

# **APPENDIX I**

## **ITEM RESPONSE THEORY PARAMETERS**

**Table I-1. 2017 Legacy 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>
316595	0.77976	0.01425	-1.98240	0.05546	0.19982	0.02778	309518	1.18610	0.01672	-0.79296	0.01653	0.22488	0.00874
316596	0.75160	0.01212	-2.65998	0.05007	0.07443	0.02743	309519	0.50741	0.00649	-2.03300	0.02360	0.00000	0.00000
316598	1.01350	0.01629	-1.24276	0.02778	0.26012	0.01386	309702	1.01991	0.01571	-1.17265	0.02527	0.23005	0.01287
316600	1.14824	0.01709	-1.50033	0.02399	0.18307	0.01426	309699	1.03878	0.01551	-0.76567	0.01998	0.23436	0.00968
316602	0.89962	0.01703	-1.83876	0.04880	0.29967	0.02381	309705	1.15020	0.01712	-0.93444	0.01953	0.25586	0.01009
316607	0.60519	0.00753	-2.24094	0.02325	0.00000	0.00000	314448	0.77838	0.01156	-1.09285	0.02869	0.10155	0.01338
316597	0.62026	0.01133	-1.80245	0.06083	0.12084	0.02655	314449	0.66272	0.01398	-0.94935	0.04965	0.27870	0.01736
316621	0.59672	0.00802	-2.57009	0.02829	0.00000	0.00000	314450	0.46763	0.01013	-1.47138	0.07946	0.09766	0.02683
314913	0.48454	0.00815	-1.02801	0.04318	0.04165	0.01458	314453	0.89504	0.01516	-0.46573	0.02321	0.27133	0.00952
314914	1.01096	0.01851	-2.37612	0.04731	0.18874	0.03036	317094	0.93262	0.01561	-0.97572	0.02828	0.28336	0.01256
314922	0.62748	0.01298	-0.18260	0.03333	0.18048	0.01163	314460	0.31222	0.00498	-0.66738	0.01781	0.00000	0.00000
314924	0.98008	0.01544	-0.92026	0.02431	0.25306	0.01141	314464	0.81422	0.01478	-1.74145	0.04867	0.23631	0.02332
309917	0.99100	0.01632	-1.48571	0.03223	0.24708	0.01669	316744	0.77099	0.01406	-1.55475	0.04762	0.23086	0.02141
309915	0.87853	0.01338	-1.73212	0.03474	0.12220	0.01906	316747	0.47574	0.01157	-0.45122	0.05793	0.11446	0.01794
292445	0.58607	0.01129	-0.37038	0.03502	0.10380	0.01264	316754	1.15919	0.01729	-0.61790	0.01694	0.27406	0.00828
292438	0.85081	0.01462	-0.02236	0.01901	0.21750	0.00762	316757	0.80615	0.01174	-1.44987	0.03129	0.09065	0.01574
309498	0.82489	0.01181	-1.60149	0.03145	0.08151	0.01642							
309509	0.78242	0.01242	-1.30144	0.03468	0.14059	0.01636							
309703	0.85191	0.01349	-0.14646	0.01821	0.16987	0.00771							
309696	1.02129	0.01428	-0.12029	0.01318	0.15830	0.00616							

**Table I-2. 2017 Legacy MCAS: IRT Parameters for Polytomous Items –  
ELA Grade 10**

Item Number	a	SE (a)	b	SE (b)	D0	SE (D0)	D1	SE (D1)	D2	SE (D2)	D3	SE (D3)	D4	SE (D4)	D5	SE(D5)
292456	1.05002	0.00417	-0.94194	0.00423	2.11703	0.01645	0.84371	0.00820	-0.55226	0.00532	-2.40847	0.00692	0.00000	0.00000	n/a	n/a
304958C	1.15220	0.00563	-2.34024	0.00434	2.55999	0.08583	2.14217	0.05887	-0.04182	0.01097	-0.46964	0.00856	-1.85236	0.00508	-2.33834	0.00482
304958T	1.09456	0.00413	0.19425	0.00410	4.22248	0.03804	3.88549	0.02907	2.49636	0.01102	2.11230	0.00889	0.69799	0.00527	0.27040	0.00501
309709	1.35731	0.00543	-0.42614	0.00325	1.50331	0.00818	0.68172	0.00548	-0.38614	0.00428	-1.79888	0.00584	0.00000	0.00000	n/a	n/a
314468	1.05191	0.00447	-1.58998	0.00430	2.38373	0.03045	0.85665	0.01144	-0.74616	0.00585	-2.49422	0.00571	0.00000	0.00000	n/a	n/a
316626	0.93419	0.00386	-1.66546	0.00477	2.87245	0.04170	0.96498	0.01278	-0.95769	0.00612	-2.87974	0.00673	0.00000	0.00000	n/a	n/a

Item Number	Parameters and Measures of Standard Error									
	D6	SE(D6)	D7	SE(D7)	D8	SE(D8)	D9	SE(D9)	D10	SE(D10)
304958C	0.00000	0.00000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
304958T	-1.83483	0.00909	-2.61559	0.01566	-4.41391	0.07478	-4.82070	0.10879	0.00000	0.00000

**Table I-3. 2017 Legacy 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>
311214	0.67100	0.01209	-2.52783	0.07065	0.11522	0.03696	313798	1.47995	0.02669	0.28259	0.01132	0.42397	0.00443
314972	0.23493	0.00471	-1.20387	0.03024	0.00000	0.00000	311988	0.91889	0.01342	0.07915	0.01366	0.13620	0.00593
312338	0.68560	0.01026	-1.28664	0.03457	0.06667	0.01559	308009	1.62439	0.02724	0.51753	0.00860	0.33015	0.00363
294145	0.89091	0.01327	0.12347	0.01399	0.13304	0.00597	312398	0.55706	0.01272	-0.01593	0.03863	0.16441	0.01250
314979	1.28007	0.02067	0.13188	0.01195	0.32514	0.00513	314930	0.18935	0.00495	-3.08111	0.08156	0.00000	0.00000
311978	0.98882	0.01402	-0.84090	0.02006	0.16685	0.01006	315083	0.60509	0.00723	-2.04556	0.02070	0.00000	0.00000
273617	1.36382	0.01934	-0.44400	0.01253	0.26761	0.00654	303436	0.86965	0.01224	-0.28740	0.01655	0.11136	0.00741
312365	1.48705	0.01896	-0.09931	0.00848	0.18507	0.00458	315073	0.57926	0.01214	-0.86389	0.05273	0.17400	0.01856
316914	0.96504	0.01547	-0.75158	0.02350	0.26446	0.01055	315460	0.97289	0.01249	-0.10080	0.01191	0.08823	0.00550
303437	1.01288	0.01378	-0.70832	0.01737	0.14754	0.00875	314961	1.09748	0.01669	0.30532	0.01126	0.20455	0.00486
306523	1.35505	0.02197	0.27709	0.01065	0.32051	0.00456	311270	0.95029	0.01307	-1.32608	0.02409	0.10255	0.01318
273262	2.04488	0.03344	0.11596	0.00805	0.39778	0.00400	315450	1.10801	0.01522	-1.22744	0.02013	0.14365	0.01158
306553	0.97625	0.01403	0.16390	0.01218	0.14073	0.00534	250652	0.58445	0.00594	-0.62675	0.00998	0.00000	0.00000
307968	1.17080	0.01865	-0.79743	0.01991	0.32522	0.00949	294526	1.29698	0.01084	-0.86530	0.00608	0.00000	0.00000
315418	1.04767	0.01782	-1.62519	0.03370	0.26527	0.01844	311219	1.28418	0.01038	-0.65314	0.00553	0.00000	0.00000
303302	1.20089	0.01593	-0.98485	0.01610	0.15589	0.00921	315136	0.46790	0.00556	-1.09270	0.01517	0.00000	0.00000
315445	0.98492	0.01745	-1.83070	0.04083	0.25679	0.02249							
315417	1.55055	0.02448	-1.12013	0.01639	0.31277	0.00976							
315024	0.81609	0.01975	-0.41858	0.03877	0.51472	0.01031							
315005	0.63376	0.01669	0.03328	0.04119	0.37017	0.01122							

**Table I-4. 2017 Legacy 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>
302075	1.24362	0.00510	-0.25427	0.00352	1.40627	0.00731	0.20579	0.00479	-0.13093	0.00458	-1.48113	0.00573	0.00000	0.00000
308936	1.28887	0.00518	-0.31528	0.00340	1.83295	0.00933	0.55570	0.00523	-0.81622	0.00457	-1.57243	0.00565	0.00000	0.00000
315126	1.05224	0.00435	-0.35386	0.00404	1.52654	0.00857	0.25301	0.00549	-0.55903	0.00512	-1.22051	0.00564	0.00000	0.00000
315477	1.24801	0.00510	-0.13113	0.00356	2.43045	0.01212	0.24811	0.00478	-0.93499	0.00494	-1.74356	0.00675	0.00000	0.00000
315483	1.58576	0.00693	-0.65876	0.00294	1.03942	0.00678	0.34114	0.00482	-0.13458	0.00416	-1.24597	0.00411	0.00000	0.00000
315776	1.33521	0.00574	-0.50483	0.00334	1.03158	0.00666	0.36780	0.00505	-0.33553	0.00435	-1.06385	0.00453	0.00000	0.00000

**Table I-5. 2017 Legacy MCAS: IRT Parameters for Dichotomous Items –  
Science 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>
299421	1.01975	0.01180	-2.34246	0.01521	0.00000	0.00000	294501	0.83285	0.01301	-0.88853	0.02605	0.20870	0.01088
291143	0.44704	0.00574	-2.17777	0.02498	0.00000	0.00000	245494	0.79565	0.01215	-1.93778	0.03919	0.11030	0.02022
289487	0.31515	0.00504	-2.25263	0.03467	0.00000	0.00000	309485	0.79913	0.01315	-1.27946	0.03436	0.22061	0.01464
317090	0.54490	0.00885	-1.90352	0.05457	0.06569	0.02163	289458	0.78440	0.01177	-0.90782	0.02588	0.14553	0.01099
304670	0.66120	0.01351	-0.55909	0.03772	0.27189	0.01221	313100	0.50473	0.01353	-0.64106	0.06720	0.26902	0.01808
309959	0.66001	0.01156	-0.75707	0.03388	0.15831	0.01256	289499	0.91041	0.02240	0.76008	0.01677	0.37619	0.00497
291064	0.82590	0.01522	0.44633	0.01519	0.19878	0.00553	294432	0.59312	0.01270	-0.61925	0.04463	0.22878	0.01416
294443	0.48170	0.01039	-0.92876	0.05985	0.10130	0.01902	281800	0.56275	0.00660	-2.22553	0.02139	0.00000	0.00000
288154	0.81662	0.01492	-0.46108	0.02650	0.31297	0.00927	245514	0.77059	0.01453	-0.27648	0.02604	0.28654	0.00890
313087	0.70944	0.01471	0.24880	0.02248	0.23563	0.00750	273695	0.62163	0.01152	-0.49056	0.03309	0.14720	0.01162
264835	0.84539	0.01263	-0.99881	0.02537	0.17791	0.01114	289163	0.47574	0.00649	-2.72395	0.03126	0.00000	0.00000
289446	0.74295	0.01445	-0.03762	0.02414	0.25919	0.00817	299440	1.00237	0.01532	-0.01624	0.01396	0.22336	0.00569
317091	0.41728	0.01330	0.40749	0.05293	0.13440	0.01441	291503	0.79371	0.01379	-0.84789	0.03074	0.27198	0.01162
273732	0.38984	0.00517	-1.73517	0.02262	0.00000	0.00000	309745	0.41358	0.00549	-2.10790	0.02574	0.00000	0.00000
291402	0.27451	0.02193	-0.22117	0.31751	0.45708	0.03790	314833	0.47456	0.00579	-2.02382	0.02205	0.00000	0.00000
289673	0.79962	0.01214	-0.38697	0.01993	0.14968	0.00801	264842	0.89543	0.01405	-0.86704	0.02451	0.24871	0.01028
289501	0.60617	0.01276	-0.71797	0.04521	0.23785	0.01455	313146	0.55280	0.00889	-1.46278	0.04538	0.05896	0.01726
317092	0.58552	0.01437	-1.95416	0.09734	0.34081	0.03158							
291168	0.89996	0.01897	0.32962	0.01855	0.36501	0.00590							
313102	0.70522	0.01375	-0.03001	0.02496	0.22711	0.00849							
281838	0.52031	0.01200	-1.01108	0.06501	0.19527	0.02018							

**Table I-6. 2017 Legacy MCAS: IRT Parameters for Polytomous Items –  
Science 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>
291624	0.93285	0.00373	-0.37667	0.00457	1.43324	0.00827	0.51360	0.00627	-0.08909	0.00576	-1.85775	0.00751	0.00000	0.00000
301143	0.79890	0.00305	0.48357	0.00522	2.17114	0.00855	0.78841	0.00649	-0.59690	0.00726	-2.36265	0.01511	0.00000	0.00000
313106	0.75665	0.00287	0.40608	0.00558	2.49931	0.00999	1.12966	0.00708	-0.71476	0.00764	-2.91421	0.01945	0.00000	0.00000
313138	1.12381	0.00450	-0.06568	0.00380	1.48783	0.00697	0.27509	0.00506	-0.23757	0.00495	-1.52536	0.00676	0.00000	0.00000

**Table I-7. 2017 Legacy MCAS: IRT Parameters for Dichotomous Items –  
Science Grade 8**

Parameters and Measures of Standard Error							Parameters and Measures of Standard Error						
Item Number	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>	Item Number	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>
299464	0.70126	0.01151	-1.11563	0.03619	0.22183	0.01373	265293	0.91719	0.01701	-0.14832	0.02289	0.36545	0.00818
289769	0.85641	0.01131	-0.81792	0.02061	0.13385	0.00927	299458	0.69658	0.01303	-0.24289	0.02940	0.24334	0.01021
272969	1.20329	0.01615	-0.55189	0.01470	0.22301	0.00749	300456	0.70702	0.01197	-0.40853	0.02774	0.19895	0.01027
310237	0.87571	0.01491	-0.04733	0.01989	0.26139	0.00775	313188	1.39085	0.02058	0.15503	0.01040	0.28838	0.00498
313155	0.71016	0.01949	0.87409	0.02227	0.31538	0.00698	291731	1.30637	0.02098	0.17714	0.01201	0.33509	0.00528
289731	0.83625	0.01281	-0.70239	0.02506	0.22776	0.01037	301427	1.19450	0.02393	-0.33366	0.02245	0.54133	0.00729
291833	1.21464	0.01850	-0.30832	0.01552	0.32425	0.00705	265226	0.97372	0.01539	0.34548	0.01287	0.18937	0.00550
289626	0.93841	0.01947	-0.08805	0.02500	0.45587	0.00787	288301	0.53202	0.01478	0.74774	0.03102	0.19816	0.00954
310269	0.75126	0.01183	-0.74407	0.02834	0.20523	0.01115	294094	1.08768	0.01968	0.77525	0.01069	0.22967	0.00435
289719	0.73752	0.01114	-0.72452	0.02664	0.16543	0.01065	291915	0.32620	0.00493	-0.92698	0.02058	0.00000	0.00000
313197	0.34251	0.01545	1.30708	0.05924	0.15190	0.01511	265217	1.41183	0.01806	0.32979	0.00756	0.15362	0.00382
281939	0.99794	0.01322	-0.95371	0.01967	0.17853	0.00965	294221	0.99745	0.02024	0.81183	0.01274	0.27032	0.00483
227912	0.56907	0.01236	-0.45171	0.04526	0.25648	0.01354	237700	1.58725	0.02683	0.96906	0.00708	0.21361	0.00294
310252	0.97745	0.01516	-1.30163	0.02800	0.30118	0.01271	265273	0.76357	0.01480	0.25509	0.02128	0.24103	0.00768
273977	1.06952	0.02197	0.92306	0.01155	0.27088	0.00434	293151	1.25357	0.01779	0.21915	0.01019	0.21738	0.00486
304503	1.06126	0.01685	0.22445	0.01331	0.24683	0.00572	313160	1.17530	0.01745	0.04954	0.01263	0.25782	0.00578
313217	0.75566	0.01246	-0.17871	0.02259	0.18622	0.00870	265247	0.95442	0.01519	0.30706	0.01352	0.19287	0.00573
299403	0.94794	0.01448	-1.29322	0.02803	0.28114	0.01269							
273933	0.79614	0.01588	0.14450	0.02318	0.30409	0.00802							
313187	0.77197	0.01406	-1.36982	0.04272	0.36289	0.01527							
291980	0.92572	0.01671	0.10768	0.01877	0.30865	0.00709							

**Table I-8. 2017 Legacy MCAS: IRT Parameters for Polytomous Items –  
Science 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>
288324	1.02357	0.00407	0.65409	0.00413	1.38907	0.00603	0.58211	0.00516	-0.30433	0.00552	-1.66685	0.01016	0.00000	0.00000
304696	1.49902	0.00636	0.05978	0.00293	0.96350	0.00521	0.40551	0.00426	-0.44989	0.00390	-0.91912	0.00430	0.00000	0.00000
304698	0.60077	0.00226	-0.60152	0.00690	2.52989	0.01695	1.30436	0.01120	-1.06977	0.00804	-2.76447	0.01094	0.00000	0.00000
313179	1.10114	0.00429	0.06650	0.00402	1.83419	0.00873	0.96393	0.00607	-0.88380	0.00527	-1.91433	0.00812	0.00000	0.00000

**Table I-9. 2017 Legacy MCAS: IRT Parameters for Dichotomous Items –  
Biology Grade HS**

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>
305769	1.13300	0.00000	-0.70171	0.00000	0.24434	0.00000	313304	0.59528	0.00000	-0.08075	0.00000	0.28167	0.00000
281187	0.75748	0.00000	0.13538	0.00000	0.34764	0.00000	313477	1.38648	0.00000	0.22201	0.00000	0.33888	0.00000
283143	1.75591	0.00000	-0.00683	0.00000	0.29547	0.00000	299780	0.81527	0.00000	-0.09500	0.00000	0.33197	0.00000
305791	0.63345	0.00000	-1.73237	0.00000	0.18568	0.00000	243327	0.99900	0.00000	-0.68331	0.00000	0.27266	0.00000
290996	0.82608	0.00000	-1.11069	0.00000	0.18515	0.00000	289326	0.95136	0.00000	0.17668	0.00000	0.27282	0.00000
313346	0.82141	0.00000	-0.19809	0.00000	0.31864	0.00000	288276	1.61077	0.00000	0.14623	0.00000	0.37022	0.00000
301402	0.51421	0.00000	0.88385	0.00000	0.33375	0.00000	310732	0.73998	0.00000	-0.47920	0.00000	0.22039	0.00000
317097	1.04795	0.00000	0.00140	0.00000	0.18252	0.00000	235177	1.06216	0.00000	-0.34092	0.00000	0.18467	0.00000
310145	0.87248	0.00000	0.32456	0.00000	0.24425	0.00000	314832	0.67192	0.00000	-0.09260	0.00000	0.12774	0.00000
310149	1.25253	0.00000	0.61752	0.00000	0.24946	0.00000	313494	0.81747	0.00000	-0.35564	0.00000	0.15957	0.00000
310143	1.36978	0.00000	0.41295	0.00000	0.21608	0.00000	310172	0.74929	0.00000	0.17762	0.00000	0.39480	0.00000
285874	1.07496	0.00000	-0.52240	0.00000	0.58402	0.00000	294785	1.13569	0.00000	0.33681	0.00000	0.27154	0.00000
317096	0.98934	0.00000	-0.55562	0.00000	0.20297	0.00000	283066	1.13143	0.00000	-0.79030	0.00000	0.33472	0.00000
305009	0.59769	0.00000	-0.80199	0.00000	0.00000	0.00000	313441	1.26550	0.00000	-0.77596	0.00000	0.21069	0.00000
317095	1.01344	0.00000	0.48637	0.00000	0.26346	0.00000	313396	1.16184	0.00000	-0.69674	0.00000	0.28939	0.00000
312671	1.52656	0.00000	-0.83608	0.00000	0.24123	0.00000	299804	0.92280	0.00000	-0.73436	0.00000	0.21242	0.00000
310762	0.92320	0.00000	-0.22976	0.00000	0.15387	0.00000	313376	0.63668	0.00000	-0.74316	0.00000	0.23715	0.00000
304455	1.11800	0.00000	-0.37520	0.00000	0.19460	0.00000	273532	0.87314	0.00000	-0.38488	0.00000	0.27393	0.00000
310200	0.65174	0.00000	-0.14922	0.00000	0.20374	0.00000	222249	0.97049	0.00000	-0.09890	0.00000	0.23264	0.00000
305801	0.93391	0.00000	0.76789	0.00000	0.34404	0.00000							
313307	1.12741	0.00000	-0.88314	0.00000	0.18957	0.00000							

**Table I-10. 2017 Legacy MCAS: IRT Parameters for Polytomous Items –  
Biology Grade HS**

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>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>
279499	1.00790	0.00000	1.16994	0.00000	1.73851	0.00000	0.59218	0.00000	-0.53760	0.00000	-1.79309	0.00000	0.00000	0.00000
291005	1.11871	0.00000	0.95911	0.00000	1.62133	0.00000	0.62465	0.00000	-0.54004	0.00000	-1.70595	0.00000	0.00000	0.00000
312663	1.25623	0.00000	1.25267	0.00000	1.81331	0.00000	0.27793	0.00000	-0.31355	0.00000	-1.77769	0.00000	0.00000	0.00000
313459	1.09241	0.00000	-0.31120	0.00000	1.40250	0.00000	0.66140	0.00000	-0.28618	0.00000	-1.77772	0.00000	0.00000	0.00000
316891	1.13805	0.00000	0.53243	0.00000	0.95928	0.00000	0.39602	0.00000	-0.23910	0.00000	-1.11619	0.00000	0.00000	0.00000

**Table I-11. 2017 Legacy MCAS: IRT Parameters for Dichotomous Items –  
Chemistry Grade HS**

Parameters and Measures of Standard Error							Parameters and Measures of Standard Error						
Item Number	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>	Item Number	<i>a</i>	<i>SE (a)</i>	<i>b</i>	<i>SE (b)</i>	<i>c</i>	<i>SE (c)</i>
274054	0.79082	0.00000	-0.56535	0.00000	0.31796	0.00000	216957	0.74838	0.00000	0.40243	0.00000	0.32633	0.00000
296516	1.25454	0.00000	-0.28070	0.00000	0.25650	0.00000	244773	0.99399	0.00000	-0.80683	0.00000	0.19127	0.00000
208298	0.77361	0.00000	-0.91675	0.00000	0.13831	0.00000	300123	1.30855	0.00000	1.11089	0.00000	0.23761	0.00000
246816	0.95413	0.00000	0.28576	0.00000	0.20499	0.00000	246715	2.33923	0.00000	-0.51418	0.00000	0.17793	0.00000
206669	0.66280	0.00000	0.28600	0.00000	0.22758	0.00000	253239	0.71719	0.00000	0.35752	0.00000	0.31720	0.00000
281114	0.51418	0.00000	-0.57765	0.00000	0.00000	0.00000	252563	1.33914	0.00000	0.36233	0.00000	0.24429	0.00000
294650	1.44601	0.00000	0.70358	0.00000	0.28378	0.00000	260902	1.65607	0.00000	0.71683	0.00000	0.22129	0.00000
246828	1.59711	0.00000	0.71664	0.00000	0.14664	0.00000	206741	0.85530	0.00000	0.72212	0.00000	0.29251	0.00000
260752	1.17177	0.00000	0.17726	0.00000	0.27190	0.00000	229493	1.34081	0.00000	0.79172	0.00000	0.28195	0.00000
261473	1.00120	0.00000	0.27374	0.00000	0.16964	0.00000	281332	0.97821	0.00000	0.77456	0.00000	0.22645	0.00000
281959	1.88169	0.00000	0.37613	0.00000	0.15899	0.00000	246827	1.70116	0.00000	0.63424	0.00000	0.32194	0.00000
310403	0.42275	0.00000	0.11550	0.00000	0.00000	0.00000	299712	1.11408	0.00000	1.11045	0.00000	0.15811	0.00000
260786	0.73043	0.00000	0.61548	0.00000	0.36713	0.00000	252562	0.91232	0.00000	0.42636	0.00000	0.17770	0.00000
260748	0.98115	0.00000	-0.13041	0.00000	0.22195	0.00000	216948	1.17938	0.00000	-0.52106	0.00000	0.19092	0.00000
300137	0.51815	0.00000	0.05181	0.00000	0.00000	0.00000	226982	1.21908	0.00000	-0.56808	0.00000	0.25851	0.00000
258929	1.26176	0.00000	0.42981	0.00000	0.24746	0.00000	275819	0.79407	0.00000	0.46721	0.00000	0.26644	0.00000
216962	1.37585	0.00000	-0.37293	0.00000	0.13157	0.00000	260918	1.14563	0.00000	-0.21750	0.00000	0.30320	0.00000
227023	0.91855	0.00000	0.48619	0.00000	0.00000	0.00000	246809	0.87092	0.00000	0.46175	0.00000	0.20018	0.00000
244981	1.46597	0.00000	0.03886	0.00000	0.22005	0.00000	244996	0.98358	0.00000	0.81755	0.00000	0.30592	0.00000
206666	0.96052	0.00000	-0.31463	0.00000	0.12985	0.00000							
208293	1.35577	0.00000	0.58040	0.00000	0.19829	0.00000							



**Table I-12. 2017 Legacy MCAS: IRT Parameters for Polytomous Items –  
Chemistry 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>
261166	1.72887	0.00000	0.23728	0.00000	1.08535	0.00000	0.57637	0.00000	-0.19493	0.00000	-1.46680	0.00000	0.00000	0.00000
281963	1.27595	0.00000	0.53669	0.00000	1.63724	0.00000	0.36233	0.00000	-0.38653	0.00000	-1.61304	0.00000	0.00000	0.00000
287893	1.34849	0.00000	1.05210	0.00000	1.71843	0.00000	0.48921	0.00000	-0.26391	0.00000	-1.94373	0.00000	0.00000	0.00000
299726	0.98413	0.00000	-0.02923	0.00000	1.55851	0.00000	0.75495	0.00000	-0.77903	0.00000	-1.53444	0.00000	0.00000	0.00000
310489	1.44438	0.00000	0.90718	0.00000	1.16870	0.00000	0.51290	0.00000	-0.50561	0.00000	-1.17599	0.00000	0.00000	0.00000

**Table I-13. 2017 Legacy MCAS: IRT Parameters for Dichotomous Items –  
Intro to Physics Grade HS**

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>
313727	1.44808	0.00000	-0.24756	0.00000	0.28498	0.00000	301729	0.83617	0.00000	-0.45729	0.00000	0.14050	0.00000
313668	0.64238	0.00000	-0.00666	0.00000	0.24851	0.00000	301746	0.96842	0.00000	0.13652	0.00000	0.24419	0.00000
316911	1.37672	0.00000	0.30172	0.00000	0.33216	0.00000	287042	0.78337	0.00000	0.66986	0.00000	0.27444	0.00000
299374	0.79452	0.00000	-0.35117	0.00000	0.17245	0.00000	310463	0.65994	0.00000	0.65209	0.00000	0.30623	0.00000
301778	1.09001	0.00000	-0.44664	0.00000	0.22059	0.00000	299322	0.92950	0.00000	0.53918	0.00000	0.33866	0.00000
305507	0.66776	0.00000	0.25548	0.00000	0.26704	0.00000	310447	0.90835	0.00000	-0.67368	0.00000	0.24049	0.00000
310498	0.94778	0.00000	0.42337	0.00000	0.28857	0.00000	304712	0.56423	0.00000	-0.11005	0.00000	0.21738	0.00000
313737	1.26253	0.00000	-0.36771	0.00000	0.35457	0.00000	311360	1.09431	0.00000	0.46412	0.00000	0.33810	0.00000
313623	1.02467	0.00000	-0.16103	0.00000	0.32102	0.00000	313723	1.30109	0.00000	0.10294	0.00000	0.37508	0.00000
313617	0.83170	0.00000	0.14442	0.00000	0.32426	0.00000	305513	1.20617	0.00000	0.03481	0.00000	0.20304	0.00000
301735	0.88089	0.00000	1.08184	0.00000	0.34798	0.00000	310502	1.35758	0.00000	1.31272	0.00000	0.42217	0.00000
305500	1.09963	0.00000	-0.41090	0.00000	0.25683	0.00000	301741	0.54324	0.00000	-0.18128	0.00000	0.21458	0.00000
286517	0.78310	0.00000	0.96904	0.00000	0.40196	0.00000	311363	1.33688	0.00000	0.60259	0.00000	0.33683	0.00000
299236	0.91304	0.00000	1.16068	0.00000	0.29372	0.00000	315670	1.11547	0.00000	-0.42460	0.00000	0.08787	0.00000
299378	1.64273	0.00000	1.44692	0.00000	0.33839	0.00000	299342	1.43834	0.00000	0.19027	0.00000	0.32112	0.00000
295863	1.11567	0.00000	-0.44330	0.00000	0.19071	0.00000	304774	0.58886	0.00000	0.05664	0.00000	0.36193	0.00000
313725	1.73705	0.00000	0.64274	0.00000	0.35864	0.00000	301733	1.54454	0.00000	0.73654	0.00000	0.31539	0.00000
299379	0.87524	0.00000	0.05577	0.00000	0.31099	0.00000	311044	0.45542	0.00000	0.66022	0.00000	0.18070	0.00000
310473	1.02113	0.00000	0.25230	0.00000	0.28451	0.00000	313696	1.54427	0.00000	0.72797	0.00000	0.15433	0.00000
272646	1.09291	0.00000	0.85191	0.00000	0.27187	0.00000							
299362	1.59683	0.00000	0.08685	0.00000	0.23650	0.00000							

**Table I-14. 2017 Legacy MCAS: IRT Parameters for Polytomous Items –  
Intro to Physics Grade HS**

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>
272703	1.17099	0.00000	0.13567	0.00000	1.30390	0.00000	0.48431	0.00000	-0.50029	0.00000	-1.28791	0.00000	0.00000	0.00000
272751	1.35177	0.00000	0.58184	0.00000	1.74235	0.00000	0.52614	0.00000	-0.72344	0.00000	-1.54505	0.00000	0.00000	0.00000
301748	1.24608	0.00000	0.29694	0.00000	1.14140	0.00000	0.55126	0.00000	-0.24890	0.00000	-1.44376	0.00000	0.00000	0.00000
306931	1.04301	0.00000	0.39517	0.00000	1.65084	0.00000	0.77883	0.00000	-0.33500	0.00000	-2.09466	0.00000	0.00000	0.00000
316892	1.21696	0.00000	1.07222	0.00000	1.48448	0.00000	0.33494	0.00000	-0.43575	0.00000	-1.38367	0.00000	0.00000	0.00000

**Table I-15. 2017 Legacy MCAS: IRT Parameters for Dichotomous Items –  
Technology and Engineering Grade HS**

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>
281469	1.00000	0.00000	-0.90091	0.00000	0.00000	0.00000	305117	1.00000	0.00000	-0.12438	0.00000	0.00000	0.00000
313293	1.00000	0.00000	-0.24154	0.00000	0.00000	0.00000	313252	1.00000	0.00000	0.18328	0.00000	0.00000	0.00000
287820	1.00000	0.00000	-0.03733	0.00000	0.00000	0.00000	299256	1.00000	0.00000	-0.47633	0.00000	0.00000	0.00000
305081	1.00000	0.00000	-0.75943	0.00000	0.00000	0.00000	294339	1.00000	0.00000	-0.53866	0.00000	0.00000	0.00000
274626	1.00000	0.00000	-0.28796	0.00000	0.00000	0.00000	300322	1.00000	0.00000	-0.52468	0.00000	0.00000	0.00000
294341	1.00000	0.00000	-0.03343	0.00000	0.00000	0.00000	299258	1.00000	0.00000	-0.42732	0.00000	0.00000	0.00000
316905	1.00000	0.00000	0.28126	0.00000	0.00000	0.00000	283431	1.00000	0.00000	0.08452	0.00000	0.00000	0.00000
208981	1.00000	0.00000	-0.03193	0.00000	0.00000	0.00000	300331	1.00000	0.00000	-0.23017	0.00000	0.00000	0.00000
300294	1.00000	0.00000	-0.36726	0.00000	0.00000	0.00000	296449	1.00000	0.00000	-0.09367	0.00000	0.00000	0.00000
306794	1.00000	0.00000	0.05679	0.00000	0.00000	0.00000	294412	1.00000	0.00000	-0.27302	0.00000	0.00000	0.00000
310018	1.00000	0.00000	-0.29688	0.00000	0.00000	0.00000	305090	1.00000	0.00000	-0.40631	0.00000	0.00000	0.00000
294352	1.00000	0.00000	-0.60985	0.00000	0.00000	0.00000	313248	1.00000	0.00000	-0.15450	0.00000	0.00000	0.00000
274649	1.00000	0.00000	0.02407	0.00000	0.00000	0.00000	300303	1.00000	0.00000	-0.77295	0.00000	0.00000	0.00000
281395	1.00000	0.00000	-0.52723	0.00000	0.00000	0.00000	274632	1.00000	0.00000	-0.28642	0.00000	0.00000	0.00000
310341	1.00000	0.00000	-0.42861	0.00000	0.00000	0.00000	293083	1.00000	0.00000	0.17928	0.00000	0.00000	0.00000
294368	1.00000	0.00000	-0.43998	0.00000	0.00000	0.00000	300326	1.00000	0.00000	0.06337	0.00000	0.00000	0.00000
310050	1.00000	0.00000	-0.25296	0.00000	0.00000	0.00000	281438	1.00000	0.00000	-0.41448	0.00000	0.00000	0.00000
299297	1.00000	0.00000	-0.40757	0.00000	0.00000	0.00000	287806	1.00000	0.00000	-0.26755	0.00000	0.00000	0.00000
305160	1.00000	0.00000	-0.37034	0.00000	0.00000	0.00000	310307	1.00000	0.00000	-0.53428	0.00000	0.00000	0.00000
265065	1.00000	0.00000	-1.05555	0.00000	0.00000	0.00000							
310312	1.00000	0.00000	0.12236	0.00000	0.00000	0.00000							

**Table I-16. 2017 Legacy MCAS: IRT Parameters for Polytomous Items –  
Technology and Engineering Grade HS**

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>
274644	1.00000	0.00000	0.64919	0.00000	1.16228	0.00000	0.51513	0.00000	-0.07964	0.00000	-1.59777	0.00000	0.00000	0.00000
287870	1.00000	0.00000	0.06263	0.00000	1.72955	0.00000	0.71065	0.00000	-0.46004	0.00000	-1.98017	0.00000	0.00000	0.00000
299299	1.00000	0.00000	0.16494	0.00000	1.87739	0.00000	0.67241	0.00000	-0.78945	0.00000	-1.76035	0.00000	0.00000	0.00000
310059	1.00000	0.00000	0.92390	0.00000	1.18927	0.00000	0.40673	0.00000	-0.36319	0.00000	-1.23282	0.00000	0.00000	0.00000
313265	1.00000	0.00000	1.05650	0.00000	1.33421	0.00000	0.62075	0.00000	-0.56369	0.00000	-1.39127	0.00000	0.00000	0.00000