

The Confidence in Teaching Mathematics (CTM) scale was created based on teachers' responses to the five

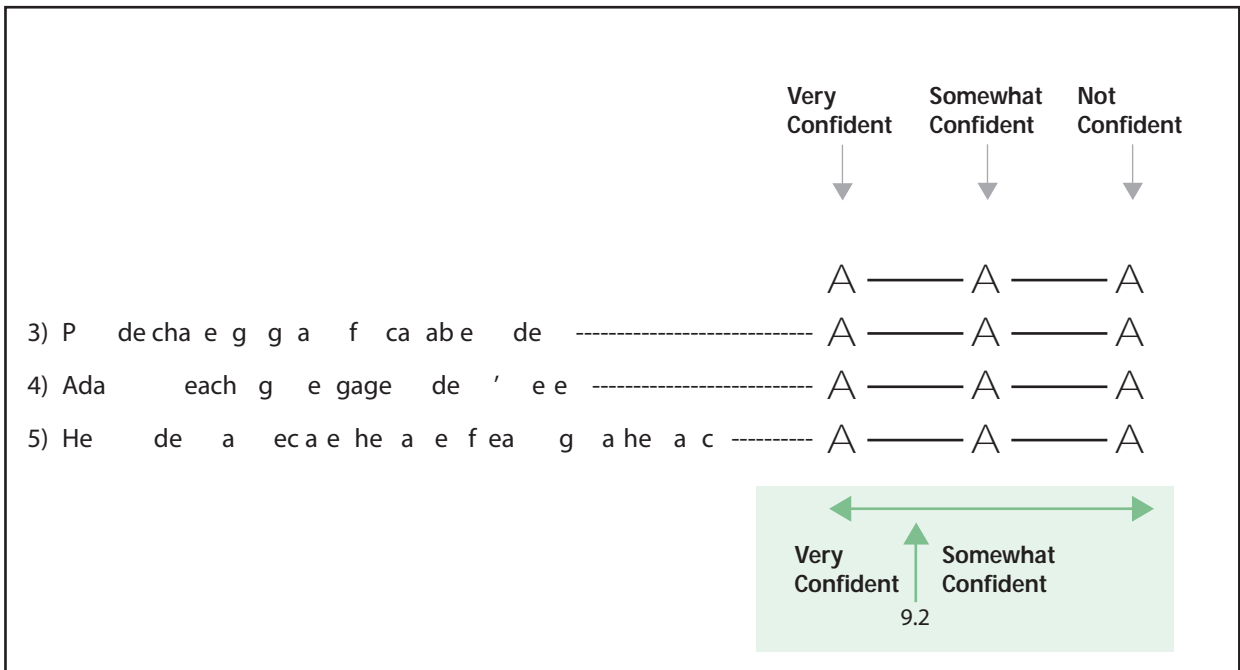


Exhibit 3: Scale Transformation Constants

Scale Transformation Constants

$$A = 10.60547$$

$$\text{Transformed Scale Score} = 10.60547$$

Exhibit 5: Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the Items in the TIMSS 2011 Confidence in Teaching Mathematics Scale, Eighth Grade

Exhibit 5: Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the Items in the TIMSS 2011 Confidence in Teaching Mathematics Scale, Eighth Grade (Continued)

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Factor Loadings for Each Item				
			BTBM18A	BTBM18B	BTBM18C	BTBM18D	BTBM18E
Mexico	0.71	46	0.67	0.74	0.62	0.71	0.65
Netherlands	0.69	45	0.52	0.67	0.73	0.70	0.72
Norway	0.67	44	0.53	0.72	0.67	0.72	0.66
Oman	0.59	39	0.61	0.64	0.54	0.64	0.67
Pakistan	0.65	42	0.59	0.70	0.64	0.64	0.65
Qatar	0.77	53	0.70	0.73	0.75	0.73	0.71
Russia	0.58	37	0.26	0.55	0.74	0.65	0.73
Russia (Federal)	0.54	40	0.66	0.79	0.63	0.54	0.53
Saudi Arabia	0.71	47	0.68	0.70	0.58	0.66	0.79
Singapore	0.73	48	0.58	0.72	0.71	0.72	0.72
Slovenia	0.59	38	0.37	0.65	0.61	0.75	0.66
Slovenia (Federal)	0.59	39	0.40	0.59	0.63	0.76	0.68
Sri Lanka	0.60	39	0.57	0.70	0.53	0.75	0.54
Thailand	0.73	49	0.61	0.65	0.76	0.74	0.72
Turkey	0.67	43	0.58	0.62	0.64	0.77	0.66
Turkey (Federal)	0.63	41	0.63	0.74	0.44	0.67	0.68
Ukraine	0.44	38		0.51	0.74	0.68	0.52
United Arab Emirates	0.67	44	0.55	0.73	0.69	0.72	0.59
United States	0.69	45	0.55	0.70	0.68	0.70	0.72
Ninth Grade Participants							
Bahrain	0.62	41	0.45	0.64	0.66	0.68	0.73
Hong Kong	0.40	32	0.19	0.04	0.17	0.89	0.88
Saudi Arabia	0.74	51	0.65	0.74	0.68	0.75	0.74
Benchmarking Participants							
Australia, Canada	0.72	48	0.53	0.74	0.66	0.74	0.77
Oman, Canada	0.80	57	0.72	0.82	0.77	0.74	0.72
Quebec, Canada	0.72	48	0.52	0.74	0.72	0.70	0.75
Abu Dhabi, UAE	0.70	46	0.58	0.75	0.71	0.80	0.51
Dubai, UAE	0.71	47	0.64	0.76	0.70	0.69	0.61
Alabama, US	0.70	47	0.65	0.54	0.77	0.67	0.77
California, US	0.63	42	0.37	0.72	0.63	0.70	0.74
Colorado, US	0.68	44	0.28	0.60	0.74	0.72	0.83
Connecticut, US	0.62	47		0.38	0.69	0.76	0.83
Florida, US	0.59	41	0.65	0.54	0.72	0.54	0.71
Idaho, US	0.62	46		0.42	0.67	0.79	0.78
Massachusetts, US	0.57	37	0.27	0.52	0.69	0.79	0.65
Michigan, US	0.63	41	0.45	0.69	0.75	0.57	0.72
North Carolina, US	0.67	50	0.72	0.82	0.73	0.63	0.61

Netherlands, Singapore, Slovenia, Saudi Arabia, United States, United Arab Emirates, Bahrain, Hong Kong, Saudi Arabia, Quebec, Abu Dhabi, Dubai, Alabama, California, Colorado, Connecticut, Florida, Idaho, Massachusetts, Michigan, North Carolina.

