

## ANNEX B1

### Results for countries and economies

Table I.B1.1 [1/2] Percentage of students at each proficiency level in reading

		All students																	
		Below Level 1c (less than 189.33 score points)		Level 1c (from 189.33 to less than 262.04 score points)		Level 1b (from 262.04 to less than 334.75 score points)		Level 1a (from 334.75 to less than 407.47 score points)		Level 2 (from 407.47 to less than 480.18 score points)		Level 3 (from 480.18 to less than 552.89 score points)		Level 4 (from 552.89 to less than 625.61 score points)		Level 5 (from 625.61 to less than 698.32 score points)		Level 6 (above 698.32 score points)	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	0.1	(0.1)	1.4	(0.2)	5.6	(0.3)	12.5	(0.4)	21.1	(0.5)	25.4	(0.5)	20.9	(0.5)	10.3	(0.4)	2.7	(0.2)
	Austria	0.0	(0.0)	0.9	(0.2)	6.4	(0.6)	16.3	(0.8)	23.5	(0.8)	26.2	(0.9)	19.3	(0.8)	6.7	(0.5)	0.7	(0.1)
	Belgium	0.1	(0.1)	1.2	(0.2)	6.0	(0.4)	14.0	(0.6)	22.4	(0.7)	26.5	(0.7)	20.4	(0.7)	8.3	(0.5)	1.3	(0.2)
	Canada	0.0	(0.0)	0.7	(0.1)	3.1	(0.2)	10.0	(0.4)	20.1	(0.6)	27.2	(0.5)	24.0	(0.5)	12.2	(0.5)	2.8	(0.2)
	Chile	0.1	(0.1)	1.7	(0.2)	8.9	(0.6)	21.0	(0.9)	29.5	(0.9)	24.4	(0.9)	11.8	(0.6)	2.4	(0.3)	0.2	(0.1)
	Colombia	0.2	(0.1)	3.6	(0.4)	15.8	(0.9)	30.3	(1.0)	27.7	(1.0)	15.8	(0.9)	5.7	(0.5)	0.9	(0.2)	0.0	(0.0)
	Czech Republic	0.1	(0.1)	0.7	(0.2)	5.0	(0.5)	15.0	(0.8)	25.0	(0.9)	26.9	(0.9)	19.1	(0.8)	7.2	(0.5)	1.1	(0.2)
	Denmark	0.0	(0.0)	0.5	(0.1)	3.5	(0.3)	11.9	(0.5)	23.9	(0.8)	30.1	(0.9)	21.6	(0.8)	7.3	(0.5)	1.1	(0.2)
	Estonia	0.0	c	0.3	(0.1)	2.1	(0.2)	8.7	(0.5)	21.2	(0.9)	29.9	(0.9)	24.0	(0.8)	11.1	(0.6)	2.8	(0.3)
	Finland	0.0	(0.0)	0.8	(0.2)	3.3	(0.4)	9.4	(0.6)	19.2	(0.7)	27.6	(0.8)	25.4	(0.8)	11.9	(0.7)	2.4	(0.3)
	France	0.0	(0.0)	1.1	(0.2)	5.7	(0.4)	14.0	(0.7)	22.8	(0.8)	26.6	(0.8)	20.5	(0.7)	8.1	(0.6)	1.1	(0.2)
	Germany	0.1	(0.1)	1.3	(0.3)	5.7	(0.5)	13.6	(0.8)	21.1	(0.8)	25.4	(0.8)	21.5	(0.9)	9.5	(0.6)	1.8	(0.2)
	Greece	0.1	(0.1)	2.1	(0.3)	9.3	(0.7)	19.0	(0.9)	27.3	(0.8)	25.2	(1.0)	13.3	(0.8)	3.3	(0.4)	0.3	(0.1)
	Hungary	0.0	(0.1)	1.2	(0.2)	7.0	(0.6)	17.0	(0.8)	25.2	(0.9)	26.3	(0.9)	17.5	(0.8)	5.2	(0.5)	0.5	(0.1)
	Iceland	0.1	(0.1)	2.3	(0.3)	8.0	(0.7)	15.9	(0.8)	24.6	(0.9)	25.1	(0.8)	16.9	(0.7)	6.2	(0.6)	0.9	(0.2)
	Ireland	0.0	(0.0)	0.2	(0.1)	2.1	(0.3)	9.5	(0.6)	21.7	(0.8)	30.3	(0.9)	24.1	(0.8)	10.3	(0.6)	1.8	(0.3)
	Israel	0.7	(0.2)	5.0	(0.5)	10.4	(0.7)	15.0	(0.9)	19.4	(0.7)	21.6	(0.8)	17.5	(0.8)	8.4	(0.6)	2.0	(0.3)
	Italy	0.1	(0.1)	1.7	(0.3)	6.7	(0.6)	14.8	(0.7)	26.3	(0.9)	28.2	(0.9)	16.9	(0.7)	4.9	(0.4)	0.5	(0.1)
	Japan	0.1	(0.0)	0.7	(0.2)	4.1	(0.4)	12.0	(0.7)	22.5	(0.9)	28.6	(1.0)	21.9	(0.8)	8.6	(0.6)	1.7	(0.3)
	Korea	0.1	(0.1)	1.1	(0.2)	4.3	(0.4)	9.6	(0.7)	19.6	(0.7)	27.6	(0.8)	24.6	(0.8)	10.8	(0.6)	2.3	(0.4)
	Latvia	0.0	(0.0)	0.6	(0.1)	5.2	(0.4)	16.6	(0.6)	27.4	(0.8)	28.8	(0.8)	16.6	(0.7)	4.4	(0.4)	0.4	(0.1)
	Lithuania	0.0	(0.0)	1.0	(0.2)	6.3	(0.4)	17.0	(0.6)	26.1	(0.8)	27.7	(0.7)	16.9	(0.6)	4.5	(0.4)	0.4	(0.1)
	Luxembourg	0.2	(0.1)	2.4	(0.2)	9.2	(0.4)	17.6	(0.6)	23.7	(0.7)	23.5	(0.7)	15.9	(0.6)	6.4	(0.4)	1.3	(0.2)
	Mexico	0.0	(0.1)	2.5	(0.4)	13.1	(0.8)	29.1	(1.1)	31.7	(1.0)	17.5	(0.9)	5.3	(0.6)	0.7	(0.2)	0.0	(0.0)
	Netherlands*	0.1	(0.1)	1.3	(0.2)	7.0	(0.6)	15.6	(0.7)	23.7	(0.8)	24.3	(1.0)	18.8	(0.8)	7.9	(0.6)	1.2	(0.2)
	New Zealand	0.1	(0.1)	1.0	(0.2)	5.2	(0.5)	12.7	(0.6)	20.8	(0.7)	24.6	(0.7)	22.5	(0.7)	10.7	(0.6)	2.4	(0.3)
	Norway	0.1	(0.1)	1.7	(0.2)	5.6	(0.4)	11.9	(0.6)	21.5	(0.7)	26.4	(0.9)	21.6	(0.8)	9.6	(0.6)	1.6	(0.2)
	Poland	0.0	(0.0)	0.5	(0.1)	3.3	(0.3)	10.8	(0.6)	22.4	(0.8)	27.7	(0.8)	23.0	(0.8)	10.1	(0.7)	2.1	(0.3)
	Portugal*	0.0	(0.0)	0.9	(0.2)	5.0	(0.5)	14.3	(0.7)	23.3	(0.7)	28.2	(0.8)	21.0	(0.9)	6.5	(0.6)	0.8	(0.2)
	Slovak Republic	0.1	(0.1)	2.3	(0.3)	9.2	(0.7)	19.8	(0.8)	26.9	(0.9)	23.5	(0.9)	13.6	(0.7)	4.1	(0.4)	0.5	(0.2)
	Slovenia	0.0	(0.1)	0.6	(0.2)	4.3	(0.4)	12.9	(0.5)	24.5	(0.8)	29.5	(0.9)	20.3	(0.7)	6.8	(0.5)	1.0	(0.2)
	Spain	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Sweden	0.2	(0.1)	1.5	(0.2)	5.1	(0.5)	11.6	(0.7)	20.6	(0.8)	25.5	(0.8)	22.3	(0.8)	10.9	(0.7)	2.4	(0.3)
	Switzerland	0.1	(0.1)	1.3	(0.3)	7.1	(0.6)	15.1	(0.7)	23.4	(0.9)	26.3	(0.8)	18.5	(0.8)	6.9	(0.6)	1.2	(0.2)
Turkey	0.0	(0.0)	0.7	(0.2)	6.3	(0.6)	19.1	(0.7)	30.2	(0.9)	26.9	(1.0)	13.5	(0.6)	3.1	(0.5)	0.2	(0.1)	
United Kingdom	0.0	(0.0)	0.8	(0.2)	4.2	(0.4)	12.3	(0.7)	23.0	(0.7)	27.2	(0.7)	21.0	(0.8)	9.5	(0.6)	2.0	(0.2)	
United States*	0.1	(0.1)	1.1	(0.2)	5.4	(0.5)	12.7	(0.8)	21.1	(0.8)	24.7	(0.8)	21.4	(0.8)	10.7	(0.7)	2.8	(0.4)	
OECD average-36a	0.1	(0.0)	1.4	(0.0)	6.2	(0.1)	15.0	(0.1)	23.7	(0.1)	26.0	(0.1)	18.9	(0.1)	7.4	(0.1)	1.3	(0.0)	
OECD total	0.1	(0.0)	1.3	(0.1)	6.7	(0.2)	15.9	(0.3)	24.0	(0.3)	24.8	(0.3)	18.1	(0.3)	7.6	(0.2)	1.6	(0.1)	

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

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).


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Table I.B1.1 [2/2] Percentage of students at each proficiency level in reading

	All students																	
	Below Level 1c (less than 189.33 score points)		Level 1c (from 189.33 to less than 262.04 score points)		Level 1b (from 262.04 to less than 334.75 score points)		Level 1a (from 334.75 to less than 407.47 score points)		Level 2 (from 407.47 to less than 480.18 score points)		Level 3 (from 480.18 to less than 552.89 score points)		Level 4 (from 552.89 to less than 625.61 score points)		Level 5 (from 625.61 to less than 698.32 score points)		Level 6 (above 698.32 score points)	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
<b>Partners</b>																		
Albania	0.1	(0.1)	2.9	(0.3)	16.4	(0.7)	32.8	(0.9)	29.9	(0.8)	14.0	(0.7)	3.5	(0.4)	0.4	(0.1)	0.0	(0.0)
Argentina	1.3	(0.2)	6.7	(0.6)	17.4	(0.7)	26.7	(0.9)	25.7	(0.8)	16.2	(0.7)	5.3	(0.5)	0.7	(0.2)	0.0	(0.0)
Baku (Azerbaijan)	0.1	(0.1)	3.7	(0.4)	19.6	(0.8)	37.0	(1.1)	28.6	(0.9)	9.2	(0.6)	1.6	(0.4)	0.1	(0.1)	0.0	(0.0)
Belarus	0.0	(0.0)	0.8	(0.2)	5.8	(0.5)	16.8	(0.8)	28.7	(0.8)	28.0	(1.0)	16.0	(0.7)	3.7	(0.4)	0.3	(0.1)
Bosnia and Herzegovina	0.1	(0.1)	2.8	(0.4)	17.5	(1.0)	33.2	(1.1)	28.8	(1.1)	14.3	(0.9)	3.0	(0.4)	0.2	(0.1)	0.0	c
Brazil	0.4	(0.1)	5.3	(0.4)	17.7	(0.6)	26.7	(0.7)	24.5	(0.6)	16.3	(0.6)	7.4	(0.5)	1.7	(0.2)	0.2	(0.1)
Brunei Darussalam	0.3	(0.1)	5.4	(0.3)	19.1	(0.5)	27.0	(0.7)	24.5	(0.6)	15.5	(0.5)	6.9	(0.3)	1.3	(0.2)	0.0	(0.0)
B-S-J-Z (China)	0.0	(0.0)	0.1	(0.1)	0.7	(0.2)	4.3	(0.5)	14.3	(0.8)	27.9	(1.0)	30.8	(1.0)	17.5	(0.9)	4.2	(0.6)
Bulgaria	0.3	(0.1)	4.6	(0.6)	17.1	(1.1)	25.1	(0.9)	24.9	(1.0)	17.3	(0.9)	8.4	(0.7)	2.2	(0.3)	0.2	(0.1)
Costa Rica	0.1	(0.0)	1.8	(0.3)	11.3	(0.7)	28.9	(1.1)	32.1	(1.1)	19.4	(1.1)	5.9	(0.8)	0.6	(0.2)	0.0	c
Croatia	0.0	(0.0)	0.7	(0.2)	5.0	(0.5)	15.9	(0.8)	28.3	(0.9)	29.0	(1.0)	16.4	(0.8)	4.3	(0.4)	0.4	(0.1)
Cyprus	0.3	(0.1)	4.3	(0.3)	15.0	(0.6)	24.1	(0.8)	26.9	(0.7)	19.3	(0.6)	8.4	(0.4)	1.7	(0.2)	0.1	(0.1)
Dominican Republic	1.1	(0.3)	15.9	(0.9)	33.3	(1.1)	28.8	(1.0)	15.0	(0.9)	4.9	(0.5)	0.9	(0.2)	0.1	(0.1)	0.0	(0.0)
Georgia	0.4	(0.1)	7.0	(0.5)	24.2	(0.9)	32.8	(0.8)	22.9	(0.8)	10.1	(0.6)	2.4	(0.3)	0.2	(0.1)	0.0	(0.0)
Hong Kong (China)*	0.1	(0.1)	0.9	(0.2)	3.5	(0.4)	8.1	(0.6)	17.8	(0.7)	27.7	(0.7)	27.1	(0.8)	12.5	(0.6)	2.3	(0.3)
Indonesia	0.2	(0.1)	6.3	(0.6)	26.7	(1.0)	36.7	(1.1)	21.8	(1.0)	7.2	(0.8)	1.1	(0.2)	0.1	(0.0)	0.0	(0.0)
Jordan	1.1	(0.2)	4.0	(0.5)	11.1	(0.7)	25.0	(0.8)	33.8	(1.0)	20.5	(0.9)	4.3	(0.5)	0.3	(0.1)	0.0	(0.0)
Kazakhstan	0.1	(0.0)	3.5	(0.3)	22.2	(0.7)	38.4	(0.7)	23.9	(0.5)	8.9	(0.3)	2.6	(0.2)	0.4	(0.1)	0.0	(0.0)
Kosovo	0.3	(0.1)	8.7	(0.6)	31.7	(0.8)	38.0	(1.0)	17.5	(0.7)	3.6	(0.3)	0.2	(0.1)	0.0	(0.0)	0.0	c
Lebanon	6.3	(0.6)	16.9	(1.0)	23.0	(0.9)	21.6	(0.8)	17.4	(0.9)	10.5	(0.7)	3.7	(0.5)	0.7	(0.2)	0.0	(0.0)
Macao (China)	0.0	(0.0)	0.3	(0.1)	2.2	(0.2)	8.2	(0.6)	19.4	(0.8)	29.8	(0.8)	26.1	(0.7)	11.7	(0.6)	2.1	(0.3)
Malaysia	0.2	(0.1)	3.6	(0.4)	14.2	(0.8)	27.9	(0.9)	31.4	(1.0)	17.9	(0.9)	4.3	(0.6)	0.5	(0.2)	0.0	(0.0)
Malta	0.7	(0.2)	4.8	(0.4)	11.9	(0.7)	18.5	(0.9)	23.7	(0.9)	21.7	(0.9)	13.4	(0.9)	4.5	(0.5)	0.9	(0.2)
Moldova	0.4	(0.1)	3.9	(0.5)	13.5	(0.7)	25.2	(0.8)	28.0	(0.9)	20.8	(0.9)	7.2	(0.6)	1.0	(0.3)	0.0	(0.0)
Montenegro	0.1	(0.1)	2.8	(0.3)	13.5	(0.5)	28.0	(0.7)	30.5	(0.6)	18.3	(0.6)	6.0	(0.4)	0.8	(0.2)	0.0	(0.0)
Morocco	0.3	(0.1)	8.8	(0.7)	30.8	(1.3)	33.4	(0.9)	20.6	(1.2)	5.6	(0.5)	0.5	(0.1)	0.0	(0.0)	0.0	c
North Macedonia	1.6	(0.2)	7.3	(0.5)	18.3	(0.8)	27.9	(1.0)	26.6	(0.8)	14.4	(0.6)	3.5	(0.3)	0.3	(0.2)	0.0	(0.0)
Panama	1.0	(0.2)	8.4	(0.8)	23.4	(0.9)	31.5	(1.0)	23.0	(0.8)	9.9	(0.9)	2.6	(0.4)	0.2	(0.1)	0.0	(0.0)
Peru	0.4	(0.1)	5.5	(0.5)	19.6	(0.9)	28.9	(0.9)	25.8	(0.7)	14.3	(0.7)	4.8	(0.5)	0.7	(0.2)	0.0	(0.0)
Philippines	0.5	(0.1)	15.1	(0.9)	38.3	(1.1)	26.7	(0.8)	13.1	(0.7)	5.1	(0.7)	1.1	(0.3)	0.1	(0.0)	0.0	(0.0)
Qatar	1.2	(0.1)	8.5	(0.3)	17.6	(0.4)	23.6	(0.5)	23.4	(0.4)	15.8	(0.4)	7.3	(0.3)	2.2	(0.2)	0.4	(0.1)
Romania	0.8	(0.3)	4.3	(0.6)	12.9	(1.0)	22.8	(1.2)	28.1	(1.1)	20.9	(1.3)	8.7	(1.0)	1.3	(0.3)	0.1	(0.1)
Russia	0.0	(0.0)	1.0	(0.2)	5.6	(0.6)	15.5	(0.9)	28.1	(0.8)	28.0	(0.8)	16.4	(0.7)	4.8	(0.5)	0.6	(0.1)
Saudi Arabia	0.5	(0.2)	5.3	(0.6)	17.0	(0.9)	29.4	(0.9)	30.4	(1.1)	14.6	(0.8)	2.6	(0.3)	0.1	(0.1)	0.0	c
Serbia	0.1	(0.1)	2.7	(0.4)	12.2	(0.8)	22.7	(0.8)	27.8	(0.8)	21.8	(0.8)	10.1	(0.7)	2.4	(0.3)	0.2	(0.1)
Singapore	0.0	(0.0)	0.5	(0.1)	3.0	(0.3)	7.7	(0.4)	14.2	(0.5)	22.3	(0.7)	26.4	(0.6)	18.5	(0.7)	7.3	(0.4)
Chinese Taipei	0.1	(0.1)	1.2	(0.2)	4.5	(0.4)	12.0	(0.6)	21.8	(0.7)	27.4	(0.8)	22.0	(0.9)	9.3	(0.7)	1.6	(0.3)
Thailand	0.1	(0.1)	3.6	(0.5)	20.6	(1.1)	35.3	(1.1)	26.0	(1.0)	11.6	(0.9)	2.7	(0.4)	0.2	(0.1)	0.0	(0.0)
Ukraine	0.2	(0.1)	1.8	(0.3)	7.2	(0.7)	16.7	(0.9)	27.7	(0.8)	28.5	(1.0)	14.5	(0.8)	3.2	(0.4)	0.2	(0.1)
United Arab Emirates	0.6	(0.1)	5.8	(0.3)	14.9	(0.5)	21.6	(0.4)	23.4	(0.5)	18.1	(0.5)	10.8	(0.6)	4.1	(0.3)	0.7	(0.1)
Uruguay	0.3	(0.1)	4.0	(0.4)	13.6	(0.8)	24.0	(0.9)	28.1	(1.1)	20.1	(0.8)	8.3	(0.7)	1.5	(0.2)	0.1	(0.1)
Viet Nam**	0.0	(0.0)	0.1	(0.1)	1.1	(0.3)	8.3	(0.9)	26.9	(1.3)	38.1	(1.2)	20.5	(1.3)	4.6	(0.7)	0.3	(0.1)

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

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).


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Table I.B1.2 [1/2] Percentage of students at each proficiency level in mathematics

		All students													
		Below Level 1 (below 357.77 score points)		Level 1 (from 357.77 to less than 420.07 score points)		Level 2 (from 420.07 to less than 482.38 score points)		Level 3 (from 482.38 to less than 544.68 score points)		Level 4 (from 544.68 to less than 606.99 score points)		Level 5 (from 606.99 to less than 669.30 score points)		Level 6 (above 669.30 score points)	
		%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
OECD	Australia	7.6	(0.5)	14.8	(0.5)	23.4	(0.5)	25.6	(0.5)	18.2	(0.5)	8.0	(0.4)	2.5	(0.3)
	Austria	7.3	(0.7)	13.8	(0.8)	20.8	(1.0)	24.9	(0.9)	20.6	(0.8)	10.0	(0.7)	2.5	(0.3)
	Belgium	6.9	(0.7)	12.8	(0.6)	18.6	(0.7)	23.8	(0.8)	22.2	(0.7)	12.5	(0.6)	3.2	(0.4)
	Canada	5.0	(0.4)	11.3	(0.5)	20.8	(0.6)	25.9	(0.6)	21.7	(0.7)	11.3	(0.5)	4.0	(0.3)
	Chile	24.7	(1.1)	27.2	(0.9)	25.5	(0.9)	15.6	(0.8)	5.7	(0.5)	1.1	(0.2)	0.1	(0.0)
	Colombia	35.5	(1.7)	29.9	(1.2)	21.1	(0.9)	10.0	(0.7)	3.1	(0.4)	0.5	(0.1)	0.0	(0.0)
	Czech Republic	6.6	(0.7)	13.8	(0.7)	22.1	(0.8)	25.2	(0.9)	19.6	(0.7)	9.5	(0.5)	3.1	(0.3)
	Denmark	3.7	(0.4)	10.9	(0.6)	22.0	(0.9)	28.8	(0.8)	23.0	(0.8)	9.5	(0.6)	2.1	(0.3)
	Estonia	2.1	(0.3)	8.1	(0.6)	20.8	(0.8)	29.0	(0.8)	24.6	(0.8)	11.8	(0.7)	3.7	(0.4)
	Finland	3.8	(0.4)	11.1	(0.6)	22.3	(0.9)	28.9	(1.0)	22.7	(0.8)	9.3	(0.5)	1.8	(0.3)
	France	8.0	(0.5)	13.2	(0.6)	21.1	(0.8)	25.6	(0.8)	21.0	(0.8)	9.2	(0.6)	1.8	(0.3)
	Germany	7.6	(0.7)	13.5	(0.8)	20.7	(0.9)	24.0	(0.8)	20.8	(0.8)	10.5	(0.7)	2.8	(0.3)
	Greece	15.3	(1.1)	20.5	(0.9)	26.8	(0.9)	22.5	(1.0)	11.1	(0.6)	3.2	(0.4)	0.5	(0.2)
	Hungary	9.6	(0.7)	16.1	(0.8)	23.6	(0.9)	25.2	(1.0)	17.5	(0.8)	6.5	(0.5)	1.4	(0.3)
	Iceland	7.4	(0.5)	13.3	(0.7)	22.0	(1.0)	26.7	(1.0)	20.2	(0.9)	8.5	(0.6)	1.9	(0.3)
	Ireland	3.8	(0.5)	11.9	(0.7)	24.7	(0.8)	30.5	(0.8)	20.8	(0.8)	7.2	(0.6)	1.0	(0.2)
	Israel	17.7	(1.1)	16.4	(0.8)	20.7	(0.7)	21.0	(0.8)	15.4	(0.8)	7.0	(0.6)	1.8	(0.3)
	Italy	9.1	(0.8)	14.8	(0.9)	22.9	(1.0)	25.6	(0.9)	18.1	(0.8)	7.5	(0.6)	2.0	(0.3)
	Japan	2.9	(0.4)	8.6	(0.6)	18.7	(0.8)	26.4	(0.9)	25.1	(1.0)	14.0	(0.8)	4.3	(0.5)
	Korea	5.4	(0.5)	9.6	(0.6)	17.3	(0.8)	23.4	(0.7)	22.9	(0.8)	14.4	(0.7)	6.9	(0.8)
	Latvia	4.4	(0.5)	12.9	(0.8)	25.8	(0.9)	29.4	(1.0)	19.0	(0.8)	7.1	(0.5)	1.4	(0.2)
	Lithuania	9.3	(0.6)	16.4	(0.7)	24.2	(0.7)	25.2	(0.9)	16.5	(0.8)	6.8	(0.5)	1.7	(0.2)
	Luxembourg	10.9	(0.6)	16.4	(0.6)	21.7	(0.8)	22.6	(0.7)	17.7	(0.7)	8.6	(0.5)	2.3	(0.3)
	Mexico	26.0	(1.2)	30.3	(0.9)	26.4	(0.9)	13.1	(0.8)	3.7	(0.5)	0.5	(0.1)	0.0	(0.0)
	Netherlands*	4.5	(0.6)	11.2	(0.7)	19.0	(1.0)	23.2	(1.1)	23.6	(0.9)	14.2	(0.8)	4.3	(0.5)
	New Zealand	7.6	(0.5)	14.2	(0.6)	22.8	(0.8)	25.0	(0.7)	18.9	(0.7)	8.8	(0.4)	2.7	(0.3)
	Norway	6.5	(0.5)	12.4	(0.6)	21.8	(0.8)	26.5	(0.8)	20.6	(0.9)	9.8	(0.6)	2.4	(0.4)
	Poland	4.2	(0.5)	10.5	(0.6)	20.7	(0.8)	26.5	(0.8)	22.3	(0.7)	11.7	(0.7)	4.1	(0.5)
	Portugal*	9.3	(0.6)	14.0	(0.8)	20.9	(0.8)	24.5	(1.1)	19.7	(0.8)	9.1	(0.6)	2.5	(0.3)
	Slovak Republic	10.7	(0.9)	14.4	(0.6)	21.4	(0.9)	24.2	(0.9)	18.6	(0.9)	8.4	(0.6)	2.3	(0.3)
	Slovenia	4.8	(0.6)	11.7	(0.7)	21.6	(0.9)	26.4	(0.9)	22.0	(0.8)	10.5	(0.8)	3.1	(0.4)
	Spain	8.7	(0.4)	16.0	(0.5)	24.4	(0.4)	26.0	(0.6)	17.5	(0.5)	6.2	(0.3)	1.1	(0.1)
	Sweden	6.0	(0.6)	12.8	(0.8)	21.9	(0.9)	25.7	(0.8)	21.0	(0.8)	10.0	(0.7)	2.6	(0.3)
	Switzerland	4.8	(0.4)	12.0	(0.8)	19.5	(0.9)	24.4	(1.0)	22.3	(0.9)	12.1	(0.7)	4.9	(0.5)
	Turkey	13.8	(0.9)	22.9	(0.8)	27.3	(0.8)	20.4	(0.8)	10.9	(0.5)	3.9	(0.4)	0.9	(0.3)
	United Kingdom	6.4	(0.5)	12.8	(0.6)	22.0	(0.8)	25.5	(0.7)	20.4	(0.7)	9.8	(0.6)	3.1	(0.4)
	United States*	10.2	(0.8)	16.9	(0.9)	24.2	(1.0)	24.1	(1.0)	16.3	(0.9)	6.8	(0.7)	1.5	(0.3)
	<b>OECD average</b>	9.1	(0.1)	14.8	(0.1)	22.2	(0.1)	24.4	(0.1)	18.5	(0.1)	8.5	(0.1)	2.4	(0.1)
	<b>OECD total</b>	11.5	(0.3)	17.2	(0.3)	22.9	(0.3)	22.6	(0.3)	16.3	(0.3)	7.4	(0.2)	2.0	(0.1)

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

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).


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Table I.B1.2 [2/2] Percentage of students at each proficiency level in mathematics

	All students													
	Below Level 1 (below 357.77 score points)		Level 1 (from 357.77 to less than 420.07 score points)		Level 2 (from 420.07 to less than 482.38 score points)		Level 3 (from 482.38 to less than 544.68 score points)		Level 4 (from 544.68 to less than 606.99 score points)		Level 5 (from 606.99 to less than 669.30 score points)		Level 6 (above 669.30 score points)	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
<b>Partners</b>														
Albania	16.9	(0.9)	25.5	(0.9)	28.6	(1.0)	19.3	(0.8)	7.5	(0.7)	2.0	(0.2)	0.3	(0.1)
Argentina	40.5	(1.6)	28.5	(1.0)	19.6	(0.9)	8.8	(0.7)	2.3	(0.3)	0.3	(0.1)	0.0	(0.0)
Baku (Azerbaijan)	24.7	(1.0)	26.1	(0.8)	25.2	(0.9)	15.7	(0.7)	6.4	(0.6)	1.7	(0.3)	0.3	(0.1)
Belarus	11.4	(0.7)	18.0	(0.7)	24.7	(0.9)	23.4	(0.7)	15.2	(0.7)	6.1	(0.5)	1.2	(0.2)
Bosnia and Herzegovina	28.7	(1.3)	28.9	(1.0)	24.2	(0.9)	13.1	(0.8)	4.3	(0.5)	0.7	(0.2)	0.1	(0.0)
Brazil	41.0	(1.0)	27.1	(0.7)	18.2	(0.7)	9.3	(0.5)	3.4	(0.3)	0.8	(0.2)	0.1	(0.0)
Brunei Darussalam	22.1	(0.8)	25.7	(0.8)	24.0	(0.6)	16.2	(0.5)	8.9	(0.5)	2.7	(0.3)	0.4	(0.1)
B-S-J-Z (China)	0.5	(0.1)	1.9	(0.3)	6.9	(0.5)	17.5	(0.8)	28.9	(1.0)	27.8	(1.0)	16.5	(1.1)
Bulgaria	21.9	(1.4)	22.5	(0.8)	23.7	(1.0)	18.2	(1.0)	9.4	(0.7)	3.3	(0.5)	0.9	(0.2)
Costa Rica	27.8	(1.3)	32.2	(1.2)	25.6	(1.2)	11.2	(1.0)	2.8	(0.5)	0.3	(0.1)	0.0	(0.0)
Croatia	11.0	(0.8)	20.2	(0.8)	27.4	(0.9)	23.3	(0.8)	13.0	(0.8)	4.3	(0.5)	0.8	(0.2)
Cyprus	17.2	(0.6)	19.7	(0.7)	24.7	(0.9)	22.0	(0.8)	12.1	(0.5)	3.7	(0.4)	0.7	(0.1)
Dominican Republic	69.3	(1.4)	21.3	(1.0)	7.3	(0.6)	1.8	(0.4)	0.3	(0.1)	0.0	(0.0)	0.0	c
Georgia	33.7	(1.2)	27.3	(1.1)	21.6	(0.8)	11.9	(0.8)	4.4	(0.5)	0.9	(0.3)	0.1	(0.1)
Hong Kong (China)*	2.8	(0.4)	6.4	(0.6)	13.5	(0.7)	22.1	(0.7)	26.3	(0.9)	19.5	(0.8)	9.5	(0.8)
Indonesia	40.6	(1.6)	31.3	(1.2)	18.6	(1.0)	6.8	(0.7)	2.3	(0.5)	0.4	(0.2)	0.0	(0.0)
Jordan	30.7	(1.4)	28.6	(0.8)	24.0	(0.9)	12.4	(0.8)	3.6	(0.5)	0.6	(0.2)	0.1	(0.1)
Kazakhstan	22.3	(0.8)	26.8	(0.6)	26.6	(0.6)	16.0	(0.6)	6.3	(0.4)	1.6	(0.2)	0.3	(0.1)
Kosovo	47.0	(1.0)	29.6	(1.1)	16.5	(0.8)	5.4	(0.4)	1.4	(0.2)	0.1	(0.1)	0.0	(0.0)
Lebanon	38.0	(1.7)	21.8	(1.0)	19.1	(1.1)	13.1	(0.9)	6.0	(0.5)	1.7	(0.3)	0.3	(0.1)
Macao (China)	1.0	(0.2)	4.0	(0.4)	12.3	(0.8)	24.8	(0.9)	30.3	(1.2)	20.0	(0.8)	7.7	(0.6)
Malaysia	16.1	(0.9)	25.4	(1.0)	28.3	(0.9)	19.3	(0.9)	8.5	(0.7)	2.2	(0.4)	0.3	(0.1)
Malta	14.3	(0.7)	15.9	(0.8)	21.5	(1.0)	23.2	(1.1)	16.6	(0.7)	6.7	(0.6)	1.8	(0.3)
Moldova	26.1	(0.9)	24.2	(0.9)	23.5	(0.9)	16.5	(0.7)	7.3	(0.6)	2.0	(0.3)	0.4	(0.1)
Montenegro	19.9	(0.7)	26.3	(0.7)	27.3	(0.7)	17.9	(0.5)	6.9	(0.4)	1.6	(0.2)	0.2	(0.1)
Morocco	47.1	(1.9)	28.5	(1.0)	16.9	(1.0)	6.2	(0.6)	1.2	(0.2)	0.1	(0.1)	0.0	(0.0)
North Macedonia	35.2	(0.8)	25.8	(0.8)	21.3	(0.7)	12.1	(0.7)	4.5	(0.4)	1.0	(0.2)	0.1	(0.1)
Panama	53.7	(1.4)	27.5	(1.0)	13.5	(0.8)	4.3	(0.6)	0.9	(0.2)	0.1	(0.1)	0.0	(0.0)
Peru	32.0	(1.2)	28.3	(0.8)	23.1	(0.9)	11.6	(0.7)	4.1	(0.5)	0.8	(0.2)	0.1	(0.0)
Philippines	54.4	(1.7)	26.3	(0.9)	13.6	(1.0)	4.7	(0.7)	0.9	(0.3)	0.1	(0.1)	0.0	(0.0)
Qatar	29.7	(0.7)	24.0	(0.5)	21.9	(0.5)	14.6	(0.4)	6.9	(0.3)	2.4	(0.2)	0.6	(0.1)
Romania	22.6	(1.6)	23.9	(1.2)	24.5	(1.1)	17.3	(1.1)	8.5	(1.0)	2.7	(0.5)	0.4	(0.2)
Russia	6.8	(0.7)	14.9	(0.8)	25.0	(0.9)	27.5	(0.9)	17.8	(0.8)	6.6	(0.6)	1.5	(0.2)
Saudi Arabia	42.8	(1.6)	29.9	(1.0)	18.8	(1.1)	6.8	(0.6)	1.5	(0.3)	0.2	(0.1)	0.0	(0.0)
Serbia	18.1	(1.1)	21.6	(0.8)	24.1	(0.8)	19.2	(0.8)	11.7	(0.7)	4.2	(0.4)	1.0	(0.2)
Singapore	1.8	(0.2)	5.3	(0.4)	11.1	(0.5)	19.1	(0.7)	25.8	(0.8)	23.2	(0.7)	13.8	(0.8)
Chinese Taipei	5.0	(0.4)	9.0	(0.5)	16.1	(0.7)	23.2	(0.8)	23.5	(0.8)	15.6	(0.8)	7.6	(0.8)
Thailand	25.0	(1.3)	27.7	(1.0)	24.6	(1.0)	14.3	(0.8)	6.1	(0.7)	1.9	(0.3)	0.3	(0.1)
Ukraine	15.6	(1.2)	20.3	(1.0)	26.2	(1.0)	21.5	(1.0)	11.5	(0.8)	4.0	(0.5)	1.0	(0.3)
United Arab Emirates	24.2	(0.9)	21.3	(0.6)	21.5	(0.5)	17.2	(0.6)	10.4	(0.5)	4.2	(0.3)	1.2	(0.1)
Uruguay	24.6	(1.1)	26.1	(1.3)	26.5	(1.0)	15.8	(1.0)	6.0	(0.6)	1.0	(0.2)	0.1	(0.0)
Viet Nam**	3.1	(0.6)	12.6	(1.2)	27.3	(1.3)	31.4	(1.1)	18.8	(1.2)	5.7	(0.7)	1.1	(0.3)

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

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).


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Table I.B1.3 [1/2] Percentage of students at each proficiency level in science

	All students															
	Below Level 1b (below 260.54 score points)		Level 1b (from 260.54 to less than 334.94 score points)		Level 1a (from 334.94 to less than 409.54 score points)		Level 2 (from 409.54 to less than 484.14 score points)		Level 3 (from 484.14 to less than 558.73 score points)		Level 4 (from 558.73 to less than 633.33 score points)		Level 5 (from 633.33 to less than 707.93 score points)		Level 6 (above 707.93 score points)	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
<b>OECD</b>																
Australia	0.6	(0.1)	4.5	(0.3)	13.7	(0.5)	23.0	(0.6)	27.5	(0.6)	21.2	(0.6)	7.9	(0.4)	1.6	(0.2)
Austria	0.6	(0.2)	4.8	(0.5)	16.5	(0.9)	25.0	(0.8)	27.6	(0.8)	19.2	(0.8)	5.8	(0.6)	0.5	(0.1)
Belgium	0.6	(0.1)	5.3	(0.5)	14.2	(0.6)	22.2	(0.7)	28.4	(0.8)	21.3	(0.7)	7.3	(0.4)	0.7	(0.2)
Canada	0.4	(0.1)	2.6	(0.2)	10.5	(0.4)	22.4	(0.6)	29.3	(0.6)	23.5	(0.7)	9.5	(0.5)	1.8	(0.2)
Chile	1.0	(0.2)	8.8	(0.7)	25.5	(1.0)	33.1	(1.0)	22.6	(1.0)	7.9	(0.6)	1.0	(0.2)	0.0	(0.0)
Colombia	2.1	(0.3)	15.3	(1.1)	33.0	(1.1)	29.6	(1.2)	15.4	(0.8)	4.2	(0.4)	0.4	(0.1)	0.0	(0.0)
Czech Republic	0.4	(0.1)	3.9	(0.4)	14.5	(0.8)	25.9	(1.0)	28.7	(1.0)	19.1	(0.8)	6.6	(0.5)	1.0	(0.2)
Denmark	0.7	(0.2)	4.1	(0.3)	13.9	(0.6)	26.6	(0.7)	30.1	(0.9)	19.1	(0.8)	5.0	(0.5)	0.5	(0.2)
Estonia	0.1	(0.1)	1.1	(0.2)	7.5	(0.5)	21.5	(0.7)	32.1	(0.9)	25.4	(0.8)	10.2	(0.5)	2.0	(0.2)
Finland	0.4	(0.1)	2.8	(0.3)	9.7	(0.6)	21.1	(0.7)	28.9	(0.8)	24.9	(0.8)	10.5	(0.6)	1.8	(0.3)
France	0.6	(0.2)	5.0	(0.4)	14.9	(0.8)	24.6	(0.9)	28.3	(0.7)	20.0	(0.9)	5.9	(0.5)	0.6	(0.1)
Germany	0.8	(0.2)	5.0	(0.5)	13.8	(0.7)	22.0	(0.9)	26.9	(0.9)	21.5	(1.0)	8.5	(0.6)	1.5	(0.2)
Greece	1.2	(0.3)	8.1	(0.8)	22.4	(1.0)	31.6	(0.9)	26.0	(1.0)	9.3	(0.6)	1.3	(0.2)	0.0	(0.0)
Hungary	0.6	(0.2)	5.7	(0.6)	17.8	(0.9)	26.1	(1.0)	28.1	(0.9)	17.0	(0.7)	4.3	(0.5)	0.4	(0.1)
Iceland	0.5	(0.2)	5.9	(0.5)	18.6	(0.8)	28.3	(0.9)	27.7	(1.0)	15.2	(0.8)	3.6	(0.4)	0.2	(0.1)
Ireland	0.3	(0.1)	3.3	(0.3)	13.4	(0.7)	26.9	(0.9)	31.3	(0.9)	19.0	(0.7)	5.4	(0.5)	0.5	(0.2)
Israel	3.2	(0.4)	10.7	(0.7)	19.2	(0.9)	23.1	(0.9)	22.9	(0.8)	15.1	(0.8)	5.2	(0.4)	0.7	(0.1)
Italy	1.1	(0.2)	6.6	(0.5)	18.2	(0.9)	30.2	(1.0)	27.8	(1.1)	13.4	(0.7)	2.6	(0.4)	0.2	(0.1)
Japan	0.2	(0.1)	1.8	(0.3)	8.9	(0.6)	19.9	(0.8)	29.7	(1.1)	26.5	(0.9)	11.4	(0.7)	1.6	(0.3)
Korea	0.5	(0.1)	3.1	(0.3)	10.6	(0.7)	21.0	(0.8)	28.6	(0.9)	24.5	(0.9)	10.0	(0.6)	1.8	(0.3)
Latvia	0.3	(0.1)	3.4	(0.4)	14.8	(0.7)	29.5	(0.8)	31.5	(1.1)	16.8	(0.8)	3.5	(0.4)	0.3	(0.1)
Lithuania	0.5	(0.2)	4.7	(0.4)	17.0	(0.8)	28.4	(0.8)	28.7	(0.8)	16.3	(0.6)	4.0	(0.3)	0.5	(0.1)
Luxembourg	0.8	(0.2)	6.8	(0.4)	19.2	(0.6)	25.7	(0.8)	25.6	(0.8)	16.6	(0.6)	4.9	(0.5)	0.5	(0.2)
Mexico	1.0	(0.3)	11.6	(1.0)	34.2	(1.3)	33.9	(0.9)	15.5	(0.9)	3.5	(0.5)	0.3	(0.1)	0.0	c
Netherlands*	0.9	(0.2)	4.8	(0.5)	14.4	(0.8)	22.4	(0.8)	24.9	(1.1)	22.1	(1.0)	9.1	(0.7)	1.5	(0.3)
New Zealand	0.6	(0.2)	4.3	(0.4)	13.1	(0.6)	22.0	(0.6)	26.8	(0.7)	21.8	(0.7)	9.5	(0.6)	1.8	(0.3)
Norway	1.1	(0.2)	5.7	(0.4)	14.1	(0.8)	25.0	(0.9)	28.6	(0.7)	18.7	(0.7)	6.1	(0.5)	0.7	(0.1)
Poland	0.2	(0.1)	2.5	(0.3)	11.1	(0.7)	24.9	(0.8)	30.0	(1.0)	22.0	(0.8)	8.1	(0.7)	1.2	(0.2)
Portugal*	0.4	(0.1)	4.4	(0.6)	14.7	(0.9)	26.2	(0.9)	29.4	(1.0)	19.2	(0.9)	5.1	(0.5)	0.5	(0.2)
Slovak Republic	1.4	(0.2)	7.9	(0.6)	19.9	(0.7)	28.5	(0.9)	25.3	(0.8)	13.2	(0.6)	3.4	(0.3)	0.3	(0.1)
Slovenia	0.2	(0.1)	2.5	(0.3)	11.9	(0.6)	24.6	(0.8)	31.8	(1.0)	21.8	(0.9)	6.7	(0.5)	0.6	(0.2)
Spain	0.6	(0.1)	4.5	(0.3)	16.2	(0.5)	28.4	(0.5)	29.4	(0.5)	16.8	(0.4)	3.9	(0.2)	0.3	(0.1)
Sweden	0.6	(0.2)	4.6	(0.5)	13.8	(0.7)	24.0	(0.7)	28.0	(0.8)	20.7	(0.9)	7.3	(0.5)	1.0	(0.2)
Switzerland	0.4	(0.1)	4.6	(0.5)	15.2	(0.8)	24.9	(0.9)	27.8	(0.9)	19.3	(1.0)	6.9	(0.7)	0.9	(0.2)
Turkey	0.3	(0.1)	4.7	(0.4)	20.1	(0.8)	32.8	(1.0)	27.3	(1.0)	12.3	(0.7)	2.3	(0.4)	0.1	(0.1)
United Kingdom	0.6	(0.2)	3.9	(0.4)	12.9	(0.6)	24.0	(0.8)	28.1	(0.8)	20.8	(0.7)	8.2	(0.6)	1.5	(0.2)
United States*	0.5	(0.2)	4.4	(0.5)	13.7	(0.8)	23.6	(0.9)	27.5	(0.9)	21.1	(0.9)	7.9	(0.7)	1.3	(0.2)
<b>OECD average</b>	0.7	(0.0)	5.2	(0.1)	16.0	(0.1)	25.8	(0.1)	27.4	(0.1)	18.1	(0.1)	5.9	(0.1)	0.8	(0.0)
<b>OECD total</b>	0.7	(0.1)	5.6	(0.2)	17.2	(0.3)	25.9	(0.3)	26.0	(0.3)	17.6	(0.3)	6.1	(0.2)	0.9	(0.1)

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

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).


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Table I.B1.3 [2/2] Percentage of students at each proficiency level in science

	All students															
	Below Level 1b (below 260.54 score points)		Level 1b (from 260.54 to less than 334.94 score points)		Level 1a (from 334.94 to less than 409.54 score points)		Level 2 (from 409.54 to less than 484.14 score points)		Level 3 (from 484.14 to less than 558.73 score points)		Level 4 (from 558.73 to less than 633.33 score points)		Level 5 (from 633.33 to less than 707.93 score points)		Level 6 (above 707.93 score points)	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
<b>Partners</b>																
Albania	1.5	(0.2)	11.7	(0.7)	33.7	(1.0)	34.8	(1.1)	15.1	(0.7)	2.9	(0.3)	0.2	(0.1)	0.0	(0.0)
Argentina	4.9	(0.6)	18.2	(1.0)	30.4	(1.1)	27.0	(0.9)	15.0	(0.8)	4.1	(0.4)	0.5	(0.1)	0.0	(0.0)
Baku (Azerbaijan)	2.5	(0.3)	17.3	(1.0)	38.0	(1.0)	29.9	(0.9)	10.3	(0.7)	1.8	(0.4)	0.1	(0.1)	0.0	c
Belarus	0.5	(0.2)	5.0	(0.5)	18.7	(0.9)	31.3	(0.9)	28.8	(0.8)	13.1	(0.8)	2.5	(0.4)	0.1	(0.1)
Bosnia and Herzegovina	2.9	(0.4)	18.2	(0.9)	35.6	(1.0)	29.4	(1.2)	11.7	(0.9)	1.9	(0.3)	0.1	(0.1)	0.0	c
Brazil	4.0	(0.4)	19.9	(0.7)	31.4	(0.8)	25.3	(0.7)	13.9	(0.7)	4.6	(0.4)	0.8	(0.1)	0.0	(0.0)
Brunei Darussalam	1.9	(0.3)	14.2	(0.6)	29.7	(0.8)	25.5	(0.5)	17.4	(0.5)	9.0	(0.4)	2.1	(0.3)	0.1	(0.1)
B-S-J-Z (China)	0.0	(0.0)	0.3	(0.1)	1.8	(0.3)	8.4	(0.6)	23.4	(0.9)	34.6	(1.0)	24.3	(1.1)	7.2	(0.7)
Bulgaria	3.0	(0.5)	15.3	(1.0)	28.3	(0.9)	26.7	(1.1)	17.9	(0.9)	7.4	(0.6)	1.4	(0.3)	0.1	(0.1)
Costa Rica	1.3	(0.3)	12.0	(0.8)	34.5	(1.2)	34.4	(1.2)	14.9	(1.2)	2.8	(0.6)	0.1	(0.1)	0.0	c
Croatia	0.6	(0.2)	5.6	(0.5)	19.1	(0.9)	30.0	(0.8)	26.9	(0.9)	14.2	(0.7)	3.3	(0.4)	0.3	(0.1)
Cyprus	2.0	(0.3)	11.9	(0.6)	25.0	(0.8)	28.9	(1.0)	21.4	(0.7)	9.1	(0.4)	1.5	(0.2)	0.1	(0.1)
Dominican Republic	13.6	(1.0)	39.6	(1.3)	31.6	(1.3)	12.3	(0.9)	2.6	(0.4)	0.3	(0.1)	0.0	(0.0)	0.0	c
Georgia	5.8	(0.5)	22.9	(0.9)	35.7	(0.9)	24.3	(0.9)	9.5	(0.6)	1.7	(0.3)	0.1	(0.1)	0.0	c
Hong Kong (China)*	0.2	(0.1)	2.4	(0.3)	8.9	(0.6)	21.7	(0.8)	33.8	(0.9)	25.0	(0.9)	7.1	(0.6)	0.7	(0.2)
Indonesia	1.8	(0.3)	16.8	(1.0)	41.4	(1.1)	29.2	(1.2)	9.2	(0.8)	1.6	(0.3)	0.1	(0.0)	0.0	(0.0)
Jordan	3.2	(0.4)	11.0	(0.8)	26.2	(0.9)	32.4	(1.0)	20.7	(0.9)	6.0	(0.5)	0.6	(0.2)	0.0	(0.0)
Kazakhstan	2.2	(0.3)	17.8	(0.7)	40.3	(0.8)	26.9	(0.8)	9.9	(0.5)	2.5	(0.3)	0.4	(0.1)	0.0	(0.0)
Kosovo	4.2	(0.4)	29.3	(0.9)	43.1	(1.0)	19.2	(0.7)	3.9	(0.4)	0.4	(0.1)	0.0	(0.0)	0.0	c
Lebanon	8.9	(0.8)	23.6	(1.2)	29.7	(1.0)	21.8	(1.0)	11.8	(0.8)	3.6	(0.4)	0.5	(0.2)	0.0	(0.0)
Macao (China)	0.1	(0.1)	0.8	(0.2)	5.1	(0.5)	17.2	(0.7)	32.3	(1.0)	30.8	(0.9)	11.9	(0.6)	1.7	(0.3)
Malaysia	0.7	(0.2)	8.3	(0.7)	27.6	(1.0)	35.9	(1.0)	21.5	(0.9)	5.4	(0.8)	0.6	(0.2)	0.0	(0.0)
Malta	3.4	(0.4)	10.8	(0.7)	19.4	(0.7)	24.9	(0.9)	23.7	(0.9)	13.5	(0.7)	3.9	(0.4)	0.5	(0.1)
Moldova	2.4	(0.3)	12.7	(0.7)	27.4	(0.9)	29.7	(0.9)	20.2	(0.8)	6.6	(0.5)	0.8	(0.2)	0.0	(0.0)
Montenegro	2.2	(0.3)	14.6	(0.6)	31.4	(0.8)	31.5	(0.7)	15.9	(0.6)	4.0	(0.3)	0.3	(0.1)	0.0	(0.0)
Morocco	2.7	(0.4)	26.1	(1.4)	40.7	(1.1)	24.0	(1.4)	6.1	(0.6)	0.4	(0.1)	0.0	(0.0)	0.0	c
North Macedonia	4.5	(0.4)	15.5	(0.6)	29.4	(0.8)	28.2	(0.9)	16.4	(0.7)	5.2	(0.4)	0.8	(0.2)	0.0	(0.0)
Panama	10.5	(0.9)	27.3	(1.1)	33.5	(1.3)	19.7	(0.8)	7.4	(0.7)	1.5	(0.3)	0.1	(0.1)	0.0	c
Peru	2.7	(0.4)	17.3	(0.9)	34.5	(1.1)	29.0	(0.8)	13.2	(0.8)	3.1	(0.5)	0.2	(0.1)	0.0	(0.0)
Philippines	7.5	(0.8)	35.3	(1.4)	35.2	(1.2)	15.4	(0.8)	5.6	(0.7)	1.0	(0.3)	0.1	(0.0)	0.0	c
Qatar	5.2	(0.3)	16.6	(0.4)	26.5	(0.6)	24.9	(0.5)	17.0	(0.4)	7.5	(0.3)	2.0	(0.2)	0.2	(0.1)
Romania	2.9	(0.5)	13.1	(1.2)	28.0	(1.4)	29.8	(1.0)	18.9	(1.3)	6.4	(0.8)	0.9	(0.2)	0.0	(0.0)
Russia	0.4	(0.2)	4.1	(0.5)	16.7	(0.9)	31.7	(0.9)	30.0	(0.9)	14.0	(0.8)	2.9	(0.4)	0.2	(0.1)
Saudi Arabia	4.9	(0.6)	21.7	(1.0)	35.6	(1.0)	26.6	(1.0)	9.6	(0.7)	1.5	(0.3)	0.1	(0.0)	0.0	c
Serbia	1.9	(0.3)	11.1	(0.8)	25.3	(1.0)	29.9	(0.9)	21.1	(0.9)	9.1	(0.7)	1.5	(0.2)	0.1	(0.0)
Singapore	0.2	(0.1)	1.8	(0.2)	7.1	(0.4)	15.1	(0.7)	25.4	(0.7)	29.7	(0.7)	17.0	(0.5)	3.8	(0.3)
Chinese Taipei	0.7	(0.2)	3.3	(0.3)	11.2	(0.6)	21.1	(0.9)	28.5	(0.9)	23.5	(0.8)	10.0	(0.8)	1.6	(0.3)
Thailand	1.3	(0.3)	11.6	(0.8)	31.6	(1.1)	31.7	(0.9)	17.8	(1.0)	5.3	(0.7)	0.7	(0.2)	0.0	(0.0)
Ukraine	1.0	(0.2)	6.3	(0.6)	19.2	(0.9)	30.0	(1.1)	26.7	(1.1)	13.4	(0.8)	3.2	(0.5)	0.3	(0.1)
United Arab Emirates	3.7	(0.2)	14.4	(0.5)	24.7	(0.6)	25.6	(0.5)	19.2	(0.5)	9.5	(0.5)	2.6	(0.2)	0.3	(0.1)
Uruguay	2.1	(0.4)	13.2	(0.8)	28.6	(1.0)	30.6	(1.0)	18.7	(0.9)	6.1	(0.5)	0.7	(0.2)	0.0	(0.0)
Viet Nam**	0.0	(0.0)	0.3	(0.1)	3.6	(0.5)	18.1	(1.2)	36.2	(1.2)	29.8	(1.1)	10.6	(0.8)	1.5	(0.3)

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

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).


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Table I.B1.4 [1/2] Mean score and variation in reading performance

	Mean score		Standard deviation		Percentiles														
					5th		10th		25th		Median (50th)		75th		90th		95th		
	Mean	S.E.	S.D.	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	
<b>OECD</b>																			
Australia	503	(1.6)	109	(0.9)	315	(2.7)	357	(2.8)	429	(2.2)	507	(1.9)	580	(2.0)	640	(2.2)	673	(2.6)	
Austria	484	(2.7)	99	(1.2)	318	(3.9)	350	(3.7)	413	(4.1)	488	(3.8)	558	(2.9)	612	(2.9)	641	(2.9)	
Belgium	493	(2.3)	103	(1.3)	317	(4.0)	352	(3.8)	421	(3.2)	498	(2.7)	568	(2.6)	623	(2.6)	653	(2.8)	
Canada	520	(1.8)	100	(0.8)	349	(2.8)	388	(2.4)	452	(2.3)	524	(2.2)	592	(2.0)	646	(2.3)	677	(2.8)	
Chile	452	(2.6)	92	(1.2)	298	(3.7)	331	(3.6)	389	(3.1)	453	(3.2)	517	(3.4)	572	(3.3)	602	(3.5)	
Colombia	412	(3.3)	89	(1.5)	272	(4.1)	300	(3.7)	350	(3.5)	408	(3.8)	472	(4.1)	532	(4.7)	566	(4.9)	
Czech Republic	490	(2.5)	97	(1.6)	328	(5.2)	362	(4.3)	422	(3.7)	492	(3.0)	560	(2.9)	616	(2.8)	647	(3.1)	
Denmark	501	(1.8)	92	(1.2)	344	(4.0)	380	(3.0)	439	(2.7)	504	(2.2)	566	(2.1)	618	(2.6)	647	(3.3)	
Estonia	523	(1.8)	93	(1.2)	367	(3.8)	402	(3.5)	460	(2.6)	524	(2.3)	587	(2.3)	643	(3.1)	676	(3.7)	
Finland	520	(2.3)	100	(1.3)	345	(4.7)	387	(4.2)	455	(3.2)	527	(2.8)	591	(2.5)	643	(3.0)	672	(3.3)	
France	493	(2.3)	101	(1.5)	319	(4.3)	355	(3.5)	423	(3.0)	497	(3.0)	567	(3.3)	622	(3.6)	651	(4.0)	
Germany	498	(3.0)	106	(1.5)	316	(5.0)	354	(4.5)	424	(4.4)	504	(4.1)	576	(3.5)	632	(3.5)	663	(3.6)	
Greece	457	(3.6)	97	(1.6)	292	(4.8)	326	(4.9)	390	(4.9)	460	(4.1)	526	(3.7)	583	(3.9)	614	(5.0)	
Hungary	476	(2.3)	98	(1.3)	311	(3.7)	346	(4.0)	407	(3.0)	479	(3.1)	547	(2.9)	602	(3.7)	631	(4.1)	
Iceland	474	(1.7)	105	(1.3)	293	(4.4)	332	(4.0)	402	(3.3)	477	(2.7)	549	(3.0)	609	(3.3)	640	(3.8)	
Ireland	518	(2.2)	91	(1.0)	364	(4.1)	398	(3.5)	456	(2.8)	520	(2.4)	583	(2.6)	635	(2.8)	663	(3.8)	
Israel	470	(3.7)	124	(1.9)	256	(5.4)	296	(5.9)	381	(5.8)	479	(4.9)	563	(3.8)	628	(3.7)	663	(3.9)	
Italy	476	(2.4)	97	(1.7)	306	(5.5)	345	(4.6)	413	(3.2)	481	(2.9)	545	(3.0)	598	(3.4)	628	(3.5)	
Japan	504	(2.7)	97	(1.7)	337	(5.1)	374	(4.5)	438	(3.7)	508	(3.0)	572	(3.1)	627	(3.7)	657	(4.1)	
Korea	514	(2.9)	102	(1.7)	329	(5.8)	377	(4.9)	449	(3.8)	522	(3.1)	585	(3.1)	640	(3.9)	669	(4.1)	
Latvia	479	(1.6)	90	(1.1)	328	(3.6)	360	(3.2)	415	(2.3)	480	(2.2)	542	(2.3)	595	(2.7)	624	(3.0)	
Lithuania	476	(1.5)	94	(1.0)	316	(3.5)	351	(2.7)	410	(2.6)	479	(2.3)	543	(1.9)	597	(1.8)	625	(3.2)	
Luxembourg	470	(1.1)	108	(1.0)	291	(3.1)	325	(2.1)	392	(2.0)	472	(1.8)	548	(1.9)	612	(2.8)	646	(3.9)	
Mexico	420	(2.7)	84	(1.6)	286	(3.9)	314	(3.5)	362	(2.8)	419	(2.9)	476	(3.5)	530	(4.2)	562	(5.8)	
Netherlands*	485	(2.7)	105	(1.7)	309	(5.2)	344	(4.4)	410	(3.5)	486	(3.7)	562	(3.4)	621	(3.3)	651	(3.4)	
New Zealand	506	(2.0)	106	(1.3)	322	(4.8)	362	(3.7)	432	(3.2)	511	(2.9)	584	(2.1)	640	(2.9)	671	(2.9)	
Norway	499	(2.2)	106	(1.3)	310	(4.3)	356	(4.3)	430	(3.2)	506	(2.7)	576	(3.1)	632	(2.9)	661	(3.0)	
Poland	512	(2.7)	97	(1.4)	347	(4.5)	384	(3.6)	446	(2.9)	515	(3.3)	581	(3.4)	636	(4.0)	667	(4.1)	
Portugal*	492	(2.4)	96	(1.2)	327	(4.7)	362	(4.0)	425	(3.4)	497	(2.9)	562	(2.9)	613	(2.7)	640	(4.4)	
Slovak Republic	458	(2.2)	100	(1.4)	291	(4.3)	326	(4.0)	388	(3.1)	458	(2.9)	529	(3.1)	590	(3.3)	623	(3.5)	
Slovenia	495	(1.2)	94	(1.2)	335	(3.9)	372	(3.0)	431	(2.2)	499	(1.9)	561	(2.1)	614	(2.8)	644	(3.4)	
Spain	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
Sweden	506	(3.0)	108	(1.5)	317	(5.5)	360	(5.7)	434	(4.1)	512	(3.4)	583	(3.2)	640	(3.5)	672	(3.7)	
Switzerland	484	(3.1)	103	(1.5)	308	(5.1)	345	(4.6)	413	(4.0)	488	(3.6)	558	(3.8)	615	(4.0)	647	(4.4)	
Turkey	466	(2.2)	88	(1.6)	321	(4.6)	351	(4.1)	404	(3.0)	466	(2.6)	527	(2.4)	581	(3.1)	610	(4.6)	
United Kingdom	504	(2.6)	100	(1.3)	334	(4.4)	372	(4.3)	435	(3.2)	506	(2.7)	575	(3.1)	632	(3.5)	664	(3.8)	
United States*	505	(3.6)	108	(1.6)	321	(5.7)	361	(5.3)	430	(4.4)	510	(4.1)	584	(4.3)	643	(3.9)	676	(4.6)	
<b>OECD average-36a</b>	487	(0.4)	99	(0.2)	318	(0.7)	354	(0.7)	419	(0.6)	490	(0.5)	558	(0.5)	614	(0.5)	644	(0.6)	
<b>OECD total</b>	485	(1.2)	105	(0.6)	311	(1.6)	347	(1.5)	411	(1.4)	486	(1.4)	560	(1.4)	620	(1.6)	654	(1.8)	

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

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).


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Table I.B1.4 [2/2] Mean score and variation in reading performance

	Mean score		Standard deviation		Percentiles													
					5th		10th		25th		Median (50th)		75th		90th		95th	
	Mean	S.E.	S.D.	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.		
<b>Partners</b>																		
Albania	405	(1.9)	80	(1.2)	277	(2.9)	303	(2.9)	349	(2.2)	403	(2.1)	459	(2.8)	510	(3.3)	542	(4.1)
Argentina	402	(3.0)	98	(1.5)	240	(4.5)	274	(4.2)	333	(3.4)	402	(3.6)	471	(3.6)	529	(3.4)	561	(3.9)
Baku (Azerbaijan)	389	(2.5)	74	(1.7)	270	(2.6)	294	(2.5)	338	(2.4)	389	(2.4)	438	(3.0)	485	(4.6)	514	(6.3)
Belarus	474	(2.4)	89	(1.3)	322	(4.5)	355	(3.4)	412	(3.1)	475	(3.0)	538	(3.0)	589	(3.1)	617	(4.0)
Bosnia and Herzegovina	403	(2.9)	79	(1.2)	278	(3.1)	303	(2.8)	346	(3.0)	400	(3.5)	458	(3.7)	509	(4.1)	537	(4.0)
Brazil	413	(2.1)	100	(1.3)	258	(2.6)	286	(2.6)	340	(2.3)	408	(2.4)	482	(3.1)	548	(3.7)	584	(4.1)
Brunei Darussalam	408	(0.9)	97	(0.8)	258	(1.9)	284	(1.9)	335	(1.4)	403	(1.5)	476	(1.7)	542	(2.5)	578	(2.5)
B-S-J-Z (China)	555	(2.7)	87	(1.7)	406	(5.9)	441	(4.2)	498	(3.5)	559	(2.9)	617	(3.1)	666	(3.5)	692	(4.8)
Bulgaria	420	(3.9)	101	(1.8)	263	(4.3)	290	(4.5)	344	(4.9)	416	(4.8)	491	(5.0)	557	(5.2)	594	(5.3)
Costa Rica	426	(3.4)	81	(1.7)	295	(3.8)	323	(3.1)	370	(2.9)	424	(3.5)	483	(4.5)	534	(5.9)	563	(6.4)
Croatia	479	(2.7)	89	(1.7)	329	(5.2)	362	(4.6)	418	(3.7)	480	(3.2)	542	(2.9)	594	(3.2)	623	(3.9)
Cyprus	424	(1.4)	98	(0.9)	265	(2.7)	295	(2.9)	353	(2.3)	424	(1.9)	494	(2.0)	554	(2.6)	587	(3.0)
Dominican Republic	342	(2.9)	82	(1.8)	221	(2.8)	241	(2.5)	281	(2.7)	334	(3.2)	395	(4.0)	453	(5.5)	488	(6.1)
Georgia	380	(2.2)	84	(1.2)	249	(3.1)	274	(2.5)	319	(2.6)	374	(2.7)	436	(2.8)	493	(3.6)	526	(3.8)
Hong Kong (China)*	524	(2.7)	99	(1.5)	342	(6.7)	390	(5.5)	463	(3.7)	533	(2.9)	595	(2.6)	645	(2.5)	673	(3.3)
Indonesia	371	(2.6)	75	(1.7)	254	(3.6)	277	(3.1)	318	(2.8)	367	(2.8)	420	(3.6)	472	(5.1)	502	(5.7)
Jordan	419	(2.9)	87	(1.7)	261	(6.9)	303	(5.7)	366	(3.9)	426	(3.0)	480	(2.6)	524	(3.1)	550	(3.6)
Kazakhstan	387	(1.5)	77	(1.2)	271	(2.5)	294	(2.2)	333	(1.7)	380	(1.5)	433	(1.9)	490	(2.9)	527	(4.1)
Kosovo	353	(1.1)	68	(0.7)	245	(2.2)	265	(2.1)	304	(1.9)	352	(1.7)	398	(1.7)	442	(2.0)	470	(3.1)
Lebanon	353	(4.3)	113	(1.6)	180	(4.9)	211	(4.6)	268	(4.6)	347	(5.7)	434	(5.2)	507	(5.0)	546	(5.7)
Macao (China)	525	(1.2)	92	(1.1)	365	(5.0)	403	(3.2)	464	(2.3)	530	(1.7)	590	(2.1)	641	(3.0)	670	(2.8)
Malaysia	415	(2.9)	85	(1.6)	273	(3.5)	302	(3.4)	357	(3.1)	417	(3.2)	474	(3.4)	524	(4.2)	552	(5.0)
Malta	448	(1.7)	113	(1.2)	258	(4.2)	295	(3.2)	369	(3.0)	452	(2.6)	529	(3.0)	593	(3.3)	628	(4.3)
Moldova	424	(2.4)	93	(1.6)	268	(4.4)	301	(3.3)	358	(2.9)	425	(3.1)	491	(3.4)	544	(3.7)	573	(4.9)
Montenegro	421	(1.1)	86	(0.8)	281	(2.6)	310	(2.1)	360	(1.6)	420	(1.7)	480	(1.6)	534	(2.0)	566	(2.7)
Morocco	359	(3.1)	75	(1.1)	244	(2.6)	265	(2.6)	304	(3.0)	355	(3.9)	412	(4.0)	460	(3.6)	488	(3.9)
North Macedonia	393	(1.1)	94	(1.0)	233	(3.4)	268	(2.7)	328	(2.2)	395	(1.9)	460	(1.8)	513	(2.4)	543	(2.7)
Panama	377	(3.0)	88	(1.9)	237	(4.0)	265	(3.7)	315	(3.0)	374	(3.0)	436	(4.2)	493	(5.6)	528	(6.7)
Peru	401	(3.0)	92	(1.5)	256	(3.5)	283	(2.9)	334	(3.3)	397	(3.3)	463	(3.8)	523	(4.9)	558	(6.3)
Philippines	340	(3.3)	80	(2.3)	230	(2.6)	248	(2.3)	281	(2.3)	327	(3.1)	388	(4.7)	453	(7.2)	491	(8.3)
Qatar	407	(0.8)	110	(0.6)	233	(1.9)	264	(1.8)	326	(1.5)	405	(1.3)	483	(1.2)	552	(1.8)	592	(2.1)
Romania	428	(5.1)	98	(2.2)	261	(6.5)	297	(6.0)	361	(6.1)	431	(6.0)	497	(6.0)	554	(5.9)	584	(5.5)
Russia	479	(3.1)	93	(1.8)	321	(5.4)	357	(4.8)	416	(3.7)	480	(3.4)	543	(3.3)	597	(3.6)	629	(4.4)
Saudi Arabia	399	(3.0)	84	(1.6)	256	(4.8)	286	(4.4)	341	(4.0)	402	(3.4)	459	(3.1)	507	(3.0)	534	(3.5)
Serbia	439	(3.3)	96	(1.4)	282	(4.0)	312	(3.9)	370	(4.4)	440	(4.1)	508	(3.5)	566	(3.5)	599	(3.8)
Singapore	549	(1.6)	109	(1.0)	352	(3.8)	398	(3.9)	478	(2.3)	559	(2.1)	628	(2.0)	684	(2.5)	714	(2.6)
Chinese Taipei	503	(2.8)	102	(1.5)	325	(4.2)	367	(3.8)	435	(3.4)	508	(3.1)	576	(3.7)	630	(3.8)	661	(4.5)
Thailand	393	(3.2)	79	(1.6)	271	(3.4)	295	(3.2)	337	(3.2)	388	(3.5)	445	(4.4)	501	(5.1)	533	(5.8)
Ukraine	466	(3.5)	93	(1.7)	302	(6.2)	340	(5.2)	404	(4.8)	472	(3.5)	532	(3.5)	582	(3.8)	612	(4.8)
United Arab Emirates	432	(2.3)	113	(0.9)	251	(2.4)	284	(2.7)	348	(2.5)	429	(2.6)	511	(3.5)	584	(3.1)	624	(3.0)
Uruguay	427	(2.8)	96	(1.6)	267	(3.5)	299	(3.6)	360	(3.6)	427	(3.2)	495	(3.6)	552	(4.5)	585	(4.1)
Viet Nam**	505	(3.6)	74	(1.7)	381	(4.9)	409	(4.6)	456	(3.9)	505	(3.7)	554	(4.1)	599	(4.7)	625	(5.5)

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

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).


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Table I.B1.5 [1/2] Mean score and variation in mathematics performance

	Mean score		Standard deviation		Percentiles													
					5th		10th		25th		Median (50th)		75th		90th		95th	
	Mean	S.E.	S.D.	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.
<b>OECD</b>																		
Australia	491	(1.9)	92	(1.2)	339	(3.8)	371	(3.0)	428	(2.2)	492	(2.1)	555	(2.0)	609	(2.7)	641	(3.6)
Austria	499	(3.0)	93	(1.5)	341	(4.4)	374	(4.4)	433	(4.0)	503	(3.7)	566	(3.5)	618	(3.3)	646	(3.6)
Belgium	508	(2.3)	95	(1.7)	344	(4.3)	377	(4.1)	440	(3.2)	514	(2.5)	579	(2.6)	628	(3.4)	656	(3.7)
Canada	512	(2.4)	92	(1.1)	358	(3.2)	392	(3.0)	449	(2.8)	513	(2.6)	576	(2.7)	629	(2.7)	661	(3.2)
Chile	417	(2.4)	85	(1.4)	282	(3.9)	311	(3.5)	359	(2.9)	416	(2.9)	475	(3.2)	528	(3.5)	559	(4.1)
Colombia	391	(3.0)	81	(2.0)	262	(5.4)	290	(3.9)	335	(3.5)	387	(3.5)	445	(3.8)	499	(4.5)	531	(4.4)
Czech Republic	499	(2.5)	93	(1.7)	345	(5.2)	378	(4.6)	435	(3.6)	501	(2.7)	564	(2.8)	619	(3.1)	650	(3.9)
Denmark	509	(1.7)	82	(1.0)	370	(3.6)	401	(2.6)	454	(2.3)	512	(2.3)	567	(2.3)	613	(2.8)	640	(3.5)
Estonia	523	(1.7)	82	(1.1)	390	(3.1)	419	(2.9)	468	(2.4)	524	(2.0)	579	(2.2)	628	(2.7)	657	(3.6)
Finland	507	(2.0)	82	(1.2)	368	(3.6)	399	(3.4)	451	(2.5)	510	(2.5)	565	(2.4)	612	(2.5)	639	(3.3)
France	495	(2.3)	93	(1.5)	333	(4.3)	370	(3.4)	433	(3.2)	502	(3.0)	562	(3.2)	611	(3.3)	638	(3.6)
Germany	500	(2.6)	95	(1.5)	337	(4.6)	373	(4.2)	433	(3.6)	504	(3.5)	570	(3.3)	621	(3.2)	650	(3.4)
Greece	451	(3.1)	89	(1.8)	302	(4.9)	334	(4.7)	391	(4.1)	454	(3.3)	513	(3.2)	565	(3.8)	595	(4.7)
Hungary	481	(2.3)	91	(1.6)	328	(3.9)	360	(4.0)	418	(3.3)	484	(2.9)	546	(3.0)	597	(3.7)	626	(4.7)
Iceland	495	(2.0)	90	(1.2)	340	(3.8)	374	(4.2)	434	(3.4)	499	(2.7)	559	(2.7)	609	(3.0)	638	(4.1)
Ireland	500	(2.2)	78	(1.0)	367	(3.6)	397	(3.3)	447	(2.6)	502	(2.5)	554	(2.3)	599	(3.0)	625	(3.5)
Israel	463	(3.5)	108	(1.9)	276	(6.2)	315	(5.5)	388	(5.0)	468	(4.0)	542	(3.6)	600	(3.9)	632	(3.9)
Italy	487	(2.8)	94	(1.8)	327	(5.5)	363	(4.7)	423	(3.1)	490	(3.5)	552	(3.3)	605	(3.9)	635	(4.9)
Japan	527	(2.5)	86	(1.6)	380	(4.3)	413	(3.9)	468	(3.1)	530	(2.9)	589	(2.8)	637	(3.8)	664	(4.5)
Korea	526	(3.1)	100	(2.0)	354	(5.0)	393	(4.4)	460	(3.8)	530	(3.4)	596	(3.6)	651	(4.6)	684	(5.9)
Latvia	496	(2.0)	80	(1.1)	363	(4.1)	393	(3.2)	441	(2.4)	497	(2.4)	551	(2.5)	599	(3.1)	628	(3.4)
Lithuania	481	(2.0)	91	(1.1)	330	(4.1)	362	(3.6)	418	(2.8)	483	(2.3)	545	(2.2)	598	(2.8)	630	(3.2)
Luxembourg	483	(1.1)	98	(1.3)	321	(3.4)	353	(2.9)	413	(2.1)	485	(2.0)	555	(2.0)	611	(2.4)	641	(2.9)
Mexico	409	(2.5)	78	(1.6)	284	(3.8)	311	(3.6)	356	(2.7)	408	(2.7)	461	(3.1)	510	(3.6)	539	(4.5)
Netherlands*	519	(2.6)	93	(1.8)	362	(5.0)	394	(4.8)	453	(4.0)	524	(3.0)	588	(2.7)	638	(3.6)	664	(3.7)
New Zealand	494	(1.7)	93	(1.1)	339	(3.7)	372	(3.0)	430	(2.5)	496	(2.3)	560	(2.2)	614	(2.2)	645	(3.7)
Norway	501	(2.2)	90	(1.3)	345	(4.1)	381	(3.9)	441	(2.9)	504	(2.8)	565	(2.4)	617	(3.1)	645	(4.4)
Poland	516	(2.6)	90	(1.7)	366	(4.7)	398	(3.8)	455	(2.9)	517	(2.8)	578	(3.1)	631	(4.2)	661	(4.7)
Portugal*	492	(2.7)	96	(1.3)	327	(5.2)	362	(3.8)	426	(3.6)	497	(3.2)	562	(3.0)	614	(3.6)	643	(4.5)
Slovak Republic	486	(2.6)	100	(1.7)	315	(6.0)	353	(5.4)	420	(4.1)	492	(3.0)	556	(2.7)	610	(3.1)	640	(3.7)
Slovenia	509	(1.4)	89	(1.4)	360	(5.3)	392	(3.0)	448	(2.3)	511	(1.8)	571	(2.3)	622	(2.8)	652	(3.4)
Spain	481	(1.5)	88	(1.0)	331	(2.8)	365	(2.4)	421	(1.8)	484	(1.6)	544	(1.8)	593	(2.2)	621	(2.4)
Sweden	502	(2.7)	91	(1.4)	348	(5.7)	383	(4.6)	441	(3.7)	505	(3.2)	567	(2.9)	618	(3.3)	647	(3.8)
Switzerland	515	(2.9)	94	(1.4)	360	(4.4)	391	(3.5)	448	(3.8)	518	(3.7)	582	(3.4)	636	(4.3)	668	(4.8)
Turkey	454	(2.3)	88	(1.8)	314	(4.3)	343	(3.8)	392	(3.2)	450	(2.4)	512	(2.7)	571	(4.0)	605	(5.3)
United Kingdom	502	(2.6)	93	(1.4)	346	(4.1)	381	(4.0)	439	(2.9)	504	(2.7)	567	(3.0)	620	(3.3)	651	(4.2)
United States*	478	(3.2)	92	(1.5)	326	(5.0)	357	(4.6)	414	(4.0)	479	(3.8)	543	(3.9)	598	(4.3)	629	(4.6)
<b>OECD average</b>	489	(0.4)	91	(0.2)	337	(0.7)	370	(0.6)	427	(0.5)	492	(0.5)	553	(0.5)	605	(0.6)	634	(0.7)
<b>OECD total</b>	478	(1.0)	97	(0.5)	318	(1.7)	350	(1.5)	409	(1.3)	478	(1.2)	547	(1.2)	604	(1.3)	636	(1.5)

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

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).


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Table I.B1.5 [2/2] Mean score and variation in mathematics performance

	Mean score		Standard deviation		Percentiles													
					5th		10th		25th		Median (50th)		75th		90th		95th	
	Mean	S.E.	S.D.	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.		
<b>Partners</b>																		
Albania	437	(2.4)	83	(1.3)	303	(3.6)	332	(3.1)	381	(2.9)	436	(3.0)	493	(2.8)	544	(3.5)	575	(3.8)
Argentina	379	(2.8)	84	(1.7)	243	(4.6)	272	(4.1)	322	(3.6)	378	(3.1)	436	(3.5)	489	(3.8)	520	(4.0)
Baku (Azerbaijan)	420	(2.8)	89	(1.7)	276	(3.8)	306	(3.4)	359	(2.9)	418	(3.1)	480	(3.8)	535	(5.0)	570	(5.4)
Belarus	472	(2.7)	93	(1.4)	318	(5.0)	351	(3.4)	407	(3.1)	473	(3.0)	537	(3.2)	592	(3.5)	623	(4.1)
Bosnia and Herzegovina	406	(3.1)	82	(1.3)	276	(4.1)	303	(3.2)	349	(3.2)	404	(3.5)	462	(3.7)	514	(4.4)	545	(4.3)
Brazil	384	(2.0)	88	(1.6)	251	(3.1)	277	(2.5)	322	(2.3)	377	(2.4)	440	(2.8)	501	(3.9)	538	(4.9)
Brunei Darussalam	430	(1.2)	91	(1.0)	287	(3.4)	316	(2.4)	365	(2.0)	425	(1.6)	492	(2.0)	555	(2.2)	588	(3.4)
B-S-J-Z (China)	591	(2.5)	80	(1.8)	452	(5.2)	486	(4.2)	540	(3.0)	596	(2.7)	647	(3.0)	691	(3.2)	716	(3.6)
Bulgaria	436	(3.8)	97	(2.1)	280	(6.1)	311	(4.6)	368	(4.6)	434	(4.2)	503	(4.1)	563	(5.7)	599	(6.8)
Costa Rica	402	(3.3)	75	(2.0)	282	(4.2)	308	(3.4)	352	(2.7)	401	(3.3)	452	(4.2)	499	(5.5)	528	(7.0)
Croatia	464	(2.5)	87	(1.7)	323	(4.6)	354	(3.9)	405	(3.0)	463	(2.9)	523	(3.1)	577	(3.9)	608	(4.2)
Cyprus	451	(1.4)	95	(1.1)	292	(3.5)	325	(2.8)	385	(2.5)	454	(1.9)	517	(2.1)	571	(2.4)	601	(3.4)
Dominican Republic	325	(2.6)	71	(2.0)	214	(3.2)	236	(2.7)	276	(2.7)	322	(2.9)	370	(3.2)	417	(4.8)	449	(6.6)
Georgia	398	(2.6)	88	(1.6)	257	(3.9)	286	(3.5)	336	(2.9)	394	(2.8)	457	(3.7)	515	(4.4)	548	(6.0)
Hong Kong (China)*	551	(3.0)	94	(1.9)	387	(6.2)	426	(5.4)	490	(4.2)	557	(3.1)	617	(2.8)	667	(3.5)	696	(4.5)
Indonesia	379	(3.1)	79	(2.2)	255	(4.3)	281	(3.9)	325	(3.2)	376	(3.1)	427	(3.7)	480	(5.9)	517	(8.7)
Jordan	400	(3.3)	85	(1.7)	259	(4.6)	291	(4.2)	343	(3.4)	400	(3.4)	458	(3.9)	508	(4.3)	539	(5.2)
Kazakhstan	423	(1.9)	87	(1.1)	282	(3.2)	314	(2.4)	365	(2.2)	422	(2.0)	480	(2.2)	535	(3.0)	568	(3.1)
Kosovo	366	(1.5)	77	(1.3)	243	(3.7)	269	(2.7)	313	(2.1)	364	(1.8)	416	(2.3)	465	(3.3)	497	(4.0)
Lebanon	393	(4.0)	106	(1.6)	224	(5.2)	256	(4.8)	317	(5.1)	391	(5.0)	469	(5.0)	533	(4.7)	569	(4.7)
Macao (China)	558	(1.5)	81	(1.5)	420	(4.1)	452	(3.6)	505	(2.3)	561	(2.3)	613	(2.2)	659	(2.6)	685	(3.4)
Malaysia	440	(2.9)	83	(1.7)	307	(3.6)	335	(3.0)	383	(3.1)	438	(3.0)	496	(3.9)	550	(4.8)	580	(5.9)
Malta	472	(1.9)	102	(1.4)	297	(4.4)	334	(3.4)	401	(3.6)	478	(2.7)	545	(2.7)	599	(3.5)	630	(4.8)
Moldova	421	(2.4)	94	(1.7)	268	(3.8)	300	(3.1)	354	(2.6)	419	(2.7)	486	(3.2)	543	(4.4)	578	(5.7)
Montenegro	430	(1.2)	83	(1.0)	295	(2.8)	324	(2.2)	371	(1.9)	429	(1.7)	487	(1.6)	538	(2.1)	569	(3.1)
Morocco	368	(3.3)	76	(1.5)	249	(3.5)	273	(3.2)	314	(3.3)	363	(3.6)	418	(4.4)	469	(4.4)	499	(5.0)
North Macedonia	394	(1.6)	93	(1.2)	243	(3.9)	275	(2.9)	330	(2.1)	394	(2.4)	458	(2.2)	516	(3.5)	550	(4.4)
Panama	353	(2.7)	77	(2.1)	228	(5.0)	255	(3.9)	300	(2.9)	351	(2.7)	403	(3.6)	454	(5.5)	485	(6.3)
Peru	400	(2.6)	84	(1.5)	266	(3.4)	293	(3.1)	341	(2.9)	397	(2.9)	456	(3.5)	511	(4.1)	544	(5.1)
Philippines	353	(3.5)	78	(2.0)	229	(4.2)	255	(3.7)	299	(3.2)	349	(3.4)	403	(4.5)	456	(6.0)	488	(7.4)
Qatar	414	(1.2)	98	(0.9)	259	(2.8)	290	(2.2)	345	(1.6)	411	(1.8)	481	(1.6)	544	(2.1)	582	(2.5)
Romania	430	(4.9)	94	(2.1)	277	(5.7)	310	(5.4)	365	(4.7)	428	(5.7)	495	(6.1)	554	(6.9)	588	(7.2)
Russia	488	(3.0)	86	(1.9)	344	(5.5)	376	(4.3)	430	(4.0)	489	(3.1)	547	(3.3)	597	(3.9)	627	(4.2)
Saudi Arabia	373	(3.0)	79	(1.6)	246	(4.6)	273	(4.3)	319	(3.4)	372	(3.3)	426	(3.6)	475	(3.6)	505	(4.1)
Serbia	448	(3.2)	97	(1.7)	293	(5.3)	324	(4.3)	380	(3.9)	446	(3.8)	516	(3.8)	576	(3.9)	609	(3.9)
Singapore	569	(1.6)	94	(1.2)	401	(3.4)	441	(2.9)	508	(2.4)	576	(2.0)	636	(2.1)	684	(2.7)	713	(3.0)
Chinese Taipei	531	(2.9)	100	(1.7)	358	(4.6)	397	(3.9)	466	(3.8)	537	(3.1)	601	(3.5)	656	(4.4)	686	(5.3)
Thailand	419	(3.4)	88	(1.8)	282	(4.8)	310	(3.6)	358	(3.3)	414	(3.7)	475	(4.3)	535	(5.8)	572	(6.1)
Ukraine	453	(3.6)	94	(1.9)	297	(5.2)	331	(4.4)	390	(4.2)	454	(4.1)	517	(4.1)	573	(5.0)	607	(5.7)
United Arab Emirates	435	(2.1)	106	(1.2)	265	(3.9)	299	(3.2)	360	(2.8)	433	(2.7)	509	(2.6)	574	(2.4)	611	(3.2)
Uruguay	418	(2.6)	85	(1.7)	276	(4.4)	307	(3.5)	359	(3.1)	419	(3.4)	477	(3.7)	529	(3.9)	558	(4.4)
Viet Nam**	496	(4.0)	75	(2.0)	373	(5.0)	400	(5.0)	445	(4.4)	496	(4.1)	546	(4.5)	591	(5.1)	619	(5.8)

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

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).


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Table I.B1.6 [1/2] Mean score and variation in science performance

	Mean score		Standard deviation		Percentiles													
	Mean	S.E.	S.D.	S.E.	5th		10th		25th		Median (50th)		75th		90th		95th	
					Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.
<b>OECD</b>																		
Australia	503	(1.8)	101	(1.1)	334	(2.7)	369	(2.6)	432	(2.2)	506	(2.3)	575	(2.2)	631	(2.7)	664	(3.8)
Austria	490	(2.8)	96	(1.2)	332	(3.8)	361	(3.1)	420	(3.6)	493	(3.5)	560	(3.1)	614	(3.3)	642	(3.7)
Belgium	499	(2.2)	99	(1.3)	328	(4.2)	363	(4.0)	428	(3.4)	505	(2.6)	571	(2.5)	624	(2.3)	652	(2.8)
Canada	518	(2.2)	96	(1.0)	357	(2.6)	393	(2.3)	453	(2.5)	520	(2.6)	586	(2.6)	640	(2.5)	671	(3.6)
Chile	444	(2.4)	83	(1.4)	309	(3.6)	336	(3.1)	385	(3.0)	442	(2.9)	502	(3.3)	553	(3.3)	584	(3.8)
Colombia	413	(3.1)	82	(1.4)	287	(3.8)	311	(3.7)	355	(3.6)	409	(3.6)	469	(4.0)	524	(4.1)	555	(4.2)
Czech Republic	497	(2.5)	94	(1.6)	341	(4.8)	373	(4.0)	430	(3.7)	497	(3.1)	564	(3.1)	620	(2.9)	651	(3.6)
Denmark	493	(1.9)	91	(1.3)	337	(3.8)	372	(3.4)	431	(2.6)	496	(2.5)	558	(2.6)	609	(3.1)	637	(3.6)
Estonia	530	(1.9)	88	(1.2)	384	(3.9)	417	(3.5)	469	(2.9)	531	(2.4)	591	(2.4)	644	(2.7)	674	(3.0)
Finland	522	(2.5)	96	(1.3)	356	(4.4)	393	(4.1)	458	(3.2)	526	(2.9)	590	(2.8)	643	(2.9)	673	(3.8)
France	493	(2.2)	96	(1.4)	330	(4.2)	364	(3.5)	425	(3.1)	497	(3.1)	563	(2.9)	615	(3.2)	644	(3.8)
Germany	503	(2.9)	103	(1.6)	328	(5.2)	363	(4.0)	430	(3.9)	508	(3.9)	577	(3.5)	633	(3.3)	665	(3.3)
Greece	452	(3.1)	86	(1.6)	309	(5.2)	338	(4.6)	392	(4.1)	453	(3.6)	513	(3.3)	561	(3.4)	591	(4.2)
Hungary	481	(2.3)	94	(1.4)	325	(4.4)	356	(3.9)	412	(3.1)	484	(3.1)	549	(3.3)	602	(3.6)	631	(4.1)
Iceland	475	(1.8)	91	(1.0)	325	(3.6)	354	(3.1)	410	(3.0)	476	(2.6)	540	(2.7)	594	(3.1)	623	(3.7)
Ireland	496	(2.2)	88	(1.2)	348	(4.1)	380	(3.5)	435	(2.6)	498	(2.6)	558	(2.6)	610	(3.2)	639	(4.2)
Israel	462	(3.6)	111	(1.9)	279	(5.6)	314	(5.0)	381	(5.1)	464	(5.0)	544	(3.7)	607	(3.8)	640	(4.0)
Italy	468	(2.4)	90	(1.7)	316	(4.7)	348	(3.9)	407	(3.1)	470	(3.0)	532	(3.0)	583	(3.7)	612	(4.7)
Japan	529	(2.6)	92	(1.6)	371	(4.5)	405	(4.4)	466	(3.7)	534	(2.9)	595	(3.0)	646	(3.5)	673	(3.9)
Korea	519	(2.8)	98	(1.7)	352	(4.9)	388	(4.1)	453	(3.7)	524	(3.3)	589	(3.1)	642	(3.8)	672	(4.4)
Latvia	487	(1.8)	84	(1.2)	347	(3.8)	377	(3.3)	429	(2.8)	489	(2.2)	546	(2.3)	595	(2.7)	623	(3.3)
Lithuania	482	(1.6)	90	(1.0)	334	(3.6)	364	(2.9)	418	(2.8)	483	(2.2)	546	(1.8)	599	(2.3)	629	(3.0)
Luxembourg	477	(1.2)	98	(1.2)	317	(3.6)	347	(2.6)	404	(2.1)	477	(1.7)	549	(2.2)	606	(2.9)	637	(3.8)
Mexico	419	(2.6)	74	(1.6)	303	(4.3)	326	(3.9)	367	(2.7)	416	(2.7)	469	(3.0)	518	(4.3)	548	(4.5)
Netherlands*	503	(2.8)	104	(1.9)	329	(5.5)	364	(5.2)	428	(4.5)	508	(3.7)	581	(3.1)	636	(3.5)	666	(3.8)
New Zealand	508	(2.1)	102	(1.4)	336	(4.5)	371	(3.7)	437	(2.8)	512	(2.7)	582	(2.7)	640	(2.9)	670	(3.3)
Norway	490	(2.3)	98	(1.2)	321	(4.5)	357	(3.9)	424	(3.3)	495	(2.5)	560	(2.8)	616	(2.9)	645	(3.4)
Poland	511	(2.6)	92	(1.4)	359	(4.2)	392	(3.4)	448	(2.8)	511	(3.0)	576	(3.4)	630	(4.0)	660	(4.4)
Portugal*	492	(2.8)	92	(1.3)	336	(5.6)	368	(4.3)	427	(3.6)	494	(3.0)	558	(3.1)	609	(3.5)	638	(4.1)
Slovak Republic	464	(2.3)	96	(1.5)	307	(3.9)	338	(3.5)	397	(3.2)	464	(2.9)	531	(2.9)	589	(3.5)	622	(3.7)
Slovenia	507	(1.3)	88	(1.1)	359	(3.3)	390	(3.4)	447	(2.1)	510	(1.9)	569	(1.9)	621	(2.8)	648	(3.7)
Spain	483	(1.6)	89	(0.8)	334	(2.3)	365	(2.4)	421	(1.9)	485	(1.7)	547	(1.8)	598	(2.2)	627	(2.2)
Sweden	499	(3.1)	98	(1.5)	333	(6.0)	368	(5.1)	431	(4.0)	503	(3.4)	570	(3.1)	624	(3.3)	655	(3.8)
Switzerland	495	(3.0)	97	(1.4)	335	(3.9)	367	(3.5)	426	(3.8)	497	(3.8)	565	(4.0)	622	(4.6)	651	(4.0)
Turkey	468	(2.0)	84	(1.6)	335	(3.4)	361	(3.1)	409	(2.8)	466	(2.3)	526	(2.4)	579	(3.9)	608	(4.8)
United Kingdom	505	(2.6)	99	(1.4)	340	(4.7)	374	(3.8)	437	(3.2)	507	(2.7)	575	(3.2)	632	(3.2)	664	(3.7)
United States*	502	(3.3)	99	(1.6)	336	(6.1)	371	(4.9)	433	(4.4)	505	(3.9)	574	(3.8)	629	(3.9)	660	(3.8)
<b>OECD average</b>	489	(0.4)	94	(0.2)	333	(0.7)	365	(0.6)	423	(0.5)	491	(0.5)	555	(0.5)	609	(0.5)	639	(0.6)
<b>OECD total</b>	486	(1.1)	99	(0.5)	325	(1.5)	357	(1.5)	415	(1.3)	486	(1.2)	558	(1.3)	616	(1.4)	648	(1.6)

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

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).


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Table I.B1.6 [2/2] Mean score and variation in science performance

	Mean score		Standard deviation		Percentiles														
					5th		10th		25th		Median (50th)		75th		90th		95th		
	Mean	S.E.	S.D.	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	
<b>Partners</b>																			
Albania	417	(2.0)	74	(1.1)	298	(3.2)	323	(3.1)	366	(2.4)	416	(2.5)	466	(2.6)	514	(3.2)	541	(3.6)	
Argentina	404	(2.9)	90	(1.6)	261	(4.7)	291	(4.0)	340	(3.4)	401	(3.3)	466	(3.7)	523	(4.0)	555	(3.7)	
Baku (Azerbaijan)	398	(2.4)	74	(1.6)	281	(3.0)	305	(2.5)	347	(2.3)	395	(2.2)	446	(3.0)	494	(4.6)	524	(6.2)	
Belarus	471	(2.4)	85	(1.3)	331	(3.7)	361	(3.5)	412	(3.4)	472	(2.9)	531	(2.7)	581	(2.7)	610	(3.7)	
Bosnia and Herzegovina	398	(2.7)	77	(1.3)	278	(3.6)	302	(3.1)	344	(2.7)	396	(3.2)	451	(3.6)	499	(3.8)	528	(4.1)	
Brazil	404	(2.1)	90	(1.5)	268	(3.0)	292	(2.3)	338	(2.1)	396	(2.3)	464	(3.1)	527	(3.6)	563	(4.8)	
Brunei Darussalam	431	(1.2)	96	(1.1)	290	(2.6)	315	(2.0)	359	(1.9)	421	(1.5)	497	(1.7)	566	(2.8)	603	(2.8)	
B-S-J-Z (China)	590	(2.7)	83	(1.7)	448	(5.0)	482	(4.0)	536	(3.4)	594	(2.8)	649	(3.1)	695	(3.7)	721	(3.9)	
Bulgaria	424	(3.6)	95	(2.0)	279	(5.1)	305	(4.3)	355	(4.0)	418	(4.1)	490	(4.8)	552	(5.3)	587	(6.1)	
Costa Rica	416	(3.3)	73	(1.9)	300	(3.9)	324	(3.2)	364	(3.0)	414	(3.4)	466	(4.3)	512	(5.6)	540	(6.6)	
Croatia	472	(2.8)	90	(1.6)	327	(4.2)	356	(4.0)	409	(3.5)	471	(3.2)	536	(3.1)	590	(3.5)	622	(3.9)	
Cyprus	439	(1.4)	93	(1.1)	291	(3.3)	319	(2.6)	372	(2.7)	437	(2.2)	505	(2.2)	562	(2.2)	592	(2.9)	
Dominican Republic	336	(2.5)	71	(1.6)	231	(2.7)	250	(2.8)	286	(2.4)	329	(2.9)	379	(3.5)	431	(4.8)	463	(5.7)	
Georgia	383	(2.3)	81	(1.3)	255	(3.6)	281	(2.7)	326	(2.7)	379	(2.9)	437	(3.0)	491	(3.9)	522	(4.9)	
Hong Kong (China)*	517	(2.5)	86	(1.2)	364	(4.6)	401	(4.3)	461	(3.2)	522	(2.7)	577	(2.5)	623	(3.3)	650	(4.0)	
Indonesia	396	(2.4)	69	(1.7)	289	(3.2)	312	(3.0)	348	(2.6)	392	(2.6)	440	(3.1)	488	(4.6)	517	(5.7)	
Jordan	429	(2.9)	88	(1.5)	282	(5.5)	316	(4.4)	370	(3.7)	431	(3.0)	490	(3.1)	541	(3.4)	570	(3.9)	
Kazakhstan	397	(1.7)	76	(1.4)	284	(2.6)	307	(2.1)	346	(1.9)	391	(1.8)	442	(2.4)	498	(3.4)	533	(4.8)	
Kosovo	365	(1.2)	65	(0.8)	265	(2.6)	285	(2.5)	320	(1.5)	361	(1.6)	406	(1.7)	450	(2.6)	478	(3.8)	
Lebanon	384	(3.5)	95	(1.6)	237	(4.0)	265	(3.6)	315	(3.7)	377	(4.3)	449	(4.8)	513	(4.9)	549	(4.9)	
Macao (China)	544	(1.5)	83	(1.0)	402	(4.3)	434	(3.0)	489	(2.6)	547	(1.8)	601	(1.9)	648	(2.2)	674	(3.5)	
Malaysia	438	(2.7)	77	(1.5)	313	(3.6)	339	(2.9)	384	(2.7)	436	(2.8)	490	(3.4)	538	(4.3)	565	(5.2)	
Malta	457	(1.9)	107	(1.2)	278	(4.8)	314	(3.5)	380	(2.9)	460	(2.5)	534	(2.9)	594	(3.3)	628	(4.2)	
Moldova	428	(2.3)	89	(1.4)	285	(3.8)	314	(2.9)	365	(2.5)	427	(2.7)	492	(3.2)	546	(3.7)	575	(4.1)	
Montenegro	415	(1.3)	81	(1.0)	285	(2.7)	311	(2.2)	358	(1.6)	413	(1.5)	470	(2.0)	523	(2.2)	554	(3.0)	
Morocco	377	(3.0)	67	(1.2)	275	(2.9)	293	(2.7)	328	(2.8)	372	(3.7)	422	(4.0)	468	(3.9)	493	(3.8)	
North Macedonia	413	(1.4)	92	(1.2)	265	(3.2)	296	(2.5)	349	(2.0)	411	(2.0)	476	(2.4)	533	(3.1)	566	(3.9)	
Panama	365	(2.9)	85	(1.9)	230	(4.8)	259	(3.8)	305	(3.2)	361	(2.8)	420	(4.1)	478	(5.7)	514	(6.1)	
Peru	404	(2.7)	80	(1.5)	280	(3.9)	304	(3.0)	347	(2.6)	400	(2.9)	458	(3.6)	511	(4.4)	543	(5.3)	
Philippines	357	(3.2)	75	(2.3)	250	(3.3)	269	(3.1)	304	(2.6)	347	(3.1)	401	(4.5)	461	(6.6)	500	(8.3)	
Qatar	419	(0.9)	103	(0.9)	259	(2.6)	290	(1.5)	345	(1.4)	414	(1.4)	490	(1.5)	557	(2.1)	596	(2.7)	
Romania	426	(4.6)	90	(1.8)	282	(5.5)	312	(4.7)	362	(4.6)	424	(5.4)	488	(5.5)	545	(5.8)	577	(6.2)	
Russia	478	(2.9)	84	(1.7)	339	(4.7)	369	(4.1)	420	(3.6)	478	(3.2)	536	(3.2)	586	(3.7)	616	(4.0)	
Saudi Arabia	386	(2.8)	79	(1.4)	261	(4.4)	287	(3.2)	331	(3.3)	384	(3.2)	440	(3.4)	489	(3.6)	519	(4.3)	
Serbia	440	(3.0)	92	(1.3)	293	(3.8)	322	(3.9)	375	(3.8)	438	(3.9)	504	(3.6)	562	(4.0)	593	(3.7)	
Singapore	551	(1.5)	97	(1.0)	376	(3.5)	416	(3.2)	487	(2.7)	560	(2.1)	621	(1.6)	670	(1.8)	698	(2.7)	
Chinese Taipei	516	(2.9)	99	(1.5)	346	(4.3)	382	(3.9)	449	(3.7)	521	(3.2)	587	(3.7)	641	(4.0)	670	(4.1)	
Thailand	426	(3.2)	82	(1.6)	299	(3.7)	324	(3.2)	367	(3.0)	421	(3.5)	481	(4.4)	535	(5.2)	567	(5.8)	
Ukraine	469	(3.3)	91	(1.8)	319	(5.0)	351	(4.4)	406	(3.8)	469	(3.8)	532	(3.7)	588	(4.5)	619	(5.5)	
United Arab Emirates	434	(2.0)	103	(0.8)	272	(2.4)	302	(2.1)	358	(2.2)	430	(2.6)	506	(2.8)	572	(3.0)	609	(2.8)	
Uruguay	426	(2.5)	87	(1.4)	287	(3.2)	314	(3.1)	364	(2.9)	423	(3.2)	486	(3.6)	540	(3.9)	573	(4.0)	
Viet Nam**	543	(3.3)	77	(1.7)	418	(4.5)	445	(3.9)	492	(3.9)	543	(3.5)	595	(3.9)	642	(4.0)	669	(5.0)	

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

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).


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Table I.B1.7 [1/4] **Percentage of low achievers and top performers in reading, 2009 through 2018**

	Proficiency level in PISA 2009		Proficiency level in PISA 2012		Proficiency level in PISA 2015		Proficiency level in PISA 2018									
	Below Level 2 (less than 407.47 score points)		Level 5 or above (at or above 625.61 score points)		Below Level 2 (less than 407.47 score points)		Level 5 or above (at or above 625.61 score points)									
	%	S.E.	%	S.E.	%	S.E.	%	S.E.								
<b>OECD</b> Australia	14.2	(0.6)	12.8	(0.8)	14.2	(0.5)	11.7	(0.5)	18.1	(0.5)	11.0	(0.5)	19.6	(0.5)	13.0	(0.5)
Austria	m	m	m	m	19.5	(1.1)	5.5	(0.6)	22.5	(1.0)	7.2	(0.6)	23.6	(1.0)	7.4	(0.5)
Belgium	17.7	(0.9)	11.2	(0.6)	16.1	(0.8)	11.8	(0.6)	19.5	(0.9)	9.3	(0.6)	21.3	(0.9)	9.5	(0.5)
Canada	10.3	(0.5)	12.8	(0.5)	10.9	(0.5)	12.9	(0.6)	10.7	(0.6)	14.0	(0.7)	13.8	(0.5)	15.0	(0.6)
Chile	30.6	(1.5)	1.3	(0.3)	33.0	(1.7)	0.6	(0.1)	28.4	(1.2)	2.3	(0.3)	31.7	(1.2)	2.6	(0.3)
Colombia	47.1	(1.9)	0.6	(0.2)	51.4	(1.8)	0.3	(0.1)	42.8	(1.5)	1.0	(0.2)	49.9	(1.7)	0.9	(0.2)
Czech Republic	23.1	(1.3)	5.1	(0.5)	16.9	(1.2)	6.1	(0.5)	22.0	(1.1)	7.9	(0.6)	20.7	(1.1)	8.2	(0.5)
Denmark	15.2	(0.9)	4.7	(0.5)	14.6	(1.1)	5.4	(0.6)	15.0	(0.8)	6.5	(0.6)	16.0	(0.7)	8.4	(0.5)
Estonia	13.3	(1.0)	6.1	(0.6)	9.1	(0.6)	8.3	(0.7)	10.6	(0.7)	11.0	(0.7)	11.1	(0.6)	13.9	(0.7)
Finland	8.1	(0.5)	14.5	(0.8)	11.3	(0.7)	13.5	(0.6)	11.1	(0.8)	13.7	(0.7)	13.5	(0.7)	14.2	(0.7)
France	19.8	(1.2)	9.6	(1.0)	18.9	(1.0)	12.9	(0.8)	21.5	(0.9)	12.5	(0.7)	20.9	(0.7)	9.2	(0.7)
Germany	18.5	(1.1)	7.6	(0.6)	14.5	(0.9)	8.9	(0.7)	16.2	(0.9)	11.7	(0.7)	20.7	(1.1)	11.3	(0.7)
Greece	21.3	(1.8)	5.6	(0.5)	22.6	(1.2)	5.1	(0.6)	27.3	(1.8)	4.0	(0.5)	30.5	(1.5)	3.7	(0.5)
Hungary	17.6	(1.4)	6.1	(0.7)	19.7	(1.2)	5.6	(0.8)	27.5	(1.1)	4.3	(0.4)	25.3	(0.9)	5.7	(0.5)
Iceland	16.8	(0.6)	8.5	(0.6)	21.0	(0.7)	5.8	(0.5)	22.1	(1.0)	6.6	(0.6)	26.4	(0.9)	7.1	(0.6)
Ireland	17.2	(1.0)	7.0	(0.5)	9.6	(0.9)	11.4	(0.7)	10.2	(0.8)	10.7	(0.7)	11.8	(0.7)	12.1	(0.7)
Israel	26.5	(1.2)	7.4	(0.6)	23.6	(1.6)	9.6	(0.8)	26.6	(1.3)	9.2	(0.7)	31.1	(1.3)	10.4	(0.7)
Italy	21.0	(0.6)	5.8	(0.3)	19.5	(0.7)	6.7	(0.3)	21.0	(1.0)	5.7	(0.5)	23.3	(1.0)	5.3	(0.5)
Japan	13.6	(1.1)	13.4	(0.9)	9.8	(0.9)	18.5	(1.3)	12.9	(1.0)	10.8	(0.9)	16.8	(1.0)	10.3	(0.7)
Korea	5.8	(0.8)	12.9	(1.1)	7.6	(0.9)	14.1	(1.2)	13.7	(1.0)	12.7	(1.0)	15.1	(0.9)	13.1	(0.9)
Latvia	17.6	(1.2)	2.9	(0.4)	17.0	(1.1)	4.2	(0.6)	17.7	(0.9)	4.3	(0.5)	22.4	(0.7)	4.8	(0.4)
Lithuania	24.4	(1.2)	2.9	(0.4)	21.2	(1.2)	3.3	(0.4)	25.1	(0.9)	4.4	(0.5)	24.4	(0.8)	5.0	(0.4)
Luxembourg	26.0	(0.6)	5.7	(0.5)	22.2	(0.7)	8.9	(0.4)	25.6	(0.6)	8.1	(0.4)	29.3	(0.6)	7.6	(0.5)
Mexico	40.1	(1.0)	0.4	(0.1)	41.1	(0.9)	0.4	(0.1)	41.7	(1.3)	0.3	(0.1)	44.7	(1.3)	0.8	(0.2)
Netherlands*	14.3	(1.5)	9.8	(1.1)	14.0	(1.2)	9.8	(0.8)	18.1	(1.0)	10.9	(0.6)	24.1	(1.0)	9.1	(0.6)
New Zealand	14.3	(0.7)	15.7	(0.8)	16.3	(0.8)	14.0	(0.8)	17.3	(0.8)	13.6	(0.9)	19.0	(0.8)	13.1	(0.6)
Norway	15.0	(0.8)	8.4	(0.9)	16.2	(1.0)	10.2	(0.7)	14.9	(0.8)	12.2	(0.7)	19.3	(0.8)	11.3	(0.6)
Poland	15.0	(0.8)	7.2	(0.6)	10.6	(0.8)	10.0	(0.9)	14.4	(0.8)	8.2	(0.7)	14.7	(0.8)	12.2	(0.8)
Portugal*	17.6	(1.2)	4.8	(0.5)	18.8	(1.4)	5.8	(0.6)	17.2	(0.9)	7.5	(0.6)	20.2	(0.9)	7.3	(0.6)
Slovak Republic	22.2	(1.2)	4.5	(0.5)	28.2	(1.8)	4.4	(0.7)	32.1	(1.1)	3.5	(0.4)	31.4	(1.0)	4.6	(0.4)
Slovenia	21.2	(0.6)	4.6	(0.5)	21.1	(0.7)	5.0	(0.4)	15.1	(0.6)	8.9	(0.7)	17.9	(0.7)	7.8	(0.5)
Spain	19.6	(0.9)	3.3	(0.3)	18.3	(0.8)	5.5	(0.3)	16.2	(0.9)	5.5	(0.5)	m	m	m	m
Sweden	17.4	(0.9)	9.0	(0.7)	22.7	(1.2)	7.9	(0.6)	18.4	(1.1)	10.0	(0.8)	18.4	(1.0)	13.3	(0.7)
Switzerland	16.8	(0.9)	8.1	(0.7)	13.7	(0.8)	9.1	(0.7)	20.0	(1.1)	7.8	(0.6)	23.6	(1.1)	8.1	(0.7)
Turkey	24.5	(1.4)	1.9	(0.4)	21.6	(1.4)	4.3	(0.9)	40.0	(2.0)	0.6	(0.2)	26.1	(1.0)	3.3	(0.5)
United Kingdom	18.4	(0.8)	8.0	(0.5)	16.6	(1.3)	8.8	(0.7)	17.9	(0.9)	9.2	(0.6)	17.3	(0.9)	11.5	(0.8)
United States*	17.6	(1.1)	9.9	(0.9)	16.6	(1.3)	7.9	(0.7)	19.0	(1.1)	9.6	(0.7)	19.3	(1.1)	13.5	(0.9)
<b>OECD average-35a</b>	19.4	(0.2)	7.3	(0.1)	18.9	(0.2)	8.1	(0.1)	20.9	(0.2)	8.1	(0.1)	22.6	(0.2)	8.8	(0.1)
<b>OECD average-36a</b>	m	m	m	m	18.9	(0.2)	8.0	(0.1)	21.0	(0.2)	8.1	(0.1)	22.6	(0.2)	8.7	(0.1)

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.


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Table I.B1.7 [2/4] Percentage of low achievers and top performers in reading, 2009 through 2018

	Proficiency level in PISA 2009		Proficiency level in PISA 2012		Proficiency level in PISA 2015		Proficiency level in PISA 2018	
	Below Level 2 (less than 407.47 score points)	Level 5 or above (at or above 625.61 score points)	Below Level 2 (less than 407.47 score points)	Level 5 or above (at or above 625.61 score points)	Below Level 2 (less than 407.47 score points)	Level 5 or above (at or above 625.61 score points)	Below Level 2 (less than 407.47 score points)	Level 5 or above (at or above 625.61 score points)
	%	S.E.	%	S.E.	%	S.E.	%	S.E.
<b>Partners</b>								
Albania	56.7 (1.9)	0.2 (0.1)	52.3 (1.3)	1.2 (0.2)	50.3 (1.9)	1.0 (0.2)	52.2 (1.1)	0.4 (0.1)
Argentina	51.6 (1.9)	1.0 (0.2)	53.6 (1.7)	0.5 (0.1)	m	m	52.1 (1.3)	0.7 (0.2)
Baku (Azerbaijan)	m	m	m	m	m	m	60.4 (1.3)	0.1 (0.1)
Belarus	m	m	m	m	m	m	23.4 (1.0)	3.9 (0.4)
Bosnia and Herzegovina	m	m	m	m	m	m	53.7 (1.6)	0.2 (0.1)
Brazil	49.6 (1.3)	1.3 (0.2)	50.8 (1.1)	0.5 (0.1)	51.0 (1.1)	1.4 (0.2)	50.0 (0.9)	1.8 (0.2)
Brunei Darussalam	m	m	m	m	m	m	51.8 (0.6)	1.3 (0.2)
B-S-J-Z (China)	m	m	m	m	m	m	5.2 (0.6)	21.7 (1.1)
Bulgaria	41.0 (2.6)	2.8 (0.5)	39.4 (2.2)	4.3 (0.6)	41.5 (2.0)	3.6 (0.5)	47.1 (1.7)	2.3 (0.4)
Costa Rica	32.6 (1.5)	0.8 (0.3)	32.4 (1.8)	0.6 (0.2)	40.3 (1.4)	0.7 (0.2)	42.0 (1.6)	0.6 (0.2)
Croatia	22.4 (1.3)	3.2 (0.4)	18.7 (1.3)	4.4 (0.7)	19.9 (1.1)	5.9 (0.5)	21.6 (1.2)	4.7 (0.5)
Cyprus	m	m	32.8 (0.7)	4.0 (0.3)	35.6 (0.9)	3.1 (0.3)	43.7 (0.7)	1.8 (0.2)
Dominican Republic	m	m	m	m	72.1 (1.5)	0.1 (0.1)	79.1 (1.3)	0.1 (0.1)
Georgia	62.0 (1.3)	0.3 (0.1)	m	m	51.7 (1.3)	1.1 (0.2)	64.4 (1.1)	0.2 (0.1)
Hong Kong (China)*	8.3 (0.7)	12.4 (0.8)	6.8 (0.7)	16.8 (1.2)	9.3 (0.8)	11.6 (0.9)	12.6 (0.8)	14.8 (0.7)
Indonesia	53.4 (2.3)	0.0 (0.0)	55.2 (2.2)	0.1 (0.1)	55.4 (1.5)	0.2 (0.1)	69.9 (1.4)	0.1 (0.0)
Jordan	48.0 (1.6)	0.2 (0.1)	50.7 (1.6)	0.1 (0.1)	46.3 (1.4)	0.3 (0.1)	41.2 (1.4)	0.3 (0.1)
Kazakhstan	58.7 (1.5)	0.4 (0.1)	57.1 (1.6)	0.0 (0.0)	m	m	64.2 (0.7)	0.4 (0.1)
Kosovo	m	m	m	m	76.9 (0.9)	0.0 c	78.7 (0.6)	0.0 (0.0)
Lebanon	m	m	m	m	70.4 (1.6)	0.8 (0.3)	67.8 (1.5)	0.7 (0.2)
Macao (China)	14.9 (0.5)	2.9 (0.2)	11.5 (0.4)	7.0 (0.4)	11.7 (0.5)	6.7 (0.5)	10.8 (0.5)	13.8 (0.6)
Malaysia	44.0 (1.6)	0.1 (0.1)	52.7 (1.7)	0.1 (0.1)	m	m	45.8 (1.4)	0.5 (0.2)
Malta	36.3 (0.7)	4.4 (0.4)	m	m	35.6 (0.8)	5.6 (0.4)	35.9 (0.8)	5.3 (0.5)
Moldova	57.2 (1.5)	0.1 (0.1)	m	m	45.8 (1.1)	1.2 (0.2)	43.0 (1.1)	1.0 (0.3)
Montenegro	49.5 (1.0)	0.6 (0.2)	43.3 (0.7)	1.0 (0.2)	41.9 (0.7)	1.4 (0.3)	44.4 (0.7)	0.8 (0.2)
Morocco	m	m	m	m	m	m	73.3 (1.6)	0.0 (0.0)
North Macedonia	m	m	m	m	70.7 (0.7)	0.2 (0.1)	55.1 (0.7)	0.3 (0.2)
Panama	65.3 (2.6)	0.5 (0.2)	m	m	m	m	64.3 (1.4)	0.2 (0.1)
Peru	64.8 (1.7)	0.5 (0.2)	59.9 (2.0)	0.5 (0.2)	53.9 (1.5)	0.3 (0.1)	54.3 (1.3)	0.8 (0.2)
Philippines	m	m	m	m	m	m	80.6 (1.4)	0.1 (0.0)
Qatar	63.5 (0.5)	1.7 (0.2)	57.1 (0.4)	1.6 (0.1)	51.6 (0.5)	1.6 (0.2)	50.9 (0.4)	2.6 (0.2)
Romania	40.4 (2.0)	0.7 (0.2)	37.3 (1.9)	1.6 (0.4)	38.7 (1.9)	2.0 (0.4)	40.8 (2.2)	1.4 (0.3)
Russia	27.4 (1.3)	3.2 (0.5)	22.3 (1.3)	4.6 (0.6)	16.2 (1.2)	6.7 (0.6)	22.1 (1.2)	5.4 (0.5)
Saudi Arabia	m	m	m	m	m	m	52.4 (1.5)	0.1 (0.1)
Serbia	32.8 (1.3)	0.8 (0.2)	33.1 (1.7)	2.2 (0.4)	m	m	37.7 (1.5)	2.5 (0.3)
Singapore	12.5 (0.5)	15.7 (0.5)	9.9 (0.4)	21.2 (0.6)	11.1 (0.5)	18.4 (0.7)	11.2 (0.5)	25.8 (0.7)
Chinese Taipei	15.6 (0.9)	5.2 (0.8)	11.5 (0.9)	11.8 (0.8)	17.2 (0.8)	6.9 (0.8)	17.8 (0.8)	10.9 (0.8)
Thailand	42.9 (1.5)	0.3 (0.2)	33.0 (1.4)	0.8 (0.2)	50.0 (1.8)	0.3 (0.1)	59.5 (1.7)	0.2 (0.1)
Ukraine	m	m	m	m	m	m	25.9 (1.4)	3.4 (0.5)
United Arab Emirates	39.8 (1.2)	2.3 (0.3)	35.5 (1.1)	2.2 (0.3)	40.4 (1.2)	3.0 (0.3)	42.9 (0.8)	4.8 (0.3)
Uruguay	41.9 (1.2)	1.8 (0.3)	47.0 (1.4)	0.9 (0.3)	39.0 (1.1)	2.5 (0.4)	41.9 (1.3)	1.5 (0.3)
Viet Nam**	m	m	9.4 (1.4)	4.5 (0.8)	13.8 (1.4)	2.7 (0.7)	m	m

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.


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Table I.B1.7 [3/4] **Percentage of low achievers and top performers in reading, 2009 through 2018**

	Change between 2009 and 2018 (PISA 2018 - PISA 2009)				Change between 2012 and 2018 (PISA 2018 - PISA 2012)				Change between 2015 and 2018 (PISA 2018 - PISA 2015)			
	Below Level 2 (less than 407.47 score points)		Level 5 or above (at or above 625.61 score points)		Below Level 2 (less than 407.47 score points)		Level 5 or above (at or above 625.61 score points)		Below Level 2 (less than 407.47 score points)		Level 5 or above (at or above 625.61 score points)	
	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.
<b>OECD</b>												
Australia	<b>5.4</b>	(1.1)	0.3	(1.1)	<b>5.4</b>	(1.1)	1.3	(1.1)	1.6	(1.2)	2.0	(1.1)
Austria	m	m	m	m	<b>4.1</b>	(1.7)	<b>1.9</b>	(0.9)	1.1	(1.8)	0.2	(0.9)
Belgium	<b>3.5</b>	(1.6)	-1.6	(0.9)	<b>5.2</b>	(1.6)	<b>-2.2</b>	(1.0)	1.7	(1.7)	0.2	(1.0)
Canada	<b>3.5</b>	(0.9)	2.2	(1.2)	<b>2.9</b>	(0.9)	2.1	(1.4)	<b>3.1</b>	(1.1)	1.0	(1.6)
Chile	1.2	(2.7)	<b>1.3</b>	(0.4)	-1.3	(2.9)	<b>2.0</b>	(0.3)	3.3	(2.9)	0.3	(0.4)
Colombia	2.8	(3.4)	0.4	(0.2)	-1.5	(3.5)	<b>0.6</b>	(0.2)	<b>7.1</b>	(3.6)	0.0	(0.2)
Czech Republic	-2.3	(2.0)	<b>3.1</b>	(0.8)	3.9	(2.0)	<b>2.2</b>	(0.9)	-1.3	(2.0)	0.4	(0.9)
Denmark	0.8	(1.4)	<b>3.7</b>	(0.9)	1.4	(1.6)	<b>3.0</b>	(1.1)	1.0	(1.5)	1.9	(1.1)
Estonia	-2.3	(1.3)	<b>7.8</b>	(1.2)	1.9	(1.1)	<b>5.5</b>	(1.3)	0.4	(1.1)	<b>2.8</b>	(1.4)
Finland	<b>5.4</b>	(1.0)	-0.3	(1.5)	<b>2.2</b>	(1.1)	0.7	(1.6)	<b>2.5</b>	(1.1)	0.5	(1.7)
France	1.2	(1.6)	-0.4	(1.3)	2.0	(1.5)	<b>-3.7</b>	(1.3)	-0.5	(1.5)	<b>-3.3</b>	(1.2)
Germany	2.2	(1.7)	<b>3.7</b>	(1.1)	<b>6.2</b>	(1.6)	2.4	(1.2)	<b>4.5</b>	(1.7)	-0.4	(1.3)
Greece	<b>9.2</b>	(2.8)	<b>-2.0</b>	(0.7)	<b>7.9</b>	(2.6)	-1.5	(0.8)	3.2	(3.0)	-0.4	(0.7)
Hungary	<b>7.7</b>	(2.1)	-0.4	(0.9)	<b>5.6</b>	(2.1)	0.1	(1.0)	-2.2	(2.1)	1.4	(0.8)
Iceland	<b>9.5</b>	(1.6)	-1.4	(0.9)	<b>5.4</b>	(1.7)	1.3	(0.8)	<b>4.3</b>	(2.0)	0.5	(0.9)
Ireland	<b>-5.4</b>	(1.4)	<b>5.1</b>	(1.3)	2.2	(1.3)	0.7	(1.4)	1.6	(1.3)	1.4	(1.5)
Israel	<b>4.5</b>	(1.9)	<b>3.0</b>	(1.0)	<b>7.5</b>	(2.3)	0.8	(1.2)	<b>4.5</b>	(2.0)	1.2	(1.1)
Italy	2.2	(1.7)	-0.5	(0.7)	<b>3.8</b>	(1.9)	-1.3	(0.7)	2.3	(2.2)	-0.3	(0.8)
Japan	3.2	(1.7)	<b>-3.2</b>	(1.2)	<b>7.0</b>	(1.6)	<b>-8.2</b>	(1.6)	<b>3.9</b>	(1.7)	-0.5	(1.3)
Korea	<b>9.3</b>	(1.3)	0.2	(1.6)	<b>7.5</b>	(1.4)	-1.0	(1.7)	1.5	(1.5)	0.5	(1.6)
Latvia	<b>4.9</b>	(2.0)	<b>1.9</b>	(0.7)	<b>5.5</b>	(2.1)	0.7	(0.8)	<b>4.8</b>	(2.1)	0.5	(0.7)
Lithuania	0.0	(1.8)	<b>2.1</b>	(0.6)	3.2	(1.9)	<b>1.7</b>	(0.6)	-0.7	(1.8)	0.5	(0.7)
Luxembourg	<b>3.3</b>	(1.3)	<b>1.9</b>	(0.7)	<b>7.1</b>	(1.4)	-1.3	(0.7)	<b>3.6</b>	(1.5)	-0.5	(0.8)
Mexico	4.6	(3.6)	0.4	(0.2)	3.6	(3.9)	0.4	(0.2)	2.9	(4.3)	<b>0.5</b>	(0.2)
Netherlands*	<b>9.8</b>	(2.2)	-0.7	(1.3)	<b>10.1</b>	(2.1)	-0.7	(1.2)	<b>6.0</b>	(2.1)	-1.8	(1.1)
New Zealand	<b>4.6</b>	(1.4)	-2.6	(1.4)	2.7	(1.5)	-0.9	(1.4)	1.7	(1.6)	-0.5	(1.6)
Norway	<b>4.3</b>	(1.3)	<b>2.9</b>	(1.2)	<b>3.1</b>	(1.5)	1.1	(1.1)	<b>4.4</b>	(1.4)	-0.9	(1.1)
Poland	-0.4	(1.4)	<b>5.0</b>	(1.3)	<b>4.1</b>	(1.4)	2.2	(1.6)	0.3	(1.5)	<b>4.0</b>	(1.5)
Portugal*	2.6	(1.8)	<b>2.5</b>	(0.9)	1.4	(2.0)	1.5	(1.0)	3.0	(1.8)	-0.2	(1.0)
Slovak Republic	<b>9.2</b>	(2.3)	0.2	(0.7)	3.2	(2.8)	0.3	(0.8)	-0.7	(2.6)	1.2	(0.6)
Slovenia	<b>-3.3</b>	(1.2)	<b>3.2</b>	(0.8)	<b>-3.3</b>	(1.3)	<b>2.7</b>	(0.8)	<b>2.7</b>	(1.3)	-1.2	(0.9)
Spain	m	m	m	m	m	m	m	m	m	m	m	m
Sweden	1.0	(1.5)	<b>4.2</b>	(1.4)	<b>-4.3</b>	(1.7)	<b>5.4</b>	(1.5)	0.0	(1.7)	<b>3.3</b>	(1.7)
Switzerland	<b>6.8</b>	(1.6)	0.0	(1.1)	<b>9.9</b>	(1.7)	-1.0	(1.1)	3.7	(1.9)	0.3	(1.1)
Turkey	1.6	(2.6)	<b>1.5</b>	(0.6)	4.5	(2.8)	-1.0	(1.0)	<b>-13.8</b>	(3.3)	<b>2.7</b>	(0.6)
United Kingdom	-1.1	(1.5)	<b>3.4</b>	(1.0)	0.7	(1.9)	<b>2.7</b>	(1.2)	-0.6	(1.7)	2.3	(1.2)
United States*	1.6	(1.7)	<b>3.7</b>	(1.5)	2.7	(1.8)	<b>5.6</b>	(1.4)	0.3	(1.8)	<b>4.0</b>	(1.5)
<b>OECD average-35a</b>	<b>3.2</b>	(1.0)	<b>1.4</b>	(0.5)	<b>3.7</b>	(1.2)	0.7	(0.6)	1.7	(1.3)	0.7	(0.6)
<b>OECD average-36a</b>	m	m	m	m	<b>3.7</b>	(1.1)	0.7	(0.6)	1.7	(1.3)	0.6	(0.5)

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.


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Table I.B1.7<sup>[4/4]</sup> Percentage of low achievers and top performers in reading, 2009 through 2018

	Change between 2009 and 2018 (PISA 2018 - PISA 2009)				Change between 2012 and 2018 (PISA 2018 - PISA 2012)				Change between 2015 and 2018 (PISA 2018 - PISA 2015)			
	Below Level 2 (less than 407.47 score points)		Level 5 or above (at or above 625.61 score points)		Below Level 2 (less than 407.47 score points)		Level 5 or above (at or above 625.61 score points)		Below Level 2 (less than 407.47 score points)		Level 5 or above (at or above 625.61 score points)	
	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.
<b>Partners</b>												
Albania	-4.4	(4.0)	0.2	(0.2)	-0.1	(4.2)	<b>-0.8</b>	(0.3)	2.0	(4.8)	<b>-0.6</b>	(0.3)
Argentina	0.5	(3.2)	-0.3	(0.3)	-1.4	(3.3)	0.2	(0.2)	m	m	m	m
Baku (Azerbaijan)	m	m	m	m	m	m	m	m	m	m	m	m
Belarus	m	m	m	m	m	m	m	m	m	m	m	m
Bosnia and Herzegovina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	0.4	(2.4)	0.5	(0.3)	-0.8	(2.5)	<b>1.3</b>	(0.3)	-1.0	(2.6)	0.4	(0.3)
Brunei Darussalam	m	m	m	m	m	m	m	m	m	m	m	m
B-S-J-Z (China)	m	m	m	m	m	m	m	m	m	m	m	m
Bulgaria	6.1	(3.5)	-0.4	(0.6)	<b>7.7</b>	(3.4)	<b>-2.0</b>	(0.7)	5.6	(3.3)	<b>-1.2</b>	(0.6)
Costa Rica	<b>9.3</b>	(3.8)	-0.2	(0.3)	<b>9.6</b>	(4.2)	0.1	(0.3)	1.7	(4.4)	0.0	(0.2)
Croatia	-0.9	(2.1)	<b>1.5</b>	(0.7)	2.9	(2.2)	0.3	(0.9)	1.7	(2.2)	-1.2	(0.8)
Cyprus	m	m	m	m	<b>10.9</b>	(2.2)	<b>-2.2</b>	(0.4)	<b>8.1</b>	(2.5)	<b>-1.3</b>	(0.4)
Dominican Republic	m	m	m	m	m	m	m	m	<b>6.9</b>	(2.4)	0.0	(0.1)
Georgia	2.4	(2.9)	-0.1	(0.1)	m	m	m	m	<b>12.7</b>	(3.4)	<b>-0.9</b>	(0.3)
Hong Kong (China)*	<b>4.3</b>	(1.1)	2.4	(1.4)	<b>5.8</b>	(1.1)	-2.0	(1.7)	<b>3.3</b>	(1.1)	<b>3.3</b>	(1.6)
Indonesia	<b>16.5</b>	(3.7)	0.0	(0.0)	<b>14.7</b>	(3.9)	0.0	(0.1)	<b>14.5</b>	(3.8)	-0.1	(0.1)
Jordan	-6.8	(3.8)	0.0	(0.1)	<b>-9.5</b>	(4.1)	0.1	(0.2)	-5.1	(4.3)	0.0	(0.1)
Kazakhstan	5.5	(3.5)	0.0	(0.1)	7.1	(3.9)	<b>0.4</b>	(0.1)	m	m	m	m
Kosovo	m	m	m	m	m	m	m	m	1.9	(2.9)	0.0	(0.0)
Lebanon	m	m	m	m	m	m	m	m	-2.6	(2.5)	-0.1	(0.3)
Macao (China)	<b>-4.1</b>	(0.9)	<b>10.9</b>	(1.0)	-0.7	(0.9)	<b>6.8</b>	(1.1)	-0.9	(0.9)	<b>7.1</b>	(1.3)
Malaysia	1.9	(3.7)	0.4	(0.2)	-6.9	(4.0)	0.4	(0.2)	m	m	m	m
Malta	-0.4	(1.6)	0.9	(0.6)	m	m	m	m	0.3	(1.9)	-0.3	(0.7)
Moldova	<b>-14.2</b>	(2.9)	<b>0.9</b>	(0.3)	m	m	m	m	-2.8	(3.2)	-0.2	(0.4)
Montenegro	-5.1	(2.9)	0.2	(0.3)	1.1	(3.2)	-0.2	(0.3)	2.5	(3.5)	-0.6	(0.4)
Morocco	m	m	m	m	m	m	m	m	m	m	m	m
North Macedonia	m	m	m	m	m	m	m	m	<b>-15.5</b>	(2.9)	0.2	(0.2)
Panama	-0.9	(3.7)	-0.3	(0.2)	m	m	m	m	m	m	m	m
Peru	<b>-10.5</b>	(2.9)	0.3	(0.3)	-5.6	(3.2)	0.3	(0.3)	0.4	(3.2)	<b>0.5</b>	(0.2)
Philippines	m	m	m	m	m	m	m	m	m	m	m	m
Qatar	<b>-12.6</b>	(1.7)	<b>0.9</b>	(0.2)	<b>-6.3</b>	(1.9)	<b>1.0</b>	(0.2)	-0.7	(2.1)	<b>1.1</b>	(0.2)
Romania	0.4	(3.5)	<b>0.7</b>	(0.4)	3.6	(3.5)	-0.2	(0.5)	2.1	(3.7)	-0.6	(0.5)
Russia	<b>-5.3</b>	(2.2)	<b>2.3</b>	(0.7)	-0.2	(2.3)	0.8	(0.8)	<b>5.9</b>	(2.3)	-1.2	(0.8)
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
Serbia	4.9	(2.7)	<b>1.7</b>	(0.4)	4.6	(3.0)	0.3	(0.5)	m	m	m	m
Singapore	-1.2	(0.7)	<b>10.1</b>	(1.8)	<b>1.4</b>	(0.7)	<b>4.6</b>	(2.0)	0.1	(0.8)	<b>7.5</b>	(2.2)
Chinese Taipei	2.2	(1.4)	<b>5.7</b>	(1.3)	<b>6.3</b>	(1.5)	-0.9	(1.4)	0.6	(1.5)	<b>4.0</b>	(1.4)
Thailand	<b>16.7</b>	(3.7)	-0.1	(0.2)	<b>26.6</b>	(3.9)	<b>-0.6</b>	(0.2)	<b>9.6</b>	(4.4)	-0.1	(0.1)
Ukraine	m	m	m	m	m	m	m	m	m	m	m	m
United Arab Emirates	3.1	(2.0)	<b>2.5</b>	(0.4)	<b>7.4</b>	(2.0)	<b>2.6</b>	(0.4)	2.5	(2.2)	<b>1.8</b>	(0.5)
Uruguay	0.0	(2.9)	-0.2	(0.4)	-5.2	(3.2)	0.6	(0.4)	2.9	(3.3)	<b>-1.0</b>	(0.5)
Viet Nam**	m	m	m	m	m	m	m	m	m	m	m	m

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.


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Table I.B1.8 [1/6] **Percentage of low achievers and top performers in mathematics, 2003 through 2018**

	Proficiency level in PISA 2003				Proficiency level in PISA 2006				Proficiency level in PISA 2009			
	Below Level 2 (less than 420.07 score points)		Level 5 or above (at or above 606.99 score points)		Below Level 2 (less than 420.07 score points)		Level 5 or above (at or above 606.99 score points)		Below Level 2 (less than 420.07 score points)		Level 5 or above (at or above 606.99 score points)	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
<b>OECD</b>												
Australia	14.3	(0.7)	19.8	(0.8)	13.0	(0.6)	16.4	(0.8)	15.9	(0.7)	16.4	(0.9)
Austria	18.8	(1.2)	14.3	(1.0)	20.0	(1.4)	15.8	(1.0)	m	m	m	m
Belgium	16.5	(0.8)	26.4	(0.8)	17.3	(1.0)	22.3	(0.8)	19.1	(0.8)	20.4	(0.7)
Canada	10.1	(0.5)	20.3	(0.7)	10.8	(0.6)	17.9	(0.7)	11.5	(0.5)	18.3	(0.6)
Chile	m	m	m	m	55.1	(2.2)	1.5	(0.4)	51.0	(1.7)	1.3	(0.3)
Colombia	m	m	m	m	71.9	(1.6)	0.4	(0.2)	70.4	(1.6)	0.1	(0.1)
Czech Republic	16.6	(1.3)	18.3	(1.2)	19.2	(1.2)	18.3	(1.2)	22.3	(1.1)	11.6	(0.9)
Denmark	15.4	(0.8)	15.9	(0.9)	13.6	(1.0)	13.7	(0.8)	17.1	(0.9)	11.6	(0.8)
Estonia	m	m	m	m	12.1	(1.0)	12.5	(0.8)	12.6	(0.9)	12.1	(0.8)
Finland	6.8	(0.5)	23.4	(0.8)	6.0	(0.6)	24.4	(1.0)	7.8	(0.5)	21.7	(0.9)
France	16.6	(1.1)	15.1	(0.9)	22.3	(1.3)	12.5	(0.9)	22.5	(1.3)	13.7	(1.0)
Germany	21.6	(1.2)	16.2	(0.9)	19.9	(1.4)	15.4	(1.0)	18.6	(1.1)	17.8	(0.9)
Greece	38.9	(1.9)	4.0	(0.6)	32.3	(1.4)	5.0	(0.5)	30.3	(1.8)	5.7	(0.6)
Hungary	23.0	(1.0)	10.7	(0.9)	21.2	(1.1)	10.3	(0.9)	22.3	(1.5)	10.1	(1.1)
Iceland	15.0	(0.7)	15.5	(0.7)	16.8	(0.8)	12.7	(0.7)	17.0	(0.6)	13.6	(0.6)
Ireland	16.8	(1.0)	11.4	(0.8)	16.4	(1.2)	10.2	(0.8)	20.8	(1.0)	6.7	(0.6)
Israel	m	m	m	m	42.0	(1.7)	6.1	(0.6)	39.5	(1.3)	5.9	(0.7)
Italy	31.9	(1.5)	7.0	(0.5)	32.8	(0.9)	6.2	(0.5)	24.9	(0.6)	9.0	(0.5)
Japan	13.3	(1.2)	24.3	(1.5)	13.0	(1.1)	18.3	(1.0)	12.5	(1.0)	20.9	(1.2)
Korea	9.5	(0.8)	24.8	(1.4)	8.9	(1.0)	27.1	(1.5)	8.1	(1.0)	25.6	(1.6)
Latvia	23.7	(1.4)	8.0	(0.8)	20.7	(1.2)	6.6	(0.6)	22.6	(1.4)	5.7	(0.6)
Lithuania	m	m	m	m	23.0	(1.1)	9.1	(0.9)	26.3	(1.2)	7.0	(0.7)
Luxembourg	21.7	(0.6)	10.8	(0.6)	22.8	(0.6)	10.6	(0.5)	23.9	(0.6)	11.4	(0.6)
Mexico	65.9	(1.7)	0.4	(0.1)	56.5	(1.3)	0.8	(0.2)	50.8	(1.0)	0.7	(0.1)
Netherlands*	10.9	(1.1)	25.5	(1.3)	11.5	(1.0)	21.1	(1.1)	13.4	(1.4)	19.9	(1.5)
New Zealand	15.1	(0.8)	20.7	(0.7)	14.0	(0.8)	18.9	(0.9)	15.4	(0.9)	18.9	(0.9)
Norway	20.8	(1.0)	11.4	(0.6)	22.2	(1.2)	10.4	(0.7)	18.2	(0.9)	10.2	(0.7)
Poland	22.0	(1.1)	10.1	(0.6)	19.8	(0.9)	10.6	(0.8)	20.5	(1.1)	10.4	(0.9)
Portugal*	30.1	(1.7)	5.4	(0.5)	30.7	(1.5)	5.7	(0.5)	23.7	(1.1)	9.6	(0.8)
Slovak Republic	19.9	(1.4)	12.7	(0.9)	20.9	(1.0)	11.0	(0.9)	21.0	(1.2)	12.7	(1.0)
Slovenia	m	m	m	m	17.7	(0.7)	13.7	(0.6)	20.3	(0.5)	14.2	(0.6)
Spain	23.0	(1.0)	7.9	(0.7)	24.7	(1.1)	7.2	(0.5)	23.7	(0.8)	8.0	(0.5)
Sweden	17.3	(0.9)	15.8	(0.8)	18.3	(1.0)	12.6	(0.7)	21.1	(1.0)	11.4	(0.8)
Switzerland	14.5	(0.8)	21.2	(1.5)	13.5	(0.9)	22.6	(1.2)	13.5	(0.8)	24.1	(1.4)
Turkey	52.2	(2.6)	5.5	(1.6)	52.1	(1.8)	4.2	(1.2)	42.1	(1.8)	5.6	(1.2)
United Kingdom	m	m	m	m	19.8	(0.8)	11.1	(0.6)	20.2	(0.9)	9.8	(0.7)
United States*	25.7	(1.2)	10.1	(0.7)	28.1	(1.7)	7.6	(0.8)	23.4	(1.3)	9.9	(1.0)
<b>OECD average-29a</b>	21.7	(0.2)	14.4	(0.2)	21.4	(0.2)	13.1	(0.2)	20.8	(0.2)	13.2	(0.2)
<b>OECD average-30</b>	21.6	(0.2)	14.4	(0.2)	21.3	(0.2)	13.2	(0.2)	m	m	m	m
<b>OECD average-36b</b>	m	m	m	m	23.9	(0.2)	12.1	(0.1)	23.5	(0.2)	12.0	(0.1)
<b>OECD average-37</b>	m	m	m	m	23.8	(0.2)	12.2	(0.1)	m	m	m	m

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.


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Table I.B1.8 [2/6] **Percentage of low achievers and top performers in mathematics, 2003 through 2018**

	Proficiency level in PISA 2003				Proficiency level in PISA 2006				Proficiency level in PISA 2009			
	Below Level 2 (less than 420.07 score points)		Level 5 or above (at or above 606.99 score points)		Below Level 2 (less than 420.07 score points)		Level 5 or above (at or above 606.99 score points)		Below Level 2 (less than 420.07 score points)		Level 5 or above (at or above 606.99 score points)	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
<b>Partners</b>												
Albania	m	m	m	m	m	m	m	m	67.7	(1.9)	0.4	(0.2)
Argentina	m	m	m	m	64.1	(2.5)	1.0	(0.4)	63.6	(2.0)	0.9	(0.3)
Baku (Azerbaijan)	m	m	m	m	m	m	m	m	m	m	m	m
Belarus	m	m	m	m	m	m	m	m	m	m	m	m
Bosnia and Herzegovina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	75.2	(1.7)	1.2	(0.4)	72.5	(1.2)	1.0	(0.3)	69.1	(1.2)	0.8	(0.2)
Brunei Darussalam	m	m	m	m	m	m	m	m	m	m	m	m
B-S-J-Z (China)	m	m	m	m	m	m	m	m	m	m	m	m
Bulgaria	m	m	m	m	53.3	(2.4)	3.1	(0.8)	47.1	(2.5)	3.8	(1.0)
Costa Rica	m	m	m	m	m	m	m	m	56.7	(1.9)	0.3	(0.2)
Croatia	m	m	m	m	28.6	(1.2)	4.7	(0.5)	33.2	(1.4)	4.9	(0.7)
Cyprus	m	m	m	m	m	m	m	m	m	m	m	m
Dominican Republic	m	m	m	m	m	m	m	m	m	m	m	m
Georgia	m	m	m	m	m	m	m	m	68.7	(1.2)	0.6	(0.2)
Hong Kong (China)*	10.4	(1.2)	30.7	(1.5)	9.5	(0.9)	27.7	(1.2)	8.8	(0.7)	30.7	(1.2)
Indonesia	78.1	(1.7)	0.2	(0.1)	65.8	(3.1)	0.4	(0.2)	76.7	(1.9)	0.1	(0.0)
Jordan	m	m	m	m	66.4	(1.6)	0.2	(0.1)	65.3	(1.9)	0.3	(0.2)
Kazakhstan	m	m	m	m	m	m	m	m	59.1	(1.5)	1.2	(0.4)
Kosovo	m	m	m	m	m	m	m	m	m	m	m	m
Lebanon	m	m	m	m	m	m	m	m	m	m	m	m
Macao (China)	11.2	(1.2)	18.7	(1.4)	10.9	(0.7)	17.4	(0.7)	11.0	(0.5)	17.1	(0.5)
Malaysia	m	m	m	m	m	m	m	m	59.3	(1.6)	0.4	(0.1)
Malta	m	m	m	m	m	m	m	m	33.7	(0.8)	7.7	(0.4)
Moldova	m	m	m	m	m	m	m	m	60.7	(1.6)	0.7	(0.2)
Montenegro	m	m	m	m	60.1	(1.0)	0.8	(0.2)	58.4	(1.1)	1.0	(0.2)
Morocco	m	m	m	m	m	m	m	m	m	m	m	m
North Macedonia	m	m	m	m	m	m	m	m	m	m	m	m
Panama	m	m	m	m	m	m	m	m	78.8	(2.2)	0.4	(0.2)
Peru	m	m	m	m	m	m	m	m	73.5	(1.8)	0.6	(0.2)
Philippines	m	m	m	m	m	m	m	m	m	m	m	m
Qatar	m	m	m	m	87.2	(0.6)	0.6	(0.1)	73.8	(0.4)	1.8	(0.2)
Romania	m	m	m	m	52.7	(2.2)	1.3	(0.3)	47.0	(2.0)	1.3	(0.3)
Russia	30.2	(1.8)	7.0	(0.8)	26.6	(1.6)	7.4	(0.8)	28.6	(1.5)	5.2	(0.8)
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
Serbia	m	m	m	m	42.6	(1.7)	2.8	(0.4)	40.6	(1.4)	3.5	(0.5)
Singapore	m	m	m	m	m	m	m	m	9.8	(0.6)	35.6	(0.8)
Chinese Taipei	m	m	m	m	12.0	(1.1)	31.9	(1.4)	12.8	(0.8)	28.6	(1.5)
Thailand	54.0	(1.7)	1.6	(0.4)	53.0	(1.3)	1.3	(0.3)	52.5	(1.6)	1.3	(0.4)
Ukraine	m	m	m	m	m	m	m	m	m	m	m	m
United Arab Emirates	m	m	m	m	m	m	m	m	51.3	(1.1)	2.9	(0.3)
Uruguay	48.1	(1.5)	2.8	(0.4)	46.1	(1.2)	3.2	(0.5)	47.6	(1.3)	2.4	(0.4)
Viet Nam**	m	m	m	m	m	m	m	m	m	m	m	m

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.


StatLink  <https://doi.org/10.1787/888934029090>

Table I.B1.8 [3/6] **Percentage of low achievers and top performers in mathematics, 2003 through 2018**

	Proficiency level in PISA 2012				Proficiency level in PISA 2015				Proficiency level in PISA 2018			
	Below Level 2 (less than 420.07 score points)		Level 5 or above (at or above 606.99 score points)		Below Level 2 (less than 420.07 score points)		Level 5 or above (at or above 606.99 score points)		Below Level 2 (less than 420.07 score points)		Level 5 or above (at or above 606.99 score points)	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
<b>OECD</b>												
Australia	19.7	(0.6)	14.8	(0.6)	22.0	(0.6)	11.3	(0.6)	22.4	(0.7)	10.5	(0.5)
Austria	18.7	(1.0)	14.3	(0.9)	21.8	(1.1)	12.5	(0.9)	21.1	(1.2)	12.6	(0.8)
Belgium	19.0	(0.8)	19.5	(0.8)	20.1	(1.0)	15.9	(0.7)	19.7	(0.9)	15.7	(0.9)
Canada	13.8	(0.5)	16.4	(0.6)	14.4	(0.7)	15.1	(0.8)	16.3	(0.7)	15.3	(0.7)
Chile	51.5	(1.7)	1.6	(0.2)	49.4	(1.3)	1.4	(0.2)	51.9	(1.3)	1.2	(0.2)
Colombia	73.8	(1.4)	0.3	(0.1)	66.3	(1.2)	0.3	(0.1)	65.4	(1.6)	0.5	(0.1)
Czech Republic	21.0	(1.2)	12.9	(0.8)	21.7	(1.1)	10.4	(0.8)	20.4	(1.1)	12.7	(0.7)
Denmark	16.8	(1.0)	10.0	(0.7)	13.6	(0.9)	11.7	(0.7)	14.6	(0.6)	11.6	(0.7)
Estonia	10.5	(0.6)	14.6	(0.8)	11.2	(0.7)	14.2	(0.8)	10.2	(0.6)	15.5	(0.8)
Finland	12.3	(0.7)	15.3	(0.7)	13.6	(0.8)	11.7	(0.7)	15.0	(0.7)	11.1	(0.6)
France	22.4	(0.9)	12.9	(0.8)	23.5	(0.9)	11.4	(0.7)	21.3	(0.8)	11.0	(0.8)
Germany	17.7	(1.0)	17.5	(0.9)	17.2	(1.0)	12.9	(0.8)	21.1	(1.1)	13.3	(0.8)
Greece	35.7	(1.3)	3.9	(0.4)	35.8	(1.8)	3.9	(0.5)	35.8	(1.5)	3.7	(0.5)
Hungary	28.1	(1.3)	9.3	(1.1)	28.0	(1.2)	8.1	(0.6)	25.6	(1.0)	8.0	(0.7)
Iceland	21.5	(0.7)	11.2	(0.7)	23.6	(1.0)	10.3	(0.8)	20.7	(1.0)	10.4	(0.6)
Ireland	16.9	(1.0)	10.7	(0.5)	15.0	(0.9)	9.8	(0.6)	15.7	(0.8)	8.2	(0.7)
Israel	33.5	(1.7)	9.4	(1.0)	32.1	(1.4)	8.9	(0.9)	34.1	(1.4)	8.8	(0.6)
Italy	24.7	(0.8)	9.9	(0.6)	23.3	(1.1)	10.5	(0.8)	23.8	(1.1)	9.5	(0.8)
Japan	11.1	(1.0)	23.7	(1.5)	10.7	(0.8)	20.3	(1.3)	11.5	(0.8)	18.3	(1.1)
Korea	9.1	(0.9)	30.9	(1.8)	15.5	(1.1)	20.9	(1.3)	15.0	(0.9)	21.4	(1.1)
Latvia	19.9	(1.1)	8.0	(0.8)	21.4	(1.0)	5.2	(0.4)	17.3	(1.0)	8.5	(0.6)
Lithuania	26.0	(1.2)	8.1	(0.6)	25.4	(1.1)	6.9	(0.7)	25.6	(0.9)	8.4	(0.5)
Luxembourg	24.3	(0.5)	11.2	(0.4)	25.8	(0.7)	10.0	(0.5)	27.2	(0.7)	10.8	(0.6)
Mexico	54.7	(0.8)	0.6	(0.1)	56.6	(1.3)	0.3	(0.1)	56.2	(1.4)	0.5	(0.1)
Netherlands*	14.8	(1.3)	19.3	(1.2)	16.7	(0.9)	15.5	(0.8)	15.8	(1.1)	18.4	(1.0)
New Zealand	22.6	(0.8)	15.0	(0.9)	21.6	(1.0)	11.4	(0.7)	21.8	(0.8)	11.6	(0.5)
Norway	22.3	(1.1)	9.4	(0.7)	17.1	(0.8)	10.6	(0.7)	18.9	(0.8)	12.2	(0.7)
Poland	14.4	(0.9)	16.7	(1.3)	17.2	(1.0)	12.2	(0.9)	14.7	(0.8)	15.8	(1.0)
Portugal*	24.9	(1.5)	10.6	(0.8)	23.8	(1.0)	11.4	(0.7)	23.3	(1.0)	11.6	(0.7)
Slovak Republic	27.5	(1.3)	11.0	(0.9)	27.7	(1.2)	7.8	(0.6)	25.1	(1.1)	10.7	(0.7)
Slovenia	20.1	(0.6)	13.7	(0.6)	16.1	(0.6)	13.5	(0.7)	16.4	(0.6)	13.6	(0.7)
Spain	23.6	(0.8)	8.0	(0.4)	22.2	(1.0)	7.2	(0.6)	24.7	(0.6)	7.3	(0.4)
Sweden	27.1	(1.1)	8.0	(0.5)	20.8	(1.2)	10.4	(0.9)	18.8	(1.0)	12.6	(0.8)
Switzerland	12.4	(0.7)	21.4	(1.2)	15.8	(1.0)	19.2	(1.0)	16.8	(0.9)	17.0	(1.0)
Turkey	42.0	(1.9)	5.9	(1.1)	51.4	(2.2)	1.1	(0.4)	36.7	(1.1)	4.8	(0.6)
United Kingdom	21.8	(1.3)	11.8	(0.8)	21.9	(1.0)	10.6	(0.7)	19.2	(0.9)	12.9	(0.8)
United States*	25.8	(1.4)	8.8	(0.8)	29.4	(1.4)	5.9	(0.7)	27.1	(1.4)	8.3	(0.8)
<b>OECD average-29a</b>	22.3	(0.2)	12.8	(0.2)	22.9	(0.2)	10.8	(0.1)	22.2	(0.2)	11.4	(0.1)
<b>OECD average-30</b>	22.2	(0.2)	12.9	(0.2)	22.9	(0.2)	10.8	(0.1)	22.1	(0.2)	11.4	(0.1)
<b>OECD average-36b</b>	24.5	(0.2)	12.0	(0.1)	24.7	(0.2)	10.2	(0.1)	24.1	(0.2)	10.9	(0.1)
<b>OECD average-37</b>	24.4	(0.2)	12.1	(0.1)	24.6	(0.2)	10.3	(0.1)	24.0	(0.2)	10.9	(0.1)

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.


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Table I.B1.8<sup>[4/6]</sup> Percentage of low achievers and top performers in mathematics, 2003 through 2018

	Proficiency level in PISA 2012				Proficiency level in PISA 2015				Proficiency level in PISA 2018			
	Below Level 2 (less than 420.07 score points)		Level 5 or above (at or above 606.99 score points)		Below Level 2 (less than 420.07 score points)		Level 5 or above (at or above 606.99 score points)		Below Level 2 (less than 420.07 score points)		Level 5 or above (at or above 606.99 score points)	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
<b>Partners</b>												
Albania	60.7	(1.0)	0.8	(0.2)	53.3	(1.9)	1.1	(0.2)	42.4	(1.4)	2.3	(0.3)
Argentina	66.5	(2.0)	0.3	(0.1)	m	m	m	m	69.0	(1.3)	0.3	(0.1)
Baku (Azerbaijan)	m	m	m	m	m	m	m	m	50.7	(1.3)	2.0	(0.3)
Belarus	m	m	m	m	m	m	m	m	29.4	(1.1)	7.3	(0.6)
Bosnia and Herzegovina	m	m	m	m	m	m	m	m	57.6	(1.6)	0.8	(0.2)
Brazil	68.3	(1.0)	0.7	(0.2)	70.3	(1.2)	0.9	(0.2)	68.1	(1.0)	0.9	(0.2)
Brunei Darussalam	m	m	m	m	m	m	m	m	47.9	(0.7)	3.0	(0.3)
B-S-J-Z (China)	m	m	m	m	m	m	m	m	2.4	(0.4)	44.3	(1.3)
Bulgaria	43.8	(1.8)	4.1	(0.6)	42.1	(1.8)	4.4	(0.6)	44.4	(1.7)	4.2	(0.6)
Costa Rica	59.9	(1.9)	0.6	(0.2)	62.5	(1.5)	0.3	(0.1)	60.0	(1.9)	0.3	(0.1)
Croatia	29.9	(1.4)	7.0	(1.1)	32.0	(1.4)	5.6	(0.5)	31.2	(1.3)	5.1	(0.5)
Cyprus	42.0	(0.6)	3.7	(0.3)	42.6	(0.8)	3.2	(0.4)	36.9	(0.7)	4.4	(0.4)
Dominican Republic	m	m	m	m	90.5	(1.0)	0.0	(0.0)	90.6	(1.0)	0.0	(0.0)
Georgia	m	m	m	m	57.1	(1.2)	1.6	(0.4)	61.1	(1.3)	1.0	(0.3)
Hong Kong (China)*	8.5	(0.8)	33.7	(1.4)	9.0	(0.8)	26.5	(1.1)	9.2	(0.8)	29.0	(1.1)
Indonesia	75.7	(2.1)	0.3	(0.2)	68.6	(1.6)	0.7	(0.2)	71.9	(1.5)	0.5	(0.2)
Jordan	68.6	(1.5)	0.6	(0.4)	67.5	(1.3)	0.3	(0.1)	59.3	(1.6)	0.7	(0.2)
Kazakhstan	45.2	(1.7)	0.9	(0.3)	m	m	m	m	49.1	(0.9)	1.9	(0.2)
Kosovo	m	m	m	m	77.7	(1.0)	0.0	(0.0)	76.6	(0.9)	0.1	(0.1)
Lebanon	m	m	m	m	60.2	(1.6)	2.0	(0.3)	59.8	(1.7)	2.0	(0.3)
Macao (China)	10.8	(0.5)	24.3	(0.6)	6.6	(0.5)	21.9	(0.6)	5.0	(0.5)	27.6	(0.8)
Malaysia	51.8	(1.7)	1.3	(0.3)	m	m	m	m	41.5	(1.4)	2.5	(0.4)
Malta	m	m	m	m	29.1	(0.8)	11.8	(0.7)	30.2	(1.0)	8.5	(0.7)
Moldova	m	m	m	m	50.3	(1.2)	1.7	(0.3)	50.3	(1.1)	2.4	(0.4)
Montenegro	56.6	(1.0)	1.0	(0.2)	51.9	(1.0)	1.5	(0.2)	46.2	(0.8)	1.8	(0.2)
Morocco	m	m	m	m	m	m	m	m	75.6	(1.6)	0.1	(0.1)
North Macedonia	m	m	m	m	70.2	(0.8)	0.8	(0.2)	61.0	(0.9)	1.1	(0.2)
Panama	m	m	m	m	m	m	m	m	81.2	(1.3)	0.1	(0.1)
Peru	74.6	(1.8)	0.6	(0.2)	66.2	(1.4)	0.4	(0.1)	60.3	(1.3)	0.9	(0.2)
Philippines	m	m	m	m	m	m	m	m	80.7	(1.6)	0.1	(0.1)
Qatar	69.6	(0.5)	2.0	(0.2)	58.7	(0.7)	2.2	(0.2)	53.7	(0.6)	2.9	(0.2)
Romania	40.8	(1.9)	3.2	(0.6)	39.9	(1.8)	3.3	(0.5)	46.6	(2.3)	3.2	(0.6)
Russia	24.0	(1.1)	7.8	(0.8)	18.9	(1.2)	8.8	(0.7)	21.6	(1.3)	8.1	(0.7)
Saudi Arabia	m	m	m	m	m	m	m	m	72.7	(1.5)	0.2	(0.1)
Serbia	38.9	(1.5)	4.6	(0.7)	m	m	m	m	39.7	(1.4)	5.2	(0.4)
Singapore	8.3	(0.5)	40.0	(0.7)	7.6	(0.4)	34.8	(0.8)	7.1	(0.4)	36.9	(0.8)
Chinese Taipei	12.8	(0.8)	37.2	(1.2)	12.7	(0.7)	28.1	(1.2)	14.0	(0.8)	23.2	(1.1)
Thailand	49.7	(1.7)	2.6	(0.5)	53.8	(1.6)	1.4	(0.3)	52.7	(1.7)	2.3	(0.4)
Ukraine	m	m	m	m	m	m	m	m	35.9	(1.6)	5.0	(0.6)
United Arab Emirates	46.3	(1.2)	3.5	(0.3)	48.7	(1.2)	3.7	(0.3)	45.5	(0.9)	5.4	(0.3)
Uruguay	55.8	(1.3)	1.4	(0.3)	52.4	(1.2)	1.7	(0.4)	50.7	(1.5)	1.0	(0.3)
Viet Nam**	14.2	(1.7)	13.3	(1.5)	19.1	(1.7)	9.3	(1.3)	m	m	m	m

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.


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Table I.B1.8 [5/6] **Percentage of low achievers and top performers in mathematics, 2003 through 2018**

	Change between 2003 and 2018 (PISA 2018 - PISA 2003)		Change between 2006 and 2018 (PISA 2018 - PISA 2006)		Change between 2009 and 2018 (PISA 2018 - PISA 2009)		Change between 2012 and 2018 (PISA 2018 - PISA 2012)		Change between 2015 and 2018 (PISA 2018 - PISA 2015)	
	Below Level 2 (less than 420.07 score points)	Level 5 or above (at or above 606.99 score points)	Below Level 2 (less than 420.07 score points)	Level 5 or above (at or above 606.99 score points)	Below Level 2 (less than 420.07 score points)	Level 5 or above (at or above 606.99 score points)	Below Level 2 (less than 420.07 score points)	Level 5 or above (at or above 606.99 score points)	Below Level 2 (less than 420.07 score points)	Level 5 or above (at or above 606.99 score points)
	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.
<b>OECD</b>										
Australia	<b>8.1</b> (1.2)	<b>-9.3</b> (1.0)	<b>9.5</b> (1.3)	<b>-6.0</b> (1.1)	<b>6.6</b> (1.6)	<b>-6.0</b> (1.2)	2.8 (1.4)	<b>-4.3</b> (1.0)	0.5 (1.0)	-0.9 (0.9)
Austria	2.3 (1.8)	-1.7 (1.4)	1.1 (2.0)	<b>-3.2</b> (1.4)	m m	m m	2.4 (1.8)	-1.7 (1.5)	-0.7 (1.7)	0.1 (1.2)
Belgium	<b>3.2</b> (1.3)	<b>-10.7</b> (1.4)	2.3 (1.5)	<b>-6.6</b> (1.5)	0.6 (1.5)	<b>-4.6</b> (1.6)	0.7 (1.4)	<b>-3.8</b> (1.5)	-0.4 (1.4)	-0.1 (1.2)
Canada	<b>6.1</b> (1.1)	<b>-5.0</b> (1.3)	<b>5.5</b> (1.3)	-2.6 (1.4)	<b>4.8</b> (1.4)	<b>-3.0</b> (1.5)	2.4 (1.3)	-1.1 (1.4)	1.9 (1.1)	0.3 (1.2)
Chile	m m	m m	-3.2 (3.7)	-0.2 (0.4)	0.9 (3.8)	-0.1 (0.4)	0.4 (3.5)	-0.4 (0.3)	2.6 (2.3)	-0.2 (0.3)
Colombia	m m	m m	-6.5 (3.4)	0.1 (0.2)	-5.1 (3.8)	<b>0.4</b> (0.2)	<b>-8.4</b> (3.5)	0.2 (0.2)	-0.9 (2.4)	0.2 (0.2)
Czech Republic	<b>3.8</b> (1.9)	<b>-5.6</b> (1.4)	1.2 (1.9)	<b>-5.6</b> (1.5)	-1.9 (2.0)	1.0 (1.4)	-0.6 (2.0)	-0.2 (1.3)	-1.3 (1.6)	<b>2.3</b> (1.1)
Denmark	-0.8 (1.2)	<b>-4.3</b> (1.3)	0.9 (1.3)	-2.1 (1.2)	-2.5 (1.4)	0.1 (1.4)	-2.3 (1.4)	1.7 (1.2)	1.0 (1.1)	0.0 (1.1)
Estonia	m m	m m	-1.9 (1.4)	2.9 (1.5)	-2.4 (1.4)	<b>3.4</b> (1.7)	-0.3 (1.2)	0.9 (1.6)	-1.0 (1.1)	1.3 (1.2)
Finland	<b>8.2</b> (1.1)	<b>-12.3</b> (1.1)	<b>9.0</b> (1.3)	<b>-13.3</b> (1.3)	<b>7.1</b> (1.4)	<b>-10.5</b> (1.3)	<b>2.7</b> (1.4)	<b>-4.1</b> (1.2)	1.4 (1.2)	-0.6 (1.0)
France	<b>4.6</b> (1.5)	<b>-4.1</b> (1.3)	-1.0 (1.7)	-1.5 (1.3)	-1.3 (1.7)	-2.7 (1.4)	-1.1 (1.4)	-1.9 (1.2)	-2.2 (1.3)	-0.4 (1.1)
Germany	-0.5 (1.7)	<b>-2.9</b> (1.4)	1.2 (1.9)	-2.1 (1.5)	2.5 (1.8)	<b>-4.5</b> (1.6)	<b>3.4</b> (1.7)	<b>-4.1</b> (1.5)	<b>3.9</b> (1.5)	0.4 (1.2)
Greece	-3.1 (2.7)	-0.3 (0.8)	3.5 (2.6)	-1.3 (0.7)	5.5 (3.1)	<b>-2.0</b> (0.8)	0.1 (2.7)	-0.2 (0.7)	0.1 (2.5)	-0.2 (0.7)
Hungary	2.6 (1.8)	<b>-2.7</b> (1.2)	<b>4.5</b> (2.0)	-2.4 (1.2)	3.3 (2.5)	-2.1 (1.4)	-2.4 (2.2)	-1.3 (1.4)	-2.3 (1.7)	-0.2 (1.0)
Iceland	<b>5.7</b> (1.4)	<b>-5.1</b> (1.0)	<b>3.9</b> (1.6)	<b>-2.3</b> (1.1)	<b>3.7</b> (1.7)	<b>-3.2</b> (1.1)	-0.8 (1.6)	-0.8 (1.1)	<b>-2.9</b> (1.5)	0.1 (1.1)
Ireland	-1.1 (1.5)	<b>-3.1</b> (1.1)	-0.7 (1.8)	-2.0 (1.1)	<b>-5.1</b> (1.8)	1.6 (1.1)	-1.2 (1.7)	<b>-2.4</b> (1.0)	0.7 (1.4)	-1.6 (0.9)
Israel	m m	m m	<b>-7.9</b> (2.4)	<b>2.7</b> (0.9)	<b>-5.4</b> (2.2)	<b>2.9</b> (1.0)	0.6 (2.4)	-0.6 (1.3)	2.0 (2.0)	-0.1 (1.1)
Italy	<b>-8.1</b> (2.1)	<b>2.5</b> (1.0)	<b>-9.0</b> (1.9)	<b>3.3</b> (1.1)	-1.1 (1.9)	0.6 (1.1)	-0.8 (1.9)	-0.4 (1.1)	0.6 (1.7)	-1.0 (1.2)
Japan	-1.9 (1.4)	<b>-5.9</b> (2.1)	-1.6 (1.4)	0.0 (1.9)	-1.0 (1.4)	-2.5 (2.2)	0.4 (1.3)	<b>-5.3</b> (2.2)	0.8 (1.1)	-2.0 (1.8)
Korea	<b>5.5</b> (1.3)	-3.4 (2.0)	<b>6.1</b> (1.4)	<b>-5.7</b> (2.3)	<b>6.9</b> (1.5)	-4.2 (2.5)	<b>5.9</b> (1.4)	<b>-9.5</b> (2.5)	-0.5 (1.4)	0.5 (1.9)
Latvia	<b>-6.4</b> (1.9)	0.5 (1.1)	-3.4 (1.9)	<b>1.9</b> (1.0)	<b>-5.2</b> (2.1)	<b>2.8</b> (1.0)	-2.6 (1.9)	0.5 (1.1)	<b>-4.1</b> (1.5)	<b>3.3</b> (0.8)
Lithuania	m m	m m	2.7 (1.9)	-0.7 (1.1)	-0.7 (2.1)	1.5 (0.9)	-0.4 (2.0)	0.4 (0.9)	0.2 (1.6)	1.5 (0.9)
Luxembourg	<b>5.5</b> (1.3)	0.0 (0.9)	<b>4.4</b> (1.4)	0.2 (0.9)	<b>3.3</b> (1.6)	-0.5 (1.0)	2.9 (1.5)	-0.4 (0.8)	1.4 (1.1)	0.8 (0.8)
Mexico	<b>-9.7</b> (2.9)	0.1 (0.2)	-0.3 (3.2)	-0.3 (0.2)	5.4 (3.6)	-0.2 (0.2)	1.5 (3.2)	-0.1 (0.1)	-0.4 (2.3)	0.2 (0.2)
Netherlands*	<b>4.8</b> (1.6)	<b>-7.1</b> (1.8)	<b>4.2</b> (1.6)	-2.7 (1.8)	2.3 (1.9)	-1.4 (2.2)	1.0 (1.7)	-0.8 (1.9)	-1.0 (1.4)	<b>2.9</b> (1.4)
New Zealand	<b>6.7</b> (1.5)	<b>-9.1</b> (1.0)	<b>7.7</b> (1.6)	<b>-7.4</b> (1.2)	<b>6.4</b> (1.8)	<b>-7.3</b> (1.3)	-0.9 (1.7)	<b>-3.4</b> (1.2)	0.1 (1.4)	0.2 (1.0)
Norway	-2.0 (1.4)	0.8 (1.1)	<b>-3.4</b> (1.6)	1.8 (1.2)	0.7 (1.5)	2.0 (1.3)	<b>-3.4</b> (1.6)	<b>2.8</b> (1.2)	1.8 (1.2)	1.5 (1.0)
Poland	<b>-7.3</b> (1.4)	<b>5.7</b> (1.3)	<b>-5.1</b> (1.3)	<b>5.2</b> (1.5)	<b>-5.8</b> (1.5)	<b>5.4</b> (1.6)	0.3 (1.3)	-1.0 (1.9)	-2.5 (1.3)	<b>3.6</b> (1.4)
Portugal*	<b>-6.8</b> (2.1)	<b>6.2</b> (1.0)	<b>-7.4</b> (2.0)	<b>5.9</b> (1.0)	-0.4 (1.8)	2.0 (1.3)	-1.6 (2.0)	1.0 (1.2)	-0.5 (1.5)	0.2 (1.1)
Slovak Republic	<b>5.1</b> (1.9)	-1.9 (1.2)	<b>4.2</b> (1.7)	-0.2 (1.3)	<b>4.1</b> (1.9)	-1.9 (1.4)	-2.4 (1.9)	-0.2 (1.3)	-2.6 (1.7)	<b>2.9</b> (1.0)
Slovenia	m m	m m	-1.2 (1.1)	-0.1 (1.2)	<b>-3.9</b> (1.1)	-0.6 (1.3)	<b>-3.7</b> (1.1)	-0.1 (1.2)	0.3 (0.9)	0.1 (1.1)
Spain	1.7 (1.5)	-0.7 (0.8)	0.0 (1.8)	0.0 (0.8)	1.0 (1.9)	-0.8 (0.8)	1.1 (1.7)	-0.7 (0.7)	2.5 (1.3)	0.0 (0.8)
Sweden	1.5 (1.5)	<b>-3.2</b> (1.2)	0.5 (1.6)	0.0 (1.2)	-2.3 (1.7)	1.2 (1.4)	<b>-8.3</b> (1.7)	<b>4.6</b> (1.1)	-2.0 (1.6)	2.2 (1.2)
Switzerland	2.3 (1.3)	<b>-4.3</b> (1.9)	<b>3.3</b> (1.4)	<b>-5.7</b> (1.7)	<b>3.4</b> (1.5)	<b>-7.2</b> (1.9)	<b>4.4</b> (1.4)	<b>-4.4</b> (1.7)	1.0 (1.4)	-2.3 (1.5)
Turkey	<b>-15.6</b> (3.3)	-0.7 (1.7)	<b>-15.4</b> (3.1)	0.6 (1.3)	-5.5 (3.6)	-0.9 (1.4)	-5.3 (3.4)	-1.1 (1.3)	<b>-14.7</b> (2.8)	<b>3.6</b> (0.7)
United Kingdom	m m	m m	-0.5 (1.6)	1.7 (1.1)	-1.0 (1.8)	<b>3.0</b> (1.2)	-2.6 (1.9)	1.0 (1.3)	-2.6 (1.5)	<b>2.2</b> (1.1)
United States*	1.4 (2.1)	-1.8 (1.1)	-1.0 (2.6)	0.6 (1.2)	3.7 (2.5)	-1.7 (1.3)	1.3 (2.4)	-0.5 (1.2)	-2.3 (2.1)	<b>2.4</b> (1.1)
<b>OECD average-29a</b>	0.5 (0.8)	<b>-3.0</b> (0.5)	0.8 (1.0)	<b>-1.7</b> (0.6)	1.3 (1.2)	<b>-1.7</b> (0.7)	-0.1 (1.1)	<b>-1.4</b> (0.6)	-0.8 (0.6)	0.6 (0.4)
<b>OECD average-30</b>	0.5 (0.8)	<b>-3.0</b> (0.5)	0.8 (1.0)	<b>-1.8</b> (0.6)	m m	m m	0.0 (1.1)	<b>-1.4</b> (0.6)	-0.8 (0.6)	0.6 (0.4)
<b>OECD average-36b</b>	m m	m m	0.1 (1.0)	<b>-1.2</b> (0.5)	0.6 (1.3)	-1.1 (0.6)	-0.5 (1.1)	-1.1 (0.6)	-0.6 (0.6)	<b>0.6</b> (0.3)
<b>OECD average-37</b>	m m	m m	0.2 (1.0)	<b>-1.3</b> (0.5)	m m	m m	-0.4 (1.1)	<b>-1.1</b> (0.6)	-0.6 (0.6)	<b>0.6</b> (0.3)

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

Notes: Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.


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Table I.B1.8 [6/6] Percentage of low achievers and top performers in mathematics, 2003 through 2018

	Change between 2003 and 2018 (PISA 2018 - PISA 2003)		Change between 2006 and 2018 (PISA 2018 - PISA 2006)		Change between 2009 and 2018 (PISA 2018 - PISA 2009)		Change between 2012 and 2018 (PISA 2018 - PISA 2012)		Change between 2015 and 2018 (PISA 2018 - PISA 2015)	
	Below Level 2 (less than 420.07 score points)	Level 5 or above (at or above 606.99 score points)	Below Level 2 (less than 420.07 score points)	Level 5 or above (at or above 606.99 score points)	Below Level 2 (less than 420.07 score points)	Level 5 or above (at or above 606.99 score points)	Below Level 2 (less than 420.07 score points)	Level 5 or above (at or above 606.99 score points)	Below Level 2 (less than 420.07 score points)	Level 5 or above (at or above 606.99 score points)
	% dif. S.E.	% dif. S.E.	% dif. S.E.	% dif. S.E.	% dif. S.E.	% dif. S.E.	% dif. S.E.	% dif. S.E.	% dif. S.E.	% dif. S.E.
Partners										
Albania	m m	m m	m m	m m	-25.4 (3.8)	1.9 (0.3)	-18.3 (3.1)	1.5 (0.3)	-10.9 (2.7)	1.2 (0.4)
Argentina	m m	m m	4.8 (3.3)	-0.7 (0.4)	5.4 (3.1)	-0.5 (0.3)	2.5 (3.0)	0.1 (0.1)	m m	m m
Baku (Azerbaijan)	m m	m m	m m	m m	m m	m m	m m	m m	m m	m m
Belarus	m m	m m	m m	m m	m m	m m	m m	m m	m m	m m
Bosnia and Herzegovina	m m	m m	m m	m m	m m	m m	m m	m m	m m	m m
Brazil	<b>-7.1</b> (2.2)	-0.3 (0.5)	<b>-4.4</b> (2.1)	-0.1 (0.4)	-1.0 (2.3)	0.1 (0.3)	-0.2 (2.0)	0.2 (0.3)	-2.2 (1.7)	0.0 (0.3)
Brunei Darussalam	m m	m m	m m	m m	m m	m m	m m	m m	m m	m m
B-S-J-Z (China)	m m	m m	m m	m m	m m	m m	m m	m m	m m	m m
Bulgaria	m m	m m	<b>-8.9</b> (3.3)	1.1 (1.0)	-2.7 (3.6)	0.4 (1.2)	0.7 (3.0)	0.2 (0.9)	2.3 (2.6)	-0.2 (0.9)
Costa Rica	m m	m m	m m	m m	3.3 (4.3)	0.0 (0.2)	0.1 (4.0)	-0.2 (0.2)	-2.5 (2.8)	0.1 (0.2)
Croatia	m m	m m	2.6 (2.5)	0.4 (0.8)	-2.0 (2.9)	0.2 (0.9)	1.3 (2.7)	-1.8 (1.3)	-0.9 (2.1)	-0.4 (0.8)
Cyprus	m m	m m	m m	m m	m m	m m	<b>-5.2</b> (1.9)	0.7 (0.5)	<b>-5.7</b> (1.4)	<b>1.2</b> (0.6)
Dominican Republic	m m	m m	m m	m m	m m	m m	m m	m m	0.0 (1.4)	0.0 (0.0)
Georgia	m m	m m	m m	m m	<b>-7.7</b> (2.9)	0.4 (0.4)	m m	m m	<b>4.0</b> (2.0)	-0.5 (0.5)
Hong Kong (China)*	-1.2 (1.4)	-1.7 (2.1)	-0.4 (1.3)	1.2 (2.1)	0.4 (1.1)	-1.7 (2.3)	0.7 (1.2)	<b>-4.7</b> (2.3)	0.2 (1.1)	2.4 (1.7)
Indonesia	<b>-6.3</b> (2.8)	0.2 (0.2)	6.1 (4.1)	0.1 (0.2)	-4.8 (3.6)	<b>0.4</b> (0.2)	-3.8 (3.5)	0.2 (0.2)	3.2 (2.5)	-0.2 (0.2)
Jordan	m m	m m	<b>-7.0</b> (3.4)	0.4 (0.3)	-5.9 (4.0)	0.4 (0.3)	<b>-9.2</b> (3.5)	0.1 (0.5)	<b>-8.2</b> (2.5)	0.4 (0.2)
Kazakhstan	m m	m m	m m	m m	<b>-10.0</b> (3.4)	0.8 (0.5)	3.9 (3.3)	<b>1.0</b> (0.4)	m m	m m
Kosovo	m m	m m	m m	m m	m m	m m	m m	m m	-1.1 (1.7)	0.1 (0.1)
Lebanon	m m	m m	m m	m m	m m	m m	m m	m m	-0.5 (2.4)	0.1 (0.4)
Macao (China)	<b>-6.2</b> (1.3)	<b>9.0</b> (2.5)	<b>-5.9</b> (0.8)	<b>10.2</b> (2.7)	<b>-6.0</b> (0.7)	<b>10.5</b> (3.1)	<b>-5.8</b> (0.7)	3.3 (2.9)	<b>-1.6</b> (0.7)	<b>5.8</b> (1.7)
Malaysia	m m	m m	m m	m m	<b>-17.8</b> (3.8)	<b>2.1</b> (0.5)	<b>-10.3</b> (3.6)	<b>1.1</b> (0.5)	m m	m m
Malta	m m	m m	m m	m m	-3.5 (1.8)	0.8 (0.9)	m m	m m	1.1 (1.4)	<b>-3.4</b> (1.0)
Moldova	m m	m m	m m	m m	<b>-10.3</b> (2.7)	<b>1.8</b> (0.4)	m m	m m	0.1 (1.9)	0.7 (0.5)
Montenegro	m m	m m	<b>-13.9</b> (2.5)	<b>0.9</b> (0.3)	<b>-12.3</b> (3.0)	<b>0.8</b> (0.3)	<b>-10.5</b> (2.7)	<b>0.7</b> (0.3)	<b>-5.7</b> (1.7)	0.3 (0.3)
Morocco	m m	m m	m m	m m	m m	m m	m m	m m	m m	m m
North Macedonia	m m	m m	m m	m m	m m	m m	m m	m m	<b>-9.2</b> (1.6)	0.3 (0.3)
Panama	m m	m m	m m	m m	2.4 (2.9)	-0.3 (0.2)	m m	m m	m m	m m
Peru	m m	m m	m m	m m	<b>-13.2</b> (3.5)	0.2 (0.3)	<b>-14.2</b> (3.2)	0.3 (0.3)	<b>-5.8</b> (2.2)	<b>0.5</b> (0.2)
Philippines	m m	m m	m m	m m	m m	m m	m m	m m	m m	m m
Qatar	m m	m m	<b>-33.5</b> (1.8)	<b>2.3</b> (0.2)	<b>-20.1</b> (2.1)	<b>1.2</b> (0.3)	<b>-15.9</b> (1.9)	<b>0.9</b> (0.3)	<b>-5.0</b> (1.3)	<b>0.7</b> (0.3)
Romania	m m	m m	-6.2 (3.5)	<b>1.9</b> (0.7)	-0.5 (3.6)	<b>1.9</b> (0.7)	5.7 (3.4)	0.0 (0.9)	<b>6.6</b> (3.0)	-0.1 (0.8)
Russia	<b>-8.6</b> (2.4)	1.0 (1.1)	<b>-5.0</b> (2.4)	0.6 (1.1)	<b>-6.9</b> (2.5)	<b>2.8</b> (1.1)	-2.3 (2.2)	0.3 (1.2)	2.7 (1.8)	-0.7 (1.0)
Saudi Arabia	m m	m m	m m	m m	m m	m m	m m	m m	m m	m m
Serbia	m m	m m	-2.9 (2.5)	<b>2.4</b> (0.6)	-0.8 (2.6)	<b>1.7</b> (0.7)	0.8 (2.5)	0.7 (0.9)	m m	m m
Singapore	m m	m m	m m	m m	<b>-2.7</b> (0.7)	1.3 (2.7)	-1.1 (0.7)	-3.1 (2.4)	-0.4 (0.6)	2.1 (1.6)
Chinese Taipei	m m	m m	2.0 (1.4)	<b>-8.7</b> (2.2)	1.2 (1.1)	<b>-5.4</b> (2.4)	1.1 (1.2)	<b>-14.0</b> (2.1)	1.3 (1.1)	<b>-4.9</b> (1.8)
Thailand	-1.3 (2.8)	0.6 (0.5)	-0.3 (2.9)	<b>0.9</b> (0.4)	0.2 (3.4)	1.0 (0.6)	3.0 (3.3)	-0.3 (0.6)	-1.1 (2.6)	0.8 (0.5)
Ukraine	m m	m m	m m	m m	m m	m m	m m	m m	m m	m m
United Arab Emirates	m m	m m	m m	m m	<b>-5.8</b> (2.3)	<b>2.6</b> (0.5)	-0.8 (2.2)	<b>2.0</b> (0.5)	-3.2 (1.7)	<b>1.7</b> (0.5)
Uruguay	2.6 (2.7)	<b>-1.8</b> (0.5)	4.6 (2.8)	<b>-2.2</b> (0.5)	3.1 (3.2)	<b>-1.4</b> (0.4)	-5.1 (3.0)	-0.3 (0.4)	-1.7 (2.3)	-0.7 (0.5)
Viet Nam**	m m	m m	m m	m m	m m	m m	m m	m m	m m	m m

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

Notes: Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.


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Table I.B1.9 [1/4] **Percentage of low achievers and top performers in science, 2006 through 2018**

	Proficiency level in PISA 2006		Proficiency level in PISA 2009		Proficiency level in PISA 2012		Proficiency level in PISA 2015		Proficiency level in PISA 2018			
	Below Level 2 (less than 409.54 score points)		Level 5 or above (at or above 633.33 score points)		Below Level 2 (less than 409.54 score points)		Level 5 or above (at or above 633.33 score points)		Below Level 2 (less than 409.54 score points)		Level 5 or above (at or above 633.33 score points)	
	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.	%	S.E.
<b>OECD</b>												
Australia	12.9 (0.6)	14.6 (0.7)	12.6 (0.6)	14.5 (0.8)	13.6 (0.5)	13.6 (0.5)	17.6 (0.6)	11.2 (0.5)	18.9 (0.6)	9.5 (0.5)		
Austria	16.3 (1.4)	10.0 (0.8)	m m	m m	15.8 (1.0)	7.9 (0.7)	20.8 (1.0)	7.7 (0.5)	21.9 (1.0)	6.3 (0.6)		
Belgium	17.0 (1.0)	10.1 (0.5)	18.0 (0.8)	10.1 (0.7)	17.7 (0.9)	9.1 (0.4)	19.8 (0.9)	9.0 (0.4)	20.0 (0.9)	8.0 (0.5)		
Canada	10.0 (0.6)	14.4 (0.5)	9.6 (0.5)	12.1 (0.5)	10.4 (0.5)	11.3 (0.5)	11.1 (0.5)	12.4 (0.6)	13.4 (0.5)	11.3 (0.6)		
Chile	39.7 (2.1)	1.9 (0.3)	32.3 (1.4)	1.1 (0.2)	34.5 (1.6)	1.0 (0.2)	34.8 (1.2)	1.2 (0.2)	35.3 (1.2)	1.0 (0.2)		
Colombia	60.2 (1.8)	0.2 (0.1)	54.1 (1.9)	0.1 (0.1)	56.2 (1.6)	0.1 (0.1)	49.0 (1.3)	0.4 (0.1)	50.4 (1.7)	0.4 (0.1)		
Czech Republic	15.5 (1.2)	11.6 (0.9)	17.3 (1.2)	8.4 (0.7)	13.8 (1.1)	7.6 (0.6)	20.7 (1.0)	7.3 (0.5)	18.8 (1.1)	7.5 (0.5)		
Denmark	18.4 (1.1)	6.8 (0.7)	16.6 (0.8)	6.7 (0.6)	16.7 (1.0)	6.8 (0.7)	15.9 (0.8)	7.0 (0.6)	18.7 (0.7)	5.5 (0.5)		
Estonia	7.7 (0.6)	11.5 (0.8)	8.3 (0.8)	10.4 (0.8)	5.0 (0.5)	12.8 (0.7)	8.8 (0.7)	13.5 (0.7)	8.8 (0.6)	12.2 (0.6)		
Finland	4.1 (0.5)	20.9 (0.8)	6.0 (0.5)	18.7 (0.9)	7.7 (0.6)	17.1 (0.7)	11.5 (0.7)	14.3 (0.6)	12.9 (0.7)	12.3 (0.7)		
France	21.2 (1.4)	8.0 (0.7)	19.3 (1.3)	8.1 (0.8)	18.7 (1.0)	7.9 (0.8)	22.1 (0.9)	8.0 (0.5)	20.5 (0.8)	6.6 (0.5)		
Germany	15.4 (1.3)	11.8 (0.7)	14.8 (1.0)	12.8 (0.8)	12.2 (0.9)	12.2 (1.0)	17.0 (1.0)	10.6 (0.6)	19.6 (1.0)	10.0 (0.6)		
Greece	24.0 (1.3)	3.4 (0.4)	25.3 (1.6)	3.1 (0.4)	25.5 (1.5)	2.5 (0.4)	32.7 (1.9)	2.1 (0.3)	31.7 (1.5)	1.3 (0.2)		
Hungary	15.0 (1.0)	6.9 (0.6)	14.1 (1.4)	5.4 (0.6)	18.0 (1.1)	5.9 (0.8)	26.0 (1.0)	4.6 (0.5)	24.1 (0.9)	4.7 (0.5)		
Iceland	20.6 (0.8)	6.3 (0.5)	17.9 (0.7)	7.0 (0.4)	24.0 (0.8)	5.2 (0.6)	25.3 (0.9)	3.8 (0.4)	25.0 (0.9)	3.8 (0.4)		
Ireland	15.5 (1.1)	9.4 (0.7)	15.2 (1.1)	8.7 (0.8)	11.1 (0.9)	10.7 (0.6)	15.3 (1.0)	7.1 (0.5)	17.0 (0.8)	5.8 (0.6)		
Israel	36.1 (1.4)	5.2 (0.6)	33.1 (1.2)	3.9 (0.4)	28.9 (1.7)	5.8 (0.6)	31.4 (1.4)	5.8 (0.5)	33.1 (1.4)	5.8 (0.5)		
Italy	25.3 (0.9)	4.6 (0.3)	20.6 (0.6)	5.8 (0.3)	18.7 (0.7)	6.1 (0.4)	23.2 (1.0)	4.1 (0.4)	25.9 (1.0)	2.7 (0.4)		
Japan	12.0 (1.0)	15.1 (0.8)	10.7 (1.0)	16.9 (0.9)	8.5 (0.9)	18.2 (1.2)	9.6 (0.7)	15.3 (1.0)	10.8 (0.8)	13.1 (0.9)		
Korea	11.2 (1.1)	10.3 (1.1)	6.3 (0.8)	11.6 (1.1)	6.6 (0.8)	11.7 (1.1)	14.4 (0.9)	10.6 (0.8)	14.2 (0.8)	11.8 (0.8)		
Latvia	17.4 (1.2)	4.1 (0.4)	14.7 (1.2)	3.1 (0.5)	12.4 (1.0)	4.4 (0.5)	17.2 (0.8)	3.8 (0.4)	18.5 (0.8)	3.7 (0.4)		
Lithuania	20.3 (1.0)	5.0 (0.7)	17.0 (1.1)	4.6 (0.5)	16.1 (1.1)	5.1 (0.5)	24.7 (1.1)	4.2 (0.5)	22.2 (0.9)	4.4 (0.3)		
Luxembourg	22.1 (0.5)	5.9 (0.4)	23.7 (0.8)	6.7 (0.5)	22.2 (0.6)	8.2 (0.5)	25.9 (0.7)	6.9 (0.4)	26.8 (0.6)	5.4 (0.5)		
Mexico	50.9 (1.4)	0.3 (0.1)	47.4 (1.0)	0.2 (0.0)	47.0 (0.8)	0.1 (0.0)	47.8 (1.3)	0.1 (0.1)	46.8 (1.4)	0.3 (0.1)		
Netherlands*	13.0 (1.0)	13.1 (0.9)	13.2 (1.6)	12.7 (1.2)	13.1 (1.1)	11.8 (1.1)	18.5 (1.0)	11.1 (0.6)	20.0 (1.1)	10.6 (0.8)		
New Zealand	13.7 (0.7)	17.6 (0.8)	13.4 (0.7)	17.6 (0.8)	16.3 (0.9)	13.4 (0.7)	17.4 (0.9)	12.8 (0.7)	18.0 (0.8)	11.3 (0.6)		
Norway	21.1 (1.3)	6.1 (0.5)	15.8 (0.9)	6.4 (0.6)	19.6 (1.1)	7.5 (0.6)	18.7 (0.8)	8.0 (0.5)	20.8 (1.0)	6.8 (0.5)		
Poland	17.0 (0.8)	6.8 (0.5)	13.1 (0.8)	7.5 (0.5)	9.0 (0.7)	10.8 (1.0)	16.3 (0.8)	7.3 (0.6)	13.8 (0.8)	9.3 (0.8)		
Portugal*	24.5 (1.4)	3.1 (0.4)	16.5 (1.1)	4.2 (0.5)	19.0 (1.4)	4.5 (0.5)	17.4 (0.9)	7.4 (0.5)	19.6 (1.0)	5.6 (0.6)		
Slovak Republic	20.2 (1.0)	5.8 (0.5)	19.3 (1.2)	6.2 (0.6)	26.9 (1.6)	4.9 (0.7)	30.7 (1.1)	3.6 (0.4)	29.3 (1.0)	3.7 (0.4)		
Slovenia	13.9 (0.6)	12.9 (0.6)	14.8 (0.5)	9.9 (0.6)	12.9 (0.6)	9.6 (0.7)	15.0 (0.5)	10.6 (0.6)	14.6 (0.7)	7.3 (0.6)		
Spain	19.6 (0.9)	4.9 (0.4)	18.2 (0.9)	4.0 (0.3)	15.7 (0.7)	4.8 (0.3)	18.3 (0.8)	5.0 (0.4)	21.3 (0.6)	4.2 (0.3)		
Sweden	16.4 (0.8)	7.9 (0.5)	19.1 (1.0)	8.1 (0.6)	22.2 (1.1)	6.3 (0.5)	21.6 (1.1)	8.5 (0.7)	19.0 (1.1)	8.3 (0.6)		
Switzerland	16.1 (0.9)	10.5 (0.8)	14.0 (0.8)	10.7 (0.9)	12.8 (0.7)	9.3 (0.8)	18.5 (1.1)	9.8 (0.6)	20.2 (1.0)	7.8 (0.7)		
Turkey	46.6 (1.6)	0.9 (0.3)	30.0 (1.5)	1.1 (0.3)	26.4 (1.5)	1.8 (0.4)	44.5 (2.1)	0.3 (0.1)	25.2 (1.1)	2.5 (0.5)		
United Kingdom	16.7 (0.8)	13.7 (0.6)	15.0 (0.8)	11.4 (0.7)	15.0 (1.1)	11.2 (0.8)	17.4 (0.8)	10.9 (0.7)	17.4 (0.9)	9.7 (0.6)		
United States*	24.4 (1.6)	9.1 (0.7)	18.1 (1.1)	9.2 (1.0)	18.1 (1.3)	7.5 (0.7)	20.3 (1.1)	8.5 (0.6)	18.6 (1.2)	9.1 (0.7)		
<b>OECD average-36b</b>	21.0 (0.2)	8.4 (0.1)	18.8 (0.2)	8.0 (0.1)	18.7 (0.2)	8.0 (0.1)	22.1 (0.2)	7.4 (0.1)	22.0 (0.2)	6.8 (0.1)		
<b>OECD average-37</b>	20.9 (0.2)	8.4 (0.1)	m m	m m	18.6 (0.2)	8.0 (0.1)	22.1 (0.2)	7.4 (0.1)	22.0 (0.2)	6.8 (0.1)		

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.


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Table I.B1.9 [2/4] Percentage of low achievers and top performers in science, 2006 through 2018

	Proficiency level in PISA 2006		Proficiency level in PISA 2009		Proficiency level in PISA 2012		Proficiency level in PISA 2015		Proficiency level in PISA 2018			
	Below Level 2 (less than 409.54 score points)	Level 5 or above (at or above 633.33 score points)	Below Level 2 (less than 409.54 score points)	Level 5 or above (at or above 633.33 score points)	Below Level 2 (less than 409.54 score points)	Level 5 or above (at or above 633.33 score points)	Below Level 2 (less than 409.54 score points)	Level 5 or above (at or above 633.33 score points)	Below Level 2 (less than 409.54 score points)	Level 5 or above (at or above 633.33 score points)		
	% S.E.	% S.E.	% S.E.	% S.E.	% S.E.	% S.E.	% S.E.	% S.E.	% S.E.	% S.E.		
<b>Partners</b>												
Albania	m m	m m	57.3 (2.0)	0.1 (0.1)	53.1 (1.2)	0.4 (0.1)	41.7 (1.7)	0.4 (0.2)	47.0 (1.3)	0.2 (0.1)		
Argentina	56.3 (2.5)	0.4 (0.1)	52.4 (1.9)	0.7 (0.2)	50.9 (2.2)	0.2 (0.1)	m m	m m	53.5 (1.4)	0.5 (0.1)		
Baku (Azerbaijan)	m m	m m	m m	m m	m m	m m	m m	m m	57.8 (1.2)	0.1 (0.1)		
Belarus	m m	m m	m m	m m	m m	m m	m m	m m	24.2 (1.2)	2.6 (0.4)		
Bosnia and Herzegovina	m m	m m	m m	m m	m m	m m	m m	m m	56.8 (1.6)	0.1 (0.1)		
Brazil	61.0 (1.4)	0.6 (0.2)	54.2 (1.3)	0.6 (0.1)	55.2 (1.1)	0.3 (0.1)	56.6 (1.1)	0.7 (0.1)	55.4 (1.0)	0.8 (0.2)		
Brunei Darussalam	m m	m m	m m	m m	m m	m m	m m	m m	45.7 (0.6)	2.3 (0.3)		
B-S-J-Z (China)	m m	m m	m m	m m	m m	m m	m m	m m	2.1 (0.3)	31.5 (1.3)		
Bulgaria	42.6 (2.4)	3.1 (0.6)	38.8 (2.5)	2.6 (0.5)	36.9 (2.0)	3.1 (0.6)	37.9 (1.9)	2.9 (0.4)	46.5 (1.6)	1.5 (0.3)		
Costa Rica	m m	m m	39.0 (1.5)	0.3 (0.1)	39.3 (1.7)	0.2 (0.1)	46.4 (1.2)	0.1 (0.1)	47.8 (1.8)	0.1 (0.1)		
Croatia	17.0 (0.9)	5.1 (0.5)	18.5 (1.1)	3.7 (0.6)	17.3 (0.9)	4.6 (0.8)	24.6 (1.2)	3.9 (0.4)	25.4 (1.2)	3.6 (0.4)		
Cyprus	m m	m m	m m	m m	38.0 (0.7)	2.0 (0.3)	42.1 (0.8)	1.6 (0.2)	39.0 (1.0)	1.6 (0.2)		
Dominican Republic	m m	m m	m m	m m	m m	m m	85.7 (1.1)	0.0 (0.0)	84.8 (1.1)	0.0 (0.0)		
Georgia	m m	m m	65.6 (1.3)	0.2 (0.1)	m m	m m	50.8 (1.3)	0.9 (0.2)	64.4 (1.2)	0.1 (0.1)		
Hong Kong (China)*	8.7 (0.8)	15.9 (0.9)	6.6 (0.7)	16.2 (1.0)	5.6 (0.6)	16.7 (1.0)	9.4 (0.7)	7.4 (0.6)	11.6 (0.8)	7.8 (0.7)		
Indonesia	61.6 (3.4)	0.0 (0.0)	65.6 (2.3)	0.0 (0.0)	66.6 (2.2)	0.0 (0.0)	56.0 (1.6)	0.1 (0.1)	60.0 (1.5)	0.1 (0.0)		
Jordan	44.3 (1.2)	0.6 (0.2)	45.6 (1.7)	0.5 (0.2)	49.6 (1.5)	0.2 (0.2)	49.8 (1.4)	0.2 (0.1)	40.3 (1.4)	0.7 (0.2)		
Kazakhstan	m m	m m	55.4 (1.6)	0.3 (0.2)	41.9 (1.8)	0.2 (0.1)	m m	m m	60.3 (1.0)	0.4 (0.1)		
Kosovo	m m	m m	m m	m m	m m	m m	67.7 (1.1)	0.0 (0.0)	76.5 (0.7)	0.0 (0.0)		
Lebanon	m m	m m	m m	m m	m m	m m	62.6 (1.7)	0.4 (0.1)	62.3 (1.6)	0.5 (0.2)		
Macao (China)	10.3 (0.5)	5.3 (0.4)	9.6 (0.4)	4.8 (0.5)	8.8 (0.5)	6.7 (0.4)	8.1 (0.4)	9.2 (0.5)	6.0 (0.5)	13.6 (0.6)		
Malaysia	m m	m m	43.0 (1.5)	0.2 (0.1)	45.5 (1.6)	0.3 (0.1)	m m	m m	36.6 (1.3)	0.6 (0.2)		
Malta	m m	m m	32.5 (0.8)	6.0 (0.6)	m m	m m	32.5 (0.8)	7.6 (0.5)	33.5 (0.9)	4.4 (0.4)		
Moldova	m m	m m	47.3 (1.5)	0.2 (0.1)	m m	m m	42.2 (1.1)	0.7 (0.2)	42.6 (1.2)	0.9 (0.2)		
Montenegro	50.2 (0.9)	0.3 (0.1)	53.6 (1.0)	0.2 (0.1)	50.7 (0.7)	0.4 (0.1)	51.0 (0.7)	0.5 (0.1)	48.2 (0.7)	0.3 (0.1)		
Morocco	m m	m m	m m	m m	m m	m m	m m	m m	69.4 (1.8)	0.0 (0.0)		
North Macedonia	m m	m m	m m	m m	m m	m m	62.9 (0.8)	0.2 (0.1)	49.5 (0.8)	0.8 (0.2)		
Panama	m m	m m	65.1 (2.8)	0.2 (0.1)	m m	m m	m m	m m	71.3 (1.4)	0.1 (0.1)		
Peru	m m	m m	68.3 (1.7)	0.2 (0.1)	68.5 (2.0)	0.0 (0.1)	58.5 (1.4)	0.1 (0.1)	54.5 (1.4)	0.2 (0.1)		
Philippines	m m	m m	m m	m m	m m	m m	m m	m m	78.0 (1.5)	0.1 (0.0)		
Qatar	79.1 (0.4)	0.3 (0.1)	65.2 (0.6)	1.4 (0.1)	62.6 (0.5)	1.5 (0.1)	49.8 (0.5)	1.7 (0.2)	48.4 (0.5)	2.2 (0.2)		
Romania	46.9 (2.4)	0.5 (0.1)	41.4 (2.1)	0.4 (0.1)	37.3 (1.6)	0.9 (0.3)	38.5 (1.8)	0.7 (0.2)	43.9 (2.1)	1.0 (0.3)		
Russia	22.2 (1.4)	4.2 (0.5)	22.0 (1.4)	4.4 (0.5)	18.8 (1.1)	4.3 (0.6)	18.2 (1.1)	3.7 (0.4)	21.2 (1.2)	3.1 (0.4)		
Saudi Arabia	m m	m m	m m	m m	m m	m m	m m	m m	62.3 (1.5)	0.1 (0.0)		
Serbia	38.5 (1.6)	0.8 (0.2)	34.4 (1.3)	1.0 (0.2)	35.0 (1.8)	1.7 (0.4)	m m	m m	38.3 (1.5)	1.6 (0.2)		
Singapore	m m	m m	11.5 (0.5)	19.9 (0.6)	9.6 (0.5)	22.7 (0.8)	9.6 (0.4)	24.2 (0.6)	9.0 (0.4)	20.7 (0.6)		
Chinese Taipei	11.6 (1.0)	14.6 (0.9)	11.1 (0.7)	8.8 (0.9)	9.8 (0.8)	8.3 (0.6)	12.4 (0.8)	15.4 (1.1)	15.1 (0.8)	11.7 (0.9)		
Thailand	46.1 (1.2)	0.4 (0.1)	42.8 (1.6)	0.6 (0.3)	33.6 (1.6)	0.9 (0.3)	46.7 (1.5)	0.5 (0.2)	44.5 (1.5)	0.7 (0.2)		
Ukraine	m m	m m	m m	m m	m m	m m	m m	m m	26.4 (1.4)	3.5 (0.5)		
United Arab Emirates	m m	m m	39.2 (1.2)	2.2 (0.2)	35.2 (1.3)	2.5 (0.3)	41.8 (1.1)	2.8 (0.2)	42.8 (0.9)	2.9 (0.2)		
Uruguay	42.1 (1.4)	1.4 (0.2)	42.6 (1.1)	1.5 (0.2)	46.9 (1.3)	1.0 (0.2)	40.8 (1.1)	1.3 (0.2)	43.9 (1.3)	0.7 (0.2)		
Viet Nam**	m m	m m	m m	m m	6.7 (1.1)	8.1 (1.1)	5.9 (0.8)	8.3 (1.2)	m m	m m		

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.


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Table I.B1.9 [3/4] **Percentage of low achievers and top performers in science, 2006 through 2018**

	Change between 2006 and 2018 (PISA 2018 - PISA 2006)				Change between 2009 and 2018 (PISA 2018 - PISA 2009)				Change between 2012 and 2018 (PISA 2018 - PISA 2012)				Change between 2015 and 2018 (PISA 2018 - PISA 2015)			
	Below Level 2 (less than 409.54 score points)		Level 5 or above (at or above 633.33 score points)		Below Level 2 (less than 409.54 score points)		Level 5 or above (at or above 633.33 score points)		Below Level 2 (less than 409.54 score points)		Level 5 or above (at or above 633.33 score points)		Below Level 2 (less than 409.54 score points)		Level 5 or above (at or above 633.33 score points)	
	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.
<b>OECD</b>																
Australia	<b>6.0</b>	(1.2)	<b>-5.1</b>	(1.0)	<b>6.3</b>	(1.3)	<b>-5.1</b>	(1.1)	<b>5.2</b>	(1.4)	<b>-4.1</b>	(1.0)	1.2	(0.8)	<b>-1.7</b>	(0.7)
Austria	<b>5.5</b>	(2.1)	<b>-3.7</b>	(1.0)	m	m	m	m	<b>6.1</b>	(2.2)	-1.6	(1.0)	1.0	(1.4)	-1.4	(0.8)
Belgium	3.0	(1.5)	<b>-2.0</b>	(0.8)	2.0	(1.5)	<b>-2.1</b>	(1.0)	2.3	(1.6)	-1.0	(0.9)	0.2	(1.3)	-1.0	(0.6)
Canada	<b>3.4</b>	(1.0)	<b>-3.1</b>	(1.0)	<b>3.9</b>	(1.0)	-0.8	(1.0)	<b>3.0</b>	(1.1)	0.0	(1.1)	<b>2.3</b>	(0.8)	-1.0	(0.9)
Chile	-4.4	(3.2)	<b>-0.9</b>	(0.4)	3.1	(3.0)	-0.1	(0.3)	0.9	(3.6)	0.0	(0.2)	0.5	(1.7)	-0.2	(0.3)
Colombia	<b>-9.8</b>	(4.0)	<b>0.3</b>	(0.1)	-3.7	(4.3)	<b>0.3</b>	(0.1)	-5.8	(4.8)	<b>0.3</b>	(0.1)	1.4	(2.2)	0.1	(0.1)
Czech Republic	3.2	(1.9)	<b>-4.1</b>	(1.1)	1.5	(1.9)	-0.8	(0.9)	<b>5.0</b>	(2.0)	-0.1	(0.9)	-1.9	(1.5)	0.2	(0.7)
Denmark	0.2	(1.6)	-1.3	(0.9)	2.1	(1.4)	-1.2	(0.8)	2.0	(1.7)	-1.2	(0.9)	<b>2.8</b>	(1.1)	-1.5	(0.8)
Estonia	1.1	(1.0)	0.7	(1.2)	0.4	(1.1)	1.8	(1.2)	<b>3.7</b>	(1.0)	-0.6	(1.3)	0.0	(0.9)	-1.3	(0.9)
Finland	<b>8.8</b>	(1.0)	<b>-8.6</b>	(1.3)	<b>6.9</b>	(1.0)	<b>-6.4</b>	(1.4)	<b>5.2</b>	(1.2)	<b>-4.8</b>	(1.5)	1.4	(1.0)	<b>-2.1</b>	(0.9)
France	-0.7	(1.8)	-1.5	(0.9)	1.2	(1.8)	-1.6	(1.0)	1.8	(1.7)	-1.3	(1.1)	-1.6	(1.2)	-1.4	(0.8)
Germany	<b>4.2</b>	(1.8)	-1.8	(1.0)	<b>4.8</b>	(1.6)	<b>-2.8</b>	(1.1)	<b>7.4</b>	(1.7)	-2.2	(1.2)	2.6	(1.4)	-0.6	(0.9)
Greece	<b>7.7</b>	(2.9)	<b>-2.1</b>	(0.4)	<b>6.5</b>	(3.1)	<b>-1.7</b>	(0.4)	6.2	(3.5)	<b>-1.2</b>	(0.5)	-1.0	(2.4)	<b>-0.8</b>	(0.4)
Hungary	<b>9.1</b>	(1.9)	<b>-2.2</b>	(0.8)	<b>10.0</b>	(2.2)	-0.7	(0.8)	<b>6.1</b>	(2.3)	-1.2	(1.0)	-1.9	(1.4)	0.1	(0.7)
Iceland	<b>4.4</b>	(2.0)	<b>-2.5</b>	(0.7)	<b>7.0</b>	(2.1)	<b>-3.1</b>	(0.6)	1.0	(2.4)	-1.4	(0.8)	-0.3	(1.3)	0.1	(0.5)
Ireland	1.5	(1.6)	<b>-3.6</b>	(0.9)	1.9	(1.6)	<b>-2.9</b>	(1.0)	<b>5.9</b>	(1.6)	<b>-4.9</b>	(0.9)	1.7	(1.3)	-1.2	(0.7)
Israel	-3.0	(2.2)	0.6	(0.8)	0.0	(2.2)	<b>1.9</b>	(0.7)	4.2	(2.6)	0.0	(0.9)	1.7	(2.0)	0.0	(0.7)
Italy	0.6	(2.0)	<b>-1.9</b>	(0.5)	<b>5.2</b>	(1.9)	<b>-3.1</b>	(0.5)	<b>7.2</b>	(2.3)	<b>-3.3</b>	(0.6)	2.7	(1.5)	<b>-1.3</b>	(0.6)
Japan	-1.2	(1.4)	-2.0	(1.6)	0.2	(1.4)	<b>-3.9</b>	(1.7)	2.4	(1.4)	<b>-5.2</b>	(2.0)	1.2	(1.0)	-2.3	(1.4)
Korea	2.9	(1.5)	1.5	(1.5)	<b>7.8</b>	(1.3)	0.2	(1.5)	<b>7.5</b>	(1.3)	0.1	(1.7)	-0.2	(1.2)	1.2	(1.2)
Latvia	1.1	(1.8)	-0.4	(0.6)	<b>3.8</b>	(1.9)	0.6	(0.6)	<b>6.1</b>	(1.9)	-0.7	(0.7)	1.2	(1.1)	-0.1	(0.5)
Lithuania	1.8	(1.7)	-0.5	(0.8)	<b>5.2</b>	(1.8)	-0.2	(0.6)	<b>6.1</b>	(2.0)	-0.7	(0.6)	-2.5	(1.4)	0.3	(0.6)
Luxembourg	<b>4.7</b>	(1.5)	-0.4	(0.7)	3.1	(1.7)	-1.3	(0.8)	<b>4.5</b>	(2.0)	<b>-2.7</b>	(0.9)	0.9	(0.9)	<b>-1.5</b>	(0.6)
Mexico	-4.1	(4.2)	0.0	(0.1)	-0.5	(4.4)	0.1	(0.1)	-0.2	(5.2)	0.1	(0.1)	-1.0	(2.1)	0.1	(0.1)
Netherlands*	<b>7.1</b>	(1.7)	-2.5	(1.3)	<b>6.9</b>	(2.1)	-2.1	(1.6)	<b>6.9</b>	(1.9)	-1.2	(1.5)	1.5	(1.5)	-0.5	(1.0)
New Zealand	<b>4.3</b>	(1.2)	<b>-6.3</b>	(1.1)	<b>4.7</b>	(1.3)	<b>-6.3</b>	(1.2)	1.8	(1.4)	-2.0	(1.2)	0.6	(1.2)	-1.5	(0.9)
Norway	-0.2	(1.9)	0.7	(0.8)	<b>5.1</b>	(1.8)	0.4	(0.9)	1.2	(2.0)	-0.8	(0.9)	2.1	(1.3)	-1.2	(0.7)
Poland	<b>-3.1</b>	(1.3)	<b>2.5</b>	(1.2)	0.7	(1.4)	1.7	(1.2)	<b>4.8</b>	(1.4)	-1.5	(1.6)	<b>-2.4</b>	(1.2)	1.9	(1.0)
Portugal*	<b>-4.9</b>	(1.9)	<b>2.5</b>	(0.7)	3.1	(1.7)	1.5	(0.9)	0.6	(2.1)	1.1	(0.9)	2.2	(1.4)	<b>-1.8</b>	(0.8)
Slovak Republic	<b>9.1</b>	(2.3)	<b>-2.1</b>	(0.7)	<b>10.0</b>	(2.4)	<b>-2.5</b>	(0.7)	2.4	(3.0)	-1.2	(0.8)	-1.4	(1.5)	0.1	(0.5)
Slovenia	0.7	(1.1)	<b>-5.6</b>	(0.9)	-0.2	(1.1)	<b>-2.5</b>	(1.0)	1.7	(1.3)	<b>-2.2</b>	(1.1)	-0.4	(0.8)	<b>-3.3</b>	(0.8)
Spain	1.6	(1.6)	-0.7	(0.5)	3.0	(1.7)	0.2	(0.4)	<b>5.6</b>	(1.8)	-0.6	(0.5)	<b>3.0</b>	(1.0)	-0.8	(0.5)
Sweden	2.6	(1.5)	0.4	(0.9)	-0.1	(1.7)	0.2	(0.9)	-3.2	(1.8)	<b>2.0</b>	(0.9)	-2.6	(1.6)	-0.2	(0.9)
Switzerland	<b>4.2</b>	(1.8)	<b>-2.7</b>	(1.2)	<b>6.2</b>	(1.8)	<b>-2.9</b>	(1.2)	<b>7.4</b>	(2.0)	-1.5	(1.2)	1.8	(1.5)	<b>-2.0</b>	(1.0)
Turkey	<b>-21.4</b>	(2.7)	<b>1.5</b>	(0.6)	-4.8	(2.7)	<b>1.3</b>	(0.6)	-1.2	(3.1)	0.7	(0.6)	<b>-19.3</b>	(2.4)	<b>2.2</b>	(0.5)
United Kingdom	0.7	(1.5)	<b>-4.1</b>	(1.0)	2.4	(1.6)	-1.7	(1.1)	2.5	(1.9)	-1.5	(1.2)	0.0	(1.2)	-1.2	(0.9)
United States*	<b>-5.7</b>	(2.1)	0.0	(1.2)	0.5	(1.8)	0.0	(1.4)	0.5	(2.0)	1.7	(1.3)	-1.7	(1.6)	0.6	(1.0)
<b>OECD average-36b</b>	1.0	(1.1)	<b>-1.6</b>	(0.3)	<b>3.2</b>	(1.2)	<b>-1.3</b>	(0.4)	<b>3.3</b>	(1.5)	<b>-1.2</b>	(0.4)	-0.1	(0.3)	<b>-0.7</b>	(0.1)
<b>OECD average-37</b>	1.1	(1.1)	<b>-1.6</b>	(0.3)	m	m	m	m	<b>3.4</b>	(1.5)	<b>-1.2</b>	(0.4)	-0.1	(0.3)	<b>-0.7</b>	(0.1)

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.


StatLink  <https://doi.org/10.1787/888934029090>

Table I.B1.9<sup>[4/4]</sup> Percentage of low achievers and top performers in science, 2006 through 2018

	Change between 2006 and 2018 (PISA 2018 - PISA 2006)				Change between 2009 and 2018 (PISA 2018 - PISA 2009)				Change between 2012 and 2018 (PISA 2018 - PISA 2012)				Change between 2015 and 2018 (PISA 2018 - PISA 2015)			
	Below Level 2 (less than 409.54 score points)		Level 5 or above (at or above 633.33 score points)		Below Level 2 (less than 409.54 score points)		Level 5 or above (at or above 633.33 score points)		Below Level 2 (less than 409.54 score points)		Level 5 or above (at or above 633.33 score points)		Below Level 2 (less than 409.54 score points)		Level 5 or above (at or above 633.33 score points)	
	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.	% dif.	S.E.
Partners																
Albania	m	m	m	m	<b>-10.3</b>	(4.4)	0.1	(0.1)	-6.1	(4.9)	-0.2	(0.2)	<b>5.3</b>	(2.2)	-0.1	(0.2)
Argentina	-2.8	(3.5)	0.0	(0.2)	1.1	(3.2)	-0.2	(0.2)	2.6	(3.8)	0.2	(0.2)	m	m	m	m
Baku (Azerbaijan)	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Belarus	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Bosnia and Herzegovina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	<b>-5.6</b>	(2.3)	0.2	(0.3)	1.2	(2.4)	0.2	(0.2)	0.2	(2.6)	<b>0.5</b>	(0.2)	-1.2	(1.5)	0.1	(0.2)
Brunei Darussalam	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
B-S-J-Z (China)	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Bulgaria	3.9	(3.5)	<b>-1.5</b>	(0.7)	<b>7.7</b>	(3.7)	-1.1	(0.6)	<b>9.6</b>	(3.7)	<b>-1.6</b>	(0.7)	<b>8.6</b>	(2.5)	<b>-1.4</b>	(0.6)
Costa Rica	m	m	m	m	<b>8.8</b>	(4.4)	-0.2	(0.1)	8.5	(5.3)	-0.1	(0.1)	1.5	(2.2)	0.0	(0.1)
Croatia	<b>8.4</b>	(2.0)	<b>-1.5</b>	(0.6)	<b>6.9</b>	(2.2)	-0.1	(0.7)	<b>8.1</b>	(2.4)	-0.9	(0.9)	0.7	(1.7)	-0.3	(0.5)
Cyprus	m	m	m	m	m	m	m	m	0.9	(2.8)	-0.3	(0.4)	<b>-3.2</b>	(1.3)	0.1	(0.3)
Dominican Republic	m	m	m	m	m	m	m	m	m	m	m	m	-0.9	(1.6)	0.0	(0.0)
Georgia	m	m	m	m	-1.2	(3.2)	-0.1	(0.1)	m	m	m	m	<b>13.6</b>	(1.8)	<b>-0.8</b>	(0.2)
Hong Kong (China)*	<b>2.8</b>	(1.3)	<b>-8.1</b>	(1.3)	<b>4.9</b>	(1.3)	<b>-8.4</b>	(1.3)	<b>6.0</b>	(1.3)	<b>-8.9</b>	(1.4)	<b>2.1</b>	(1.1)	0.5	(1.0)
Indonesia	-1.6	(5.5)	0.0	(0.1)	-5.6	(5.1)	0.1	(0.0)	-6.6	(6.1)	0.1	(0.0)	4.1	(2.3)	0.0	(0.1)
Jordan	-4.0	(2.9)	0.0	(0.3)	-5.3	(3.3)	0.2	(0.2)	<b>-9.2</b>	(3.7)	0.4	(0.2)	<b>-9.5</b>	(2.0)	<b>0.5</b>	(0.2)
Kazakhstan	m	m	m	m	4.9	(4.3)	0.1	(0.2)	<b>18.4</b>	(5.3)	0.2	(0.1)	m	m	m	m
Kosovo	m	m	m	m	m	m	m	m	m	m	m	m	<b>8.8</b>	(1.3)	0.0	(0.0)
Lebanon	m	m	m	m	m	m	m	m	m	m	m	m	-0.4	(2.4)	0.1	(0.2)
Macao (China)	<b>-4.3</b>	(0.8)	<b>8.3</b>	(1.3)	<b>-3.6</b>	(0.7)	<b>8.9</b>	(1.3)	<b>-2.8</b>	(0.8)	<b>7.0</b>	(1.5)	<b>-2.1</b>	(0.7)	<b>4.5</b>	(0.8)
Malaysia	m	m	m	m	-6.4	(3.8)	0.4	(0.2)	<b>-8.9</b>	(4.5)	0.3	(0.2)	m	m	m	m
Malta	m	m	m	m	1.0	(1.5)	<b>-1.6</b>	(0.7)	m	m	m	m	1.0	(1.2)	<b>-3.2</b>	(0.6)
Moldova	m	m	m	m	-4.7	(3.7)	<b>0.6</b>	(0.2)	m	m	m	m	0.4	(1.7)	0.1	(0.3)
Montenegro	-2.0	(3.3)	0.1	(0.2)	-5.3	(3.6)	0.1	(0.2)	-2.5	(4.3)	-0.1	(0.2)	<b>-2.8</b>	(1.1)	-0.1	(0.2)
Morocco	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
North Macedonia	m	m	m	m	m	m	m	m	m	m	m	m	<b>-13.5</b>	(1.2)	<b>0.6</b>	(0.2)
Panama	m	m	m	m	6.2	(3.7)	-0.1	(0.1)	m	m	m	m	m	m	m	m
Peru	m	m	m	m	<b>-13.8</b>	(3.8)	0.0	(0.2)	<b>-14.0</b>	(4.6)	0.2	(0.1)	<b>-4.0</b>	(2.0)	0.1	(0.1)
Philippines	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Qatar	<b>-30.7</b>	(1.9)	<b>1.9</b>	(0.2)	<b>-16.8</b>	(2.1)	<b>0.8</b>	(0.2)	<b>-14.3</b>	(2.5)	<b>0.8</b>	(0.2)	-1.4	(0.8)	<b>0.5</b>	(0.2)
Romania	-3.0	(4.1)	0.5	(0.3)	2.6	(4.0)	<b>0.6</b>	(0.3)	6.6	(4.3)	0.1	(0.4)	5.4	(2.9)	0.3	(0.3)
Russia	-1.0	(2.5)	-1.1	(0.6)	-0.8	(2.5)	-1.3	(0.7)	2.5	(2.7)	-1.2	(0.7)	3.1	(1.7)	-0.7	(0.5)
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Serbia	-0.2	(2.8)	<b>0.8</b>	(0.3)	3.9	(2.7)	<b>0.5</b>	(0.3)	3.3	(3.3)	-0.1	(0.4)	m	m	m	m
Singapore	m	m	m	m	<b>-2.5</b>	(0.7)	0.8	(1.9)	-0.6	(0.8)	-2.0	(2.3)	-0.6	(0.6)	<b>-3.4</b>	(0.9)
Chinese Taipei	<b>3.5</b>	(1.4)	<b>-3.0</b>	(1.4)	<b>4.1</b>	(1.2)	<b>2.8</b>	(1.4)	<b>5.3</b>	(1.3)	<b>3.3</b>	(1.3)	<b>2.7</b>	(1.1)	<b>-3.7</b>	(1.4)
Thailand	-1.6	(3.3)	0.3	(0.2)	1.7	(3.6)	0.1	(0.3)	<b>10.9</b>	(4.2)	-0.2	(0.3)	-2.3	(2.2)	0.3	(0.2)
Ukraine	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
United Arab Emirates	m	m	m	m	3.6	(2.6)	<b>0.7</b>	(0.3)	<b>7.6</b>	(3.1)	0.3	(0.4)	1.0	(1.5)	0.1	(0.3)
Uruguay	1.7	(3.1)	<b>-0.7</b>	(0.3)	1.3	(3.1)	<b>-0.8</b>	(0.3)	-3.0	(3.7)	-0.3	(0.3)	3.1	(1.8)	<b>-0.6</b>	(0.3)
Viet Nam**	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

Notes: Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.


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Table I.B1.10<sup>[1/4]</sup> Mean reading performance, 2000 through 2018

		Reading performance, by PISA cycle													
		PISA 2000		PISA 2003		PISA 2006		PISA 2009		PISA 2012		PISA 2015		PISA 2018	
		Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.
OECD	Australia	528	(3.5)	525	(2.1)	513	(2.1)	515	(2.3)	512	(1.6)	503	(1.7)	503	(1.6)
	Austria	492	(2.7)	491	(3.8)	490	(4.1)	m	m	490	(2.8)	485	(2.8)	484	(2.7)
	Belgium	507	(3.6)	507	(2.6)	501	(3.0)	506	(2.3)	509	(2.3)	499	(2.4)	493	(2.3)
	Canada	534	(1.6)	528	(1.7)	527	(2.4)	524	(1.5)	523	(1.9)	527	(2.3)	520	(1.8)
	Chile	410	(3.6)	m	m	442	(5.0)	449	(3.1)	441	(2.9)	459	(2.6)	452	(2.6)
	Colombia	m	m	m	m	385	(5.1)	413	(3.7)	403	(3.4)	425	(2.9)	412	(3.3)
	Czech Republic	492	(2.4)	489	(3.5)	483	(4.2)	478	(2.9)	493	(2.9)	487	(2.6)	490	(2.5)
	Denmark	497	(2.4)	492	(2.8)	494	(3.2)	495	(2.1)	496	(2.6)	500	(2.5)	501	(1.8)
	Estonia	m	m	m	m	501	(2.9)	501	(2.6)	516	(2.0)	519	(2.2)	523	(1.8)
	Finland	546	(2.6)	543	(1.6)	547	(2.1)	536	(2.3)	524	(2.4)	526	(2.5)	520	(2.3)
	France	505	(2.7)	496	(2.7)	488	(4.1)	496	(3.4)	505	(2.8)	499	(2.5)	493	(2.3)
	Germany	484	(2.5)	491	(3.4)	495	(4.4)	497	(2.7)	508	(2.8)	509	(3.0)	498	(3.0)
	Greece	474	(5.0)	472	(4.1)	460	(4.0)	483	(4.3)	477	(3.3)	467	(4.3)	457	(3.6)
	Hungary	480	(4.0)	482	(2.5)	482	(3.3)	494	(3.2)	488	(3.2)	470	(2.7)	476	(2.3)
	Iceland	507	(1.5)	492	(1.6)	484	(1.9)	500	(1.4)	483	(1.8)	482	(2.0)	474	(1.7)
	Ireland	527	(3.2)	515	(2.6)	517	(3.5)	496	(3.0)	523	(2.6)	521	(2.5)	518	(2.2)
	Israel	452	(8.5)	m	m	439	(4.6)	474	(3.6)	486	(5.0)	479	(3.8)	470	(3.7)
	Italy	487	(2.9)	476	(3.0)	469	(2.4)	486	(1.6)	490	(2.0)	485	(2.7)	476	(2.4)
	Japan	522	(5.2)	498	(3.9)	498	(3.6)	520	(3.5)	538	(3.7)	516	(3.2)	504	(2.7)
	Korea	525	(2.4)	534	(3.1)	556	(3.8)	539	(3.5)	536	(3.9)	517	(3.5)	514	(2.9)
	Latvia	458	(5.3)	491	(3.7)	479	(3.7)	484	(3.0)	489	(2.4)	488	(1.8)	479	(1.6)
	Lithuania	m	m	m	m	470	(3.0)	468	(2.4)	477	(2.5)	472	(2.7)	476	(1.5)
	Luxembourg	m	m	479	(1.5)	479	(1.3)	472	(1.3)	488	(1.5)	481	(1.4)	470	(1.1)
	Mexico	422	(3.3)	400	(4.1)	410	(3.1)	425	(2.0)	424	(1.5)	423	(2.6)	420	(2.7)
	Netherlands*	m	m	513	(2.9)	507	(2.9)	508	(5.1)	511	(3.5)	503	(2.4)	485	(2.7)
	New Zealand	529	(2.8)	522	(2.5)	521	(3.0)	521	(2.4)	512	(2.4)	509	(2.4)	506	(2.0)
	Norway	505	(2.8)	500	(2.8)	484	(3.2)	503	(2.6)	504	(3.2)	513	(2.5)	499	(2.2)
	Poland	479	(4.5)	497	(2.9)	508	(2.8)	500	(2.6)	518	(3.1)	506	(2.5)	512	(2.7)
	Portugal*	470	(4.5)	478	(3.7)	472	(3.6)	489	(3.1)	488	(3.8)	498	(2.7)	492	(2.4)
	Slovak Republic	m	m	469	(3.1)	466	(3.1)	477	(2.5)	463	(4.2)	453	(2.8)	458	(2.2)
	Slovenia	m	m	m	m	494	(1.0)	483	(1.0)	481	(1.2)	505	(1.5)	495	(1.2)
	Spain	493	(2.7)	481	(2.6)	461	(2.2)	481	(2.0)	488	(1.9)	496	(2.4)	m	m
	Sweden	516	(2.2)	514	(2.4)	507	(3.4)	497	(2.9)	483	(3.0)	500	(3.5)	506	(3.0)
	Switzerland	494	(4.2)	499	(3.3)	499	(3.1)	501	(2.4)	509	(2.6)	492	(3.0)	484	(3.1)
	Turkey	m	m	441	(5.8)	447	(4.2)	464	(3.5)	475	(4.2)	428	(4.0)	466	(2.2)
	United Kingdom	m	m	m	m	495	(2.3)	494	(2.3)	499	(3.5)	498	(2.8)	504	(2.6)
United States*	504	(7.0)	495	(3.2)	m	m	500	(3.7)	498	(3.7)	497	(3.4)	505	(3.6)	
	<b>OECD average-23</b>	500	(0.7)	497	(0.6)	495	(0.7)	499	(0.6)	501	(0.6)	497	(0.6)	493	(0.5)
	<b>OECD average-27</b>	494	(0.8)	m	m	m	m	m	m	498	(0.6)	495	(0.5)	491	(0.5)
	<b>OECD average-29b</b>	m	m	494	(0.6)	m	m	m	m	498	(0.5)	493	(0.5)	490	(0.5)
	<b>OECD average-35a</b>	m	m	m	m	m	m	491	(0.5)	493	(0.5)	490	(0.5)	487	(0.4)
	<b>OECD average-35b</b>	m	m	m	m	486	(0.6)	m	m	493	(0.5)	490	(0.5)	487	(0.4)
	<b>OECD average-36a</b>	m	m	m	m	m	m	m	m	493	(0.5)	490	(0.5)	487	(0.4)

1. The average 3-year trend is the average change, per 3-year period, between the earliest available measurement in PISA and PISA 2018, calculated by a linear regression.

2. Curvilinear trends in performance are computed only for countries with comparable data in more than four PISA assessments. Curvilinear trends are calculated by a regression of performance over both linear and quadratic (squared) terms of the gap between the year of assessment and 2018. The coefficient for the linear term represents the annual rate of change in 2018, while the coefficient for the quadratic term represents the acceleration or deceleration of the change in performance.

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Albania, Argentina, Bulgaria, Chile, Indonesia, the Republic of North Macedonia, Peru and Thailand conducted the PISA 2000 assessment in 2001, Hong Kong (China), Israel and Romania conducted the assessment in 2002, as part of PISA 2000+. Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+. Estimates of the average 3-year trend and the curvilinear trend for these countries consider the year in which the assessment was conducted.


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Table I.B1.10 [2/4] Mean reading performance, 2000 through 2018

	Reading performance, by PISA cycle													
	PISA 2000		PISA 2003		PISA 2006		PISA 2009		PISA 2012		PISA 2015		PISA 2018	
	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.
<b>Partners</b>														
Albania	349	(3.3)	m	m	m	m	385	(4.0)	394	(3.2)	405	(4.1)	405	(1.9)
Argentina	418	(9.9)	m	m	374	(7.2)	398	(4.6)	396	(3.7)	m	m	402	(3.0)
Baku (Azerbaijan)	m	m	m	m	m	m	m	m	m	m	m	m	389	(2.5)
Belarus	m	m	m	m	m	m	m	m	m	m	m	m	474	(2.4)
Bosnia and Herzegovina	m	m	m	m	m	m	m	m	m	m	m	m	403	(2.9)
Brazil	396	(3.1)	403	(4.6)	393	(3.7)	412	(2.7)	407	(2.0)	407	(2.8)	413	(2.1)
Brunei Darussalam	m	m	m	m	m	m	m	m	m	m	m	m	408	(0.9)
B-S-J-Z (China)	m	m	m	m	m	m	m	m	m	m	m	m	555	(2.7)
Bulgaria	430	(4.9)	m	m	402	(6.9)	429	(6.7)	436	(6.0)	432	(5.0)	420	(3.9)
Costa Rica	m	m	m	m	m	m	443	(3.2)	441	(3.5)	427	(2.6)	426	(3.4)
Croatia	m	m	m	m	477	(2.8)	476	(2.9)	485	(3.3)	487	(2.7)	479	(2.7)
Cyprus	m	m	m	m	m	m	m	m	449	(1.2)	443	(1.7)	424	(1.4)
Dominican Republic	m	m	m	m	m	m	m	m	m	m	358	(3.1)	342	(2.9)
Georgia	m	m	m	m	m	m	374	(2.9)	m	m	401	(3.0)	380	(2.2)
Hong Kong (China)*	525	(2.9)	510	(3.7)	536	(2.4)	533	(2.1)	545	(2.8)	527	(2.7)	524	(2.7)
Indonesia	371	(4.0)	382	(3.4)	393	(5.9)	402	(3.7)	396	(4.2)	397	(2.9)	371	(2.6)
Jordan	m	m	m	m	401	(3.3)	405	(3.3)	399	(3.6)	408	(2.9)	419	(2.9)
Kazakhstan	m	m	m	m	m	m	390	(3.1)	393	(2.7)	m	m	387	(1.5)
Kosovo	m	m	m	m	m	m	m	m	m	m	347	(1.6)	353	(1.1)
Lebanon	m	m	m	m	m	m	m	m	m	m	347	(4.4)	353	(4.3)
Macao (China)	m	m	498	(2.2)	492	(1.1)	487	(0.9)	509	(0.9)	509	(1.3)	525	(1.2)
Malaysia	m	m	m	m	m	m	414	(2.9)	398	(3.3)	m	m	415	(2.9)
Malta	m	m	m	m	m	m	442	(1.6)	m	m	447	(1.8)	448	(1.7)
Moldova	m	m	m	m	m	m	388	(2.8)	m	m	416	(2.5)	424	(2.4)
Montenegro	m	m	m	m	392	(1.2)	408	(1.7)	422	(1.2)	427	(1.6)	421	(1.1)
Morocco	m	m	m	m	m	m	m	m	m	m	m	m	359	(3.1)
North Macedonia	373	(1.9)	m	m	m	m	m	m	m	m	352	(1.4)	393	(1.1)
Panama	m	m	m	m	m	m	371	(6.5)	m	m	m	m	377	(3.0)
Peru	327	(4.4)	m	m	m	m	370	(4.0)	384	(4.3)	398	(2.9)	401	(3.0)
Philippines	m	m	m	m	m	m	m	m	m	m	m	m	340	(3.3)
Qatar	m	m	m	m	312	(1.2)	372	(0.8)	388	(0.8)	402	(1.0)	407	(0.8)
Romania	m	m	m	m	396	(4.7)	424	(4.1)	438	(4.0)	434	(4.1)	428	(5.1)
Russia	462	(4.2)	442	(3.9)	440	(4.3)	459	(3.3)	475	(3.0)	495	(3.1)	479	(3.1)
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	399	(3.0)
Serbia	m	m	m	m	401	(3.5)	442	(2.4)	446	(3.4)	m	m	439	(3.3)
Singapore	m	m	m	m	m	m	526	(1.1)	542	(1.4)	535	(1.6)	549	(1.6)
Chinese Taipei	m	m	m	m	496	(3.4)	495	(2.6)	523	(3.0)	497	(2.5)	503	(2.8)
Thailand	431	(3.2)	420	(2.8)	417	(2.6)	421	(2.6)	441	(3.1)	409	(3.3)	393	(3.2)
Ukraine	m	m	m	m	m	m	m	m	m	m	m	m	466	(3.5)
United Arab Emirates	m	m	m	m	m	m	431	(2.9)	442	(2.5)	434	(2.9)	432	(2.3)
Uruguay	m	m	434	(3.4)	413	(3.4)	426	(2.6)	411	(3.2)	437	(2.5)	427	(2.8)
Viet Nam**	m	m	m	m	m	m	m	m	508	(4.4)	487	(3.7)	m	m

1. The average 3-year trend is the average change, per 3-year period, between the earliest available measurement in PISA and PISA 2018, calculated by a linear regression.  
 2. Curvilinear trends in performance are computed only for countries with comparable data in more than four PISA assessments. Curvilinear trends are calculated by a regression of performance over both linear and quadratic (squared) terms of the gap between the year of assessment and 2018. The coefficient for the linear term represents the annual rate of change in 2018, while the coefficient for the quadratic term represents the acceleration or deceleration of the change in performance.

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Albania, Argentina, Bulgaria, Chile, Indonesia, the Republic of North Macedonia, Peru and Thailand conducted the PISA 2000 assessment in 2001, Hong Kong (China), Israel and Romania conducted the assessment in 2002, as part of PISA 2000+. Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+. Estimates of the average 3-year trend and the curvilinear trend for these countries consider the year in which the assessment was conducted.


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Table I.B1.10 [3/4] Mean reading performance, 2000 through 2018

	Change in reading performance between PISA 2018 and:										Average 3-year trend in reading performance <sup>1</sup> across PISA assessments (since 2000 or earliest assessment available)			Curvilinear trend in reading performance across PISA assessments <sup>2</sup>						
	PISA 2000 (PISA 2018 - PISA 2000)		PISA 2003 (PISA 2018 - PISA 2003)		PISA 2006 (PISA 2018 - PISA 2006)		PISA 2009 (PISA 2018 - PISA 2009)		PISA 2012 (PISA 2018 - PISA 2012)		PISA 2015 (PISA 2018 - PISA 2015)		Annual rate of change in 2018 (linear term)			Rate of acceleration or deceleration in performance (quadratic term)				
	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Coef.	S.E.	p-value	Coef.	S.E.	Coef.	S.E.	
<b>OECD</b>																				
Australia	-26	(5.6)	-23	(8.2)	-10	(5.9)	-12	(4.5)	-9	(4.4)	0	(4.6)	-4.4	(1.3)	0.001	-1.0	(0.5)	0.0	(0.0)	
Austria	-8	(5.6)	-6	(9.0)	-6	(7.2)	m	m	-5	(5.4)	0	(5.5)	-1.3	(2.0)	0.512	-0.8	(0.8)	0.0	(0.0)	
Belgium	-14	(5.9)	-14	(8.5)	-8	(6.5)	-13	(4.8)	-16	(4.9)	-6	(5.2)	-1.8	(1.3)	0.172	-1.8	(0.6)	-0.1	(0.0)	
Canada	-14	(4.7)	-8	(8.2)	-7	(6.1)	-4	(4.2)	-3	(4.6)	-7	(4.9)	-1.7	(1.3)	0.173	0.0	(0.4)	0.0	(0.0)	
Chile	43	(6.0)	m	m	10	(7.7)	3	(5.4)	11	(5.4)	-6	(5.4)	7.1	(1.4)	0.000	-1.3	(0.8)	-0.2	(0.0)	
Colombia	m	m	m	m	27	(8.0)	-1	(6.1)	9	(6.0)	-13	(5.9)	6.6	(1.8)	0.000	-2.5	(1.3)	-0.4	(0.1)	
Czech Republic	-1	(5.3)	2	(8.9)	8	(7.2)	12	(5.2)	-3	(5.4)	3	(5.4)	0.1	(1.3)	0.925	1.7	(0.7)	0.1	(0.0)	
Denmark	4	(5.0)	9	(8.5)	7	(6.4)	6	(4.5)	5	(4.9)	1	(5.0)	1.1	(1.3)	0.398	1.3	(0.5)	0.1	(0.0)	
Estonia	m	m	m	m	22	(6.3)	22	(4.8)	7	(4.6)	4	(4.9)	6.3	(1.4)	0.000	1.6	(0.8)	0.0	(0.1)	
Finland	-26	(5.3)	-23	(8.3)	-27	(6.1)	-16	(4.8)	-4	(5.0)	-6	(5.2)	-4.9	(1.3)	0.000	-2.2	(0.5)	0.0	(0.0)	
France	-12	(5.4)	-4	(8.5)	5	(7.0)	-3	(5.4)	-13	(5.2)	-7	(5.2)	-0.4	(1.3)	0.745	0.5	(0.7)	0.0	(0.0)	
Germany	14	(5.6)	7	(9.0)	3	(7.5)	1	(5.3)	-9	(5.6)	-11	(5.8)	3.3	(1.3)	0.015	-0.9	(0.7)	-0.1	(0.0)	
Greece	-16	(7.4)	-15	(9.5)	-2	(7.5)	-25	(6.6)	-20	(6.1)	-10	(6.9)	-1.5	(1.5)	0.293	-2.5	(0.9)	-0.1	(0.1)	
Hungary	-4	(6.1)	-6	(8.5)	-6	(6.6)	-18	(5.2)	-12	(5.4)	6	(5.3)	-1.1	(1.4)	0.416	-3.0	(0.7)	-0.1	(0.0)	
Iceland	-33	(4.6)	-18	(8.1)	-10	(5.9)	-26	(4.2)	-9	(4.5)	-8	(4.7)	-4.4	(1.3)	0.000	-1.4	(0.4)	0.0	(0.0)	
Ireland	-9	(5.6)	3	(8.5)	1	(6.7)	22	(5.1)	-5	(5.1)	-3	(5.2)	-0.3	(1.3)	0.824	2.8	(0.6)	0.2	(0.0)	
Israel	18	(10.1)	m	m	32	(7.9)	-4	(6.3)	-15	(7.2)	-9	(6.6)	6.1	(1.9)	0.001	-1.0	(1.2)	-0.2	(0.1)	
Italy	-11	(5.5)	1	(8.7)	8	(6.3)	-10	(4.6)	-13	(4.9)	-8	(5.3)	0.2	(1.3)	0.862	0.1	(0.5)	0.0	(0.0)	
Japan	-18	(7.1)	6	(9.1)	6	(6.9)	-16	(5.6)	-34	(5.9)	-12	(5.7)	0.8	(1.4)	0.594	-1.1	(0.8)	-0.1	(0.0)	
Korea	-11	(5.6)	-20	(8.9)	-42	(7.1)	-25	(5.7)	-22	(6.2)	-3	(6.0)	-3.1	(1.3)	0.021	-6.7	(0.7)	-0.3	(0.0)	
Latvia	21	(6.8)	-12	(8.7)	-1	(6.6)	-5	(4.9)	-10	(4.7)	-9	(4.6)	2.3	(1.4)	0.094	-3.0	(0.7)	-0.2	(0.0)	
Lithuania	m	m	m	m	6	(6.2)	7	(4.5)	-1	(4.7)	3	(5.0)	1.6	(1.4)	0.268	0.2	(0.8)	0.0	(0.1)	
Luxembourg	m	m	-9	(8.0)	-9	(5.5)	-2	(3.9)	-18	(4.2)	-11	(4.3)	-0.7	(1.3)	0.576	-1.8	(0.3)	-0.1	(0.0)	
Mexico	-1	(5.9)	21	(9.2)	10	(6.7)	-5	(4.9)	-3	(4.9)	-3	(5.4)	2.0	(1.3)	0.134	0.9	(0.6)	0.0	(0.0)	
Netherlands*	m	m	-28	(8.7)	-22	(6.6)	-24	(6.8)	-26	(5.7)	-18	(5.3)	-4.3	(1.4)	0.002	-4.4	(1.0)	-0.2	(0.1)	
New Zealand	-23	(5.3)	-16	(8.4)	-15	(6.4)	-15	(4.7)	-6	(4.9)	-4	(5.0)	-3.7	(1.3)	0.005	-1.5	(0.5)	0.0	(0.0)	
Norway	-6	(5.4)	0	(8.5)	15	(6.5)	-4	(4.9)	-4	(5.4)	-14	(5.1)	1.0	(1.3)	0.429	1.4	(0.6)	0.1	(0.0)	
Poland	33	(6.6)	15	(8.7)	4	(6.5)	11	(5.1)	-6	(5.6)	6	(5.4)	4.5	(1.4)	0.001	-1.4	(0.7)	-0.2	(0.0)	
Portugal*	22	(6.5)	14	(9.0)	19	(6.8)	2	(5.3)	4	(5.8)	-6	(5.3)	4.3	(1.4)	0.002	0.8	(0.7)	0.0	(0.0)	
Slovak Republic	m	m	-11	(8.7)	-8	(6.5)	-19	(4.9)	-5	(6.0)	5	(5.3)	-3.2	(1.4)	0.019	-2.4	(0.8)	-0.1	(0.1)	
Slovenia	m	m	m	m	1	(5.5)	12	(3.9)	14	(4.1)	-10	(4.4)	2.4	(1.3)	0.062	3.5	(0.5)	0.2	(0.0)	
Spain	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
Sweden	-11	(5.5)	-8	(8.7)	-2	(7.0)	8	(5.5)	22	(5.7)	6	(6.1)	-3.0	(1.3)	0.024	2.6	(0.7)	0.2	(0.0)	
Switzerland	-10	(6.6)	-15	(9.0)	-15	(6.8)	-17	(5.3)	-25	(5.5)	-8	(5.9)	-1.3	(1.4)	0.339	-3.7	(0.7)	-0.2	(0.0)	
Turkey	m	m	25	(9.9)	18	(7.1)	1	(5.4)	-10	(6.0)	37	(6.0)	2.2	(1.6)	0.160	-2.3	(1.0)	-0.2	(0.1)	
United Kingdom	m	m	m	m	9	(6.3)	10	(4.9)	5	(5.7)	6	(5.5)	2.1	(1.4)	0.137	1.5	(1.0)	0.1	(0.1)	
United States*	1	(8.9)	10	(9.1)	m	m	6	(6.2)	8	(6.4)	8	(6.3)	0.2	(1.6)	0.916	1.7	(1.0)	0.1	(0.1)	
<b>OECD average-23</b>	-7	(4.1)	-5	(7.8)	-3	(5.3)	-7	(3.6)	-9	(3.8)	-4	(3.8)	-0.5	(1.2)	0.672	-0.8	(0.1)	-0.03	(0.01)	
<b>OECD average-27</b>	-4	(4.1)	m	m	m	m	m	m	-7	(3.8)	-4	(3.8)	0.0	(1.2)	0.997	-0.7	(0.1)	-0.04	(0.01)	
<b>OECD average-29b</b>	m	m	-4	(7.8)	m	m	m	m	-9	(3.8)	-3	(4.0)	-0.7	(1.2)	0.598	-1.0	(0.1)	-0.05	(0.01)	
<b>OECD average-35a</b>	m	m	m	m	m	m	-4	(3.6)	-6	(3.8)	-3	(4.0)	0.4	(1.2)	0.736	-0.7	(0.1)	-0.05	(0.01)	
<b>OECD average-35b</b>	m	m	m	m	1	(5.3)	m	m	-7	(3.8)	-3	(4.0)	0.4	(1.2)	0.765	-0.8	(0.1)	-0.06	(0.01)	
<b>OECD average-36a</b>	m	m	m	m	m	m	m	m	-6	(3.8)	-3	(4.0)	0.4	(1.2)	0.769	-0.7	(0.1)	-0.05	(0.01)	

1. The average 3-year trend is the average change, per 3-year period, between the earliest available measurement in PISA and PISA 2018, calculated by a linear regression.

2. Curvilinear trends in performance are computed only for countries with comparable data in more than four PISA assessments. Curvilinear trends are calculated by a regression of performance over both linear and quadratic (squared) terms of the gap between the year of assessment and 2018. The coefficient for the linear term represents the annual rate of change in 2018, while the coefficient for the quadratic term represents the acceleration or deceleration of the change in performance.

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

Notes: Values that are statistically significant are indicated in bold (see Annex A3).

Albania, Argentina, Bulgaria, Chile, Indonesia, the Republic of North Macedonia, Peru and Thailand conducted the PISA 2000 assessment in 2001, Hong Kong (China), Israel and Romania conducted the assessment in 2002, as part of PISA 2000+. Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+. Estimates of the average 3-year trend and the curvilinear trend for these countries consider the year in which the assessment was conducted.


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Table I.B1.10 [4/4] Mean reading performance, 2000 through 2018

	Change in reading performance between PISA 2018 and:											Average 3-year trend in reading performance <sup>1</sup> across PISA assessments (since 2000 or earliest assessment available)			Curvilinear trend in reading performance across PISA assessments <sup>2</sup>					
	PISA 2000 (PISA 2018 - PISA 2000)		PISA 2003 (PISA 2018 - PISA 2003)		PISA 2006 (PISA 2018 - PISA 2006)		PISA 2009 (PISA 2018 - PISA 2009)		PISA 2012 (PISA 2018 - PISA 2012)		PISA 2015 (PISA 2018 - PISA 2015)		Annual rate of change in 2018 (linear term)			Rate of acceleration or deceleration in performance (quadratic term)				
	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Coef.	S.E.	p-value	Coef.	S.E.	Coef.	S.E.	
<b>Partners</b>																				
Albania	<b>57</b>	(5.6)	m	m	m	m	<b>21</b>	(5.7)	<b>11</b>	(5.3)	0	(6.0)	<b>10.5</b>	(1.4)	0.000	1.1	(0.8)	<b>-0.1</b>	(0.0)	
Argentina	-17	(11.1)	m	m	<b>28</b>	(9.4)	3	(6.5)	6	(6.0)	m	m	-1.2	(2.0)	0.553	<b>4.3</b>	(1.2)	<b>0.3</b>	(0.1)	
Baku (Azerbaijan)	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
Belarus	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
Bosnia and Herzegovina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
Brazil	<b>17</b>	(5.5)	10	(9.3)	<b>20</b>	(6.8)	1	(4.9)	6	(4.8)	6	(5.2)	2.6	(1.3)	0.051	0.9	(0.6)	0.0	(0.0)	
Brunei Darussalam	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
B-S-J-Z (China)	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
Bulgaria	-11	(7.5)	m	m	18	(9.5)	-9	(8.5)	<b>-16</b>	(8.1)	-12	(7.5)	0.8	(1.6)	0.598	0.4	(1.3)	0.0	(0.1)	
Costa Rica	m	m	m	m	m	m	<b>-16</b>	(5.8)	<b>-14</b>	(6.2)	-1	(5.8)	<b>-6.8</b>	(2.1)	0.001	m	m	m	m	
Croatia	m	m	m	m	2	(6.5)	3	(5.3)	-6	(5.7)	-8	(5.5)	1.4	(1.5)	0.332	-1.3	(1.1)	<b>-0.1</b>	(0.1)	
Cyprus	m	m	m	m	m	m	m	m	<b>-25</b>	(4.2)	<b>-18</b>	(4.5)	<b>-12.2</b>	(2.1)	0.000	m	m	m	m	
Dominican Republic	m	m	m	m	m	m	m	m	m	m	<b>-16</b>	(5.7)	<b>-16.1</b>	(5.7)	0.005	m	m	m	m	
Georgia	m	m	m	m	m	m	5	(5.0)	m	m	<b>-22</b>	(5.4)	3.5	(1.9)	0.061	m	m	m	m	
Hong Kong (China)*	-1	(5.7)	15	(9.0)	-12	(6.4)	-9	(4.9)	<b>-20</b>	(5.4)	-2	(5.5)	1.6	(1.4)	0.251	<b>-4.0</b>	(0.7)	<b>-0.3</b>	(0.0)	
Indonesia	0	(6.2)	-11	(8.9)	<b>-22</b>	(8.3)	<b>-31</b>	(5.7)	<b>-25</b>	(6.2)	<b>-26</b>	(5.5)	1.2	(1.4)	0.403	<b>-6.6</b>	(0.9)	<b>-0.4</b>	(0.1)	
Jordan	m	m	m	m	<b>18</b>	(6.8)	<b>14</b>	(5.7)	<b>20</b>	(5.9)	11	(5.7)	<b>4.0</b>	(1.6)	0.010	<b>4.0</b>	(1.2)	<b>0.2</b>	(0.1)	
Kazakhstan	m	m	m	m	m	m	-4	(4.9)	-6	(4.8)	m	m	-1.4	(1.6)	0.376	m	m	m	m	
Kosovo	m	m	m	m	m	m	m	m	m	m	6	(4.4)	5.9	(4.4)	0.175	m	m	m	m	
Lebanon	m	m	m	m	m	m	m	m	m	m	7	(7.3)	6.8	(7.3)	0.352	m	m	m	m	
Macao (China)	m	m	<b>27</b>	(8.2)	<b>33</b>	(5.5)	<b>38</b>	(3.8)	<b>16</b>	(4.0)	<b>16</b>	(4.3)	<b>6.0</b>	(1.3)	0.000	<b>5.9</b>	(0.4)	<b>0.3</b>	(0.0)	
Malaysia	m	m	m	m	m	m	1	(5.4)	<b>17</b>	(5.8)	m	m	2.2	(2.0)	0.260	m	m	m	m	
Malta	m	m	m	m	m	m	6	(4.2)	m	m	2	(4.6)	2.3	(1.5)	0.127	m	m	m	m	
Moldova	m	m	m	m	m	m	<b>36</b>	(5.1)	m	m	8	(5.3)	<b>13.7</b>	(1.9)	0.000	m	m	m	m	
Montenegro	m	m	m	m	<b>29</b>	(5.5)	<b>14</b>	(4.1)	-1	(4.1)	-6	(4.4)	<b>7.7</b>	(1.3)	0.000	<b>-2.4</b>	(0.4)	<b>-0.4</b>	(0.0)	
Morocco	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
North Macedonia	<b>20</b>	(4.6)	m	m	m	m	m	m	m	m	<b>41</b>	(4.3)	1.1	(4.0)	0.791	m	m	m	m	
Panama	m	m	m	m	m	m	6	(8.0)	m	m	m	m	2.1	(2.7)	0.435	m	m	m	m	
Peru	<b>73</b>	(6.7)	m	m	m	m	<b>31</b>	(6.1)	<b>16</b>	(6.5)	3	(5.7)	<b>13.5</b>	(1.5)	0.000	<b>2.2</b>	(0.9)	<b>-0.1</b>	(0.1)	
Philippines	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
Qatar	m	m	m	m	<b>95</b>	(5.4)	<b>35</b>	(3.7)	<b>20</b>	(3.9)	5	(4.1)	<b>21.9</b>	(1.3)	0.000	<b>-3.1</b>	(0.3)	<b>-0.9</b>	(0.0)	
Romania	m	m	m	m	<b>32</b>	(8.7)	3	(7.5)	-10	(7.5)	-6	(7.6)	<b>7.2</b>	(1.9)	0.000	<b>-5.8</b>	(1.7)	<b>-0.7</b>	(0.1)	
Russia	<b>17</b>	(6.6)	<b>36</b>	(9.2)	<b>39</b>	(7.5)	<b>19</b>	(5.7)	3	(5.7)	<b>-16</b>	(5.9)	<b>6.8</b>	(1.4)	0.000	<b>5.1</b>	(0.8)	<b>0.2</b>	(0.0)	
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
Serbia	m	m	m	m	<b>38</b>	(7.1)	-3	(5.4)	-7	(6.0)	m	m	<b>7.7</b>	(1.6)	0.000	m	m	m	m	
Singapore	m	m	m	m	m	m	<b>24</b>	(4.0)	7	(4.3)	<b>14</b>	(4.5)	<b>6.4</b>	(1.4)	0.000	m	m	m	m	
Chinese Taipei	m	m	m	m	6	(6.8)	7	(5.2)	<b>-21</b>	(5.6)	6	(5.5)	1.5	(1.6)	0.339	<b>-3.4</b>	(1.1)	<b>-0.3</b>	(0.1)	
Thailand	<b>-38</b>	(6.1)	<b>-27</b>	(8.9)	<b>-24</b>	(6.7)	<b>-28</b>	(5.5)	<b>-48</b>	(5.8)	<b>-16</b>	(6.1)	<b>-4.1</b>	(1.4)	0.003	<b>-5.3</b>	(0.7)	<b>-0.2</b>	(0.0)	
Ukraine	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
United Arab Emirates	m	m	m	m	m	m	0	(5.1)	<b>-10</b>	(5.1)	-2	(5.4)	-0.7	(2.2)	0.738	m	m	m	m	
Uruguay	m	m	-7	(8.9)	<b>15</b>	(6.8)	1	(5.2)	<b>16</b>	(5.6)	-9	(5.4)	0.6	(1.4)	0.656	3.4	(0.8)	0.2	(0.1)	
Viet Nam**	m	m	m	m	m	m	m	m	m	m	m	m	<b>-21.4</b>	(6.1)	0.000	m	m	m	m	

1. The average 3-year trend is the average change, per 3-year period, between the earliest available measurement in PISA and PISA 2018, calculated by a linear regression.

2. Curvilinear trends in performance are computed only for countries with comparable data in more than four PISA assessments. Curvilinear trends are calculated by a regression of performance over both linear and quadratic (squared) terms of the gap between the year of assessment and 2018. The coefficient for the linear term represents the annual rate of change in 2018, while the coefficient for the quadratic term represents the acceleration or deceleration of the change in performance.

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Albania, Argentina, Bulgaria, Chile, Indonesia, the Republic of North Macedonia, Peru and Thailand conducted the PISA 2000 assessment in 2001, Hong Kong (China), Israel and Romania conducted the assessment in 2002, as part of PISA 2000+. Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+. Estimates of the average 3-year trend and the curvilinear trend for these countries consider the year in which the assessment was conducted.


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Table I.B1.11 <sup>[1/4]</sup> Mean mathematics performance, 2003 through 2018

		Mathematics performance, by PISA cycle											
		PISA 2003		PISA 2006		PISA 2009		PISA 2012		PISA 2015		PISA 2018	
		Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.
OECD	Australia	524	(2.1)	520	(2.2)	514	(2.5)	504	(1.6)	494	(1.6)	491	(1.9)
	Austria	506	(3.3)	505	(3.7)	m	m	506	(2.7)	497	(2.9)	499	(3.0)
	Belgium	529	(2.3)	520	(3.0)	515	(2.3)	515	(2.1)	507	(2.4)	508	(2.3)
	Canada	532	(1.8)	527	(2.0)	527	(1.6)	518	(1.8)	516	(2.3)	512	(2.4)
	Chile	m	m	411	(4.6)	421	(3.1)	423	(3.1)	423	(2.5)	417	(2.4)
	Colombia	m	m	370	(3.8)	381	(3.2)	376	(2.9)	390	(2.3)	391	(3.0)
	Czech Republic	516	(3.5)	510	(3.6)	493	(2.8)	499	(2.9)	492	(2.4)	499	(2.5)
	Denmark	514	(2.7)	513	(2.6)	503	(2.6)	500	(2.3)	511	(2.2)	509	(1.7)
	Estonia	m	m	515	(2.7)	512	(2.6)	521	(2.0)	520	(2.0)	523	(1.7)
	Finland	544	(1.9)	548	(2.3)	541	(2.2)	519	(1.9)	511	(2.3)	507	(2.0)
	France	511	(2.5)	496	(3.2)	497	(3.1)	495	(2.5)	493	(2.1)	495	(2.3)
	Germany	503	(3.3)	504	(3.9)	513	(2.9)	514	(2.9)	506	(2.9)	500	(2.6)
	Greece	445	(3.9)	459	(3.0)	466	(3.9)	453	(2.5)	454	(3.8)	451	(3.1)
	Hungary	490	(2.8)	491	(2.9)	490	(3.5)	477	(3.2)	477	(2.5)	481	(2.3)
	Iceland	515	(1.4)	506	(1.8)	507	(1.4)	493	(1.7)	488	(2.0)	495	(2.0)
	Ireland	503	(2.4)	501	(2.8)	487	(2.5)	501	(2.2)	504	(2.1)	500	(2.2)
	Israel	m	m	442	(4.3)	447	(3.3)	466	(4.7)	470	(3.6)	463	(3.5)
	Italy	466	(3.1)	462	(2.3)	483	(1.9)	485	(2.0)	490	(2.8)	487	(2.8)
	Japan	534	(4.0)	523	(3.3)	529	(3.3)	536	(3.6)	532	(3.0)	527	(2.5)
	Korea	542	(3.2)	547	(3.8)	546	(4.0)	554	(4.6)	524	(3.7)	526	(3.1)
	Latvia	483	(3.7)	486	(3.0)	482	(3.1)	491	(2.8)	482	(1.9)	496	(2.0)
	Lithuania	m	m	486	(2.9)	477	(2.6)	479	(2.6)	478	(2.3)	481	(2.0)
	Luxembourg	493	(1.0)	490	(1.1)	489	(1.2)	490	(1.1)	486	(1.3)	483	(1.1)
	Mexico	385	(3.6)	406	(2.9)	419	(1.8)	413	(1.4)	408	(2.2)	409	(2.5)
	Netherlands*	538	(3.1)	531	(2.6)	526	(4.7)	523	(3.5)	512	(2.2)	519	(2.6)
	New Zealand	523	(2.3)	522	(2.4)	519	(2.3)	500	(2.2)	495	(2.3)	494	(1.7)
	Norway	495	(2.4)	490	(2.6)	498	(2.4)	489	(2.7)	502	(2.2)	501	(2.2)
	Poland	490	(2.5)	495	(2.4)	495	(2.8)	518	(3.6)	504	(2.4)	516	(2.6)
	Portugal*	466	(3.4)	466	(3.1)	487	(2.9)	487	(3.8)	492	(2.5)	492	(2.7)
	Slovak Republic	498	(3.3)	492	(2.8)	497	(3.1)	482	(3.4)	475	(2.7)	486	(2.6)
	Slovenia	m	m	504	(1.0)	501	(1.2)	501	(1.2)	510	(1.3)	509	(1.4)
	Spain	485	(2.4)	480	(2.3)	483	(2.1)	484	(1.9)	486	(2.2)	481	(1.5)
	Sweden	509	(2.6)	502	(2.4)	494	(2.9)	478	(2.3)	494	(3.2)	502	(2.7)
	Switzerland	527	(3.4)	530	(3.2)	534	(3.3)	531	(3.0)	521	(2.9)	515	(2.9)
	Turkey	423	(6.7)	424	(4.9)	445	(4.4)	448	(4.8)	420	(4.1)	454	(2.3)
	United Kingdom	m	m	495	(2.1)	492	(2.4)	494	(3.3)	492	(2.5)	502	(2.6)
	United States*	483	(2.9)	474	(4.0)	487	(3.6)	481	(3.6)	470	(3.2)	478	(3.2)
	<b>OECD average-29a</b>	499	(0.6)	497	(0.5)	499	(0.5)	496	(0.5)	491	(0.5)	494	(0.4)
	<b>OECD average-30</b>	499	(0.6)	497	(0.5)	m	m	496	(0.5)	491	(0.5)	494	(0.4)
	<b>OECD average-36b</b>	m	m	490	(0.5)	492	(0.5)	490	(0.5)	487	(0.4)	489	(0.4)
	<b>OECD average-37</b>	m	m	490	(0.5)	m	m	490	(0.5)	487	(0.4)	489	(0.4)

1. The average 3-year trend is the average change, per 3-year period, between the earliest available measurement in PISA and PISA 2018, calculated by a linear regression.

2. Curvilinear trends in performance are computed only for countries with comparable data in more than four PISA assessments. Curvilinear trends are calculated by a regression of performance over both linear and quadratic (squared) terms of the gap between the year of assessment and 2018. The coefficient for the linear term represents the annual rate of change in 2018, while the coefficient for the quadratic term represents the acceleration or deceleration of the change in performance.

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.

Estimates of the average 3-year trend and the curvilinear trend for these countries consider the year in which the assessment was conducted.


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Table I.B1.11 [2/4] Mean mathematics performance, 2003 through 2018

	Mathematics performance, by PISA cycle											
	PISA 2003		PISA 2006		PISA 2009		PISA 2012		PISA 2015		PISA 2018	
	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.
<b>Partners</b>												
Albania	m	m	m	m	377	(4.0)	394	(2.0)	413	(3.4)	437	(2.4)
Argentina	m	m	381	(6.2)	388	(4.1)	388	(3.5)	m	m	379	(2.8)
Baku (Azerbaijan)	m	m	m	m	m	m	m	m	m	m	420	(2.8)
Belarus	m	m	m	m	m	m	m	m	m	m	472	(2.7)
Bosnia and Herzegovina	m	m	m	m	m	m	m	m	m	m	406	(3.1)
Brazil	356	(4.8)	370	(2.9)	386	(2.4)	389	(1.9)	377	(2.9)	384	(2.0)
Brunei Darussalam	m	m	m	m	m	m	m	m	m	m	430	(1.2)
B-S-J-Z (China)	m	m	m	m	m	m	m	m	m	m	591	(2.5)
Bulgaria	m	m	413	(6.1)	428	(5.9)	439	(4.0)	441	(4.0)	436	(3.8)
Costa Rica	m	m	m	m	409	(3.0)	407	(3.0)	400	(2.5)	402	(3.3)
Croatia	m	m	467	(2.4)	460	(3.1)	471	(3.5)	464	(2.8)	464	(2.5)
Cyprus	m	m	m	m	m	m	440	(1.1)	437	(1.7)	451	(1.4)
Dominican Republic	m	m	m	m	m	m	m	m	328	(2.7)	325	(2.6)
Georgia	m	m	m	m	379	(2.8)	m	m	404	(2.8)	398	(2.6)
Hong Kong (China)*	550	(4.5)	547	(2.7)	555	(2.7)	561	(3.2)	548	(3.0)	551	(3.0)
Indonesia	360	(3.9)	391	(5.6)	371	(3.7)	375	(4.0)	386	(3.1)	379	(3.1)
Jordan	m	m	384	(3.3)	387	(3.7)	386	(3.1)	380	(2.7)	400	(3.3)
Kazakhstan	m	m	m	m	405	(3.0)	432	(3.0)	m	m	423	(1.9)
Kosovo	m	m	m	m	m	m	m	m	362	(1.6)	366	(1.5)
Lebanon	m	m	m	m	m	m	m	m	396	(3.7)	393	(4.0)
Macao (China)	527	(2.9)	525	(1.3)	525	(0.9)	538	(1.0)	544	(1.1)	558	(1.5)
Malaysia	m	m	m	m	404	(2.7)	421	(3.2)	m	m	440	(2.9)
Malta	m	m	m	m	463	(1.4)	m	m	479	(1.7)	472	(1.9)
Moldova	m	m	m	m	397	(3.1)	m	m	420	(2.5)	421	(2.4)
Montenegro	m	m	399	(1.4)	403	(2.0)	410	(1.1)	418	(1.5)	430	(1.2)
Morocco	m	m	m	m	m	m	m	m	m	m	368	(3.3)
North Macedonia	m	m	m	m	m	m	m	m	371	(1.3)	394	(1.6)
Panama	m	m	m	m	360	(5.2)	m	m	m	m	353	(2.7)
Peru	m	m	m	m	365	(4.0)	368	(3.7)	387	(2.7)	400	(2.6)
Philippines	m	m	m	m	m	m	m	m	m	m	353	(3.5)
Qatar	m	m	318	(1.0)	368	(0.7)	376	(0.8)	402	(1.3)	414	(1.2)
Romania	m	m	415	(4.2)	427	(3.4)	445	(3.8)	444	(3.8)	430	(4.9)
Russia	468	(4.2)	476	(3.9)	468	(3.3)	482	(3.0)	494	(3.1)	488	(3.0)
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	373	(3.0)
Serbia	m	m	435	(3.5)	442	(2.9)	449	(3.4)	m	m	448	(3.2)
Singapore	m	m	m	m	562	(1.4)	573	(1.3)	564	(1.5)	569	(1.6)
Chinese Taipei	m	m	549	(4.1)	543	(3.4)	560	(3.3)	542	(3.0)	531	(2.9)
Thailand	417	(3.0)	417	(2.3)	419	(3.2)	427	(3.4)	415	(3.0)	419	(3.4)
Ukraine	m	m	m	m	m	m	m	m	m	m	453	(3.6)
United Arab Emirates	m	m	m	m	421	(2.5)	434	(2.4)	427	(2.4)	435	(2.1)
Uruguay	422	(3.3)	427	(2.6)	427	(2.6)	409	(2.8)	418	(2.5)	418	(2.6)
Viet Nam**	m	m	m	m	m	m	511	(4.8)	495	(4.5)	m	m

1. The average 3-year trend is the average change, per 3-year period, between the earliest available measurement in PISA and PISA 2018, calculated by a linear regression.

2. Curvilinear trends in performance are computed only for countries with comparable data in more than four PISA assessments. Curvilinear trends are calculated by a regression of performance over both linear and quadratic (squared) terms of the gap between the year of assessment and 2018. The coefficient for the linear term represents the annual rate of change in 2018, while the coefficient for the quadratic term represents the acceleration or deceleration of the change in performance.

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.

Estimates of the average 3-year trend and the curvilinear trend for these countries consider the year in which the assessment was conducted.


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Table I.B1.11 [3/4] Mean mathematics performance, 2003 through 2018

	Change in mathematics performance between PISA 2018 and:										Average 3-year trend in mathematics performance <sup>1</sup> across PISA assessments (since 2003 or earliest assessment available after 2003)			Curvilinear trend in mathematics performance across PISA assessments <sup>2</sup>			
	PISA 2003 (PISA 2018 - PISA 2003)		PISA 2006 (PISA 2018 - PISA 2006)		PISA 2009 (PISA 2018 - PISA 2009)		PISA 2012 (PISA 2018 - PISA 2012)		PISA 2015 (PISA 2018 - PISA 2015)		Annual rate of change in 2018 (linear term)			Rate of acceleration or deceleration in performance (quadratic term)			
	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Coef.	S.E.	p-value	Coef.	S.E.	Coef.	S.E.
<b>OECD</b>																	
Australia	<b>-33</b>	(4.0)	<b>-29</b>	(4.3)	<b>-23</b>	(4.8)	<b>-13</b>	(4.2)	-3	(3.4)	<b>-7.2</b>	(1.1)	0.000	<b>-2.6</b>	(0.6)	0.0	(0.0)
Austria	-7	(5.2)	-7	(5.7)	m	m	-7	(5.2)	2	(4.7)	-1.7	(1.2)	0.154	-1.3	(1.0)	0.0	(0.1)
Belgium	<b>-21</b>	(4.3)	<b>-12</b>	(4.9)	-7	(4.8)	-6	(4.6)	1	(4.0)	<b>-4.1</b>	(1.1)	0.000	-0.2	(0.6)	<b>0.1</b>	(0.0)
Canada	<b>-20</b>	(4.1)	<b>-15</b>	(4.4)	<b>-15</b>	(4.5)	-6	(4.5)	-4	(4.0)	<b>-4.1</b>	(1.1)	0.000	<b>-1.3</b>	(0.6)	0.0	(0.0)
Chile	m	m	6	(6.1)	-4	(5.3)	-5	(5.1)	-5	(4.2)	1.4	(1.4)	0.307	<b>-2.5</b>	(1.1)	<b>-0.2</b>	(0.1)
Colombia	m	m	<b>21</b>	(5.8)	10	(5.7)	<b>14</b>	(5.3)	1	(4.4)	<b>5.1</b>	(1.3)	0.000	1.5	(1.1)	0.0	(0.1)
Czech Republic	<b>-17</b>	(5.1)	-10	(5.4)	7	(5.2)	1	(5.0)	7	(4.2)	<b>-3.7</b>	(1.2)	0.002	<b>2.1</b>	(0.8)	<b>0.2</b>	(0.1)
Denmark	-5	(4.3)	-4	(4.5)	6	(4.7)	<b>9</b>	(4.4)	-2	(3.6)	-0.9	(1.1)	0.390	<b>2.1</b>	(0.6)	<b>0.2</b>	(0.0)
Estonia	m	m	9	(4.5)	<b>11</b>	(4.7)	3	(4.3)	4	(3.6)	<b>2.5</b>	(1.1)	0.032	1.1	(0.7)	0.0	(0.1)
Finland	<b>-37</b>	(3.9)	<b>-41</b>	(4.4)	<b>-33</b>	(4.6)	<b>-11</b>	(4.3)	-4	(3.8)	<b>-9.1</b>	(1.1)	0.000	<b>-4.1</b>	(0.6)	<b>-0.1</b>	(0.0)
France	<b>-15</b>	(4.4)	0	(5.1)	-1	(5.2)	0	(4.8)	2	(3.9)	<b>-2.5</b>	(1.1)	0.025	1.3	(0.7)	<b>0.1</b>	(0.0)
Germany	-3	(5.1)	-4	(5.7)	<b>-13</b>	(5.3)	<b>-13</b>	(5.1)	-6	(4.6)	-0.1	(1.2)	0.907	<b>-3.0</b>	(0.8)	<b>-0.2</b>	(0.1)
Greece	6	(5.7)	-8	(5.3)	<b>-15</b>	(6.1)	-2	(5.2)	-2	(5.4)	0.1	(1.3)	0.950	<b>-3.2</b>	(0.9)	<b>-0.2</b>	(0.1)
Hungary	-9	(4.6)	<b>-10</b>	(4.9)	-9	(5.5)	4	(5.2)	4	(4.1)	<b>-2.8</b>	(1.1)	0.013	-0.3	(0.8)	0.0	(0.1)
Iceland	<b>-20</b>	(3.7)	<b>-10</b>	(4.1)	<b>-11</b>	(4.3)	2	(4.2)	<b>7</b>	(3.6)	<b>-4.7</b>	(1.0)	0.000	0.2	(0.4)	<b>0.1</b>	(0.0)
Ireland	-3	(4.3)	-2	(4.8)	<b>12</b>	(4.9)	-2	(4.6)	-4	(3.8)	0.1	(1.1)	0.897	<b>1.6</b>	(0.6)	<b>0.1</b>	(0.0)
Israel	m	m	<b>21</b>	(6.4)	<b>16</b>	(6.0)	-3	(6.7)	-7	(5.6)	<b>6.4</b>	(1.5)	0.000	-1.6	(1.5)	<b>-0.3</b>	(0.1)
Italy	<b>21</b>	(5.0)	<b>25</b>	(4.8)	4	(4.9)	1	(4.8)	-3	(4.6)	<b>5.4</b>	(1.2)	0.000	-0.1	(0.7)	<b>-0.1</b>	(0.0)
Japan	-7	(5.5)	4	(5.2)	-2	(5.5)	-9	(5.5)	-5	(4.5)	0.0	(1.2)	0.998	-0.3	(0.9)	0.0	(0.1)
Korea	<b>-16</b>	(5.3)	<b>-22</b>	(5.8)	<b>-20</b>	(6.2)	<b>-28</b>	(6.5)	2	(5.4)	<b>-4.1</b>	(1.2)	0.001	<b>-5.3</b>	(1.0)	<b>-0.3</b>	(0.1)
Latvia	<b>13</b>	(5.0)	<b>10</b>	(4.8)	<b>14</b>	(5.1)	6	(4.8)	<b>14</b>	(3.6)	1.7	(1.2)	0.162	<b>1.7</b>	(0.8)	0.1	(0.1)
Lithuania	m	m	-5	(4.7)	5	(4.8)	2	(4.7)	3	(3.8)	-0.7	(1.2)	0.532	<b>2.0</b>	(0.9)	<b>0.2</b>	(0.1)
Luxembourg	<b>-10</b>	(3.2)	-7	(3.5)	-6	(3.9)	-6	(3.7)	-2	(2.9)	-1.7	(1.0)	0.078	<b>-0.8</b>	(0.3)	0.0	(0.0)
Mexico	<b>24</b>	(5.2)	3	(5.0)	<b>-10</b>	(4.7)	-4	(4.4)	1	(4.1)	<b>3.4</b>	(1.2)	0.004	<b>-4.0</b>	(0.7)	<b>-0.3</b>	(0.0)
Netherlands*	<b>-19</b>	(5.0)	<b>-11</b>	(4.9)	-7	(6.5)	-4	(5.5)	7	(4.2)	<b>-4.2</b>	(1.2)	0.000	0.0	(0.9)	0.1	(0.1)
New Zealand	<b>-29</b>	(4.0)	<b>-27</b>	(4.3)	<b>-25</b>	(4.6)	-5	(4.4)	-1	(3.7)	<b>-7.0</b>	(1.1)	0.000	<b>-2.4</b>	(0.6)	0.0	(0.0)
Norway	6	(4.3)	<b>11</b>	(4.7)	3	(4.8)	<b>12</b>	(4.9)	-1	(3.9)	1.5	(1.1)	0.164	<b>1.7</b>	(0.7)	0.1	(0.0)
Poland	<b>25</b>	(4.6)	<b>20</b>	(4.8)	<b>21</b>	(5.2)	-2	(5.6)	<b>11</b>	(4.2)	<b>5.1</b>	(1.1)	0.000	1.1	(0.8)	0.0	(0.1)
Portugal*	<b>26</b>	(5.2)	<b>26</b>	(5.2)	6	(5.3)	5	(5.7)	1	(4.3)	<b>6.0</b>	(1.2)	0.000	0.2	(0.9)	<b>-0.1</b>	(0.1)
Slovak Republic	<b>-12</b>	(5.1)	-6	(5.0)	<b>-11</b>	(5.3)	5	(5.4)	<b>11</b>	(4.4)	<b>-3.6</b>	(1.2)	0.002	0.1	(0.8)	0.1	(0.1)
Slovenia	m	m	4	(3.6)	7	(4.0)	<b>8</b>	(3.8)	-1	(3.0)	1.8	(0.9)	0.060	<b>1.8</b>	(0.5)	<b>0.1</b>	(0.0)
Spain	-4	(4.0)	1	(4.2)	-2	(4.4)	-3	(4.1)	-4	(3.5)	0.0	(1.1)	0.989	-0.1	(0.6)	0.0	(0.0)
Sweden	-7	(4.6)	0	(4.8)	8	(5.3)	<b>24</b>	(4.8)	8	(4.7)	-2.1	(1.1)	0.069	<b>4.4</b>	(0.7)	<b>0.3</b>	(0.0)
Switzerland	<b>-11</b>	(5.3)	<b>-14</b>	(5.3)	<b>-19</b>	(5.6)	<b>-16</b>	(5.4)	-6	(4.7)	<b>-2.5</b>	(1.2)	0.039	<b>-3.9</b>	(0.9)	<b>-0.2</b>	(0.1)
Turkey	<b>30</b>	(7.6)	<b>30</b>	(6.3)	8	(6.1)	6	(6.3)	<b>33</b>	(5.3)	<b>4.1</b>	(1.5)	0.006	0.4	(1.2)	-0.1	(0.1)
United Kingdom	m	m	6	(4.6)	9	(5.0)	8	(5.3)	<b>9</b>	(4.3)	1.3	(1.1)	0.250	<b>2.5</b>	(1.0)	<b>0.2</b>	(0.1)
United States*	-5	(5.2)	4	(6.1)	-9	(6.0)	-3	(5.9)	9	(5.1)	-1.2	(1.2)	0.313	-0.8	(0.9)	0.0	(0.1)
<b>OECD average-29a</b>	-5	(2.9)	-3	(3.3)	-5	(3.6)	-2	(3.4)	2	(2.4)	-1.3	(1.0)	0.166	<b>-0.5</b>	(0.1)	0.0	(0.0)
<b>OECD average-30</b>	-5	(2.9)	-3	(3.3)	m	m	-2	(3.4)	2	(2.4)	-1.3	(1.0)	0.161	<b>-0.6</b>	(0.1)	0.0	(0.0)
<b>OECD average-36b</b>	m	m	-1	(3.2)	-3	(3.6)	-1	(3.4)	2	(2.4)	-0.6	(0.9)	0.538	<b>-0.3</b>	(0.1)	0.0	(0.0)
<b>OECD average-37</b>	m	m	-1	(3.2)	m	m	-1	(3.4)	2	(2.4)	-0.6	(0.9)	0.516	<b>-0.3</b>	(0.1)	0.0	(0.0)

1. The average 3-year trend is the average change, per 3-year period, between the earliest available measurement in PISA and PISA 2018, calculated by a linear regression.

2. Curvilinear trends in performance are computed only for countries with comparable data in more than four PISA assessments. Curvilinear trends are calculated by a regression of performance over both linear and quadratic (squared) terms of the gap between the year of assessment and 2018. The coefficient for the linear term represents the annual rate of change in 2018, while the coefficient for the quadratic term represents the acceleration or deceleration of the change in performance.

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.

Estimates of the average 3-year trend and the curvilinear trend for these countries consider the year in which the assessment was conducted.


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Table I.B1.11 [4/4] Mean mathematics performance, 2003 through 2018

	Change in mathematics performance between PISA 2018 and:										Average 3-year trend in mathematics performance <sup>1</sup> across PISA assessments (since 2003 or earliest assessment available after 2003)			Curvilinear trend in mathematics performance across PISA assessments <sup>2</sup>			
	PISA 2003 (PISA 2018 - PISA 2003)		PISA 2006 (PISA 2018 - PISA 2006)		PISA 2009 (PISA 2018 - PISA 2009)		PISA 2012 (PISA 2018 - PISA 2012)		PISA 2015 (PISA 2018 - PISA 2015)		Coef.	S.E.	p-value	Annual rate of change in 2018 (linear term)		Rate of acceleration or deceleration in performance (quadratic term)	
	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.				Coef.	S.E.	Coef.	S.E.
<b>Partners</b>																	
Albania	m	m	m	m	<b>60</b>	(5.9)	<b>43</b>	(4.6)	<b>24</b>	(4.8)	<b>19.8</b>	(1.9)	0.000	m	m	m	m
Argentina	m	m	-2	(7.5)	-9	(6.1)	-9	(5.6)	m	m	-1.0	(1.6)	0.549	m	m	m	m
Baku (Azerbaijan)	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Belarus	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Bosnia and Herzegovina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	<b>28</b>	(5.9)	<b>14</b>	(4.8)	-2	(4.7)	-5	(4.4)	6	(4.2)	<b>4.6</b>	(1.2)	0.000	<b>-2.9</b>	(0.8)	<b>-0.3</b>	(0.1)
Brunei Darussalam	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
B-S-J-Z (China)	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Bulgaria	m	m	<b>23</b>	(7.9)	8	(7.8)	-3	(6.5)	-5	(6.0)	<b>5.9</b>	(1.8)	0.001	-2.4	(1.6)	<b>-0.4</b>	(0.1)
Costa Rica	m	m	m	m	-7	(5.7)	-5	(5.6)	2	(4.7)	-3.0	(2.0)	0.142	m	m	m	m
Croatia	m	m	-3	(4.7)	4	(5.3)	-7	(5.5)	0	(4.4)	-0.2	(1.2)	0.871	-0.3	(1.1)	0.0	(0.1)
Cyprus	m	m	m	m	m	m	<b>11</b>	(3.8)	<b>14</b>	(3.2)	<b>5.7</b>	(1.9)	0.003	m	m	m	m
Dominican Republic	m	m	m	m	m	m	m	m	-3	(4.4)	-2.6	(4.4)	0.556	m	m	m	m
Georgia	m	m	m	m	<b>18</b>	(5.2)	m	m	-6	(4.5)	<b>7.6</b>	(2.0)	0.000	m	m	m	m
Hong Kong (China)*	1	(6.1)	4	(5.1)	-3	(5.4)	-10	(5.5)	3	(4.8)	0.4	(1.3)	0.749	-1.3	(0.9)	-0.1	(0.1)
Indonesia	<b>19</b>	(5.7)	-12	(7.2)	7	(6.0)	4	(6.1)	-7	(5.0)	2.2	(1.3)	0.086	-1.4	(1.0)	<b>-0.1</b>	(0.1)
Jordan	m	m	<b>16</b>	(5.7)	<b>13</b>	(6.1)	<b>14</b>	(5.6)	<b>20</b>	(4.8)	2.5	(1.3)	0.057	<b>3.7</b>	(1.3)	<b>0.2</b>	(0.1)
Kazakhstan	m	m	m	m	<b>18</b>	(5.0)	-9	(4.9)	m	m	<b>4.7</b>	(1.6)	0.004	m	m	m	m
Kosovo	m	m	m	m	m	m	m	m	4	(3.2)	4.6	(3.4)	0.177	m	m	m	m
Lebanon	m	m	m	m	m	m	m	m	-3	(6.0)	-2.8	(6.0)	0.638	m	m	m	m
Macao (China)	<b>30</b>	(4.3)	<b>33</b>	(3.8)	<b>32</b>	(4.0)	<b>20</b>	(3.8)	<b>14</b>	(3.0)	<b>6.2</b>	(1.1)	0.000	<b>5.0</b>	(0.4)	<b>0.2</b>	(0.0)
Malaysia	m	m	m	m	<b>36</b>	(5.3)	<b>20</b>	(5.4)	m	m	<b>12.7</b>	(1.9)	0.000	m	m	m	m
Malta	m	m	m	m	<b>9</b>	(4.3)	m	m	<b>-7</b>	(3.5)	<b>3.9</b>	(1.6)	0.014	m	m	m	m
Moldova	m	m	m	m	<b>23</b>	(5.3)	m	m	1	(4.2)	<b>9.2</b>	(2.0)	0.000	m	m	m	m
Montenegro	m	m	<b>30</b>	(3.7)	<b>27</b>	(4.3)	<b>20</b>	(3.7)	<b>12</b>	(3.0)	<b>7.6</b>	(1.0)	0.000	<b>4.3</b>	(0.4)	<b>0.1</b>	(0.0)
Morocco	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
North Macedonia	m	m	m	m	m	m	m	m	<b>23</b>	(3.1)	<b>23.3</b>	(3.3)	0.000	m	m	m	m
Panama	m	m	m	m	-7	(6.9)	m	m	m	m	-2.3	(2.3)	0.317	m	m	m	m
Peru	m	m	m	m	<b>35</b>	(5.9)	<b>32</b>	(5.6)	<b>13</b>	(4.4)	<b>12.2</b>	(1.9)	0.000	m	m	m	m
Philippines	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Qatar	m	m	<b>96</b>	(3.6)	<b>46</b>	(3.8)	<b>38</b>	(3.6)	<b>12</b>	(2.9)	<b>22.6</b>	(0.9)	0.000	<b>1.8</b>	(0.4)	<b>-0.5</b>	(0.0)
Romania	m	m	<b>15</b>	(7.2)	3	(6.9)	<b>-15</b>	(7.0)	<b>-14</b>	(6.6)	<b>4.7</b>	(1.7)	0.005	<b>-5.2</b>	(1.6)	<b>-0.6</b>	(0.1)
Russia	<b>19</b>	(5.8)	<b>12</b>	(5.8)	<b>20</b>	(5.7)	6	(5.4)	-6	(4.9)	<b>4.7</b>	(1.3)	0.000	<b>1.9</b>	(0.9)	0.0	(0.1)
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Serbia	m	m	<b>13</b>	(5.7)	6	(5.6)	-1	(5.7)	m	m	<b>3.0</b>	(1.4)	0.031	m	m	m	m
Singapore	m	m	m	m	7	(4.1)	-4	(3.9)	5	(3.2)	1.1	(1.4)	0.432	m	m	m	m
Chinese Taipei	m	m	<b>-18</b>	(5.9)	<b>-12</b>	(5.7)	<b>-29</b>	(5.5)	<b>-11</b>	(4.8)	<b>-3.8</b>	(1.4)	0.007	<b>-5.5</b>	(1.2)	<b>-0.4</b>	(0.1)
Thailand	2	(5.4)	1	(5.2)	0	(5.9)	-8	(5.9)	3	(5.1)	0.3	(1.2)	0.806	-1.0	(0.9)	-0.1	(0.1)
Ukraine	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
United Arab Emirates	m	m	m	m	<b>14</b>	(4.8)	1	(4.7)	7	(4.0)	3.7	(2.0)	0.059	m	m	m	m
Uruguay	-5	(5.1)	-9	(4.9)	-9	(5.1)	8	(5.1)	0	(4.3)	-2.0	(1.2)	0.093	-0.4	(0.8)	0.0	(0.1)
Viet Nam**	m	m	m	m	m	m	m	m	m	m	-17.1	(6.7)	0.011	m	m	m	m

1. The average 3-year trend is the average change, per 3-year period, between the earliest available measurement in PISA and PISA 2018, calculated by a linear regression.

2. Curvilinear trends in performance are computed only for countries with comparable data in more than four PISA assessments. Curvilinear trends are calculated by a regression of performance over both linear and quadratic (squared) terms of the gap between the year of assessment and 2018. The coefficient for the linear term represents the annual rate of change in 2018, while the coefficient for the quadratic term represents the acceleration or deceleration of the change in performance.

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

Notes: Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.

Estimates of the average 3-year trend and the curvilinear trend for these countries consider the year in which the assessment was conducted.


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Table I.B1.12<sup>[1/4]</sup> Mean science performance, 2006 through 2018

	Science performance, by PISA cycle									
	PISA 2006		PISA 2009		PISA 2012		PISA 2015		PISA 2018	
	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.
<b>OECD</b>										
Australia	527	(2.3)	527	(2.5)	521	(1.8)	510	(1.5)	503	(1.8)
Austria	511	(3.9)	m	m	506	(2.7)	495	(2.4)	490	(2.8)
Belgium	510	(2.5)	507	(2.5)	505	(2.2)	502	(2.3)	499	(2.2)
Canada	534	(2.0)	529	(1.6)	525	(1.9)	528	(2.1)	518	(2.2)
Chile	438	(4.3)	447	(2.9)	445	(2.9)	447	(2.4)	444	(2.4)
Colombia	388	(3.4)	402	(3.6)	399	(3.1)	416	(2.4)	413	(3.1)
Czech Republic	513	(3.5)	500	(3.0)	508	(3.0)	493	(2.3)	497	(2.5)
Denmark	496	(3.1)	499	(2.5)	498	(2.7)	502	(2.4)	493	(1.9)
Estonia	531	(2.5)	528	(2.7)	541	(1.9)	534	(2.1)	530	(1.9)
Finland	563	(2.0)	554	(2.3)	545	(2.2)	531	(2.4)	522	(2.5)
France	495	(3.4)	498	(3.6)	499	(2.6)	495	(2.1)	493	(2.2)
Germany	516	(3.8)	520	(2.8)	524	(3.0)	509	(2.7)	503	(2.9)
Greece	473	(3.2)	470	(4.0)	467	(3.1)	455	(3.9)	452	(3.1)
Hungary	504	(2.7)	503	(3.1)	494	(2.9)	477	(2.4)	481	(2.3)
Iceland	491	(1.6)	496	(1.4)	478	(2.1)	473	(1.7)	475	(1.8)
Ireland	508	(3.2)	508	(3.3)	522	(2.5)	503	(2.4)	496	(2.2)
Israel	454	(3.7)	455	(3.1)	470	(5.0)	467	(3.4)	462	(3.6)
Italy	475	(2.0)	489	(1.8)	494	(1.9)	481	(2.5)	468	(2.4)
Japan	531	(3.4)	539	(3.4)	547	(3.6)	538	(3.0)	529	(2.6)
Korea	522	(3.4)	538	(3.4)	538	(3.7)	516	(3.1)	519	(2.8)
Latvia	490	(3.0)	494	(3.1)	502	(2.8)	490	(1.6)	487	(1.8)
Lithuania	488	(2.8)	491	(2.9)	496	(2.6)	475	(2.7)	482	(1.6)
Luxembourg	486	(1.1)	484	(1.2)	491	(1.3)	483	(1.1)	477	(1.2)
Mexico	410	(2.7)	416	(1.8)	415	(1.3)	416	(2.1)	419	(2.6)
Netherlands*	525	(2.7)	522	(5.4)	522	(3.5)	509	(2.3)	503	(2.8)
New Zealand	530	(2.7)	532	(2.6)	516	(2.1)	513	(2.4)	508	(2.1)
Norway	487	(3.1)	500	(2.6)	495	(3.1)	498	(2.3)	490	(2.3)
Poland	498	(2.3)	508	(2.4)	526	(3.1)	501	(2.5)	511	(2.6)
Portugal*	474	(3.0)	493	(2.9)	489	(3.7)	501	(2.4)	492	(2.8)
Slovak Republic	488	(2.6)	490	(3.0)	471	(3.6)	461	(2.6)	464	(2.3)
Slovenia	519	(1.1)	512	(1.1)	514	(1.3)	513	(1.3)	507	(1.3)
Spain	488	(2.6)	488	(2.1)	496	(1.8)	493	(2.1)	483	(1.6)
Sweden	503	(2.4)	495	(2.7)	485	(3.0)	493	(3.6)	499	(3.1)
Switzerland	512	(3.2)	517	(2.8)	515	(2.7)	506	(2.9)	495	(3.0)
Turkey	424	(3.8)	454	(3.6)	463	(3.9)	425	(3.9)	468	(2.0)
United Kingdom	515	(2.3)	514	(2.5)	514	(3.4)	509	(2.6)	505	(2.6)
United States*	489	(4.2)	502	(3.6)	497	(3.8)	496	(3.2)	502	(3.3)
<b>OECD average-36b</b>	494	(0.5)	498	(0.5)	498	(0.5)	491	(0.4)	489	(0.4)
<b>OECD average-37</b>	495	(0.5)	m	m	498	(0.5)	491	(0.4)	489	(0.4)

1. The average 3-year trend is the average change, per 3-year period, between the earliest available measurement in PISA and PISA 2018, calculated by a linear regression.
2. Curvilinear trends in performance are computed only for countries with comparable data in more than four PISA assessments. Curvilinear trends are calculated by a regression of performance over both linear and quadratic (squared) terms of the gap between the year of assessment and 2018. The coefficient for the linear term represents the annual rate of change in 2018, while the coefficient for the quadratic term represents the acceleration or deceleration of the change in performance.

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.

Estimates of the average 3-year trend and the curvilinear trend for these countries consider the year in which the assessment was conducted.


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Table I.B1.12 [2/4] Mean science performance, 2006 through 2018

	Science performance, by PISA cycle									
	PISA 2006		PISA 2009		PISA 2012		PISA 2015		PISA 2018	
	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.	Mean score	S.E.
<b>Partners</b>										
<b>Albania</b>	m	m	391	(3.9)	397	(2.4)	427	(3.3)	417	(2.0)
<b>Argentina</b>	391	(6.1)	401	(4.6)	406	(3.9)	m	m	404	(2.9)
<b>Baku (Azerbaijan)</b>	m	m	m	m	m	m	m	m	398	(2.4)
<b>Belarus</b>	m	m	m	m	m	m	m	m	471	(2.4)
<b>Bosnia and Herzegovina</b>	m	m	m	m	m	m	m	m	398	(2.7)
<b>Brazil</b>	390	(2.8)	405	(2.4)	402	(2.1)	401	(2.3)	404	(2.1)
<b>Brunei Darussalam</b>	m	m	m	m	m	m	m	m	431	(1.2)
<b>B-S-J-Z (China)</b>	m	m	m	m	m	m	m	m	590	(2.7)
<b>Bulgaria</b>	434	(6.1)	439	(5.9)	446	(4.8)	446	(4.4)	424	(3.6)
<b>Costa Rica</b>	m	m	430	(2.8)	429	(2.9)	420	(2.1)	416	(3.3)
<b>Croatia</b>	493	(2.4)	486	(2.8)	491	(3.1)	475	(2.5)	472	(2.8)
<b>Cyprus</b>	m	m	m	m	438	(1.2)	433	(1.4)	439	(1.4)
<b>Dominican Republic</b>	m	m	m	m	m	m	332	(2.6)	336	(2.5)
<b>Georgia</b>	m	m	373	(2.9)	m	m	411	(2.4)	383	(2.3)
<b>Hong Kong (China)*</b>	542	(2.5)	549	(2.8)	555	(2.6)	523	(2.5)	517	(2.5)
<b>Indonesia</b>	393	(5.7)	383	(3.8)	382	(3.8)	403	(2.6)	396	(2.4)
<b>Jordan</b>	422	(2.8)	415	(3.5)	409	(3.1)	409	(2.7)	429	(2.9)
<b>Kazakhstan</b>	m	m	400	(3.1)	425	(3.0)	m	m	397	(1.7)
<b>Kosovo</b>	m	m	m	m	m	m	378	(1.7)	365	(1.2)
<b>Lebanon</b>	m	m	m	m	m	m	386	(3.4)	384	(3.5)
<b>Macao (China)</b>	511	(1.1)	511	(1.0)	521	(0.8)	529	(1.1)	544	(1.5)
<b>Malaysia</b>	m	m	422	(2.7)	420	(3.0)	m	m	438	(2.7)
<b>Malta</b>	m	m	461	(1.7)	m	m	465	(1.6)	457	(1.9)
<b>Moldova</b>	m	m	413	(3.0)	m	m	428	(2.0)	428	(2.3)
<b>Montenegro</b>	412	(1.1)	401	(2.0)	410	(1.1)	411	(1.0)	415	(1.3)
<b>Morocco</b>	m	m	m	m	m	m	m	m	377	(3.0)
<b>North Macedonia</b>	m	m	m	m	m	m	384	(1.2)	413	(1.4)
<b>Panama</b>	m	m	376	(5.7)	m	m	m	m	365	(2.9)
<b>Peru</b>	m	m	369	(3.5)	373	(3.6)	397	(2.4)	404	(2.7)
<b>Philippines</b>	m	m	m	m	m	m	m	m	357	(3.2)
<b>Qatar</b>	349	(0.9)	379	(0.9)	384	(0.7)	418	(1.0)	419	(0.9)
<b>Romania</b>	418	(4.2)	428	(3.4)	439	(3.3)	435	(3.2)	426	(4.6)
<b>Russia</b>	479	(3.7)	478	(3.3)	486	(2.9)	487	(2.9)	478	(2.9)
<b>Saudi Arabia</b>	m	m	m	m	m	m	m	m	386	(2.8)
<b>Serbia</b>	436	(3.0)	443	(2.4)	445	(3.4)	m	m	440	(3.0)
<b>Singapore</b>	m	m	542	(1.4)	551	(1.5)	556	(1.2)	551	(1.5)
<b>Chinese Taipei</b>	532	(3.6)	520	(2.6)	523	(2.3)	532	(2.7)	516	(2.9)
<b>Thailand</b>	421	(2.1)	425	(3.0)	444	(2.9)	421	(2.8)	426	(3.2)
<b>Ukraine</b>	m	m	m	m	m	m	m	m	469	(3.3)
<b>United Arab Emirates</b>	m	m	438	(2.6)	448	(2.8)	437	(2.4)	434	(2.0)
<b>Uruguay</b>	428	(2.7)	427	(2.6)	416	(2.8)	435	(2.2)	426	(2.5)
<b>Viet Nam**</b>	m	m	m	m	528	(4.3)	525	(3.9)	m	m

1. The average 3-year trend is the average change, per 3-year period, between the earliest available measurement in PISA and PISA 2018, calculated by a linear regression.

2. Curvilinear trends in performance are computed only for countries with comparable data in more than four PISA assessments. Curvilinear trends are calculated by a regression of performance over both linear and quadratic (squared) terms of the gap between the year of assessment and 2018. The coefficient for the linear term represents the annual rate of change in 2018, while the coefficient for the quadratic term represents the acceleration or deceleration of the change in performance.

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.

Estimates of the average 3-year trend and the curvilinear trend for these countries consider the year in which the assessment was conducted.


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Table I.B1.12 [3/4] Mean science performance, 2006 through 2018

	Change in science performance between PISA 2018 and:								Average 3-year trend in science performance <sup>1</sup> across PISA assessments (since 2006 or earliest assessment available after 2006)	Curvilinear trend in science performance across PISA assessments <sup>2</sup>						
	PISA 2006 (PISA 2018 - PISA 2006)		PISA 2009 (PISA 2018 - PISA 2009)		PISA 2012 (PISA 2018 - PISA 2012)		PISA 2015 (PISA 2018 - PISA 2015)			Annual rate of change in 2018 (linear term)		Rate of acceleration or deceleration in performance (quadratic term)				
	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.		Coef.	S.E.	p-value	Coef.	S.E.	Coef.	S.E.
<b>OECD</b>																
Australia	<b>-24</b>	(4.5)	<b>-24</b>	(4.7)	<b>-19</b>	(4.7)	<b>-7</b>	(2.8)	<b>-6.5</b>	(1.2)	0.000	<b>-4.1</b>	(0.7)	<b>-0.2</b>	(0.1)	
Austria	<b>-21</b>	(5.9)	m	m	<b>-16</b>	(5.6)	-5	(4.0)	<b>-5.5</b>	(1.5)	0.000	m	m	m	m	
Belgium	<b>-12</b>	(4.8)	-8	(4.9)	-6	(5.1)	-3	(3.5)	<b>-2.7</b>	(1.3)	0.035	-0.9	(0.8)	0.0	(0.1)	
Canada	<b>-16</b>	(4.6)	<b>-11</b>	(4.5)	-7	(4.9)	<b>-10</b>	(3.4)	<b>-3.4</b>	(1.2)	0.006	-1.3	(0.7)	0.0	(0.1)	
Chile	5	(6.0)	-4	(5.2)	-1	(5.5)	-3	(3.7)	1.1	(1.5)	0.468	-1.6	(1.1)	-0.2	(0.1)	
Colombia	<b>25</b>	(5.7)	12	(6.0)	<b>15</b>	(5.9)	-2	(4.1)	<b>6.4</b>	(1.4)	0.000	1.0	(1.2)	-0.1	(0.1)	
Czech Republic	<b>-16</b>	(5.5)	-4	(5.3)	<b>-12</b>	(5.6)	4	(3.7)	<b>-4.0</b>	(1.4)	0.004	-0.4	(1.0)	0.1	(0.1)	
Denmark	-3	(5.0)	-7	(4.8)	-6	(5.2)	<b>-9</b>	(3.4)	-0.4	(1.3)	0.763	<b>-2.1</b>	(0.9)	<b>-0.2</b>	(0.1)	
Estonia	-1	(4.7)	2	(4.9)	<b>-11</b>	(4.8)	-4	(3.2)	0.4	(1.3)	0.771	<b>-2.0</b>	(0.8)	<b>-0.2</b>	(0.1)	
Finland	<b>-41</b>	(4.7)	<b>-32</b>	(5.0)	<b>-24</b>	(5.2)	<b>-9</b>	(3.8)	<b>-10.7</b>	(1.3)	0.000	<b>-4.2</b>	(0.9)	-0.1	(0.1)	
France	-2	(5.3)	-5	(5.6)	-6	(5.3)	-2	(3.4)	-0.8	(1.4)	0.581	-1.7	(1.0)	-0.1	(0.1)	
Germany	<b>-13</b>	(5.9)	<b>-17</b>	(5.4)	<b>-21</b>	(5.8)	-6	(4.2)	<b>-3.6</b>	(1.5)	0.014	<b>-5.0</b>	(1.1)	<b>-0.3</b>	(0.1)	
Greece	<b>-22</b>	(5.7)	<b>-18</b>	(6.2)	<b>-15</b>	(6.0)	-3	(5.2)	<b>-5.9</b>	(1.5)	0.000	<b>-2.8</b>	(1.2)	-0.1	(0.1)	
Hungary	<b>-23</b>	(5.0)	<b>-22</b>	(5.3)	<b>-13</b>	(5.5)	4	(3.7)	<b>-7.1</b>	(1.3)	0.000	<b>-2.2</b>	(1.0)	0.0	(0.1)	
Iceland	<b>-16</b>	(4.2)	<b>-21</b>	(4.3)	-3	(4.9)	2	(2.9)	<b>-5.4</b>	(1.2)	0.000	-1.2	(0.7)	0.0	(0.1)	
Ireland	<b>-12</b>	(5.2)	<b>-12</b>	(5.3)	<b>-26</b>	(5.2)	-6	(3.6)	<b>-3.0</b>	(1.4)	0.030	<b>-5.4</b>	(0.9)	<b>-0.4</b>	(0.1)	
Israel	8	(6.2)	7	(6.0)	-8	(7.3)	-4	(5.2)	2.8	(1.5)	0.066	-1.9	(1.5)	-0.2	(0.1)	
Italy	-7	(4.7)	<b>-21</b>	(4.7)	<b>-26</b>	(5.1)	<b>-13</b>	(3.8)	-2.3	(1.3)	0.063	<b>-7.4</b>	(0.8)	<b>-0.6</b>	(0.1)	
Japan	-2	(5.5)	-10	(5.6)	<b>-18</b>	(6.0)	<b>-9</b>	(4.2)	-0.6	(1.4)	0.668	<b>-5.0</b>	(1.1)	<b>-0.4</b>	(0.1)	
Korea	-3	(5.6)	<b>-19</b>	(5.7)	<b>-19</b>	(6.1)	3	(4.5)	<b>-2.9</b>	(1.4)	0.046	<b>-5.5</b>	(1.2)	<b>-0.4</b>	(0.1)	
Latvia	-2	(4.9)	-7	(5.0)	<b>-15</b>	(5.2)	-3	(2.8)	-0.8	(1.3)	0.519	<b>-3.7</b>	(0.9)	<b>-0.3</b>	(0.1)	
Lithuania	-6	(4.7)	-9	(4.9)	<b>-14</b>	(5.0)	7	(3.5)	<b>-2.8</b>	(1.3)	0.032	<b>-2.7</b>	(0.8)	<b>-0.2</b>	(0.1)	
Luxembourg	<b>-10</b>	(3.8)	-7	(4.0)	<b>-14</b>	(4.4)	<b>-6</b>	(2.2)	-1.9	(1.1)	0.082	<b>-2.8</b>	(0.5)	<b>-0.2</b>	(0.0)	
Mexico	10	(5.1)	3	(4.8)	4	(4.9)	3	(3.7)	1.9	(1.3)	0.158	0.2	(0.8)	0.0	(0.1)	
Netherlands*	<b>-21</b>	(5.3)	<b>-19</b>	(7.1)	<b>-19</b>	(6.0)	-5	(3.9)	<b>-5.6</b>	(1.4)	0.000	<b>-3.6</b>	(1.3)	-0.1	(0.1)	
New Zealand	<b>-22</b>	(4.9)	<b>-24</b>	(4.9)	-7	(5.0)	-5	(3.5)	<b>-6.2</b>	(1.3)	0.000	<b>-1.9</b>	(0.8)	0.0	(0.1)	
Norway	4	(5.2)	-9	(5.0)	-4	(5.6)	<b>-8</b>	(3.6)	0.6	(1.3)	0.657	<b>-3.0</b>	(1.0)	<b>-0.3</b>	(0.1)	
Poland	<b>13</b>	(4.9)	3	(5.1)	<b>-15</b>	(5.7)	<b>10</b>	(3.9)	2.1	(1.3)	0.109	<b>-3.4</b>	(1.0)	<b>-0.3</b>	(0.1)	
Portugal*	<b>17</b>	(5.4)	-1	(5.4)	2	(6.1)	<b>-9</b>	(4.0)	<b>4.3</b>	(1.4)	0.002	<b>-2.4</b>	(1.2)	<b>-0.3</b>	(0.1)	
Slovak Republic	<b>-24</b>	(4.9)	<b>-26</b>	(5.2)	-7	(5.9)	3	(3.8)	<b>-7.8</b>	(1.3)	0.000	-1.5	(1.1)	0.1	(0.1)	
Slovenia	<b>-12</b>	(3.9)	-5	(4.0)	-7	(4.4)	<b>-6</b>	(2.4)	<b>-2.2</b>	(1.1)	0.043	-0.9	(0.4)	0.0	(0.0)	
Spain	-5	(4.6)	-5	(4.4)	<b>-13</b>	(4.7)	<b>-10</b>	(3.0)	-0.5	(1.2)	0.674	<b>-3.0</b>	(0.7)	<b>-0.2</b>	(0.1)	
Sweden	-4	(5.2)	4	(5.5)	<b>15</b>	(5.9)	6	(5.0)	-1.0	(1.4)	0.463	<b>4.1</b>	(1.1)	<b>0.4</b>	(0.1)	
Switzerland	<b>-16</b>	(5.6)	<b>-21</b>	(5.5)	<b>-20</b>	(5.7)	<b>-10</b>	(4.4)	<b>-4.4</b>	(1.4)	0.002	<b>-5.2</b>	(1.1)	<b>-0.3</b>	(0.1)	
Turkey	<b>44</b>	(5.6)	<b>14</b>	(5.5)	5	(5.9)	<b>43</b>	(4.7)	<b>6.1</b>	(1.5)	0.000	0.0	(1.1)	-0.2	(0.1)	
United Kingdom	<b>-10</b>	(4.9)	-9	(5.1)	-9	(5.8)	-5	(3.9)	-2.4	(1.3)	0.064	-2.0	(1.0)	-0.1	(0.1)	
United States*	<b>13</b>	(6.4)	0	(6.1)	5	(6.4)	6	(4.8)	2.1	(1.6)	0.182	-0.3	(1.3)	-0.1	(0.1)	
<b>OECD average-36b</b>	-6	(3.5)	<b>-9</b>	(3.6)	<b>-9</b>	(4.1)	-2	(1.6)	-1.9	(1.1)	0.075	<b>-2.4</b>	(0.2)	<b>-0.15</b>	(0.01)	
<b>OECD average-37</b>	-6	(3.5)	m	m	<b>-10</b>	(4.1)	-2	(1.6)	-2.0	(1.1)	0.061	m	m	m	m	

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\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.

Estimates of the average 3-year trend and the curvilinear trend for these countries consider the year in which the assessment was conducted.


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Table I.B1.12 [4/4] Mean science performance, 2006 through 2018

	Change in science performance between PISA 2018 and:								Average 3-year trend in science performance <sup>1</sup> across PISA assessments (since 2006 or earliest assessment available after 2006)			Curvilinear trend in science performance across PISA assessments <sup>2</sup>				
	PISA 2006 (PISA 2018 - PISA 2006)		PISA 2009 (PISA 2018 - PISA 2009)		PISA 2012 (PISA 2018 - PISA 2012)		PISA 2015 (PISA 2018 - PISA 2015)		Coef.	S.E.	p-value	Annual rate of change in 2018 (linear term)		Rate of acceleration or deceleration in performance (quadratic term)		
	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.	Score dif.	S.E.				Coef.	S.E.	Coef.	S.E.	
<b>Partners</b>																
Albania	m	m	<b>26</b>	(5.7)	<b>19</b>	(5.1)	<b>-10</b>	(4.1)	<b>10.7</b>	(2.0)	0.000	m	m	m	m	
Argentina	13	(7.6)	3	(6.5)	-2	(6.3)	m	m	3.0	(1.7)	0.076	m	m	m	m	
Baku (Azerbaijan)	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
Belarus	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
Bosnia and Herzegovina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
Brazil	<b>13</b>	(4.9)	-2	(4.8)	2	(5.0)	3	(3.4)	2.2	(1.3)	0.087	-1.3	(0.8)	<b>-0.2</b>	(0.1)	
Brunei Darussalam	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
B-S-J-Z (China)	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
Bulgaria	-10	(7.9)	-15	(7.8)	<b>-22</b>	(7.2)	<b>-22</b>	(5.9)	-1.4	(1.9)	0.452	<b>-6.4</b>	(1.7)	<b>-0.5</b>	(0.1)	
Costa Rica	m	m	<b>-15</b>	(5.6)	<b>-14</b>	(5.9)	-4	(4.2)	<b>-6.1</b>	(2.2)	0.006	m	m	m	m	
Croatia	<b>-21</b>	(5.1)	<b>-14</b>	(5.4)	<b>-19</b>	(5.8)	-3	(4.0)	<b>-5.3</b>	(1.3)	0.000	<b>-3.1</b>	(1.1)	-0.1	(0.1)	
Cyprus	m	m	m	m	1	(4.4)	<b>6</b>	(2.5)	0.7	(2.2)	0.770	m	m	m	m	
Dominican Republic	m	m	m	m	m	m	4	(3.9)	4.0	(3.9)	0.306	m	m	m	m	
Georgia	m	m	10	(5.2)	m	m	<b>-28</b>	(3.7)	<b>5.6</b>	(2.0)	0.005	m	m	m	m	
Hong Kong (China)*	<b>-26</b>	(5.0)	<b>-32</b>	(5.2)	<b>-38</b>	(5.4)	-7	(3.9)	<b>-7.7</b>	(1.3)	0.000	<b>-8.6</b>	(1.0)	<b>-0.5</b>	(0.1)	
Indonesia	3	(7.1)	<b>14</b>	(5.7)	<b>14</b>	(6.0)	-7	(3.8)	2.5	(1.7)	0.139	<b>3.6</b>	(1.3)	0.2	(0.1)	
Jordan	7	(5.4)	<b>14</b>	(5.8)	<b>20</b>	(5.9)	<b>21</b>	(4.2)	0.8	(1.4)	0.574	<b>6.0</b>	(1.1)	<b>0.5</b>	(0.1)	
Kazakhstan	m	m	-3	(5.0)	<b>-28</b>	(5.3)	m	m	-2.9	(1.6)	0.073	m	m	m	m	
Kosovo	m	m	m	m	m	m	<b>-14</b>	(2.6)	<b>-13.6</b>	(2.6)	0.000	m	m	m	m	
Lebanon	m	m	m	m	m	m	-3	(5.1)	-2.8	(5.1)	0.590	m	m	m	m	
Macao (China)	<b>33</b>	(3.9)	<b>33</b>	(4.0)	<b>23</b>	(4.4)	<b>15</b>	(2.4)	<b>8.3</b>	(1.1)	0.000	<b>5.3</b>	(0.5)	<b>0.2</b>	(0.0)	
Malaysia	m	m	<b>15</b>	(5.2)	<b>18</b>	(5.7)	m	m	<b>6.6</b>	(1.9)	0.001	m	m	m	m	
Malta	m	m	-5	(4.4)	m	m	<b>-8</b>	(2.9)	-1.3	(1.7)	0.433	m	m	m	m	
Moldova	m	m	<b>16</b>	(5.2)	m	m	0	(3.4)	<b>6.1</b>	(2.0)	0.003	m	m	m	m	
Montenegro	3	(3.9)	<b>14</b>	(4.3)	5	(4.4)	4	(2.2)	1.7	(1.1)	0.144	<b>2.5</b>	(0.4)	<b>0.2</b>	(0.0)	
Morocco	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
North Macedonia	m	m	m	m	m	m	<b>29</b>	(2.4)	<b>28.7</b>	(2.7)	0.000	m	m	m	m	
Panama	m	m	-11	(7.4)	m	m	m	m	-3.8	(2.5)	0.126	m	m	m	m	
Peru	m	m	<b>35</b>	(5.7)	<b>31</b>	(6.0)	8	(3.9)	<b>12.8</b>	(2.0)	0.000	m	m	m	m	
Philippines	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
Qatar	<b>70</b>	(3.7)	<b>40</b>	(3.8)	<b>35</b>	(4.2)	2	(2.0)	<b>17.9</b>	(1.1)	0.000	<b>3.4</b>	(0.3)	<b>-0.2</b>	(0.0)	
Romania	7	(7.1)	-2	(6.7)	-13	(6.9)	-9	(5.8)	2.1	(1.7)	0.218	<b>-4.4</b>	(1.5)	<b>-0.4</b>	(0.1)	
Russia	-2	(5.8)	-1	(5.7)	-9	(5.7)	<b>-9</b>	(4.4)	0.5	(1.5)	0.755	-2.1	(1.1)	-0.2	(0.1)	
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
Serbia	4	(5.5)	-3	(5.3)	-5	(6.1)	m	m	0.7	(1.3)	0.615	m	m	m	m	
Singapore	m	m	<b>9</b>	(4.1)	-1	(4.5)	-5	(2.4)	<b>3.2</b>	(1.6)	0.039	m	m	m	m	
Chinese Taipei	<b>-17</b>	(5.7)	-5	(5.3)	-8	(5.5)	<b>-17</b>	(4.2)	-2.2	(1.4)	0.118	-1.1	(1.0)	0.0	(0.1)	
Thailand	5	(5.2)	1	(5.6)	<b>-18</b>	(5.9)	4	(4.5)	0.6	(1.3)	0.677	<b>-3.8</b>	(1.1)	<b>-0.3</b>	(0.1)	
Ukraine	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
United Arab Emirates	m	m	-4	(4.9)	<b>-15</b>	(5.3)	-3	(3.5)	-2.5	(2.3)	0.276	m	m	m	m	
Uruguay	-2	(5.1)	-1	(5.1)	10	(5.5)	<b>-10</b>	(3.6)	0.4	(1.3)	0.746	1.5	(0.9)	0.1	(0.1)	
Viet Nam**	m	m	m	m	m	m	m	m	-3.8	(6.2)	0.541	m	m	m	m	

1. The average 3-year trend is the average change, per 3-year period, between the earliest available measurement in PISA and PISA 2018, calculated by a linear regression.

2. Curvilinear trends in performance are computed only for countries with comparable data in more than four PISA assessments. Curvilinear trends are calculated by a regression of performance over both linear and quadratic (squared) terms of the gap between the year of assessment and 2018. The coefficient for the linear term represents the annual rate of change in 2018, while the coefficient for the quadratic term represents the acceleration or deceleration of the change in performance.

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.

Estimates of the average 3-year trend and the curvilinear trend for these countries consider the year in which the assessment was conducted.


StatLink  <https://doi.org/10.1787/888934029090>

Table I.B1.13<sup>[1/2]</sup> Distribution of reading scores, 2000 through 2018

		Average 3-year trend in percentiles of reading performance across PISA assessments <sup>1</sup>									
		10th percentile		25th percentile		Median (50th percentile)		75th percentile		90th percentile	
		Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
OECD	Australia	<b>-6.2</b>	(1.4)	<b>-5.5</b>	(1.4)	<b>-4.6</b>	(1.4)	<b>-3.6</b>	(1.4)	-2.4	(1.3)
	Austria	-0.9	(2.1)	-1.9	(2.0)	-1.9	(2.0)	-1.4	(2.0)	-1.3	(2.0)
	Belgium	1.1	(1.7)	-2.0	(1.5)	<b>-3.6</b>	(1.4)	<b>-2.9</b>	(1.3)	-1.8	(1.3)
	Canada	<b>-2.8</b>	(1.3)	<b>-2.7</b>	(1.3)	-2.0	(1.3)	-1.1	(1.3)	-0.3	(1.3)
	Chile	<b>8.1</b>	(1.6)	<b>7.3</b>	(1.5)	<b>7.0</b>	(1.5)	<b>6.8</b>	(1.5)	<b>6.2</b>	(1.5)
	Colombia	<b>12.0</b>	(2.1)	<b>7.4</b>	(2.1)	<b>4.3</b>	(2.0)	<b>3.8</b>	(1.8)	<b>4.5</b>	(1.9)
	Czech Republic	0.2	(1.5)	-1.0	(1.4)	-0.6	(1.4)	0.2	(1.4)	0.7	(1.4)
	Denmark	2.2	(1.4)	1.0	(1.3)	0.6	(1.3)	0.5	(1.4)	0.7	(1.3)
	Estonia	<b>3.7</b>	(1.9)	<b>4.1</b>	(1.6)	<b>5.6</b>	(1.5)	<b>7.7</b>	(1.5)	<b>10.0</b>	(1.6)
	Finland	<b>-8.6</b>	(1.5)	<b>-6.9</b>	(1.3)	<b>-4.5</b>	(1.3)	<b>-2.8</b>	(1.3)	-1.5	(1.3)
	France	<b>-4.0</b>	(1.5)	-2.7	(1.4)	-0.5	(1.3)	1.6	(1.3)	<b>3.0</b>	(1.3)
	Germany	<b>5.8</b>	(1.7)	<b>3.2</b>	(1.5)	2.0	(1.4)	2.1	(1.4)	1.9	(1.4)
	Greece	-0.8	(1.8)	-1.9	(1.7)	-2.0	(1.5)	-1.8	(1.4)	-1.5	(1.5)
	Hungary	-2.4	(1.5)	-2.4	(1.5)	-1.4	(1.4)	-0.3	(1.4)	0.3	(1.4)
	Iceland	<b>-6.5</b>	(1.4)	<b>-5.9</b>	(1.4)	<b>-5.0</b>	(1.3)	<b>-3.2</b>	(1.3)	-1.7	(1.4)
	Ireland	0.6	(1.5)	-0.6	(1.4)	-1.0	(1.3)	-0.7	(1.4)	-0.2	(1.5)
	Israel	2.6	(2.5)	4.3	(2.3)	<b>6.1</b>	(1.9)	<b>7.6</b>	(1.8)	<b>8.7</b>	(1.7)
	Italy	0.1	(1.6)	0.0	(1.4)	-0.1	(1.4)	0.0	(1.3)	0.4	(1.3)
	Japan	0.9	(1.8)	-0.1	(1.6)	0.2	(1.4)	0.8	(1.4)	1.8	(1.5)
	Korea	<b>-9.5</b>	(1.6)	<b>-6.3</b>	(1.4)	<b>-2.7</b>	(1.4)	0.2	(1.4)	2.6	(1.4)
	Latvia	<b>4.7</b>	(1.6)	<b>3.2</b>	(1.5)	2.2	(1.4)	1.0	(1.4)	0.3	(1.4)
	Lithuania	1.0	(1.6)	0.7	(1.6)	1.4	(1.6)	2.3	(1.6)	2.7	(1.6)
	Luxembourg	<b>-2.9</b>	(1.4)	<b>-3.8</b>	(1.3)	-2.0	(1.3)	0.7	(1.3)	<b>3.5</b>	(1.4)
	Mexico	<b>4.9</b>	(1.4)	<b>3.5</b>	(1.4)	1.8	(1.4)	0.3	(1.4)	-0.4	(1.5)
	Netherlands*	<b>-9.0</b>	(1.8)	<b>-6.9</b>	(1.6)	<b>-4.6</b>	(1.5)	-2.1	(1.5)	0.6	(1.4)
	New Zealand	<b>-3.2</b>	(1.5)	<b>-4.3</b>	(1.4)	<b>-4.4</b>	(1.3)	<b>-3.6</b>	(1.3)	<b>-3.3</b>	(1.4)
	Norway	1.4	(1.5)	0.9	(1.4)	0.5	(1.3)	1.1	(1.3)	1.3	(1.4)
	Poland	<b>6.4</b>	(1.5)	<b>4.8</b>	(1.4)	<b>4.1</b>	(1.4)	<b>3.8</b>	(1.5)	<b>3.3</b>	(1.5)
	Portugal*	<b>5.2</b>	(1.6)	<b>4.4</b>	(1.5)	<b>4.1</b>	(1.4)	<b>4.0</b>	(1.4)	<b>4.1</b>	(1.4)
	Slovak Republic	<b>-5.4</b>	(1.7)	<b>-4.8</b>	(1.6)	<b>-3.6</b>	(1.4)	-2.3	(1.5)	-0.8	(1.5)
	Slovenia	1.3	(1.5)	1.3	(1.4)	1.6	(1.3)	2.5	(1.4)	<b>4.3</b>	(1.6)
	Spain	m	m	m	m	m	m	m	m	m	m
	Sweden	<b>-6.4</b>	(1.6)	<b>-4.8</b>	(1.4)	<b>-3.0</b>	(1.4)	-1.0	(1.3)	0.1	(1.4)
	Switzerland	-1.7	(1.6)	-2.1	(1.5)	-1.8	(1.4)	-0.9	(1.5)	-0.5	(1.5)
	Turkey	<b>3.4</b>	(1.8)	2.7	(1.6)	2.5	(1.6)	2.2	(1.7)	0.7	(2.2)
	United Kingdom	2.9	(1.8)	1.1	(1.5)	1.3	(1.5)	2.1	(1.5)	2.9	(1.6)
United States*	0.2	(2.0)	-0.6	(1.7)	-0.2	(1.6)	0.4	(1.6)	0.4	(1.5)	
<b>OECD average-23</b>	-0.8	(1.2)	-1.2	(1.2)	-0.9	(1.2)	-0.3	(1.2)	0.3	(1.2)	
<b>OECD average-27</b>	-0.3	(1.3)	-0.7	(1.3)	-0.4	(1.2)	0.3	(1.2)	0.8	(1.2)	
<b>OECD average-29b</b>	-1.1	(1.3)	-1.5	(1.2)	-1.1	(1.2)	-0.3	(1.2)	0.3	(1.2)	
<b>OECD average-35a</b>	0.0	(1.2)	-0.4	(1.2)	-0.1	(1.2)	0.7	(1.2)	1.5	(1.2)	
<b>OECD average-35b</b>	0.0	(1.2)	-0.5	(1.2)	-0.1	(1.2)	0.7	(1.2)	1.4	(1.2)	
<b>OECD average-36a</b>	0.0	(1.2)	-0.5	(1.2)	-0.1	(1.2)	0.7	(1.2)	1.4	(1.2)	

1. The average 3-year trend is the average change, per 3-year-period, between the earliest available measurement in PISA and PISA 2018, calculated by a linear regression.

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Albania, Argentina, Bulgaria, Chile, Indonesia, the Republic of North Macedonia, Peru and Thailand conducted the PISA 2000 assessment in 2001, Hong Kong (China), Israel and Romania conducted the assessment in 2002, as part of PISA 2000+. Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.

Estimates of the average 3-year trend and the curvilinear trend for these countries consider the year in which the assessment was conducted.

The full version of this table is available on line, at the *StatLink* below.


**StatLink**  <https://doi.org/10.1787/888934029090>

Table I.B1.13 [2/2] Distribution of reading scores, 2000 through 2018

	Average 3-year trend in percentiles of reading performance across PISA assessments <sup>1</sup>									
	10th percentile		25th percentile		Median (50th percentile)		75th percentile		90th percentile	
	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
<b>Partners</b>										
Albania	<b>14.4</b>	(1.7)	<b>12.3</b>	(1.6)	<b>9.7</b>	(1.5)	<b>7.9</b>	(1.4)	<b>7.9</b>	(1.4)
Argentina	4.4	(2.4)	0.8	(2.4)	-2.5	(2.2)	-3.8	(2.0)	<b>-4.3</b>	(2.1)
Baku (Azerbaijan)	m	m	m	m	m	m	m	m	m	m
Belarus	m	m	m	m	m	m	m	m	m	m
Bosnia and Herzegovina	m	m	m	m	m	m	m	m	m	m
Brazil	2.6	(1.5)	1.5	(1.4)	1.6	(1.4)	<b>3.3</b>	(1.4)	<b>4.0</b>	(1.4)
Brunei Darussalam	m	m	m	m	m	m	m	m	m	m
B-S-J-Z (China)	m	m	m	m	m	m	m	m	m	m
Bulgaria	0.9	(1.8)	-0.4	(1.8)	0.1	(1.8)	1.2	(1.8)	1.8	(1.9)
Costa Rica	<b>-7.6</b>	(2.5)	<b>-8.3</b>	(2.2)	<b>-8.3</b>	(2.2)	<b>-6.1</b>	(2.5)	-3.7	(3.0)
Croatia	1.4	(2.0)	0.7	(1.7)	0.4	(1.6)	1.7	(1.6)	2.9	(1.6)
Cyprus	-0.7	(3.1)	<b>-12.6</b>	(2.4)	<b>-17.4</b>	(2.4)	<b>-16.8</b>	(2.5)	<b>-14.7</b>	(2.7)
Dominican Republic	-9.4	(6.0)	<b>-15.6</b>	(5.9)	<b>-19.7</b>	(6.1)	<b>-20.8</b>	(6.9)	<b>-17.5</b>	(8.5)
Georgia	<b>11.6</b>	(2.4)	<b>5.2</b>	(2.2)	0.3	(2.0)	-0.1	(2.0)	0.5	(2.4)
Hong Kong (China)*	-1.5	(1.7)	-0.3	(1.5)	1.3	(1.4)	<b>3.1</b>	(1.3)	<b>4.8</b>	(1.3)
Indonesia	1.2	(1.5)	0.7	(1.4)	0.7	(1.4)	0.9	(1.5)	2.1	(1.6)
Jordan	<b>4.9</b>	(2.2)	<b>4.7</b>	(1.7)	<b>4.0</b>	(1.6)	<b>3.5</b>	(1.6)	2.6	(1.7)
Kazakhstan	<b>5.0</b>	(1.7)	0.9	(1.6)	-2.8	(1.7)	<b>-6.1</b>	(1.8)	<b>-6.2</b>	(2.2)
Kosovo	<b>22.0</b>	(5.2)	<b>10.0</b>	(5.0)	2.1	(4.7)	-4.3	(4.9)	-4.6	(5.2)
Lebanon	8.4	(8.4)	3.5	(7.8)	8.4	(8.8)	8.6	(9.0)	4.0	(9.4)
Macao (China)	-0.1	(1.5)	<b>3.0</b>	(1.4)	<b>6.3</b>	(1.3)	<b>9.3</b>	(1.5)	<b>11.2</b>	(1.4)
Malaysia	1.1	(2.4)	-0.3	(2.2)	0.8	(2.2)	3.1	(2.2)	<b>5.6</b>	(2.4)
Malta	5.4	(2.9)	1.1	(2.0)	0.3	(2.0)	-0.3	(2.0)	2.2	(2.0)
Moldova	<b>11.1</b>	(2.3)	<b>11.1</b>	(2.3)	<b>12.8</b>	(2.1)	<b>15.9</b>	(2.2)	<b>17.0</b>	(2.2)
Montenegro	<b>8.2</b>	(1.5)	<b>7.5</b>	(1.4)	<b>7.0</b>	(1.3)	<b>7.4</b>	(1.3)	<b>8.0</b>	(1.4)
Morocco	m	m	m	m	m	m	m	m	m	m
North Macedonia	0.5	(4.0)	1.1	(4.0)	1.1	(4.0)	0.8	(4.0)	1.6	(4.0)
Panama	6.3	(3.7)	3.5	(2.9)	2.0	(2.8)	-0.0	(3.2)	-2.8	(3.8)
Peru	<b>14.6</b>	(1.6)	<b>13.9</b>	(1.6)	<b>13.5</b>	(1.6)	<b>12.9</b>	(1.7)	<b>12.5</b>	(1.7)
Philippines	m	m	m	m	m	m	m	m	m	m
Qatar	<b>19.3</b>	(1.3)	<b>21.3</b>	(1.3)	<b>24.2</b>	(1.3)	<b>23.7</b>	(1.3)	<b>20.9</b>	(1.6)
Romania	<b>5.4</b>	(2.3)	<b>6.1</b>	(2.4)	<b>7.0</b>	(2.2)	<b>8.1</b>	(2.1)	<b>10.1</b>	(2.2)
Russia	<b>7.7</b>	(1.6)	<b>7.0</b>	(1.5)	<b>6.1</b>	(1.4)	<b>6.4</b>	(1.4)	<b>6.7</b>	(1.4)
Saudi Arabia	m	m	m	m	m	m	m	m	m	m
Serbia	<b>4.8</b>	(1.9)	<b>4.9</b>	(1.9)	<b>7.0</b>	(1.8)	<b>9.0</b>	(1.7)	<b>11.3</b>	(1.7)
Singapore	0.3	(1.8)	<b>5.0</b>	(1.6)	<b>7.4</b>	(1.6)	<b>8.6</b>	(1.6)	<b>9.5</b>	(1.7)
Chinese Taipei	-3.7	(1.9)	-1.5	(1.8)	1.2	(1.6)	<b>4.6</b>	(1.6)	<b>7.4</b>	(1.8)
Thailand	<b>-4.1</b>	(1.4)	<b>-4.8</b>	(1.4)	<b>-5.0</b>	(1.4)	<b>-4.0</b>	(1.4)	-2.6	(1.5)
Ukraine	m	m	m	m	m	m	m	m	m	m
United Arab Emirates	<b>-8.1</b>	(2.5)	<b>-6.6</b>	(2.4)	-2.5	(2.3)	3.8	(2.4)	<b>8.9</b>	(2.4)
Uruguay	<b>8.4</b>	(1.6)	<b>3.4</b>	(1.5)	-0.5	(1.5)	<b>-3.2</b>	(1.5)	<b>-5.8</b>	(1.6)
Viet Nam**	-17.1	(9.7)	<b>-24.2</b>	(7.2)	<b>-25.0</b>	(5.9)	<b>-22.7</b>	(6.2)	<b>-18.9</b>	(7.8)

1. The average 3-year trend is the average change, per 3-year-period, between the earliest available measurement in PISA and PISA 2018, calculated by a linear regression.

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Albania, Argentina, Bulgaria, Chile, Indonesia, the Republic of North Macedonia, Peru and Thailand conducted the PISA 2000 assessment in 2001, Hong Kong (China), Israel and Romania conducted the assessment in 2002, as part of PISA 2000+. Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.

Estimates of the average 3-year trend and the curvilinear trend for these countries consider the year in which the assessment was conducted.

The full version of this table is available on line, at the *StatLink* below.


**StatLink**  <https://doi.org/10.1787/888934029090>



Table I.B1.14<sup>[1/2]</sup> Distribution of mathematics scores, 2003 through 2018

		Average 3-year trend in percentiles of mathematics performance across PISA assessments <sup>1</sup>									
		10th percentile		25th percentile		Median (50th percentile)		75th percentile		90th percentile	
		Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
OECD	Australia	<b>-7.1</b>	(1.1)	<b>-7.5</b>	(1.1)	<b>-7.5</b>	(1.1)	<b>-7.4</b>	(1.1)	<b>-6.9</b>	(1.2)
	Austria	-1.7	(1.5)	-1.5	(1.4)	-1.3	(1.3)	-1.8	(1.3)	-2.3	(1.3)
	Belgium	-1.1	(1.5)	<b>-3.4</b>	(1.2)	<b>-4.8</b>	(1.2)	<b>-6.2</b>	(1.1)	<b>-6.8</b>	(1.2)
	Canada	<b>-5.5</b>	(1.2)	<b>-5.0</b>	(1.2)	<b>-4.2</b>	(1.1)	<b>-3.5</b>	(1.1)	<b>-2.9</b>	(1.2)
	Chile	0.9	(1.5)	1.5	(1.4)	2.1	(1.5)	1.9	(1.6)	0.9	(1.8)
	Colombia	<b>7.2</b>	(1.8)	<b>5.2</b>	(1.6)	<b>4.3</b>	(1.5)	<b>4.4</b>	(1.6)	<b>4.9</b>	(1.5)
	Czech Republic	-2.0	(1.5)	<b>-2.7</b>	(1.3)	<b>-3.2</b>	(1.3)	<b>-4.8</b>	(1.3)	<b>-5.9</b>	(1.3)
	Denmark	1.0	(1.3)	0.2	(1.2)	-0.9	(1.1)	-2.1	(1.2)	<b>-3.4</b>	(1.2)
	Estonia	2.2	(1.4)	1.8	(1.2)	<b>2.4</b>	(1.2)	<b>2.6</b>	(1.3)	<b>2.6</b>	(1.2)
	Finland	<b>-9.7</b>	(1.2)	<b>-9.2</b>	(1.2)	<b>-8.5</b>	(1.1)	<b>-9.2</b>	(1.1)	<b>-9.3</b>	(1.1)
	France	<b>-3.1</b>	(1.4)	<b>-2.7</b>	(1.3)	-2.1	(1.2)	-2.2	(1.2)	<b>-2.8</b>	(1.2)
	Germany	2.8	(1.5)	1.1	(1.4)	-0.4	(1.3)	-1.7	(1.3)	<b>-2.8</b>	(1.2)
	Greece	0.5	(1.6)	0.0	(1.4)	0.2	(1.3)	0.1	(1.3)	-0.8	(1.4)
	Hungary	<b>-3.7</b>	(1.4)	<b>-3.3</b>	(1.2)	-2.3	(1.2)	-2.4	(1.3)	<b>-3.0</b>	(1.4)
	Iceland	<b>-5.6</b>	(1.3)	<b>-5.2</b>	(1.2)	<b>-4.6</b>	(1.1)	<b>-4.5</b>	(1.1)	<b>-4.1</b>	(1.2)
	Ireland	1.3	(1.3)	1.1	(1.3)	0.2	(1.2)	-0.8	(1.1)	-1.8	(1.2)
	Israel	<b>4.4</b>	(2.1)	<b>6.0</b>	(1.8)	<b>7.6</b>	(1.7)	<b>7.2</b>	(1.6)	<b>5.8</b>	(1.6)
	Italy	<b>5.2</b>	(1.4)	<b>5.6</b>	(1.3)	<b>5.9</b>	(1.2)	<b>5.4</b>	(1.2)	<b>4.6</b>	(1.3)
	Japan	2.9	(1.6)	1.3	(1.4)	-0.2	(1.3)	-1.5	(1.3)	-2.7	(1.5)
	Korea	<b>-7.3</b>	(1.5)	<b>-5.1</b>	(1.3)	<b>-3.6</b>	(1.3)	-2.6	(1.4)	-1.9	(1.6)
	Latvia	<b>3.5</b>	(1.5)	<b>2.5</b>	(1.3)	1.5	(1.2)	0.8	(1.2)	0.1	(1.3)
	Lithuania	-0.9	(1.4)	-1.2	(1.3)	-0.6	(1.2)	-0.6	(1.3)	-0.8	(1.7)
	Luxembourg	<b>-3.1</b>	(1.2)	<b>-3.2</b>	(1.1)	-1.9	(1.1)	-0.5	(1.1)	-0.3	(1.1)
	Mexico	<b>6.0</b>	(1.3)	<b>4.6</b>	(1.2)	<b>3.1</b>	(1.2)	1.9	(1.3)	0.7	(1.3)
	Netherlands*	<b>-5.2</b>	(1.5)	<b>-4.1</b>	(1.5)	<b>-3.6</b>	(1.3)	<b>-4.4</b>	(1.2)	<b>-4.1</b>	(1.2)
	New Zealand	<b>-6.0</b>	(1.2)	<b>-6.7</b>	(1.2)	<b>-7.2</b>	(1.1)	<b>-7.5</b>	(1.1)	<b>-7.9</b>	(1.3)
	Norway	1.8	(1.3)	2.0	(1.2)	2.1	(1.2)	1.2	(1.2)	0.5	(1.1)
	Poland	<b>4.4</b>	(1.2)	<b>5.1</b>	(1.2)	<b>5.3</b>	(1.2)	<b>5.0</b>	(1.2)	<b>4.7</b>	(1.3)
	Portugal*	2.6	(1.4)	<b>4.6</b>	(1.4)	<b>6.7</b>	(1.3)	<b>7.9</b>	(1.2)	<b>7.8</b>	(1.2)
	Slovak Republic	<b>-6.1</b>	(1.5)	<b>-4.6</b>	(1.4)	<b>-2.7</b>	(1.2)	<b>-2.6</b>	(1.2)	<b>-2.8</b>	(1.3)
	Slovenia	2.0	(1.1)	<b>2.8</b>	(1.1)	<b>2.8</b>	(1.1)	1.3	(1.0)	-0.8	(1.2)
	Spain	0.4	(1.2)	-0.1	(1.2)	0.1	(1.1)	0.0	(1.1)	-0.6	(1.1)
	Sweden	-2.0	(1.4)	-2.0	(1.2)	-1.7	(1.3)	<b>-2.4</b>	(1.2)	<b>-2.9</b>	(1.3)
	Switzerland	-1.1	(1.3)	<b>-2.8</b>	(1.3)	<b>-2.6</b>	(1.3)	<b>-3.0</b>	(1.4)	<b>-3.4</b>	(1.5)
Turkey	<b>6.3</b>	(1.4)	<b>6.3</b>	(1.4)	<b>5.3</b>	(1.5)	<b>3.9</b>	(1.8)	-0.2	(2.6)	
United Kingdom	-0.8	(1.4)	0.6	(1.2)	2.2	(1.2)	<b>2.5</b>	(1.2)	1.9	(1.4)	
United States*	-0.1	(1.4)	-1.0	(1.3)	-1.1	(1.3)	-1.6	(1.3)	-2.3	(1.3)	
<b>OECD average-29a</b>	-1.0	(1.0)	-1.2	(1.0)	-1.1	(1.0)	-1.5	(1.0)	<b>-2.1</b>	(1.0)	
<b>OECD average-30</b>	-1.1	(1.0)	-1.2	(1.0)	-1.1	(1.0)	-1.6	(1.0)	<b>-2.1</b>	(1.0)	
<b>OECD average-36b</b>	-0.4	(0.9)	-0.5	(0.9)	-0.3	(0.9)	-0.7	(0.9)	-1.3	(0.9)	
<b>OECD average-37</b>	-0.5	(0.9)	-0.5	(0.9)	-0.4	(0.9)	-0.7	(0.9)	-1.3	(0.9)	

1. The average 3-year trend is the average change, per 3-year-period, between the earliest available measurement in PISA and PISA 2018, calculated by a linear regression.

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.

Estimates of the average 3-year trend and the curvilinear trend for these countries consider the year in which the assessment was conducted.

The full version of this table is available on line, at the *StatLink* below.


*StatLink*  <https://doi.org/10.1787/888934029090>

Table I.B1.14 [2/2] **Distribution of mathematics scores, 2003 through 2018**

		Average 3-year trend in percentiles of mathematics performance across PISA assessments <sup>1</sup>									
		10th percentile		25th percentile		Median (50th percentile)		75th percentile		90th percentile	
		Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
Partners	Albania	<b>24.0</b>	(2.4)	<b>20.6</b>	(2.3)	<b>18.5</b>	(2.0)	<b>18.1</b>	(2.1)	<b>16.7</b>	(2.5)
	Argentina	<b>5.3</b>	(2.4)	1.0	(2.0)	-2.2	(1.8)	<b>-4.1</b>	(1.8)	<b>-5.6</b>	(2.2)
	Baku (Azerbaijan)	m	m	m	m	m	m	m	m	m	m
	Belarus	m	m	m	m	m	m	m	m	m	m
	Bosnia and Herzegovina	m	m	m	m	m	m	m	m	m	m
	Brazil	<b>7.4</b>	(1.4)	<b>5.8</b>	(1.2)	<b>4.3</b>	(1.3)	<b>3.7</b>	(1.4)	2.6	(1.9)
	Brunei Darussalam	m	m	m	m	m	m	m	m	m	m
	B-S-J-Z (China)	m	m	m	m	m	m	m	m	m	m
	Bulgaria	<b>6.2</b>	(2.1)	<b>5.8</b>	(1.9)	<b>5.9</b>	(1.9)	<b>5.7</b>	(2.0)	<b>5.4</b>	(2.5)
	Costa Rica	<b>-5.0</b>	(2.2)	<b>-3.9</b>	(1.9)	-2.8	(2.2)	-1.8	(2.4)	-1.5	(2.8)
	Croatia	-0.9	(1.4)	-0.9	(1.3)	-0.4	(1.3)	0.2	(1.3)	0.6	(1.5)
	Cyprus	2.6	(2.4)	<b>4.5</b>	(2.2)	<b>7.6</b>	(2.2)	<b>7.6</b>	(2.2)	<b>5.6</b>	(2.3)
	Dominican Republic	-6.4	(5.3)	-4.7	(4.8)	-2.3	(4.8)	-2.5	(5.3)	0.4	(7.1)
	Georgia	<b>5.9</b>	(2.6)	<b>6.4</b>	(2.2)	<b>6.6</b>	(2.0)	<b>8.8</b>	(2.2)	<b>11.2</b>	(2.6)
	Hong Kong (China)*	1.6	(1.8)	1.4	(1.6)	0.1	(1.3)	-0.7	(1.2)	-1.0	(1.3)
	Indonesia	2.7	(1.4)	2.3	(1.2)	2.2	(1.3)	1.5	(1.5)	1.5	(1.8)
	Jordan	1.6	(1.6)	1.8	(1.4)	2.3	(1.4)	2.8	(1.5)	<b>3.6</b>	(1.7)
	Kazakhstan	1.3	(1.7)	<b>4.0</b>	(1.7)	<b>5.7</b>	(1.7)	<b>6.5</b>	(2.0)	<b>6.7</b>	(2.4)
	Kosovo	3.1	(4.6)	3.6	(3.9)	3.6	(3.5)	3.0	(4.2)	5.3	(5.8)
	Lebanon	-11.9	(7.4)	-7.0	(7.3)	-0.9	(7.1)	4.3	(7.2)	1.4	(7.7)
	Macao (China)	<b>7.4</b>	(1.4)	<b>7.6</b>	(1.2)	<b>6.5</b>	(1.2)	<b>5.5</b>	(1.1)	<b>4.5</b>	(1.4)
	Malaysia	<b>8.7</b>	(2.0)	<b>11.1</b>	(1.9)	<b>12.8</b>	(1.9)	<b>15.0</b>	(2.3)	<b>16.8</b>	(2.8)
	Malta	3.1	(2.3)	3.7	(2.3)	<b>4.6</b>	(2.0)	<b>3.8</b>	(1.9)	2.4	(1.9)
	Moldova	<b>5.0</b>	(2.4)	<b>6.0</b>	(2.3)	<b>8.9</b>	(2.2)	<b>11.9</b>	(2.4)	<b>13.6</b>	(2.9)
	Montenegro	<b>7.8</b>	(1.3)	<b>7.0</b>	(1.1)	<b>7.5</b>	(1.1)	<b>8.1</b>	(1.0)	<b>7.8</b>	(1.1)
	Morocco	m	m	m	m	m	m	m	m	m	m
	North Macedonia	<b>23.7</b>	(4.8)	<b>23.7</b>	(4.0)	<b>25.4</b>	(3.7)	<b>24.1</b>	(4.0)	<b>20.2</b>	(4.6)
Panama	-2.1	(2.9)	-1.9	(2.4)	-1.5	(2.4)	-1.7	(2.8)	-4.0	(3.6)	
Peru	<b>14.5</b>	(2.0)	<b>13.1</b>	(2.0)	<b>12.1</b>	(2.0)	<b>11.3</b>	(2.3)	<b>10.8</b>	(2.7)	
Philippines	m	m	m	m	m	m	m	m	m	m	
Qatar	<b>18.1</b>	(1.2)	<b>20.6</b>	(1.0)	<b>24.6</b>	(1.0)	<b>26.9</b>	(1.0)	<b>23.9</b>	(1.1)	
Romania	1.2	(2.3)	2.4	(1.8)	<b>4.3</b>	(1.8)	<b>6.9</b>	(1.9)	<b>8.8</b>	(2.3)	
Russia	<b>5.8</b>	(1.5)	<b>5.5</b>	(1.4)	<b>5.4</b>	(1.3)	<b>4.5</b>	(1.4)	2.8	(1.4)	
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	
Serbia	1.2	(1.7)	1.2	(1.6)	2.2	(1.5)	<b>4.5</b>	(1.6)	<b>5.6</b>	(1.6)	
Singapore	<b>5.9</b>	(1.9)	<b>5.3</b>	(1.6)	1.7	(1.5)	-2.4	(1.6)	<b>-5.1</b>	(1.8)	
Chinese Taipei	-2.4	(1.8)	-2.1	(1.8)	<b>-3.9</b>	(1.5)	<b>-5.0</b>	(1.4)	<b>-5.2</b>	(1.6)	
Thailand	-1.1	(1.3)	-0.4	(1.2)	0.4	(1.2)	0.8	(1.3)	1.4	(1.6)	
Ukraine	m	m	m	m	m	m	m	m	m	m	
United Arab Emirates	-3.7	(2.3)	0.2	(2.2)	<b>4.3</b>	(2.1)	<b>8.4</b>	(2.1)	<b>10.0</b>	(2.2)	
Uruguay	<b>3.1</b>	(1.3)	0.0	(1.3)	<b>-2.9</b>	(1.3)	<b>-4.3</b>	(1.3)	<b>-5.4</b>	(1.4)	
Viet Nam**	-12.9	(9.1)	<b>-18.2</b>	(7.3)	<b>-18.3</b>	(6.8)	<b>-17.7</b>	(7.3)	<b>-21.2</b>	(9.8)	

1. The average 3-year trend is the average change, per 3-year-period, between the earliest available measurement in PISA and PISA 2018, calculated by a linear regression.

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

**Notes:** Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.

Estimates of the average 3-year trend and the curvilinear trend for these countries consider the year in which the assessment was conducted.

The full version of this table is available on line, at the *StatLink* below.


*StatLink*  <https://doi.org/10.1787/888934029090>

Table I.B1.15<sup>[1/2]</sup> Distribution of science scores, 2006 through 2018

	Average 3-year trend in percentiles of science performance across PISA assessments <sup>1</sup>									
	10th percentile		25th percentile		Median (50th percentile)		75th percentile		90th percentile	
	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
<b>OECD</b>										
Australia	<b>-7.6</b>	(1.4)	<b>-7.7</b>	(1.3)	<b>-6.6</b>	(1.3)	<b>-5.9</b>	(1.3)	<b>-6.0</b>	(1.4)
Austria	<b>-4.7</b>	(2.0)	<b>-6.4</b>	(1.9)	<b>-6.3</b>	(1.7)	<b>-5.7</b>	(1.6)	<b>-5.1</b>	(1.6)
Belgium	-2.2	(1.9)	<b>-3.5</b>	(1.5)	<b>-3.3</b>	(1.4)	<b>-3.3</b>	(1.3)	<b>-2.5</b>	(1.3)
Canada	<b>-4.3</b>	(1.4)	<b>-4.3</b>	(1.3)	<b>-3.8</b>	(1.3)	<b>-3.0</b>	(1.3)	-2.0	(1.4)
Chile	1.9	(1.6)	1.7	(1.5)	1.6	(1.6)	0.8	(1.9)	-0.7	(1.8)
Colombia	<b>8.0</b>	(1.7)	<b>5.5</b>	(1.7)	<b>5.0</b>	(1.5)	<b>6.1</b>	(1.7)	<b>7.3</b>	(1.7)
Czech Republic	-3.2	(1.8)	<b>-3.9</b>	(1.6)	<b>-4.4</b>	(1.5)	<b>-4.5</b>	(1.5)	<b>-4.9</b>	(1.6)
Denmark	0.2	(1.7)	-0.1	(1.5)	-0.3	(1.4)	-0.8	(1.4)	-1.2	(1.5)
Estonia	-1.3	(1.7)	-0.9	(1.4)	0.4	(1.3)	1.5	(1.4)	2.1	(1.5)
Finland	<b>-15.5</b>	(1.6)	<b>-12.8</b>	(1.4)	<b>-10.3</b>	(1.3)	<b>-8.1</b>	(1.3)	<b>-7.2</b>	(1.4)
France	0.7	(1.8)	-1.0	(1.7)	-1.4	(1.6)	-1.4	(1.5)	-1.7	(1.5)
Germany	<b>-4.2</b>	(2.1)	<b>-4.4</b>	(1.8)	<b>-3.8</b>	(1.6)	<b>-3.3</b>	(1.5)	-2.6	(1.4)
Greece	<b>-5.3</b>	(2.0)	<b>-6.6</b>	(1.8)	<b>-6.4</b>	(1.6)	<b>-6.1</b>	(1.5)	<b>-6.4</b>	(1.5)
Hungary	<b>-10.6</b>	(1.8)	<b>-10.1</b>	(1.5)	<b>-7.3</b>	(1.5)	<b>-5.0</b>	(1.4)	<b>-3.6</b>	(1.5)
Iceland	<b>-3.8</b>	(1.5)	<b>-5.7</b>	(1.4)	<b>-6.1</b>	(1.3)	<b>-6.4</b>	(1.3)	<b>-6.1</b>	(1.4)
Ireland	-0.7	(1.6)	-2.1	(1.5)	<b>-3.6</b>	(1.4)	<b>-4.5</b>	(1.5)	<b>-5.0</b>	(1.6)
Israel	2.0	(1.9)	2.1	(1.9)	3.3	(1.8)	<b>3.5</b>	(1.7)	2.9	(1.7)
Italy	-0.9	(1.5)	-1.3	(1.4)	-2.4	(1.4)	<b>-3.3</b>	(1.3)	<b>-4.3</b>	(1.5)
Japan	2.3	(2.0)	-0.2	(1.7)	-1.5	(1.5)	-2.0	(1.4)	-2.2	(1.4)
Korea	<b>-7.6</b>	(1.8)	<b>-5.3</b>	(1.6)	-2.5	(1.5)	-0.7	(1.5)	1.0	(1.7)
Latvia	-1.4	(1.7)	-1.4	(1.5)	-1.1	(1.4)	-0.3	(1.4)	0.1	(1.4)
Lithuania	<b>-3.7</b>	(1.5)	<b>-3.6</b>	(1.4)	<b>-3.3</b>	(1.4)	-2.1	(1.4)	-1.5	(1.5)
Luxembourg	-1.4	(1.5)	<b>-3.7</b>	(1.3)	<b>-3.2</b>	(1.2)	-1.4	(1.2)	-0.6	(1.3)
Mexico	<b>4.5</b>	(1.6)	2.7	(1.4)	1.5	(1.4)	0.4	(1.4)	-0.2	(1.5)
Netherlands*	<b>-8.5</b>	(2.0)	<b>-7.6</b>	(1.8)	<b>-5.8</b>	(1.7)	<b>-3.8</b>	(1.4)	<b>-2.9</b>	(1.5)
New Zealand	<b>-5.1</b>	(1.6)	<b>-6.0</b>	(1.5)	<b>-6.5</b>	(1.5)	<b>-7.1</b>	(1.4)	<b>-7.1</b>	(1.4)
Norway	-2.7	(1.7)	-0.5	(1.5)	1.3	(1.4)	1.6	(1.4)	1.9	(1.5)
Poland	1.0	(1.4)	1.5	(1.4)	2.2	(1.4)	2.6	(1.4)	3.0	(1.5)
Portugal*	1.7	(1.8)	3.2	(1.6)	<b>4.3</b>	(1.5)	<b>5.7</b>	(1.4)	<b>6.0</b>	(1.5)
Slovak Republic	<b>-10.0</b>	(1.7)	<b>-9.4</b>	(1.4)	<b>-7.7</b>	(1.4)	<b>-7.0</b>	(1.5)	<b>-6.2</b>	(1.5)
Slovenia	-0.2	(1.5)	-0.5	(1.3)	-1.8	(1.2)	<b>-3.9</b>	(1.2)	<b>-5.0</b>	(1.4)
Spain	-0.9	(1.4)	-1.0	(1.3)	-0.8	(1.3)	-0.3	(1.3)	-0.2	(1.3)
Sweden	<b>-3.8</b>	(1.9)	-2.3	(1.6)	-0.6	(1.5)	0.4	(1.4)	0.5	(1.5)
Switzerland	<b>-3.9</b>	(1.7)	<b>-5.7</b>	(1.6)	<b>-5.1</b>	(1.5)	<b>-4.3</b>	(1.6)	-3.3	(1.8)
Turkey	<b>4.8</b>	(1.5)	<b>5.7</b>	(1.4)	<b>7.1</b>	(1.5)	<b>7.4</b>	(1.8)	<b>5.1</b>	(2.4)
United Kingdom	-1.0	(1.6)	-1.8	(1.5)	-2.6	(1.3)	<b>-3.3</b>	(1.4)	<b>-4.2</b>	(1.4)
United States*	3.6	(1.9)	3.4	(1.8)	2.5	(1.7)	1.0	(1.8)	-0.2	(1.7)
<b>OECD average-36b</b>	<b>-2.2</b>	(1.1)	<b>-2.4</b>	(1.1)	-2.0	(1.1)	-1.7	(1.1)	-1.6	(1.1)
<b>OECD average-37</b>	<b>-2.3</b>	(1.1)	<b>-2.5</b>	(1.1)	<b>-2.1</b>	(1.1)	-1.8	(1.1)	-1.7	(1.1)

1. The average 3-year trend is the average change, per 3-year-period, between the earliest available measurement in PISA and PISA 2018, calculated by a linear regression.

\*PISA 2018 data did not meet the PISA technical standards but were accepted as largely comparable (see Annexes A2 and A4).

\*\*The data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results (see Annexes A2 and A4).

Notes: Values that are statistically significant are indicated in bold (see Annex A3).

Costa Rica, Georgia, Malta and Moldova conducted the PISA 2009 assessment in 2010 as part of PISA 2009+.

Estimates of the average 3-year trend and the curvilinear trend for these countries consider the year in which the assessment was conducted

The full version of this table is available on line, at the *StatLink* below.


*StatLink*  <https://doi.org/10.1787/888934029090>

Table I.B1.15 [2/2] Distribution of science scores, 2006 through 2018

	Average 3-year trend in percentiles of science performance across PISA assessments <sup>1</sup>									
	10th percentile		25th percentile		Median (50th percentile)		75th percentile		90th percentile	
	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
<b>Partners</b>										
Albania	<b>19.7</b>	(2.4)	<b>13.4</b>	(2.2)	<b>9.2</b>	(2.2)	<b>5.6</b>	(2.2)	4.1	(2.5)
Argentina	<b>8.3</b>	(2.3)	<b>4.0</b>	(1.9)	1.5	(1.8)	0.5	(1.8)	0.0	(1.9)
Baku (Azerbaijan)	m	m	m	m	m	m	m	m	m	m
Belarus	m	m	m	m	m	m	m	m	m	m
Bosnia and Herzegovina	m	m	m	m	m	m	m	m	m	m
Brazil	1.2	(1.4)	0.9	(1.2)	1.8	(1.3)	<b>3.4</b>	(1.5)	<b>4.0</b>	(1.8)
Brunei Darussalam	m	m	m	m	m	m	m	m	m	m
B-S-J-Z (China)	m	m	m	m	m	m	m	m	m	m
Bulgaria	2.0	(2.2)	-0.3	(2.0)	-2.0	(2.2)	-3.3	(2.3)	<b>-4.6</b>	(2.3)
Costa Rica	<b>-5.2</b>	(2.3)	<b>-6.4</b>	(2.4)	<b>-6.7</b>	(2.3)	<b>-5.8</b>	(2.4)	-5.5	(3.1)
Croatia	<b>-7.4</b>	(1.6)	<b>-6.8</b>	(1.5)	<b>-5.8</b>	(1.5)	<b>-4.3</b>	(1.4)	-2.9	(1.5)
Cyprus	3.1	(2.8)	-0.6	(2.5)	-1.0	(2.5)	0.6	(2.6)	0.7	(2.6)
Dominican Republic	6.2	(4.2)	4.9	(3.8)	3.5	(4.3)	3.2	(5.1)	2.0	(7.0)
Georgia	<b>10.6</b>	(2.2)	<b>6.7</b>	(2.2)	4.0	(2.2)	3.3	(2.2)	3.4	(2.5)
Hong Kong (China)*	<b>-5.4</b>	(1.9)	<b>-6.3</b>	(1.5)	<b>-8.1</b>	(1.4)	<b>-9.4</b>	(1.3)	<b>-9.6</b>	(1.4)
Indonesia	<b>3.0</b>	(1.5)	2.7	(1.6)	2.3	(1.7)	2.2	(2.1)	1.9	(2.8)
Jordan	1.1	(1.7)	1.0	(1.5)	0.8	(1.4)	0.3	(1.5)	-0.1	(1.6)
Kazakhstan	2.2	(1.9)	-1.0	(1.8)	<b>-4.3</b>	(1.7)	<b>-7.1</b>	(1.9)	<b>-6.6</b>	(2.5)
Kosovo	-3.5	(3.6)	<b>-8.2</b>	(3.1)	<b>-14.4</b>	(2.9)	<b>-20.3</b>	(3.1)	<b>-24.1</b>	(4.8)
Lebanon	-10.6	(5.5)	-6.9	(5.4)	-2.0	(6.2)	2.5	(7.2)	2.6	(7.1)
Macao (China)	<b>6.0</b>	(1.3)	<b>7.6</b>	(1.2)	<b>8.4</b>	(1.2)	<b>9.1</b>	(1.2)	<b>9.7</b>	(1.3)
Malaysia	<b>6.5</b>	(2.2)	<b>6.0</b>	(1.9)	<b>6.1</b>	(2.0)	<b>6.8</b>	(2.1)	<b>7.5</b>	(2.5)
Malta	2.6	(2.2)	-0.7	(2.1)	-2.2	(2.0)	-3.8	(2.2)	<b>-4.3</b>	(2.1)
Moldova	<b>5.9</b>	(2.4)	4.1	(2.4)	4.4	(2.3)	<b>7.1</b>	(2.1)	<b>8.6</b>	(2.4)
Montenegro	1.0	(1.3)	1.4	(1.2)	1.3	(1.2)	1.7	(1.2)	2.6	(1.4)
Morocco	m	m	m	m	m	m	m	m	m	m
North Macedonia	<b>18.9</b>	(3.8)	<b>23.9</b>	(3.1)	<b>29.1</b>	(3.3)	<b>36.1</b>	(4.3)	<b>36.6</b>	(4.8)
Panama	-0.4	(3.2)	-3.3	(3.0)	-4.1	(2.8)	-5.4	(2.9)	-5.5	(3.5)
Peru	<b>17.3</b>	(2.2)	<b>13.5</b>	(2.0)	<b>11.7</b>	(2.0)	<b>11.0</b>	(2.3)	<b>10.3</b>	(2.7)
Philippines	m	m	m	m	m	m	m	m	m	m
Qatar	<b>11.3</b>	(1.1)	<b>14.3</b>	(1.1)	<b>19.2</b>	(1.1)	<b>23.1</b>	(1.2)	<b>22.2</b>	(1.4)
Romania	0.1	(1.8)	0.8	(1.8)	2.1	(1.9)	3.3	(1.9)	<b>4.5</b>	(2.1)
Russia	2.5	(1.8)	1.4	(1.6)	0.6	(1.6)	-0.6	(1.5)	-1.9	(1.6)
Saudi Arabia	m	m	m	m	m	m	m	m	m	m
Serbia	-1.8	(1.6)	-1.3	(1.5)	0.0	(1.5)	1.9	(1.6)	<b>4.4</b>	(1.7)
Singapore	<b>4.4</b>	(2.1)	<b>5.6</b>	(1.7)	<b>4.4</b>	(1.8)	1.8	(1.7)	-0.9	(1.8)
Chinese Taipei	<b>-4.6</b>	(1.7)	-3.2	(1.8)	-2.5	(1.5)	-0.9	(1.5)	0.5	(1.4)
Thailand	-0.5	(1.5)	-0.9	(1.4)	0.1	(1.4)	1.6	(1.6)	2.3	(1.7)
Ukraine	m	m	m	m	m	m	m	m	m	m
United Arab Emirates	<b>-6.5</b>	(2.4)	<b>-6.2</b>	(2.4)	-3.7	(2.4)	0.9	(2.4)	3.0	(2.4)
Uruguay	<b>4.0</b>	(1.7)	1.1	(1.5)	-0.4	(1.4)	-1.0	(1.5)	-1.9	(1.6)
Viet Nam**	-0.7	(8.4)	-8.5	(7.0)	-7.9	(6.2)	-4.2	(6.3)	-0.9	(9.1)

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Estimates of the average 3-year trend and the curvilinear trend for these countries consider the year in which the assessment was conducted

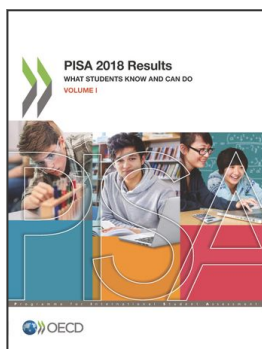
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## Annex B1 List of tables available on line

<https://doi.org/10.1787/888934029090>

WEB	Table I.B1.16	Percentage of students at each level on the cognitive process subscale of reading "locate information"
WEB	Table I.B1.17	Percentage of students at each level on the cognitive process subscale of reading "understand"
WEB	Table I.B1.18	Percentage of students at each level on the cognitive process subscale of reading "evaluate and reflect"
WEB	Table I.B1.19	Percentage of students at each level on the text structure subscale of reading "single"
WEB	Table I.B1.20	Percentage of students at each level on the text structure subscale of reading "multiple"
WEB	Table I.B1.21	Mean score and variation in the cognitive process subscale of reading "locate information"
WEB	Table I.B1.22	Mean score and variation in the cognitive process subscale of reading "understand"
WEB	Table I.B1.23	Mean score and variation in the cognitive process subscale of reading "evaluate and reflect"
WEB	Table I.B1.24	Mean score and variation in the text structure subscale of reading "single"
WEB	Table I.B1.25	Mean score and variation in the text structure subscale of reading "multiple"
WEB	Table I.B1.26	Top performers in reading, mathematics and science
WEB	Table I.B1.27	Low achievers in reading, mathematics and science
WEB	Table I.B1.28	Variation in reading performance, 2000 through 2018
WEB	Table I.B1.29	Variation in mathematics performance, 2003 through 2018
WEB	Table I.B1.30	Variation in science performance, 2006 through 2018
WEB	Table I.B1.31	Percentage of low achievers and top performers in reading among all 15-year-olds, 2009 through 2018
WEB	Table I.B1.32	Percentage of low achievers and top performers in mathematics among all 15-year-olds, 2006 through 2018
WEB	Table I.B1.33	Percentage of low achievers and top performers in science among all 15-year-olds, 2009 through 2018
WEB	Table I.B1.34	Distribution of reading scores among 15-year-olds, 2009 through 2018
WEB	Table I.B1.35	Distribution of mathematics scores among 15-year-olds, 2003 through 2018
WEB	Table I.B1.36	Distribution of science scores among 15-year-olds, 2006 through 2018
WEB	Table I.B1.37	Percentage of low achievers and top performers in reading, 2009 through 2018, adjusted for demographic changes
WEB	Table I.B1.38	Percentage of low achievers and top performers in mathematics, 2012 through 2018, adjusted for demographic changes
WEB	Table I.B1.39	Percentage of low achievers and top performers in science, in 2015 and 2018, adjusted for demographic changes
WEB	Table I.B1.40	Mean reading performance, 2009 through 2018, adjusted for demographic changes
WEB	Table I.B1.41	Mean mathematics performance, 2012 through 2018, adjusted for demographic changes
WEB	Table I.B1.42	Mean science performance, 2015 and 2018, adjusted for demographic changes
WEB	Table I.B1.43	Distribution of reading scores, 2009 through 2018, adjusted for demographic changes
WEB	Table I.B1.44	Distribution of mathematics scores, 2012 through 2018, adjusted for demographic changes
WEB	Table I.B1.45	Distribution of science scores, 2015 and 2018, adjusted for demographic changes
WEB	Table I.B1.46	Variation in reading performance, 2009 through 2018, adjusted for demographic changes
WEB	Table I.B1.47	Variation in mathematics performance, 2012 through 2018, adjusted for demographic changes
WEB	Table I.B1.48	Variation in science performance, 2015 and 2018, adjusted for demographic changes
WEB	Table I.B1.49	Minimum achievement in reading and mathematics (SDG 4.1)
WEB	Table I.B1.50	Disparities in minimum achievement in reading and mathematics (SDG 4.5)
WEB	Table I.B1.51	Time spent using the Internet (2012)
WEB	Table I.B1.52	Time spent using the Internet (2018)
WEB	Table I.B1.53	Change in time spent using the Internet (2012 to 2018)
WEB	Table I.B1.54	Availability of digital devices at home (2009)
WEB	Table I.B1.55	Availability of digital devices at home (2018)
WEB	Table I.B1.56	Change in the availability of digital devices at home (2012 to 2018)
WEB	Table I.B1.57	Students' reading habits and attitudes towards reading (2009)
WEB	Table I.B1.58	Students' reading habits and attitudes towards reading (2018)
WEB	Table I.B1.59	Changes in students' reading habits and attitudes towards reading (2009 to 2018)



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