



**Exhibit 2: Item Parameters for the TIMSS 2011 School Discipline and Safety Scale, Eighth Grade**

Item	delta	tau_1	tau_2	tau_3
12	1.417	2.0	0.444	.10521
12	0.5470	1.27	0.0	2.511
12	0.425	2.170	0.71	2.701
12	1.17	1.40	0.	2.
12	1.022	1.7245	0.4505	2.2550
12	1.41	1.047	0.1	1.727
12	1.240	0.215	1.244	1.507
12	1.4511	1.712	0.514	2.52
12	1.15	0.744	1.0151	1.757
12	2.11	0.071	0.7572	0.4
12	2.550	1.112	0.022	0.50

**Exhibit 3: Scale Transformation Constants**

Scale Transformation Constants	
.427	
0.7571	$\cdot 427 + 0.7571$

**Exhibit 4: Equivalence Table of the Raw Score and the Transformed Scale Score**

Raw Score	Transformed Scale Score	Cutpoint	Raw Score	Transformed Scale Score	Cutpoint
0	.044		17	.057	
1	5.11225		1	.2471	
2	5.5427		1	.71	
	.0142		20	.571	
4	.2511		21	.7747	
5	.501		22	.517	
	.12		2	.207	
7	.4071		24	.501	
	.2		25	.717	
	7.111		2	10.11045	
10	7.2211		27	10.4424	
11	7.5107		2	10.7500	10.7
12	7.41		2	11.1750	
1	7.512		0	11.521	
14	7.70		1	12.04	
15	7.2011		2	12.7271	
1	7.44	.0		1.441	



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



