i>
293280	0.98178	0.00705	-0.19235	0.00819	2.67033	0.03018	0.69523	0.01277	-0.89956	0.01010	-2.46600	0.01698	0.00000	0.00000
297574	1.00919	0.00731	-0.41478	0.00814	2.05312	0.02476	0.85097	0.01437	-0.48327	0.01000	-2.42082	0.01468	0.00000	0.00000
302312	0.94617	0.00000	-0.50676	0.00000	2.18373	0.00000	0.69019	0.00000	-0.72084	0.00000	-2.15308	0.00000	0.00000	0.00000
303867	1.02103	0.00755	-0.56059	0.00788	2.31548	0.03024	0.83110	0.01515	-0.91631	0.00970	-2.23027	0.01249	0.00000	0.00000

**Table H-13. 2016 MCAS: IRT Parameters for Dichotomous Items –  
ELA Grade 10**

Item Number	Parameters and Measures of Standard Error						Item Number	Parameters and Measures of Standard Error					
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>		<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>
314827	1.04059	0.01611	-2.71218	0.02441	0.00000	0.00000	314684	0.61243	0.01269	-0.58044	0.04374	0.17253	0.01576
314836	1.11851	0.01699	-2.14690	0.02924	0.07080	0.02063	314687	0.65906	0.01268	-0.99998	0.04621	0.16852	0.01855
310286	1.05312	0.01800	-2.34654	0.04075	0.10824	0.02954	314693	0.58650	0.00901	-0.92820	0.03372	0.04186	0.01326
314828	0.53502	0.01290	-0.74099	0.06369	0.18491	0.02081	314698	0.89427	0.01599	-1.63997	0.04330	0.21906	0.02287
309542	1.04958	0.01997	-2.34142	0.05024	0.18005	0.03545	314699	0.48282	0.00592	-1.33924	0.01727	0.00000	0.00000
314837	0.80450	0.01354	-1.11001	0.03468	0.17496	0.01617	309154	0.82064	0.01749	-1.64239	0.05930	0.34606	0.02543
309551	0.37747	0.00756	-3.67077	0.06713	0.00000	0.00000	309155	0.59344	0.01229	-1.89101	0.08073	0.14739	0.03487
309553	0.66470	0.01420	-0.92374	0.05105	0.26389	0.01844	309158	0.55814	0.00714	-2.08918	0.02335	0.00000	0.00000
314403	0.58162	0.01353	-0.78470	0.05871	0.22743	0.01963	309161	0.65743	0.01292	-1.65024	0.06367	0.16107	0.02842
314404	0.72057	0.01580	0.26253	0.02582	0.26799	0.00870	309162	0.86761	0.01601	-0.80502	0.03210	0.31446	0.01300
314406	0.42085	0.00588	-1.79274	0.02477	0.00000	0.00000	309166	0.96522	0.01378	-0.48525	0.01746	0.15458	0.00843
314408	0.33953	0.00533	-1.54757	0.02629	0.00000	0.00000	309175	0.59197	0.01333	0.00313	0.03611	0.17604	0.01212
314578	0.52699	0.01183	-0.99382	0.06597	0.13319	0.02306	309180	0.59084	0.00730	-2.01498	0.02147	0.00000	0.00000
314580	0.61610	0.01138	-1.60073	0.05926	0.10657	0.02602	314531	0.84969	0.01454	-1.44951	0.03934	0.18454	0.01999
314581	0.67102	0.01212	-0.50305	0.03249	0.13407	0.01281	314535	1.01626	0.01586	-1.87327	0.03341	0.11062	0.02162
314584	0.89458	0.01514	-0.08267	0.01918	0.23695	0.00785	314537	0.51088	0.01051	-0.79716	0.05407	0.07955	0.01888
314672	0.98426	0.01379	-0.81344	0.01947	0.13556	0.01005	314540	0.72158	0.01336	-1.27228	0.04653	0.18389	0.02048
314681	0.85153	0.01604	-0.29769	0.02597	0.31416	0.00971							
314677	0.66892	0.01234	-0.38947	0.03156	0.14362	0.01218							

**Table H-14. 2016 MCAS: IRT Parameters for Polytomous Items –  
ELA Grade 10**

Item Number	Parameters and Measures of Standard Error													
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>D0</i>	<i>SE (D0)</i>	<i>D1</i>	<i>SE (D1)</i>	<i>D2</i>	<i>SE (D2)</i>	<i>D3</i>	<i>SE (D3)</i>	<i>D4</i>	<i>SE (D4)</i>
299602C	1.11485	0.00550	-2.40145	0.00456	2.43974	0.08213	2.13238	0.06230	-0.01039	0.01171	-0.45161	0.00905	-1.76055	0.00541
299602T	1.03755	0.00381	-0.01405	0.00422	4.27017	0.04600	3.87226	0.03342	2.48617	0.01254	2.05972	0.00983	0.67020	0.00572
309181	1.05026	0.00418	-0.73238	0.00426	2.37998	0.01763	0.87676	0.00771	-0.74550	0.00524	-2.51124	0.00799	0.00000	0.00000
314417	1.20379	0.00493	-0.83747	0.00377	2.14799	0.01653	0.73945	0.00720	-0.60708	0.00482	-2.28036	0.00644	0.00000	0.00000
314701	1.16696	0.00483	-0.96896	0.00384	1.81141	0.01427	0.71998	0.00764	-0.52729	0.00504	-2.00410	0.00562	0.00000	0.00000
314838	1.02563	0.00421	-1.03259	0.00455	2.62529	0.02555	0.96544	0.00928	-0.65990	0.00550	-2.93083	0.00857	0.00000	0.00000

continued



Item Number	Parameters and Measures of Standard Error											
	<i>D5</i>	<i>SE (D5)</i>	<i>D6</i>	<i>SE (D6)</i>	<i>D7</i>	<i>SE (D7)</i>	<i>D8</i>	<i>SE (D8)</i>	<i>D9</i>	<i>SE (D9)</i>	<i>D10</i>	<i>SE (D10)</i>
299602C	-2.34957	0.00503	0.00000	0.00000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
299602T	0.11413	0.00529	-1.74871	0.00781	-2.64947	0.01319	-4.24672	0.04627	-4.82774	0.07628	0.00000	0.00000

**Table H-15. 2016 MCAS: IRT Parameters for Dichotomous Items –  
Mathematics Grade 3**

Item Number	Parameters and Measures of Standard Error						Item Number	Parameters and Measures of Standard Error					
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>		<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>
306309	0.98530	0.00000	-1.28641	0.00000	0.10462	0.00000	297444	0.65011	0.03145	1.30405	0.04817	0.32344	0.01332
309883	0.78941	0.03111	-0.71832	0.08760	0.47298	0.02591	293492	0.78750	0.02466	-1.15910	0.07584	0.24622	0.03169
310850	0.84610	0.05105	2.15700	0.03754	0.34860	0.00770	227232	0.83254	0.02137	-0.37969	0.04083	0.14075	0.01752
207001	0.73284	0.02183	-1.33457	0.07851	0.17162	0.03383	202992	0.90426	0.00000	-0.60132	0.00000	0.09994	0.00000
303398	1.15504	0.02861	-0.03489	0.02579	0.20556	0.01241	306371	0.89255	0.00000	1.05710	0.00000	0.14772	0.00000
225833	0.67883	0.00000	-0.64161	0.00000	0.19188	0.00000	310857	0.53212	0.00000	1.11330	0.00000	0.19136	0.00000
300728	0.26339	0.00000	-2.04467	0.00000	0.00000	0.00000	297439	1.17584	0.00000	-0.65566	0.00000	0.10197	0.00000
310835	1.11661	0.02281	-0.49898	0.02264	0.05563	0.01060	207791	0.50402	0.00000	-1.78257	0.00000	0.33969	0.00000
227239	0.67704	0.01990	-0.52264	0.06163	0.15541	0.02347	293709	1.09991	0.02941	0.49367	0.02393	0.23814	0.01032
297446	0.96403	0.00000	-1.41039	0.00000	0.19095	0.00000	314785	0.55743	0.02864	1.63820	0.04716	0.21513	0.01363
306317	1.03981	0.00000	0.15826	0.00000	0.41055	0.00000	207826	0.42618	0.01164	-2.52326	0.07409	0.00000	0.00000
212474	0.93425	0.00000	-0.48208	0.00000	0.22448	0.00000	310894	0.61542	0.00000	0.10585	0.00000	0.00000	0.00000
297454	0.97552	0.02649	-0.29503	0.03794	0.23719	0.01666	260579	0.69766	0.01317	-1.17905	0.02739	0.00000	0.00000
260990	0.71515	0.02278	-1.28885	0.08762	0.21737	0.03577	298985	0.61806	0.00000	-1.33005	0.00000	0.00000	0.00000
309921	0.69560	0.00000	-0.69456	0.00000	0.18979	0.00000	310887	0.52187	0.00000	-0.72893	0.00000	0.00000	0.00000
306352	0.95211	0.04128	-0.84185	0.08569	0.59754	0.02289	310884	0.87890	0.01378	0.00532	0.01323	0.00000	0.00000

**Table H-16. 2016 MCAS: IRT Parameters for Polytomous Items –  
Mathematics Grade 3**

Item Number	Parameters and Measures of Standard Error									
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>D0</i>	<i>SE (D0)</i>	<i>D1</i>	<i>SE (D1)</i>	<i>D2</i>	<i>SE (D2)</i>
253598	0.83406	0.01158	-0.62833	0.01554	0.22923	0.01505	-0.22923	0.01338	0.00000	0.00000
293503	0.80855	0.00000	-0.43514	0.00000	0.65116	0.00000	-0.65116	0.00000	0.00000	0.00000
297404	0.69509	0.00000	-0.83613	0.00000	0.45361	0.00000	-0.45361	0.00000	0.00000	0.00000
297641	0.71628	0.00729	-0.46870	0.01271	1.03810	0.01973	-1.03810	0.01337	0.00000	0.00000

**Table H-17. 2016 MCAS: IRT Parameters for Dichotomous Items –  
Mathematics Grade 4**

Item Number	Parameters and Measures of Standard Error						Item Number	Parameters and Measures of Standard Error					
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>		<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>
301796	0.94511	0.00000	-2.48614	0.00000	0.12083	0.00000	301804	1.03202	0.00000	0.48435	0.00000	0.25413	0.00000
270627	0.65768	0.02008	-1.08973	0.08233	0.15497	0.03285	307077	0.76059	0.00000	-0.80486	0.00000	0.25136	0.00000
218879	1.16611	0.03827	-0.54145	0.04716	0.43151	0.01965	258221	1.57205	0.00000	0.58255	0.00000	0.25546	0.00000
311558	1.00755	0.00000	-0.12082	0.00000	0.39268	0.00000	298098	0.70547	0.00000	-1.33416	0.00000	0.20261	0.00000
227367	0.74722	0.02877	-2.18704	0.14033	0.28481	0.06125	218905	0.67824	0.01980	-1.83918	0.08812	0.11429	0.03794
303326	1.47943	0.03313	0.70806	0.01333	0.13086	0.00676	298082	1.17146	0.03196	0.71279	0.02103	0.22650	0.00942
281504	0.88905	0.02329	-1.03264	0.05043	0.13529	0.02419	247705	0.70690	0.02124	0.18792	0.04551	0.15151	0.01723
286768	0.87915	0.03130	-0.21215	0.05980	0.42255	0.02010	307073	1.36447	0.03190	0.82491	0.01421	0.13551	0.00684
287236	1.24473	0.04562	1.24734	0.02172	0.36111	0.00783	247750	0.50783	0.00000	-1.79900	0.00000	0.20713	0.00000
311536	0.89591	0.02894	-0.11515	0.04983	0.34457	0.01871	301819	1.25103	0.04042	1.61339	0.01588	0.15933	0.00553
297613	0.90746	0.02440	-1.76423	0.05706	0.08557	0.02739	303333	0.83447	0.00000	-0.12281	0.00000	0.33057	0.00000
311541	1.04513	0.00000	0.82798	0.00000	0.18254	0.00000	293514	0.59372	0.01141	-0.51814	0.02362	0.00000	0.00000
279771	1.12368	0.02793	-0.63390	0.03389	0.17059	0.01782	307311	0.83472	0.01435	-0.57336	0.01870	0.00000	0.00000
297625	0.82913	0.00000	-1.94538	0.00000	0.09770	0.00000	307065	0.88363	0.00000	0.64294	0.00000	0.00000	0.00000
311555	1.04336	0.00000	-0.06447	0.00000	0.26951	0.00000	307072	0.69172	0.00000	-0.50089	0.00000	0.00000	0.00000
250416	0.39712	0.00000	-2.78489	0.00000	0.22823	0.00000	307030	1.03078	0.00000	-0.13851	0.00000	0.00000	0.00000
293453	0.93018	0.00000	-1.06907	0.00000	0.24457	0.00000	299681	0.78480	0.01298	0.06531	0.01445	0.00000	0.00000
247598	0.74280	0.02259	-2.12052	0.09160	0.12522	0.04238							
311532	1.03387	0.02469	0.51063	0.02116	0.12051	0.00964							
280085	0.87914	0.02584	0.44759	0.03336	0.21296	0.01344							
307325	0.99841	0.02773	-0.05846	0.03629	0.25674	0.01597							

**Table H-18. 2016 MCAS: IRT Parameters for Polytomous Items –  
Mathematics Grade 4**

Item Number	Parameters and Measures of Standard Error													
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>D0</i>	<i>SE (D0)</i>	<i>D1</i>	<i>SE (D1)</i>	<i>D2</i>	<i>SE (D2)</i>	<i>D3</i>	<i>SE (D3)</i>	<i>D4</i>	<i>SE (D4)</i>
293812	1.05318	0.00809	0.34497	0.00784	1.76565	0.01743	0.76002	0.01168	-1.02130	0.01025	-1.50436	0.01170	0.00000	0.00000
302489	0.92675	0.00784	-0.66578	0.00921	1.34599	0.02352	0.54476	0.01632	-0.29397	0.01234	-1.59678	0.01078	0.00000	0.00000
307039	1.04893	0.00000	-0.00051	0.00000	1.42714	0.00000	0.54308	0.00000	-0.42145	0.00000	-1.54877	0.00000	0.00000	0.00000
307322	1.00054	0.00769	0.36804	0.00793	1.15876	0.01361	0.66161	0.01155	-0.33326	0.00999	-1.48711	0.01209	0.00000	0.00000

**Table H-19. 2016 MCAS: IRT Parameters for Dichotomous Items –  
Mathematics Grade 5**

Item Number	Parameters and Measures of Standard Error						Item Number	Parameters and Measures of Standard Error					
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>		<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>
280733	0.70451	0.00000	-1.25776	0.00000	0.30981	0.00000	217318	1.22501	0.02971	-0.74929	0.03075	0.18278	0.01725
217315	0.72050	0.02289	-1.42657	0.08625	0.22765	0.03515	306391	0.71902	0.02124	-0.17894	0.04933	0.16260	0.01914
301167	1.13448	0.00000	1.32705	0.00000	0.30965	0.00000	305023	1.03580	0.02688	0.23727	0.02573	0.17896	0.01175
311291	0.78479	0.02167	-0.20361	0.04294	0.15795	0.01770	272786	1.80490	0.04802	0.53506	0.01467	0.29883	0.00773
280493	1.31009	0.03027	0.33281	0.01729	0.15002	0.00878	301173	1.42654	0.03791	0.37648	0.01927	0.27434	0.00947
262105	1.06169	0.00000	-1.07910	0.00000	0.29875	0.00000	306467	0.77870	0.02773	0.34457	0.04535	0.27588	0.01602
206953	0.90492	0.00000	-0.25605	0.00000	0.22505	0.00000	287189	1.02216	0.02937	-1.68008	0.05448	0.15449	0.02792
311323	0.93455	0.00000	-0.15356	0.00000	0.20695	0.00000	301597	1.49303	0.03701	0.23212	0.01815	0.23420	0.00957
262140	0.86646	0.00000	-0.99826	0.00000	0.21122	0.00000	293819	0.68142	0.01960	-0.26831	0.05078	0.12932	0.01953
221158	1.12621	0.02785	-0.10153	0.02712	0.19318	0.01333	306428	1.02371	0.00000	0.85583	0.00000	0.20683	0.00000
248907	1.30045	0.00000	0.98577	0.00000	0.68625	0.00000	306393	1.09640	0.03675	0.48801	0.03003	0.36784	0.01145
311281	1.08686	0.00000	-0.15609	0.00000	0.27110	0.00000	298105	0.63574	0.01181	-0.50003	0.02079	0.00000	0.00000
260827	1.45864	0.04322	-0.41291	0.03124	0.38932	0.01545	310322	0.59090	0.01138	-0.51551	0.02223	0.00000	0.00000
311298	1.05056	0.00000	-0.12604	0.00000	0.38276	0.00000	221205	0.67259	0.00000	-2.03279	0.00000	0.00000	0.00000
311308	1.37018	0.00000	0.84946	0.00000	0.17927	0.00000	287421	0.79038	0.01509	-1.25432	0.02640	0.00000	0.00000
306402	1.01169	0.02742	0.43616	0.02457	0.17870	0.01088	303757	0.99522	0.01562	-0.31336	0.01344	0.00000	0.00000
204708	0.75860	0.00000	-1.63343	0.00000	0.13469	0.00000	301183	0.64551	0.00000	-0.46093	0.00000	0.00000	0.00000
303751	0.65847	0.02474	-1.11962	0.10693	0.34278	0.03523							
311307	1.51503	0.03872	0.04784	0.02043	0.26678	0.01087							
287413	0.61160	0.03292	1.66820	0.03715	0.16675	0.01193							
303315	0.76022	0.00000	-0.37882	0.00000	0.17876	0.00000							

**Table H-20. 2016 MCAS: IRT Parameters for Polytomous Items –  
Mathematics Grade 5**

Item Number	Parameters and Measures of Standard Error													
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>D0</i>	<i>SE (D0)</i>	<i>D1</i>	<i>SE (D1)</i>	<i>D2</i>	<i>SE (D2)</i>	<i>D3</i>	<i>SE (D3)</i>	<i>D4</i>	<i>SE (D4)</i>
272901	1.35219	0.00000	-0.22576	0.00000	0.80348	0.00000	0.11077	0.00000	-0.13212	0.00000	-0.78212	0.00000	0.00000	0.00000
298005	0.82979	0.00712	-0.69090	0.01004	1.69974	0.02683	0.99991	0.01956	-1.08311	0.01155	-1.61654	0.01167	0.00000	0.00000
303764	1.43252	0.01134	0.30167	0.00570	1.05762	0.01075	0.17585	0.00799	-0.23284	0.00756	-1.00063	0.00831	0.00000	0.00000
303765	0.99966	0.00000	-0.22206	0.00000	1.15897	0.00000	0.62524	0.00000	-0.69191	0.00000	-1.09231	0.00000	0.00000	0.00000

**Table H-21. 2016 MCAS: IRT Parameters for Dichotomous Items –  
Mathematics Grade 6**

Item Number	Parameters and Measures of Standard Error						Item Number	Parameters and Measures of Standard Error					
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>		<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>
311651	0.61126	0.02602	-1.95936	0.18164	0.35474	0.06185	311690	1.19381	0.00000	0.02922	0.00000	0.21895	0.00000
266113	0.63439	0.00000	-0.82796	0.00000	0.39430	0.00000	298145	1.15904	0.00000	-0.34140	0.00000	0.26118	0.00000
309778	1.19904	0.06516	1.56411	0.02520	0.45536	0.00721	251299	1.34453	0.00000	0.13028	0.00000	0.12149	0.00000
311714	1.42921	0.04145	1.43855	0.01221	0.11833	0.00471	301221	0.99138	0.02556	-0.24511	0.03554	0.20917	0.01673
272290	0.88273	0.00000	0.69473	0.00000	0.23759	0.00000	311713	1.20356	0.03201	1.17019	0.01386	0.11028	0.00597
311656	0.92637	0.00000	-1.70771	0.00000	0.17673	0.00000	282152	0.94177	0.02641	-1.32684	0.05818	0.18150	0.02947
265884	0.88573	0.02677	-1.49174	0.07200	0.21276	0.03505	272300	1.42856	0.00000	0.04723	0.00000	0.21154	0.00000
265893	0.80145	0.00000	0.12506	0.00000	0.19777	0.00000	311679	0.82727	0.02014	-0.14712	0.03476	0.10299	0.01528
272172	0.89558	0.02319	-0.14364	0.03668	0.17138	0.01647	229005	1.14915	0.03519	-1.26722	0.05307	0.27921	0.02806
311703	1.25236	0.03895	0.73833	0.02251	0.33415	0.00944	314808	0.91385	0.00000	0.29051	0.00000	0.23298	0.00000
311709	0.80986	0.00000	-0.78185	0.00000	0.19717	0.00000	221674	1.04966	0.02804	-0.15355	0.03447	0.25669	0.01601
307345	1.60468	0.03996	0.83602	0.01326	0.20425	0.00674	311687	0.90200	0.01444	0.87726	0.01089	0.00000	0.00000
282262	1.24328	0.02802	-0.35694	0.02488	0.15246	0.01382	311708	1.45754	0.00000	0.95730	0.00000	0.00000	0.00000
298163	1.01368	0.00000	-0.10242	0.00000	0.12291	0.00000	303723	1.42594	0.02015	0.76863	0.00766	0.00000	0.00000
288383	0.94256	0.02786	-0.75730	0.05434	0.29416	0.02420	298156	0.79377	0.01457	-1.04092	0.02422	0.00000	0.00000
296382	1.12520	0.03978	1.08227	0.02201	0.30051	0.00870	311659	0.65501	0.00000	-1.18938	0.00000	0.00000	0.00000
282128	0.65505	0.00000	-2.43244	0.00000	0.22540	0.00000	298150	0.53739	0.01071	0.37449	0.01696	0.00000	0.00000
288380	1.43301	0.03457	-0.81760	0.02607	0.14086	0.01593							
264407	0.81387	0.00000	-0.01014	0.00000	0.12805	0.00000							
298264	0.76397	0.02036	-1.16140	0.06094	0.12040	0.02744							
272174	1.23169	0.00000	-0.64089	0.00000	0.21465	0.00000							

**Table H-22. 2016 MCAS: IRT Parameters for Polytomous Items –  
Mathematics Grade 6**

Item Number	Parameters and Measures of Standard Error													
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>D0</i>	<i>SE (D0)</i>	<i>D1</i>	<i>SE (D1)</i>	<i>D2</i>	<i>SE (D2)</i>	<i>D3</i>	<i>SE (D3)</i>	<i>D4</i>	<i>SE (D4)</i>
296396	1.26262	0.00000	0.13385	0.00000	0.91358	0.00000	0.23495	0.00000	-0.12362	0.00000	-1.02491	0.00000	0.00000	0.00000
301511	1.41937	0.01148	0.29315	0.00575	0.82036	0.00993	0.25694	0.00813	-0.20985	0.00749	-0.86745	0.00776	0.00000	0.00000
303724	1.02716	0.01064	-1.14793	0.01092	1.06453	0.02514	0.12333	0.01550	-0.13119	0.01389	-1.05666	0.01046	0.00000	0.00000
311694	1.06476	0.00000	-0.31298	0.00000	1.13759	0.00000	0.41985	0.00000	-0.50010	0.00000	-1.05734	0.00000	0.00000	0.00000

**Table H-23. 2016 MCAS: IRT Parameters for Dichotomous Items –  
Mathematics Grade 7**

Item Number	Parameters and Measures of Standard Error						Item Number	Parameters and Measures of Standard Error					
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>		<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>
298181	1.02995	0.00000	-1.21227	0.00000	0.20265	0.00000	306593	1.10186	0.03040	0.18193	0.02727	0.28354	0.01142
219436	0.97725	0.00000	-0.31153	0.00000	0.21400	0.00000	306644	0.92318	0.02321	-0.27113	0.03358	0.16429	0.01462
281606	1.20214	0.00000	-0.33387	0.00000	0.12302	0.00000	250345	1.04361	0.02550	0.00565	0.02594	0.17828	0.01164
250260	0.86284	0.03162	0.10121	0.04962	0.42344	0.01516	302316	0.93033	0.00000	0.08030	0.00000	0.23937	0.00000
296354	1.51428	0.04428	1.06311	0.01469	0.25147	0.00612	272464	1.03434	0.02719	-0.21643	0.03208	0.23926	0.01408
311084	1.42208	0.03244	0.20907	0.01671	0.18289	0.00846	298195	1.51936	0.00000	1.04299	0.00000	0.30748	0.00000
298218	0.91354	0.02528	0.44810	0.02702	0.18652	0.01081	208369	0.95114	0.03545	0.74115	0.03289	0.38183	0.01062
298209	1.43338	0.00000	0.68469	0.00000	0.25988	0.00000	311137	1.11920	0.00000	0.15605	0.00000	0.08935	0.00000
259107	1.74451	0.00000	0.22570	0.00000	0.27596	0.00000	306572	1.20996	0.00000	0.74996	0.00000	0.15679	0.00000
306615	1.16394	0.00000	0.47309	0.00000	0.27325	0.00000	261640	0.99861	0.02805	-0.47746	0.04033	0.28190	0.01716
311080	1.08582	0.00000	0.09109	0.00000	0.28195	0.00000	303735	1.18930	0.03093	0.31961	0.02214	0.24492	0.00981
250202	0.83164	0.02345	-0.40212	0.04559	0.21280	0.01835	302318	0.98469	0.00000	-0.88289	0.00000	0.00000	0.00000
302314	0.95056	0.02765	-0.35157	0.04195	0.29689	0.01684	306598	0.84385	0.01675	-1.79461	0.02997	0.00000	0.00000
306636	1.41692	0.03733	0.80055	0.01543	0.22336	0.00688	306606	0.61061	0.00000	-0.44901	0.00000	0.00000	0.00000
290124	0.92181	0.02935	-0.13099	0.04407	0.35664	0.01581	281696	0.97726	0.01750	-1.34988	0.02149	0.00000	0.00000
228056	1.51606	0.03758	-0.83605	0.02411	0.16888	0.01406	301860	0.56652	0.00000	-0.84291	0.00000	0.00000	0.00000
208376	0.99555	0.02120	-1.14701	0.03154	0.05113	0.01463	298174	0.63502	0.01164	-1.03310	0.02514	0.00000	0.00000
205493	1.23752	0.00000	-0.56983	0.00000	0.16782	0.00000							
282300	1.11088	0.03758	0.54419	0.02932	0.40604	0.01017							
296356	1.13381	0.02824	0.53907	0.01918	0.17340	0.00842							
281419	0.99590	0.00000	0.43651	0.00000	0.10355	0.00000							

**Table H-24. 2016 MCAS: IRT Parameters for Polytomous Items –  
Mathematics Grade 7**

Item Number	Parameters and Measures of Standard Error													
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>D0</i>	<i>SE (D0)</i>	<i>D1</i>	<i>SE (D1)</i>	<i>D2</i>	<i>SE (D2)</i>	<i>D3</i>	<i>SE (D3)</i>	<i>D4</i>	<i>SE (D4)</i>
272156	1.39109	0.00000	0.57392	0.00000	1.19854	0.00000	0.47828	0.00000	-0.66505	0.00000	-1.01177	0.00000	0.00000	0.00000
298212	1.29776	0.00000	-0.15763	0.00000	0.74982	0.00000	0.09848	0.00000	-0.07129	0.00000	-0.77701	0.00000	0.00000	0.00000
311079	0.98180	0.00728	-0.16045	0.00796	1.83653	0.02034	0.48306	0.01217	-0.59938	0.01016	-1.72021	0.01168	0.00000	0.00000
311134	1.24636	0.00942	0.23290	0.00640	1.26803	0.01248	0.42852	0.00938	-0.37476	0.00851	-1.32178	0.01002	0.00000	0.00000

**Table H-25. 2016 MCAS: IRT Parameters for Dichotomous Items –  
Mathematics Grade 8**

Item Number	Parameters and Measures of Standard Error						Item Number	Parameters and Measures of Standard Error					
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>		<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>
272928	1.43103	0.00000	-0.09075	0.00000	0.20572	0.00000	307497	1.20316	0.02857	1.10060	0.01555	0.13411	0.00614
273670	1.00059	0.02774	-0.09670	0.03699	0.30959	0.01480	284910	1.01619	0.03015	1.36053	0.02015	0.19153	0.00712
284880	0.72905	0.00000	-0.86005	0.00000	0.13416	0.00000	275024	0.87637	0.02164	0.15770	0.03172	0.17091	0.01279
219585	1.44347	0.00000	0.10494	0.00000	0.22699	0.00000	307594	0.71067	0.02918	0.97545	0.04857	0.36764	0.01312
263846	1.37843	0.00000	0.66995	0.00000	0.35478	0.00000	307585	1.02968	0.00000	-0.64587	0.00000	0.26109	0.00000
297516	1.20606	0.00000	0.92844	0.00000	0.11972	0.00000	307553	0.79022	0.00000	-0.38855	0.00000	0.20323	0.00000
307424	1.66236	0.00000	0.39102	0.00000	0.20848	0.00000	282314	0.97930	0.02246	-0.34695	0.03081	0.14336	0.01402
307500	0.61514	0.00000	-1.32236	0.00000	0.24424	0.00000	301689	1.51376	0.00000	1.54629	0.00000	0.23448	0.00000
311439	0.59264	0.02443	0.99491	0.05464	0.26607	0.01521	264725	1.48785	0.00000	-0.36949	0.00000	0.28692	0.00000
219562	1.18432	0.00000	0.43621	0.00000	0.16818	0.00000	307521	0.78378	0.02136	0.86110	0.02794	0.13846	0.01005
307428	1.36068	0.03707	-0.08758	0.02649	0.33434	0.01234	219616	1.33362	0.03826	0.88192	0.02058	0.33084	0.00797
283255	0.87664	0.02032	-0.44432	0.03548	0.13170	0.01537	301477	0.76923	0.01192	0.69243	0.01289	0.00000	0.00000
284149	1.04198	0.02489	0.57275	0.02223	0.17039	0.00925	296114	0.61806	0.00000	-0.86850	0.00000	0.00000	0.00000
259251	0.69109	0.02151	-0.17280	0.06031	0.27464	0.01988	228379	0.63049	0.01341	-1.91290	0.04171	0.00000	0.00000
253753	1.00685	0.00000	0.03475	0.00000	0.30511	0.00000	297651	0.70993	0.01144	-0.02051	0.01602	0.00000	0.00000
304572	0.77430	0.02295	-0.13470	0.05106	0.28334	0.01794	311451	0.87513	0.00000	-0.80653	0.00000	0.00000	0.00000
219587	1.23768	0.00000	-0.32556	0.00000	0.27610	0.00000	297663	1.22138	0.00000	-0.21496	0.00000	0.00000	0.00000
228149	0.84246	0.02621	-0.38007	0.05553	0.36154	0.01931							
264788	0.36457	0.01210	-4.02267	0.13498	0.00000	0.00000							
311409	0.69586	0.01950	-0.61719	0.06030	0.20841	0.02213							
303788	0.68050	0.02114	0.49381	0.04501	0.20859	0.01481							

**Table H-26. 2016 MCAS: IRT Parameters for Polytomous Items –  
Mathematics Grade 8**

Item Number	Parameters and Measures of Standard Error													
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>D0</i>	<i>SE (D0)</i>	<i>D1</i>	<i>SE (D1)</i>	<i>D2</i>	<i>SE (D2)</i>	<i>D3</i>	<i>SE (D3)</i>	<i>D4</i>	<i>SE (D4)</i>
298039	0.90144	0.00000	-0.24678	0.00000	1.76611	0.00000	0.70192	0.00000	-0.39371	0.00000	-2.07431	0.00000	0.00000	0.00000
301485	1.52348	0.01257	0.26789	0.00570	1.74790	0.01550	0.01851	0.00819	-0.61784	0.00773	-1.14858	0.00820	0.00000	0.00000
301713	1.31406	0.00000	0.19756	0.00000	1.34559	0.00000	0.43347	0.00000	-0.42422	0.00000	-1.35484	0.00000	0.00000	0.00000
311465	0.97096	0.00712	0.71957	0.00811	1.89245	0.01582	0.27962	0.01066	-0.47380	0.01067	-1.69828	0.01452	0.00000	0.00000

**Table H-27. 2016 MCAS: IRT Parameters for Dichotomous Items –  
Mathematics Grade 10**

Item Number	Parameters and Measures of Standard Error						Item Number	Parameters and Measures of Standard Error					
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>		<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>
311984	1.07992	0.01569	-1.07540	0.02187	0.18445	0.01208	312396	1.07823	0.01749	-0.31768	0.01790	0.31412	0.00758
300987	0.82402	0.01291	-1.11120	0.03162	0.13433	0.01555	314810	0.85214	0.01796	-0.25662	0.02941	0.40553	0.00946
303389	0.46861	0.00556	-1.08686	0.01507	0.00000	0.00000	288111	1.33199	0.01426	-0.91261	0.00998	0.03571	0.00563
281596	0.94333	0.01823	-0.29237	0.02477	0.39576	0.00866	294483	1.12855	0.01760	-1.08009	0.02319	0.26021	0.01231
306521	0.81056	0.01117	-1.18562	0.02700	0.06040	0.01378	308919	0.98608	0.01613	0.28177	0.01359	0.21307	0.00555
303268	0.75304	0.01445	-0.55297	0.03390	0.25818	0.01271	312354	1.06939	0.01704	-0.15130	0.01609	0.28474	0.00682
294173	0.91575	0.01564	0.20357	0.01594	0.22171	0.00633	311205	0.55251	0.00576	-0.64210	0.01050	0.00000	0.00000
293994	1.15755	0.01708	-0.27668	0.01450	0.25918	0.00671	303385	0.84833	0.00991	-1.37379	0.02032	0.02925	0.01036
313940	1.01901	0.01495	-0.61071	0.01893	0.20477	0.00909	303376	0.50072	0.00637	-1.94353	0.02262	0.00000	0.00000
313799	0.61463	0.01421	-0.49145	0.04842	0.24633	0.01587	299920	0.86411	0.01122	-0.87472	0.02025	0.05522	0.01007
311176	1.17034	0.01696	-0.21801	0.01359	0.24511	0.00634	306497	0.95762	0.02250	1.16308	0.01269	0.22468	0.00402
306534	1.39451	0.02560	0.07456	0.01376	0.46474	0.00507	301009	0.88823	0.01408	-1.58283	0.03699	0.13200	0.02117
301435	0.97214	0.01590	-0.37612	0.02034	0.27479	0.00856	311163	1.18640	0.01057	-1.23214	0.00769	0.00000	0.00000
308014	1.20253	0.01777	-0.05894	0.01259	0.25987	0.00571	250773	0.91051	0.00754	-0.52505	0.00669	0.00000	0.00000
313889	0.68461	0.00836	-2.20810	0.02101	0.00000	0.00000	287942	0.99769	0.00797	-0.32256	0.00586	0.00000	0.00000
313773	0.75070	0.01282	-1.59822	0.04799	0.12607	0.02460	303461	0.50512	0.00553	-0.13666	0.00969	0.00000	0.00000
303292	1.12278	0.01430	-1.23427	0.01808	0.07762	0.01104							
294500	0.58614	0.00617	-1.16975	0.01294	0.00000	0.00000							
312325	0.36946	0.00570	-2.14364	0.03213	0.00000	0.00000							
308754	0.45299	0.00593	-1.79449	0.02264	0.00000	0.00000							

**Table H-28. 2016 MCAS: IRT Parameters for Polytomous Items –  
Mathematics Grade 10**

Item Number	Parameters and Measures of Standard Error													
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>D0</i>	<i>SE (D0)</i>	<i>D1</i>	<i>SE (D1)</i>	<i>D2</i>	<i>SE (D2)</i>	<i>D3</i>	<i>SE (D3)</i>	<i>D4</i>	<i>SE (D4)</i>
303454	1.13240	0.00445	-0.39921	0.00375	1.63396	0.00890	0.53447	0.00569	-0.44044	0.00490	-1.72799	0.00619	0.00000	0.00000
306491	1.29039	0.00521	-0.27477	0.00334	1.84971	0.00907	0.30770	0.00486	-0.69775	0.00451	-1.45966	0.00541	0.00000	0.00000
311174	1.40482	0.00598	-0.37319	0.00315	1.03538	0.00608	0.35863	0.00472	-0.33786	0.00420	-1.05615	0.00446	0.00000	0.00000
311224	1.38878	0.00579	-0.65986	0.00335	1.67543	0.01008	0.77741	0.00615	-0.31880	0.00446	-2.13404	0.00598	0.00000	0.00000
312317	1.30280	0.00525	-0.28133	0.00335	1.38519	0.00705	0.78426	0.00550	-0.48736	0.00447	-1.68208	0.00592	0.00000	0.00000
313788	1.40062	0.00602	-0.15519	0.00317	1.36915	0.00647	0.06742	0.00431	-0.50666	0.00422	-0.92991	0.00454	0.00000	0.00000



**Table H-29. 2016 MCAS: IRT Parameters for Dichotomous Items –  
STE Grade 5**

Item Number	Parameters and Measures of Standard Error						Item Number	Parameters and Measures of Standard Error					
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>		<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>
288149	0.52578	0.01462	-1.76919	0.11139	0.40007	0.02904	294447	0.88025	0.01621	-0.38822	0.02477	0.36560	0.00846
316897	0.25486	0.00511	-3.25607	0.06264	0.00000	0.00000	309966	0.97708	0.01430	-1.09246	0.02265	0.22638	0.01054
288174	0.41408	0.01304	0.20785	0.06107	0.16498	0.01571	304609	0.29966	0.01737	-0.36757	0.22065	0.34832	0.03412
281807	0.68637	0.01067	-1.69141	0.04067	0.10031	0.01790	294496	0.86164	0.01371	-0.36597	0.02044	0.23293	0.00801
294464	0.77465	0.01238	-1.00871	0.03007	0.20409	0.01221	263140	1.05822	0.01566	-0.42629	0.01627	0.26295	0.00702
304682	0.84831	0.01404	-0.48390	0.02321	0.26616	0.00884	281840	0.46534	0.00571	-1.97652	0.02231	0.00000	0.00000
309962	0.75397	0.01537	-0.35829	0.03124	0.35963	0.00970	291384	0.92339	0.01844	-0.90171	0.03331	0.47873	0.01056
291342	0.74024	0.01146	-0.19279	0.01963	0.12401	0.00757	273772	0.77282	0.01387	-1.41662	0.04169	0.29192	0.01629
264883	0.76684	0.01183	-0.05924	0.01768	0.12752	0.00686	289684	0.95780	0.01422	-0.73212	0.02039	0.24016	0.00883
304603	0.72261	0.01275	-1.32295	0.04143	0.24276	0.01609	289469	0.66845	0.02591	1.75890	0.02697	0.27337	0.00512
291332	0.77142	0.01369	-0.35750	0.02560	0.26062	0.00912	309988	0.78419	0.01246	-0.55538	0.02401	0.19629	0.00939
294512	0.76469	0.01195	-0.53651	0.02360	0.16934	0.00927	291222	0.63457	0.01172	-0.53860	0.03387	0.18166	0.01172
291042	0.43657	0.00638	-2.96353	0.03751	0.00000	0.00000	291367	0.88283	0.01419	-1.30772	0.03066	0.25982	0.01337
304599	0.50962	0.01082	-0.56830	0.04775	0.12880	0.01496	316896	0.81580	0.01267	0.11483	0.01545	0.14084	0.00603
273739	0.68832	0.01437	-0.46552	0.03643	0.33037	0.01118	299401	0.94260	0.01413	0.13816	0.01324	0.17251	0.00538
264854	0.54733	0.01009	-2.14831	0.07162	0.10680	0.02844	289451	0.78455	0.01274	-0.55246	0.02472	0.21311	0.00952
304476	0.78819	0.01364	-0.42523	0.02526	0.25864	0.00920	294436	1.00712	0.01648	0.60923	0.01074	0.17320	0.00411
291235	1.20288	0.01652	-0.84115	0.01554	0.23574	0.00781							
299496	0.48334	0.01350	0.51392	0.03787	0.16745	0.01098							
309486	1.04104	0.01572	-0.54685	0.01795	0.28036	0.00767							
291419	0.48419	0.00596	-2.14658	0.02349	0.00000	0.00000							

**Table H-30. 2016 MCAS: IRT Parameters for Polytomous Items –  
STE Grade 5**

Item Number	Parameters and Measures of Standard Error													
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>D0</i>	<i>SE (D0)</i>	<i>D1</i>	<i>SE (D1)</i>	<i>D2</i>	<i>SE (D2)</i>	<i>D3</i>	<i>SE (D3)</i>	<i>D4</i>	<i>SE (D4)</i>
273735	0.80026	0.00321	0.48192	0.00523	1.65810	0.00757	0.60353	0.00645	-0.62966	0.00725	-1.63198	0.01024	0.00000	0.00000
273773	0.85999	0.00368	-0.53743	0.00495	1.12042	0.00832	0.48218	0.00689	-0.09288	0.00625	-1.50973	0.00675	0.00000	0.00000
291597	0.92782	0.00402	-1.05158	0.00473	1.31360	0.01066	0.72567	0.00832	-0.42297	0.00608	-1.61629	0.00596	0.00000	0.00000
294556	0.76386	0.00314	0.78387	0.00554	1.66752	0.00735	0.49085	0.00670	-0.41150	0.00763	-1.74687	0.01254	0.00000	0.00000

**Table H-31. 2016 MCAS: IRT Parameters for Dichotomous Items –  
STE Grade 8**

Item Number	Parameters and Measures of Standard Error						Item Number	Parameters and Measures of Standard Error					
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>		<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>
310260	0.39450	0.00580	-2.08642	0.03182	0.00000	0.00000	291999	1.01656	0.01565	-0.72401	0.02281	0.26436	0.01066
289724	0.80995	0.01601	-0.98455	0.04317	0.37442	0.01576	273927	0.97817	0.01814	0.56690	0.01467	0.28199	0.00561
282055	0.81876	0.01622	0.62519	0.01724	0.23181	0.00638	273978	1.24395	0.01682	-0.11285	0.01203	0.21750	0.00603
289641	0.60404	0.01191	-0.50931	0.04229	0.16423	0.01501	299435	1.06893	0.01607	-0.18452	0.01639	0.25874	0.00739
282025	0.99584	0.01940	1.17883	0.01075	0.16858	0.00379	252744	0.83520	0.01393	-0.03041	0.02078	0.21191	0.00834
288322	1.25721	0.02224	0.68152	0.01083	0.31271	0.00435	299482	0.42830	0.00569	-1.60971	0.02353	0.00000	0.00000
291822	1.09065	0.01543	-0.67797	0.01862	0.21577	0.00941	310270	0.79622	0.01326	-0.02517	0.02133	0.18415	0.00853
282004	0.58201	0.01585	0.80666	0.02899	0.21538	0.00922	282069	0.89053	0.01830	0.92023	0.01394	0.23101	0.00513
299469	0.66221	0.01032	-1.96580	0.04890	0.07474	0.02320	299412	0.91416	0.01620	0.40099	0.01616	0.24789	0.00632
299394	1.06225	0.01691	0.02081	0.01594	0.28694	0.00677	291708	0.95103	0.01360	-0.55522	0.02007	0.17893	0.00947
291711	0.39948	0.00568	-1.86075	0.02824	0.00000	0.00000	282026	1.16818	0.02033	0.68705	0.01110	0.27541	0.00450
265300	0.36895	0.00530	-1.40147	0.02411	0.00000	0.00000	310254	1.29157	0.03228	1.15387	0.01226	0.42527	0.00368
229398	0.99765	0.01622	-0.08832	0.01829	0.28775	0.00760	265230	0.33932	0.01971	1.66421	0.06790	0.19276	0.01755
299414	1.04769	0.01686	0.74405	0.01033	0.16978	0.00430	299480	0.38687	0.00516	-0.50560	0.01475	0.00000	0.00000
265228	0.66589	0.01145	-1.85191	0.05679	0.11960	0.02655	265218	0.48934	0.00559	-0.73334	0.01337	0.00000	0.00000
310326	1.08175	0.01664	0.28704	0.01279	0.23251	0.00558	304548	1.03797	0.01320	-1.20570	0.01984	0.08449	0.01107
299453	1.08714	0.01778	-0.47337	0.02087	0.34669	0.00897	291864	1.14062	0.01542	-0.46811	0.01530	0.19778	0.00780
291810	0.69584	0.01321	-2.23922	0.07216	0.17013	0.03562							
291825	1.47888	0.02446	0.86361	0.00805	0.25052	0.00339							
309785	1.03893	0.01404	-0.27000	0.01498	0.16573	0.00722							
299429	0.86622	0.01511	-0.72086	0.03090	0.30366	0.01248							

**Table H-32. 2016 MCAS: IRT Parameters for Polytomous Items –  
STE Grade 8**

Item Number	Parameters and Measures of Standard Error													
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>D0</i>	<i>SE (D0)</i>	<i>D1</i>	<i>SE (D1)</i>	<i>D2</i>	<i>SE (D2)</i>	<i>D3</i>	<i>SE (D3)</i>	<i>D4</i>	<i>SE (D4)</i>
292041	0.90268	0.00363	0.14642	0.00455	1.41675	0.00769	0.39675	0.00592	-0.45626	0.00576	-1.35724	0.00698	0.00000	0.00000
299004	1.04077	0.00416	0.05734	0.00400	1.32580	0.00719	0.51023	0.00555	-0.47394	0.00514	-1.36209	0.00623	0.00000	0.00000
299510	0.79886	0.00308	0.67573	0.00516	1.91121	0.00812	0.43717	0.00630	-0.60169	0.00706	-1.74670	0.01073	0.00000	0.00000
304691	1.05208	0.00440	-0.29989	0.00404	1.20545	0.00787	0.40184	0.00585	-0.35257	0.00510	-1.25472	0.00545	0.00000	0.00000

**Table H-33. 2016 MCAS: IRT Parameters for Dichotomous Items –  
High School Biology**

Item Number	Parameters and Measures of Standard Error						Item Number	Parameters and Measures of Standard Error					
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>		<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>
310212	0.74792	0.00000	-1.32409	0.00000	0.32646	0.00000	279799	1.48263	0.00000	0.62865	0.00000	0.45920	0.00000
290013	0.84145	0.00000	-0.24228	0.00000	0.13984	0.00000	304873	0.79352	0.00000	-0.91712	0.00000	0.24122	0.00000
304944	0.58330	0.00000	-1.06991	0.00000	0.16883	0.00000	301333	0.68939	0.00000	-0.99037	0.00000	0.15087	0.00000
310079	0.92466	0.00000	-0.95182	0.00000	0.22351	0.00000	305800	1.09094	0.00000	-0.47283	0.00000	0.34324	0.00000
290985	0.62942	0.00000	-0.48787	0.00000	0.24621	0.00000	276542	1.04051	0.00000	-0.61999	0.00000	0.23028	0.00000
290928	1.09408	0.00000	0.12423	0.00000	0.31312	0.00000	300665	1.38293	0.00000	-0.98333	0.00000	0.35949	0.00000
261212	1.07350	0.00000	-0.67263	0.00000	0.29684	0.00000	304899	0.98101	0.00000	0.11057	0.00000	0.33533	0.00000
299859	0.86035	0.00000	0.27547	0.00000	0.23751	0.00000	296121	0.78267	0.00000	0.13265	0.00000	0.21727	0.00000
299856	0.82083	0.00000	0.41708	0.00000	0.18332	0.00000	299800	1.29796	0.00000	-0.00826	0.00000	0.26692	0.00000
299865	1.01754	0.00000	-0.57386	0.00000	0.25160	0.00000	310755	0.70046	0.00000	-0.29243	0.00000	0.14860	0.00000
299860	0.51136	0.00000	-0.45586	0.00000	0.17896	0.00000	301342	0.84577	0.00000	-1.07320	0.00000	0.16535	0.00000
283173	1.06066	0.00000	0.88367	0.00000	0.33265	0.00000	301334	1.16268	0.00000	-0.15428	0.00000	0.34071	0.00000
304882	0.51623	0.00000	-0.87494	0.00000	0.14707	0.00000	304985	0.78987	0.00000	-0.03542	0.00000	0.38545	0.00000
310086	1.54810	0.00000	-0.95256	0.00000	0.37731	0.00000	289264	1.25103	0.00000	0.21749	0.00000	0.23110	0.00000
290951	0.57850	0.00000	-0.77111	0.00000	0.12961	0.00000	296151	1.02167	0.00000	-0.14360	0.00000	0.39289	0.00000
312655	0.75639	0.00000	0.70453	0.00000	0.24711	0.00000	301386	1.09941	0.00000	0.19935	0.00000	0.26459	0.00000
304925	0.83628	0.00000	-0.81372	0.00000	0.21515	0.00000	290971	0.94881	0.00000	0.22041	0.00000	0.16193	0.00000
294761	1.02906	0.00000	-0.13112	0.00000	0.24538	0.00000	301371	0.68651	0.00000	-0.65528	0.00000	0.10722	0.00000
301396	0.33642	0.00000	-1.05314	0.00000	0.00000	0.00000							
281144	0.82430	0.00000	-0.83623	0.00000	0.23818	0.00000							
304938	1.05408	0.00000	-0.07550	0.00000	0.22312	0.00000							
299750	0.65780	0.00000	-0.57147	0.00000	0.18989	0.00000							

**Table H-34. 2016 MCAS: IRT Parameters for Polytomous Items –  
High School Biology**

Item Number	Parameters and Measures of Standard Error													
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>D0</i>	<i>SE (D0)</i>	<i>D1</i>	<i>SE (D1)</i>	<i>D2</i>	<i>SE (D2)</i>	<i>D3</i>	<i>SE (D3)</i>	<i>D4</i>	<i>SE (D4)</i>
289126	1.06424	0.00000	1.06096	0.00000	1.59071	0.00000	0.82007	0.00000	-0.28925	0.00000	-2.12153	0.00000	0.00000	0.00000
301354	1.21022	0.00000	0.91452	0.00000	1.71173	0.00000	0.35854	0.00000	-0.50842	0.00000	-1.56185	0.00000	0.00000	0.00000
304272	1.57701	0.00000	0.96866	0.00000	1.01970	0.00000	0.30837	0.00000	-0.24268	0.00000	-1.08538	0.00000	0.00000	0.00000
310764	1.10882	0.00000	0.60523	0.00000	1.20656	0.00000	0.31052	0.00000	-0.13883	0.00000	-1.37825	0.00000	0.00000	0.00000
314638	1.15255	0.00000	0.56458	0.00000	1.33339	0.00000	0.42913	0.00000	-0.42507	0.00000	-1.33746	0.00000	0.00000	0.00000

**Table H-35. 2016 MCAS: IRT Parameters for Dichotomous Items –  
High School Chemistry**

Item Number	Parameters and Measures of Standard Error						Item Number	Parameters and Measures of Standard Error					
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>		<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>
304361	1.01420	0.00000	-0.52482	0.00000	0.28728	0.00000	300129	1.49125	0.00000	0.50953	0.00000	0.27453	0.00000
273193	1.03443	0.00000	1.12460	0.00000	0.22282	0.00000	300141	0.77543	0.00000	-0.52933	0.00000	0.00000	0.00000
299698	1.02961	0.00000	0.09836	0.00000	0.24221	0.00000	208259	0.95338	0.00000	-0.96485	0.00000	0.25813	0.00000
300073	0.94904	0.00000	0.10358	0.00000	0.22282	0.00000	246788	1.06992	0.00000	-0.29988	0.00000	0.23537	0.00000
261461	1.32948	0.00000	0.55151	0.00000	0.45106	0.00000	244914	1.11472	0.00000	0.11770	0.00000	0.19825	0.00000
305195	1.62499	0.00000	0.63732	0.00000	0.14367	0.00000	252681	1.68352	0.00000	0.78691	0.00000	0.27011	0.00000
281315	0.85995	0.00000	0.02130	0.00000	0.23182	0.00000	275886	1.41955	0.00000	0.39121	0.00000	0.15399	0.00000
300076	1.49322	0.00000	-0.32985	0.00000	0.23024	0.00000	294670	0.62840	0.00000	0.01003	0.00000	0.00000	0.00000
300170	1.28579	0.00000	-0.01466	0.00000	0.20286	0.00000	281321	0.83855	0.00000	1.11723	0.00000	0.29676	0.00000
246829	0.73002	0.00000	0.67329	0.00000	0.25634	0.00000	287291	1.45870	0.00000	0.69270	0.00000	0.12911	0.00000
294698	0.64557	0.00000	-0.93513	0.00000	0.00000	0.00000	261170	1.10916	0.00000	0.37473	0.00000	0.29023	0.00000
294715	0.96799	0.00000	0.20823	0.00000	0.20642	0.00000	300095	1.73515	0.00000	-0.06113	0.00000	0.25144	0.00000
294590	1.22655	0.00000	0.27707	0.00000	0.24151	0.00000	246844	1.25212	0.00000	-0.51306	0.00000	0.25089	0.00000
287950	1.00408	0.00000	0.70938	0.00000	0.40864	0.00000	288229	1.48374	0.00000	0.98158	0.00000	0.25887	0.00000
298318	1.18800	0.00000	1.09260	0.00000	0.14313	0.00000	294598	1.04182	0.00000	0.35051	0.00000	0.20656	0.00000
258948	1.20030	0.00000	-0.52159	0.00000	0.30801	0.00000	281922	1.09808	0.00000	0.12542	0.00000	0.15183	0.00000
261167	0.26948	0.00000	0.45265	0.00000	0.00000	0.00000	258936	1.14929	0.00000	0.25044	0.00000	0.27297	0.00000
260896	0.89771	0.00000	0.37973	0.00000	0.28025	0.00000	294705	1.56625	0.00000	0.05464	0.00000	0.18559	0.00000
294649	0.91556	0.00000	0.73193	0.00000	0.24638	0.00000							
294712	0.57996	0.00000	-0.80011	0.00000	0.00000	0.00000							
281183	0.97416	0.00000	1.40714	0.00000	0.31355	0.00000							
298979	0.73379	0.00000	-0.56507	0.00000	0.00000	0.00000							

**Table H-36. 2016 MCAS: IRT Parameters for Polytomous Items –  
High School Chemistry**

Item Number	Parameters and Measures of Standard Error													
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>D0</i>	<i>SE (D0)</i>	<i>D1</i>	<i>SE (D1)</i>	<i>D2</i>	<i>SE (D2)</i>	<i>D3</i>	<i>SE (D3)</i>	<i>D4</i>	<i>SE (D4)</i>
261486	0.91393	0.00000	0.48882	0.00000	0.77440	0.00000	0.60531	0.00000	-0.15038	0.00000	-1.22934	0.00000	0.00000	0.00000
288234	1.07757	0.00000	0.13765	0.00000	1.93197	0.00000	0.52057	0.00000	-0.76495	0.00000	-1.68758	0.00000	0.00000	0.00000
288237	1.57058	0.00000	1.24727	0.00000	0.99015	0.00000	0.06953	0.00000	-0.36048	0.00000	-0.69920	0.00000	0.00000	0.00000
300145	1.47622	0.00000	0.45698	0.00000	1.26504	0.00000	0.55524	0.00000	-0.45276	0.00000	-1.36752	0.00000	0.00000	0.00000
309496	1.67252	0.00000	0.85205	0.00000	1.27747	0.00000	0.28046	0.00000	-0.43393	0.00000	-1.12400	0.00000	0.00000	0.00000

**Table H-37. 2016 MCAS: IRT Parameters for Dichotomous Items –  
High School Introductory Physics**

Item Number	Parameters and Measures of Standard Error						Item Number	Parameters and Measures of Standard Error					
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>		<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>
301789	0.95153	0.00000	-0.43980	0.00000	0.22798	0.00000	273436	0.87753	0.00000	0.92698	0.00000	0.31300	0.00000
261148	1.43453	0.00000	0.29055	0.00000	0.30434	0.00000	293973	1.03134	0.00000	0.15098	0.00000	0.20824	0.00000
287403	1.25894	0.00000	0.60963	0.00000	0.16617	0.00000	310455	0.81857	0.00000	-0.98279	0.00000	0.24752	0.00000
305478	0.96273	0.00000	0.05021	0.00000	0.28021	0.00000	280455	1.30966	0.00000	0.75251	0.00000	0.30727	0.00000
305495	1.25976	0.00000	0.25279	0.00000	0.20544	0.00000	287389	1.07544	0.00000	1.14962	0.00000	0.39416	0.00000
287218	1.01887	0.00000	0.34759	0.00000	0.27477	0.00000	310486	1.37031	0.00000	0.08432	0.00000	0.20068	0.00000
304782	1.17139	0.00000	-0.15850	0.00000	0.08599	0.00000	287371	0.57684	0.00000	-0.70905	0.00000	0.28876	0.00000
311056	0.92374	0.00000	0.41646	0.00000	0.47021	0.00000	305493	0.62919	0.00000	-0.49149	0.00000	0.21944	0.00000
305514	0.84913	0.00000	-0.02546	0.00000	0.14738	0.00000	272741	1.20547	0.00000	0.98707	0.00000	0.15114	0.00000
311023	1.50653	0.00000	-0.19239	0.00000	0.15793	0.00000	293939	1.20719	0.00000	-0.10705	0.00000	0.10916	0.00000
310499	0.93285	0.00000	-0.14286	0.00000	0.28188	0.00000	304763	0.75399	0.00000	0.31804	0.00000	0.29236	0.00000
311313	1.06229	0.00000	-0.95862	0.00000	0.18586	0.00000	310433	0.85567	0.00000	-0.42148	0.00000	0.26107	0.00000
301786	0.85208	0.00000	-0.53600	0.00000	0.21103	0.00000	301717	0.89937	0.00000	-0.79279	0.00000	0.15128	0.00000
280453	1.31955	0.00000	0.73839	0.00000	0.33375	0.00000	295846	1.44108	0.00000	0.76423	0.00000	0.24051	0.00000
280963	0.65071	0.00000	-0.42709	0.00000	0.16230	0.00000	314840	0.83309	0.00000	-0.31208	0.00000	0.27487	0.00000
311371	0.94557	0.00000	-0.50794	0.00000	0.19231	0.00000	313006	0.86752	0.00000	-0.23624	0.00000	0.27201	0.00000
301731	1.22085	0.00000	-0.72727	0.00000	0.17081	0.00000	297417	1.25529	0.00000	0.29765	0.00000	0.19124	0.00000
305440	1.07339	0.00000	0.02823	0.00000	0.28767	0.00000	301772	0.92250	0.00000	0.11613	0.00000	0.18236	0.00000
295865	0.44643	0.00000	0.63841	0.00000	0.18901	0.00000							
280470	1.09040	0.00000	0.61392	0.00000	0.23258	0.00000							
273427	0.97994	0.00000	0.55771	0.00000	0.30121	0.00000							
301785	0.87741	0.00000	0.20328	0.00000	0.31476	0.00000							

**Table H-38. 2016 MCAS: IRT Parameters for Polytomous Items –  
High School Introductory Physics**

Item Number	Parameters and Measures of Standard Error													
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>D0</i>	<i>SE (D0)</i>	<i>D1</i>	<i>SE (D1)</i>	<i>D2</i>	<i>SE (D2)</i>	<i>D3</i>	<i>SE (D3)</i>	<i>D4</i>	<i>SE (D4)</i>
246576	1.10855	0.00000	0.20263	0.00000	1.62586	0.00000	1.07331	0.00000	-1.07629	0.00000	-1.62288	0.00000	0.00000	0.00000
287224	1.06235	0.00000	0.45841	0.00000	1.78615	0.00000	0.31177	0.00000	-0.61261	0.00000	-1.48531	0.00000	0.00000	0.00000
287404	1.46740	0.00000	1.10370	0.00000	1.64336	0.00000	0.75374	0.00000	-0.40210	0.00000	-1.99500	0.00000	0.00000	0.00000
293950	0.97397	0.00000	0.42132	0.00000	1.73847	0.00000	1.13263	0.00000	-1.02658	0.00000	-1.84453	0.00000	0.00000	0.00000
299384	1.04856	0.00000	1.19707	0.00000	1.90858	0.00000	0.78070	0.00000	-0.56251	0.00000	-2.12677	0.00000	0.00000	0.00000

**Table H-39. 2016 MCAS: IRT Parameters for Dichotomous Items –  
High School Technology/Engineering**

Item Number	Parameters and Measures of Standard Error						Item Number	Parameters and Measures of Standard Error					
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>		<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>
309909	1.00000	0.00000	-0.92489	0.00000	0.00000	0.00000	305151	1.00000	0.00000	0.30886	0.00000	0.00000	0.00000
299265	1.00000	0.00000	-0.36517	0.00000	0.00000	0.00000	283463	1.00000	0.00000	-0.39180	0.00000	0.00000	0.00000
306801	1.00000	0.00000	-0.31594	0.00000	0.00000	0.00000	271562	1.00000	0.00000	0.05481	0.00000	0.00000	0.00000
310038	1.00000	0.00000	-1.21882	0.00000	0.00000	0.00000	305143	1.00000	0.00000	-0.16283	0.00000	0.00000	0.00000
294386	1.00000	0.00000	0.16608	0.00000	0.00000	0.00000	294343	1.00000	0.00000	-0.53545	0.00000	0.00000	0.00000
306803	1.00000	0.00000	-0.19518	0.00000	0.00000	0.00000	294344	1.00000	0.00000	-0.16114	0.00000	0.00000	0.00000
300295	1.00000	0.00000	-0.09151	0.00000	0.00000	0.00000	293186	1.00000	0.00000	-0.26690	0.00000	0.00000	0.00000
305145	1.00000	0.00000	-0.16214	0.00000	0.00000	0.00000	273146	1.00000	0.00000	-0.07880	0.00000	0.00000	0.00000
268467	1.00000	0.00000	-1.17747	0.00000	0.00000	0.00000	305105	1.00000	0.00000	-0.32278	0.00000	0.00000	0.00000
300305	1.00000	0.00000	-0.23498	0.00000	0.00000	0.00000	310010	1.00000	0.00000	-0.23407	0.00000	0.00000	0.00000
294349	1.00000	0.00000	-0.26272	0.00000	0.00000	0.00000	300286	1.00000	0.00000	-0.05338	0.00000	0.00000	0.00000
287802	1.00000	0.00000	-0.93747	0.00000	0.00000	0.00000	299351	1.00000	0.00000	-0.60778	0.00000	0.00000	0.00000
206772	1.00000	0.00000	0.20235	0.00000	0.00000	0.00000	289975	1.00000	0.00000	-0.28144	0.00000	0.00000	0.00000
290764	1.00000	0.00000	0.18539	0.00000	0.00000	0.00000	300330	1.00000	0.00000	0.44306	0.00000	0.00000	0.00000
300288	1.00000	0.00000	-0.78008	0.00000	0.00000	0.00000	310015	1.00000	0.00000	-0.07669	0.00000	0.00000	0.00000
297426	1.00000	0.00000	-0.34261	0.00000	0.00000	0.00000	294413	1.00000	0.00000	-0.20177	0.00000	0.00000	0.00000
299352	1.00000	0.00000	-1.04127	0.00000	0.00000	0.00000	300267	1.00000	0.00000	-1.11449	0.00000	0.00000	0.00000
310045	1.00000	0.00000	0.03279	0.00000	0.00000	0.00000	221684	1.00000	0.00000	-0.33859	0.00000	0.00000	0.00000
208126	1.00000	0.00000	-0.38680	0.00000	0.00000	0.00000							
294402	1.00000	0.00000	-0.40674	0.00000	0.00000	0.00000							
310314	1.00000	0.00000	-0.14797	0.00000	0.00000	0.00000							
281930	1.00000	0.00000	-0.98260	0.00000	0.00000	0.00000							

**Table H-40. 2016 MCAS: IRT Parameters for Polytomous Items –  
High School Technology/Engineering**

Item Number	Parameters and Measures of Standard Error													
	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>D0</i>	<i>SE (D0)</i>	<i>D1</i>	<i>SE (D1)</i>	<i>D2</i>	<i>SE (D2)</i>	<i>D3</i>	<i>SE (D3)</i>	<i>D4</i>	<i>SE (D4)</i>
279914	1.00000	0.00000	0.02394	0.00000	1.27180	0.00000	0.53861	0.00000	-0.34279	0.00000	-1.46762	0.00000	0.00000	0.00000
299306	1.00000	0.00000	0.92824	0.00000	1.81531	0.00000	0.62137	0.00000	-0.67764	0.00000	-1.75904	0.00000	0.00000	0.00000
300263	1.00000	0.00000	0.26238	0.00000	1.07805	0.00000	0.53070	0.00000	-0.30267	0.00000	-1.30607	0.00000	0.00000	0.00000
305095	1.00000	0.00000	0.63078	0.00000	1.61474	0.00000	0.70941	0.00000	-0.76942	0.00000	-1.55473	0.00000	0.00000	0.00000
306842	1.00000	0.00000	1.06119	0.00000	1.68667	0.00000	0.50256	0.00000	-0.41119	0.00000	-1.77804	0.00000	0.00000	0.00000