APPENDIX C: THE 2010 MSA-MATH CLASSICAL AND RASCH ITEM PARAMETERS

Table C.1 The 2010 MSA-Math Classical and Rasch Item Parameters: Grade 3 Form A

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2
3509931	SR	0.70	0.36	0.9627	0.0463	1.11	1.08		
3548059	SR	0.78	0.55	0.6288	0.0491	0.82	0.66		
100000011186	BCR	0.73	0.54	0.8552	0.0471	0.87	0.73		
3595529	BCR	0.62	0.35	0.8995	0.0401	1.14	1.16	-2.3179	2.3179
3510009	SR	0.84	0.36	0.0690	0.0560	0.96	0.84		
100000044159	SR	0.61	0.26	1.5712	0.0431	1.22	1.34		
3548057	SR	0.82	0.32	0.5502	0.0500	0.92	0.95		
100000232540	SR	0.84	0.30	0.0514	0.0562	1.07	1.24		
100000366020	SR	0.68	0.45	1.3184	0.0443	0.95	0.90		
3510017	SR	0.94	0.32	-1.1315	0.0824	0.87	1.08		
3509926	SR	0.49	0.43	2.4187	0.0421	1.01	1.04		
3509960	SR	0.82	0.29	0.3981	0.0520	1.02	1.00		
100000044152	SR	0.89	0.32	-0.3864	0.0642	0.84	0.73		
100000025225	SR	0.85	0.34	-0.2038	0.0609	1.13	1.14		
3510022	SR	0.57	0.29	2.0077	0.0420	1.13	1.24		
3509983	SR	0.93	0.39	-1.1470	0.0824	0.98	1.03		
3509941	BCR	0.64	0.44	1.3031	0.0443	1.04	1.10		
3595501	BCR	0.55	0.49	1.6084	0.0381	0.97	0.96	-2.0125	2.0125
3509927	SR	0.82	0.29	0.4123	0.0515	1.07	1.33		
100000063515	SR	0.87	0.36	-0.2985	0.0622	1.02	1.12		
3519708	SR	0.47	0.33	2.2939	0.0419	1.07	1.15		
100000025196	BCR	0.90	0.36	-0.7483	0.0718	1.00	0.84		
3595519	BCR	0.67	0.49	1.2431	0.0316	1.11	1.10	-0.6761	0.6761
100000044158	SR	0.86	0.45	-0.2871	0.0620	0.94	0.87		
100000067832	SR	0.57	0.52	1.8287	0.0423	0.87	0.84		
100000063513	SR	0.83	0.55	0.1375	0.0552	0.83	0.64		
3548507	SR	0.90	0.32	-0.2784	0.0619	0.81	0.70		
3509988	SR	0.75	0.40	0.5005	0.0508	1.15	1.15		
3488123	SR	0.56	0.44	1.3765	0.0441	1.09	1.08		
3488139	BCR	0.48	0.47	2.2833	0.0419	0.93	0.89		
3564095	BCR	0.47	0.46	2.3841	0.0336	1.05	1.05	-1.4396	1.4396
3510063	SR	0.80	0.44	0.4861	0.0507	0.91	0.86		
3510072	BCR	0.85	0.41	-0.0411	0.0577	0.97	0.99		
3564080	BCR	0.61	0.46	1.5221	0.0312	1.13	1.14	-0.8553	0.8553
3519712	SR	0.93	0.24	-1.0473	0.0797	1.05	1.38		
100000067839	SR	0.85	0.48	-0.1399	0.0595	0.89	0.74		
3488003	SR	0.45	0.22	2.4137	0.0420	1.24	1.42		
100000004262	SR	0.72	0.44	0.8784	0.0473	1.03	0.99		
3510065	SR	0.95	0.29	-2.1822	0.1255	1.32	1.08		
3509961	SR	0.93	0.34	-1.3667	0.0902	1.18	1.24		
100000063549	SR	0.65	0.56	1.3353	0.0441	0.87	0.81		

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2
3510018	SR	0.82	0.50	0.2953	0.0529	0.86	0.70		
3510035	SR	0.90	0.30	-0.6165	0.0684	1.11	1.60		
100000011176	BCR	0.91	0.39	-0.8382	0.0749	0.98	0.86		
3595524	BCR	0.64	0.45	0.7295	0.0408	0.99	0.99	-2.4568	2.4568
100000025212	SR	0.89	0.45	-0.4987	0.0659	0.91	0.83		
3510058	SR	0.90	0.42	-0.6059	0.0682	0.85	0.85		
3510347	SR	0.75	0.45	0.9229	0.0467	0.94	0.92		
3510053	SR	0.85	0.33	-0.2691	0.0617	1.20	1.43		
100000044162	SR	0.85	0.36	-0.0075	0.0571	1.01	1.11		
3496700	SR	0.84	0.34	-0.6248	0.0687	1.59	1.72		
3510036	SR	0.87	0.37	-0.5397	0.0672	1.18	1.06		
3510329	SR	0.67	0.35	1.5719	0.0432	1.04	1.03		
3510033	SR	0.83	0.36	0.0473	0.0564	1.12	1.00		
3510043	SR	0.78	0.40	0.0444	0.0563	1.39	1.47		
100000067773	SR	0.93	0.38	-1.2267	0.0849	0.94	0.95		
100000025211	SR	0.78	0.52	0.4822	0.0508	0.93	0.78		
3509950	SR	0.78	0.35	0.8475	0.0472	0.94	0.87		
100000004277	BCR	0.82	0.56	0.1937	0.0544	0.83	0.62		
3595518	BCR	0.56	0.59	1.8092	0.0303	0.92	0.91	-0.7713	0.7713
100000011208	SR	0.84	0.40	0.0471	0.0563	0.96	1.04		
100000067837	SR	0.65	0.43	1.3024	0.0443	0.99	0.95		
100000067778	SR	0.92	0.36	-1.1288	0.0822	0.97	0.95		
3510176	SR	0.69	0.45	1.2021	0.0449	0.98	1.00		
3509929	SR	0.57	0.46	1.8021	0.0426	0.95	0.93		

Table C.2 The 2010 MSA-Math Classical and Rasch Item Parameters: Grade 3 Form F

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2
3509931	SR	0.71	0.36	0.9627	0.0468	1.10	1.08		
3548059	SR	0.78	0.53	0.6288	0.0498	0.80	0.66		
100000011186	BCR	0.74	0.53	0.8552	0.0477	0.84	0.71		
3595529	BCR	0.62	0.34	0.8995	0.0399	1.15	1.19	-2.3179	2.3179
3510009	SR	0.85	0.37	0.0690	0.0568	0.97	0.86		
100000044159	SR	0.62	0.26	1.5712	0.0434	1.20	1.26		
3548057	SR	0.83	0.32	0.5502	0.0507	0.92	0.90		
100000232428	SR	0.96	0.23	-1.7247	0.1053	1.02	1.07		
100000366020	SR	0.69	0.45	1.3184	0.0447	0.92	0.85		
3510017	SR	0.95	0.30	-1.1315	0.0837	0.70	0.60		
3509926	SR	0.52	0.44	2.4187	0.0420	1.00	1.05		
3509960	SR	0.82	0.30	0.3981	0.0526	1.01	1.12		
100000044152	SR	0.91	0.31	-0.3864	0.0652	0.81	0.77		
100000025225	SR	0.86	0.34	-0.2038	0.0618	1.10	1.04		
3510022	SR	0.57	0.29	2.0077	0.0421	1.15	1.24		
3509983	SR	0.93	0.37	-1.1470	0.0839	1.03	0.99		
3509941	BCR	0.65	0.42	1.3031	0.0447	1.06	1.17		
3595501	BCR	0.56	0.48	1.6084	0.0381	0.98	0.98	-2.0125	2.0125
3509927	SR	0.82	0.28	0.4123	0.0522	1.11	1.41		
100000025201	SR	0.80	0.49	0.4111	0.0523	0.87	0.80		
100000367550	SR	0.75	0.28	0.7454	0.0487	1.16	1.18		
100000025196	BCR	0.91	0.36	-0.7483	0.0729	0.97	0.78		
3595519	BCR	0.67	0.48	1.2431	0.0318	1.13	1.17	-0.6761	0.6761
3511729	SR	0.72	0.47	0.9775	0.0468	0.96	0.92		
100000067864	SR	0.88	0.41	-0.4308	0.0658	0.92	1.25		
3497892	SR	0.70	0.47	1.1154	0.0459	0.96	0.93		
3548507	SR	0.90	0.31	-0.2784	0.0630	0.80	0.79		
3509988	SR	0.76	0.39	0.5005	0.0515	1.14	1.21		
3488123	SR	0.60	0.43	1.3765	0.0445	1.06	1.07		
3488139	BCR	0.47	0.47	2.2833	0.0419	0.92	0.87		
3564095	BCR	0.46	0.46	2.3841	0.0335	1.03	1.03	-1.4396	1.4396
3510063	SR	0.82	0.42	0.4861	0.0514	0.96	0.89		
3488087	BCR	0.43	0.49	2.5974	0.0422	0.88	0.91		
3564099	BCR	0.40	0.46	2.8239	0.0341	1.00	1.02	-1.4658	1.4658
100000025234	SR	0.82	0.41	0.1035	0.0564	0.98	0.90		
100000067806	SR	0.93	0.39	-1.1593	0.0846	0.90	0.57		
100000004264	SR	0.69	0.47	1.1323	0.0458	0.96	0.89		
100000025204	SR	0.89	0.47	-0.5377	0.0681	0.87	0.72		
3510065	SR	0.95	0.26	-2.1822	0.1278	1.58	1.04		
3509961	SR	0.92	0.32	-1.3667	0.0914	1.31	1.36		
100000004268	SR	0.53	0.37	2.0124	0.0422	1.04	1.05		

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2
3510018	SR	0.83	0.49	0.2953	0.0537	0.81	0.62		
3510035	SR	0.90	0.27	-0.6165	0.0696	1.01	1.31		
3509949	BCR	0.76	0.47	0.7528	0.0489	0.93	0.91		
3985609	BCR	0.70	0.54	1.1340	0.0325	1.02	1.06	-0.7901	0.7901
3487800	SR	0.90	0.50	-0.6059	0.0695	0.83	0.62		
3510058	SR	0.92	0.38	-0.6059	0.0695	0.82	0.78		
3510347	SR	0.75	0.46	0.9229	0.0474	0.90	0.84		
3510053	SR	0.85	0.33	-0.2691	0.0629	1.21	1.42		
100000044162	SR	0.86	0.34	-0.0075	0.0580	0.95	0.99		
3496700	SR	0.84	0.32	-0.6248	0.0699	1.58	1.67		
3510036	SR	0.88	0.36	-0.5397	0.0680	1.08	1.00		
3510329	SR	0.67	0.35	1.5719	0.0434	1.04	1.03		
3510033	SR	0.84	0.36	0.0473	0.0574	1.02	0.89		
3510043	SR	0.77	0.39	0.0444	0.0573	1.39	1.81		
100000067777	SR	0.93	0.40	-1.0684	0.0816	0.87	0.70		
100000025211	SR	0.82	0.51	0.4822	0.0515	0.81	0.68		
3509950	SR	0.79	0.34	0.8475	0.0478	0.95	0.92		
3509932	BCR	0.98	0.22	-3.0569	0.1897	0.95	0.81		
3564086	BCR	0.44	0.54	2.6464	0.0352	0.91	0.90	-1.6647	1.6647
100000011210	SR	0.87	0.41	-0.2484	0.0623	0.93	0.81		
100000018400	SR	0.67	0.28	1.1695	0.0455	1.19	1.21		
100000067804	SR	0.85	0.36	-0.2424	0.0622	0.96	1.07		
3510176	SR	0.69	0.44	1.2021	0.0454	0.97	0.98		
3509929	SR	0.58	0.46	1.8021	0.0428	0.96	0.95		

Table C.3 The 2010 MSA-Math Classical and Rasch Item Parameters: Grade 4 Form A

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2
3497865	SR	0.70	0.48	0.2341	0.0471	0.96	0.93		
3515407	SR	0.87	0.41	-0.7990	0.0589	0.87	0.84		
3515643	SR	0.49	0.46	1.7570	0.0425	0.97	0.98		
3487819	BCR	0.53	0.41	1.4019	0.0425	1.06	1.11		
3564186	BCR	0.42	0.35	2.7967	0.0477	1.13	1.17	-3.0944	3.0944
3515408	SR	0.81	0.47	0.1763	0.0476	0.78	0.66		
3515641	SR	0.83	0.47	-0.8522	0.0599	1.08	1.03		
3515410	SR	0.88	0.35	-1.0550	0.0635	0.91	0.86		
100000069423	SR	0.56	0.32	1.2547	0.0428	1.15	1.23		
3515605	SR	0.64	0.51	0.9009	0.0436	0.92	0.91		
100000069397	SR	0.79	0.37	-0.1970	0.0510	1.03	0.99		
3488166	SR	0.82	0.42	-0.4437	0.0540	1.04	1.06		
3515447	SR	0.55	0.47	1.4979	0.0424	0.98	0.98		
100000044142	BCR	0.84	0.38	-0.6437	0.0568	0.99	0.91		
3595499	BCR	0.47	0.49	1.7679	0.0398	0.97	0.97	-2.2015	2.2015
3515604	SR	0.71	0.51	0.3940	0.0461	0.90	0.92		
3515737	SR	0.83	0.28	-0.7461	0.0582	1.31	1.70		
3488190	SR	0.52	0.36	0.9747	0.0433	1.22	1.33		
3515470	SR	0.75	0.39	0.0797	0.0484	1.03	0.97		
3490562	SR	0.54	0.39	1.1949	0.0428	1.10	1.15		
3487979	SR	0.68	0.33	0.5114	0.0454	1.14	1.23		
100000025175	BCR	0.89	0.33	-1.2660	0.0682	1.02	1.09		
3595574	BCR	0.41	0.45	2.5138	0.0445	1.01	1.01	-2.7223	2.7223
100000018336	SR	0.80	0.45	-0.2781	0.0519	0.96	0.95		
100000069344	SR	0.85	0.49	-0.9015	0.0608	0.90	0.70		
3551599	SR	0.87	0.49	-0.5617	0.0555	0.67	0.47		
100000044144	SR	0.96	0.20	-2.7781	0.1206	1.16	1.54		
100000069324	SR	0.88	0.29	-0.9820	0.0621	1.05	1.03		
100000025187	SR	0.83	0.31	-0.5744	0.0557	1.07	1.22		
100000025153	SR	0.98	0.20	-3.4861	0.1660	0.96	0.65		
100000069420	SR	0.87	0.41	-0.9062	0.0608	0.96	0.80		
3515823	BCR	0.45	0.52	1.7822	0.0426	0.89	0.83		
3595532	BCR	0.39	0.55	2.2823	0.0372	0.92	0.91	-1.9034	1.9034
3488150	BCR	0.38	0.54	2.1818	0.0435	0.82	0.76		
3564176	BCR	0.47	0.57	1.7181	0.0336	0.90	0.90	-1.4235	1.4235
100000007114	SR	0.94	0.33	-2.0205	0.0886	0.93	0.67		
3515575	SR	0.89	0.39	-0.1077	0.0502	0.69	0.55		
100000069424	SR	0.90	0.35	-1.2966	0.0685	0.97	0.96		
3515471	SR	0.86	0.36	-0.9767	0.0620	1.11	1.05		
3515630	SR	0.57	0.47	0.9291	0.0434	1.03	1.02		
3488145	BCR	0.70	0.48	0.3722	0.0462	0.97	0.94		

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2
3564189	BCR	0.49	0.45	1.5344	0.0383	1.07	1.08	-2.0477	2.0477
3497871	SR	0.76	0.47	-0.1044	0.0501	0.96	0.91		
3515635	SR	0.62	0.42	0.6901	0.0444	1.07	1.18		
3515631	SR	0.79	0.38	-0.4674	0.0543	1.20	1.35		
100000252124	SR	0.68	0.44	0.5293	0.0453	1.01	0.95		
100000069399	SR	0.79	0.45	-0.2536	0.0517	0.96	0.87		
100000201857	SR	0.50	0.40	1.0327	0.0432	1.16	1.24		
3515634	SR	0.79	0.46	-0.2435	0.0517	0.93	1.02		
3515853	SR	0.83	0.45	-0.1060	0.0501	0.80	0.70		
100000011499	SR	0.90	0.38	-1.3258	0.0691	0.92	0.78		
3548078	SR	0.49	0.39	1.6350	0.0424	1.08	1.17		
3515933	SR	0.82	0.27	-0.3619	0.0529	1.13	1.51		
3548079	SR	0.96	0.32	-2.3000	0.0993	0.83	0.52		
100000201852	SR	0.85	0.46	-0.9014	0.0609	0.98	0.88		
100000011489	SR	0.97	0.23	-2.8436	0.1246	0.80	1.22		
3515592	SR	0.87	0.43	-0.8156	0.0595	0.79	0.61		
3515783	BCR	0.74	0.55	0.1496	0.0478	0.84	0.71		
3595560	BCR	0.71	0.60	0.4463	0.0310	0.99	0.98	-0.0430	0.0430
100000252111	SR	0.78	0.37	-0.1004	0.0501	1.12	1.33		
3515506	SR	0.91	0.35	-1.2169	0.0669	0.73	0.63		
100000011497	SR	0.74	0.42	0.1555	0.0478	1.02	0.98		
3515632	SR	0.70	0.51	-0.0118	0.0493	1.06	0.97		
3548088	SR	0.76	0.44	-0.1831	0.0511	1.01	1.07		

Table C.4 The 2010 MSA-Math Classical and Rasch Item Parameters: Grade 4 Form F

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2
3487811	SR	0.70	0.45	0.3353	0.0460	0.98	0.95		
3515407	SR	0.88	0.40	-0.7990	0.0588	0.90	0.78		
3515643	SR	0.50	0.43	1.7570	0.0423	0.99	1.00		
3487819	BCR	0.53	0.41	1.4019	0.0422	1.09	1.15		
3564186	BCR	0.42	0.35	2.7967	0.0476	1.05	1.11	-3.0944	3.0944
3515408	SR	0.81	0.48	0.1763	0.0472	0.76	0.62		
3515641	SR	0.83	0.47	-0.8522	0.0598	1.05	0.89		
3515410	SR	0.89	0.34	-1.0550	0.0634	0.95	0.82		
100000069320	SR	0.96	0.23	-2.2702	0.0982	0.98	0.79		
3515605	SR	0.65	0.52	0.9009	0.0432	0.87	0.79		
100000069323	SR	0.42	0.25	2.0168	0.0428	1.16	1.34		
3488166	SR	0.81	0.42	-0.4437	0.0537	0.99	0.90		
3515447	SR	0.56	0.47	1.4979	0.0421	0.93	0.94		
100000044142	BCR	0.85	0.37	-0.6437	0.0566	0.95	0.95		
3595499	BCR	0.48	0.48	1.7679	0.0400	0.94	0.94	-2.2015	2.2015
3515604	SR	0.72	0.51	0.3940	0.0457	0.88	0.79		
3515737	SR	0.83	0.28	-0.7461	0.0580	1.29	1.66		
3488190	SR	0.52	0.35	0.9747	0.0429	1.21	1.33		
3515470	SR	0.75	0.39	0.0797	0.0480	1.04	1.00		
3490562	SR	0.56	0.40	1.1949	0.0424	1.02	1.04		
100000069387	SR	0.66	0.35	0.6341	0.0443	1.13	1.16		
3548776	BCR	0.50	0.51	1.5300	0.0422	0.88	0.84		
3595562	BCR	0.61	0.59	0.7810	0.0330	0.93	0.92	-1.1908	1.1908
100000018336	SR	0.80	0.43	-0.2781	0.0518	0.95	0.91		
100000007113	SR	0.76	0.55	-0.0095	0.0490	0.84	0.68		
3551599	SR	0.87	0.48	-0.5617	0.0555	0.69	0.48		
100000044144	SR	0.97	0.18	-2.7781	0.1219	1.45	2.72		
3497864	SR	0.80	0.35	-0.2837	0.0516	1.04	0.99		
100000007120	SR	0.69	0.30	0.5750	0.0447	1.17	1.25		
3548767	SR	0.70	0.30	0.4355	0.0455	1.18	1.23		
100000069321	SR	0.94	0.28	-1.8118	0.0821	1.02	0.84		
100000201938	BCR	0.68	0.58	0.5229	0.0449	0.84	0.71		
3985620	BCR	0.43	0.49	2.3075	0.0430	0.94	0.93	-2.5494	2.5494
3488076	BCR	0.55	0.37	1.2332	0.0424	1.09	1.11		
3595578	BCR	0.32	0.42	3.6555	0.0423	1.04	1.03	-2.9024	2.9024
100000252099	SR	0.82	0.32	-0.4699	0.0541	1.07	1.13		
3515575	SR	0.89	0.40	-0.1077	0.0499	0.64	0.53		
3487994	SR	0.76	0.42	0.0297	0.0485	0.99	0.96		
3515471	SR	0.86	0.36	-0.9767	0.0620	1.04	0.86		
3515630	SR	0.57	0.48	0.9291	0.0430	0.98	0.92		
3488145	BCR	0.70	0.47	0.3722	0.0459	1.02	1.01		

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2
3564189	BCR	0.49	0.45	1.5344	0.0384	1.03	1.04	-2.0477	2.0477
3551460	SR	0.75	0.40	-0.0075	0.0488	1.01	1.07		
3515635	SR	0.61	0.42	0.6901	0.0440	1.12	1.24		
3515631	SR	0.79	0.38	-0.4674	0.0539	1.17	1.33		
3488034	SR	0.91	0.38	-1.3871	0.0707	0.95	0.73		
100000011498	SR	0.85	0.38	-0.6789	0.0570	1.00	0.99		
100000201857	SR	0.48	0.39	1.0327	0.0429	1.17	1.22		
3515634	SR	0.81	0.44	-0.2435	0.0514	0.85	0.99		
3515853	SR	0.83	0.44	-0.1060	0.0497	0.77	0.63		
100000252117	SR	0.61	0.38	0.9730	0.0429	1.10	1.11		
3548078	SR	0.51	0.39	1.6350	0.0421	1.07	1.13		
3515933	SR	0.81	0.24	-0.3619	0.0526	1.21	1.50		
3548079	SR	0.96	0.30	-2.3000	0.0995	0.64	0.36		
100000201852	SR	0.86	0.43	-0.9014	0.0606	0.99	0.88		
100000011489	SR	0.97	0.20	-2.8436	0.1258	1.18	1.30		
3515592	SR	0.88	0.42	-0.8156	0.0593	0.85	0.64		
100000007087	BCR	0.77	0.48	-0.0833	0.0496	0.95	0.96		
3595563	BCR	0.70	0.48	-0.0165	0.0364	1.06	1.10	-1.4651	1.4651
100000011510	SR	0.67	0.58	0.6061	0.0444	0.84	0.74		
3515506	SR	0.91	0.36	-1.2169	0.0670	0.72	0.55		
100000011491	SR	0.80	0.35	-0.2494	0.0513	1.06	1.07		
3515632	SR	0.71	0.51	-0.0118	0.0489	1.02	0.91		
3548088	SR	0.78	0.43	-0.1831	0.0507	0.97	0.94		

Table C.5 The 2010 MSA-Math Classical and Rasch Item Parameters: Grade 5 Form A

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2	Step 2-3
3488503	SR	0.79	0.23	-0.4592	0.0502	1.14	1.35			
3511269	SR	0.88	0.27	-1.0845	0.0589	0.91	0.94			
3488420	SR	0.65	0.27	0.4222	0.0436	1.18	1.28			
3488471	BCR	0.31	0.45	2.2200	0.0447	0.96	0.91			
3564052	BCR	0.45	0.48	1.5853	0.0347	1.03	1.03	-1.5919	1.5919	
100000065210	SR	0.80	0.36	-0.4266	0.0499	1.03	1.05			
100000065234	SR	0.92	0.28	-1.7803	0.0740	0.97	1.15			
3511203	SR	0.94	0.31	-1.3086	0.0630	0.56	0.44			
100000028266	SR	0.95	0.28	-2.3060	0.0905	0.92	0.70			
100000065176	SR	0.83	0.36	-0.8064	0.0545	0.99	0.92			
3511196	SR	0.57	0.49	0.6094	0.0435	0.99	0.99			
100000366297	SR	0.70	0.26	0.0688	0.0462	1.17	1.31			
3488373	SR	0.71	0.40	0.1790	0.0459	0.94	0.95			
3511467	SR	0.83	0.38	-0.9093	0.0576	0.86	0.75			
3512529	SR	0.60	0.21	0.4459	0.0449	1.29	1.42			
3512606	SR	0.65	0.31	0.3045	0.0441	1.16	1.34			
3488376	SR	0.80	0.42	-0.5510	0.0512	0.94	0.79			
100000043853	SR	0.70	0.42	0.3350	0.0441	0.92	0.89			
100000028212	BCR	0.68	0.51	0.3107	0.0442	0.89	0.81			
3595468	BCR	0.47	0.48	1.4747	0.0351	1.02	1.02	-1.6789	1.6789	
3492117	SR	0.95	0.27	-2.4397	0.0955	0.92	0.74			
3512638	SR	0.72	0.40	0.2606	0.0444	0.95	0.93			
3492126	SR	0.88	0.44	-1.1318	0.0598	0.78	0.49			
100000143144	SR	0.53	0.40	1.0908	0.0419	1.02	1.04			
3511483	BCR	0.37	0.52	1.9029	0.0432	0.90	0.85			
3563992	BCR	0.39	0.56	1.9325	0.0330	0.95	0.95	-1.2674	1.2674	
100000366318	SR	0.87	0.26	-0.8175	0.0549	0.89	1.01			
3511246	SR	0.79	0.44	-0.3310	0.0493	0.86	0.77			
3488443	SR	0.49	0.31	1.6277	0.0424	1.18	1.31			
100000022541	SR	0.74	0.38	-0.1671	0.0474	0.99	0.98			
100000030431	SR	0.48	0.33	1.3624	0.0419	1.11	1.16			
3511566	SR	0.68	0.38	0.1548	0.0450	1.09	1.18			
3511513	SR	0.85	0.32	-1.1293	0.0597	1.13	1.38			
3488370	SR	0.87	0.35	-1.0980	0.0592	0.99	0.99			
3488402	ECR	0.79	0.38	-0.4879	0.0509	1.01	0.97			
3564000	ECR	0.57	0.50	0.8000	0.0260	1.24	1.27	-1.3484	-0.2459	1.5943
3488391	SR	0.88	0.26	-1.2591	0.0621	1.03	1.22			
3488431	SR	0.75	0.28	-0.2130	0.0478	1.14	1.35			
3492140	SR	0.90	0.38	-1.4589	0.0663	0.84	0.58			
3492133	SR	0.57	0.44	0.7803	0.0425	1.02	0.99			
3488485	SR	0.89	0.35	-1.2799	0.0626	0.96	0.84			

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2	Step 2-3
100000022528	BCR	0.43	0.56	1.6254	0.0426	0.82	0.76			
3595465	BCR	0.27	0.58	2.9001	0.0370	0.85	0.82	-1.5156	1.5156	
100000086836	SR	0.59	0.45	0.6849	0.0428	0.99	0.96			
3512595	SR	0.78	0.33	-0.6828	0.0531	1.21	1.32			
3488509	SR	0.77	0.50	-0.5908	0.0520	1.03	0.98			
3511636	SR	0.46	0.50	1.4392	0.0422	0.90	0.90			
100000043857	SR	0.85	0.36	-0.9439	0.0571	0.93	0.93			
100000065196	SR	0.80	0.34	-0.5374	0.0510	1.02	1.03			
3512712	SR	0.91	0.30	-1.6307	0.0700	1.02	1.28			
3511429	SR	0.77	0.41	-0.5025	0.0507	1.09	1.08			
3512644	BCR	0.44	0.60	1.6118	0.0426	0.79	0.72			
3595445	BCR	0.53	0.63	1.0439	0.0302	0.88	0.87	-0.7480	0.7480	
3511626	SR	0.87	0.30	-0.9260	0.0563	0.90	0.84			
100000366304	SR	0.91	0.29	-1.6268	0.0700	0.99	1.01			
3488326	SR	0.66	0.38	0.2463	0.0448	1.04	1.09			
3488251	SR	0.65	0.37	0.5581	0.0430	1.07	1.07			
3512691	SR	0.58	0.34	1.0014	0.0419	1.11	1.14			
3488530	BCR	0.36	0.50	1.8673	0.0436	0.88	0.83			
3564054	BCR	0.32	0.49	2.2051	0.0318	1.12	1.13	-0.6519	0.6519	
3488237	SR	0.63	0.58	0.4508	0.0436	0.82	0.71			
100000022532	BCR	0.42	0.62	1.6379	0.0426	0.75	0.69			
3595471	BCR	0.42	0.62	1.5127	0.0269	0.94	0.87	0.8480	-0.8480	
3488328	SR	0.73	0.39	-0.0717	0.0469	1.02	1.07			
3511448	SR	0.79	0.35	-0.6839	0.0533	1.09	1.24			

Table C.6 The 2010 MSA-Math Classical and Rasch Item Parameters: Grade 5 Form F

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2	Step 2-3
3488494	SR	0.76	0.29	-0.1633	0.0480	1.10	1.11			
3511269	SR	0.90	0.28	-1.0845	0.0602	0.89	0.85			
3488475	SR	0.69	0.27	0.2377	0.0450	1.17	1.24			
3488471	BCR	0.32	0.45	2.2200	0.0443	0.95	0.86			
3564052	BCR	0.46	0.47	1.5853	0.0347	1.02	1.01	-1.5919	1.5919	
100000065277	SR	0.89	0.37	-1.2857	0.0641	0.91	0.63			
100000028272	SR	0.73	0.38	0.0484	0.0463	1.00	0.94			
3511203	SR	0.94	0.30	-1.3086	0.0646	0.53	0.40			
100000028266	SR	0.96	0.26	-2.3060	0.0929	0.88	0.62			
3492129	SR	0.63	0.29	0.5872	0.0432	1.19	1.33			
3511196	SR	0.59	0.49	0.6094	0.0436	0.98	0.97			
3488511	SR	0.40	0.28	1.8688	0.0431	1.16	1.34			
3488373	SR	0.71	0.40	0.1790	0.0462	0.97	0.97			
3511467	SR	0.83	0.37	-0.9093	0.0584	0.95	0.86			
3512529	SR	0.59	0.22	0.4459	0.0448	1.37	1.57			
3512606	SR	0.66	0.31	0.3045	0.0445	1.18	1.44			
100000028227	SR	0.26	0.47	2.6325	0.0467	0.89	0.83			
100000043853	SR	0.71	0.40	0.3350	0.0444	0.94	0.95			
3488459	BCR	0.65	0.48	0.5314	0.0437	0.94	0.90			
3595470	BCR	0.53	0.49	1.0467	0.0393	0.97	0.96	-2.1176	2.1176	
3492117	SR	0.95	0.27	-2.4397	0.0981	1.10	0.98			
3512638	SR	0.73	0.39	0.2606	0.0449	0.97	0.97			
3492126	SR	0.89	0.43	-1.1318	0.0611	0.71	0.42			
100000143144	SR	0.52	0.39	1.0908	0.0419	1.05	1.07			
3511483	BCR	0.38	0.52	1.9029	0.0429	0.88	0.83			
3563992	BCR	0.40	0.55	1.9325	0.0329	0.94	0.93	-1.2674	1.2674	
100000366318	SR	0.88	0.27	-0.8175	0.0562	0.84	0.98			
3511246	SR	0.80	0.44	-0.3310	0.0501	0.81	0.69			
3488443	SR	0.47	0.32	1.6277	0.0422	1.16	1.26			
100000366311	SR	0.82	0.35	-0.6239	0.0531	0.98	1.01			
100000022540	SR	0.74	0.44	-0.0859	0.0475	0.93	0.90			
3511566	SR	0.69	0.36	0.1548	0.0455	1.07	1.19			
3511513	SR	0.86	0.30	-1.1293	0.0612	1.10	1.34			
3488249	SR	0.54	0.40	1.0221	0.0420	1.01	1.00			
100000028203	ECR	0.65	0.42	0.5215	0.0439	1.00	1.00			
3595467	ECR	0.38	0.56	2.0262	0.0300	0.93	0.92	-2.4394	0.4672	1.9722
3488391	SR	0.89	0.22	-1.2591	0.0635	0.98	1.33			
3488431	SR	0.77	0.27	-0.2130	0.0485	1.08	1.28			
3492140	SR	0.91	0.37	-1.4589	0.0679	0.87	0.62			
3492133	SR	0.58	0.44	0.7803	0.0426	0.97	0.93			
3488485	SR	0.85	0.33	-1.2799	0.0641	1.34	1.32			

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2	Step 2-3
3556476	BCR	0.51	0.51	1.2350	0.0420	0.90	0.89			
3563990	BCR	0.47	0.61	1.3785	0.0271	0.94	0.91	0.2627	-0.2627	
100000086836	SR	0.61	0.47	0.6849	0.0429	0.96	0.93			
3512595	SR	0.78	0.32	-0.6828	0.0540	1.32	1.58			
3488509	SR	0.80	0.50	-0.5908	0.0529	0.87	0.74			
3511636	SR	0.49	0.50	1.4392	0.0419	0.89	0.87			
100000043857	SR	0.86	0.34	-0.9439	0.0582	0.85	0.92			
100000065196	SR	0.81	0.35	-0.5374	0.0520	1.05	1.11			
3512712	SR	0.92	0.31	-1.6307	0.0719	1.00	0.87			
3511429	SR	0.78	0.40	-0.5025	0.0516	1.04	1.05			
3511455	BCR	0.83	0.51	-0.8030	0.0560	0.82	0.62			
3563993	BCR	0.74	0.46	0.1427	0.0308	1.11	1.53	0.1393	-0.1393	
3511626	SR	0.89	0.29	-0.9260	0.0576	0.90	0.87			
100000143146	SR	0.76	0.42	-0.1540	0.0480	0.96	0.85			
3488326	SR	0.68	0.40	0.2463	0.0453	0.97	1.01			
3488251	SR	0.64	0.36	0.5581	0.0433	1.09	1.06			
3512691	SR	0.57	0.33	1.0014	0.0420	1.07	1.09			
3512564	BCR	0.40	0.41	1.8176	0.0428	1.00	1.03			
3595444	BCR	0.29	0.42	3.0464	0.0387	1.07	1.09	-2.0643	2.0643	
100000022545	SR	0.75	0.37	-0.1281	0.0480	1.02	0.92			
3488346	BCR	0.50	0.64	1.1973	0.0424	0.74	0.67			
3595473	BCR	0.47	0.62	1.3196	0.0266	0.86	0.81	0.8754	-0.8754	
3488328	SR	0.71	0.40	-0.0717	0.0478	1.02	1.02			
3511448	SR	0.78	0.33	-0.6839	0.0546	1.13	1.23			

Table C.7 The 2010 MSA-Math Classical and Rasch Item Parameters: Grade 6 Form A

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2	Step 2-3
3516257	SR	0.89	0.24	-1.2053	0.0194	0.83	0.97			
100000065103	SR	0.67	0.27	0.0740	0.0151	1.18	1.33			
3516291	SR	0.52	0.31	0.6406	0.0145	1.20	1.32			
100000022483	SR	0.57	0.25	0.6958	0.0145	1.23	1.31			
3488501	SR	0.73	0.36	-0.2534	0.0158	1.06	1.06			
3516243	SR	0.75	0.40	-0.2844	0.0159	0.96	0.88			
100000028374	ECR	0.64	0.51	0.2351	0.0149	0.91	0.84			
3595487	ECR	0.61	0.59	0.3640	0.0086	1.09	1.11	-1.3201	0.1828	1.1373
100000078832	SR	0.81	0.35	-0.8569	0.0178	1.01	1.02			
3516559	SR	0.91	0.25	-1.4432	0.0209	0.78	0.92			
3516255	SR	0.77	0.27	-0.4703	0.0164	1.10	1.25			
3516258	SR	0.64	0.38	0.3254	0.0148	1.04	1.06			
100000064636	SR	0.78	0.39	-0.6205	0.0169	1.00	0.95			
3516240	SR	0.68	0.51	0.2409	0.0149	0.86	0.78			
3516909	SR	0.60	0.44	0.4042	0.0148	1.00	0.97			
100000064615	SR	0.81	0.41	-0.9301	0.0182	0.94	0.86			
3548404	BCR	0.53	0.52	0.7819	0.0146	0.93	0.91			
3564013	BCR	0.43	0.49	1.7242	0.0155	0.94	0.92	-2.6919	2.6919	
100000065117	SR	0.52	0.56	0.8319	0.0146	0.86	0.81			
3516351	SR	0.51	0.53	0.8923	0.0146	0.90	0.86			
3516290	SR	0.70	0.40	-0.1396	0.0159	1.00	1.00			
100000043862	SR	0.64	0.43	0.2101	0.0152	1.01	0.95			
100000065065	SR	0.40	0.43	1.4833	0.0149	1.01	1.08			
100000022476	SR	0.64	0.31	0.2578	0.0149	1.14	1.28			
3492143	SR	0.77	0.42	-0.6658	0.0171	1.00	0.93			
100000028367	BCR	0.37	0.61	1.6930	0.0150	0.78	0.69			
3595489	BCR	0.53	0.68	0.8402	0.0099	0.83	0.77	-0.3408	0.3408	
100000094478	SR	0.83	0.35	-1.0731	0.0188	0.98	1.05			
3516331	SR	0.52	0.39	1.1378	0.0145	1.10	1.13			
3516241	SR	0.86	0.39	-1.4702	0.0211	1.10	0.96			
3516247	SR	0.63	0.61	0.3674	0.0148	0.79	0.72			
3516329	SR	0.61	0.34	0.5144	0.0146	1.11	1.19			
3516623	SR	0.75	0.31	-0.7259	0.0173	1.24	1.50			
3488359	SR	0.91	0.38	-1.8828	0.0242	0.91	0.59			
3492095	SR	0.82	0.47	-0.9261	0.0181	0.84	0.68			
100000065053	SR	0.38	0.52	1.6667	0.0149	0.88	0.86			
100000022498	BCR	0.61	0.42	0.3903	0.0149	1.03	1.07			
3595494	BCR	0.54	0.66	0.7504	0.0104	0.84	0.83	-0.7203	0.7203	
3492073	SR	0.80	0.39	-0.7730	0.0175	0.98	0.91			
3516565	SR	0.52	0.54	0.8786	0.0145	0.88	0.86			
3488358	SR	0.68	0.49	-0.0834	0.0155	0.95	0.98			

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2	Step 2-3
100000022473	SR	0.59	0.43	0.5012	0.0147	1.02	1.05			
100000065061	SR	0.80	0.44	-0.8511	0.0179	0.92	0.80			
3516906	SR	0.61	0.40	0.2864	0.0149	1.07	1.10			
3516332	SR	0.52	0.31	0.5885	0.0146	1.22	1.33			
3516301	SR	0.77	0.49	-0.2182	0.0158	0.79	0.67			
100000022470	SR	0.52	0.54	0.8821	0.0145	0.89	0.84			
3488489	SR	0.74	0.40	-0.2639	0.0159	0.98	0.90			
100000022501	BCR	0.44	0.49	1.3128	0.0146	0.95	0.93			
3595485	BCR	0.77	0.52	-0.8338	0.0128	0.93	0.91	-1.1925	1.1925	
3492120	SR	0.65	0.36	0.2830	0.0149	1.06	1.06			
100000012861	SR	0.85	0.42	-1.2153	0.0196	0.90	0.77			
3488399	BCR	0.63	0.46	0.2229	0.0151	0.99	0.97			
3595482	BCR	0.22	0.44	2.3397	0.0111	1.20	1.39	0.3430	-0.3430	
3516613	SR	0.53	0.26	0.4071	0.0150	1.29	1.40			
100000004449	SR	0.48	0.57	1.0940	0.0144	0.84	0.82			
3488362	SR	0.52	0.49	0.9268	0.0144	0.94	0.92			
100000065076	SR	0.51	0.21	0.9253	0.0144	1.29	1.40			
3516327	BCR	0.49	0.34	1.0327	0.0145	1.16	1.21			
3564005	BCR	0.62	0.57	0.2748	0.0109	0.97	0.95	-0.9394	0.9394	
100000064631	SR	0.78	0.44	-0.6210	0.0170	0.92	0.86			
3516303	SR	0.54	0.47	0.6580	0.0146	0.97	0.93			

Table C.8 The 2010 MSA-Math Classical and Rasch Item Parameters: Grade 6 Form F

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2	Step 2-3
3516257	SR	0.89	0.25	-1.2053	0.0199	0.85	0.90			
100000065090	SR	0.92	0.30	-1.9815	0.0258	0.96	0.91			
3516291	SR	0.54	0.31	0.6406	0.0145	1.16	1.26			
100000022483	SR	0.57	0.24	0.6958	0.0145	1.20	1.28			
100000028429	SR	0.59	0.36	0.5836	0.0145	1.07	1.04			
3516243	SR	0.76	0.39	-0.2844	0.0161	0.97	0.89			
100000028374	ECR	0.66	0.52	0.2351	0.0150	0.87	0.80			
3595487	ECR	0.62	0.58	0.3640	0.0086	1.07	1.07	-1.3201	0.1828	1.1373
100000078832	SR	0.82	0.32	-0.8569	0.0182	1.05	1.09			
3516559	SR	0.91	0.24	-1.4432	0.0215	0.78	0.86			
3516255	SR	0.79	0.26	-0.4703	0.0167	1.07	1.18			
3516258	SR	0.66	0.37	0.3254	0.0148	1.03	1.03			
100000028410	SR	0.87	0.33	-1.3212	0.0207	0.98	0.96			
3516240	SR	0.71	0.48	0.2409	0.0150	0.85	0.78			
3516909	SR	0.61	0.43	0.4042	0.0148	1.00	0.97			
3492071	SR	0.65	0.50	0.2299	0.0150	0.91	0.82			
3516627	BCR	0.55	0.50	0.7075	0.0147	0.94	0.92			
3564006	BCR	0.42	0.55	1.6275	0.0135	0.92	0.92	-2.0510	2.0510	
100000004453	SR	0.54	0.53	0.8127	0.0145	0.89	0.85			
3516351	SR	0.53	0.51	0.8923	0.0145	0.90	0.86			
3516290	SR	0.71	0.41	-0.1396	0.0160	0.98	0.97			
100000043862	SR	0.66	0.42	0.2101	0.0152	1.00	0.93			
100000065065	SR	0.41	0.42	1.4833	0.0147	0.98	1.03			
3488297	SR	0.79	0.38	-0.6249	0.0172	0.99	0.94			
3492143	SR	0.78	0.42	-0.6658	0.0174	1.02	0.95			
100000028363	BCR	0.70	0.55	-0.0837	0.0157	0.85	0.76			
3595491	BCR	0.65	0.60	0.3055	0.0102	0.93	0.90	-0.3163	0.3163	
100000064614	SR	0.80	0.45	-0.6463	0.0173	0.91	0.84			
3516331	SR	0.54	0.38	1.1378	0.0144	1.07	1.10			
3516241	SR	0.87	0.37	-1.4702	0.0216	1.09	0.93			
3516247	SR	0.66	0.60	0.3674	0.0148	0.78	0.70			
3516329	SR	0.67	0.42	0.5144	0.0146	0.95	0.92			
3516623	SR	0.77	0.31	-0.7259	0.0176	1.20	1.39			
100000094472	SR	0.47	0.41	1.1803	0.0144	0.99	1.02			
3492095	SR	0.80	0.45	-0.9261	0.0185	1.04	0.94			
100000028417	SR	0.87	0.41	-1.3160	0.0207	0.92	0.68			
100000022498	BCR	0.60	0.41	0.3903	0.0149	1.04	1.07			
3595494	BCR	0.56	0.66	0.7504	0.0104	0.85	0.82	-0.7203	0.7203	
3492094	SR	0.72	0.36	-0.1972	0.0159	1.04	1.13			
3516565	SR	0.51	0.50	0.8786	0.0144	0.92	0.90			
3488358	SR	0.69	0.49	-0.0834	0.0156	0.94	0.96			

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2	Step 2-3
100000064637	SR	0.62	0.47	0.3609	0.0149	0.95	0.91			
100000094475	SR	0.75	0.43	-0.4276	0.0166	0.95	0.88			
3516906	SR	0.59	0.40	0.2864	0.0150	1.10	1.10			
3516332	SR	0.54	0.30	0.5885	0.0146	1.18	1.26			
3516301	SR	0.80	0.49	-0.2182	0.0160	0.73	0.59			
100000022470	SR	0.54	0.52	0.8821	0.0144	0.88	0.84			
3488489	SR	0.75	0.39	-0.2639	0.0161	0.97	0.90			
100000022492	BCR	0.71	0.34	-0.1987	0.0161	1.06	1.17			
3595479	BCR	0.50	0.24	0.9807	0.0097	1.74	2.03	-0.1290	0.1290	
3492120	SR	0.64	0.37	0.2830	0.0149	1.07	1.06			
100000064783	SR	0.57	0.40	0.7013	0.0145	1.02	1.01			
3488281	BCR	0.65	0.55	0.1382	0.0155	0.86	0.79			
3564063	BCR	0.59	0.45	0.3369	0.0118	1.12	1.17	-1.3775	1.3775	
3516613	SR	0.56	0.28	0.4071	0.0149	1.23	1.30			
3488317	SR	0.90	0.29	-1.6344	0.0228	0.99	0.98			
100000064622	SR	0.88	0.32	-1.4157	0.0213	0.97	1.04			
100000065148	SR	0.60	0.40	0.5523	0.0146	1.02	1.00			
3516327	BCR	0.49	0.32	1.0327	0.0144	1.14	1.19			
3564005	BCR	0.63	0.56	0.2748	0.0109	0.95	0.94	-0.9394	0.9394	
100000064624	SR	0.79	0.37	-0.6630	0.0174	1.00	0.90			
3516303	SR	0.55	0.45	0.6580	0.0145	0.98	0.95			

Table C.9 The 2010 MSA-Math Classical and Rasch Item Parameters: Grade 7 Form A

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2	Step 2-3
3517604	SR	0.34	0.44	1.4441	0.0159	1.02	1.06			
3517601	SR	0.54	0.55	0.4455	0.0152	0.90	0.88			
3517678	SR	0.95	0.26	-2.6820	0.0279	0.69	0.60			
100000064084	SR	0.66	0.37	-0.3144	0.0158	1.11	1.15			
100000026806	BCR	0.51	0.47	0.4422	0.0154	1.03	1.05			
3595381	BCR	0.61	0.58	-0.1940	0.0121	0.97	0.96	-1.3372	1.3372	
3517616	SR	0.65	0.49	-0.1398	0.0156	0.93	0.92			
3517634	SR	0.69	0.53	-0.4706	0.0161	0.87	0.77			
100000064025	SR	0.66	0.44	-0.3181	0.0158	1.02	1.06			
3517677	SR	0.66	0.52	-0.3998	0.0160	0.92	0.87			
100000026799	SR	0.58	0.58	0.1445	0.0153	0.86	0.79			
100000026796	SR	0.84	0.39	-1.4762	0.0193	0.91	0.80			
100000004159	SR	0.51	0.47	0.5166	0.0152	1.03	1.06			
3517652	SR	0.70	0.46	-0.6359	0.0165	1.00	0.91			
3547473	SR	0.83	0.41	-1.1243	0.0179	0.81	0.71			
3517739	SR	0.86	0.33	-1.9183	0.0218	1.03	1.23			
100000063929	SPR	0.33	0.44	1.4038	0.0165	1.03	1.05			
100000026808	ECR	0.34	0.54	1.4517	0.0161	0.90	0.81			
3595374	ECR	0.37	0.65	1.2670	0.0087	1.14	1.13	-0.1693	-0.8031	0.9724
100000004154	SPR	0.63	0.45	-0.2708	0.0161	1.03	1.09			
100000026792	SPR	0.59	0.49	-0.0337	0.0159	0.99	1.00			
100000063933	SPR	0.71	0.52	-0.8874	0.0178	0.87	0.84			
3517818	BCR	0.30	0.58	1.5333	0.0168	0.84	0.73			
3564023	BCR	0.30	0.54	2.1002	0.0153	0.93	0.92	-2.4025	2.4025	
100000123045	SR	0.59	0.37	-0.1001	0.0161	1.14	1.22			
3517639	SR	0.35	0.52	1.4497	0.0159	0.92	0.91			
3517665	SR	0.41	0.44	0.9745	0.0153	1.02	1.10			
3517742	SR	0.65	0.41	0.0227	0.0154	1.04	1.07			
3547642	SPR	0.72	0.33	-0.7284	0.0169	1.12	1.39			
100000018124	SPR	0.34	0.54	1.4308	0.0160	0.91	0.83			
3517706	BCR	0.52	0.48	0.3815	0.0155	1.03	1.08			
3564025	BCR	0.32	0.56	1.5390	0.0116	1.11	1.08	-0.7818	0.7818	
100000026814	SR	0.43	0.35	0.9408	0.0153	1.17	1.31			
3517656	SR	0.67	0.39	-0.4094	0.0160	1.12	1.06			
100000012782	SR	0.88	0.41	-2.0093	0.0223	0.88	0.68			
100000012779	ECR	0.50	0.55	0.5110	0.0153	0.93	0.92			
3595378	ECR	0.33	0.64	1.8500	0.0113	0.92	0.92	-2.6284	0.3759	2.2526
100000063916	SPR	0.38	0.59	1.1933	0.0157	0.85	0.77			
3547772	SPR	0.29	0.52	1.7435	0.0166	0.92	0.81			
100000012796	SR	0.49	0.33	0.2502	0.0153	1.25	1.39			
3517602	SR	0.50	0.45	0.7735	0.0153	1.05	1.12			

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2	Step 2-3
3517687	SR	0.58	0.49	-0.0583	0.0155	1.01	0.98			
3517692	SR	0.84	0.30	-1.4991	0.0194	1.00	1.20			
100000004147	ECR	0.74	0.37	-0.8589	0.0172	1.08	1.13			
3595388	ECR	0.32	0.54	1.8264	0.0103	1.19	1.18	-1.9672	-0.1313	2.0984
100000063988	SPR	0.66	0.43	-0.3417	0.0159	1.02	1.15			
3492166	SPR	0.25	0.51	2.0183	0.0174	0.90	0.79			
100000018133	SPR	0.30	0.55	1.6854	0.0166	0.88	0.79			
3517712	SR	0.51	0.39	0.5663	0.0153	1.13	1.20			
3517714	SR	0.60	0.58	0.0092	0.0156	0.84	0.77			
3517885	SR	0.48	0.44	1.0861	0.0154	1.12	1.18			
100000018106	SR	0.61	0.35	0.0819	0.0153	1.15	1.17			
3517693	BCR	0.14	0.42	2.9771	0.0210	0.92	0.71			
3564028	BCR	0.45	0.46	0.8278	0.0119	1.21	1.21	-1.3678	1.3678	
3517721	SR	0.51	0.46	0.5231	0.0152	1.02	1.03			
3517691	SR	0.67	0.55	-0.2784	0.0158	0.83	0.76			
3492162	SR	0.72	0.38	-0.7170	0.0167	1.07	1.08			
3555858	SR	0.49	0.45	0.6673	0.0152	1.04	1.09			
100000070659	SPR	0.39	0.58	1.1503	0.0158	0.86	0.83			
3555859	SR	0.78	0.41	-1.4603	0.0193	1.15	1.24			
100000363463	SR	0.61	0.52	-0.0202	0.0155	0.93	0.88			
3488830	SR	0.54	0.55	-0.0385	0.0155	0.97	0.94			

Table C.10 The 2010 MSA-Math Classical and Rasch Item Parameters: Grade 7 Form F

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2	Step 2-3
3517604	SR	0.33	0.42	1.4441	0.0160	1.04	1.07			
3517601	SR	0.55	0.55	0.4455	0.0154	0.90	0.87			
3517678	SR	0.96	0.24	-2.6820	0.0284	0.61	0.41			
3500142	SR	0.64	0.55	-0.2119	0.0160	0.89	0.79			
100000026820	BCR	0.52	0.61	0.4402	0.0155	0.84	0.79			
3595398	BCR	0.55	0.58	0.2177	0.0124	0.99	0.99	-1.5084	1.5084	
3517616	SR	0.67	0.48	-0.1398	0.0159	0.93	0.91			
3517634	SR	0.70	0.54	-0.4706	0.0164	0.86	0.75			
3487535	SR	0.62	0.31	-0.0824	0.0158	1.23	1.33			
3517677	SR	0.67	0.52	-0.3998	0.0163	0.93	0.88			
100000026799	SR	0.61	0.59	0.1445	0.0156	0.82	0.75			
100000026796	SR	0.84	0.39	-1.4762	0.0196	0.89	0.80			
3487612	SR	0.82	0.42	-1.4333	0.0195	0.95	0.88			
3517652	SR	0.74	0.45	-0.6359	0.0168	0.93	0.83			
3547473	SR	0.84	0.39	-1.1243	0.0182	0.79	0.69			
3517739	SR	0.86	0.32	-1.9183	0.0221	1.04	1.33			
100000064095	SPR	0.40	0.47	1.1139	0.0159	1.02	1.03			
3491692	ECR	0.46	0.65	0.7610	0.0157	0.78	0.71			
3564159	ECR	0.47	0.72	0.6508	0.0092	0.91	0.88	-1.3030	0.3303	0.9727
3487614	SPR	0.72	0.38	-0.8015	0.0176	1.08	1.23			
3492176	SPR	0.66	0.52	-0.4784	0.0169	0.93	0.88			
100000064098	SPR	0.74	0.48	-1.1179	0.0189	0.90	0.94			
100000004178	BCR	0.38	0.59	1.1288	0.0163	0.85	0.77			
3595400	BCR	0.40	0.65	0.9665	0.0111	0.97	0.92	-0.3186	0.3186	
100000123045	SR	0.59	0.40	-0.1001	0.0164	1.13	1.17			
3517639	SR	0.34	0.42	1.4497	0.0161	1.05	1.09			
3517665	SR	0.40	0.44	0.9745	0.0156	1.04	1.10			
3517742	SR	0.64	0.43	0.0227	0.0157	1.03	1.05			
3513630	SPR	0.70	0.42	-0.5803	0.0168	1.03	1.14			
100000018121	SPR	0.25	0.52	2.0178	0.0175	0.88	0.82			
3517706	BCR	0.53	0.46	0.3815	0.0157	1.05	1.10			
3564025	BCR	0.33	0.55	1.5390	0.0117	1.14	1.13	-0.7818	0.7818	
100000026814	SR	0.44	0.34	0.9408	0.0155	1.21	1.34			
3517656	SR	0.67	0.41	-0.4094	0.0163	1.08	1.00			
3500139	SR	0.77	0.43	-1.0226	0.0178	0.97	0.92			
100000012779	ECR	0.52	0.53	0.5110	0.0155	0.95	0.94			
3595378	ECR	0.35	0.64	1.8500	0.0114	1.00	0.99	-2.6284	0.3759	2.2526
100000064021	SPR	0.45	0.64	0.8403	0.0157	0.80	0.73			
3547675	SPR	0.59	0.58	0.0400	0.0158	0.85	0.80			
100000012796	SR	0.48	0.33	0.2502	0.0156	1.28	1.42			
3517602	SR	0.51	0.48	0.7735	0.0155	1.03	1.09			

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2	Step 2-3
3517687	SR	0.60	0.48	-0.0583	0.0158	1.03	1.01			
3517692	SR	0.84	0.29	-1.4991	0.0197	1.05	1.30			
100000027967	ECR	0.34	0.44	1.5638	0.0163	1.04	1.03			
3595392	ECR	0.36	0.54	1.6174	0.0104	1.16	1.15	-2.0279	-0.0882	2.1160
100000004173	SPR	0.40	0.56	1.1111	0.0158	0.90	0.83			
100000070736	SPR	0.37	0.49	1.2585	0.0160	1.00	0.96			
100000064052	SPR	0.19	0.43	2.4514	0.0195	0.94	0.90			
3517712	SR	0.49	0.39	0.5663	0.0157	1.13	1.18			
3517714	SR	0.58	0.57	0.0092	0.0160	0.86	0.78			
3517885	SR	0.46	0.41	1.0861	0.0156	1.15	1.23			
100000018106	SR	0.61	0.36	0.0819	0.0156	1.15	1.16			
3517693	BCR	0.13	0.41	2.9771	0.0211	0.87	0.66			
3564028	BCR	0.45	0.45	0.8278	0.0121	1.23	1.24	-1.3678	1.3678	
3517721	SR	0.53	0.48	0.5231	0.0154	1.00	0.99			
3517691	SR	0.66	0.55	-0.2784	0.0160	0.86	0.81			
100000012794	SR	0.43	0.36	0.9999	0.0156	1.16	1.28			
3555858	SR	0.48	0.46	0.6673	0.0154	1.02	1.04			
3492164	SPR	0.34	0.46	1.4419	0.0164	1.02	1.04			
3555859	SR	0.79	0.41	-1.4603	0.0196	1.14	1.13			
100000363463	SR	0.60	0.52	-0.0202	0.0158	0.95	0.90			
3488830	SR	0.55	0.55	-0.0385	0.0158	0.96	0.90			

Table C.11 The 2010 MSA-Math Classical and Rasch Item Parameters: Grade 8 Form A

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2	Step 2-3
3514015	SR	0.26	0.34	1.4965	0.0168	1.10	1.17			
3514014	SR	0.57	0.41	-0.2177	0.0154	1.09	1.08			
100000043324	BCR	0.46	0.59	0.3845	0.0155	0.85	0.77			
3595434	BCR	0.44	0.60	0.3994	0.0100	1.10	1.04	0.6339	-0.6339	
100000018156	SR	0.70	0.32	-0.7550	0.0161	1.12	1.14			
100000064981	SR	0.62	0.46	-0.4269	0.0156	0.98	1.01			
3514053	SR	0.77	0.34	-1.2003	0.0172	0.98	1.11			
100000043330	SR	0.47	0.54	0.3621	0.0153	0.91	0.88			
3500150	SR	0.51	0.42	0.3158	0.0153	1.07	1.12			
3514161	SPR	0.24	0.53	1.7253	0.0176	0.88	0.77			
100000012774	ECR	0.26	0.59	1.5604	0.0172	0.82	0.66			
3595421	ECR	0.48	0.73	0.1961	0.0096	0.83	0.83	-1.5626	-0.0169	1.5796
100000026779	SPR	0.68	0.49	-0.8747	0.0166	0.91	0.88			
100000018170	SPR	0.74	0.45	-1.2527	0.0176	0.92	0.91			
100000065006	SPR	0.75	0.35	-1.2763	0.0178	1.04	1.44			
100000012737	SPR	0.39	0.57	0.7805	0.0158	0.89	0.82			
3514595	SR	0.71	0.35	-0.8540	0.0163	1.05	1.12			
3487718	SR	0.64	0.46	-0.5452	0.0158	0.98	0.95			
3487637	BCR	0.28	0.53	1.4578	0.0168	0.91	0.79			
3595418	BCR	0.57	0.58	-0.1928	0.0109	1.00	1.07	-0.6025	0.6025	
3514279	SPR	0.27	0.58	1.5409	0.0172	0.82	0.71			
100000043320	SR	0.48	0.39	0.2581	0.0153	1.11	1.17			
3500154	SR	0.75	0.49	-1.1600	0.0171	0.86	0.75			
3514062	SR	0.44	0.55	0.5139	0.0153	0.90	0.89			
3487636	BCR	0.21	0.53	1.9670	0.0183	0.84	0.72			
3595428	BCR	0.33	0.58	1.0288	0.0109	1.07	1.07	-0.1750	0.1750	
3492058	SPR	0.46	0.50	0.4102	0.0154	0.97	0.94			
3514131	SPR	0.43	0.50	0.5542	0.0155	0.98	0.95			
100000049037	SR	0.66	0.41	-0.5927	0.0159	1.03	1.02			
3487626	ECR	0.24	0.46	1.7702	0.0177	0.95	1.00			
3595433	ECR	0.46	0.74	0.2890	0.0087	0.84	0.83	-1.0401	0.3739	0.6662
100000043323	SR	0.49	0.51	0.5661	0.0154	0.98	0.99			
3514291	SR	0.82	0.33	-1.4001	0.0179	0.88	1.02			
3487724	SR	0.38	0.49	0.8736	0.0157	0.96	0.97			
3514117	BCR	0.40	0.65	0.6586	0.0159	0.77	0.70			
3564111	BCR	0.47	0.64	0.2436	0.0114	0.92	0.94	-0.8169	0.8169	
3514055	SR	0.59	0.40	-0.2581	0.0155	1.07	1.15			
3487901	SR	0.86	0.38	-2.1555	0.0216	0.89	0.79			
3514056	SR	0.82	0.30	-1.4852	0.0183	1.01	1.13			
3487537	SR	0.79	0.39	-1.5304	0.0184	0.97	0.93			
3487525	SR	0.53	0.56	0.0551	0.0153	0.88	0.84			

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2	Step 2-3
100000018153	SR	0.63	0.26	-0.5150	0.0157	1.26	1.48			
3514074	SR	0.43	0.29	0.3257	0.0154	1.25	1.37			
3514075	SR	0.66	0.39	-0.6275	0.0159	1.07	1.02			
3487933	ECR	0.33	0.43	1.2142	0.0163	1.06	1.05			
3595416	ECR	0.29	0.60	1.5956	0.0102	1.07	1.06	-1.5055	-0.3011	1.8066
100000064900	SPR	0.39	0.44	0.8337	0.0158	1.04	1.06			
100000071596	SPR	0.31	0.56	1.2240	0.0168	0.88	0.78			
3514095	SR	0.33	0.44	1.2102	0.0162	1.01	1.11			
100000016549	SR	0.84	0.33	-1.9345	0.0202	0.99	1.11			
100000018146	SR	0.77	0.39	-1.3641	0.0177	0.97	1.17			
3487902	SR	0.85	0.34	-1.8764	0.0199	0.87	0.87			
100000018151	SR	0.58	0.45	0.0346	0.0153	1.01	0.97			
3487712	SR	0.58	0.47	-0.3805	0.0156	1.01	1.04			
3492047	SR	0.27	0.30	1.5124	0.0170	1.20	1.32			
3500160	SPR	0.30	0.54	1.2752	0.0166	0.91	0.80			
3500164	SPR	0.42	0.47	0.5753	0.0158	1.02	1.01			
100000012745	BCR	0.28	0.51	1.3321	0.0172	0.96	0.88			
3595427	BCR	0.40	0.54	0.4893	0.0108	1.27	1.38	0.0455	-0.0455	
3487912	SR	0.54	0.49	-0.0934	0.0156	0.97	0.93			
3547536	SR	0.52	0.43	-0.0487	0.0156	1.06	1.07			
3492031	SR	0.35	0.35	0.9789	0.0162	1.13	1.31			

Table C.12 The 2010 MSA-Math Classical and Rasch Item Parameters: Grade 8 Form F

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2	Step 2-3
3514015	SR	0.27	0.32	1.4965	0.0169	1.14	1.25			
3514014	SR	0.58	0.42	-0.2177	0.0156	1.09	1.07			
3487624	BCR	0.28	0.55	1.5161	0.0173	0.88	0.81			
3595415	BCR	0.30	0.59	1.3253	0.0122	0.99	0.98	-0.8164	0.8164	
100000018156	SR	0.71	0.32	-0.7550	0.0163	1.12	1.19			
100000064858	SR	0.62	0.50	-0.4014	0.0158	0.94	0.91			
3514053	SR	0.78	0.33	-1.2003	0.0175	0.99	1.13			
100000043330	SR	0.49	0.53	0.3621	0.0155	0.95	0.93			
3500150	SR	0.50	0.39	0.3158	0.0155	1.12	1.19			
100000064903	SPR	0.33	0.55	1.1908	0.0165	0.89	0.82			
3487680	ECR	0.31	0.66	1.2585	0.0168	0.74	0.61			
3564133	ECR	0.35	0.69	0.7715	0.0085	1.12	1.07	0.2687	0.5204	-0.7890
100000004110	SPR	0.69	0.44	-0.8713	0.0168	0.98	1.03			
100000065028	SPR	0.70	0.34	-0.9745	0.0172	1.09	1.38			
100000064919	SPR	0.38	0.58	0.8664	0.0162	0.86	0.81			
100000012737	SPR	0.39	0.58	0.7805	0.0160	0.88	0.81			
3514595	SR	0.73	0.34	-0.8540	0.0165	1.06	1.12			
100000026755	SR	0.65	0.40	-0.5724	0.0161	1.07	1.03			
3514147	BCR	0.45	0.55	0.4865	0.0158	0.92	0.86			
3564115	BCR	0.38	0.57	0.7613	0.0108	1.19	1.17	0.0351	-0.0351	
100000026745	SPR	0.19	0.54	2.1143	0.0192	0.83	0.61			
100000043320	SR	0.45	0.32	0.2581	0.0155	1.22	1.32			
3500154	SR	0.74	0.48	-1.1600	0.0173	0.89	0.81			
3514062	SR	0.47	0.55	0.5139	0.0155	0.91	0.89			
3514266	BCR	0.35	0.60	1.0607	0.0163	0.84	0.74			
3564120	BCR	0.53	0.61	-0.0377	0.0120	0.94	0.93	-1.2136	1.2136	
3487907	SPR	0.41	0.65	0.6857	0.0158	0.77	0.68			
3514114	SPR	0.45	0.48	0.4998	0.0156	1.01	1.01			
100000049037	SR	0.65	0.41	-0.5927	0.0161	1.06	1.05			
3514607	ECR	0.30	0.67	1.2960	0.0170	0.72	0.59			
3564112	ECR	0.32	0.73	1.1473	0.0092	0.89	0.82	-0.2529	-0.6027	0.8555
100000043323	SR	0.52	0.51	0.5661	0.0156	1.00	0.99			
3514291	SR	0.80	0.30	-1.4001	0.0181	0.99	1.32			
100000004089	SR	0.82	0.38	-1.6932	0.0194	0.97	0.90			
3514117	BCR	0.41	0.66	0.6586	0.0160	0.78	0.70			
3564111	BCR	0.48	0.65	0.2436	0.0115	0.92	0.93	-0.8169	0.8169	
3514055	SR	0.61	0.39	-0.2581	0.0157	1.08	1.17			
3487901	SR	0.87	0.37	-2.1555	0.0219	0.88	0.77			
3514056	SR	0.85	0.27	-1.4852	0.0185	0.92	0.96			
3487566	SR	0.53	0.48	0.0785	0.0155	1.00	0.98			
3487525	SR	0.55	0.55	0.0551	0.0155	0.90	0.87			

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SEM	Ms. Infit	Ms. Outfit	Step 0-1	Step 1-2	Step 2-3
100000018153	SR	0.63	0.25	-0.5150	0.0159	1.28	1.53			
3514074	SR	0.45	0.33	0.3257	0.0155	1.20	1.27			
3514075	SR	0.67	0.40	-0.6275	0.0161	1.06	1.01			
100000016550	ECR	0.77	0.41	-1.3817	0.0181	0.96	0.98			
3595411	ECR	0.46	0.51	0.5644	0.0099	1.30	1.31	-1.6158	-0.4646	2.0804
3513638	SPR	0.35	0.47	1.0684	0.0162	1.02	1.00			
100000064832	SPR	0.73	0.48	-1.1628	0.0175	0.89	0.85			
3514095	SR	0.36	0.45	1.2102	0.0163	1.04	1.14			
100000065017	SR	0.81	0.30	-1.6215	0.0190	1.05	1.37			
3487904	SR	0.65	0.55	-0.5972	0.0161	0.86	0.78			
3487902	SR	0.86	0.33	-1.8764	0.0202	0.85	0.87			
100000018151	SR	0.55	0.42	0.0346	0.0155	1.07	1.09			
3487712	SR	0.61	0.46	-0.3805	0.0158	1.00	1.02			
3492047	SR	0.29	0.30	1.5124	0.0171	1.23	1.37			
100000018176	SPR	0.26	0.39	1.6711	0.0175	1.05	1.16			
3492050	SPR	0.72	0.41	-1.1053	0.0175	0.99	1.14			
100000012744	BCR	0.20	0.53	2.0170	0.0191	0.86	0.67			
3595424	BCR	0.27	0.62	2.5056	0.0158	0.82	0.78	-2.6114	2.6114	
3487912	SR	0.56	0.49	-0.0934	0.0158	0.96	0.91			
3547536	SR	0.51	0.43	-0.0487	0.0158	1.09	1.13			
3487719	SR	0.78	0.36	-1.6419	0.0195	0.95	0.95			