Appendix 17F: Item Parameters from the eTIMSS with PSI 2019 Calibrations

Problem Solving and Inquiry Item Parameters from the eTIMSS with PSI 2019 Calibration—Grade 4 Mathematics

Item		RMSD	Slope (a_i)	Location (b_i)	Guessing (c_i)	Step 1 (d_{i1})	Step 2 (d_{i2})
MI01_01	MQ11A01	0.020	1.085 (0.132)	1.226 (0.063)	0.121 (0.019)		
MI01_02A	MQ11A02A	0.033	0.890 (0.050)	-0.499 (0.045)			
MI01_02B	MQ11A02B	0.026	0.786 (0.046)	0.238 (0.041)			
MI01_02C	MQ11A02C	0.027	0.994 (0.053)	-0.195 (0.036)			
MI01_03A	MQ11A03A	0.038	0.485 (0.038)	0.480 (0.066)			
MI01_03B	MQ11A03B	0.032	0.993 (0.053)	-0.194 (0.036)			
MI01_04A	MQ11A04A	0.027	0.595 (0.027)	0.817 (0.039)		-0.419 (0.066)	0.419 (0.078)
MI01_04B	MQ11A04B	0.032	0.995 (0.054)	0.328 (0.034)			
MI01_05A	MQ11A05A	0.022	1.313 (0.180)	1.257 (0.062)	0.203 (0.019)		
MI01_05B	MQ11A05B	0.026	0.924 (0.050)	-0.096 (0.037)			
MI01_06A	MQ11A06A	0.026	1.310 (0.065)	0.087 (0.028)			
MI01_06B	MQ11A06B	0.031	1.400 (0.081)	1.030 (0.037)			
MI01_07A	MQ11R01A	0.041	0.527 (0.041)	-1.035 (0.095)			
MI01_07B	MQ11R01B	0.029	0.731 (0.045)	-0.373 (0.051)			
MI01_08A	MQ11R02A	0.028	1.174 (0.067)	0.837 (0.037)			
MI01_08B	MQ11R02B	0.026	1.079 (0.059)	0.134 (0.034)			
MI01_09	MQ11R03	0.019	1.313 (0.074)	0.714 (0.033)			
MI01_10	MQ11R04	0.019	0.542 (0.023)	0.943 (0.044)		-1.311 (0.101)	1.311 (0.111)
MI02_01A	MQ11P01A	0.020	1.002 (0.055)	0.421 (0.035)			
MI02_01B	MQ11P01B	0.044	0.469 (0.025)	1.413 (0.070)		-0.660 (0.088)	0.660 (0.115)
MI02_02	MQ11P02	0.060	0.753 (0.046)	0.263 (0.043)			
MI02_03	MQ11P03	0.046	0.300 (0.014)	-0.730 (0.069)		-2.194 (0.166)	2.194 (0.152)
MI02_04	MQ11P04	0.021	0.768 (0.031)	1.058 (0.035)		-1.018 (0.078)	1.018 (0.088)
MI02_05A	MQ11P05A	0.026	0.977 (0.054)	-0.373 (0.041)			
MI02_05B	MQ11P05B	0.023	0.884 (0.069)	1.651 (0.089)			
MI02_06A	MQ11P06A	0.024	0.866 (0.069)	1.659 (0.092)			
MI02_06B	MQ11P06B	0.019	1.041 (0.067)	1.121 (0.052)			
MI02_07A	MQ11P07A	0.020	1.175 (0.083)	1.368 (0.059)			
MI02_07B	MQ11P07B	0.021	1.207 (0.096)	1.617 (0.074)			

The concurrent calibration model included regular eTIMSS items with item parameters fixed to equal the values from the final eTIMSS 2019 adjusted model calibration (see Chapter 12, Appendix 12K).

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CHAPTER 17: SCALING AND REPORTING THE PROBLEM SOLVING AND INQUIRY DATA
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Problem Solving and Inquiry Item Parameters from the eTIMSS with PSI 2019 Calibration—Grade 4 Science

Item		RMSD	Slope (a_i)	Location (b_i)	Guessing (c_i)	Step 1 (d_{i1})	Step 2 (d_{i2})
SI01_01	SQ11F01	0.028	0.454 (0.025)	0.762 (0.046)		-0.514 (0.082)	0.514 (0.093)
SI01_02	SQ11F02	0.033	1.007 (0.058)	0.360 (0.033)			
SI01_03	SQ11F03	0.034	0.650 (0.045)	-0.194 (0.054)			
SI01_04	SQ11F04	0.037	0.782 (0.050)	0.055 (0.043)			
SI01_05	SQ11F05	0.032	0.656 (0.047)	0.099 (0.050)			
SI01_06	SQ11F06	0.042	0.424 (0.040)	-0.683 (0.106)			
SI01_07A	SQ11F07A	0.036	0.570 (0.077)	0.061 (0.185)	0.178 (0.059)		
SI01_07B	SQ11F07B	0.019	0.820 (0.079)	1.793 (0.122)			
SI01_08	SQ11F08	0.036	0.546 (0.044)	-0.663 (0.086)			
SI01_09	SQ11F09	0.034	0.737 (0.042)	0.678 (0.033)		0.218 (0.051)	-0.218 (0.060)
SI02_01	SQ11S01	0.035	1.028 (0.057)	-0.103 (0.035)			
SI02_02	SQ11S02	0.031	0.927 (0.055)	0.339 (0.035)			
SI02_03	SQ11S03	0.039	0.448 (0.019)	0.805 (0.043)		-1.580 (0.105)	1.580 (0.113)
SI02_04	SQ11S04	0.030	0.668 (0.036)	0.547 (0.032)		0.157 (0.054)	-0.157 (0.060)
SI02_05	SQ11S05	0.033	0.706 (0.039)	0.731 (0.034)		0.405 (0.049)	-0.405 (0.060)
SI02_07	SQ11S07	0.045	0.498 (0.030)	0.520 (0.045)		0.768 (0.070)	-0.768 (0.079)
SI02_08	SQ11S08	0.028	0.559 (0.047)	0.630 (0.062)			
SI02_09	SQ11S09	0.029	0.734 (0.051)	0.235 (0.045)			

The concurrent calibration model included regular eTIMSS items with item parameters fixed to equal the values from the final eTIMSS 2019 adjusted model calibration (see Chapter 12, Appendix 12L).

Problem Solving and Inquiry Item Parameters from the eTIMSS with PSI 2019 Calibration—Grade 8 Mathematics

Item		RMSD	Slope (a_i)	Location (b_i)	Guessing (c_i)	Step 1 (d_{i1})	Step 2 (d_{i2})
MI01_01	MQ12B01	0.032	1.043 (0.066)	0.467 (0.042)			
MI01_02	MQ12B02	0.024	1.779 (0.255)	1.528 (0.057)	0.123 (0.014)		
MI01_03	MQ12B03	0.027	0.617 (0.031)	0.932 (0.047)		-0.880 (0.100)	0.880 (0.111)
MI01_04A	MQ12B04A	0.035	1.605 (0.102)	0.846 (0.034)			
MI01_04B	MQ12B04B	0.036	1.394 (0.092)	1.023 (0.040)			
MI01_04C	MQ12B04C	0.043	0.871 (0.062)	0.921 (0.056)			
MI01_05A	MQ12B05A	0.031	1.390 (0.087)	0.771 (0.036)			
MI01_05B	MQ12B05B	0.025	1.472 (0.093)	0.816 (0.036)			
MI01_05C	MQ12B05C	0.017	0.965 (0.069)	2.084 (0.077)		-0.761 (0.114)	0.761 (0.152)
MI01_06	MQ12R01	0.020	1.400 (0.099)	1.227 (0.046)			
MI01_07A	MQ12R02A	0.027	1.092 (0.074)	0.877 (0.046)			
MI01_07B	MQ12R02B	0.031	1.086 (0.075)	0.866 (0.047)			
MI01_07C	MQ12R02C	0.021	1.626 (0.121)	1.249 (0.043)			
MI02_01	MQ12D01	0.033	1.368 (0.084)	0.629 (0.035)			
MI02_02A	MQ12D02A	0.091	0.718 (0.055)	-0.683 (0.077)			
MI02_02B	MQ12D02B	0.027	1.428 (0.097)	1.111 (0.042)			
MI02_03	MQ12D03	0.022	1.527 (0.100)	0.977 (0.037)			
MI02_04	MQ12D04	0.043	0.712 (0.053)	0.558 (0.058)			
MI02_05	MQ12D05	0.028	0.905 (0.065)	1.007 (0.057)			
MI02_06A	MQ12D06A	0.045	1.978 (0.162)	1.507 (0.044)			
MI02_06B	MQ12D06B	0.029	2.461 (0.212)	1.491 (0.038)			
MI02_07A	MQ12D07A	0.023	1.314 (0.101)	1.437 (0.056)			
MI02_07B	MQ12D07B	0.024	0.910 (0.050)	1.536 (0.049)		-0.616 (0.083)	0.616 (0.103)
MI02_08A	MQ12D08A	0.085	0.788 (0.059)	-0.681 (0.072)			
MI02_08B	MQ12D08B	0.057	0.594 (0.052)	0.967 (0.082)			

The concurrent calibration model included regular eTIMSS items with item parameters fixed to equal the values from the final eTIMSS 2019 adjusted model calibration (see Chapter 12, Appendix 12M).

Problem Solving and Inquiry Item Parameters from the eTIMSS with PSI 2019 Calibration—Grade 8 Science

Item		RMSD	Slope (a_i)	Location (b_i)	Guessing (c_i)	Step 1 (d_{i1})	Step 2 (d_{i2})
SI01_01	SQ12S01	0.044	0.615 (0.055)	-1.052 (0.114)			
SI01_02	SQ12S02	0.044	0.887 (0.069)	-1.004 (0.083)			
SI01_03	SQ12S03	0.027	1.096 (0.075)	0.775 (0.043)			
SI01_04	SQ12S04	0.038	1.090 (0.071)	0.193 (0.039)			
SI01_05	SQ12S05	0.030	0.810 (0.112)	0.345 (0.137)	0.211 (0.054)		
SI01_06	SQ12S06	0.045	1.100 (0.075)	0.781 (0.043)			
SI01_07A	SQ12S07A	0.036	1.115 (0.120)	-0.512 (0.125)	0.234 (0.062)		
SI01_07B	SQ12S07B	0.033	1.785 (0.253)	1.303 (0.052)	0.140 (0.017)		
SI01_07C	SQ12S07C	0.029	0.840 (0.115)	0.536 (0.114)	0.181 (0.046)		
SI01_08	SQ12S08	0.046	0.375 (0.045)	-0.335 (0.118)			
SI01_09	SQ12S09	0.029	0.423 (0.054)	1.812 (0.198)			
SI01_10	SQ12S10	0.050	0.889 (0.063)	-0.035 (0.049)			
SI01_11	SQ12S11	0.020	0.753 (0.072)	1.590 (0.108)			
SI01_12	SQ12S12	0.033	1.022 (0.070)	0.603 (0.043)			
SI01_13A	SQ12S13A	0.031	0.796 (0.110)	0.597 (0.114)	0.160 (0.045)		
SI01_13B	SQ12S13B	0.025	0.873 (0.061)	1.494 (0.059)		0.131 (0.058)	-0.131 (0.093)
SI02_01	SQ12P01	0.027	0.903 (0.111)	-0.483 (0.175)	0.277 (0.073)		
SI02_02	SQ12P02	0.038	0.317 (0.024)	1.609 (0.121)		-1.020 (0.150)	1.020 (0.188)
SI02_03	SQ12P03	0.024	0.820 (0.067)	1.157 (0.070)			
SI02_04	SQ12P04	0.037	1.184 (0.069)	0.937 (0.030)		0.298 (0.040)	-0.298 (0.053)
SI02_05	SQ12P05	0.032	0.414 (0.026)	-0.433 (0.068)		-0.557 (0.130)	0.557 (0.112)
SI02_06	SQ12P06	0.065	0.952 (0.068)	0.780 (0.049)			
SI02_09	SQ12P10	0.036	0.754 (0.061)	0.873 (0.062)			
SI02_10	SQ12P13	0.022	1.216 (0.088)	1.125 (0.049)			
SI02_11	SQ12P14	0.020	1.159 (0.089)	1.271 (0.058)			
SI02_12	SQ12P15	0.049	0.479 (0.025)	0.437 (0.047)		-0.891 (0.109)	0.891 (0.111)
SI02_13	SQ12P16	0.025	1.353 (0.206)	0.735 (0.084)	0.352 (0.035)		

The concurrent calibration model included regular eTIMSS items with item parameters fixed to equal the values from the final eTIMSS 2019 adjusted model calibration (see Chapter 12, Appendix 12N).

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