

Item Parameters for the TIMSS 2015 Students Like Learning Mathematics Scale, Fourth Grade

Item	delta	tau_1	tau_2	tau_3	Infit
01	-0.3 1'	-0.7 22	-0. 1	1.3 3	0.7
01 *	0.1 1'	-0. 7	-0.01 2	0. 302	1.72
01	0.12 2	-0. 2103	0.11'30	0.70'73	1.3
01	-0. 17	-0. 2 7'	-0.373'1	1.2020	1.1
01	-0.1 07	-0. 2 3	-0. 31'	1.01 02	0. 7
01	0.03	-1.2'7	-0.211	1. 7	1.0'
01	0.1'0'7'	-0. 0 7'	-0.2 7'	1.22 1	1.0
01	0. 13	-1.100	-0.237 0	1.33 2	0.
01	0. 7 1	-0. 2 31	-0.1030'	0.7313	0. 1

*Reverse coded

Scale Transformation Constants for the TIMSS 2015 Students Like Learning Mathematics Scale, Fourth Grade

Scale Transformation Constants	
. 02 3	TransformedScaleScore = 8402636 + 1.047479 • LogitScaleScore
1.0 7 7	

Equivalence Table of Raw and Transformed Scale Scores for the TIMSS

Raw Score	Transformed Scale Score	Cutpoint
0	4.40782	
1	5.53183	
2	6.06393	
3	6.42611	
4	6.71073	
5	6.94947	
6	7.15899	
7	7.34756	
8	7.52392	
9	7.68976	
10	7.84785	
11	8.00037	
12	8.14916	
13	8.29582	8.3
14	8.44192	
15	8.58902	
16	8.73889	
17	8.89348	
18	9.05518	
19	9.22676	
20	9.41034	
21	9.61310	
22	9.84154	
23	10.10678	10.1
24	10.42683	
25	10.83982	
26	11.43903	
27	12.65794	



Relationship Between the TIMSS 2015 Students Like Learning Mathematics Scale, Fourth Grade, and TIMSS 2015 Mathematics Achievement

Country	Pearson's Correlation with Mathematics Achievement		Variance in Mathematics Achievement Accounted for by Difference Between Regions of the Scale (%)
	(r)	(r ²)	
Australia	0.19	0.04	0.03
Bahrain	0.21	0.04	0.05
Belgium (Flemish)	0.10	0.01	0.01
Bulgaria	0.22	0.05	0.04
Canada	0.21	0.04	0.04
Chile	0.19	0.04	0.04
Chinese Taipei	0.21	0.05	0.04
Croatia	0.14	0.02	0.02
Cyprus	0.18	0.03	0.04
Czech Republic	0.17	0.03	0.02
Denmark	0.17	0.03	0.03
England	0.12	0.02	0.02
Finland	0.20	0.04	0.03
France	0.19	0.04	0.03
Georgia	0.22	0.05	0.04
Germany	0.16	0.03	0.03
Hong Kong SAR	0.22	0.05	0.04
Hungary	0.20	0.04	0.03
Indonesia	0.24	0.06	0.06
Iran, Islamic Rep. of	0.23	0.05	0.05
Ireland	0.17	0.03	0.03
Italy	0.13	0.02	0.01
Japan	0.30	0.09	0.09
Jordan	0.25	0.06	0.06
Kazakhstan	0.15	0.02	0.02
Korea, Rep. of	0.33	0.11	0.10
Kuwait	0.18	0.03	0.04
Lithuania	0.16	0.02	0.02
Morocco	0.29	0.09	0.08
Netherlands	0.18	0.03	0.03
New Zealand	0.05	0.00	0.00
Northern Ireland	0.18	0.03	0.03
Norway (5)	0.10	0.01	0.02
Oman	0.26	0.07	0.06
Poland	0.13	0.02	0.02
Portugal	0.28	0.08	0.07
Qatar	0.21	0.04	0.05
Russian Federation	0.22	0.05	0.04
Saudi Arabia	0.21	0.04	0.05
Serbia	0.10	0.01	0.01
Singapore	0.23	0.05	0.05
Slovak Republic	0.07	0.01	0.00
Slovenia	0.19	0.03	0.03
South Africa (5)	0.32	0.10	0.12
Spain	0.13	0.02	0.02
Sweden	0.07	0.00	0.00
Turkey	0.26	0.07	0.06
United Arab Emirates	0.19	0.03	0.04
United States	0.16	0.02	0.02
International Median	0.19	0.04	0.03
Benchmarking Participants			
Buenos Aires, Argentina	0.06	0.00	0.01
Ontario, Canada	0.21	0.04	0.04
Quebec, Canada	0.18	0.03	0.03
Norway (4)	0.17	0.03	0.03
Abu Dhabi, UAE	0.21	0.04	0.05
Dubai, UAE	0.16	0.02	0.02
Florida, US	0.19	0.04	0.04

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