

APPENDIX C: THE 2009 MSA-MATH CLASSICAL AND RASCH ITEM PARAMETERS

Table C.1 The 2009 MSA-Math Classical and Rasch Item Parameters: Grade 3 Form A

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step 0-1	Step 1-2
3509931	SR	0.70	0.35	0.9627	0.0460	1.12	1.18		
3548055	SR	0.98	0.28	-2.4386	0.1279	0.92	0.61		
100000011184	BCR	0.57	0.43	1.5806	0.0431	1.00	0.96		
3595527	BCR	0.56	0.43	1.4153	0.0434	0.98	0.98	-2.5617	2.5617
3510009	SR	0.86	0.39	0.0690	0.0547	0.87	0.84		
100000205908	SR	0.81	0.45	0.1990	0.0530	0.96	0.91		
3548054	SR	0.96	0.27	-1.7100	0.0956	0.89	1.21		
100000210424	SR	0.58	0.41	1.6564	0.0429	1.05	1.08		
100000210493	SR	0.84	0.44	-0.0917	0.0571	0.95	0.97		
3510017	SR	0.93	0.36	-1.1315	0.0779	0.78	0.70		
3510006	SR	0.58	0.46	1.2257	0.0447	1.07	1.22		
3509960	SR	0.80	0.32	0.3981	0.0511	1.05	1.14		
3509964	SR	0.78	0.50	-0.0360	0.0565	1.11	0.97		
100000025225	SR	0.83	0.35	-0.2038	0.0591	1.05	1.06		
3509941	BCR	0.62	0.45	1.4160	0.0437	1.01	1.06		
3595501	BCR	0.56	0.50	1.5639	0.0376	0.95	0.95	-1.9549	1.9549
3509983	SR	0.94	0.42	-1.1470	0.0782	0.73	0.61		
3510022	SR	0.56	0.32	2.0077	0.0424	1.12	1.30		
3509927	SR	0.79	0.32	0.4123	0.0506	1.10	1.37		
100000025207	SR	0.95	0.38	-1.4723	0.0876	0.92	0.76		
3510005	SR	0.61	0.40	1.3897	0.0438	1.07	1.08		
100000025196	BCR	0.90	0.38	-0.7697	0.0689	1.02	0.84		
3595519	BCR	0.64	0.50	1.2125	0.0324	1.14	1.17	-0.9262	0.9262
100000025199	SR	0.94	0.35	-1.6379	0.0934	0.96	0.92		
3510062	SR	0.85	0.23	-0.3652	0.0613	1.30	1.74		
3488065	SR	0.88	0.58	-0.4834	0.0634	0.78	0.47		
100000004258	SR	0.89	0.43	-0.6636	0.0673	0.95	0.63		
3509988	SR	0.72	0.40	0.5005	0.0501	1.19	1.37		
3510070	SR	0.98	0.27	-2.6459	0.1405	0.68	0.85		
3488139	BCR	0.47	0.46	2.1303	0.0423	0.94	0.91		
3564095	BCR	0.45	0.47	2.4239	0.0390	0.98	0.98	-2.0904	2.0904
3510063	SR	0.80	0.45	0.4861	0.0500	0.88	0.82		
3510072	BCR	0.87	0.44	-0.3424	0.0608	0.91	0.94		
3564080	BCR	0.61	0.47	1.4331	0.0314	1.13	1.15	-0.8085	0.8085
100000210496	SR	0.85	0.19	-0.0611	0.0564	1.24	1.62		
3509926	SR	0.51	0.43	2.4187	0.0426	1.04	1.10		
3548507	SR	0.88	0.34	-0.2784	0.0599	0.91	0.83		
3509967	SR	0.91	0.34	-0.8856	0.0717	1.01	0.99		
3510065	SR	0.95	0.32	-2.1822	0.1159	1.44	1.80		

Table C.1 (continued)

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step 0-1	Step 1-2
3509961	SR	0.93	0.37	-1.3667	0.0845	1.01	1.08		
100000044158	SR	0.87	0.46	-0.4990	0.0636	0.99	0.75		
3510018	SR	0.80	0.50	0.2953	0.0519	0.88	0.77		
3510035	SR	0.89	0.34	-0.6165	0.0657	1.09	1.33		
3509949	BCR	0.76	0.49	0.5146	0.0499	0.93	0.81		
3985609	BCR	0.68	0.56	0.9641	0.0334	0.98	1.01	-0.9820	0.9820
3510055	SR	0.62	0.46	1.2952	0.0442	0.99	0.97		
3510058	SR	0.90	0.43	-0.6059	0.0656	0.85	0.74		
3510347	SR	0.72	0.47	0.9229	0.0465	0.93	0.93		
3510053	SR	0.85	0.35	-0.2691	0.0598	1.02	1.03		
3510041	SR	0.94	0.31	-1.8190	0.0997	1.35	1.37		
3510051	SR	0.57	0.44	1.4814	0.0435	0.99	1.01		
3509929	SR	0.56	0.44	1.8021	0.0426	0.94	1.00		
3510329	SR	0.66	0.36	1.5719	0.0432	1.10	1.17		
3510033	SR	0.85	0.38	0.0473	0.0550	0.89	0.78		
3510043	SR	0.77	0.41	0.0444	0.0550	1.26	1.28		
100000210497	SR	0.97	0.39	-2.3219	0.1225	0.86	0.40		
3497888	SR	0.91	0.47	-0.9265	0.0726	0.89	0.74		
3509962	SR	0.91	0.42	-0.6247	0.0659	0.86	1.01		
3547998	BCR	0.88	0.45	-0.4669	0.063	0.93	0.83		
3564094	BCR	0.55	0.51	1.6096	0.0381	0.97	0.98	-2.0080	2.0080
100000011195	SR	0.90	0.33	-0.8620	0.0712	1.02	1.28		
100000018397	SR	0.85	0.33	-0.2798	0.0599	1.07	1.18		
100000011207	SR	0.83	0.48	0.0479	0.0551	0.91	0.72		
3490569	SR	0.91	0.29	-0.9778	0.0738	1.09	1.55		
3510036	SR	0.87	0.41	-0.5397	0.0645	1.06	1.05		

Table C.2 The 2009 MSA-Mathematics Classical and Rasch Item Parameters: Grade 3 Form F

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step 0-1	Step 1-2
3509931	SR	0.70	0.36	0.9627	0.0454	1.11	1.16		
3548055	SR	0.98	0.25	-2.4386	0.1311	0.84	0.75		
100000011186	BCR	0.73	0.54	0.7532	0.0469	0.87	0.74		
3595529	BCR	0.60	0.37	1.0151	0.0409	1.11	1.15	-2.4072	2.4072
3510009	SR	0.86	0.38	0.0690	0.0541	0.89	0.89		
100000205908	SR	0.82	0.43	0.1990	0.0525	0.95	0.93		
3548054	SR	0.96	0.23	-1.7100	0.0969	0.69	0.61		
3509979	SR	0.89	0.38	-0.0209	0.0554	0.78	0.67		
100000011211	SR	0.68	0.45	1.0793	0.0450	0.96	0.96		
3510017	SR	0.92	0.34	-1.1315	0.0783	0.85	0.78		
3510006	SR	0.58	0.46	1.2257	0.0442	1.07	1.17		
3509960	SR	0.80	0.34	0.3981	0.0507	1.05	1.06		
3509964	SR	0.78	0.51	-0.036	0.0562	1.14	0.95		
100000025225	SR	0.83	0.34	-0.2038	0.0589	1.10	1.12		
3509941	BCR	0.63	0.44	1.4160	0.0431	0.96	0.97		
3595501	BCR	0.56	0.49	1.5639	0.0374	0.93	0.93	-1.9549	1.9549
3509983	SR	0.94	0.40	-1.1470	0.0785	0.81	0.71		
3510022	SR	0.57	0.32	2.0077	0.0417	1.09	1.16		
3509927	SR	0.73	0.23	0.4123	0.0500	1.46	2.29		
3509928	SR	0.95	0.43	-0.6271	0.0659	0.45	0.27		
100000004275	SR	0.44	0.24	2.3631	0.0419	1.18	1.41		
100000025196	BCR	0.90	0.39	-0.7697	0.0690	0.99	0.83		
3595519	BCR	0.64	0.50	1.2125	0.0319	1.14	1.17	-0.9262	0.9262
100000025210	SR	0.96	0.32	-2.1068	0.1141	0.95	0.65		
100000004270	SR	0.88	0.43	-0.5454	0.0643	0.96	0.88		
100000025202	SR	0.86	0.54	-0.2431	0.0589	0.84	0.60		
100000004258	SR	0.90	0.42	-0.6636	0.0673	0.82	0.61		
3509988	SR	0.74	0.39	0.5005	0.0495	1.10	1.15		
3510070	SR	0.98	0.23	-2.6459	0.1442	0.73	0.49		
3510067	BCR	0.85	0.38	-0.0129	0.0553	1.02	0.96		
3564083	BCR	0.82	0.38	0.2571	0.0366	1.28	1.45	-0.4253	0.4253
3510063	SR	0.8	0.44	0.4861	0.0494	0.90	0.82		
3488087	BCR	0.44	0.48	2.4484	0.0421	0.89	0.88		
3564099	BCR	0.40	0.47	2.8035	0.0346	0.98	0.99	-1.5459	1.5459
100000004263	SR	0.86	0.39	-0.2543	0.0591	0.96	0.98		
3509926	SR	0.48	0.42	2.4187	0.0420	1.01	1.11		
100000213058	SR	0.87	0.33	-0.4736	0.0631	1.04	1.02		

Table C.2 (continued)

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step 0-1	Step 1-2
100000044163	SR	0.78	0.35	-0.4817	0.0632	1.93	2.64		
3510065	SR	0.95	0.31	-2.1822	0.1180	1.41	1.34		
3509961	SR	0.93	0.35	-1.3667	0.0852	0.85	0.74		
3511729	SR	0.68	0.47	1.0809	0.0448	0.95	0.98		
3510018	SR	0.81	0.51	0.2953	0.0513	0.81	0.69		
3510035	SR	0.89	0.31	-0.6165	0.0656	1.07	1.73		
3509978	BCR	0.66	0.46	1.1411	0.0443	0.99	0.99		
3985610	BCR	0.50	0.31	2.0758	0.0462	1.16	1.20	-2.6995	2.6995
3510055	SR	0.63	0.49	1.2952	0.0436	0.94	0.92		
3510058	SR	0.90	0.42	-0.6059	0.0654	0.83	0.71		
3510347	SR	0.73	0.47	0.9229	0.0458	0.90	0.87		
3510053	SR	0.87	0.33	-0.2691	0.0595	1.02	1.22		
3510041	SR	0.95	0.32	-1.8190	0.1012	1.24	1.40		
3510051	SR	0.56	0.45	1.4814	0.0428	1.02	1.04		
3509929	SR	0.56	0.45	1.8021	0.042	0.93	0.92		
3510329	SR	0.64	0.33	1.5719	0.0425	1.09	1.13		
3510033	SR	0.86	0.36	0.0473	0.0545	0.91	0.83		
3510043	SR	0.77	0.41	0.0444	0.0545	1.14	1.08		
3510012	SR	0.80	0.49	0.0993	0.0538	1.03	0.86		
100000025211	SR	0.77	0.53	0.4822	0.0495	0.88	0.70		
3509962	SR	0.92	0.42	-0.6247	0.0658	0.67	0.60		
3509932	BCR	0.98	0.24	-2.8170	0.1554	0.94	1.15		
3564086	BCR	0.46	0.54	2.3423	0.0343	0.95	0.94	-1.5697	1.5697
100000011196	SR	0.83	0.48	0.0623	0.0542	0.91	0.72		
100000018395	SR	0.91	0.30	-0.8495	0.0708	1.01	0.99		
3509950	SR	0.78	0.34	0.8475	0.0462	0.96	0.91		
3510176	SR	0.65	0.46	1.2021	0.0440	0.99	1.03		
3510036	SR	0.87	0.40	-0.5397	0.0642	1.05	1.16		

Table C.3 The 2009 MSA-Mathematics Classical and Rasch Item Parameters: Grade 4 Form A

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step 0-1	Step 1-2
3488052	SR	0.65	0.44	0.7943	0.0432	0.98	0.95		
3515407	SR	0.87	0.43	-0.7990	0.0560	0.85	0.70		
100000044146	SR	0.92	0.20	-1.8595	0.0770	1.07	1.85		
3487819	BCR	0.50	0.45	1.3917	0.0422	1.00	1.00		
3564186	BCR	0.44	0.38	2.1573	0.0441	1.09	1.11	-2.6637	2.6637
3515408	SR	0.79	0.49	0.1763	0.0462	0.79	0.68		
3515641	SR	0.81	0.50	-0.8522	0.0569	1.10	0.97		
3515410	SR	0.89	0.37	-1.0550	0.0599	0.87	0.71		
3515827	SR	0.65	0.36	0.6152	0.0439	1.11	1.18		
3515605	SR	0.63	0.51	0.9009	0.0430	0.91	0.88		
100000025162	SR	0.91	0.24	-1.5223	0.0689	1.13	1.43		
3488159	SR	0.89	0.37	-1.1317	0.0613	0.90	1.22		
3515447	SR	0.53	0.45	1.4979	0.0422	1.00	1.12		
100000044142	BCR	0.83	0.41	-0.7600	0.0557	1.01	0.92		
3595499	BCR	0.47	0.50	1.7168	0.0395	0.97	0.96	-2.1933	2.1933
3515604	SR	0.69	0.52	0.3940	0.0449	0.94	0.90		
3515737	SR	0.83	0.31	-0.7461	0.0553	1.15	1.35		
3515576	SR	0.67	0.40	0.5508	0.0442	1.04	1.04		
3515470	SR	0.73	0.41	0.0797	0.0469	1.02	0.97		
3515643	SR	0.47	0.48	1.7570	0.0425	0.94	0.94		
100000007124	SR	0.65	0.38	0.5869	0.044	1.11	1.14		
100000025172	BCR	0.61	0.46	0.7480	0.0434	1.01	0.99		
3985613	BCR	0.46	0.53	1.5908	0.0355	0.98	0.98	-1.7399	1.7399
100000018336	SR	0.78	0.46	-0.2781	0.0500	0.95	0.97		
100000007112	SR	0.45	0.29	1.6779	0.0425	1.22	1.40		
3515571	SR	0.84	0.45	-0.9395	0.0583	0.99	1.00		
100000044144	SR	0.96	0.21	-2.7781	0.1095	1.23	2.08		
3515421	SR	0.85	0.40	-0.6701	0.0543	0.86	0.74		
100000025188	SR	0.68	0.45	0.3956	0.0449	1.03	1.04		
3487993	SR	0.92	0.29	-1.7595	0.0746	1.03	1.82		
100000007125	SR	0.71	0.34	0.2837	0.0458	1.12	1.17		
3515823	BCR	0.45	0.52	1.6944	0.0425	0.93	0.88		
3595532	BCR	0.38	0.55	2.3297	0.0369	0.93	0.92	-1.8612	1.8612
3488150	BCR	0.38	0.54	2.1316	0.0436	0.83	0.75		
3564176	BCR	0.47	0.60	1.6184	0.0320	0.87	0.87	-1.1561	1.1561
100000007115	SR	0.88	0.45	-1.3705	0.0658	0.88	0.58		
3515575	SR	0.90	0.41	-1.4972	0.0685	0.90	0.87		

Table C.3 (continued)

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step 0-1	Step 1-2
100000025157	SR	0.92	0.30	-1.7237	0.0737	1.02	1.26		
3515471	SR	0.86	0.36	-0.9767	0.0586	1.00	0.85		
3515630	SR	0.56	0.48	0.9291	0.0428	0.98	0.96		
3488145	BCR	0.70	0.50	0.1552	0.0464	0.96	0.94		
3564189	BCR	0.48	0.43	1.5957	0.0409	1.03	1.04	-2.3378	2.3378
100000012183	SR	0.60	0.30	0.8211	0.0432	1.18	1.26		
3515533	SR	0.84	0.50	-0.7839	0.0558	0.86	0.74		
3515631	SR	0.79	0.39	-0.4674	0.0519	1.12	1.22		
100000011509	SR	0.76	0.54	-0.2239	0.0495	0.85	0.70		
100000011489	SR	0.97	0.26	-2.8436	0.1126	0.96	1.06		
100000201857	SR	0.48	0.39	1.0327	0.0428	1.12	1.20		
3515543	SR	0.80	0.54	-0.2743	0.0501	0.77	0.74		
3515853	SR	0.79	0.46	-0.1060	0.0484	0.89	0.79		
3497869	SR	0.82	0.26	-0.5937	0.0535	1.18	1.22		
3548078	SR	0.51	0.39	0.6282	0.0438	1.25	1.41		
3515933	SR	0.79	0.28	-0.3619	0.0507	1.23	1.46		
3515519	SR	0.86	0.43	-0.6898	0.0546	0.77	0.92		
3515795	SR	0.64	0.46	0.5626	0.0441	1.00	0.97		
100000201842	SR	0.87	0.42	-1.0863	0.0605	0.93	0.94		
3548086	SR	0.80	0.41	-0.2943	0.0502	0.97	0.92		
3515783	BCR	0.74	0.57	-0.0626	0.0481	0.87	0.73		
3595560	BCR	0.72	0.62	0.1566	0.0322	0.99	1.01	-0.3225	0.3225
3488164	SR	0.91	0.31	-1.6322	0.0714	0.97	1.28		
3515506	SR	0.90	0.39	-1.2169	0.0630	0.83	0.73		
100000201853	SR	0.87	0.38	-1.2081	0.0628	0.97	0.86		
3515632	SR	0.70	0.51	-0.0118	0.0478	1.01	0.95		
3548088	SR	0.77	0.45	-0.1831	0.0493	0.94	0.94		

Table C.4 The 2009 MSA-Mathematics Classical and Rasch Item Parameters: Grade 4 Form F

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step 0-1	Step 1-2
3488053	SR	0.79	0.28	-0.3452	0.0507	1.13	1.32		
3515407	SR	0.87	0.40	-0.7990	0.0563	0.81	0.69		
100000044146	SR	0.92	0.19	-1.8595	0.0784	1.24	2.17		
3487819	BCR	0.51	0.44	1.3917	0.0421	1.00	1.01		
3564186	BCR	0.43	0.37	2.1573	0.0441	1.16	1.19	-2.6637	2.6637
3515408	SR	0.79	0.49	0.1763	0.0462	0.77	0.63		
3515641	SR	0.82	0.48	-0.8522	0.0573	1.07	0.94		
3515410	SR	0.89	0.36	-1.0550	0.0605	0.83	0.71		
100000025153	SR	0.98	0.21	-3.5593	0.1584	0.98	0.51		
3515605	SR	0.63	0.52	0.9009	0.0428	0.88	0.82		
3488056	SR	0.51	0.30	1.3222	0.0421	1.19	1.32		
3488159	SR	0.88	0.37	-1.1317	0.0618	0.92	1.09		
3515447	SR	0.54	0.48	1.4979	0.0421	0.95	0.98		
100000044142	BCR	0.83	0.40	-0.7600	0.0560	1.02	0.97		
3595499	BCR	0.47	0.49	1.7168	0.0395	1.00	0.99	-2.1933	2.1933
3515604	SR	0.69	0.51	0.3940	0.0449	0.91	0.85		
3515737	SR	0.84	0.31	-0.7461	0.0556	1.17	1.60		
100000007116	SR	0.62	0.47	0.7504	0.0433	0.95	0.91		
3515470	SR	0.73	0.39	0.0797	0.0469	1.08	1.07		
3515643	SR	0.47	0.48	1.7570	0.0424	0.97	0.97		
3497882	SR	0.79	0.36	-0.1920	0.0492	1.04	1.05		
3515642	BCR	0.28	0.48	2.6593	0.0463	0.86	0.80		
3985619	BCR	0.42	0.59	1.8365	0.0320	0.91	0.89	-1.1225	1.1225
100000201943	SR	0.44	0.38	1.7574	0.0424	1.06	1.15		
100000201937	SR	0.91	0.39	-1.6415	0.0728	1.00	0.69		
3515571	SR	0.85	0.41	-0.9395	0.0587	1.00	1.01		
100000044144	SR	0.96	0.20	-2.7781	0.1122	1.14	1.31		
3515421	SR	0.86	0.38	-0.6701	0.0546	0.88	0.81		
3498610	SR	0.93	0.38	-1.7896	0.0765	0.93	0.78		
3548767	SR	0.70	0.34	0.0868	0.0469	1.23	1.30		
100000025158	SR	0.51	0.31	1.2922	0.0425	1.18	1.27		
100000201938	BCR	0.66	0.60	0.4797	0.0445	0.84	0.73		
3985620	BCR	0.42	0.51	2.4328	0.0456	0.91	0.89	-2.8528	2.8528
3515807	BCR	0.75	0.39	-0.2644	0.0512	1.08	1.02		
3564165	BCR	0.39	0.47	2.1333	0.0350	1.08	1.08	-1.6175	1.6175
3497865	SR	0.66	0.50	0.4883	0.0445	0.92	0.90		
3515575	SR	0.91	0.41	-1.4972	0.0694	0.86	0.77		

Table C.4 (continued)

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step	Step
								0-1	1-2
100000025156	SR	0.84	0.39	-0.8555	0.0573	0.99	0.88		
3515471	SR	0.86	0.36	-0.9767	0.0591	1.03	0.81		
3515630	SR	0.57	0.49	0.9291	0.0427	0.97	0.94		
3488145	BCR	0.72	0.49	0.1552	0.0464	0.95	0.91		
3564189	BCR	0.48	0.43	1.5957	0.0411	1.09	1.10	-2.3378	2.3378
3551477	SR	0.53	0.55	1.2590	0.0422	0.85	0.80		
3515533	SR	0.85	0.50	-0.7839	0.0561	0.86	0.64		
3515631	SR	0.78	0.38	-0.4674	0.0520	1.20	1.36		
100000201942	SR	0.69	0.45	0.3220	0.0453	0.99	1.03		
100000201852	SR	0.85	0.47	-0.9014	0.0579	0.86	0.68		
100000201857	SR	0.45	0.39	1.0327	0.0429	1.20	1.33		
3515543	SR	0.81	0.51	-0.2743	0.0504	0.76	0.63		
3515853	SR	0.82	0.46	-0.1060	0.0484	0.78	0.67		
3515785	SR	0.78	0.32	0.1771	0.0463	0.99	0.97		
3548078	SR	0.54	0.40	0.6282	0.0437	1.19	1.26		
3515933	SR	0.80	0.26	-0.3619	0.0509	1.10	1.33		
3515519	SR	0.87	0.42	-0.6898	0.0548	0.78	0.77		
3515795	SR	0.64	0.46	0.5626	0.0440	0.99	0.94		
100000201939	SR	0.93	0.34	-1.9724	0.0817	0.96	0.89		
3548086	SR	0.81	0.41	-0.2943	0.0503	0.93	0.91		
100000201940	BCR	0.68	0.53	0.4107	0.0449	0.88	0.81		
3985623	BCR	0.64	0.61	0.6834	0.0292	0.96	0.96	0.0238	-0.0238
100000212986	SR	0.59	0.23	0.8914	0.0428	1.26	1.38		
3515506	SR	0.91	0.38	-1.2169	0.0635	0.79	0.64		
3502602	SR	0.61	0.41	0.8642	0.0430	1.04	1.06		
3515632	SR	0.69	0.51	-0.0118	0.0478	1.02	0.98		
3548088	SR	0.79	0.44	-0.1831	0.0493	0.96	0.90		

Table C.5 The 2009 MSA-Mathematics Classical and Rasch Item Parameters: Grade 5 Form A

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step 0-1	Step 1-2	Step 2-3
3488443	SR	0.42	0.29	1.6277	0.0434	1.21	1.37			
3511269	SR	0.88	0.30	-1.0845	0.0591	0.89	0.85			
3492139	SR	0.54	0.07	0.9589	0.0431	1.49	1.69			
3488471	BCR	0.31	0.44	2.2862	0.0461	0.94	0.86			
3564052	BCR	0.42	0.48	1.8914	0.0389	1.00	1.00	-2.0216	2.0216	
3488391	SR	0.88	0.28	-1.2591	0.0621	0.99	1.03			
100000022548	SR	0.52	0.49	1.0761	0.0430	0.91	0.92			
3511203	SR	0.92	0.39	-1.8897	0.0763	0.89	0.53			
3488331	SR	0.80	0.33	-0.6848	0.0536	1.07	1.26			
3488507	SR	0.78	0.46	-0.4448	0.0509	0.93	0.90			
3511196	SR	0.57	0.51	0.6094	0.0445	0.97	0.96			
3492130	SR	0.54	0.45	0.9322	0.0438	0.99	0.97			
3488373	SR	0.68	0.42	0.1790	0.0469	1.00	0.99			
3511467	SR	0.82	0.40	-0.9093	0.0575	0.88	0.77			
3512529	SR	0.58	0.24	0.4459	0.0457	1.30	1.45			
3511339	SR	0.65	0.52	0.4633	0.0445	0.87	0.83			
3512698	SR	0.92	0.24	-1.7862	0.0734	1.04	1.29			
100000043853	SR	0.70	0.43	0.3350	0.0451	0.97	0.93			
3488461	BCR	0.50	0.57	1.1765	0.0431	0.85	0.78			
3564055	BCR	0.73	0.63	-0.1442	0.0339	0.88	0.83	-0.4881	0.4881	
3511216	SR	0.69	0.27	0.2030	0.0458	1.19	1.21			
3512638	SR	0.70	0.42	0.2606	0.0455	0.95	0.91			
3511499	SR	0.63	0.53	0.1746	0.0461	0.99	0.95			
3488506	SR	0.40	0.45	1.7536	0.0437	1.03	1.08			
3488522	BCR	0.65	0.48	0.3599	0.0451	0.97	0.95			
3564059	BCR	0.80	0.52	-0.6893	0.0382	0.95	1.01	-0.8147	0.8147	
3488324	SR	0.78	0.52	-0.2851	0.0495	0.82	0.69			
3511246	SR	0.79	0.48	-0.3310	0.0499	0.86	0.75			
3511458	SR	0.90	0.38	-1.7535	0.0730	0.92	0.68			
3488419	SR	0.72	0.44	-0.0825	0.0477	0.99	0.98			
100000028276	SR	0.84	0.48	-0.9996	0.0580	0.87	0.62			
3511566	SR	0.68	0.41	0.1548	0.0461	1.06	1.08			
3511513	SR	0.86	0.38	-1.1293	0.0600	0.96	1.02			
3488272	SR	0.53	0.38	0.8010	0.0435	1.09	1.13			
3548429	ECR	0.68	0.60	0.1442	0.0465	0.82	0.71			
3564047	ECR	0.63	0.67	0.4382	0.0253	0.94	0.92	-0.9888	0.1966	0.7922
3511266	SR	0.70	0.44	0.0148	0.0471	1.05	0.97			

Table C.5 (continued)

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step 0-1	Step 1-2	Step 2-3
3488431	SR	0.74	0.30	-0.2130	0.0488	1.11	1.28			
3511470	SR	0.85	0.40	-0.6898	0.0538	0.82	0.72			
3488375	SR	0.90	0.32	-1.6090	0.0695	1.02	0.93			
100000028274	SR	0.86	0.36	-1.3725	0.0645	0.98	1.05			
3488347	BCR	0.45	0.61	1.4298	0.0433	0.79	0.73			
3564046	BCR	0.42	0.63	1.5002	0.0276	0.90	0.84	0.8247	-0.8247	
3488393	SR	0.91	0.35	-1.8559	0.0755	0.97	0.86			
3512595	SR	0.78	0.36	-0.6828	0.0537	1.16	1.38			
3488241	SR	0.92	0.28	-1.7928	0.0740	0.91	1.08			
3511572	SR	0.48	0.34	1.2621	0.0431	1.14	1.22			
100000043857	SR	0.81	0.41	-0.9439	0.0574	0.95	0.95			
3512712	SR	0.90	0.35	-1.6307	0.0698	0.95	0.97			
3511396	SR	0.85	0.41	-1.1516	0.0603	0.93	0.83			
3511429	SR	0.78	0.42	-0.5025	0.0516	1.03	1.00			
3488277	BCR	0.47	0.59	1.2616	0.0436	0.83	0.76			
3564193	BCR	0.45	0.58	1.3546	0.0324	1.01	1.01	-1.0498	1.0498	
3511626	SR	0.86	0.32	-0.9260	0.0569	0.94	1.04			
100000022555	SR	0.48	0.39	1.1820	0.0430	1.08	1.15			
3511631	SR	0.79	0.39	-0.3862	0.0507	0.92	0.93			
3488251	SR	0.64	0.36	0.5581	0.0443	1.08	1.05			
3511439	SR	0.78	0.47	-0.5779	0.0525	0.95	0.79			
3488406	BCR	0.56	0.51	0.7860	0.0437	0.91	0.86			
3563998	BCR	0.52	0.49	0.9340	0.0342	1.07	1.07	-1.4162	1.4162	
3488326	SR	0.65	0.40	0.2463	0.0458	1.08	1.15			
3488348	BCR	0.68	0.49	0.0277	0.0478	0.95	0.85			
3464056	BCR	0.47	0.59	1.1386	0.0317	0.97	0.96	-0.8486	0.8486	
3488328	SR	0.71	0.39	-0.0717	0.0483	1.01	0.96			
3511448	SR	0.76	0.35	-0.6839	0.0543	1.14	1.31			

Table C.6 The 2009 MSA-Mathematics Classical and Rasch Item Parameters: Grade 5 Form F

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step 0-1	Step 1-2	Step 2-3
3492123	SR	0.54	0.34	1.1181	0.0422	1.10	1.13			
3511269	SR	0.89	0.29	-1.0845	0.0598	0.94	0.90			
3492117	SR	0.95	0.28	-2.4397	0.0961	0.91	0.58			
3511531	BCR	0.70	0.50	0.1282	0.0459	0.93	0.87			
3563986	BCR	0.59	0.48	0.5377	0.0352	1.06	1.07	-1.5615	1.5615	
3492128	SR	0.54	0.49	1.0153	0.0424	0.94	0.90			
100000022548	SR	0.53	0.50	1.0761	0.0423	0.94	0.97			
3511203	SR	0.94	0.33	-1.8897	0.0779	0.73	0.53			
100000022547	SR	0.83	0.47	-0.7480	0.0546	0.91	0.79			
100000028251	SR	0.63	0.35	0.5516	0.0437	1.10	1.13			
3511196	SR	0.57	0.51	0.6094	0.0439	0.96	0.95			
100000028253	SR	0.46	0.35	1.4773	0.0428	1.10	1.16			
3488373	SR	0.69	0.43	0.1790	0.0465	0.95	0.90			
3511467	SR	0.82	0.41	-0.9093	0.0579	0.94	0.82			
3512529	SR	0.60	0.25	0.4459	0.0451	1.32	1.47			
3511339	SR	0.66	0.51	0.4633	0.0440	0.89	0.86			
3488515	SR	0.83	0.22	-0.7556	0.0547	1.15	1.49			
100000043853	SR	0.70	0.40	0.3350	0.0446	0.95	1.03			
3488461	BCR	0.50	0.58	1.1765	0.0424	0.83	0.79			
3564055	BCR	0.74	0.62	-0.1442	0.0338	0.85	0.79	-0.4881	0.4881	
3511216	SR	0.64	0.30	0.2030	0.0454	1.22	1.27			
3512638	SR	0.76	0.44	0.2606	0.0450	0.86	0.79			
3488495	SR	0.88	0.33	-1.2540	0.0631	0.99	0.87			
3492140	SR	0.89	0.40	-1.4589	0.0673	0.92	0.69			
3512615	BCR	0.78	0.51	-0.4877	0.0517	0.86	0.81			
3595439	BCR	0.58	0.52	0.5673	0.0362	0.95	0.96	-1.6948	1.6948	
3488324	SR	0.78	0.51	-0.2851	0.0495	0.76	0.65			
3511246	SR	0.77	0.45	-0.3310	0.0500	0.91	0.84			
3511458	SR	0.93	0.31	-1.7535	0.0748	0.61	0.54			
3512616	SR	0.48	0.31	1.2809	0.0422	1.14	1.25			
3488240	SR	0.69	0.51	0.2496	0.0451	0.94	0.91			
3511566	SR	0.67	0.40	0.1548	0.0457	1.12	1.26			
3511513	SR	0.87	0.37	-1.1293	0.0608	0.94	0.99			
100000209182	SR	0.20	0.13	3.1000	0.0522	1.21	1.97			
3488525	ECR	0.82	0.39	-0.7202	0.0544	0.97	0.97			
3564053	ECR	0.50	0.58	1.1388	0.0285	1.02	1.01	-2.2589	0.246	2.0128
3511266	SR	0.70	0.44	0.0148	0.0467	1.03	0.95			

Table C.6 (continued)

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step 0-1	Step 1-2	Step 2-3
3488431	SR	0.75	0.29	-0.2130	0.0486	1.11	1.36			
3511470	SR	0.86	0.38	-0.6898	0.0539	0.77	0.66			
3492126	SR	0.86	0.49	-1.1318	0.0609	0.83	0.54			
100000028274	SR	0.88	0.38	-1.3725	0.0653	0.92	0.90			
3488347	BCR	0.46	0.60	1.4298	0.0424	0.80	0.75			
3564046	BCR	0.43	0.62	1.5002	0.0268	0.88	0.87	0.8247	-0.8247	
3488393	SR	0.92	0.34	-1.8559	0.0770	0.90	0.63			
3512595	SR	0.79	0.34	-0.6828	0.0538	1.20	1.38			
3488241	SR	0.92	0.26	-1.7928	0.0754	0.97	0.98			
3488509	SR	0.80	0.51	-0.5908	0.0527	0.86	0.79			
100000043857	SR	0.83	0.41	-0.9439	0.0577	1.00	1.05			
3512712	SR	0.91	0.34	-1.6307	0.0711	0.91	0.85			
3511396	SR	0.86	0.39	-1.1516	0.0609	1.04	0.98			
3511429	SR	0.77	0.41	-0.5025	0.0516	1.09	1.15			
3548459	BCR	0.75	0.55	-0.2124	0.0491	0.85	0.72			
3564051	BCR	0.68	0.42	0.0385	0.0350	1.20	1.39	-1.2689	1.2689	
3511626	SR	0.88	0.30	-0.9260	0.0573	0.87	0.84			
3488275	SR	0.49	0.53	1.2554	0.0423	0.90	0.87			
3511631	SR	0.80	0.40	-0.3862	0.0509	0.87	0.77			
3488251	SR	0.64	0.35	0.5581	0.0436	1.08	1.04			
3511439	SR	0.79	0.48	-0.5779	0.0525	1.00	0.83			
3512649	BCR	0.28	0.46	2.5751	0.0475	0.89	0.85			
3563989	BCR	0.38	0.48	1.7474	0.0282	1.19	1.36	0.2559	-0.2559	
3492134	SR	0.64	0.20	0.5423	0.0437	1.29	1.36			
3488259	BCR	0.19	0.44	3.0327	0.0518	0.82	0.69			
3564048	BCR	0.33	0.56	1.9710	0.0287	0.98	0.91	0.495	-0.495	
3488328	SR	0.72	0.41	-0.0717	0.0478	0.99	1.01			
3511448	SR	0.77	0.33	-0.6839	0.0544	1.13	1.35			

Table C.7 The 2009 MSA-Mathematics Classical and Rasch Item Parameters: Grade 6 Form A

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step 0-1	Step 1-2	Step 2-3
3516257	SR	0.90	0.23	-1.8193	0.0669	1.03	1.26			
100000078832	SR	0.82	0.34	-1.0614	0.0538	1.04	1.05			
3516291	SR	0.54	0.31	0.6406	0.0425	1.25	1.35			
3492091	SR	0.75	0.35	-0.4928	0.0478	1.12	1.27			
100000028397	SR	0.80	0.41	-0.9101	0.0521	0.97	0.86			
3516243	SR	0.73	0.41	-0.2844	0.0462	0.98	0.88			
3517004	ECR	0.93	0.34	-2.4767	0.0852	0.95	0.67			
3564010	ECR	0.66	0.57	-0.2026	0.0279	1.12	1.15	-1.9106	0.2374	1.6732
3516248	SR	0.85	0.37	-1.3223	0.0577	1.01	0.94			
3516559	SR	0.92	0.26	-2.1208	0.0742	0.99	1.17			
3516255	SR	0.77	0.30	-0.4703	0.0476	1.10	1.30			
3516258	SR	0.64	0.39	0.3254	0.0433	1.07	1.11			
3488422	SR	0.48	0.45	1.0056	0.0422	0.99	0.98			
3516240	SR	0.67	0.52	0.2409	0.0436	0.89	0.83			
3516909	SR	0.58	0.46	0.4042	0.0433	0.99	0.97			
100000012866	SR	0.21	0.30	2.8196	0.0514	1.00	1.35			
3548404	BCR	0.53	0.52	0.7098	0.0427	0.94	0.91			
3564013	BCR	0.47	0.41	1.2037	0.0513	0.98	0.99	-3.0576	3.0576	
3488296	SR	0.81	0.40	-1.0460	0.0543	0.99	1.01			
3516351	SR	0.50	0.53	0.4777	0.0434	0.99	0.98			
3516290	SR	0.69	0.41	-0.1396	0.0461	1.02	1.06			
100000043862	SR	0.62	0.44	0.2101	0.0443	1.02	0.99			
100000208908	SR	0.32	0.44	1.8806	0.0449	0.92	1.05			
3517010	SR	0.54	0.39	0.8496	0.0422	1.12	1.16			
100000043865	SR	0.55	0.42	0.7262	0.0424	1.04	1.03			
3488462	BCR	0.62	0.58	0.2562	0.0437	0.83	0.77			
3564075	BCR	0.52	0.61	0.7929	0.0306	0.94	0.94	-0.803	0.803	
3503966	SR	0.51	0.59	0.8279	0.0423	0.82	0.77			
3516331	SR	0.52	0.39	1.1378	0.0423	1.08	1.08			
3516241	SR	0.86	0.39	-1.4702	0.0602	0.97	0.87			
3516247	SR	0.63	0.60	0.3674	0.0431	0.80	0.74			
3516329	SR	0.71	0.37	-0.2969	0.0464	1.06	1.22			
3516355	SR	0.71	0.48	-0.1849	0.0456	0.90	0.85			
3516359	SR	0.67	0.43	0.0835	0.0442	1.04	1.01			
3492095	SR	0.79	0.49	-0.9261	0.0525	0.90	0.73			
100000028408	SR	0.85	0.42	-1.4442	0.0599	0.94	0.72			

Table C.7 (continued)

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step 0-1	Step 1-2	Step 2-3
3516333	BCR	0.67	0.62	-0.0954	0.0452	0.78	0.67			
3564008	BCR	0.66	0.66	0.0294	0.0303	0.83	0.82	-0.1519	0.1519	
3488398	SR	0.97	0.27	-3.1672	0.1133	0.93	0.52			
3516929	SR	0.72	0.50	0.0810	0.0442	0.87	0.76			
3488358	SR	0.67	0.46	-0.0834	0.0452	0.94	1.04			
3488302	SR	0.55	0.47	0.6636	0.0427	1.00	0.98			
100000012859	SR	0.71	0.40	-0.2466	0.0462	1.04	1.16			
3516906	SR	0.60	0.41	0.2864	0.0436	1.08	1.10			
3516332	SR	0.53	0.31	0.5885	0.0428	1.24	1.38			
3516256	SR	0.63	0.36	0.1350	0.0442	1.12	1.24			
3516302	SR	0.71	0.40	-0.4092	0.0473	1.10	1.26			
100000208906	SR	0.88	0.38	-1.5247	0.0612	0.93	0.84			
100000208909	BCR	0.46	0.55	1.1385	0.0427	0.88	0.83			
3985730	BCR	0.48	0.62	0.9849	0.0281	1.01	0.98	0.1811	-0.1811	
3516375	SR	0.63	0.52	0.2607	0.0434	0.91	0.87			
3503954	SR	0.83	0.21	-1.1222	0.0547	1.18	1.56			
3516616	BCR	0.44	0.57	1.1920	0.0429	0.89	0.84			
3564012	BCR	0.52	0.45	0.5835	0.0373	1.14	1.15	-1.8963	1.8963	
3516613	SR	0.57	0.28	0.4071	0.0435	1.25	1.32			
100000022470	SR	0.51	0.56	0.8821	0.0423	0.87	0.83			
100000208907	SR	0.83	0.45	-1.1677	0.0554	0.91	0.83			
3488306	SR	0.89	0.28	-1.7554	0.0656	1.03	1.19			
3488411	BCR	0.48	0.39	1.1054	0.0424	1.09	1.12			
3564014	BCR	0.55	0.54	0.6090	0.0340	1.01	1.00	-1.4986	1.4986	
3488258	SR	0.79	0.41	-0.8592	0.0518	0.98	0.91			
3516303	SR	0.55	0.48	0.6580	0.0427	0.94	0.90			

Table C.8 The 2009 MSA-Mathematics Classical and Rasch Item Parameters: Grade 6 Form F

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step 0-1	Step 1-2	Step 2-3
3516257	SR	0.89	0.23	-1.8193	0.0690	1.15	1.52			
3488263	SR	0.87	0.33	-1.5008	0.0622	0.99	0.84			
3516291	SR	0.55	0.30	0.6406	0.0422	1.19	1.27			
3492143	SR	0.79	0.42	-0.6658	0.0499	0.89	0.77			
3488262	SR	0.91	0.31	-2.1168	0.0768	0.98	0.79			
3516243	SR	0.74	0.39	-0.2844	0.0465	0.93	0.84			
3548350	ECR	0.59	0.61	0.3475	0.0443	0.84	0.76			
3564015	ECR	0.50	0.64	0.8817	0.0242	1.04	1.04	-0.7206	-0.1891	0.9097
3516248	SR	0.84	0.36	-1.3223	0.0589	1.14	1.05			
3516559	SR	0.92	0.25	-2.1208	0.0769	1.01	1.20			
3516255	SR	0.78	0.31	-0.4703	0.0480	1.06	1.18			
3516258	SR	0.65	0.38	0.3254	0.0433	1.02	1.06			
3488440	SR	0.68	0.59	-0.1323	0.0455	0.82	0.68			
3516240	SR	0.66	0.50	0.2409	0.0435	0.86	0.83			
3516909	SR	0.58	0.46	0.4042	0.0431	0.98	0.95			
3488307	SR	0.68	0.39	-0.1634	0.046	1.04	1.01			
3516627	BCR	0.51	0.51	0.6268	0.0434	0.98	1.00			
3564006	BCR	0.42	0.55	1.3578	0.0378	0.98	0.98	-1.9164	1.9164	
100000022483	SR	0.54	0.27	0.6958	0.0427	1.23	1.32			
3516351	SR	0.50	0.52	0.4777	0.0434	0.99	0.96			
3516290	SR	0.69	0.42	-0.1396	0.0464	0.96	0.94			
100000043862	SR	0.61	0.46	0.2101	0.0445	0.97	0.92			
3488424	SR	0.81	0.42	-1.1816	0.058	0.92	0.80			
100000028430	SR	0.67	0.37	0.0122	0.0446	1.08	1.18			
100000043865	SR	0.55	0.40	0.7262	0.0422	1.03	1.01			
3488469	BCR	0.69	0.52	-0.1844	0.0462	0.89	0.80			
3564071	BCR	0.74	0.56	-0.2008	0.0305	1.01	0.86	0.9385	-0.9385	
3492099	SR	0.92	0.28	-2.1347	0.0773	1.02	1.10			
3516331	SR	0.52	0.36	1.1378	0.0418	1.16	1.21			
3516241	SR	0.86	0.36	-1.4702	0.0616	0.92	0.79			
3516247	SR	0.63	0.59	0.3674	0.0429	0.80	0.74			
3516329	SR	0.65	0.40	-0.2969	0.0465	1.20	1.33			
3516355	SR	0.71	0.48	-0.1849	0.0457	0.92	0.86			
3488260	SR	0.63	0.45	0.1206	0.0439	0.98	0.91			
3492095	SR	0.78	0.45	-0.9261	0.0531	1.00	1.06			
100000004462	SR	0.79	0.18	-0.6746	0.0501	1.19	1.55			

Table C.8 (continued)

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step 0-1	Step 1-2	Step 2-3
3516358	BCR	0.43	0.52	1.2893	0.0424	0.95	0.90			
3985729	BCR	0.40	0.56	1.5499	0.0327	0.98	0.97	-1.2584	1.2584	
3492093	SR	0.80	0.33	-0.7772	0.0512	1.05	1.21			
3516929	SR	0.70	0.48	0.0810	0.0442	0.86	0.75			
100000028419	SR	0.76	0.48	-0.6904	0.0503	0.93	1.00			
100000004450	SR	0.63	0.41	0.1537	0.0440	1.07	1.09			
100000028416	SR	0.49	0.39	1.0327	0.0420	1.06	1.08			
3516906	SR	0.66	0.46	0.2864	0.0434	0.93	0.85			
3516332	SR	0.53	0.29	0.5885	0.0425	1.23	1.35			
3516256	SR	0.63	0.35	0.1350	0.0440	1.18	1.30			
3516302	SR	0.71	0.39	-0.4092	0.0475	1.09	1.15			
3488489	SR	0.71	0.43	-0.2639	0.0464	0.99	0.87			
100000208909	BCR	0.48	0.55	1.1385	0.0425	0.88	0.84			
3985730	BCR	0.50	0.61	0.9849	0.0278	1.01	0.99	0.1811	-0.1811	
3516375	SR	0.62	0.53	0.2607	0.0433	0.88	0.80			
3492087	SR	0.80	0.35	-0.8918	0.0525	1.02	1.17			
3516616	BCR	0.40	0.55	1.1920	0.0432	0.84	0.77			
3564012	BCR	0.50	0.42	0.5835	0.0380	1.07	1.09	-1.8963	1.8963	
3516613	SR	0.56	0.28	0.4071	0.0437	1.19	1.27			
100000028409	SR	0.63	0.43	0.2401	0.0434	1.02	0.98			
3503961	SR	0.93	0.26	-2.2456	0.0804	1.02	1.03			
3492120	SR	0.63	0.38	0.2830	0.0433	1.04	1.02			
3516913	BCR	0.42	0.53	1.2807	0.0422	0.89	0.85			
3985725	BCR	0.56	0.63	0.3129	0.0353	0.85	0.84	-1.6336	1.6336	
3488385	SR	0.77	0.43	-0.6632	0.0501	0.97	0.88			
3516303	SR	0.56	0.47	0.6580	0.0424	0.94	0.91			

Table C.9 The 2009 MSA-Mathematics Classical and Rasch Item Parameters: Grade 7 Form A

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step 0-1	Step 1-2	Step 2-3
3517604	SR	0.36	0.44	1.0539	0.0442	0.98	0.97			
3517601	SR	0.55	0.54	0.4455	0.0436	0.90	0.88			
3517609	SR	0.60	0.51	0.1508	0.0439	0.93	0.89			
3487664	SR	0.24	0.33	2.2060	0.0508	1.04	1.30			
3517744	BCR	0.45	0.45	0.6921	0.0444	1.06	1.04			
3564018	BCR	0.34	0.50	1.4348	0.0344	1.16	1.14	-1.1447	1.1447	
3517616	SR	0.67	0.50	-0.1398	0.0447	0.94	0.91			
3517634	SR	0.71	0.54	-0.4706	0.0462	0.84	0.76			
3517677	SR	0.67	0.54	-0.3998	0.0458	0.91	0.86			
3517638	SR	0.78	0.49	-1.1551	0.0514	0.91	0.83			
100000026796	SR	0.83	0.37	-1.4762	0.0551	1.02	1.06			
3517650	SR	0.69	0.51	-0.4683	0.0462	0.93	0.86			
3487922	SR	0.68	0.36	-0.4981	0.0463	1.11	1.19			
3517652	SR	0.74	0.46	-0.6359	0.0472	0.93	0.83			
3547473	SR	0.83	0.41	-1.1243	0.0511	0.81	0.72			
3517663	SR	0.35	0.42	1.5825	0.0464	1.13	1.28			
100000018130	SPR	0.53	0.48	0.3886	0.0441	1.03	1.09			
3491692	ECR	0.45	0.65	0.7615	0.0444	0.76	0.68			
3564159	ECR	0.47	0.71	0.5864	0.0256	0.95	0.93	-1.186	0.4071	0.7788
3517668	SPR	0.37	0.51	1.0492	0.0453	0.96	0.91			
100000043354	SPR	0.36	0.54	1.2412	0.0460	0.92	0.89			
100000043350	SPR	0.60	0.58	-0.1607	0.0465	0.87	0.84			
3487925	BCR	0.66	0.50	-0.6335	0.0493	1.00	1.08			
3564151	BCR	0.69	0.44	-1.0291	0.0377	1.19	1.54	-0.8589	0.8589	
100000208466	SR	0.55	0.49	0.0546	0.0460	1.00	0.96			
3517667	SR	0.60	0.45	-0.5147	0.0464	1.18	1.35			
3517678	SR	0.94	0.31	-2.682	0.0791	0.73	0.67			
3517742	SR	0.60	0.45	0.0227	0.0444	1.01	1.02			
3547642	SPR	0.72	0.36	-0.8342	0.0489	1.09	1.28			
3487560	SPR	0.30	0.59	1.6314	0.0475	0.80	0.68			
3517725	BCR	0.33	0.57	1.4747	0.0462	0.89	0.79			
3564022	BCR	0.52	0.65	0.1132	0.0334	0.91	0.90	-1.1539	1.1539	
100000043349	SR	0.34	0.38	1.3415	0.0452	1.08	1.26			
3517656	SR	0.67	0.41	-0.4094	0.0459	1.13	1.09			
100000012796	SR	0.56	0.35	0.2502	0.0438	1.20	1.26			
100000043347	ECR	0.71	0.60	-0.6646	0.0477	0.81	0.73			

Table C.9 (continued)

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step	Step	Step
								0-1	1-2	2-3
3595366	ECR	0.41	0.57	1.6353	0.0331	1.06	1.09	-3.0103	-0.694	3.7043
3547777	SPR	0.33	0.48	1.5096	0.0463	0.99	0.95			
100000207793	SPR	0.62	0.48	-0.2274	0.0455	1.02	1.08			
3547535	SR	0.83	0.44	-1.5891	0.0568	0.94	0.71			
100000043338	SR	0.35	0.28	1.4392	0.0458	1.17	1.51			
3517687	SR	0.61	0.47	-0.0583	0.0444	1.00	0.95			
3517692	SR	0.84	0.32	-1.4991	0.0553	0.95	1.11			
3517648	ECR	0.67	0.38	-0.4422	0.0462	1.13	1.29			
3564027	ECR	0.73	0.60	-0.8657	0.0297	0.98	1.03	-0.9282	-0.5852	1.5135
3500155	SPR	0.22	0.45	2.2489	0.0527	0.95	0.83			
3517704	SPR	0.39	0.49	1.0690	0.0459	0.97	0.97			
100000004171	SPR	0.44	0.59	0.8686	0.0444	0.87	0.82			
3517712	SR	0.47	0.40	0.5663	0.0446	1.09	1.13			
3517714	SR	0.58	0.57	0.0092	0.0454	0.87	0.80			
3517716	SR	0.69	0.36	-0.4333	0.0460	1.12	1.05			
3517718	SR	0.72	0.36	-0.2963	0.0453	1.03	1.06			
3487678	BCR	0.50	0.53	0.5631	0.0439	0.95	0.92			
3564153	BCR	0.44	0.51	0.9376	0.0397	1.02	1.01	-2.0991	2.0991	
3517721	SR	0.53	0.49	0.5231	0.0435	0.97	0.94			
3517691	SR	0.66	0.59	-0.2784	0.0454	0.83	0.78			
100000018106	SR	0.60	0.35	0.0819	0.0441	1.18	1.20			
3555858	SR	0.46	0.46	0.6673	0.0437	0.99	1.02			
3492167	SPR	0.35	0.57	1.3391	0.0454	0.87	0.78			
3555859	SR	0.77	0.42	-1.4603	0.0550	1.14	1.19			
3517752	SR	0.66	0.51	-0.5723	0.0470	0.99	0.93			
3488830	SR	0.60	0.56	-0.0385	0.0445	0.91	0.85			

Table C.10 The 2009 MSA-Mathematics Classical and Rasch Item Parameters: Grade 7 Form F

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step 0-1	Step 1-2	Step 2-3
3517604	SR	0.36	0.45	1.0539	0.0445	0.96	0.95			
3517601	SR	0.56	0.55	0.4455	0.0437	0.90	0.87			
3517609	SR	0.61	0.53	0.1508	0.0439	0.93	0.87			
3487664	SR	0.25	0.34	2.2060	0.0512	1.03	1.36			
3517744	BCR	0.46	0.44	0.6921	0.0444	1.08	1.07			
3564018	BCR	0.35	0.50	1.4348	0.0345	1.15	1.14	-1.1447	1.1447	
3517616	SR	0.67	0.51	-0.1398	0.0448	0.92	0.89			
3517634	SR	0.72	0.56	-0.4706	0.0461	0.84	0.74			
3517677	SR	0.68	0.54	-0.3998	0.0457	0.88	0.82			
3517638	SR	0.78	0.48	-1.1551	0.0512	0.90	0.83			
100000026796	SR	0.83	0.38	-1.4762	0.0548	0.96	0.90			
3517650	SR	0.70	0.51	-0.4683	0.0460	0.90	0.82			
3487605	SR	0.61	0.34	0.0261	0.0442	1.21	1.45			
3517652	SR	0.77	0.46	-0.6359	0.047	0.90	0.78			
3547473	SR	0.84	0.41	-1.1243	0.0508	0.79	0.70			
3517663	SR	0.35	0.39	1.5825	0.0467	1.10	1.19			
100000043344	SPR	0.37	0.54	1.3744	0.0461	0.94	0.93			
3487765	ECR	0.50	0.60	0.5452	0.0439	0.85	0.81			
3564141	ECR	0.53	0.58	0.5905	0.0327	1.00	1.03	-2.1342	-1.1123	3.2465
3517668	SPR	0.38	0.51	1.0492	0.0452	0.95	0.89			
3547893	SPR	0.25	0.56	2.1319	0.0517	0.81	0.63			
100000043350	SPR	0.60	0.56	-0.1607	0.0464	0.89	0.85			
3487925	BCR	0.67	0.49	-0.6335	0.049	0.94	1.04			
3564151	BCR	0.70	0.43	-1.0291	0.0375	1.22	1.61	-0.8589	0.8589	
100000208467	SR	0.59	0.38	-0.0362	0.0458	1.14	1.24			
3517667	SR	0.56	0.39	-0.5147	0.0464	1.35	1.80			
3517678	SR	0.95	0.30	-2.6820	0.0785	0.72	0.52			
3517742	SR	0.60	0.46	0.0227	0.0445	1.00	1.01			
3555865	SPR	0.35	0.54	1.4240	0.0466	0.88	0.89			
100000043360	SPR	0.58	0.56	0.0968	0.0442	0.90	0.86			
100000048821	BCR	0.54	0.44	0.2601	0.0441	1.07	1.08			
3595371	BCR	0.32	0.48	2.1656	0.0409	1.03	1.02	-2.2964	2.2964	
100000043349	SR	0.33	0.38	1.3415	0.0456	1.09	1.23			
3517656	SR	0.67	0.40	-0.4094	0.0459	1.12	1.05			
3491634	SR	0.32	0.21	1.7720	0.0479	1.38	1.87			
100000012779	ECR	0.53	0.56	0.3215	0.0442	0.92	0.90			

Table C.10 (continued)

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step	Step	Step
								0-1	1-2	2-3
3595378	ECR	0.36	0.66	1.5606	0.0317	0.87	0.87	-2.5425	0.2773	2.2652
100000207795	SPR	0.65	0.62	-0.2841	0.0456	0.79	0.74			
3517683	SPR	0.58	0.63	0.2289	0.0443	0.80	0.73			
3547535	SR	0.82	0.44	-1.5891	0.0566	1.01	0.87			
100000043338	SR	0.34	0.27	1.4392	0.0462	1.26	1.70			
3517687	SR	0.61	0.48	-0.0583	0.0444	1.01	0.99			
3517692	SR	0.84	0.32	-1.4991	0.0551	0.97	1.05			
3517648	ECR	0.68	0.37	-0.4422	0.0461	1.15	1.35			
3564027	ECR	0.74	0.61	-0.8657	0.0296	0.96	1.02	-0.9282	-0.5852	1.5135
3492169	SPR	0.39	0.54	1.1920	0.0455	0.94	0.91			
100000043342	SPR	0.63	0.45	-0.1596	0.0450	1.01	1.07			
3492156	SPR	0.41	0.61	1.0662	0.0449	0.82	0.75			
3517712	SR	0.50	0.42	0.5663	0.0440	1.12	1.22			
3517714	SR	0.62	0.60	0.0092	0.0446	0.85	0.79			
3517716	SR	0.69	0.38	-0.4333	0.0460	1.11	1.05			
3517718	SR	0.73	0.36	-0.2963	0.0452	1.04	1.10			
100000012810	BCR	0.28	0.52	1.8858	0.0498	0.91	0.84			
3595375	BCR	0.39	0.55	1.5793	0.0447	0.93	0.90	-2.5264	2.5264	
3517721	SR	0.55	0.50	0.5231	0.0437	1.00	0.99			
3517691	SR	0.69	0.58	-0.2784	0.0453	0.79	0.71			
3487748	SR	0.60	0.39	0.1268	0.044	1.16	1.14			
3555858	SR	0.47	0.47	0.6673	0.0439	1.03	1.07			
100000018133	SPR	0.32	0.57	1.6464	0.0478	0.81	0.70			
3555859	SR	0.77	0.43	-1.4603	0.0547	1.16	1.31			
3517752	SR	0.67	0.52	-0.5723	0.0468	0.94	0.87			
3488830	SR	0.57	0.54	-0.0385	0.0445	0.96	0.91			

Table C.11 The 2009 MSA-Mathematics Classical and Rasch Item Parameters: Grade 8 Form A

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step 0-1	Step 1-2	Step 2-3
3514015	SR	0.27	0.33	1.4965	0.0471	1.09	1.14			
3514014	SR	0.57	0.42	-0.2177	0.0429	1.07	1.01			
3514013	BCR	0.5	0.66	0.1810	0.0428	0.74	0.67			
3564107	BCR	0.68	0.63	-0.9848	0.0348	0.83	0.80	-1.1835	1.1835	
3514016	SR	0.81	0.33	-1.3613	0.0493	0.94	0.92			
100000018156	SR	0.68	0.36	-0.7550	0.0448	1.11	1.11			
3514053	SR	0.77	0.36	-1.2003	0.0479	0.93	0.96			
100000043330	SR	0.47	0.51	0.3621	0.0426	0.96	0.96			
3500150	SR	0.48	0.40	0.3158	0.0426	1.08	1.12			
100000018174	SPR	0.52	0.60	0.0671	0.0429	0.80	0.74			
3487680	ECR	0.31	0.66	1.2610	0.0463	0.72	0.59			
3564133	ECR	0.35	0.69	0.8697	0.0240	1.03	0.96	-0.111	0.3415	-0.2305
3514065	SPR	0.91	0.33	-2.9220	0.0786	0.90	0.85			
100000026780	SPR	0.38	0.58	0.7842	0.0442	0.85	0.79			
100000043325	SPR	0.56	0.45	-0.2713	0.0440	1.05	1.19			
100000004108	SPR	0.53	0.47	0.0206	0.0428	1.03	1.09			
3514595	SR	0.71	0.36	-0.8540	0.0454	1.03	1.07			
100000012754	SR	0.65	0.46	-0.6096	0.0442	0.98	0.96			
3487759	BCR	0.30	0.64	1.2982	0.0465	0.76	0.62			
3564128	BCR	0.51	0.73	0.0944	0.0321	0.72	0.71	-1.0009	1.0009	
100000004078	SPR	0.52	0.65	0.0720	0.0428	0.75	0.70			
100000043320	SR	0.46	0.36	0.2581	0.0427	1.12	1.17			
3514058	SR	0.35	0.48	1.0306	0.0444	0.98	1.01			
3514062	SR	0.45	0.57	0.5139	0.0429	0.86	0.83			
3514117	BCR	0.41	0.66	0.7346	0.0445	0.78	0.70			
3564111	BCR	0.46	0.62	0.2987	0.0332	0.93	0.94	-1.0752	1.0752	
3513646	SPR	0.46	0.58	0.4579	0.0433	0.88	0.84			
3514597	SPR	0.88	0.36	-2.3874	0.0651	0.90	0.82			
3514156	SR	0.77	0.42	-1.4579	0.0504	1.03	1.05			
3487934	ECR	0.51	0.44	0.0273	0.0434	1.04	1.04			
3564122	ECR	0.38	0.57	0.9667	0.0266	1.19	1.20	-0.9274	-1.0424	1.9698
100000043323	SR	0.51	0.52	0.5661	0.0430	0.99	1.00			
3514291	SR	0.81	0.36	-1.4001	0.0498	0.87	0.98			
100000049037	SR	0.65	0.43	-0.5927	0.0443	1.00	0.95			
3487633	BCR	0.67	0.50	-0.8046	0.0461	0.94	0.90			
3564123	BCR	0.49	0.38	0.2204	0.0289	1.60	1.95	0.0018	-0.0018	

Table C.11 (continued)

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step 0-1	Step 1-2	Step 2-3
3514055	SR	0.59	0.40	-0.2581	0.0431	1.07	1.11			
3514052	SR	0.53	0.35	-0.1085	0.0429	1.21	1.22			
3487539	SR	0.64	0.36	-0.6178	0.0444	1.12	1.14			
100000043311	SR	0.37	0.17	0.8435	0.0439	1.41	1.64			
3487525	SR	0.53	0.58	0.0551	0.0428	0.86	0.80			
3487540	SR	0.67	0.42	-0.7102	0.0446	1.02	0.98			
3514074	SR	0.46	0.35	0.3257	0.0428	1.17	1.23			
3514075	SR	0.67	0.39	-0.6275	0.0442	1.07	0.98			
3514164	ECR	0.57	0.54	-0.2697	0.0436	0.91	0.94			
3564117	ECR	0.51	0.58	0.0215	0.0277	1.16	1.16	-2.0897	0.3751	1.7146
100000043326	SPR	0.45	0.53	0.3680	0.0430	0.92	0.90			
3514083	SPR	0.28	0.52	1.2566	0.0480	0.90	0.84			
3514095	SR	0.33	0.45	1.2102	0.0453	1.01	1.16			
3487568	SR	0.20	0.10	2.0087	0.0514	1.37	1.85			
3514103	SR	0.70	0.35	-0.5330	0.0439	1.03	1.07			
100000043304	SR	0.32	0.50	1.3321	0.0464	0.93	1.03			
3519734	SR	0.24	0.33	1.7460	0.0491	1.06	1.55			
100000004118	SR	0.54	0.53	0.0905	0.0427	0.90	0.85			
3487906	SPR	0.22	0.47	1.7189	0.0522	0.89	0.81			
3500160	SPR	0.26	0.54	1.5068	0.0487	0.86	0.74			
3487939	BCR	0.44	0.60	0.3153	0.0452	0.85	0.79			
3564124	BCR	0.29	0.57	1.5079	0.0379	0.99	0.96	-1.5771	1.5771	
3487912	SR	0.53	0.48	-0.0934	0.0436	1.02	0.98			
3514710	SR	0.56	0.35	-0.1424	0.0436	1.15	1.24			
100000004091	SR	0.52	0.35	0.0638	0.0437	1.15	1.22			

Table C.12 The 2009 MSA-Mathematics Classical and Rasch Item Parameters: Grade 8 Form F

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step 0-1	Step 1-2	Step 2-3
3514015	SR	0.28	0.32	1.4965	0.0468	1.12	1.19			
3514014	SR	0.58	0.41	-0.2177	0.0427	1.07	1.05			
3514016	SR	0.82	0.33	-1.3613	0.0492	0.89	0.83			
100000018154	SR	0.69	0.43	-0.6627	0.0442	0.99	0.97			
3514053	SR	0.78	0.36	-1.2003	0.0479	0.95	1.03			
100000043330	SR	0.49	0.53	0.3621	0.0423	0.90	0.88			
3500150	SR	0.49	0.38	0.3158	0.0423	1.13	1.21			
3500167	SPR	0.21	0.27	1.8723	0.0516	1.17	1.46			
3514283	ECR	0.44	0.61	0.5874	0.043	0.83	0.75			
3564116	ECR	0.58	0.64	-0.5358	0.0267	1.04	1.02	-2.4564	1.4718	0.9846
3492049	SPR	0.61	0.41	-0.4824	0.0443	1.03	1.15			
100000004107	SPR	0.52	0.44	0.1624	0.0428	1.02	1.04			
100000199104	SPR	0.42	0.59	0.6409	0.0437	0.84	0.81			
3514161	SPR	0.23	0.51	1.7775	0.0497	0.84	0.71			
100000018159	SR	0.88	0.42	-2.1690	0.0603	0.86	0.64			
3488841	SR	0.68	0.26	-0.7247	0.0446	1.20	1.59			
3491681	BCR	0.28	0.41	1.4238	0.0467	1.02	0.99			
3564126	BCR	0.36	0.48	1.1318	0.0360	1.05	1.05	-1.6837	1.6837	
3513650	SPR	0.36	0.54	1.0321	0.0445	0.88	0.81			
100000026754	SR	0.67	0.37	-0.5765	0.0438	1.08	1.13			
3514058	SR	0.35	0.45	1.0306	0.0441	0.93	0.97			
3514062	SR	0.46	0.55	0.5139	0.0426	0.87	0.84			
3514117	BCR	0.43	0.65	0.7346	0.0440	0.79	0.70			
3564111	BCR	0.47	0.63	0.2987	0.0327	0.90	0.91	-1.0752	1.0752	
3492059	SPR	0.42	0.50	0.5743	0.0431	0.96	0.92			
3514279	SPR	0.27	0.58	1.5561	0.048	0.78	0.66			
3514156	SR	0.74	0.43	-1.4579	0.0504	1.08	1.10			
3487934	ECR	0.51	0.44	0.0273	0.0432	1.00	0.95			
3564122	ECR	0.37	0.55	0.9667	0.0263	1.14	1.14	-0.9274	-1.0424	1.9698
100000043323	SR	0.52	0.51	0.5661	0.0427	0.94	0.94			
3514291	SR	0.80	0.32	-1.4001	0.0497	0.92	1.07			
3487545	SR	0.70	0.27	-0.8828	0.0456	1.17	1.29			
3519815	BCR	0.57	0.51	-0.2045	0.0432	0.93	0.97			
3564138	BCR	0.41	0.56	0.7170	0.0336	1.00	0.99	-1.3017	1.3017	
3514055	SR	0.58	0.40	-0.2581	0.0430	1.04	1.10			
3514052	SR	0.54	0.34	-0.1085	0.0427	1.19	1.21			

Table C.12 (continued)

Item CID	Item Type	P-Value	Point-Biserial	Rasch Difficulty	SE	MS. Infit	MS. Outfit	Step 0-1	Step 1-2	Step 2-3
3487539	SR	0.65	0.35	-0.6178	0.0444	1.13	1.14			
3514705	SR	0.26	0.26	1.5905	0.0478	1.13	1.61			
3487525	SR	0.54	0.55	0.0551	0.0427	0.88	0.84			
3487540	SR	0.68	0.42	-0.7102	0.0444	1.05	1.05			
3514074	SR	0.48	0.36	0.3257	0.0424	1.10	1.13			
3514075	SR	0.67	0.40	-0.6275	0.0441	1.06	0.97			
100000043313	ECR	0.64	0.51	-0.5323	0.0441	0.90	0.93			
3595407	ECR	0.77	0.58	-1.2176	0.0272	0.95	1.10	-0.7351	0.1474	0.5877
100000012732	SPR	0.27	0.50	1.5351	0.0474	0.90	0.84			
3514167	SPR	0.60	0.46	-0.3043	0.0433	1.00	0.96			
3514095	SR	0.34	0.45	1.2102	0.0449	0.99	1.04			
100000018153	SR	0.65	0.31	-0.5150	0.0436	1.18	1.30			
100000004114	SR	0.33	0.31	1.2076	0.0450	1.17	1.33			
3514103	SR	0.72	0.35	-0.5330	0.0437	0.98	0.97			
100000018151	SR	0.55	0.47	0.0346	0.0424	1.00	1.01			
3487712	SR	0.61	0.48	-0.3805	0.0432	0.91	0.88			
3492047	SR	0.30	0.38	1.0119	0.0441	1.02	1.05			
100000018179	SPR	0.34	0.55	1.0936	0.0451	0.89	0.80			
3500164	SPR	0.45	0.48	0.5224	0.0434	1.01	0.99			
3487939	BCR	0.44	0.63	0.3153	0.0441	0.77	0.70			
3564124	BCR	0.29	0.61	1.5079	0.0374	1.01	0.97	-1.5771	1.5771	
3487912	SR	0.56	0.50	-0.0934	0.0431	0.94	0.89			
3514710	SR	0.56	0.37	-0.1424	0.0432	1.09	1.10			
3487902	SR	0.81	0.33	-1.8764	0.0564	0.99	1.05			