

### Exhibit 1.9: Percentages of Students Reaching International Benchmarks of Mathematics Achievement Across Assessment Years

Country	Advanced International Benchmark (625)						High International Benchmark (550)					
	Percent of Students						Percent of Students					
	2019	2015	2011	2007	2003	1995	2019	2015	2011	2007	2003	1995
Singapore	54	50	43 ▲	41 ▲	38 ▲	38 ▲	84	80	78 ▲	74 ▲	73 ▲	70 ▲
Hong Kong SAR	38	45 ▼	37	40	22 ▲	17 ▲	78	84 ▼	80	81	67 ▲	56 ▲
Korea, Rep. of	37	41 ▼	39			25 ▲	77	81 ▼	80			70 ▲
Chinese Taipei	37	35	34	24 ▲	16 ▲		78	76	74 ▲	66 ▲	61 ▲	
Japan	33	32	30 ▲	23 ▲	21 ▲	22 ▲	74	74	70 ▲	61 ▲	60 ▲	61 ▲
Northern Ireland	26	27	24				60	61	59			
England	21	17 ▲	18	16 ▲	14 ▲	7 ▲	53	49 ▲	49	48 ▲	43 ▲	24 ▲
Russian Federation	20	20	13 ▲	16	11 ▲		61	59	47 ▲	48 ▲	41 ▲	
Ireland	15	14	9 ▲			10 ▲	52	51	41 ▲			40 ▲
United States	14	14	13	10 ▲	7 ▲	9 ▲	46	47	47	40 ▲	35 ▲	37 ▲
Lithuania	13	10 ▲	10 ▲	10 ▲	10 ▲		48	44	43 ▲	42 ▲	44	
Norway (5)	13	14					48	50				
Cyprus	12	10			8 ▲	5 ▲	42	39			34 ▲	21 ▲
Latvia	11				10		50				44 ▲	
Finland	11	8 ▲	12				42	43	49 ▼			
Czech Republic	10	8 ▲	4 ▲	2 ▲		16 ▼	42	38	30 ▲	19 ▲		46
Australia	10	9	10	9	5 ▲	6 ▲	36	36	35	35	26 ▲	27 ▲
Austria	9		2 ▲	3 ▲		10	45		26 ▲	26 ▲		42
Hungary	9	13 ▼	10	9	10	11	39	44 ▼	37	35	41	38
Portugal	9	12 ▼	8			1 ▲	39	46 ▼	40			11 ▲
Denmark	8	12 ▼	10	7			37	46 ▼	44 ▼	36		
Belgium (Flemish)	8	10	10		10 ▼		40	47 ▼	50 ▼		51 ▼	
Bulgaria	8	10					37	40				
Poland	8	10					36	44 ▼				
Azerbaijan	8		5 ▲				36		21 ▲			
Sweden	8	5 ▲	3 ▲	3 ▲			36	34	25 ▲	24 ▲		
Netherlands	7	4 ▲	5 ▲	7	5	12 ▼	44	37 ▲	44	42	44	50 ▼
Serbia	7	10 ▼	9 ▼				32	37 ▼	36			
United Arab Emirates	7	5 ▲	2 ▲				26	18 ▲	12 ▲			
Canada	6	6					32	31				
New Zealand	6	6	4 ▲	5	5 ▲	4 ▲	25	26	23	26	26	19 ▲
Germany	6	5	5	6			36	34	37	37		
Slovak Republic	5	4	5	5			31	26 ▲	30	26 ▲		
Malta	5		4 ▲				32		25 ▲			
Kazakhstan	5		7				29		29			
Bahrain	4	2 ▲	1 ▲				21	13 ▲	10 ▲			
Italy	4	4	5	6	6		30	28	28	29	29	
Croatia	4	3	2 ▲				28	24 ▲	19 ▲			
Spain	4	3	1 ▲				27	27	17 ▲			
France	3	2					21	21				
Oman	3	2	1 ▲				12	11	5 ▲			
Georgia	3	2	2	1 ▲			20	15 ▲	12 ▲	10 ▲		
Armenia	3	3	2		2		23	20	14 ▲		13 ▲	
Qatar	2	3	2				14	13	10 ▲			
Iran, Islamic Rep. of	2	1	1 ▲	0 ▲	0 ▲	0 ▲	13	11	9 ▲	3 ▲	2 ▲	3 ▲
Morocco	1	0	0				6	3	2 ▲			
South Africa (5)	1	1					5	5				
Saudi Arabia	1	0	2				6	3 ▲	7			
Kuwait	1	0					6	3 ▲				
Chile	1	1 ▼	2 ▼				7	10 ▼	14 ▼			
Philippines	0				1		1				5 ▼	
<b>Benchmarking Participants</b>												
Dubai, UAE	16	11 ▲	5 ▲	2 ▲			50	35 ▲	22 ▲	12 ▲		
Quebec, Canada	8	9	6	5 ▲	3 ▲	13 ▼	41	42	40	34 ▲	25 ▲	50 ▼
Ontario, Canada	7	6	7	4 ▲	5	4 ▲	32	31	34	29	29	22 ▲
Abu Dhabi, UAE	3	3	1 ▲				15	12	8 ▲			

▲ 2019 percent significantly higher  
▼ 2019 percent significantly lower

An empty cell indicates a country did not participate in that year's assessment or did not have comparable data. See Appendix A for country participation in previous TIMSS assessments. Results for Lithuania before 2015 do not include students taught in Polish or Russian.

**Exhibit 1.9: Percentages of Students Reaching International Benchmarks of Mathematics Achievement Across Assessment Years**

(Continued)

Country	Intermediate International Benchmark (475)						Low International Benchmark (400)					
	Percent of Students						Percent of Students					
	2019	2015	2011	2007	2003	1995	2019	2015	2011	2007	2003	1995
Singapore	96	93	94	92 ▲	91 ▲	89 ▲	99	99	99	98 ▲	97 ▲	96 ▲
Hong Kong SAR	96	98 ▼	96	97	94 ▲	87 ▲	100	100	99	100	99	97 ▲
Korea, Rep. of	95	97 ▼	97 ▼			94	99	100	100			99
Chinese Taipei	96	95	93 ▲	92 ▲	92 ▲		100	100	99 ▲	99 ▲	99 ▲	
Japan	95	95	93 ▲	89 ▲	89 ▲	89 ▲	99	99	99	98 ▲	98 ▲	98 ▲
Northern Ireland	85	86	85				96	97	96			
England	83	80	78 ▲	79 ▲	75 ▲	54 ▲	96	96	93 ▲	94 ▲	93 ▲	82 ▲
Russian Federation	91	89	82 ▲	81 ▲	76 ▲		99	98	97 ▲	95 ▲	95 ▲	
Ireland	84	84	77 ▲			73 ▲	97	97	94 ▲			91 ▲
United States	77	79	81 ▼	77	72 ▲	71 ▲	93	95 ▼	96 ▼	95 ▼	93	92
Lithuania	81	81	79	77 ▲	79		96	96	96	94 ▲	96	
Norway (5)	82	86 ▼					97	98				
Cyprus	77	74			68 ▲	52 ▲	95	93 ▲			89 ▲	79 ▲
Latvia	85				81 ▲		98				96 ▲	
Finland	78	82 ▼	85 ▼				95	97 ▼	98 ▼			
Czech Republic	78	78	72 ▲	59 ▲		79	96	96	93 ▲	88 ▲		95
Australia	70	70	70	71	64 ▲	61 ▲	90	91	90	91	88	86 ▲
Austria	84		70 ▲	69 ▲		77 ▲	98		95 ▲	93 ▲		94 ▲
Hungary	74	75	70	67 ▲	76	72	93	92	90 ▲	88 ▲	94	91
Portugal	74	82 ▼	80 ▼			37 ▲	95	97 ▼	97 ▼			70 ▲
Denmark	75	80 ▼	82 ▼	76			95	96	97	95		
Belgium (Flemish)	80	88 ▼	89 ▼		90 ▼		97	99 ▼	99 ▼		99 ▼	
Bulgaria	71	75					90	92				
Poland	73	80 ▼					93	96 ▼				
Azerbaijan	72		46 ▲				92		72 ▲			
Sweden	74	75	69 ▲	68 ▲			94	95	93	93		
Netherlands	84	83	88 ▼	84	89 ▼	87	98	99	99 ▼	98	99	99
Serbia	68	72	70				89	91	90			
United Arab Emirates	53	42 ▲	35 ▲				78	68 ▲	64 ▲			
Canada	69	69					92	92				
New Zealand	56	59	58	61 ▼	61 ▼	51	83	84	85	85	86 ▼	78 ▲
Germany	75	77	81 ▼	78 ▼			96	96	97 ▼	96		
Slovak Republic	71	65 ▲	69	63 ▲			91	88	90	88		
Malta	69		63 ▲				91		88 ▲			
Kazakhstan	71		62 ▲				95		88 ▲			
Bahrain	54	41 ▲	34 ▲				81	72 ▲	67 ▲			
Italy	73	69 ▲	69 ▲	67 ▲	65 ▲		95	93 ▲	93 ▲	91 ▲	89 ▲	
Croatia	70	67	60 ▲				95	93	90 ▲			
Spain	65	67	56 ▲				91	93	87 ▲			
France	57	58					85	87				
Oman	33	32	20 ▲				62	60	46 ▲			
Georgia	56	47 ▲	41 ▲	35 ▲			84	78 ▲	72 ▲	67 ▲		
Armenia	64	55 ▲	41 ▲		43 ▲		92	84 ▲	72 ▲		75 ▲	
Qatar	40	36	29 ▲				70	65 ▲	55 ▲			
Iran, Islamic Rep. of	39	36	33 ▲	20 ▲	17 ▲	15 ▲	68	65	64	53 ▲	45 ▲	44 ▲
Morocco	18	17	10 ▲				43	41	26 ▲			
South Africa (5)	16	17					37	39				
Saudi Arabia	23	16 ▲	24				51	43 ▲	55			
Kuwait	21	12 ▲					47	33 ▲				
Chile	33	42 ▼	44 ▼				70	78 ▼	77 ▼			
Philippines	6				15 ▼		19				34 ▼	
<b>Benchmarking Participants</b>												
Dubai, UAE	80	66 ▲	50 ▲	37 ▲			95	87 ▲	75 ▲	69 ▲		
Quebec, Canada	80	82	83	74 ▲	69 ▲	87 ▼	97	98	99 ▼	96	94 ▲	98
Ontario, Canada	68	70	73 ▼	71	70	59 ▲	92	93	94	94	94	86 ▲
Abu Dhabi, UAE	37	32 ▲	29 ▲				64	56 ▲	58 ▲			

▲ 2019 percent significantly higher

▼ 2019 percent significantly lower