

Mathematics scores for specific content areas for upper grade thirteen-year-olds compared to the US mean (national percent correct in each area).

Whole Numbers	Common Fractions	Decimal Fractions & Percentages	Relationships of Fractions	Estimations of Quantity/Size
Singapore 80.4	Singapore 82.4	Singapore 77.9	Singapore 85.1	Japan 77.9
Japan 72.0	Japan 72.2	Czech Republic 72.5	Korea 77.6	Singapore 77.3
Switzerland 70.2	Hong Kong 69.9	Hong Kong 71.1	Japan 75.3	England 72.2
Belgium (Fl) 68.6	Hong Kong 69.4	Japan 69.8	Hong Kong 74.1	Hong Kong 71.8
Austria 68.4	Belgium (Fl) 68.7	Slovak Republic 69.1	Belgium (Fl) 71.3	Switzerland 71.8
Korea 67.6	Switzerland 62.4	Hungary 68.7	Switzerland 70.0	Czech Republic 71.7
Czech Republic 67.4	Ireland 61.7	Korea 68.4	France 67.2	Netherlands 71.2
Hong Kong 65.4	Austria 60.4	Austria 66.6	Austria 66.8	Belgium (Fl) 70.7
Slovak Republic 64.6	Belgium (Fr) 59.8	Russian Federation 65.9	Belgium (Fr) 65.8	Korea 70.7
France 64.5	Slovenia 59.7	France 64.9	Canada 65.1	Austria 69.9
Slovenia 63.4	Czech Republic 59.6	Belgium (Fl) 64.6	Czech Republic 64.9	Australia 69.3
Russian Federation 62.7	Netherlands 58.9	Slovenia 62.9	Ireland 64.3	Hungary 69.3
Bulgaria 62.5	Slovak Republic 58.6	Switzerland 61.9	Slovak Republic 63.0	Sweden 69.3
Ireland 62.2	France 57.8	Canada 61.0	Germany 62.6	Slovak Republic 69.1
Spain 60.8	Hungary 57.7	Sweden 59.2	Netherlands 62.5	France 69.0
Hungary 60.6	Israel 57.4	Belgium (Fr) 58.6	Slovenia 62.4	Germany 69.0
Sweden 58.9	Canada 56.2	Thailand 58.0	Sweden 62.2	Canada 67.8
Canada 57.9	Russian Federation 55.8	Netherlands 57.8	Australia 61.0	Scotland 68.8
Israel 59.0	Australia 55.4	Bulgaria 57.8	Hungary 60.7	Norway 66.6
Thailand 56.0	Thailand 54.2	Ireland 57.3	Bulgaria 59.9	Belgium (Fr) 65.8
International 55.7	Bulgaria 54.2	Germany 57.2	Thailand 59.6	Slovenia 65.5
Germany 55.4	Sweden 53.1	Israel 56.3	Norway 59.6	New Zealand 65.3
Latvia 55.4	International 52.3	USA 55.8	Russian Federation 59.2	Ireland 64.4
Belgium (Fr) 55.4	Cyprus 51.9	International 55.5	Iceland 59.2	Denmark 64.3
Australia 55.0	Germany 51.7	Lithuania 55.4	USA 58.5	Russian Federation 63.5
Lithuania 53.8	New Zealand 51.5	Norway 54.1	Israel 57.6	USA 62.7
Netherlands 53.5	Norway 51.2	Australia 53.5	International 57.0	Bulgaria 62.4
Norway 53.4	USA 49.3	Latvia 52.9	New Zealand 56.8	Iceland 61.6
Greece 52.7	Scotland 49.3	Iceland 52.6	England 53.8	International 61.1
USA 52.3	England 49.2	Greece 52.6	Denmark 51.9	Latvia 59.5
Romania 52.3	Spain 49.2	Spain 50.6	Scotland 51.5	Israel 58.4
Denmark 51.0	Denmark 49.0	Portugal 49.9	Greece 51.3	Thailand 57.1
Portugal 49.0	Latvia 47.3	New Zealand 49.3	Cyprus 50.9	Spain 54.8
New Zealand 48.6	Greece 47.3	Denmark 48.8	Lithuania 49.0	Greece 54.5
Iceland 48.4	Romania 47.0	Scotland 47.3	Spain 48.2	Lithuania 53.0
Scotland 47.9	Iceland 44.4	Romania 46.9	Latvia 47.2	Portugal 50.7
England 46.8	Lithuania 39.1	England 45.9	Romania 45.8	Romania 46.4
Cyprus 45.8	Iran 37.9	Cyprus 43.5	Portugal 43.2	Cyprus 43.9
Iran 43.4	Portugal 34.8	Philippines 42.2	Philippines 35.7	Philippines 36.9
Philippines 38.0	Philippines 30.0	Iran 33.7	Iran 35.3	Kuwait 34.7
Colombia 34.2	Colombia 27.3	Colombia 31.9	Colombia 27.3	Colombia 33.8
Kuwait 26.4	Kuwait 25.2	South Africa 28.3	South Africa 27.2	Iran 33.4
South Africa 26.0	South Africa 20.2	Kuwait 27.5	Kuwait 25.0	South Africa 28.6

Significantly Higher than the US
Not Significantly Different from the US
Significantly Lower than the US

2D Geo. Basics	Polygons & Circles	3D Geo. & Transformations	Congruence & Similarity	Proportionality Concepts
Japan 78.9	Korea 73.0	Japan 84.3	Japan 79.7	Singapore 70.1
Singapore 78.3	Japan 70.8	Singapore 78.6	Korea 76.9	Korea 57.0
Korea 75.5	Singapore 70.6	Czech Republic 77.7	Singapore 76.7	Japan 56.9
Hong Kong 73.5	Hong Kong 65.4	France 77.7	Hong Kong 71.0	Hong Kong 50.1
Russian Federation 63.4	Belgium (Fl) 64.1	Hong Kong 77.6	France 69.7	Netherlands 41.9
Netherlands 62.9	Bulgaria 63.4	Switzerland 75.9	Czech Republic 66.1	Ireland 41.2
Thailand 62.4	France 61.9	Slovak Republic 75.2	Bulgaria 66.0	Canada 40.3
Czech Republic 62.1	Israel 59.7	Belgium (Fr) 74.5	Slovak Republic 63.2	Sweden 39.2
Bulgaria 61.7	Czech Republic 57.4	Belgium (Fl) 73.7	Thailand 62.7	Belgium (Fl) 39.0
Hungary 61.6	Romania 57.3	Korea 73.3	Russian Federation 62.3	Slovenia 38.1
Slovak Republic 59.8	Russian Federation 57.2	Bulgaria 72.6	Belgium (Fl) 57.5	Australia 37.8
Australia 58.8	Belgium (Fr) 54.2	Hungary 71.0	Latvia 56.9	France 37.3
Belgium (Fl) 58.8	Thailand 53.5	Netherlands 70.6	Slovenia 56.6	Switzerland 36.8
Slovenia 58.3	Slovak Republic 53.2	Slovenia 70.2	Romania 56.1	Czech Republic 37.3
Austria 58.1	Slovenia 53.2	Russian Federation 70.2	Israel 54.8	Austria 36.5
Switzerland 57.9	Hungary 51.6	Canada 70.1	Lithuania 53.8	Thailand 36.5
France 56.1	Canada 50.5	Austria 69.5	Hungary 53.4	Belgium (Fr) 36.1
New Zealand 55.8	Australia 50.4	New Zealand 67.3	Canada 52.8	Slovak Republic 35.9
England 54.9	Greece 49.6	Latvia 66.6	International 52.5	England 34.8
Canada 54.7	Latvia 49.1	England 66.3	Belgium (Fr) 51.9	Hungary 34.6
International 53.7	International 48.9	Australia 65.5	Switzerland 51.2	International 33.6
Denmark 53.9	Austria 48.7	Denmark 65.4	Cyprus 51.1	Russian Federation 33.5
Latvia 53.3	Switzerland 48.6	International 63.4	Australia 50.9	New Zealand 33.4
Scotland 52.6	Ireland 48.0	Israel 64.8	Denmark 50.3	Scotland 32.4
Israel 52.5	England 47.0	Thailand 64.5	Netherlands 51.0	USA 31.5
Ireland 52.4	Cyprus 46.7	Germany 63.7	Austria 48.9	Israel 31.4
Norway 52.1	Lithuania 44.6	Lithuania 63.7	Iceland 48.5	Romania 31.3
Belgium (Fr) 51.4	Iceland 44.3	Scotland 63.2	Greece 48.2	Norway 30.9
Spain 49.5	Germany 44.3	Iceland 60.4	Norway 46.9	Bulgaria 30.6
Germany 49.3	Netherlands 44.0	Greece 58.8	Ireland 46.7	Greece 29.6
Lithuania 48.9	New Zealand 43.2	Norway 58.6	New Zealand 45.9	Cyprus 29.5
Iceland 48.7	Scotland 42.8	USA 58.4	Sweden 45.9	Iceland 29.4
Greece 48.6	Sweden 42.8	Spain 58.2	Scotland 45.6	Denmark 28.8
USA 47.9	Norway 42.4	Ireland 57.8	England 45.6	Spain 27.4
Romania 47.5	Denmark 40.1	Sweden 55.9	Germany 45.1	Latvia 27.3
Sweden 46.1	Spain 39.3	Portugal 51.9	Iran 44.1	Germany 26.5
Cyprus 43.8	USA 39.1	Romania 50.7	USA 44.1	Iran 22.9
Portugal 42.8	Iran 37.9	Cyprus 49.9	Spain 43.6	Lithuania 21.8
Iran 41.8	Portugal 35.5	Iran 47.3	Portugal 43.2	Portugal 20.3
Kuwait 35.4	Kuwait 31.3	Kuwait 44.2	Kuwait 38.2	Philippines 17.1
Philippines 32.1	Colombia 27.8	Philippines 36.5	Philippines 31.4	Kuwait 13.7
Colombia 27.0	Philippines 27.3	Colombia 36.4	Colombia 26.5	Colombia 13.0
South Africa 25.7	South Africa 21.7	South Africa 26.1	South Africa 23.2	South Africa 11.9

Mathematics scores for specific content areas for upper grade thirteen-year-olds compared to the US mean (national percent correct in each area).

Rounding	Estimating Computations	Measurement Units	Perimeter, Area, Volume	Measurement Estimations & Errors
Czech Republic 86.9	Singapore 75.8	Singapore 77.9	Singapore 84.5	Czech Republic 82.9
Singapore 86.6	Czech Republic 69.8	Japan 74.8	Japan 72.6	Singapore 81.0
Canada 84.7	Japan 69.0	Czech Republic 73.2	Hong Kong 63.9	Sweden 80.8
Korea 83.8	Korea 66.7	Slovenia 72.0	Korea 61.8	Korea 79.5
Iceland 83.1	Belgium (Fl) 64.1	Slovak Republic 71.9	Austria 50.4	Belgium (Fl) 78.9
Slovak Republic 82.4	Switzerland 62.5	Belgium (Fl) 71.8	Czech Republic 48.9	Hungary 78.2
Belgium (Fl) 81.0	Canada 61.3	Switzerland 71.6	Slovak Republic 47.9	Switzerland 78.2
Hungary 79.8	Slovak Republic 61.1	Sweden 69.5	Switzerland 46.6	Austria 77.7
Japan 79.6	Ireland 60.5	France 69.0	Slovenia 45.8	Netherlands 76.1
USA 79.2	Sweden 60.0	Austria 68.1	Belgium (Fl) 45.6	France 75.2
Netherlands 78.5	Australia 59.1	Belgium (Fr) 68.1	Bulgaria 45.2	Slovak Republic 75.2
Sweden 78.5	Austria 58.9	Ireland 68.1	Russian Federation 44.6	Australia 74.5
Australia 77.5	Netherlands 58.7	Bulgaria 68.0	France 44.1	Norway 74.5
Switzerland 77.4	Hong Kong 57.8	Korea 67.9	Netherlands 44.0	Denmark 73.0
Ireland 76.5	New Zealand 57.6	Hungary 67.5	Belgium (Fr) 43.0	Germany 72.9
Austria 75.9	Hungary 57.3	Netherlands 66.8	Hungary 42.9	Hong Kong 72.7
Thailand 75.4	Norway 57.0	Norway 66.4	Australia 42.1	Japan 72.5
France 74.7	USA 55.7	Russian Federation 65.9	Canada 40.4	Slovenia 72.5
Slovenia 74.7	Iceland 54.7	Denmark 65.4	Thailand 40.0	England 71.8
New Zealand 74.4	England 54.4	Hong Kong 65.2	Ireland 39.4	New Zealand 70.6
Hong Kong 74.2	Slovenia 52.6	Australia 65.0	Sweden 39.3	Scotland 69.9
Russian Federation 73.5	Germany 52.0	Germany 63.5	International 39.0	Canada 69.7
England 74.2	Israel 51.9	Iceland 63.0	Romania 38.2	Ireland 69.6
Scotland 73.4	Scotland 51.6	Canada 63.0	England 37.1	Russian Federation 69.6
Norway 72.3	France 50.8	Israel 63.0	Cyprus 36.9	Latvia 66.9
Denmark 71.2	Belgium (Fr) 50.6	Spain 62.4	Israel 36.9	Thailand 66.1
International 70.9	Russian Federation 50.0	Thailand 62.3	Norway 36.4	International 64.8
Belgium (Fr) 70.2	Thailand 49.5	International 61.6	Scotland 35.7	Belgium (Fr) 64.6
Germany 69.9	International 50.9	New Zealand 61.3	Denmark 35.5	Israel 63.3
Lithuania 69.2	Greece 46.3	England 60.5	New Zealand 35.0	USA 62.5
Israel 68.8	Denmark 46.0	Latvia 60.3	Latvia 33.6	Iceland 61.6
Bulgaria 68.1	Bulgaria 44.9	Romania 59.3	Iceland 33.1	Greece 59.4
Portugal 65.0	Spain 44.1	Greece 58.4	Germany 32.9	Spain 55.3
Cyprus 64.4	Lithuania 42.3	Scotland 58.5	Lithuania 32.2	Lithuania 55.1
Greece 64.1	Cyprus 39.7	Cyprus 55.0	Spain 29.9	Portugal 54.9
Latvia 63.3	Latvia 38.9	Portugal 55.0	Greece 29.8	Bulgaria 52.8
Spain 62.2	Portugal 38.2	Lithuania 54.6	USA 27.8	Romania 50.0
Romania 57.5	Romania 38.0	USA 53.0	Portugal 22.8	Cyprus 45.7
Philippines 49.2	Philippines 30.9	Iran 44.2	Iran 21.1	Philippines 36.0
Colombia 47.6	Colombia 28.7	Colombia 40.8	Kuwait 14.7	Iran 35.5
Iran 46.3	Iran 27.0	Kuwait 35.7	Philippines 14.4	Kuwait 35.1
Kuwait 44.5	South Africa 20.3	Philippines 32.1	Colombia 11.9	Colombia 32.4
South Africa 36.8	Kuwait 20.2	South Africa 27.3	South Africa 8.3	South Africa 28.1

Proportionality Problems	Patterns, Relations & Functions	Equations & Formulas	Data Representation & Analysis	Statistics & Probability
Singapore 76.7	Japan 70.0	Singapore 79.8	Japan 84.3	Singapore 78.5
Japan 67.8	Korea 68.4	Japan 72.3	Korea 81.9	Korea 77.8
Korea 65.1	Singapore 67.2	Hong Kong 70.5	France 81.4	Belgium (Fl) 77.7
Hong Kong 64.0	Hong Kong 60.8	Korea 70.0	Switzerland 81.3	Japan 75.0
Czech Republic 61.3	Czech Republic 60.2	Czech Republic 64.3	Singapore 81.0	Hong Kong 73.0
Belgium (Fl) 59.4	England 60.1	Belgium (Fl) 62.1	Netherlands 80.6	Netherlands 72.4
Slovak Republic 58.7	Switzerland 59.5	Russian Federation 61.4	Czech Republic 79.6	Switzerland 72.4
Bulgaria 58.3	Belgium (Fl) 59.2	Hungary 60.9	Sweden 79.5	Ireland 70.3
Switzerland 57.3	Hungary 59.1	Slovak Republic 60.6	Belgium (Fl) 79.5	Canada 70.0
Russian Federation 56.3	Canada 58.2	Slovenia 60.1	Austria 78.7	Sweden 68.7
Thailand 56.0	Australia 57.6	Bulgaria 59.4	Denmark 77.6	Belgium (Fr) 68.5
Hungary 55.9	Austria 56.3	Israel 58.3	Slovenia 77.5	Australia 67.5
Netherlands 55.9	Netherlands 56.9	Austria 58.2	Belgium (Fr) 76.8	France 66.5
Belgium (Fr) 55.9	Scotland 56.5	Thailand 54.0	Hong Kong 76.4	Hungary 66.2
France 55.7	New Zealand 55.7	France 53.6	Ireland 76.2	New Zealand 65.9
Slovenia 55.3	Ireland 55.5	Belgium (Fr) 52.8	Germany 76.0	England 65.3
Austria 55.2	Slovenia 55.4	Australia 52.8	Norway 75.5	Norway 64.7
Ireland 52.4	France 55.0	Ireland 52.7	Slovak Republic 75.2	Austria 64.6
Australia 52.2	Slovak Republic 54.3	Canada 52.4	Australia 75.2	Slovenia 63.7
Canada 51.6	Bulgaria 53.7	Spain 52.2	Canada 75.0	Czech Republic 63.4
International 50.2	Thailand 53.4	Switzerland 51.9	England 74.8	USA 63.1
Sweden 49.2	Russian Federation 53.2	Netherlands 51.7	Thailand 74.5	Scotland 62.4
Germany 49.0	Israel 53.2	International 50.7	Scotland 74.2	Germany 62.4
Latvia 48.2	International 51.5	Romania 50.5	New Zealand 74.1	Israel 62.3
Denmark 47.7	USA 51.1	USA 49.4	Hungary 73.7	Iceland 62.0
England 47.2	Spain 50.3	Latvia 49.1	Israel 73.2	Denmark 61.9
New Zealand 47.1	Belgium (Fr) 49.9	Cyprus 46.7	Iceland 72.6	Bulgaria 61.1
Norway 47.1	Norway 48.7	New Zealand 46.6	USA 72.6	International 59.9
Romania 46.7	Denmark 48.6	Germany 46.4	Russian Federation 72.0	Spain 58.0
Israel 46.5	Germany 47.6	Greece 45.6	International 71.0	Russian Federation 56.9
Lithuania 45.6	Sweden 47.2	Lithuania 45.3	Bulgaria 70.8	Cyprus 57.2
Scotland 45.4	Latvia 47.2	Norway 44.9	Spain 70.4	Slovak Republic 57.0
USA 45.2	Greece 46.9	England 44.1	Latvia 70.0	Thailand 56.5
Iceland 44.6	Iceland 44.7	Denmark 44.0	Portugal 69.7	Greece 52.6
Spain 43.6	Romania 45.4	Sweden 43.7	Lithuania 67.0	Latvia 51.6
Cyprus 43.3	Portugal 45.3	Scotland 42.5	Greece 66.6	Romania 46.7
Greece 41.1	Lithuania 45.2	Iceland 39.5	Cyprus 59.6	Portugal 44.5
Portugal 41.0	Cyprus 42.3	Portugal 36.6	Romania 58.0	Lithuania 43.6
Iran 38.0	Iran 41.7	Iran 35.6	Iran 52.0	Iran 36.4
Philippines 32.8	Colombia 33.2	Kuwait 29.5	Colombia 47.7	Kuwait 34.8
Colombia 29.8	Philippines 33.1	Philippines 29.4	Philippines 45.9	Philippines 32.6
Kuwait 29.5	Kuwait 32.6	Colombia 24.5	Kuwait 45.8	Colombia 31.3
South Africa 27.0	South Africa 20.4	South Africa 22.9	South Africa 29.4	South Africa 28.1

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