

# TIMSS 2011

## TIMSS 2011 Conditioning Models for Concurrent Calibration

**TIMSS 2011 Conditioning Models for Concurrent Calibration at the Fourth Grade**

Country	2011				2007			
	Number of Primary Conditioning Variables	Number of Principal Components Available	Number of Principal Components Retained	Percentage of Variance Explained	Number of Primary Conditioning Variables	Number of Principal Components Available	Number of Principal Components Retained	Percentage of Variance Explained
Armenia	2	227	129	90	—	—	—	—
Australia	2	233	129	90	2	293	163	90
Austria	2	233	129	90	2	293	168	90
Azerbaijan	2	237	143	90	—	—	—	—
Bahrain	3	239	139	90	—	—	—	—
Belgium (Flemish)	2	235	129	90	—	—	—	—
Chile	2	239	138	90	—	—	—	—
Chinese Taipei	2	237	128	90	2	293	165	90
Croatia	2	235	128	90	—	—	—	—
Czech Republic	2	239	129	90	2	293	168	90
Denmark	2	239	132	90	2	285	159	90
England	2	239	131	90	2	291	165	90
Finland	3	237	125	90	—	—	—	—
Georgia	2	235	137	90	2	289	171	90
Germany	2	239	130	90	2	293	163	90
Hong Kong SAR	3	239	128	90	3	293	160	90
Hungary	2	239	131	90	2	291	166	90
Iran, Islamic Rep. of	2	239	139	90	2	293	170	90
Ireland	3	237	129	90	—	—	—	—
Italy	3	239	132	90	2	237	152	90
Japan	2	239	129	90	2	293	165	90
Kazakhstan	3	239	133	90	—	—	—	—
Korea, Rep. of	2	239	127	90	—	—	—	—
Kuwait	2	239	148	90	—	—	—	—
Lithuania	2	239	131	90	2	293	166	90
Malta	2	239	134	90	—	—	—	—
Morocco	2	239	146	90	—	—	—	—
Netherlands	2	227	129	90	2	285	160	90
New Zealand	7	239	134	90	7	293	168	90
Northern Ireland	2	239	129	90	—	—	—	—

**TIMSS 2011 Conditioning Models for Concurrent Calibration at the Fourth Grade (Continued)**

Country	2011				2007			
	Number of Primary Conditioning Variables	Number of Principal Components Available	Number of Principal Components Retained	Percentage of Variance Explained	Number of Primary Conditioning Variables	Number of Principal Components Available	Number of Principal Components Retained	Percentage of Variance Explained
Norway	3	239	129	90	2	293	165	90
Oman	3	239	142	90	—	—	—	—
Poland	2	231	127	90	—	—	—	—
Portugal	2	235	127	90	—	—	—	—
Qatar	3	231	136	90	—	—	—	—
Romania	3	239	133	90	—	—	—	—
Russian Federation	2	239	132	90	2	293	167	90
Saudi Arabia	3	239	138	90	—	—	—	—
Serbia	2	227	125	90	—	—	—	—
Singapore	2	239	129	90	2	293	164	90
Slovak Republic	3	235	129	90	3	293	169	90
Slovenia	2	236	129	90	2	293	168	90
Spain	5	229	130	90	—	—	—	—
Sweden	2	237	128	90	2	293	166	90
Thailand	2	239	138	90	—	—	—	—
Tunisia	2	239	143	90	2	293	176	90
Turkey	2	237	139	90	—	—	—	—
United Arab Emirates	5	235	138	90	—	—	—	—
United States	9	233	133	90	7	283	166	90
Yemen	2	233	143	90	—	—	—	—
<b>Sixth Grade Participants</b>								
Botswana	2	239	141	90	—	—	—	—
Honduras	2	239	136	90	—	—	—	—
Yemen	2	233	141	90	—	—	—	—
<b>Benchmarking Participants</b>								
Alberta, Canada	3	239	131	90	—	—	—	—
Ontario, Canada	3	239	133	90	—	—	—	—
Quebec, Canada	3	239	130	90	—	—	—	—
Abu Dhabi, UAE	3	235	136	90	—	—	—	—
Dubai, UAE	3	235	134	90	—	—	—	—
Florida, US	9	233	130	90	—	—	—	—
North Carolina, US	9	233	89	76	—	—	—	—

**TIMSS 2011 Conditioning Models for Concurrent Calibration at the Eighth Grade**

Country	2011				2007			
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Armenia	2	814	292	82	—	—	—	—
Australia	2	363	187	90	2	400	203	88
Bahrain	3	366	197	90	3	397	211	87
Chile	2	369	202	90	—	—	—	—
Chinese Taipei	2	369	184	90	2	397	202	89
England	2	368	189	90	2	382	201	89
Finland	3	827	213	79	—	—	—	—
Georgia	2	825	228	76	2	901	208	71
Ghana	2	369	214	90	—	—	—	—
Hong Kong SAR	2	369	185	90	2	400	173	83
Hungary	2	829	258	78	2	905	205	66
Indonesia	2	829	289	85	2	907	210	70
Iran, Islamic Rep. of	2	369	204	90	2	400	199	84
Israel	3	339	181	90	—	—	—	—
Italy	3	369	190	90	2	327	199	90
Japan	2	366	184	90	2	396	212	90
Jordan	2	369	207	90	2	397	230	90
Kazakhstan	3	826	219	77	—	—	—	—
Korea, Rep. of	2	366	182	90	2	397	212	90
Lebanon	3	677	198	75	3	740	189	70
Lithuania	2	829	237	76	2	906	199	65
Macedonia, Rep. of	3	825	203	73	—	—	—	—
Malaysia	2	365	196	90	2	398	221	90
Morocco	2	823	412	90	—	—	—	—
New Zealand	6	369	192	90	—	—	—	—
Norway	3	369	189	90	2	397	217	90
Oman	3	366	208	90	3	397	232	90
Palestinian Nat'l Auth.	2	356	202	90	2	393	218	87
Qatar	3	358	190	90	—	—	—	—
Romania	3	829	276	80	3	907	209	68
Russian Federation	2	826	244	77	2	903	223	70
Saudi Arabia	3	365	200	90	—	—	—	—
Singapore	2	369	188	90	2	399	215	90
Slovenia	2	829	220	76	2	791	202	69
Sweden	2	827	278	84	2	907	260	79
Syrian Arab Republic	2	826	220	72	2	907	232	68
Thailand	2	366	198	90	2	400	225	90
Tunisia	2	369	207	90	2	400	204	84
Turkey	2	364	200	90	—	—	—	—

**TIMSS 2011 Conditioning Models for Concurrent Calibration at the Eighth Grade (Continued)**

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	Number of Primary Conditioning Variables	Number of Principal Components Available	Number of Principal Components Retained	Percentage of Variance Explained	Number of Primary Conditioning Variables	Number of Principal Components Available	Number of Principal Components Retained	Percentage of Variance Explained
Ukraine	3	822	168	68	3	907	221	69
United Arab Emirates	5	365	202	90	—	—	—	—
United States	9	363	195	90	7	390	223	90
<b>Ninth Grade Participants</b>								
Botswana	2	369	212	90	—	—	—	—
Honduras	2	313	181	90	—	—	—	—
South Africa	3	369	214	90	—	—	—	—
<b>Benchmarking Participants</b>								
Alberta, Canada	3	369	190	90	—	—	—	—
Ontario, Canada	3	369	188	90	—	—	—	—
Quebec, Canada	3	369	193	90	—	—	—	—
Abu Dhabi, UAE	3	365	197	90	—	—	—	—
Dubai, UAE	3	365	196	90	—	—	—	—
Alabama, US	9	363	105	71	—	—	—	—
California, US	9	363	130	77	—	—	—	—
Colorado, US	9	363	108	72	—	—	—	—
Connecticut, US	9	363	104	71	—	—	—	—
Florida, US	9	363	85	65	—	—	—	—
Indiana, US	9	363	113	73	—	—	—	—
Massachusetts, US	9	363	103	71	—	—	—	—
Minnesota, US	9	363	125	77	—	—	—	—
North Carolina, US	9	363	105	71	—	—	—	—