

Exhibit 13.14: TIMSS 2015 Linear Transformation Constants for Achievement Scores at the Eighth Grade

Overall Mathematics	TIMSS 2011 Published Scores		TIMSS 2011 Re-Scaled Scores		$A_{k,i}$	$B_{k,i}$
	Mean	Standard Deviation	Mean	Standard Deviation		
PV1	473.42229	111.72611	-0.03549	0.99024	477.42708	112.82747
PV2	473.75171	112.62466	-0.03610	0.99166	477.85132	113.57130
PV3	473.63844	113.27223	-0.03601	0.99136	477.75261	114.25951
PV4	473.10247	113.46924	-0.03444	0.99066	477.04681	114.53935
PV5	473.67012	113.04213	-0.03540	0.99170	477.70540	113.98864

Overall Science	TIMSS 2011 Published Scores		TIMSS 2011 Re-Scaled Scores		$A_{k,i}$	$B_{k,i}$
	Mean	Standard Deviation	Mean	Standard Deviation		
PV1	482.10953	107.52913	-0.00234	0.92492	482.38202	116.25820
PV2	482.14011	107.21152	-0.00113	0.92745	482.27044	115.59787
PV3	483.14479	106.44266	-0.00367	0.92707	483.56607	114.81597
PV4	481.87213	107.83798	-0.00133	0.92584	482.02702	116.47632
PV5	482.89696	107.25956	-0.00132	0.92636	483.04972	115.78622