



Item Parameters for the TIMSS 2015 Could Do Literacy and Numeracy Tasks When Began Primary School Scale, Fourth Grade

Item	delta	tau_1	tau_2	tau_3	Infit
ASBH07A	-1.03450	-1.59845	-0.12765	1.72610	0.95
ASBH07B	0.00558	-1.49311	-0.20363	1.69674	0.80
ASBH07C	0.95109	-1.27650	-0.19632	1.47282	0.84
ASBH07D	1.46628	-1.16350	-0.27247	1.43597	1.06
ASBH07E	-0.54696	-1.61915	-0.16181	1.78096	0.91
ASBH07F	0.16992	-1.52300	-0.23087	1.75387	0.87
ASBH08A	-0.41760	-2.17966	0.18999	1.98967	1.43
ASBH08B	0.05264	-2.24322	0.38476	1.85846	1.14
ASBH08C	0.30953	-2.07283	0.40542	1.66741	1.10
ASBH08D	-0.97181				1.01
ASBH08E	0.01583				1.06

Scale Transformation Constants for the TIMSS 2015 Could Do Literacy and Numeracy Tasks When Began Primary School Scale, Fourth Grade

Scale Transformation Constants	
A = 8.878367	TransformedScaleScore = 8878367 + 1.114077 * LogitScaleScore
B = 1.114077	

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 Could Do Literacy and Numeracy Tasks When Began Primary School Scale, Fourth Grade

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Component Loadings for Each Item										
			ASBH07A	ASBH07B	ASBH07C	ASBH07D	ASBH07E	ASBH07F	ASBH08A	ASBH08B	ASBH08C	ASBH08D	ASBH08E
Australia	0.91	53	0.72	0.82	0.82	0.79	0.78	0.81	0.64	0.72	0.76	0.58	0.56
Bahrain	0.87	45	0.65	0.80	0.81	0.73	0.72	0.80	0.57	0.62	0.63	0.46	0.48
Belgium (Flemish)	0.89	48	0.73	0.82	0.80	0.75	0.78	0.80	0.44	0.63	0.68	0.50	0.53
Bulgaria	0.93	61	0.83	0.86	0.82	0.76	0.83	0.85	0.73	0.77	0.78	0.65	0.67
Canada	0.90	50	0.69	0.80	0.80	0.76	0.75	0.80	0.62	0.67	0.71	0.59	0.57
Chile	0.90	50	0.73	0.80	0.83	0.77	0.77	0.81	0.57	0.63	0.64	0.58	0.58
Chinese Taipei	0.83	40	0.78	0.85	0.85	0.79	0.80	0.76	0.21	0.26	0.26	0.39	0.42
Croatia	0.90	52	0.76	0.84	0.83	0.77	0.78	0.82	0.59	0.68	0.70	0.55	0.56
Cyprus	0.90	49	0.73	0.84	0.81	0.74	0.78	0.82	0.55	0.63	0.65	0.54	0.57
Czech Republic	0.89	49	0.78	0.85	0.83	0.77	0.79	0.82	0.50	0.60	0.62	0.45	0.50
Denmark	0.87	44	0.73	0.79	0.73	0.61	0.72	0.78	0.54	0.66	0.70	0.49	0.48
England	-	-	-	-	-	-	-	-	-	-	-	-	-
Finland	0.91	53	0.75	0.83	0.82	0.78	0.78	0.83	0.66	0.72	0.72	0.49	0.52
France	0.88	46	0.65	0.77	0.76	0.68	0.71	0.76	0.60	0.69	0.69	0.56	0.52
Georgia	0.88	46	0.74	0.83	0.82	0.71	0.78	0.80	0.42	0.57	0.62	0.46	0.50
Germany	0.88	46	0.75	0.79	0.76	0.67	0.75	0.75	0.52	0.65	0.71	0.50	0.51
Hong Kong SAR	0.82	38	0.74	0.82	0.83	0.71	0.79	0.78	0.31	0.32	0.33	0.32	0.35
Hungary	0.90	50	0.80	0.86	0.82	0.72	0.81	0.80	0.49	0.67	0.72	0.43	0.44
Indonesia	0.91	53	0.76	0.83	0.82	0.76	0.76	0.80	0.66	0.71	0.71	0.58	0.57
Iran, Islamic Rep. of	0.90	51	0.77	0.82	0.81	0.74	0.81	0.82	0.43	0.62	0.64	0.63	0.62
Ireland	0.89	51	0.75	0.83	0.85	0.80	0.80	0.83	0.56	0.60	0.63	0.55	0.54
Italy	0.90	49	0.73	0.80	0.79	0.70	0.75	0.79	0.58	0.71	0.73	0.55	0.54
Japan	0.86	46	0.82	0.84	0.86	0.82	0.84	0.85	0.27	0.36	0.40	0.52	0.48
Jordan	0.89	50	0.78	0.85	0.81	0.69	0.81	0.84	0.54	0.59	0.61	0.58	0.60
Kazakhstan	0.88	46	0.69	0.79	0.80	0.76	0.73	0.78	0.57	0.64	0.67	0.46	0.48
Korea, Rep. of	0.84	47	0.85	0.89	0.92	0.90	0.90	0.89	0.21	0.19	0.22	0.38	0.41
Kuwait	0.89	48	0.74	0.82	0.82	0.74	0.77	0.82	0.56	0.63	0.63	0.48	0.48
Lithuania	0.89	48	0.75	0.81	0.80	0.75	0.73	0.75	0.60	0.65	0.65	0.53	0.54
Morocco	0.93	59	0.78	0.88	0.86	0.74	0.83	0.86	0.66	0.76	0.78	0.70	0.57
Netherlands	0.91	52	0.79	0.84	0.82	0.78	0.77	0.79	0.58	0.70	0.72	0.49	0.54
New Zealand	0.90	51	0.73	0.81	0.80	0.74	0.78	0.80	0.57	0.70	0.74	0.58	0.57
Northern Ireland	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway (5)	0.90	50	0.78	0.83	0.81	0.69	0.80	0.82	0.52	0.70	0.72	0.53	0.50
Oman	0.88	47	0.69	0.79	0.79	0.71	0.73	0.80	0.61	0.65	0.65	0.52	0.54
Poland	0.90	51	0.75	0.83	0.83	0.76	0.80	0.83	0.59	0.70	0.71	0.47	0.51
Portugal	0.89	48	0.73	0.80	0.77	0.71	0.77	0.79	0.54	0.65	0.67	0.55	0.56
Qatar	0.89	48	0.68	0.81	0.80	0.73	0.76	0.82	0.59	0.65	0.66	0.50	0.52
Russian Federation	0.90	51	0.75	0.83	0.83	0.77	0.74	0.77	0.65	0.71	0.72	0.50	0.52
Saudi Arabia	0.89	49	0.70	0.83	0.82	0.73	0.78	0.83	0.53	0.61	0.62	0.55	0.57
Serbia	0.89	49	0.77	0.81	0.77	0.51	0.78	0.82	0.61	0.67	0.70	0.59	0.61
Singapore	0.88	47	0.73	0.82	0.83	0.78	0.76	0.80	0.59	0.60	0.60	0.44	0.47
Slovak Republic	0.89	48	0.75	0.82	0.76	0.67	0.78	0.79	0.52	0.66	0.72	0.54	0.55
Slovenia	0.92	54	0.80	0.84	0.82	0.74	0.81	0.84	0.60	0.72	0.76	0.55	0.56
South Africa (5)	0.86	42	0.65	0.74	0.77	0.72	0.72	0.74	0.52	0.58	0.61	0.47	0.49
Spain	0.91	53	0.76	0.80	0.83	0.78	0.78	0.82	0.64	0.67	0.70	0.59	0.55
Sweden	0.90	52	0.76	0.84	0.83	0.76	0.78	0.81	0.61	0.68	0.70	0.52	0.57
Turkey	0.92	58	0.81	0.84	0.83	0.80	0.85	0.86	0.57	0.69	0.73	0.66	0.67
United Arab Emirates	0.88	47	0.68	0.80	0.80	0.74	0.73	0.80	0.61	0.65	0.66	0.47	0.48
United States	-	-	-	-	-	-	-	-	-	-	-	-	-
Benchmarking Participants													
Buenos Aires, Argentina	0.91	52	0.76	0.81	0.80	0.73	0.77	0.77	0.65	0.73	0.73	0.54	0.54
Ontario, Canada	0.90	50	0.68	0.79	0.82	0.77	0.75	0.80	0.62	0.67	0.71	0.56	0.56
Quebec, Canada	0.89	48	0.68	0.79	0.76	0.69	0.73	0.77	0.65	0.68	0.72	0.59	0.55
Norway (4)	0.91	52	0.77	0.84	0.80	0.69	0.78	0.82	0.58	0.73	0.76	0.54	0.55
Abu Dhabi, UAE	0.89	47	0.70	0.82	0.81	0.75	0.74	0.81	0.61	0.64	0.65	0.45	0.45
Dubai, UAE	0.88	47	0.67	0.78	0.80	0.73	0.72	0.79	0.61	0.64	0.67	0.52	0.51
Florida, US	-	-	-	-	-	-	-	-	-	-	-	-	-

A dash (-) indicates comparable data not available.

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



Australia  
Bahrain  
Belgium (Flemish)  
Bulgaria  
Canada  
Chile  
Chinese Taipei  
Croatia  
Cyprus  
Czech Republic  
Denmark  
England  
Finland  
France  
Georgia  
Germany  
Hong Kong SAR  
Hungary  
Indonesia  
Iran, Islamic Rep. of  
Ireland  
Italy  
Japan  
Jordan  
Kazakhstan  
Korea, Rep. of  
Kuwait

