

**Exhibit M1.3: Multiple Comparisons of Average Advanced Mathematics Achievement**

Instructions: Read across the row for a country to compare performance with the countries listed along the top of the chart. The symbols indicate whether the average achievement of the country in the row is significantly lower than that of the comparison country, significantly higher than that of the comparison country, or if there is no statistically significant difference between the average achievement of the two countries.

Country	Average Scale Score	Russian Federation 6hr+	Lebanon	United States	Russian Federation	Portugal	France	Slovenia	Norway	Sweden	Italy
		Russian Federation 6hr+	540 (7.8)			▲	▲	▲	▲	▲	▲
Lebanon	532 (3.1)			▲	▲	▲	▲	▲	▲	▲	
United States	485 (5.2)	▼	▼				▲	▲	▲	▲	
Russian Federation	485 (5.7)	▼	▼				▲	▲	▲	▲	
Portugal	482 (2.5)	▼	▼				▲	▲	▲	▲	
France	463 (3.1)	▼	▼	▼	▼	▼			▲	▲	
Slovenia	460 (3.4)	▼	▼	▼	▼	▼			▲	▲	
Norway	459 (4.6)	▼	▼	▼	▼	▼			▲	▲	
Sweden	431 (4.0)	▼	▼	▼	▼	▼	▼	▼			
Italy	422 (5.3)	▼	▼	▼	▼	▼	▼	▼			

- ▲ Average achievement significantly higher than comparison country
- ▼ Average achievement significantly lower than comparison country

The Russian Federation 6hr+ results are for a subset of the Russian Federation students. This subset of students are in an Intensive stream that have at least 6 hours of mathematics lessons per week.

Significance tests were not adjusted for multiple comparisons. Five percent of the comparisons would be statistically significant by chance alone.

( ) Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.

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