

Mathematics: Algebra / (MA13001 - I01)  
Label: Composite function  
ItemType: M Key: D

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	645	29.4	7.7	1.8	59.9	0.5	0.6	59.9	0.2	0.5	0.0	58.1	61.4
Austria	782	50.7	14.5	2.2	27.9	1.3	3.4	27.9	0.2	3.1	0.1	19.2	42.9
Canada	2781	18.5	9.2	1.4	69.8	0.9	0.3	69.8	0.0	0.3	0.0	65.0	74.0
Cyprus	390	12.7	7.0	2.4	74.5	1.3	2.1	74.5	0.0	2.1	0.0	72.1	76.1
Czech Republic	1101	63.4	10.8	1.3	20.5	0.8	3.2	20.5	0.4	2.8	0.0	13.4	30.9
Denmark	1388	12.9	15.2	2.1	63.8	2.4	3.6	63.8	0.0	3.6	0.0	64.9	63.5
France	1071	3.9	6.3	1.4	87.3	0.4	0.6	87.3	0.0	0.6	0.0	90.7	85.4
Germany	2296	21.8	15.3	2.8	54.1	1.9	4.1	54.1	0.4	3.7	0.1	51.8	57.8
Greece	456	3.4	8.0	1.7	85.8	0.5	0.5	85.8	0.0	0.5	0.0	89.8	84.0
Israel	953	16.7	3.0	2.3	75.9	0.2	1.9	75.9	0.0	1.5	0.4	72.0	78.1
Italy	397	33.2	11.9	2.4	48.4	0.8	3.3	48.4	0.0	3.3	0.0	44.3	51.0
Lithuania	734	17.3	4.2	0.4	75.1	1.0	2.0	75.1	0.0	2.0	0.0	71.7	78.4
Russian Federation	1638	16.6	5.9	1.2	71.9	0.3	4.2	71.9	0.0	4.1	0.0	65.9	77.4
Slovenia	1536	18.6	12.0	1.9	64.1	0.4	2.9	64.1	0.2	2.7	0.0	62.7	66.0
Sweden	1001	21.8	12.6	2.8	59.6	2.6	0.7	59.6	0.0	0.6	0.1	59.7	59.5
Switzerland	1404	24.5	9.8	1.2	58.7	0.6	5.1	58.7	0.0	5.0	0.1	55.0	62.1
United States	2785	25.0	15.3	2.9	54.7	1.6	0.5	54.7	0.0	0.5	0.0	56.1	53.4
International Avg.	1256	23.0	9.9	1.9	61.9	1.0	2.3	61.9	0.1	2.2	0.1	59.6	64.8

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Algebra / (MA13002 - I02)  
Label: Graph of function over distinct ranges  
ItemType: M Key: A

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	645	67.7	7.7	7.7	4.1	11.2	1.5	67.7	0.7	0.8	0.0	69.7	66.1
Austria	782	37.7	10.9	9.4	10.4	15.7	15.8	37.7	0.1	15.6	0.1	31.0	47.7
Canada	2781	55.0	10.1	12.4	5.9	15.1	1.5	55.0	0.2	1.3	0.0	52.7	57.0
Cyprus	391	56.7	12.6	8.6	7.7	13.7	0.7	56.7	0.0	0.7	0.0	50.3	60.2
Czech Republic	1101	50.7	7.6	9.8	7.9	13.2	10.8	50.7	0.6	10.2	0.1	40.2	66.2
Denmark	1388	82.7	1.1	3.8	3.1	7.2	2.0	82.7	0.1	2.0	0.0	80.7	83.4
France	1071	84.3	1.8	2.9	2.3	6.6	2.2	84.3	0.0	2.2	0.0	83.6	84.5
Germany	2296	53.4	6.6	4.4	7.5	8.7	19.3	53.4	1.6	17.3	0.4	48.8	60.2
Greece	456	68.5	5.4	5.4	3.7	12.1	5.0	68.5	0.0	5.0	0.0	65.4	70.1
Israel	953	65.4	7.5	4.3	5.1	14.8	2.9	65.4	0.0	2.5	0.4	63.7	67.2
Italy	397	63.3	8.7	3.1	5.4	10.6	8.8	63.3	0.0	8.8	0.0	68.4	60.0
Lithuania	734	69.4	4.9	7.4	3.4	6.6	8.3	69.4	0.0	8.3	0.0	62.0	76.6
Russian Federation	1638	79.9	2.9	7.1	1.3	6.2	2.7	79.9	0.0	2.6	0.0	74.2	85.2
Slovenia	1536	57.1	9.2	4.8	7.9	11.8	9.2	57.1	0.2	9.0	0.0	56.4	58.0
Sweden	999	67.0	5.4	6.0	5.9	14.2	1.5	67.0	0.0	1.4	0.1	62.9	68.9
Switzerland	1404	65.9	4.4	5.7	5.3	9.6	9.2	65.9	0.0	9.0	0.1	60.4	70.9
United States	2785	43.7	17.1	15.2	5.7	16.1	2.2	43.7	0.0	2.1	0.0	41.4	45.8
International Avg.	1256	62.8	7.3	6.9	5.5	11.4	6.1	62.8	0.2	5.8	0.1	59.5	66.4

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Algebra / (MA13003 - I03)  
Label: Comparison of predictions of two functions  
ItemType: M Key: E

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	645	13.8	10.0	6.4	3.9	65.4	0.5	65.4	0.0	0.5	0.0	59.5	70.2
Austria	782	5.0	12.5	14.7	7.2	49.3	11.3	49.3	0.7	10.5	0.1	44.1	57.3
Canada	2781	9.8	8.3	9.3	4.4	67.1	1.2	67.1	0.1	1.1	0.0	64.9	69.2
Cyprus	390	16.8	9.5	7.7	4.6	60.3	1.1	60.3	0.0	1.1	0.0	58.5	61.9
Czech Republic	1101	8.9	9.1	4.8	4.1	64.8	8.3	64.8	3.3	4.9	0.1	57.1	76.2
Denmark	1388	10.9	3.6	3.8	1.3	70.7	9.7	70.7	5.6	4.2	0.0	73.2	69.5
France	1071	27.7	7.1	4.5	3.8	49.7	7.1	49.7	3.4	3.7	0.0	51.4	49.0
Germany	2296	7.1	8.0	5.9	3.3	62.8	12.8	62.8	5.8	6.6	0.4	59.4	68.4
Greece	456	12.6	13.8	7.0	8.4	51.0	7.3	51.0	1.1	5.3	0.8	46.3	52.8
Israel	953	16.5	3.9	5.1	4.0	66.8	3.7	66.8	0.1	3.1	0.4	64.2	69.1
Italy	398	13.7	8.0	8.2	6.0	54.1	10.0	54.1	0.8	9.3	0.0	45.5	59.8
Lithuania	734	12.0	3.3	2.5	0.5	76.5	5.1	76.5	0.0	5.1	0.0	72.7	80.2
Russian Federation	1638	10.9	5.6	4.7	3.1	69.5	6.2	69.5	0.0	6.1	0.1	66.2	72.4
Slovenia	1536	13.8	8.6	8.6	4.1	52.6	12.2	52.6	1.4	10.9	0.0	48.8	56.1
Sweden	999	5.7	9.9	5.1	2.7	70.2	6.4	70.2	5.8	0.5	0.1	68.7	70.8
Switzerland	1404	7.2	5.5	4.6	2.5	70.4	9.7	70.4	4.2	5.4	0.1	66.4	73.6
United States	2785	10.1	9.9	12.1	8.8	57.4	1.8	57.4	0.2	1.5	0.1	52.1	62.4
International Avg.	1256	11.9	8.0	6.8	4.3	62.3	6.7	62.3	1.9	4.7	0.1	58.8	65.8

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Calculus / (MA13004 - I04)  
Label: Limit of function by reducing polynomials  
ItemType: M Key: B

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	645	14.5	51.0	10.6	4.3	18.6	1.0	51.0	0.0	1.0	0.0	52.3	49.9
Austria	782	15.1	31.6	15.5	4.7	26.8	6.3	31.6	0.0	6.2	0.1	29.5	35.9
Canada	2781	9.9	59.0	9.8	2.1	18.1	1.1	59.0	0.0	1.1	0.0	54.2	63.3
Cyprus	391	7.0	78.4	3.7	0.8	9.7	0.5	78.4	0.0	0.5	0.0	75.2	80.6
Czech Republic	1101	9.6	49.3	10.1	6.9	12.6	11.4	49.3	2.4	9.0	0.1	42.4	59.5
Denmark	1388	5.4	59.2	11.9	1.4	17.6	4.4	59.2	0.1	4.2	0.1	55.5	61.3
France	1071	0.7	85.7	5.0	0.4	7.3	1.0	85.7	0.2	0.7	0.1	86.8	84.7
Germany	2296	8.0	49.4	11.9	3.3	20.8	6.6	49.4	0.4	5.8	0.4	47.4	52.5
Greece	456	6.1	79.2	2.5	0.6	9.9	1.7	79.2	0.0	0.8	0.9	76.9	80.2
Israel	953	4.6	69.7	14.1	0.6	10.0	1.0	69.7	0.0	0.6	0.4	68.9	70.6
Italy	398	3.9	77.5	7.0	0.8	8.9	1.9	77.5	0.0	1.9	0.0	79.5	76.2
Lithuania	734	7.0	53.4	5.3	2.2	10.2	21.9	53.4	0.2	21.6	0.0	44.6	61.9
Russian Federation	1638	4.2	68.4	5.5	2.4	11.4	8.0	68.4	0.0	7.8	0.2	62.1	74.3
Slovenia	1536	7.6	65.8	5.0	2.4	11.3	7.9	65.8	0.3	7.7	0.0	66.8	64.7
Sweden	998	17.6	44.4	9.7	4.0	21.9	2.5	44.4	0.1	2.2	0.2	33.2	49.5
Switzerland	1404	6.5	67.1	9.5	1.1	13.1	2.7	67.1	0.0	2.5	0.1	61.6	72.0
United States	2785	9.9	47.5	10.3	4.5	21.9	5.9	47.5	0.0	5.8	0.1	44.6	50.2
International Avg.	1256	8.1	61.0	8.7	2.5	14.7	5.0	61.0	0.2	4.7	0.2	57.7	64.0

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Calculus / (MA13006 - I06)  
Label: Using chain rule  
ItemType: M Key: D

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	645	3.8	7.2	19.7	63.1	5.8	0.4	63.1	0.0	0.4	0.0	63.3	62.9
Austria	782	9.4	12.1	22.9	44.7	7.3	3.6	44.7	0.0	3.4	0.2	39.5	52.5
Canada	2781	6.2	11.3	20.4	51.7	8.2	2.2	51.7	0.3	1.9	0.0	46.5	56.5
Cyprus	391	2.8	1.0	15.0	77.0	3.4	0.8	77.0	0.0	0.8	0.0	80.1	74.7
Czech Republic	1100	8.7	13.5	25.2	30.6	6.4	15.5	30.6	3.1	12.3	0.1	26.0	37.3
Denmark	1388	14.1	11.4	18.8	32.4	10.3	12.9	32.4	0.2	12.7	0.1	28.3	34.9
France	1071	7.6	1.5	21.7	56.0	7.4	5.8	56.0	0.0	5.4	0.3	52.3	58.8
Germany	2296	8.8	13.3	26.5	36.2	6.2	9.0	36.2	0.5	8.1	0.4	34.3	39.3
Greece	456	4.6	4.7	14.8	64.1	8.1	3.7	64.1	0.0	2.6	1.1	70.8	61.1
Israel	953	3.5	0.9	18.5	67.5	7.5	2.2	67.5	0.3	1.4	0.5	71.5	65.8
Italy	398	6.8	5.6	16.0	59.2	9.1	3.3	59.2	0.2	2.8	0.3	64.6	55.7
Lithuania	734	2.2	2.7	21.7	65.0	2.1	6.4	65.0	0.0	6.4	0.0	62.2	67.7
Russian Federation	1626	4.0	2.9	19.3	65.7	4.8	3.4	65.7	0.2	2.9	0.4	59.7	71.2
Slovenia	1536	5.2	7.1	23.2	45.1	4.9	14.6	45.1	0.0	14.5	0.0	46.4	43.6
Sweden	997	7.3	22.9	27.6	34.2	4.9	3.1	34.2	0.0	2.9	0.2	33.5	34.5
Switzerland	1404	5.9	7.4	23.3	50.9	7.0	5.4	50.9	0.0	5.2	0.2	46.3	54.7
United States	2785	13.1	12.3	23.0	35.4	10.5	5.5	35.4	0.0	5.4	0.1	32.8	38.0
International Avg.	1255	6.7	8.1	21.0	51.7	6.7	5.7	51.7	0.3	5.2	0.2	50.5	53.5

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Geometry / (MA13007 - I07)  
Label: Sum of slopes of equilateral triangle  
ItemType: M Key: A

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	645	57.7	1.2	15.1	16.2	7.9	1.9	57.7	0.0	1.9	0.0	52.6	61.7
Austria	782	51.2	1.8	22.3	15.4	5.2	4.2	51.2	0.0	3.9	0.3	41.6	67.5
Canada	2781	67.5	2.2	12.1	11.3	5.9	1.0	67.5	0.0	0.9	0.0	61.4	73.2
Cyprus	391	71.0	2.6	7.3	11.8	4.1	3.2	71.0	0.3	2.9	0.0	65.8	74.0
Czech Republic	1100	41.5	2.6	22.0	13.2	8.7	11.9	41.5	2.9	8.9	0.1	33.9	52.7
Denmark	1388	77.0	7.0	7.0	3.4	1.8	3.8	77.0	0.4	3.2	0.1	75.2	77.6
France	1071	76.4	1.7	9.0	6.5	2.6	3.9	76.4	0.0	3.5	0.3	71.4	79.3
Germany	2296	67.6	2.3	17.0	5.4	2.2	5.4	67.6	0.3	4.6	0.4	61.3	76.2
Greece	456	43.0	4.9	14.0	27.2	3.6	7.3	43.0	0.0	6.2	1.1	35.3	46.6
Israel	953	76.9	0.4	3.8	13.9	2.8	2.2	76.9	0.0	1.7	0.5	71.5	80.9
Italy	398	48.2	2.0	13.1	18.5	2.4	15.8	48.2	0.0	15.5	0.3	43.6	51.1
Lithuania	733	43.6	1.1	17.1	10.3	3.2	24.6	43.6	0.0	24.6	0.0	35.1	51.9
Russian Federation	1636	53.0	0.8	10.8	20.9	3.7	10.9	53.0	0.0	10.4	0.4	46.6	58.9
Slovenia	1536	55.5	1.5	15.2	12.6	4.0	11.2	55.5	0.0	11.1	0.0	52.7	57.5
Sweden	1000	71.6	3.7	10.8	9.3	3.6	0.9	71.6	0.1	0.6	0.2	71.0	71.9
Switzerland	1404	75.7	1.2	6.4	10.8	1.9	4.0	75.7	0.1	3.7	0.2	68.0	83.2
United States	2785	46.4	2.2	21.5	18.7	8.7	2.4	46.4	0.0	2.3	0.1	43.2	49.5
International Avg.	1256	60.2	2.3	13.2	13.3	4.3	6.7	60.2	0.2	6.2	0.3	54.7	65.5

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Geometry / (MA13008 - I08)  
Label: Length of segment of isosceles right triangle  
ItemType: M Key: D

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
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Australia	645	9.6	9.2	16.6	63.0	1.5	63.0	0.4	1.1	0.0	62.5	63.3
Austria	782	7.1	5.5	15.0	69.9	2.6	69.9	0.3	1.9	0.3	65.8	76.3
Canada	2781	7.4	8.4	11.8	71.8	0.6	71.8	0.2	0.3	0.1	71.5	72.1
Cyprus	391	7.3	5.1	3.9	82.4	1.4	82.4	0.0	1.4	0.0	86.9	79.3
Czech Republic	1101	3.7	5.3	6.6	80.1	4.3	80.1	2.8	1.4	0.2	76.2	85.9
Denmark	1388	3.6	4.4	8.9	76.1	6.9	76.1	3.8	3.0	0.1	77.8	74.7
France	1071	1.5	2.7	7.7	82.7	5.3	82.7	3.3	1.4	0.6	81.0	84.3
Germany	2296	4.5	3.2	15.8	70.8	5.6	70.8	2.9	2.1	0.6	71.2	70.2
Greece	456	6.1	6.5	4.5	79.3	3.6	79.3	0.5	1.9	1.1	79.6	79.2
Israel	953	1.3	2.7	3.4	91.6	1.0	91.6	0.0	0.3	0.7	95.6	88.7
Italy	398	7.2	6.8	5.7	77.9	2.4	77.9	0.0	2.1	0.3	80.7	76.1
Lithuania	733	1.6	0.6	1.2	96.2	0.5	96.2	0.0	0.5	0.0	94.7	97.6
Russian Federation	1637	1.1	2.0	1.8	92.8	2.2	92.8	0.1	1.3	0.8	91.4	94.1
Slovenia	1536	6.3	8.6	6.4	72.3	6.4	72.3	0.6	5.6	0.2	73.1	71.0
Sweden	999	5.2	5.5	13.6	73.9	1.8	73.9	0.4	1.1	0.2	79.0	71.6
Switzerland	1404	1.1	3.2	6.3	84.9	4.5	84.9	1.1	2.8	0.5	81.7	88.0
United States	2785	12.8	11.6	13.2	61.6	0.8	61.6	0.3	0.4	0.1	62.2	61.0
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International Avg.	1256	5.1	5.4	8.4	78.1	3.0	78.1	1.0	1.7	0.3	78.3	78.4
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DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Algebra / (MA13009 - I09)  
Label: Integer coordinates of function  
ItemType: M Key: C

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
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Australia	645	4.2	3.8	50.4	41.0	0.6	50.4	0.0	0.6	0.0	47.9	52.5
Austria	782	1.6	6.2	57.0	32.7	2.6	57.0	0.0	2.2	0.4	52.0	64.8
Canada	2781	1.7	4.1	47.8	46.0	0.5	47.8	0.0	0.4	0.1	40.9	54.0
Cyprus	391	2.8	5.1	63.1	28.2	0.8	63.1	0.0	0.8	0.0	59.1	65.6
Czech Republic	1101	0.5	5.6	66.9	25.6	1.3	66.9	0.2	0.9	0.2	59.3	78.2
Denmark	1388	0.8	3.5	72.0	22.2	1.5	72.0	0.3	1.1	0.1	73.1	70.9
France	1071	2.2	5.2	59.5	32.0	1.1	59.5	0.0	0.4	0.6	55.6	62.5
Germany	2296	1.7	4.6	65.8	25.6	2.4	65.8	0.2	1.6	0.6	65.8	66.5
Greece	456	2.1	5.8	67.4	21.9	2.8	67.4	0.0	1.6	1.1	69.6	66.8
Israel	953	1.8	3.9	68.0	25.2	1.2	68.0	0.0	0.4	0.7	69.9	67.0
Italy	398	2.9	4.2	63.4	25.6	3.9	63.4	0.5	3.1	0.3	63.2	63.5
Lithuania	734	0.9	1.7	83.4	12.8	1.2	83.4	0.0	1.2	0.0	79.6	87.1
Russian Federation	1636	0.1	1.7	84.2	11.4	2.5	84.2	0.0	1.5	1.0	82.1	86.2
Slovenia	1536	1.8	3.3	65.7	27.1	2.1	65.7	0.0	1.9	0.2	62.1	68.5
Sweden	999	4.1	6.4	59.8	29.2	0.5	59.8	0.0	0.3	0.2	51.6	63.4
Switzerland	1404	1.7	2.3	74.3	19.9	1.8	74.3	0.1	1.2	0.5	72.8	75.4
United States	2785	1.7	4.4	32.1	61.1	0.7	32.1	0.0	0.6	0.1	29.1	34.9
-----												
International Avg.	1256	1.9	4.2	63.6	28.7	1.6	63.6	0.1	1.2	0.4	60.8	66.4
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DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.



Mathematics: Algebra / (MA13011 - J01)  
Label: Equivalent fractions using difference of squares  
ItemType: M Key: A

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	185	61.0	7.0	7.5	20.3	4.2	0.0	61.0	0.0	0.0	0.0	71.4	53.3
Austria	200	28.0	11.2	11.6	40.0	5.0	4.1	28.0	0.0	3.5	0.6	25.9	32.1
Canada	780	58.9	7.9	7.9	18.1	6.5	0.8	58.9	0.0	0.8	0.0	55.8	61.8
Cyprus	102	55.5	19.4	3.8	11.5	9.8	0.0	55.5	0.0	0.0	0.0	61.3	51.0
Czech Republic	288	58.6	11.6	6.7	14.7	5.7	2.7	58.6	2.3	0.4	0.0	51.8	67.6
Denmark	444	37.0	10.2	7.4	32.8	6.5	6.0	37.0	0.0	6.0	0.0	30.2	41.2
France	268	79.4	5.1	3.1	4.6	6.2	1.6	79.4	0.4	1.3	0.0	79.5	80.4
Germany	750	26.7	13.4	6.9	39.9	6.3	6.9	26.7	0.7	5.7	0.5	23.0	32.1
Greece	121	82.8	3.0	1.3	3.8	7.7	1.4	82.8	0.0	1.4	0.0	86.7	80.7
Israel	203	67.5	9.9	2.0	9.9	4.9	5.9	67.5	0.5	5.4	0.0	67.0	69.0
Italy	126	55.0	17.7	5.3	7.5	10.9	3.7	55.0	0.0	3.7	0.0	61.0	52.4
Lithuania	251	90.2	4.0	0.8	2.5	1.6	0.9	90.2	0.0	0.9	0.0	90.7	89.6
Russian Federation	468	78.9	5.8	2.2	6.8	4.1	2.3	78.9	0.0	2.1	0.2	75.5	82.2
Slovenia	452	62.7	11.4	6.3	12.6	3.2	3.8	62.7	0.2	3.6	0.0	57.6	67.5
Sweden	241	52.4	12.1	5.9	20.6	7.9	1.1	52.4	0.0	1.1	0.0	55.8	50.6
Switzerland	361	60.8	9.9	2.1	18.4	7.5	1.3	60.8	0.4	0.9	0.0	51.3	68.7
United States	786	44.6	17.7	8.6	22.1	6.0	0.9	44.6	0.0	0.9	0.0	45.0	44.2
International Avg.	354	58.8	10.4	5.2	16.8	6.1	2.6	58.8	0.3	2.2	0.1	58.2	60.3

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Algebra / (MA13012 - J02)

Label: Cubing a trigonometric function with imaginary numbers

ItemType: M Key: C

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF INVALID	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	185	3.6	6.5	40.3	42.5	5.7	1.4	40.3	0.0	1.4	40.3
Austria	200	5.9	21.0	25.2	27.5	8.5	11.8	25.2	0.0	11.2	30.9
Canada	780	2.1	12.8	33.6	39.6	9.6	2.3	33.6	0.0	2.3	37.8
Cyprus	.	.	.	.	.	.	.	.	.	.	.
Czech Republic	288	4.3	14.6	40.6	26.0	9.4	5.0	40.6	0.8	4.2	46.1
Denmark	444	3.3	17.6	21.4	32.2	5.2	20.1	21.4	0.3	19.9	21.1
France	268	0.6	8.1	59.1	19.0	11.6	1.5	59.1	0.1	1.4	58.5
Germany	750	3.8	17.9	21.0	23.0	6.1	28.2	21.0	2.6	25.1	18.0
Greece	.	.	.	.	.	.	.	.	.	.	.
Israel	203	0.0	7.4	62.6	19.7	5.9	4.4	62.6	0.0	4.4	61.0
Italy	126	6.9	11.6	18.6	34.2	5.5	23.3	18.6	1.6	21.7	22.0
Lithuania	250	0.2	7.3	46.6	24.7	9.2	12.0	46.6	0.0	12.0	48.6
Russian Federation	468	0.2	3.7	55.9	22.1	6.6	11.6	55.9	0.0	11.4	62.1
Slovenia	452	1.9	8.1	40.3	20.6	12.2	16.9	40.3	1.5	15.4	39.3
Sweden	242	1.4	15.9	46.2	24.4	10.1	1.9	46.2	0.0	1.9	42.0
Switzerland	.	.	.	.	.	.	.	.	.	.	.
United States	786	4.2	16.4	24.1	38.4	11.6	5.4	24.1	0.0	5.4	26.4
International Avg.	389	2.8	12.1	38.2	28.1	8.4	10.4	38.2	0.5	9.8	39.6

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Algebra / (MA13013 - J03)  
Label: Value of x needed to make function negative  
ItemType: M Key: E

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	185	7.4	18.4	10.2	8.9	54.2	1.0	54.2	0.0	1.0	0.0	62.7	47.7
Austria	200	12.6	11.8	8.9	18.2	42.0	6.5	42.0	0.0	5.8	0.6	34.3	53.4
Canada	780	9.9	19.1	4.8	10.7	53.3	2.2	53.3	0.4	1.8	0.0	49.4	56.8
Cyprus	102	6.7	11.8	1.2	11.6	65.5	3.3	65.5	0.0	3.3	0.0	54.5	72.0
Czech Republic	288	7.2	18.3	5.6	7.4	56.4	5.2	56.4	3.1	2.1	0.0	50.3	64.4
Denmark	444	7.7	10.8	4.9	7.1	57.5	12.0	57.5	1.4	10.5	0.1	56.0	60.4
France	268	3.5	7.7	1.1	2.5	83.4	1.7	83.4	0.1	1.6	0.0	77.1	86.3
Germany	750	7.8	7.2	6.9	13.6	50.1	14.4	50.1	2.2	11.8	0.5	47.7	54.4
Greece	121	4.6	13.8	2.5	7.5	64.6	6.8	64.6	0.0	6.8	0.0	65.5	64.8
Israel	203	3.9	9.4	3.0	6.4	74.9	2.5	74.9	0.0	2.5	0.0	79.1	73.0
Italy	126	6.1	14.1	5.0	3.2	63.1	8.5	63.1	0.6	7.9	0.0	60.8	64.1
Lithuania	251	1.6	6.6	1.6	1.1	81.9	7.1	81.9	0.0	7.1	0.0	81.5	82.3
Russian Federation	467	5.6	5.6	1.4	3.7	79.0	4.6	79.0	0.1	4.2	0.2	77.2	80.8
Slovenia	452	9.7	6.1	3.2	16.5	50.9	13.6	50.9	1.9	11.7	0.0	49.5	53.5
Sweden	241	5.5	11.1	6.7	5.8	67.4	3.5	67.4	0.0	3.5	0.0	57.4	72.8
Switzerland	361	4.2	9.7	3.0	10.1	63.8	9.2	63.8	1.3	7.9	0.0	52.0	73.7
United States	786	10.8	17.7	12.6	14.1	41.9	2.8	41.9	0.1	2.7	0.0	41.2	42.6
International Avg.	354	6.8	11.7	4.9	8.7	61.8	6.2	61.8	0.7	5.4	0.1	58.6	64.9

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Calculus / (MA13015 - J05)  
Label: Derivative of exponential function  
ItemType: M Key: C

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	185	8.6	8.6	75.6	3.1	4.2	0.0	75.6	0.0	0.0	0.0	82.2	70.6
Austria	200	12.0	21.1	45.8	12.2	7.0	1.8	45.8	0.0	1.1	0.6	33.4	65.1
Canada	780	7.4	26.7	51.5	8.6	4.5	1.4	51.5	0.0	1.4	0.0	51.3	51.4
Cyprus	102	2.1	2.7	92.1	1.0	2.0	0.0	92.1	0.0	0.0	0.0	95.1	90.1
Czech Republic	288	26.2	19.9	40.5	7.8	2.3	3.3	40.5	0.5	2.8	0.0	35.7	47.0
Denmark	444	13.5	20.8	52.4	8.1	1.7	3.4	52.4	0.0	3.3	0.1	51.7	54.1
France	268	2.9	2.4	92.5	0.6	0.4	1.3	92.5	0.1	1.1	0.0	90.3	94.4
Germany	750	7.6	26.5	50.6	8.1	4.3	2.9	50.6	0.4	2.1	0.5	46.7	55.4
Greece	121	5.1	1.8	86.9	4.4	1.1	0.7	86.9	0.0	0.7	0.0	92.7	83.9
Israel	203	2.0	1.5	89.2	3.0	2.0	2.5	89.2	0.5	2.0	0.0	90.1	88.0
Italy	126	8.9	16.7	62.5	6.8	3.4	1.6	62.5	0.0	1.6	0.0	74.0	57.6
Lithuania	251	17.5	13.2	59.6	2.0	1.1	6.5	59.6	0.0	6.5	0.0	67.2	51.7
Russian Federation	468	12.5	5.7	73.7	2.8	2.4	2.9	73.7	0.0	2.5	0.5	72.3	75.0
Slovenia	452	8.0	14.4	55.6	11.7	2.3	8.0	55.6	0.0	8.0	0.0	57.7	53.7
Sweden	244	15.9	16.5	57.7	6.6	2.7	0.5	57.7	0.0	0.5	0.0	62.7	55.0
Switzerland	361	14.3	15.2	57.2	8.6	2.9	1.8	57.2	0.3	1.5	0.0	53.5	60.3
United States	786	37.3	17.0	32.6	7.2	4.3	1.7	32.6	0.0	1.7	0.0	33.7	31.3
International Avg.	355	11.9	13.6	63.3	6.0	2.9	2.4	63.3	0.1	2.2	0.1	64.1	63.8

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Calculus / (MA13016 - J06)  
Label: Radius of cylinder while maximizing volume  
ItemType: M Key: D

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	185	10.0	19.6	13.0	34.5	22.9	0.0	34.5	0.0	0.0	0.0	30.9	37.2
Austria	200	7.0	10.6	18.0	34.3	26.2	3.9	34.3	0.0	3.2	0.6	30.5	41.8
Canada	780	9.9	16.5	17.6	33.2	21.7	1.1	33.2	0.0	1.1	0.0	27.5	38.7
Cyprus	102	8.7	16.0	28.6	35.7	9.1	1.8	35.7	0.0	1.8	0.0	22.7	44.7
Czech Republic	288	8.3	12.1	12.5	36.1	22.9	8.1	36.1	3.3	4.7	0.0	29.9	44.3
Denmark	444	9.9	14.4	16.0	35.4	13.4	10.9	35.4	0.3	10.5	0.1	30.5	37.5
France	268	9.8	16.9	10.9	31.0	21.5	9.9	31.0	0.7	9.2	0.0	34.3	29.6
Germany	750	5.5	13.3	11.3	28.6	27.3	14.0	28.6	3.4	10.2	0.5	24.6	34.7
Greece	121	11.0	16.7	11.9	34.0	15.0	11.3	34.0	0.0	11.3	0.0	37.7	32.6
Israel	203	9.4	18.7	17.2	35.5	13.3	5.9	35.5	0.0	5.9	0.0	27.5	41.0
Italy	126	6.3	14.1	9.5	35.7	25.3	9.0	35.7	0.0	9.0	0.0	23.2	41.1
Lithuania	251	5.1	10.1	7.6	43.5	23.6	10.1	43.5	0.0	10.1	0.0	42.2	44.9
Russian Federation	468	5.4	14.1	10.3	47.7	13.3	9.2	47.7	0.2	8.1	0.8	50.5	45.0
Slovenia	452	6.2	18.5	18.4	25.0	16.3	15.7	25.0	1.0	14.7	0.0	21.3	30.1
Sweden	242	5.8	23.7	13.0	41.5	14.7	1.4	41.5	0.0	1.4	0.0	47.6	38.1
Switzerland	361	5.9	11.9	10.0	42.7	18.9	10.6	42.7	1.2	9.3	0.0	32.1	51.6
United States	786	11.9	13.5	20.6	25.1	26.5	2.4	25.1	0.0	2.4	0.0	25.2	25.0
International Avg.	355	8.0	15.3	14.5	35.3	19.5	7.4	35.3	0.6	6.6	0.1	31.7	38.7

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Geometry / (MA13017 - J07)  
Label: Equation of perpendicular line  
ItemType: M Key: E

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	185	18.6	8.0	9.7	10.4	52.7	0.5	52.7	0.0	0.5	0.0	59.4	47.7
Austria	200	32.9	4.4	18.5	8.4	28.7	7.1	28.7	0.0	6.5	0.6	22.2	39.1
Canada	780	22.7	5.4	12.1	9.7	48.5	1.5	48.5	0.0	1.4	0.0	45.3	51.4
Cyprus	102	23.3	4.0	7.3	1.8	63.6	0.0	63.6	0.0	0.0	0.0	62.3	63.8
Czech Republic	288	26.2	2.7	5.0	8.6	46.4	11.1	46.4	1.5	9.7	0.0	37.8	57.6
Denmark	444	24.9	3.0	4.4	4.3	54.3	9.0	54.3	0.6	7.8	0.6	50.0	57.6
France	268	26.8	2.0	5.2	8.1	51.6	6.3	51.6	0.1	6.2	0.0	53.7	50.1
Germany	750	31.4	2.6	9.7	8.3	30.6	17.4	30.6	3.1	13.9	0.5	28.0	34.4
Greece	121	23.6	2.7	6.6	3.3	57.9	5.9	57.9	0.0	5.9	0.0	47.5	63.6
Israel	202	17.8	3.0	3.0	6.4	67.3	2.5	67.3	0.0	2.0	0.5	71.1	66.0
Italy	126	15.6	0.4	20.2	13.7	43.2	6.8	43.2	0.0	6.8	0.0	57.1	37.3
Lithuania	251	31.3	1.2	1.2	2.9	41.7	21.7	41.7	0.0	21.7	0.0	38.6	44.9
Russian Federation	468	31.4	1.3	5.2	5.0	42.5	14.5	42.5	0.0	13.7	0.8	43.5	41.6
Slovenia	452	13.3	4.9	11.0	8.1	51.4	11.4	51.4	0.6	10.7	0.0	50.1	51.4
Sweden	240	25.4	8.2	14.4	8.6	39.8	3.5	39.8	0.4	3.0	0.0	38.0	40.8
Switzerland	361	31.4	2.9	6.3	5.1	44.5	9.8	44.5	0.1	9.6	0.2	41.5	47.1
United States	786	20.6	9.6	17.0	12.3	36.7	3.8	36.7	0.1	3.7	0.0	38.4	34.9
International Avg.	354	24.6	3.9	9.2	7.4	47.1	7.8	47.1	0.4	7.3	0.2	46.1	48.8

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Geometry / (MA13018 - J08)  
Label: Difference of two vectors  
ItemType: M Key: B

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	185	2.2	67.7	21.2	5.0	3.2	0.6	67.7	0.0	0.6	0.0	64.9	69.9
Austria	200	1.5	60.0	24.1	3.6	3.7	7.1	60.0	0.0	6.5	0.6	55.4	65.7
Canada	780	2.1	65.3	23.5	2.8	3.6	2.7	65.3	0.0	2.7	0.0	63.7	66.9
Cyprus	102	5.3	60.6	25.2	5.0	1.0	2.9	60.6	0.0	2.9	0.0	61.0	59.6
Czech Republic	288	0.9	69.7	25.8	0.3	1.4	1.9	69.7	0.4	1.6	0.0	64.4	76.6
Denmark	444	0.2	77.3	20.3	0.0	0.1	2.1	77.3	0.0	1.5	0.6	81.8	74.8
France	268	0.8	82.7	12.7	0.0	2.3	1.6	82.7	0.1	1.4	0.0	83.5	82.0
Germany	750	0.6	75.4	19.5	0.7	0.8	2.9	75.4	0.0	2.4	0.5	75.1	77.2
Greece	121	0.8	73.5	18.4	1.0	2.5	3.8	73.5	0.0	3.8	0.0	77.9	72.0
Israel	202	0.0	61.9	12.9	2.0	2.0	21.3	61.9	0.0	20.8	0.5	53.3	71.0
Italy	126	7.4	51.8	22.7	2.0	2.9	13.2	51.8	0.0	13.2	0.0	53.3	51.1
Lithuania	251	1.7	66.0	15.7	0.2	2.2	14.1	66.0	0.0	14.1	0.0	65.1	67.0
Russian Federation	468	0.2	76.4	17.6	0.5	2.0	3.4	76.4	0.0	1.9	1.5	79.8	73.3
Slovenia	452	1.3	50.4	31.8	5.0	2.6	8.9	50.4	0.0	8.9	0.0	50.1	50.9
Sweden	242	2.0	63.6	21.7	2.7	5.7	4.3	63.6	0.0	4.0	0.3	63.0	63.9
Switzerland	361	0.0	78.6	18.9	0.3	1.2	1.0	78.6	0.0	0.8	0.2	77.7	79.4
United States	.	.	.	.	.	.	.	.	.	.	.	.	.
International Avg.	328	1.7	67.5	20.8	1.9	2.3	5.8	67.5	0.0	5.5	0.3	66.9	68.8

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Geometry / (MA13019 - J09)  
Label: Equation representing set of points  
ItemType: M Key: B

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
-----												
Australia	185	20.5	29.0	31.6	15.5	3.4	29.0	0.0	3.4	0.0	17.1	38.0
Austria	200	20.0	19.2	38.0	8.8	14.1	19.2	0.0	13.4	0.6	16.0	23.7
Canada	780	29.9	21.8	31.7	13.5	3.2	21.8	0.4	2.8	0.0	17.6	25.8
Cyprus	102	18.3	33.9	29.1	15.9	2.8	33.9	0.0	2.8	0.0	28.6	37.9
Czech Republic	288	26.8	12.4	37.8	5.7	17.3	12.4	3.1	14.3	0.0	8.1	18.0
Denmark	444	13.3	17.6	27.5	4.9	36.7	17.6	1.3	34.8	0.6	11.3	19.6
France	268	23.6	32.2	20.5	5.8	18.0	32.2	0.0	18.0	0.0	25.0	35.3
Germany	750	15.9	18.4	29.2	6.4	30.1	18.4	2.7	26.9	0.5	16.0	22.6
Greece	121	9.7	39.5	21.8	17.4	11.6	39.5	0.0	11.6	0.0	47.3	36.0
Israel	203	26.6	35.5	19.7	9.4	8.9	35.5	0.5	7.9	0.5	31.9	39.0
Italy	126	22.1	28.6	22.1	7.9	19.4	28.6	1.8	17.5	0.0	35.7	25.5
Lithuania	251	13.3	22.6	15.6	14.1	34.3	22.6	0.0	34.3	0.0	20.7	24.6
Russian Federation	468	17.2	29.8	18.0	9.6	25.4	29.8	0.0	23.9	1.5	26.8	32.6
Slovenia	452	22.7	14.0	30.9	6.8	25.7	14.0	0.2	25.4	0.0	10.5	18.3
Sweden	237	22.7	28.9	27.4	11.6	9.4	28.9	0.0	9.1	0.3	21.6	33.0
Switzerland	361	22.4	24.6	26.5	7.7	18.9	24.6	0.0	18.7	0.2	24.8	24.4
United States	786	26.3	19.5	37.4	8.3	8.6	19.5	0.0	8.6	0.0	19.4	19.5
-----												
International Avg.	354	20.7	25.1	27.3	9.9	16.9	25.1	0.6	16.1	0.2	22.3	27.9
-----												

DIFF = Percent correct      OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.



Mathematics: Geometry / (MA13020 - J10)  
Label: Value of vector in triangle  
ItemType: M Key: C

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	185	18.8	15.3	45.5	5.2	10.4	4.8	45.5	0.0	4.8	0.0	44.3	46.5
Austria	200	18.9	21.1	22.0	11.6	8.0	18.4	22.0	0.0	17.8	0.6	17.8	27.7
Canada	780	19.7	14.0	43.0	8.7	11.5	3.1	43.0	0.0	3.1	0.0	39.2	46.6
Cyprus	102	13.7	11.9	54.4	5.8	10.9	3.3	54.4	0.0	3.3	0.0	46.0	60.6
Czech Republic	288	14.6	17.3	29.0	9.3	10.1	19.6	29.0	4.8	14.8	0.0	28.3	30.0
Denmark	444	14.8	17.6	32.9	2.9	8.1	23.7	32.9	0.2	22.7	0.8	28.4	34.8
France	268	34.5	5.0	38.9	1.2	8.3	12.2	38.9	1.2	11.1	0.0	41.0	38.3
Germany	750	14.0	10.5	36.7	6.3	10.4	22.0	36.7	4.4	17.2	0.5	33.5	38.7
Greece	121	16.7	3.1	51.2	1.7	14.7	12.6	51.2	0.0	12.6	0.0	48.2	52.3
Israel	203	11.3	6.4	41.4	9.9	8.4	22.7	41.4	0.0	22.2	0.5	37.4	45.0
Italy	126	18.0	14.0	24.1	7.1	11.7	25.0	24.1	0.0	25.0	0.0	22.1	25.0
Lithuania	251	8.6	4.5	44.2	2.0	11.2	29.5	44.2	0.0	29.5	0.0	42.5	46.0
Russian Federation	468	18.8	3.5	53.1	0.3	9.8	14.4	53.1	0.1	12.6	1.7	46.9	59.2
Slovenia	452	12.4	10.4	47.0	6.0	10.3	14.0	47.0	0.0	14.0	0.0	44.6	50.7
Sweden	238	15.2	34.1	17.2	15.6	9.9	7.9	17.2	0.4	7.2	0.3	22.5	14.4
Switzerland	361	11.4	12.3	43.9	5.2	11.4	15.9	43.9	0.6	15.0	0.3	38.0	48.9
United States	786	21.5	19.5	27.6	9.2	12.2	10.0	27.6	0.0	10.0	0.0	25.6	29.7
International Avg.	354	16.6	13.0	38.4	6.3	10.4	15.2	38.4	0.7	14.3	0.3	35.7	40.9

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Geometry / (MA13021 - J11)  
Label: Shape created by rotating line  
ItemType: M Key: A

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	185	59.9	7.0	5.5	22.1	5.5	0.0	59.9	0.0	0.0	0.0	53.1	65.1
Austria	200	76.8	6.2	4.1	9.7	1.7	1.4	76.8	0.0	0.8	0.6	72.1	83.8
Canada	780	59.3	5.9	8.9	19.8	5.4	0.6	59.3	0.0	0.6	0.0	52.5	66.0
Cyprus	102	74.9	7.7	2.9	11.4	1.0	2.2	74.9	0.0	2.2	0.0	82.4	71.3
Czech Republic	288	69.6	3.8	6.0	12.3	7.6	0.8	69.6	0.0	0.8	0.0	58.8	84.0
Denmark	444	88.1	0.7	2.2	5.7	0.7	2.6	88.1	0.0	1.8	0.8	87.4	88.5
France	268	70.8	4.5	3.8	12.1	8.0	0.7	70.8	0.0	0.7	0.0	67.8	71.9
Germany	750	78.7	6.5	3.5	7.4	1.5	2.4	78.7	0.4	1.5	0.5	74.4	86.2
Greece	121	44.2	3.9	9.2	32.9	7.1	2.7	44.2	0.0	2.7	0.0	35.8	48.7
Israel	203	78.8	7.4	9.9	1.5	0.0	2.5	78.8	0.0	2.0	0.5	75.8	82.0
Italy	126	76.8	7.3	6.1	9.2	0.4	0.2	76.8	0.0	0.2	0.0	76.9	76.7
Lithuania	251	75.9	2.7	2.6	7.4	6.8	4.6	75.9	0.0	4.6	0.0	74.4	77.6
Russian Federation	467	83.2	2.3	1.8	8.0	1.3	3.5	83.2	0.4	1.5	1.7	81.5	84.9
Slovenia	452	56.4	7.1	8.3	17.8	8.6	1.8	56.4	0.0	1.8	0.0	53.5	60.9
Sweden	244	90.0	0.4	1.6	7.3	0.0	0.8	90.0	0.0	0.5	0.3	85.7	92.4
Switzerland	361	80.2	3.8	3.6	10.5	0.5	1.4	80.2	0.0	1.2	0.3	74.8	84.7
United States	786	58.0	4.0	4.2	27.7	5.8	0.3	58.0	0.0	0.3	0.0	50.5	66.1
International Avg.	355	71.9	4.8	5.0	13.1	3.6	1.7	71.9	0.0	1.4	0.3	68.1	75.9

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Calculus / (MA13024 - J14)  
Label: Integral of function  
ItemType: M Key: B

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	185	5.4	65.8	12.3	11.4	3.4	1.8	65.8	0.0	1.8	0.0	85.2	51.1
Austria	200	6.4	44.6	17.8	9.1	14.0	8.0	44.6	0.0	7.4	0.6	34.4	60.9
Canada	780	9.8	36.2	25.3	6.9	15.9	6.0	36.2	0.0	5.9	0.1	31.3	41.0
Cyprus	102	2.2	80.5	5.3	4.8	7.2	0.0	80.5	0.0	0.0	0.0	77.3	82.2
Czech Republic	288	7.8	37.0	12.8	7.3	13.7	21.3	37.0	1.9	19.5	0.0	33.0	42.3
Denmark	444	6.0	66.1	6.8	4.3	4.9	11.9	66.1	0.0	11.1	0.9	65.9	66.6
France	268	2.0	76.7	8.1	3.5	3.5	6.3	76.7	0.0	6.3	0.0	65.2	83.5
Germany	750	5.0	35.7	16.9	9.2	9.7	23.7	35.7	1.7	20.5	1.5	33.5	36.8
Greece	121	3.0	67.6	7.2	6.3	9.7	6.2	67.6	0.0	6.2	0.0	72.4	64.9
Israel	.	.	.	.	.	.	.	.	.	.	.	.	.
Italy	126	2.9	59.2	12.7	5.1	7.3	12.8	59.2	1.6	9.7	1.5	57.1	60.0
Lithuania	251	2.7	59.8	5.5	1.5	6.9	23.6	59.8	0.0	21.3	2.3	52.9	67.1
Russian Federation	468	1.0	72.6	4.4	3.6	6.5	11.8	72.6	0.0	9.8	2.1	70.1	75.1
Slovenia	452	3.4	30.7	12.1	7.2	6.3	40.4	30.7	1.6	38.2	0.5	27.0	33.5
Sweden	242	5.9	54.4	15.1	4.0	16.1	4.4	54.4	0.0	2.9	1.4	44.1	60.0
Switzerland	361	4.0	53.9	14.1	4.5	8.6	14.9	53.9	0.0	14.6	0.3	42.8	63.2
United States	786	6.8	44.1	23.8	7.3	10.3	7.6	44.1	0.0	7.6	0.0	41.0	47.3
International Avg.	364	4.6	55.3	12.5	6.0	9.0	12.5	55.3	0.4	11.4	0.7	52.1	58.5

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Calculus / (MA13025A - J15A)  
Label: Function where not continuous  
ItemType: S Key: X

COUNTRY	N	10	79	99	INVAL ID	OMIT	NOT REACH ED	V1	1.GIRL % Right	2.BOY % Right
Australia	185	54.1	37.1	8.8	0.0	8.8	0.0	54.1	48.8	58.0
Austria	200	30.3	35.2	34.4	5.8	27.2	1.4	30.3	18.6	46.4
Canada	780	59.4	32.6	8.0	0.6	7.2	0.2	59.4	52.1	66.5
Cyprus	102	53.4	27.0	19.7	0.0	19.7	0.0	53.4	61.1	47.6
Czech Republic	288	47.9	23.2	29.0	1.4	27.5	0.0	47.9	41.5	56.2
Denmark	444	54.9	29.0	16.1	1.0	13.8	1.3	54.9	51.5	55.9
France	268	83.3	14.3	2.4	0.0	2.4	0.0	83.3	78.2	85.9
Germany	750	31.8	32.6	35.6	9.9	23.2	2.4	31.8	27.6	36.1
Greece	121	66.8	16.1	17.1	0.9	15.1	1.0	66.8	54.8	73.3
Israel	203	48.3	30.5	21.2	0.0	20.2	1.0	48.3	45.1	52.0
Italy	126	53.4	19.7	26.9	0.3	23.1	3.4	53.4	53.9	53.3
Lithuania	250	29.3	17.2	53.5	1.9	48.0	3.6	29.3	20.9	38.1
Russian Federation	468	54.0	20.8	25.3	0.3	21.4	3.5	54.0	53.0	54.9
Slovenia	452	55.1	19.3	25.6	0.5	23.4	1.6	55.1	50.7	58.9
Sweden	244	37.4	38.1	24.5	0.0	22.0	2.5	37.4	40.8	35.6
Switzerland	361	54.6	23.4	22.0	2.7	18.1	1.2	54.6	51.4	57.3
United States	786	45.1	40.8	14.1	2.5	11.6	0.0	45.1	42.1	48.3
International Avg.	355	50.5	26.9	22.6	1.7	19.6	1.4	50.5	46.6	54.4

V1 = Percent scoring 1 or better      V2 = Percent scoring 2 or better      V3 = Percent scoring 3 or better  
Percent right for boys and girls corresponds to the percent obtaining the maximum score on the item.  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Calculus / (MA13025B - J15B)  
Label: Function where not differentiable  
ItemType: S Key: X

COUNTRY	N	10	70	71	72	79	99	INVAL ID	OMIT	NOT REACH ED	V1	1.GIRL % Right	2.BOY % Right
-----													
Australia	185	7.0	25.2	6.4	29.4	18.7	13.2	0.0	10.5	2.7	7.0	2.8	10.2
Austria	200	5.8	28.2	3.6	2.9	10.7	48.8	7.0	39.1	2.6	5.8	2.2	11.4
Canada	780	9.2	32.1	4.8	9.9	27.3	16.7	1.3	14.9	0.6	9.2	4.8	13.3
Cyprus	102	0.0	23.4	3.0	27.8	15.8	30.0	0.0	22.1	8.0	0.0	.	.
Czech Republic	288	5.7	23.9	1.5	5.1	16.1	47.6	0.9	44.6	2.1	5.7	2.3	10.3
Denmark	444	26.2	21.3	5.2	7.0	13.8	26.4	0.5	21.7	4.2	26.2	17.9	31.0
France	268	7.3	60.9	2.9	2.9	17.6	8.3	0.2	8.2	0.0	7.3	4.9	8.6
Germany	750	9.9	28.8	3.1	6.8	8.4	43.0	12.7	27.1	3.2	9.9	7.5	13.1
Greece	121	7.7	37.9	14.8	4.2	7.1	28.3	1.4	22.2	4.7	7.7	3.7	9.8
Israel	203	2.0	20.2	3.9	35.0	12.8	26.1	0.0	24.6	1.5	2.0	.	4.0
Italy	126	9.8	27.3	6.7	5.8	18.8	31.6	0.0	25.2	6.4	9.8	5.9	11.4
Lithuania	251	4.6	11.1	0.9	1.4	13.4	68.5	0.5	58.2	9.9	4.6	2.0	7.3
Russian Federation	468	18.3	25.6	2.6	6.6	9.2	37.7	0.0	33.1	4.6	18.3	15.4	21.0
Slovenia	452	1.9	16.1	2.2	12.5	10.5	56.8	2.2	51.5	3.1	1.9	1.4	2.6
Sweden	244	1.7	27.5	1.8	31.8	11.5	25.7	0.4	16.8	8.5	1.7	1.0	2.1
Switzerland	361	15.9	31.7	5.0	6.2	9.6	31.6	5.3	24.3	2.0	15.9	9.4	21.3
United States	786	7.2	26.8	4.9	5.2	32.5	23.3	6.2	16.1	1.0	7.2	7.7	6.7
-----													
International Avg.	355	8.3	27.5	4.3	11.8	14.9	33.2	2.3	27.1	3.8	8.3	5.9	11.5
-----													

V1 = Percent scoring 1 or better      V2 = Percent scoring 2 or better      V3 = Percent scoring 3 or better  
Percent right for boys and girls corresponds to the percent obtaining the maximum score on the item.  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Geometry / (MA13026A - J16A)  
Label: Triangle abc reflection  
ItemType: S Key: X

COUNTRY	N	10	70	71	79	99	INVAL ID	OMIT	NOT REACH ED	V1	1.GIRL % Right	2.BOY % Right
-----												
Australia	185	58.5	9.9	1.3	22.8	7.5	1.1	3.1	3.3	58.5	56.9	59.7
Austria	200	62.5	7.4	9.1	10.6	10.3	2.6	4.3	3.5	62.5	52.3	75.6
Canada	780	50.0	6.9	13.3	26.2	3.6	0.7	2.2	0.6	50.0	45.4	54.5
Cyprus	102	55.7	4.1	6.1	19.9	14.2	0.0	4.2	10.0	55.7	57.4	53.9
Czech Republic	288	78.8	6.9	0.7	8.8	4.7	1.2	1.5	2.1	78.8	77.0	81.2
Denmark	444	71.4	9.0	9.4	4.5	5.7	0.6	0.9	4.2	71.4	77.1	68.3
France	268	86.6	5.1	1.0	4.3	3.0	0.2	2.8	0.0	86.6	81.3	89.7
Germany	749	80.7	4.4	1.1	7.2	6.6	1.5	1.7	3.4	80.7	80.8	81.6
Greece	121	61.0	16.6	0.0	4.1	18.4	9.6	3.4	5.4	61.0	55.3	64.3
Israel	203	53.7	8.4	4.9	22.2	10.8	1.5	7.9	1.5	53.7	50.5	57.0
Italy	126	65.8	4.3	5.1	11.8	13.1	1.5	5.0	6.6	65.8	65.8	65.7
Lithuania	251	56.7	3.6	4.6	13.2	21.8	6.9	5.1	9.9	56.7	51.6	62.1
Russian Federation	468	75.4	3.8	5.3	9.2	6.3	0.0	1.2	5.1	75.4	74.4	76.3
Slovenia	452	69.2	1.4	0.3	21.9	7.3	2.0	2.2	3.1	69.2	66.7	71.6
Sweden	244	39.5	10.0	1.6	25.4	23.5	0.4	13.6	9.5	39.5	25.4	47.1
Switzerland	361	76.2	5.9	6.1	7.0	4.8	0.1	2.0	2.8	76.2	69.3	81.9
United States	786	34.4	7.5	15.0	37.5	5.6	1.0	3.6	1.0	34.4	33.8	35.0
-----												
International Avg.	355	63.3	6.8	5.0	15.1	9.8	1.8	3.8	4.2	63.3	60.1	66.2
-----												

V1 = Percent scoring 1 or better      V2 = Percent scoring 2 or better      V3 = Percent scoring 3 or better  
Percent right for boys and girls corresponds to the percent obtaining the maximum score on the item.  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Geometry / (MA13026B - J16B)  
Label: Triangle abc rotation  
ItemType: S Key: X

COUNTRY	N	10	70	71	72	79	99	INVAL ID	OMIT	NOT REACH ED	V1	1.GIRL % Right	2.BOY % Right
Australia	185	24.3	1.5	2.0	0.0	51.0	21.2	2.9	15.0	3.3	24.3	23.3	25.0
Austria	200	18.4	4.5	2.2	1.0	46.9	27.1	6.6	17.0	3.5	18.4	7.9	34.9
Canada	780	20.4	3.4	4.5	2.9	55.5	13.5	0.6	11.8	1.1	20.4	9.0	31.2
Cyprus	102	9.8	4.9	2.0	0.0	40.6	42.7	0.0	31.8	10.9	9.8	7.7	11.3
Czech Republic	288	23.2	5.1	13.6	0.3	35.5	22.3	4.7	15.5	2.1	23.2	17.7	30.4
Denmark	444	29.4	12.0	8.6	1.9	34.0	14.1	1.1	8.6	4.4	29.4	26.0	32.2
France	268	37.6	6.5	12.6	0.9	34.8	7.7	1.9	5.8	0.0	37.6	31.6	41.1
Germany	750	23.0	8.5	3.0	0.2	38.2	27.2	11.4	12.2	3.6	23.0	18.1	31.6
Greece	121	10.4	37.4	1.5	0.8	6.8	43.1	5.4	31.6	6.1	10.4	9.7	10.8
Israel	.	.	.	.	.	.	.	.	.	.	.	.	.
Italy	126	26.8	7.3	4.2	0.2	26.1	35.4	1.5	27.3	6.6	26.8	14.7	32.0
Lithuania	251	22.8	0.9	3.6	6.8	21.8	44.0	8.4	25.1	10.6	22.8	18.8	27.1
Russian Federation	468	37.9	2.0	4.5	1.5	28.1	25.9	1.7	18.9	5.4	37.9	26.7	48.7
Slovenia	452	9.4	19.0	0.6	0.0	33.9	37.2	3.3	30.7	3.1	9.4	5.5	14.3
Sweden	244	11.4	4.2	4.8	0.3	40.0	39.2	1.0	24.4	13.8	11.4	6.6	14.1
Switzerland	361	44.5	10.3	5.8	0.8	23.1	15.4	2.2	10.2	3.0	44.5	38.7	49.4
United States	786	8.6	3.8	5.1	1.4	64.9	16.1	2.2	12.8	1.1	8.6	5.3	12.2
International Avg.	364	22.4	8.2	4.9	1.2	36.3	27.0	3.4	18.7	4.9	22.4	16.7	27.9

V1 = Percent scoring 1 or better      V2 = Percent scoring 2 or better      V3 = Percent scoring 3 or better  
Percent right for boys and girls corresponds to the percent obtaining the maximum score on the item.  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Algebra / (MA13027 - J17)

Label: Limit of perimeter of polygon contained in a circle

ItemType: S Key: X

COUNTRY	N	20	21	10	11	70	71	79	99	INVAL ID	OMIT	NOT REACH ED	V1	V2	1.GIRL % Right	2.BOY % Right
Australia	185	27.9	17.1	0.0	2.1	5.0	2.9	24.7	20.3	0.4	14.7	5.3	47.1	45.0	43.4	46.2
Austria	200	14.7	5.3	0.0	11.7	5.2	7.4	15.6	40.2	18.8	13.7	7.7	31.7	20.0	11.4	31.6
Canada	780	19.7	5.9	0.0	6.0	7.4	4.7	33.7	22.5	5.4	14.6	2.5	31.6	25.6	16.6	34.1
Cyprus	102	19.0	2.7	0.0	4.7	2.4	2.9	16.0	52.2	1.0	32.3	18.8	26.5	21.8	17.2	25.1
Czech Republic	288	14.3	2.2	0.0	4.0	4.2	1.7	8.3	65.3	15.3	42.3	7.7	20.5	16.5	3.2	34.1
Denmark	444	31.3	4.5	0.0	6.4	7.1	1.6	10.5	38.5	0.7	30.5	7.3	42.2	35.8	26.9	41.0
France	268	41.3	3.2	0.2	11.1	3.6	4.2	12.8	23.5	0.2	23.3	0.0	55.8	44.5	29.1	52.0
Germany	750	18.6	6.2	0.5	10.4	7.4	7.6	19.5	29.7	14.6	9.1	6.1	35.8	24.9	18.5	35.6
Greece	121	12.0	0.8	16.8	0.0	0.0	0.0	5.9	64.5	6.2	48.7	9.6	29.6	12.8	7.7	15.4
Israel	203	28.1	2.5	1.0	9.9	3.9	5.4	9.4	39.9	0.5	36.5	3.0	41.4	30.5	24.2	39.0
Italy	126	34.5	5.7	5.3	10.6	2.1	6.8	8.3	26.7	0.2	18.3	8.3	56.0	40.2	21.0	48.4
Lithuania	251	27.1	0.3	0.0	8.0	2.6	0.9	4.6	56.6	5.1	33.9	17.6	35.4	27.4	21.1	34.0
Russian Federation	467	35.4	3.4	0.3	7.7	2.6	1.3	9.1	40.1	0.8	28.5	10.8	46.9	38.8	29.3	48.0
Slovenia	452	6.6	0.6	1.9	4.7	0.8	9.5	23.4	52.5	11.0	30.0	11.4	13.8	7.2	1.9	13.6
Sweden	244	18.6	12.4	0.3	3.6	7.4	0.0	8.8	48.9	3.3	26.4	19.2	34.9	31.0	33.1	29.9
Switzerland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
United States	786	12.2	3.1	0.1	2.1	3.9	11.4	49.8	17.3	3.1	11.4	2.8	17.6	15.4	14.0	16.8
International Avg.	354	22.6	4.8	1.7	6.4	4.1	4.3	16.3	39.9	5.4	25.9	8.6	35.4	27.3	19.9	34.0

V1 = Percent scoring 1 or better      V2 = Percent scoring 2 or better      V3 = Percent scoring 3 or better  
Percent right for boys and girls corresponds to the percent obtaining the maximum score on the item.  
Because of missing gender information, some totals may appear inconsistent.



Mathematics: Algebra / (MA13028 - J18)  
Label: Steps for mathematical induction  
ItemType: E Key: X

COUNTRY	N	20	10	11	70	99	INVALID	OMIT	NOT REACHED	V1	V2	1.GIRL % Right	2.BOY % Right
Australia	185	35.1	3.9	0.0	28.4	32.6	0.6	24.0	7.9	39.0	35.1	48.9	24.6
Austria	200	1.1	0.6	0.7	11.0	86.5	32.7	40.1	13.7	2.5	1.1	.	2.9
Canada	780	8.1	4.4	0.4	42.7	44.4	3.2	34.2	6.9	12.9	8.1	8.0	8.2
Cyprus	102	22.2	2.9	0.9	18.4	55.7	1.0	29.8	24.8	26.0	22.2	24.6	21.0
Czech Republic	288	13.8	2.3	2.5	21.9	59.5	4.4	35.4	19.6	18.6	13.8	8.2	21.1
Denmark	444	0.5	0.9	0.3	7.8	90.5	0.7	67.5	22.3	1.8	0.5	.	0.9
France	.	.	.	.	.	.	.	.	.	.	.	.	.
Germany	750	3.0	1.5	0.0	8.8	86.7	40.0	37.1	9.6	4.5	3.0	2.0	4.5
Greece	121	80.1	1.2	0.0	0.5	18.2	2.2	4.9	11.1	81.3	80.1	85.5	78.3
Israel	203	58.1	12.3	6.9	17.2	5.4	0.0	2.0	3.4	77.3	58.1	59.3	56.0
Italy	126	0.2	3.9	0.3	9.3	86.4	6.6	67.2	12.5	4.3	0.2	.	0.3
Lithuania	251	15.8	2.2	0.4	23.1	58.5	4.7	28.0	25.8	18.4	15.8	17.0	14.6
Russian Federation	467	29.3	2.6	1.0	11.7	55.4	2.1	33.6	19.7	32.9	29.3	21.5	36.8
Slovenia	452	25.8	4.6	0.0	13.4	56.2	6.8	27.1	22.3	30.5	25.8	26.7	23.7
Sweden	244	0.2	0.2	0.0	6.0	93.5	7.6	51.8	34.1	0.5	0.2	0.7	.
Switzerland	361	12.5	4.4	3.0	26.2	53.9	12.8	33.8	7.3	19.9	12.5	10.0	14.6
United States	786	0.8	0.3	0.1	40.3	58.4	12.7	39.0	6.7	1.3	0.8	1.4	0.3
International Avg.	360	19.2	3.0	1.0	17.9	58.8	8.6	34.7	15.5	23.2	19.2	24.1	20.5

V1 = Percent scoring 1 or better      V2 = Percent scoring 2 or better      V3 = Percent scoring 3 or better  
Percent right for boys and girls corresponds to the percent obtaining the maximum score on the item.  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Geometry / (MA13029 - J19)  
Label: Prove that e is midpoint of quadrilateral  
ItemType: S Key: X

COUNTRY	N	20	10	19	79	99	INVAL ID	OMIT	NOT REACH ED	V1	V2	1.GIRL % Right	2.BOY % Right
-----													
Australia	185	57.0	1.7	6.3	16.3	18.7	1.9	2.1	14.7	65.0	57.0	67.5	49.0
Austria	200	33.7	3.9	4.3	15.4	42.7	11.2	7.7	23.8	41.9	33.7	27.9	42.5
Canada	780	28.7	2.9	8.0	43.3	17.1	2.7	2.8	11.6	39.6	28.7	28.0	29.4
Cyprus	102	51.5	2.2	10.0	9.7	26.7	0.0	1.0	25.7	63.7	51.5	54.3	48.9
Czech Republic	288	28.0	2.0	13.2	16.8	40.0	6.2	9.8	24.0	43.1	28.0	24.0	33.3
Denmark	444	21.4	1.8	8.4	29.5	38.9	2.4	1.9	34.6	31.6	21.4	18.1	23.1
France	268	64.8	2.1	6.1	11.1	15.8	0.2	7.6	8.0	73.1	64.8	57.4	68.3
Germany	750	18.9	2.4	4.9	30.5	43.3	16.9	6.1	20.2	26.2	18.9	21.5	16.0
Greece	121	49.6	1.7	0.0	12.6	36.1	0.0	25.0	11.1	51.3	49.6	44.3	52.7
Israel	203	77.3	2.5	8.4	2.5	9.4	0.0	5.4	3.9	88.2	77.3	84.6	74.0
Italy	126	29.6	4.4	13.2	12.7	40.1	2.7	4.9	32.5	47.2	29.6	27.9	30.3
Lithuania	251	26.4	5.5	2.4	18.2	47.4	3.2	13.3	30.9	34.3	26.4	21.6	31.5
Russian Federation	467	50.1	1.9	5.7	10.1	32.3	1.4	5.0	26.0	57.6	50.1	49.8	50.3
Slovenia	451	23.3	6.0	1.4	19.1	50.1	6.4	15.1	28.6	30.7	23.3	25.9	21.0
Sweden	244	12.3	2.4	6.2	22.0	57.2	5.9	4.2	47.0	20.8	12.3	12.4	12.2
Switzerland	361	29.5	4.4	11.2	24.9	30.0	7.7	5.7	16.6	45.1	29.5	30.1	28.9
United States	786	20.9	3.2	3.4	50.0	22.5	5.3	2.9	14.3	27.5	20.9	18.3	23.7
-----													
International Avg.	355	36.6	3.0	6.7	20.3	33.4	4.4	7.1	22.0	46.3	36.6	36.1	37.4
-----													

V1 = Percent scoring 1 or better      V2 = Percent scoring 2 or better      V3 = Percent scoring 3 or better  
Percent right for boys and girls corresponds to the percent obtaining the maximum score on the item.  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Algebra / (MA13064 - K01)  
Label: Relationship between two variables  
ItemType: M Key: E

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	174	4.1	3.4	6.9	6.9	78.5	0.2	78.5	0.1	0.1	0.0	72.6	83.4
Austria	202	3.7	7.8	7.8	7.3	72.1	1.3	72.1	0.0	1.0	0.3	62.4	84.7
Canada	807	1.7	3.8	3.2	4.0	87.1	0.3	87.1	0.2	0.1	0.0	84.9	88.9
Cyprus	109	0.9	1.5	1.6	0.7	95.2	0.0	95.2	0.0	0.0	0.0	92.3	97.2
Czech Republic	272	1.1	2.7	5.5	5.6	81.7	3.5	81.7	3.5	0.0	0.0	75.4	90.2
Denmark	422	2.5	1.4	1.2	2.9	88.9	3.0	88.9	2.7	0.3	0.0	88.5	89.7
France	259	0.5	0.6	2.0	1.7	94.9	0.4	94.9	0.2	0.2	0.0	95.4	94.6
Germany	733	2.0	1.2	3.0	7.0	77.9	8.9	77.9	4.9	3.5	0.5	74.5	82.5
Greece	109	4.4	4.3	2.3	5.6	83.4	0.0	83.4	0.0	0.0	0.0	83.0	83.7
Israel	206	0.5	0.5	2.9	2.4	92.7	1.0	92.7	0.5	0.0	0.5	89.9	95.9
Italy	121	2.9	1.9	2.5	10.0	81.0	1.8	81.0	0.0	1.8	0.0	86.6	77.4
Lithuania	249	0.0	2.0	0.6	5.2	90.6	1.5	90.6	0.0	1.5	0.0	89.6	91.6
Russian Federation	446	2.4	4.4	4.1	3.5	84.1	1.5	84.1	0.0	1.5	0.0	81.9	86.4
Slovenia	430	2.9	3.0	4.9	5.2	81.3	2.7	81.3	1.0	1.7	0.0	78.3	84.6
Sweden	253	1.5	0.0	3.5	4.2	90.9	0.0	90.9	0.0	0.0	0.0	92.6	90.2
Switzerland	360	0.8	0.8	1.1	1.1	95.7	0.5	95.7	0.1	0.3	0.0	94.5	96.4
United States	759	12.9	6.3	6.0	8.6	65.2	1.0	65.2	0.3	0.8	0.0	66.8	63.7
International Avg.	348	2.6	2.7	3.5	4.8	84.8	1.6	84.8	0.8	0.8	0.1	82.9	87.1

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Algebra / (MA13065 - K02)  
Label: Permutations of books on a shelf  
ItemType: M Key: A

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	174	51.6	18.5	23.5	5.7	0.0	0.6	51.6	0.0	0.6	0.0	48.8	54.1
Austria	202	9.0	34.6	25.4	20.4	6.8	3.7	9.0	0.0	3.4	0.3	8.3	9.6
Canada	807	28.2	27.9	19.1	20.8	2.0	2.0	28.2	0.0	2.0	0.0	25.2	30.8
Cyprus	109	40.7	27.3	22.0	6.2	0.0	3.7	40.7	0.0	3.7	0.0	36.7	42.5
Czech Republic	272	17.1	30.2	27.8	19.2	1.5	4.2	17.1	2.3	1.9	0.0	12.4	23.6
Denmark	422	27.9	30.4	21.6	15.7	0.8	3.6	27.9	0.1	3.5	0.0	25.3	29.0
France	259	31.3	25.6	32.2	8.0	0.0	3.0	31.3	0.0	3.0	0.0	26.5	34.4
Germany	733	13.4	28.3	19.4	23.2	3.5	12.1	13.4	0.4	11.3	0.5	9.1	19.2
Greece	109	30.6	33.1	23.8	7.2	3.0	2.3	30.6	0.0	2.3	0.0	29.9	31.1
Israel	206	37.9	16.0	23.3	14.6	1.5	6.8	37.9	0.0	6.3	0.5	33.3	45.9
Italy	121	13.0	35.7	18.3	12.0	1.9	19.2	13.0	0.0	19.2	0.0	14.4	12.1
Lithuania	249	33.0	31.3	13.1	9.6	1.6	11.3	33.0	0.0	11.3	0.0	26.6	39.0
Russian Federation	446	15.7	35.6	15.8	15.3	1.7	16.0	15.7	0.0	16.0	0.0	10.9	20.7
Slovenia	430	37.4	19.3	22.6	11.5	0.9	8.4	37.4	0.3	8.1	0.0	37.4	36.7
Sweden	253	24.7	21.0	16.1	29.9	5.4	2.8	24.7	0.0	2.8	0.0	19.8	26.8
Switzerland	360	33.7	19.7	21.1	14.2	3.2	8.1	33.7	0.0	8.1	0.0	29.2	35.5
United States	759	15.7	36.1	18.0	28.2	1.3	0.8	15.7	0.1	0.8	0.0	15.9	15.5
International Avg.	348	27.1	27.7	21.4	15.4	2.1	6.4	27.1	0.2	6.1	0.1	24.1	29.8

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Calculus / (MA13066 - K03)  
Label: Linear acceleration of an object  
ItemType: M Key: C

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
-----												
Australia	174	14.0	3.5	71.3	11.2	0.0	71.3	0.0	0.0	0.0	65.7	76.0
Austria	202	25.8	5.7	57.0	11.0	0.6	57.0	0.0	0.3	0.3	55.7	58.5
Canada	807	10.5	2.1	74.8	12.1	0.5	74.8	0.4	0.1	0.0	71.9	77.3
Cyprus	109	3.0	1.8	84.0	11.2	0.0	84.0	0.0	0.0	0.0	83.5	84.1
Czech Republic	272	23.1	3.0	63.1	9.8	1.0	63.1	0.0	1.0	0.0	68.0	56.4
Denmark	422	14.5	6.8	64.3	9.8	4.6	64.3	0.7	3.9	0.0	62.8	64.1
France	259	13.1	0.7	76.8	5.7	3.6	76.8	0.7	2.9	0.0	82.4	73.2
Germany	733	25.1	7.0	46.1	13.3	8.5	46.1	4.5	3.6	0.5	43.5	49.8
Greece	109	5.7	3.1	69.6	21.6	0.0	69.6	0.0	0.0	0.0	62.9	73.4
Israel	206	14.6	4.9	69.9	6.3	4.4	69.9	0.0	3.9	0.5	56.6	81.6
Italy	121	20.8	1.4	54.9	14.4	8.5	54.9	0.0	8.5	0.0	40.3	64.2
Lithuania	248	13.3	2.8	65.5	5.7	12.7	65.5	0.0	12.7	0.0	61.3	69.5
Russian Federation	446	5.2	3.2	74.2	12.9	4.5	74.2	0.1	4.4	0.0	69.6	79.1
Slovenia	430	13.2	5.1	52.2	18.5	10.9	52.2	0.4	10.5	0.0	56.7	47.4
Sweden	253	5.1	4.7	71.8	18.2	0.2	71.8	0.0	0.2	0.0	70.0	72.6
Switzerland	360	19.5	3.6	60.4	14.3	2.2	60.4	0.2	2.0	0.0	57.2	61.7
United States	759	31.0	4.8	54.8	9.3	0.1	54.8	0.0	0.1	0.0	59.8	50.3
-----												
International Avg.	348	15.2	3.8	65.3	12.1	3.7	65.3	0.4	3.2	0.1	62.8	67.0
-----												

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Calculus / (MA13067 - K04)  
Label: Limit of a function  
ItemType: M Key: B

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	174	45.4	23.5	4.7	13.2	9.9	3.3	23.5	0.0	3.3	0.0	25.0	22.1
Austria	202	45.6	11.5	8.4	3.4	25.5	5.5	11.5	0.0	5.2	0.3	11.9	10.5
Canada	807	34.3	35.3	6.2	8.3	14.7	1.2	35.3	0.0	1.2	0.0	30.6	39.4
Cyprus	110	13.4	36.1	2.7	17.2	29.7	0.8	36.1	0.0	0.8	0.0	31.4	38.2
Czech Republic	272	40.5	24.8	4.4	7.9	12.3	10.0	24.8	0.7	9.3	0.0	18.6	33.3
Denmark	422	46.8	29.7	1.5	1.6	16.3	4.1	29.7	0.0	4.1	0.0	27.9	31.8
France	259	27.3	45.8	1.7	1.4	16.8	6.9	45.8	0.0	6.9	0.0	48.1	44.6
Germany	733	50.8	17.1	2.8	1.6	21.1	6.5	17.1	0.0	6.1	0.5	14.6	19.6
Greece	109	18.3	52.6	7.3	8.0	12.8	1.0	52.6	0.0	1.0	0.0	53.8	51.9
Israel	206	32.5	12.1	1.5	2.9	48.1	2.9	12.1	0.0	2.4	0.5	11.1	13.3
Italy	121	19.0	20.5	4.8	15.3	37.0	3.5	20.5	0.0	3.5	0.0	21.0	20.2
Lithuania	249	29.3	26.9	1.6	6.3	14.1	21.9	26.9	0.0	21.9	0.0	20.9	32.6
Russian Federation	446	33.2	29.5	6.4	5.9	13.4	11.7	29.5	0.0	11.7	0.0	27.7	31.3
Slovenia	430	37.9	18.8	4.7	4.6	22.2	11.8	18.8	0.1	11.7	0.0	19.9	17.8
Sweden	253	32.0	29.3	2.6	9.1	25.0	2.1	29.3	0.0	2.1	0.0	24.4	31.3
Switzerland	360	39.1	27.5	5.9	4.3	20.3	2.9	27.5	0.0	2.9	0.0	21.8	32.7
United States	759	31.9	25.2	9.2	8.3	20.9	4.4	25.2	0.0	4.4	0.0	24.2	26.1
International Avg.	348	34.0	27.4	4.5	7.0	21.2	5.9	27.4	0.0	5.8	0.1	25.5	29.2

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Calculus / (MA13068 - K05)  
Label: Derivatives  
ItemType: M Key: A

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	174	51.2	6.0	8.6	19.1	13.5	1.6	51.2	0.0	1.6	0.0	54.8	48.2
Austria	202	41.9	9.2	19.8	12.4	11.0	5.6	41.9	0.0	5.3	0.3	33.6	54.1
Canada	807	45.4	5.8	15.8	21.0	10.2	1.8	45.4	0.0	1.8	0.0	43.0	47.8
Cyprus	110	36.0	13.4	26.4	9.0	12.3	2.8	36.0	0.0	2.8	0.0	30.7	40.3
Czech Republic	272	38.6	9.1	12.6	24.1	4.5	11.0	38.6	0.4	10.6	0.0	32.3	47.3
Denmark	422	48.7	6.7	9.1	18.7	7.8	9.1	48.7	0.2	8.9	0.0	45.2	50.5
France	259	51.5	1.4	9.1	26.2	6.8	4.8	51.5	0.9	3.9	0.0	44.3	56.3
Germany	733	37.8	8.8	12.2	13.8	10.4	17.0	37.8	2.2	14.3	0.5	31.3	46.2
Greece	109	37.5	9.5	17.4	21.0	6.5	8.0	37.5	0.0	8.0	0.0	34.1	39.4
Israel	206	57.8	5.8	11.2	14.6	9.7	1.0	57.8	0.0	0.5	0.5	56.6	62.2
Italy	121	42.3	4.0	10.3	25.2	4.4	13.8	42.3	0.0	13.8	0.0	35.6	46.5
Lithuania	249	43.0	4.1	6.8	11.0	1.6	33.5	43.0	0.2	33.3	0.0	42.6	43.3
Russian Federation	446	48.3	6.7	10.9	18.9	6.8	8.4	48.3	0.0	8.4	0.0	41.9	54.9
Slovenia	430	40.0	8.1	14.2	18.9	6.5	12.3	40.0	0.1	12.2	0.0	34.5	47.1
Sweden	253	61.3	4.0	7.3	19.0	6.6	1.8	61.3	0.0	1.8	0.0	60.2	61.8
Switzerland	360	45.4	9.4	5.8	21.1	7.5	10.8	45.4	0.2	10.6	0.0	32.6	55.3
United States	759	47.2	6.3	15.1	19.2	9.4	2.7	47.2	0.2	2.5	0.0	45.0	49.2
International Avg.	348	45.5	7.0	12.5	18.4	8.0	8.6	45.5	0.3	8.3	0.1	41.1	50.0

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Calculus / (MA13069 - K06)

Label: Solving an integral

ItemType: M Key: D

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
-----													
Australia	174	3.3	8.8	14.5	65.7	5.0	2.7	65.7	0.0	2.7	0.0	65.8	65.6
Austria	202	12.9	10.5	14.6	46.2	3.7	12.1	46.2	0.0	11.8	0.3	37.2	58.4
Canada	807	12.9	12.8	17.8	43.2	6.1	7.2	43.2	0.0	7.2	0.0	37.5	48.3
Cyprus	110	3.9	5.5	18.3	55.5	13.1	3.6	55.5	0.0	3.6	0.0	62.3	51.9
Czech Republic	272	9.0	8.6	15.5	42.3	5.7	19.0	42.3	6.3	12.7	0.0	37.6	48.7
Denmark	422	1.9	2.8	6.8	79.9	4.4	4.3	79.9	0.0	3.8	0.4	76.3	81.3
France	259	2.9	3.5	6.8	77.5	4.7	4.5	77.5	0.0	4.5	0.0	77.1	78.0
Germany	733	4.9	5.3	9.0	57.8	8.0	15.0	57.8	0.6	13.8	0.6	56.6	60.3
Greece	109	15.0	12.0	5.6	55.5	6.5	5.4	55.5	0.0	5.4	0.0	44.0	62.1
Israel	206	2.9	4.9	12.6	62.6	9.2	7.8	62.6	0.0	7.3	0.5	57.6	70.4
Italy	121	8.9	6.1	6.0	56.7	3.6	18.8	56.7	1.3	17.5	0.0	64.0	52.0
Lithuania	249	3.8	3.8	7.4	56.4	4.4	24.1	56.4	0.0	24.1	0.0	53.3	59.3
Russian Federation	446	3.5	2.7	8.2	72.0	3.2	10.4	72.0	0.0	10.4	0.0	68.8	75.3
Slovenia	430	6.9	7.3	12.3	34.6	4.0	34.8	34.6	0.4	34.4	0.0	25.7	45.5
Sweden	253	3.7	7.2	5.0	76.3	5.3	2.3	76.3	0.0	2.3	0.0	77.7	75.8
Switzerland	360	5.2	8.6	10.2	58.5	6.2	11.4	58.5	0.0	11.4	0.0	51.4	64.9
United States	759	11.3	12.4	16.9	45.1	6.6	7.7	45.1	0.0	7.7	0.0	35.9	53.3
-----													
International Avg.	348	6.6	7.2	11.0	58.0	5.9	11.2	58.0	0.5	10.6	0.1	54.6	61.8
-----													

DIFF = Percent correct      OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.



Mathematics: Geometry / (MA13070 - K07)  
Label: Vertices of right angle triangle  
ItemType: M Key: B

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
-----												
Australia	174	21.4	45.2	5.4	27.0	1.0	45.2	0.0	1.0	0.0	53.6	38.1
Austria	202	5.0	51.8	3.5	37.0	2.6	51.8	0.0	2.3	0.3	49.2	58.0
Canada	807	14.4	51.8	2.0	31.3	0.5	51.8	0.0	0.5	0.0	53.7	50.0
Cyprus	110	12.2	51.1	5.4	30.5	0.9	51.1	0.0	0.9	0.0	46.9	54.9
Czech Republic	272	10.9	47.7	3.1	36.0	2.2	47.7	0.8	1.4	0.0	42.3	55.2
Denmark	422	4.6	70.0	1.2	23.1	1.1	70.0	0.0	0.6	0.4	68.5	69.6
France	259	8.2	63.3	2.0	26.2	0.2	63.3	0.0	0.2	0.0	64.2	62.6
Germany	733	7.9	51.2	2.3	33.9	4.6	51.2	0.4	3.6	0.6	51.1	51.1
Greece	109	20.3	36.5	1.5	40.2	1.4	36.5	0.0	1.4	0.0	33.8	38.1
Israel	206	8.7	60.2	1.0	26.7	3.4	60.2	0.5	1.9	1.0	53.5	67.3
Italy	121	7.1	53.8	2.9	28.6	7.6	53.8	0.6	7.0	0.0	51.4	55.3
Lithuania	249	6.1	70.0	0.6	20.7	2.6	70.0	0.0	2.6	0.0	70.0	70.0
Russian Federation	446	7.4	71.3	1.4	18.9	0.9	71.3	0.0	0.9	0.0	69.6	73.2
Slovenia	430	13.0	54.4	3.2	26.7	2.6	54.4	0.3	2.4	0.0	56.2	52.4
Sweden	253	3.3	60.0	3.1	32.9	0.8	60.0	0.0	0.8	0.0	58.7	60.5
Switzerland	360	6.2	62.0	5.1	24.7	2.0	62.0	0.0	2.0	0.0	64.0	59.5
United States	759	14.8	46.3	2.8	35.0	1.1	46.3	0.2	0.9	0.0	38.1	53.6
-----												
International Avg.	348	10.1	55.7	2.7	29.4	2.1	55.7	0.2	1.8	0.1	54.4	57.0
-----												

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Geometry / (MA13073 - K10)  
Label: Angle inscribed by figures inside a semicircle  
ItemType: M Key: C

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
-----												
Australia	174	48.5	28.3	16.3	3.4	3.5	16.3	0.0	3.5	0.0	11.7	20.2
Austria	202	37.1	35.7	18.8	3.7	4.7	18.8	0.0	3.8	0.8	18.4	18.4
Canada	807	42.3	39.5	15.2	2.2	0.8	15.2	0.3	0.5	0.0	18.7	12.3
Cyprus	110	27.2	43.4	20.4	4.4	4.6	20.4	0.0	4.6	0.0	23.8	18.4
Czech Republic	272	25.7	36.7	33.3	1.7	2.5	33.3	0.7	1.8	0.0	32.7	34.1
Denmark	422	46.4	29.0	16.7	2.2	5.7	16.7	0.9	3.7	1.1	14.0	18.3
France	259	37.2	20.6	34.6	2.6	4.9	34.6	0.2	4.8	0.0	32.8	35.9
Germany	733	41.5	26.6	23.5	2.0	6.4	23.5	1.2	4.5	0.7	23.2	24.3
Greece	109	29.0	47.4	13.0	2.1	8.6	13.0	0.0	7.7	0.9	14.5	12.1
Israel	206	31.6	39.8	20.9	2.9	4.9	20.9	0.0	2.4	2.4	22.2	21.4
Italy	121	38.8	27.1	19.5	3.8	10.9	19.5	0.0	6.5	4.5	20.8	18.6
Lithuania	249	49.7	25.6	15.6	0.6	8.4	15.6	0.0	8.4	0.0	13.2	17.9
Russian Federation	445	33.1	35.5	21.7	2.3	7.4	21.7	0.0	6.9	0.5	17.7	25.8
Slovenia	430	44.8	26.9	22.5	0.5	5.3	22.5	0.2	4.7	0.4	24.8	20.0
Sweden	253	41.1	23.9	26.0	6.9	2.1	26.0	0.0	2.1	0.0	19.5	28.7
Switzerland	360	34.5	26.2	33.8	1.0	4.4	33.8	0.1	4.2	0.1	33.7	34.2
United States	759	44.2	44.5	8.4	1.2	1.7	8.4	0.0	1.7	0.0	8.5	8.2
-----												
International Avg.	348	38.4	32.8	21.2	2.6	5.1	21.2	0.2	4.2	0.7	20.6	21.7
-----												

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Algebra / (MA13074 - K11)  
Label: Probability of number on a card  
ItemType: M Key: D

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
-----													
Australia	174	2.7	2.3	6.8	75.9	11.7	0.7	75.9	0.0	0.7	0.0	75.4	76.2
Austria	202	16.0	12.0	11.4	36.1	19.6	5.0	36.1	0.0	4.1	0.8	37.4	32.2
Canada	807	5.6	6.2	9.2	60.9	16.4	1.8	60.9	0.1	1.6	0.0	55.3	65.9
Cyprus	110	10.8	15.2	11.6	35.4	24.1	2.9	35.4	1.1	1.8	0.0	29.7	39.9
Czech Republic	272	6.9	15.4	8.6	42.6	19.5	7.0	42.6	1.9	5.0	0.0	33.3	55.4
Denmark	422	3.9	2.7	4.0	67.8	19.2	2.4	67.8	0.0	1.3	1.1	62.3	73.3
France	259	4.0	6.7	3.1	61.8	22.4	2.1	61.8	0.2	1.9	0.0	54.6	66.1
Germany	733	10.2	11.4	7.5	45.5	16.3	9.1	45.5	1.8	6.5	0.8	41.8	50.4
Greece	109	17.4	20.9	9.2	29.1	16.2	7.2	29.1	0.0	6.3	0.9	22.1	33.0
Israel	206	5.3	7.8	6.8	56.3	14.1	9.7	56.3	0.0	7.3	2.4	51.5	63.3
Italy	121	9.3	6.9	14.8	34.0	18.4	16.5	34.0	0.3	11.8	4.5	23.6	40.6
Lithuania	249	5.1	11.8	3.4	48.9	15.2	15.5	48.9	0.0	15.5	0.0	40.2	57.1
Russian Federation	446	11.7	11.3	14.1	34.6	16.3	11.9	34.6	0.0	11.4	0.5	25.7	43.9
Slovenia	430	8.9	12.8	11.0	36.2	19.6	11.5	36.2	1.1	9.9	0.4	35.8	36.6
Sweden	253	5.4	2.7	4.2	64.9	21.5	1.3	64.9	0.4	0.6	0.4	69.2	63.2
Switzerland	360	5.2	6.1	3.8	62.8	16.2	5.9	62.8	0.0	5.7	0.1	56.2	68.7
United States	759	6.8	9.6	7.9	61.9	13.4	0.4	61.9	0.0	0.4	0.0	52.9	69.9
-----													
International Avg.	348	7.9	9.5	8.1	50.3	17.7	6.5	50.3	0.4	5.4	0.7	45.1	55.0
-----													

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Geometry / (MA13075 - K12)  
Label: Translation of coordinates  
ItemType: S Key: X

COUNTRY	N	10	11	12	19	70	71	72	73	79	99	INVAL ID	OMIT	NOT REACH ED	V1	1.GIRL % Right	2.BOY % Right
Australia	174	4.3	8.7	19.8	1.7	4.3	0.4	0.8	4.2	32.7	23.0	1.2	21.8	0.0	34.5	38.2	31.3
Austria	202	32.0	11.3	6.2	0.0	7.0	1.7	1.8	7.2	5.6	27.1	7.4	18.9	0.8	49.6	38.4	65.1
Canada	807	12.9	13.1	28.2	2.1	5.2	1.1	0.4	3.9	17.3	15.9	3.0	12.9	0.0	56.3	55.7	56.9
Cyprus	110	10.0	5.6	8.2	0.0	12.2	0.0	2.2	6.2	18.8	36.8	1.6	35.2	0.0	23.8	13.6	29.4
Czech Republic	272	27.3	13.6	14.3	0.0	20.8	2.9	0.6	4.4	5.2	10.9	2.9	7.5	0.5	55.1	51.7	59.9
Denmark	422	45.5	10.9	15.9	0.6	7.9	0.0	1.0	0.5	4.7	13.0	0.2	11.3	1.5	72.9	73.9	74.2
France	259	20.4	5.0	48.4	0.9	4.8	2.2	1.9	0.7	7.2	8.5	1.7	6.8	0.0	74.7	67.9	78.8
Germany	732	28.3	8.2	23.0	0.9	4.2	1.1	0.4	1.6	10.9	21.4	8.2	11.7	1.5	60.4	59.0	62.4
Greece	109	14.9	20.8	5.8	1.7	10.5	0.0	0.9	0.0	4.3	41.1	3.4	36.8	0.9	43.2	32.4	49.3
Israel	206	32.0	9.2	12.1	1.5	3.9	1.5	1.5	5.8	12.1	20.4	1.5	16.5	2.4	54.9	56.6	55.1
Italy	121	34.8	0.2	15.2	0.9	14.4	0.4	0.0	1.4	10.5	22.0	4.1	13.5	4.5	51.2	51.4	51.1
Lithuania	249	28.0	10.2	14.5	0.2	3.8	0.0	0.0	1.8	3.6	38.0	7.0	30.4	0.5	52.9	48.0	57.5
Russian Federation	445	32.4	3.1	14.9	9.7	15.7	1.0	0.7	0.5	5.3	16.8	1.6	14.5	0.7	60.0	53.5	66.8
Slovenia	430	34.7	0.0	0.8	0.2	0.7	0.0	0.2	9.6	32.6	21.2	7.2	13.6	0.4	35.7	35.0	36.2
Sweden	253	20.7	12.9	3.6	1.7	10.6	0.0	0.0	0.9	7.3	42.4	1.5	40.5	0.4	38.9	40.1	38.4
Switzerland	360	30.6	12.1	31.1	2.1	3.9	1.7	1.0	2.2	8.2	7.0	0.9	5.9	0.1	76.0	73.6	77.5
United States	759	15.6	5.1	21.2	0.5	14.2	1.2	0.8	2.6	17.5	21.5	3.1	18.4	0.0	42.3	36.2	47.7
International Avg.	348	25.0	8.8	16.7	1.5	8.5	0.9	0.8	3.1	12.0	22.8	3.3	18.6	0.8	51.9	48.5	55.1

V1 = Percent scoring 1 or better      V2 = Percent scoring 2 or better      V3 = Percent scoring 3 or better  
Percent right for boys and girls corresponds to the percent obtaining the maximum score on the item.  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Algebra / (MA13076 - K13)  
Label: Growth of bacteria  
ItemType: S Key: X

COUNTRY	N	10	11	12	13	19	70	71	72	73	79	99	INVAL ID	NOT REACH ED	OMIT	V1	1.GIRL % Right	2.BOY % Right
Australia	174	0.5	6.4	4.1	21.2	0.0	1.6	6.1	3.0	12.3	37.1	8.0	2.8	4.6	0.5	32.1	37.3	27.6
Austria	202	11.9	6.2	4.5	1.8	1.0	24.6	1.7	0.4	4.4	25.3	18.3	6.4	9.9	2.0	25.3	22.7	29.8
Canada	807	2.4	12.3	13.1	4.9	2.4	4.7	3.4	4.8	1.8	40.0	10.2	1.5	8.4	0.4	35.0	26.1	43.0
Cyprus	110	0.0	8.5	4.8	1.7	0.0	11.7	2.8	1.6	0.0	45.7	23.1	3.6	16.7	2.8	15.1	6.7	21.0
Czech Republic	272	7.0	10.9	6.1	0.0	0.0	25.1	3.6	2.6	0.6	27.8	16.3	8.2	7.1	0.9	24.0	12.4	39.9
Denmark	422	21.2	7.3	9.5	3.0	1.5	13.0	1.1	0.9	3.0	17.4	22.0	2.1	17.7	2.2	42.5	34.5	47.5
France	258	9.4	8.9	2.1	1.8	1.8	7.6	1.8	0.5	3.4	31.8	30.8	2.1	28.4	0.3	24.2	20.7	26.4
Germany	732	14.8	11.1	4.4	2.7	1.5	14.0	6.4	2.4	2.3	22.7	17.7	7.1	8.5	2.2	34.5	28.1	43.0
Greece	109	1.7	0.0	2.0	0.6	3.9	33.0	5.1	3.6	2.4	11.5	36.2	6.4	27.7	2.1	8.2	10.1	7.2
Israel	206	15.5	19.9	10.7	8.7	2.4	0.5	6.8	1.0	4.9	16.5	13.1	0.0	10.2	2.9	57.3	55.6	58.2
Italy	121	16.7	3.1	0.0	0.3	0.8	22.8	0.6	0.0	1.6	36.3	17.8	2.5	9.5	5.8	20.9	20.6	21.1
Lithuania	249	7.4	6.9	3.7	0.2	2.2	19.7	4.3	0.0	0.0	31.2	24.3	4.7	17.7	1.9	20.5	14.4	26.2
Russian Federation	445	7.1	6.5	7.1	1.9	0.8	13.9	3.7	0.8	0.3	33.2	24.6	2.3	21.0	1.2	23.5	20.4	26.8
Slovenia	430	6.8	9.4	3.9	0.0	0.3	1.1	0.1	0.0	0.0	62.5	15.8	5.7	8.9	1.3	20.5	14.7	26.6
Sweden	253	10.4	12.7	10.4	16.0	1.8	9.0	0.5	0.5	3.9	19.9	15.0	1.6	11.7	1.7	51.2	46.1	53.4
Switzerland	360	9.6	11.1	3.1	2.1	0.5	9.2	4.3	1.3	4.0	38.9	15.9	4.5	11.1	0.2	26.4	18.7	30.0
United States	759	3.5	5.9	2.8	6.8	4.1	11.9	4.5	0.5	5.9	49.9	4.2	0.8	3.0	0.4	23.2	16.3	29.4
International Avg.	348	8.6	8.7	5.4	4.3	1.5	13.1	3.3	1.4	3.0	32.2	18.4	3.7	13.1	1.7	28.5	23.8	32.8

V1 = Percent scoring 1 or better      V2 = Percent scoring 2 or better      V3 = Percent scoring 3 or better  
Percent right for boys and girls corresponds to the percent obtaining the maximum score on the item.  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Geometry / (MA13077 - K14)  
Label: Length of string around rod  
ItemType: E Key: X

COUNTRY	N	20	21	22	29	10	11	19	70	71	72	73	74	79	99	INVAL ID	OMIT	NOT REACH ED	V1	V2	1.GIRL % Right	2.BOY % Right
Australia	174	4.1	4.8	1.7	2.8	0.9	0.8	0.0	3.0	18.9	5.7	1.1	1.5	39.7	15.1	2.2	12.4	0.5	15.0	13.4	11.9	14.6
Austria	202	5.7	1.6	1.0	1.0	1.3	0.0	0.8	12.1	3.1	4.1	0.0	0.6	19.6	49.3	12.2	34.9	2.2	11.3	9.2	3.4	17.2
Canada	807	8.9	0.4	1.2	1.6	0.5	0.2	0.1	0.7	17.9	10.9	0.5	0.4	41.6	15.2	4.0	10.8	0.4	12.8	12.0	6.6	16.8
Cyprus	110	0.0	0.0	0.0	0.0	0.9	0.0	1.0	0.9	8.3	8.1	1.6	0.0	28.6	50.5	2.6	45.1	2.8	1.9	0.0	.	.
Czech Republic	272	6.1	1.3	0.8	0.0	1.6	0.0	2.9	5.7	8.8	6.4	4.2	1.4	14.3	46.5	9.7	35.4	1.4	12.7	8.2	3.0	15.4
Denmark	422	7.3	1.0	1.6	0.2	0.5	0.4	1.7	2.2	2.8	9.9	0.1	0.4	18.3	53.8	0.5	50.3	3.0	12.5	10.0	6.0	13.0
France	258	2.6	1.3	0.0	0.0	0.0	1.3	0.5	1.5	9.2	2.3	2.4	0.0	12.5	66.5	2.7	61.2	2.7	5.6	3.8	1.7	5.2
Germany	732	4.2	0.3	2.9	0.4	0.8	0.0	0.0	1.5	10.3	7.9	2.2	0.4	22.6	46.5	17.8	25.2	3.4	8.6	7.8	2.1	15.2
Greece	109	0.6	0.9	0.8	2.5	0.9	0.0	0.0	9.1	0.6	0.0	12.7	0.0	0.9	71.1	6.7	61.3	3.2	5.7	4.8	2.9	5.9
Israel	206	5.8	0.0	0.5	0.5	1.0	0.0	2.9	0.0	14.1	6.8	8.7	16.5	11.2	32.0	1.0	28.2	2.9	10.7	6.8	6.1	8.2
Italy	121	2.0	0.0	2.2	2.7	0.0	0.0	3.5	7.5	7.8	6.7	2.9	0.0	15.1	49.4	1.6	42.0	5.8	10.5	7.0	.	11.4
Lithuania	249	16.7	0.6	0.5	0.0	0.0	0.0	0.8	2.5	2.9	4.3	0.0	0.0	11.4	60.3	16.6	39.8	3.9	18.6	17.8	6.9	27.9
Russian Federation	435	10.9	0.2	2.0	0.0	2.1	0.2	0.2	8.5	3.4	4.7	4.4	1.4	14.8	47.1	1.9	42.2	3.0	15.6	13.2	10.3	16.3
Slovenia	430	4.3	0.3	0.0	0.3	0.6	0.0	0.0	0.0	8.8	5.3	1.0	0.4	30.6	48.5	12.4	33.6	2.5	5.5	4.8	2.3	7.9
Sweden	253	14.8	1.6	7.9	0.0	0.2	0.6	0.2	1.4	6.7	21.1	1.9	0.9	20.0	22.9	2.5	18.7	1.7	25.2	24.2	17.1	27.2
Switzerland	360	13.6	2.5	1.4	0.0	0.9	0.4	0.1	0.9	6.3	13.2	3.9	0.2	26.5	30.1	9.8	20.1	0.3	18.8	17.5	4.3	27.1
United States	759	2.9	0.0	0.5	0.0	0.2	0.2	0.1	2.3	12.1	8.9	0.2	0.1	57.3	15.2	3.2	11.7	0.4	3.9	3.4	0.9	5.7
International Avg.	347	6.5	1.0	1.5	0.7	0.7	0.2	0.9	3.5	8.4	7.4	2.8	1.4	22.7	42.4	6.3	33.7	2.4	11.5	9.6	5.7	14.7

V1 = Percent scoring 1 or better      V2 = Percent scoring 2 or better      V3 = Percent scoring 3 or better  
Percent right for boys and girls corresponds to the percent obtaining the maximum score on the item.  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Algebra / (MA13078 - K15)  
Label: Complex number solution of equation  
ItemType: S Key: X

COUNTRY	N	20	21	29	10	11	19	70	71	72	73	79	99	INVAL ID	OMIT	NOT REACH ED	V1	V2	1.GIRL % Right	2.BOY % Right
Australia	174	0.0	17.6	1.0	1.0	0.0	1.3	0.0	0.0	0.6	2.4	8.6	67.5	1.7	64.4	1.4	21.0	18.6	11.5	24.7
Austria	202	0.2	0.4	0.0	1.6	0.0	0.0	1.0	0.3	0.0	0.0	7.0	89.5	18.8	63.0	7.7	2.2	0.6	.	1.6
Canada	807	0.6	2.7	0.7	1.1	0.0	1.4	1.3	0.5	0.3	0.5	20.4	70.4	12.6	57.2	0.6	6.5	4.0	4.5	3.7
Cyprus	110	1.9	17.5	0.0	8.1	0.0	0.0	0.0	0.0	0.7	0.8	6.3	64.7	5.4	55.5	3.9	27.5	19.4	14.4	23.3
Czech Republic	272	2.1	11.3	0.0	4.9	0.9	0.7	0.9	0.7	1.7	0.0	5.6	71.4	4.0	63.2	4.2	19.8	13.3	6.9	22.1
Denmark	422	0.0	1.2	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	3.8	94.1	0.7	88.8	4.6	1.2	1.2	1.5	1.0
France	259	7.8	51.8	0.3	10.1	1.0	0.7	0.3	0.9	0.9	0.0	5.0	21.0	0.4	17.1	3.5	71.7	60.0	64.6	57.3
Germany	732	0.1	0.0	0.0	0.2	0.0	0.0	0.3	0.0	0.0	0.0	6.6	92.8	43.6	41.9	7.3	0.3	0.1	0.2	.
Greece	109	1.7	46.1	0.0	5.1	0.0	1.0	4.4	0.6	0.0	0.0	0.8	40.3	0.6	33.5	6.2	53.9	47.8	57.3	42.5
Israel	206	1.5	41.7	0.0	17.0	0.0	2.4	0.0	0.0	0.5	0.5	3.4	33.0	0.5	29.6	2.9	62.6	43.2	39.4	50.0
Italy	121	1.3	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	1.8	96.6	2.8	80.3	13.5	1.5	1.3	.	2.1
Lithuania	249	6.2	10.4	0.0	0.2	0.0	0.5	1.6	0.9	0.0	0.0	2.7	77.4	4.9	62.7	9.7	17.4	16.6	10.8	22.1
Russian Federation	435	3.9	27.6	0.1	5.3	0.4	2.0	3.4	0.6	0.0	0.0	4.4	52.4	0.9	44.4	7.1	39.2	31.5	29.8	33.4
Slovenia	430	1.8	10.3	0.3	0.2	0.0	0.1	0.0	1.0	0.0	0.0	15.3	70.9	2.3	60.8	7.7	12.7	12.5	8.5	17.1
Sweden	253	5.1	19.0	1.0	6.3	0.4	0.3	4.2	1.1	0.4	0.0	9.8	52.4	2.9	46.2	3.3	32.2	25.1	20.0	27.3
Switzerland	360	2.2	8.7	1.5	7.0	0.5	0.8	1.8	0.4	0.0	0.7	4.4	71.9	22.2	48.2	1.5	20.7	12.3	8.4	15.1
United States	759	0.2	1.0	0.7	1.2	0.3	0.2	2.5	0.1	0.0	0.1	19.1	74.6	11.6	61.1	1.8	3.6	1.9	0.8	2.8
International Avg.	347	2.2	15.7	0.3	4.1	0.2	0.7	1.3	0.4	0.3	0.3	7.4	67.1	8.0	54.0	5.1	23.2	18.2	18.6	21.6

V1 = Percent scoring 1 or better      V2 = Percent scoring 2 or better      V3 = Percent scoring 3 or better  
Percent right for boys and girls corresponds to the percent obtaining the maximum score on the item.  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Geometry / (MA13079 - K16)  
Label: Calculation of height of a glacier  
ItemType: E Key: X

COUNTRY	N	30	31	39	20	21	22	23	24	29	10	11	19	70	79	99	INVAL ID	OMIT	NOT REACH ED	V1	V2	V3	1.GIRL % Right	2.BOY % Right
Australia	174	37.0	0.3	0.0	15.3	2.5	0.6	7.1	0.0	0.0	2.7	11.2	4.1	1.8	8.6	8.8	0.7	5.2	2.9	80.8	62.8	37.3	33.6	40.5
Austria	202	17.1	0.0	0.3	21.5	3.1	0.3	5.6	0.3	1.9	3.5	4.7	2.2	0.8	12.3	26.3	7.5	8.2	10.6	60.6	50.2	17.4	12.3	26.1
Canada	807	35.3	0.4	7.7	20.6	1.8	0.4	1.6	0.3	2.5	3.0	9.4	1.1	1.1	9.0	5.8	1.1	4.0	0.7	84.1	70.6	43.4	34.6	51.2
Cyprus	110	12.9	0.0	0.0	21.2	7.5	0.0	5.4	0.0	0.9	1.9	5.1	3.3	4.8	6.9	30.2	0.9	24.0	5.4	58.1	47.9	12.9	4.9	18.6
Czech Republic	272	35.4	0.4	2.6	9.6	7.4	0.6	3.0	0.0	0.8	3.4	10.7	3.6	0.7	0.7	21.2	2.7	10.7	7.8	77.4	59.7	38.3	29.2	50.8
Denmark	422	41.4	0.1	0.3	18.1	1.5	0.9	6.8	0.2	2.0	5.5	5.4	1.5	1.8	3.3	11.2	1.0	5.4	4.7	83.7	71.3	41.9	37.4	43.1
France	259	39.9	2.6	0.0	22.6	4.5	3.2	3.5	1.0	0.3	2.5	1.5	1.9	0.6	2.2	13.7	0.7	9.2	3.8	83.6	77.6	42.4	40.0	44.1
Germany	733	29.8	0.9	0.4	2.8	1.5	0.2	1.1	0.0	0.5	4.8	19.1	2.4	1.6	8.6	26.2	10.4	6.5	9.3	63.6	37.3	31.1	24.3	40.7
Greece	109	26.1	3.0	2.6	3.2	1.3	0.0	0.0	0.0	1.0	0.6	1.7	0.6	5.6	0.0	54.2	6.2	38.0	10.1	40.2	37.2	31.7	23.2	36.6
Israel	206	17.5	0.5	0.5	33.5	3.9	0.0	4.4	1.5	0.0	3.9	3.4	5.8	3.9	3.9	17.5	0.5	14.1	2.9	74.8	61.7	18.4	9.1	28.6
Italy	121	16.8	2.7	1.3	3.4	14.2	0.0	6.2	0.0	0.0	2.2	2.7	2.2	2.3	13.0	33.1	2.0	16.5	14.6	51.7	44.6	20.8	10.1	27.6
Lithuania	249	26.1	0.0	0.0	12.4	26.1	0.0	2.5	0.0	0.0	0.0	3.9	0.7	2.2	2.4	23.8	1.5	11.6	10.8	71.6	67.0	26.1	14.1	37.2
Russian Federation	445	24.6	0.0	0.8	6.1	21.3	0.5	2.3	0.0	1.2	1.4	4.8	1.8	3.0	2.1	30.0	0.2	19.9	9.9	64.9	56.8	25.4	17.6	33.7
Slovenia	430	19.1	1.3	0.0	15.4	2.8	0.0	0.0	0.1	0.2	15.2	0.5	0.2	0.0	11.2	33.9	9.4	12.7	11.8	54.9	38.9	20.4	16.7	24.2
Sweden	253	54.8	2.9	10.8	5.2	0.4	0.0	2.3	0.0	0.7	9.9	2.2	0.7	0.5	0.7	8.8	0.4	3.0	5.4	90.1	77.2	68.5	64.8	70.0
Switzerland	360	39.0	0.6	0.3	21.3	1.7	3.1	2.2	0.0	0.2	6.0	6.7	1.9	2.4	4.0	10.6	1.9	6.5	2.3	83.0	68.4	39.9	36.1	43.4
United States	759	24.5	0.2	2.5	10.6	3.2	0.0	3.8	0.1	2.8	2.1	6.2	11.3	2.7	19.9	10.2	1.6	6.6	2.0	67.3	47.7	27.2	15.5	37.6
International Avg.	348	29.3	0.9	1.8	14.3	6.2	0.6	3.4	0.2	0.9	4.0	5.8	2.7	2.1	6.4	21.5	2.9	11.9	6.8	70.0	57.5	32.0	24.9	38.5

V1 = Percent scoring 1 or better      V2 = Percent scoring 2 or better      V3 = Percent scoring 3 or better  
Percent right for boys and girls corresponds to the percent obtaining the maximum score on the item.  
Because of missing gender information, some totals may appear inconsistent.



Mathematics: Calculus / (MA13080 - K17)

Label: Equation of a function given the derivative and point

ItemType: S Key: X

COUNTRY	N	30	39	20	21	22	23	29	10	11	19	70	71	79	99	INVAL ID	OMIT	NOT REACH ED	V1	V2	V3	1.GIRL % Right	2.BOY % Right
Australia	174	48.1	0.0	0.0	3.7	0.0	3.6	2.6	13.4	0.0	0.0	4.8	2.5	5.5	15.9	2.9	10.1	2.9	71.4	58.0	48.1	43.6	51.9
Austria	202	13.8	0.0	0.6	1.8	0.0	0.4	1.1	1.6	0.0	15.5	6.1	4.1	4.1	51.0	17.6	22.8	10.6	34.7	17.6	13.8	9.7	21.0
Canada	807	26.1	0.7	0.2	2.2	0.4	0.9	1.1	2.0	0.2	6.1	9.0	0.9	33.8	16.4	2.3	13.4	0.7	40.0	31.6	26.8	23.5	29.6
Cyprus	110	31.9	2.5	0.0	6.5	0.0	0.9	2.1	0.0	0.9	2.6	5.6	0.0	11.8	35.2	1.8	27.3	6.1	47.4	43.9	34.3	31.4	35.2
Czech Republic	272	10.5	0.0	0.8	1.1	0.0	0.2	0.3	0.0	0.6	0.8	8.0	2.6	9.1	65.8	22.2	35.8	7.8	14.5	13.1	10.5	4.2	19.3
Denmark	422	45.1	0.0	0.3	4.5	0.0	1.2	1.8	2.6	0.0	0.6	6.7	2.4	5.9	28.9	1.4	22.7	4.8	56.2	53.0	45.1	36.0	51.7
France	259	55.0	0.3	1.6	1.3	0.0	0.3	1.2	2.6	0.2	1.4	6.5	1.9	6.3	21.3	0.2	16.2	4.9	64.0	59.8	55.3	52.5	56.9
Germany	731	20.8	0.3	1.1	1.2	0.0	0.1	0.2	2.8	0.8	0.7	14.0	4.1	11.8	41.9	15.7	16.1	10.1	28.2	23.8	21.1	19.2	24.3
Greece	109	41.5	0.0	0.6	0.0	0.0	0.0	1.0	2.6	0.0	0.0	5.4	0.0	0.0	48.9	3.1	30.6	15.1	45.7	43.1	41.5	41.5	41.5
Israel	206	55.8	0.0	1.5	2.9	0.0	1.0	0.0	1.0	0.0	1.5	8.3	1.9	9.7	16.5	0.5	12.1	3.9	63.6	61.2	55.8	52.5	61.2
Italy	121	14.7	0.3	0.4	1.4	0.0	0.0	2.0	2.2	1.0	3.4	7.5	1.6	7.2	58.3	2.0	41.7	14.6	25.4	18.8	14.9	16.3	14.0
Lithuania	249	13.3	0.0	0.0	0.8	0.0	0.0	0.3	1.8	0.0	0.0	8.5	2.7	3.8	68.8	10.3	46.5	11.9	16.2	14.4	13.3	8.2	18.1
Russian Federation	445	26.7	0.1	0.7	4.4	0.5	0.2	0.4	1.3	0.2	0.1	9.7	1.9	8.8	45.1	1.1	32.9	11.1	34.6	33.0	26.9	18.0	36.2
Slovenia	430	11.3	0.0	0.0	1.2	0.0	1.8	0.8	0.6	0.0	0.1	20.5	0.2	18.3	45.4	13.8	19.2	12.3	15.7	15.0	11.3	7.7	15.3
Sweden	253	37.2	0.0	0.0	1.7	0.3	0.6	3.2	1.9	0.0	0.0	7.2	2.1	11.8	34.1	2.6	24.8	6.6	44.9	43.0	37.2	33.0	38.9
Switzerland	360	30.0	0.2	0.2	2.9	0.4	0.4	1.0	1.2	0.5	1.5	10.6	4.2	21.6	25.3	5.8	16.9	2.6	38.3	35.1	30.3	21.6	37.2
United States	759	16.0	0.2	0.0	0.5	0.2	0.1	0.4	2.8	0.1	0.3	8.2	1.8	37.2	32.2	3.6	26.1	2.4	20.6	17.4	16.2	15.3	17.0
International Avg.	348	29.3	0.3	0.5	2.2	0.1	0.7	1.1	2.4	0.3	2.0	8.6	2.1	12.2	38.3	6.3	24.4	7.6	38.9	34.2	29.6	25.5	33.5

V1 = Percent scoring 1 or better      V2 = Percent scoring 2 or better      V3 = Percent scoring 3 or better  
Percent right for boys and girls corresponds to the percent obtaining the maximum score on the item.  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Geometry / (MA13081 - K18)  
Label: Geometric proof of isosceles triangle  
ItemType: E Key: X

COUNTRY	N	20	21	29	10	11	19	70	71	72	79	99	INVAL ID	OMIT	NOT REACH ED	V1	V2	1.GIRL % Right	2.BOY % Right
Australia	174	36.4	2.5	0.8	14.4	2.6	1.6	13.4	1.8	2.6	13.4	10.6	2.1	4.6	3.9	58.3	39.7	44.8	35.4
Austria	202	16.2	0.0	1.4	3.1	0.3	1.7	5.4	11.8	1.2	3.9	54.9	10.1	22.6	22.3	22.7	17.6	17.3	19.4
Canada	807	33.0	0.5	0.6	8.6	2.2	10.4	4.7	11.9	1.1	20.6	6.4	1.4	2.4	2.5	55.3	34.1	34.7	33.7
Cyprus	110	33.2	0.0	2.0	25.1	1.9	0.9	17.8	5.2	0.9	1.7	11.3	0.9	3.6	6.9	63.0	35.2	29.7	37.8
Czech Republic	271	31.4	1.1	1.2	6.9	2.1	1.3	6.5	8.6	4.5	8.5	27.8	0.9	10.5	16.5	44.1	33.8	25.4	45.2
Denmark	422	13.6	1.7	0.8	17.1	4.3	2.4	9.8	4.9	3.7	12.3	29.3	1.6	13.4	14.3	39.9	16.1	15.4	17.0
France	259	51.1	2.0	0.3	6.7	0.8	3.4	2.8	5.0	0.5	9.2	18.1	0.4	8.4	9.2	64.3	53.4	59.0	49.7
Germany	732	18.2	1.4	1.2	7.2	0.4	2.3	6.9	1.8	0.5	10.4	49.6	17.5	14.2	17.8	30.7	20.8	20.7	21.4
Greece	109	64.5	0.0	0.0	0.6	0.0	0.0	3.6	0.0	0.0	0.9	30.5	1.4	8.9	20.3	65.0	64.5	52.8	71.1
Israel	206	42.2	4.9	1.9	25.2	0.0	1.0	18.9	0.0	0.5	1.0	4.4	0.0	0.5	3.9	75.2	49.0	61.6	36.7
Italy	121	17.4	10.3	5.3	5.8	0.7	3.9	7.4	2.9	3.1	5.9	37.3	0.0	9.1	28.2	43.5	33.1	44.5	25.8
Lithuania	249	27.9	2.1	0.0	14.1	0.0	4.0	10.6	1.3	0.5	8.7	30.8	4.6	4.2	22.0	48.1	30.0	24.5	35.2
Russian Federation	445	40.4	1.7	1.8	15.7	0.7	0.8	0.8	7.1	3.1	7.0	20.8	0.9	3.6	16.3	61.1	43.9	44.8	43.0
Slovenia	430	14.9	1.0	1.4	4.7	0.4	12.9	8.4	0.0	0.6	11.2	44.6	3.6	19.1	21.9	35.2	17.2	18.6	15.8
Sweden	253	38.0	2.2	0.8	7.0	1.5	0.8	9.9	3.5	0.0	10.5	25.8	1.0	7.7	17.0	50.3	41.0	45.3	39.2
Switzerland	360	41.9	0.9	4.3	11.8	3.0	1.8	7.5	3.0	1.4	4.5	20.0	1.8	10.2	8.0	63.6	47.1	45.6	48.9
United States	759	8.6	0.6	0.0	7.1	0.4	1.2	3.6	33.0	3.8	22.5	19.2	2.0	3.7	13.6	17.9	9.1	10.8	7.7
International Avg.	348	31.1	1.9	1.4	10.6	1.3	3.0	8.1	6.0	1.6	9.0	26.0	3.0	8.6	14.4	49.3	34.5	35.0	34.3

V1 = Percent scoring 1 or better      V2 = Percent scoring 2 or better      V3 = Percent scoring 3 or better  
Percent right for boys and girls corresponds to the percent obtaining the maximum score on the item.  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Algebra / (MA13082 - L01)  
Label: Values of x for an inequality  
ItemType: M Key: B

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	189	17.2	68.3	4.6	6.8	1.5	1.6	68.3	0.0	1.6	0.0	69.7	67.1
Austria	197	24.4	42.9	11.3	10.5	3.0	7.9	42.9	0.0	7.6	0.3	38.3	54.0
Canada	794	18.1	66.9	4.4	5.8	2.7	2.0	66.9	0.5	1.5	0.0	68.9	65.2
Cyprus	118	13.4	80.4	4.3	0.9	1.0	0.0	80.4	0.0	0.0	0.0	80.9	79.9
Czech Republic	273	5.1	84.4	2.9	0.4	1.0	6.2	84.4	4.0	2.2	0.0	83.2	86.0
Denmark	412	10.2	78.2	2.2	4.1	2.0	3.2	78.2	0.5	2.7	0.0	78.6	77.3
France	269	9.2	85.3	0.2	1.1	0.0	4.3	85.3	3.9	0.4	0.0	89.2	83.6
Germany	706	17.0	55.0	6.6	4.0	1.9	15.6	55.0	9.8	5.4	0.3	57.0	52.6
Greece	116	9.2	83.3	3.5	1.9	1.3	0.8	83.3	0.0	0.8	0.0	88.4	81.9
Israel	232	4.3	93.5	0.0	1.3	0.9	0.0	93.5	0.0	0.0	0.0	94.3	92.1
Italy	113	14.1	72.4	3.4	0.0	3.0	7.2	72.4	2.2	5.0	0.0	76.3	69.5
Lithuania	234	3.2	95.7	0.0	0.2	0.0	1.0	95.7	0.7	0.2	0.0	95.9	95.5
Russian Federation	450	8.4	88.3	0.4	0.6	1.4	0.8	88.3	0.0	0.8	0.0	89.3	87.5
Slovenia	419	13.2	70.5	2.2	5.0	2.0	7.1	70.5	3.0	4.1	0.0	79.6	59.7
Sweden	252	20.4	58.1	2.6	5.9	2.2	10.8	58.1	7.4	3.4	0.0	63.2	55.7
Switzerland	351	20.4	69.2	3.2	0.8	1.7	4.6	69.2	2.8	1.9	0.0	61.9	75.8
United States	804	13.9	67.1	7.8	7.0	2.5	1.7	67.1	0.4	1.3	0.0	66.9	67.2
International Avg.	349	13.0	74.1	3.5	3.3	1.6	4.4	74.1	2.1	2.3	0.0	75.4	73.6

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Algebra / (MA13083 - L02)  
Label: Solve an equation using base b  
ItemType: M Key: D

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	189	2.3	8.8	1.2	67.2	18.5	2.0	67.2	0.0	2.0	0.0	58.4	75.0
Austria	197	2.9	7.3	5.5	47.5	26.5	10.3	47.5	0.0	9.9	0.3	46.2	48.4
Canada	794	2.5	9.9	4.0	68.1	14.4	1.1	68.1	0.0	1.1	0.0	63.1	72.8
Cyprus	118	1.5	5.8	3.4	72.0	15.4	1.9	72.0	0.0	1.9	0.0	72.3	71.5
Czech Republic	273	1.6	9.0	2.3	51.2	24.0	11.9	51.2	4.5	7.4	0.0	45.1	59.1
Denmark	412	3.6	7.0	1.3	60.9	13.6	13.6	60.9	0.7	12.9	0.0	54.0	64.9
France	269	2.3	3.7	1.4	60.5	16.7	15.4	60.5	0.0	15.4	0.0	59.3	61.5
Germany	706	2.8	9.8	1.8	40.1	24.5	21.1	40.1	0.1	20.5	0.4	40.7	39.7
Greece	116	2.3	1.3	1.2	79.2	10.3	5.6	79.2	0.0	5.6	0.0	81.3	79.0
Israel	232	0.9	1.3	0.4	89.2	6.5	1.7	89.2	0.0	1.7	0.0	91.0	89.1
Italy	113	2.2	8.4	4.2	52.2	20.1	12.9	52.2	2.0	10.9	0.0	37.7	62.7
Lithuania	234	1.0	5.6	0.0	83.8	3.0	6.5	83.8	0.0	6.5	0.0	77.8	89.4
Russian Federation	450	1.4	5.2	3.3	82.6	4.9	2.6	82.6	0.0	2.6	0.0	76.6	87.2
Slovenia	419	3.2	8.2	2.7	47.7	21.6	16.5	47.7	0.1	16.5	0.0	51.1	43.8
Sweden	252	4.2	10.9	3.7	60.7	14.6	5.9	60.7	0.0	5.9	0.0	65.4	58.6
Switzerland	351	2.8	4.6	0.8	62.6	14.2	15.0	62.6	0.0	15.0	0.0	61.2	64.6
United States	804	7.3	9.7	6.7	55.8	18.6	1.8	55.8	0.0	1.8	0.0	52.3	59.0
International Avg.	349	2.6	6.9	2.6	63.6	15.7	8.6	63.6	0.4	8.1	0.0	60.8	66.3

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Algebra / (MA13084 - L03)  
Label: Value of constant for radioactive decay  
ItemType: M Key: A

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	189	56.6	13.9	7.3	14.7	5.2	2.4	56.6	0.0	2.4	0.0	56.5	56.6
Austria	196	31.6	17.2	10.1	16.7	10.7	13.7	31.6	0.0	13.4	0.3	27.9	39.6
Canada	794	44.9	12.1	5.2	19.5	12.4	5.8	44.9	0.0	5.8	0.0	49.4	40.9
Cyprus	118	52.5	12.4	1.8	24.9	3.1	5.3	52.5	0.0	5.3	0.0	38.5	60.0
Czech Republic	273	35.3	7.6	5.7	18.3	12.0	21.1	35.3	4.4	16.7	0.0	30.2	42.0
Denmark	412	58.7	7.2	5.2	6.3	5.3	17.3	58.7	0.3	16.8	0.2	51.9	63.2
France	269	47.2	6.4	6.3	9.9	7.3	22.9	47.2	0.3	22.6	0.0	47.2	48.0
Germany	706	35.4	8.4	7.2	8.5	12.2	28.3	35.4	0.9	26.9	0.4	35.9	34.2
Greece	116	65.2	5.6	4.8	13.2	3.6	7.6	65.2	0.8	6.8	0.0	70.0	63.0
Israel	232	40.9	12.9	10.8	14.2	3.0	18.1	40.9	0.0	18.1	0.0	32.8	51.5
Italy	113	29.9	15.6	4.9	15.7	7.0	26.9	29.9	0.0	26.9	0.0	28.0	31.3
Lithuania	234	34.5	6.2	1.9	6.5	15.2	35.8	34.5	0.0	35.8	0.0	24.6	43.5
Russian Federation	450	47.6	9.6	2.9	5.0	16.2	18.8	47.6	0.7	18.1	0.0	32.2	59.6
Slovenia	419	19.9	10.8	8.6	14.0	9.6	37.1	19.9	0.1	37.0	0.0	21.2	18.3
Sweden	252	65.8	10.6	6.0	10.4	4.8	2.4	65.8	0.0	2.4	0.0	64.3	66.5
Switzerland	351	37.5	13.6	4.6	14.0	4.5	25.7	37.5	0.2	25.5	0.0	29.8	45.6
United States	804	38.1	14.6	7.8	20.5	12.4	6.5	38.1	0.0	6.5	0.0	40.3	36.0
International Avg.	349	43.6	10.9	5.9	13.7	8.5	17.4	43.6	0.5	16.9	0.1	40.0	47.0

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Algebra / (MA13085 - L04)  
Label: Contributions of examination question choices  
ItemType: M Key: C

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	189	20.2	0.5	70.9	2.0	4.9	1.5	70.9	0.0	1.5	0.0	73.8	68.2
Austria	197	16.5	5.4	40.1	4.8	28.1	5.0	40.1	0.0	4.7	0.3	39.9	43.9
Canada	794	11.9	2.1	48.7	8.5	23.8	4.9	48.7	0.0	4.9	0.0	47.8	49.5
Cyprus	118	2.4	6.9	63.3	7.1	17.0	3.4	63.3	0.0	3.4	0.0	58.6	66.9
Czech Republic	273	19.1	5.1	41.6	20.3	9.7	4.2	41.6	1.3	2.9	0.0	31.2	55.3
Denmark	412	13.1	3.5	38.7	6.3	25.8	12.5	38.7	0.3	12.0	0.2	33.9	41.6
France	269	9.7	0.0	77.7	3.2	8.2	1.2	77.7	0.0	1.2	0.0	75.6	79.5
Germany	706	17.4	6.0	35.1	10.0	16.9	14.7	35.1	0.2	14.1	0.4	31.9	40.1
Greece	116	13.9	5.5	46.0	7.9	21.9	4.8	46.0	0.0	4.8	0.0	37.5	48.9
Israel	232	8.6	4.3	50.9	6.9	16.4	12.9	50.9	0.0	12.9	0.0	43.4	59.4
Italy	113	17.1	12.3	27.5	4.1	9.5	29.5	27.5	0.0	29.5	0.0	16.6	35.3
Lithuania	234	25.5	1.3	47.3	3.6	7.9	14.4	47.3	0.0	14.4	0.0	37.4	56.5
Russian Federation	449	25.6	5.6	34.1	7.6	13.3	13.7	34.1	0.0	13.7	0.0	27.4	39.3
Slovenia	419	14.9	3.0	49.2	14.1	9.9	8.9	49.2	0.2	8.7	0.0	51.2	46.8
Sweden	252	13.2	5.1	46.0	13.1	21.4	1.2	46.0	0.0	1.2	0.0	40.8	48.5
Switzerland	351	8.0	1.7	56.9	4.1	18.7	10.6	56.9	0.0	10.6	0.0	55.2	57.8
United States	804	18.1	6.5	36.0	8.2	25.2	5.9	36.0	0.0	5.9	0.0	35.4	36.5
International Avg.	349	15.0	4.4	47.6	7.8	16.4	8.8	47.6	0.1	8.6	0.1	43.4	51.4

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Algebra / (MA13086 - L05)  
Label: Sum of infinite geometric series  
ItemType: M Key: B

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	189	12.1	53.0	0.5	2.7	31.3	0.5	53.0	0.0	0.5	0.0	48.6	56.8
Austria	197	15.4	18.4	3.3	1.2	59.2	2.5	18.4	0.0	2.2	0.3	10.4	38.5
Canada	794	11.6	52.0	2.2	4.1	28.7	1.4	52.0	0.0	1.4	0.0	47.6	56.1
Cyprus	118	5.2	79.5	2.6	4.8	7.0	1.0	79.5	0.0	1.0	0.0	84.0	76.6
Czech Republic	273	10.6	38.8	1.6	11.3	28.8	8.8	38.8	4.8	4.0	0.0	26.2	55.6
Denmark	412	7.5	30.4	1.3	2.0	50.2	8.6	30.4	0.7	7.8	0.2	24.1	34.9
France	269	8.4	43.6	2.6	4.7	35.5	5.3	43.6	0.0	5.3	0.0	33.1	50.3
Germany	706	14.2	24.8	3.9	3.1	50.4	3.6	24.8	0.2	3.0	0.4	18.0	34.8
Greece	116	6.5	61.6	2.2	8.9	17.1	3.8	61.6	0.0	3.8	0.0	55.2	64.6
Israel	232	8.6	55.6	5.6	6.0	21.1	3.0	55.6	0.0	3.0	0.0	54.1	58.4
Italy	113	17.9	22.4	4.6	4.8	36.3	14.0	22.4	0.0	14.0	0.0	18.2	25.5
Lithuania	234	8.1	64.5	2.6	1.2	14.6	9.1	64.5	0.0	9.1	0.0	58.9	69.6
Russian Federation	450	8.5	56.7	2.1	4.3	22.5	6.0	56.7	0.0	6.0	0.0	49.9	62.0
Slovenia	419	4.9	24.1	2.1	9.8	38.7	20.4	24.1	0.5	19.9	0.0	27.3	20.3
Sweden	252	5.0	54.1	4.9	1.3	34.3	0.4	54.1	0.0	0.4	0.0	45.2	58.1
Switzerland	351	8.6	55.0	6.6	2.4	22.7	4.6	55.0	0.0	4.6	0.0	45.2	63.8
United States	804	18.2	25.3	5.0	8.1	42.2	1.2	25.3	0.0	1.2	0.0	21.6	28.8
International Avg.	349	10.1	44.7	3.2	4.8	31.8	5.5	44.7	0.4	5.1	0.1	39.3	50.3

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Calculus / (MA13087 - L06)  
Label: Critical point of velocity equation  
ItemType: M Key: B

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	189	3.2	63.0	26.3	6.1	1.4	0.0	63.0	0.0	0.0	0.0	55.8	69.3
Austria	197	2.2	12.6	63.6	10.6	7.0	4.0	12.6	0.0	3.7	0.3	8.3	20.5
Canada	794	6.2	51.0	36.6	2.9	2.9	0.4	51.0	0.0	0.4	0.0	48.0	53.9
Cyprus	118	4.3	49.0	39.9	5.1	1.7	0.0	49.0	0.0	0.0	0.0	51.8	48.0
Czech Republic	273	4.9	8.6	70.4	3.7	2.9	9.5	8.6	5.9	3.6	0.0	5.1	13.3
Denmark	412	7.4	36.0	45.5	3.0	2.4	5.6	36.0	0.3	5.1	0.2	34.6	36.3
France	269	2.4	51.0	40.0	3.3	0.6	2.7	51.0	0.3	2.5	0.0	51.4	50.0
Germany	706	3.7	9.1	71.5	6.0	2.1	7.6	9.1	0.1	7.0	0.4	6.8	12.9
Greece	116	4.6	32.0	47.9	6.5	5.3	3.6	32.0	0.0	3.6	0.0	30.1	33.0
Israel	232	3.0	12.5	65.9	6.5	3.4	8.6	12.5	0.0	8.6	0.0	5.7	21.8
Italy	113	9.9	18.9	48.4	2.9	3.6	16.3	18.9	0.8	15.5	0.0	24.1	15.2
Lithuania	234	1.0	27.0	65.5	0.9	0.2	5.5	27.0	0.0	5.5	0.0	19.9	33.5
Russian Federation	450	7.1	43.3	40.0	2.2	2.3	5.1	43.3	0.0	5.1	0.0	40.6	45.4
Slovenia	419	1.7	5.0	70.0	5.5	2.3	15.5	5.0	0.1	15.4	0.0	4.0	6.1
Sweden	252	7.2	63.1	22.6	4.6	2.0	0.6	63.1	0.0	0.6	0.0	69.5	60.1
Switzerland	351	3.6	21.6	63.1	5.8	2.0	4.0	21.6	0.0	4.0	0.0	18.2	24.7
United States	804	5.4	24.9	59.3	6.8	3.0	0.7	24.9	0.1	0.6	0.0	23.7	25.9
International Avg.	349	4.6	31.1	51.5	4.8	2.7	5.3	31.1	0.4	4.8	0.1	29.3	33.5

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.



Mathematics: Calculus / (MA13088 - L07)

Label: Graph of  $y=f(x)$

ItemType: M Key: C

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	189	32.7	11.7	33.8	17.1	3.2	1.5	33.8	0.0	1.5	0.0	24.8	41.8
Austria	197	43.5	6.7	19.0	15.4	8.2	7.1	19.0	0.0	6.8	0.3	11.3	36.3
Canada	794	23.1	8.8	27.9	22.2	12.5	5.6	27.9	0.0	5.6	0.0	28.8	27.2
Cyprus	118	24.7	5.2	51.2	12.8	6.1	0.0	51.2	0.0	0.0	0.0	51.1	50.7
Czech Republic	273	25.5	5.1	24.5	18.6	11.7	14.5	24.5	1.7	12.8	0.0	19.2	31.6
Denmark	412	36.5	6.4	38.6	11.2	2.0	5.3	38.6	0.5	4.6	0.2	33.8	40.6
France	269	46.2	6.0	38.3	5.5	2.2	1.9	38.3	0.0	1.9	0.0	33.1	40.9
Germany	706	36.2	4.8	26.0	18.5	4.3	10.2	26.0	0.9	8.6	0.6	23.6	29.3
Greece	116	23.2	17.1	30.6	27.2	1.2	0.8	30.6	0.0	0.8	0.0	37.0	28.2
Israel	232	39.7	6.5	34.1	13.4	2.2	4.3	34.1	0.0	4.3	0.0	32.0	36.6
Italy	113	24.0	8.6	41.9	15.0	4.2	6.4	41.9	0.0	6.4	0.0	42.5	41.5
Lithuania	234	29.6	10.1	31.1	4.4	4.2	20.6	31.1	0.0	20.6	0.0	24.1	37.6
Russian Federation	449	33.9	6.7	42.4	7.9	3.8	5.2	42.4	0.0	5.2	0.0	41.6	43.1
Slovenia	419	19.9	3.1	23.9	8.9	13.1	31.2	23.9	0.1	31.1	0.0	23.8	23.9
Sweden	252	26.7	10.2	48.0	9.2	3.7	2.2	48.0	0.2	1.9	0.0	36.2	53.4
Switzerland	351	30.8	3.9	43.4	12.9	3.9	5.1	43.4	0.0	5.1	0.0	34.7	51.9
United States	804	21.9	10.5	26.7	19.4	14.9	6.6	26.7	0.1	6.5	0.0	23.2	30.1
International Avg.	349	30.5	7.7	34.2	14.1	6.0	7.6	34.2	0.2	7.3	0.1	30.6	37.9

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Geometry / (MA13089 - L08)  
Label: Coordinates of fourth point of a rectangle  
ItemType: M Key: E

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	189	8.5	14.3	10.5	13.3	50.7	2.8	50.7	0.0	2.8	0.0	43.7	56.9
Austria	197	9.9	13.2	9.1	15.0	41.6	11.3	41.6	0.0	10.9	0.3	40.3	44.9
Canada	794	10.1	9.9	6.5	23.3	47.1	3.0	47.1	0.0	3.0	0.0	45.2	48.9
Cyprus	118	6.1	10.5	14.5	13.5	48.5	6.8	48.5	0.0	6.8	0.0	58.9	41.9
Czech Republic	273	9.1	13.4	10.2	9.2	48.5	9.6	48.5	5.8	3.8	0.0	45.9	52.1
Denmark	412	8.5	5.3	3.4	13.1	62.1	7.6	62.1	0.3	7.1	0.2	61.1	63.1
France	269	4.0	2.1	4.2	6.2	82.1	1.4	82.1	0.0	1.4	0.0	73.5	87.2
Germany	706	12.1	11.4	7.8	15.8	38.2	14.8	38.2	1.5	12.6	0.6	39.9	35.0
Greece	116	1.5	11.3	14.5	12.5	50.6	9.6	50.6	0.0	9.6	0.0	54.1	49.6
Israel	.	.	.	.	.	.	.	.	.	.	.	.	.
Italy	113	13.2	8.0	11.6	6.9	46.4	13.9	46.4	0.0	13.9	0.0	37.4	52.8
Lithuania	234	4.8	2.1	7.5	14.7	50.5	20.4	50.5	0.0	20.4	0.0	36.7	63.3
Russian Federation	450	8.6	6.6	7.7	12.4	55.4	9.4	55.4	0.0	9.4	0.0	44.9	63.6
Slovenia	419	9.1	15.2	8.7	11.0	37.1	18.9	37.1	0.9	17.9	0.0	36.3	38.1
Sweden	252	6.6	20.3	8.3	13.8	45.1	5.8	45.1	0.6	5.2	0.0	43.2	46.0
Switzerland	351	11.7	8.3	5.5	11.1	49.9	13.4	49.9	0.7	12.7	0.0	49.0	50.1
United States	804	9.4	17.6	9.5	22.8	38.3	2.3	38.3	0.0	2.3	0.0	38.3	38.4
International Avg.	356	8.3	10.6	8.7	13.4	49.5	9.4	49.5	0.6	8.7	0.1	46.8	52.0

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Geometry / (MA13090 - L09)  
Label: Transformation of a rectangle  
ItemType: M Key: A

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
-----												
Australia	189	56.3	15.5	17.4	10.3	0.4	56.3	0.0	0.4	0.0	51.3	60.8
Austria	197	50.9	21.0	6.9	15.2	6.0	50.9	0.0	5.7	0.3	45.9	60.2
Canada	794	61.9	8.7	13.6	14.3	1.4	61.9	0.0	1.0	0.4	63.4	60.7
Cyprus	118	30.0	39.9	15.8	13.5	0.8	30.0	0.0	0.8	0.0	23.8	32.6
Czech Republic	273	53.8	17.8	5.9	19.3	3.2	53.8	2.6	0.5	0.0	47.2	62.6
Denmark	412	69.7	3.8	11.0	8.2	7.3	69.7	5.6	1.5	0.2	67.0	70.7
France	269	63.0	5.5	12.1	11.1	8.4	63.0	3.0	5.4	0.0	58.6	66.3
Germany	706	71.0	7.5	3.9	11.5	6.2	71.0	4.1	1.4	0.6	69.4	73.9
Greece	116	45.3	17.6	16.2	18.4	2.5	45.3	1.0	1.5	0.0	36.9	49.0
Israel	232	45.3	20.7	11.2	21.6	1.3	45.3	0.0	1.3	0.0	46.7	44.6
Italy	113	55.9	10.0	8.2	22.7	3.2	55.9	1.3	1.9	0.0	52.4	58.4
Lithuania	234	60.8	17.0	7.6	8.0	6.6	60.8	0.0	6.6	0.0	51.4	69.4
Russian Federation	448	64.7	8.5	10.9	12.7	3.2	64.7	0.2	3.1	0.0	57.6	70.1
Slovenia	419	43.0	12.8	18.3	17.0	8.9	43.0	7.0	1.9	0.0	45.0	40.7
Sweden	252	37.4	14.4	31.4	9.7	7.2	37.4	5.0	1.8	0.5	28.4	41.5
Switzerland	351	82.5	3.7	4.1	6.2	3.5	82.5	2.5	1.0	0.0	79.3	85.3
United States	804	46.1	13.2	24.0	16.3	0.4	46.1	0.0	0.4	0.0	44.8	47.3
-----												
International Avg.	349	55.1	14.0	12.9	13.9	4.1	55.1	1.9	2.1	0.1	51.1	58.5
-----												

DIFF = Percent correct      OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Geometry / (MA13093 - L12)  
Label: Length of diagonal in a regular hexagon  
ItemType: M Key: A

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	OMIT	NOT REACHED	1.GIRL % Right	2.BOY % Right
Australia	189	69.2	5.8	6.7	8.3	7.5	2.5	69.2	0.0	2.5	0.0	64.1	73.6
Austria	197	66.5	13.0	7.3	2.2	6.0	5.0	66.5	0.0	4.7	0.3	62.2	77.6
Canada	794	64.1	9.1	8.5	9.1	7.2	1.9	64.1	0.0	1.6	0.4	61.2	66.9
Cyprus	118	60.6	4.3	11.0	16.6	5.8	1.7	60.6	0.0	1.7	0.0	45.3	70.3
Czech Republic	273	64.3	11.4	7.2	4.3	6.6	6.2	64.3	4.2	2.0	0.0	56.1	75.1
Denmark	412	78.2	3.5	3.2	4.6	2.1	8.3	78.2	0.3	7.9	0.2	77.3	78.7
France	269	74.6	3.8	7.7	4.2	4.2	5.6	74.6	0.0	5.6	0.0	70.5	77.2
Germany	706	60.5	13.2	6.1	3.6	6.8	9.7	60.5	0.3	8.4	1.0	60.2	60.7
Greece	116	51.5	4.2	11.6	17.7	12.1	2.9	51.5	0.0	2.3	0.6	51.2	51.9
Israel	232	99.1	0.0	0.4	0.0	0.4	0.0	99.1	0.0	0.0	0.0	100.0	99.0
Italy	113	61.5	8.4	10.5	3.2	4.0	12.5	61.5	0.0	12.5	0.0	53.1	67.5
Lithuania	234	69.7	3.9	5.9	11.9	3.2	5.4	69.7	0.0	5.2	0.2	57.7	80.8
Russian Federation	450	71.1	5.0	6.1	10.2	3.9	3.7	71.1	0.6	2.5	0.6	62.1	78.2
Slovenia	419	58.4	10.0	10.1	7.7	3.5	10.3	58.4	0.4	9.9	0.0	61.1	55.2
Sweden	252	75.1	3.1	9.9	4.8	4.1	3.0	75.1	0.0	2.2	0.8	72.6	76.2
Switzerland	351	73.8	2.7	6.5	5.2	4.6	7.2	73.8	0.0	7.1	0.1	67.5	80.8
United States	804	59.4	13.6	7.3	7.0	11.2	1.5	59.4	0.0	1.5	0.0	55.7	62.9
International Avg.	349	68.1	6.8	7.4	7.1	5.5	5.2	68.1	0.3	4.6	0.2	63.4	72.5

DIFF = Percent correct OTHER INCORRECT = Sum of invalid, not reached and omitted responses  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Geometry / (MA13094 - L13)  
Label: Angle between two vectors  
ItemType: S Key: X

COUNTRY	N	10	11	12	13	19	70	71	72	73	79	99	INVAL ID	NOT REACH ED	OMIT	V1	1.GIRL % Right	2.BOY % Right
-----																		
Australia	189	7.9	1.9	11.0	5.6	7.1	7.1	0.0	0.9	2.6	14.0	41.9	2.0	39.5	0.4	33.5	26.0	40.3
Austria	197	17.6	0.0	0.0	5.2	1.6	5.2	0.0	0.0	10.3	11.1	49.0	17.2	31.5	0.3	24.4	18.2	40.7
Canada	794	7.7	2.5	3.5	10.8	5.3	5.9	2.0	1.4	0.4	23.8	36.7	5.4	30.9	0.4	29.8	24.4	34.8
Cyprus	117	16.5	7.9	1.0	0.9	1.0	6.0	0.0	0.9	13.2	6.2	46.6	3.5	43.1	0.0	27.1	23.3	29.7
Czech Republic	273	7.3	0.3	3.5	6.5	2.9	12.1	0.0	0.8	3.1	8.8	54.6	9.3	45.3	0.0	20.6	12.3	31.6
Denmark	412	24.8	1.7	3.1	9.3	2.1	12.5	0.6	1.4	5.2	10.2	29.1	0.5	28.4	0.2	41.0	32.2	45.3
France	269	25.1	1.1	1.4	1.4	1.3	6.8	0.0	0.0	0.4	11.3	51.3	1.3	49.6	0.4	30.3	23.0	34.6
Germany	704	20.0	1.2	1.9	1.5	2.4	10.1	0.0	0.4	6.5	7.3	48.5	19.8	26.7	2.1	27.1	21.1	34.7
Greece	116	13.8	31.2	0.0	0.8	0.0	6.9	2.5	0.0	1.7	1.7	41.6	2.5	38.5	0.6	45.8	26.2	53.9
Israel	232	9.5	3.9	2.6	4.3	2.2	9.5	0.9	0.4	7.3	6.5	53.0	0.4	52.6	0.0	22.4	12.3	34.7
Italy	113	7.4	3.4	2.0	0.4	3.0	12.2	0.0	0.0	0.0	2.1	69.4	4.7	62.8	1.9	16.3	9.0	21.5
Lithuania	234	12.5	3.8	5.4	0.0	0.3	5.3	0.0	0.0	0.0	1.5	71.3	7.9	62.9	0.5	22.0	10.8	32.3
Russian Federation	449	21.9	6.2	4.7	0.9	5.2	6.7	0.7	0.0	1.9	3.3	48.5	2.9	45.0	0.6	38.9	27.1	48.1
Slovenia	419	11.9	1.7	3.5	1.0	0.9	6.8	0.0	0.2	0.7	13.3	60.1	6.2	53.6	0.4	18.9	19.3	18.5
Sweden	252	11.7	0.0	0.3	7.7	5.2	4.2	0.0	0.3	0.3	7.3	63.0	3.1	59.0	1.0	24.9	24.2	25.2
Switzerland	351	14.7	0.8	4.3	12.0	4.1	7.1	0.3	0.0	8.2	21.0	27.6	6.4	20.6	0.6	35.8	26.0	45.5
United States	804	6.3	0.1	0.3	7.0	0.7	13.0	0.2	0.6	0.5	31.0	40.4	9.6	30.7	0.0	14.4	11.0	17.6
-----																		
International Avg.	349	13.9	4.0	2.9	4.4	2.7	8.1	0.4	0.4	3.7	10.6	49.0	6.0	42.4	0.5	27.8	20.4	34.6
-----																		

V1 = Percent scoring 1 or better      V2 = Percent scoring 2 or better      V3 = Percent scoring 3 or better  
Percent right for boys and girls corresponds to the percent obtaining the maximum score on the item.  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Algebra / (MA13095 - L14)  
Label: Probability of both smoking and drinking  
ItemType: S Key: X

COUNTRY	N	10	70	71	72	73	79	99	INVAL ID	OMIT	NOT REACH ED	V1	1.GIRL % Right	2.BOY % Right
-----														
Australia	189	75.7	0.0	1.8	0.0	0.2	12.9	9.4	0.0	6.4	3.0	75.7	71.8	79.1
Austria	197	40.6	1.4	1.3	0.9	2.3	18.7	34.9	11.0	21.5	2.3	40.6	33.2	59.1
Canada	794	56.6	0.2	1.0	0.7	0.7	21.9	18.8	2.7	15.4	0.7	56.6	55.1	58.0
Cyprus	117	41.1	3.1	0.0	0.0	0.0	15.3	40.5	11.6	28.9	0.0	41.1	44.2	38.5
Czech Republic	272	32.4	0.6	1.2	1.0	5.3	14.9	44.6	7.6	36.1	1.0	32.4	16.4	53.3
Denmark	412	66.9	1.5	0.3	0.5	1.9	13.4	15.4	0.2	14.6	0.6	66.9	57.1	72.2
France	269	79.7	0.0	0.9	0.2	1.5	12.6	5.2	0.4	4.3	0.5	79.7	78.0	80.2
Germany	704	41.1	0.8	0.3	0.0	1.7	13.1	42.9	19.1	20.8	3.1	41.1	36.8	48.2
Greece	116	56.5	5.2	0.0	0.6	0.0	3.6	34.2	4.6	25.5	4.0	56.5	55.0	57.6
Israel	232	38.4	0.9	0.4	0.0	1.3	12.1	47.0	0.4	46.6	0.0	38.4	28.7	49.5
Italy	113	38.1	0.0	0.4	1.4	2.4	11.4	46.3	3.2	37.1	6.0	38.1	33.9	41.1
Lithuania	234	40.0	0.0	0.0	0.0	0.7	9.4	49.8	4.0	43.9	2.0	40.0	24.4	54.5
Russian Federation	449	36.0	0.2	1.1	0.9	2.8	14.3	44.7	0.7	41.5	2.5	36.0	20.6	48.1
Slovenia	419	36.9	0.1	0.4	0.4	0.9	15.9	45.4	10.0	32.6	2.7	36.9	35.1	39.0
Sweden	251	65.4	0.0	0.0	1.2	0.3	12.4	20.6	0.0	19.1	1.5	65.4	70.8	63.0
Switzerland	350	54.3	2.0	1.1	0.3	1.7	15.6	25.1	8.9	15.4	0.7	54.3	44.7	62.8
United States	804	53.2	0.3	1.3	0.3	1.1	29.3	14.5	1.4	12.6	0.5	53.2	49.9	56.2
-----														
International Avg.	348	50.2	1.0	0.7	0.5	1.5	14.5	31.7	5.0	24.8	1.8	50.2	44.5	56.5
-----														

V1 = Percent scoring 1 or better      V2 = Percent scoring 2 or better      V3 = Percent scoring 3 or better  
Percent right for boys and girls corresponds to the percent obtaining the maximum score on the item.  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Algebra / (MA13097 - L16)  
Label: Solution of real values of a quadratic equation  
ItemType: E Key: X

COUNTRY	N	32	30	31	39	20	21	22	29	10	11	12	19	70	79	99	INVAL ID	OMIT	NOT REACH ED	V1	V2	V3	1.GIRL % Right	2.BOY % Right
Australia	189	0.0	8.8	8.1	2.5	7.9	0.9	0.0	1.5	16.7	2.3	0.0	12.6	7.2	17.7	13.8	0.0	10.9	3.0	61.2	29.6	19.3	15.8	22.5
Austria	197	0.0	2.6	0.5	0.5	6.4	0.6	0.0	1.7	18.8	5.9	0.0	6.5	6.0	14.7	35.8	5.4	26.8	3.6	43.5	12.3	3.6	1.9	7.6
Canada	794	0.0	7.0	1.7	2.5	12.9	2.7	0.0	3.7	16.8	2.2	0.0	10.7	9.3	19.3	11.2	0.8	9.4	1.0	60.2	30.6	11.3	7.4	14.9
Cyprus	118	0.0	17.5	4.2	0.0	29.9	2.5	0.0	5.8	0.0	0.9	0.0	11.3	6.5	5.0	16.3	0.9	13.0	2.4	72.1	60.0	21.7	17.1	24.7
Czech Republic	273	0.0	11.0	7.6	1.1	11.5	0.7	0.0	2.1	2.0	2.5	0.0	5.9	27.7	6.9	21.0	6.5	13.4	1.2	44.4	34.0	19.7	16.1	24.4
Denmark	412	0.0	4.4	3.9	0.0	8.1	2.3	0.0	1.2	13.8	2.3	0.5	3.7	20.6	12.3	26.9	1.9	23.8	1.1	40.2	19.9	8.4	7.6	9.0
France	269	0.0	7.6	11.1	0.6	10.6	2.7	0.5	1.0	4.7	5.8	0.0	8.0	5.7	24.7	17.0	1.2	14.1	1.8	52.6	34.1	19.4	14.8	22.1
Germany	706	0.8	5.6	1.5	1.7	3.9	0.9	0.4	1.8	11.2	2.3	0.0	8.6	1.0	19.9	40.4	19.0	17.4	4.0	38.7	16.6	9.6	10.7	8.5
Greece	116	3.0	8.4	47.4	0.0	4.7	1.1	0.6	0.0	0.0	0.0	0.0	0.0	5.2	2.3	27.2	6.0	11.1	10.0	65.3	65.3	58.9	67.7	55.8
Israel	232	0.0	9.1	23.7	0.4	31.9	7.8	0.0	3.4	1.3	5.2	0.0	5.6	4.7	3.4	3.4	0.4	2.2	0.9	88.4	76.3	33.2	33.6	35.6
Italy	113	0.0	12.3	3.7	0.2	8.7	0.0	0.0	2.0	9.4	2.2	0.0	5.5	7.2	11.5	37.5	1.3	27.6	8.6	43.8	26.8	16.1	17.7	15.0
Lithuania	234	0.0	12.1	50.9	0.0	6.5	6.2	0.0	0.6	1.6	4.2	0.0	0.0	1.1	3.2	13.9	5.0	4.3	4.5	81.8	76.1	62.9	56.2	69.2
Russian Federation	449	0.1	10.6	48.2	1.2	4.6	4.7	0.0	2.1	0.5	4.5	0.3	1.9	8.7	3.8	8.7	0.5	5.8	2.5	78.7	71.5	60.1	55.4	63.8
Slovenia	419	6.4	18.7	10.4	0.2	0.8	0.5	0.0	0.1	1.0	0.0	0.0	1.6	14.8	27.8	17.7	2.4	10.7	4.7	39.7	37.1	35.7	39.6	31.2
Sweden	252	0.0	6.4	1.2	0.4	8.0	1.2	0.0	1.4	9.7	0.2	1.5	16.1	14.4	10.4	29.1	3.3	23.5	2.4	46.0	18.6	8.0	6.6	8.6
Switzerland	350	0.0	7.8	4.2	0.2	16.7	1.6	0.0	3.0	8.6	1.7	0.0	9.6	15.7	13.6	17.3	2.6	9.8	4.8	53.4	33.5	12.1	5.5	18.8
United States	804	0.1	4.0	0.5	2.3	6.3	0.0	0.0	0.4	20.1	1.5	0.0	7.6	15.1	27.7	14.3	3.6	10.0	0.7	42.9	13.6	6.9	6.1	7.7
International Avg.	349	0.6	9.1	13.5	0.8	10.6	2.1	0.1	1.9	8.0	2.6	0.1	6.8	10.1	13.2	20.7	3.6	13.8	3.4	56.1	38.6	23.9	22.3	25.8

V1 = Percent scoring 1 or better      V2 = Percent scoring 2 or better      V3 = Percent scoring 3 or better  
Percent right for boys and girls corresponds to the percent obtaining the maximum score on the item.  
Because of missing gender information, some totals may appear inconsistent.

Mathematics: Geometry / (MA13098 - L17)  
Label: Equation for circle  
ItemType: E Key: X

COUNTRY	N	20	21	29	10	11	12	19	70	71	72	73	79	99	INVAL ID	OMIT	NOT REACH ED	V1	V2	1.GIRL % Right	2.BOY % Right
Australia	189	19.1	1.4	0.6	0.0	5.5	0.6	1.5	0.0	3.2	8.6	2.0	29.8	27.6	3.6	18.3	5.7	28.8	21.2	18.1	24.0
Austria	197	2.5	1.5	0.4	0.0	0.9	0.3	0.0	0.0	1.0	7.1	2.8	26.6	57.0	9.3	34.9	12.8	5.5	4.3	3.1	7.4
Canada	794	16.6	0.3	0.0	0.4	3.9	0.0	2.2	1.2	3.2	10.7	5.4	38.2	17.9	1.5	13.4	3.0	23.5	17.0	14.0	19.8
Cyprus	118	6.3	23.5	0.0	1.8	0.9	0.0	0.0	4.5	0.0	3.0	2.6	17.5	39.8	1.8	29.3	8.7	32.5	29.8	32.7	28.5
Czech Republic	273	13.6	0.6	0.3	0.0	5.6	0.0	0.7	2.0	0.0	5.1	3.4	19.7	48.9	7.8	38.0	3.2	20.9	14.6	8.8	22.2
Denmark	412	22.7	0.0	3.2	1.4	4.7	0.1	3.7	1.2	0.1	4.6	6.6	26.3	25.4	0.8	17.3	7.3	35.8	25.9	26.1	24.9
France	269	37.0	0.3	0.0	0.0	13.1	0.3	1.1	0.0	0.9	5.4	6.7	12.4	22.8	0.9	15.3	6.6	51.8	37.3	34.9	38.6
Germany	706	5.7	0.2	0.1	0.6	1.8	0.7	0.7	0.1	0.6	3.5	2.4	21.2	62.5	25.6	23.4	13.6	9.8	6.0	5.2	7.5
Greece	116	34.9	14.7	2.7	0.0	1.3	0.0	0.0	7.3	1.7	2.7	1.9	1.1	31.8	1.9	13.1	16.7	53.6	52.3	56.1	51.1
Israel	232	37.5	4.3	0.4	0.4	5.2	0.0	0.9	0.4	0.4	3.0	12.1	15.1	20.3	0.0	19.4	0.9	48.7	42.2	40.2	47.5
Italy	113	0.0	8.4	7.2	1.9	2.8	2.2	2.0	0.0	0.0	4.0	0.0	16.2	55.2	3.8	35.1	16.3	24.6	15.7	16.2	15.2
Lithuania	234	9.6	3.4	0.0	0.0	0.0	0.0	0.0	0.3	2.4	0.8	0.0	7.8	75.8	14.8	54.3	6.6	12.9	12.9	8.8	16.7
Russian Federation	449	31.4	2.5	0.2	0.1	4.1	0.4	0.2	1.3	2.3	1.6	2.4	13.3	40.2	2.0	33.6	4.6	38.9	34.1	27.1	39.5
Slovenia	419	13.6	0.4	0.0	0.0	1.4	0.0	2.8	0.0	0.2	4.1	7.2	23.5	46.8	4.5	32.5	9.7	18.2	14.0	14.8	13.2
Sweden	252	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	2.7	3.6	1.2	22.1	69.8	4.0	54.7	11.1	0.7	0.0	.	.
Switzerland	350	16.3	1.0	1.1	0.1	1.5	1.1	1.6	0.2	1.6	2.6	3.2	25.9	43.7	8.1	29.0	6.6	22.7	18.4	18.2	18.7
United States	804	6.5	0.0	0.1	0.0	4.1	0.0	0.4	1.1	4.4	13.6	6.5	40.0	23.2	5.3	14.8	3.2	11.1	6.6	5.4	7.8
International Avg.	349	16.1	3.7	1.0	0.4	3.3	0.4	1.0	1.2	1.5	4.9	3.9	21.0	41.7	5.6	28.0	8.0	25.9	20.7	20.6	23.9

V1 = Percent scoring 1 or better      V2 = Percent scoring 2 or better      V3 = Percent scoring 3 or better  
Percent right for boys and girls corresponds to the percent obtaining the maximum score on the item.  
Because of missing gender information, some totals may appear inconsistent.



Mathematics: Geometry / (MA13099 - L18)  
Label: Distance between centers of two circles  
ItemType: S Key: X

COUNTRY	N	20	21	29	10	11	12	19	70	71	72	79	99	INVAL ID	OMIT	NOT REACH ED	V1	V2	1.GIRL % Right	2.BOY % Right
-----																				
Australia	189	51.6	6.1	0.0	4.5	0.7	0.0	0.0	3.1	1.8	1.1	13.4	17.8	1.3	6.6	9.9	62.8	57.7	54.8	60.2
Austria	197	40.5	3.6	0.0	2.0	0.0	0.6	0.9	5.2	2.0	1.4	16.5	27.5	6.8	4.3	16.4	47.5	44.1	37.1	63.8
Canada	794	49.8	7.7	0.0	4.9	1.9	0.7	0.4	3.6	3.1	1.3	18.7	8.1	1.2	2.3	4.6	65.3	57.5	56.2	58.6
Cyprus	118	50.2	4.9	0.0	0.0	1.9	0.8	0.8	2.2	2.5	0.0	10.6	26.2	1.7	5.1	19.5	58.6	55.1	66.2	49.3
Czech Republic	270	48.7	1.5	0.3	12.0	0.0	0.0	2.2	2.5	0.9	0.0	12.2	19.6	7.5	2.6	9.6	64.7	50.6	42.5	61.2
Denmark	412	49.3	6.0	0.3	2.8	1.5	0.4	0.3	0.9	5.0	0.0	12.3	21.2	1.5	7.8	11.9	60.6	55.6	51.1	58.4
France	269	54.0	1.9	0.0	5.4	0.5	0.0	2.2	0.5	0.9	0.0	7.0	27.6	1.1	13.9	12.6	64.1	56.0	57.5	55.7
Germany	705	34.5	0.7	0.5	4.4	0.8	0.8	0.5	3.1	0.7	0.2	13.3	40.5	13.5	5.9	21.0	42.2	35.7	35.3	37.6
Greece	116	31.4	2.2	0.0	0.0	0.0	0.0	0.0	5.3	0.0	1.1	2.5	57.5	4.1	28.9	24.5	33.6	33.6	35.8	33.0
Israel	232	63.4	5.6	0.4	5.6	0.4	0.4	1.7	2.6	0.4	0.0	6.0	13.4	0.4	6.9	6.0	77.6	69.4	71.3	67.3
Italy	113	28.3	2.4	0.0	6.7	0.0	0.0	3.0	2.9	1.2	0.2	13.1	42.4	1.8	13.0	27.6	40.3	30.6	22.9	36.2
Lithuania	234	63.8	0.0	2.9	5.1	0.0	0.0	0.0	0.5	0.0	0.0	0.0	27.6	8.2	0.9	18.5	71.9	66.8	59.3	73.7
Russian Federation	449	57.4	0.0	0.9	9.8	1.1	0.2	1.6	0.1	0.1	0.6	8.4	19.8	2.2	4.4	13.2	71.0	58.3	54.5	61.3
Slovenia	419	36.7	0.0	2.3	0.4	0.0	0.0	1.6	0.8	0.0	0.0	19.4	38.7	7.8	8.7	22.2	41.0	39.0	35.3	43.4
Sweden	252	43.5	6.9	0.0	3.4	0.8	0.0	0.0	0.0	3.2	1.4	10.6	30.3	0.9	3.5	26.0	54.6	50.3	47.0	51.9
Switzerland	350	52.4	3.9	0.4	3.8	0.8	0.0	1.7	0.7	1.0	0.5	16.1	18.7	4.7	2.6	11.4	63.0	56.7	54.4	59.6
United States	804	37.5	1.7	0.1	4.8	0.1	0.4	1.0	4.7	4.2	2.6	30.7	12.2	2.8	4.0	5.3	45.6	39.2	35.3	42.9
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International Avg.	348	46.7	3.2	0.5	4.5	0.6	0.3	1.0	2.3	1.6	0.6	12.4	26.4	4.0	7.1	15.3	56.7	50.4	48.0	53.8
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V1 = Percent scoring 1 or better      V2 = Percent scoring 2 or better      V3 = Percent scoring 3 or better  
Percent right for boys and girls corresponds to the percent obtaining the maximum score on the item.  
Because of missing gender information, some totals may appear inconsistent.