Table V.4. Snapshot of students' autonomy and 21st-century mathematics skills

Countries/economies with values **above** the OECD average
Countries/economies with values **not significantly different** from the OECD average
Countries/economies with values **below** the OECD average

	Percentage of students reporting:				Trying to connect new material to what they have learned in previous mathematics lessons more than half of the time			
	Extracting mathematical information from diagrams, graphs, or simulations frequently	Interpreting mathematical solutions in the context of a real-life challenge frequently	Confidence extracting mathematical information from diagrams, graphs, or simulations	Confidence interpreting mathematical solutions in the context of a real-life challenge	More confidence in 21st-century mathematics skills[1]	Difference between more and less confidence in 21st-century mathematics skills[1]	Confidence finding learning resources online on their own, if schools close again in the future	They can easily assess the quality of information they find online
	%	%	%	%	%	% dif.	%	%
OECD average	34.6	19.7	64.5	52.5	62.6	32.0	72.7	51.0
Singapore	53.2	33.7	75.2	59.1	68.2	36.3	m	64.0
Denmark*	49.5	26.3	72.9	56.8	64.7	41.4	m	60.4
Kazakhstan	48.8	34.0	63.2	60.8	73.7	41.2	77.9	53.9
United Kingdom*	48.5	20.9	72.7	58.7	65.6	37.0	72.6	59.0
Netherlands*	47.7	15.1	73.9	50.0	54.3	26.9	74.6	m
Canada*	47.5	26.3	73.4	65.1	69.3	33.6	74.6	m
Albania	47.2	38.1	60.5	62.9	84.5	45.9	68.0	42.9
Ireland*	47.0	20.2	76.8	54.4	63.7	32.0	72.1	61.8
Austria	46.3	27.8	74.7	55.7	70.7	30.7	73.1	43.6
Uzbekistan	45.4	43.3	58.3	64.6	79.5	43.2	67.6	m
United Arab Emirates	45.2	31.8	68.8	61.3	74.3	42.5	79.2	m
France	44.9	26.5	79.4	69.1	52.8	30.0	82.9	m
Malta	44.7	21.5	66.9	53.9	71.9	42.5	68.0	58.0
United States*	44.5	19.2	69.3	58.6	69.6	34.9	73.5	62.7
Australia*	43.6	22.9	72.0	62.9	70.3	42.4	77.7	61.8
Saudi Arabia	43.6	33.4	63.7	57.4	64.9	40.1	69.0	34.4
Qatar	43.0	29.4	65.3	56.3	72.0	39.2	72.9	m
Hungary	42.9	16.0	74.1	37.3	56.9	27.7	79.3	48.9
Brazil	42.4	36.2	47.7	48.4	52.7	24.4	52.8	39.2
New Zealand*	42.2	19.7	68.0	55.3	61.3	36.7	73.4	m
Germany	41.7	21.6	77.6	56.2	64.8	31.7	77.3	47.4
Brunei Darussalam	41.6	15.7	46.8	29.3	53.0	26.9	54.6	40.5
Portugal	40.3	19.7	69.6	62.9	67.1	37.2	73.2	m
Georgia	40.2	28.3	44.2	44.9	73.4	43.2	63.6	44.4
Dominican Republic	39.7	37.0	47.1	51.4	70.7	36.6	63.1	40.4
Jamaica*	38.8	23.3	60.1	47.0	67.6	32.2	65.2	m
Colombia	37.9	29.4	67.8	68.3	68.7	32.4	81.4	m
Belgium	37.4	21.1	73.0	52.9	53.9	27.1	64.7	48.5
Malaysia	36.3	20.6	47.1	37.3	58.0	36.6	60.1	34.5
Sweden	35.8	26.3	67.0	58.7	70.0	40.1	71.5	48.0
Peru	35.7	35.5	61.8	60.3	72.2	36.0	72.2	m
Indonesia	35.5	30.9	47.0	47.9	60.7	33.5	58.7	m
Switzerland	35.2	19.8	75.1	63.3	61.0	29.5	76.5	48.3
Japan	34.5	15.3	43.9	30.0	44.7	30.6	32.6	39.0
Jordan	34.0	28.4	47.6	46.6	67.0	37.2	59.7	32.6
Uruguay	34.0	20.1	65.1	60.7	64.5	29.0	66.4	44.0
El Salvador	33.8	30.6	56.8	56.4	70.2	33.1	72.4	m
Cambodia	33.7	25.8	m	m	m	m	54.7	m
Philippines	33.6	25.9	47.6	49.5	53.6	26.2	61.1	m
Spain	33.4	20.8	63.6	57.8	61.2	25.5	77.5	52.2
Chile	33.4	28.9	55.9	54.8	69.1	28.8	70.8	50.1
Israel	32.9	13.3	57.0	39.4	68.3	32.8	61.6	41.0
Bulgaria	32.6	23.1	50.6	44.6	70.1	37.3	66.2	40.1
Argentina	32.5	27.6	47.5	50.9	52.2	26.3	67.6	36.7

Table V.4. Snapshot of students' autonomy and 21st-century mathematics skills [2/2]

Countries/economies with values **above** the OECD average
Countries/economies with values **not significantly different** from the OECD average
Countries/economies with values **below** the OECD average

	Percentage of students reporting:							
	Extracting mathematical information from diagrams, graphs, or simulations frequently	Interpreting mathematical solutions in the context of a real-life challenge frequently	Confidence extracting mathematical information from diagrams, graphs, or simulations	Confidence interpreting mathematical solutions in the context of a real-life challenge	Trying to connect new material to what they have learned in previous mathematics lessons more than half of the time		Confidence finding learning resources online on their own, if schools close again in the future	They can easily assess the quality of information they find online
					More confidence in 21st-century mathematics skills[1]	Difference between more and less confidence in 21st-century mathematics skills[1]		
	%	%	%	%	%	% dif.	%	%
OECD average	34.6	19.7	64.5	52.5	62.6	**32.0**	72.7	51.0
Slovak Republic	31.5	21.0	60.2	52.2	56.2	**22.4**	69.5	44.2
Romania	31.4	18.5	60.4	54.3	64.7	**35.8**	68.5	43.6
Morocco	31.3	27.9	42.9	44.3	60.2	**34.1**	53.6	30.5
Lithuania	31.2	14.2	68.3	49.2	60.7	**31.1**	82.4	54.5
Latvia*	31.2	18.7	55.9	36.3	60.3	**25.6**	75.1	52.8
Montenegro	31.1	23.0	42.7	43.8	65.9	**28.9**	57.8	m
North Macedonia	30.6	24.8	54.3	52.9	69.1	**38.5**	68.2	m
Paraguay	30.6	28.2	m	m	m	m	70.6	m
Moldova	30.2	20.4	44.3	44.5	67.3	**38.9**	67.6	m
Guatemala	30.2	29.8	m	m	m	m	69.7	m
Greece	30.0	16.1	48.9	42.8	70.1	**37.1**	56.0	45.2
Norway	29.9	18.6	58.6	48.3	65.7	**38.4**	m	m
Serbia	29.9	21.0	51.1	43.7	67.0	**35.2**	61.8	m
Mongolia	28.8	16.9	50.6	39.7	62.8	**37.6**	67.6	m
Türkiye	28.4	19.3	60.6	51.9	66.7	**38.3**	70.4	58.5
Croatia	27.2	22.6	70.9	63.2	63.6	**34.5**	87.1	44.2
Mexico	27.0	24.4	56.5	53.5	71.6	**37.3**	72.2	m
Costa Rica	26.0	26.8	51.1	55.4	65.5	**26.3**	69.6	58.2
Italy	25.5	16.1	64.7	51.7	57.2	**32.0**	86.5	51.9
Panama*	25.1	21.5	54.6	60.8	71.6	**29.4**	80.6	43.7
Poland	24.9	11.3	56.6	41.3	48.1	**18.9**	71.2	44.9
Iceland	23.9	16.4	62.6	55.8	69.3	**37.9**	79.9	57.4
Finland	23.6	14.6	63.2	59.0	61.0	**38.0**	79.8	51.6
Estonia	22.3	14.9	63.9	43.8	55.7	**25.8**	80.8	42.2
Korea	21.8	10.8	48.2	38.1	66.8	**42.6**	64.9	55.8
Viet Nam	20.2	17.3	m	m	m	m	69.6	m
Thailand	20.1	18.1	36.0	33.4	52.5	**33.7**	56.3	44.9
Slovenia	18.6	17.3	62.3	52.5	56.7	**21.6**	73.0	43.1
Czechia	18.3	11.3	47.2	41.8	55.9	**20.3**	m	46.6
Kosovo	42.5	31.9	45.9	44.6	65.8	**29.4**	61.9	m
Cyprus	38.5	22.0	59.8	51.5	68.2	**34.4**	65.2	m
Palestinian Authority	35.7	29.8	51.3	50.5	67.3	**39.4**	59.0	m
Baku (Azerbaijan)	35.6	26.9	58.7	57.1	79.3	**44.9**	67.6	m
Ukrainian regions (18 of 27)	35.0	19.5	44.4	39.9	60.9	**34.5**	76.5	46.2
Chinese Taipei	30.1	16.0	63.7	43.1	53.8	**41.3**	67.6	50.7
Macao (China)	29.2	11.3	59.9	46.2	50.6	**35.3**	65.8	47.7
Hong Kong (China)*	24.5	11.2	59.1	46.8	56.3	**37.1**	69.6	50.9

* Caution is required when interpreting estimates because one or more PISA sampling standards were not met (see Reader's Guide, Annexes A2 and A4).
1. Students who reported more (less) confidence in 21st-century mathematics skills are those in the top (bottom) quarter of the index of confidence in 21st-century mathematics skills in their own country/economy.
Note: Values that are statistically significant are marked in bold (see Annex A3).
Countries and economies are ranked in descending order of the percentage of students who reported "Extracting mathematical information from diagrams, graphs, or simulations" frequently.
Source: OECD, PISA 2022 Database, Tables V.B1.8.1, V.B1.8.10, V.B1.8.28, V.B1.8.29, V.B1.9.2 and V.B1.10.15.
The StatLink URL of this table is available below Snapshot Table V.7.