

Mathematics: Number / Applying

B_MD1_01 ME72002: Show 28 is a perfect number - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	10.5	67.7	7.9	24.3	0.0	12.5	8.4
	2023	650	3.1	63.0	2.0	33.9	1.1	2.7	3.5
Chinese Taipei	2019	703	70.8	27.4	66.5	6.1	0.0	74.1	67.4
	2023	1101	63.0	35.6	60.7	3.6	0.0	67.2	59.3
England	2019	479	40.6	49.1	33.6	17.2	0.0	32.1	51.5
	2023	596	39.1	51.9	33.4	14.5	0.2	37.7	40.8
Finland	2019	687	5.7	80.9	4.9	14.2	0.0	4.7	6.7
	2023	860	5.3	77.9	4.4	16.8	1.0	6.3	4.5
France	2019	546	15.9	61.6	11.7	26.7	0.0	15.6	16.2
	2023	653	19.7	64.1	15.7	19.9	0.3	18.1	21.3
Georgia	2019	468	35.0	47.7	25.7	26.7	0.0	29.9	40.2
	2023	706	33.7	45.7	23.2	29.8	1.3	34.9	32.5
Hong Kong SAR	2019	461	46.6	48.6	42.4	9.0	0.0	45.5	47.6
	2023	642	49.3	47.2	45.9	6.7	0.2	45.7	52.9
Hungary	2019	664	48.3	45.4	42.5	12.2	0.0	49.3	47.4
	2023	800	40.1	52.7	35.3	12.0	0.0	39.2	41.0
Israel	2019	534	34.6	54.4	28.8	16.8	0.0	33.0	36.4
	2023	758	23.1	61.7	18.5	18.6	1.2	19.3	26.4
Italy	2019	511	37.7	52.9	32.0	14.8	0.3	37.4	38.0
	2023	670	39.4	50.1	32.6	17.0	0.3	41.0	38.1
Korea, Rep. of	2019	557	71.4	27.6	69.1	3.3	0.0	72.1	70.7
	2023	849	73.1	25.4	69.1	5.1	0.5	76.0	70.3
Lithuania	2019	542	40.3	47.4	32.0	20.6	0.0	45.7	34.5
	2023	791	33.1	54.4	26.9	18.7	0.0	34.3	31.7
Malaysia	2019	1001	18.1	77.2	17.1	5.5	0.2	19.9	16.2
	2023	1275	7.4	88.6	7.1	4.0	0.3	7.4	7.4
Norway (9)	2019	648	8.8	69.2	6.7	23.8	0.3	9.4	8.2
	2023	912	6.2	69.3	4.6	23.3	2.8	6.9	5.6
Portugal	2019	474	42.4	47.1	34.7	18.2	0.0	39.8	44.7
	2023	773	30.2	54.1	23.4	22.2	0.2	28.8	31.4
Qatar	2019	555	23.8	66.4	20.8	12.9	0.0	24.9	22.6
	2023	620	17.3	73.2	15.3	10.8	0.7	15.9	18.6
Singapore	2019	694	58.7	40.0	56.7	3.3	0.0	60.4	57.0
	2023	949	59.8	39.5	58.8	1.5	0.2	59.8	59.8
Sweden	2019	565	8.4	67.5	6.2	26.3	0.0	8.0	8.8
	2023	725	10.7	62.9	7.5	27.0	2.7	9.2	12.0
United Arab Emirates	2019	3159	26.0	66.4	23.4	10.2	0.1	26.0	26.1
	2023	4041	31.7	62.9	29.2	6.9	1.0	30.4	32.9
United States	2019	1237	34.8	62.1	33.1	4.4	0.4	38.1	31.7
	2023	1167	28.9	66.7	27.1	3.9	2.3	28.1	29.6
International Avg. (20)	2019	15065	33.9	55.3	29.8	14.8	0.1	33.9	34.0
	2023	19538	30.7	57.3	27.0	14.8	0.8	30.5	31.0

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

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COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1154	15.6	76.0	14.0	9.7	0.2	15.8	15.4
	2023	1033	18.1	74.2	16.4	8.4	1.0	18.3	17.9
Dubai, UAE	2019	816	44.1	51.9	40.9	7.2	0.0	44.6	43.5
	2023	1178	49.3	46.9	45.6	6.0	1.5	44.8	53.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Knowing

B_MD1_02 ME72188: 3 tenths + 107 thousandths = - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	29.6	18.3	48.3	28.8	1.8	2.4	0.3	30.1	29.3
	2023	650	23.7	21.8	44.3	22.3	5.5	4.7	1.3	20.8	26.9
Chinese Taipei	2019	702	67.4	6.2	25.2	67.1	1.1	0.3	0.0	66.9	67.8
	2023	1101	66.2	6.5	25.4	66.1	1.8	0.1	0.0	65.7	66.7
England	2019	479	27.4	14.1	56.8	27.1	0.9	1.1	0.0	28.7	25.9
	2023	596	34.0	11.0	52.4	33.5	1.6	1.3	0.2	33.3	34.7
Finland	2019	687	38.1	12.9	46.8	37.7	1.5	1.1	0.0	36.8	39.4
	2023	860	30.5	13.5	51.3	29.8	3.1	1.3	1.0	30.9	30.2
France	2019	546	41.6	13.2	42.9	41.1	1.5	0.9	0.3	42.1	41.2
	2023	653	40.4	11.7	45.0	39.8	2.1	0.7	0.7	37.1	43.5
Georgia	2019	468	40.8	19.6	36.6	39.8	1.5	2.5	0.0	40.3	41.3
	2023	707	42.5	20.3	33.9	41.1	1.5	1.2	2.0	40.4	44.5
Hong Kong SAR	2019	461	47.9	6.7	43.4	46.9	1.1	1.8	0.2	47.7	48.0
	2023	642	44.1	6.3	46.1	43.6	2.9	0.9	0.2	38.1	49.6
Hungary	2019	664	53.1	11.1	33.8	52.9	1.8	0.4	0.0	51.8	54.5
	2023	800	48.1	14.4	35.8	48.0	1.5	0.3	0.0	43.3	52.6
Israel	2019	534	36.4	13.3	46.6	36.0	2.9	1.2	0.0	31.1	41.9
	2023	758	31.1	15.1	48.6	29.8	2.4	2.5	1.6	30.8	31.3
Italy	2019	511	46.1	13.5	37.7	45.0	1.6	1.8	0.5	43.4	48.4
	2023	670	42.3	16.9	37.1	41.8	3.0	0.8	0.4	40.4	43.9
Korea, Rep. of	2019	557	59.0	8.9	29.2	58.1	2.3	1.5	0.0	57.0	61.0
	2023	849	57.8	9.2	31.0	57.3	1.6	0.5	0.5	60.0	55.7
Lithuania	2019	542	43.5	9.4	45.5	43.3	1.4	0.5	0.0	43.0	44.1
	2023	790	37.9	14.7	45.9	37.9	1.4	0.2	0.0	38.5	37.3
Malaysia	2019	1001	39.7	13.1	44.1	39.2	2.5	0.7	0.4	40.4	38.9
	2023	1275	27.7	18.1	49.9	27.4	3.2	0.5	0.9	27.0	28.6
Norway (9)	2019	648	35.9	12.8	48.3	34.9	1.2	2.2	0.6	31.3	40.5
	2023	912	32.0	12.0	48.3	30.5	4.6	1.2	3.5	31.7	32.2
Portugal	2019	474	39.6	14.2	44.6	39.4	1.2	0.7	0.0	35.8	42.9
	2023	774	33.1	19.4	44.2	32.7	2.4	0.7	0.5	30.9	35.2
Qatar	2019	555	21.4	24.1	51.0	21.0	1.6	2.3	0.0	22.1	20.7
	2023	620	22.0	16.9	55.3	21.2	3.0	1.8	1.8	20.0	23.9
Singapore	2019	694	54.3	5.2	39.9	54.1	0.6	0.2	0.1	51.8	56.7
	2023	949	49.6	5.4	44.0	49.5	0.9	0.0	0.2	45.6	53.1
Sweden	2019	565	39.5	11.7	46.9	39.4	1.7	0.4	0.0	42.7	36.1
	2023	725	41.8	12.9	40.5	39.5	1.6	1.6	3.9	36.7	46.5
United Arab Emirates	2019	3157	29.5	17.0	48.8	29.0	3.5	1.4	0.2	27.7	31.2
	2023	4042	32.5	17.8	45.6	31.5	2.2	1.4	1.6	29.6	35.2
United States	2019	1237	45.7	12.8	40.4	45.3	0.7	0.5	0.4	44.6	46.8
	2023	1167	37.2	14.5	44.0	36.0	2.2	0.3	2.9	38.5	35.9
International Avg. (20)	2019	15062	41.8	12.9	42.8	41.3	1.6	1.2	0.1	40.8	42.8
	2023	19540	38.7	13.9	43.4	38.0	2.4	1.1	1.2	37.0	40.4

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Knowing

B_MD1_02 ME72188: 3 tenths + 107 thousandths = - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1152	24.3	20.2	49.0	24.0	5.4	1.1	0.3	24.0	24.5
	2023	1034	25.3	23.5	46.0	24.5	3.0	1.2	1.8	21.9	28.4
Dubai, UAE	2019	816	36.3	12.1	48.0	35.9	2.7	1.1	0.2	34.2	38.5
	2023	1178	40.4	12.3	44.0	39.0	1.2	1.7	1.9	36.6	43.7

DIFF = Percent correct
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Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Applying
B_MD1_03 ME72035: Value of M in $3/4 \times M = 1/2$ - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019 2023	580 649	13.2 6.8	64.4 62.5	9.8 4.5	25.3 31.1	0.4 1.8	10.8 8.1	15.5 5.5
Chinese Taipei	2019 2023	703 1101	79.7 73.4	19.9 26.3	78.0 72.5	2.2 1.2	0.0 0.0	81.8 78.1	77.6 69.1
England	2019 2023	479 596	26.5 28.5	57.1 58.0	20.6 23.2	22.4 18.6	0.0 0.2	25.9 26.7	27.3 30.6
Finland	2019 2023	687 858	25.3 13.0	63.3 75.3	21.4 11.3	15.2 12.4	0.1 1.0	25.9 14.4	24.8 11.9
France	2019 2023	546 651	15.2 11.8	63.9 71.9	11.5 9.7	24.3 17.7	0.3 0.7	13.8 11.3	16.3 12.3
Georgia	2019 2023	468 706	37.6 35.8	49.2 52.5	29.6 29.2	21.2 16.2	0.0 2.0	30.5 34.6	44.9 36.9
Hong Kong SAR	2019 2023	461 640	62.9 58.9	35.8 39.0	60.6 55.9	3.4 4.8	0.2 0.2	61.2 56.7	64.2 60.9
Hungary	2019 2023	664 800	29.4 24.0	59.0 66.2	24.5 20.9	16.5 12.9	0.0 0.0	31.9 21.5	27.0 26.2
Israel	2019 2023	534 758	31.9 22.1	57.1 63.9	26.8 18.2	16.1 16.1	0.0 1.8	30.8 17.8	33.0 25.7
Italy	2019 2023	511 670	50.2 45.1	39.0 45.2	39.4 37.1	21.0 17.1	0.5 0.5	53.6 45.7	47.6 44.6
Korea, Rep. of	2019 2023	557 849	80.8 78.0	18.6 21.3	78.1 75.8	3.3 2.4	0.0 0.5	83.3 79.2	78.2 76.9
Lithuania	2019 2023	542 791	44.5 34.7	45.6 56.3	36.6 29.9	17.7 13.8	0.0 0.0	45.2 34.9	43.8 34.5
Malaysia	2019 2023	1001 1275	18.5 11.9	78.4 85.4	17.8 11.5	3.4 1.9	0.4 1.2	16.8 10.2	20.3 13.8
Norway (9)	2019 2023	648 910	32.7 19.7	50.7 59.1	24.7 14.5	24.1 22.7	0.6 3.7	35.0 20.1	30.6 19.3
Portugal	2019 2023	474 774	21.2 18.8	68.1 66.8	18.3 15.4	13.6 17.1	0.0 0.6	18.0 16.6	24.0 20.7
Qatar	2019 2023	555 620	22.0 20.4	71.4 73.9	20.1 19.0	8.5 4.8	0.0 2.2	20.6 19.6	23.3 21.2
Singapore	2019 2023	694 949	55.6 50.0	43.5 49.0	54.5 49.0	2.0 1.8	0.1 0.2	59.4 49.7	52.0 50.2
Sweden	2019 2023	565 725	20.6 23.4	61.4 57.1	15.9 17.5	22.7 20.9	0.0 4.6	22.6 21.8	18.4 24.8
United Arab Emirates	2019 2023	3158 4041	36.1 36.9	59.6 58.4	33.7 34.1	6.5 5.5	0.2 2.1	36.8 35.7	35.5 37.9
United States	2019 2023	1237 1166	33.9 24.5	63.4 70.4	32.6 22.8	3.6 3.6	0.4 3.2	37.3 24.9	30.6 24.0
International Avg. (20)	2019 2023	15064 19529	36.9 31.9	53.5 57.9	32.7 28.6	13.6 12.1	0.2 1.3	37.1 31.4	36.7 32.4

DIFF = Percent correct
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Mathematics: Number / Applying

B_MD1_03 ME72035: Value of M in $3/4 \times M = 1/2$ - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019 2023	1154 1033	27.2 24.9	69.1 69.4	25.8 23.0	4.8 5.2	0.3 2.4	26.9 24.2	27.5 25.5
Dubai, UAE	2019 2023	816 1178	49.7 50.8	46.6 44.1	46.0 45.5	7.1 7.7	0.3 2.7	51.3 45.6	48.0 55.3

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Knowing

B_MD1_04 ME72055: Numbers equivalent to 60% (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	8.3	87.8	7.9	3.9	0.4	4.4	12.6
	2023	650	7.0	88.6	6.6	2.3	2.5	5.4	8.7
Chinese Taipei	2019	702	56.9	43.0	56.8	0.2	0.0	56.2	57.6
	2023	1101	56.7	43.3	56.6	0.1	0.0	54.6	58.6
England	2019	479	31.3	68.5	31.2	0.2	0.0	26.5	37.2
	2023	596	34.6	64.6	34.2	0.9	0.3	24.0	47.0
Finland	2019	687	41.4	58.3	41.2	0.3	0.1	38.1	44.6
	2023	860	36.0	63.0	35.4	0.6	1.0	29.8	41.4
France	2019	546	19.2	79.7	19.0	1.0	0.4	15.7	22.1
	2023	653	14.6	84.2	14.4	0.5	0.9	8.2	20.7
Georgia	2019	468	10.3	87.3	10.0	2.7	0.0	6.3	14.4
	2023	707	11.0	85.7	10.6	1.4	2.2	9.1	12.9
Hong Kong SAR	2019	461	57.3	42.5	57.0	0.3	0.2	48.9	64.3
	2023	642	56.0	43.7	55.6	0.5	0.2	46.0	65.4
Hungary	2019	664	24.1	75.2	23.9	0.9	0.0	17.6	30.7
	2023	800	21.6	78.2	21.6	0.1	0.2	14.1	28.7
Israel	2019	534	33.8	65.8	33.6	0.6	0.0	26.0	41.8
	2023	758	27.7	70.3	26.9	0.9	1.9	20.0	34.7
Italy	2019	511	9.7	88.8	9.6	1.1	0.5	6.8	12.3
	2023	670	13.9	84.9	13.7	0.7	0.7	7.5	19.3
Korea, Rep. of	2019	557	43.2	56.5	42.9	0.6	0.0	35.5	50.9
	2023	849	43.0	56.4	42.7	0.4	0.5	36.4	49.5
Lithuania	2019	542	24.6	75.2	24.5	0.2	0.0	17.6	31.9
	2023	791	24.9	75.1	24.9	0.0	0.0	16.8	33.5
Malaysia	2019	1001	11.6	87.0	11.4	1.0	0.6	10.1	13.2
	2023	1275	6.5	91.7	6.4	0.3	1.6	5.3	7.9
Norway (9)	2019	648	41.4	57.6	40.6	1.3	0.6	33.6	48.8
	2023	912	36.4	60.9	34.8	0.2	4.0	30.6	41.7
Portugal	2019	474	15.4	83.6	15.3	1.1	0.0	10.0	20.1
	2023	774	11.8	87.0	11.6	0.1	1.3	7.3	16.0
Qatar	2019	555	12.6	87.2	12.6	0.2	0.0	9.8	15.5
	2023	620	15.5	81.5	15.0	1.3	2.2	12.2	18.7
Singapore	2019	694	47.1	52.8	47.0	0.1	0.1	42.4	51.7
	2023	949	52.2	47.7	52.1	0.0	0.2	46.1	57.7
Sweden	2019	565	46.8	52.7	46.5	0.7	0.1	45.0	49.1
	2023	725	45.0	52.1	42.6	0.3	5.0	38.6	50.8
United Arab Emirates	2019	3153	17.9	81.2	17.8	0.7	0.3	15.7	20.0
	2023	4042	23.1	74.3	22.3	0.7	2.7	16.8	28.9
United States	2019	1237	38.7	60.7	38.3	0.4	0.5	35.8	41.6
	2023	1167	32.5	65.0	31.3	0.1	3.6	27.0	37.8
International Avg. (20)	2019	15058	29.6	69.6	29.4	0.9	0.2	25.1	34.0
	2023	19541	28.5	69.9	28.0	0.6	1.5	22.8	34.0

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

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Mathematics: Number / Knowing

B_MD1_04 ME72055: Numbers equivalent to 60% (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019 2023	1150 1034	13.3 13.9	85.9 83.0	13.2 13.4	0.6 0.9	0.3 2.8	10.1 9.6	16.2 17.8
Dubai, UAE	2019 2023	816 1178	28.5 37.7	70.9 59.6	28.3 36.1	0.3 0.8	0.5 3.5	25.2 27.7	31.9 46.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Knowing

B_MD1_05 ME72222: Value of sqrt expression for $x = 10$ and $y = 8$ - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	41.0	32.3	38.4	11.5	11.4	5.6	0.7	42.3	39.4
	2023	650	31.5	27.2	27.5	19.1	13.5	10.0	2.7	27.7	35.4
Chinese Taipei	2019	703	79.0	10.7	78.5	3.6	6.5	0.7	0.0	81.2	76.9
	2023	1101	76.5	8.9	76.3	5.3	9.3	0.1	0.1	78.5	74.6
England	2019	479	47.0	29.1	45.3	13.0	8.9	3.6	0.0	48.6	45.0
	2023	596	50.7	26.8	48.9	12.7	8.1	3.3	0.3	47.9	53.9
Finland	2019	687	45.3	26.8	44.5	11.5	15.5	1.7	0.1	44.6	46.0
	2023	860	42.8	28.0	41.5	14.2	13.3	1.8	1.1	41.8	43.6
France	2019	546	37.9	30.8	36.7	14.5	14.9	2.8	0.4	40.2	36.0
	2023	653	36.1	32.3	34.7	16.1	13.0	3.1	0.9	33.5	38.6
Georgia	2019	468	32.6	40.4	31.9	9.7	15.7	2.4	0.0	29.4	35.9
	2023	707	36.3	29.7	34.9	10.0	21.5	1.6	2.4	37.5	35.1
Hong Kong SAR	2019	461	69.2	14.3	68.3	4.5	11.7	1.2	0.2	70.0	68.5
	2023	642	71.8	9.3	71.2	8.3	10.4	0.6	0.2	71.2	72.4
Hungary	2019	664	58.8	19.0	58.5	10.4	11.6	0.6	0.0	60.0	57.7
	2023	800	55.5	21.7	55.2	9.7	12.8	0.3	0.2	55.2	55.7
Israel	2019	534	56.0	23.4	54.9	10.6	9.0	2.1	0.0	55.3	56.8
	2023	758	45.7	26.8	43.0	15.3	9.1	3.8	2.0	43.6	47.6
Italy	2019	511	67.0	19.6	65.3	5.5	7.0	2.0	0.5	71.5	63.0
	2023	670	64.9	17.7	63.8	9.6	7.2	1.0	0.7	65.8	64.1
Korea, Rep. of	2019	557	49.6	20.9	48.6	12.9	15.7	2.0	0.0	50.2	48.9
	2023	849	52.4	22.8	51.6	10.4	13.6	1.1	0.5	51.3	53.5
Lithuania	2019	542	56.5	21.6	55.9	6.4	15.1	1.0	0.0	60.1	52.7
	2023	791	52.7	21.2	52.5	9.4	16.4	0.4	0.0	55.1	50.3
Malaysia	2019	1001	40.3	18.8	39.4	22.0	17.7	1.2	0.8	39.2	41.3
	2023	1275	36.5	24.1	35.7	24.5	13.5	0.5	1.8	33.4	39.9
Norway (9)	2019	648	43.0	20.7	40.3	15.2	17.4	5.8	0.6	46.2	40.0
	2023	912	42.1	21.9	38.7	15.9	15.3	4.1	4.1	41.1	43.1
Portugal	2019	474	38.5	22.5	38.0	7.4	30.9	1.2	0.0	40.1	37.2
	2023	774	36.9	21.9	35.9	17.1	22.3	1.6	1.3	37.7	36.1
Qatar	2019	555	35.3	36.6	34.2	10.6	15.5	3.0	0.0	32.6	38.0
	2023	620	36.2	35.4	34.6	11.1	14.4	1.6	2.8	32.6	39.6
Singapore	2019	694	77.8	8.5	77.7	5.4	8.3	0.1	0.1	79.5	76.2
	2023	949	75.4	10.0	75.1	7.9	6.5	0.3	0.2	76.4	74.6
Sweden	2019	565	41.3	20.1	38.3	22.8	11.5	7.2	0.1	37.7	45.5
	2023	725	41.3	23.5	36.4	19.0	9.2	6.9	5.0	38.7	43.7
United Arab Emirates	2019	3157	50.6	26.5	49.9	10.5	11.7	1.1	0.4	50.9	50.4
	2023	4042	54.5	23.8	52.0	10.2	9.5	1.5	3.0	55.1	53.9
United States	2019	1237	56.3	22.4	55.2	10.0	10.5	1.4	0.6	60.4	52.3
	2023	1167	49.5	24.0	47.2	11.2	12.8	1.1	3.7	48.3	50.7
International Avg. (20)	2019	15063	51.2	23.2	50.0	10.9	13.3	2.3	0.2	52.0	50.4
	2023	19541	49.5	22.9	47.8	12.8	12.6	2.2	1.6	48.6	50.3

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Knowing

B_MD1_05 ME72222: Value of sqrt expression for $x = 10$ and $y = 8$ - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1153	45.8	26.8	45.2	12.4	14.4	0.9	0.3	46.5	45.2
	2023	1034	47.6	26.9	45.7	12.9	10.4	0.7	3.4	49.6	45.9
Dubai, UAE	2019	816	63.1	21.5	62.0	6.4	8.4	1.2	0.6	62.9	63.3
	2023	1178	65.1	17.7	61.2	7.7	7.5	2.3	3.6	64.5	65.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Applying
B_MD1_06 ME72090: Inequality for relationship between areas of rectangles - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	28.3	26.3	19.2	28.5	18.8	6.5	0.8	29.8	26.5
	2023	650	25.2	22.0	22.7	27.5	15.2	9.3	3.3	24.2	26.3
Chinese Taipei	2019	703	75.2	74.7	9.8	9.3	5.5	0.7	0.0	79.0	71.4
	2023	1101	71.8	71.7	9.4	12.2	6.5	0.1	0.1	75.2	68.8
England	2019	479	34.5	33.2	25.3	25.5	12.4	3.6	0.0	36.4	32.2
	2023	596	34.9	33.1	23.6	28.2	9.9	4.8	0.4	37.3	32.2
Finland	2019	687	29.9	29.3	19.0	29.8	19.9	1.7	0.3	32.6	27.3
	2023	860	29.0	27.9	21.7	28.6	17.9	2.4	1.6	32.0	26.5
France	2019	546	27.1	24.8	19.1	25.2	22.5	7.7	0.7	27.2	27.0
	2023	652	25.0	23.9	19.5	31.2	21.1	3.4	1.0	24.0	26.0
Georgia	2019	468	44.2	42.1	20.0	23.6	9.6	4.7	0.0	44.4	44.0
	2023	707	40.5	38.3	23.4	21.3	11.5	2.6	2.9	43.0	38.0
Hong Kong SAR	2019	461	72.0	70.7	9.7	10.7	7.0	1.7	0.2	74.5	69.9
	2023	642	68.8	68.3	9.6	14.2	7.1	0.5	0.2	68.7	68.9
Hungary	2019	664	23.7	23.4	20.6	37.9	16.6	1.6	0.0	24.7	22.7
	2023	800	26.3	25.9	18.7	35.7	18.1	1.5	0.2	26.9	25.9
Israel	2019	534	50.3	49.7	13.0	24.2	12.0	1.1	0.0	52.0	48.5
	2023	758	40.9	38.8	17.6	23.5	14.9	2.4	2.8	40.9	40.9
Italy	2019	511	37.5	35.8	23.4	23.7	12.5	3.9	0.8	45.0	31.1
	2023	670	38.3	36.6	19.5	26.1	13.4	3.8	0.7	41.8	35.3
Korea, Rep. of	2019	557	70.7	70.1	12.4	8.9	7.7	0.9	0.0	71.9	69.6
	2023	849	73.6	73.0	11.2	9.1	5.9	0.4	0.5	74.2	72.9
Lithuania	2019	542	43.1	42.5	18.0	21.9	16.1	1.4	0.0	44.1	42.0
	2023	791	43.7	43.5	19.3	21.8	14.8	0.6	0.0	45.3	42.0
Malaysia	2019	1001	42.3	41.5	17.9	20.6	18.0	0.9	1.0	45.2	39.5
	2023	1275	35.0	34.0	21.1	23.7	18.5	0.6	2.2	35.8	34.0
Norway (9)	2019	648	24.9	21.7	21.3	28.1	16.2	12.1	0.6	31.7	18.4
	2023	912	23.0	20.2	23.8	26.8	16.8	7.8	4.7	24.2	22.0
Portugal	2019	474	37.8	36.9	15.2	28.6	17.0	2.3	0.0	44.2	32.1
	2023	774	34.4	32.9	18.6	26.9	17.4	2.8	1.5	34.1	34.6
Qatar	2019	555	39.3	38.3	18.9	26.6	13.7	2.2	0.4	39.3	39.3
	2023	620	34.4	32.3	21.9	22.0	17.8	2.4	3.5	34.5	34.3
Singapore	2019	694	73.3	72.9	11.4	10.4	4.8	0.4	0.1	79.1	67.7
	2023	949	68.8	68.5	13.4	13.2	4.5	0.2	0.2	70.3	67.4
Sweden	2019	565	26.8	25.3	18.0	30.3	20.9	5.3	0.1	27.2	26.0
	2023	725	32.6	29.1	18.2	25.0	17.1	5.0	5.6	33.3	31.8
United Arab Emirates	2019	3154	41.2	39.8	19.1	24.6	13.1	2.9	0.6	42.1	40.3
	2023	4041	45.6	43.1	18.5	22.0	10.9	1.8	3.7	45.9	45.3
United States	2019	1237	41.0	40.0	17.0	26.5	14.1	1.6	0.8	40.1	41.9
	2023	1167	36.9	35.0	18.6	26.0	15.1	1.0	4.3	38.3	35.7
International Avg. (20)	2019	15060	43.2	41.9	17.4	23.2	13.9	3.2	0.3	45.5	40.9
	2023	19539	41.4	39.9	18.5	23.2	13.7	2.7	2.0	42.5	40.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Algebra / Applying
B_MD1_06 ME72090: Inequality for relationship between areas of rectangles - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1151	35.6	34.8	19.8	27.7	15.4	1.9	0.4	36.2	35.1
	2023	1033	37.8	35.6	22.1	24.6	11.9	2.0	3.8	37.1	38.5
Dubai, UAE	2019	816	54.6	53.2	17.8	16.6	10.0	1.7	0.7	52.9	56.2
	2023	1178	56.4	52.8	15.2	16.3	9.5	1.6	4.6	56.3	56.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Reasoning

B_MD1_07 ME72233: Weight of one block on a balance - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	57.0	21.1	54.3	13.9	6.0	3.3	1.4	51.2	63.2
	2023	650	49.0	23.1	45.5	17.5	6.8	3.5	3.6	44.5	53.9
Chinese Taipei	2019	703	71.8	14.1	71.0	9.8	4.0	1.0	0.1	71.3	72.2
	2023	1101	69.7	14.5	69.6	11.3	4.4	0.0	0.1	65.7	73.4
England	2019	479	51.6	25.1	51.2	16.3	6.5	0.9	0.0	48.0	56.1
	2023	596	52.2	19.0	50.7	18.8	8.6	2.2	0.8	47.8	57.2
Finland	2019	687	65.6	11.6	64.8	14.8	7.5	0.9	0.3	62.2	68.9
	2023	860	57.8	15.4	56.3	21.3	4.4	0.9	1.7	56.3	59.2
France	2019	546	48.9	25.4	47.4	17.1	7.0	2.0	1.1	44.2	52.7
	2023	653	49.9	24.1	48.9	19.2	5.9	0.9	1.0	43.0	56.4
Georgia	2019	468	51.6	23.4	49.6	18.2	5.1	3.2	0.5	46.6	56.8
	2023	707	48.2	24.9	45.6	18.8	5.4	2.2	3.1	40.8	55.4
Hong Kong SAR	2019	461	59.9	12.9	59.5	21.6	5.4	0.2	0.5	56.5	62.7
	2023	642	60.6	14.4	60.0	19.0	5.6	0.7	0.2	54.3	66.4
Hungary	2019	664	61.6	17.2	61.3	15.3	5.6	0.6	0.0	54.7	68.7
	2023	800	55.7	18.3	55.3	20.1	5.6	0.4	0.2	50.1	60.9
Israel	2019	534	53.7	17.8	52.4	18.5	8.9	2.4	0.0	48.3	59.6
	2023	758	50.2	22.4	47.5	19.5	5.2	2.5	2.9	45.8	54.1
Italy	2019	511	55.3	21.2	54.1	15.5	7.0	1.1	1.0	45.8	63.7
	2023	670	51.7	22.0	50.3	19.4	5.5	1.2	1.6	47.5	55.3
Korea, Rep. of	2019	557	69.8	14.2	69.7	10.8	5.1	0.2	0.0	66.9	72.8
	2023	849	69.1	14.0	68.4	13.4	3.2	0.5	0.6	66.4	71.8
Lithuania	2019	542	59.3	15.5	58.8	17.7	7.2	0.8	0.0	53.4	65.4
	2023	791	56.9	18.5	56.8	18.1	6.4	0.2	0.0	48.8	65.5
Malaysia	2019	1001	40.8	24.7	40.0	27.1	6.3	0.9	1.0	34.5	47.2
	2023	1275	42.5	31.0	41.2	19.4	5.2	0.7	2.4	40.7	44.5
Norway (9)	2019	648	62.2	14.9	60.9	17.2	4.9	1.4	0.7	56.7	67.5
	2023	912	54.5	14.8	50.9	21.8	5.9	0.9	5.7	52.5	56.3
Portugal	2019	474	49.9	25.6	49.4	18.9	5.1	0.8	0.2	42.6	56.1
	2023	774	50.7	28.9	49.3	15.0	4.0	0.8	2.0	47.9	53.4
Qatar	2019	555	48.0	22.0	46.5	20.5	8.1	2.7	0.4	45.2	50.9
	2023	620	46.2	24.4	43.9	21.6	5.2	1.0	3.9	48.5	44.0
Singapore	2019	694	66.6	9.7	66.4	15.8	7.8	0.2	0.1	62.4	70.6
	2023	949	66.4	10.4	66.2	17.1	6.0	0.1	0.2	62.7	69.6
Sweden	2019	565	61.1	14.9	59.7	18.6	4.5	1.9	0.3	58.0	64.7
	2023	725	57.7	16.2	52.8	15.9	6.7	1.9	6.6	54.7	60.4
United Arab Emirates	2019	3153	48.0	24.6	47.0	19.9	6.3	1.4	0.7	44.4	51.4
	2023	4041	49.5	23.3	46.6	18.9	5.5	1.4	4.2	46.8	51.9
United States	2019	1237	58.8	17.4	57.6	17.5	5.5	1.2	0.8	53.7	63.9
	2023	1167	51.3	18.9	48.7	20.2	7.1	0.4	4.6	48.6	53.9
International Avg. (20)	2019	15059	57.1	18.7	56.1	17.3	6.2	1.4	0.4	52.3	61.7
	2023	19540	54.5	19.9	52.7	18.3	5.6	1.1	2.3	50.7	58.2

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Reasoning
B_MD1_07 ME72233: Weight of one block on a balance - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1150	45.7	25.9	44.9	20.4	7.2	1.1	0.5	41.7	49.2
	2023	1033	42.7	29.3	40.3	19.8	5.0	1.2	4.5	39.1	46.0
Dubai, UAE	2019	816	55.1	19.9	53.9	17.8	6.1	1.5	0.8	51.1	59.2
	2023	1178	58.5	17.1	55.0	17.3	4.5	1.1	5.1	55.8	61.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Applying
B_MD1_08A ME72106A: Figures made of straws - Figure 7 - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	57.4	36.7	49.5	11.9	1.8	55.9	58.9
	2023	649	39.2	50.4	32.5	12.8	4.3	40.5	37.9
Chinese Taipei	2019	703	87.7	12.2	87.1	0.6	0.1	89.3	86.1
	2023	1101	81.6	18.2	81.1	0.5	0.1	81.5	81.8
England	2019	479	62.1	36.4	59.7	3.9	0.0	62.1	62.1
	2023	596	54.0	43.1	50.6	5.5	0.8	51.6	56.7
Finland	2019	687	65.4	33.2	62.6	4.0	0.3	67.1	63.7
	2023	858	59.0	38.6	55.5	4.0	1.9	62.3	56.2
France	2019	546	63.1	34.6	59.1	5.0	1.3	61.3	64.5
	2023	652	47.4	49.2	44.4	5.3	1.1	53.2	41.9
Georgia	2019	468	37.3	53.8	32.0	13.2	1.0	33.8	40.9
	2023	707	39.5	49.2	32.2	15.0	3.7	34.1	44.7
Hong Kong SAR	2019	461	77.2	22.3	75.6	1.7	0.5	75.9	78.4
	2023	642	68.4	31.1	67.2	1.5	0.2	66.5	70.1
Hungary	2019	664	63.7	35.7	62.8	1.5	0.0	65.2	62.3
	2023	800	54.7	44.7	54.0	0.9	0.4	56.3	53.2
Israel	2019	534	64.5	33.7	61.2	4.9	0.2	63.7	65.2
	2023	758	45.2	49.0	40.3	6.6	4.1	39.6	50.1
Italy	2019	511	53.1	43.5	49.3	6.2	1.0	48.8	56.9
	2023	670	48.8	47.0	44.8	6.2	2.0	46.4	50.9
Korea, Rep. of	2019	557	74.9	24.7	73.7	1.6	0.0	77.5	72.2
	2023	849	73.4	26.0	72.0	1.4	0.6	71.7	75.1
Lithuania	2019	542	61.7	36.9	59.4	3.7	0.0	61.6	61.8
	2023	791	54.5	43.6	52.3	4.1	0.0	57.3	51.5
Malaysia	2019	1001	54.4	44.3	53.0	1.6	1.1	53.8	55.1
	2023	1275	34.8	62.3	33.3	1.5	3.0	36.4	33.1
Norway (9)	2019	648	59.9	37.5	56.0	5.8	0.7	56.0	63.7
	2023	912	59.6	35.3	52.1	6.8	5.9	62.3	57.1
Portugal	2019	474	71.2	27.8	68.8	3.1	0.2	69.3	72.8
	2023	774	57.6	39.8	54.1	3.9	2.2	58.1	57.2
Qatar	2019	555	44.5	52.5	42.1	4.6	0.8	48.9	40.0
	2023	620	32.1	61.8	29.2	4.9	4.0	32.8	31.5
Singapore	2019	694	81.3	18.6	80.9	0.3	0.2	82.7	79.9
	2023	949	76.0	23.8	75.4	0.6	0.2	77.0	75.2
Sweden	2019	565	65.3	33.1	62.3	4.2	0.4	67.4	62.9
	2023	725	63.6	32.0	55.9	5.5	6.7	66.8	60.6
United Arab Emirates	2019	3158	47.1	50.5	45.0	3.8	0.7	50.0	44.3
	2023	4041	47.4	48.3	43.5	3.3	4.9	46.2	48.5
United States	2019	1237	51.3	46.6	49.1	3.2	1.0	54.6	48.1
	2023	1167	41.1	54.6	38.0	2.4	5.0	38.0	44.0
International Avg. (20)	2019	15064	62.2	35.7	59.5	4.2	0.6	62.2	62.0
	2023	19536	53.9	42.4	50.4	4.6	2.5	53.9	53.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Algebra / Applying
B_MD1_08A ME72106A: Figures made of straws - Figure 7 - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1153	37.3	59.7	35.5	4.3	0.5	42.4	32.7
	2023	1034	33.1	60.2	29.9	4.9	5.0	33.8	32.5
Dubai, UAE	2019	816	63.1	35.8	61.2	2.2	0.8	63.6	62.6
	2023	1178	64.3	33.0	59.4	2.0	5.6	61.2	66.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Reasoning

B_MD1_08B ME72106B: Figures made of straws - Figure 50 - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	13.5	64.4	10.1	22.8	2.8	11.3	15.9
	2023	650	7.9	66.3	5.7	21.0	7.0	6.2	9.5
Chinese Taipei	2019	703	72.0	27.6	71.1	1.2	0.1	71.7	72.4
	2023	1101	66.3	33.1	65.2	1.6	0.1	66.5	66.2
England	2019	479	25.9	65.4	22.8	11.3	0.5	25.8	25.9
	2023	596	22.8	67.1	19.9	12.1	1.0	19.4	26.6
Finland	2019	687	24.4	68.2	22.0	9.2	0.6	21.0	27.4
	2023	857	18.1	72.1	16.0	9.2	2.7	16.8	19.2
France	2019	546	19.1	68.7	16.2	13.5	1.7	18.0	20.0
	2023	653	10.2	76.3	8.7	13.2	1.8	10.2	10.2
Georgia	2019	468	16.8	61.0	12.3	24.6	2.1	11.9	21.4
	2023	707	17.8	61.0	13.2	20.8	5.0	15.7	19.8
Hong Kong SAR	2019	461	56.1	41.5	52.9	5.1	0.5	54.7	57.3
	2023	640	49.2	49.0	47.6	2.7	0.7	46.9	51.4
Hungary	2019	664	25.9	69.4	24.3	6.4	0.0	24.6	27.2
	2023	800	21.8	72.1	20.1	7.1	0.7	19.7	23.8
Israel	2019	534	37.0	55.9	32.8	10.8	0.4	36.9	37.1
	2023	758	20.2	66.2	16.7	11.9	5.1	14.8	24.8
Italy	2019	511	20.9	66.0	17.4	14.8	1.8	21.4	20.5
	2023	670	18.9	65.4	15.2	16.4	3.0	16.5	20.8
Korea, Rep. of	2019	557	54.7	43.6	52.7	3.7	0.0	54.3	55.2
	2023	849	53.5	44.1	50.8	4.3	0.8	49.7	57.3
Lithuania	2019	542	25.8	65.9	23.0	11.2	0.0	21.6	30.3
	2023	791	20.0	69.5	17.4	12.8	0.4	15.6	24.5
Malaysia	2019	1001	16.5	79.5	15.7	3.6	1.3	15.4	17.6
	2023	1275	8.7	85.2	8.1	2.7	4.0	7.9	9.5
Norway (9)	2019	648	28.5	60.4	24.1	14.8	0.8	28.4	28.6
	2023	912	27.7	57.7	22.1	12.5	7.7	29.0	26.6
Portugal	2019	474	33.5	57.7	29.1	11.9	1.4	32.0	34.7
	2023	774	20.0	67.6	16.9	12.2	3.3	18.2	21.5
Qatar	2019	555	18.3	73.7	16.5	8.6	1.2	19.3	17.3
	2023	620	14.1	73.4	12.0	8.8	5.8	15.6	12.7
Singapore	2019	694	62.4	36.8	60.9	2.1	0.2	65.9	58.9
	2023	949	58.4	41.0	57.6	1.0	0.4	58.9	57.9
Sweden	2019	565	36.9	55.5	32.4	11.4	0.7	40.8	32.9
	2023	724	37.2	51.7	30.6	9.3	8.4	37.6	36.9
United Arab Emirates	2019	3158	24.3	70.0	22.5	6.6	1.0	24.9	23.7
	2023	4041	24.8	65.9	21.8	6.3	6.0	21.3	28.0
United States	2019	1237	25.1	70.0	23.4	5.4	1.2	25.9	24.2
	2023	1167	15.4	76.8	13.9	3.5	5.8	12.9	17.7
International Avg. (20)	2019	15064	31.9	60.0	29.1	9.9	0.9	31.3	32.4
	2023	19534	26.7	63.1	24.0	9.5	3.5	25.0	28.2

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Reasoning

B_MD1_08B ME72106B: Figures made of straws - Figure 50 - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1153	13.6	79.6	12.6	6.9	0.9	13.6	13.7
	2023	1034	13.7	75.4	12.0	6.2	6.4	12.8	14.5
Dubai, UAE	2019	816	39.5	57.4	37.4	4.3	0.9	41.6	37.3
	2023	1178	40.4	52.5	35.5	5.8	6.2	35.0	44.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Reasoning

B_MD1_08C ME72106C: Figures made of straws - rule - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	6.6	56.7	4.0	36.1	3.2	4.3	9.1
	2023	650	2.4	53.0	1.3	38.2	7.4	3.4	1.4
Chinese Taipei	2019	702	55.3	40.9	50.6	8.4	0.1	56.0	54.6
	2023	1101	48.9	48.4	46.2	5.3	0.1	50.8	47.1
England	2019	479	28.2	54.8	21.6	23.1	0.5	27.5	29.2
	2023	596	23.9	56.8	17.8	24.3	1.1	20.3	27.6
Finland	2019	687	13.5	63.8	10.0	25.7	0.6	13.1	13.9
	2023	860	6.5	70.8	4.9	21.4	3.0	6.5	6.4
France	2019	546	13.5	43.8	6.8	47.5	1.9	18.5	9.9
	2023	653	7.9	49.7	4.3	43.2	2.8	8.8	7.1
Georgia	2019	468	15.1	40.8	7.2	49.5	2.4	6.5	21.9
	2023	707	15.9	41.2	7.8	45.7	5.3	17.6	14.5
Hong Kong SAR	2019	461	41.5	53.1	37.7	8.7	0.5	35.9	46.4
	2023	642	33.2	60.0	29.8	9.6	0.7	30.2	35.9
Hungary	2019	664	17.7	56.4	12.2	31.5	0.0	20.3	15.4
	2023	800	13.8	57.9	9.3	32.1	0.7	12.9	14.5
Israel	2019	534	32.8	50.7	24.8	23.4	1.1	34.0	31.6
	2023	758	14.2	55.7	9.2	29.1	5.9	12.8	15.5
Italy	2019	511	13.2	53.9	8.2	34.6	3.3	14.8	11.7
	2023	670	13.2	47.2	7.1	42.4	3.3	13.4	13.0
Korea, Rep. of	2019	557	49.6	45.2	44.4	10.4	0.0	52.3	46.8
	2023	849	45.8	47.5	40.2	11.5	0.8	43.8	47.7
Lithuania	2019	542	18.8	58.1	13.5	28.4	0.0	16.8	21.1
	2023	791	15.3	53.8	9.7	35.8	0.7	14.0	16.5
Malaysia	2019	1001	6.2	85.0	5.6	7.9	1.5	5.9	6.5
	2023	1275	2.0	86.5	1.7	7.0	4.8	1.8	2.1
Norway (9)	2019	648	19.7	50.9	12.5	35.8	0.9	21.7	18.0
	2023	912	18.4	56.9	12.8	22.4	7.9	21.3	15.8
Portugal	2019	474	27.1	56.9	21.1	19.7	2.3	23.1	30.4
	2023	774	17.4	58.2	12.3	25.8	3.8	19.0	16.2
Qatar	2019	555	13.4	68.1	10.5	20.0	1.3	13.8	12.9
	2023	620	11.2	68.6	8.7	16.5	6.2	12.9	9.8
Singapore	2019	694	56.3	41.6	53.5	4.6	0.3	63.3	49.6
	2023	949	48.5	49.7	46.8	3.0	0.6	49.5	47.6
Sweden	2019	565	37.0	50.9	29.9	18.4	0.7	40.6	33.0
	2023	725	34.7	48.3	25.6	17.5	8.6	34.0	35.2
United Arab Emirates	2019	3159	20.8	68.6	18.0	12.2	1.2	21.5	20.1
	2023	4042	21.6	63.6	17.5	12.4	6.5	19.5	23.3
United States	2019	1237	14.1	77.4	12.7	8.5	1.3	13.0	15.1
	2023	1167	11.5	77.6	10.0	6.1	6.2	9.4	13.4
International Avg. (20)	2019	15064	25.0	55.9	20.2	22.7	1.2	25.1	24.9
	2023	19541	20.3	57.6	16.2	22.5	3.8	20.1	20.5

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Reasoning

B_MD1_08C ME72106C: Figures made of straws - rule - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1154	9.9	77.5	8.5	12.9	1.0	9.9	9.9
	2023	1034	10.3	73.2	8.4	11.8	6.6	9.8	10.7
Dubai, UAE	2019	816	38.0	55.6	34.1	9.0	1.4	39.4	36.6
	2023	1178	37.0	52.7	30.9	9.6	6.8	34.1	39.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Geometry and Measurement / Knowing
B_MD1_09A ME72128A: Parallelogram - area - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	23.1	56.3	17.0	23.4	3.3	24.0	22.3
	2023	650	12.5	58.9	8.4	25.2	7.6	11.8	13.2
Chinese Taipei	2019	703	76.6	22.8	74.7	2.4	0.1	76.7	76.5
	2023	1101	70.9	28.7	69.9	1.3	0.1	73.7	68.4
England	2019	479	40.9	52.5	36.4	10.6	0.5	41.9	39.8
	2023	596	45.9	46.9	39.8	12.1	1.1	41.6	50.6
Finland	2019	687	59.3	37.5	54.7	7.1	0.7	58.9	59.7
	2023	860	47.7	46.8	42.7	7.0	3.5	53.7	42.7
France	2019	546	28.7	54.3	21.9	21.8	2.0	27.7	29.6
	2023	652	19.6	64.5	15.8	16.4	3.3	18.9	20.4
Georgia	2019	468	23.9	58.2	18.3	20.9	2.6	20.1	27.9
	2023	707	27.8	58.8	22.6	12.6	5.9	28.5	27.0
Hong Kong SAR	2019	461	80.6	19.0	78.9	1.6	0.5	77.6	83.2
	2023	642	71.8	27.2	69.3	2.4	1.2	72.3	71.3
Hungary	2019	664	31.8	57.5	26.8	15.7	0.0	30.9	32.7
	2023	800	27.7	64.5	24.7	10.1	0.8	26.0	29.2
Israel	2019	534	45.5	48.2	40.1	10.3	1.4	41.3	49.8
	2023	758	37.8	51.2	31.1	11.3	6.3	36.5	38.9
Italy	2019	511	47.3	44.5	40.0	12.0	3.5	52.5	42.5
	2023	670	42.1	46.0	33.4	16.9	3.6	42.4	41.8
Korea, Rep. of	2019	557	73.9	25.3	71.7	3.0	0.0	72.2	75.6
	2023	849	69.5	29.4	66.9	2.8	0.9	67.3	71.5
Lithuania	2019	542	31.8	63.0	29.3	7.7	0.0	30.1	33.6
	2023	790	36.5	55.4	31.9	12.1	0.7	35.4	37.6
Malaysia	2019	1001	24.4	71.6	23.1	3.5	1.9	26.3	22.4
	2023	1275	10.4	82.3	9.5	2.4	5.8	10.3	10.4
Norway (9)	2019	648	49.4	41.4	40.4	16.8	1.4	46.8	52.1
	2023	912	48.5	40.4	38.0	13.3	8.3	51.4	45.8
Portugal	2019	474	29.6	56.8	23.9	16.7	2.6	27.5	31.6
	2023	772	23.7	60.3	18.8	17.0	3.9	21.9	25.3
Qatar	2019	555	22.2	69.1	19.7	9.7	1.5	17.3	27.4
	2023	620	17.8	72.0	15.6	5.4	7.1	14.5	20.8
Singapore	2019	694	65.3	34.1	64.0	1.4	0.5	64.6	65.9
	2023	949	65.5	34.0	64.5	0.9	0.6	64.7	66.2
Sweden	2019	565	53.9	40.4	47.3	10.8	1.5	57.3	50.6
	2023	725	51.2	39.1	41.1	10.5	9.2	51.8	50.7
United Arab Emirates	2019	3158	31.3	62.9	28.6	6.8	1.7	31.5	31.0
	2023	4039	34.1	58.2	30.0	4.8	6.9	32.0	35.9
United States	2019	1237	31.5	64.5	29.7	3.8	1.9	32.8	30.3
	2023	1167	27.3	65.2	24.5	3.9	6.4	26.7	27.9
International Avg. (20)	2019	15064	43.6	49.0	39.3	10.3	1.4	42.9	44.2
	2023	19534	39.4	51.5	34.9	9.4	4.2	39.1	39.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Geometry and Measurement / Knowing
B_MD1_09A ME72128A: Parallelogram - area - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019 2023	1153 1034	22.7 20.9	71.5 68.8	21.0 18.1	6.3 6.2	1.2 6.9	24.4 18.8	21.2 22.6
Dubai, UAE	2019 2023	816 1178	46.5 48.7	48.9 45.0	42.5 42.7	6.7 5.0	2.0 7.3	44.5 45.0	48.5 51.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Geometry and Measurement / Reasoning
B_MD1_09B ME72128B: Parallelogram - perimeter - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019 2023	580 650	16.3 7.8	49.1 55.7	14.6 6.6	3.7 1.7	29.1 27.3	3.6 8.7	16.6 7.9	15.7 7.7
Chinese Taipei	2019 2023	703 1101	73.7 70.8	18.8 21.5	12.9 13.9	64.3 62.1	3.9 2.4	0.1 0.1	74.4 71.5	73.0 70.1
England	2019 2023	479 596	30.4 27.5	45.2 47.5	24.5 23.3	12.8 10.8	16.9 17.3	0.5 1.1	26.2 24.1	35.6 31.2
Finland	2019 2023	687 858	34.4 27.1	37.7 50.0	38.1 25.8	10.7 10.4	12.7 9.7	0.7 4.0	34.7 29.8	34.1 24.7
France	2019 2023	546 652	29.4 20.9	44.8 53.7	16.0 14.7	14.0 8.8	23.0 19.0	2.3 3.8	24.6 21.4	33.8 20.4
Georgia	2019 2023	468 707	26.6 25.7	47.8 49.5	14.6 13.3	12.7 12.8	22.0 17.9	2.9 6.5	25.3 25.9	28.1 25.4
Hong Kong SAR	2019 2023	461 640	65.3 60.5	26.5 29.8	12.7 14.6	55.3 49.5	4.8 4.7	0.7 1.3	63.1 53.9	67.2 66.7
Hungary	2019 2023	664 800	30.6 27.7	50.7 55.6	15.0 13.9	18.1 17.0	16.2 12.8	0.0 0.8	27.9 25.2	33.1 29.9
Israel	2019 2023	534 758	36.8 27.7	41.5 42.9	24.8 25.8	19.0 8.5	13.1 16.2	1.6 6.7	35.5 25.6	38.3 29.4
Italy	2019 2023	511 670	46.7 44.0	35.0 36.2	19.9 16.7	29.4 26.7	12.1 16.5	3.7 3.9	45.7 44.3	47.6 43.8
Korea, Rep. of	2019 2023	557 849	52.7 67.7	25.6 20.3	38.6 21.0	30.8 53.9	5.0 4.0	0.0 0.9	49.3 67.5	56.3 67.8
Lithuania	2019 2023	542 791	34.0 37.1	50.1 44.0	19.9 20.5	20.9 21.7	9.1 12.7	0.0 1.1	33.4 35.0	34.6 39.3
Malaysia	2019 2023	1001 1275	21.1 10.6	68.6 77.5	10.3 6.4	14.6 6.4	4.4 3.0	2.1 6.8	23.0 10.3	19.1 10.9
Norway (9)	2019 2023	648 911	27.5 32.4	41.8 39.2	28.6 22.5	7.0 13.0	20.7 15.6	1.9 9.8	26.4 33.3	28.7 31.7
Portugal	2019 2023	474 772	37.0 26.1	43.0 51.3	17.7 13.2	21.7 13.8	14.7 16.1	3.0 5.6	34.4 27.7	39.5 24.6
Qatar	2019 2023	555 619	13.1 10.4	70.2 71.0	10.2 7.3	6.2 5.0	11.5 8.7	1.9 8.0	9.0 9.9	17.4 10.8
Singapore	2019 2023	694 949	66.7 62.8	24.8 29.9	15.7 13.3	57.6 55.1	1.3 1.0	0.6 0.7	66.7 61.2	66.8 64.4
Sweden	2019 2023	565 725	31.2 29.7	38.2 38.7	39.2 29.6	6.7 7.8	14.1 13.5	1.8 10.5	32.1 28.7	30.2 30.6
United Arab Emirates	2019 2023	3158 4041	21.2 26.2	64.5 56.3	12.3 12.4	12.8 16.0	8.5 7.5	1.9 7.9	20.0 23.4	22.3 28.8
United States	2019 2023	1237 1166	24.7 19.8	59.8 62.4	19.7 18.1	13.0 8.6	5.4 3.5	2.1 7.5	25.3 19.3	24.2 20.2
International Avg. (20)	2019 2023	15064 19530	36.0 33.1	44.2 46.6	20.3 16.6	21.6 20.5	12.4 11.5	1.6 4.8	34.7 32.3	37.3 33.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Geometry and Measurement / Reasoning
B_MD1_09B ME72128B: Parallelogram - perimeter - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1153	13.9	72.2	11.7	6.7	7.9	1.5	14.7	13.2
	2023	1034	14.1	68.9	7.5	8.2	7.3	8.1	11.4	16.5
Dubai, UAE	2019	816	34.2	51.0	15.8	22.8	8.2	2.2	30.4	38.2
	2023	1178	41.6	39.7	18.0	25.7	8.6	8.1	38.0	44.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Geometry and Measurement / Applying
B_MD1_10 ME72119: Point to complete a parallelogram - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	23.4	71.9	22.0	2.1	4.0	25.1	21.3
	2023	650	12.8	69.5	10.2	11.5	8.7	12.5	13.1
Chinese Taipei	2019	703	80.4	19.5	79.9	0.4	0.1	83.1	77.7
	2023	1101	77.0	22.8	76.5	0.4	0.2	79.7	74.5
England	2019	479	48.3	50.7	47.3	1.6	0.5	50.9	45.0
	2023	596	44.6	52.2	42.1	4.5	1.2	44.1	45.3
Finland	2019	687	50.2	48.3	48.6	2.2	0.9	54.3	46.2
	2023	860	35.1	59.9	32.4	3.2	4.5	37.2	33.3
France	2019	546	59.8	38.1	56.6	2.8	2.4	65.6	54.9
	2023	653	50.3	46.0	46.5	3.4	4.1	51.4	49.2
Georgia	2019	468	34.8	60.5	32.3	3.8	3.4	34.3	35.4
	2023	707	34.4	56.6	29.7	6.7	7.0	34.3	34.5
Hong Kong SAR	2019	461	66.1	33.3	64.8	1.3	0.7	63.9	67.9
	2023	642	62.5	36.2	60.3	2.2	1.3	61.7	63.2
Hungary	2019	664	59.0	40.3	58.0	1.7	0.0	61.8	56.2
	2023	800	52.0	46.6	50.4	1.8	1.1	56.9	47.4
Israel	2019	534	47.5	50.4	45.6	2.0	2.0	50.2	44.5
	2023	758	37.8	54.2	33.0	4.5	8.3	38.2	37.5
Italy	2019	511	46.8	50.9	44.8	0.6	3.7	48.9	45.0
	2023	670	39.8	54.7	36.1	4.8	4.4	41.8	38.1
Korea, Rep. of	2019	557	85.9	14.0	85.1	0.9	0.0	86.8	85.0
	2023	849	81.5	18.0	78.9	2.2	0.9	81.5	81.4
Lithuania	2019	542	47.4	52.0	46.9	1.2	0.0	44.7	50.2
	2023	791	38.8	58.4	37.1	3.4	1.1	39.5	38.1
Malaysia	2019	1001	41.0	56.9	39.5	1.2	2.4	45.0	37.0
	2023	1275	31.4	62.6	28.7	1.5	7.3	30.1	32.9
Norway (9)	2019	648	47.8	49.5	45.3	3.2	2.0	48.9	46.6
	2023	912	41.9	49.1	35.4	5.7	9.7	46.5	37.6
Portugal	2019	474	45.5	51.8	43.2	1.5	3.5	44.2	46.5
	2023	774	29.9	62.2	26.5	5.7	5.6	33.7	26.2
Qatar	2019	555	29.7	67.4	28.5	2.1	2.0	33.0	26.4
	2023	620	20.4	70.8	18.1	2.2	8.9	22.9	18.0
Singapore	2019	694	73.3	26.5	72.5	0.4	0.6	76.9	69.8
	2023	949	73.1	26.5	72.0	0.5	1.0	75.7	70.8
Sweden	2019	565	35.9	61.1	34.3	2.5	2.1	39.5	32.2
	2023	725	40.9	49.5	34.2	4.7	11.6	43.3	38.6
United Arab Emirates	2019	3156	30.5	66.7	29.3	2.0	2.0	31.4	29.7
	2023	4042	32.7	59.8	29.0	2.5	8.7	31.4	33.8
United States	2019	1237	36.3	61.6	35.2	1.0	2.2	39.7	33.1
	2023	1167	29.4	63.4	26.4	2.4	7.8	28.7	30.0
International Avg. (20)	2019	15062	49.5	48.6	48.0	1.7	1.7	51.4	47.5
	2023	19541	43.3	51.0	40.2	3.7	5.2	44.6	42.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Geometry and Measurement / Applying
B_MD1_10 ME72119: Point to complete a parallelogram - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1151	19.0	77.9	18.3	2.1	1.7	21.6	16.8
	2023	1034	16.6	74.3	14.8	2.1	8.7	16.0	17.1
Dubai, UAE	2019	816	47.8	50.1	45.8	1.7	2.4	49.3	46.3
	2023	1178	51.6	42.7	45.6	2.4	9.2	49.9	53.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Data and Probability / Applying
B_MD1_11A ME72153A: Bar graph of cars sold - per quarter - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019 2023	580 650	20.2 11.3	68.3 67.8	17.3 8.6	10.2 14.6	4.2 9.0	18.0 11.0	22.6 11.5
Chinese Taipei	2019 2023	703 1101	80.1 73.3	19.6 26.3	78.6 72.2	1.7 1.2	0.1 0.3	81.7 76.5	78.5 70.3
England	2019 2023	479 596	48.5 43.1	47.1 50.8	44.4 38.4	8.0 9.6	0.5 1.2	46.0 40.3	51.5 46.3
Finland	2019 2023	687 860	53.0 36.1	43.5 56.7	49.1 32.0	6.0 6.3	1.3 5.1	50.9 34.2	55.0 37.7
France	2019 2023	546 652	49.7 37.9	45.9 54.1	45.2 33.0	5.5 7.8	3.3 5.1	50.2 36.2	49.2 39.4
Georgia	2019 2023	468 707	33.7 31.2	51.0 52.3	26.0 23.7	19.6 15.6	3.4 8.4	30.3 29.6	37.4 32.6
Hong Kong SAR	2019 2023	461 642	76.3 73.5	22.9 25.6	73.9 71.0	2.5 2.1	0.7 1.3	77.4 72.4	75.5 74.6
Hungary	2019 2023	664 800	57.3 46.4	41.4 50.4	55.6 43.7	3.0 4.8	0.0 1.1	53.2 41.8	61.4 50.5
Israel	2019 2023	534 758	58.8 37.9	36.1 50.8	51.5 31.0	10.1 9.3	2.3 8.8	56.3 33.7	61.4 41.5
Italy	2019 2023	511 670	44.5 38.1	48.3 52.1	38.7 32.1	9.3 10.9	3.7 4.9	40.0 32.5	48.5 42.8
Korea, Rep. of	2019 2023	557 849	81.2 75.2	17.9 23.5	77.5 71.3	4.6 4.4	0.0 0.9	79.8 74.6	82.7 75.8
Lithuania	2019 2023	542 791	50.7 41.4	47.6 53.4	49.0 37.7	3.4 7.6	0.0 1.3	48.7 36.2	52.7 46.8
Malaysia	2019 2023	1001 1274	30.7 11.0	65.2 78.6	28.8 9.7	3.3 3.5	2.7 8.2	33.9 10.8	27.4 11.3
Norway (9)	2019 2023	648 912	65.0 49.6	29.9 39.6	55.5 39.0	12.5 10.8	2.1 10.6	65.3 52.4	64.8 47.2
Portugal	2019 2023	474 772	49.3 29.9	45.4 60.8	44.2 25.9	6.8 7.1	3.5 6.2	44.3 24.6	53.4 34.9
Qatar	2019 2023	555 620	30.5 19.7	62.7 68.9	27.5 17.0	7.6 4.6	2.3 9.5	29.9 22.4	31.1 17.3
Singapore	2019 2023	694 949	80.7 74.7	19.1 24.8	79.9 73.3	0.5 0.8	0.6 1.1	80.3 74.8	81.1 74.6
Sweden	2019 2023	565 725	49.0 47.9	43.6 40.2	41.9 36.9	12.0 10.7	2.5 12.1	45.4 47.8	52.5 47.9
United Arab Emirates	2019 2023	3157 4042	29.9 31.5	63.9 58.4	27.3 26.9	6.6 5.4	2.2 9.2	28.9 26.9	30.8 35.7
United States	2019 2023	1237 1167	47.0 32.8	50.2 59.3	44.6 29.0	2.8 3.3	2.4 8.4	46.5 31.5	47.6 34.1
International Avg. (20)	2019 2023	15063 19537	51.8 42.1	43.5 49.7	47.8 37.6	6.8 7.0	1.9 5.6	50.4 40.5	53.2 43.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Data and Probability / Applying
B_MD1_11A ME72153A: Bar graph of cars sold - per quarter - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1152	18.1	75.8	16.8	5.5	2.0	17.2	18.9
	2023	1034	17.8	71.5	15.5	4.0	9.0	13.8	21.3
Dubai, UAE	2019	816	49.2	46.5	45.0	6.0	2.6	48.2	50.1
	2023	1178	50.7	41.4	42.6	6.3	9.8	44.0	56.3

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Data and Probability / Applying
B_MD1_11B ME72153B: Bar graph of cars sold - percent in 3rd quarter - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	6.4	74.2	5.1	15.5	5.2	6.1	6.8
	2023	650	3.7	67.8	2.6	17.9	11.7	3.0	4.5
Chinese Taipei	2019	703	32.0	62.7	29.5	7.6	0.2	31.9	32.1
	2023	1101	35.5	61.4	33.7	4.5	0.4	35.5	35.4
England	2019	479	15.3	72.3	13.1	13.7	0.9	14.2	16.7
	2023	595	15.5	69.8	12.8	14.4	3.1	11.5	20.0
Finland	2019	687	10.5	77.9	9.1	11.3	1.7	8.9	11.9
	2023	860	9.5	75.5	7.9	9.8	6.8	9.1	9.7
France	2019	546	10.2	71.1	8.0	16.5	4.3	10.8	9.6
	2023	653	7.2	70.2	5.5	17.4	6.9	6.1	8.2
Georgia	2019	468	6.0	66.0	4.2	24.5	5.4	2.3	9.7
	2023	707	9.4	62.6	6.5	19.7	11.1	10.7	8.3
Hong Kong SAR	2019	461	54.7	42.5	51.4	4.9	1.2	52.5	56.7
	2023	638	49.1	47.8	46.1	3.7	2.3	41.8	56.1
Hungary	2019	664	23.7	69.0	21.4	9.4	0.1	20.2	27.0
	2023	800	16.5	72.3	14.3	11.6	1.7	13.3	19.3
Israel	2019	534	17.1	67.8	14.0	14.6	3.6	14.2	20.2
	2023	758	6.3	69.3	4.6	14.9	11.2	3.4	8.7
Italy	2019	511	8.0	73.9	6.4	13.8	5.8	9.8	6.4
	2023	670	8.4	68.3	6.3	18.7	6.7	6.2	10.2
Korea, Rep. of	2019	557	26.4	66.6	23.8	9.6	0.0	27.1	25.6
	2023	848	22.7	70.0	20.5	8.3	1.2	23.0	22.4
Lithuania	2019	542	19.3	71.5	17.1	11.1	0.3	22.8	15.9
	2023	791	18.0	66.8	14.7	16.8	1.7	17.7	18.4
Malaysia	2019	1001	11.0	83.2	10.2	2.2	4.3	11.7	10.3
	2023	1275	4.0	83.3	3.5	2.9	10.4	3.6	4.4
Norway (9)	2019	648	12.3	67.2	9.4	18.6	4.8	11.7	12.8
	2023	911	6.6	67.1	4.7	15.3	12.9	6.0	7.1
Portugal	2019	474	13.6	68.4	10.7	16.0	4.8	11.7	15.2
	2023	773	10.3	70.2	8.1	13.7	8.0	10.7	10.0
Qatar	2019	555	9.9	78.4	8.6	9.7	3.3	9.9	9.8
	2023	620	7.4	75.5	6.0	6.4	12.0	8.4	6.4
Singapore	2019	694	65.2	34.2	64.1	1.0	0.8	68.7	61.9
	2023	949	62.0	36.8	60.0	1.5	1.7	63.5	60.6
Sweden	2019	565	17.5	65.7	14.0	15.8	4.6	15.0	20.3
	2023	725	19.7	57.4	14.1	13.1	15.4	17.8	21.4
United Arab Emirates	2019	3159	13.8	77.7	12.4	6.3	3.5	11.9	15.6
	2023	4041	15.7	69.0	12.9	6.3	11.8	12.7	18.5
United States	2019	1237	19.4	75.9	18.3	2.4	3.4	19.8	19.1
	2023	1167	11.8	76.6	10.2	3.2	9.9	8.4	15.0
International Avg. (20)	2019	15065	19.6	68.3	17.5	11.2	2.9	19.1	20.2
	2023	19532	17.0	66.9	14.8	11.0	7.4	15.6	18.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Data and Probability / Applying
B_MD1_11B ME72153B: Bar graph of cars sold - percent in 3rd quarter - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019 2023	1154 1034	8.0 6.4	84.5 77.7	7.3 5.3	5.5 6.3	2.6 10.7	6.7 4.9	9.2 7.7
Dubai, UAE	2019 2023	816 1178	23.9 29.7	68.3 56.4	21.4 23.8	6.3 6.6	4.0 13.2	22.0 23.5	25.8 35.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Data and Probability / Applying
B_MD1_12 ME72172: Probability of object landing upright - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	49.4	6.7	33.7	5.9	45.3	1.6	6.8	54.0	44.7
	2023	650	28.0	11.4	39.9	10.3	23.9	1.4	13.1	28.6	27.3
Chinese Taipei	2019	703	74.2	6.6	15.4	3.7	73.9	0.1	0.2	74.8	73.5
	2023	1101	71.9	6.8	16.0	5.1	71.4	0.1	0.6	76.2	67.9
England	2019	479	58.5	5.3	29.7	5.2	56.7	2.2	0.9	57.1	60.2
	2023	596	51.7	7.3	31.6	7.4	49.5	0.4	3.7	50.5	52.9
Finland	2019	687	60.8	5.5	25.8	7.1	59.5	0.5	1.7	59.7	61.7
	2023	860	48.2	5.7	33.0	9.3	44.7	0.2	7.1	50.1	46.6
France	2019	546	54.0	8.9	28.5	6.2	51.1	0.5	4.8	55.1	53.1
	2023	653	35.1	7.6	45.0	7.2	32.3	0.6	7.3	36.4	33.8
Georgia	2019	468	26.4	9.7	51.5	6.6	24.4	2.2	5.7	23.4	29.6
	2023	707	28.6	7.9	46.4	7.4	24.6	1.9	11.9	28.5	28.6
Hong Kong SAR	2019	461	55.7	6.1	29.0	8.5	54.6	0.7	1.2	56.4	55.0
	2023	642	61.4	3.2	26.1	8.2	59.7	0.3	2.5	58.1	64.7
Hungary	2019	664	41.2	7.5	44.8	5.5	40.5	0.9	0.6	40.7	41.7
	2023	800	34.1	7.7	47.2	9.9	33.5	0.1	1.7	34.5	33.7
Israel	2019	534	63.3	5.3	25.4	4.3	60.4	0.7	3.9	63.8	62.8
	2023	758	42.9	6.5	32.6	10.2	37.0	0.7	12.9	39.9	45.4
Italy	2019	511	53.9	7.4	26.5	8.8	49.9	0.9	6.4	57.0	51.2
	2023	670	44.0	7.6	33.9	9.8	40.3	1.0	7.4	40.0	47.4
Korea, Rep. of	2019	557	82.0	3.6	11.3	3.1	81.6	0.2	0.2	83.5	80.4
	2023	849	76.3	3.9	14.1	5.3	75.3	0.0	1.4	75.6	77.0
Lithuania	2019	542	59.8	6.7	27.2	5.9	59.3	0.2	0.7	58.5	61.2
	2023	791	45.5	8.0	37.2	8.2	44.5	0.2	1.9	43.9	47.2
Malaysia	2019	1001	34.1	13.9	38.5	9.6	32.0	1.4	4.6	36.7	31.5
	2023	1275	21.9	9.3	46.2	12.9	19.2	1.0	11.4	20.9	23.1
Norway (9)	2019	648	60.0	5.9	23.6	7.8	56.1	1.6	5.0	57.0	62.8
	2023	912	46.6	5.7	30.2	9.3	39.6	0.8	14.4	48.5	45.0
Portugal	2019	474	51.8	4.5	34.7	6.2	48.7	0.7	5.3	47.3	55.5
	2023	774	41.6	6.5	38.1	8.0	37.5	1.1	8.8	37.5	45.5
Qatar	2019	555	44.3	8.4	35.7	8.7	42.0	1.6	3.7	46.0	42.7
	2023	620	31.4	11.0	39.2	8.6	27.0	1.3	12.9	35.7	27.5
Singapore	2019	694	82.0	5.2	11.2	1.4	80.7	0.7	0.9	84.0	80.1
	2023	949	71.6	5.8	17.4	4.6	70.2	0.1	2.0	71.4	71.9
Sweden	2019	565	64.6	6.3	20.7	6.1	60.6	1.0	5.2	60.5	69.4
	2023	725	60.3	6.3	18.4	8.3	50.1	0.1	16.8	61.1	59.6
United Arab Emirates	2019	3154	42.4	9.3	36.4	8.6	40.0	1.7	4.0	44.7	40.3
	2023	4042	43.4	8.3	30.6	9.5	37.1	1.2	13.3	43.9	42.9
United States	2019	1237	57.4	7.2	26.6	7.0	55.0	0.7	3.5	59.1	55.8
	2023	1167	45.6	5.9	33.5	9.1	40.7	0.3	10.6	43.8	47.3
International Avg. (20)	2019	15060	55.8	7.0	28.8	6.3	53.6	1.0	3.3	56.0	55.7
	2023	19541	46.5	7.1	32.8	8.4	42.9	0.6	8.1	46.3	46.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Data and Probability / Applying
B_MD1_12 ME72172: Probability of object landing upright - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1150	34.1	9.1	42.4	11.4	32.5	1.7	2.9	37.7	30.8
	2023	1034	29.3	11.1	39.2	11.8	25.8	0.4	11.7	29.5	29.1
Dubai, UAE	2019	816	62.1	8.0	23.1	4.3	58.0	2.0	4.6	60.8	63.3
	2023	1178	62.0	5.4	19.9	6.6	52.1	1.4	14.6	63.6	60.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

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Mathematics: Number / Reasoning

B_MD2_01 ME72001: Two integers with product of -24 and sum of 5 - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	13.2	62.6	9.5	27.4	0.5	12.5	13.8
	2023	645	4.7	72.0	3.6	23.9	0.6	3.5	5.7
Chinese Taipei	2019	704	79.9	19.7	78.6	1.7	0.0	80.5	79.3
	2023	1110	73.7	25.7	72.0	2.4	0.0	75.8	71.7
England	2019	459	37.0	45.1	26.5	27.4	1.0	35.0	39.4
	2023	622	33.9	51.3	26.3	22.2	0.2	27.8	39.2
Finland	2019	696	45.3	44.9	37.2	17.9	0.0	46.9	43.9
	2023	860	27.8	62.9	24.2	12.9	0.0	31.4	25.0
France	2019	551	15.1	54.3	9.6	36.0	0.0	12.3	17.3
	2023	648	12.6	62.9	9.0	28.1	0.0	10.7	14.4
Georgia	2019	469	37.4	43.8	26.1	29.3	0.7	35.3	39.5
	2023	710	33.7	49.7	25.3	25.1	0.0	26.6	39.7
Hong Kong SAR	2019	470	43.1	52.0	39.4	8.6	0.0	45.4	41.0
	2023	650	41.8	51.9	37.2	10.2	0.7	38.7	44.3
Hungary	2019	652	42.1	50.1	36.5	13.3	0.0	40.4	43.7
	2023	798	32.1	59.7	28.2	12.1	0.0	31.2	32.9
Israel	2019	535	42.8	45.8	34.2	19.9	0.2	41.7	43.8
	2023	755	25.6	57.9	20.0	21.7	0.4	23.5	27.6
Italy	2019	518	30.2	54.4	23.6	22.0	0.0	30.5	30.0
	2023	672	26.6	55.0	19.9	25.1	0.0	25.3	27.9
Korea, Rep. of	2019	551	76.1	22.7	72.3	5.1	0.0	76.6	75.6
	2023	856	70.5	28.3	67.5	3.9	0.3	69.7	71.2
Lithuania	2019	543	37.7	46.6	28.2	25.2	0.0	41.8	33.6
	2023	784	30.4	53.9	23.6	22.4	0.1	32.1	28.5
Malaysia	2019	1019	10.5	85.4	10.0	4.6	0.0	9.0	12.0
	2023	1254	4.0	93.4	3.9	2.7	0.0	3.2	4.9
Norway (9)	2019	655	17.1	52.9	10.9	35.8	0.4	15.0	18.9
	2023	902	11.6	60.6	7.9	31.1	0.4	10.7	12.2
Portugal	2019	490	24.1	60.0	19.1	20.9	0.0	18.2	30.6
	2023	793	13.4	70.6	10.9	18.5	0.0	11.6	15.1
Qatar	2019	559	19.7	69.0	16.9	13.9	0.2	18.7	20.7
	2023	633	18.4	70.8	15.9	13.2	0.0	14.3	22.7
Singapore	2019	701	59.1	39.2	56.7	4.1	0.0	60.3	58.0
	2023	963	54.6	43.9	52.9	3.2	0.0	54.4	54.8
Sweden	2019	574	14.8	57.2	9.9	32.5	0.5	10.9	18.5
	2023	745	18.6	57.7	13.1	28.9	0.3	17.7	19.3
United Arab Emirates	2019	3176	30.7	63.3	28.0	8.5	0.1	30.4	31.0
	2023	4040	35.6	59.4	32.9	7.5	0.2	32.1	38.9
United States	2019	1245	37.9	58.4	35.6	5.4	0.6	38.1	37.6
	2023	1162	25.5	71.8	24.6	3.4	0.2	22.9	27.9
International Avg. (20)	2019	15148	35.7	51.4	30.4	18.0	0.2	35.0	36.4
	2023	19602	29.8	58.0	26.0	15.9	0.2	28.2	31.2

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Reasoning

B_MD2_01 ME72001: Two integers with product of -24 and sum of 5 - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1170	19.0	75.1	17.7	7.0	0.2	19.4	18.7
	2023	1033	20.8	73.6	19.3	7.1	0.0	17.2	24.2
Dubai, UAE	2019	815	51.5	44.0	46.7	9.2	0.1	47.5	55.8
	2023	1180	52.5	42.8	47.3	9.8	0.1	48.0	56.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Knowing

B_MD2_02 ME72019: Order fractions and decimals from smallest to largest - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	10.7	87.1	10.5	1.5	1.0	9.8	11.7
	2023	645	8.7	89.7	8.5	1.2	0.6	3.6	13.1
Chinese Taipei	2019	704	67.6	32.4	67.4	0.2	0.0	66.6	68.5
	2023	1110	63.8	36.1	63.8	0.1	0.0	61.7	65.8
England	2019	459	50.7	48.4	49.8	0.8	1.0	43.6	60.0
	2023	622	56.3	43.2	55.7	0.9	0.2	48.1	64.4
Finland	2019	696	55.8	43.9	55.5	0.5	0.0	48.7	62.2
	2023	860	50.8	49.2	50.7	0.1	0.0	43.9	56.4
France	2019	551	37.9	61.9	37.8	0.0	0.4	29.3	45.5
	2023	649	37.0	62.9	36.9	0.2	0.0	26.7	47.9
Georgia	2019	469	15.7	82.4	15.4	1.5	0.7	12.5	18.9
	2023	711	20.5	78.9	20.4	0.8	0.0	16.5	24.0
Hong Kong SAR	2019	470	68.0	32.0	67.8	0.2	0.0	68.9	67.1
	2023	650	69.7	30.1	69.3	0.0	0.7	67.4	71.6
Hungary	2019	652	40.8	59.1	40.7	0.2	0.0	30.7	50.9
	2023	798	36.2	63.7	36.2	0.1	0.0	27.5	45.8
Israel	2019	535	38.5	60.6	38.0	1.1	0.2	30.8	47.4
	2023	755	32.8	66.5	32.5	0.4	0.5	25.0	40.5
Italy	2019	518	25.8	74.0	25.7	0.1	0.2	21.9	29.2
	2023	672	31.6	68.3	31.5	0.2	0.0	25.1	38.5
Korea, Rep. of	2019	551	61.2	38.8	61.2	0.0	0.0	58.7	63.7
	2023	856	59.3	40.5	59.0	0.2	0.3	55.1	63.2
Lithuania	2019	543	43.5	56.1	43.2	0.6	0.0	46.6	40.5
	2023	785	42.9	57.0	42.9	0.0	0.1	33.8	52.6
Malaysia	2019	1019	17.9	81.9	17.8	0.3	0.0	15.4	20.6
	2023	1255	9.9	90.1	9.9	0.0	0.0	6.6	13.4
Norway (9)	2019	655	55.5	43.3	54.1	2.2	0.5	50.7	60.3
	2023	903	48.8	50.6	48.2	0.8	0.4	43.3	53.1
Portugal	2019	490	35.1	64.8	35.0	0.2	0.0	25.6	45.6
	2023	794	28.5	71.5	28.4	0.1	0.0	19.6	37.1
Qatar	2019	559	21.5	77.5	21.2	1.1	0.2	18.1	25.0
	2023	633	24.0	75.5	23.8	0.7	0.0	19.5	28.6
Singapore	2019	701	69.3	30.7	69.1	0.3	0.0	67.4	71.0
	2023	963	66.7	33.3	66.7	0.0	0.0	60.7	72.1
Sweden	2019	574	59.4	40.1	58.7	0.8	0.5	53.1	65.4
	2023	746	63.0	36.8	62.6	0.4	0.3	58.2	67.8
United Arab Emirates	2019	3178	28.6	70.3	28.2	1.4	0.2	25.6	31.3
	2023	4042	34.5	65.2	34.4	0.3	0.2	26.6	42.1
United States	2019	1245	48.3	51.4	48.0	0.1	0.6	43.9	53.1
	2023	1162	42.2	57.6	42.1	0.1	0.3	35.4	48.5
International Avg. (20)	2019	15150	42.6	56.8	42.3	0.7	0.3	38.4	46.9
	2023	19611	41.4	58.3	41.2	0.3	0.2	35.2	47.3

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

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Mathematics: Number / Knowing

B_MD2_02 ME72019: Order fractions and decimals from smallest to largest - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	19.8	79.3	19.6	0.9	0.2	17.7	21.9
	2023	1034	25.7	74.0	25.5	0.4	0.0	17.7	33.3
Dubai, UAE	2019	815	48.1	51.4	47.6	0.8	0.2	41.7	55.2
	2023	1180	50.8	49.0	50.6	0.3	0.1	40.8	60.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Knowing

B_MD2_03 ME72189: 7/100 + 6/1000 = - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	30.2	5.4	28.5	30.3	30.2	4.4	1.1	27.4	33.0
	2023	645	38.2	9.4	36.7	30.4	19.5	3.4	0.6	34.8	41.3
Chinese Taipei	2019	704	76.8	4.6	76.8	6.4	12.1	0.1	0.0	77.2	76.4
	2023	1110	77.6	4.2	77.6	8.1	10.2	0.0	0.0	78.5	76.7
England	2019	459	43.8	7.0	42.8	20.1	27.6	1.5	1.0	39.8	49.0
	2023	622	50.9	13.2	50.3	18.9	16.5	0.8	0.2	47.7	54.0
Finland	2019	696	50.6	9.7	49.3	20.7	17.8	2.3	0.2	50.3	50.8
	2023	860	49.1	15.7	48.9	21.6	13.4	0.5	0.0	47.1	50.7
France	2019	551	41.7	7.2	41.1	17.7	32.8	0.9	0.4	45.5	38.2
	2023	649	49.0	10.0	48.8	13.7	27.0	0.6	0.0	48.0	50.1
Georgia	2019	467	47.5	10.6	46.4	20.4	20.4	1.5	0.7	48.5	46.5
	2023	711	52.9	8.9	52.1	17.8	19.7	1.6	0.0	52.2	53.6
Hong Kong SAR	2019	470	74.9	6.4	74.6	9.2	9.4	0.5	0.0	74.5	75.3
	2023	650	81.3	4.2	80.7	7.0	7.4	0.2	0.7	79.0	83.2
Hungary	2019	652	53.6	9.4	52.9	19.4	17.0	1.2	0.0	52.6	54.5
	2023	798	56.2	10.8	56.1	17.9	15.1	0.1	0.0	53.3	59.4
Israel	2019	535	54.1	9.3	53.3	21.4	14.6	1.2	0.2	55.3	52.8
	2023	755	49.8	9.0	49.2	23.5	17.1	0.6	0.5	48.4	51.1
Italy	2019	518	50.6	8.9	50.0	17.8	22.0	1.0	0.2	53.0	48.6
	2023	672	55.2	7.7	54.8	17.3	19.5	0.7	0.0	56.3	54.0
Korea, Rep. of	2019	551	80.0	3.3	79.8	8.7	8.0	0.2	0.0	79.7	80.4
	2023	856	79.4	4.1	79.2	8.2	8.2	0.0	0.3	79.8	79.0
Lithuania	2019	543	51.0	4.6	50.6	28.9	15.1	0.8	0.0	53.2	48.8
	2023	785	51.5	7.1	51.2	23.9	17.1	0.5	0.1	49.8	53.2
Malaysia	2019	1019	50.6	8.6	50.3	19.8	20.8	0.5	0.0	48.4	53.0
	2023	1255	47.7	12.2	47.5	20.2	19.7	0.4	0.0	47.2	48.1
Norway (9)	2019	655	53.6	11.2	51.2	16.7	16.5	3.8	0.6	52.1	55.0
	2023	903	54.0	15.8	52.3	17.6	11.2	2.7	0.4	52.4	55.3
Portugal	2019	490	54.1	3.4	53.9	19.5	22.8	0.5	0.0	50.5	58.2
	2023	794	54.2	4.3	54.0	20.2	21.2	0.3	0.0	54.5	53.9
Qatar	2019	559	38.2	10.7	37.8	30.0	20.5	0.8	0.2	37.0	39.4
	2023	633	43.7	8.0	43.4	25.2	22.8	0.6	0.0	43.1	44.3
Singapore	2019	701	80.9	5.1	80.6	4.8	9.2	0.3	0.0	82.4	79.4
	2023	963	80.8	6.1	80.8	6.7	6.4	0.0	0.0	81.8	80.0
Sweden	2019	574	57.1	10.4	55.6	13.9	17.5	2.1	0.6	54.5	59.5
	2023	746	57.9	12.5	57.1	16.2	12.8	1.0	0.3	56.1	59.7
United Arab Emirates	2019	3175	54.0	6.0	53.2	20.0	19.4	1.2	0.2	56.2	52.0
	2023	4042	63.8	7.0	63.5	15.3	13.7	0.3	0.2	63.7	64.0
United States	2019	1245	54.4	5.0	53.5	20.6	19.3	1.1	0.6	55.7	53.0
	2023	1162	51.9	7.8	51.7	20.7	19.3	0.3	0.3	52.5	51.4
International Avg. (20)	2019	15145	54.9	7.3	54.1	18.3	18.6	1.3	0.3	54.7	55.2
	2023	19611	57.3	8.9	56.8	17.5	15.9	0.7	0.2	56.3	58.1

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Knowing
B_MD2_03 ME72189: $7/100 + 6/1000 =$ - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1170	48.4	7.2	47.8	20.7	22.9	1.1	0.3	52.0	45.4
	2023	1034	56.3	8.1	56.2	17.9	17.6	0.1	0.0	56.8	55.9
Dubai, UAE	2019	815	67.9	4.4	66.7	13.1	14.1	1.5	0.2	65.9	70.0
	2023	1180	70.2	6.9	69.9	12.1	10.6	0.4	0.1	70.3	70.1

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Knowing

B_MD2_04 ME72024: Value of P for expression with fraction and decimal - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	14.9	64.9	11.4	22.7	1.1	15.9	14.0
	2023	644	7.5	73.4	6.0	19.9	0.7	6.0	8.9
Chinese Taipei	2019	704	62.2	37.3	61.3	1.5	0.0	61.1	63.2
	2023	1110	60.0	39.6	59.4	1.0	0.0	61.2	58.8
England	2019	459	31.2	56.6	25.7	16.7	1.0	28.1	34.9
	2023	622	33.8	57.1	29.2	13.4	0.2	32.1	35.4
Finland	2019	696	30.1	61.5	26.5	11.6	0.4	30.9	29.4
	2023	856	24.4	68.6	22.1	9.2	0.1	25.4	23.6
France	2019	551	28.0	58.2	22.6	18.8	0.4	25.4	30.0
	2023	649	30.1	61.5	26.4	12.1	0.0	28.1	32.0
Georgia	2019	469	34.3	51.5	26.8	21.0	0.7	35.5	33.1
	2023	710	39.8	49.3	32.6	17.9	0.1	38.6	40.8
Hong Kong SAR	2019	470	48.3	50.1	46.8	3.1	0.0	53.3	43.8
	2023	649	45.0	52.7	43.0	3.6	0.7	43.8	45.9
Hungary	2019	652	40.3	52.7	35.6	11.7	0.0	40.1	40.5
	2023	798	30.2	64.7	28.0	7.3	0.0	27.7	32.8
Israel	2019	535	41.9	50.9	36.7	12.1	0.4	44.2	39.5
	2023	755	26.7	66.6	24.2	8.6	0.5	24.4	28.8
Italy	2019	518	35.9	52.0	29.2	18.4	0.4	37.8	34.5
	2023	671	31.9	58.2	27.2	14.6	0.0	31.1	32.6
Korea, Rep. of	2019	551	67.5	31.5	65.4	3.2	0.0	65.0	70.1
	2023	856	63.2	35.6	61.0	3.1	0.3	63.2	63.1
Lithuania	2019	543	36.6	55.3	32.0	12.8	0.0	41.9	31.5
	2023	784	39.9	53.5	35.5	10.9	0.1	41.6	38.2
Malaysia	2019	1019	20.5	76.6	19.8	3.5	0.1	21.2	19.7
	2023	1255	10.3	88.2	10.2	1.6	0.1	9.5	11.2
Norway (9)	2019	655	34.8	52.3	27.9	19.1	0.7	39.1	30.1
	2023	902	24.3	62.2	20.0	17.2	0.6	24.3	24.4
Portugal	2019	490	39.0	53.7	34.3	12.0	0.0	38.5	39.5
	2023	794	28.2	64.3	25.2	10.6	0.0	26.9	29.4
Qatar	2019	559	19.8	72.9	18.0	8.7	0.4	20.5	19.1
	2023	633	21.8	72.6	20.3	7.1	0.0	18.5	25.3
Singapore	2019	701	64.0	35.6	63.4	1.0	0.0	67.0	61.3
	2023	963	58.5	41.4	58.3	0.3	0.0	59.0	58.1
Sweden	2019	574	34.2	56.0	29.0	14.3	0.7	35.6	32.7
	2023	746	33.0	57.8	28.5	13.3	0.4	32.5	33.5
United Arab Emirates	2019	3176	25.0	70.5	23.5	5.8	0.2	22.7	27.1
	2023	4040	36.1	61.3	34.5	4.0	0.2	32.7	39.2
United States	2019	1245	31.4	65.1	29.8	4.3	0.7	29.0	34.0
	2023	1162	29.6	69.0	29.0	1.7	0.4	25.7	33.2
International Avg. (20)	2019	15148	37.0	55.3	33.3	11.1	0.4	37.6	36.4
	2023	19599	33.7	59.9	31.0	8.9	0.2	32.6	34.8

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Knowing

B_MD2_04 ME72024: Value of P for expression with fraction and decimal - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	17.4	78.9	16.6	4.2	0.3	17.0	17.8
	2023	1033	27.5	69.6	26.4	4.0	0.0	25.3	29.5
Dubai, UAE	2019	815	37.0	58.3	34.2	7.1	0.4	31.2	43.0
	2023	1180	47.0	50.1	44.4	5.3	0.1	39.9	53.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Applying
B_MD2_05 ME72043: Ratio of tablet screen side lengths - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	21.7	34.4	29.1	19.7	7.8	7.5	1.5	22.4	21.1
	2023	645	21.1	27.2	36.4	19.9	10.6	4.9	1.0	18.6	23.3
Chinese Taipei	2019	704	77.0	6.5	13.5	76.6	2.9	0.5	0.0	78.6	75.3
	2023	1110	72.1	6.6	16.3	72.1	5.0	0.0	0.0	76.5	68.1
England	2019	459	40.3	18.8	27.4	39.0	11.5	2.2	1.0	38.0	43.3
	2023	514	47.7	13.2	31.6	46.5	6.3	2.2	0.3	43.9	51.4
Finland	2019	696	37.9	20.9	31.5	36.4	7.1	3.6	0.5	34.0	41.2
	2023	860	31.5	18.2	40.4	31.1	8.9	1.4	0.1	30.2	32.6
France	2019	551	26.3	28.1	33.3	24.2	6.2	7.8	0.4	26.9	25.8
	2023	649	22.1	24.2	41.6	20.7	7.1	6.1	0.2	22.3	21.9
Georgia	2019	470	38.2	17.9	29.8	35.3	9.3	6.9	0.8	36.4	40.0
	2023	711	42.6	23.1	24.6	40.9	7.4	3.8	0.1	41.9	43.1
Hong Kong SAR	2019	470	72.9	7.2	15.7	72.5	4.0	0.4	0.2	74.8	71.3
	2023	650	67.3	10.5	17.6	65.9	4.0	1.4	0.7	69.1	65.8
Hungary	2019	652	47.2	18.6	25.5	46.7	8.2	1.0	0.0	46.1	48.4
	2023	798	43.2	20.5	27.7	43.0	8.3	0.5	0.0	39.4	47.2
Israel	2019	535	53.7	14.3	24.3	52.8	7.1	1.1	0.4	54.3	52.9
	2023	755	32.2	23.4	32.7	31.5	10.2	1.6	0.6	30.6	33.8
Italy	2019	518	50.9	18.4	23.0	48.8	5.7	3.6	0.5	51.6	50.3
	2023	672	49.4	18.2	25.7	47.7	5.0	3.3	0.0	48.4	50.4
Korea, Rep. of	2019	551	78.9	4.1	13.1	78.5	3.7	0.5	0.0	78.6	79.3
	2023	856	72.6	6.0	16.2	71.9	5.1	0.5	0.4	71.5	73.6
Lithuania	2019	543	34.4	25.5	31.0	33.7	7.7	2.2	0.0	32.3	36.5
	2023	785	42.6	20.2	29.4	41.6	6.6	2.1	0.1	40.5	44.7
Malaysia	2019	1019	39.6	16.2	32.6	39.1	10.8	1.2	0.2	37.6	41.9
	2023	1255	26.2	22.8	39.7	26.0	10.8	0.7	0.1	26.0	26.5
Norway (9)	2019	655	40.7	18.1	31.1	38.0	6.1	5.8	0.9	40.1	41.5
	2023	903	34.0	20.1	35.0	32.2	7.2	4.6	0.8	32.9	34.9
Portugal	2019	490	31.4	30.6	32.1	30.4	3.9	3.1	0.0	26.7	36.5
	2023	794	24.4	29.4	36.5	23.9	8.4	1.5	0.3	24.3	24.4
Qatar	2019	559	34.5	18.7	32.6	32.7	10.9	4.6	0.6	35.3	33.7
	2023	520	28.0	22.2	38.5	27.5	9.9	1.9	0.0	25.7	30.3
Singapore	2019	701	90.0	2.8	5.4	89.4	1.8	0.6	0.0	92.1	88.0
	2023	963	86.8	2.8	9.1	86.6	1.3	0.2	0.0	88.6	85.1
Sweden	2019	574	33.4	19.2	35.1	31.1	7.5	5.6	1.3	31.8	34.9
	2023	746	30.4	19.1	39.2	28.6	7.3	5.3	0.4	24.1	36.3
United Arab Emirates	2019	3175	38.7	18.2	32.9	37.7	8.4	2.5	0.2	36.7	40.6
	2023	3471	38.8	15.8	36.5	37.9	7.6	1.8	0.4	34.8	42.4
United States	2019	1245	45.2	15.7	30.5	43.5	6.6	2.9	0.7	45.5	44.7
	2023	1162	32.2	18.0	41.3	31.9	7.9	0.4	0.5	32.5	31.9
International Avg. (20)	2019	15148	46.7	17.7	26.5	45.3	6.9	3.2	0.5	46.0	47.4
	2023	18819	42.3	18.1	30.8	41.4	7.2	2.2	0.3	41.1	43.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Number / Applying

B_MD2_05 ME72043: Ratio of tablet screen side lengths - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1169	28.8	20.5	38.5	28.4	11.1	1.3	0.3	25.9	31.3
	2023	948	30.9	16.8	41.3	30.4	9.8	1.6	0.2	24.7	36.8
Dubai, UAE	2019	815	57.0	12.5	24.3	55.2	4.8	2.8	0.4	52.9	61.4
	2023	929	51.3	13.9	28.0	50.3	5.9	1.7	0.2	46.1	56.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Knowing

B_MD2_06 ME72221: Value of $y = 2x^2 - 2x + 5$ given $x = MC$ - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	36.0	10.6	33.4	23.1	25.7	5.7	1.6	35.3	36.7
	2023	645	31.4	13.3	29.2	24.5	25.8	6.1	1.2	31.5	31.4
Chinese Taipei	2019	704	76.3	6.4	76.1	11.2	6.0	0.2	0.0	76.4	76.2
	2023	1110	77.9	7.7	77.8	9.0	5.4	0.0	0.0	80.3	75.6
England	2019	459	41.5	12.7	39.6	23.1	20.0	3.6	1.0	40.4	42.8
	2023	622	49.3	18.4	47.8	18.4	12.5	2.8	0.2	45.5	53.0
Finland	2019	696	46.3	11.4	44.6	24.9	15.5	3.1	0.5	49.8	43.3
	2023	860	48.2	13.6	47.3	22.9	14.3	1.8	0.1	50.0	46.7
France	2019	551	39.6	13.0	37.5	26.0	18.1	5.1	0.4	37.5	41.4
	2023	649	45.5	10.5	44.3	22.7	20.0	2.2	0.2	42.8	48.3
Georgia	2019	467	50.4	12.5	48.6	18.1	17.2	2.9	0.8	51.3	49.5
	2023	711	52.9	14.3	51.3	15.8	15.5	2.9	0.1	54.1	52.0
Hong Kong SAR	2019	470	77.7	7.3	77.0	10.4	4.4	0.7	0.2	80.4	75.2
	2023	650	78.3	7.7	77.5	8.3	5.4	0.3	0.7	83.6	74.1
Hungary	2019	652	54.6	9.6	53.7	20.3	14.7	1.7	0.0	55.0	54.2
	2023	798	55.1	12.3	54.9	17.8	14.5	0.4	0.0	54.7	55.6
Israel	2019	535	52.0	9.8	50.5	22.2	14.6	2.4	0.4	49.2	55.1
	2023	755	46.5	12.1	45.2	24.3	15.7	2.2	0.6	45.2	47.8
Italy	2019	518	52.1	7.7	49.8	19.4	18.7	3.7	0.7	53.6	50.8
	2023	672	57.5	8.8	56.9	16.4	16.8	1.1	0.0	56.3	58.9
Korea, Rep. of	2019	551	79.5	3.6	79.1	11.0	5.8	0.5	0.0	81.4	77.6
	2023	856	79.6	5.4	78.9	9.8	5.1	0.3	0.5	79.9	79.2
Lithuania	2019	543	55.5	8.5	55.0	17.8	17.7	1.0	0.0	60.0	51.1
	2023	785	55.3	9.8	54.3	18.1	16.1	1.6	0.1	56.4	54.1
Malaysia	2019	1019	41.9	11.5	41.4	24.0	21.9	1.0	0.2	38.5	45.6
	2023	1255	33.9	14.4	33.6	29.3	21.9	0.5	0.2	29.8	38.1
Norway (9)	2019	655	42.4	6.2	39.0	26.9	19.8	7.2	0.9	41.1	43.9
	2023	903	41.8	14.9	39.8	25.6	14.8	3.9	0.9	42.2	41.5
Portugal	2019	490	53.3	10.0	52.4	17.9	17.9	1.8	0.0	55.1	51.5
	2023	794	46.4	11.1	45.4	21.3	20.2	1.9	0.3	48.3	44.5
Qatar	2019	559	44.2	13.0	42.8	18.7	22.3	2.5	0.8	47.8	40.5
	2023	633	42.8	14.1	42.2	22.5	19.7	1.5	0.0	36.7	49.3
Singapore	2019	701	84.5	5.4	83.9	6.9	3.1	0.7	0.0	88.6	80.5
	2023	963	76.8	7.9	76.8	10.5	4.7	0.0	0.0	79.4	74.5
Sweden	2019	574	34.1	13.0	32.0	32.6	16.2	4.5	1.6	30.8	37.4
	2023	746	38.6	13.8	37.2	27.7	17.7	3.0	0.6	34.6	42.6
United Arab Emirates	2019	3176	51.2	12.0	49.9	19.5	16.1	2.3	0.2	52.6	49.9
	2023	4042	57.6	11.8	56.8	16.5	13.5	1.1	0.3	55.2	59.9
United States	2019	1245	54.4	13.9	52.2	16.4	13.5	3.1	0.9	53.8	55.1
	2023	1162	45.6	18.5	45.2	21.6	13.9	0.2	0.6	42.2	48.6
International Avg. (20)	2019	15146	53.4	9.9	51.9	19.5	15.5	2.7	0.5	53.9	52.9
	2023	19611	53.1	12.0	52.1	19.1	14.7	1.7	0.3	52.4	53.8

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Knowing
B_MD2_06 ME72221: Value of $y = 2x^2 - 2x + 5$ given $x = MC$ - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1170	44.1	13.9	43.4	22.3	18.9	1.2	0.3	46.8	41.7
	2023	1034	47.0	12.1	46.4	22.7	17.5	1.1	0.1	42.3	51.5
Dubai, UAE	2019	815	61.1	10.4	59.6	16.4	11.1	2.2	0.4	61.0	61.3
	2023	1180	65.9	11.9	64.9	11.7	10.0	1.4	0.2	61.0	70.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Knowing

B_MD2_07 ME72220: Simplify $4(3a + 4) - 3(4a - 6)$ - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	16.0	27.4	33.0	14.4	14.3	9.0	1.9	15.5	16.5
	2023	645	10.1	30.6	32.2	17.7	9.0	8.8	1.6	10.1	10.1
Chinese Taipei	2019	704	65.5	8.6	10.0	15.7	65.2	0.6	0.0	67.9	63.2
	2023	1110	66.5	10.5	8.8	14.2	66.5	0.0	0.0	69.9	63.4
England	2019	459	20.8	29.0	27.3	18.4	19.6	4.8	1.0	21.1	20.4
	2023	622	22.8	29.3	26.1	20.2	22.3	2.0	0.2	21.5	24.1
Finland	2019	696	16.4	32.4	24.4	23.3	15.7	3.7	0.6	16.8	16.0
	2023	860	14.2	36.8	27.2	19.9	13.9	2.1	0.1	14.8	13.8
France	2019	551	12.1	35.1	31.5	15.6	11.3	5.8	0.7	11.5	12.6
	2023	649	12.3	31.7	37.0	14.9	11.7	4.5	0.2	11.0	13.8
Georgia	2019	469	22.6	19.2	32.5	20.5	21.2	5.8	0.8	23.5	21.9
	2023	711	29.9	24.9	24.6	18.1	28.8	3.5	0.2	31.5	28.4
Hong Kong SAR	2019	469	55.6	12.5	13.9	17.7	55.2	0.4	0.2	63.0	48.8
	2023	650	51.8	13.4	16.1	18.0	51.1	0.7	0.7	52.1	51.4
Hungary	2019	652	25.4	26.2	24.0	22.5	24.7	2.6	0.0	22.9	27.9
	2023	798	21.7	30.2	25.2	22.2	21.5	0.9	0.0	21.6	21.8
Israel	2019	535	37.1	16.7	24.7	19.7	36.1	1.8	0.9	39.9	34.1
	2023	755	32.2	21.3	27.0	18.4	31.6	0.9	0.8	30.2	34.0
Italy	2019	518	24.0	28.7	27.8	13.9	22.3	6.5	0.8	23.2	24.7
	2023	672	23.6	26.6	26.1	22.0	23.0	2.3	0.0	23.5	23.6
Korea, Rep. of	2019	551	70.1	7.2	9.0	13.4	69.6	0.7	0.0	71.6	68.5
	2023	856	67.7	10.7	10.2	11.2	67.2	0.3	0.5	67.9	67.5
Lithuania	2019	543	27.5	25.0	25.5	20.6	26.9	2.0	0.0	28.9	26.0
	2023	785	27.5	28.2	25.0	17.5	26.8	2.3	0.1	30.6	24.1
Malaysia	2019	1019	21.6	23.4	36.2	17.6	21.2	1.3	0.3	21.8	21.3
	2023	1255	17.7	29.0	39.8	12.9	17.5	0.6	0.2	18.7	16.5
Norway (9)	2019	655	15.8	29.4	31.1	15.4	14.3	8.8	1.1	14.9	16.8
	2023	903	11.3	34.0	31.5	17.1	10.5	6.0	1.0	7.9	13.9
Portugal	2019	490	18.3	31.8	26.6	20.1	17.6	3.9	0.0	17.6	19.2
	2023	794	18.2	34.0	31.4	14.4	17.8	2.1	0.3	20.9	15.7
Qatar	2019	559	21.4	27.4	30.0	17.9	20.5	3.5	0.8	21.2	21.6
	2023	633	29.0	25.1	27.3	17.4	28.5	1.7	0.0	30.4	27.6
Singapore	2019	701	71.1	7.9	8.8	12.0	70.8	0.5	0.0	74.9	67.5
	2023	963	68.1	8.6	9.8	13.4	68.0	0.2	0.0	73.1	63.7
Sweden	2019	574	16.2	34.8	21.4	21.9	15.1	5.1	1.7	16.1	16.3
	2023	746	18.9	34.6	23.1	19.3	17.9	4.4	0.7	19.8	17.9
United Arab Emirates	2019	3175	27.4	22.7	27.3	20.7	26.7	2.2	0.3	29.3	25.7
	2023	4042	37.6	22.1	22.0	17.2	36.9	1.5	0.4	38.0	37.1
United States	2019	1245	34.4	22.0	22.6	19.0	33.3	2.1	1.0	38.0	30.3
	2023	1162	29.1	27.9	25.3	16.9	28.7	0.6	0.7	28.3	29.8
International Avg. (20)	2019	15146	31.0	23.4	24.4	18.0	30.1	3.5	0.6	32.0	30.0
	2023	19611	30.5	25.5	24.8	17.2	30.0	2.3	0.4	31.1	29.9

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Knowing

B_MD2_07 ME72220: Simplify $4(3a + 4) - 3(4a - 6)$ - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1170	22.9	24.0	32.2	19.3	22.4	1.7	0.3	25.5	20.5
	2023	1034	31.0	24.2	25.9	17.9	30.5	1.3	0.2	33.7	28.4
Dubai, UAE	2019	815	35.7	21.1	18.9	22.9	34.9	1.6	0.6	35.3	36.1
	2023	1180	42.4	21.0	18.0	17.5	41.7	1.5	0.2	40.1	44.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Applying
B_MD2_08 ME72225: Number of pizzas (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	23.2	62.3	18.8	16.7	2.3	20.4	25.7
	2023	643	26.1	62.3	22.0	13.8	1.9	21.7	29.9
Chinese Taipei	2019	704	78.1	21.5	76.8	1.8	0.0	81.4	74.9
	2023	1110	76.1	23.6	75.3	1.1	0.0	78.6	73.8
England	2019	459	43.4	48.9	37.5	12.3	1.3	41.7	45.5
	2023	622	40.3	53.6	36.2	10.0	0.2	32.8	47.3
Finland	2019	696	47.3	47.8	42.8	8.8	0.6	44.6	49.4
	2023	860	38.6	57.9	36.5	5.5	0.1	40.8	36.9
France	2019	551	35.1	56.6	30.6	11.6	1.2	33.5	36.5
	2023	649	31.8	60.8	28.3	10.6	0.3	27.8	35.9
Georgia	2019	470	32.3	55.6	26.5	16.9	0.9	28.1	36.2
	2023	709	35.5	56.7	31.3	11.7	0.3	32.5	38.0
Hong Kong SAR	2019	470	61.7	36.8	59.2	3.7	0.2	63.8	59.8
	2023	650	60.4	37.5	57.1	4.7	0.7	57.0	63.1
Hungary	2019	652	45.8	50.6	42.7	6.7	0.0	40.2	51.2
	2023	798	41.9	55.1	39.8	5.2	0.0	35.6	48.4
Israel	2019	535	46.0	47.9	40.8	10.2	1.2	36.4	56.2
	2023	755	40.2	53.8	36.2	9.0	1.0	33.7	46.4
Italy	2019	518	38.1	53.8	33.2	11.9	1.1	29.3	45.4
	2023	672	37.1	57.0	33.5	9.4	0.1	33.1	41.0
Korea, Rep. of	2019	551	70.7	28.3	68.3	3.3	0.0	68.8	72.6
	2023	855	70.5	28.2	67.3	4.0	0.5	67.2	73.5
Lithuania	2019	543	47.9	47.1	43.3	9.6	0.0	45.1	50.4
	2023	784	41.2	53.0	37.1	9.7	0.1	36.4	46.1
Malaysia	2019	1019	23.2	74.6	22.5	2.5	0.4	22.8	23.5
	2023	1255	19.9	78.9	19.6	1.3	0.2	17.6	22.3
Norway (9)	2019	655	45.6	45.9	38.4	14.5	1.2	40.5	50.3
	2023	903	42.3	52.2	38.3	8.3	1.1	42.5	42.2
Portugal	2019	490	41.7	52.5	37.5	10.0	0.0	42.1	41.2
	2023	794	37.2	58.2	34.4	7.0	0.4	34.6	39.5
Qatar	2019	559	19.6	71.8	17.5	10.0	0.8	17.8	21.3
	2023	633	25.4	69.6	23.8	6.6	0.0	22.1	29.0
Singapore	2019	701	69.7	29.7	68.4	1.9	0.0	69.3	70.1
	2023	963	67.8	31.7	66.7	1.7	0.0	66.3	69.2
Sweden	2019	574	45.9	47.4	40.3	10.4	1.9	41.8	49.9
	2023	746	49.9	44.2	44.0	10.8	1.0	44.6	54.8
United Arab Emirates	2019	3178	26.6	68.5	24.8	6.3	0.5	24.8	28.2
	2023	4042	33.9	62.8	32.1	4.6	0.4	29.2	38.2
United States	2019	1245	41.7	55.0	39.4	4.6	1.0	38.9	44.8
	2023	1161	35.7	62.3	34.6	2.4	0.8	30.9	40.1
International Avg. (20)	2019	15151	44.2	50.1	40.5	8.7	0.7	41.6	46.7
	2023	19604	42.6	53.0	39.7	6.9	0.5	39.3	45.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Algebra / Applying
B_MD2_08 ME72225: Number of pizzas (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	21.6	74.8	20.6	4.1	0.4	22.5	20.9
	2023	1034	27.4	70.0	26.4	3.5	0.2	21.2	33.2
Dubai, UAE	2019	815	40.0	55.5	36.9	6.8	0.8	35.6	44.5
	2023	1180	46.5	50.0	43.5	6.2	0.3	39.9	52.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Applying

B_MD2_09A ME72110A: Triangle tiles for square shape - 5 by 5 square - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	27.0	57.9	21.4	17.1	3.6	29.7	24.4
	2023	645	21.6	64.4	17.7	15.6	2.3	18.9	23.9
Chinese Taipei	2019	704	70.1	29.5	69.1	1.4	0.0	69.3	70.8
	2023	1110	63.7	35.7	62.8	1.5	0.0	66.3	61.3
England	2019	459	38.7	54.3	34.3	9.8	1.6	39.7	37.5
	2023	622	33.5	59.3	29.9	10.5	0.3	28.1	38.7
Finland	2019	696	28.7	64.5	25.9	8.7	0.9	26.7	30.4
	2023	859	25.1	68.2	22.9	8.5	0.4	26.0	24.4
France	2019	551	23.1	64.6	19.4	14.0	2.0	18.4	27.1
	2023	649	22.9	68.1	20.3	11.2	0.5	22.1	23.7
Georgia	2019	470	12.5	63.4	9.1	26.6	1.0	13.0	12.0
	2023	710	20.7	60.3	15.8	23.4	0.5	20.5	20.9
Hong Kong SAR	2019	470	54.5	43.6	52.2	4.0	0.2	53.2	55.7
	2023	649	48.0	49.1	45.3	5.0	0.7	47.4	48.4
Hungary	2019	652	42.4	53.8	39.6	6.6	0.0	37.9	46.6
	2023	797	31.4	66.0	30.2	3.7	0.0	30.0	32.9
Israel	2019	535	29.4	61.7	25.7	10.8	1.8	26.1	32.9
	2023	755	24.8	65.3	21.5	10.9	2.3	24.0	25.5
Italy	2019	518	35.7	57.9	32.1	8.5	1.6	31.1	39.5
	2023	672	36.3	57.0	32.5	10.3	0.2	34.0	38.7
Korea, Rep. of	2019	551	49.1	49.9	48.2	1.9	0.0	46.9	51.3
	2023	856	48.0	49.5	45.8	4.2	0.5	42.6	53.2
Lithuania	2019	543	34.1	62.9	32.6	4.5	0.0	31.2	37.0
	2023	785	34.5	60.9	32.1	6.6	0.3	33.2	35.9
Malaysia	2019	1019	21.4	75.0	20.4	3.6	0.9	19.7	23.3
	2023	1255	13.3	84.8	13.0	1.8	0.4	10.8	15.9
Norway (9)	2019	655	33.9	53.7	27.5	17.1	1.8	36.5	31.5
	2023	902	37.4	50.8	30.4	17.2	1.6	38.1	36.8
Portugal	2019	490	30.8	64.8	28.8	5.7	0.7	33.2	28.0
	2023	794	29.6	65.4	27.5	6.7	0.4	26.9	32.1
Qatar	2019	559	17.8	71.6	15.5	11.2	1.6	20.9	14.8
	2023	633	18.4	75.1	16.9	7.5	0.5	17.0	20.0
Singapore	2019	701	60.6	38.8	59.7	1.4	0.1	60.6	60.7
	2023	963	55.1	44.5	54.5	1.0	0.0	51.9	57.9
Sweden	2019	574	23.7	62.0	19.2	16.0	2.7	26.5	21.0
	2023	746	24.5	62.6	20.3	15.3	1.8	21.5	27.4
United Arab Emirates	2019	3177	20.6	73.0	19.0	7.0	1.0	22.7	18.8
	2023	4041	25.2	70.6	23.7	5.0	0.7	24.5	25.8
United States	2019	1245	30.2	66.1	28.6	3.8	1.5	31.1	29.4
	2023	1162	27.7	69.5	26.7	2.7	1.1	25.4	29.9
International Avg. (20)	2019	15150	34.2	58.4	31.4	9.0	1.2	33.7	34.6
	2023	19605	32.1	61.4	29.5	8.4	0.7	30.5	33.7

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Applying

B_MD2_09A ME72110A: Triangle tiles for square shape - 5 by 5 square - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	14.6	79.9	13.7	5.6	0.8	15.9	13.6
	2023	1034	20.0	75.2	18.8	5.6	0.4	17.6	22.3
Dubai, UAE	2019	815	37.9	55.7	34.0	8.8	1.4	36.6	39.3
	2023	1180	36.1	60.5	34.2	4.5	0.8	34.2	37.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Reasoning

B_MD2_09B ME72110B: Triangle tiles for square shape - rule - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	11.0	46.1	5.7	43.1	5.1	15.1	6.9
	2023	645	8.0	51.6	4.5	41.4	2.4	5.5	9.8
Chinese Taipei	2019	704	62.0	34.4	56.1	9.5	0.0	62.5	61.4
	2023	1110	55.8	39.5	49.8	10.7	0.0	57.6	54.2
England	2019	459	28.0	48.8	19.0	30.2	2.1	26.9	29.4
	2023	622	26.5	45.5	16.4	36.8	1.3	20.6	31.5
Finland	2019	696	19.1	56.8	13.4	28.5	1.2	20.2	18.3
	2023	860	15.8	62.1	11.7	25.8	0.4	16.6	15.3
France	2019	551	19.2	41.3	9.8	46.1	2.8	19.1	19.2
	2023	649	21.4	39.4	10.7	49.0	0.9	19.8	23.2
Georgia	2019	470	12.2	36.8	5.1	56.0	2.0	13.3	11.2
	2023	711	18.3	33.1	7.4	58.8	0.7	13.6	21.8
Hong Kong SAR	2019	470	44.6	49.3	39.7	10.8	0.2	43.6	45.5
	2023	649	42.9	46.4	34.9	18.0	0.7	41.3	44.2
Hungary	2019	652	36.8	40.8	23.7	35.5	0.0	34.3	39.0
	2023	798	28.3	44.6	17.6	37.8	0.0	28.2	28.4
Israel	2019	535	34.9	42.8	23.0	32.2	2.0	31.6	38.4
	2023	754	21.4	47.5	12.9	37.2	2.3	19.6	23.0
Italy	2019	518	22.9	48.6	14.4	35.2	1.8	22.6	23.1
	2023	672	25.9	42.2	14.8	42.6	0.4	29.0	23.0
Korea, Rep. of	2019	551	37.4	55.5	33.1	11.4	0.0	33.2	41.6
	2023	856	37.1	49.7	29.3	20.4	0.5	34.9	39.1
Lithuania	2019	543	32.1	40.9	19.4	39.5	0.3	34.6	29.7
	2023	784	26.5	41.5	15.0	43.2	0.3	24.1	28.7
Malaysia	2019	1019	9.3	80.4	8.2	9.7	1.7	8.4	10.2
	2023	1255	3.0	85.1	2.6	11.7	0.5	2.6	3.4
Norway (9)	2019	655	26.2	45.5	16.2	35.5	2.8	28.7	23.8
	2023	903	24.5	45.8	14.8	36.7	2.6	26.9	22.6
Portugal	2019	490	16.0	57.2	10.9	31.2	0.7	14.7	17.6
	2023	794	13.7	53.0	8.4	38.1	0.5	16.2	11.7
Qatar	2019	559	11.4	63.8	8.2	25.3	2.7	13.5	9.4
	2023	633	9.8	67.8	7.4	24.1	0.7	6.5	13.7
Singapore	2019	701	51.8	44.6	47.9	7.4	0.1	52.3	51.3
	2023	962	45.2	50.4	41.7	7.8	0.1	42.2	48.0
Sweden	2019	574	11.7	57.9	7.7	31.0	3.4	13.5	10.1
	2023	746	12.9	58.2	8.6	31.2	2.0	12.1	13.6
United Arab Emirates	2019	3177	16.2	66.2	12.8	19.5	1.4	18.3	14.3
	2023	4042	19.2	64.7	15.4	18.7	1.1	18.3	20.1
United States	2019	1245	19.8	73.7	18.2	6.0	2.1	21.1	18.5
	2023	1162	12.4	78.6	11.1	8.4	1.9	11.2	13.4
International Avg. (20)	2019	15150	26.1	51.6	19.6	27.2	1.6	26.4	25.9
	2023	19607	23.4	52.3	16.8	29.9	1.0	22.3	24.4

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Reasoning

B_MD2_09B ME72110B: Triangle tiles for square shape - rule - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	9.7	74.4	8.0	16.4	1.2	11.3	8.2
	2023	1034	12.3	72.3	10.1	16.7	0.9	8.4	15.9
Dubai, UAE	2019	815	30.9	54.0	24.2	20.0	1.9	30.9	31.0
	2023	1180	30.9	55.6	24.9	18.2	1.3	30.0	31.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Geometry and Measurement / Applying
B_MD2_10 ME72150: Cost of shipping box by volume - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	52.0	16.4	18.0	46.2	8.4	4.7	6.4	54.2	49.8
	2023	645	45.9	18.8	21.8	43.4	10.6	2.9	2.5	47.2	44.7
Chinese Taipei	2019	704	84.4	5.1	6.8	84.1	3.6	0.3	0.0	83.6	85.1
	2023	1110	81.6	4.6	8.8	81.6	4.9	0.0	0.0	85.0	78.5
England	2019	459	68.9	12.3	9.3	66.0	8.1	2.1	2.2	68.7	69.2
	2023	622	69.6	9.3	13.1	67.5	7.1	1.6	1.5	69.9	69.3
Finland	2019	696	63.3	13.6	17.2	60.6	4.3	3.0	1.2	60.1	66.1
	2023	860	59.4	14.9	19.8	58.5	5.3	1.0	0.4	58.3	60.3
France	2019	551	53.4	18.9	19.6	50.2	5.3	3.1	3.0	52.2	54.6
	2023	649	52.4	19.8	19.0	51.5	7.9	0.9	0.9	49.9	55.1
Georgia	2019	469	51.4	15.9	19.3	46.3	8.7	7.1	2.7	48.2	54.6
	2023	711	59.4	12.0	18.4	57.1	8.6	3.2	0.7	56.7	61.6
Hong Kong SAR	2019	470	80.1	3.6	12.0	79.3	4.2	0.9	0.2	85.8	75.0
	2023	650	80.3	4.3	10.9	79.8	4.4	0.0	0.7	82.5	78.5
Hungary	2019	652	68.0	9.7	17.0	67.5	5.1	0.8	0.0	66.9	69.2
	2023	798	62.8	9.8	20.8	62.6	6.4	0.3	0.0	59.0	66.9
Israel	2019	535	69.3	8.8	14.2	66.2	6.3	2.4	2.2	69.7	68.9
	2023	755	57.9	15.1	16.7	55.5	8.5	1.6	2.6	54.6	61.0
Italy	2019	518	59.3	9.5	18.2	56.8	11.3	2.1	2.1	59.7	58.9
	2023	672	60.7	14.9	17.9	59.8	6.0	0.9	0.6	58.4	63.1
Korea, Rep. of	2019	551	82.3	4.9	9.0	82.0	3.7	0.4	0.0	80.3	84.3
	2023	856	80.4	5.5	11.3	79.9	2.6	0.1	0.5	77.4	83.3
Lithuania	2019	543	68.5	10.4	15.9	67.9	4.9	0.4	0.6	71.7	65.4
	2023	785	67.3	9.9	18.3	66.8	4.2	0.4	0.3	69.3	65.2
Malaysia	2019	1019	69.6	8.5	12.7	67.5	8.2	1.1	1.9	71.6	67.6
	2023	1255	54.5	16.8	18.4	54.0	10.0	0.1	0.8	52.6	56.4
Norway (9)	2019	655	67.5	6.7	18.5	62.0	4.7	4.9	3.2	70.6	64.4
	2023	903	67.9	7.9	17.8	64.4	4.7	2.6	2.6	69.4	66.8
Portugal	2019	490	67.7	12.5	11.8	65.4	7.0	2.2	1.2	63.4	72.5
	2023	794	57.7	15.3	19.3	56.7	7.0	1.2	0.5	57.7	57.7
Qatar	2019	559	59.2	13.2	12.8	55.7	12.4	3.0	2.9	58.0	60.3
	2023	633	62.1	13.3	12.9	60.5	10.7	1.8	0.9	59.8	64.6
Singapore	2019	701	88.8	2.4	4.6	88.1	4.2	0.6	0.2	88.6	89.0
	2023	963	87.2	2.7	5.8	87.1	4.3	0.1	0.1	87.9	86.7
Sweden	2019	574	70.9	7.9	14.1	63.6	4.1	6.7	3.5	67.9	73.7
	2023	746	68.0	9.3	14.6	64.1	6.2	3.7	2.1	68.2	67.9
United Arab Emirates	2019	3175	62.3	12.1	13.8	59.8	10.4	2.0	1.9	63.7	61.0
	2023	4042	67.7	11.3	12.6	66.1	7.7	1.0	1.3	68.8	66.5
United States	2019	1245	74.2	6.9	12.7	70.9	5.0	2.1	2.3	73.9	74.7
	2023	1162	64.8	9.7	15.9	63.0	8.6	0.7	2.1	63.5	66.0
International Avg. (20)	2019	15147	68.1	10.0	13.9	65.3	6.5	2.5	1.9	67.9	68.2
	2023	19611	65.4	11.3	15.7	64.0	6.8	1.2	1.1	64.8	66.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Geometry and Measurement / Applying
B_MD2_10 ME72150: Cost of shipping box by volume - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1169	55.6	14.6	17.1	53.4	10.9	2.2	1.7	58.0	53.5
	2023	1034	57.5	14.6	17.4	56.4	9.7	0.9	1.0	59.9	55.2
Dubai, UAE	2019	815	74.7	6.8	8.8	71.7	8.7	1.6	2.4	74.3	75.0
	2023	1180	78.3	7.4	9.2	76.4	4.7	0.9	1.4	77.5	79.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

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Mathematics: Geometry and Measurement / Applying
B_MD2_11 ME72139: Length of surfboard shadow - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	6.5	75.8	5.3	12.0	6.9	2.9	9.9
	2023	644	8.4	75.5	6.9	15.0	2.5	6.4	10.1
Chinese Taipei	2019	704	51.0	48.1	50.1	1.8	0.0	46.2	55.7
	2023	1110	48.3	51.3	47.9	0.8	0.0	45.2	51.1
England	2019	459	23.0	66.1	19.7	11.9	2.3	15.8	31.9
	2023	622	30.3	64.8	28.2	5.5	1.5	20.4	39.6
Finland	2019	696	31.5	63.8	29.4	5.5	1.3	28.6	34.0
	2023	860	28.9	67.3	27.4	4.9	0.4	23.2	33.4
France	2019	551	19.1	69.3	16.4	11.2	3.1	12.7	24.4
	2023	648	23.9	68.9	21.7	8.5	0.9	18.3	30.0
Georgia	2019	469	18.2	66.1	14.7	16.5	2.7	13.5	22.7
	2023	710	23.3	67.9	20.7	10.3	1.1	16.9	28.4
Hong Kong SAR	2019	470	47.2	51.9	46.4	1.6	0.2	46.6	47.8
	2023	650	50.2	48.4	48.7	2.3	0.7	45.6	53.9
Hungary	2019	652	22.1	73.5	20.9	5.6	0.0	14.6	29.5
	2023	797	26.2	70.8	25.1	4.1	0.0	20.1	32.7
Israel	2019	535	19.2	71.2	17.0	8.9	2.9	11.4	27.3
	2023	755	24.1	69.5	22.1	5.7	2.7	19.3	28.7
Italy	2019	518	12.2	76.9	10.7	10.1	2.3	8.4	15.4
	2023	670	18.2	74.9	16.7	7.8	0.6	14.6	21.9
Korea, Rep. of	2019	551	69.2	30.4	68.4	1.2	0.0	65.8	72.7
	2023	855	66.5	33.0	65.6	0.9	0.5	64.8	68.1
Lithuania	2019	543	25.4	69.8	23.8	5.8	0.6	19.4	31.2
	2023	785	24.0	70.2	22.2	7.3	0.3	15.6	32.9
Malaysia	2019	1019	9.1	86.6	8.7	2.7	2.1	7.2	11.3
	2023	1255	7.8	90.7	7.7	0.8	0.9	6.2	9.5
Norway (9)	2019	655	31.3	58.8	26.8	10.4	4.0	24.7	37.4
	2023	903	27.8	63.2	24.3	9.9	2.6	20.6	33.4
Portugal	2019	490	18.8	73.6	17.0	8.0	1.4	14.1	24.2
	2023	794	18.8	74.7	17.3	7.6	0.5	19.0	18.6
Qatar	2019	559	11.9	80.3	10.8	5.5	3.4	12.8	11.1
	2023	633	13.0	82.3	12.3	4.3	1.1	9.0	17.2
Singapore	2019	701	55.3	44.0	54.4	1.4	0.2	55.1	55.5
	2023	963	63.1	36.7	62.7	0.4	0.1	61.7	64.3
Sweden	2019	574	27.4	61.5	23.2	10.8	4.4	22.5	31.8
	2023	746	27.0	65.0	24.0	8.4	2.7	17.4	36.4
United Arab Emirates	2019	3176	15.9	79.2	15.0	3.7	2.1	14.7	17.0
	2023	4039	27.5	69.6	26.5	2.4	1.6	23.4	31.5
United States	2019	1245	19.8	74.8	18.5	4.1	2.7	15.6	24.4
	2023	1161	18.9	77.7	18.1	1.7	2.5	11.8	25.6
International Avg. (20)	2019	15148	26.7	66.1	24.8	6.9	2.1	22.6	30.7
	2023	19600	28.8	66.1	27.3	5.4	1.2	24.0	33.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Geometry and Measurement / Applying
B_MD2_11 ME72139: Length of surfboard shadow - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019 2023	1170 1034	10.2 19.6	85.8 76.6	9.7 18.7	2.3 3.5	2.2 1.1	9.9 16.1	10.5 23.1
Dubai, UAE	2019 2023	815 1180	25.2 37.3	70.0 60.1	23.5 35.8	4.0 2.2	2.4 1.9	21.0 29.7	29.6 44.3

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

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Mathematics: Geometry and Measurement / Reasoning

B_MD2_12 ME72229: Distance on circular road around city center - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	3.1	61.3	0.6	1.7	28.7	7.7	2.8	3.4
	2023	645	2.0	69.8	0.4	1.3	23.9	4.7	1.6	2.4
Chinese Taipei	2019	704	29.4	63.3	8.2	24.0	4.4	0.1	27.7	31.2
	2023	1109	26.3	67.8	8.1	21.6	2.5	0.0	23.5	29.0
England	2019	459	18.4	58.5	2.2	12.4	24.2	2.6	16.2	21.1
	2023	622	11.9	71.3	1.3	9.1	16.0	2.4	8.7	14.8
Finland	2019	696	10.8	72.7	0.6	8.6	16.8	1.3	11.3	10.5
	2023	859	10.8	77.1	1.4	8.7	12.2	0.7	9.5	11.7
France	2019	551	5.4	66.8	1.8	3.0	24.5	3.9	2.9	7.5
	2023	648	5.1	77.8	2.3	3.1	15.8	1.1	4.1	6.1
Georgia	2019	470	5.5	58.8	1.0	2.9	32.0	5.3	5.0	5.9
	2023	707	4.6	63.1	1.4	2.4	31.8	1.3	2.8	5.9
Hong Kong SAR	2019	470	30.7	54.2	19.0	18.7	7.7	0.4	33.0	28.7
	2023	650	32.0	53.5	19.2	20.1	6.4	0.7	28.3	34.9
Hungary	2019	652	17.8	71.4	1.6	14.9	11.6	0.6	14.8	20.7
	2023	798	10.2	80.2	2.5	8.0	9.1	0.2	8.4	12.0
Israel	2019	535	15.3	63.1	3.6	9.9	20.0	3.4	12.0	18.3
	2023	754	6.4	73.8	2.2	4.0	17.1	2.9	3.1	9.3
Italy	2019	518	11.6	67.6	2.6	7.8	18.8	3.3	10.6	12.3
	2023	672	12.3	70.0	3.2	8.4	17.7	0.7	12.7	11.9
Korea, Rep. of	2019	551	32.6	62.6	1.6	29.9	5.9	0.0	29.7	35.6
	2023	855	31.0	63.5	2.3	27.9	5.8	0.5	26.0	35.5
Lithuania	2019	543	13.9	63.7	3.0	9.0	23.6	0.8	14.0	13.8
	2023	784	16.0	67.8	2.4	11.9	17.4	0.5	14.2	17.7
Malaysia	2019	1019	4.5	86.2	3.4	2.4	5.5	2.5	3.5	5.6
	2023	1255	2.2	93.2	2.7	0.8	2.3	1.1	2.4	2.0
Norway (9)	2019	655	16.0	57.2	0.7	10.6	26.5	5.1	14.4	17.1
	2023	903	16.9	61.1	1.7	11.8	22.0	3.5	16.7	17.1
Portugal	2019	490	6.0	65.8	2.1	3.2	27.4	1.6	3.2	8.9
	2023	792	6.5	74.4	1.8	4.4	18.3	1.1	5.6	7.4
Qatar	2019	559	4.6	79.1	1.9	2.9	12.2	3.8	5.3	4.0
	2023	632	5.1	82.8	2.1	3.4	9.9	1.7	4.9	5.3
Singapore	2019	701	42.5	50.3	9.5	35.9	3.8	0.5	43.2	41.8
	2023	963	40.0	54.0	9.2	34.4	2.1	0.2	35.7	43.7
Sweden	2019	574	20.6	54.5	1.6	13.5	24.6	5.8	20.8	20.4
	2023	746	23.1	57.4	2.3	16.5	20.3	3.5	21.4	24.7
United Arab Emirates	2019	3176	7.8	79.2	5.0	4.4	8.7	2.7	7.8	7.8
	2023	4038	12.3	76.6	6.4	8.0	7.1	2.0	10.2	14.3
United States	2019	1245	14.9	75.7	2.3	12.3	6.2	3.6	13.5	16.4
	2023	1162	8.8	85.0	2.0	7.3	3.0	2.7	6.4	10.9
International Avg. (20)	2019	15149	15.6	65.6	3.6	11.4	16.6	2.7	14.6	16.5
	2023	19594	14.2	71.0	3.7	10.6	13.0	1.6	12.3	15.8

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Geometry and Measurement / Reasoning

B_MD2_12 ME72229: Distance on circular road around city center - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	4.2	85.6	3.5	2.1	6.5	2.4	4.0	4.4
	2023	1034	5.0	84.9	4.1	2.5	6.3	2.2	2.9	6.9
Dubai, UAE	2019	815	16.7	68.8	6.8	11.1	9.9	3.4	15.5	18.0
	2023	1179	22.7	63.6	9.7	15.3	9.2	2.3	19.8	25.3

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Data and Probability / Applying
B_MD2_13 ME72171: Probability of spinner landing on W - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	18.6	60.6	13.8	17.2	8.4	15.6	21.2
	2023	645	22.0	66.1	18.6	9.9	5.3	17.8	25.4
Chinese Taipei	2019	704	76.2	23.3	74.8	1.8	0.1	70.7	81.7
	2023	1110	75.8	24.0	75.2	0.8	0.0	75.4	76.2
England	2019	459	57.5	37.5	50.7	8.6	3.2	53.8	62.1
	2023	622	56.1	40.6	51.9	4.9	2.6	50.3	61.5
Finland	2019	696	57.1	38.9	51.8	7.4	2.0	50.0	62.7
	2023	858	48.2	48.9	45.5	4.8	0.8	40.7	54.0
France	2019	551	46.7	44.3	38.9	12.2	4.6	38.0	54.2
	2023	647	46.6	49.2	42.9	6.7	1.2	40.2	53.2
Georgia	2019	470	28.5	49.7	19.8	22.6	7.9	23.5	33.2
	2023	709	32.1	53.4	25.3	19.1	2.2	30.2	33.6
Hong Kong SAR	2019	470	63.0	35.1	59.9	4.0	1.0	62.1	63.8
	2023	638	68.1	30.7	65.7	2.9	0.7	62.7	72.6
Hungary	2019	652	39.5	52.5	34.3	12.6	0.7	35.9	42.7
	2023	797	30.1	63.8	27.5	8.4	0.3	22.9	37.3
Israel	2019	535	52.3	40.6	44.5	10.8	4.1	44.4	60.8
	2023	755	37.3	55.3	32.9	8.2	3.6	28.9	45.0
Italy	2019	518	42.4	47.3	34.9	13.8	4.0	38.8	45.2
	2023	672	38.1	54.9	33.9	9.9	1.4	31.8	44.3
Korea, Rep. of	2019	551	80.0	19.5	77.8	2.5	0.2	75.0	85.0
	2023	855	72.0	27.2	70.1	2.2	0.5	68.4	75.4
Lithuania	2019	543	39.5	49.9	32.6	16.3	1.2	33.4	44.8
	2023	783	39.8	54.0	35.7	9.7	0.6	33.4	46.0
Malaysia	2019	1019	28.4	67.2	26.6	2.7	3.4	29.0	27.6
	2023	1255	14.9	82.5	14.5	1.5	1.5	14.5	15.4
Norway (9)	2019	655	52.9	39.0	43.8	11.4	5.8	45.6	59.5
	2023	903	52.2	41.4	45.3	8.5	4.7	48.8	55.0
Portugal	2019	490	32.6	59.0	28.6	9.6	2.8	28.6	36.9
	2023	794	28.0	65.2	25.3	8.0	1.5	19.1	36.4
Qatar	2019	559	26.0	68.2	23.9	3.8	4.1	25.6	26.3
	2023	633	29.0	66.4	27.1	3.6	3.0	21.9	36.3
Singapore	2019	701	79.5	20.1	78.0	1.4	0.6	78.5	80.5
	2023	963	77.8	21.9	76.9	0.5	0.7	77.0	78.6
Sweden	2019	574	49.3	42.7	41.5	7.3	8.6	43.0	55.4
	2023	746	53.5	41.1	47.2	6.9	4.8	47.5	59.0
United Arab Emirates	2019	3177	34.5	60.5	31.8	4.5	3.1	36.1	33.1
	2023	4040	42.8	54.1	40.4	2.8	2.6	39.0	46.3
United States	2019	1245	51.5	45.0	47.8	3.0	4.2	50.0	53.2
	2023	1162	40.8	56.3	38.9	1.6	3.2	33.3	47.8
International Avg. (20)	2019	15150	47.8	45.0	42.8	8.7	3.5	43.9	51.5
	2023	19587	45.3	49.9	42.0	6.0	2.1	40.2	50.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Data and Probability / Applying
B_MD2_13 ME72171: Probability of spinner landing on W - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	23.9	71.2	22.4	3.5	2.8	25.3	22.8
	2023	1034	31.0	65.6	29.5	2.2	2.8	25.6	36.1
Dubai, UAE	2019	815	53.5	43.0	49.5	3.8	3.8	53.9	53.0
	2023	1179	63.1	34.5	59.0	3.2	3.2	59.9	65.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Data and Probability / Knowing

B_MD2_14A ME72211A: Selling prices of houses - mean - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	38.2	16.7	33.2	18.4	18.6	3.9	9.1	41.9	34.7
	2023	645	31.3	15.2	27.4	19.4	25.6	6.8	5.7	30.6	31.9
Chinese Taipei	2019	704	87.0	2.6	86.3	6.9	3.4	0.7	0.1	88.1	85.9
	2023	1110	81.8	3.9	80.9	8.8	5.4	1.0	0.0	84.2	79.5
England	2019	459	66.6	9.6	62.4	13.1	8.6	2.6	3.6	67.7	65.1
	2023	514	60.6	12.2	56.4	13.3	11.1	4.1	2.9	55.9	65.3
Finland	2019	696	65.4	5.1	62.3	18.9	8.9	2.5	2.3	65.9	65.1
	2023	860	58.0	7.8	56.5	22.4	10.8	1.6	1.0	56.0	59.6
France	2019	551	54.0	6.0	48.7	19.3	16.2	4.4	5.5	53.5	54.5
	2023	649	47.1	10.9	44.8	20.5	19.0	3.6	1.2	44.7	49.5
Georgia	2019	469	54.9	16.2	47.5	13.7	9.1	4.6	8.8	53.5	56.3
	2023	711	49.2	15.0	46.2	21.2	11.5	3.3	2.7	47.1	51.0
Hong Kong SAR	2019	470	76.3	6.2	74.5	10.6	6.4	1.2	1.2	78.1	74.7
	2023	650	79.8	5.3	78.6	10.4	4.1	0.8	0.7	84.4	76.2
Hungary	2019	652	71.9	9.3	70.4	11.1	7.2	0.8	1.2	72.6	71.1
	2023	798	62.4	11.7	61.7	16.8	8.8	0.8	0.3	61.3	63.5
Israel	2019	535	66.1	10.1	62.1	11.7	10.1	1.8	4.1	65.3	67.0
	2023	754	51.6	19.6	48.7	15.0	11.2	1.6	4.0	51.3	51.9
Italy	2019	518	54.9	6.2	50.9	20.7	15.0	2.8	4.5	54.7	55.1
	2023	672	50.2	7.9	48.4	21.4	18.7	1.7	1.8	46.8	53.8
Korea, Rep. of	2019	551	84.5	1.6	83.5	10.0	3.7	0.8	0.4	85.4	83.7
	2023	856	80.1	2.6	79.0	12.6	4.5	0.8	0.5	78.7	81.3
Lithuania	2019	543	69.8	7.2	68.7	12.1	10.4	0.4	1.2	73.5	66.3
	2023	785	63.1	8.8	62.2	14.6	13.0	0.6	0.8	61.2	65.0
Malaysia	2019	1019	59.0	16.6	55.5	12.7	9.3	1.7	4.2	62.0	55.8
	2023	1255	29.0	34.6	28.3	17.0	17.5	0.8	1.7	29.5	28.5
Norway (9)	2019	655	69.2	4.0	61.5	15.6	7.7	4.6	6.5	69.5	68.8
	2023	903	60.6	6.2	55.0	19.6	9.9	4.0	5.3	59.7	61.4
Portugal	2019	490	54.5	9.6	50.4	16.9	15.6	4.0	3.5	51.1	58.1
	2023	794	42.6	9.4	41.1	21.7	24.4	1.7	1.8	40.1	45.0
Qatar	2019	559	37.7	19.8	34.1	16.6	19.9	5.2	4.4	38.3	37.2
	2023	522	36.6	22.2	34.6	20.5	17.2	2.4	3.1	34.8	38.3
Singapore	2019	701	88.1	3.0	86.5	5.5	3.2	1.2	0.6	89.3	86.9
	2023	963	81.0	4.9	80.2	8.9	5.0	0.3	0.7	82.2	79.9
Sweden	2019	574	61.5	4.3	52.6	15.2	13.4	5.5	9.0	62.0	61.1
	2023	746	59.3	6.8	54.3	15.9	14.6	3.3	5.1	58.2	60.4
United Arab Emirates	2019	3174	47.3	17.6	44.2	16.5	15.1	2.9	3.7	48.1	46.7
	2023	3483	50.3	16.7	46.8	14.5	15.0	3.4	3.6	49.3	51.3
United States	2019	1245	56.6	12.1	52.8	14.5	13.8	2.4	4.4	59.3	53.8
	2023	1162	35.5	18.6	33.2	20.4	21.2	2.8	3.8	31.9	39.0
International Avg. (20)	2019	15146	63.2	9.2	59.4	14.0	10.8	2.7	3.9	64.0	62.4
	2023	18832	55.5	12.0	53.2	16.7	13.4	2.3	2.3	54.4	56.6

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Data and Probability / Knowing

B_MD2_14A ME72211A: Selling prices of houses - mean - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1169	41.6	23.2	39.4	18.4	13.7	2.3	3.1	44.0	39.5
	2023	952	40.4	23.7	37.9	15.9	16.3	2.8	3.4	42.1	38.8
Dubai, UAE	2019	815	64.4	9.3	59.3	13.0	10.5	3.8	4.1	64.1	64.8
	2023	937	66.3	10.7	60.7	11.9	8.3	3.7	4.8	63.5	68.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Knowing

B_MM2_01 ME72178: Shelves labeled with perfect square (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	591	11.9	85.7	11.6	2.3	0.5	12.3	11.3
	2023	640	10.8	85.7	10.3	3.0	1.0	8.2	13.0
Chinese Taipei	2019	723	69.0	30.9	68.8	0.2	0.2	69.3	68.7
	2023	798	64.8	35.1	64.7	0.2	0.0	72.3	57.9
England	2019	479	28.3	69.8	27.6	2.5	0.0	28.9	27.8
	2023	598	32.2	66.9	31.8	1.3	0.0	28.3	36.1
Finland	2019	702	17.0	81.9	16.7	1.2	0.3	16.4	17.5
	2023	835	15.8	82.0	15.4	2.0	0.6	15.9	15.8
France	2019	558	13.3	84.5	13.0	2.5	0.0	15.1	11.7
	2023	642	12.1	86.7	11.9	1.3	0.0	10.6	13.8
Georgia	2019	469	16.6	80.4	16.0	3.5	0.1	18.1	15.1
	2023	693	24.7	74.2	24.3	1.3	0.2	23.1	26.2
Hong Kong SAR	2019	468	50.2	49.4	49.9	0.7	0.0	56.7	45.0
	2023	639	50.4	49.2	50.0	0.7	0.1	50.0	50.8
Hungary	2019	653	25.2	74.6	25.1	0.2	0.0	24.5	25.9
	2023	772	23.1	76.8	23.1	0.1	0.0	23.2	23.0
Israel	2019	528	24.4	74.6	24.1	1.1	0.2	26.1	22.9
	2023	738	17.2	81.4	16.9	1.3	0.4	17.2	17.1
Italy	2019	514	33.9	64.9	33.3	1.5	0.3	33.7	34.1
	2023	657	39.1	60.4	38.8	0.8	0.0	41.0	37.2
Korea, Rep. of	2019	546	41.4	58.3	41.3	0.4	0.0	40.4	42.4
	2023	607	44.5	55.0	44.1	0.9	0.0	40.1	48.4
Lithuania	2019	546	28.3	71.4	28.2	0.4	0.0	31.7	25.6
	2023	778	28.8	71.1	28.8	0.1	0.0	27.8	29.8
Malaysia	2019	1014	22.5	76.3	22.2	1.4	0.1	25.5	19.5
	2023	1255	13.8	86.1	13.8	0.1	0.0	14.7	12.8
Norway (9)	2019	646	20.9	76.8	20.3	2.0	0.9	22.5	19.7
	2023	899	16.9	80.9	16.4	1.9	0.7	16.3	17.3
Portugal	2019	478	32.6	66.7	32.3	1.0	0.0	31.8	33.5
	2023	783	27.3	72.3	27.1	0.3	0.3	28.3	26.2
Qatar	2019	551	23.9	75.2	23.7	0.8	0.4	26.8	21.2
	2023	616	28.5	70.5	28.1	1.1	0.3	33.2	23.3
Singapore	2019	686	74.2	25.7	74.1	0.2	0.0	73.4	75.1
	2023	675	68.9	31.1	68.9	0.0	0.0	71.0	66.9
Sweden	2019	566	7.3	88.1	7.0	4.6	0.3	8.0	6.8
	2023	716	9.1	87.4	8.7	3.1	0.8	9.2	8.9
United Arab Emirates	2019	3207	26.5	72.7	26.2	1.0	0.1	29.1	24.1
	2023	4711	32.1	67.1	31.7	0.9	0.3	31.6	32.6
United States	2019	1229	45.3	54.3	45.0	0.5	0.2	50.7	40.4
	2023	1162	34.3	64.6	33.7	0.6	1.0	35.2	33.4
International Avg. (20)	2019	15154	30.7	68.1	30.3	1.4	0.2	32.0	29.4
	2023	19214	29.7	69.2	29.4	1.1	0.3	29.9	29.5

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Knowing

B_MM2_01 ME72178: Shelves labeled with perfect square (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1175	16.0	83.4	15.8	0.8	0.0	19.0	13.3
	2023	1743	20.4	78.7	20.2	0.8	0.3	20.9	20.0
Dubai, UAE	2019	827	45.3	54.2	44.9	0.8	0.1	46.1	44.4
	2023	1176	49.4	50.1	48.9	0.9	0.1	47.8	50.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Reasoning

B_MM2_02 ME72234: Statement about whole number x - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	591	25.5	25.1	27.9	16.5	23.8	6.2	0.5	25.7	25.1
	2023	640	25.0	22.1	28.5	20.7	23.7	3.7	1.1	25.6	24.4
Chinese Taipei	2019	722	76.0	7.5	7.5	8.9	75.5	0.4	0.2	77.4	74.7
	2023	798	76.3	7.9	6.3	9.5	76.3	0.0	0.0	79.9	73.0
England	2019	479	33.9	21.3	19.2	23.3	32.7	3.5	0.0	39.7	28.5
	2023	598	42.3	17.1	20.6	19.0	41.5	1.8	0.0	41.0	43.6
Finland	2019	702	29.2	32.0	24.2	13.2	28.6	1.5	0.4	29.5	28.8
	2023	835	30.7	24.5	24.0	19.1	29.9	2.0	0.6	31.5	29.9
France	2019	558	31.9	20.7	29.9	13.7	30.1	5.6	0.0	33.1	30.8
	2023	642	33.1	19.2	29.1	17.0	32.3	2.3	0.0	36.7	29.2
Georgia	2019	470	35.8	24.4	24.8	12.5	34.4	3.8	0.1	37.6	34.1
	2023	693	39.9	17.4	23.6	17.7	39.0	2.1	0.2	41.9	37.9
Hong Kong SAR	2019	468	50.7	15.6	15.8	17.5	50.3	0.9	0.0	50.2	51.2
	2023	639	59.3	13.9	11.2	15.3	58.9	0.6	0.1	58.2	60.4
Hungary	2019	653	29.5	21.9	31.4	16.5	29.3	0.8	0.0	28.4	30.6
	2023	772	32.8	23.4	27.2	16.2	32.6	0.5	0.0	36.7	28.4
Israel	2019	528	53.6	13.6	18.3	14.0	52.9	1.1	0.2	51.8	55.2
	2023	738	48.4	16.3	18.2	15.9	47.2	1.7	0.6	51.8	44.7
Italy	2019	514	43.4	13.0	25.0	15.6	41.0	5.1	0.4	46.3	40.4
	2023	657	48.9	12.3	23.8	14.1	48.0	1.8	0.0	53.5	44.2
Korea, Rep. of	2019	546	66.9	13.4	10.8	8.8	66.8	0.1	0.0	67.8	66.0
	2023	607	68.5	13.5	10.1	7.7	68.3	0.4	0.0	68.0	69.0
Lithuania	2019	546	36.3	18.5	30.3	14.4	36.0	0.8	0.0	40.9	32.6
	2023	778	33.6	18.2	30.5	16.7	33.1	1.5	0.0	38.5	28.8
Malaysia	2019	1014	34.2	19.5	27.9	17.6	33.8	1.1	0.1	39.5	29.0
	2023	1255	33.2	23.8	25.3	17.6	33.1	0.3	0.0	37.5	28.7
Norway (9)	2019	646	29.1	22.7	29.2	13.6	26.8	6.6	1.1	31.3	27.4
	2023	899	31.3	23.7	24.8	16.6	29.7	4.5	0.7	31.5	31.0
Portugal	2019	478	38.7	17.0	26.0	16.8	37.8	2.5	0.0	42.4	35.2
	2023	783	36.3	19.0	27.2	16.9	35.9	0.8	0.3	36.1	36.5
Qatar	2019	551	36.2	21.8	21.1	18.8	35.1	2.8	0.4	43.9	29.0
	2023	616	39.5	26.2	14.1	18.9	38.7	1.9	0.3	42.6	36.4
Singapore	2019	686	57.5	15.0	12.5	14.7	57.1	0.8	0.0	59.0	56.0
	2023	675	63.9	14.5	9.1	12.4	63.7	0.4	0.0	62.3	65.4
Sweden	2019	566	38.3	25.2	20.2	13.1	36.3	4.8	0.3	41.6	35.5
	2023	716	33.9	24.8	23.1	15.4	32.4	3.5	0.8	39.3	29.0
United Arab Emirates	2019	3208	42.6	18.9	18.8	18.5	41.8	1.8	0.1	45.8	39.6
	2023	4711	47.2	19.7	17.0	15.1	46.3	1.5	0.4	48.4	46.1
United States	2019	1229	47.7	13.2	18.3	20.1	47.1	1.0	0.3	51.1	44.5
	2023	1162	45.8	16.6	17.2	19.3	44.9	0.7	1.3	44.9	46.6
International Avg. (20)	2019	15155	41.9	19.0	21.9	15.4	40.9	2.6	0.2	44.2	39.7
	2023	19214	43.5	18.7	20.5	16.1	42.8	1.6	0.3	45.3	41.7

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

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Mathematics: Number / Reasoning

B_MM2_02 ME72234: Statement about whole number x - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1175	35.7	19.3	22.7	21.5	35.2	1.2	0.0	36.5	34.8
	2023	1743	38.9	23.0	18.5	18.5	38.3	1.3	0.4	42.3	35.7
Dubai, UAE	2019	827	52.5	16.4	15.2	14.8	51.4	2.0	0.1	52.4	52.7
	2023	1176	58.2	13.9	16.1	10.9	57.1	1.7	0.2	56.3	60.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Knowing

B_MM2_03 ME72020: Compare values of decimals and fractions (DERIVED) - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	591	31.6	56.2	20.8	20.4	2.0	0.5	32.5	30.4
	2023	640	26.6	62.1	14.5	17.9	4.4	1.1	23.7	29.0
Chinese Taipei	2019	723	82.0	12.3	11.2	76.0	0.3	0.2	80.6	83.3
	2023	798	78.3	13.7	15.9	70.4	0.0	0.0	80.9	75.9
England	2019	479	63.3	26.1	19.7	52.0	2.2	0.0	59.9	66.6
	2023	598	66.0	22.6	22.3	54.2	0.9	0.0	60.4	71.6
Finland	2019	702	74.0	16.3	18.7	63.7	0.9	0.4	69.3	78.8
	2023	835	70.9	18.3	20.9	59.6	0.7	0.6	67.9	73.7
France	2019	558	56.0	32.1	22.4	43.8	1.7	0.0	58.8	53.3
	2023	642	52.3	37.3	20.3	41.9	0.5	0.0	48.9	56.0
Georgia	2019	469	40.8	48.2	18.3	30.5	2.9	0.1	37.0	44.6
	2023	693	41.8	48.2	18.8	31.9	1.0	0.2	38.0	45.5
Hong Kong SAR	2019	469	81.3	11.6	14.0	74.1	0.2	0.0	79.6	82.7
	2023	639	80.9	15.4	7.2	77.1	0.3	0.1	78.7	83.1
Hungary	2019	653	54.5	32.0	26.5	41.0	0.5	0.0	49.2	59.5
	2023	772	54.4	32.5	26.1	41.3	0.5	0.0	49.5	60.0
Israel	2019	528	59.1	27.1	27.1	45.2	0.5	0.2	47.8	69.9
	2023	738	56.2	32.1	22.0	44.3	0.6	0.9	51.3	61.4
Italy	2019	514	51.4	35.7	23.0	38.5	2.1	0.6	47.7	54.8
	2023	657	56.5	32.2	22.2	45.1	0.5	0.0	56.6	56.4
Korea, Rep. of	2019	546	75.7	16.7	15.0	67.9	0.4	0.0	72.6	78.5
	2023	607	73.8	19.3	13.8	66.8	0.0	0.0	68.5	78.4
Lithuania	2019	546	56.8	31.3	23.8	44.8	0.2	0.0	54.9	58.3
	2023	778	58.3	30.8	21.6	47.4	0.1	0.0	57.6	59.0
Malaysia	2019	1014	40.8	50.6	16.4	32.3	0.7	0.1	42.7	38.8
	2023	1255	25.0	68.1	13.7	18.2	0.1	0.0	24.0	26.1
Norway (9)	2019	646	70.9	17.9	19.2	57.5	4.1	1.2	70.0	72.4
	2023	899	63.7	25.9	19.0	52.6	1.5	1.0	61.1	66.0
Portugal	2019	478	55.0	33.9	21.3	43.8	0.9	0.0	51.4	58.4
	2023	783	47.4	40.0	24.9	34.8	0.0	0.3	48.5	46.2
Qatar	2019	551	40.5	45.8	25.2	27.1	1.5	0.4	40.2	40.7
	2023	616	42.6	44.2	25.9	29.4	0.2	0.3	42.1	43.1
Singapore	2019	686	75.9	17.1	13.9	68.9	0.1	0.0	77.8	73.9
	2023	675	78.5	15.4	12.1	72.5	0.0	0.0	79.0	78.1
Sweden	2019	566	61.6	29.6	16.1	52.3	1.2	0.7	59.7	63.2
	2023	716	70.0	20.1	18.9	59.4	0.8	0.8	68.0	71.7
United Arab Emirates	2019	3207	51.2	35.7	25.3	38.0	0.9	0.1	50.6	51.7
	2023	4711	55.3	32.8	23.1	43.2	0.4	0.5	51.7	58.7
United States	2019	1229	66.8	23.6	18.6	57.0	0.4	0.3	67.7	65.9
	2023	1162	59.8	29.2	20.5	48.6	0.3	1.5	56.7	62.7
International Avg. (20)	2019	15155	59.5	30.0	19.8	48.7	1.2	0.2	57.5	61.3
	2023	19214	57.9	32.0	19.2	47.8	0.6	0.4	55.7	60.1

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

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Mathematics: Number / Knowing

B_MM2_03 ME72020: Compare values of decimals and fractions (DERIVED) - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1175	45.4	42.1	23.6	33.1	1.1	0.0	49.0	42.3
	2023	1743	49.3	38.0	24.5	36.7	0.4	0.4	46.5	52.1
Dubai, UAE	2019	827	64.6	23.9	22.4	52.9	0.7	0.1	60.3	69.0
	2023	1176	67.0	22.6	20.3	56.3	0.5	0.3	62.0	71.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

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Mathematics: Number / Applying

B_MM2_04 ME72027: Fraction of water in full container - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	591	51.5	48.9	31.5	8.5	6.1	4.1	0.9	48.3	54.8
	2023	640	48.6	46.6	33.6	10.9	4.7	3.1	1.1	41.4	54.7
Chinese Taipei	2019	723	78.2	77.9	11.4	3.5	6.9	0.2	0.2	74.3	81.8
	2023	798	76.7	76.7	10.3	3.5	9.4	0.0	0.0	76.3	77.1
England	2019	479	68.2	66.4	18.8	7.1	5.0	2.3	0.4	63.4	72.8
	2023	598	71.9	71.2	17.0	4.1	6.6	1.1	0.0	67.9	75.9
Finland	2019	702	81.5	80.7	13.9	3.1	1.4	0.5	0.4	77.7	85.1
	2023	835	79.2	78.0	15.8	3.2	1.6	0.7	0.8	73.9	84.0
France	2019	558	66.5	65.7	23.0	4.5	5.5	0.7	0.5	59.5	73.2
	2023	642	64.9	64.9	21.4	6.6	7.1	0.1	0.0	58.9	71.5
Georgia	2019	470	49.4	47.7	28.9	7.1	12.9	3.4	0.1	48.1	50.6
	2023	693	50.7	49.3	35.1	4.5	8.4	2.6	0.2	47.3	54.0
Hong Kong SAR	2019	469	66.7	65.8	15.5	7.3	10.1	1.1	0.2	60.7	71.5
	2023	639	72.9	72.4	15.3	4.9	6.8	0.6	0.1	66.7	78.9
Hungary	2019	653	60.5	60.0	28.0	5.4	5.9	0.8	0.0	55.2	65.5
	2023	772	57.9	57.9	30.2	3.9	8.1	0.0	0.0	51.2	65.5
Israel	2019	528	72.4	71.6	17.8	3.5	6.0	0.9	0.2	66.5	77.9
	2023	738	62.6	61.4	24.4	5.8	6.4	0.9	1.0	55.8	69.8
Italy	2019	514	51.9	50.7	22.5	4.1	20.6	1.3	0.9	38.1	64.4
	2023	657	58.8	58.3	21.2	5.9	13.9	0.5	0.2	52.5	65.1
Korea, Rep. of	2019	546	76.1	75.8	11.3	4.1	8.5	0.4	0.0	73.0	78.9
	2023	607	72.5	72.5	13.8	4.3	9.3	0.0	0.0	65.3	78.8
Lithuania	2019	546	61.9	61.9	26.7	3.3	8.1	0.0	0.0	57.5	65.5
	2023	778	58.8	58.5	27.5	5.3	8.1	0.6	0.0	54.8	62.8
Malaysia	2019	1014	36.6	35.9	29.9	8.9	23.5	1.3	0.4	35.4	37.8
	2023	1255	30.1	30.1	39.3	12.8	17.7	0.2	0.0	25.8	34.6
Norway (9)	2019	646	78.2	74.8	15.7	3.9	1.3	3.0	1.3	78.7	77.5
	2023	899	77.1	75.5	15.8	3.3	3.4	0.6	1.4	74.9	79.1
Portugal	2019	478	61.7	61.4	28.4	4.6	5.2	0.4	0.0	52.0	70.9
	2023	783	55.8	55.4	31.0	6.7	6.3	0.4	0.3	52.4	59.3
Qatar	2019	551	39.0	37.8	28.5	10.6	19.9	2.2	1.0	39.0	39.0
	2023	616	48.0	46.8	23.4	12.5	14.7	2.0	0.5	46.9	49.3
Singapore	2019	686	86.4	86.0	7.6	1.5	4.5	0.5	0.0	86.0	86.8
	2023	675	85.8	85.8	8.9	2.2	3.1	0.0	0.0	83.9	87.5
Sweden	2019	566	79.2	77.7	15.2	3.6	1.6	1.1	0.8	79.4	79.0
	2023	716	80.7	79.7	13.9	2.7	2.6	0.3	0.8	82.2	79.3
United Arab Emirates	2019	3207	39.3	38.8	26.0	13.9	19.8	1.2	0.3	35.8	42.6
	2023	4711	47.7	46.8	22.8	10.6	18.1	1.1	0.7	40.0	55.0
United States	2019	1229	63.2	62.4	16.5	7.5	12.2	0.8	0.4	60.2	66.0
	2023	1162	57.2	56.1	22.6	8.6	10.8	0.3	1.6	50.9	62.8
International Avg. (20)	2019	15156	63.4	62.4	20.9	5.8	9.2	1.3	0.4	59.4	67.1
	2023	19214	62.9	62.2	22.2	6.1	8.3	0.8	0.4	58.4	67.2

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

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Mathematics: Number / Applying

B_MM2_04 ME72027: Fraction of water in full container - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	31.3	30.9	28.6	17.4	22.0	0.7	0.3	29.3	32.8
	2023	1743	38.5	37.9	26.6	13.5	20.6	0.8	0.6	29.8	46.7
Dubai, UAE	2019	827	56.9	55.7	21.2	9.0	12.0	1.7	0.3	50.3	63.6
	2023	1176	63.9	62.8	18.0	5.9	11.6	1.1	0.6	57.3	70.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Applying
B_MM2_05 ME72052: Table of proportional x and y (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	591	5.8	82.0	5.0	11.8	1.2	7.4	4.2
	2023	640	7.7	81.7	6.8	10.3	1.3	7.4	7.9
Chinese Taipei	2019	723	51.5	48.2	51.2	0.4	0.2	52.8	50.3
	2023	798	66.0	34.0	66.0	0.0	0.0	71.7	60.8
England	2019	479	15.8	78.7	14.8	6.1	0.4	14.0	17.5
	2023	598	22.2	75.5	21.6	2.9	0.0	17.7	26.6
Finland	2019	702	14.4	82.0	13.8	3.7	0.5	13.1	15.7
	2023	835	18.2	79.3	17.6	2.2	0.9	13.9	22.0
France	2019	558	32.7	63.6	30.9	4.8	0.6	35.9	29.8
	2023	638	35.7	62.3	34.6	3.1	0.0	34.3	37.1
Georgia	2019	471	13.0	77.1	11.5	10.7	0.8	10.4	15.5
	2023	693	17.8	77.9	16.9	4.8	0.4	17.2	18.4
Hong Kong SAR	2019	469	31.9	66.3	31.0	2.2	0.5	29.8	33.5
	2023	639	48.6	50.8	48.0	1.1	0.1	44.8	52.2
Hungary	2019	653	17.4	80.2	16.9	2.9	0.0	12.6	21.9
	2023	772	19.6	78.8	19.1	2.1	0.0	17.0	22.4
Israel	2019	528	19.6	76.2	18.6	4.9	0.4	16.7	22.2
	2023	738	16.3	79.7	15.5	3.7	1.0	14.0	18.8
Italy	2019	514	12.5	81.9	11.7	5.3	1.0	8.7	16.0
	2023	656	17.5	79.3	16.8	3.7	0.2	15.9	19.1
Korea, Rep. of	2019	546	50.4	48.8	49.5	1.7	0.0	45.1	55.2
	2023	607	56.3	43.4	56.0	0.7	0.0	50.9	61.1
Lithuania	2019	546	16.1	82.3	15.7	2.0	0.0	14.7	17.1
	2023	778	21.5	77.2	21.2	1.6	0.0	17.7	25.4
Malaysia	2019	1014	4.2	93.7	4.1	1.5	0.7	3.2	5.2
	2023	1255	3.9	95.5	3.9	0.6	0.0	3.4	4.4
Norway (9)	2019	646	5.8	83.3	5.1	10.0	1.6	7.0	4.8
	2023	899	9.1	84.0	8.4	6.2	1.4	7.1	10.7
Portugal	2019	478	24.9	72.1	23.9	4.0	0.0	21.2	28.2
	2023	783	15.2	81.3	14.5	3.9	0.3	14.3	16.0
Qatar	2019	551	8.4	86.6	7.9	4.4	1.1	8.8	8.0
	2023	616	9.6	88.7	9.4	0.8	1.1	8.8	10.4
Singapore	2019	686	54.0	45.6	53.4	1.0	0.0	54.0	53.9
	2023	675	53.0	46.8	52.8	0.4	0.0	49.1	56.5
Sweden	2019	566	7.1	87.9	6.7	4.5	1.0	7.4	6.8
	2023	716	7.4	87.3	6.9	4.9	0.8	6.2	8.3
United Arab Emirates	2019	3208	16.2	81.6	15.8	2.3	0.4	15.1	17.1
	2023	4710	20.9	77.2	20.4	1.5	0.9	18.2	23.4
United States	2019	1229	12.9	85.8	12.7	1.1	0.4	12.5	13.2
	2023	1162	16.0	82.2	15.6	0.6	1.6	12.8	18.9
International Avg. (20)	2019	15158	20.7	75.2	20.0	4.3	0.5	19.5	21.8
	2023	19208	24.1	73.1	23.6	2.8	0.5	22.1	26.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Number / Applying

B_MM2_05 ME72052: Table of proportional x and y (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1175	9.8	87.9	9.6	2.1	0.3	10.1	9.5
	2023	1742	13.0	85.3	12.7	1.2	0.8	12.2	13.7
Dubai, UAE	2019	827	23.4	74.5	22.8	2.4	0.3	21.2	25.7
	2023	1176	32.2	65.9	31.3	2.2	0.7	27.1	37.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Knowing

B_MM2_06 ME72067: Value of y when a = 10, b = 4, and f = -2 - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	591	40.5	9.2	37.6	14.8	31.2	5.8	1.4	43.4	37.2
	2023	640	39.9	10.0	37.0	18.3	27.4	5.5	1.7	39.4	40.3
Chinese Taipei	2019	723	87.5	3.1	87.0	3.3	6.1	0.3	0.3	89.3	85.8
	2023	798	87.2	2.9	87.2	4.4	5.4	0.0	0.0	90.5	84.2
England	2019	479	69.9	7.2	68.3	5.0	17.3	1.8	0.4	71.2	68.6
	2023	598	69.1	6.8	68.0	5.3	18.4	1.6	0.0	67.5	70.6
Finland	2019	702	56.1	5.4	54.9	6.2	31.2	1.7	0.5	61.2	51.1
	2023	835	55.0	6.3	54.1	9.4	28.6	0.6	0.9	57.8	52.4
France	2019	558	45.1	8.5	43.6	8.7	36.0	2.3	0.9	49.7	40.8
	2023	642	45.3	9.7	44.4	10.0	34.0	1.9	0.0	45.3	45.3
Georgia	2019	470	61.3	8.6	59.9	9.1	20.2	1.5	0.8	61.7	60.9
	2023	693	62.5	10.3	61.2	8.0	18.4	1.4	0.7	59.4	65.5
Hong Kong SAR	2019	469	87.5	3.7	86.3	4.7	3.9	0.9	0.5	90.0	85.5
	2023	639	85.8	3.9	85.7	3.0	7.3	0.1	0.1	87.9	83.7
Hungary	2019	653	58.3	5.5	58.0	9.3	26.7	0.6	0.0	59.6	57.1
	2023	772	58.9	6.6	58.8	8.8	25.8	0.2	0.0	59.7	57.8
Israel	2019	528	66.4	8.4	64.5	7.2	17.0	2.4	0.4	69.1	63.8
	2023	738	59.8	6.3	58.3	11.6	21.3	1.6	1.0	60.6	59.0
Italy	2019	514	43.2	10.5	42.0	9.4	35.3	1.8	1.0	42.7	43.7
	2023	657	55.6	4.7	54.3	15.0	23.6	2.2	0.2	57.7	53.5
Korea, Rep. of	2019	546	86.0	3.3	86.0	4.5	6.2	0.0	0.0	85.9	86.1
	2023	607	85.1	4.5	84.9	5.1	5.3	0.1	0.0	83.7	86.2
Lithuania	2019	546	69.4	5.5	68.8	2.9	22.0	0.9	0.0	71.0	68.1
	2023	778	68.3	5.2	68.0	5.5	21.0	0.3	0.1	70.4	66.1
Malaysia	2019	1014	42.1	12.3	41.6	13.8	31.0	0.5	0.7	40.7	43.5
	2023	1255	36.9	14.0	36.8	17.7	31.2	0.3	0.1	35.9	38.0
Norway (9)	2019	646	54.1	8.0	50.8	8.3	26.8	4.5	1.6	59.5	49.9
	2023	899	49.4	6.4	47.8	10.4	32.1	1.8	1.6	47.8	50.9
Portugal	2019	478	57.2	4.0	56.5	6.9	31.5	1.1	0.0	58.1	56.3
	2023	783	44.5	7.7	44.0	14.3	32.9	0.5	0.6	45.2	43.8
Qatar	2019	551	53.9	13.0	52.2	12.6	19.1	2.0	1.1	59.6	48.4
	2023	616	59.4	10.6	58.2	12.0	17.2	0.8	1.1	61.8	56.7
Singapore	2019	686	89.1	3.8	89.1	2.3	4.8	0.0	0.0	91.1	87.1
	2023	675	88.7	2.1	88.5	3.1	6.1	0.2	0.0	90.8	86.7
Sweden	2019	566	39.4	7.5	37.9	8.8	42.2	2.5	1.2	41.4	37.7
	2023	716	51.9	8.6	50.5	6.5	31.7	1.5	1.2	53.7	50.3
United Arab Emirates	2019	3206	64.1	10.3	63.3	9.0	16.2	0.8	0.5	65.0	63.1
	2023	4710	67.2	8.2	65.9	8.0	16.0	0.7	1.3	66.8	67.6
United States	2019	1229	75.1	7.3	74.2	5.9	11.4	0.7	0.5	78.5	72.0
	2023	1162	65.0	9.3	63.8	10.4	14.7	0.2	1.7	67.1	63.1
International Avg. (20)	2019	15155	62.3	7.2	61.1	7.6	21.8	1.6	0.6	64.4	60.3
	2023	19213	61.8	7.2	60.9	9.3	20.9	1.1	0.6	62.4	61.1

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Knowing

B_MM2_06 ME72067: Value of y when a = 10, b = 4, and f = -2 - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	58.1	10.5	57.6	11.4	19.6	0.6	0.3	60.2	56.2
	2023	1742	58.4	9.6	57.2	10.9	20.2	0.9	1.1	56.1	60.5
Dubai, UAE	2019	827	76.9	8.7	75.8	4.5	9.5	1.0	0.5	76.2	77.7
	2023	1176	79.6	5.8	78.3	3.8	10.5	0.6	1.0	80.4	78.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Reasoning

B_MM2_07A ME72083A: Model planes - Explain amount of time - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	591	60.6	32.3	49.7	16.7	1.4	59.7	61.4
	2023	640	53.7	32.8	38.1	27.3	1.9	48.2	58.2
Chinese Taipei	2019	723	81.2	18.1	78.1	3.5	0.3	85.7	77.0
	2023	798	81.4	17.8	78.2	3.9	0.0	84.8	78.3
England	2019	479	76.0	21.2	67.2	11.1	0.4	73.0	79.2
	2023	598	78.5	18.6	68.1	13.3	0.0	76.4	80.6
Finland	2019	702	69.0	28.5	63.3	7.4	0.8	72.9	65.3
	2023	835	62.2	34.5	56.7	7.8	1.0	64.8	59.8
France	2019	558	77.1	19.3	65.2	14.5	0.9	81.2	73.3
	2023	642	72.9	22.5	60.7	16.7	0.0	76.5	69.2
Georgia	2019	472	68.7	22.3	49.0	27.9	0.8	69.3	68.0
	2023	693	67.7	22.7	47.7	28.6	1.0	63.4	72.1
Hong Kong SAR	2019	469	77.3	20.4	69.7	9.4	0.5	79.7	75.3
	2023	639	84.6	13.7	75.6	10.6	0.1	81.0	88.4
Hungary	2019	653	71.1	26.0	64.0	10.1	0.0	68.2	73.8
	2023	772	70.2	26.3	61.9	11.9	0.0	72.6	67.7
Israel	2019	528	79.3	17.5	67.3	14.6	0.5	77.5	81.0
	2023	738	73.9	19.9	56.6	22.1	1.4	72.7	75.3
Italy	2019	514	76.5	20.3	66.1	12.4	1.1	71.4	81.3
	2023	657	71.2	24.9	61.6	13.1	0.3	68.3	74.1
Korea, Rep. of	2019	546	87.0	12.3	82.4	5.3	0.0	87.9	86.3
	2023	607	84.7	14.3	78.9	6.9	0.0	80.9	88.1
Lithuania	2019	546	73.7	22.7	63.6	13.7	0.0	75.6	72.1
	2023	778	71.4	24.5	61.1	14.3	0.1	73.0	69.9
Malaysia	2019	1014	40.5	55.7	37.9	5.6	0.8	40.4	40.5
	2023	1255	28.4	67.6	26.8	5.5	0.2	28.6	28.1
Norway (9)	2019	646	72.3	23.2	60.7	14.5	1.6	76.1	68.7
	2023	899	66.5	28.1	55.7	14.6	1.6	71.3	62.6
Portugal	2019	478	71.6	25.4	64.0	10.6	0.0	65.6	77.5
	2023	783	66.5	28.7	57.0	13.7	0.6	66.8	66.2
Qatar	2019	551	46.4	43.6	37.7	17.3	1.5	46.8	45.9
	2023	616	56.5	34.6	44.9	19.2	1.2	55.3	57.9
Singapore	2019	686	84.1	15.7	83.0	1.3	0.0	82.3	86.0
	2023	674	84.7	15.0	83.2	1.8	0.0	86.1	83.5
Sweden	2019	566	75.5	20.6	63.4	14.4	1.6	77.4	73.9
	2023	716	72.5	24.2	63.9	10.8	1.2	80.6	65.7
United Arab Emirates	2019	3206	53.3	39.4	44.9	15.1	0.6	52.2	54.4
	2023	4711	62.9	28.7	48.6	21.1	1.6	59.5	66.3
United States	2019	1229	67.3	30.4	62.4	6.6	0.6	71.0	63.8
	2023	1161	59.8	36.0	53.4	8.9	1.7	56.7	62.4
International Avg. (20)	2019	15157	70.4	25.7	62.0	11.6	0.7	70.7	70.2
	2023	19212	68.5	26.8	58.9	13.6	0.7	68.4	68.7

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Reasoning

B_MM2_07A ME72083A: Model planes - Explain amount of time - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	44.5	45.7	36.6	17.4	0.3	46.9	41.9
	2023	1743	52.0	35.4	38.4	24.7	1.6	45.2	58.6
Dubai, UAE	2019	827	73.2	23.9	65.3	10.2	0.6	71.2	75.3
	2023	1176	81.8	15.5	69.7	13.6	1.2	79.8	83.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Applying
B_MM2_07B ME72083B: Model planes - inequality - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	591	28.6	32.8	16.0	13.9	25.1	9.9	2.4	29.3	27.9
	2023	640	31.2	26.3	14.2	19.2	27.0	10.8	2.4	32.3	30.2
Chinese Taipei	2019	723	57.5	23.8	7.0	11.1	56.6	1.2	0.3	60.9	54.3
	2023	798	62.4	18.8	7.0	11.5	62.1	0.5	0.0	64.9	60.1
England	2019	479	33.7	31.8	12.7	17.5	31.5	5.6	0.9	37.6	29.8
	2023	598	46.5	23.7	11.9	15.3	44.1	5.0	0.0	49.5	43.5
Finland	2019	702	40.0	28.9	14.5	14.3	38.5	3.1	0.8	45.5	34.6
	2023	835	37.9	31.2	13.4	15.0	36.4	2.9	1.1	43.9	32.6
France	2019	558	36.7	28.9	10.8	16.4	32.6	9.7	1.5	41.6	32.3
	2023	642	39.7	28.4	11.2	16.7	37.0	6.5	0.2	42.9	36.2
Georgia	2019	471	28.3	35.8	15.6	11.6	24.8	11.3	1.0	33.4	23.3
	2023	693	36.7	26.2	17.2	14.5	33.6	7.5	1.0	34.2	39.1
Hong Kong SAR	2019	468	48.4	22.9	13.4	13.6	46.8	2.8	0.5	49.2	47.8
	2023	639	60.4	16.4	10.2	12.4	59.6	1.3	0.1	62.2	58.7
Hungary	2019	653	41.5	22.6	15.2	19.4	40.7	2.1	0.0	45.8	37.5
	2023	772	44.3	22.8	14.2	17.6	43.5	1.9	0.0	51.1	36.7
Israel	2019	528	49.3	19.9	11.5	17.1	47.0	3.6	1.1	50.1	48.5
	2023	738	40.3	21.8	14.3	19.1	37.3	6.1	1.4	41.6	39.0
Italy	2019	514	35.7	26.3	13.5	20.0	33.2	4.7	2.3	39.5	32.2
	2023	657	45.7	21.4	10.2	19.6	43.1	5.3	0.3	52.6	38.8
Korea, Rep. of	2019	546	66.2	16.5	6.3	10.7	65.6	0.9	0.0	68.5	64.2
	2023	607	70.9	17.5	4.5	6.8	70.4	0.7	0.0	72.9	69.2
Lithuania	2019	546	49.7	26.9	10.0	12.1	48.5	2.4	0.1	53.1	47.0
	2023	778	50.3	25.4	10.0	13.3	49.3	2.0	0.1	54.5	46.2
Malaysia	2019	1014	33.8	25.7	18.9	19.5	32.6	2.2	1.1	36.2	31.3
	2023	1255	27.1	30.2	19.6	21.8	26.6	1.5	0.3	29.5	24.6
Norway (9)	2019	646	38.7	21.3	13.0	18.9	33.6	11.3	1.8	40.4	36.5
	2023	899	36.1	23.6	16.7	17.6	32.7	7.6	1.8	40.3	32.8
Portugal	2019	478	43.5	23.4	11.4	19.2	41.7	4.3	0.0	43.8	43.3
	2023	783	40.2	23.9	15.1	18.9	38.9	2.6	0.6	42.9	37.4
Qatar	2019	551	31.9	30.2	19.3	13.4	29.5	5.2	2.5	41.1	23.2
	2023	616	36.2	27.2	17.3	16.8	34.8	2.4	1.5	43.5	28.4
Singapore	2019	686	52.4	27.3	7.0	13.0	52.0	0.6	0.2	55.7	48.9
	2023	675	58.9	20.8	10.1	10.0	58.8	0.2	0.0	62.9	55.4
Sweden	2019	566	35.6	24.3	15.4	17.0	31.4	9.6	2.3	42.3	30.3
	2023	716	42.3	24.0	13.0	15.8	38.7	7.2	1.2	47.0	38.2
United Arab Emirates	2019	3206	35.0	28.6	17.2	15.6	33.1	4.1	1.4	41.0	29.5
	2023	4711	44.6	22.5	15.3	14.7	42.1	3.5	1.9	47.7	41.6
United States	2019	1229	53.9	21.1	9.7	13.5	51.8	2.7	1.2	59.5	48.7
	2023	1162	50.2	16.2	12.5	19.3	48.5	1.7	1.8	52.6	48.1
International Avg. (20)	2019	15155	42.0	26.0	12.9	15.4	39.8	4.9	1.1	45.7	38.5
	2023	19214	45.1	23.4	12.9	15.8	43.2	3.9	0.8	48.5	41.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Algebra / Applying
B_MM2_07B ME72083B: Model planes - inequality - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	30.5	27.5	20.9	17.9	29.2	3.4	1.1	39.3	22.9
	2023	1743	37.9	22.5	18.6	17.6	35.7	3.7	1.9	38.8	37.0
Dubai, UAE	2019	827	49.5	27.5	8.2	11.8	46.6	4.8	1.1	56.4	42.6
	2023	1176	58.5	20.1	9.3	10.0	55.4	3.5	1.7	62.1	55.1

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

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Mathematics: Algebra / Applying
B_MM2_08A ME72108A: Small triangles in figure - figure 10 - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	591	33.5	54.4	27.3	15.7	2.5	31.1	35.8
	2023	640	28.0	61.1	23.7	12.8	2.4	23.2	31.8
Chinese Taipei	2019	723	75.4	24.0	73.7	2.1	0.3	77.0	74.0
	2023	798	70.1	29.5	69.0	1.5	0.0	75.1	65.4
England	2019	479	47.4	47.0	42.3	9.6	1.1	50.3	44.5
	2023	598	49.3	46.5	45.2	8.1	0.2	46.0	52.7
Finland	2019	702	42.7	52.2	38.9	8.1	0.8	42.1	43.2
	2023	834	34.8	60.1	32.1	6.6	1.2	32.3	37.0
France	2019	558	47.3	46.6	41.7	9.9	1.8	48.7	46.0
	2023	642	41.9	53.7	38.7	7.5	0.2	40.4	43.3
Georgia	2019	471	49.9	41.6	41.5	16.0	1.0	46.9	53.0
	2023	693	49.7	44.4	43.9	10.6	1.1	49.2	50.2
Hong Kong SAR	2019	468	63.5	35.4	61.6	2.5	0.5	62.0	64.7
	2023	637	54.6	43.7	52.7	3.5	0.1	54.3	54.9
Hungary	2019	653	43.7	50.4	39.1	10.4	0.0	44.3	43.1
	2023	772	34.7	61.1	32.5	6.3	0.0	34.3	35.2
Israel	2019	528	60.9	35.8	55.8	7.4	1.1	59.2	62.5
	2023	738	47.6	47.9	43.5	7.0	1.6	43.8	51.4
Italy	2019	514	60.6	34.4	52.9	10.4	2.3	57.1	64.0
	2023	657	53.8	42.1	49.1	8.2	0.6	51.7	56.0
Korea, Rep. of	2019	546	68.1	31.1	66.2	2.7	0.0	69.5	66.7
	2023	606	67.8	31.8	66.8	1.4	0.0	65.1	70.1
Lithuania	2019	546	66.0	32.4	63.0	4.5	0.1	65.2	66.8
	2023	778	52.4	44.4	48.9	6.7	0.1	51.5	53.3
Malaysia	2019	1014	23.4	73.5	22.5	2.8	1.2	23.0	23.9
	2023	1255	13.6	83.9	13.2	2.1	0.7	12.1	15.2
Norway (9)	2019	646	38.4	51.3	32.0	14.5	2.3	39.5	37.5
	2023	899	33.7	56.0	28.5	13.3	2.1	32.4	34.7
Portugal	2019	478	50.8	46.0	47.5	6.3	0.1	47.8	53.7
	2023	783	37.7	59.0	35.7	4.7	0.6	36.9	38.6
Qatar	2019	551	48.4	48.0	45.0	4.5	2.5	53.2	44.0
	2023	616	49.1	47.9	46.3	4.0	1.8	50.8	47.3
Singapore	2019	686	68.3	31.2	67.3	1.3	0.2	66.7	70.0
	2023	675	62.6	36.7	61.5	1.8	0.0	64.7	60.8
Sweden	2019	566	39.2	53.1	34.2	10.5	2.3	39.6	38.8
	2023	716	35.2	57.1	31.0	10.5	1.4	37.0	33.4
United Arab Emirates	2019	3208	45.8	50.8	42.9	4.9	1.4	47.1	44.6
	2023	4711	46.9	49.1	43.4	5.4	2.2	45.8	48.0
United States	2019	1229	52.0	44.9	48.6	5.3	1.3	57.4	47.0
	2023	1162	45.6	51.5	43.1	3.1	2.2	43.3	47.6
International Avg. (20)	2019	15157	51.3	44.2	47.2	7.5	1.1	51.4	51.2
	2023	19210	45.5	50.4	42.4	6.3	0.9	44.5	46.3

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Algebra / Applying

B_MM2_08A ME72108A: Small triangles in figure - figure 10 - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1175	35.6	60.2	33.3	5.4	1.1	36.3	35.1
	2023	1743	37.1	58.2	34.4	5.4	2.0	34.9	39.2
Dubai, UAE	2019	827	61.3	36.4	57.7	4.8	1.1	60.7	62.0
	2023	1176	61.6	35.3	56.5	6.1	2.1	58.1	64.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

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Mathematics: Algebra / Reasoning

B_MM2_08B ME72108B: Small triangles in figure - rule - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	591	23.8	44.0	13.8	38.0	4.2	24.0	23.7
	2023	640	15.6	49.9	9.2	38.1	2.8	15.6	15.6
Chinese Taipei	2019	723	45.5	48.5	40.5	10.7	0.3	44.5	46.4
	2023	798	61.6	34.0	54.6	11.4	0.0	68.1	55.5
England	2019	479	47.8	39.3	35.9	23.7	1.1	47.8	47.8
	2023	598	42.7	43.2	32.3	24.2	0.3	41.8	43.7
Finland	2019	702	25.6	50.9	17.5	30.4	1.2	29.0	22.8
	2023	835	21.3	58.9	16.0	23.9	1.2	23.4	19.8
France	2019	558	41.2	30.8	21.6	45.4	2.1	47.1	36.0
	2023	642	30.6	34.5	15.2	49.5	0.9	33.2	28.0
Georgia	2019	472	35.6	30.2	16.7	51.1	1.9	37.6	34.0
	2023	693	29.8	32.2	13.7	52.7	1.4	32.1	28.0
Hong Kong SAR	2019	469	53.2	41.2	46.8	11.6	0.5	54.5	52.0
	2023	639	45.5	46.1	38.5	15.0	0.3	41.9	49.2
Hungary	2019	653	27.2	47.6	17.7	34.5	0.2	26.1	28.1
	2023	772	22.1	50.3	14.3	35.4	0.0	24.2	20.2
Israel	2019	528	61.2	28.8	45.4	24.5	1.3	62.0	60.4
	2023	738	45.0	35.8	29.3	32.5	2.3	40.2	49.7
Italy	2019	514	33.1	42.6	21.1	33.5	2.7	32.0	34.1
	2023	657	37.1	38.8	22.8	37.5	0.9	39.2	34.9
Korea, Rep. of	2019	546	54.9	39.8	48.5	11.7	0.0	58.2	52.0
	2023	607	53.5	39.0	44.8	16.1	0.2	54.5	52.6
Lithuania	2019	546	44.6	36.1	29.0	34.9	0.1	45.7	43.7
	2023	778	37.7	35.1	21.3	43.5	0.1	43.9	32.0
Malaysia	2019	1014	10.1	79.5	8.9	10.1	1.5	10.7	9.5
	2023	1255	5.8	84.0	5.2	9.6	1.2	4.4	7.2
Norway (9)	2019	646	25.1	40.5	13.6	43.0	2.9	28.3	22.7
	2023	899	26.3	48.9	17.4	31.2	2.4	25.9	26.7
Portugal	2019	478	41.6	43.3	30.9	25.5	0.2	40.1	43.1
	2023	783	29.2	52.3	21.5	25.5	0.6	32.1	26.4
Qatar	2019	551	31.9	54.2	25.4	17.6	2.8	37.0	27.3
	2023	616	32.5	51.7	25.0	21.1	2.2	30.5	34.9
Singapore	2019	686	61.6	36.5	58.7	4.6	0.2	61.9	61.4
	2023	675	54.5	43.9	52.6	3.6	0.0	57.7	51.6
Sweden	2019	566	32.2	46.4	22.0	28.2	3.4	32.9	31.5
	2023	716	25.9	52.6	18.4	27.5	1.6	27.6	24.5
United Arab Emirates	2019	3208	35.0	54.8	29.5	13.9	1.7	36.4	33.7
	2023	4711	35.3	51.7	28.2	16.9	3.2	34.3	36.2
United States	2019	1229	39.2	56.3	36.2	5.6	1.9	44.4	34.3
	2023	1162	30.4	61.7	27.0	8.4	2.8	28.5	32.2
International Avg. (20)	2019	15159	38.5	44.6	29.0	24.9	1.5	40.0	37.2
	2023	19214	34.1	47.2	25.4	26.2	1.2	35.0	33.4

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Reasoning

B_MM2_08B ME72108B: Small triangles in figure - rule - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1175	26.0	62.0	21.8	14.6	1.6	26.1	26.0
	2023	1743	24.4	60.4	19.4	17.0	3.2	22.5	26.1
Dubai, UAE	2019	827	53.2	41.2	46.8	10.7	1.3	53.6	52.8
	2023	1176	52.0	39.1	42.4	15.8	2.7	51.9	52.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Geometry and Measurement / Applying
B_MM2_09 ME72181: Translation of triangle on grid - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	590	21.1	70.4	18.8	5.9	4.8	18.3	23.8
	2023	640	22.4	68.9	19.9	8.2	3.0	19.9	24.6
Chinese Taipei	2019	722	45.6	53.7	44.9	1.0	0.4	42.7	48.2
	2023	798	51.2	48.7	51.0	0.3	0.0	49.7	52.5
England	2019	479	42.5	54.4	40.3	4.2	1.1	45.3	39.9
	2023	598	49.8	48.6	48.3	2.6	0.4	46.9	52.8
Finland	2019	702	45.8	50.8	42.9	4.8	1.6	42.7	48.8
	2023	835	49.3	48.4	47.1	3.3	1.2	45.5	52.8
France	2019	558	16.6	74.4	14.8	8.3	2.4	19.3	14.2
	2023	642	18.5	75.2	17.1	6.5	1.1	15.5	21.8
Georgia	2019	472	13.0	74.0	11.0	13.1	1.9	11.4	14.5
	2023	693	14.3	76.5	12.8	8.4	2.2	11.8	17.0
Hong Kong SAR	2019	469	53.8	45.0	52.5	2.0	0.5	54.3	53.5
	2023	639	40.0	57.6	38.3	3.7	0.4	32.8	47.1
Hungary	2019	653	41.2	57.3	40.1	2.5	0.2	35.6	46.4
	2023	772	34.6	64.0	33.9	2.0	0.1	29.8	40.1
Israel	2019	528	28.8	67.3	27.3	3.8	1.6	22.4	34.8
	2023	738	29.0	64.8	26.4	5.8	3.0	27.2	30.9
Italy	2019	514	13.1	77.5	11.6	7.5	3.4	10.3	15.7
	2023	657	18.2	76.3	17.0	5.4	1.2	15.5	21.0
Korea, Rep. of	2019	546	54.1	45.3	53.4	1.3	0.0	47.5	59.9
	2023	607	63.1	36.2	61.9	1.5	0.4	57.4	68.1
Lithuania	2019	546	22.2	75.4	21.5	3.0	0.1	16.3	27.2
	2023	778	19.6	78.4	19.2	2.3	0.1	15.7	23.6
Malaysia	2019	1014	13.9	81.9	13.2	2.9	2.0	12.0	15.7
	2023	1255	2.3	94.2	2.3	1.8	1.8	1.4	3.3
Norway (9)	2019	646	36.0	57.3	32.3	6.8	3.6	34.9	37.1
	2023	899	35.0	57.9	31.2	8.3	2.6	32.7	37.1
Portugal	2019	478	26.2	70.7	25.1	3.3	0.9	26.6	25.8
	2023	783	20.3	75.9	19.3	3.7	1.1	18.8	21.8
Qatar	2019	551	15.1	78.7	14.0	4.1	3.2	14.8	15.3
	2023	616	31.7	65.5	30.5	1.3	2.7	33.1	30.3
Singapore	2019	686	22.1	76.1	21.6	2.1	0.2	21.9	22.4
	2023	675	27.9	71.7	27.7	0.6	0.0	22.7	32.6
Sweden	2019	566	35.3	55.9	30.5	9.4	4.2	34.4	36.1
	2023	716	39.5	54.8	35.8	7.4	1.9	38.0	40.8
United Arab Emirates	2019	3207	22.6	73.2	21.3	3.5	1.9	22.9	22.2
	2023	4711	27.0	68.1	25.2	3.0	3.8	26.1	27.9
United States	2019	1229	48.1	49.9	46.2	1.9	2.0	47.1	48.9
	2023	1162	45.8	51.6	43.6	1.3	3.5	43.1	48.3
International Avg. (20)	2019	15156	30.9	64.5	29.2	4.6	1.8	29.0	32.5
	2023	19214	32.0	64.2	30.4	3.9	1.5	29.2	34.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Geometry and Measurement / Applying
B_MM2_09 ME72181: Translation of triangle on grid - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	16.0	79.6	15.1	3.6	1.7	15.9	15.9
	2023	1743	21.3	73.5	19.9	2.8	3.8	19.0	23.5
Dubai, UAE	2019	827	37.8	60.0	36.5	1.9	1.6	35.8	39.9
	2023	1176	40.3	55.5	37.5	3.8	3.2	41.3	39.3

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Geometry and Measurement / Reasoning
B_MM2_10 ME72126: Area of shaded part of square ABCD - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	591	13.3	55.7	8.3	5.0	26.2	4.8	12.5	14.0
	2023	639	9.7	62.7	6.4	3.9	23.4	3.7	9.4	9.9
Chinese Taipei	2019	723	67.4	24.1	13.9	57.2	4.4	0.4	68.5	66.3
	2023	798	61.5	30.4	15.2	53.0	1.4	0.0	68.8	54.7
England	2019	479	25.2	55.3	8.8	15.7	18.9	1.3	29.4	21.4
	2023	598	27.7	57.7	7.7	19.8	14.4	0.4	26.8	28.6
Finland	2019	702	28.7	57.8	3.9	22.1	14.3	1.8	30.4	27.1
	2023	835	27.9	62.5	6.4	22.3	7.3	1.5	28.5	27.4
France	2019	558	16.9	54.2	5.6	8.8	28.9	2.4	18.8	15.3
	2023	638	14.9	68.0	4.4	10.1	16.4	1.1	14.6	15.3
Georgia	2019	472	18.3	50.9	10.2	7.5	29.5	1.9	15.4	21.4
	2023	692	16.3	61.9	9.5	8.3	17.4	3.0	16.6	16.1
Hong Kong SAR	2019	469	63.9	27.9	13.7	54.6	3.4	0.5	65.2	62.8
	2023	636	64.9	29.2	9.2	57.9	2.9	0.8	64.9	64.9
Hungary	2019	653	25.7	58.1	8.7	17.2	15.8	0.2	21.2	29.6
	2023	772	20.8	67.1	8.7	14.3	9.7	0.1	18.5	23.2
Israel	2019	528	42.2	43.4	12.1	30.1	12.6	1.8	40.1	44.1
	2023	738	30.1	54.3	9.6	20.6	12.0	3.5	28.0	32.2
Italy	2019	514	31.4	44.1	15.9	15.8	20.4	3.8	30.4	32.3
	2023	657	32.4	49.5	15.0	19.9	14.4	1.2	31.5	33.4
Korea, Rep. of	2019	546	68.6	24.8	10.9	60.8	3.5	0.0	67.5	69.7
	2023	607	63.8	30.6	9.7	57.7	1.3	0.6	60.2	67.0
Lithuania	2019	546	27.2	57.9	8.1	19.1	14.9	0.1	29.0	25.7
	2023	778	25.5	62.1	5.7	19.3	12.8	0.1	26.4	24.6
Malaysia	2019	1014	19.8	70.2	7.9	14.3	5.0	2.6	19.7	19.9
	2023	1255	10.0	81.7	7.1	5.9	3.2	2.2	8.7	11.2
Norway (9)	2019	646	32.0	46.3	7.9	19.7	22.4	3.7	33.3	30.9
	2023	899	29.1	52.3	6.8	19.4	18.4	3.0	31.4	27.4
Portugal	2019	478	32.2	45.1	12.1	18.2	23.5	1.2	23.1	40.9
	2023	782	21.2	63.5	10.0	13.4	11.8	1.4	20.4	22.0
Qatar	2019	551	13.9	70.4	10.0	7.2	9.1	3.3	16.9	11.1
	2023	615	14.2	74.1	7.0	9.3	6.5	3.1	15.2	13.1
Singapore	2019	686	66.6	25.6	14.6	58.3	1.4	0.2	66.4	66.9
	2023	675	65.7	27.4	13.4	58.5	0.8	0.0	65.6	65.8
Sweden	2019	566	33.4	46.6	9.4	21.1	17.9	5.1	35.9	31.3
	2023	714	33.0	50.2	13.2	21.4	12.6	2.7	35.3	31.1
United Arab Emirates	2019	3206	21.7	65.7	10.4	14.5	7.2	2.2	21.6	21.8
	2023	4710	25.8	62.4	8.5	19.0	5.7	4.4	23.5	28.0
United States	2019	1229	21.6	67.7	8.8	15.4	5.8	2.2	21.7	21.5
	2023	1162	18.9	72.7	6.7	14.4	2.5	3.7	15.6	21.9
International Avg. (20)	2019	15157	33.5	49.6	10.1	24.1	14.2	2.0	33.3	33.7
	2023	19200	30.7	56.0	9.0	23.4	9.7	1.8	30.5	30.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Geometry and Measurement / Reasoning

B_MM2_10 ME72126: Area of shaded part of square ABCD - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	13.2	75.3	9.3	7.5	5.9	2.0	12.6	13.6
	2023	1743	15.8	71.5	8.7	9.9	5.7	4.3	15.1	16.5
Dubai, UAE	2019	827	36.9	49.9	13.2	26.4	8.9	1.6	37.2	36.6
	2023	1176	43.1	45.5	9.4	33.2	7.7	4.2	38.7	47.1

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Data and Probability / Applying
B_MM2_11 ME72164: Important for counting planes (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	591	12.3	79.3	11.1	2.7	6.9	13.4	11.1
	2023	640	11.7	83.2	11.1	0.5	5.3	13.9	9.9
Chinese Taipei	2019	723	23.8	75.4	23.6	0.5	0.5	23.8	23.9
	2023	798	25.6	74.2	25.6	0.0	0.2	28.2	23.2
England	2019	479	39.9	58.7	38.9	1.0	1.4	41.0	38.8
	2023	598	36.3	62.8	35.8	0.6	0.8	35.3	37.4
Finland	2019	702	20.0	77.4	19.3	0.7	2.7	19.5	20.4
	2023	835	16.0	82.4	15.7	0.3	1.6	14.7	17.2
France	2019	558	26.9	69.4	25.5	1.5	3.6	27.1	26.7
	2023	642	25.6	72.4	24.9	0.4	2.2	24.7	26.6
Georgia	2019	469	6.8	84.4	6.2	6.9	2.5	5.6	7.9
	2023	693	3.2	91.2	3.0	1.9	3.9	3.0	3.3
Hong Kong SAR	2019	468	22.8	75.7	22.4	1.0	0.8	23.5	22.3
	2023	639	20.8	78.3	20.5	0.4	0.8	15.4	26.0
Hungary	2019	653	34.4	65.3	34.2	0.2	0.3	33.6	35.2
	2023	772	28.5	71.4	28.4	0.0	0.2	28.6	28.3
Israel	2019	528	23.8	74.0	23.2	0.5	2.3	22.0	25.6
	2023	738	15.7	79.5	14.8	0.7	4.9	12.8	18.7
Italy	2019	514	27.9	67.7	26.2	0.8	5.4	22.8	32.6
	2023	657	21.2	76.9	20.7	0.4	2.0	18.6	23.9
Korea, Rep. of	2019	546	45.2	54.2	44.7	0.6	0.4	42.4	47.7
	2023	607	42.8	56.7	42.4	0.2	0.6	39.1	46.0
Lithuania	2019	545	24.8	74.9	24.7	0.2	0.2	28.9	21.5
	2023	778	23.3	76.3	23.2	0.3	0.2	23.8	22.9
Malaysia	2019	1014	8.3	86.3	7.8	1.1	4.8	7.5	9.0
	2023	1255	5.0	90.5	4.7	0.5	4.3	5.5	4.5
Norway (9)	2019	646	25.6	67.8	23.3	3.4	5.5	23.2	27.7
	2023	899	21.1	74.3	19.9	1.6	4.2	23.8	19.0
Portugal	2019	478	20.1	76.4	19.2	1.5	3.0	18.7	21.4
	2023	783	17.4	80.7	17.0	0.3	1.9	19.2	15.5
Qatar	2019	551	12.1	82.8	11.4	1.4	4.4	12.7	11.5
	2023	616	10.8	85.1	10.3	0.7	4.0	12.5	8.9
Singapore	2019	686	37.3	62.1	37.0	0.5	0.4	34.9	39.8
	2023	675	41.1	58.8	41.0	0.2	0.0	40.7	41.5
Sweden	2019	566	39.0	55.9	35.7	1.3	7.1	41.9	36.5
	2023	716	39.7	57.8	38.0	0.8	3.4	40.4	39.0
United Arab Emirates	2019	3207	12.7	82.9	12.1	1.6	3.5	13.6	11.8
	2023	4711	16.7	77.4	15.6	1.2	5.8	16.2	17.3
United States	2019	1229	35.2	62.0	33.6	0.8	3.5	37.7	32.9
	2023	1162	27.6	69.1	26.4	0.1	4.5	25.4	29.6
International Avg. (20)	2019	15153	24.9	71.6	24.0	1.4	3.0	24.7	25.2
	2023	19214	22.5	74.9	22.0	0.6	2.5	22.1	22.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Data and Probability / Applying
B_MM2_11 ME72164: Important for counting planes (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1175	9.0	87.0	8.6	1.5	2.9	10.0	7.9
	2023	1743	11.7	81.6	10.8	1.5	6.1	10.6	12.7
Dubai, UAE	2019	827	23.7	72.4	22.5	1.8	3.3	24.6	22.8
	2023	1176	30.2	65.5	28.3	1.4	4.8	29.7	30.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Data and Probability / Knowing

B_MM2_12A ME72185A: Probability of picking marble - not green - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	591	15.2	68.5	12.3	11.3	7.9	14.8	15.6
	2023	639	14.6	71.0	12.1	11.6	5.3	13.2	15.7
Chinese Taipei	2019	723	53.2	45.8	52.1	1.6	0.5	51.3	55.1
	2023	790	56.1	43.6	55.7	0.5	0.2	60.4	52.1
England	2019	479	42.3	52.3	38.4	7.8	1.4	38.4	46.2
	2023	598	46.0	50.9	43.3	5.0	0.8	39.9	51.9
Finland	2019	702	28.5	61.8	24.6	11.0	2.7	25.7	30.9
	2023	830	27.8	65.9	25.3	7.1	1.6	23.9	31.0
France	2019	558	26.7	60.3	22.0	14.2	3.6	24.4	28.6
	2023	641	23.5	66.8	20.5	10.5	2.2	21.5	25.5
Georgia	2019	472	8.7	65.4	6.3	25.3	3.1	4.9	12.2
	2023	691	13.4	69.3	10.7	15.4	4.6	11.3	15.4
Hong Kong SAR	2019	468	44.1	53.1	41.8	4.0	1.1	46.1	42.4
	2023	581	50.0	47.7	47.8	3.4	1.1	46.5	53.5
Hungary	2019	653	24.0	65.4	20.7	13.6	0.3	20.0	27.5
	2023	768	18.0	74.8	16.4	8.6	0.2	14.6	21.6
Israel	2019	528	39.3	53.3	34.5	9.8	2.4	40.2	38.5
	2023	738	22.4	63.7	18.4	12.8	5.1	18.1	26.5
Italy	2019	514	25.1	62.2	20.8	11.1	5.9	22.8	27.2
	2023	657	29.2	62.5	25.7	9.7	2.1	28.7	29.7
Korea, Rep. of	2019	546	71.1	28.1	69.2	2.3	0.4	68.4	73.5
	2023	607	58.4	40.7	57.0	1.7	0.6	53.3	62.7
Lithuania	2019	546	20.6	69.2	18.0	12.6	0.3	16.2	24.0
	2023	777	23.7	68.4	21.3	10.2	0.2	18.0	29.0
Malaysia	2019	1014	15.7	76.4	14.3	4.5	4.9	15.3	16.1
	2023	1255	5.4	88.2	5.1	2.1	4.6	3.4	7.5
Norway (9)	2019	646	42.9	47.8	35.9	10.6	5.6	41.9	43.8
	2023	899	43.8	48.5	37.8	9.4	4.4	45.4	42.6
Portugal	2019	478	18.6	68.1	15.6	12.9	3.4	13.4	23.4
	2023	783	17.4	71.5	15.0	11.3	2.1	12.4	22.2
Qatar	2019	551	19.8	72.5	17.9	4.9	4.6	14.8	24.6
	2023	616	21.5	72.0	19.7	4.1	4.2	19.7	23.5
Singapore	2019	686	70.4	29.1	69.0	1.5	0.4	71.5	69.2
	2023	675	71.3	28.6	70.9	0.5	0.0	69.3	73.0
Sweden	2019	566	37.8	51.4	31.2	10.1	7.3	32.6	42.3
	2023	714	37.9	54.5	33.3	8.5	3.8	39.0	37.0
United Arab Emirates	2019	3208	29.9	64.6	27.6	4.2	3.7	29.8	30.0
	2023	4707	32.0	61.2	28.8	3.6	6.4	29.2	34.7
United States	2019	1229	38.7	57.5	36.4	2.3	3.8	37.2	40.1
	2023	1162	30.4	65.6	28.6	1.3	4.5	25.0	35.2
International Avg. (20)	2019	15158	33.6	57.6	30.4	8.8	3.2	31.5	35.6
	2023	19128	32.1	60.8	29.7	6.9	2.7	29.7	34.5

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Data and Probability / Knowing

B_MM2_12A ME72185A: Probability of picking marble - not green - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1175	19.2	75.0	17.9	4.2	3.0	20.3	18.1
	2023	1741	21.4	70.5	19.3	3.3	6.9	19.5	23.3
Dubai, UAE	2019	827	52.9	43.3	48.7	4.7	3.3	52.1	53.7
	2023	1174	50.7	44.6	46.0	4.0	5.4	47.7	53.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Data and Probability / Knowing

B_MM2_12B ME72185B: Probability of picking marble - yellow or blue - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	591	12.9	68.7	10.2	7.2	14.0	11.6	14.2
	2023	638	14.9	67.5	11.8	8.9	11.7	13.8	15.8
Chinese Taipei	2019	723	57.6	41.0	55.7	1.6	1.7	57.1	58.0
	2023	793	60.9	38.5	60.0	1.3	0.2	67.1	55.2
England	2019	479	46.5	47.2	41.1	7.2	4.6	45.3	47.7
	2023	598	46.6	49.3	43.0	4.5	3.3	42.7	50.3
Finland	2019	702	30.2	59.2	25.7	8.6	6.5	25.1	34.9
	2023	829	29.3	63.3	26.2	5.0	5.5	27.3	30.9
France	2019	558	30.8	53.9	24.0	11.5	10.6	30.9	30.7
	2023	641	26.7	61.9	22.6	7.1	8.5	21.2	32.3
Georgia	2019	472	14.3	58.3	9.7	17.8	14.2	10.1	18.2
	2023	691	18.5	61.7	14.0	12.1	12.2	17.9	19.2
Hong Kong SAR	2019	469	45.7	51.1	43.0	2.4	3.6	46.3	45.1
	2023	585	55.0	42.4	51.8	3.1	2.7	51.9	57.9
Hungary	2019	653	27.0	61.4	22.7	10.2	5.7	19.4	33.6
	2023	769	20.8	71.5	18.7	4.8	4.9	18.3	23.5
Israel	2019	528	45.7	46.1	38.8	7.8	7.3	48.1	43.6
	2023	738	22.8	60.4	17.9	10.1	11.6	18.1	27.3
Italy	2019	514	27.6	59.0	22.5	5.8	12.7	22.4	32.4
	2023	657	29.8	59.6	25.3	8.1	7.1	29.2	30.3
Korea, Rep. of	2019	546	74.0	25.1	71.3	2.1	1.5	72.3	75.5
	2023	607	62.0	36.6	59.9	2.3	1.2	58.2	65.4
Lithuania	2019	546	24.8	64.3	21.2	8.7	5.8	22.3	26.7
	2023	777	21.5	68.1	18.6	7.9	5.4	17.3	25.4
Malaysia	2019	1014	17.7	73.3	15.8	2.9	7.9	18.2	17.3
	2023	1255	4.8	88.0	4.4	1.6	5.9	3.5	6.1
Norway (9)	2019	646	46.0	42.9	36.5	11.3	9.3	47.1	45.1
	2023	899	45.5	45.4	37.9	8.0	8.8	47.1	44.2
Portugal	2019	478	16.6	68.6	13.6	9.4	8.4	15.5	17.5
	2023	783	14.7	72.3	12.5	7.8	7.4	10.9	18.6
Qatar	2019	551	18.6	72.0	16.4	4.6	7.0	17.9	19.2
	2023	616	22.2	70.4	20.0	4.0	5.6	21.2	23.2
Singapore	2019	686	74.8	24.7	73.3	0.7	1.2	74.2	75.4
	2023	675	71.5	28.3	71.1	0.6	0.0	70.2	72.7
Sweden	2019	566	40.5	48.1	32.7	7.4	11.8	41.6	39.4
	2023	715	44.4	48.2	38.4	6.3	7.1	45.7	43.2
United Arab Emirates	2019	3208	29.8	63.4	27.0	3.8	5.8	28.6	31.0
	2023	4705	33.4	58.5	29.3	3.2	8.9	30.3	36.3
United States	2019	1229	41.8	54.1	38.9	1.9	5.2	41.8	41.9
	2023	1162	31.0	64.7	29.0	1.1	5.1	25.7	35.7
International Avg. (20)	2019	15159	36.1	54.1	32.0	6.6	7.2	34.8	37.4
	2023	19133	33.8	57.8	30.6	5.4	6.2	31.9	35.7

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Data and Probability / Knowing

B_MM2_12B ME72185B: Probability of picking marble - yellow or blue - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1175	20.2	73.1	18.5	3.2	5.2	19.7	20.5
	2023	1739	23.0	67.5	20.2	2.8	9.5	22.0	23.9
Dubai, UAE	2019	827	50.3	44.9	45.4	3.5	6.2	49.9	50.6
	2023	1175	53.1	41.6	47.1	3.0	8.3	48.5	57.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Knowing

B_MM3_01 ME72005: Number with most factors - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	42.6	42.1	7.5	41.5	6.4	2.4	0.1	40.9	43.9
	2023	634	28.7	53.6	10.3	28.1	6.0	1.9	0.1	25.8	31.8
Chinese Taipei	2019	685	77.7	14.5	5.2	77.6	2.6	0.1	0.0	80.0	75.5
	2023	801	75.3	17.3	3.8	75.3	3.7	0.0	0.0	78.0	72.9
England	2019	480	61.0	28.5	5.0	60.4	5.2	0.9	0.0	60.1	61.8
	2023	594	58.7	29.4	5.7	58.6	6.1	0.2	0.0	53.0	65.4
Finland	2019	700	16.9	70.9	6.6	16.6	4.2	1.4	0.3	19.1	15.0
	2023	833	14.0	75.7	5.6	13.9	3.8	0.8	0.2	15.8	12.2
France	2019	546	44.9	38.7	8.7	44.4	7.1	0.8	0.2	43.7	46.2
	2023	637	47.8	31.7	6.6	47.3	13.5	0.9	0.0	42.4	52.3
Georgia	2019	468	67.6	26.7	1.6	67.3	3.9	0.6	0.0	64.3	70.5
	2023	693	63.8	29.5	2.7	63.8	4.0	0.0	0.0	64.1	63.6
Hong Kong SAR	2019	462	59.4	26.6	7.1	59.0	6.7	0.6	0.0	60.5	58.5
	2023	631	59.3	23.5	8.7	59.1	8.4	0.0	0.3	57.7	60.7
Hungary	2019	650	66.9	26.4	2.2	66.8	4.5	0.1	0.0	61.2	73.1
	2023	773	69.3	22.4	3.4	69.3	4.9	0.0	0.0	65.8	72.9
Israel	2019	542	49.2	38.0	6.8	48.8	5.6	0.7	0.1	50.0	48.3
	2023	746	36.2	48.4	6.1	35.6	8.0	1.9	0.0	31.9	40.4
Italy	2019	522	32.9	54.9	6.1	31.9	4.0	2.9	0.3	27.7	38.4
	2023	655	30.5	57.5	6.7	30.2	4.8	0.8	0.0	26.0	34.7
Korea, Rep. of	2019	550	87.7	8.1	3.0	87.1	1.1	0.6	0.0	85.7	89.4
	2023	604	83.0	13.8	2.0	83.0	1.2	0.0	0.0	84.8	81.5
Lithuania	2019	548	70.8	23.9	2.6	70.7	2.7	0.1	0.0	70.2	71.5
	2023	775	58.9	30.6	4.3	58.5	6.0	0.3	0.2	58.0	59.7
Malaysia	2019	1009	36.3	40.9	8.5	36.2	14.1	0.3	0.0	35.8	36.9
	2023	1254	31.1	38.4	15.4	31.1	15.0	0.0	0.0	30.8	31.6
Norway (9)	2019	664	32.7	50.6	11.3	31.9	3.8	2.1	0.3	34.0	31.5
	2023	902	26.1	55.6	14.5	25.7	2.6	1.3	0.4	26.7	25.5
Portugal	2019	484	65.5	22.1	2.8	65.5	9.6	0.0	0.0	66.1	64.9
	2023	768	56.6	28.9	4.6	56.5	9.8	0.3	0.0	51.0	61.9
Qatar	2019	561	50.8	36.6	5.6	50.2	6.4	1.1	0.1	54.0	47.9
	2023	612	38.1	48.4	4.9	38.0	8.4	0.2	0.0	38.4	37.9
Singapore	2019	692	68.6	24.5	2.6	68.5	4.3	0.1	0.0	67.6	69.5
	2023	689	61.5	30.3	4.5	61.5	3.8	0.0	0.0	56.8	65.5
Sweden	2019	590	17.9	34.9	38.9	17.3	5.2	3.7	0.0	19.6	16.1
	2023	723	24.1	36.4	35.4	23.8	3.1	1.3	0.0	27.8	21.0
United Arab Emirates	2019	3204	49.1	37.2	5.6	48.6	7.5	1.0	0.1	48.0	50.1
	2023	4672	52.4	35.1	5.6	52.1	6.6	0.5	0.1	50.0	54.8
United States	2019	1257	54.4	30.6	6.6	54.1	8.1	0.5	0.2	53.3	55.7
	2023	1143	44.7	39.1	7.2	44.5	8.7	0.3	0.3	44.4	45.1
International Avg. (20)	2019	15194	52.6	33.8	7.2	52.2	5.7	1.0	0.1	52.1	53.2
	2023	19139	48.0	37.3	7.9	47.8	6.4	0.5	0.1	46.5	49.6

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Knowing

B_MM3_01 ME72005: Number with most factors - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1167	38.7	43.3	8.1	38.3	9.3	0.8	0.2	37.2	40.2
	2023	1724	44.7	37.9	7.8	44.3	9.3	0.6	0.2	40.8	48.5
Dubai, UAE	2019	821	63.2	28.2	3.9	62.3	4.1	1.4	0.0	61.2	65.2
	2023	1152	65.6	26.1	3.6	65.2	4.6	0.5	0.1	64.0	66.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Knowing

B_MM3_02 ME72021: Value of X in 10/15 = X/18 - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	29.0	56.5	23.1	20.4	0.1	29.9	28.3
	2023	634	18.4	67.4	15.2	17.3	0.1	20.2	16.7
Chinese Taipei	2019	685	70.3	29.1	68.9	2.0	0.0	71.6	69.1
	2023	800	69.1	30.8	68.7	0.5	0.0	69.3	68.9
England	2019	480	37.6	55.8	33.6	10.7	0.0	36.9	38.3
	2023	594	41.0	53.8	37.4	8.9	0.0	33.1	49.9
Finland	2019	700	42.7	54.3	40.5	4.9	0.3	42.9	42.6
	2023	833	43.7	53.8	41.7	4.3	0.2	40.2	47.2
France	2019	546	31.6	60.2	27.8	11.8	0.2	27.6	35.6
	2023	637	33.1	60.1	29.7	10.2	0.0	35.4	31.1
Georgia	2019	467	40.2	52.5	35.3	12.2	0.0	43.8	37.1
	2023	693	40.9	51.5	35.6	12.9	0.0	42.1	39.9
Hong Kong SAR	2019	462	61.4	37.4	59.3	3.3	0.0	62.5	60.4
	2023	631	66.0	33.2	64.5	2.0	0.3	68.6	63.8
Hungary	2019	650	35.8	57.6	32.1	10.3	0.0	33.7	37.9
	2023	773	30.2	66.1	28.6	5.3	0.0	28.5	31.8
Israel	2019	542	47.1	49.9	44.4	5.7	0.1	50.4	43.7
	2023	746	38.7	56.8	35.9	7.3	0.0	34.9	42.2
Italy	2019	522	44.0	50.7	39.9	8.7	0.7	43.4	44.6
	2023	655	40.5	54.1	36.8	9.1	0.0	40.0	41.0
Korea, Rep. of	2019	550	76.3	23.2	74.7	2.1	0.0	74.3	78.2
	2023	604	77.5	21.9	75.7	2.3	0.0	76.5	78.4
Lithuania	2019	548	43.0	52.5	39.7	7.8	0.0	47.4	38.4
	2023	775	40.8	53.6	36.9	9.3	0.2	40.3	41.2
Malaysia	2019	1009	27.4	71.1	26.9	2.1	0.0	27.3	27.6
	2023	1254	14.5	84.7	14.4	1.0	0.0	13.5	15.7
Norway (9)	2019	664	44.1	50.0	39.4	10.3	0.3	42.6	45.8
	2023	902	37.5	57.9	34.8	6.9	0.4	32.9	41.5
Portugal	2019	484	45.6	48.9	41.0	10.0	0.0	48.2	43.0
	2023	768	33.2	62.6	31.1	6.3	0.0	30.7	35.5
Qatar	2019	561	32.5	63.6	30.6	5.7	0.1	35.8	29.5
	2023	612	31.5	66.2	30.5	3.3	0.0	27.2	35.3
Singapore	2019	692	69.2	30.3	68.3	1.3	0.0	70.3	68.2
	2023	689	64.8	35.1	64.7	0.1	0.0	64.0	65.5
Sweden	2019	590	47.6	47.3	42.9	9.8	0.1	45.7	49.6
	2023	722	46.7	50.5	44.3	5.2	0.1	44.9	48.3
United Arab Emirates	2019	3203	49.4	49.1	48.0	2.8	0.1	52.1	47.0
	2023	4672	49.7	48.9	48.3	2.8	0.1	49.6	49.9
United States	2019	1257	50.8	48.4	50.0	1.5	0.2	48.5	53.1
	2023	1142	40.6	58.3	39.8	1.7	0.3	40.7	40.5
International Avg. (20)	2019	15192	46.3	49.4	43.3	7.2	0.1	46.8	45.9
	2023	19136	42.9	53.4	40.7	5.8	0.1	41.6	44.2

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Knowing

B_MM3_02 ME72021: Value of X in 10/15 = X/18 - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1166	37.5	60.8	36.4	2.6	0.2	40.2	35.0
	2023	1724	38.6	59.8	37.6	2.4	0.2	38.1	39.2
Dubai, UAE	2019	821	59.0	39.8	57.2	2.9	0.0	56.6	61.2
	2023	1152	59.9	38.5	57.6	3.8	0.1	58.4	61.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Reasoning

B_MM3_03 ME72026: Make two fractions with largest product - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	25.7	72.7	25.1	1.6	0.6	21.8	28.9
	2023	634	29.8	69.5	29.5	0.9	0.1	30.0	29.5
Chinese Taipei	2019	685	69.0	30.9	68.9	0.2	0.0	67.6	70.5
	2023	801	72.7	27.3	72.7	0.0	0.0	71.9	73.5
England	2019	480	33.8	65.7	33.6	0.7	0.0	30.2	37.4
	2023	594	39.7	60.2	39.6	0.2	0.0	36.7	43.1
Finland	2019	700	52.8	46.8	52.3	0.6	0.3	51.5	53.8
	2023	833	48.7	50.9	48.3	0.6	0.2	46.0	51.5
France	2019	546	40.8	58.5	40.4	0.9	0.2	38.2	43.7
	2023	637	42.9	56.4	42.4	1.1	0.0	40.2	45.3
Georgia	2019	466	37.0	60.8	35.8	3.4	0.0	31.0	42.4
	2023	694	34.2	65.3	34.0	0.5	0.2	32.3	35.9
Hong Kong SAR	2019	462	62.0	37.8	61.7	0.4	0.0	59.5	64.0
	2023	631	56.8	43.0	56.7	0.1	0.3	53.1	60.2
Hungary	2019	650	54.3	45.5	54.2	0.3	0.0	52.0	57.0
	2023	773	52.3	47.7	52.3	0.0	0.0	46.7	57.9
Israel	2019	542	49.9	49.9	49.6	0.5	0.1	41.5	58.8
	2023	746	48.4	50.9	47.7	1.2	0.1	41.6	54.8
Italy	2019	522	28.0	70.4	27.3	1.6	0.7	24.2	31.9
	2023	655	35.1	64.7	35.0	0.2	0.0	32.0	38.1
Korea, Rep. of	2019	550	65.4	34.5	65.0	0.5	0.0	59.1	71.2
	2023	604	74.3	25.6	73.9	0.5	0.0	66.3	81.3
Lithuania	2019	548	43.4	55.8	42.9	1.3	0.0	40.3	46.8
	2023	775	37.6	62.2	37.4	0.2	0.2	33.2	41.9
Malaysia	2019	1009	15.3	84.3	15.2	0.5	0.0	14.9	15.7
	2023	1254	22.6	77.4	22.6	0.0	0.0	21.1	24.3
Norway (9)	2019	664	43.6	55.4	42.7	1.1	0.9	40.4	47.2
	2023	902	33.0	66.3	32.7	0.4	0.6	29.7	35.9
Portugal	2019	484	48.9	50.4	48.2	1.4	0.0	43.8	54.0
	2023	768	47.4	52.3	47.2	0.5	0.0	44.5	50.2
Qatar	2019	561	30.7	68.4	30.4	1.1	0.1	31.8	29.7
	2023	612	36.1	63.8	36.0	0.2	0.0	34.1	37.8
Singapore	2019	692	57.3	42.7	57.2	0.2	0.0	50.9	63.2
	2023	689	64.2	35.8	64.2	0.0	0.0	57.4	70.1
Sweden	2019	590	44.6	53.7	43.3	2.8	0.2	43.7	45.6
	2023	723	50.6	48.8	50.0	1.0	0.2	47.5	53.3
United Arab Emirates	2019	3202	32.3	66.8	31.8	1.2	0.1	27.7	36.4
	2023	4671	37.5	61.9	37.1	0.8	0.2	33.3	41.6
United States	2019	1257	41.1	58.6	40.9	0.3	0.2	35.5	47.0
	2023	1143	42.5	57.1	42.3	0.2	0.4	39.7	45.3
International Avg. (20)	2019	15190	43.8	55.5	43.3	1.0	0.2	40.3	47.3
	2023	19139	45.3	54.4	45.1	0.4	0.1	41.9	48.6

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Reasoning

B_MM3_03 ME72026: Make two fractions with largest product - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019 2023	1166 1724	25.4 32.6	73.8 66.8	25.1 32.3	0.9 0.7	0.2 0.3	25.2 27.6	25.5 37.6
Dubai, UAE	2019 2023	821 1151	41.3 47.5	58.0 51.8	40.8 46.8	1.2 1.4	0.0 0.1	32.1 42.8	50.1 51.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Applying

B_MM3_04A ME72041A: Ratio of boys to girls - Class I - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	12.9	74.4	11.1	14.0	0.6	11.7	14.0
	2023	634	6.6	78.9	5.6	15.4	0.1	5.9	7.3
Chinese Taipei	2019	685	83.3	16.4	81.9	1.7	0.0	85.1	81.5
	2023	801	80.8	18.9	79.5	1.5	0.0	83.9	78.1
England	2019	480	76.2	22.3	71.6	6.1	0.0	79.4	73.2
	2023	594	75.2	23.9	72.6	3.4	0.1	77.1	73.0
Finland	2019	700	36.8	56.4	32.8	10.5	0.3	40.8	33.4
	2023	832	31.7	63.2	29.3	7.2	0.2	27.3	35.9
France	2019	546	23.5	63.9	19.6	16.3	0.2	20.1	27.1
	2023	637	15.1	69.0	12.2	18.7	0.0	13.8	16.2
Georgia	2019	468	53.0	40.3	45.3	14.3	0.1	56.6	49.9
	2023	694	50.6	43.1	44.1	12.5	0.3	54.1	47.7
Hong Kong SAR	2019	462	75.9	23.3	73.4	3.3	0.0	78.6	73.8
	2023	631	73.5	25.7	71.4	2.7	0.3	78.8	68.8
Hungary	2019	650	43.9	51.5	40.3	8.2	0.0	39.4	48.8
	2023	773	40.7	54.2	37.2	8.5	0.0	36.0	45.1
Israel	2019	542	68.1	30.7	65.6	3.7	0.1	70.3	65.8
	2023	746	36.3	59.0	33.7	7.1	0.1	37.7	35.1
Italy	2019	522	36.5	56.8	32.6	10.0	0.7	37.2	35.7
	2023	655	29.5	62.4	26.1	11.5	0.0	29.5	29.5
Korea, Rep. of	2019	550	85.7	14.1	84.4	1.3	0.3	84.6	86.7
	2023	604	86.2	13.7	85.0	1.3	0.0	89.6	83.1
Lithuania	2019	548	39.2	56.6	36.6	6.8	0.0	40.2	38.2
	2023	775	30.5	64.8	28.4	6.5	0.2	31.6	29.5
Malaysia	2019	1009	58.5	40.8	57.6	1.6	0.0	64.1	52.5
	2023	1254	35.8	63.5	35.4	1.1	0.0	40.0	31.0
Norway (9)	2019	664	21.4	71.5	19.4	8.2	0.9	19.0	24.0
	2023	902	6.1	85.9	5.5	8.0	0.6	5.8	6.3
Portugal	2019	484	18.2	75.5	16.8	7.7	0.0	18.4	18.0
	2023	768	9.4	82.7	8.5	8.7	0.0	9.3	9.4
Qatar	2019	561	32.7	64.9	31.6	2.9	0.5	34.5	31.2
	2023	612	38.6	59.9	37.6	2.4	0.1	32.6	43.8
Singapore	2019	692	91.5	8.4	91.3	0.3	0.0	93.5	89.7
	2023	689	89.6	10.4	89.6	0.0	0.0	90.9	88.4
Sweden	2019	590	7.2	82.1	6.3	11.3	0.2	6.0	8.4
	2023	723	4.8	87.7	4.4	7.7	0.2	2.5	6.8
United Arab Emirates	2019	3207	45.7	52.7	44.3	2.9	0.2	47.5	44.1
	2023	4672	47.6	51.2	46.5	2.2	0.2	47.0	48.1
United States	2019	1257	66.2	33.5	65.5	0.7	0.3	69.7	62.7
	2023	1143	46.4	52.9	45.8	0.9	0.4	48.5	44.3
International Avg. (20)	2019	15197	48.8	46.8	46.4	6.6	0.2	49.8	47.9
	2023	19139	41.7	53.6	39.9	6.4	0.1	42.1	41.4

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Applying

B_MM3_04A ME72041A: Ratio of boys to girls - Class I - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1169	35.3	62.8	34.2	2.7	0.3	35.5	35.1
	2023	1724	34.9	63.4	34.0	2.3	0.3	34.5	35.3
Dubai, UAE	2019	821	68.8	30.1	66.5	3.3	0.1	72.1	65.8
	2023	1152	69.3	29.9	67.4	2.6	0.1	70.0	68.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Applying

B_MM3_04B ME72041B: Ratio of boys to girls - eighth grade - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	10.0	71.8	8.0	19.7	0.6	11.3	9.0
	2023	634	4.3	80.4	3.6	15.9	0.1	5.1	3.5
Chinese Taipei	2019	685	71.8	27.4	69.8	2.9	0.0	73.7	69.9
	2023	801	65.5	33.9	64.2	1.9	0.0	71.5	60.4
England	2019	480	64.6	32.6	59.5	7.9	0.0	71.3	58.1
	2023	594	63.0	34.6	59.0	6.3	0.1	69.2	56.1
Finland	2019	700	31.3	57.7	26.3	15.6	0.4	36.5	27.0
	2023	833	22.8	69.3	20.5	10.0	0.2	20.1	25.5
France	2019	546	19.7	62.6	15.4	21.8	0.2	16.9	22.8
	2023	637	9.8	71.4	7.8	20.8	0.0	9.7	9.9
Georgia	2019	468	40.5	48.1	32.7	19.1	0.1	40.5	40.5
	2023	694	41.5	47.7	33.8	18.2	0.3	45.8	38.0
Hong Kong SAR	2019	462	58.9	38.8	55.5	5.7	0.0	63.9	54.7
	2023	631	57.6	40.7	55.2	3.8	0.3	60.4	55.0
Hungary	2019	650	40.5	51.3	34.9	13.8	0.0	37.7	43.4
	2023	773	32.9	59.6	29.2	11.1	0.0	31.0	34.6
Israel	2019	542	55.9	41.2	52.3	6.3	0.2	63.8	47.6
	2023	746	27.8	65.6	25.2	8.9	0.3	28.7	26.9
Italy	2019	522	26.9	59.3	21.8	18.3	0.7	27.6	26.2
	2023	655	22.0	65.9	18.6	15.5	0.0	24.3	19.9
Korea, Rep. of	2019	550	75.8	23.7	74.4	1.6	0.3	79.7	72.1
	2023	604	65.9	33.5	64.7	1.8	0.0	71.6	60.8
Lithuania	2019	548	30.7	61.5	27.3	11.2	0.0	31.9	29.5
	2023	775	25.9	66.6	23.3	9.8	0.2	25.3	26.6
Malaysia	2019	1009	49.4	49.2	48.0	2.7	0.1	55.1	43.2
	2023	1254	26.4	72.3	26.0	1.7	0.0	32.0	20.2
Norway (9)	2019	664	17.3	73.2	15.3	10.2	1.3	16.0	18.7
	2023	902	3.9	86.8	3.5	8.9	0.8	2.5	5.2
Portugal	2019	484	14.7	75.1	12.9	12.0	0.0	15.8	13.6
	2023	768	6.6	83.1	5.9	11.0	0.0	6.5	6.8
Qatar	2019	561	27.5	69.1	26.3	4.1	0.5	28.6	26.5
	2023	612	26.2	71.3	25.3	3.4	0.1	24.4	27.8
Singapore	2019	692	84.6	15.3	84.3	0.4	0.0	86.3	83.0
	2023	689	80.6	19.3	80.4	0.3	0.0	82.6	78.8
Sweden	2019	590	5.4	80.0	4.6	14.8	0.6	4.9	6.0
	2023	723	3.6	87.6	3.3	8.8	0.3	1.2	5.6
United Arab Emirates	2019	3206	37.6	59.8	36.0	4.0	0.2	39.6	35.8
	2023	4672	37.4	60.1	35.9	3.7	0.3	37.4	37.4
United States	2019	1257	53.8	45.4	53.0	1.1	0.5	56.6	51.1
	2023	1143	36.6	62.3	35.9	1.4	0.4	38.9	34.3
International Avg. (20)	2019	15196	40.8	52.2	37.9	9.7	0.3	42.9	38.9
	2023	19140	33.0	60.6	31.1	8.2	0.2	34.4	31.7

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Applying

B_MM3_04B ME72041B: Ratio of boys to girls - eighth grade - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1169	25.7	71.6	24.7	3.4	0.3	27.5	24.0
	2023	1724	24.6	72.7	23.7	3.3	0.4	25.1	24.1
Dubai, UAE	2019	821	60.8	37.3	57.8	4.8	0.1	63.4	58.3
	2023	1152	59.7	38.4	56.8	4.7	0.1	60.3	59.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Knowing

B_MM3_05 ME72223: Expression for money in savings account - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	37.9	45.2	36.6	10.8	4.1	2.7	0.6	36.7	38.8
	2023	634	36.6	40.1	36.0	15.9	6.4	1.5	0.1	34.6	38.7
Chinese Taipei	2019	685	80.5	14.2	80.1	3.9	1.3	0.4	0.0	80.3	80.7
	2023	801	81.1	13.8	81.0	4.0	1.0	0.2	0.0	83.0	79.5
England	2019	480	54.7	25.2	53.2	10.9	7.9	2.9	0.0	48.6	60.8
	2023	594	55.3	28.1	54.4	10.0	5.9	1.4	0.1	53.9	56.8
Finland	2019	700	49.1	33.3	48.2	10.7	5.8	1.5	0.4	50.2	48.2
	2023	833	47.1	34.0	46.5	11.9	6.3	1.0	0.3	49.1	45.1
France	2019	546	46.1	42.3	44.8	6.1	4.0	2.4	0.3	43.8	48.6
	2023	637	44.5	39.2	43.4	9.7	5.5	2.3	0.0	41.9	46.7
Georgia	2019	467	43.9	39.5	42.5	10.6	4.2	3.1	0.1	35.3	51.7
	2023	694	43.0	38.9	42.3	11.3	5.8	1.4	0.3	34.7	50.3
Hong Kong SAR	2019	462	69.3	21.6	68.2	5.8	2.8	1.6	0.0	71.8	67.3
	2023	631	70.3	21.6	69.9	5.7	2.3	0.3	0.3	67.7	72.6
Hungary	2019	650	50.4	32.1	50.3	11.3	6.0	0.4	0.0	49.1	51.9
	2023	773	48.5	33.9	48.5	11.4	6.2	0.0	0.0	46.0	51.0
Israel	2019	542	61.7	24.2	60.4	8.4	4.7	2.0	0.2	64.1	59.3
	2023	746	54.4	28.6	53.9	10.8	5.8	0.6	0.3	55.0	53.7
Italy	2019	522	47.9	39.2	46.7	8.5	3.0	1.9	0.7	43.8	52.3
	2023	655	48.4	39.4	48.2	9.1	2.9	0.4	0.0	42.8	53.8
Korea, Rep. of	2019	550	78.9	13.9	78.6	5.7	1.5	0.2	0.3	74.5	83.0
	2023	604	80.7	15.3	80.2	3.1	0.8	0.6	0.0	76.8	84.1
Lithuania	2019	548	58.1	32.2	57.7	6.9	2.5	0.7	0.0	53.7	62.7
	2023	775	56.0	33.8	55.8	7.9	2.2	0.0	0.2	53.6	58.3
Malaysia	2019	1009	34.5	48.6	34.3	11.6	4.9	0.4	0.3	34.7	34.3
	2023	1254	33.1	48.3	33.1	14.2	4.4	0.0	0.0	32.1	34.4
Norway (9)	2019	664	50.2	29.9	47.4	10.9	6.1	4.5	1.3	52.5	47.8
	2023	902	52.8	31.6	51.5	9.0	5.4	1.6	1.0	53.9	51.8
Portugal	2019	484	51.1	36.0	50.5	8.0	4.3	1.1	0.0	48.1	54.0
	2023	768	45.4	34.5	45.2	11.6	8.2	0.6	0.0	40.3	50.3
Qatar	2019	561	43.4	35.3	42.3	14.8	5.1	1.9	0.6	42.3	44.3
	2023	612	48.5	36.4	48.4	9.6	5.2	0.3	0.1	45.0	51.5
Singapore	2019	692	76.2	20.7	76.1	2.6	0.4	0.2	0.0	74.1	78.2
	2023	689	74.4	21.8	74.3	2.1	1.6	0.2	0.0	71.3	77.2
Sweden	2019	590	59.0	28.2	57.4	7.0	4.7	1.6	1.1	60.2	57.7
	2023	723	58.7	28.8	58.0	7.4	4.7	0.8	0.3	60.9	56.7
United Arab Emirates	2019	3202	49.3	30.3	48.7	11.5	8.3	1.0	0.2	48.4	50.2
	2023	4672	51.1	33.5	50.6	8.2	6.6	0.6	0.4	47.7	54.4
United States	2019	1257	73.6	13.5	72.9	7.3	5.3	0.3	0.7	72.4	74.9
	2023	1143	64.9	21.7	64.4	7.4	5.7	0.3	0.5	64.8	65.2
International Avg. (20)	2019	15191	55.8	30.3	54.8	8.7	4.3	1.5	0.3	54.2	57.3
	2023	19140	54.7	31.2	54.3	9.0	4.7	0.7	0.2	52.8	56.6

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Knowing
B_MM3_05 ME72223: Expression for money in savings account - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1165	43.9	29.4	43.4	16.6	9.3	0.9	0.3	46.5	41.6
	2023	1724	43.3	35.5	42.7	11.8	8.6	0.9	0.4	41.5	45.1
Dubai, UAE	2019	821	63.9	25.1	63.5	6.5	4.2	0.5	0.1	57.8	69.6
	2023	1152	65.7	26.5	65.2	4.0	3.6	0.5	0.2	60.9	70.1

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Knowing

B_MM3_06 ME72094: Value of k when $(k + 7) / 3 = 6$ - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	44.5	46.6	37.4	15.0	1.0	41.2	47.3
	2023	634	32.8	59.2	28.9	11.7	0.1	28.3	37.4
Chinese Taipei	2019	685	85.5	14.4	84.6	1.0	0.0	85.4	85.5
	2023	801	85.8	14.1	85.2	0.7	0.0	84.7	86.7
England	2019	480	67.9	29.3	61.9	8.8	0.1	71.3	64.6
	2023	594	65.4	32.8	62.0	5.1	0.1	61.5	69.7
Finland	2019	700	65.0	33.0	61.2	5.4	0.4	67.6	62.7
	2023	833	65.1	33.6	62.7	3.4	0.3	64.6	65.6
France	2019	546	54.2	40.4	47.8	11.4	0.3	47.8	60.8
	2023	636	42.2	51.4	37.6	11.1	0.0	39.9	44.2
Georgia	2019	468	59.4	36.7	53.8	9.4	0.1	57.6	61.0
	2023	694	65.7	31.2	59.7	8.8	0.3	66.4	65.1
Hong Kong SAR	2019	462	87.0	12.8	85.4	1.8	0.0	89.6	84.8
	2023	630	80.7	19.0	79.5	1.2	0.3	80.9	80.5
Hungary	2019	650	70.1	28.9	67.8	3.2	0.0	67.5	72.9
	2023	773	61.9	37.6	61.2	1.2	0.0	60.6	63.2
Israel	2019	542	66.5	30.9	61.4	7.4	0.2	68.6	64.4
	2023	746	56.9	40.1	53.0	6.6	0.3	55.3	58.4
Italy	2019	522	69.5	28.3	64.3	6.5	0.9	67.4	71.5
	2023	654	65.4	32.7	61.8	5.4	0.1	60.5	69.9
Korea, Rep. of	2019	550	81.1	18.6	79.9	1.2	0.3	77.9	84.1
	2023	604	84.9	14.9	83.7	1.2	0.2	84.1	85.6
Lithuania	2019	548	79.0	19.8	74.5	5.7	0.0	77.6	80.5
	2023	775	70.6	28.2	67.8	3.8	0.2	69.5	71.6
Malaysia	2019	1009	45.4	53.5	44.5	1.6	0.3	49.5	41.1
	2023	1254	24.6	74.6	24.3	1.0	0.0	23.3	26.0
Norway (9)	2019	664	68.5	28.4	61.6	8.7	1.3	66.2	71.0
	2023	901	64.0	33.4	59.4	6.1	1.1	64.0	63.9
Portugal	2019	484	61.6	36.2	58.2	5.6	0.0	56.6	66.5
	2023	768	52.8	44.8	50.2	5.0	0.0	47.2	58.0
Qatar	2019	561	43.5	54.5	41.9	3.0	0.6	44.1	42.9
	2023	612	44.0	55.1	43.3	1.6	0.1	38.0	49.2
Singapore	2019	692	82.1	17.8	81.8	0.4	0.0	81.6	82.7
	2023	689	77.7	22.2	77.6	0.1	0.0	78.1	77.5
Sweden	2019	590	79.2	19.7	75.2	4.0	1.1	80.6	77.7
	2023	723	76.2	23.0	73.9	2.8	0.3	79.2	73.7
United Arab Emirates	2019	3203	53.3	45.1	51.6	3.1	0.2	53.5	53.2
	2023	4671	58.0	41.2	56.8	1.5	0.5	55.8	60.1
United States	2019	1257	61.0	38.2	59.8	1.3	0.7	59.0	63.1
	2023	1143	54.0	45.4	53.2	0.9	0.5	52.1	56.0
International Avg. (20)	2019	15193	66.2	31.7	62.7	5.2	0.4	65.5	66.9
	2023	19135	61.4	36.7	59.1	4.0	0.2	59.7	63.1

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Knowing

B_MM3_06 ME72094: Value of k when $(k + 7) / 3 = 6$ - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1166	40.5	57.7	39.3	2.6	0.3	43.6	37.7
	2023	1723	49.2	49.8	48.1	1.7	0.4	47.4	50.9
Dubai, UAE	2019	821	71.5	27.4	68.8	3.6	0.1	69.0	73.9
	2023	1152	73.6	25.9	72.3	1.2	0.5	72.6	74.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Applying

B_MM3_07 ME72059: Formula for students' overall scores in course - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	18.4	60.1	13.6	24.4	1.9	21.0	16.4
	2023	632	9.4	69.0	7.2	23.6	0.1	8.8	10.1
Chinese Taipei	2019	685	73.7	25.5	71.3	3.2	0.0	76.6	70.7
	2023	801	72.4	27.1	70.8	2.1	0.0	77.2	68.2
England	2019	480	43.8	46.6	36.4	16.9	0.1	48.9	38.7
	2023	594	39.4	53.7	35.0	11.1	0.3	36.9	42.4
Finland	2019	700	14.9	72.1	12.6	14.9	0.4	18.8	11.6
	2023	830	15.2	76.8	13.8	9.1	0.3	14.8	15.6
France	2019	546	25.5	56.6	19.4	23.3	0.7	27.4	23.5
	2023	634	21.6	61.2	16.8	22.0	0.0	24.7	18.8
Georgia	2019	468	45.9	42.1	35.8	22.0	0.1	48.5	43.6
	2023	692	43.7	45.6	35.4	18.6	0.4	48.4	39.4
Hong Kong SAR	2019	462	74.9	24.3	72.4	3.3	0.0	78.2	72.2
	2023	631	77.8	21.5	75.3	2.7	0.5	81.8	74.1
Hungary	2019	650	32.2	62.2	29.5	8.3	0.0	32.0	32.4
	2023	773	31.5	64.0	29.4	6.6	0.0	34.2	28.7
Israel	2019	542	51.6	41.1	43.7	15.0	0.2	57.5	45.6
	2023	746	38.0	53.9	33.1	12.5	0.5	40.9	35.2
Italy	2019	522	26.3	58.7	20.9	19.5	0.9	28.9	23.5
	2023	655	25.1	63.3	21.2	15.4	0.1	27.2	23.1
Korea, Rep. of	2019	550	70.5	28.2	67.3	4.3	0.3	73.1	68.1
	2023	604	64.2	34.2	61.4	4.1	0.2	64.9	63.6
Lithuania	2019	548	59.1	37.2	53.8	9.0	0.0	64.5	53.3
	2023	774	53.7	42.9	49.6	7.3	0.2	58.7	48.8
Malaysia	2019	1009	38.4	59.1	36.9	3.4	0.6	44.4	32.0
	2023	1254	22.8	75.9	22.4	1.5	0.1	25.4	19.9
Norway (9)	2019	664	22.4	60.2	17.4	21.1	1.3	21.8	23.1
	2023	901	17.6	69.9	14.9	14.1	1.1	17.6	17.6
Portugal	2019	484	44.4	46.0	36.7	17.3	0.0	48.2	40.5
	2023	768	33.6	57.5	29.1	13.4	0.0	36.3	31.0
Qatar	2019	561	28.6	64.0	25.6	9.2	1.1	31.9	25.6
	2023	611	31.4	64.2	29.4	6.3	0.1	34.8	28.4
Singapore	2019	692	81.4	18.5	80.7	0.9	0.0	84.0	78.8
	2023	689	76.5	23.3	76.0	0.7	0.0	79.5	73.9
Sweden	2019	590	31.2	57.3	26.0	15.5	1.3	34.5	27.5
	2023	723	30.9	61.5	27.5	10.6	0.3	29.8	31.9
United Arab Emirates	2019	3206	42.0	55.1	39.9	4.7	0.3	46.7	37.7
	2023	4670	47.0	51.0	45.2	3.2	0.6	49.4	44.5
United States	2019	1257	55.9	42.7	54.1	2.5	0.7	60.1	51.5
	2023	1143	45.0	53.2	43.5	2.6	0.8	48.5	41.5
International Avg. (20)	2019	15196	44.1	47.9	39.7	11.9	0.5	47.3	40.8
	2023	19125	39.8	53.5	36.9	9.4	0.3	42.0	37.8

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Applying

B_MM3_07 ME72059: Formula for Students' overall scores in course - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1168	32.0	64.8	30.4	4.2	0.5	37.4	27.0
	2023	1723	35.2	62.4	33.8	3.1	0.6	38.2	32.1
Dubai, UAE	2019	821	60.0	38.2	57.3	4.4	0.1	62.1	57.9
	2023	1152	62.4	36.1	59.8	3.6	0.5	63.2	61.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Knowing

B_MM3_08 ME72080: Expression equivalent to $x + 2y + 6$ - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	19.7	17.1	20.0	44.9	4.7	10.9	2.4	24.7	15.9
	2023	634	14.0	12.9	24.5	48.8	5.9	7.6	0.3	13.8	14.3
Chinese Taipei	2019	685	70.6	70.0	9.5	15.5	4.2	0.8	0.0	74.3	66.9
	2023	801	70.7	70.5	10.1	15.1	4.0	0.2	0.0	74.9	67.0
England	2019	480	26.7	25.1	23.4	38.8	6.6	6.0	0.1	25.5	27.9
	2023	594	30.0	28.9	25.0	35.8	6.7	3.2	0.4	26.7	33.8
Finland	2019	700	25.4	24.2	21.8	43.3	6.0	4.3	0.4	25.6	25.3
	2023	833	27.3	26.4	22.4	41.8	6.4	2.6	0.4	27.3	27.2
France	2019	546	11.9	11.1	23.3	50.8	7.7	6.2	0.9	9.5	14.6
	2023	637	16.4	15.5	25.1	49.5	4.7	5.2	0.0	19.2	13.9
Georgia	2019	467	31.5	29.6	18.9	40.9	4.6	5.9	0.1	33.0	30.2
	2023	694	29.9	28.5	17.0	45.2	4.6	3.9	0.9	30.9	29.1
Hong Kong SAR	2019	462	56.3	55.8	13.6	24.4	5.3	0.9	0.0	59.7	53.5
	2023	631	58.5	57.7	14.0	21.8	5.1	0.9	0.5	58.7	58.3
Hungary	2019	650	37.9	37.7	16.8	41.3	3.7	0.6	0.0	37.8	38.0
	2023	773	35.9	35.7	20.5	38.7	4.5	0.6	0.0	36.8	35.1
Israel	2019	542	48.8	46.9	18.9	26.3	4.1	3.2	0.6	51.2	46.3
	2023	746	40.7	39.8	23.6	30.2	4.4	1.6	0.5	39.9	41.4
Italy	2019	522	29.6	27.1	17.5	42.5	4.3	7.0	1.6	29.4	29.9
	2023	655	28.3	27.5	22.1	43.3	4.4	1.8	0.9	32.0	24.8
Korea, Rep. of	2019	550	66.8	66.1	10.6	18.5	3.8	0.8	0.3	66.6	66.9
	2023	604	71.7	70.6	10.4	14.7	2.9	1.0	0.4	73.1	70.4
Lithuania	2019	548	36.2	34.6	19.9	35.7	5.3	4.5	0.0	41.4	30.7
	2023	775	34.6	34.0	23.7	37.7	2.9	1.5	0.2	32.8	36.5
Malaysia	2019	1009	20.3	19.8	24.0	48.0	6.1	1.3	0.8	23.2	17.2
	2023	1254	18.4	18.2	22.6	53.6	4.8	0.5	0.2	18.6	18.1
Norway (9)	2019	664	18.8	16.4	27.1	38.0	5.9	10.8	1.8	19.4	18.2
	2023	902	23.5	22.1	29.7	38.1	4.4	4.3	1.3	21.8	25.0
Portugal	2019	484	28.7	27.8	24.9	39.6	4.4	3.4	0.0	32.5	25.0
	2023	768	28.8	28.1	20.8	43.2	5.5	2.3	0.0	27.8	29.7
Qatar	2019	561	28.1	26.7	23.4	39.1	5.9	3.6	1.4	29.8	26.5
	2023	612	28.7	28.0	21.1	41.0	7.6	2.3	0.1	31.0	26.7
Singapore	2019	692	72.4	71.8	9.1	15.2	3.1	0.8	0.0	76.7	68.4
	2023	689	70.8	70.7	9.8	16.1	3.3	0.1	0.0	70.5	71.1
Sweden	2019	590	27.3	25.6	22.0	39.8	6.6	4.3	1.8	29.3	25.1
	2023	723	31.5	30.2	24.1	33.8	7.9	3.2	0.7	31.0	31.9
United Arab Emirates	2019	3203	31.2	30.4	19.3	41.5	6.1	2.3	0.5	31.8	30.7
	2023	4671	39.3	38.4	18.8	35.3	5.1	1.7	0.8	38.3	40.3
United States	2019	1257	43.0	41.9	20.5	29.3	5.7	1.7	0.9	44.3	41.7
	2023	1143	39.6	39.0	19.7	33.3	6.4	0.6	1.0	40.7	38.7
International Avg. (20)	2019	15192	36.6	35.3	19.2	35.7	5.2	3.9	0.7	38.3	34.9
	2023	19139	36.9	36.1	20.2	35.8	5.1	2.3	0.4	37.3	36.7

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Knowing
B_MM3_08 ME72080: Expression equivalent to $x + 2y + 6$ - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1167	21.7	21.0	20.6	48.9	6.6	2.2	0.6	24.4	19.1
	2023	1724	33.1	32.2	20.0	38.4	6.6	2.0	0.7	35.0	31.2
Dubai, UAE	2019	821	47.8	46.8	16.9	29.6	4.6	1.9	0.2	43.9	51.4
	2023	1152	50.7	49.6	16.1	27.8	4.4	1.3	0.7	47.4	53.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Applying
B_MM3_09 ME72081: Pair of equations for ticket price (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	12.8	82.2	12.0	3.2	2.6	11.7	13.6
	2023	634	6.9	90.1	6.6	2.9	0.5	6.9	6.8
Chinese Taipei	2019	685	55.0	44.6	54.6	0.8	0.0	60.4	49.7
	2023	801	45.0	54.9	44.9	0.2	0.0	49.8	40.9
England	2019	480	19.0	77.8	18.3	3.9	0.1	19.3	18.7
	2023	594	18.9	79.0	18.4	2.3	0.4	18.1	19.8
Finland	2019	700	13.9	84.3	13.6	1.6	0.6	15.3	12.7
	2023	833	15.5	82.7	15.2	1.5	0.6	14.4	16.7
France	2019	546	18.5	78.7	17.9	2.2	1.2	17.5	19.6
	2023	637	12.9	85.5	12.7	1.5	0.3	15.7	10.6
Georgia	2019	467	16.0	82.1	15.6	2.2	0.1	16.6	15.4
	2023	694	14.0	83.7	13.6	1.8	0.9	17.4	11.0
Hong Kong SAR	2019	462	53.6	45.8	53.0	1.1	0.0	59.3	49.1
	2023	631	49.8	49.8	49.4	0.2	0.5	51.4	48.4
Hungary	2019	650	22.6	76.6	22.3	1.0	0.0	23.1	22.0
	2023	773	20.4	79.5	20.4	0.1	0.0	20.3	20.5
Israel	2019	542	27.5	70.7	26.8	1.9	0.6	25.9	29.2
	2023	746	16.1	81.9	15.8	1.9	0.5	16.8	15.5
Italy	2019	522	18.2	79.1	17.6	1.7	1.6	18.7	17.6
	2023	655	19.9	78.6	19.5	0.9	0.9	20.9	18.9
Korea, Rep. of	2019	550	59.8	39.7	59.0	1.0	0.3	56.8	62.5
	2023	604	58.8	40.8	58.3	0.4	0.4	60.7	57.2
Lithuania	2019	548	23.5	76.1	23.3	0.6	0.0	23.5	23.5
	2023	775	23.0	76.7	22.9	0.1	0.2	23.8	22.2
Malaysia	2019	1009	16.2	82.3	15.9	0.9	0.8	18.8	13.3
	2023	1254	10.3	89.1	10.3	0.2	0.5	10.1	10.6
Norway (9)	2019	664	16.9	76.0	15.5	6.3	2.1	20.0	13.7
	2023	902	14.5	82.7	14.0	2.1	1.3	16.3	12.8
Portugal	2019	484	19.5	79.3	19.2	1.5	0.0	17.6	21.4
	2023	768	15.5	84.2	15.5	0.4	0.0	15.9	15.2
Qatar	2019	561	12.6	83.6	12.1	2.7	1.7	12.0	13.2
	2023	612	10.1	88.6	10.0	1.3	0.2	7.8	12.2
Singapore	2019	692	52.5	47.2	52.1	0.6	0.2	53.7	51.3
	2023	689	46.9	53.1	46.9	0.0	0.0	46.0	47.8
Sweden	2019	590	17.7	78.3	16.8	3.0	2.0	17.2	18.3
	2023	723	21.5	75.1	20.5	3.7	0.7	24.7	18.7
United Arab Emirates	2019	3199	15.5	82.8	15.2	1.3	0.7	14.8	16.2
	2023	4672	20.6	78.0	20.3	0.8	1.0	20.0	21.3
United States	2019	1257	30.4	68.2	29.7	0.5	1.6	29.1	31.8
	2023	1143	20.3	78.7	20.0	0.2	1.1	21.3	19.3
International Avg. (20)	2019	15188	26.1	71.8	25.5	1.9	0.8	26.6	25.6
	2023	19140	23.1	75.6	22.8	1.1	0.5	23.9	22.3

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Algebra / Applying

B_MM3_09 ME72081: Pair of equations for ticket price (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1163	13.3	84.9	13.0	1.4	0.7	12.9	13.6
	2023	1724	15.6	82.8	15.3	0.9	1.1	15.5	15.7
Dubai, UAE	2019	821	26.6	72.4	26.2	1.1	0.3	24.3	28.7
	2023	1152	31.0	68.1	30.5	0.6	0.7	30.8	31.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Geometry and Measurement / Knowing
B_MM3_10 ME72140: Shape reflected over dotted line (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	39.9	57.4	38.1	1.4	3.0	39.9	39.9
	2023	634	31.1	67.7	30.5	1.4	0.5	32.2	29.9
Chinese Taipei	2019	685	75.7	24.3	75.7	0.0	0.0	78.9	72.5
	2023	801	74.6	25.3	74.6	0.0	0.0	76.8	72.8
England	2019	480	66.0	33.6	65.3	1.0	0.1	68.7	63.3
	2023	594	59.2	40.4	58.7	0.3	0.6	58.3	60.3
Finland	2019	700	56.9	42.5	56.2	0.6	0.6	64.2	50.6
	2023	833	60.5	39.1	59.8	0.5	0.6	69.9	50.6
France	2019	546	70.8	28.6	69.3	0.9	1.2	71.6	70.0
	2023	637	63.7	35.9	62.9	0.8	0.4	74.6	54.4
Georgia	2019	467	34.0	63.6	32.7	3.5	0.1	36.6	31.7
	2023	694	28.1	70.5	27.6	1.1	0.9	32.3	24.5
Hong Kong SAR	2019	462	76.4	23.3	75.4	1.3	0.0	81.2	72.5
	2023	631	65.6	34.1	65.1	0.3	0.5	70.5	61.1
Hungary	2019	650	63.3	36.5	63.1	0.4	0.0	63.4	63.2
	2023	773	58.9	41.1	58.9	0.0	0.0	64.1	53.7
Israel	2019	542	45.8	53.1	44.8	0.6	1.4	51.2	40.1
	2023	746	39.8	59.2	39.1	1.0	0.7	43.0	36.7
Italy	2019	522	46.6	52.0	45.4	0.7	1.9	46.6	46.7
	2023	654	49.2	50.1	48.6	0.1	1.2	51.4	47.1
Korea, Rep. of	2019	550	69.0	31.0	68.8	0.0	0.3	71.0	67.1
	2023	604	69.3	30.5	69.0	0.0	0.4	74.2	65.1
Lithuania	2019	548	68.7	31.2	68.5	0.2	0.0	73.0	64.2
	2023	775	60.3	39.6	60.2	0.0	0.2	64.2	56.6
Malaysia	2019	1009	40.1	59.3	39.6	0.2	0.8	41.3	38.8
	2023	1254	24.9	74.4	24.7	0.2	0.7	26.4	23.2
Norway (9)	2019	664	63.1	35.7	61.1	0.7	2.4	65.6	60.7
	2023	902	56.7	42.7	55.8	0.2	1.4	60.8	53.1
Portugal	2019	484	59.6	40.2	59.2	0.6	0.0	58.5	60.7
	2023	768	52.4	47.5	52.3	0.3	0.0	51.6	53.2
Qatar	2019	561	33.0	65.3	32.1	0.7	1.8	34.4	31.6
	2023	612	35.2	64.4	35.1	0.2	0.3	38.1	32.7
Singapore	2019	692	67.0	32.9	66.9	0.0	0.2	68.1	66.0
	2023	689	65.5	34.5	65.5	0.0	0.0	62.8	67.8
Sweden	2019	590	60.6	38.2	58.6	0.8	2.4	67.1	53.5
	2023	723	52.1	46.9	50.9	0.9	1.4	55.8	48.8
United Arab Emirates	2019	3199	42.3	56.8	41.6	0.8	0.8	44.6	40.2
	2023	4671	43.6	55.6	43.0	0.4	1.1	45.8	41.5
United States	2019	1257	59.5	39.7	58.4	0.3	1.6	61.2	57.9
	2023	1143	52.1	47.3	51.5	0.0	1.2	55.6	48.7
International Avg. (20)	2019	15188	56.9	42.3	56.1	0.7	0.9	59.4	54.6
	2023	19138	52.1	47.3	51.7	0.4	0.6	55.4	49.1

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Geometry and Measurement / Knowing

B_MM3_10 ME72140: Shape reflected over dotted line (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1164	32.5	66.5	32.0	0.6	0.9	35.4	29.8
	2023	1724	34.0	64.9	33.5	0.4	1.2	37.5	30.6
Dubai, UAE	2019	821	58.9	40.7	58.3	0.4	0.6	59.3	58.6
	2023	1151	59.5	40.1	58.8	0.3	0.9	59.9	59.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Geometry and Measurement / Reasoning

B_MM3_11 ME72120: Value of angle x with parallel lines a and b - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	7.9	69.6	6.0	21.4	3.1	8.8	7.1
	2023	634	1.9	79.1	1.5	18.9	0.5	3.0	0.8
Chinese Taipei	2019	685	62.3	36.9	60.9	2.3	0.0	62.6	61.9
	2023	801	50.0	49.1	49.2	1.7	0.0	50.8	49.3
England	2019	480	20.6	70.3	18.2	11.4	0.1	19.1	22.1
	2023	594	26.4	67.5	24.2	7.7	0.6	24.2	29.0
Finland	2019	700	12.4	75.7	10.7	13.0	0.6	13.9	11.3
	2023	832	12.9	79.8	11.9	7.8	0.6	13.9	12.0
France	2019	546	10.4	66.6	7.8	23.9	1.6	10.2	10.7
	2023	636	10.6	75.1	8.9	15.6	0.4	11.4	9.9
Georgia	2019	468	16.9	63.2	12.9	23.1	0.8	18.3	15.8
	2023	694	19.6	64.6	15.8	18.4	1.2	17.6	21.3
Hong Kong SAR	2019	462	66.0	33.2	64.4	2.5	0.0	68.0	64.4
	2023	631	58.4	40.4	56.8	2.3	0.5	59.8	57.1
Hungary	2019	650	14.1	80.2	13.2	6.6	0.0	13.0	15.3
	2023	773	11.5	85.3	11.1	3.6	0.0	9.7	13.3
Israel	2019	542	36.3	54.3	30.9	13.3	1.4	35.1	37.4
	2023	746	26.6	65.9	23.9	9.4	0.8	24.6	28.4
Italy	2019	522	8.4	75.1	6.9	16.1	1.9	10.1	6.9
	2023	655	8.0	80.0	7.0	11.8	1.2	10.7	5.6
Korea, Rep. of	2019	550	60.4	38.7	59.1	2.0	0.3	60.0	60.9
	2023	604	69.3	29.9	67.6	2.0	0.4	68.7	69.9
Lithuania	2019	548	21.9	71.9	20.2	7.9	0.0	23.9	20.0
	2023	775	21.7	73.0	20.2	6.6	0.2	20.2	23.1
Malaysia	2019	1009	12.2	84.2	11.7	2.9	1.1	14.2	10.1
	2023	1254	8.2	89.9	8.1	1.3	0.7	8.1	8.4
Norway (9)	2019	664	11.7	71.6	9.5	16.5	2.4	12.9	10.5
	2023	902	8.6	80.2	7.5	10.9	1.4	7.9	9.1
Portugal	2019	484	21.5	72.0	19.7	8.4	0.0	23.6	19.4
	2023	768	16.1	78.5	15.0	6.4	0.0	15.9	16.2
Qatar	2019	561	13.3	80.6	12.4	5.0	2.0	15.2	11.6
	2023	612	15.6	80.6	14.8	4.3	0.3	13.6	17.3
Singapore	2019	692	71.2	28.6	70.6	0.6	0.2	71.2	71.1
	2023	689	71.9	28.0	71.7	0.3	0.0	71.4	72.4
Sweden	2019	590	10.9	71.4	8.8	17.4	2.4	8.4	13.6
	2023	722	12.0	77.6	10.6	10.3	1.5	10.1	13.6
United Arab Emirates	2019	3207	23.5	72.6	22.3	4.3	0.8	24.0	23.1
	2023	4671	26.7	70.0	25.6	3.3	1.2	25.5	27.9
United States	2019	1257	11.8	84.0	11.3	3.1	1.6	10.9	12.8
	2023	1143	9.4	87.7	9.1	2.0	1.2	7.9	11.0
International Avg. (20)	2019	15197	25.7	65.0	23.9	10.1	1.0	26.2	25.3
	2023	19136	24.3	69.1	23.0	7.2	0.6	23.8	24.8

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Geometry and Measurement / Reasoning

B_MM3_11 ME72120: Value of angle x with parallel lines a and b - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1169	14.9	81.5	14.3	3.3	0.9	15.5	14.4
	2023	1723	18.2	77.3	17.2	4.3	1.2	19.6	16.9
Dubai, UAE	2019	821	40.2	56.5	37.9	5.1	0.6	39.8	40.5
	2023	1152	41.5	56.0	39.7	3.3	1.0	38.3	44.3

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Geometry and Measurement / Reasoning
B_MM3_12 ME72131: Areas of triangles ABC and ABD - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	4.8	80.8	4.1	11.0	4.1	3.5	5.9
	2023	634	3.7	86.1	3.4	9.7	0.8	3.8	3.7
Chinese Taipei	2019	684	58.7	41.2	58.5	0.3	0.0	57.8	59.6
	2023	801	55.6	44.2	55.4	0.4	0.0	58.9	52.8
England	2019	480	10.3	83.0	9.5	7.5	0.1	13.6	7.0
	2023	594	12.9	84.3	12.4	2.5	0.7	13.1	12.6
Finland	2019	700	8.3	87.8	7.9	3.4	0.9	8.4	8.2
	2023	833	8.1	89.5	7.9	2.0	0.6	8.9	7.3
France	2019	546	8.5	82.3	7.7	7.8	2.2	9.0	8.0
	2023	637	4.9	90.8	4.7	4.2	0.4	5.9	4.0
Georgia	2019	468	3.2	89.2	3.0	6.7	1.1	5.2	1.6
	2023	694	4.7	91.0	4.5	3.2	1.3	4.8	4.7
Hong Kong SAR	2019	462	48.0	51.1	47.2	1.7	0.0	48.2	47.9
	2023	631	39.5	59.5	38.8	0.9	0.8	38.5	40.4
Hungary	2019	650	5.2	93.1	5.1	1.8	0.0	3.3	7.3
	2023	773	5.6	93.6	5.5	0.8	0.0	4.5	6.6
Israel	2019	542	19.4	76.8	18.5	3.1	1.6	19.8	19.0
	2023	746	17.1	78.8	16.2	3.6	1.3	15.4	18.7
Italy	2019	522	13.2	80.0	12.2	5.2	2.6	12.6	13.8
	2023	655	14.8	81.6	14.1	2.9	1.3	14.8	14.7
Korea, Rep. of	2019	550	62.1	37.4	61.4	0.8	0.4	61.4	62.8
	2023	604	53.8	45.4	52.8	1.4	0.4	55.3	52.4
Lithuania	2019	548	5.5	91.5	5.3	3.0	0.2	4.4	6.7
	2023	775	7.7	90.9	7.6	1.2	0.2	5.6	9.7
Malaysia	2019	1009	7.9	88.9	7.6	2.2	1.3	8.1	7.7
	2023	1254	2.3	96.4	2.2	0.4	1.0	2.9	1.6
Norway (9)	2019	664	7.4	85.3	6.8	5.3	2.5	8.6	6.2
	2023	902	12.4	82.9	11.7	3.7	1.7	13.7	11.3
Portugal	2019	484	8.8	88.0	8.5	3.4	0.1	10.3	7.4
	2023	768	6.9	89.8	6.6	3.5	0.0	6.8	6.9
Qatar	2019	561	3.5	92.9	3.3	1.1	2.7	4.4	2.6
	2023	612	7.8	89.5	7.6	1.6	1.3	5.9	9.5
Singapore	2019	692	51.3	48.4	51.0	0.4	0.2	50.6	52.0
	2023	689	57.9	42.1	57.9	0.0	0.0	57.0	58.6
Sweden	2019	590	17.9	74.9	16.4	5.4	3.4	20.0	15.7
	2023	723	18.3	77.2	17.3	3.5	1.9	17.5	19.0
United Arab Emirates	2019	3207	9.5	87.3	9.2	2.4	1.1	8.1	10.9
	2023	4671	11.9	85.1	11.5	1.7	1.7	11.4	12.4
United States	2019	1257	8.6	88.1	8.3	1.4	2.3	8.3	9.0
	2023	1143	6.3	91.9	6.2	0.5	1.5	6.6	6.0
International Avg. (20)	2019	15196	18.1	77.4	17.6	3.7	1.3	18.3	18.0
	2023	19139	17.6	79.5	17.2	2.4	0.8	17.6	17.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Geometry and Measurement / Reasoning

B_MM3_12 ME72131: Areas of triangles ABC and ABD - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1169	3.7	93.1	3.6	2.2	1.1	3.8	3.6
	2023	1724	6.9	90.0	6.7	1.4	2.0	7.2	6.5
Dubai, UAE	2019	821	19.5	78.2	18.9	1.9	1.0	18.2	20.7
	2023	1152	21.3	75.6	20.5	2.7	1.2	19.9	22.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Geometry and Measurement / Applying
B_MM3_13 ME72147: Surface area of rectangular prism - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	6.8	78.3	5.7	11.5	4.4	5.4	8.0
	2023	634	3.7	82.7	3.2	12.6	1.4	2.9	4.6
Chinese Taipei	2019	685	51.5	48.2	51.1	0.8	0.0	50.6	52.3
	2023	801	50.0	49.7	49.8	0.5	0.0	49.1	50.8
England	2019	480	16.7	77.1	15.4	7.4	0.1	14.9	18.4
	2023	594	20.1	76.3	19.2	3.7	0.7	19.0	21.5
Finland	2019	700	20.7	72.7	19.0	7.2	1.1	24.1	17.9
	2023	832	20.5	75.4	19.4	4.6	0.6	21.5	19.5
France	2019	546	6.7	81.5	5.9	10.4	2.2	5.0	8.5
	2023	636	4.3	87.4	4.0	8.0	0.6	5.6	3.3
Georgia	2019	468	10.3	79.9	9.1	9.8	1.1	10.6	9.9
	2023	693	7.7	80.4	6.7	11.3	1.6	8.9	6.8
Hong Kong SAR	2019	462	51.7	46.5	49.9	3.0	0.5	48.4	54.5
	2023	631	45.3	53.5	44.3	1.5	0.8	45.0	45.6
Hungary	2019	650	21.6	70.7	19.5	9.8	0.0	20.4	22.8
	2023	772	21.9	73.5	20.6	5.8	0.0	15.6	28.0
Israel	2019	542	16.5	76.9	15.1	5.9	2.1	16.4	16.6
	2023	746	7.8	86.1	7.3	5.1	1.4	6.3	9.3
Italy	2019	522	21.2	66.1	17.8	13.4	2.8	15.2	27.0
	2023	655	18.8	70.9	16.4	11.4	1.3	21.2	16.5
Korea, Rep. of	2019	550	52.4	46.6	51.4	1.6	0.4	50.2	54.5
	2023	603	46.9	51.8	45.7	1.9	0.6	48.3	45.7
Lithuania	2019	548	26.5	70.2	25.3	4.2	0.2	26.6	26.4
	2023	775	23.9	74.0	23.3	2.5	0.2	24.1	23.8
Malaysia	2019	1009	9.9	87.1	9.5	1.8	1.6	12.6	6.9
	2023	1254	3.8	93.8	3.7	1.3	1.2	3.6	3.9
Norway (9)	2019	664	19.9	70.8	17.6	8.9	2.7	20.4	19.3
	2023	901	19.0	75.4	17.7	5.2	1.7	17.0	20.9
Portugal	2019	484	5.3	86.9	4.9	8.1	0.1	2.5	8.2
	2023	768	8.3	87.0	7.9	5.1	0.0	7.0	9.5
Qatar	2019	561	8.2	87.4	7.8	1.9	2.9	7.9	8.5
	2023	611	8.8	87.7	8.5	2.5	1.3	6.4	11.0
Singapore	2019	692	54.2	45.5	53.7	0.6	0.2	56.1	52.4
	2023	689	51.0	48.9	50.9	0.1	0.0	48.1	53.5
Sweden	2019	590	23.8	64.5	20.1	11.7	3.7	23.3	24.3
	2023	723	26.6	66.4	24.0	7.6	1.9	26.3	26.8
United Arab Emirates	2019	3206	16.9	79.8	16.2	2.7	1.3	16.3	17.4
	2023	4668	19.3	77.0	18.5	2.5	2.1	17.4	21.2
United States	2019	1257	19.6	76.3	18.6	2.7	2.5	18.2	21.1
	2023	1143	15.0	83.0	14.7	0.7	1.6	15.7	14.4
International Avg. (20)	2019	15196	23.0	70.7	21.7	6.2	1.5	22.3	23.7
	2023	19129	21.1	74.1	20.3	4.7	1.0	20.4	21.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Geometry and Measurement / Applying
B_MM3_13 ME72147: Surface area of rectangular prism - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1169	8.4	88.4	8.1	1.9	1.6	7.4	9.4
	2023	1722	10.0	86.0	9.6	2.0	2.4	10.1	9.9
Dubai, UAE	2019	821	29.3	68.2	28.2	2.6	1.0	29.7	28.9
	2023	1151	31.7	64.9	30.2	3.0	1.9	27.8	35.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

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Mathematics: Data and Probability / Applying
B_MM3_14 ME72154: Bar graph of Internet users in world - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	55.2	4.4	15.0	51.2	22.2	2.7	4.5	46.6	62.3
	2023	634	46.3	8.3	20.3	45.0	23.5	1.1	1.8	40.9	52.1
Chinese Taipei	2019	685	85.1	2.6	6.5	84.9	5.7	0.0	0.2	86.6	83.6
	2023	801	86.6	3.6	5.5	86.4	4.2	0.2	0.0	87.5	85.8
England	2019	480	65.4	4.2	13.2	64.6	16.8	1.2	0.1	65.3	65.5
	2023	594	64.9	4.0	15.9	63.8	14.6	0.7	0.9	60.0	70.7
Finland	2019	700	72.7	4.1	8.2	70.5	14.1	1.3	1.7	75.8	70.2
	2023	833	70.5	5.9	10.3	69.6	13.0	0.7	0.6	70.6	70.4
France	2019	546	62.7	3.4	11.2	59.5	20.7	2.2	2.9	54.5	71.8
	2023	637	62.3	6.2	15.8	61.3	15.2	0.5	1.0	60.0	64.1
Georgia	2019	467	51.5	6.4	21.7	49.9	18.8	2.0	1.1	51.3	51.7
	2023	694	49.9	7.0	18.9	48.5	22.7	1.0	2.0	44.9	54.2
Hong Kong SAR	2019	462	82.8	3.4	8.8	81.5	4.7	1.0	0.5	85.1	81.0
	2023	631	85.1	2.9	7.3	83.5	4.3	0.9	1.0	82.8	87.2
Hungary	2019	650	74.9	3.0	11.3	74.7	10.7	0.4	0.0	74.1	75.9
	2023	773	72.1	2.8	13.6	72.1	11.5	0.1	0.0	73.1	71.1
Israel	2019	542	67.8	3.4	12.1	65.1	15.3	1.3	2.8	62.0	74.0
	2023	746	61.3	7.8	14.2	59.6	15.7	0.9	1.9	57.2	65.1
Italy	2019	522	68.4	4.9	10.6	63.9	14.0	1.9	4.8	64.2	72.8
	2023	655	71.3	5.1	12.4	70.2	10.8	0.0	1.5	64.2	78.1
Korea, Rep. of	2019	550	78.3	1.5	10.1	77.6	9.9	0.4	0.4	76.0	80.5
	2023	604	80.3	2.7	9.0	79.6	7.9	0.1	0.6	77.7	82.5
Lithuania	2019	548	78.1	1.5	9.4	77.2	10.9	0.8	0.3	72.9	83.4
	2023	775	73.2	2.7	9.2	72.9	14.9	0.1	0.2	68.2	77.9
Malaysia	2019	1009	56.6	4.6	20.3	54.5	16.8	1.5	2.4	56.2	57.0
	2023	1254	48.6	9.1	23.1	47.3	17.7	0.7	2.1	48.9	48.3
Norway (9)	2019	664	69.0	4.0	12.3	64.3	12.5	3.3	3.5	69.3	68.9
	2023	902	68.4	6.6	11.5	66.7	12.7	0.4	2.0	68.1	68.6
Portugal	2019	484	64.8	4.1	13.9	63.4	16.4	1.4	0.8	59.6	70.0
	2023	768	64.6	5.2	12.6	63.9	17.2	1.1	0.1	59.2	69.7
Qatar	2019	561	51.9	7.6	18.1	49.1	19.8	2.0	3.4	45.6	57.7
	2023	612	49.2	8.0	18.2	47.8	23.1	1.3	1.7	48.9	49.5
Singapore	2019	692	86.5	2.4	6.2	86.2	4.9	0.1	0.3	87.9	85.2
	2023	689	85.1	3.6	6.9	85.1	4.3	0.0	0.0	83.9	86.2
Sweden	2019	590	71.6	3.3	9.6	66.1	13.3	2.9	4.8	70.3	73.1
	2023	723	73.4	4.8	9.8	70.4	11.0	1.6	2.4	76.5	70.8
United Arab Emirates	2019	3201	53.6	6.7	19.9	52.0	18.5	1.3	1.6	51.2	55.6
	2023	4672	55.8	7.8	17.4	53.8	17.4	0.9	2.7	51.9	59.6
United States	2019	1257	62.8	4.3	15.0	59.8	16.2	1.1	3.5	57.1	68.4
	2023	1143	60.0	5.7	17.2	58.4	16.1	0.7	1.9	56.2	63.7
International Avg. (20)	2019	15190	68.0	4.0	12.7	65.8	14.1	1.4	2.0	65.6	70.4
	2023	19140	66.4	5.5	13.5	65.3	13.9	0.7	1.2	64.0	68.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Data and Probability / Applying
B_MM3_14 ME72154: Bar graph of Internet users in world - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1164	47.8	9.1	21.0	46.5	20.6	0.8	2.0	49.6	46.1
	2023	1724	50.5	9.3	20.5	48.4	17.6	1.1	3.0	48.5	52.4
Dubai, UAE	2019	821	67.7	3.8	15.4	65.5	12.0	2.0	1.4	63.9	71.2
	2023	1152	67.3	5.3	11.0	65.2	15.3	0.6	2.5	62.1	72.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Data and Probability / Applying
B_MM3_15 ME72192: Graph that best shows favorite fruit - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	49.0	45.8	33.6	3.7	10.4	1.2	5.3	49.7	48.4
	2023	634	38.2	37.1	41.0	7.7	11.3	0.8	2.1	38.9	37.5
Chinese Taipei	2019	685	65.5	65.0	24.4	3.6	6.3	0.5	0.2	63.2	67.8
	2023	801	67.5	67.4	21.5	4.8	6.1	0.2	0.0	67.4	67.6
England	2019	480	67.2	66.1	16.2	4.3	11.8	1.6	0.1	73.6	60.7
	2023	594	64.3	62.6	23.9	2.7	8.2	1.8	0.9	63.4	65.4
Finland	2019	700	58.4	56.4	25.5	2.1	12.6	1.4	2.0	62.9	54.4
	2023	833	59.1	57.3	25.1	3.6	11.0	2.4	0.7	61.3	56.7
France	2019	546	61.0	58.3	25.2	3.2	8.8	0.8	3.7	59.6	62.6
	2023	637	57.1	56.0	28.9	4.4	8.8	0.7	1.2	58.7	55.8
Georgia	2019	467	37.4	35.6	38.9	5.9	14.9	3.4	1.3	39.7	35.3
	2023	694	39.5	38.2	38.0	5.8	14.5	1.4	2.1	42.1	37.4
Hong Kong SAR	2019	462	63.0	62.3	21.6	4.9	10.2	0.6	0.5	62.9	63.1
	2023	631	66.4	65.7	21.4	3.7	8.2	0.1	1.0	64.0	68.5
Hungary	2019	649	64.4	64.2	24.0	2.4	9.1	0.3	0.0	65.4	63.3
	2023	773	62.9	62.9	24.2	4.1	8.7	0.0	0.1	62.6	63.3
Israel	2019	542	60.4	58.1	29.3	2.7	6.0	1.1	2.8	60.5	60.4
	2023	746	57.2	55.5	28.5	4.7	8.2	0.8	2.2	55.8	58.6
Italy	2019	522	44.2	41.5	34.4	5.9	12.1	0.8	5.3	46.8	41.6
	2023	655	44.0	43.0	36.9	4.9	12.8	0.8	1.5	47.0	41.1
Korea, Rep. of	2019	550	83.3	82.8	11.3	2.0	3.4	0.2	0.4	84.4	82.2
	2023	604	84.5	83.9	9.7	2.4	3.4	0.0	0.6	86.7	82.5
Lithuania	2019	548	62.0	61.3	26.5	0.9	10.2	0.9	0.3	63.5	60.5
	2023	775	53.3	53.1	37.8	2.5	6.3	0.1	0.2	58.3	48.4
Malaysia	2019	1009	45.1	43.1	34.8	4.4	13.4	0.9	3.5	44.6	45.6
	2023	1254	38.0	36.9	41.1	6.3	12.7	0.4	2.6	40.2	35.5
Norway (9)	2019	664	66.1	62.0	26.4	0.8	4.5	2.0	4.3	61.5	71.0
	2023	902	61.4	59.1	27.5	3.9	5.8	1.7	2.0	64.2	58.8
Portugal	2019	484	49.9	48.9	31.2	1.8	16.0	0.2	1.8	46.7	53.1
	2023	768	47.7	47.4	36.4	2.8	12.8	0.5	0.2	46.5	48.8
Qatar	2019	561	44.0	41.5	37.6	6.5	8.6	2.2	3.5	48.3	40.1
	2023	612	47.4	45.8	34.8	4.7	11.3	1.1	2.3	47.8	47.1
Singapore	2019	692	78.3	77.7	12.6	2.3	6.7	0.4	0.3	78.5	78.2
	2023	689	76.0	76.0	16.5	2.5	5.0	0.0	0.0	76.2	75.8
Sweden	2019	590	70.9	65.7	20.5	2.1	4.3	2.3	5.0	72.2	69.5
	2023	723	67.6	64.6	20.4	3.5	7.0	2.0	2.5	68.2	67.2
United Arab Emirates	2019	3203	47.4	45.8	33.5	5.9	11.3	1.3	2.2	49.4	45.7
	2023	4672	51.6	49.3	29.9	5.9	10.5	1.2	3.2	50.2	52.9
United States	2019	1257	68.2	64.6	20.3	2.7	7.1	1.0	4.3	70.0	66.4
	2023	1143	55.0	53.7	32.0	3.3	8.6	0.1	2.4	54.4	55.6
International Avg. (20)	2019	15191	59.3	57.3	26.4	3.4	9.4	1.2	2.3	60.2	58.5
	2023	19140	56.9	55.8	28.8	4.2	9.1	0.8	1.4	57.7	56.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Data and Probability / Applying
B_MM3_15 ME72192: Graph that best shows favorite fruit - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1165	39.7	38.2	38.2	7.9	11.9	1.4	2.4	42.6	37.1
	2023	1724	44.7	42.3	33.8	7.5	11.1	1.8	3.7	46.2	43.2
Dubai, UAE	2019	821	65.4	63.3	21.1	4.1	8.3	1.2	1.9	62.8	67.8
	2023	1152	62.9	60.7	23.8	3.1	8.9	0.7	2.7	58.7	66.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Data and Probability / Reasoning

B_MM3_16 ME72161: Mean heights of basketball team - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	580	16.7	75.3	15.1	4.1	5.6	11.0	21.1
	2023	634	12.1	80.3	11.0	6.3	2.4	8.4	15.9
Chinese Taipei	2019	685	60.3	39.5	60.0	0.4	0.2	61.5	59.1
	2023	801	57.2	42.7	57.0	0.4	0.0	56.0	58.1
England	2019	480	35.0	61.5	33.1	4.5	0.9	34.2	35.8
	2023	594	37.5	60.8	36.4	1.8	0.9	33.3	42.3
Finland	2019	700	30.5	66.9	29.3	1.3	2.5	33.0	28.3
	2023	833	33.0	65.6	32.3	0.8	1.2	32.7	33.3
France	2019	546	35.4	60.0	32.9	3.3	3.9	34.6	36.3
	2023	637	22.9	74.8	22.3	1.6	1.4	22.9	23.0
Georgia	2019	468	21.6	74.4	20.4	3.0	2.1	21.4	21.7
	2023	694	13.8	81.8	13.1	2.8	2.3	12.4	15.0
Hong Kong SAR	2019	462	49.3	50.0	48.6	0.8	0.5	53.3	45.9
	2023	631	50.5	48.8	49.8	0.4	1.0	50.6	50.5
Hungary	2019	650	34.3	65.4	34.2	0.3	0.0	32.9	35.9
	2023	773	24.2	75.5	24.1	0.3	0.1	22.9	25.5
Israel	2019	542	37.1	59.9	35.3	1.8	3.0	33.5	40.9
	2023	746	32.5	65.1	31.4	0.9	2.6	30.3	34.6
Italy	2019	522	29.2	64.1	26.5	3.7	5.7	23.2	35.6
	2023	655	27.6	70.2	26.7	1.3	1.8	26.0	29.1
Korea, Rep. of	2019	550	58.9	40.9	58.7	0.0	0.4	54.3	63.2
	2023	604	53.0	46.6	52.4	0.3	0.6	52.5	53.4
Lithuania	2019	548	36.5	62.3	35.8	1.6	0.3	34.4	38.7
	2023	775	33.6	65.6	33.2	1.0	0.2	28.5	38.6
Malaysia	2019	1009	22.8	73.2	21.6	1.3	3.9	22.7	22.9
	2023	1254	8.9	88.1	8.6	0.5	2.9	7.9	10.0
Norway (9)	2019	664	37.3	57.8	34.4	3.2	4.6	38.3	36.3
	2023	902	34.6	62.9	33.3	1.3	2.5	33.6	35.4
Portugal	2019	484	27.6	68.7	26.1	3.2	2.0	23.5	31.5
	2023	768	25.6	73.1	25.1	1.5	0.3	19.8	31.1
Qatar	2019	561	13.9	80.8	13.0	1.7	4.5	16.5	11.6
	2023	612	22.4	74.9	21.7	0.9	2.5	17.4	26.8
Singapore	2019	692	60.9	38.8	60.6	0.3	0.4	61.4	60.5
	2023	689	63.6	36.4	63.6	0.0	0.0	61.5	65.4
Sweden	2019	590	37.7	56.5	34.1	3.8	5.6	35.4	40.2
	2023	723	39.5	57.7	37.7	1.8	2.8	35.8	42.7
United Arab Emirates	2019	3205	25.2	71.5	24.1	2.0	2.4	23.9	26.3
	2023	4671	24.3	71.8	23.1	1.2	4.0	22.3	26.3
United States	2019	1257	32.2	63.7	30.2	1.4	4.7	31.4	32.9
	2023	1143	26.3	71.6	25.5	0.5	2.4	24.4	28.2
International Avg. (20)	2019	15195	35.1	61.6	33.7	2.1	2.7	34.0	36.2
	2023	19139	32.2	65.7	31.4	1.3	1.6	30.0	34.3

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Data and Probability / Reasoning

B_MM3_16 ME72161: Mean heights of basketball team - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1168	15.7	80.5	14.9	2.0	2.5	16.3	15.1
	2023	1724	17.2	78.1	16.3	0.9	4.7	16.1	18.4
Dubai, UAE	2019	821	44.6	52.9	42.6	2.3	2.2	41.4	47.5
	2023	1152	40.1	57.2	38.3	1.2	3.3	37.6	42.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Knowing

B_MM4_01 ME72187: Sum of two numbers with exponents - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	598	43.4	52.3	40.1	7.7	0.0	40.9	45.1
	2023	633	29.9	65.4	27.9	6.4	0.3	24.6	34.2
Chinese Taipei	2019	704	77.7	22.1	77.2	0.7	0.0	80.3	75.2
	2023	798	81.8	18.2	81.6	0.2	0.0	80.6	82.9
England	2019	484	55.6	41.9	52.6	4.8	0.7	53.4	58.1
	2023	620	55.1	43.1	52.8	3.2	0.9	54.4	55.8
Finland	2019	684	57.1	41.4	55.1	3.2	0.3	62.7	51.3
	2023	837	57.4	41.7	56.2	2.0	0.1	55.5	59.2
France	2019	562	28.6	67.8	27.1	5.1	0.0	28.3	28.8
	2023	632	31.6	65.3	30.2	4.5	0.0	30.9	32.4
Georgia	2019	472	54.4	43.3	51.7	5.0	0.0	56.9	52.1
	2023	705	56.4	41.8	54.1	4.1	0.0	54.4	58.6
Hong Kong SAR	2019	468	73.5	26.3	73.0	0.7	0.0	77.1	70.1
	2023	638	74.5	25.4	74.2	0.4	0.0	76.6	72.3
Hungary	2019	633	60.5	38.6	59.2	2.2	0.0	60.3	60.8
	2023	771	60.7	39.2	60.5	0.3	0.0	61.4	60.0
Israel	2019	522	59.2	39.3	57.1	3.6	0.0	61.5	56.7
	2023	734	46.1	52.8	45.2	1.9	0.2	44.2	48.0
Italy	2019	514	72.3	27.3	71.1	1.6	0.0	71.9	72.6
	2023	651	72.2	27.5	71.3	1.2	0.0	70.4	74.0
Korea, Rep. of	2019	556	79.1	20.7	78.1	0.9	0.4	79.1	79.0
	2023	616	83.2	16.6	82.7	0.7	0.0	81.3	85.4
Lithuania	2019	551	68.0	31.5	66.9	1.4	0.2	67.1	69.1
	2023	775	65.2	34.4	64.5	1.1	0.0	70.0	60.6
Malaysia	2019	1007	28.5	70.9	28.3	0.7	0.0	29.4	27.7
	2023	1273	18.2	81.5	18.1	0.4	0.0	17.1	19.4
Norway (9)	2019	654	35.9	60.2	33.7	6.0	0.1	36.2	35.6
	2023	895	47.1	50.6	45.1	3.5	0.8	47.1	47.2
Portugal	2019	488	58.9	40.1	57.4	2.6	0.0	59.8	57.9
	2023	759	46.6	52.2	45.6	2.2	0.0	45.4	47.7
Qatar	2019	557	40.8	57.6	39.8	2.1	0.5	39.2	42.8
	2023	619	38.2	60.8	37.6	1.1	0.5	36.9	39.4
Singapore	2019	684	71.4	28.3	70.6	1.0	0.1	73.3	69.9
	2023	692	70.1	29.8	69.9	0.3	0.0	67.6	72.5
Sweden	2019	566	34.7	61.8	32.8	5.0	0.4	38.2	31.1
	2023	724	41.6	56.6	40.4	2.9	0.1	43.0	40.3
United Arab Emirates	2019	3173	55.9	43.4	55.1	1.3	0.2	55.2	56.6
	2023	4667	61.0	38.7	60.6	0.6	0.1	61.2	60.9
United States	2019	1221	58.4	41.2	57.8	0.7	0.3	61.7	54.9
	2023	1120	50.7	48.7	50.2	0.7	0.3	51.1	50.4
International Avg. (20)	2019	15098	55.7	42.8	54.2	2.8	0.2	56.6	54.8
	2023	19159	54.4	44.5	53.4	1.9	0.2	53.7	55.1

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Knowing

B_MM4_01 ME72187: Sum of two numbers with exponents - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1175	46.0	52.9	45.1	1.4	0.5	43.5	48.5
	2023	1745	52.3	47.4	52.1	0.4	0.2	52.6	52.1
Dubai, UAE	2019	808	70.8	28.8	69.8	1.3	0.1	70.5	71.1
	2023	1157	70.2	29.7	70.0	0.3	0.1	69.6	70.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Reasoning

B_MM4_02 ME72022: Value of P x Q on number line - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	598	29.9	19.5	29.0	28.0	17.2	5.9	0.4	23.1	34.6
	2023	633	27.7	17.7	36.8	26.2	13.9	5.1	0.3	23.6	31.1
Chinese Taipei	2019	704	53.7	11.6	19.8	53.5	14.8	0.4	0.0	52.3	55.0
	2023	798	47.0	13.6	23.0	47.0	16.4	0.0	0.0	42.9	51.0
England	2019	484	38.8	8.3	28.7	37.2	21.8	3.4	0.7	34.4	43.5
	2023	620	37.5	10.9	29.9	36.5	20.2	1.5	0.9	35.4	39.5
Finland	2019	684	42.3	9.3	31.0	40.9	15.5	3.0	0.3	38.4	46.2
	2023	837	38.6	7.7	36.5	37.8	15.8	2.0	0.3	36.3	40.9
France	2019	562	38.3	8.6	31.6	37.4	20.2	2.2	0.0	40.2	36.4
	2023	634	34.7	7.5	37.6	34.2	19.2	1.5	0.0	30.3	39.3
Georgia	2019	472	26.1	16.9	44.2	25.1	9.9	3.9	0.0	23.6	28.3
	2023	705	23.7	18.6	42.8	23.0	12.9	2.7	0.0	23.4	24.0
Hong Kong SAR	2019	468	53.7	9.1	19.2	53.3	17.7	0.7	0.0	53.4	53.9
	2023	638	56.0	12.1	16.7	55.7	15.1	0.4	0.0	55.0	56.9
Hungary	2019	633	40.5	12.0	30.9	40.3	16.3	0.4	0.0	37.2	43.5
	2023	771	37.9	9.4	35.4	37.8	17.2	0.2	0.0	31.5	44.4
Israel	2019	522	44.5	13.0	26.9	43.4	14.2	2.1	0.4	43.8	45.3
	2023	734	37.9	11.5	28.3	37.0	20.7	2.3	0.2	33.9	42.0
Italy	2019	514	37.8	11.2	31.5	36.5	17.4	3.1	0.3	37.0	38.6
	2023	651	37.1	9.9	32.5	36.5	19.4	1.6	0.0	32.6	41.7
Korea, Rep. of	2019	556	51.3	13.3	19.4	50.9	15.6	0.5	0.4	48.8	53.5
	2023	616	47.8	13.5	26.0	47.7	12.6	0.2	0.0	42.4	53.6
Lithuania	2019	551	40.6	9.6	38.4	40.2	10.9	0.8	0.2	43.1	37.5
	2023	776	33.9	12.2	39.9	33.6	13.4	0.9	0.0	31.0	36.7
Malaysia	2019	1007	34.8	13.4	36.8	34.6	14.8	0.4	0.0	33.6	35.9
	2023	1273	25.3	17.5	40.7	25.3	16.5	0.1	0.0	25.8	24.7
Norway (9)	2019	654	42.4	9.7	29.0	39.9	15.5	5.8	0.1	38.4	45.9
	2023	899	41.4	9.0	28.3	39.9	19.2	2.8	0.8	38.6	43.8
Portugal	2019	488	36.1	10.5	25.9	35.6	26.7	1.3	0.0	34.2	38.1
	2023	760	35.1	11.6	31.8	34.9	21.1	0.6	0.0	31.4	38.6
Qatar	2019	557	31.4	16.3	33.6	30.2	16.2	3.2	0.5	28.3	34.9
	2023	620	26.1	14.9	37.6	25.8	20.4	0.8	0.5	26.2	26.0
Singapore	2019	684	59.8	5.1	18.2	59.2	16.5	0.8	0.1	55.8	63.0
	2023	692	53.4	6.5	20.5	53.3	19.5	0.1	0.0	49.5	57.1
Sweden	2019	566	49.1	8.7	24.9	47.7	16.0	2.4	0.4	49.8	48.4
	2023	725	50.0	9.3	21.1	49.1	18.6	1.8	0.1	48.7	51.3
United Arab Emirates	2019	3170	36.9	15.1	31.7	36.3	15.2	1.5	0.2	34.0	39.4
	2023	4668	37.7	15.2	31.3	37.4	15.3	0.7	0.1	35.9	39.6
United States	2019	1221	44.3	7.8	25.2	43.9	22.2	0.5	0.4	41.3	47.4
	2023	1120	40.0	9.7	29.3	39.6	20.3	0.7	0.3	37.5	42.5
International Avg. (20)	2019	15095	41.6	11.4	28.8	40.7	16.7	2.1	0.2	39.5	43.5
	2023	19170	38.4	11.9	31.3	37.9	17.4	1.3	0.2	35.6	41.2

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Reasoning
B_MM4_02 ME72022: Value of P x Q on number line - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	31.8	17.5	36.1	31.3	13.6	1.0	0.5	29.2	34.2
	2023	1745	34.2	16.5	33.2	33.9	15.4	0.7	0.2	33.6	34.9
Dubai, UAE	2019	808	46.8	9.2	24.4	46.0	18.9	1.4	0.1	43.3	50.0
	2023	1158	46.3	13.3	24.4	46.1	15.8	0.4	0.1	45.5	47.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Applying

B_MM4_04 ME72045: Ratio of blue and green paint for room - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	598	21.0	67.9	18.1	13.4	0.6	19.6	21.8
	2023	633	15.0	74.8	13.2	11.6	0.3	11.8	17.5
Chinese Taipei	2019	704	74.3	25.3	73.1	1.6	0.0	74.5	74.2
	2023	798	75.8	24.0	75.0	1.0	0.0	74.0	77.5
England	2019	484	55.8	39.6	50.1	9.5	0.8	55.5	56.1
	2023	619	54.1	43.5	51.3	4.2	1.0	51.1	57.3
Finland	2019	684	40.2	55.1	37.1	7.4	0.4	39.6	40.8
	2023	836	41.8	55.6	40.0	4.2	0.3	38.8	44.6
France	2019	562	15.9	70.8	13.4	15.9	0.0	11.6	19.8
	2023	632	20.3	72.0	18.4	9.6	0.0	19.9	20.8
Georgia	2019	472	41.3	51.9	36.5	11.5	0.2	39.5	42.8
	2023	704	37.1	56.4	33.3	10.4	0.0	39.6	34.5
Hong Kong SAR	2019	468	64.5	34.2	62.1	3.7	0.0	65.6	63.4
	2023	637	65.2	33.9	63.5	2.6	0.0	61.4	69.3
Hungary	2019	633	51.0	46.4	48.3	5.3	0.0	51.0	51.1
	2023	771	47.0	52.2	46.4	1.5	0.0	47.1	47.0
Israel	2019	522	49.0	47.0	45.2	7.4	0.4	48.8	49.3
	2023	734	28.4	66.8	26.5	6.6	0.2	28.8	28.0
Italy	2019	514	27.6	63.5	24.2	12.0	0.3	25.9	29.3
	2023	651	29.7	63.2	26.7	10.2	0.0	26.8	32.5
Korea, Rep. of	2019	556	79.3	20.0	76.9	2.7	0.4	80.2	78.5
	2023	616	80.9	18.8	79.9	1.3	0.0	81.4	80.4
Lithuania	2019	551	47.0	49.0	43.4	7.5	0.2	48.6	45.0
	2023	776	49.1	48.4	46.6	5.0	0.0	54.0	44.3
Malaysia	2019	1007	31.1	67.5	30.4	2.0	0.1	31.6	30.5
	2023	1273	24.0	75.6	23.8	0.6	0.0	23.8	24.1
Norway (9)	2019	654	39.7	53.1	34.9	11.5	0.4	38.1	41.0
	2023	898	38.2	55.6	34.3	9.1	1.0	40.0	36.6
Portugal	2019	488	19.2	71.1	16.9	11.9	0.0	19.9	18.5
	2023	760	22.1	70.7	20.1	9.2	0.0	22.4	21.9
Qatar	2019	557	20.2	73.2	18.5	7.5	0.7	21.1	19.1
	2023	620	22.5	74.3	21.6	3.6	0.5	20.1	24.7
Singapore	2019	684	79.9	19.9	79.1	0.9	0.1	82.4	78.0
	2023	692	76.4	23.5	75.8	0.7	0.0	71.6	81.0
Sweden	2019	566	36.7	56.0	32.5	11.1	0.4	40.0	33.3
	2023	725	43.3	51.5	39.3	9.0	0.1	39.5	46.8
United Arab Emirates	2019	3172	30.0	66.5	28.5	4.7	0.3	29.2	30.8
	2023	4664	34.6	63.8	33.7	2.3	0.1	32.1	37.1
United States	2019	1221	37.5	59.9	36.0	3.6	0.4	38.6	36.5
	2023	1119	34.6	63.5	33.6	2.6	0.3	31.6	37.5
International Avg. (20)	2019	15097	43.1	51.9	40.3	7.5	0.3	43.1	43.0
	2023	19158	42.0	54.4	40.1	5.3	0.2	40.8	43.2

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

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Mathematics: Number / Applying

B_MM4_04 ME72045: Ratio of blue and green paint for room - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	22.5	74.6	21.7	3.1	0.6	21.4	23.5
	2023	1742	24.7	73.3	24.1	2.4	0.2	23.0	26.4
Dubai, UAE	2019	808	51.8	46.2	49.6	3.9	0.3	49.7	53.8
	2023	1158	55.0	43.9	53.7	2.4	0.1	51.2	58.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Applying

B_MM4_05 ME72049: Ratio of Y and B in row of quilt - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	598	42.8	52.4	39.1	7.7	0.8	33.8	49.6
	2023	632	39.7	58.5	38.5	2.7	0.3	34.9	43.6
Chinese Taipei	2019	704	90.0	9.9	89.2	0.9	0.0	91.6	88.5
	2023	796	91.6	8.4	91.5	0.1	0.0	92.3	90.9
England	2019	484	75.3	24.0	73.4	1.8	0.8	78.9	71.4
	2023	619	78.5	21.2	77.5	0.3	1.0	78.1	78.9
Finland	2019	684	58.9	39.0	55.9	3.9	1.2	58.5	59.4
	2023	835	52.2	47.0	51.4	1.4	0.3	50.2	54.1
France	2019	562	33.4	62.2	31.2	6.3	0.3	28.3	38.2
	2023	634	44.9	53.2	43.4	3.4	0.0	42.5	47.5
Georgia	2019	472	59.5	37.5	55.1	7.2	0.2	56.9	61.7
	2023	705	56.7	41.2	53.9	4.9	0.0	57.9	55.3
Hong Kong SAR	2019	468	85.1	14.5	83.0	2.5	0.0	88.8	81.7
	2023	638	84.3	15.6	83.8	0.6	0.0	83.1	85.7
Hungary	2019	633	69.1	30.4	68.0	1.6	0.0	67.6	70.5
	2023	771	68.8	31.0	68.4	0.6	0.0	66.5	71.2
Israel	2019	522	68.2	30.4	65.4	3.4	0.8	72.5	63.6
	2023	735	49.3	49.5	48.2	2.2	0.2	53.6	45.0
Italy	2019	514	53.2	44.6	50.6	4.3	0.4	47.6	58.3
	2023	650	61.8	37.0	59.9	3.0	0.0	58.7	64.9
Korea, Rep. of	2019	556	90.6	9.3	89.6	0.7	0.4	92.2	89.1
	2023	616	93.4	6.6	93.2	0.2	0.0	92.1	94.7
Lithuania	2019	551	70.2	29.1	68.6	2.1	0.2	69.4	71.2
	2023	776	65.9	33.7	65.3	1.0	0.0	67.4	64.5
Malaysia	2019	1007	72.6	27.1	71.8	0.8	0.3	74.0	71.3
	2023	1273	56.6	43.4	56.5	0.1	0.0	57.6	55.4
Norway (9)	2019	654	57.5	40.5	54.9	4.2	0.4	57.0	58.1
	2023	897	50.3	47.7	48.3	3.0	1.0	48.7	51.7
Portugal	2019	488	49.1	49.4	47.8	2.8	0.0	46.9	51.5
	2023	760	47.9	51.2	47.0	1.8	0.0	45.5	50.2
Qatar	2019	557	57.6	39.6	53.9	5.3	1.1	59.4	55.4
	2023	620	48.7	51.0	48.4	0.2	0.5	47.7	49.6
Singapore	2019	684	93.1	6.8	92.6	0.4	0.1	93.1	93.1
	2023	692	89.7	10.3	89.7	0.0	0.0	89.8	89.5
Sweden	2019	566	42.7	53.4	39.8	6.1	0.6	40.8	44.5
	2023	725	48.6	49.0	46.4	4.5	0.1	43.8	53.2
United Arab Emirates	2019	3175	57.8	41.1	56.2	2.2	0.5	56.5	58.8
	2023	4663	61.8	37.9	61.4	0.5	0.2	60.3	63.3
United States	2019	1221	68.1	31.4	67.2	0.5	0.8	66.7	69.8
	2023	1118	65.4	34.3	64.9	0.4	0.5	64.4	66.5
International Avg. (20)	2019	15100	64.8	33.6	62.7	3.2	0.5	64.0	65.3
	2023	19155	62.8	36.4	61.9	1.5	0.2	61.8	63.8

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Applying

B_MM4_05 ME72049: Ratio of Y and B in row of quilt - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1175	50.1	48.4	48.5	2.2	0.9	47.3	52.7
	2023	1740	55.8	43.7	55.2	0.9	0.2	54.9	56.8
Dubai, UAE	2019	808	75.4	24.3	74.5	0.9	0.3	75.7	75.2
	2023	1158	75.7	24.2	75.2	0.5	0.1	70.9	80.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Knowing

B_MM4_06 ME72069: Value of $3a + 5b$ given values for a and b - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	598	32.7	54.7	26.6	17.5	1.3	27.8	36.0
	2023	631	20.9	64.4	17.0	18.3	0.3	16.9	23.9
Chinese Taipei	2019	704	84.8	14.9	83.2	1.8	0.1	85.8	83.7
	2023	798	86.5	13.4	85.7	1.0	0.0	87.6	85.4
England	2019	484	56.9	39.4	52.0	7.4	1.1	57.1	56.6
	2023	620	63.9	34.5	61.1	3.4	1.0	59.4	68.6
Finland	2019	684	47.5	48.4	43.8	6.5	1.3	49.2	45.7
	2023	836	46.0	51.7	44.1	4.0	0.3	46.6	45.5
France	2019	562	30.0	64.5	27.7	7.2	0.7	30.0	30.1
	2023	633	38.7	58.7	37.1	4.1	0.0	37.1	40.5
Georgia	2019	472	50.6	44.0	45.1	10.5	0.5	52.2	49.1
	2023	703	51.0	45.9	47.7	6.5	0.0	46.4	56.1
Hong Kong SAR	2019	468	83.9	15.5	81.0	3.5	0.0	87.3	80.7
	2023	638	84.5	15.4	84.0	0.5	0.1	82.6	86.5
Hungary	2019	633	58.3	40.8	57.2	2.0	0.0	60.5	56.4
	2023	770	58.7	40.9	58.1	1.1	0.0	60.1	57.3
Israel	2019	522	59.9	36.0	53.8	9.5	0.8	60.1	59.8
	2023	734	56.6	40.2	52.6	7.0	0.2	56.0	57.3
Italy	2019	514	45.2	47.7	39.4	12.5	0.4	48.2	42.3
	2023	651	45.0	51.6	42.2	6.2	0.0	43.8	46.2
Korea, Rep. of	2019	556	81.6	18.0	79.7	1.8	0.4	79.3	83.5
	2023	616	82.3	17.4	81.3	1.3	0.0	84.8	79.7
Lithuania	2019	551	63.3	34.8	60.0	5.1	0.2	69.7	55.4
	2023	775	56.9	41.6	54.9	3.5	0.0	62.9	50.9
Malaysia	2019	1007	26.0	72.3	25.4	2.0	0.3	27.5	24.6
	2023	1272	22.9	76.7	22.8	0.5	0.0	25.1	20.5
Norway (9)	2019	654	43.4	48.7	37.3	13.2	0.8	47.2	40.1
	2023	898	42.7	52.7	39.3	6.9	1.1	39.8	45.2
Portugal	2019	488	40.7	55.4	38.0	6.4	0.2	42.4	38.8
	2023	759	37.4	56.5	33.8	9.7	0.0	37.0	37.8
Qatar	2019	557	34.5	60.5	31.9	5.9	1.6	35.0	33.9
	2023	619	39.7	58.6	38.6	2.4	0.5	38.0	41.3
Singapore	2019	684	82.0	17.8	81.2	0.9	0.1	84.2	80.2
	2023	692	80.5	19.4	80.2	0.3	0.0	81.1	79.9
Sweden	2019	566	44.0	51.7	40.6	6.9	0.9	42.0	45.9
	2023	723	49.9	48.4	48.3	3.2	0.1	46.2	53.6
United Arab Emirates	2019	3175	47.3	51.4	46.0	2.0	0.6	47.2	47.3
	2023	4662	54.5	45.0	53.9	0.9	0.2	55.2	53.8
United States	2019	1221	62.1	37.0	60.6	1.5	1.0	66.7	57.3
	2023	1120	51.0	47.7	49.7	2.2	0.5	50.2	51.9
International Avg. (20)	2019	15100	53.7	42.7	50.5	6.2	0.6	55.0	52.4
	2023	19150	53.5	44.0	51.6	4.2	0.2	52.8	54.1

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Knowing

B_MM4_06 ME72069: Value of $3a + 5b$ given values for a and b - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1175	35.6	62.6	34.5	1.9	1.0	35.1	36.0
	2023	1743	45.3	53.9	44.7	1.2	0.2	45.4	45.2
Dubai, UAE	2019	808	65.0	34.3	63.7	1.7	0.3	65.8	64.3
	2023	1156	69.3	30.4	68.7	0.7	0.1	66.8	71.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Knowing

B_MM4_07 ME72074: Write $A + B$ in terms of x and y - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	598	16.5	47.1	9.3	41.6	2.1	10.9	19.9
	2023	633	2.9	62.1	1.9	35.5	0.5	2.1	3.5
Chinese Taipei	2019	704	68.9	29.0	64.2	6.7	0.1	67.4	70.3
	2023	798	66.9	31.8	64.1	4.1	0.0	68.4	65.3
England	2019	484	32.5	39.5	19.0	40.0	1.4	26.6	39.6
	2023	619	34.0	48.0	24.7	26.3	1.0	27.0	40.9
Finland	2019	684	17.1	53.4	11.0	34.1	1.5	18.9	15.4
	2023	837	9.4	67.7	7.0	24.8	0.5	5.8	12.4
France	2019	562	12.9	47.6	7.0	44.2	1.2	11.5	14.2
	2023	634	11.9	60.1	8.1	31.9	0.0	12.4	11.3
Georgia	2019	472	25.2	44.4	14.9	40.1	0.5	26.7	24.0
	2023	705	24.3	47.0	15.1	37.9	0.0	23.1	25.6
Hong Kong SAR	2019	468	53.1	39.9	45.1	15.0	0.0	53.2	53.0
	2023	638	45.3	48.3	40.1	11.6	0.1	42.2	48.5
Hungary	2019	633	37.5	46.0	27.6	26.4	0.0	34.9	39.7
	2023	771	28.2	57.6	22.6	19.7	0.1	27.1	29.3
Israel	2019	522	38.2	42.6	26.3	30.2	0.9	37.6	38.8
	2023	734	22.9	53.2	15.8	30.9	0.2	21.9	23.8
Italy	2019	514	23.2	48.2	14.6	36.5	0.7	26.3	20.5
	2023	651	19.3	49.4	11.8	38.8	0.0	15.8	23.0
Korea, Rep. of	2019	556	59.8	36.6	54.4	8.6	0.4	63.5	56.6
	2023	616	56.3	40.6	52.3	7.1	0.0	57.3	55.3
Lithuania	2019	551	39.6	35.9	23.6	40.3	0.2	44.1	34.4
	2023	776	23.4	51.8	15.8	32.3	0.0	27.8	19.2
Malaysia	2019	1007	8.2	84.7	7.5	7.3	0.5	8.1	8.2
	2023	1274	5.1	89.9	4.8	5.3	0.0	4.1	6.0
Norway (9)	2019	654	18.8	46.4	10.8	41.9	1.0	21.5	16.6
	2023	899	14.6	60.6	10.4	27.8	1.3	15.3	14.1
Portugal	2019	488	27.4	52.4	19.8	27.6	0.2	27.9	26.7
	2023	760	17.0	59.3	12.1	28.2	0.4	16.8	17.2
Qatar	2019	557	16.8	64.3	13.0	20.2	2.4	16.2	17.6
	2023	617	16.5	70.8	14.0	14.5	0.7	13.3	19.4
Singapore	2019	684	60.3	37.5	57.1	5.1	0.3	61.3	59.6
	2023	692	56.9	41.5	54.8	3.7	0.0	55.5	58.3
Sweden	2019	566	24.1	50.9	16.1	31.5	1.4	23.9	24.2
	2023	725	16.9	65.2	13.2	21.4	0.1	16.2	17.5
United Arab Emirates	2019	3174	24.9	64.1	21.3	13.9	0.8	22.6	27.0
	2023	4668	26.2	66.7	23.7	9.4	0.3	23.4	28.9
United States	2019	1221	29.2	61.6	25.4	11.9	1.2	30.3	27.9
	2023	1119	19.9	72.1	17.9	9.2	0.7	16.4	23.1
International Avg. (20)	2019	15099	31.7	48.6	24.4	26.2	0.8	31.7	31.7
	2023	19166	25.9	57.2	21.5	21.0	0.3	24.6	27.1

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Knowing

B_MM4_07 ME72074: Write $A + B$ in terms of x and y - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1175	13.7	74.8	11.9	12.0	1.2	11.0	16.4
	2023	1745	15.5	76.6	14.1	9.0	0.3	13.6	17.5
Dubai, UAE	2019	808	43.3	48.3	36.8	14.4	0.4	39.8	46.6
	2023	1158	41.3	52.5	36.9	10.4	0.2	36.6	45.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Applying
B_MM4_08 ME72013: Formula for height of cliff - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	598	24.6	44.5	19.3	23.4	7.7	2.7	2.4	25.9	23.4
	2023	633	15.2	43.5	28.0	14.6	9.6	3.8	0.6	16.3	14.4
Chinese Taipei	2019	704	65.3	14.8	11.6	65.1	8.2	0.2	0.1	64.6	65.9
	2023	798	59.9	12.0	9.8	59.9	18.3	0.0	0.0	58.5	61.3
England	2019	484	44.6	17.2	20.7	42.9	15.3	2.4	1.4	43.1	46.3
	2023	620	34.7	22.1	19.5	33.7	21.9	1.7	1.0	30.4	39.0
Finland	2019	684	29.5	37.0	25.1	28.4	5.7	2.3	1.6	34.4	24.6
	2023	837	28.3	30.0	33.0	27.9	7.6	1.1	0.5	29.2	27.5
France	2019	562	18.9	37.0	29.3	18.0	10.7	3.5	1.3	18.1	19.7
	2023	634	25.0	33.9	29.8	24.8	10.5	1.0	0.0	25.4	24.6
Georgia	2019	471	36.3	41.7	13.2	35.1	6.6	2.3	1.0	42.9	30.8
	2023	705	38.2	36.2	18.7	38.0	6.5	0.6	0.0	38.9	37.5
Hong Kong SAR	2019	468	65.9	11.3	14.5	64.9	7.8	1.3	0.2	67.8	64.0
	2023	638	61.1	12.6	14.3	60.9	11.8	0.4	0.1	60.3	62.0
Hungary	2019	633	20.1	53.0	22.6	19.9	3.6	0.6	0.3	15.9	24.0
	2023	771	21.1	44.6	26.0	20.9	7.6	0.8	0.1	21.9	20.2
Israel	2019	522	37.2	23.1	21.2	36.1	16.5	1.3	1.7	35.0	39.6
	2023	734	28.3	27.8	26.8	28.0	16.1	0.9	0.3	28.8	27.9
Italy	2019	514	44.2	31.5	17.3	42.7	5.0	2.4	1.0	44.0	44.4
	2023	651	41.6	31.6	16.3	41.1	9.8	1.2	0.0	42.3	40.9
Korea, Rep. of	2019	556	65.4	15.6	11.8	64.8	6.9	0.5	0.4	64.7	66.0
	2023	616	58.9	16.6	12.2	58.7	12.2	0.3	0.0	59.9	57.8
Lithuania	2019	551	52.2	25.1	15.1	51.9	7.3	0.4	0.2	58.2	44.8
	2023	776	45.6	24.3	17.6	45.5	12.4	0.1	0.0	49.8	41.5
Malaysia	2019	1007	25.1	36.4	30.5	24.8	6.9	0.4	1.0	25.7	24.6
	2023	1273	17.6	46.3	29.8	17.5	6.1	0.2	0.1	17.7	17.4
Norway (9)	2019	654	25.9	31.4	33.2	24.8	6.4	2.7	1.4	29.3	23.1
	2023	899	25.0	30.7	30.7	24.0	10.7	2.1	1.8	22.7	26.9
Portugal	2019	488	39.7	31.8	21.8	39.1	5.9	0.3	1.0	42.5	36.7
	2023	760	28.7	35.3	26.0	28.5	9.2	0.7	0.4	29.3	28.2
Qatar	2019	557	31.6	38.9	20.3	29.9	5.4	3.0	2.6	34.3	28.4
	2023	620	29.8	39.2	19.5	29.2	10.0	1.0	1.0	29.3	30.4
Singapore	2019	684	73.1	8.5	12.4	72.4	5.7	0.5	0.4	76.7	70.2
	2023	692	66.6	12.2	13.2	66.5	8.0	0.2	0.0	68.7	64.6
Sweden	2019	566	18.1	30.1	35.1	17.0	12.0	4.0	1.8	15.8	20.3
	2023	725	18.8	30.2	35.3	18.4	14.3	1.4	0.4	17.9	19.6
United Arab Emirates	2019	3174	46.3	27.2	19.3	45.3	6.0	1.2	1.1	47.8	45.0
	2023	4668	43.7	25.9	17.6	43.2	12.3	0.6	0.4	44.2	43.2
United States	2019	1221	47.9	21.5	15.2	46.5	14.0	0.9	2.0	49.1	46.6
	2023	1120	35.0	25.2	22.1	34.6	17.0	0.3	0.8	35.5	34.5
International Avg. (20)	2019	15098	40.6	28.9	20.5	39.7	8.2	1.6	1.1	41.8	39.4
	2023	19170	36.2	29.0	22.3	35.8	11.6	0.9	0.4	36.3	36.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Algebra / Applying
B_MM4_08 ME72013: Formula for height of cliff - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1175	36.1	32.2	24.2	35.0	5.7	1.7	1.3	36.8	35.4
	2023	1745	34.6	30.6	22.8	34.2	11.0	0.9	0.4	36.8	32.5
Dubai, UAE	2019	808	62.5	16.2	13.0	61.4	7.6	0.7	1.1	64.2	60.9
	2023	1158	56.2	17.2	12.1	55.9	14.2	0.2	0.3	53.9	58.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Applying
B_MM4_09 ME72095: Values of x and y for system of equations (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	598	24.6	45.9	15.0	36.7	2.4	19.9	27.6
	2023	633	16.3	59.2	11.5	28.6	0.6	10.7	20.6
Chinese Taipei	2019	704	69.3	28.1	63.4	8.4	0.1	70.7	67.8
	2023	798	69.5	29.5	67.2	3.2	0.0	70.5	68.5
England	2019	484	52.6	32.3	35.7	30.6	1.4	55.3	49.6
	2023	620	46.3	43.4	37.4	18.1	1.0	41.2	51.3
Finland	2019	684	50.3	36.6	37.1	24.7	1.6	53.9	46.7
	2023	835	42.3	50.7	37.2	11.5	0.7	42.6	42.1
France	2019	562	33.4	41.5	20.8	35.6	2.2	32.3	34.5
	2023	633	33.0	53.5	26.4	20.2	0.0	31.7	34.5
Georgia	2019	472	41.3	39.6	27.9	31.5	1.0	43.2	39.8
	2023	702	44.4	41.5	33.2	25.2	0.0	43.0	45.9
Hong Kong SAR	2019	468	51.7	43.3	46.3	10.1	0.2	51.8	51.7
	2023	633	54.7	41.5	50.2	8.2	0.1	52.5	57.0
Hungary	2019	633	51.8	40.2	43.1	16.5	0.3	56.4	47.7
	2023	769	47.3	47.7	42.9	9.2	0.1	46.9	47.8
Israel	2019	522	46.2	40.1	34.5	23.6	1.9	44.9	47.8
	2023	734	34.5	52.1	27.5	20.1	0.3	32.8	36.1
Italy	2019	514	32.6	45.2	21.9	31.9	1.0	29.0	35.8
	2023	651	34.6	48.7	25.7	25.5	0.0	34.6	34.5
Korea, Rep. of	2019	556	69.6	28.3	64.7	6.6	0.4	70.5	68.8
	2023	615	72.5	26.2	68.9	4.9	0.0	74.5	70.2
Lithuania	2019	551	48.6	36.7	34.7	28.4	0.2	55.1	40.5
	2023	776	41.1	45.5	31.7	22.8	0.0	44.6	37.8
Malaysia	2019	1007	12.7	81.0	11.8	6.2	1.1	13.1	12.3
	2023	1272	10.1	87.6	9.8	2.4	0.1	9.3	10.9
Norway (9)	2019	654	41.7	38.1	27.2	33.2	1.5	40.6	42.6
	2023	899	45.0	42.4	34.7	21.1	1.8	45.4	44.6
Portugal	2019	488	36.3	47.3	27.0	24.7	1.1	37.3	35.1
	2023	760	24.0	60.6	19.2	19.6	0.5	20.4	27.3
Qatar	2019	557	22.5	64.3	18.7	14.3	2.7	21.5	23.6
	2023	619	22.4	67.9	19.6	11.4	1.0	21.2	23.5
Singapore	2019	684	55.0	42.2	51.6	5.8	0.5	53.4	56.4
	2023	691	51.2	47.6	49.9	2.5	0.0	49.9	52.4
Sweden	2019	566	52.5	34.0	37.5	26.6	2.0	61.3	44.4
	2023	725	55.2	37.6	46.5	15.3	0.6	56.9	53.7
United Arab Emirates	2019	3174	29.2	62.7	25.9	10.2	1.2	28.3	30.0
	2023	4664	34.7	60.6	32.2	6.8	0.5	31.9	37.5
United States	2019	1221	40.8	54.1	37.3	6.4	2.2	42.4	39.1
	2023	1119	31.4	65.0	29.7	4.4	0.8	31.9	30.9
International Avg. (20)	2019	15099	43.1	44.1	34.1	20.6	1.2	44.0	42.1
	2023	19148	40.5	50.5	35.1	14.1	0.4	39.6	41.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Algebra / Applying

B_MM4_09 ME72095: Values of x and y for system of equations (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1175	20.0	72.4	18.1	7.8	1.6	17.1	22.8
	2023	1743	25.4	70.0	23.8	5.5	0.7	24.6	26.2
Dubai, UAE	2019	808	45.3	47.9	39.6	11.3	1.2	44.6	45.9
	2023	1157	49.7	46.1	45.5	8.0	0.3	41.9	56.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Reasoning
B_MM4_10 ME72109: Rule to express y in terms of x - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	598	7.7	48.2	4.0	43.6	4.1	3.5	10.2
	2023	633	3.9	65.0	2.6	31.1	1.3	3.8	3.9
Chinese Taipei	2019	704	49.2	44.6	43.2	12.0	0.1	47.6	50.8
	2023	798	46.7	50.4	44.2	5.4	0.0	46.1	47.3
England	2019	484	18.0	59.3	13.0	26.0	1.7	18.4	17.6
	2023	620	17.6	66.9	14.3	17.8	1.0	16.0	19.4
Finland	2019	684	6.9	71.1	5.3	21.5	2.1	7.6	6.3
	2023	836	13.2	73.3	11.1	14.9	0.7	9.8	16.2
France	2019	562	9.9	46.1	5.1	45.6	3.2	11.0	8.8
	2023	634	10.4	66.3	7.7	25.9	0.1	7.6	13.2
Georgia	2019	472	26.8	41.9	15.3	40.6	2.1	23.7	29.4
	2023	705	20.7	51.8	13.5	34.3	0.4	23.7	17.8
Hong Kong SAR	2019	468	43.5	48.2	37.1	14.3	0.4	42.3	44.5
	2023	638	42.0	54.1	39.2	6.6	0.1	39.3	44.9
Hungary	2019	633	26.0	61.5	21.6	16.6	0.3	24.5	27.3
	2023	771	15.1	77.7	13.8	8.4	0.1	14.8	15.3
Israel	2019	522	30.5	51.1	22.4	24.1	2.5	29.8	31.1
	2023	735	28.3	54.9	21.7	22.6	0.8	28.5	28.2
Italy	2019	514	15.4	54.0	9.8	35.0	1.3	14.0	16.7
	2023	651	17.2	57.4	11.9	30.7	0.0	14.4	20.2
Korea, Rep. of	2019	556	40.0	51.0	33.9	14.7	0.4	43.2	37.3
	2023	616	38.1	53.3	32.7	13.9	0.1	33.3	43.1
Lithuania	2019	551	20.2	52.4	13.2	33.9	0.5	16.0	25.2
	2023	776	18.0	59.9	13.2	26.9	0.0	17.8	18.2
Malaysia	2019	1007	5.5	85.9	5.0	6.6	2.5	5.2	5.7
	2023	1274	2.3	93.6	2.2	4.1	0.1	1.5	3.2
Norway (9)	2019	654	10.4	58.3	6.8	33.2	1.7	10.5	10.3
	2023	899	12.9	68.6	10.2	19.0	2.2	12.7	13.1
Portugal	2019	488	11.0	63.3	7.8	27.4	1.5	12.4	9.3
	2023	760	10.6	66.6	7.9	24.7	0.9	12.0	9.3
Qatar	2019	557	5.5	73.3	4.2	19.4	3.1	5.8	5.0
	2023	619	11.6	76.5	10.0	12.3	1.2	9.8	13.4
Singapore	2019	684	51.8	45.0	48.3	6.0	0.6	55.3	48.9
	2023	692	56.5	41.9	54.4	3.7	0.0	55.5	57.4
Sweden	2019	566	12.3	62.0	8.7	26.1	3.2	11.5	13.1
	2023	725	13.1	69.3	10.4	19.4	0.9	9.3	16.4
United Arab Emirates	2019	3175	15.7	73.7	13.7	11.0	1.7	12.6	18.5
	2023	4668	22.0	71.6	20.2	7.0	1.1	19.4	24.6
United States	2019	1221	14.7	75.8	13.1	8.3	2.8	14.3	15.1
	2023	1120	15.0	78.1	13.8	7.1	1.0	13.4	16.6
International Avg. (20)	2019	15100	21.0	58.3	16.6	23.3	1.8	20.5	21.6
	2023	19170	20.8	64.9	17.8	16.8	0.6	19.4	22.1

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Algebra / Reasoning

B_MM4_10 ME72109: Rule to express y in terms of x - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1175	7.5	82.1	6.7	9.2	2.0	6.4	8.6
	2023	1745	13.2	80.0	12.2	6.2	1.6	11.5	15.0
Dubai, UAE	2019	808	28.8	63.0	25.5	10.0	1.4	23.7	33.7
	2023	1158	35.9	59.0	33.0	7.0	1.0	32.4	39.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

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Mathematics: Geometry and Measurement / Reasoning

B_MM4_11 ME72125: Area of square given side length of hexagon - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	598	21.0	19.3	27.7	20.1	25.1	2.6	5.3	14.6	26.0
	2023	633	16.1	15.4	34.1	23.4	22.8	2.9	1.5	14.0	17.7
Chinese Taipei	2019	704	73.4	73.3	11.2	8.6	6.7	0.0	0.1	72.1	74.8
	2023	798	76.1	76.1	12.4	7.6	3.9	0.0	0.0	76.0	76.1
England	2019	484	37.6	35.5	29.4	17.1	12.5	3.8	1.7	35.2	40.2
	2023	620	41.2	40.3	26.4	22.0	9.1	1.2	1.0	36.9	45.6
Finland	2019	684	39.5	37.6	26.1	20.5	10.9	2.3	2.6	45.5	33.3
	2023	837	37.9	37.3	30.1	22.8	8.3	1.0	0.7	33.2	42.4
France	2019	562	19.8	18.5	28.7	25.9	20.4	2.5	4.0	19.0	20.4
	2023	634	20.4	20.4	33.3	28.1	17.9	0.3	0.1	20.4	20.5
Georgia	2019	472	28.3	26.9	35.7	19.6	12.9	2.7	2.2	25.9	30.5
	2023	705	32.3	31.8	34.3	18.8	13.5	1.2	0.4	32.9	31.7
Hong Kong SAR	2019	468	65.6	63.7	19.2	9.6	4.7	2.2	0.6	67.6	63.7
	2023	638	62.2	61.4	19.9	12.3	5.0	1.0	0.3	60.1	64.4
Hungary	2019	633	27.7	27.5	29.6	23.0	19.4	0.2	0.3	25.3	29.8
	2023	771	26.9	26.8	29.3	30.1	13.6	0.1	0.1	25.8	28.0
Israel	2019	522	42.3	40.0	21.9	21.8	10.9	2.7	2.7	39.8	45.0
	2023	735	35.6	35.0	24.0	26.9	12.4	0.7	1.0	33.1	38.2
Italy	2019	514	49.8	48.5	26.6	12.8	9.5	0.9	1.7	48.1	51.3
	2023	651	52.9	52.7	26.2	12.4	8.3	0.4	0.0	49.8	56.1
Korea, Rep. of	2019	556	63.3	62.7	15.8	11.0	9.6	0.4	0.4	61.4	64.9
	2023	616	68.2	67.7	13.8	10.3	7.5	0.4	0.3	69.7	66.6
Lithuania	2019	551	44.0	43.4	24.5	18.5	12.1	1.0	0.5	46.8	40.7
	2023	776	45.7	45.7	23.2	19.1	12.0	0.0	0.0	49.6	41.9
Malaysia	2019	1007	24.2	23.1	32.3	19.4	20.8	1.3	3.2	25.0	23.3
	2023	1273	13.7	13.7	28.7	26.0	31.3	0.2	0.1	12.0	15.6
Norway (9)	2019	654	32.6	30.3	30.1	22.6	9.8	4.8	2.3	33.0	32.3
	2023	899	39.6	37.8	27.8	22.6	7.2	2.3	2.3	40.6	38.7
Portugal	2019	488	35.8	34.8	27.7	19.5	15.2	0.8	2.0	35.7	35.8
	2023	760	33.3	32.8	26.3	23.1	16.1	0.7	0.9	32.9	33.8
Qatar	2019	557	21.6	20.3	36.9	17.7	19.2	2.2	3.7	18.9	24.9
	2023	620	21.2	20.8	38.3	23.5	15.5	0.7	1.2	19.8	22.5
Singapore	2019	684	77.1	75.9	13.5	5.2	3.8	1.0	0.6	78.5	76.0
	2023	692	74.7	74.7	12.7	8.0	4.6	0.0	0.0	73.7	75.7
Sweden	2019	566	45.4	41.5	21.1	20.9	7.9	4.2	4.3	49.1	41.7
	2023	725	50.2	48.8	23.0	17.3	8.1	1.7	1.1	50.8	49.6
United Arab Emirates	2019	3172	26.1	25.2	29.8	23.5	17.8	1.5	2.2	23.7	28.3
	2023	4668	32.6	31.9	31.0	20.0	15.1	0.6	1.4	29.7	35.4
United States	2019	1221	31.3	29.9	30.6	20.0	15.1	1.2	3.2	28.6	34.2
	2023	1120	30.5	29.9	34.2	21.7	12.2	0.7	1.2	26.5	34.4
International Avg. (20)	2019	15097	40.3	38.9	25.9	17.9	13.2	1.9	2.2	39.7	40.9
	2023	19171	40.6	40.1	26.4	19.8	12.2	0.8	0.7	39.4	41.8

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Geometry and Measurement / Reasoning

B_MM4_11 ME72125: Area of square given side length of hexagon - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1175	20.1	19.3	28.0	29.1	19.8	1.4	2.3	17.9	22.1
	2023	1745	23.6	23.0	33.4	24.1	16.7	0.7	2.1	23.4	23.9
Dubai, UAE	2019	808	41.1	40.0	26.3	18.7	12.3	0.7	2.1	36.4	45.6
	2023	1158	48.4	47.6	25.9	15.1	9.9	0.2	1.3	42.6	53.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Geometry and Measurement / Applying
B_MM4_12 ME72196: Diameter of semicircle on ice cream logo - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	598	22.5	54.8	15.9	23.8	5.5	17.3	26.2
	2023	633	18.7	65.6	15.1	17.8	1.5	13.5	22.8
Chinese Taipei	2019	704	60.4	38.0	58.0	3.8	0.1	59.7	61.1
	2023	798	62.3	37.1	61.2	1.7	0.0	61.4	63.1
England	2019	484	53.6	36.5	42.2	19.3	2.0	54.1	53.1
	2023	620	55.1	40.9	50.2	7.7	1.3	50.3	60.1
Finland	2019	684	44.3	45.9	36.6	14.8	2.7	46.5	42.3
	2023	835	35.0	59.8	32.3	7.2	0.7	29.3	40.2
France	2019	562	37.4	47.8	28.6	19.4	4.2	37.0	37.8
	2023	633	38.3	55.2	34.2	10.5	0.1	34.8	41.8
Georgia	2019	472	26.9	53.4	19.7	24.7	2.2	25.9	27.8
	2023	704	31.6	54.9	25.4	19.3	0.4	32.2	30.9
Hong Kong SAR	2019	468	52.6	42.8	47.6	9.0	0.6	58.8	46.9
	2023	637	51.7	46.4	49.7	3.7	0.3	48.7	54.9
Hungary	2019	633	48.5	47.9	45.0	6.8	0.3	48.5	48.5
	2023	771	42.0	56.0	40.6	3.3	0.1	40.3	43.8
Israel	2019	522	47.3	43.7	39.3	13.3	3.7	47.0	47.7
	2023	735	40.1	52.7	35.2	11.0	1.1	39.3	40.8
Italy	2019	514	39.2	45.5	29.3	23.4	1.8	37.5	40.7
	2023	651	43.6	48.7	37.6	13.7	0.0	37.9	49.5
Korea, Rep. of	2019	556	50.3	47.5	48.2	3.9	0.4	47.8	52.6
	2023	615	54.7	43.9	53.0	2.8	0.3	53.2	56.4
Lithuania	2019	551	47.6	45.5	41.3	12.7	0.5	45.2	50.7
	2023	776	45.1	48.7	40.0	11.3	0.0	45.2	45.0
Malaysia	2019	1007	18.7	73.8	17.0	5.5	3.7	18.9	18.5
	2023	1273	13.3	85.1	13.1	1.6	0.2	13.2	13.5
Norway (9)	2019	654	47.4	38.8	34.9	23.6	2.7	44.7	49.7
	2023	899	43.9	46.7	36.6	14.1	2.6	45.1	43.0
Portugal	2019	488	40.1	50.6	33.9	13.3	2.2	41.3	38.7
	2023	759	37.9	55.2	33.7	10.2	1.0	38.8	37.2
Qatar	2019	557	25.1	63.1	21.2	11.8	4.0	26.0	24.0
	2023	620	23.9	70.8	22.2	5.8	1.2	22.5	25.1
Singapore	2019	684	70.6	28.3	68.0	2.9	0.7	69.4	71.6
	2023	692	67.8	31.6	66.7	1.7	0.0	65.9	69.7
Sweden	2019	566	37.1	44.1	26.1	25.3	4.6	41.1	33.3
	2023	725	43.0	48.0	36.2	14.7	1.2	40.0	45.6
United Arab Emirates	2019	3173	27.6	65.8	25.1	6.9	2.2	25.4	29.6
	2023	4667	33.0	63.0	31.0	4.4	1.5	32.3	33.7
United States	2019	1221	40.5	54.7	37.2	4.6	3.5	38.6	42.6
	2023	1120	33.5	62.9	31.7	4.2	1.2	30.7	36.2
International Avg. (20)	2019	15098	41.9	48.4	35.8	13.4	2.4	41.5	42.2
	2023	19163	40.7	53.7	37.3	8.3	0.7	38.7	42.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Geometry and Measurement / Applying
B_MM4_12 ME72196: Diameter of semicircle on ice cream logo - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1175	17.2	76.1	15.8	5.8	2.3	16.9	17.5
	2023	1745	23.4	72.0	22.0	3.6	2.4	23.7	23.2
Dubai, UAE	2019	808	49.3	45.6	44.3	8.1	2.1	43.3	54.8
	2023	1158	51.9	45.0	48.6	5.1	1.3	49.0	54.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Geometry and Measurement / Reasoning
B_MM4_13 ME72237: Net of a triangular prism - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	598	58.4	26.4	8.6	2.8	53.0	1.9	7.2	58.6	58.4
	2023	633	59.2	18.1	13.2	8.6	57.8	0.5	1.8	58.1	60.2
Chinese Taipei	2019	704	76.6	9.0	4.5	9.7	76.0	0.5	0.2	78.1	75.0
	2023	797	79.3	10.1	4.6	6.0	79.3	0.0	0.0	81.4	77.4
England	2019	484	77.7	13.3	3.7	4.5	74.9	1.4	2.1	78.4	76.9
	2023	620	75.4	13.5	6.1	4.3	73.4	1.0	1.6	77.0	73.7
Finland	2019	684	68.0	12.8	12.8	4.8	64.5	2.3	2.9	69.9	66.0
	2023	837	74.1	9.6	10.3	5.3	72.1	2.1	0.7	77.5	70.9
France	2019	562	70.6	15.9	6.7	5.0	66.2	1.3	4.8	73.7	67.7
	2023	634	69.3	13.8	9.2	7.4	68.7	0.2	0.8	71.2	67.3
Georgia	2019	472	42.9	33.9	13.8	6.2	40.6	2.6	2.9	45.3	40.9
	2023	705	50.2	23.7	14.8	10.9	49.7	0.6	0.4	53.4	46.4
Hong Kong SAR	2019	468	81.3	8.2	4.2	5.9	79.7	1.4	0.6	85.4	77.4
	2023	638	82.1	7.4	5.5	4.9	81.6	0.3	0.3	80.6	83.6
Hungary	2019	633	74.8	12.7	7.4	5.0	74.2	0.4	0.4	73.5	75.9
	2023	771	75.2	11.0	8.3	5.4	75.1	0.0	0.1	74.7	75.7
Israel	2019	522	64.1	17.5	11.1	5.2	60.5	1.5	4.2	64.3	64.0
	2023	735	57.2	20.2	10.7	11.2	56.2	0.5	1.2	55.9	58.5
Italy	2019	514	57.2	19.7	13.9	7.4	54.7	1.1	3.2	56.1	58.3
	2023	651	69.7	16.2	8.4	5.6	69.3	0.2	0.3	71.0	68.4
Korea, Rep. of	2019	556	80.6	8.0	3.2	8.1	79.8	0.5	0.4	77.9	82.9
	2023	616	80.2	7.8	3.2	8.7	79.9	0.0	0.3	75.9	84.7
Lithuania	2019	551	75.2	12.2	6.1	6.4	74.8	0.0	0.5	75.7	74.6
	2023	776	78.7	8.5	7.8	4.9	78.0	0.6	0.2	79.8	77.5
Malaysia	2019	1007	61.4	22.5	6.2	7.9	58.3	0.6	4.4	57.8	64.9
	2023	1273	61.4	22.6	8.7	7.1	61.0	0.1	0.5	60.9	62.0
Norway (9)	2019	654	71.4	14.9	7.7	4.4	67.6	2.2	3.2	71.7	71.2
	2023	899	80.9	8.5	6.5	3.4	77.8	1.1	2.7	81.8	80.1
Portugal	2019	488	73.9	15.5	6.1	3.9	71.9	0.3	2.4	76.5	71.2
	2023	760	72.0	11.8	8.9	6.9	71.0	0.1	1.4	72.9	71.2
Qatar	2019	557	51.0	32.2	10.0	3.7	47.9	2.1	4.1	53.0	48.7
	2023	620	54.6	24.2	12.1	8.3	53.6	0.7	1.2	57.4	52.0
Singapore	2019	684	81.4	9.0	5.4	3.9	80.2	0.8	0.7	84.6	78.9
	2023	692	83.3	10.7	3.7	2.4	83.3	0.0	0.0	84.8	81.8
Sweden	2019	566	67.7	12.2	9.3	7.4	60.5	3.8	6.7	67.9	67.4
	2023	725	70.9	11.1	11.4	5.7	68.8	1.3	1.6	70.9	70.9
United Arab Emirates	2019	3173	53.8	26.0	11.2	7.1	51.6	1.2	3.0	56.6	51.4
	2023	4668	60.8	21.6	9.8	6.7	59.2	0.7	2.0	62.7	58.9
United States	2019	1221	65.5	16.6	7.8	8.4	62.3	0.9	4.1	66.8	64.1
	2023	1120	72.8	13.7	8.2	4.8	71.2	0.2	1.9	71.5	74.0
International Avg. (20)	2019	15098	67.7	16.9	8.0	5.9	65.0	1.3	2.9	68.6	66.8
	2023	19170	70.4	14.2	8.6	6.4	69.4	0.5	1.0	71.0	69.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Geometry and Measurement / Reasoning
B_MM4_13 ME72237: Net of a triangular prism - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1175	48.4	25.9	14.0	9.4	46.3	1.6	2.7	54.9	42.3
	2023	1745	59.1	22.4	10.4	6.8	57.3	0.5	2.6	60.3	58.0
Dubai, UAE	2019	808	69.2	19.2	7.5	2.9	66.3	0.7	3.4	68.7	69.6
	2023	1158	70.7	15.1	8.2	5.3	68.9	0.8	1.7	71.2	70.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Data and Probability / Applying
B_MM4_14 ME72232: Important for fair basketball tryout (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	598	51.0	44.4	46.2	1.9	7.5	49.2	52.6
	2023	633	31.6	66.4	30.7	0.9	2.0	32.3	31.0
Chinese Taipei	2019	704	64.9	35.1	64.7	0.0	0.2	61.7	68.0
	2023	798	60.8	39.2	60.8	0.0	0.0	60.6	61.0
England	2019	484	72.4	26.5	69.5	1.8	2.1	73.0	71.7
	2023	620	72.2	27.1	70.5	0.8	1.6	72.1	72.4
Finland	2019	684	60.7	37.7	58.3	1.0	3.0	65.9	55.5
	2023	837	54.6	44.8	53.8	0.6	0.8	57.2	52.1
France	2019	562	60.3	37.4	56.8	1.0	4.8	61.9	58.8
	2023	634	58.4	41.3	58.0	0.0	0.8	61.0	55.6
Georgia	2019	471	49.2	47.8	46.2	3.0	3.0	50.0	48.4
	2023	705	46.3	52.6	45.4	1.6	0.4	49.7	42.5
Hong Kong SAR	2019	468	57.8	41.7	57.1	0.6	0.6	54.8	60.6
	2023	638	55.0	44.7	54.8	0.2	0.3	50.4	60.0
Hungary	2019	633	47.8	51.9	47.5	0.2	0.4	49.4	46.3
	2023	771	51.0	49.0	50.9	0.0	0.1	56.4	45.4
Israel	2019	522	63.9	33.9	60.1	1.8	4.2	61.4	66.6
	2023	735	59.9	39.3	58.8	0.5	1.4	61.2	58.7
Italy	2019	514	61.3	36.8	58.3	1.7	3.2	62.2	60.5
	2023	651	47.6	52.1	47.4	0.3	0.3	49.9	45.3
Korea, Rep. of	2019	556	75.1	24.8	74.7	0.2	0.4	75.4	74.8
	2023	616	69.6	30.3	69.3	0.2	0.3	68.0	71.3
Lithuania	2019	551	60.2	39.5	59.9	0.1	0.5	58.6	62.3
	2023	776	53.9	45.8	53.6	0.3	0.2	55.9	52.0
Malaysia	2019	1007	43.2	53.6	40.8	0.9	4.7	48.2	38.5
	2023	1273	31.5	68.1	31.3	0.1	0.5	32.7	30.2
Norway (9)	2019	654	60.6	36.6	56.4	3.7	3.2	61.4	60.0
	2023	899	57.2	41.3	55.2	0.8	2.7	57.7	56.7
Portugal	2019	488	69.0	30.1	66.9	0.5	2.4	69.0	69.0
	2023	760	58.5	40.8	57.6	0.2	1.4	58.1	58.9
Qatar	2019	557	36.7	58.9	34.2	2.5	4.3	40.6	32.2
	2023	620	38.7	59.9	37.8	1.1	1.2	40.4	37.1
Singapore	2019	684	79.6	20.1	78.3	0.5	1.1	79.3	79.8
	2023	692	73.8	26.2	73.8	0.0	0.0	74.3	73.3
Sweden	2019	566	56.0	39.8	50.6	2.5	7.1	63.0	49.0
	2023	724	51.9	46.9	50.6	0.9	1.6	55.5	48.5
United Arab Emirates	2019	3172	38.4	58.9	36.7	1.3	3.2	41.0	36.1
	2023	4668	43.3	55.0	42.1	0.6	2.3	43.8	42.9
United States	2019	1221	59.6	38.4	56.7	0.5	4.3	63.0	56.0
	2023	1120	56.2	42.8	55.0	0.2	2.0	58.5	54.0
International Avg. (20)	2019	15096	58.4	39.7	56.0	1.3	3.0	59.5	57.3
	2023	19170	53.6	45.7	52.9	0.5	1.0	54.8	52.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Data and Probability / Applying
B_MM4_14 ME72232: Important for fair basketball tryout (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	31.6	65.8	30.4	1.1	2.7	35.0	28.4
	2023	1745	36.9	60.9	35.7	0.6	2.9	38.8	35.1
Dubai, UAE	2019	808	57.3	40.5	54.3	1.6	3.5	58.2	56.4
	2023	1158	62.6	36.5	61.0	0.5	2.0	61.6	63.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

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Mathematics: Data and Probability / Reasoning

B_MM4_15 ME72206: Pie charts for proportions of people by age - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	598	8.8	59.2	5.7	26.8	8.4	3.4	12.4
	2023	633	9.0	69.3	6.8	20.9	2.9	8.0	9.8
Chinese Taipei	2019	704	36.5	59.3	34.1	6.3	0.2	34.3	38.7
	2023	796	30.5	66.8	29.3	4.0	0.0	28.1	32.9
England	2019	484	21.2	66.4	17.9	13.4	2.4	16.5	26.5
	2023	619	28.8	63.4	25.6	9.0	1.9	24.8	32.8
Finland	2019	684	16.9	71.4	14.5	10.8	3.3	19.6	14.2
	2023	837	20.4	72.7	18.6	7.9	0.9	16.0	24.3
France	2019	562	12.8	66.7	9.8	18.1	5.4	12.5	13.1
	2023	634	11.8	75.2	10.1	13.9	0.8	10.0	13.6
Georgia	2019	472	10.8	54.3	6.6	33.7	5.4	7.8	13.8
	2023	705	15.7	58.6	10.9	29.0	1.4	12.9	18.5
Hong Kong SAR	2019	468	42.7	50.5	37.5	11.1	0.8	45.1	40.3
	2023	638	39.1	55.2	35.5	9.1	0.3	36.2	42.2
Hungary	2019	633	22.4	69.7	20.1	9.6	0.5	17.8	26.5
	2023	771	17.3	76.8	16.1	7.0	0.1	16.7	17.9
Israel	2019	522	25.3	55.2	18.8	20.9	5.1	21.5	29.4
	2023	734	14.8	70.5	12.2	15.6	1.8	13.3	16.1
Italy	2019	514	12.6	62.3	9.0	24.1	4.6	11.1	13.8
	2023	651	17.5	66.8	14.1	18.5	0.6	11.0	23.8
Korea, Rep. of	2019	556	29.1	67.4	27.6	4.6	0.4	26.3	31.5
	2023	616	26.8	70.6	25.8	3.1	0.5	22.9	30.9
Lithuania	2019	551	19.5	66.5	16.1	16.9	0.5	20.9	17.7
	2023	722	16.6	72.4	14.4	12.7	0.5	15.4	17.7
Malaysia	2019	1007	10.0	79.0	8.7	7.1	5.2	10.5	9.5
	2023	1274	4.1	91.7	3.9	3.8	0.6	3.5	4.8
Norway (9)	2019	654	17.8	61.3	13.2	20.6	5.0	15.8	19.4
	2023	899	21.2	66.5	17.9	12.2	3.3	20.6	21.8
Portugal	2019	488	8.9	67.3	6.6	23.3	2.8	7.6	10.4
	2023	760	11.4	73.4	9.5	15.5	1.6	8.9	13.7
Qatar	2019	557	9.7	69.5	7.5	17.7	5.3	8.9	10.8
	2023	619	7.7	80.2	6.7	10.9	2.2	5.6	9.7
Singapore	2019	684	43.4	54.1	41.5	2.9	1.4	44.5	42.5
	2023	692	43.2	56.1	42.7	1.2	0.0	37.5	48.8
Sweden	2019	566	28.5	51.1	20.4	20.3	8.3	27.0	30.0
	2023	725	27.4	61.8	23.4	13.0	1.9	23.2	31.1
United Arab Emirates	2019	3175	11.9	74.9	10.2	11.2	3.7	11.0	12.8
	2023	4663	15.7	77.3	14.4	5.6	2.7	13.0	18.3
United States	2019	1221	11.3	78.4	10.0	7.0	4.6	11.1	11.6
	2023	1120	11.3	83.6	10.7	3.5	2.2	9.8	12.9
International Avg. (20)	2019	15100	20.0	64.2	16.8	15.3	3.7	18.7	21.3
	2023	19108	19.5	70.4	17.4	10.8	1.3	16.9	22.1

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Mathematics: Data and Probability / Reasoning

B_MM4_15 ME72206: Pie charts for proportions of people by age - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1175	6.7	81.1	5.9	10.0	3.0	5.5	7.9
	2023	1742	9.0	82.2	8.2	6.2	3.4	8.1	9.9
Dubai, UAE	2019	808	25.2	64.3	21.7	9.8	4.1	23.2	27.1
	2023	1158	30.0	64.8	27.8	5.2	2.3	24.7	34.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Knowing
B_ME2_01 ME62271: Randy's blue balloons - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	29.3	9.4	22.4	36.3	28.3	3.2	0.5	25.2	33.0
	2023	632	25.2	9.5	21.1	41.8	24.4	2.9	0.2	22.6	27.6
Chinese Taipei	2019	701	68.9	4.4	21.4	5.2	68.6	0.3	0.1	68.5	69.2
	2023	475	69.3	4.1	21.6	5.0	69.3	0.0	0.0	68.1	70.5
England	2019	462	42.8	4.5	26.6	25.4	42.4	1.0	0.1	40.0	46.6
	2023	473	51.6	6.5	16.4	25.2	51.3	0.6	0.0	47.2	56.2
Finland	2019	690	49.7	10.3	23.7	15.8	49.1	0.9	0.3	51.2	48.1
	2023	809	49.1	9.2	22.3	18.9	48.7	0.7	0.1	43.5	55.3
France	2019	561	40.2	11.1	19.4	28.6	39.7	1.2	0.0	38.1	42.1
	2023	642	40.0	9.3	21.2	28.7	39.6	0.9	0.2	36.3	43.9
Georgia	2019	460	37.4	15.2	21.6	24.2	36.4	2.2	0.3	38.5	36.3
	2023	676	36.5	12.1	27.4	22.7	35.8	2.0	0.0	37.4	35.6
Hong Kong SAR	2019	464	56.1	5.4	22.9	15.2	55.7	0.6	0.2	57.2	55.2
	2023	623	67.0	2.9	20.2	9.7	66.6	0.3	0.3	63.0	71.2
Hungary	2019	641	41.0	8.0	23.7	27.1	40.9	0.2	0.2	36.0	46.1
	2023	749	38.2	6.9	30.8	24.0	38.2	0.2	0.0	33.5	43.4
Israel	2019	521	52.7	5.5	20.0	21.3	52.2	1.0	0.0	52.9	52.6
	2023	722	45.0	11.9	20.5	22.0	44.6	0.7	0.3	42.7	47.5
Italy	2019	513	37.9	7.3	41.1	13.5	37.7	0.3	0.0	33.3	42.3
	2023	638	47.1	7.6	29.6	15.5	46.9	0.5	0.0	45.0	49.4
Korea, Rep. of	2019	551	78.6	3.5	11.0	6.9	78.4	0.2	0.0	76.4	80.6
	2023	358	79.1	1.6	12.8	6.4	78.6	0.3	0.3	79.0	79.1
Lithuania	2019	538	44.7	5.8	25.4	23.7	44.3	0.8	0.0	42.6	46.8
	2023	768	44.9	7.6	23.6	23.2	44.4	1.1	0.0	42.8	47.0
Malaysia	2019	1014	36.5	7.8	27.4	27.9	36.2	0.7	0.0	35.5	37.6
	2023	1231	29.3	9.3	24.3	36.9	29.2	0.2	0.0	29.4	29.2
Norway (9)	2019	663	51.2	8.1	22.3	17.1	49.8	2.2	0.6	49.5	52.8
	2023	887	49.2	8.9	21.3	19.9	48.4	1.3	0.4	48.4	50.0
Portugal	2019	487	42.5	10.5	22.9	23.9	42.4	0.3	0.0	43.9	41.2
	2023	757	32.8	8.8	23.1	34.6	32.5	1.0	0.0	29.0	36.5
Singapore	2019	691	79.2	1.8	10.8	8.0	78.7	0.5	0.2	76.0	82.0
	2023	401	78.1	1.7	13.2	6.9	77.9	0.3	0.0	78.1	78.2
Sweden	2019	572	56.9	7.3	22.1	12.7	55.5	2.0	0.4	58.7	55.0
	2023	696	59.6	6.5	18.6	14.3	58.2	1.9	0.5	59.4	59.9
United Arab Emirates	2019	3158	40.5	9.5	25.9	23.2	39.8	1.5	0.1	39.0	41.8
	2023	4644	40.7	9.3	25.1	24.3	40.3	0.9	0.0	39.5	41.8
United States	2019	1235	41.1	8.1	28.1	22.2	40.8	0.6	0.3	38.7	43.7
	2023	1153	38.2	12.4	26.4	22.8	38.0	0.3	0.1	35.7	40.4
International Avg. (19)	2019	14506	48.8	7.6	23.1	19.9	48.3	1.0	0.2	47.4	50.2
	2023	17334	48.5	7.7	22.1	21.2	48.0	0.8	0.1	46.3	50.7
Abu Dhabi, UAE	2019	1171	33.6	12.3	23.8	29.4	33.2	1.1	0.3	33.7	33.5
	2023	2215	34.1	10.7	25.4	29.2	33.8	0.8	0.0	34.7	33.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Number / Knowing
B_ME2_01 ME62271: Randy's blue balloons - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Dubai, UAE	2019	804	54.6	7.4	22.6	15.1	54.1	0.9	0.0	49.3	59.8
	2023	917	55.4	5.7	20.8	17.6	54.7	1.1	0.0	50.4	60.1

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Applying
B_ME2_02 ME62152: Least number of crates for Harry's apples - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	19.2	74.8	17.8	6.9	0.5	17.6	20.5
	2023	632	22.5	69.6	20.2	9.7	0.5	16.9	27.6
Chinese Taipei	2019	701	77.3	22.6	77.0	0.3	0.1	77.0	77.6
	2023	475	79.6	20.4	79.6	0.0	0.0	81.1	78.2
England	2019	462	49.2	48.9	47.5	3.4	0.2	48.0	50.9
	2023	582	55.0	43.5	53.1	3.4	0.0	50.2	59.6
Finland	2019	690	55.8	42.7	53.9	3.0	0.4	58.3	53.2
	2023	809	47.8	51.3	46.9	1.7	0.1	46.4	49.2
France	2019	561	39.3	57.5	37.3	5.2	0.0	34.8	43.4
	2023	641	36.3	61.1	34.7	4.0	0.2	33.1	39.5
Georgia	2019	460	35.0	59.6	32.2	7.9	0.3	31.4	38.2
	2023	675	33.4	62.9	31.6	5.4	0.1	29.5	37.4
Hong Kong SAR	2019	464	76.4	23.2	75.2	1.4	0.2	77.8	75.1
	2023	623	79.2	20.6	78.5	0.5	0.3	79.7	78.7
Hungary	2019	641	48.1	51.3	47.6	0.9	0.2	42.8	53.4
	2023	749	43.7	55.7	43.2	1.1	0.0	38.4	49.3
Israel	2019	521	43.1	54.5	41.3	4.2	0.0	39.6	47.2
	2023	722	35.0	61.9	33.3	4.5	0.3	33.0	37.0
Italy	2019	513	35.9	61.8	34.7	3.5	0.0	30.7	40.9
	2023	638	41.8	57.5	41.3	1.2	0.0	36.9	47.1
Korea, Rep. of	2019	551	59.3	40.3	58.6	1.1	0.0	56.0	62.3
	2023	358	62.6	37.0	62.0	0.8	0.3	62.3	63.0
Lithuania	2019	538	50.6	48.7	49.9	1.4	0.0	51.6	49.7
	2023	768	53.1	46.1	52.2	1.7	0.0	48.9	57.3
Malaysia	2019	1014	35.7	63.6	35.3	1.1	0.0	38.7	32.4
	2023	1230	19.1	80.6	19.1	0.3	0.0	18.9	19.4
Norway (9)	2019	663	49.5	47.4	46.5	5.4	0.6	51.2	48.0
	2023	886	47.5	49.5	44.8	5.3	0.4	44.9	49.8
Portugal	2019	487	45.7	52.2	43.9	3.9	0.0	43.0	48.3
	2023	757	32.8	64.7	31.6	3.8	0.0	29.7	35.7
Qatar	2019	560	19.5	76.6	18.6	4.7	0.1	17.0	22.2
	2023	598	22.0	75.7	21.3	3.0	0.0	15.3	28.0
Singapore	2019	691	63.1	36.6	62.5	0.7	0.2	61.6	64.4
	2023	401	72.5	27.5	72.5	0.0	0.0	69.1	75.7
Sweden	2019	572	54.6	43.0	51.6	5.0	0.4	52.8	56.4
	2023	695	57.1	41.6	55.4	2.4	0.6	54.7	59.5
United Arab Emirates	2019	3158	27.4	71.1	26.8	2.0	0.1	23.0	31.3
	2023	5328	33.2	66.0	32.7	1.3	0.1	28.6	37.6
United States	2019	1235	50.6	48.8	50.0	0.9	0.3	49.7	51.5
	2023	1153	42.6	56.8	42.1	1.0	0.1	41.2	43.9
International Avg. (20)	2019	15066	46.8	51.3	45.4	3.1	0.2	45.1	48.3
	2023	18720	45.8	52.5	44.8	2.5	0.1	42.9	48.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Number / Applying

B_ME2_02 ME62152: Least number of crates for Harry's apples - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	23.5	75.2	23.1	1.4	0.3	20.4	26.3
	2023	2426	26.4	72.7	26.1	1.2	0.1	23.0	29.7
Dubai, UAE	2019	804	42.7	56.1	41.7	2.2	0.0	36.2	49.1
	2023	1163	49.2	49.8	48.2	2.0	0.0	42.1	56.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Applying
B_ME2_03 ME62215: Fill in bicycle sale table (DERIVED) - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	20.6	57.8	11.9	10.6	19.1	0.6	16.3	23.9
	2023	632	18.8	63.3	13.3	9.5	13.1	0.7	12.3	24.3
Chinese Taipei	2019	701	52.9	38.2	15.4	43.8	2.5	0.1	49.1	56.7
	2023	475	51.9	40.0	14.9	43.8	1.3	0.0	50.1	53.8
England	2019	462	39.8	42.0	22.3	24.0	11.2	0.5	37.1	43.2
	2023	582	44.9	40.0	23.0	30.5	6.5	0.0	36.3	52.9
Finland	2019	690	48.8	33.3	29.3	31.0	5.8	0.6	44.1	53.5
	2023	809	46.4	38.7	24.6	31.8	4.5	0.4	37.6	55.6
France	2019	561	18.8	62.9	13.7	9.3	13.9	0.2	14.5	22.7
	2023	640	17.6	66.2	17.8	7.1	8.6	0.2	12.9	22.3
Georgia	2019	460	25.2	55.6	14.1	14.0	15.6	0.6	22.0	27.9
	2023	674	28.8	52.5	20.2	15.3	11.9	0.1	22.7	34.8
Hong Kong SAR	2019	464	50.7	36.8	21.8	38.3	3.0	0.2	49.6	51.8
	2023	608	52.1	39.2	16.5	43.5	0.5	0.4	49.2	55.1
Hungary	2019	641	40.1	46.2	19.0	27.8	6.9	0.2	34.0	45.9
	2023	749	35.4	52.6	19.6	24.4	3.4	0.0	27.2	44.2
Israel	2019	521	44.8	38.7	20.6	29.4	11.3	0.0	40.3	50.1
	2023	722	35.8	49.2	21.5	22.7	6.2	0.3	31.0	40.6
Italy	2019	513	26.0	57.2	18.8	14.0	10.0	0.0	18.2	32.8
	2023	638	27.7	58.4	18.8	16.6	6.2	0.0	20.1	35.5
Korea, Rep. of	2019	551	46.2	42.2	18.6	34.8	4.4	0.0	41.0	50.9
	2023	358	47.4	41.9	16.9	37.0	4.0	0.3	40.5	54.4
Lithuania	2019	538	41.6	42.5	23.1	26.9	7.5	0.0	42.0	41.2
	2023	768	40.7	45.3	21.0	27.8	5.9	0.0	33.2	48.2
Malaysia	2019	1014	19.9	70.7	15.5	11.7	2.1	0.0	19.3	20.6
	2023	1231	13.1	79.3	13.9	6.0	0.7	0.0	12.4	13.9
Norway (9)	2019	663	49.0	31.2	26.3	29.4	12.4	0.6	48.2	49.8
	2023	886	43.6	36.6	27.9	25.0	10.0	0.5	42.5	44.6
Portugal	2019	487	27.8	54.9	21.0	14.7	9.5	0.0	23.1	32.6
	2023	757	18.7	68.8	14.8	10.1	6.3	0.0	13.7	23.4
Qatar	2019	560	16.7	66.4	16.7	6.7	10.1	0.1	11.3	22.6
	2023	599	20.6	67.6	15.5	11.7	5.0	0.2	13.9	26.8
Singapore	2019	691	71.2	19.2	17.9	60.8	1.9	0.2	70.1	72.2
	2023	401	73.5	17.1	18.7	64.2	0.0	0.0	71.9	75.1
Sweden	2019	572	55.1	29.1	24.3	38.5	7.4	0.6	51.5	58.9
	2023	694	55.1	27.3	30.5	37.0	4.6	0.6	51.6	58.5
United Arab Emirates	2019	3159	26.2	62.1	16.8	16.6	4.4	0.1	21.9	30.1
	2023	5328	30.7	59.1	16.8	21.6	2.4	0.1	23.9	37.2
United States	2019	1235	29.3	59.4	15.8	20.0	4.6	0.3	26.2	32.7
	2023	1153	23.1	66.8	16.1	14.5	2.4	0.3	18.5	27.2
International Avg. (20)	2019	15067	37.5	47.3	19.1	25.1	8.2	0.3	34.0	41.0
	2023	18704	36.3	50.5	19.1	25.0	5.2	0.2	31.1	41.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Number / Applying

B_ME2_03 ME62215: Fill in bicycle sale table (DERIVED) - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	18.1	71.5	14.4	10.1	3.7	0.3	16.5	19.5
	2023	2426	23.4	66.8	15.8	15.0	2.3	0.1	17.5	28.9
Dubai, UAE	2019	804	43.0	43.9	21.7	30.5	4.0	0.0	36.2	49.6
	2023	1163	48.9	40.0	19.0	37.8	3.2	0.0	38.0	59.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Reasoning

B_ME2_04 ME62143: Number of girls in a class given boys:girls - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	13.1	61.7	9.3	28.2	0.8	12.6	13.4
	2023	632	8.4	70.8	6.5	21.8	0.9	8.5	8.3
Chinese Taipei	2019	701	61.4	37.3	59.3	3.3	0.1	62.0	60.8
	2023	474	63.8	35.5	62.5	2.0	0.0	67.0	60.7
England	2019	462	42.2	46.1	33.6	19.6	0.8	36.8	48.5
	2023	582	45.4	49.2	40.9	9.8	0.0	41.3	49.0
Finland	2019	690	27.4	59.5	22.5	17.3	0.7	22.3	31.9
	2023	809	21.1	70.2	18.8	10.7	0.4	15.1	27.3
France	2019	561	10.1	60.6	6.8	32.4	0.2	8.6	11.5
	2023	639	11.5	67.9	8.8	23.1	0.2	11.7	11.3
Georgia	2019	461	27.4	55.0	20.7	23.8	0.6	28.2	26.7
	2023	674	27.1	57.3	21.3	21.3	0.1	22.0	32.1
Hong Kong SAR	2019	464	51.4	45.3	47.8	6.7	0.2	51.3	51.4
	2023	618	55.0	43.7	53.4	2.6	0.3	53.2	56.8
Hungary	2019	641	30.6	60.3	26.5	13.0	0.2	25.1	35.4
	2023	749	29.3	65.8	27.3	6.9	0.0	25.4	33.4
Israel	2019	521	38.6	52.6	33.1	14.4	0.0	36.2	41.2
	2023	722	25.9	63.0	22.0	14.7	0.3	18.1	33.3
Italy	2019	513	17.2	60.7	12.6	26.7	0.0	12.9	20.8
	2023	638	19.9	65.4	16.3	18.3	0.0	16.8	23.2
Korea, Rep. of	2019	551	63.4	34.5	59.9	5.5	0.1	66.6	60.5
	2023	358	63.7	35.0	61.3	3.3	0.4	61.6	65.8
Lithuania	2019	538	27.1	58.5	21.7	19.7	0.0	28.0	26.2
	2023	768	27.7	63.7	24.4	11.9	0.0	24.1	31.1
Malaysia	2019	1014	18.7	78.2	18.0	3.6	0.2	17.5	19.9
	2023	1231	9.2	89.6	9.1	1.3	0.0	9.8	8.7
Norway (9)	2019	663	38.1	46.9	28.9	23.3	0.8	31.9	43.4
	2023	886	27.8	57.8	22.2	19.5	0.5	26.2	29.1
Portugal	2019	487	15.8	59.9	11.2	28.9	0.0	16.9	14.6
	2023	757	7.7	78.1	6.5	15.4	0.0	5.8	9.5
Qatar	2019	560	10.9	77.7	9.5	12.5	0.4	9.1	12.7
	2023	599	12.6	81.5	11.7	6.7	0.2	8.0	16.8
Singapore	2019	691	80.0	19.7	78.9	1.1	0.3	76.6	83.0
	2023	401	80.8	19.1	80.6	0.3	0.0	80.8	80.9
Sweden	2019	572	25.0	51.8	17.2	30.3	0.6	22.4	27.3
	2023	694	22.0	64.1	18.1	16.8	1.1	21.2	22.7
United Arab Emirates	2019	3159	19.1	74.8	17.7	7.4	0.1	15.6	22.2
	2023	5328	24.2	72.1	23.0	4.7	0.2	20.4	27.7
United States	2019	1235	29.2	67.1	27.7	4.4	0.8	24.0	34.6
	2023	1153	21.3	76.4	20.7	2.6	0.3	15.0	26.9
International Avg. (20)	2019	15068	32.3	55.4	28.1	16.1	0.3	30.2	34.3
	2023	18712	30.2	61.3	27.8	10.7	0.2	27.6	32.7

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Reasoning

B_ME2_04 ME62143: Number of girls in a class given boys:girls - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	14.0	80.8	13.2	5.8	0.3	11.9	15.9
	2023	2426	17.0	79.0	16.2	4.6	0.1	14.0	19.8
Dubai, UAE	2019	804	31.4	63.7	29.1	7.2	0.0	21.0	41.7
	2023	1163	40.8	55.7	38.4	5.9	0.0	34.3	46.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Knowing

B_ME2_05 ME62230: Identify expression equivalent to $(3x + 6) / 9x$ - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chinese Taipei	2019 2023	701 475	63.6 64.4	5.4 3.9	63.2 64.4	7.5 8.1	23.3 23.7	0.5 0.0	0.1 0.0	63.7 64.4	63.5 64.3
England	2019 2023	462 582	32.6 36.5	14.7 11.0	31.6 35.9	20.4 19.1	30.3 32.4	2.2 1.6	0.8 0.0	33.2 35.1	31.8 37.8
Finland	2019 2023	690 809	20.9 24.2	8.5 10.2	20.2 23.6	34.6 34.1	33.5 29.8	2.5 1.9	0.7 0.5	18.3 19.7	23.4 29.0
Georgia	2019 2023	461 676	37.0 35.3	7.3 12.0	35.5 34.7	14.5 13.8	38.8 37.7	3.1 1.6	0.9 0.1	35.9 34.4	38.0 36.3
Hong Kong SAR	2019 2023	464 623	54.0 55.1	5.2 5.5	53.1 54.7	9.5 8.5	30.5 30.6	1.5 0.3	0.2 0.3	52.7 54.1	55.2 56.2
Hungary	2019 2023	641 749	28.6 32.1	7.6 9.6	28.1 32.0	14.8 15.0	47.6 43.1	1.7 0.3	0.2 0.0	26.2 27.7	31.1 36.9
Israel	2019 2023	521 722	45.1 41.8	8.0 13.0	44.2 40.8	11.3 16.5	34.3 27.5	2.1 1.9	0.0 0.3	40.9 35.0	50.2 48.9
Korea, Rep. of	2019 2023	551 358	45.3 51.1	7.3 7.5	45.0 50.9	7.7 5.6	39.5 35.6	0.4 0.0	0.1 0.4	45.8 50.4	44.8 51.8
Lithuania	2019 2023	538 768	21.6 22.3	11.8 9.6	21.4 22.2	27.9 27.0	37.7 40.3	1.2 0.8	0.0 0.0	21.2 22.8	22.1 21.9
Malaysia	2019 2023	1014 1231	29.8 29.4	4.7 8.3	29.5 29.4	19.8 14.8	44.9 47.4	0.9 0.0	0.2 0.2	28.4 28.5	31.3 30.5
Norway (9)	2019 2023	663 887	22.6 25.6	11.6 19.0	20.8 24.5	30.0 23.2	29.6 28.8	7.3 4.0	0.8 0.6	19.1 20.3	25.9 30.3
Portugal	2019 2023	487 757	26.5 23.7	8.0 12.6	25.9 23.5	28.9 31.4	34.9 31.8	2.3 0.7	0.0 0.0	20.8 22.6	32.2 24.7
Qatar	2019 2023	560 599	25.4 28.0	14.0 19.0	24.6 27.5	15.4 18.0	43.0 33.9	2.5 1.5	0.4 0.2	22.3 26.8	28.9 29.1
Singapore	2019 2023	691 401	72.5 73.6	3.8 4.6	72.1 73.5	5.1 5.7	18.4 16.0	0.2 0.3	0.3 0.0	70.9 69.2	73.8 77.8
Sweden	2019 2023	572 696	27.0 27.3	14.9 15.1	25.1 26.1	19.5 20.7	33.5 33.7	6.5 3.4	0.6 1.1	23.5 27.3	30.4 27.3
United Arab Emirates	2019 2023	3157 5328	32.5 36.8	12.4 14.1	31.9 36.4	20.5 18.7	33.4 29.9	1.7 0.7	0.2 0.2	28.4 31.5	36.3 41.9
United States	2019 2023	1235 1153	36.0 30.5	13.2 18.2	35.1 30.0	17.4 17.3	31.9 32.8	1.6 1.1	0.8 0.6	33.3 30.6	38.8 30.4
International Avg. (17)	2019 2023	13408 16814	36.5 37.5	9.3 11.4	35.7 37.1	17.9 17.5	34.4 32.6	2.2 1.2	0.4 0.3	34.4 35.3	38.7 39.7
Abu Dhabi, UAE	2019 2023	1171 2426	27.5 33.7	14.8 16.3	27.3 33.5	22.6 18.7	34.5 30.9	0.5 0.5	0.3 0.2	21.9 31.0	32.5 36.2
Dubai, UAE	2019 2023	804 1163	39.2 45.1	7.6 8.7	38.5 44.6	15.5 15.8	36.6 29.7	1.8 1.1	0.1 0.2	35.9 35.5	42.6 54.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Algebra / Applying

B_ME2_06 ME62095: Equation for Bruno's monthly cell phone cost - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	31.9	28.9	35.7	18.4	7.6	8.1	1.2	30.8	32.9
	2023	632	32.9	30.7	36.5	20.8	5.0	5.9	1.0	28.5	36.9
Chinese Taipei	2019	701	74.6	74.1	11.0	9.4	4.8	0.5	0.1	77.2	71.9
	2023	475	80.0	80.0	10.0	7.7	2.2	0.0	0.0	85.5	74.5
England	2019	462	46.8	44.8	24.3	19.1	7.6	3.4	0.8	46.6	47.0
	2023	582	46.0	45.3	30.4	17.3	5.5	1.5	0.0	43.0	48.8
Finland	2019	690	49.4	47.1	23.8	18.9	5.4	4.0	0.7	52.5	46.4
	2023	809	43.6	42.1	28.7	20.6	5.0	3.0	0.5	42.8	44.5
France	2019	561	44.6	42.8	30.2	18.0	4.9	3.9	0.2	41.9	47.1
	2023	642	48.2	47.5	26.1	18.8	6.2	1.2	0.2	49.0	47.3
Georgia	2019	462	35.8	33.3	33.2	20.8	5.8	5.8	1.2	38.3	33.4
	2023	676	57.5	55.7	15.5	18.8	6.8	3.0	0.1	57.9	57.1
Hong Kong SAR	2019	464	59.5	58.4	15.7	17.1	7.0	1.6	0.2	57.1	61.7
	2023	623	64.6	64.3	16.0	13.8	5.4	0.2	0.3	64.4	64.9
Hungary	2019	641	49.8	49.1	26.4	20.7	2.3	1.3	0.2	48.6	51.0
	2023	749	49.6	49.4	26.0	21.5	2.8	0.3	0.0	43.8	55.9
Israel	2019	521	65.6	64.4	17.1	12.4	4.3	1.8	0.0	66.8	64.1
	2023	722	58.0	56.7	19.1	16.4	5.5	1.7	0.5	56.7	59.4
Italy	2019	513	40.8	39.2	29.0	18.5	9.3	3.9	0.0	37.6	43.8
	2023	638	46.2	45.3	28.1	17.8	6.8	1.9	0.0	47.2	45.2
Korea, Rep. of	2019	551	63.3	63.0	20.6	12.7	3.3	0.4	0.1	63.4	63.2
	2023	358	68.4	68.0	20.0	9.0	2.4	0.3	0.4	68.6	68.2
Lithuania	2019	538	50.8	50.2	25.8	15.5	7.3	1.2	0.0	55.6	45.8
	2023	768	54.0	53.6	25.4	14.5	5.9	0.7	0.0	53.7	54.2
Malaysia	2019	1014	43.0	42.7	28.3	22.5	5.7	0.5	0.3	46.3	39.6
	2023	1231	29.3	29.3	32.5	30.2	7.7	0.1	0.2	31.7	26.8
Norway (9)	2019	663	48.2	43.5	25.4	15.5	6.0	8.8	0.8	50.9	45.6
	2023	887	41.5	39.4	28.9	20.2	6.4	4.5	0.6	40.0	43.0
Portugal	2019	487	49.4	48.2	26.0	17.1	6.3	2.4	0.0	52.1	46.7
	2023	757	39.5	39.3	35.8	17.8	6.7	0.5	0.0	39.3	39.6
Qatar	2019	560	37.5	35.7	30.1	20.1	9.3	4.3	0.4	34.3	41.0
	2023	599	39.9	39.1	28.6	23.3	6.8	2.0	0.2	45.6	34.7
Singapore	2019	691	72.5	72.0	11.2	11.0	5.1	0.5	0.3	73.1	72.0
	2023	401	73.4	73.0	10.4	10.6	5.5	0.5	0.0	70.3	76.4
Sweden	2019	572	57.6	54.7	22.4	11.8	5.9	4.5	0.6	59.8	55.4
	2023	696	54.8	52.7	23.2	11.6	8.7	2.7	1.1	55.0	54.7
United Arab Emirates	2019	3158	42.5	41.5	25.8	21.8	8.5	2.2	0.2	45.1	40.1
	2023	5328	46.3	45.8	28.2	18.4	6.5	0.8	0.2	45.2	47.4
United States	2019	1235	57.3	56.0	23.8	13.6	4.3	1.3	0.9	57.0	57.6
	2023	1153	51.2	50.5	28.2	14.4	5.6	0.7	0.6	49.9	52.3
International Avg. (20)	2019	15068	51.0	49.5	24.3	16.7	6.0	3.0	0.4	51.8	50.3
	2023	18726	51.3	50.4	24.9	17.2	5.7	1.6	0.3	50.9	51.6

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Applying

B_ME2_06 ME62095: Equation for Bruno's monthly cell phone cost - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	37.1	36.2	28.5	23.9	9.1	2.0	0.3	41.7	32.9
	2023	2426	38.5	38.3	33.2	20.7	7.3	0.3	0.2	37.4	39.6
Dubai, UAE	2019	804	55.9	54.6	20.8	16.0	6.4	2.1	0.1	56.9	54.8
	2023	1163	63.1	61.8	19.5	12.0	4.7	1.8	0.2	60.8	65.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Applying

B_ME2_07 ME62076: Room divided into classroom M and laboratory L - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	45.3	42.9	36.8	9.0	5.9	4.1	1.2	45.8	44.9
	2023	632	39.1	37.0	33.9	16.9	6.9	4.3	1.0	37.7	40.3
Chinese Taipei	2019	701	90.1	89.7	5.5	3.0	1.4	0.2	0.1	91.8	88.3
	2023	475	90.8	90.8	5.0	2.5	1.7	0.0	0.0	92.7	89.0
England	2019	462	61.8	60.6	21.5	12.8	3.1	1.2	0.8	65.5	56.9
	2023	582	61.5	60.8	20.6	12.7	4.8	1.2	0.0	61.5	61.5
Finland	2019	690	61.9	60.1	26.3	7.8	2.9	2.0	0.9	65.9	58.0
	2023	809	58.5	57.3	27.9	10.2	2.5	1.5	0.5	59.4	57.4
France	2019	561	55.4	53.8	26.6	12.1	4.6	2.7	0.2	54.5	56.2
	2023	642	55.0	54.6	27.6	13.7	3.4	0.5	0.2	58.2	51.7
Georgia	2019	459	50.3	47.6	23.5	15.3	8.2	4.1	1.3	50.1	50.6
	2023	676	51.3	50.1	26.5	16.1	5.0	2.2	0.1	53.0	49.5
Hong Kong SAR	2019	464	87.7	87.0	6.3	3.9	1.9	0.6	0.2	89.9	85.7
	2023	623	85.7	85.0	7.0	5.4	1.8	0.5	0.3	86.9	84.6
Hungary	2019	641	57.2	56.8	23.0	15.0	4.4	0.7	0.2	56.1	58.4
	2023	749	56.3	56.0	25.2	13.0	5.2	0.5	0.0	54.5	58.3
Israel	2019	521	65.6	64.5	18.5	12.0	3.4	1.4	0.2	66.2	64.9
	2023	722	63.5	62.3	18.2	13.0	4.6	1.5	0.5	64.5	62.5
Italy	2019	513	67.2	66.0	19.2	9.8	3.3	1.8	0.0	65.5	68.9
	2023	638	69.1	68.8	19.8	8.3	2.7	0.4	0.0	71.6	66.4
Korea, Rep. of	2019	551	81.9	81.4	9.1	6.9	2.0	0.5	0.1	84.6	79.3
	2023	358	88.1	87.0	4.3	5.0	2.4	0.8	0.4	90.5	85.7
Lithuania	2019	538	71.2	70.8	16.9	10.2	1.5	0.5	0.0	75.3	66.8
	2023	768	69.7	69.4	17.4	8.6	4.2	0.4	0.0	70.9	68.5
Malaysia	2019	1014	60.6	60.1	21.0	13.2	4.9	0.4	0.4	67.5	53.2
	2023	1231	51.6	51.5	27.2	13.8	7.4	0.0	0.2	56.1	46.7
Norway (9)	2019	663	58.0	54.2	26.4	9.2	3.6	5.8	0.8	59.6	56.6
	2023	887	60.0	58.2	26.9	9.6	2.3	2.3	0.8	64.7	56.1
Portugal	2019	487	64.6	63.7	23.2	8.7	2.9	0.9	0.5	67.5	61.8
	2023	757	59.7	59.5	25.6	10.0	4.6	0.4	0.0	60.0	59.4
Qatar	2019	560	50.0	48.7	21.4	20.1	7.1	2.0	0.6	53.3	46.4
	2023	599	50.8	50.5	24.4	16.7	7.8	0.6	0.2	48.6	52.9
Singapore	2019	691	90.5	90.0	4.3	3.7	1.5	0.3	0.3	89.5	91.3
	2023	401	90.3	90.1	5.3	3.2	1.2	0.3	0.0	92.3	88.5
Sweden	2019	572	64.3	61.6	25.8	6.4	2.0	3.4	0.8	67.0	61.5
	2023	696	68.6	66.7	22.2	6.5	1.8	1.7	1.2	65.8	71.3
United Arab Emirates	2019	3159	58.1	57.0	21.2	12.9	7.0	1.5	0.3	59.1	57.2
	2023	5328	63.1	62.4	20.2	10.8	5.7	0.6	0.4	63.7	62.4
United States	2019	1235	60.4	58.8	21.1	11.6	5.8	1.7	1.0	63.8	56.9
	2023	1153	57.2	56.6	25.0	11.1	6.1	0.4	0.8	57.6	56.9
International Avg. (20)	2019	15066	65.1	63.8	19.9	10.2	3.9	1.8	0.5	66.9	63.2
	2023	18726	64.5	63.7	20.5	10.3	4.1	1.0	0.3	65.5	63.5

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Applying

B_ME2_07 ME62076: Room divided into classroom M and laboratory L - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	50.5	49.6	25.2	17.3	6.2	1.3	0.4	52.3	48.8
	2023	2426	57.1	56.8	24.5	11.4	6.7	0.4	0.2	57.8	56.5
Dubai, UAE	2019	804	71.4	70.3	15.6	7.7	4.9	1.3	0.1	71.2	71.5
	2023	1163	75.2	74.3	13.5	7.7	3.4	0.5	0.6	73.5	76.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Applying
B_ME2_08 ME62030: Find cost of taxi ride with table - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	45.6	50.3	42.1	6.3	1.2	50.8	41.0
	2023	632	44.1	52.4	41.3	5.2	1.0	44.0	44.2
Chinese Taipei	2019	701	72.4	27.3	71.6	1.0	0.1	78.8	65.7
	2023	475	70.6	29.2	70.2	0.6	0.0	72.0	69.2
England	2019	462	46.1	51.1	43.8	4.4	0.8	51.7	38.7
	2023	582	45.2	53.2	43.9	2.8	0.0	42.3	48.0
Finland	2019	690	45.8	52.3	44.3	2.5	0.9	47.9	43.8
	2023	809	44.4	54.6	43.5	1.4	0.5	45.2	43.5
France	2019	561	43.1	53.9	40.8	5.1	0.2	44.3	42.1
	2023	641	42.9	55.7	41.8	2.3	0.2	47.2	38.4
Georgia	2019	462	43.2	50.2	38.2	10.3	1.3	46.0	40.7
	2023	676	42.8	54.4	40.7	4.7	0.2	44.1	41.5
Hong Kong SAR	2019	464	65.6	33.4	63.6	2.8	0.2	70.1	61.4
	2023	622	62.4	37.2	61.7	0.8	0.3	60.8	64.1
Hungary	2019	641	46.8	52.8	46.5	0.5	0.2	50.8	42.7
	2023	749	44.0	55.8	43.8	0.4	0.0	42.1	46.0
Israel	2019	521	50.5	47.4	48.4	4.0	0.2	50.9	50.1
	2023	722	41.1	57.2	39.8	2.4	0.6	43.2	38.8
Italy	2019	513	42.8	54.9	41.1	4.1	0.0	45.1	40.5
	2023	638	43.4	55.3	42.5	2.2	0.0	43.8	43.1
Korea, Rep. of	2019	551	63.1	36.2	61.7	2.0	0.1	65.6	60.8
	2023	358	61.2	38.3	60.3	1.0	0.4	61.6	60.7
Lithuania	2019	538	50.0	48.8	48.8	2.5	0.0	57.7	42.0
	2023	768	45.5	53.4	44.6	1.9	0.0	49.1	41.9
Malaysia	2019	1014	60.0	39.8	59.6	0.2	0.4	66.7	52.7
	2023	1231	42.2	57.5	42.0	0.3	0.2	46.9	37.2
Norway (9)	2019	663	32.9	63.7	31.3	3.9	1.1	37.0	29.0
	2023	887	35.0	62.6	33.7	2.9	0.9	38.6	31.9
Portugal	2019	487	49.1	49.9	48.1	1.6	0.5	51.1	47.1
	2023	757	50.8	48.6	50.2	1.2	0.0	54.4	47.3
Qatar	2019	560	44.6	53.2	42.8	3.3	0.6	45.8	43.2
	2023	599	45.3	53.5	44.2	2.1	0.2	49.0	41.8
Singapore	2019	691	66.4	33.1	65.6	1.0	0.3	65.1	67.6
	2023	401	65.9	34.0	65.8	0.3	0.0	68.0	64.0
Sweden	2019	572	52.4	45.2	49.8	4.1	0.9	57.9	46.9
	2023	696	46.2	52.3	44.9	1.5	1.3	52.4	40.3
United Arab Emirates	2019	3160	48.5	50.1	47.2	2.5	0.3	53.8	43.7
	2023	5328	49.4	50.1	48.9	0.6	0.4	52.1	46.8
United States	2019	1235	50.7	48.0	49.4	1.3	1.3	58.4	42.8
	2023	1153	48.5	50.7	47.7	0.7	0.9	52.3	45.0
International Avg. (20)	2019	15070	51.0	47.1	49.2	3.2	0.5	54.8	47.1
	2023	18724	48.5	50.3	47.6	1.8	0.4	50.5	46.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Algebra / Applying
B_ME2_08 ME62030: Find cost of taxi ride with table - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	41.7	56.4	40.3	2.9	0.4	49.1	34.8
	2023	2426	42.5	57.0	42.1	0.7	0.2	45.7	39.5
Dubai, UAE	2019	804	58.3	40.9	57.2	1.8	0.1	59.7	56.9
	2023	1163	62.2	37.3	61.5	0.5	0.7	62.6	61.9

Mathematics: Geometry and Measurement / Knowing

B_ME2_09 ME62171: Shaded square reflected over the line XY - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	49.0	19.6	15.0	15.0	47.5	1.5	1.4	49.3	48.6
	2023	632	45.3	20.0	19.3	13.3	43.6	2.8	1.0	46.0	44.7
Chinese Taipei	2019	701	72.0	5.0	15.6	7.3	71.9	0.0	0.1	76.0	68.1
	2023	475	65.2	4.3	21.0	9.5	65.2	0.0	0.0	71.7	58.9
England	2019	462	67.2	7.3	15.9	9.0	66.1	0.9	0.8	76.1	55.1
	2023	582	62.3	6.9	21.2	9.4	62.0	0.5	0.0	63.0	61.7
Finland	2019	690	61.5	5.8	13.7	18.3	60.4	1.0	0.9	67.9	55.1
	2023	809	66.5	5.6	14.5	13.0	65.6	0.6	0.6	71.6	60.8
France	2019	561	64.7	9.9	14.2	10.7	63.8	1.0	0.4	69.9	60.1
	2023	642	59.5	12.1	16.8	10.9	58.5	1.4	0.2	62.4	56.4
Georgia	2019	462	40.9	23.9	19.2	13.9	39.4	2.4	1.3	44.7	37.5
	2023	676	38.2	27.8	15.3	17.5	37.4	1.8	0.2	40.2	36.1
Hong Kong SAR	2019	464	71.1	4.5	11.9	12.4	70.8	0.2	0.2	73.3	69.0
	2023	623	63.6	3.9	18.4	14.0	63.4	0.0	0.3	64.5	62.6
Hungary	2019	641	71.9	5.1	15.0	8.0	71.6	0.2	0.2	73.3	70.4
	2023	749	62.8	6.9	19.1	11.2	62.8	0.0	0.0	65.1	60.3
Israel	2019	521	52.5	9.5	22.1	15.5	52.2	0.4	0.2	56.6	47.7
	2023	722	44.2	13.5	28.1	13.5	43.7	0.5	0.7	48.2	40.0
Italy	2019	513	51.2	9.0	19.4	20.0	50.7	0.9	0.0	53.8	48.8
	2023	638	56.7	7.7	20.8	14.8	56.7	0.0	0.0	58.7	54.6
Korea, Rep. of	2019	551	87.8	1.1	3.0	8.1	87.6	0.2	0.1	87.4	88.2
	2023	358	88.1	0.8	3.6	7.4	87.8	0.0	0.4	90.5	85.7
Lithuania	2019	538	61.5	6.2	15.5	16.7	61.4	0.2	0.0	70.0	52.6
	2023	768	60.5	8.1	15.8	15.5	60.4	0.2	0.0	69.4	51.6
Malaysia	2019	1014	49.7	13.8	19.0	17.1	49.3	0.3	0.4	52.7	46.5
	2023	1231	40.6	19.4	24.6	15.2	40.4	0.2	0.2	45.5	35.2
Norway (9)	2019	663	50.9	7.6	21.3	18.3	49.1	2.6	1.1	55.1	47.0
	2023	886	46.0	8.8	29.3	14.8	45.1	1.0	0.9	51.9	40.9
Portugal	2019	487	74.5	7.2	9.8	8.3	73.8	0.5	0.5	74.4	74.6
	2023	757	60.0	9.8	17.0	13.1	59.8	0.3	0.0	62.6	57.5
Qatar	2019	560	36.7	8.9	26.2	26.4	35.8	2.0	0.7	38.2	35.2
	2023	599	43.9	11.3	26.8	17.5	43.4	0.6	0.5	51.1	37.2
Singapore	2019	691	73.5	7.2	10.1	9.1	73.1	0.2	0.3	77.7	69.9
	2023	401	78.2	3.2	11.4	7.1	78.2	0.0	0.0	81.9	74.8
Sweden	2019	572	33.1	8.2	40.6	16.2	32.2	2.0	0.9	40.8	25.3
	2023	696	40.4	7.4	39.6	11.5	39.6	0.6	1.3	45.9	35.1
United Arab Emirates	2019	3159	49.4	9.9	21.6	18.4	48.6	1.1	0.4	54.1	45.1
	2023	5326	49.2	11.4	24.7	14.3	48.7	0.4	0.5	52.7	45.7
United States	2019	1235	64.5	7.1	17.8	9.7	62.8	1.0	1.5	68.1	60.6
	2023	1153	54.3	9.4	22.8	13.0	53.7	0.1	1.0	55.3	53.4
International Avg. (20)	2019	15069	59.2	8.8	17.3	13.9	58.4	0.9	0.6	63.0	55.3
	2023	18723	56.3	9.9	20.5	12.8	55.8	0.6	0.4	59.9	52.7

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

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Mathematics: Geometry and Measurement / Knowing

B_ME2_09 ME62171: Shaded square reflected over the line XY - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	45.4	13.3	23.5	16.9	44.6	1.1	0.6	51.0	40.4
	2023	2426	41.2	16.5	25.1	16.8	40.9	0.4	0.3	45.1	37.4
Dubai, UAE	2019	804	62.8	4.9	17.6	14.0	61.7	1.5	0.4	68.1	57.6
	2023	1161	64.3	5.7	19.6	10.1	63.7	0.2	0.7	67.1	61.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

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Mathematics: Geometry and Measurement / Reasoning

B_ME2_10 ME62301: Sculpture from solid cube - number of faces - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	17.7	71.9	15.4	10.9	1.8	12.9	22.0
	2023	632	17.1	73.8	15.2	10.0	1.0	12.3	21.6
Chinese Taipei	2019	701	55.8	43.5	55.0	1.3	0.1	56.6	55.0
	2023	475	52.0	47.8	51.7	0.6	0.0	52.2	51.7
England	2019	462	31.7	63.9	29.7	5.6	0.8	32.4	30.8
	2023	582	34.6	63.6	33.6	2.8	0.0	26.1	42.7
Finland	2019	690	15.7	73.9	13.7	11.4	1.0	18.1	13.3
	2023	809	16.7	76.2	15.2	7.9	0.8	15.0	18.5
France	2019	561	25.3	69.7	23.6	6.3	0.4	21.0	29.0
	2023	642	26.4	68.8	24.7	6.3	0.2	20.1	32.7
Georgia	2019	462	12.3	68.5	9.6	19.8	2.1	11.2	13.3
	2023	675	13.0	72.6	10.8	16.3	0.2	9.6	16.6
Hong Kong SAR	2019	463	45.6	52.8	44.3	2.6	0.2	42.2	48.8
	2023	622	46.4	52.5	45.5	1.6	0.3	39.7	53.2
Hungary	2019	641	39.4	58.7	38.2	3.0	0.2	36.6	42.1
	2023	749	33.4	65.5	32.8	1.7	0.0	31.2	35.8
Israel	2019	521	19.8	72.4	17.8	9.5	0.2	16.8	23.2
	2023	722	17.9	75.6	16.5	7.2	0.7	17.1	18.7
Italy	2019	513	23.3	72.0	21.9	6.1	0.0	15.1	31.3
	2023	638	25.3	72.1	24.5	3.4	0.0	23.5	27.3
Korea, Rep. of	2019	551	47.1	51.7	46.0	2.3	0.1	44.8	49.2
	2023	358	50.9	48.1	49.9	1.6	0.4	46.3	55.7
Lithuania	2019	538	31.3	65.7	29.9	4.4	0.0	30.9	31.8
	2023	768	32.4	64.8	31.0	4.2	0.0	32.0	32.7
Malaysia	2019	1014	11.1	86.7	10.8	2.1	0.4	7.8	14.5
	2023	1231	7.3	91.3	7.1	1.2	0.3	6.6	8.0
Norway (9)	2019	663	28.0	62.3	24.3	11.8	1.6	27.8	28.3
	2023	887	28.8	64.7	26.2	8.3	0.9	26.4	30.9
Portugal	2019	487	23.1	71.0	21.3	7.3	0.5	20.8	25.3
	2023	757	21.9	74.7	21.0	4.4	0.0	18.4	25.3
Qatar	2019	560	10.0	80.7	9.0	9.4	0.8	7.7	12.5
	2023	599	14.3	82.9	13.8	2.6	0.7	11.4	17.1
Singapore	2019	691	46.6	52.6	45.9	1.3	0.3	39.8	52.5
	2023	401	45.3	54.4	45.1	0.5	0.0	39.2	51.1
Sweden	2019	572	35.1	56.3	30.4	11.8	1.5	35.4	34.7
	2023	696	32.7	62.2	30.3	6.1	1.4	29.8	35.5
United Arab Emirates	2019	3159	13.8	81.8	13.1	4.7	0.4	13.3	14.2
	2023	5327	17.8	80.1	17.4	1.9	0.6	14.8	20.8
United States	2019	1235	27.8	69.7	26.8	1.9	1.5	22.5	33.3
	2023	1153	22.0	76.7	21.6	0.7	1.0	19.5	24.3
International Avg. (20)	2019	15068	28.0	66.3	26.3	6.7	0.7	25.7	30.3
	2023	18723	27.8	68.4	26.7	4.5	0.4	24.6	31.0

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Geometry and Measurement / Reasoning

B_ME2_10 ME62301: Sculpture from solid cube - number of faces - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	9.1	85.8	8.6	5.0	0.6	8.1	10.0
	2023	2425	13.1	85.1	12.9	1.6	0.4	10.8	15.4
Dubai, UAE	2019	804	26.6	70.0	25.3	4.3	0.5	25.8	27.4
	2023	1163	30.9	66.8	29.9	2.6	0.7	25.8	35.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Geometry and Measurement / Reasoning

B_ME2_11 ME62194: Number of cubes in solid figure - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	67.3	4.1	15.1	63.9	11.8	2.7	2.5	67.6	67.1
	2023	632	62.6	3.1	22.7	60.7	10.4	2.0	1.2	60.9	64.2
Chinese Taipei	2019	701	93.6	0.4	1.8	93.4	4.2	0.1	0.1	94.1	93.1
	2023	475	93.4	0.7	3.2	93.4	2.8	0.0	0.0	93.4	93.4
England	2019	462	72.3	2.4	15.1	70.4	9.5	1.5	1.1	76.5	66.6
	2023	582	75.1	4.2	14.0	75.0	6.6	0.2	0.0	75.2	75.0
Finland	2019	690	80.1	1.5	7.8	78.5	10.2	0.8	1.1	80.2	80.0
	2023	809	80.2	2.0	8.4	79.3	9.0	0.4	0.8	80.2	80.3
France	2019	561	73.9	4.4	11.0	72.5	10.3	1.3	0.5	73.9	73.8
	2023	642	74.6	3.1	13.5	73.9	8.7	0.5	0.4	74.5	74.7
Georgia	2019	460	59.8	7.8	15.8	57.6	15.1	1.5	2.1	66.6	53.8
	2023	676	64.7	7.6	20.1	64.2	7.4	0.5	0.3	67.9	61.4
Hong Kong SAR	2019	463	84.7	1.7	6.7	84.3	6.7	0.3	0.2	88.1	81.6
	2023	623	84.7	0.9	6.7	84.1	7.5	0.3	0.4	81.9	87.6
Hungary	2019	641	78.9	2.1	9.7	78.4	9.1	0.4	0.2	78.1	79.6
	2023	749	77.5	2.3	11.6	77.4	8.6	0.0	0.1	76.1	79.1
Israel	2019	521	74.7	4.7	11.9	73.7	8.4	0.8	0.6	75.1	74.2
	2023	722	70.5	4.5	14.3	69.4	10.2	0.9	0.7	72.8	68.1
Italy	2019	513	75.0	4.1	11.1	73.8	9.3	1.6	0.0	74.9	75.2
	2023	638	71.3	4.4	14.2	70.7	9.8	0.7	0.1	73.3	69.2
Korea, Rep. of	2019	551	92.0	0.6	3.3	91.5	4.1	0.3	0.2	92.5	91.6
	2023	358	89.1	1.1	4.2	88.4	5.5	0.4	0.4	90.7	87.6
Lithuania	2019	538	83.7	0.9	7.5	82.9	7.7	0.9	0.2	85.1	82.3
	2023	768	81.6	1.1	10.1	81.3	7.1	0.4	0.0	82.6	80.5
Malaysia	2019	1014	71.9	7.4	10.3	71.0	10.1	0.6	0.6	75.1	68.4
	2023	1231	60.6	7.4	24.4	60.4	7.4	0.0	0.5	61.3	59.9
Norway (9)	2019	663	80.7	3.3	8.8	77.6	6.5	1.6	2.3	86.5	75.1
	2023	887	79.5	2.4	8.8	77.2	8.7	1.5	1.4	80.6	78.8
Portugal	2019	487	82.4	2.0	6.0	80.8	9.3	0.9	1.1	81.1	83.6
	2023	757	74.0	2.6	13.6	73.7	9.7	0.3	0.2	74.2	73.9
Qatar	2019	560	60.7	6.7	20.5	59.0	10.9	1.9	1.0	62.5	58.7
	2023	599	60.7	8.0	19.2	59.6	11.4	0.9	0.9	59.5	61.8
Singapore	2019	691	88.9	0.9	3.1	88.1	7.0	0.6	0.3	88.5	89.2
	2023	401	90.2	0.8	2.7	89.9	6.3	0.3	0.0	90.6	89.7
Sweden	2019	572	80.1	2.2	8.2	77.6	8.8	1.7	1.5	83.7	76.5
	2023	696	81.3	1.8	9.1	79.1	7.2	1.1	1.6	83.0	79.7
United Arab Emirates	2019	3158	66.8	7.2	15.9	65.5	9.4	1.4	0.6	68.7	65.2
	2023	5327	65.7	6.8	18.1	64.8	9.1	0.6	0.6	65.8	65.5
United States	2019	1235	75.4	3.0	12.6	73.5	8.4	0.6	1.9	78.8	71.9
	2023	1153	71.9	3.9	16.0	71.2	7.9	0.0	1.0	72.0	71.7
International Avg. (20)	2019	15065	77.2	3.4	10.1	75.7	8.8	1.1	0.9	78.9	75.4
	2023	18725	75.5	3.4	12.7	74.7	8.1	0.6	0.5	75.8	75.1

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

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Mathematics: Geometry and Measurement / Reasoning

B_ME2_11 ME62194: Number of cubes in solid figure - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	62.5	9.9	18.5	61.5	8.6	0.9	0.6	65.1	60.1
	2023	2426	60.4	8.9	19.9	59.9	10.5	0.3	0.5	60.6	60.1
Dubai, UAE	2019	804	73.5	4.1	12.4	72.5	9.6	0.7	0.7	74.0	73.0
	2023	1162	75.8	3.6	12.6	74.6	7.6	0.7	0.9	75.7	75.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Data and Probability / Applying
B_ME2_13 ME62320: Fishing histogram - proportion of fish released - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	17.7	14.1	40.6	19.0	15.9	5.5	5.0	13.9	21.1
	2023	632	13.6	12.6	49.3	18.5	12.6	4.8	2.2	10.6	16.3
Chinese Taipei	2019	701	71.4	6.4	13.5	8.5	70.9	0.5	0.1	73.9	68.8
	2023	475	73.6	3.4	11.2	11.7	73.6	0.0	0.0	75.9	71.4
England	2019	462	44.3	8.2	22.4	21.9	41.8	3.5	2.1	47.3	40.3
	2023	582	50.8	5.8	23.6	19.1	50.0	1.3	0.2	44.0	57.3
Finland	2019	690	46.4	8.6	24.9	17.9	44.5	2.5	1.5	48.2	44.5
	2023	809	43.6	7.4	26.3	21.2	42.4	1.5	1.3	40.0	47.6
France	2019	561	27.6	9.5	36.8	21.6	25.8	4.3	2.0	24.4	30.4
	2023	642	29.0	7.5	39.2	22.2	28.1	1.6	1.4	24.3	33.7
Georgia	2019	460	24.9	17.3	33.5	19.5	23.3	3.9	2.6	24.5	25.2
	2023	676	24.6	10.5	40.8	20.0	23.2	3.8	1.7	23.9	25.2
Hong Kong SAR	2019	463	59.6	6.6	17.8	15.7	59.2	0.4	0.2	58.7	60.6
	2023	623	64.2	4.8	16.7	13.9	63.8	0.3	0.4	63.3	65.2
Hungary	2019	641	43.4	9.8	27.3	18.8	42.9	0.9	0.3	40.4	46.5
	2023	749	36.3	8.4	31.5	23.4	36.0	0.6	0.1	29.4	43.8
Israel	2019	521	43.2	7.8	27.3	20.4	42.3	0.8	1.4	42.3	44.3
	2023	722	40.1	7.9	31.0	18.9	38.7	2.2	1.3	37.7	42.6
Italy	2019	513	26.9	7.3	42.2	21.2	26.0	2.5	0.8	18.2	35.0
	2023	638	33.3	7.0	37.8	21.0	32.8	1.1	0.3	31.5	35.2
Korea, Rep. of	2019	551	68.9	4.8	13.4	12.7	68.4	0.4	0.2	68.0	69.8
	2023	358	72.5	4.1	10.9	12.3	71.9	0.0	0.8	72.2	72.7
Lithuania	2019	538	43.9	7.1	23.5	24.5	43.0	1.5	0.5	45.7	42.0
	2023	768	41.4	7.6	29.9	20.3	40.8	1.3	0.1	36.3	46.4
Malaysia	2019	1014	28.1	10.4	34.9	24.9	27.5	1.5	0.8	29.6	26.6
	2023	1231	15.1	14.3	46.7	23.3	15.0	0.2	0.5	15.8	14.4
Norway (9)	2019	663	46.0	9.2	21.6	18.6	42.2	3.0	5.3	47.4	44.7
	2023	887	48.2	7.4	25.1	17.5	46.6	1.7	1.7	49.9	46.8
Portugal	2019	487	32.1	12.3	31.7	20.8	30.6	1.7	2.9	31.8	32.4
	2023	757	22.8	10.7	43.5	21.8	22.4	0.9	0.8	19.5	25.8
Qatar	2019	560	25.2	9.3	39.7	20.7	23.5	4.7	2.1	28.2	22.2
	2023	599	24.1	10.5	41.7	21.4	23.4	1.4	1.5	25.3	23.0
Singapore	2019	691	76.3	3.2	11.0	9.2	75.3	0.9	0.4	78.1	74.8
	2023	401	75.0	3.7	15.0	6.3	74.8	0.3	0.0	73.5	76.3
Sweden	2019	572	50.0	9.1	20.0	17.4	46.5	2.8	4.3	52.9	47.1
	2023	696	55.6	7.5	16.9	18.1	53.3	1.3	2.7	56.7	54.6
United Arab Emirates	2019	3158	29.2	11.3	39.2	18.2	28.3	2.0	1.0	25.7	32.3
	2023	5328	34.2	12.2	34.0	18.1	33.4	1.1	1.2	31.2	37.1
United States	2019	1235	43.7	9.1	24.4	20.8	42.2	0.7	2.7	45.3	42.1
	2023	1153	34.0	9.5	32.2	23.0	33.4	0.3	1.6	29.1	38.4
International Avg. (20)	2019	15065	42.4	9.1	27.3	18.6	41.0	2.2	1.8	42.2	42.5
	2023	18726	41.6	8.1	30.2	18.6	40.8	1.3	1.0	39.5	43.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Data and Probability / Applying
B_ME2_13 ME62320: Fishing histogram - proportion of fish released - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	18.2	14.5	44.2	21.2	17.8	1.7	0.6	17.2	19.1
	2023	2426	26.8	14.3	38.4	19.4	26.3	0.8	0.8	23.7	29.7
Dubai, UAE	2019	804	47.8	5.8	30.4	14.1	45.9	1.9	1.9	43.8	51.6
	2023	1163	52.0	8.7	22.5	15.1	50.3	1.7	1.6	48.9	55.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Data and Probability / Reasoning

B_ME2_14 ME62296: Draw a spinner given chance of outcomes - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	39.5	54.6	35.6	4.2	5.7	36.5	42.2
	2023	632	37.8	58.2	35.3	3.7	2.8	38.6	37.1
Chinese Taipei	2019	701	72.1	27.6	71.4	0.8	0.1	73.8	70.3
	2023	475	74.5	25.4	74.4	0.2	0.0	76.9	72.1
England	2019	462	70.8	27.5	66.5	3.7	2.4	71.6	69.6
	2023	582	68.7	30.5	67.1	1.7	0.7	63.3	73.9
Finland	2019	690	61.7	36.3	58.5	3.5	1.7	62.2	61.2
	2023	809	61.0	37.7	58.9	2.0	1.4	63.3	58.5
France	2019	561	57.0	40.8	54.1	2.6	2.5	56.4	57.5
	2023	642	57.3	41.2	55.3	1.9	1.6	56.2	58.4
Georgia	2019	462	20.0	69.7	17.4	10.1	2.8	18.3	21.5
	2023	676	26.6	68.2	24.7	5.0	2.1	22.7	30.5
Hong Kong SAR	2019	464	67.8	31.6	66.5	1.7	0.2	69.1	66.6
	2023	622	72.0	27.5	70.9	1.1	0.4	72.0	72.0
Hungary	2019	641	60.9	38.5	59.9	1.3	0.3	61.3	60.5
	2023	749	58.9	40.7	58.3	0.9	0.1	55.3	62.8
Israel	2019	521	57.7	40.5	55.2	2.6	1.7	56.9	58.6
	2023	722	46.4	51.4	44.5	1.9	2.2	43.5	49.4
Italy	2019	513	62.0	36.2	59.1	3.6	1.1	55.0	68.9
	2023	638	67.0	32.4	65.7	1.6	0.3	70.5	63.2
Korea, Rep. of	2019	551	76.4	23.3	75.6	0.8	0.2	76.5	76.4
	2023	358	79.6	20.1	78.2	0.9	0.8	79.0	80.1
Lithuania	2019	538	50.0	48.3	48.4	2.6	0.7	49.8	50.3
	2023	768	49.3	48.7	48.3	1.9	0.1	42.9	55.7
Malaysia	2019	1014	44.5	54.6	43.8	0.5	1.1	48.6	40.3
	2023	1231	26.5	73.0	26.3	0.2	0.5	24.4	28.8
Norway (9)	2019	663	60.4	36.1	54.9	3.4	5.7	63.3	57.6
	2023	887	60.2	37.6	56.9	3.6	1.8	63.5	57.5
Portugal	2019	487	61.7	36.3	58.6	1.6	3.5	56.2	67.3
	2023	757	54.6	44.3	53.3	1.6	0.8	51.4	57.7
Qatar	2019	560	39.0	56.7	36.2	4.5	2.6	40.5	37.3
	2023	599	42.1	55.9	40.6	1.6	1.9	43.1	41.2
Singapore	2019	691	77.3	22.5	76.3	0.6	0.6	77.2	77.3
	2023	401	81.1	18.9	81.1	0.0	0.0	80.0	82.0
Sweden	2019	572	66.2	30.0	58.6	6.2	5.2	72.2	60.1
	2023	696	67.4	31.2	64.4	1.7	2.8	70.6	64.1
United Arab Emirates	2019	3159	46.0	52.0	44.4	2.1	1.5	47.7	44.5
	2023	5328	47.2	51.5	46.0	1.1	1.4	45.1	49.2
United States	2019	1235	61.1	37.4	58.7	0.9	3.0	61.7	60.5
	2023	1150	57.7	41.4	56.5	0.5	1.6	57.6	57.9
International Avg. (20)	2019	15069	57.6	40.0	55.0	2.9	2.1	57.7	57.4
	2023	18722	56.8	41.8	55.3	1.7	1.2	56.0	57.6

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Mathematics: Data and Probability / Reasoning

B_ME2_14 ME62296: Draw a spinner given chance of outcomes - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	39.8	58.5	38.6	2.0	0.9	43.3	36.6
	2023	2426	39.5	59.5	38.8	0.8	0.9	37.6	41.3
Dubai, UAE	2019	804	64.6	34.2	62.4	0.8	2.6	64.5	64.7
	2023	1163	68.8	30.3	66.7	1.2	1.9	66.1	71.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Knowing

B_ME4_01 ME62001: 276 x 85 is equal to - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	40.8	12.2	37.5	30.4	11.8	7.8	0.3	41.1	40.6
	2023	644	43.8	13.9	41.5	24.1	15.4	4.6	0.5	40.0	46.8
Chinese Taipei	2019	698	62.9	8.1	62.6	17.5	11.4	0.4	0.1	63.7	62.0
	2023	474	66.0	6.9	66.0	17.8	9.4	0.0	0.0	64.5	67.3
England	2019	481	42.7	12.0	41.5	28.9	14.9	1.8	0.9	38.3	47.0
	2023	604	48.0	13.9	47.3	22.8	14.5	1.3	0.1	43.7	52.2
Finland	2019	695	35.5	10.2	34.5	36.5	16.1	2.5	0.2	32.4	38.0
	2023	811	45.4	13.0	44.5	28.0	12.5	1.7	0.3	46.0	44.8
France	2019	549	39.4	11.0	38.4	28.5	19.5	2.5	0.0	36.6	42.3
	2023	633	41.7	12.3	41.1	29.6	15.6	1.4	0.0	38.2	45.1
Georgia	2019	479	36.9	16.6	35.8	28.7	15.8	3.1	0.0	32.3	41.2
	2023	687	43.1	14.1	42.0	28.7	12.5	2.7	0.0	43.1	43.2
Hong Kong SAR	2019	470	60.6	9.4	59.8	21.3	8.2	1.1	0.2	61.8	59.5
	2023	622	69.6	7.9	68.7	14.8	7.3	1.0	0.3	63.5	76.4
Hungary	2019	647	52.7	11.9	51.9	23.5	11.2	1.4	0.0	50.4	54.9
	2023	765	61.6	8.9	61.3	17.2	12.2	0.5	0.0	62.2	61.0
Israel	2019	543	55.7	10.6	54.9	21.0	12.0	1.3	0.2	56.7	54.6
	2023	732	60.3	10.3	59.5	19.7	9.3	0.8	0.4	58.5	62.0
Italy	2019	528	47.4	10.3	45.4	26.6	13.6	3.7	0.4	45.2	49.5
	2023	646	54.5	12.1	54.1	21.8	11.3	0.6	0.0	52.5	56.5
Korea, Rep. of	2019	552	59.7	9.2	59.3	21.9	9.0	0.5	0.1	57.1	62.2
	2023	364	64.2	7.7	64.2	18.1	10.1	0.0	0.0	62.4	66.1
Lithuania	2019	545	44.1	10.1	43.0	29.2	15.4	2.0	0.3	40.6	47.5
	2023	758	54.4	11.5	54.1	23.6	10.3	0.5	0.0	51.0	57.7
Malaysia	2019	1012	54.2	10.6	54.0	22.9	12.1	0.2	0.2	54.6	53.8
	2023	1245	52.3	14.1	52.2	21.8	11.7	0.2	0.0	52.1	52.4
Norway (9)	2019	656	40.2	14.0	37.5	26.6	15.2	5.8	0.9	43.6	36.6
	2023	889	49.8	13.8	48.4	22.4	12.7	2.0	0.7	49.7	49.8
Portugal	2019	486	40.7	13.0	40.1	28.4	16.9	1.6	0.0	38.4	43.6
	2023	763	50.5	13.1	49.9	21.9	14.0	1.0	0.0	46.2	54.6
Qatar	2019	559	41.1	15.7	39.9	27.9	13.5	3.0	0.0	40.6	41.5
	2023	596	49.3	15.8	48.8	20.7	13.7	0.8	0.1	45.5	53.0
Singapore	2019	699	60.1	9.3	59.4	16.8	13.4	1.1	0.0	63.0	57.2
	2023	403	64.9	10.1	64.9	14.1	11.0	0.0	0.0	64.3	65.3
Sweden	2019	580	36.8	14.0	35.3	29.1	17.4	3.6	0.6	33.5	40.5
	2023	711	51.1	12.4	50.1	24.8	10.8	1.9	0.0	47.0	55.6
United Arab Emirates	2019	3194	44.8	12.6	43.7	28.9	12.5	2.2	0.1	41.6	47.5
	2023	5305	59.5	11.4	58.9	18.0	10.7	0.9	0.2	60.8	58.2
United States	2019	1262	47.7	13.2	47.2	23.6	14.9	0.6	0.5	46.7	48.9
	2023	1154	49.6	16.1	49.2	20.3	13.7	0.5	0.3	49.8	49.6
International Avg. (20)	2019	15219	47.2	11.7	46.1	25.9	13.7	2.3	0.2	45.9	48.5
	2023	18806	54.0	12.0	53.3	21.5	11.9	1.1	0.1	52.1	55.9

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Knowing

B_ME4_01 ME62001: 276 x 85 is equal to - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	42.8	12.6	42.2	31.0	12.8	1.4	0.0	39.6	45.7
	2023	2426	58.4	11.5	57.7	18.4	11.1	1.1	0.2	60.2	56.6
Dubai, UAE	2019	822	53.9	11.7	52.2	22.5	10.4	2.9	0.3	48.2	59.5
	2023	1156	67.2	9.5	66.5	14.2	8.8	1.0	0.0	66.4	67.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Applying
B_ME4_02 ME62214: Ahmed buys ice cream and a book - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	26.4	64.1	23.0	12.3	0.6	22.3	30.1
	2023	644	24.4	66.8	21.5	11.0	0.8	19.4	28.1
Chinese Taipei	2019	698	61.0	38.9	60.9	0.2	0.1	61.1	61.0
	2023	474	65.3	34.3	64.8	0.9	0.0	62.3	68.0
England	2019	481	45.1	49.4	40.5	9.3	0.9	38.6	51.7
	2023	493	48.6	49.2	46.6	4.0	0.1	40.7	56.2
Finland	2019	695	57.0	41.9	55.5	2.4	0.2	53.8	59.7
	2023	809	53.8	44.3	51.6	3.8	0.3	51.0	56.5
France	2019	549	41.2	55.1	38.6	6.3	0.0	36.6	45.9
	2023	632	38.4	60.0	37.4	2.6	0.0	34.8	41.9
Georgia	2019	480	34.4	59.2	31.0	9.8	0.0	31.4	37.2
	2023	688	31.6	61.2	28.2	10.1	0.5	27.9	34.9
Hong Kong SAR	2019	470	51.4	47.5	50.3	2.1	0.2	52.6	50.4
	2023	620	60.6	38.9	59.7	1.2	0.3	58.2	63.2
Hungary	2019	647	41.9	56.2	40.5	3.3	0.0	36.0	47.5
	2023	765	37.8	61.6	37.4	1.0	0.0	29.4	45.7
Israel	2019	543	46.7	50.7	44.4	4.8	0.2	39.1	54.8
	2023	731	43.0	55.1	41.5	2.9	0.4	33.8	51.8
Italy	2019	528	32.2	64.5	30.6	4.6	0.4	25.6	38.5
	2023	646	34.5	64.0	33.7	2.3	0.0	30.2	38.8
Korea, Rep. of	2019	552	62.5	37.0	61.7	1.2	0.1	60.5	64.5
	2023	364	62.5	37.2	62.0	0.8	0.0	57.5	68.0
Lithuania	2019	545	51.0	46.8	48.6	4.3	0.3	50.1	51.8
	2023	758	41.6	57.3	40.8	1.9	0.0	37.0	46.2
Malaysia	2019	1012	19.6	78.8	19.2	1.8	0.2	18.8	20.4
	2023	1245	12.1	87.5	12.1	0.5	0.0	9.8	14.5
Norway (9)	2019	656	57.5	39.4	53.4	6.3	0.9	53.1	62.2
	2023	889	55.9	42.0	53.3	4.1	0.7	55.9	56.0
Portugal	2019	486	35.0	61.8	33.3	4.8	0.2	29.5	41.9
	2023	763	32.6	65.2	31.5	3.3	0.0	29.2	35.9
Qatar	2019	559	21.1	76.0	20.3	3.7	0.0	20.2	21.9
	2023	490	21.9	76.7	21.5	1.7	0.1	19.9	23.9
Singapore	2019	699	71.2	28.7	70.8	0.6	0.0	69.7	72.6
	2023	403	68.2	31.8	68.2	0.0	0.0	61.6	73.8
Sweden	2019	580	54.2	43.5	51.4	4.1	1.0	48.9	60.0
	2023	711	56.9	41.5	54.9	3.2	0.3	51.1	63.4
United Arab Emirates	2019	3198	25.9	72.0	25.2	2.6	0.2	23.0	28.5
	2023	4641	28.2	70.8	27.7	1.2	0.3	23.1	33.0
United States	2019	1262	41.9	57.2	41.2	1.2	0.5	35.8	47.7
	2023	1154	37.6	61.4	37.0	1.3	0.3	32.5	42.3
International Avg. (20)	2019	15224	43.8	53.4	42.0	4.3	0.3	40.3	47.4
	2023	17920	42.8	55.3	41.6	2.9	0.2	38.3	47.1

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Number / Applying

B_ME4_02 ME62214: Ahmed buys ice cream and a book - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	20.9	76.8	20.3	2.7	0.2	22.0	19.9
	2023	2217	21.2	77.6	20.8	1.3	0.4	16.8	25.4
Dubai, UAE	2019	822	37.8	60.7	36.9	2.1	0.3	28.7	46.9
	2023	913	43.7	55.5	43.0	1.5	0.1	36.7	50.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Applying

B_ME4_03 ME62146: Find percent of fir trees in a park given a ratio - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	19.9	18.8	24.7	39.8	11.4	4.7	0.6	16.0	23.3
	2023	644	20.6	19.9	23.8	41.5	11.4	2.1	1.4	14.1	26.0
Chinese Taipei	2019	698	71.0	70.4	14.3	8.6	5.9	0.7	0.1	67.6	74.4
	2023	474	71.6	71.4	9.8	13.4	5.1	0.3	0.0	69.3	73.7
England	2019	481	45.7	44.7	20.9	25.8	6.5	1.3	0.9	43.1	48.2
	2023	604	55.4	55.1	17.2	18.8	8.4	0.3	0.2	53.0	57.8
Finland	2019	695	32.0	31.7	11.0	48.4	8.0	0.5	0.2	32.6	31.4
	2023	811	31.7	31.1	10.9	49.7	6.4	1.6	0.3	33.2	30.2
France	2019	549	16.4	15.9	25.1	49.2	6.8	3.0	0.0	14.3	18.5
	2023	633	20.3	20.1	28.0	43.9	7.3	0.7	0.0	16.8	23.6
Georgia	2019	480	31.4	31.1	26.3	30.1	11.5	1.0	0.0	29.2	33.5
	2023	688	30.9	30.3	25.6	27.9	14.4	1.4	0.5	31.9	29.9
Hong Kong SAR	2019	470	59.9	59.2	8.3	25.0	6.4	0.7	0.4	60.6	59.3
	2023	622	61.1	60.4	9.3	23.6	5.6	0.9	0.3	56.2	66.6
Hungary	2019	647	43.3	43.2	21.6	26.2	8.7	0.3	0.0	42.5	44.2
	2023	765	45.9	45.9	23.3	24.5	6.2	0.0	0.0	39.8	51.8
Israel	2019	543	34.9	34.5	21.4	30.0	13.0	0.9	0.2	36.1	33.5
	2023	733	22.1	21.7	24.0	38.2	14.4	0.9	0.8	22.0	22.2
Italy	2019	528	25.3	24.7	23.4	42.4	7.0	1.9	0.7	20.0	30.8
	2023	646	29.4	29.3	22.6	39.9	7.8	0.4	0.0	23.0	36.0
Korea, Rep. of	2019	552	79.9	79.7	8.0	8.6	3.4	0.2	0.1	80.2	79.6
	2023	364	82.0	82.0	5.5	7.8	4.7	0.0	0.0	85.3	78.3
Lithuania	2019	545	44.7	44.3	17.7	32.1	5.0	0.4	0.5	41.9	47.4
	2023	758	48.3	48.1	20.6	26.9	4.1	0.3	0.0	50.0	46.5
Malaysia	2019	1012	40.4	40.1	29.5	21.3	8.1	0.7	0.2	39.4	41.6
	2023	1245	31.1	31.1	40.3	20.2	8.4	0.1	0.0	28.3	33.9
Norway (9)	2019	656	34.0	33.1	12.1	46.1	6.0	1.9	0.9	28.3	40.1
	2023	889	24.7	24.3	13.9	51.5	8.6	0.9	0.7	22.7	26.3
Portugal	2019	486	20.7	20.5	23.3	50.1	5.2	0.6	0.2	17.5	24.6
	2023	763	16.5	16.4	30.5	47.0	5.4	0.5	0.1	13.4	19.5
Qatar	2019	559	23.6	23.4	31.2	34.5	10.2	0.6	0.1	20.7	26.4
	2023	596	26.8	26.7	30.5	32.7	9.7	0.1	0.3	22.3	31.3
Singapore	2019	699	81.0	80.7	6.4	6.6	6.0	0.4	0.0	80.9	81.0
	2023	403	77.3	77.3	7.6	7.5	7.6	0.0	0.0	74.0	80.1
Sweden	2019	580	17.0	16.6	21.0	53.6	6.5	1.3	1.1	17.7	16.2
	2023	711	21.9	21.5	19.6	52.2	5.1	1.3	0.3	18.9	25.2
United Arab Emirates	2019	3192	30.4	30.0	24.5	33.9	10.2	1.2	0.2	27.4	33.1
	2023	5305	33.9	33.6	24.8	32.4	8.3	0.6	0.3	29.4	38.3
United States	2019	1262	40.2	39.8	13.8	37.6	7.8	0.5	0.6	35.0	45.1
	2023	1154	38.1	37.6	22.0	32.2	6.9	0.6	0.6	34.0	42.1
International Avg. (20)	2019	15218	39.6	39.1	19.2	32.5	7.7	1.1	0.4	37.6	41.6
	2023	18808	39.5	39.2	20.5	31.6	7.8	0.6	0.3	36.9	42.0

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Applying

B_ME4_03 ME62146: Find percent of fir trees in a park given a ratio - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1170	26.1	25.8	28.3	34.8	9.8	1.2	0.2	22.0	29.9
	2023	2426	28.7	28.4	28.4	33.8	8.4	0.6	0.4	25.0	32.3
Dubai, UAE	2019	822	46.1	45.5	16.4	29.5	7.4	1.0	0.3	40.8	51.3
	2023	1156	50.6	50.2	16.1	25.3	7.6	0.6	0.1	44.6	56.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Number / Applying
B_ME4_04 ME62154: Number of eggs Minji needs to bake cookies - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	41.1	53.7	37.5	8.1	0.6	38.9	43.1
	2023	644	38.2	56.5	35.0	7.1	1.4	28.6	45.7
Chinese Taipei	2019	698	85.9	14.0	85.6	0.3	0.1	84.4	87.5
	2023	474	83.8	16.1	83.3	0.6	0.0	83.4	84.0
England	2019	481	63.1	34.7	59.3	5.1	0.9	57.0	69.2
	2023	604	67.1	31.9	65.1	2.8	0.2	61.8	72.3
Finland	2019	695	71.6	27.8	70.1	1.9	0.2	62.8	78.9
	2023	811	70.8	28.5	69.0	2.1	0.3	66.9	74.6
France	2019	549	62.2	35.3	58.0	6.8	0.0	56.4	68.1
	2023	632	60.6	38.0	58.3	3.7	0.0	51.6	69.1
Georgia	2019	480	49.2	46.3	44.8	8.9	0.0	46.1	52.1
	2023	688	54.4	42.2	50.4	7.0	0.5	44.8	63.9
Hong Kong SAR	2019	470	74.8	24.7	73.4	1.4	0.4	74.1	75.4
	2023	622	80.3	19.5	79.8	0.4	0.3	75.3	86.0
Hungary	2019	647	63.6	35.7	62.4	1.9	0.0	60.5	66.6
	2023	765	64.0	35.7	63.5	0.8	0.0	55.0	72.5
Israel	2019	543	59.3	38.7	56.4	4.8	0.2	52.2	66.9
	2023	733	51.7	46.5	49.7	2.9	1.0	42.1	60.8
Italy	2019	528	53.6	43.9	50.8	4.7	0.7	48.9	58.2
	2023	646	57.5	41.5	56.2	2.3	0.0	45.3	69.9
Korea, Rep. of	2019	552	87.1	12.8	86.0	1.0	0.1	85.3	88.9
	2023	364	85.1	14.9	84.9	0.3	0.0	83.4	87.0
Lithuania	2019	545	72.4	26.7	70.1	2.7	0.5	68.3	76.5
	2023	758	66.5	33.1	65.8	1.1	0.0	60.9	72.0
Malaysia	2019	1012	40.3	58.9	39.7	1.2	0.2	39.6	40.9
	2023	1245	31.6	68.3	31.6	0.2	0.0	29.9	33.4
Norway (9)	2019	656	68.6	29.3	64.1	5.6	0.9	62.5	74.9
	2023	889	70.4	28.6	68.1	2.6	0.8	67.6	72.7
Portugal	2019	486	56.7	41.5	54.4	3.9	0.2	50.7	63.7
	2023	763	56.8	42.4	55.8	1.7	0.1	52.0	61.3
Qatar	2019	559	32.4	64.8	31.0	4.1	0.1	29.9	34.8
	2023	595	41.5	57.6	40.8	1.3	0.3	37.0	46.0
Singapore	2019	699	82.0	17.8	81.4	0.8	0.0	84.3	79.8
	2023	403	84.7	15.3	84.7	0.0	0.0	83.2	86.1
Sweden	2019	580	67.8	30.3	63.9	4.7	1.1	66.2	69.6
	2023	711	68.4	30.6	66.2	2.8	0.3	61.1	76.3
United Arab Emirates	2019	3197	40.9	57.4	39.8	2.6	0.2	38.0	43.6
	2023	5298	47.1	52.2	46.4	1.0	0.3	43.2	50.9
United States	2019	1262	55.9	43.1	54.6	1.8	0.6	53.3	58.5
	2023	1154	49.6	49.4	48.7	1.3	0.6	45.4	53.6
International Avg. (20)	2019	15223	61.4	36.9	59.2	3.6	0.4	58.0	64.9
	2023	18799	61.5	37.4	60.2	2.1	0.3	55.9	66.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Number / Applying

B_ME4_04 ME62154: Number of eggs Minji needs to bake cookies - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019 2023	1175 2424	33.2 41.5	65.3 57.5	32.4 40.8	2.0 1.2	0.2 0.5	32.3 38.6	34.1 44.3
Dubai, UAE	2019 2023	822 1155	61.5 63.7	37.6 35.8	60.1 62.9	2.0 1.1	0.3 0.2	57.8 57.3	65.3 69.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

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Mathematics: Algebra / Knowing

B_ME4_05 ME62067: Find value of x when y = 5 - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	55.5	14.8	13.8	51.8	13.0	6.0	0.6	58.0	53.2
	2023	644	53.1	20.1	14.3	50.0	9.8	4.4	1.4	50.7	55.0
Chinese Taipei	2019	698	83.0	5.7	3.3	82.6	7.8	0.4	0.1	85.1	81.0
	2023	474	86.3	5.2	2.3	86.3	6.2	0.0	0.0	84.7	87.7
England	2019	481	69.1	11.6	5.8	66.6	12.5	2.5	1.1	71.1	67.0
	2023	604	71.0	10.1	8.5	69.9	10.0	0.8	0.7	69.0	72.8
Finland	2019	695	72.7	10.8	6.2	71.3	9.8	1.7	0.2	75.8	70.0
	2023	811	67.6	15.3	8.6	66.0	7.8	2.0	0.3	76.0	59.3
France	2019	549	54.3	19.4	11.2	50.7	12.1	6.6	0.0	59.6	48.8
	2023	633	50.6	23.9	13.7	49.9	11.1	1.4	0.0	50.8	50.4
Georgia	2019	479	58.5	24.0	9.0	57.1	7.5	1.7	0.6	56.7	60.2
	2023	688	64.4	20.0	6.9	63.0	7.9	1.6	0.5	64.2	64.6
Hong Kong SAR	2019	470	84.2	7.9	2.6	82.9	5.1	1.1	0.4	84.2	84.2
	2023	622	85.6	7.0	3.5	85.2	3.8	0.3	0.3	83.5	88.0
Hungary	2019	647	75.1	10.0	5.3	74.1	9.3	1.3	0.0	77.1	73.1
	2023	765	74.0	13.1	6.9	73.9	6.0	0.2	0.0	75.2	72.9
Israel	2019	543	73.2	12.8	5.9	72.2	7.7	1.2	0.2	73.5	72.9
	2023	733	71.7	13.2	9.5	70.2	5.1	1.0	1.0	74.2	69.2
Italy	2019	528	61.6	15.3	11.4	59.5	10.5	2.5	0.9	60.5	62.7
	2023	646	67.2	15.7	8.1	66.2	8.6	1.5	0.0	67.6	66.7
Korea, Rep. of	2019	552	86.2	5.1	3.4	85.3	5.2	0.8	0.1	85.9	86.4
	2023	364	85.9	3.7	3.4	85.6	7.0	0.3	0.0	89.1	82.3
Lithuania	2019	545	70.7	10.3	5.1	69.9	13.5	0.7	0.5	71.6	69.9
	2023	758	68.5	16.6	7.3	68.1	7.4	0.7	0.0	74.5	62.6
Malaysia	2019	1012	60.7	17.2	9.6	60.2	12.2	0.6	0.2	63.8	57.5
	2023	1245	52.4	23.7	12.1	52.4	11.7	0.1	0.0	52.6	52.2
Norway (9)	2019	656	72.3	9.2	7.5	66.3	8.6	7.0	1.2	73.5	71.2
	2023	889	69.1	13.1	9.3	66.9	7.6	2.4	0.8	71.7	67.0
Portugal	2019	486	55.8	13.9	12.6	54.7	16.8	1.6	0.4	59.4	51.4
	2023	763	55.4	18.5	15.8	55.0	10.0	0.6	0.1	55.3	55.5
Qatar	2019	559	56.3	19.9	10.5	55.9	12.9	0.6	0.1	56.3	56.4
	2023	596	57.9	19.2	10.1	56.8	12.0	0.9	0.9	60.1	55.6
Singapore	2019	699	83.5	10.1	2.6	82.6	3.6	1.1	0.0	85.0	82.1
	2023	403	82.0	11.4	4.0	82.0	2.7	0.0	0.0	83.2	80.9
Sweden	2019	580	68.7	10.6	7.5	66.3	12.0	2.0	1.5	70.1	67.2
	2023	711	69.9	13.8	7.2	68.7	8.6	1.4	0.3	71.6	68.0
United Arab Emirates	2019	3197	65.1	14.6	7.9	63.9	11.8	1.6	0.3	67.2	63.2
	2023	5305	65.6	17.0	7.5	65.1	9.7	0.3	0.4	68.0	63.1
United States	2019	1262	69.6	9.0	8.6	68.7	12.4	0.5	0.8	72.7	66.8
	2023	1154	67.0	13.9	9.2	65.9	9.4	0.7	1.0	70.8	63.6
International Avg. (20)	2019	15222	68.8	12.6	7.5	67.2	10.2	2.1	0.5	70.4	67.3
	2023	18808	68.2	14.7	8.4	67.4	8.1	1.0	0.4	69.6	66.9

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Knowing

B_ME4_05 ME62067: Find value of x when y = 5 - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1173	58.3	18.6	9.0	57.4	13.5	1.3	0.2	61.8	55.0
	2023	2426	61.6	18.8	8.8	60.9	10.4	0.5	0.6	64.9	58.3
Dubai, UAE	2019	822	77.8	8.3	5.1	76.4	8.4	1.5	0.3	78.0	77.7
	2023	1156	75.4	10.9	5.8	75.1	7.8	0.1	0.3	76.7	74.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Knowing

B_ME4_06 ME62341: Slope of line $y = 3x - 1$ - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	27.4	22.4	28.3	12.7	24.0	11.9	0.6	29.5	25.6
	2023	644	23.9	26.3	27.0	17.4	22.3	5.5	1.4	21.1	26.2
Chinese Taipei	2019	698	29.1	15.8	26.8	27.9	28.9	0.6	0.1	25.1	33.0
	2023	474	20.6	15.0	36.1	27.8	20.5	0.6	0.0	15.0	25.5
England	2019	481	30.2	16.2	31.2	18.0	28.4	5.1	1.1	26.3	34.4
	2023	604	34.0	17.4	30.9	14.6	32.5	3.9	0.7	32.1	35.8
Finland	2019	695	31.7	18.8	28.6	16.5	29.5	6.4	0.2	37.9	26.5
	2023	811	36.8	17.1	26.2	18.0	35.6	2.8	0.3	38.4	35.2
France	2019	549	24.2	27.7	26.1	14.8	21.9	9.5	0.0	25.2	23.2
	2023	633	30.6	25.7	23.9	16.7	29.3	4.4	0.0	30.4	30.8
Georgia	2019	480	25.4	26.4	27.6	14.4	23.3	7.6	0.6	22.7	27.8
	2023	688	34.3	27.0	18.7	16.7	32.5	4.5	0.7	33.9	34.6
Hong Kong SAR	2019	470	26.8	15.8	28.3	25.8	25.6	4.1	0.4	26.3	27.2
	2023	622	25.1	19.8	26.5	27.6	24.7	1.1	0.3	21.3	29.4
Hungary	2019	647	33.1	18.9	28.7	18.1	32.5	1.9	0.0	36.3	30.1
	2023	765	31.1	16.1	31.0	21.0	30.8	1.2	0.0	29.4	32.8
Israel	2019	543	65.1	11.0	14.1	9.2	64.2	0.9	0.5	66.8	63.3
	2023	733	56.1	13.9	16.8	12.1	54.8	1.3	1.0	59.2	53.1
Italy	2019	528	23.5	28.5	23.8	19.0	21.9	6.0	0.9	26.4	20.6
	2023	646	26.0	24.1	26.3	21.4	25.3	2.9	0.0	28.2	23.8
Korea, Rep. of	2019	552	61.1	9.8	19.2	9.5	60.5	0.8	0.1	56.6	65.5
	2023	364	66.2	9.7	16.5	7.6	66.2	0.0	0.0	65.1	67.3
Lithuania	2019	545	27.3	23.9	20.5	25.1	26.0	4.0	0.5	25.8	28.7
	2023	758	30.2	25.7	18.4	24.4	29.7	1.9	0.0	28.6	31.9
Malaysia	2019	1012	27.2	25.0	26.3	19.7	26.6	2.3	0.2	28.7	25.8
	2023	1245	23.4	31.4	30.1	14.8	23.3	0.3	0.1	22.6	24.1
Norway (9)	2019	656	27.7	11.2	33.0	19.6	24.4	9.8	2.0	25.4	30.3
	2023	889	23.4	15.4	30.3	25.2	21.6	6.5	1.0	20.3	25.7
Portugal	2019	486	37.9	27.3	20.3	12.0	36.4	3.7	0.4	40.6	34.6
	2023	763	34.2	28.3	25.4	11.2	33.8	1.2	0.1	33.1	35.3
Qatar	2019	559	34.8	25.2	21.1	16.2	33.4	3.8	0.1	33.6	36.0
	2023	596	37.6	22.1	24.9	13.8	36.7	1.5	0.9	35.4	39.9
Singapore	2019	699	49.3	14.2	21.7	14.4	48.9	0.8	0.0	48.4	50.2
	2023	403	45.8	18.0	25.0	11.3	45.8	0.0	0.0	48.3	43.6
Sweden	2019	580	21.5	14.2	33.3	23.6	19.4	8.0	1.5	23.6	19.3
	2023	711	22.9	19.0	33.1	21.7	22.0	3.9	0.3	18.1	28.1
United Arab Emirates	2019	3195	40.0	22.4	20.7	15.1	38.7	2.8	0.4	40.0	39.9
	2023	5305	45.5	20.6	20.1	12.9	44.7	1.3	0.5	44.9	46.1
United States	2019	1262	59.4	15.6	14.1	10.1	58.3	1.2	0.8	60.2	58.8
	2023	1154	52.0	18.8	16.9	11.5	51.1	0.6	1.0	54.1	50.2
International Avg. (20)	2019	15221	35.1	19.5	24.7	17.1	33.6	4.6	0.5	35.3	35.0
	2023	18808	35.0	20.6	25.2	17.4	34.1	2.3	0.4	34.0	36.0

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Knowing

B_ME4_06 ME62341: Slope of line $y = 3x - 1$ - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1173	34.9	24.0	19.9	19.3	33.8	2.7	0.4	38.6	31.5
	2023	2426	40.8	22.3	21.4	14.5	40.1	1.0	0.7	40.1	41.4
Dubai, UAE	2019	822	48.9	15.5	22.7	11.4	47.4	2.7	0.3	46.8	51.0
	2023	1156	56.2	15.8	18.8	8.4	55.3	1.4	0.4	54.0	58.3

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Reasoning

B_ME4_07 ME62242: Relationship for a linear graph in words - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	37.4	35.2	28.4	16.8	13.8	5.0	0.8	31.5	42.8
	2023	644	37.6	35.9	28.6	17.1	13.9	2.9	1.7	30.8	43.2
Chinese Taipei	2019	698	78.6	78.1	8.2	7.9	5.1	0.6	0.1	78.3	78.9
	2023	474	80.2	80.0	7.0	7.9	4.8	0.3	0.0	79.8	80.5
England	2019	481	62.4	59.5	18.2	11.3	6.3	3.6	1.1	60.3	64.6
	2023	604	65.4	64.0	16.3	11.9	5.7	1.2	0.9	61.4	69.1
Finland	2019	695	61.9	60.7	18.9	10.2	8.2	1.7	0.3	62.3	61.6
	2023	811	61.1	59.7	17.3	13.4	7.4	1.9	0.3	57.7	64.4
France	2019	549	48.6	46.9	27.7	10.1	11.7	3.6	0.0	43.3	54.2
	2023	633	41.6	40.9	26.8	17.2	13.4	1.7	0.0	37.7	45.3
Georgia	2019	479	49.6	47.7	24.2	15.7	8.6	3.2	0.6	48.6	50.5
	2023	688	49.9	48.3	24.0	16.1	8.4	2.1	1.0	46.8	53.0
Hong Kong SAR	2019	470	66.8	66.2	12.3	12.8	7.8	0.6	0.4	61.5	71.3
	2023	622	63.3	62.3	15.6	11.5	8.9	1.5	0.3	57.8	69.5
Hungary	2019	647	63.1	62.5	18.3	13.9	4.2	1.1	0.0	62.5	63.8
	2023	765	63.9	63.8	16.5	11.8	7.8	0.2	0.0	55.4	71.9
Israel	2019	543	62.4	61.1	17.6	11.2	8.1	1.5	0.5	58.7	66.4
	2023	733	60.0	59.1	18.4	12.3	8.6	0.5	1.1	56.2	63.8
Italy	2019	528	59.6	57.5	17.3	13.9	7.7	2.7	0.9	57.4	61.8
	2023	646	56.0	55.4	17.4	19.3	6.8	1.0	0.0	53.5	58.6
Korea, Rep. of	2019	552	71.9	71.4	11.5	12.4	3.9	0.6	0.1	71.8	72.1
	2023	364	80.4	80.2	9.6	7.1	2.9	0.2	0.0	84.0	76.3
Lithuania	2019	545	59.4	58.5	19.5	11.1	9.4	1.0	0.5	54.1	64.4
	2023	758	57.6	57.3	19.1	12.2	10.8	0.5	0.0	57.0	58.2
Malaysia	2019	1012	48.5	48.2	20.9	14.1	16.2	0.5	0.2	47.3	49.8
	2023	1245	39.8	39.7	25.9	15.4	18.7	0.3	0.1	38.8	40.9
Norway (9)	2019	656	55.6	52.3	20.4	14.1	7.2	3.8	2.1	51.6	60.1
	2023	889	55.4	53.2	21.0	13.0	8.8	2.6	1.4	50.2	59.6
Portugal	2019	486	58.9	57.9	19.2	14.7	6.5	1.3	0.4	56.3	62.0
	2023	763	56.8	56.0	17.9	15.0	9.7	1.3	0.1	53.0	60.4
Qatar	2019	559	51.3	50.7	26.4	13.8	7.8	1.1	0.1	48.8	53.8
	2023	596	54.8	54.1	25.7	11.8	7.1	0.4	0.9	54.5	55.1
Singapore	2019	699	78.2	77.7	9.2	8.9	3.5	0.6	0.0	78.1	78.3
	2023	403	78.5	78.5	8.9	8.3	4.2	0.0	0.0	76.5	80.3
Sweden	2019	580	59.1	55.9	18.7	12.0	8.1	3.2	2.2	56.3	62.1
	2023	711	63.2	61.6	17.5	9.9	8.5	2.1	0.4	56.6	70.2
United Arab Emirates	2019	3192	54.7	53.7	24.6	13.0	6.8	1.5	0.4	56.0	53.6
	2023	5305	58.8	58.2	22.9	11.5	6.3	0.4	0.7	56.3	61.3
United States	2019	1262	68.8	67.8	15.3	10.2	5.2	0.6	0.9	66.1	71.5
	2023	1154	62.5	61.4	17.9	11.7	7.1	0.8	1.0	60.9	64.2
International Avg. (20)	2019	15217	59.9	58.5	18.8	12.4	7.8	1.9	0.6	57.5	62.2
	2023	18808	59.3	58.5	18.7	12.7	8.5	1.1	0.5	56.2	62.3

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Algebra / Reasoning

B_ME4_07 ME62242: Relationship for a linear graph in words - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	45.4	44.7	30.7	15.6	7.4	1.1	0.5	49.0	42.2
	2023	2426	51.1	50.4	30.1	11.4	6.7	0.5	0.9	49.0	53.1
Dubai, UAE	2019	822	71.7	70.7	13.9	9.5	4.5	1.0	0.3	69.0	74.4
	2023	1156	73.4	72.6	12.1	9.3	4.9	0.5	0.7	69.6	77.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Geometry and Measurement / Applying
B_ME4_08A ME62250A: Julia's hexagon box - decorated strip - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	39.8	51.7	34.3	13.1	0.9	40.1	39.6
	2023	644	41.7	48.8	34.9	14.6	1.7	37.0	45.4
Chinese Taipei	2019	698	77.1	22.7	76.3	1.0	0.1	78.2	76.0
	2023	474	82.7	17.0	81.2	1.7	0.0	82.6	82.7
England	2019	481	47.1	45.8	40.7	12.1	1.3	44.9	49.3
	2023	604	56.6	40.6	53.0	5.4	0.9	58.6	54.7
Finland	2019	695	68.4	29.6	64.2	5.9	0.3	75.7	62.5
	2023	810	61.1	37.2	58.4	4.1	0.3	66.4	55.8
France	2019	549	60.7	35.4	54.7	9.9	0.0	57.3	64.2
	2023	632	61.3	36.1	57.2	6.7	0.0	62.9	59.7
Georgia	2019	480	42.1	45.9	33.3	20.2	0.6	40.2	43.9
	2023	688	50.9	42.3	43.7	13.0	1.0	49.6	52.1
Hong Kong SAR	2019	470	61.4	36.5	58.1	4.8	0.6	63.9	59.3
	2023	622	70.1	28.2	66.2	5.3	0.3	67.3	73.2
Hungary	2019	647	45.7	51.7	43.5	4.9	0.0	44.3	47.0
	2023	765	41.7	57.3	41.0	1.6	0.0	39.9	43.4
Israel	2019	543	52.5	43.1	47.5	8.9	0.5	51.8	53.1
	2023	733	56.0	41.3	52.6	5.0	1.1	56.8	55.3
Italy	2019	528	60.5	35.9	55.1	8.0	1.0	59.9	61.2
	2023	646	66.0	31.7	61.5	6.8	0.0	63.6	68.3
Korea, Rep. of	2019	552	72.0	27.5	71.0	1.4	0.1	71.8	72.3
	2023	364	79.6	20.2	78.7	1.1	0.0	81.4	77.6
Lithuania	2019	545	67.0	31.4	63.9	4.2	0.5	65.4	68.7
	2023	758	67.0	31.5	63.8	4.7	0.0	67.0	67.0
Malaysia	2019	1012	33.0	65.4	32.2	2.2	0.2	33.7	32.3
	2023	1245	27.8	71.6	27.6	0.6	0.1	25.4	30.3
Norway (9)	2019	656	60.1	35.1	52.8	10.0	2.2	63.9	56.2
	2023	889	59.1	37.8	54.7	5.9	1.6	62.3	56.5
Portugal	2019	486	51.1	45.4	47.4	6.8	0.4	51.1	51.0
	2023	763	48.6	49.7	47.0	3.3	0.1	49.1	48.2
Qatar	2019	559	25.3	70.6	24.0	5.3	0.1	27.3	23.4
	2023	595	32.6	64.9	31.4	2.7	0.9	31.5	33.7
Singapore	2019	699	73.0	26.5	71.6	1.9	0.0	74.0	72.0
	2023	403	74.0	25.9	73.8	0.3	0.0	73.4	74.6
Sweden	2019	580	64.0	30.5	54.1	12.9	2.5	66.0	61.6
	2023	711	53.0	42.9	48.4	8.3	0.4	53.2	52.8
United Arab Emirates	2019	3198	32.7	63.4	30.8	5.4	0.4	33.0	32.4
	2023	5303	36.3	61.2	34.9	3.1	0.8	35.2	37.4
United States	2019	1262	43.5	54.4	41.8	2.8	1.0	41.1	45.7
	2023	1154	42.2	55.7	40.6	2.5	1.2	44.3	40.2
International Avg. (20)	2019	15224	53.8	42.4	49.9	7.1	0.6	54.2	53.6
	2023	18803	55.4	42.1	52.5	4.8	0.5	55.4	55.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Geometry and Measurement / Applying
B_ME4_08A ME62250A: Julia's hexagon box - decorated strip - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019 2023	1175 2425	23.7 26.7	73.1 70.3	22.7 25.6	3.8 3.1	0.5 1.0	25.6 26.7	22.0 26.6
Dubai, UAE	2019 2023	822 1156	53.4 56.7	43.6 41.3	49.9 54.1	6.2 3.8	0.3 0.7	51.3 53.5	55.3 59.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Geometry and Measurement / Applying
B_ME4_08B ME62250B: Julia's hexagon box - blue paper for sides - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	10.3	71.4	8.2	19.1	1.3	11.1	9.6
	2023	644	8.5	70.6	6.5	20.8	2.0	8.6	8.4
Chinese Taipei	2019	698	62.8	36.0	60.7	3.2	0.1	63.5	62.1
	2023	474	65.8	33.2	63.9	2.9	0.0	64.6	66.8
England	2019	481	25.4	59.0	20.1	19.4	1.5	23.2	27.5
	2023	604	29.2	64.0	26.4	8.6	1.1	29.0	29.4
Finland	2019	695	33.2	57.5	28.7	12.8	1.0	34.2	32.4
	2023	811	29.3	65.3	27.0	7.3	0.3	31.5	27.1
France	2019	549	26.4	55.6	19.9	24.1	0.4	24.4	28.2
	2023	633	23.4	62.7	19.2	17.9	0.2	25.2	21.7
Georgia	2019	480	12.9	63.1	9.3	26.1	1.5	17.3	8.8
	2023	688	21.0	59.3	15.8	23.5	1.4	16.6	25.3
Hong Kong SAR	2019	470	43.0	50.7	38.2	10.5	0.6	43.6	42.5
	2023	621	40.2	53.3	35.8	10.4	0.5	36.0	45.0
Hungary	2019	647	20.7	66.9	17.5	15.7	0.0	22.6	19.0
	2023	765	15.3	77.9	14.1	8.0	0.0	11.5	18.9
Israel	2019	543	31.3	57.2	26.0	16.1	0.7	31.8	30.7
	2023	733	21.5	67.0	18.3	13.4	1.3	22.5	20.5
Italy	2019	528	38.0	50.8	31.1	16.8	1.2	42.6	33.7
	2023	646	38.6	51.7	32.6	15.7	0.0	32.4	44.9
Korea, Rep. of	2019	552	63.0	36.1	61.5	2.3	0.1	62.9	63.1
	2023	364	64.9	34.3	63.4	2.4	0.0	67.5	62.0
Lithuania	2019	545	40.8	52.0	35.9	11.7	0.5	37.9	43.8
	2023	758	36.4	57.7	33.1	9.2	0.0	35.4	37.5
Malaysia	2019	1012	16.4	81.1	16.0	2.7	0.3	16.9	15.9
	2023	1245	7.1	90.8	6.9	2.1	0.1	6.7	7.5
Norway (9)	2019	656	23.8	59.0	18.5	19.9	2.6	22.5	25.4
	2023	889	24.9	61.2	20.3	16.6	1.8	23.6	26.0
Portugal	2019	486	19.8	67.4	16.7	15.2	0.7	18.9	20.9
	2023	762	17.9	71.8	15.6	12.4	0.2	18.0	17.8
Qatar	2019	559	7.8	83.4	7.1	9.2	0.3	7.5	8.1
	2023	596	12.2	81.4	11.4	6.0	1.2	10.2	14.4
Singapore	2019	699	57.4	41.0	55.2	3.8	0.1	53.3	61.5
	2023	403	48.8	49.8	47.5	2.6	0.0	51.6	46.5
Sweden	2019	580	32.7	53.0	25.7	18.6	2.7	37.0	27.4
	2023	711	32.9	57.9	28.4	13.2	0.5	33.4	32.4
United Arab Emirates	2019	3199	18.9	75.0	17.5	7.0	0.5	19.8	18.2
	2023	5304	19.6	74.9	18.3	5.6	1.2	17.6	21.5
United States	2019	1262	27.9	68.8	26.6	3.2	1.4	25.8	29.8
	2023	1154	19.3	77.1	18.4	3.0	1.6	19.2	19.4
International Avg. (20)	2019	15225	30.6	59.2	27.0	12.9	0.9	30.8	30.4
	2023	18805	28.8	63.1	26.1	10.1	0.7	28.0	29.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Geometry and Measurement / Applying
B_ME4_08B ME62250B: Julia's hexagon box - blue paper for sides - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1175	10.2	85.3	9.7	4.6	0.5	12.0	8.6
	2023	2426	12.9	81.6	12.1	4.8	1.4	12.2	13.6
Dubai, UAE	2019	822	33.3	60.1	30.0	9.2	0.7	32.4	34.2
	2023	1156	35.0	59.7	32.2	6.9	1.3	32.4	37.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

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Mathematics: Geometry and Measurement / Reasoning

B_ME4_09 ME62170: Fill in table for number of faces coated with paint (DERIVED) - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	28.6	41.3	33.9	6.4	17.0	1.3	26.5	30.5
	2023	644	25.2	47.6	31.4	5.6	13.4	2.0	24.8	25.6
Chinese Taipei	2019	698	47.3	37.8	28.4	32.4	1.4	0.1	44.4	50.1
	2023	474	52.1	31.5	31.5	35.7	1.2	0.0	51.7	52.5
England	2019	481	35.8	39.6	36.2	14.1	8.6	1.5	35.5	36.2
	2023	604	36.5	40.6	38.1	15.3	5.0	1.1	33.8	39.2
Finland	2019	695	39.5	32.8	45.2	13.6	7.4	1.0	39.1	39.8
	2023	810	37.8	36.6	44.4	13.6	5.2	0.3	39.3	36.3
France	2019	549	36.1	34.3	45.9	9.4	10.0	0.4	34.6	37.6
	2023	630	38.3	34.5	48.2	12.3	4.8	0.2	37.5	39.1
Georgia	2019	480	29.2	43.4	31.4	8.6	15.1	1.5	30.2	28.2
	2023	688	29.2	42.7	35.6	7.1	13.1	1.4	30.7	27.7
Hong Kong SAR	2019	470	43.6	37.0	32.5	24.9	5.1	0.6	43.9	43.3
	2023	621	44.3	38.8	29.8	27.9	2.9	0.5	40.5	48.6
Hungary	2019	647	48.2	29.5	40.5	26.0	4.0	0.0	48.7	47.7
	2023	765	41.8	37.1	40.9	20.9	1.1	0.0	41.6	42.0
Israel	2019	543	34.0	41.2	35.0	12.8	9.9	1.1	35.6	32.5
	2023	733	32.5	39.7	43.3	7.9	7.4	1.7	35.1	30.2
Italy	2019	528	39.5	31.3	47.0	12.2	8.3	1.2	40.0	38.9
	2023	646	39.8	31.8	49.6	12.6	5.8	0.2	36.4	43.2
Korea, Rep. of	2019	552	54.9	20.6	47.1	30.2	1.7	0.4	52.8	57.0
	2023	364	54.2	22.7	45.4	31.1	0.7	0.0	53.6	54.9
Lithuania	2019	545	46.6	25.5	47.1	19.2	7.6	0.5	46.2	46.9
	2023	757	42.4	33.1	44.0	18.6	4.2	0.0	43.8	41.0
Malaysia	2019	1012	28.3	49.0	41.2	6.9	2.6	0.3	28.8	27.8
	2023	1245	24.3	55.6	38.7	4.7	0.7	0.3	22.4	26.3
Norway (9)	2019	656	39.6	36.0	29.3	18.5	13.3	2.8	40.5	38.9
	2023	889	38.5	40.6	29.4	19.9	8.1	2.1	40.5	36.9
Portugal	2019	486	31.4	44.9	39.7	9.8	4.9	0.7	31.7	31.0
	2023	763	32.3	43.9	43.0	9.7	2.8	0.5	33.5	31.2
Qatar	2019	559	25.7	50.7	39.1	4.8	5.0	0.3	29.8	21.7
	2023	596	32.3	40.6	46.3	7.2	4.1	1.7	31.4	33.1
Singapore	2019	699	50.9	32.8	31.2	34.6	1.4	0.1	49.9	52.0
	2023	403	54.2	30.2	31.2	38.6	0.0	0.0	54.4	54.1
Sweden	2019	580	38.8	38.6	32.1	18.7	7.7	3.0	40.1	37.4
	2023	711	37.7	40.9	34.8	17.8	6.0	0.5	36.4	39.1
United Arab Emirates	2019	3196	30.0	46.6	40.1	8.5	4.3	0.6	29.7	30.3
	2023	5305	32.4	43.6	43.1	9.7	2.2	1.3	32.0	32.8
United States	2019	1262	34.4	42.7	41.5	12.5	1.9	1.5	35.5	33.3
	2023	1154	33.2	42.9	44.5	10.2	0.9	1.6	34.2	32.3
International Avg. (20)	2019	15222	38.1	37.8	38.2	16.2	6.9	0.9	38.2	38.0
	2023	18802	38.0	38.7	39.7	16.3	4.5	0.8	37.7	38.3

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Geometry and Measurement / Reasoning

B_ME4_09 ME62170: Fill in table for number of faces coated with paint (DERIVED) - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	24.2	54.4	38.4	4.3	2.4	0.5	25.8	22.7
	2023	2426	28.8	47.0	42.9	6.2	2.3	1.5	28.3	29.2
Dubai, UAE	2019	822	40.7	36.2	38.8	18.7	5.5	0.7	36.8	44.5
	2023	1156	39.3	38.5	39.6	18.0	2.4	1.5	37.7	40.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Geometry and Measurement / Applying

B_ME4_10 ME62192: Distance from base of ladder to base of building - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	10.9	77.8	9.5	10.8	1.9	8.1	13.3
	2023	643	14.1	77.0	12.6	8.0	2.4	11.1	16.5
Chinese Taipei	2019	698	71.5	28.1	70.6	1.2	0.1	70.4	72.6
	2023	474	71.3	28.4	70.6	1.0	0.0	70.6	71.9
England	2019	481	15.6	74.8	13.9	9.8	1.5	15.0	16.3
	2023	603	15.8	79.7	15.0	4.2	1.1	10.6	21.0
Finland	2019	695	15.9	80.0	15.2	3.9	1.0	16.2	15.7
	2023	810	16.5	80.9	16.0	2.8	0.4	17.1	15.9
France	2019	549	16.1	75.5	14.5	9.1	0.9	13.5	18.6
	2023	632	16.7	78.7	15.7	5.0	0.5	16.2	17.1
Georgia	2019	481	13.0	83.0	12.4	3.1	1.5	12.4	13.5
	2023	687	19.8	75.0	18.5	4.3	2.2	16.9	22.7
Hong Kong SAR	2019	470	54.4	43.9	52.3	3.2	0.6	57.1	52.0
	2023	622	55.5	42.8	53.3	3.3	0.5	50.8	60.7
Hungary	2019	647	23.0	74.8	22.3	2.9	0.0	19.9	25.8
	2023	765	22.5	76.5	22.1	1.4	0.0	21.7	23.2
Israel	2019	543	18.7	75.3	17.3	6.3	1.1	19.1	18.3
	2023	732	11.8	83.5	11.2	3.1	2.3	11.0	12.5
Italy	2019	528	38.6	57.5	36.2	4.8	1.5	38.1	39.1
	2023	646	40.5	57.3	39.1	3.4	0.2	32.8	48.4
Korea, Rep. of	2019	552	25.6	72.5	25.0	2.2	0.4	22.7	28.5
	2023	364	52.0	47.6	51.6	0.8	0.0	46.7	57.8
Lithuania	2019	545	25.2	71.3	24.0	4.3	0.5	22.5	27.8
	2023	758	36.9	61.6	36.0	2.5	0.0	37.7	36.1
Malaysia	2019	1012	16.7	80.9	16.2	2.3	0.6	19.0	14.2
	2023	1245	11.0	87.7	10.9	0.9	0.5	10.1	11.9
Norway (9)	2019	656	15.6	76.0	14.1	7.0	3.0	15.5	15.7
	2023	889	21.1	73.6	19.7	4.4	2.4	20.2	21.9
Portugal	2019	486	31.6	63.0	29.0	6.5	1.5	33.2	29.6
	2023	763	24.5	71.1	23.0	4.9	1.0	26.0	23.0
Qatar	2019	559	7.2	88.2	6.8	4.5	0.4	7.9	6.5
	2023	596	15.5	81.0	14.8	2.3	1.9	13.3	17.6
Singapore	2019	699	67.8	31.8	66.9	1.1	0.2	68.4	67.1
	2023	403	61.3	38.6	61.2	0.2	0.0	57.3	64.8
Sweden	2019	580	5.8	84.1	5.2	7.4	3.2	6.9	4.7
	2023	711	7.1	86.9	6.7	5.6	0.9	6.1	8.1
United Arab Emirates	2019	3196	20.5	76.5	19.7	3.2	0.6	20.8	20.2
	2023	5305	25.5	72.2	24.7	1.6	1.6	23.0	27.8
United States	2019	1262	29.7	67.7	28.6	1.9	1.7	29.3	30.2
	2023	1154	19.8	77.6	19.1	1.3	2.0	17.7	21.8
International Avg. (20)	2019	15223	26.2	69.1	25.0	4.8	1.1	25.8	26.5
	2023	18802	28.0	68.9	27.1	3.0	1.0	25.9	30.0

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Mathematics: Geometry and Measurement / Applying

B_ME4_10 ME62192: Distance from base of ladder to base of building - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	12.4	84.9	12.0	2.6	0.5	13.0	11.9
	2023	2426	16.2	80.8	15.7	1.8	1.7	14.4	18.0
Dubai, UAE	2019	822	33.9	62.9	32.3	4.1	0.7	33.9	33.9
	2023	1156	43.1	55.0	41.7	1.7	1.6	39.8	46.1

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Mathematics: Data and Probability / Applying
B_ME4_11 ME62072: Graph for Charles' walk or bike to Olympic park - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	35.7	59.5	33.0	5.7	1.9	32.6	38.4
	2023	644	32.9	61.9	30.3	5.1	2.7	27.1	37.7
Chinese Taipei	2019	698	61.5	38.3	61.1	0.4	0.1	63.7	59.2
	2023	474	66.0	33.9	65.8	0.3	0.0	65.6	66.3
England	2019	481	62.2	35.8	58.9	3.8	1.5	61.2	63.2
	2023	604	68.3	31.1	67.0	0.8	1.1	67.4	69.2
Finland	2019	695	55.5	42.9	53.6	2.4	1.1	57.0	54.4
	2023	811	52.8	46.1	51.5	1.7	0.8	55.3	50.3
France	2019	549	67.3	31.1	64.0	3.6	1.4	64.5	70.3
	2023	633	58.9	40.3	57.6	1.5	0.5	57.0	60.7
Georgia	2019	481	38.5	56.8	35.5	6.0	1.6	38.1	38.8
	2023	688	37.7	58.9	35.6	3.0	2.5	32.5	43.2
Hong Kong SAR	2019	470	52.2	46.7	51.0	1.7	0.6	56.5	48.5
	2023	622	49.9	49.7	49.5	0.3	0.5	49.2	50.6
Hungary	2019	647	59.2	40.6	59.0	0.3	0.0	56.3	62.1
	2023	765	58.8	41.1	58.7	0.2	0.0	56.4	61.1
Israel	2019	543	59.2	39.5	57.1	2.1	1.3	54.6	64.1
	2023	732	55.7	42.7	53.8	1.2	2.4	51.7	59.6
Italy	2019	528	54.4	43.4	51.8	3.0	1.8	55.3	53.5
	2023	646	54.1	45.0	53.2	1.5	0.4	48.3	60.0
Korea, Rep. of	2019	552	66.2	33.2	65.2	1.2	0.4	63.9	68.6
	2023	364	68.4	31.5	68.0	0.6	0.0	69.8	66.8
Lithuania	2019	545	57.9	41.2	56.6	1.7	0.5	57.0	58.8
	2023	757	54.3	45.6	54.2	0.2	0.0	55.3	53.3
Malaysia	2019	1012	35.4	63.5	34.8	1.1	0.6	35.8	35.0
	2023	1246	24.0	75.3	23.7	0.3	0.7	24.5	23.4
Norway (9)	2019	656	55.5	41.7	52.0	2.5	3.8	55.9	55.1
	2023	889	56.4	41.3	53.6	2.6	2.6	56.8	56.1
Portugal	2019	486	58.1	40.3	55.8	2.0	2.0	58.2	57.9
	2023	763	56.6	42.5	55.5	0.6	1.3	57.1	56.1
Qatar	2019	559	33.3	64.8	32.3	2.4	0.5	31.1	35.4
	2023	596	39.5	58.9	38.4	0.4	2.3	38.3	40.6
Singapore	2019	699	76.7	23.1	76.0	0.7	0.2	78.7	74.7
	2023	403	75.6	24.4	75.6	0.0	0.0	71.1	79.5
Sweden	2019	580	64.2	33.1	59.4	4.2	3.3	66.9	61.3
	2023	711	57.8	40.8	56.0	1.5	1.7	58.7	57.0
United Arab Emirates	2019	3199	40.9	57.4	39.7	2.1	0.8	40.5	41.2
	2023	5304	42.5	55.9	41.3	1.0	1.8	40.9	44.0
United States	2019	1262	61.8	36.8	59.5	1.5	2.1	59.9	63.7
	2023	1154	57.0	41.9	55.4	0.7	2.1	56.6	57.4
International Avg. (20)	2019	15226	54.8	43.5	52.8	2.4	1.3	54.4	55.2
	2023	18806	53.4	45.4	52.2	1.2	1.2	52.0	54.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Mathematics: Data and Probability / Applying
B_ME4_11 ME62072: Graph for Charles' walk or bike to Olympic park - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1175	32.9	65.8	32.3	1.0	0.9	35.2	30.8
	2023	2426	35.9	62.2	34.9	0.9	2.0	35.6	36.3
Dubai, UAE	2019	822	61.2	37.4	59.0	3.0	0.7	55.8	66.7
	2023	1156	63.4	35.8	62.0	0.4	1.8	60.2	66.3

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

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Mathematics: Data and Probability / Knowing

B_ME4_13 ME62120: Umut picks marbles without replacement - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	584	29.7	18.8	26.2	28.1	21.5	2.3	3.1	23.8	35.1
	2023	644	33.2	14.9	24.6	31.0	22.8	2.1	4.6	30.9	35.2
Chinese Taipei	2019	698	71.8	5.5	9.9	71.5	12.7	0.3	0.1	67.6	75.8
	2023	474	75.1	3.3	8.3	75.1	13.3	0.0	0.0	71.8	78.0
England	2019	481	45.4	8.8	16.7	43.8	27.3	1.4	2.0	38.1	52.8
	2023	604	51.0	7.5	10.9	50.0	29.6	0.4	1.6	48.2	53.7
Finland	2019	695	48.3	7.6	18.6	46.6	23.7	1.3	2.2	50.6	46.5
	2023	811	51.6	7.0	17.8	50.4	22.4	0.5	1.8	50.5	52.7
France	2019	549	46.8	11.0	14.9	44.6	24.9	2.0	2.7	46.2	47.4
	2023	633	46.3	10.2	18.9	45.2	23.2	1.5	1.0	46.6	46.0
Georgia	2019	480	34.7	21.0	21.7	32.6	18.7	2.9	3.1	29.7	39.4
	2023	688	38.0	25.8	19.6	36.0	13.5	1.5	3.6	34.6	41.4
Hong Kong SAR	2019	470	64.3	5.1	13.8	63.4	16.3	0.6	0.8	66.1	62.8
	2023	622	66.8	5.7	10.3	66.4	17.0	0.0	0.6	62.4	71.7
Hungary	2019	647	44.1	12.6	20.2	43.9	22.9	0.3	0.0	40.7	47.4
	2023	765	41.1	12.8	19.3	41.1	26.8	0.0	0.0	36.0	46.0
Israel	2019	543	53.1	9.9	11.5	51.2	23.9	1.4	2.1	47.2	59.6
	2023	733	49.0	12.7	17.3	46.5	18.5	1.4	3.6	42.1	55.5
Italy	2019	528	46.9	12.1	15.9	44.3	22.2	2.5	3.0	42.3	51.5
	2023	646	53.0	9.0	15.9	52.3	21.5	0.7	0.5	49.6	56.4
Korea, Rep. of	2019	552	76.1	1.6	5.0	75.6	17.1	0.1	0.5	75.1	77.0
	2023	364	72.4	1.2	8.4	72.2	17.9	0.0	0.3	72.6	72.2
Lithuania	2019	545	42.8	12.8	18.4	41.9	24.8	1.5	0.7	38.6	47.0
	2023	758	44.1	10.0	21.5	43.8	24.1	0.2	0.4	41.4	46.8
Malaysia	2019	1012	36.2	16.3	19.3	35.2	26.4	1.3	1.6	37.9	34.4
	2023	1245	28.9	17.9	32.1	28.3	19.5	0.6	1.7	26.2	31.7
Norway (9)	2019	656	47.1	7.1	16.6	43.6	25.2	1.6	5.9	50.0	43.8
	2023	889	53.1	5.8	15.9	50.0	22.6	0.9	4.8	52.6	53.5
Portugal	2019	486	37.1	15.7	18.4	35.4	25.8	1.1	3.5	32.3	42.9
	2023	763	43.7	15.2	16.9	41.9	21.7	2.0	2.3	40.8	46.5
Qatar	2019	559	32.0	16.1	23.0	31.2	27.2	1.4	1.1	33.4	30.6
	2023	596	37.8	10.5	17.4	36.4	32.0	0.4	3.2	36.2	39.4
Singapore	2019	699	67.2	2.8	6.1	66.6	23.5	0.5	0.5	67.0	67.5
	2023	403	70.4	4.0	6.6	70.1	18.9	0.2	0.2	69.1	71.5
Sweden	2019	580	56.6	6.2	11.2	52.9	23.2	1.6	4.9	59.0	54.0
	2023	711	56.6	5.4	11.9	54.3	24.3	1.6	2.6	59.1	53.9
United Arab Emirates	2019	3195	38.0	11.6	17.8	37.0	31.1	1.1	1.4	34.8	40.8
	2023	5304	41.6	11.0	17.0	39.9	28.0	0.9	3.3	38.6	44.5
United States	2019	1262	50.8	6.4	11.7	49.1	29.5	0.1	3.2	47.1	54.4
	2023	1154	48.6	7.2	14.7	46.8	27.5	0.6	3.2	47.2	49.8
International Avg. (20)	2019	15221	48.4	10.4	15.8	46.9	23.4	1.3	2.1	46.4	50.5
	2023	18807	50.1	9.9	16.3	48.9	22.3	0.8	2.0	47.8	52.3

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

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Mathematics: Data and Probability / Knowing
B_ME4_13 ME62120: Umut picks marbles without replacement - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	33.8	13.0	22.1	33.1	29.6	0.8	1.4	32.2	35.3
	2023	2425	38.3	11.6	20.3	36.7	27.2	0.9	3.4	36.4	40.1
Dubai, UAE	2019	822	51.3	6.8	9.5	49.7	30.9	1.9	1.2	44.2	58.2
	2023	1156	54.6	6.5	9.8	52.5	27.3	0.8	3.1	48.6	60.1