

Table I.4.2^[1/2] Comparing countries' and economies' performance in mathematics

Mean score	Comparison country/economy	Statistically significantly above the OECD average	
		Not statistically significantly different from the OECD average	
		Statistically significantly below the OECD average	
		Countries and economies whose mean score is not statistically significantly different from the comparison country's/economy's score	
591	B-S-J-Z (China)		
569	Singapore		
558	Macao (China)		Hong Kong (China) ¹
551	Hong Kong (China) ¹		Macao (China)
531	Chinese Taipei		Japan, Korea
527	Japan		Chinese Taipei, Korea, Estonia
526	Korea		Chinese Taipei, Japan, Estonia, Netherlands ¹
523	Estonia		Japan, Korea, Netherlands ¹
519	Netherlands ¹		Korea, Estonia, Poland, Switzerland
516	Poland		Netherlands, ¹ Switzerland, Canada
515	Switzerland		Netherlands, ¹ Poland, Canada, Denmark
512	Canada		Poland, Switzerland, Denmark, Slovenia, Belgium, Finland
509	Denmark		Switzerland, Canada, Slovenia, Belgium, Finland
509	Slovenia		Canada, Denmark, Belgium, Finland
508	Belgium		Canada, Denmark, Slovenia, Finland, Sweden, United Kingdom
507	Finland		Canada, Denmark, Slovenia, Belgium, Sweden, United Kingdom
502	Sweden		Belgium, Finland, United Kingdom, Norway, Germany, Ireland, Czech Republic, Austria, Latvia
502	United Kingdom		Belgium, Finland, Sweden, Norway, Germany, Ireland, Czech Republic, Austria, Latvia, France
501	Norway		Sweden, United Kingdom, Germany, Ireland, Czech Republic, Austria, Latvia, France, Iceland
500	Germany		Sweden, United Kingdom, Norway, Ireland, Czech Republic, Austria, Latvia, France, Iceland, New Zealand
500	Ireland		Sweden, United Kingdom, Norway, Germany, Czech Republic, Austria, Latvia, France, Iceland, New Zealand
499	Czech Republic		Sweden, United Kingdom, Norway, Germany, Ireland, Austria, Latvia, France, Iceland, New Zealand, Portugal ¹
499	Austria		Sweden, United Kingdom, Norway, Germany, Ireland, Czech Republic, Latvia, France, Iceland, New Zealand, Portugal ¹
496	Latvia		Sweden, United Kingdom, Norway, Germany, Ireland, Czech Republic, Austria, France, Iceland, New Zealand, Portugal, ¹ Australia
495	France		United Kingdom, Norway, Germany, Ireland, Czech Republic, Austria, Latvia, Iceland, New Zealand, Portugal, ¹ Australia
495	Iceland		Norway, Germany, Ireland, Czech Republic, Austria, Latvia, France, New Zealand, Portugal, ¹ Australia
494	New Zealand		Germany, Ireland, Czech Republic, Austria, Latvia, France, Iceland, Portugal, ¹ Australia
492	Portugal ¹		Czech Republic, Austria, Latvia, France, Iceland, New Zealand, Australia, Russia, Italy, Slovak Republic
491	Australia		Latvia, France, Iceland, New Zealand, Portugal, ¹ Russia, Italy, Slovak Republic
488	Russia		Portugal, ¹ Australia, Italy, Slovak Republic, Luxembourg, Spain, Lithuania, Hungary
487	Italy		Portugal, ¹ Australia, Russia, Slovak Republic, Luxembourg, Spain, Lithuania, Hungary, United States ¹
486	Slovak Republic		Portugal, ¹ Australia, Russia, Italy, Luxembourg, Spain, Lithuania, Hungary, United States ¹
483	Luxembourg		Russia, Italy, Slovak Republic, Spain, Lithuania, Hungary, United States ¹
481	Spain		Russia, Italy, Slovak Republic, Luxembourg, Lithuania, Hungary, United States ¹
481	Lithuania		Russia, Italy, Slovak Republic, Luxembourg, Spain, Hungary, United States ¹
481	Hungary		Russia, Italy, Slovak Republic, Luxembourg, Spain, Lithuania, United States ¹
478	United States ¹		Italy, Slovak Republic, Luxembourg, Spain, Lithuania, Hungary, Belarus, Malta
472	Belarus		United States, ¹ Malta
472	Malta		United States, ¹ Belarus
464	Croatia		Israel
463	Israel		Croatia
454	Turkey		Ukraine, Greece, Cyprus, Serbia
453	Ukraine		Turkey, Greece, Cyprus, Serbia
451	Greece		Turkey, Ukraine, Cyprus, Serbia
451	Cyprus		Turkey, Ukraine, Greece, Serbia
448	Serbia		Turkey, Ukraine, Greece, Cyprus, Malaysia
440	Malaysia		Serbia, Albania, Bulgaria, United Arab Emirates, Romania
437	Albania		Malaysia, Bulgaria, United Arab Emirates, Romania
436	Bulgaria		Malaysia, Albania, United Arab Emirates, Brunei Darussalam, Romania, Montenegro
435	United Arab Emirates		Malaysia, Albania, Bulgaria, Romania
430	Brunei Darussalam		Bulgaria, Romania, Montenegro
430	Romania		Malaysia, Albania, Bulgaria, United Arab Emirates, Brunei Darussalam, Montenegro, Kazakhstan, Moldova, Baku (Azerbaijan), Thailand
430	Montenegro		Bulgaria, Brunei Darussalam, Romania

1. Data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

Source: OECD, PISA 2018 Database, Table I.B1.5.

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Table I.4.2 [2/2] **Comparing countries' and economies' performance in mathematics**

Mean score	Comparison country/economy	Countries and economies whose mean score is not statistically significantly different from the comparison country's/economy's score
423	Kazakhstan	Romania, Moldova, Baku (Azerbaijan), Thailand, Uruguay, Chile
421	Moldova	Romania, Kazakhstan, Baku (Azerbaijan), Thailand, Uruguay, Chile
420	Baku (Azerbaijan)	Romania, Kazakhstan, Moldova, Thailand, Uruguay, Chile, Qatar
419	Thailand	Romania, Kazakhstan, Moldova, Baku (Azerbaijan), Uruguay, Chile, Qatar
418	Uruguay	Kazakhstan, Moldova, Baku (Azerbaijan), Thailand, Chile, Qatar
417	Chile	Kazakhstan, Moldova, Baku (Azerbaijan), Thailand, Uruguay, Qatar
414	Qatar	Baku (Azerbaijan), Thailand, Uruguay, Chile, Mexico
409	Mexico	Qatar, Bosnia and Herzegovina, Costa Rica
406	Bosnia and Herzegovina	Mexico, Costa Rica, Peru, Jordan
402	Costa Rica	Mexico, Bosnia and Herzegovina, Peru, Jordan, Georgia, Lebanon
400	Peru	Bosnia and Herzegovina, Costa Rica, Jordan, Georgia, North Macedonia, Lebanon
400	Jordan	Bosnia and Herzegovina, Costa Rica, Peru, Georgia, North Macedonia, Lebanon
398	Georgia	Costa Rica, Peru, Jordan, North Macedonia, Lebanon, Colombia
394	North Macedonia	Peru, Jordan, Georgia, Lebanon, Colombia
393	Lebanon	Costa Rica, Peru, Jordan, Georgia, North Macedonia, Colombia
391	Colombia	Georgia, North Macedonia, Lebanon
384	Brazil	Argentina, Indonesia
379	Argentina	Brazil, Indonesia, Saudi Arabia
379	Indonesia	Brazil, Argentina, Saudi Arabia
373	Saudi Arabia	Argentina, Indonesia, Morocco
368	Morocco	Saudi Arabia, Kosovo
366	Kosovo	Morocco
353	Panama	Philippines
353	Philippines	Panama
325	Dominican Republic	

1. Data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

Source: OECD, PISA 2018 Database, Table I.B1.5.

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VARIATION IN PERFORMANCE WITHIN COUNTRIES AND ECONOMIES

While differences in average performance across countries and economies are large, the gap that separates the highest-performing and lowest-performing students within any country is, typically, even larger. In reading, for example, the difference between the 95th percentile of performance (the score above which only 5% of students scored) and the 5th percentile of performance (the score below which only 5% of students scored) was more than 220 score points in all countries and economies; on average across OECD countries, 327 score points separated these extremes (Table I.B1.4). This difference corresponds, typically, to capacities that students develop over the equivalent of several years and grades.⁴

The largest differences between top-performing and low-achieving students were found in Israel, Lebanon, Malta and the United Arab Emirates, meaning that learning outcomes at age 15 in these countries are highly unequal (Table I.B1.4).

The smallest differences between high- and low-achieving students were, typically, found amongst countries and economies with the lowest mean scores. In Kosovo, Morocco and the Philippines, even the highest-performing students scored only around the OECD average. In these countries/economies, the 95th percentile of the reading distribution was close to the average score across OECD countries.

The standard deviation summarises the variation in performance amongst 15-year-old students within each country/economy across the entire distribution. The average standard deviation in reading performance within OECD countries was 99 score points. If the between-country variation was also considered (“OECD total”), the standard deviation across all students in OECD countries was 105 score points. By this measure, the smallest variation in reading proficiency was found in Kosovo (68 score points); several other countries and economies whose mean performance was below the OECD average also have small variations in performance (Figure I.4.1). Amongst high-performing systems, B-S-J-Z (China) (87 score points) stood out for its relatively small variation in performance. This indicates that, more than in other high-performing systems, student performance in B-S-J-Z (China) is consistently high: there are smaller-than-average inequalities in learning outcomes.