

Item Parameters for the TIMSS 2015 Students Confident in Mathematics Scale, Eighth Grade

Item	delta	tau_1	tau_2	tau_3	Infit
BSBM19A	-0.50782	-1.09617	-0.31356	1.40973	0.93
BSBM19B*	0.02025	-1.16866	0.14633	1.02233	1.04
BSBM19C*	0.24765	-0.85950	0.16100	0.69850	0.94
BSBM19D	-0.23484	-1.26266	-0.08260	1.34526	0.94
BSBM19E*	-0.05673	-0.97126	0.06128	0.90998	1.21
BSBM19F	0.28492	-1.25325	-0.17310	1.42635	0.99
BSBM19G	0.02811	-1.08338	-0.13552	1.21890	1.11
BSBM19H*	0.11634	-0.69162	0.02593	0.66569	0.92
BSBM19I*	0.10212	-0.89145	0.10503	0.78642	0.99

*Reverse coded

Scale Transformation Constants for the TIMSS 2015 Students Confident in Mathematics Scale, Eighth Grade

Scale Transformation Constants	
A = 9.553292	
B = 1.590838	

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2015

Equivalence Table of Raw and Transformed Scale Scores for the TIMSS
2015 Students Confident in Mathematics Scale, Eighth Grade

Raw Score	Transformed Scale Score	Cutpoint
0	3.19619	
1	4.99370	
2	5.86478	
3	6.46291	
4	6.92948	
5	7.32079	
6	7.66196	
7	7.96832	
8	8.24834	
9	8.51163	
10	8.76064	
11	8.99900	
12	9.22981	
13	9.45579	9.5
14	9.67949	
15	9.90347	
16	10.13034	
17	10.36309	
18	10.60515	
19	10.86066	
20	11.13293	
21	11.43104	
22	11.76507	
23	12.15148	12.1
24	12.61729	
25	13.22021	
26	14.10390	
27	15.92523	

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2015

Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the Items in the TIMSS 2015 Students Confident in Mathematics Scale, Eighth Grade

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Component Loadings for Each Item								
			BSBM19A	BSBM19B*	BSBM19C*	BSBM19D	BSBM19E*	BSBM19F	BSBM19G	BSBM19H*	BSBM19I*
Australia	0.90	56	0.80	0.75	0.83	0.79	0.58	0.77	0.58	0.80	0.77

