

Executive Summary

PISA 2022 assesses reading, science, and, as its main subject, mathematics. Being proficient in mathematics today is more than the mere reproduction of routine mathematical procedures. Rather, PISA considers a mathematically proficient person to be someone who can mathematically reason their way through complex real-life problems and find solutions by formulating, employing and interpreting mathematics.

What students know and can do: student performance

In mathematics

- Singapore scored significantly higher than all other countries/economies in mathematics (575 points) and, along with Hong Kong (China)*, Japan, Korea, Macao (China), and Chinese Taipei, outperformed all other countries and economies in mathematics. Another 17 countries also performed above the OECD average (472 points), ranging from Estonia (510 points) to New Zealand* (479 points).
- An average of 69% of students are at least basically proficient in mathematics in OECD countries. This means they are beginning to demonstrate the ability and initiative to use mathematics in simple real-life situations.
- In 16 out of 81 countries/economies participating in PISA 2022, more than 10% of students attained Level 5 or 6 proficiency, meaning they are high-performing: they understand that a problem is quantitative in nature and can formulate complex mathematical models to solve it. By contrast, less than 5% of students are high-performing in 42 countries/economies.

In reading and science

- Singapore scored significantly higher than all other countries/economies in reading (543 points) and science (561 points). Behind Singapore, Ireland* performed as well as Estonia, Japan, Korea and Chinese Taipei while another 14 education systems performed above the OECD average in reading (476 points), ranging from Macao (China) (510 points) to Italy (482 points).
- In science, the highest-performing education systems are Singapore, Japan, Macao (China), and Chinese Taipei, Korea, Estonia, Hong Kong (China)* and Canada*. Finland performed as well as Canada* in science. In addition to these nine countries and economies, another 15 education systems also performed above the OECD average in science (485 points), ranging from Australia* (507 points) to Belgium (491 points).
- About three out of four students have achieved basic proficiency in reading and science in OECD countries.
- In reading and science, an OECD average of 7% of students attained the highest proficiency levels of 5 or 6. In 13 countries/economies, more than 10% of students are top performers in reading. In 14 countries/economies, more than 10% of students are top performers in science.

Trends in performance

- No change in the OECD average over consecutive PISA assessments up to 2018 has ever exceeded four points in mathematics and five points in reading: in PISA 2022, however, the OECD average dropped by almost 15 points in mathematics and about 10 score points in reading compared to PISA 2018. Mean performance in science, however, remained stable. The unprecedented drops in mathematics and reading point to the shock effect of COVID-19 on most countries.
- Only four countries and economies improved their performance between PISA 2018 and 2022 in all three subjects: Brunei Darussalam, Cambodia, the Dominican Republic and Chinese Taipei.
- Trend analysis of PISA results reveals a decades-long decline that began well before the pandemic. In reading and science, performances peaked in 2012 and 2009, respectively, before dipping while performance began a downward descent in mathematics before 2018 in Australia*, Belgium, Canada*, the Czech Republic, Finland, Hungary, Iceland, Korea, the Netherlands*, New Zealand*, the Slovak Republic and Switzerland.
- Four countries and economies are bucking this trend of long-term decline: Colombia, Macao (China), Peru, and Qatar. Their results have improved on average in all three subjects over the full period they have participated in PISA. Four other countries (Israel, Republic of Moldova, Singapore and Türkiye) have improved in two out of three subjects.

Equity in education

- Education systems in Canada*, Denmark*, Finland, Hong Kong (China)*, Ireland*, Japan, Korea, Latvia*, Macao (China) and the United Kingdom* are highly equitable by PISA's standard (combining high levels of inclusion and fairness).
- The percentage of 15-year-olds enrolled in school in Grade 7 or above in each country/economy ranges from 36% in Cambodia and 48% in Guatemala to 90% or more in 34 countries and economies.
- Socio-economically advantaged students scored 93 points more in mathematics than disadvantaged students on average across OECD countries. The performance gap attributed to students' socio-economic status is greater than 93 score points in 22 countries or economies and 50 points or fewer in 13 countries or economies.
- Boys outperformed girls in mathematics by nine score points and girls outperformed boys in reading by 24 score points on average across OECD countries. In science, the performance difference between boys and girls is not significant.
- Non-immigrant students scored 29 points more than immigrant students in mathematics on average across OECD countries but non-immigrant students scored only five points more than immigrant students once socio-economic status and language spoken at home had been accounted for.
- An average of 8% of students in the OECD area reported not eating at least once a week in the past 30 days because there was not enough money to buy food. In 18 countries/economies, more than 20% of students reported not being able to afford to eat at least once a week.

Trends in equity




- The socio-economic gap in mathematics performance did not change between 2018 and 2022 in 51 out of the 68 countries/economies with available PISA data; it widened in 12 countries/economies and narrowed in five (Argentina, Chile, the Philippines, Saudi Arabia and the United Arab Emirates).
- The gender gap in mathematics performance did not change between 2018 and 2022 in most countries/economies (57 out of the 72 with comparable data); it widened in 11 countries/economies and narrowed in four (Albania, Baku [Azerbaijan], Colombia and Montenegro).

Table I.1. Snapshot of performance in mathematics, reading and science [1/2]

	Mean score in PISA 2022			Long-term trend: Average decennial trend			Short-term change in performance (PISA 2018 to PISA 2022)			Top-performing and low-performing students	
	Mathematics	Reading	Science	Mathematics	Reading	Science	Mathematics	Reading	Science	Share of top performers in at least one subject (Level 5 or 6)	Share of low performers in all three subjects (below Level 2)
	Mean	Mean	Mean	Score dif.	Score dif.	Score dif.	Score dif.	Score dif.	Score dif.	%	%
OECD average	472	476	485	-7	-4	-7	-15	-10	-2	13.7	16.4
Singapore	575	543	561	6	12	12	6	-7	10	44.5	4.2
Japan	536	516	547	2	2	4	9	12	17	28.7	5.3
Korea	527	515	528	-13	-11	-4	1	1	9	29.7	7.3
Estonia	510	511	526	1	11	-3	-13	-12	-4	20.0	5.2
Switzerland	508	483	503	-12	-7	-11	-7	-1	7	19.4	12.4
Canada*	497	507	515	-17	-9	-12	-15	-13	-3	22.7	8.1
Netherlands*	493	459	488	-20	-25	-23	-27	-26	-15	19.0	20.2
Ireland*	492	516	504	-2	-1	-7	-8	-2	8	14.7	7.5
Belgium	489	479	491	-18	-11	-11	-19	-14	-8	15.5	15.2
Denmark*	489	489	494	-9	0	-3	-20	-12	1	12.8	10.3
United Kingdom*	489	494	500	-1	2	-10	-13	-10	-5	17.9	12.0
Poland	489	489	499	5	5	-1	-27	-23	-12	15.3	11.9
Austria	487	480	491	-9	-5	-14	-12	-4	1	14.6	15.5
Australia*	487	498	507	-21	-14	-16	-4	-5	4	20.7	12.1
Czech Republic	487	489	498	-12	1	-9	-12	-2	1	15.5	12.2
Slovenia	485	469	500	-7	-7	-10	-24	-27	-7	13.0	12.0
Finland	484	490	511	-34	-23	-34	-23	-30	-11	17.9	11.5
Latvia*	483	475	494	2	3	-1	-13	-4	7	9.7	10.6
Sweden	482	487	494	-9	-11	-2	-21	-19	-6	17.0	15.2
New Zealand*	479	501	504	-24	-12	-18	-15	-5	-4	19.5	13.7
Lithuania	475	472	484	-4	2	-6	-6	-4	2	10.4	14.4
Germany	475	480	492	-12	2	-17	-25	-18	-11	14.6	16.7
France	474	474	487	-14	-8	-6	-21	-19	-6	12.9	16.8
Spain	473	474	485	-4	-1	-2	m	m	m	10.6	12.9
Hungary	473	473	486	-10	-5	-15	-8	-3	5	11.2	16.5
Portugal	472	477	484	8	7	5	-21	-15	-7	10.1	13.8
Italy	471	482	477	8	1	-6	-15	5	9	10.7	12.9
Viet Nam**	469	462	472	m	m	m	m	m	m	6.3	12.2
Norway	468	477	478	-7	-5	-7	-33	-23	-12	13.8	17.5
Malta	466	445	466	3	3	2	-6	-3	9	10.7	21.6
United States*	465	504	499	-8	2	5	-13	-1	-3	18.1	14.8
Slovak Republic	464	447	462	-16	-13	-20	-22	-11	-2	9.5	22.2
Croatia	463	475	483	-1	0	-10	-1	-3	10	9.7	13.6
Iceland	459	436	447	-24	-24	-27	-36	-38	-28	6.8	23.3
Israel	458	474	465	11	13	7	-5	3	3	15.1	21.3
Türkiye	453	456	476	14	5	24	0	-10	8	7.3	18.5
Brunei Darussalam	442	429	446	m	m	m	12	21	15	4.5	30.0
Serbia	440	440	447	3	16	4	-8	1	8	5.0	24.5
United Arab Emirates	431	417	432	7	-12	-8	-4	-14	-2	8.8	33.9
Greece	430	438	441	-9	-12	-21	-21	-19	-11	3.9	25.7
Romania	428	428	428	6	15	3	-2	1	2	5.0	33.2
Kazakhstan	425	386	423	10	-4	6	2	-1	26	2.2	32.8
Mongolia	425	378	412	m	m	m	m	m	m	2.3	39.9

Notes: Values that are statistically significant are marked in bold (see Annex A3). * Caution is required when interpreting estimates because one or more PISA sampling standards were not met (see Reader's Guide, Annexes A2 and A4). Long-term trends are reported for the longest available period since PISA 2003 for mathematics, PISA 2000 for reading and PISA 2006 for science. The OECD average does not include Costa Rica and Spain for short-term change in performance. Countries and economies are ranked in descending order of the mean mathematics score in PISA 2022. Source: OECD, PISA 2022 Database, Tables I.B1.2.1, I.B1.2.2, I.B1.2.3, I.B1.4.42, I.B1.4.43, I.B1.5.4, I.B1.5.5 and I.B1.5.6:

Table I.1. Snapshot of performance in mathematics, reading and science [2/2]

	Countries/economies with a mean performance/share of top performers above the OECD average Countries/economies with a share of low performers below the OECD average
	Countries/economies with a mean performance/share of top performers/share of low performers not significantly different from the OECD average
	Countries/economies with a mean performance/share of top performers below the OECD average Countries/economies with a share of low performers above the OECD average

	Mean score in PISA 2022			Long-term trend: Average decennial trend			Short-term change in performance (PISA 2018 to PISA 2022)			Top-performing and low-performing students	
	Mathematics	Reading	Science	Mathematics	Reading	Science	Mathematics	Reading	Science	Share of top performers in at least one subject (Level 5 or 6)	Share of low performers in all three subjects (below Level 2)
	Mean	Mean	Mean	Score dif.	Score dif.	Score dif.	Score dif.	Score dif.	Score dif.	%	%
Bulgaria	417	404	421	3	-5	-11	-19	-16	-3	4.6	38.3
Moldova	414	411	417	14	20	5	-6	-13	-12	1.7	37.1
Qatar	414	419	432	58	59	51	0	12	13	5.2	34.2
Chile	412	448	444	-1	16	2	-6	-4	0	3.6	24.8
Uruguay	409	430	435	-8	3	5	-9	3	10	3.4	30.6
Malaysia	409	388	416	7	-12	1	-32	-27	-21	1.3	40.6
Montenegro	406	405	403	10	9	0	-24	-16	-12	1.5	41.3
Mexico	395	415	410	2	4	1	-14	-5	-9	0.7	38.4
Thailand	394	379	409	-8	-20	-8	-25	-14	-17	1.3	46.3
Peru	391	408	408	26	38	33	-9	8	4	1.3	40.8
Georgia	390	374	384	8	-2	6	-8	-6	1	1.3	51.1
Saudi Arabia	389	383	390	m	m	m	16	-17	4	0.3	48.6
North Macedonia	389	359	380	m	-2	m	-6	-34	-33	0.7	55.8
Costa Rica	385	415	411	-17	-21	-16	-18	-11	-5	1.1	38.1
Colombia	383	409	411	9	12	15	-8	-4	-2	1.5	40.7
Brazil	379	410	403	10	7	5	-5	-3	-1	2.6	42.2
Argentina	378	401	406	-5	-2	7	-2	-1	2	1.5	42.7
Jamaica*	377	410	403	m	m	m	m	m	m	1.7	43.5
Albania	368	358	376	4	12	-5	-69	-47	-41	0.8	56.2
Indonesia	366	359	383	0	-5	0	-13	-12	-13	0.1	59.0
Morocco	365	339	365	m	m	m	-3	-20	-11	0.0	68.5
Uzbekistan	364	336	355	m	m	m	m	m	m	0.1	71.4
Jordan	361	342	375	-8	m	m	-39	m	m	0.0	62.9
Panama*	357	392	388	-4	15	5	4	15	23	1.2	50.4
Philippines	355	347	356	m	m	m	2	7	-1	0.2	71.3
Guatemala	344	374	373	m	m	m	10	5	8	0.1	63.8
El Salvador	343	365	373	m	m	m	m	m	m	0.2	62.8
Dominican Republic	339	351	360	m	m	m	14	10	25	0.1	68.4
Paraguay	338	373	368	m	m	m	11	3	10	0.1	61.1
Cambodia	336	329	347	m	m	m	12	8	17	0.0	82.2
Macao (China)	552	510	543	18	14	24	-6	-15	0	31.1	4.1
Chinese Taipei	547	515	537	-6	8	2	16	13	22	34.8	7.9
Hong Kong (China)*	540	500	520	-3	-5	-21	-11	-25	4	29.7	7.2
Ukrainian regions (18 of 27)	441	428	450	m	m	m	m	m	m	4.6	25.3
Cyprus	418	381	411	m	m	m	-32	-43	-28	5.3	40.3
Baku (Azerbaijan)	397	365	380	m	m	m	-23	-24	-18	0.9	50.9
Palestinian Authority	366	349	369	m	m	m	m	m	m	0.1	63.5
Kosovo	355	342	357	m	m	m	-11	-11	-8	0.0	72.9

Notes: Values that are statistically significant are marked in bold (see Annex A3). * Caution is required when interpreting estimates because one or more PISA sampling standards were not met (see Reader's Guide, Annexes A2 and A4). Long-term trends are reported for the longest available period since PISA 2003 for mathematics, PISA 2000 for reading and PISA 2006 for science. The OECD average does not include Costa Rica and Spain for short-term change in performance. Countries and economies are ranked in descending order of the mean mathematics score in PISA 2022. Source: OECD, PISA 2022 Database, Tables I.B1.2.1, I.B1.2.2, I.B1.2.3, I.B1.4.42, I.B1.4.43, I.B1.5.4, I.B1.5.5 and I.B1.5.6

Table I.2. Snapshot of socio-economic disparities in academic performance [1/2]

	Coverage Index 3: Coverage of 15-year-old population	Strength: Percentage of variance in mathematics performance explained by ESCS ¹		Percentage of disadvantaged students who are academically resilient ²	Difference between advantaged ³ and disadvantaged students in mathematics Score dif.	Short-term change in performance in mathematics, by socio-economic background (PISA 2018 to PISA 2022)		
		%	%			Difference between advantaged and disadvantaged students ⁴ Score dif.	Disadvantaged students ⁵ Score dif.	Advantaged students ⁵ Score dif.
OECD average		15.5	10.2		93	7	-17	-10
Cambodia	0.36	1.9	18.2		21	m	m	m
Uzbekistan	0.88	2.0	19.6		22	m	m	m
Kazakhstan	0.93	3.9	16.8		41	8	0	7
Albania	0.79	4.5	17.1		49	12	-68	-57
Philippines	0.83	4.8	11.6		36	-38	20	-18
Jordan	0.94	5.2	14.5		40	-15	-32	-47
Indonesia	0.85	5.5	15.2		34	-17	-6	-23
United Arab Emirates	0.94	5.8	9.5		68	-35	7	-28
Jamaica*	0.58	6.1	15.2		45	m	m	m
Saudi Arabia	0.81	6.4	14.2		47	-20	27	7
Georgia	0.86	7.8	13.9		65	-12	-1	-13
Morocco	0.76	8.5	15.8		43	-8	1	-7
Iceland	0.94	9.3	11.3		72	2	-36	-34
Montenegro	0.93	9.5	14.0		67	10	-29	-19
Norway	0.91	9.6	12.6		81	12	-31	-19
Malta	0.93	10.0	12.7		83	-9	-1	-10
Dominican Republic	0.64	10.1	12.6		45	-11	17	6
Thailand	0.75	10.1	15.0		61	-10	-22	-32
Canada*	0.92	10.2	12.7		76	7	-18	-11
Mexico	0.64	10.4	11.8		58	-8	-9	-17
United Kingdom*	0.97	11.0	15.2		86	3	-7	-5
Paraguay	0.72	11.2	12.4		66	m	m	m
Qatar	0.94	11.7	7.6		84	-9	4	-5
Greece	0.91	11.8	12.0		76	-6	-16	-21
Japan	0.92	11.9	11.5		81	13	5	18
Guatemala	0.48	12.1	11.2		60	m	m	m
Denmark*	0.84	12.2	10.2		74	3	-23	-19
Finland	0.95	12.4	11.9		83	10	-26	-16
Chile	0.86	12.5	12.8		69	-21	7	-14
North Macedonia	0.91	12.5	12.3		76	-7	-5	-12
Türkiye	0.74	12.6	11.7		82	8	-8	0
Korea	1.00	12.6	10.9		97	9	-4	5
Ireland*	1.00	13.0	11.9		74	7	-10	-3
Croatia	0.89	13.0	10.7		82	12	-10	2
Latvia*	0.85	13.2	11.7		75	6	-16	-10
Serbia	0.87	13.4	12.3		81	5	-15	-10
Estonia	0.94	13.4	10.3		81	18	-23	-6
Italy	0.87	13.5	11.3		85	4	-15	-11
Viet Nam	0.68	13.8	12.7		78	m	m	m
Spain	0.90	14.2	11.7		86	m	m	m

1. ESCS refers to the PISA index of economic, social and cultural status. 2. Academically resilient students are disadvantaged students who scored in the top quarter of performance in reading amongst students in their own country/economy. 3. A socio-economically advantaged (disadvantaged) student is a student in the top (bottom) quarter of ESCS in his or her own country/economy. 4. A positive (negative) score difference indicates that the difference between advantaged and disadvantaged students in mathematics was larger (smaller) in PISA 2022 than in PISA 2018. 5. A positive (negative) score difference indicates that performance improved (declined) among disadvantaged students or advantaged students between PISA 2018 and PISA 2022. Notes: Values that are statistically significant are marked in bold (see Annex A3). * Caution is required when interpreting estimates because one or more PISA sampling standards were not met (see Reader's Guide, Annexes A2 and A4). The OECD average does not include Costa Rica and Spain for short-term change in performance. *Countries and economies are ranked in ascending order of the percentage of variance in mathematics performance explained by ESCS.* Source: OECD, PISA 2022 Database, Tables I.B1.4.1, I.B1.4.3 and I.B1.5.19.:

Table I.2. Snapshot of socio-economic disparities in academic performance [2/2]

	Coverage Index 3: Coverage of 15-year-old population	Strength: Percentage of variance in mathematics performance explained by ESCS ¹	Percentage of disadvantaged students who are academically resilient ²	Difference between advantaged ³ and disadvantaged students in mathematics	Short-term change in performance in mathematics, by socio-economic background (PISA 2018 to PISA 2022)		
					Difference between advantaged and disadvantaged students ⁴	Disadvantaged students ⁵	Advantaged students ⁵
					Score dif.	Score dif.	Score dif.
El Salvador	0.61	14.4	10.2	57	m	m	m
Australia*	0.90	14.6	9.9	101	20	-13	7
Brazil	0.76	14.8	10.2	77	-13	0	-13
United States*	0.86	14.9	10.6	102	5	-12	-7
Sweden	0.89	15.0	9.9	99	15	-24	-9
Netherlands*	0.79	15.1	10.6	106	17	-34	-18
Argentina	0.84	15.4	10.2	75	-21	12	-9
Moldova	0.97	15.6	10.1	82	-16	3	-12
Slovenia	1.00	15.7	9.4	91	5	-30	-25
New Zealand*	0.90	15.8	8.6	102	15	-23	-9
Brunei Darussalam	0.98	16.0	10.9	86	0	13	14
Colombia	0.73	16.2	9.8	79	2	-7	-5
Poland	0.89	16.3	8.6	96	5	-29	-24
Lithuania	0.92	16.5	9.8	92	2	-4	-2
Singapore	0.95	17.0	10.2	112	22	-6	16
Bulgaria	0.80	17.2	7.4	108	5	-21	-16
Peru	0.86	17.3	7.4	86	-11	-2	-13
Uruguay	0.85	17.9	10.4	91	-1	-3	-4
Malaysia	0.75	18.1	9.3	82	-5	-26	-31
Mongolia	0.87	18.1	8.8	94	m	m	m
Portugal	0.93	18.2	9.4	101	-3	-17	-20
Germany	0.92	18.7	9.5	111	7	-26	-18
Austria	0.89	19.4	8.2	106	14	-20	-5
Israel	0.90	19.6	7.7	124	17	-11	7
Panama*	0.58	20.0	7.8	77	-5	7	2
Switzerland	0.91	20.8	8.2	117	17	-15	2
France	0.93	21.5	7.4	113	5	-22	-16
Belgium	0.99	21.8	8.2	117	1	-19	-18
Czech Republic	0.91	22.0	7.3	116	8	-18	-9
Hungary	0.86	25.1	8.2	121	7	-12	-5
Slovak Republic	0.96	25.7	6.1	133	16	-32	-15
Romania	0.76	25.8	6.6	132	24	-11	13
Costa Rica	0.78	m	m	m	m	m	m
Macao (China)	0.98	5.0	16.8	55	20	-14	6
Baku (Azerbaijan)	0.73	5.2	14.5	54	1	-25	-25
Kosovo	0.86	5.7	17.7	39	-4	-8	-12
Hong Kong (China)*	0.81	5.8	16.7	65	7	-13	-5
Palestinian Authority	0.78	7.4	12.3	50	m	m	m
Cyprus	0.94	10.9	11.6	92	17	-35	-18
Ukrainian regions (18 of 27)	0.42	13.8	10.5	84	m	m	m
Chinese Taipei	0.93	15.7	10.1	119	27	3	30

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Table I.3. Snapshot of gender gaps in performance [1/2]

	Mathematics performance				Reading performance				Science performance			
	Girls	Boys	Difference between boys and girls	Short-term change in gender gap (PISA 2018 to PISA 2022) ¹	Girls	Boys	Difference between boys and girls	Short-term change in gender gap (PISA 2018 to PISA 2022) ¹	Girls	Boys	Difference between boys and girls	Short-term change in gender gap (PISA 2018 to PISA 2022) ¹
	Mean score	Mean score	Score dif.	Score dif.	Mean score	Mean score	Score dif.	Score dif.	Mean score	Mean score	Score dif.	Score dif.
OECD average	468	477	9	4	488	464	-24	5	485	485	0	2
Albania	378	359	-19	-14	379	339	-40	-2	391	362	-28	-12
Jordan	368	353	-15	-9	364	318	-46	m	390	358	-33	m
Philippines	362	348	-14	-3	364	329	-35	-8	363	349	-15	-11
Jamaica*	384	370	-13	m	426	391	-35	m	412	392	-20	m
Brunei Darussalam	448	437	-11	-4	447	413	-34	-4	452	440	-12	-5
Malaysia	414	403	-10	-4	404	373	-31	-5	423	410	-13	-7
Qatar	418	410	-8	16	440	399	-40	25	443	422	-21	18
United Arab Emirates	435	428	-7	2	440	396	-45	12	441	424	-17	9
Indonesia	369	362	-6	3	370	347	-23	2	385	380	-5	2
North Macedonia	392	386	-6	1	372	346	-26	26	388	373	-15	4
Thailand	397	391	-6	10	391	365	-27	12	414	404	-10	9
Bulgaria	420	415	-6	-4	422	389	-33	7	430	413	-16	-1
Mongolia	427	422	-6	m	391	366	-25	m	420	405	-15	m
Georgia	393	387	-5	-1	392	357	-35	3	391	377	-14	0
Finland	487	482	-5	1	513	468	-45	7	522	500	-22	2
Dominican Republic	341	337	-4	-1	367	333	-34	-3	367	353	-13	-4
Cambodia	338	334	-4	-5	338	318	-20	-4	351	342	-9	-5
Morocco	367	363	-4	-5	350	329	-22	4	370	361	-9	0
Slovenia	485	484	-2	-2	491	447	-44	-2	508	493	-15	-5
Norway	469	468	-1	6	498	456	-42	5	485	472	-13	-3
Montenegro	406	405	0	-9	423	388	-36	-5	407	399	-8	-3
Kazakhstan	426	425	0	-2	400	373	-27	-1	426	421	-5	2
Slovak Republic	463	465	1	-3	462	433	-30	5	466	459	-7	-1
Malta	465	467	1	14	465	426	-39	10	472	460	-12	9
Saudi Arabia	388	390	2	15	399	366	-33	22	398	383	-15	13
Sweden	481	483	2	3	506	469	-37	-2	498	489	-8	-1
Iceland	457	461	3	13	454	419	-35	5	454	440	-13	-5
Panama*	355	358	4	-4	401	382	-19	-5	387	389	2	1
Moldova	412	416	4	6	427	397	-30	10	421	413	-8	3
Romania	425	430	5	0	442	415	-26	7	428	427	-1	-1
Korea	525	530	5	1	533	499	-34	-11	530	526	-3	-7
Lithuania	473	478	5	8	487	456	-31	8	487	482	-6	0
Poland	486	492	6	4	503	475	-29	4	500	498	-2	-1
Türkiye	450	456	6	1	468	444	-25	0	478	473	-5	2
Greece	427	433	6	6	451	426	-25	17	446	436	-10	1
Uzbekistan	361	367	6	m	347	325	-22	m	357	353	-4	m
Estonia	507	513	6	-2	525	498	-27	4	528	524	-4	1
El Salvador	340	347	6	m	371	358	-13	m	372	374	2	m
Croatia	460	466	6	-2	493	459	-34	-1	488	477	-11	-7
Czech Republic	483	491	7	4	503	474	-29	4	499	497	-2	0
Belgium	486	493	8	-4	492	465	-28	-6	491	491	0	-5

1. A positive (negative) score difference indicates that the difference between boys and girls in mathematics was larger (smaller) in PISA 2022 than in PISA 2018. Notes: Values that are statistically significant are marked in bold (see Annex A3). * Caution is required when interpreting estimates because one or more PISA sampling standards were not met (see Reader's Guide, Annexes A2 and A4). The OECD average does not include Costa Rica and Spain for short-term change in performance. Countries and economies are ranked in descending order of the gender gap in mathematics performance. Source: OECD, PISA 2022 Database, Tables I.B1.4.17, I.B1.4.18, I.B1.4.19, I.B1.5.40, I.B1.5.43 and I.B1.5.46.

Table I.3. Snapshot of gender gaps in performance [2/2]

	Mathematics performance				Reading performance				Science performance			
	Girls	Boys	Difference between boys and girls	Short-term change in gender gap (PISA 2018 to PISA 2022) ¹	Girls	Boys	Difference between boys and girls	Short-term change in gender gap (PISA 2018 to PISA 2022) ¹	Girls	Boys	Difference between boys and girls	Short-term change in gender gap (PISA 2018 to PISA 2022) ¹
	Mean score	Mean score	Score dif.	Score dif.	Mean score	Mean score	Score dif.	Score dif.	Mean score	Mean score	Score dif.	Score dif.
Brazil	375	383	8	0	419	402	-17	8	400	406	5	7
Japan	531	540	9	-1	524	508	-17	4	546	548	2	-1
Colombia	378	387	9	-11	414	403	-12	-1	408	414	6	-6
Latvia*	478	488	10	3	488	461	-28	5	493	495	1	10
France	469	479	10	3	484	464	-20	5	488	487	-1	0
Spain	468	478	10	m	487	462	-25	m	482	487	5	m
Viet Nam**	464	475	10	m	471	453	-18	m	470	475	6	m
New Zealand*	474	484	10	2	514	488	-26	3	504	504	-1	-2
Portugal	467	477	11	2	487	466	-21	3	485	484	-2	-7
Netherlands*	487	498	11	9	473	447	-26	3	487	489	2	11
Switzerland	502	513	11	4	495	472	-24	7	502	503	0	1
Uruguay	403	414	11	3	438	423	-15	8	431	440	9	5
Serbia	434	445	11	8	453	428	-26	10	449	446	-4	1
Argentina	372	383	11	-4	408	394	-14	2	403	409	6	-4
Israel	452	463	11	20	486	462	-23	25	465	465	0	19
Australia*	481	493	11	5	509	487	-22	10	506	508	2	1
Germany	469	480	11	4	490	470	-19	6	492	493	0	1
Paraguay	332	343	11	-2	382	364	-19	-5	367	370	3	-2
Denmark*	483	495	12	8	499	479	-21	9	490	497	7	9
Mexico	389	401	12	0	419	411	-8	3	404	417	14	4
Singapore	568	581	12	8	553	533	-20	4	558	565	7	3
Canada*	491	503	12	7	519	495	-24	5	515	515	1	4
Guatemala	338	351	12	1	379	369	-9	2	370	376	6	1
Ireland*	485	498	13	7	525	507	-18	5	501	507	6	7
United States*	458	471	13	5	515	493	-22	2	496	503	7	6
United Kingdom*	482	496	14	2	503	486	-16	4	496	504	8	6
Hungary	465	480	15	6	481	465	-17	10	484	488	3	-3
Costa Rica	377	392	15	-3	417	414	-3	12	404	418	15	5
Peru	384	399	15	-1	412	404	-8	2	401	415	14	1
Chile	403	420	16	9	451	445	-7	13	436	450	14	11
Austria	478	497	19	6	491	470	-20	8	485	497	11	9
Italy	461	482	21	6	491	472	-19	6	474	481	7	3
Cyprus	426	411	-16	-7	409	355	-54	-7	426	397	-29	-8
Palestinian Authority	373	357	-16	m	371	322	-49	m	382	352	-30	m
Baku (Azerbaijan)	401	394	-7	-15	385	347	-37	-12	387	374	-12	-7
Kosovo	355	355	0	-4	355	330	-25	0	360	354	-6	0
Chinese Taipei	544	550	6	2	529	502	-27	-5	536	539	3	2
Hong Kong (China)*	536	544	9	14	512	489	-23	12	520	520	0	9
Ukrainian regions (18 of 27)	436	446	10	m	439	416	-23	m	450	450	-1	m
Macao (China)	544	559	15	12	518	503	-14	8	542	544	2	4

1. A positive (negative) score difference indicates that the difference between boys and girls in mathematics was larger (smaller) in PISA 2022 than in PISA 2018. Notes: Values that are statistically significant are marked in bold (see Annex A3). * Caution is required when interpreting estimates because one or more PISA sampling standards were not met (see Reader's Guide, Annexes A2 and A4). The OECD average does not include Costa Rica and Spain for short-term change in performance. Countries and economies are ranked in descending order of the gender gap in mathematics performance. Source: OECD, PISA 2022 Database, Tables I.B1.4.17, I.B1.4.18, I.B1.4.19, I.B1.5.40, I.B1.5.43 and I.B1.5.46:

Table I.4. Snapshot of immigrant students [1/2]

Countries/economies with a mean score in mathematics or a share of immigrant students **above** the OECD average
 Countries/economies with a mean score in mathematics or a share of immigrant students **not significantly different** from the OECD average
 Countries/economies with a mean score in mathematics or a share of immigrant students **below** the OECD average

	Percentage of immigrant students %	Performance in mathematics			Score-point difference in mathematics performance associated with immigrant background	
		Non-immigrant students	Second-generation immigrant students	First-generation immigrant students	After accounting for students' socio-economic status	After accounting for students' socio-economic status and language spoken at home
		Mean score	Mean score	Mean score	Score dif.	Score dif.
OECD average	12.9	479	459	435	-15	-5
Qatar	59.1	378	428	458	66	61
United Arab Emirates	52.9	390	466	489	88	88
Switzerland	34.9	528	477	472	-19	-5
Canada*	34.4	497	517	499	16	15
Australia*	29.3	483	509	506	26	25
Singapore	28.6	568	608	591	15	19
New Zealand*	28.5	479	500	482	16	24
Austria	26.6	505	451	439	-25	-5
Germany	25.8	495	457	398	-32	-8
United States*	23.7	470	466	441	16	28
Sweden	21.3	499	449	423	-34	-27
Belgium	20.5	504	452	439	-25	-17
United Kingdom*	20.1	494	507	483	12	16
Ireland*	17.4	495	489	484	0	0
France	16.5	485	438	425	-17	-9
Norway	15.9	479	448	436	-9	-11
Israel	15.1	467	468	410	1	11
Spain	15.1	481	459	433	-7	-5
Netherlands*	13.6	508	460	431	-27	-10
Greece	13.2	438	404	373	-13	-1
Costa Rica	12.5	387	373	367	m	m
Malta	11.9	469	451	484	6	5
Jordan	11.5	363	376	364	10	10
Portugal	11.3	477	461	434	-25	-20
Saudi Arabia	10.8	386	412	418	27	27
Denmark*	10.7	497	445	437	-28	-21
Serbia	10.7	441	448	445	2	3
Italy	10.7	476	453	430	-3	6
Slovenia	9.8	492	447	424	-29	-6
Croatia	8.8	466	451	459	-5	-1
Estonia	8.7	514	492	475	-20	-18
Brunei Darussalam	7.9	439	475	505	47	40
Iceland	7.4	464	436	419	-15	-2
Kazakhstan	7.4	426	430	431	12	12
Chile	6.9	417	435	381	-18	-17
Finland	6.8	491	442	413	-42	-29
Montenegro	6.2	407	417	402	-2	1
Argentina	5.3	380	375	365	4	11
Panama*	4.5	358	416	410	42	48
Dominican Republic	4.2	345	311	332	-16	-12
Czech Republic	4.1	489	484	443	-13	22

1. Second-generation immigrant students are those born in the country of assessment but whose parent(s) were born in another country. 2. First-generation immigrant students are those born outside the country of assessment and whose parents were also born in another country. Notes: Values that are statistically significant are marked in bold (see Annex A3). * Caution is required when interpreting estimates because one or more PISA sampling standards were not met (see Reader's Guide, Annexes A2 and A4). Countries and economies are ranked in descending order of the percentage of immigrant students. Source: OECD, PISA 2022 Database, Tables I.B1.7.1, I.B1.7.17 and I.B1.7.53.

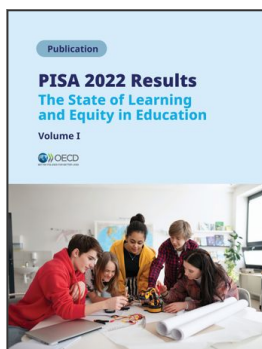
Table I.4. Snapshot of immigrant students [2/2]

	Percentage of immigrant students	Performance in mathematics			Score-point difference in mathematics performance associated with immigrant background	
		Non-immigrant students	Second-generation immigrant students	First-generation immigrant students	After accounting for students' socio-economic status	After accounting for students' socio-economic status and language spoken at home
		Mean score	Mean score	Mean score	Score dif.	Score dif.
Latvia*	3.3	484	491	496	3	8
Colombia	2.9	387	c	366	-22	-22
Thailand	2.5	397	364	366	-12	-10
Hungary	2.2	474	499	462	7	12
Paraguay	2.1	342	352	363	10	19
Philippines	2.0	359	278	319	-78	-74
North Macedonia	2.0	393	341	366	-44	-39
Lithuania	1.8	477	453	479	-14	-5
Slovak Republic	1.8	467	459	454	-16	17
Moldova	1.8	416	418	378	-18	-17
Türkiye	1.7	455	c	410	-55	-44
Uruguay	1.6	411	c	425	-10	-7
Malaysia	1.5	411	387	c	-15	-16
Mexico	1.5	398	352	325	-56	-52
Jamaica*	1.2	383	c	c	-38	-32
Peru	1.2	394	c	388	-31	-31
Poland	1.2	492	c	435	-45	-30
Georgia	1.1	396	341	374	-40	-32
Bulgaria	1.1	424	c	413	-34	-22
Albania	1.1	375	c	c	-52	-51
Uzbekistan	1.0	365	336	c	-30	-31
Guatemala	0.8	350	c	c	-23	-21
Japan	0.7	537	c	c	-29	12
El Salvador	0.7	346	c	c	-29	-25
Morocco	0.7	367	c	324	-59	-58
Romania	0.6	431	c	c	-44	-33
Brazil	0.5	384	c	c	-46	-31
Indonesia	0.4	367	303	c	-88	-89
Korea	0.4	529	c	c	c	c
Cambodia	0.4	340	c	c	c	c
Mongolia	0.4	427	c	c	c	c
Viet Nam	0.1	471	c	c	c	c
Macao (China)	60.3	543	558	564	26	25
Hong Kong (China)*	39.5	547	542	527	7	14
Cyprus	19.5	424	419	439	20	10
Baku (Azerbaijan)	4.4	404	399	385	-11	-10
Palestinian Authority	2.2	368	359	329	-32	-29
Kosovo	1.4	358	340	c	-17	-17
Ukrainian regions (18 of 27)	0.9	439	c	c	-14	-18
Chinese Taipei	0.7	549	c	c	-56	-47

1. Second-generation immigrant students are those born in the country of assessment but whose parent(s) were born in another country. 2. First-generation immigrant students are those born outside the country of assessment and whose parents were also born in another country. Notes: Values that are statistically significant are marked in bold (see Annex A3). * Caution is required when interpreting estimates because one or more PISA sampling standards were not met (see Reader's Guide, Annexes A2 and A4). Countries and economies are ranked in descending order of the percentage of immigrant students. Source: OECD, PISA 2022 Database, Tables I.B1.7.1, I.B1.7.17 and I.B1.7.53.

Data for all snapshot tables is available on line:

StatLink  <https://stat.link/d84fig>



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