

APPENDIX C: THE 2008 MSA-MATH CLASSICAL AND RASCH ITEM PARAMETERS

Table C.1 The 2008 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	Step 2-3
3509931	SR	0.68	0.35	0.9627	0.0443	1.03	1.06			
3548059	SR	0.74	0.55	0.6288	0.0467	0.83	0.70			
3509918	BCR	0.82	0.40	-0.1008	0.0549	0.99	0.99			
3595500	BCR	0.54	0.45	1.5690	0.0367	1.04	1.04	-1.8761	1.8761	
3510009	SR	0.84	0.36	0.0690	0.0526	0.93	0.88			
3509974	SR	0.65	0.21	1.0359	0.0440	1.30	1.52			
3548057	SR	0.80	0.35	0.5502	0.0474	0.91	0.87			
3509955	SR	0.61	0.34	1.8411	0.0415	1.07	1.17			
100000044161	SR	0.66	0.44	1.0707	0.0440	1.01	1.08			
3509959	SR	0.70	0.40	0.8740	0.0453	1.02	0.99			
3488196	SR	0.86	0.43	-0.4959	0.0622	0.94	0.76			
3509960	SR	0.78	0.34	0.3981	0.0494	1.00	1.00			
3509964	SR	0.79	0.51	-0.0360	0.0548	0.91	0.71			
3488126	SR	0.87	0.48	-0.8251	0.0691	0.81	0.53			
3509941	BCR	0.58	0.44	1.5122	0.0421	1.00	1.02			
3595501	BCR	0.54	0.51	1.5891	0.0362	0.97	0.96	-1.8002	1.8002	
3510068	SR	0.84	0.41	-0.3305	0.0585	1.00	0.99			
3510022	SR	0.52	0.32	2.0077	0.0415	1.11	1.19			
3509927	SR	0.81	0.30	0.4123	0.0487	0.98	1.15			
3510006	SR	0.59	0.48	1.2257	0.0430	0.96	0.99			
3496696	SR	0.77	0.26	0.3479	0.0493	1.17	1.32			
3509957	BCR	0.81	0.28	0.1115	0.0523	1.10	1.12			
3595502	BCR	0.43	0.49	2.3975	0.0356	0.99	0.98	-1.7280	1.7280	
3488123	SR	0.59	0.46	1.3765	0.0426	0.97	0.93			
3548507	SR	0.85	0.34	-0.2784	0.0578	1.03	0.94			
100000044159	SR	0.57	0.29	1.5712	0.0422	1.16	1.21			
3488038	SR	0.43	0.19	2.2208	0.0419	1.27	1.53			
3509935	SR	0.61	0.44	1.2515	0.0435	0.98	1.04			
3510066	SR	0.80	0.49	0.0425	0.0535	0.86	0.73			
3510073	BCR	0.79	0.39	0.2315	0.0506	1.00	1.02			
3595503	BCR	0.59	0.40	1.1948	0.0376	1.09	1.10	-1.9764	1.9764	
3510125	SR	0.57	0.46	1.6971	0.0416	0.91	0.88			
3510072	BCR	0.85	0.41	-0.2447	0.0570	0.94	0.98			
3595504	BCR	0.60	0.49	1.5000	0.0292	1.16	1.16	-0.5243	0.5243	
100000044163	SR	0.76	0.36	-0.4817	0.0613	1.87	2.22			
3509926	SR	0.39	0.41	2.4187	0.0421	0.96	1.05			
100000044152	SR	0.87	0.34	-0.3864	0.0595	1.03	1.01			
3509961	SR	0.92	0.36	-1.3667	0.0827	1.28	1.18			
3510065	SR	0.94	0.28	-2.1822	0.1153	1.30	1.12			

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	Step 2-3
3510063	SR	0.78	0.45	0.4861	0.0481	0.87	0.82			
100000044158	SR	0.86	0.44	-0.4990	0.0616	1.03	0.86			
3510018	SR	0.79	0.49	0.2953	0.0499	0.89	0.73			
3510035	SR	0.89	0.30	-0.6165	0.0637	0.92	1.26			
3510060	BCR	0.86	0.28	-0.4451	0.0607	1.09	1.22			
3595505	BCR	0.58	0.48	1.3069	0.0354	0.99	0.99	-1.7023	1.7023	
3510055	SR	0.62	0.47	1.2952	0.0428	0.92	0.90			
3510027	SR	0.87	0.40	-0.5906	0.0633	1.02	0.88			
3510347	SR	0.74	0.46	0.9229	0.0449	0.83	0.78			
3510053	SR	0.84	0.29	-0.2691	0.0574	1.16	1.31			
3510058	SR	0.88	0.43	-0.6059	0.0635	0.93	0.88			
3510051	SR	0.57	0.45	1.4814	0.0421	0.96	0.95			
3509929	SR	0.54	0.46	1.8021	0.0418	0.95	0.97			
3510329	SR	0.56	0.33	1.5719	0.0419	1.12	1.21			
3510033	SR	0.82	0.34	0.0473	0.0529	1.03	1.08			
3510043	SR	0.77	0.39	0.0444	0.0529	1.15	1.11			
3510012	SR	0.80	0.47	0.0993	0.0522	0.97	0.83			
3487779	SR	0.85	0.56	-0.2992	0.0579	0.79	0.55			
3509962	SR	0.90	0.41	-0.6247	0.0638	0.78	0.66			
3510034	BCR	0.35	0.44	2.6680	0.0428	0.93	0.91			
3595506	BCR	0.38	0.54	2.6710	0.0340	0.90	0.89	-1.4737	1.4737	
3488178	SR	0.53	0.45	1.7968	0.0415	0.99	1.04			
3496700	SR	0.88	0.34	-0.6248	0.0639	1.00	0.91			
3509950	SR	0.71	0.33	0.8475	0.0453	1.05	1.02			
3490570	SR	0.87	0.35	-0.4471	0.0607	1.02	1.05			
3510036	SR	0.85	0.39	-0.5397	0.0626	0.97	0.92			

Table C.2 The 2008 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	Step 2-3
3509931	SR	0.70	0.35	0.9627	0.0450	1.10	1.08			
3548059	SR	0.77	0.53	0.6288	0.0475	0.82	0.68			
3509918	BCR	0.83	0.42	0.0751	0.0533	0.98	0.94			
3595500	BCR	0.55	0.42	1.6361	0.0375	1.06	1.07	-1.9848	1.9848	
3510009	SR	0.84	0.36	0.0690	0.0534	0.94	0.82			
3509974	SR	0.66	0.22	1.0359	0.0446	1.32	1.49			
3548057	SR	0.81	0.34	0.5502	0.0481	0.96	1.06			
3509955	SR	0.63	0.34	1.8411	0.0419	1.11	1.21			
100000044160	SR	0.93	0.32	-1.1760	0.0780	0.98	1.04			
3509959	SR	0.72	0.38	0.8740	0.0458	1.01	0.97			
3488196	SR	0.89	0.40	-0.7392	0.0677	0.92	0.70			
3509960	SR	0.81	0.32	0.3981	0.0500	0.97	1.00			
3509964	SR	0.82	0.50	-0.0360	0.0552	0.92	0.77			
3509956	SR	0.66	0.27	1.1953	0.0442	1.20	1.32			
3509941	BCR	0.58	0.42	1.6893	0.0422	1.05	1.09			
3595501	BCR	0.56	0.49	1.6043	0.0362	0.98	0.98	-1.8082	1.8082	
3510068	SR	0.88	0.40	-0.3305	0.0594	0.86	1.02			
3510022	SR	0.53	0.31	2.0077	0.0418	1.14	1.24			
3509927	SR	0.80	0.28	0.4123	0.0495	1.08	1.35			
3510006	SR	0.60	0.48	1.2257	0.0436	1.01	1.08			
3487972	SR	0.51	0.42	2.0271	0.0418	1.00	1.00			
3509922	BCR	0.68	0.45	1.0913	0.0449	1.00	0.97			
3595507	BCR	0.37	0.50	3.2375	0.0387	0.94	0.93	-2.1210	2.1210	
100000044153	SR	0.89	0.30	-0.6268	0.0651	1.03	1.08			
3510126	SR	0.77	0.44	0.1797	0.0522	1.16	1.10			
100000044159	SR	0.59	0.29	1.5483	0.0427	1.19	1.27			
100000044154	SR	0.88	0.29	-0.2581	0.0586	0.86	0.77			
3509935	SR	0.63	0.43	1.2515	0.0441	1.02	1.02			
3510066	SR	0.82	0.48	0.0425	0.0543	0.89	0.69			
3510067	BCR	0.85	0.36	-0.2338	0.0579	1.02	1.03			
3595508	BCR	0.80	0.36	0.1995	0.0369	1.23	1.40	-0.9490	0.9490	
3488069	SR	0.89	0.30	-0.5610	0.0635	1.05	1.10			
3509924	BCR	0.62	0.51	1.5222	0.0426	0.93	0.94			
3595509	BCR	0.39	0.55	3.0387	0.0385	0.90	0.89	-2.0994	2.0994	
3488171	SR	0.74	0.52	0.7136	0.0469	0.90	0.80			
3509926	SR	0.47	0.46	2.4187	0.0423	0.99	0.99			
3488127	SR	0.78	0.51	0.3755	0.0500	0.93	0.77			

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	Step 2-3
3509961	SR	0.92	0.35	-1.3667	0.0839	1.13	1.01			
3510065	SR	0.95	0.25	-2.1822	0.1166	1.32	1.45			
3510063	SR	0.78	0.44	0.4861	0.0489	0.89	0.82			
100000044158	SR	0.86	0.46	-0.4990	0.0624	1.14	0.98			
3510018	SR	0.79	0.51	0.2953	0.0507	0.93	0.77			
3510035	SR	0.89	0.28	-0.6165	0.0645	1.03	1.37			
3510060	BCR	0.87	0.27	-0.3562	0.0600	1.07	1.12			
3595505	BCR	0.60	0.47	1.2218	0.0369	0.97	0.98	-1.8923	1.8923	
3510055	SR	0.62	0.48	1.2952	0.0434	0.95	0.94			
3510027	SR	0.87	0.38	-0.5906	0.0643	1.02	0.96			
3510347	SR	0.76	0.43	0.9229	0.0455	0.88	0.82			
3510053	SR	0.85	0.28	-0.2691	0.0582	1.14	1.35			
3510058	SR	0.88	0.42	-0.6059	0.0643	1.01	1.02			
3510051	SR	0.57	0.46	1.4814	0.0427	0.99	0.98			
3509929	SR	0.55	0.47	1.8021	0.0422	0.93	0.91			
3510329	SR	0.57	0.35	1.5719	0.0424	1.16	1.21			
3510033	SR	0.84	0.32	0.0473	0.0538	1.01	1.02			
3510043	SR	0.79	0.40	0.0444	0.0538	1.16	1.19			
3510012	SR	0.81	0.48	0.0993	0.0532	0.96	0.77			
3488033	SR	0.89	0.56	-0.5440	0.0632	0.78	0.48			
3509962	SR	0.91	0.41	-0.6247	0.0647	0.76	0.70			
3509932	BCR	0.98	0.25	-2.7407	0.1484	0.95	0.44			
3595510	BCR	0.44	0.53	2.4652	0.0353	0.92	0.93	-1.6902	1.6902	
3490561	SR	0.91	0.27	-0.8923	0.0707	1.06	1.08			
3510020	SR	0.85	0.47	-0.1123	0.0560	0.93	0.81			
100000044162	SR	0.84	0.40	-0.0075	0.0548	0.99	0.98			
3490570	SR	0.87	0.38	-0.5043	0.0627	0.99	0.92			
3510036	SR	0.86	0.40	-0.5397	0.0635	1.05	0.96			

Table C.3 The 2008 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	Step 2-3
3515406	SR	0.66	0.42	0.6241	0.0437	1.02	1.04			
3515407	SR	0.87	0.41	-0.7990	0.0561	0.93	0.83			
100000044146	SR	0.92	0.19	-1.8595	0.0785	1.26	2.69			
100000044148	BCR	0.36	0.36	2.0901	0.0433	1.08	1.11			
3595498	BCR	0.58	0.49	0.7602	0.0371	0.97	0.96	-1.9452	1.9452	
3515408	SR	0.78	0.50	0.1763	0.0460	0.80	0.67			
3515641	SR	0.81	0.47	-0.8522	0.0570	1.19	1.09			
3515410	SR	0.88	0.36	-1.0550	0.0602	0.98	0.86			
3487996	SR	0.77	0.26	-0.0097	0.0474	1.18	1.27			
3515605	SR	0.63	0.52	0.9009	0.0428	0.90	0.85			
3488056	SR	0.53	0.31	1.3222	0.0422	1.22	1.31			
3488159	SR	0.88	0.36	-1.1317	0.0617	0.97	1.07			
3515447	SR	0.54	0.48	1.4979	0.0421	0.96	0.97			
100000044142	BCR	0.83	0.38	-0.5527	0.0529	0.99	0.95			
3595499	BCR	0.46	0.50	1.8966	0.0388	0.95	0.94	-2.1375	2.1375	
3515604	SR	0.70	0.53	0.3940	0.0448	0.87	0.88			
3515737	SR	0.84	0.30	-0.7461	0.0554	1.06	1.12			
3515576	SR	0.66	0.38	0.5508	0.0440	1.05	1.03			
3515470	SR	0.74	0.40	0.0797	0.0467	1.01	1.00			
3515643	SR	0.44	0.48	1.7570	0.0424	0.91	0.91			
3515645	SR	0.74	0.36	-0.1355	0.0485	1.13	1.18			
3515648	BCR	0.55	0.57	1.2519	0.0422	0.82	0.76			
3595531	BCR	0.58	0.64	0.9986	0.0301	0.83	0.80	-0.6913	0.6913	
3515559	SR	0.70	0.40	0.1734	0.0461	1.07	1.16			
3515426	SR	0.49	0.41	1.6228	0.0424	1.06	1.10			
3515571	SR	0.82	0.44	-0.9395	0.0586	1.20	1.19			
100000044144	SR	0.95	0.19	-2.7781	0.1143	1.01	1.18			
3515421	SR	0.87	0.36	-0.6701	0.0543	0.89	0.93			
3515574	SR	0.88	0.45	-0.9677	0.0588	0.80	0.65			
3515823	BCR	0.46	0.54	1.6468	0.0423	0.89	0.85			
3595532	BCR	0.42	0.56	2.0517	0.0353	0.92	0.91	-1.6746	1.6746	
100000044149	SR	0.98	0.11	-3.4118	0.1510	1.01	1.41			
3548767	SR	0.73	0.33	0.0868	0.0468	1.13	1.20			
3515807	BCR	0.75	0.36	0.0553	0.0472	1.09	1.09			
3595533	BCR	0.39	0.44	2.2474	0.0333	1.16	1.14	-1.2842	1.2842	
3488052	SR	0.62	0.45	0.7943	0.0431	0.98	0.94			
3515575	SR	0.89	0.39	-1.3667	0.0664	0.93	0.76			

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	Step 2-3
3515705	SR	0.83	0.31	-0.2051	0.0491	0.95	0.98			
3515471	SR	0.87	0.36	-0.9767	0.0589	1.05	0.87			
3515630	SR	0.54	0.48	0.9291	0.0427	1.00	0.97			
3515886	BCR	0.57	0.47	1.1277	0.0423	0.99	1.01			
3595534	BCR	0.57	0.42	0.8438	0.0377	1.08	1.09	-2.0080	2.0080	
3515787	SR	0.55	0.31	1.1443	0.0423	1.17	1.26			
3515533	SR	0.85	0.48	-0.7839	0.0561	0.86	0.74			
3515631	SR	0.79	0.37	-0.4674	0.0519	1.15	1.16			
3515486	SR	0.60	0.41	0.7468	0.0433	1.08	1.08			
3515484	SR	0.92	0.30	-1.7626	0.0760	1.01	1.33			
3497876	SR	0.63	0.49	0.7358	0.0433	0.93	0.89			
3515543	SR	0.82	0.50	-0.2743	0.0499	0.77	0.67			
3515853	SR	0.81	0.45	-0.1060	0.0485	0.81	0.68			
3497869	SR	0.81	0.22	-0.5937	0.0534	1.13	1.16			
3548078	SR	0.51	0.41	1.3598	0.0421	1.03	1.06			
3515933	SR	0.77	0.24	-0.3619	0.0507	1.26	1.61			
3515519	SR	0.88	0.37	-0.6898	0.0547	0.82	0.92			
3515795	SR	0.66	0.48	0.5626	0.0440	0.95	0.88			
3515545	SR	0.88	0.40	-0.8464	0.0569	0.84	0.67			
3548086	SR	0.82	0.39	-0.2943	0.0500	0.91	0.87			
3515843	BCR	0.90	0.36	-1.3684	0.0663	0.93	0.95			
3595535	BCR	0.68	0.47	0.0715	0.0361	1.07	1.10	-1.6202	1.6202	
3497867	SR	0.65	0.39	0.5913	0.0438	1.06	1.16			
3515506	SR	0.91	0.37	-1.2169	0.0634	0.80	0.68			
3515887	SR	0.87	0.29	-1.4589	0.0684	1.39	1.66			
3515632	SR	0.70	0.51	-0.0118	0.0476	1.02	0.96			
3548088	SR	0.77	0.43	-0.1831	0.0491	0.96	0.97			

Table C.4 The 2008 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	Step 2-3
3515406	SR	0.66	0.45	0.6241	0.0434	0.96	0.96			
3515407	SR	0.87	0.43	-0.7990	0.0552	0.83	0.67			
100000044150	SR	0.66	0.33	0.5597	0.0436	1.13	1.16			
3515595	BCR	0.81	0.46	-0.4856	0.0514	0.92	0.74			
3595536	BCR	0.50	0.56	1.4296	0.0348	0.93	0.92	-1.6389	1.6389	
3515408	SR	0.78	0.52	0.1763	0.0456	0.76	0.64			
3515641	SR	0.81	0.49	-0.8522	0.0560	1.08	0.96			
3515410	SR	0.87	0.35	-1.0550	0.0591	0.98	0.83			
3497882	SR	0.78	0.32	-0.1920	0.0484	1.09	1.09			
3515605	SR	0.62	0.51	0.9009	0.0426	0.90	0.87			
3497866	SR	0.71	0.36	0.2397	0.0453	1.09	1.08			
3515582	SR	0.82	0.23	-0.4742	0.0512	1.18	1.45			
3515447	SR	0.52	0.48	1.4979	0.0421	0.98	1.07			
100000044142	BCR	0.86	0.37	-0.9256	0.0571	0.99	0.99			
3595499	BCR	0.47	0.48	1.7707	0.0404	0.97	0.97	-2.2938	2.2938	
3515604	SR	0.68	0.52	0.3940	0.0445	0.91	0.83			
3515737	SR	0.84	0.29	-0.7523	0.0546	1.07	1.41			
3515576	SR	0.65	0.39	0.5508	0.0437	1.03	0.99			
3515470	SR	0.74	0.39	0.0797	0.0463	1.04	1.04			
3515643	SR	0.45	0.45	1.7570	0.0425	0.99	1.04			
3515645	SR	0.75	0.36	-0.1355	0.0479	1.13	1.19			
3515648	BCR	0.55	0.56	1.1199	0.0422	0.88	0.82			
3595531	BCR	0.58	0.63	0.9347	0.0307	0.91	0.89	-0.8467	0.8467	
3551599	SR	0.82	0.54	-0.5617	0.0523	0.82	0.61			
3488180	SR	0.86	0.43	-0.9544	0.0577	0.93	0.77			
3515571	SR	0.81	0.45	-0.9395	0.0575	1.18	1.38			
100000044145	SR	0.96	0.25	-2.1504	0.0852	0.62	0.38			
3515421	SR	0.86	0.36	-0.6701	0.0535	0.87	0.75			
3488166	SR	0.80	0.47	-0.4437	0.0509	0.92	0.84			
3515646	BCR	0.63	0.56	0.6734	0.0432	0.86	0.80			
3595537	BCR	0.61	0.59	0.8984	0.0280	1.03	0.97	0.1686	-0.1686	
3488190	SR	0.56	0.42	0.9747	0.0424	1.00	1.00			
3488060	SR	0.99	0.08	-3.8290	0.1749	1.01	2.46			
3515807	BCR	0.78	0.37	-0.2581	0.0491	1.06	1.00			
3595533	BCR	0.34	0.42	2.6447	0.0365	1.11	1.11	-1.7531	1.7531	
3490562	SR	0.53	0.38	1.1949	0.0421	1.09	1.12			
3515575	SR	0.87	0.44	-1.1384	0.0606	0.87	0.67			

Table C.4 (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
3488019	SR	0.66	0.27	0.5462	0.0438	1.25	1.49			
3515471	SR	0.86	0.37	-0.9767	0.0579	1.06	0.93			
3515630	SR	0.54	0.48	0.9291	0.0425	0.99	0.99			
3515783	BCR	0.76	0.55	-0.0713	0.0474	0.85	0.74			
3595560	BCR	0.74	0.60	0.1264	0.0318	0.92	0.95	-0.3519	0.3519	
3515935	SR	0.86	0.32	-0.8732	0.0563	1.03	1.23			
3515785	SR	0.72	0.26	0.1771	0.0457	1.21	1.29			
3515631	SR	0.79	0.36	-0.4674	0.0512	1.14	1.25			
3515486	SR	0.58	0.39	0.7468	0.0431	1.11	1.15			
10000044143	SR	0.75	0.48	0.2215	0.0454	0.86	0.79			
3488189	SR	0.82	0.45	-0.7062	0.0542	0.93	0.98			
3502604	SR	0.80	0.39	-0.4877	0.0517	0.98	1.01			
3515853	SR	0.79	0.43	-0.1060	0.0481	0.85	0.82			
3515836	SR	0.59	0.43	0.6346	0.0434	1.09	1.18			
3548078	SR	0.52	0.41	1.2468	0.0421	1.05	1.12			
3515933	SR	0.78	0.25	-0.3619	0.0500	1.23	1.60			
3515635	SR	0.55	0.42	0.6901	0.0431	1.12	1.24			
3515795	SR	0.63	0.47	0.5626	0.0436	1.00	0.93			
3515545	SR	0.88	0.40	-0.8464	0.0559	0.80	0.64			
3548086	SR	0.80	0.40	-0.2943	0.0494	0.94	1.01			
3515830	BCR	0.95	0.26	-2.2268	0.0873	0.96	0.98			
3595561	BCR	0.78	0.33	-0.5908	0.0376	1.24	1.39	-1.3955	1.3955	
3548079	SR	0.96	0.34	-2.0300	0.0811	0.69	0.38			
3515506	SR	0.92	0.33	-1.2169	0.0619	0.75	0.59			
3515887	SR	0.91	0.33	-1.4589	0.0666	0.97	0.91			
3515632	SR	0.72	0.50	-0.0118	0.0470	0.97	0.87			
3548088	SR	0.77	0.42	-0.1831	0.0484	0.99	1.02			

Table C.5 The 2008 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
3511312	SR	0.42	0.36	1.5795	0.0426	1.09	1.14			
3511269	SR	0.89	0.26	-1.0845	0.0572	0.92	0.93			
3512642	SR	0.63	0.45	0.4442	0.0435	0.99	0.96			
3511531	BCR	0.69	0.52	0.1259	0.0450	0.92	0.87			
3595438	BCR	0.60	0.52	0.5335	0.0336	1.00	1.01	-1.3908	1.3908	
3488390	SR	0.43	0.37	1.4804	0.0424	1.11	1.17			
3512622	SR	0.67	0.49	0.2133	0.0445	0.95	0.87			
3511203	SR	0.91	0.38	-1.6829	0.0687	0.86	0.51			
3488506	SR	0.39	0.44	1.7536	0.0431	0.97	0.99			
3512535	SR	0.54	0.32	0.9885	0.0422	1.15	1.23			
3511196	SR	0.57	0.51	0.6094	0.0433	0.95	0.96			
3511307	SR	0.42	0.34	1.5483	0.0429	1.16	1.25			
3488373	SR	0.67	0.42	0.1790	0.0457	1.03	1.03			
3511467	SR	0.82	0.40	-0.9093	0.0556	0.89	0.76			
3512529	SR	0.58	0.24	0.4459	0.0445	1.29	1.41			
3511339	SR	0.65	0.52	0.4633	0.0434	0.89	0.85			
3512639	SR	0.79	0.37	-0.4690	0.0496	1.04	1.00			
100000043853	SR	0.67	0.40	0.3350	0.0441	1.02	1.06			
3512615	BCR	0.79	0.50	-0.5151	0.0502	0.88	0.93			
3595439	BCR	0.54	0.52	0.8697	0.0337	1.01	1.00	-1.4537	1.4537	
3511216	SR	0.71	0.25	0.2030	0.0447	1.17	1.21			
3512638	SR	0.74	0.46	0.2606	0.0444	0.88	0.83			
3512691	SR	0.60	0.33	1.0014	0.0423	1.14	1.18			
3512702	SR	0.50	0.31	0.8431	0.0425	1.21	1.36			
3511336	BCR	0.42	0.54	1.4848	0.0434	0.88	0.81			
3595440	BCR	0.38	0.63	1.7477	0.0316	0.85	0.81	-0.8139	0.8139	
3511566	SR	0.66	0.42	0.1548	0.0452	1.04	1.06			
3511246	SR	0.76	0.46	-0.3310	0.0488	0.92	0.80			
3511458	SR	0.87	0.36	-1.7042	0.0700	1.11	0.86			
3511479	SR	0.61	0.43	0.6218	0.0429	1.00	1.00			
3511504	SR	0.88	0.27	-1.2550	0.0601	1.03	1.23			
3488324	SR	0.75	0.52	-0.2851	0.0479	0.88	0.77			
3511513	SR	0.85	0.38	-1.1293	0.0580	1.00	0.95			
3488272	SR	0.56	0.36	0.8010	0.0425	1.08	1.08			
3511258	ECR	0.85	0.38	-1.0546	0.0571	0.97	0.92			
3595441	ECR	0.51	0.52	0.9016	0.0351	0.98	0.98	-3.8291	0.2550	3.5741
3511266	SR	0.70	0.42	0.0148	0.0458	1.06	1.02			

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	0.28	-0.2130	0.0473	1.16	1.44			
3511470	SR	0.86	0.36	-0.6898	0.0520	0.84	0.73			
3511499	SR	0.63	0.53	0.1746	0.0448	0.96	0.95			
3511330	SR	0.61	0.32	0.6342	0.0431	1.15	1.18			
3556476	BCR	0.50	0.52	1.2085	0.0424	0.92	0.89			
3595442	BCR	0.44	0.63	1.3852	0.0272	0.92	0.83	0.6408	-0.6408	
3511348	SR	0.56	0.40	0.8880	0.0425	1.06	1.12			
3512595	SR	0.81	0.36	-0.6828	0.0520	1.02	1.16			
3511521	SR	0.63	0.52	0.2895	0.0443	0.92	0.84			
3488241	SR	0.92	0.26	-1.7928	0.0716	1.01	1.21			
100000043857	SR	0.83	0.39	-0.9439	0.0555	0.96	1.15			
3511376	SR	0.88	0.37	-0.9892	0.0558	0.75	0.74			
3511396	SR	0.89	0.38	-1.1516	0.0583	0.76	0.63			
3511429	SR	0.77	0.43	-0.5025	0.0499	1.05	1.10			
3512618	BCR	0.47	0.54	1.3098	0.0426	0.87	0.82			
3595443	BCR	0.56	0.49	0.5173	0.0408	0.94	0.93	-2.2969	2.2969	
3512623	SR	0.79	0.41	-0.5862	0.0509	0.97	0.87			
3512625	SR	0.91	0.29	-1.6381	0.0681	0.85	0.99			
3511631	SR	0.78	0.41	-0.3862	0.0495	0.87	0.77			
3488251	SR	0.61	0.35	0.5581	0.0432	1.13	1.12			
3511439	SR	0.77	0.46	-0.5779	0.0509	0.98	0.81			
3512564	BCR	0.37	0.40	1.7934	0.0436	1.02	1.06			
3595444	BCR	0.35	0.42	2.3824	0.0376	1.09	1.09	-1.8916	1.8916	
3511442	SR	0.63	0.48	0.5383	0.0433	0.94	0.91			
3512644	BCR	0.37	0.58	1.8531	0.0441	0.80	0.73			
3595445	BCR	0.47	0.64	1.3274	0.0316	0.88	0.86	-0.9532	0.9532	
3488328	SR	0.71	0.43	-0.0717	0.0467	0.99	0.96			
3511448	SR	0.78	0.38	-0.6839	0.0524	1.16	1.30			

Table C.6 The 2008 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
3511312	SR	0.41	0.36	1.5795	0.0429	1.08	1.16			
3511269	SR	0.89	0.27	-1.0845	0.0588	0.83	0.80			
3512642	SR	0.62	0.43	0.5603	0.0438	1.03	1.09			
3511531	BCR	0.71	0.51	0.0205	0.0466	0.93	0.87			
3595438	BCR	0.62	0.50	0.3914	0.0358	1.05	1.05	-1.6521	1.6521	
3488390	SR	0.44	0.37	1.5155	0.0428	1.11	1.16			
3512622	SR	0.68	0.51	0.1285	0.0458	0.94	0.86			
3511203	SR	0.92	0.34	-1.8304	0.0744	0.94	0.71			
3488356	SR	0.78	0.36	-0.4351	0.0504	1.08	1.11			
3512535	SR	0.56	0.30	0.9885	0.0427	1.20	1.30			
3511196	SR	0.58	0.53	0.6094	0.0441	0.89	0.83			
3511307	SR	0.42	0.32	1.5483	0.0433	1.16	1.26			
3488373	SR	0.67	0.42	0.0790	0.0473	1.02	1.03			
3511467	SR	0.83	0.39	-0.9093	0.0574	0.90	0.74			
10000043850	SR	0.64	0.47	0.2307	0.0465	0.97	0.95			
3511339	SR	0.67	0.51	0.4633	0.0441	0.92	0.91			
3512639	SR	0.80	0.35	-0.6094	0.0523	1.06	1.11			
10000043853	SR	0.67	0.40	0.3350	0.0448	1.03	1.08			
3512615	BCR	0.81	0.47	-0.6929	0.0534	0.86	0.84			
3595439	BCR	0.59	0.51	0.7258	0.0340	1.03	1.02	-1.4307	1.4307	
3511216	SR	0.70	0.26	0.2030	0.0454	1.17	1.18			
10000043855	SR	0.40	0.48	1.6760	0.0431	0.93	0.94			
3488377	SR	0.72	0.36	0.0327	0.0465	1.08	1.04			
3511542	SR	0.64	0.48	0.3252	0.0448	0.95	0.92			
3511336	BCR	0.43	0.53	1.5666	0.0435	0.90	0.84			
3595440	BCR	0.38	0.64	1.8347	0.0321	0.87	0.83	-0.9254	0.9254	
3492137	SR	0.79	0.40	-0.5120	0.0514	0.98	1.06			
3511246	SR	0.77	0.45	-0.3310	0.0496	0.96	0.84			
3511458	SR	0.91	0.35	-1.7042	0.0715	0.87	0.75			
3511479	SR	0.64	0.44	0.6218	0.0436	1.00	1.05			
3511504	SR	0.90	0.24	-1.2550	0.0618	0.99	1.35			
3488324	SR	0.75	0.50	-0.1710	0.0480	0.87	0.76			
3511513	SR	0.87	0.35	-1.1293	0.0596	0.88	0.93			
3512632	SR	0.42	0.39	1.6552	0.0431	1.04	1.15			
3511258	ECR	0.85	0.37	-1.0108	0.0581	1.00	0.89			
3595441	ECR	0.51	0.51	0.8865	0.0362	0.99	0.99	-4.0748	0.2841	3.7906
3511266	SR	0.70	0.43	0.0148	0.0467	1.04	0.97			

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	0.26	-0.2189	0.0484	1.17	1.44			
3511470	SR	0.87	0.37	-0.6898	0.0533	0.78	0.67			
3511499	SR	0.63	0.52	0.1746	0.0457	1.00	1.00			
3511330	SR	0.63	0.29	0.6342	0.0437	1.17	1.22			
3556476	BCR	0.51	0.50	1.0842	0.0428	0.93	0.91			
3595442	BCR	0.45	0.61	1.3952	0.0275	0.96	0.92	0.5900	-0.5900	
3511348	SR	0.56	0.38	0.8588	0.0432	1.10	1.19			
3512595	SR	0.80	0.36	-0.6828	0.0533	1.06	1.19			
3511521	SR	0.64	0.53	0.2895	0.0452	0.95	0.91			
3488418	SR	0.44	0.33	1.4472	0.0431	1.11	1.19			
3488372	SR	0.85	0.38	-1.1720	0.0608	0.94	0.86			
3511376	SR	0.89	0.34	-0.9892	0.0574	0.77	0.92			
3511396	SR	0.89	0.35	-1.1516	0.0600	0.83	0.73			
3511429	SR	0.78	0.44	-0.5025	0.0512	1.00	0.99			
3512618	BCR	0.48	0.57	1.3102	0.0430	0.88	0.84			
3595443	BCR	0.55	0.45	0.5023	0.0461	0.96	0.94	-2.7505	2.7505	
3488455	SR	0.93	0.31	-1.9347	0.0771	0.94	0.95			
3488299	SR	0.63	0.40	0.4209	0.0450	1.04	1.01			
3488457	SR	0.48	0.51	1.2508	0.0435	0.90	0.90			
3512628	SR	0.83	0.30	-0.5862	0.0520	0.99	1.16			
3511439	SR	0.79	0.47	-0.5779	0.0520	0.98	0.96			
3512564	BCR	0.35	0.42	2.0012	0.0443	0.98	0.97			
3595444	BCR	0.30	0.47	2.6476	0.0367	1.04	1.05	-1.6217	1.6217	
3511442	SR	0.62	0.47	0.5383	0.0439	0.96	0.94			
3512644	BCR	0.38	0.59	1.8003	0.0439	0.81	0.73			
3595445	BCR	0.48	0.64	1.2216	0.0316	0.87	0.86	-0.9532	0.9532	
100000043851	SR	0.65	0.50	0.4326	0.0444	0.92	0.85			
3511448	SR	0.79	0.37	-0.6839	0.0534	1.10	1.16			

Table C.7 The 2008 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	0.88	0.30	-1.2053	0.0545	0.91	1.18			
3488264	SR	0.69	0.53	-0.0691	0.0448	0.89	0.77			
3516291	SR	0.55	0.33	0.6406	0.0427	1.26	1.38			
3492143	SR	0.78	0.45	-0.6658	0.0487	0.97	0.88			
3516295	SR	0.71	0.33	0.1004	0.0440	1.11	1.19			
3516243	SR	0.73	0.42	-0.2844	0.0459	1.01	0.94			
3517004	ECR	0.90	0.36	-1.7891	0.0642	0.92	0.77			
3595446	ECR	0.62	0.60	0.1623	0.0274	1.11	1.14	-1.8832	0.1382	1.7450
3516248	SR	0.84	0.40	-1.2219	0.0548	0.96	0.89			
3516559	SR	0.92	0.29	-1.4432	0.0579	0.74	0.84			
3516255	SR	0.79	0.31	-0.4703	0.0472	1.04	1.14			
3516258	SR	0.63	0.37	0.3254	0.0434	1.15	1.23			
3516298	SR	0.38	0.53	1.7544	0.0444	0.89	0.92			
3516240	SR	0.65	0.54	0.2409	0.0437	0.88	0.83			
3516909	SR	0.60	0.48	0.4042	0.0433	0.99	0.96			
3516283	SR	0.50	0.50	0.9203	0.0427	0.97	0.98			
3516627	BCR	0.50	0.53	0.8724	0.0436	0.98	0.95			
3595447	BCR	0.42	0.58	1.4503	0.0358	0.95	0.94	-1.6293	1.6293	
3488482	SR	0.86	0.42	-1.3990	0.0577	0.90	0.75			
3516285	SR	0.58	0.43	0.3104	0.0438	1.13	1.16			
3516290	SR	0.76	0.45	-0.1396	0.0459	0.86	0.83			
100000043862	SR	0.63	0.45	0.2101	0.0442	1.04	1.03			
3488383	SR	0.69	0.26	-0.1255	0.0455	1.25	1.54			
3488516	SR	0.70	0.26	-0.1462	0.0451	1.26	1.57			
100000043865	SR	0.54	0.43	0.7262	0.0427	1.08	1.11			
3516363	BCR	0.50	0.64	0.9993	0.0429	0.77	0.69			
3595448	BCR	0.62	0.68	0.2927	0.0310	0.81	0.76	-0.7056	0.7056	
3516453	SR	0.79	0.52	-0.8160	0.0501	0.93	0.84			
3516331	SR	0.50	0.37	1.1378	0.0428	1.14	1.17			
3516241	SR	0.86	0.40	-1.4702	0.0584	1.03	0.92			
3516247	SR	0.62	0.61	0.3674	0.0432	0.82	0.78			
3516329	SR	0.61	0.46	0.5144	0.0429	0.98	1.00			
3516355	SR	0.72	0.49	-0.1849	0.0454	0.93	0.84			
3516351	SR	0.53	0.51	0.4777	0.0430	0.99	0.97			
3492095	SR	0.81	0.51	-0.9261	0.0512	0.84	0.63			
3516249	SR	0.68	0.43	-0.4091	0.0467	1.17	1.39			

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	0.65	0.66	0.1802	0.0438	0.74	0.63			
3595449	BCR	0.61	0.69	0.3670	0.0313	0.80	0.80	-0.8656	0.8656	
3516573	SR	0.76	0.43	-0.3209	0.0462	0.91	0.91			
3516929	SR	0.67	0.48	0.0810	0.0442	1.02	0.95			
3516242	SR	0.49	0.39	1.2969	0.0432	1.12	1.24			
3516281	SR	0.52	0.52	0.8563	0.0426	1.01	1.05			
3516354	SR	0.71	0.52	-0.1945	0.0455	0.91	0.80			
3516906	SR	0.62	0.46	0.2864	0.0436	1.02	0.99			
3516332	SR	0.52	0.27	0.5885	0.0428	1.27	1.44			
3516256	SR	0.63	0.40	0.1350	0.0440	1.13	1.26			
3516302	SR	0.71	0.38	-0.4092	0.0468	1.16	1.25			
3492142	SR	0.65	0.38	0.1475	0.0440	1.14	1.12			
3517013	BCR	0.61	0.54	0.4029	0.0435	0.90	0.86			
3595450	BCR	0.73	0.60	-0.6751	0.0366	0.85	0.83	-1.4158	1.4158	
3516375	SR	0.63	0.50	0.2607	0.0435	0.95	0.89			
3517000	SR	0.60	0.44	0.6588	0.0428	1.03	1.02			
3516616	BCR	0.44	0.55	1.2017	0.0438	0.88	0.82			
3595451	BCR	0.52	0.47	0.6973	0.0385	1.06	1.07	-2.0205	2.0205	
3516613	SR	0.56	0.26	0.4071	0.0438	1.36	1.47			
3516313	SR	0.80	0.32	-1.3362	0.0572	1.16	1.42			
3516318	SR	0.88	0.43	-1.8302	0.0648	1.14	0.96			
3488508	SR	0.73	0.39	-0.3096	0.0461	1.08	1.09			
3516913	BCR	0.43	0.54	1.3284	0.0432	0.87	0.83			
3595452	BCR	0.57	0.67	0.4845	0.0340	0.79	0.79	-1.4754	1.4754	
3516323	SR	0.71	0.40	-0.0894	0.0449	1.03	1.02			
3516303	SR	0.56	0.49	0.6580	0.0428	0.98	0.96			

Table C.8 The 2008 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
100000043879	SR	0.85	0.32	-1.1606	0.0557	1.05	1.23			
3488502	SR	0.92	0.27	-2.1067	0.0740	1.02	1.11			
3516291	SR	0.56	0.32	0.6406	0.0431	1.23	1.37			
3516625	SR	0.93	0.38	-1.9630	0.0706	0.89	0.54			
3516295	SR	0.71	0.29	0.1004	0.0447	1.16	1.29			
3516243	SR	0.76	0.39	-0.2844	0.0469	1.06	1.02			
3516923	ECR	0.80	0.52	-0.6537	0.0501	0.88	0.73			
3595453	ECR	0.53	0.63	0.8626	0.0267	1.06	1.06	-1.8458	0.2499	1.5959
3516248	SR	0.87	0.36	-1.3853	0.0590	0.98	0.93			
3516559	SR	0.93	0.26	-1.4432	0.0601	0.72	0.74			
3516255	SR	0.79	0.32	-0.4703	0.0483	1.07	1.12			
3516361	SR	0.72	0.47	-0.1306	0.0460	0.98	0.95			
3492088	SR	0.89	0.42	-1.4997	0.0611	0.89	0.74			
3516240	SR	0.68	0.52	0.2409	0.0443	0.89	0.85			
3516909	SR	0.63	0.47	0.3274	0.0441	1.00	0.94			
3516283	SR	0.53	0.53	0.9203	0.0429	0.93	0.94			
3516627	BCR	0.57	0.50	0.6439	0.0440	1.00	0.97			
3595447	BCR	0.48	0.55	1.1168	0.0366	0.98	0.98	-1.7979	1.7979	
3488441	SR	0.58	0.63	0.6093	0.0435	0.79	0.70			
3516285	SR	0.61	0.42	0.3104	0.0444	1.10	1.13			
3516290	SR	0.77	0.44	-0.1396	0.0470	0.87	0.85			
100000043862	SR	0.66	0.45	0.0847	0.0455	1.03	0.95			
3488263	SR	0.80	0.43	-0.7946	0.0521	0.98	0.89			
3488500	SR	0.91	0.31	-1.7078	0.0649	0.98	1.04			
100000043865	SR	0.54	0.44	0.8249	0.0429	1.05	1.05			
3516628	BCR	0.25	0.50	2.5157	0.0481	0.82	0.70			
3595454	BCR	0.45	0.68	1.3822	0.0316	0.78	0.76	-1.0038	1.0038	
3516453	SR	0.87	0.48	-0.8160	0.0515	0.69	0.52			
3516331	SR	0.52	0.35	1.1378	0.0428	1.15	1.21			
3516241	SR	0.87	0.37	-1.4702	0.0607	1.11	0.99			
3516247	SR	0.65	0.60	0.3674	0.0437	0.79	0.73			
3516329	SR	0.67	0.41	0.5144	0.0434	1.03	1.00			
3516355	SR	0.74	0.48	-0.1849	0.0463	0.92	0.90			
3516351	SR	0.57	0.51	0.4777	0.0434	0.98	0.93			
3516565	SR	0.56	0.56	0.8786	0.0428	0.90	0.90			
3516249	SR	0.72	0.39	-0.4091	0.0479	1.13	1.34			

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
3516333	BCR	0.68	0.65	0.1568	0.0446	0.75	0.64			
3595449	BCR	0.63	0.68	0.3681	0.0317	0.79	0.79	-0.8854	0.8854	
3516573	SR	0.80	0.38	-0.3209	0.0472	0.91	0.91			
3516929	SR	0.75	0.50	-0.2890	0.0471	0.93	0.80			
3516242	SR	0.50	0.37	1.2969	0.0431	1.16	1.23			
100000043863	SR	0.70	0.42	-0.0212	0.0454	1.02	0.95			
3516354	SR	0.71	0.52	0.0038	0.0454	0.94	0.84			
3516906	SR	0.64	0.46	0.3667	0.0440	1.03	1.01			
3516332	SR	0.54	0.27	0.5885	0.0432	1.32	1.49			
3516256	SR	0.65	0.37	0.1350	0.0447	1.17	1.25			
3516302	SR	0.72	0.39	-0.4092	0.0479	1.19	1.26			
3488256	SR	0.64	0.55	0.3246	0.0440	0.91	0.84			
3517013	BCR	0.61	0.55	0.5063	0.0436	0.90	0.87			
3595450	BCR	0.74	0.58	-0.7280	0.0380	0.90	0.89	-1.6251	1.6251	
3516375	SR	0.65	0.53	0.2299	0.0442	0.91	0.84			
3517000	SR	0.59	0.44	0.6588	0.0432	1.04	1.04			
3516616	BCR	0.44	0.57	1.3552	0.0441	0.85	0.80			
3595451	BCR	0.52	0.45	0.7537	0.0392	1.10	1.11	-2.0793	2.0793	
3516613	SR	0.54	0.28	0.4071	0.0443	1.34	1.47			
3516313	SR	0.82	0.26	-1.3362	0.0592	1.19	1.80			
3516318	SR	0.90	0.35	-1.8302	0.0674	1.09	1.08			
3488508	SR	0.76	0.39	-0.3522	0.0474	1.02	1.15			
3516327	BCR	0.48	0.26	1.1725	0.0429	1.32	1.47			
3595455	BCR	0.64	0.58	0.2939	0.0318	1.00	0.97	-0.8570	0.8570	
3488257	SR	0.76	0.43	-0.4530	0.0483	0.99	0.95			
3516303	SR	0.59	0.47	0.6580	0.0432	0.99	0.99			

Table C.9 The 2008 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	0.35	0.43	1.0539	0.0441	1.01	1.02			
3517601	SR	0.53	0.54	0.4455	0.0432	0.94	0.94			
3517609	SR	0.60	0.51	0.1508	0.0433	0.95	0.94			
3517613	SR	0.72	0.56	-0.6420	0.0459	0.80	0.70			
100000043334	BCR	0.48	0.61	0.5824	0.0443	0.82	0.75			
3595363	BCR	0.61	0.64	-0.1895	0.0320	0.86	0.80	-0.6819	0.6819	
3517616	SR	0.66	0.50	-0.1398	0.0439	0.92	0.88			
3517634	SR	0.69	0.56	-0.4706	0.0450	0.85	0.78			
3517642	SR	0.50	0.59	0.3982	0.0431	0.89	0.85			
3517638	SR	0.80	0.49	-1.1551	0.0497	0.83	0.71			
3487667	SR	0.25	0.20	2.0203	0.0498	1.30	2.25			
3517650	SR	0.68	0.50	-0.4683	0.0450	0.94	0.95			
3517863	SR	0.66	0.32	-0.4038	0.0447	1.21	1.44			
3517652	SR	0.71	0.45	-0.6359	0.0459	1.01	0.92			
3547473	SR	0.84	0.39	-1.1243	0.0494	0.83	0.76			
3517663	SR	0.35	0.43	1.5825	0.0466	1.12	1.22			
100000043348	ECR	0.41	0.44	0.9563	0.0448	1.06	1.06			
3595364	ECR	0.30	0.57	1.5655	0.0276	1.21	1.20	-1.0967	0.3318	0.7649
100000043345	SPR	0.37	0.50	1.1777	0.0457	0.99	0.97			
3547779	SPR	0.58	0.50	0.0174	0.0442	0.99	1.03			
3517645	SPR	0.74	0.46	-1.0518	0.0498	0.99	0.98			
100000043351	SPR	0.75	0.50	-1.1112	0.0506	0.87	0.85			
3517665	SR	0.38	0.43	0.9745	0.0451	1.05	1.15			
3517646	BCR	0.74	0.45	-1.0888	0.0509	0.92	0.91			
3595365	BCR	0.73	0.41	-0.9755	0.0342	1.14	1.57	0.1389	-0.1389	
3517667	SR	0.56	0.46	-0.5147	0.0466	1.15	1.33			
3517678	SR	0.93	0.31	-2.6820	0.0748	0.85	0.72			
3517742	SR	0.61	0.47	0.0227	0.0435	0.98	1.00			
3547642	SPR	0.73	0.35	-0.9166	0.0481	1.06	1.36			
3487560	SPR	0.29	0.60	1.7398	0.0486	0.78	0.65			
3517725	BCR	0.33	0.58	1.5045	0.0461	0.84	0.76			
3564022	BCR	0.49	0.65	0.5585	0.0298	0.96	0.92	-0.4548	0.4548	
3517710	SR	0.72	0.52	-0.6119	0.0457	0.85	0.74			
3517656	SR	0.67	0.40	-0.4094	0.0448	1.11	1.05			
100000057641	SR	0.52	0.36	0.6653	0.0433	1.21	1.33			
100000043347	ECR	0.74	0.55	-0.8969	0.0476	0.83	0.72			

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	0.32	0.52	2.6970	0.0429	0.94	0.93	-4.3825	0.7102	3.6723
3517876	SPR	0.15	0.40	2.8645	0.0598	0.96	1.02			
100000043353	SPR	0.67	0.41	-0.4017	0.0450	1.12	1.25			
3547535	SR	0.85	0.41	-1.6395	0.0551	0.91	0.73			
100000043338	SR	0.34	0.28	1.4392	0.0459	1.23	1.68			
3517687	SR	0.58	0.48	-0.0583	0.0436	1.00	0.96			
3517692	SR	0.85	0.33	-1.4991	0.0532	0.91	0.92			
3517673	ECR	0.70	0.33	-0.6673	0.0461	1.13	1.45			
3564020	ECR	0.47	0.42	0.2954	0.0377	1.22	1.26	-4.5319	1.1166	3.4153
3487649	SPR	0.23	0.42	2.2096	0.0521	0.97	1.28			
3517654	SPR	0.56	0.36	0.1125	0.0435	1.18	1.35			
100000043343	SPR	0.55	0.58	0.2698	0.0433	0.88	0.86			
3517712	SR	0.47	0.35	0.5663	0.0438	1.18	1.35			
3517714	SR	0.58	0.59	0.0092	0.0441	0.84	0.77			
3517716	SR	0.70	0.34	-0.4333	0.0449	1.16	1.15			
3517718	SR	0.71	0.39	-0.2963	0.0443	1.01	1.02			
3517878	BCR	0.43	0.52	0.8699	0.0440	0.97	0.92			
3595367	BCR	0.55	0.64	0.1013	0.0346	0.88	0.87	-1.4432	1.4432	
3517721	SR	0.55	0.46	0.5231	0.0431	1.04	1.05			
3517691	SR	0.65	0.58	-0.2784	0.0443	0.84	0.80			
3517709	SR	0.70	0.50	-0.7302	0.0464	0.97	0.90			
3555858	SR	0.46	0.44	0.6673	0.0435	1.05	1.15			
3492156	SPR	0.37	0.59	1.2944	0.0455	0.83	0.73			
3555859	SR	0.76	0.42	-1.4603	0.0527	1.24	1.39			
3517752	SR	0.67	0.51	-0.5723	0.0456	0.99	0.93			
3488830	SR	0.61	0.58	-0.0385	0.0436	0.89	0.82			

Table C.10 The 2008 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	0.37	0.42	1.0539	0.0442	1.01	1.02			
3517601	SR	0.54	0.54	0.4455	0.0435	0.95	0.95			
3517609	SR	0.62	0.51	0.1508	0.0438	0.99	0.96			
3517613	SR	0.74	0.56	-0.6420	0.0468	0.87	0.81			
100000043335	BCR	0.70	0.49	-0.4860	0.0459	0.95	1.00			
3595368	BCR	0.83	0.56	-1.3132	0.0363	0.87	0.88	-0.2339	0.2339	
3517616	SR	0.68	0.50	-0.1398	0.0445	0.94	0.92			
3517634	SR	0.70	0.57	-0.4706	0.0457	0.86	0.72			
3517642	SR	0.52	0.58	0.3982	0.0435	0.90	0.89			
3517638	SR	0.81	0.54	-1.1551	0.0503	0.80	0.66			
100000043349	SR	0.38	0.32	1.3415	0.0451	1.18	1.46			
3517650	SR	0.65	0.44	-0.4683	0.0458	1.14	1.48			
3517739	SR	0.87	0.36	-1.9183	0.0591	1.00	1.25			
3517652	SR	0.75	0.45	-0.6359	0.0467	0.93	0.82			
3547473	SR	0.85	0.41	-1.1243	0.0501	0.87	0.85			
3517663	SR	0.36	0.40	1.5825	0.0462	1.09	1.31			
3487765	ECR	0.46	0.59	0.8535	0.0439	0.85	0.81			
3595369	ECR	0.55	0.60	0.5148	0.0322	0.96	0.98	-2.3799	-0.9260	3.3059
100000043344	SPR	0.38	0.53	1.2419	0.0453	0.92	0.96			
3513631	SPR	0.58	0.50	0.1934	0.0445	1.00	0.98			
3487596	SPR	0.41	0.57	1.0476	0.0451	0.87	0.79			
100000043350	SPR	0.61	0.55	-0.0987	0.0456	0.92	0.86			
3517665	SR	0.39	0.40	0.9745	0.0451	1.11	1.31			
3517610	BCR	0.50	0.60	0.4313	0.0457	0.85	0.76			
3595370	BCR	0.56	0.57	0.0359	0.0332	1.08	1.18	-0.7781	0.7781	
3517667	SR	0.53	0.41	-0.5147	0.0475	1.35	1.89			
3517678	SR	0.94	0.31	-2.6820	0.0738	0.78	0.51			
3517742	SR	0.61	0.47	0.0227	0.0441	1.01	1.07			
3513630	SPR	0.70	0.41	-0.5989	0.0466	1.06	1.22			
100000043360	SPR	0.59	0.56	0.1275	0.0439	0.91	0.86			
100000048821	BCR	0.68	0.46	-0.4202	0.0457	1.05	1.04			
3595371	BCR	0.39	0.51	1.8783	0.0438	0.99	1.00	-2.7673	2.7673	
3517710	SR	0.78	0.53	-0.6119	0.0465	0.81	0.68			
3517656	SR	0.67	0.41	-0.4094	0.0455	1.15	1.07			
3491634	SR	0.29	0.19	1.7720	0.0471	1.36	2.23			
3547487	ECR	0.86	0.49	-1.7311	0.0568	0.84	0.77			

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
3564031	ECR	0.36	0.54	2.1381	0.0387	0.94	0.93	-4.0409	0.4064	3.6345
100000043354	SPR	0.43	0.56	1.0066	0.0443	0.91	0.83			
100000043356	SPR	0.81	0.46	-1.3785	0.0527	0.93	0.97			
3547535	SR	0.84	0.43	-1.6395	0.0555	1.03	0.85			
100000043338	SR	0.34	0.28	1.4309	0.0455	1.25	1.81			
3517687	SR	0.60	0.48	-0.0583	0.0442	1.00	0.95			
3517692	SR	0.83	0.33	-1.4991	0.0537	1.03	1.22			
3517648	ECR	0.70	0.37	-0.5360	0.0462	1.17	1.41			
3564027	ECR	0.67	0.62	-0.3195	0.0302	0.94	0.96	-0.8801	-1.5639	2.4440
3492169	SPR	0.41	0.50	1.1079	0.0450	0.99	1.02			
100000043342	SPR	0.70	0.48	-0.5518	0.0464	0.96	1.03			
3492165	SPR	0.50	0.58	0.5345	0.0444	0.86	0.78			
3487747	SR	0.24	0.44	2.1330	0.0502	0.95	0.98			
3517714	SR	0.62	0.57	0.0092	0.0447	0.86	0.77			
3517716	SR	0.70	0.35	-0.4333	0.0457	1.18	1.14			
3517718	SR	0.72	0.38	-0.2963	0.0450	1.05	1.09			
3517708	BCR	0.59	0.47	0.1843	0.0437	1.02	1.03			
3595372	BCR	0.82	0.56	-1.3958	0.0372	0.92	0.92	-0.7581	0.7581	
3517721	SR	0.56	0.46	0.5231	0.0435	1.05	1.09			
3517691	SR	0.70	0.58	-0.4072	0.0455	0.82	0.75			
3517709	SR	0.71	0.51	-0.7302	0.0472	0.98	1.04			
3487615	SR	0.62	0.60	0.0253	0.0442	0.84	0.76			
3487734	SPR	0.48	0.55	0.7117	0.0442	0.89	0.84			
3555859	SR	0.77	0.42	-1.4603	0.0534	1.20	1.26			
3517752	SR	0.68	0.52	-0.5723	0.0465	1.03	0.97			
3487898	SR	0.54	0.36	0.3744	0.0438	1.22	1.35			

Table C.11 The 2008 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	0.28	0.35	1.4965	0.0480	1.19	1.41			
3514014	SR	0.57	0.39	-0.2177	0.0426	1.13	1.13			
3514013	BCR	0.48	0.67	0.2481	0.0430	0.74	0.67			
3564107	BCR	0.66	0.64	-0.9490	0.0344	0.84	0.82	-1.2905	1.2905	
3514016	SR	0.79	0.34	-1.3613	0.0474	0.96	0.96			
3500150	SR	0.47	0.41	0.3158	0.0428	1.08	1.14			
3514053	SR	0.74	0.40	-1.2003	0.0463	0.95	0.98			
100000043330	SR	0.45	0.51	0.3621	0.0428	0.97	0.98			
100000043305	SR	0.64	0.32	-0.7079	0.0438	1.16	1.22			
3514702	ECR	0.32	0.51	1.0904	0.0458	0.94	0.89			
3564108	ECR	0.40	0.60	0.5369	0.0244	1.38	1.40	-0.8401	0.6976	0.1425
3513650	SPR	0.31	0.55	1.1148	0.0462	0.88	0.83			
3514064	SPR	0.22	0.58	1.6566	0.0499	0.78	0.62			
3500166	SPR	0.33	0.51	0.9813	0.0456	0.94	0.90			
100000043325	SPR	0.59	0.45	-0.4508	0.0438	0.99	1.10			
3514595	SR	0.69	0.35	-0.8540	0.0443	1.11	1.17			
3514059	SR	0.64	0.42	-0.5815	0.0434	1.02	0.98			
3514267	BCR	0.40	0.55	0.6788	0.0439	0.90	0.81			
3564110	BCR	0.67	0.60	-0.9812	0.0343	0.89	0.87	-1.2635	1.2635	
3514263	SPR	0.59	0.45	-0.3795	0.0431	1.00	1.05			
3487907	SPR	0.46	0.69	0.3647	0.0431	0.71	0.62			
100000043320	SR	0.47	0.35	0.2581	0.0428	1.17	1.23			
3514058	SR	0.33	0.47	1.0306	0.0451	0.96	1.03			
3514062	SR	0.43	0.58	0.5139	0.0432	0.88	0.88			
3514117	BCR	0.37	0.68	0.7094	0.0449	0.73	0.63			
3564111	BCR	0.41	0.68	0.5525	0.0318	0.87	0.84	-0.7657	0.7657	
3492059	SPR	0.45	0.56	0.3553	0.0435	0.87	0.84			
3487708	SPR	0.70	0.53	-1.0683	0.0465	0.83	0.83			
3514291	SR	0.76	0.38	-1.4001	0.0478	1.00	1.18			
3514607	ECR	0.27	0.66	1.3428	0.0484	0.71	0.56			
3564112	ECR	0.28	0.72	1.1814	0.0262	0.87	0.76	0.0189	-0.8420	0.8231
100000043323	SR	0.50	0.53	0.5661	0.0434	1.03	1.06			
3514057	SR	0.68	0.59	-0.9380	0.0448	0.82	0.69			
3514121	SR	0.72	0.37	-1.0563	0.0456	1.00	1.13			
3514118	BCR	0.10	0.31	2.9690	0.0672	1.03	0.94			
3564113	BCR	0.36	0.50	1.6151	0.0412	0.92	0.93	-2.4991	2.4991	

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	0.56	0.42	-0.2581	0.0427	1.06	1.13			
3514052	SR	0.53	0.34	-0.1085	0.0426	1.17	1.16			
3487539	SR	0.64	0.36	-0.6178	0.0437	1.13	1.17			
100000043311	SR	0.36	0.16	0.8435	0.0444	1.42	1.70			
3487525	SR	0.50	0.58	0.0551	0.0427	0.87	0.83			
3487540	SR	0.65	0.39	-0.7102	0.0437	1.11	1.06			
3514074	SR	0.42	0.29	0.3257	0.0431	1.21	1.29			
3514075	SR	0.65	0.39	-0.6275	0.0435	1.11	1.02			
100000043313	ECR	0.60	0.52	-0.5034	0.0437	0.91	0.96			
3595405	ECR	0.72	0.61	-1.1346	0.0260	0.93	1.15	-0.8613	0.1993	0.6621
3513638	SPR	0.37	0.45	0.8139	0.0444	1.05	1.09			
3487542	SPR	0.50	0.57	0.0986	0.0432	0.84	0.79			
3514092	SR	0.44	0.35	0.2379	0.0427	1.16	1.23			
3514136	SR	0.67	0.43	-0.8910	0.0447	0.95	1.05			
3514095	SR	0.32	0.46	1.2102	0.0460	0.97	1.03			
3487568	SR	0.19	0.11	2.0087	0.0526	1.46	2.20			
100000043309	SR	0.18	0.31	1.8701	0.0512	1.05	1.32			
3514103	SR	0.68	0.36	-0.5330	0.0432	1.06	1.02			
100000043304	SR	0.27	0.43	1.3321	0.0471	0.98	1.19			
3500162	SPR	0.24	0.35	1.5218	0.0492	1.09	1.20			
3514079	SPR	0.29	0.55	1.2839	0.0474	0.86	0.82			
3514669	BCR	0.56	0.54	-0.2550	0.0436	0.88	0.89			
3564114	BCR	0.73	0.55	-1.2583	0.0336	0.89	0.89	-0.4250	0.4250	
3487912	SR	0.52	0.50	-0.0934	0.0429	0.95	0.92			
3514710	SR	0.53	0.38	-0.1424	0.0429	1.14	1.19			
3514139	SR	0.68	0.39	-1.3743	0.0481	1.17	1.46			

Table C.12 The 2008 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	0.0475	1.21	1.39			
3514014	SR	0.58	0.39	-0.2177	0.0426	1.13	1.14			
3514013	BCR	0.50	0.65	0.1635	0.0429	0.76	0.69			
3564107	BCR	0.67	0.62	-1.0320	0.0354	0.84	0.83	-1.3764	1.3764	
3514016	SR	0.80	0.34	-1.3613	0.0480	0.96	1.03			
3487526	SR	0.60	0.52	-0.3818	0.0430	0.92	0.85			
3514053	SR	0.77	0.36	-1.2003	0.0468	1.02	1.19			
100000043330	SR	0.48	0.50	0.4265	0.0428	0.98	1.00			
100000043305	SR	0.64	0.32	-0.6357	0.0437	1.15	1.16			
3514283	ECR	0.41	0.60	0.7105	0.0438	0.82	0.72			
3564116	ECR	0.57	0.65	-0.5004	0.0272	1.02	0.99	-2.4388	1.4114	1.0274
3492049	SPR	0.60	0.41	-0.3910	0.0436	1.07	1.20			
100000043307	SPR	0.29	0.55	1.4660	0.0481	0.90	0.78			
3514162	SPR	0.44	0.58	0.6185	0.0440	0.90	0.85			
3487563	SPR	0.46	0.48	0.4457	0.0432	1.07	1.06			
3514595	SR	0.71	0.36	-0.9382	0.0450	1.12	1.35			
3514059	SR	0.68	0.43	-0.5815	0.0436	0.99	0.96			
3514217	BCR	0.30	0.41	1.5261	0.0479	1.09	1.07			
3595406	BCR	0.44	0.49	0.9485	0.0476	0.89	0.86	-2.9439	2.9439	
3513648	SPR	0.58	0.41	-0.2496	0.0429	1.03	1.07			
100000043314	SPR	0.29	0.54	1.3827	0.0472	0.89	0.82			
3500154	SR	0.74	0.48	-1.1600	0.0465	0.89	0.82			
3514058	SR	0.35	0.47	1.0306	0.0448	1.02	1.10			
3514062	SR	0.45	0.57	0.5139	0.0430	0.89	0.85			
3514117	BCR	0.38	0.66	0.8458	0.0450	0.75	0.64			
3564111	BCR	0.44	0.66	0.4167	0.0319	0.91	0.90	-0.8046	0.8046	
3514114	SPR	0.42	0.48	0.5733	0.0434	1.01	1.00			
3519804	SPR	0.27	0.59	1.5395	0.0484	0.80	0.63			
3514291	SR	0.78	0.35	-1.4001	0.0484	0.97	1.31			
3514607	ECR	0.28	0.66	1.4386	0.0484	0.72	0.59			
3564112	ECR	0.29	0.71	1.2339	0.0262	0.92	0.87	-0.1186	-0.6697	0.7883
100000043323	SR	0.51	0.51	0.5661	0.0432	1.04	1.08			
3514057	SR	0.69	0.56	-0.9380	0.0452	0.85	0.73			
3514121	SR	0.72	0.35	-1.0563	0.0461	1.04	1.25			
3514266	BCR	0.33	0.61	1.1230	0.0461	0.82	0.71			
3564120	BCR	0.51	0.62	0.0332	0.0339	0.92	0.92	-1.3167	1.3167	

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
3514055	SR	0.59	0.41	-0.2581	0.0429	1.11	1.21			
3514052	SR	0.53	0.31	-0.1085	0.0428	1.23	1.25			
3487539	SR	0.64	0.35	-0.5920	0.0440	1.13	1.18			
3487901	SR	0.86	0.37	-2.1555	0.0579	0.93	0.92			
3514056	SR	0.78	0.31	-1.9767	0.0555	1.40	1.85			
3487540	SR	0.66	0.43	-0.6311	0.0437	1.02	0.99			
3514074	SR	0.46	0.35	0.3257	0.0428	1.18	1.30			
3514075	SR	0.66	0.38	-0.6275	0.0438	1.11	1.05			
100000043313	ECR	0.62	0.52	-0.4647	0.0436	0.93	0.97			
3595405	ECR	0.73	0.60	-1.1127	0.0264	1.00	1.17	-1.1482	0.3695	0.7787
3487913	SPR	0.37	0.46	0.9479	0.0445	1.05	1.08			
3514167	SPR	0.56	0.47	-0.2011	0.0432	0.99	0.93			
3514092	SR	0.44	0.36	0.2379	0.0426	1.20	1.29			
3514136	SR	0.70	0.46	-0.9134	0.0451	0.95	1.01			
3514095	SR	0.32	0.45	1.2102	0.0457	1.03	1.19			
3514174	SR	0.52	0.40	0.1391	0.0424	1.11	1.16			
3492047	SR	0.34	0.38	1.0119	0.0448	1.15	1.21			
3514103	SR	0.70	0.35	-0.5330	0.0433	1.05	1.10			
100000043304	SR	0.29	0.44	1.3763	0.0470	0.98	1.18			
3487721	SPR	0.50	0.57	0.1096	0.0433	0.89	0.85			
3492052	SPR	0.24	0.48	1.7004	0.0507	0.95	0.83			
3514709	BCR	0.52	0.53	0.0865	0.0432	0.94	0.96			
3595408	BCR	0.75	0.49	-1.3311	0.0347	0.98	1.02	-0.7377	0.7377	
3487672	SR	0.39	0.51	0.7592	0.0442	0.93	0.99			
3514710	SR	0.54	0.37	-0.1424	0.0431	1.16	1.26			
3514139	SR	0.70	0.38	-1.3743	0.0489	1.11	1.42			