

Item: E01 KEY: A  
 COMPARING NOTES DISPLAYED ON OSCILLOSCOPE (Wave Phenomena)  
 Difficulty: 416

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	661	75.6	4.1	6.9	13.0	0.4	75.6	0.0	0.0	0.4	76.2	75.4
Austria	777	82.6	5.5	7.4	2.8	1.7	82.6	0.6	0.0	1.1	79.4	87.4
Canada	2367	69.5	7.4	7.8	15.2	0.1	69.5	0.0	0.0	0.0	71.8	67.7
Cyprus	366	66.5	12.0	8.8	12.7	0.0	66.5	0.0	0.0	0.0	65.0	68.4
Czech Republic	1087	74.6	4.2	13.3	7.2	0.6	74.6	0.3	0.0	0.3	72.9	77.4
Denmark	654	83.1	8.5	6.4	0.8	1.2	83.1	0.2	0.0	1.0	79.8	83.9
France	1110	62.6	10.7	13.3	12.3	1.1	62.6	0.4	0.0	0.7	64.4	61.5
Germany	723	84.5	4.2	9.0	1.2	1.1	84.5	0.5	0.0	0.6	81.3	85.7
Greece	459	65.8	14.0	12.5	6.7	0.9	65.8	0.0	0.0	0.9	70.7	63.5
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	853	65.7	11.4	7.7	13.1	2.1	65.7	0.2	0.4	1.5	59.4	67.7
Italy	145	56.2	12.2	15.8	11.2	4.6	56.2	0.0	0.0	4.6	59.0	53.5
Latvia (LSS)	708	82.8	6.1	4.7	6.0	0.4	82.8	0.0	0.0	0.4	83.8	81.7
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	1045	73.8	6.6	8.5	10.3	0.7	73.8	0.0	0.0	0.7	70.9	74.9
Russian Federation	1229	84.5	10.1	4.4	0.7	0.4	84.5	0.0	0.0	0.4	84.5	84.4
Slovenia	747	77.6	7.7	11.5	1.4	1.8	77.6	0.0	0.0	1.8	66.4	81.6
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	1012	69.8	8.4	8.9	12.6	0.3	69.8	0.2	0.0	0.1	70.5	69.4
Switzerland	1371	83.6	4.6	7.6	2.5	1.6	83.6	0.4	0.0	1.3	81.1	85.8
United States	3114	74.4	5.4	4.9	15.1	0.2	74.4	0.1	0.0	0.1	76.8	72.3
INTERNATIONAL AVG	.	74.1	8.0	8.9	8.1	1.1	74.1	0.2	0.0	0.9	73.0	74.6

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: E02 KEY: B  
 HALF-LIFE OF THORIUM (Modern Physics)  
 Difficulty: 532

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	661	5.3	70.4	20.0	2.7	1.6	70.4	0.0	0.0	1.6	59.7	75.8
Austria	777	11.0	59.7	20.0	7.6	1.8	59.7	0.1	0.0	1.7	55.6	66.1
Canada	2367	8.2	58.0	27.5	4.2	2.2	58.0	0.0	0.0	2.1	50.5	63.8
Cyprus	368	10.7	41.9	39.8	2.8	4.8	41.9	0.0	0.0	4.8	34.4	48.1
Czech Republic	1087	4.5	40.7	36.5	13.2	5.1	40.7	1.0	0.0	4.1	33.5	52.2
Denmark	654	4.2	84.9	7.9	0.9	2.1	84.9	0.0	0.0	2.1	78.9	86.1
France	1110	7.2	46.3	22.5	16.7	7.2	46.3	0.1	0.0	7.1	41.3	49.6
Germany	723	4.8	71.8	15.7	2.7	4.9	71.8	0.1	0.0	4.8	63.9	75.7
Greece	459	6.9	56.5	26.5	4.3	5.9	56.5	0.0	0.0	5.9	45.8	61.5
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	853	5.7	50.6	31.8	5.5	6.3	50.6	0.0	0.4	6.0	42.2	53.2
Italy	145	12.1	40.3	36.4	3.6	7.6	40.3	0.0	0.0	7.6	28.8	51.4
Latvia (LSS)	708	5.1	53.0	29.1	7.6	5.2	53.0	0.0	0.0	5.2	53.7	52.2
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	1045	5.8	75.0	16.7	0.6	1.9	75.0	0.0	0.0	1.9	65.7	78.2
Russian Federation	1229	5.5	64.5	19.7	5.6	4.8	64.5	0.0	0.0	4.8	58.4	69.5
Slovenia	747	3.7	52.6	29.6	3.6	10.5	52.6	0.0	0.0	10.5	44.8	55.5
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	1012	4.5	74.1	20.8	0.3	0.2	74.1	0.0	0.0	0.2	67.4	77.4
Switzerland	1371	6.0	60.3	25.5	4.1	4.1	60.3	0.0	0.0	4.1	52.5	68.4
United States	3114	9.5	51.7	31.6	4.8	2.4	51.7	0.0	0.0	2.3	49.1	54.1
INTERNATIONAL AVG	.	6.7	58.5	25.4	5.0	4.4	58.5	0.1	0.0	4.3	51.5	63.3

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: E03 KEY: C  
 TENSION IN THREAD BETWEEN TWO POINTS (Mechanics)  
 Difficulty: 467

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	661	8.8	13.1	70.3	4.4	2.4	0.9	70.3	0.0	0.0	0.9	53.9	78.7
Austria	777	10.0	23.3	56.0	5.8	3.3	1.7	56.0	0.0	0.0	1.7	45.3	74.4
Canada	2367	11.7	19.1	60.3	5.7	2.4	0.8	60.3	0.0	0.0	0.8	47.8	69.7
Cyprus	368	18.1	11.3	61.0	6.8	1.7	1.0	61.0	0.0	0.0	1.0	52.0	66.1
Czech Republic	1087	13.8	20.5	62.1	2.2	0.8	0.5	62.1	0.1	0.0	0.4	52.5	77.6
Denmark	654	8.1	7.2	81.3	2.8	0.4	0.2	81.3	0.0	0.0	0.2	65.4	85.0
France	1110	18.0	17.5	59.6	2.6	0.7	1.7	59.6	0.2	0.0	1.5	47.2	67.2
Germany	723	8.6	12.7	75.3	2.0	0.2	1.2	75.3	0.0	0.0	1.2	62.5	81.3
Greece	459	15.2	22.3	53.4	4.7	1.9	2.5	53.4	0.2	0.0	2.3	41.1	59.1
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	853	11.7	7.3	75.0	3.8	1.3	0.9	75.0	0.0	0.5	0.5	63.1	78.8
Italy	145	23.8	23.0	45.4	1.1	2.0	4.8	45.4	0.0	0.0	4.8	36.6	53.9
Latvia (LSS)	707	4.5	13.1	77.8	1.9	1.3	1.4	77.8	0.0	0.0	1.4	66.8	88.4
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	1047	8.4	5.0	83.4	2.1	0.5	0.5	83.4	0.0	0.0	0.5	69.4	88.3
Russian Federation	1233	6.6	11.6	75.3	3.6	0.8	2.1	75.3	0.0	0.0	2.1	62.5	86.0
Slovenia	747	8.1	5.1	84.4	1.5	0.6	0.3	84.4	0.0	0.0	0.3	68.3	90.7
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	1011	5.9	2.8	88.1	2.4	0.7	0.1	88.1	0.0	0.0	0.1	77.0	93.5
Switzerland	1371	11.1	10.1	72.8	2.4	1.0	2.6	72.8	0.0	0.0	2.6	61.5	83.6
United States	3114	10.4	33.2	46.3	5.1	3.8	1.2	46.3	0.0	0.0	1.2	32.1	59.7
INTERNATIONAL AVG	.	11.3	14.3	68.2	3.4	1.4	1.4	68.2	0.0	0.0	1.3	55.8	76.8

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: E04 KEY: D  
 CIRCUIT IN BOX (Electricity & Magnetism)  
 Difficulty: 314

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	661	1.6	0.8	4.2	89.4	3.3	0.8	89.4	0.0	0.0	0.8	88.5	89.9
Austria	777	1.9	2.6	5.3	76.6	8.8	4.8	76.6	1.3	0.0	3.5	72.6	82.5
Canada	2367	2.1	0.9	3.0	86.6	6.8	0.6	86.6	0.0	0.0	0.6	84.1	88.5
Cyprus	368	2.6	1.9	5.7	83.9	5.3	0.5	83.9	0.0	0.0	0.5	84.4	82.8
Czech Republic	1087	1.8	0.8	3.0	85.7	6.2	2.6	85.7	0.3	0.0	2.2	80.7	93.7
Denmark	654	1.2	1.0	0.6	90.9	3.7	2.6	90.9	0.4	0.0	2.3	88.1	91.5
France	1110	1.6	0.6	3.5	86.1	5.5	2.8	86.1	0.3	0.0	2.5	83.5	88.0
Germany	723	1.8	1.5	2.0	88.9	4.3	1.6	88.9	0.3	0.0	1.4	85.2	90.2
Greece	459	1.0	1.7	4.2	80.0	10.0	3.0	80.0	0.5	0.0	2.5	81.3	79.4
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	853	1.2	1.3	3.9	86.6	5.3	1.8	86.6	0.0	0.5	1.3	79.7	88.4
Italy	145	1.5	0.0	0.6	79.7	10.2	8.1	79.7	0.0	0.0	8.1	74.5	84.7
Latvia (LSS)	708	2.0	2.9	4.9	82.4	5.0	2.8	82.4	0.0	0.0	2.8	80.7	84.0
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	1048	0.9	0.4	2.6	92.8	2.7	0.6	92.8	0.0	0.0	0.6	89.6	93.9
Russian Federation	1233	1.5	0.1	2.2	91.6	2.4	2.1	91.6	0.0	0.0	2.1	87.1	95.4
Slovenia	747	1.4	1.0	1.4	87.4	5.6	3.1	87.4	0.0	0.0	3.1	78.0	90.9
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	1012	0.7	1.1	2.1	92.3	3.6	0.0	92.3	0.0	0.0	0.0	88.6	94.2
Switzerland	1371	2.4	1.7	2.3	83.4	6.3	3.9	83.4	0.5	0.0	3.4	79.6	86.7
United States	3114	4.9	2.3	5.2	75.6	10.9	1.1	75.6	0.0	0.0	1.0	73.3	77.8
INTERNATIONAL AVG	.	1.8	1.3	3.2	85.5	5.9	2.4	85.5	0.2	0.0	2.1	82.2	87.9

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: E05 KEY: C  
 DEPTH OF WELL (Mechanics)  
 Difficulty: 380

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	661	3.9	4.2	87.1	3.1	0.6	1.1	87.1	0.0	0.0	1.1	84.0	88.6
Austria	777	13.1	7.8	58.9	16.5	1.5	2.2	58.9	0.1	0.0	2.1	56.2	64.1
Canada	2367	5.3	3.9	76.0	13.1	1.2	0.5	76.0	0.0	0.0	0.4	71.7	79.3
Cyprus	368	3.6	3.0	85.2	4.5	3.2	0.5	85.2	0.0	0.0	0.5	82.2	87.6
Czech Republic	1087	7.4	4.5	79.3	6.7	0.6	1.5	79.3	0.2	0.0	1.3	76.5	83.8
Denmark	654	3.4	4.6	82.0	8.9	0.6	0.5	82.0	0.0	0.0	0.5	76.5	83.8
France	1110	7.0	7.0	66.4	12.1	5.6	1.9	66.4	0.0	0.0	1.9	67.6	65.8
Germany	723	3.4	3.9	76.5	12.2	1.5	2.5	76.5	0.4	0.0	2.1	71.3	78.9
Greece	459	2.4	3.7	89.5	2.0	1.3	1.1	89.5	0.0	0.0	1.1	88.1	90.2
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	853	1.2	2.5	90.3	4.0	0.6	1.5	90.3	0.0	0.5	1.1	93.0	89.3
Italy	145	7.8	4.3	69.8	14.3	2.6	1.2	69.8	0.0	0.0	1.2	75.4	64.3
Latvia (LSS)	708	4.9	3.7	82.3	7.8	0.9	0.5	82.3	0.0	0.0	0.5	82.1	82.5
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	1048	1.3	2.7	87.3	7.5	1.2	0.1	87.3	0.0	0.0	0.1	85.5	87.9
Russian Federation	1233	1.8	2.4	90.8	3.6	0.7	0.7	90.8	0.0	0.0	0.7	88.7	92.6
Slovenia	747	2.2	4.0	78.2	12.5	1.5	1.5	78.2	0.2	0.0	1.3	71.3	80.4
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	1012	2.9	2.6	84.7	8.4	1.4	0.0	84.7	0.0	0.0	0.0	83.1	85.4
Switzerland	1371	3.9	5.3	73.8	13.6	0.9	2.5	73.8	0.2	0.0	2.3	67.6	79.6
United States	3114	10.6	6.2	70.4	11.6	0.5	0.7	70.4	0.0	0.0	0.7	68.8	71.8
INTERNATIONAL AVG	.	4.8	4.2	79.4	9.0	1.5	1.1	79.4	0.1	0.0	1.1	77.2	80.9

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: E06 KEY: D  
 PLACEMENT OF THIRD CHARGE (Electricity & Magnetism)  
 Difficulty: 673

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	661	19.2	20.0	11.5	32.4	14.6	2.2	32.4	0.0	0.0	2.2	30.5	33.4
Austria	777	23.6	13.8	13.5	26.2	18.1	4.8	26.2	0.0	0.0	4.8	24.7	28.1
Canada	2367	15.8	17.1	10.2	40.5	14.5	1.8	40.5	0.0	0.0	1.8	41.2	39.9
Cyprus	368	12.7	13.3	7.4	44.6	18.1	4.0	44.6	0.0	0.0	4.0	44.9	44.7
Czech Republic	1087	25.5	15.8	8.2	31.6	15.0	3.9	31.6	0.5	0.0	3.4	29.5	35.1
Denmark	654	25.8	16.0	12.0	27.1	11.1	7.9	27.1	0.2	0.0	7.8	18.9	29.3
France	1110	24.0	16.6	8.2	31.4	10.2	9.7	31.4	0.3	0.0	9.4	31.1	30.9
Germany	723	24.3	16.0	11.2	30.2	7.5	10.8	30.2	0.2	0.0	10.6	29.3	30.8
Greece	459	12.3	16.8	6.4	46.7	12.7	5.1	46.7	0.0	0.0	5.1	45.5	47.3
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	853	6.8	26.7	8.0	46.8	8.4	3.3	46.8	0.0	0.5	2.8	43.3	47.4
Italy	145	25.4	15.6	6.4	34.3	10.2	8.2	34.3	0.0	0.0	8.2	26.1	42.3
Latvia (LSS)	708	15.4	16.2	9.1	39.4	14.6	5.3	39.4	0.0	0.0	5.3	40.4	38.5
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	1048	20.7	16.1	11.5	38.1	11.7	1.9	38.1	0.0	0.0	1.9	34.5	39.3
Russian Federation	1233	14.2	11.3	5.2	48.2	16.6	4.5	48.2	0.0	0.0	4.5	39.7	55.3
Slovenia	747	20.2	16.2	9.0	35.6	8.4	10.7	35.6	0.0	0.0	10.7	36.5	34.7
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	1011	22.7	20.0	8.2	35.9	11.4	1.8	35.9	0.0	0.0	1.8	36.6	35.5
Switzerland	1371	19.5	19.8	10.5	30.8	11.3	8.1	30.8	0.2	0.0	7.9	28.3	33.4
United States	3114	25.7	13.0	11.9	28.3	19.2	2.0	28.3	0.0	0.0	2.0	30.3	26.4
INTERNATIONAL AVG	.	19.7	16.7	9.4	36.0	13.0	5.3	36.0	0.1	0.0	5.2	34.0	37.4

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: E07 KEY: B  
 BETA RADIATION OUTPUT FROM DISCS (Modern Physics)  
 Difficulty: 612

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	661	29.2	44.3	9.6	16.5	0.5	44.3	0.0	0.0	0.5	40.8	46.1
Austria	777	20.4	45.4	9.5	19.9	4.8	45.4	0.0	0.1	4.7	42.5	51.0
Canada	2367	31.3	42.4	6.5	18.3	1.5	42.4	0.0	0.0	1.5	38.1	45.7
Cyprus	368	19.4	37.5	9.1	28.1	5.9	37.5	0.0	0.0	5.9	32.7	40.2
Czech Republic	1087	27.5	39.0	6.3	21.6	5.5	39.0	0.3	0.0	5.2	33.0	48.7
Denmark	654	20.5	43.3	2.9	29.1	4.2	43.3	0.0	0.2	4.0	42.3	42.9
France	1110	25.9	44.1	2.8	19.2	8.1	44.1	0.0	0.0	8.1	40.7	46.6
Germany	723	26.2	51.0	5.4	11.2	6.2	51.0	0.1	0.0	6.1	50.7	50.2
Greece	459	19.0	39.7	14.1	18.3	8.9	39.7	0.0	0.0	8.9	41.2	39.0
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	853	23.6	48.3	4.3	14.8	9.0	48.3	0.0	0.5	8.6	44.9	49.6
Italy	145	27.0	24.2	7.4	15.7	25.8	24.2	0.0	0.0	25.8	22.5	25.8
Latvia (LSS)	708	19.6	51.7	9.9	11.6	7.3	51.7	0.0	0.0	7.3	45.0	58.2
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	1048	34.1	42.6	9.2	11.8	2.3	42.6	0.0	0.0	2.3	35.3	45.2
Russian Federation	1230	24.4	46.5	11.5	10.7	6.8	46.5	0.0	0.0	6.8	46.1	46.9
Slovenia	747	23.5	51.0	5.8	11.9	7.9	51.0	0.0	0.0	7.9	44.4	53.1
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	1012	29.1	48.4	7.2	14.8	0.5	48.4	0.0	0.0	0.5	40.4	52.3
Switzerland	1371	22.4	49.5	5.4	12.7	10.0	49.5	0.0	0.0	10.0	45.5	53.5
United States	3114	31.9	41.1	7.4	17.3	2.3	41.1	0.0	0.0	2.3	38.1	43.9
INTERNATIONAL AVG	.	25.3	43.9	7.5	16.9	6.5	43.9	0.0	0.0	6.5	40.2	46.6

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: E08 KEY: D  
 NUMBER OF MOLECULES OF AIR (Heat)  
 Difficulty: 596

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	661	5.2	8.4	30.0	55.7	0.6	55.7	0.0	0.0	0.6	52.1	57.6
Austria	777	3.0	18.8	44.5	31.6	2.1	31.6	0.0	0.1	2.0	27.3	38.9
Canada	2367	3.1	7.8	35.0	53.5	0.6	53.5	0.0	0.0	0.6	57.2	50.7
Cyprus	367	6.2	7.4	42.1	42.6	1.7	42.6	0.0	0.0	1.7	41.2	43.0
Czech Republic	1086	5.0	13.7	34.6	45.3	1.4	45.3	0.1	0.0	1.3	44.3	47.0
Denmark	654	5.8	17.8	32.3	37.6	6.5	37.6	0.0	0.2	6.3	39.6	37.3
France	1110	4.1	12.2	27.9	51.1	4.7	51.1	0.0	0.0	4.7	45.7	55.3
Germany	723	3.9	12.9	30.0	47.2	6.1	47.2	0.8	0.0	5.2	40.2	50.3
Greece	459	5.5	11.4	32.8	46.0	4.3	46.0	0.3	0.0	4.0	48.2	45.0
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	853	3.8	14.7	36.3	38.9	6.3	38.9	0.0	0.6	5.7	35.3	39.9
Italy	144	4.8	11.7	33.6	40.8	9.1	40.8	0.0	0.0	9.1	31.7	49.5
Latvia (LSS)	708	2.9	12.9	30.2	52.2	1.9	52.2	0.0	0.0	1.9	49.2	55.1
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	1048	4.7	15.0	32.8	45.8	1.6	45.8	0.0	0.0	1.6	38.8	48.3
Russian Federation	1230	3.9	6.8	30.6	54.2	4.4	54.2	0.0	0.0	4.4	47.2	60.0
Slovenia	747	3.5	10.2	25.2	56.5	4.7	56.5	0.0	0.0	4.7	45.4	60.3
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	1012	4.9	16.2	35.4	42.4	1.1	42.4	0.0	0.1	1.0	35.5	45.9
Switzerland	1371	3.1	12.4	35.6	46.1	2.8	46.1	0.0	0.0	2.8	42.8	49.1
United States	3114	4.5	12.6	31.8	49.8	1.3	49.8	0.2	0.0	1.0	51.5	48.2
INTERNATIONAL AVG	.	4.3	12.4	33.4	46.5	3.4	46.5	0.1	0.1	3.3	43.0	49.0

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent



Item: E09 KEY: A  
 CIRCUIT READINGS WHEN SWITCH IS CLOSED (Electricity & Magnetism)  
 Difficulty: 673

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	661	39.4	20.3	16.6	23.2	0.6	39.4	0.0	0.0	0.6	32.1	43.0
Austria	777	26.1	30.9	27.4	13.4	2.2	26.1	0.3	0.1	1.8	19.1	37.6
Canada	2367	32.1	21.8	26.6	19.0	0.6	32.1	0.1	0.0	0.5	29.2	34.1
Cyprus	367	35.0	26.3	25.8	12.0	0.9	35.0	0.0	0.0	0.9	33.6	35.8
Czech Republic	1087	31.7	27.7	29.7	9.7	1.2	31.7	0.1	0.0	1.0	29.3	35.6
Denmark	654	45.3	23.1	16.2	14.1	1.4	45.3	0.0	0.2	1.2	41.6	45.6
France	1110	27.8	23.4	24.8	20.9	3.0	27.8	0.4	0.0	2.5	26.0	28.7
Germany	723	29.8	30.8	17.7	17.9	3.8	29.8	0.0	0.0	3.8	29.5	29.9
Greece	459	32.5	26.7	22.4	16.0	2.5	32.5	0.0	0.0	2.5	32.3	32.6
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	853	55.6	16.9	15.2	9.7	2.6	55.6	0.1	0.6	1.9	48.7	57.2
Italy	145	39.1	18.2	17.1	18.0	7.7	39.1	0.0	0.0	7.7	39.1	39.0
Latvia (LSS)	702	40.8	17.7	30.6	8.1	2.7	40.8	0.0	0.1	2.6	35.2	46.3
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	1048	45.5	18.4	15.9	19.5	0.7	45.5	0.0	0.0	0.7	40.6	47.1
Russian Federation	1229	47.6	20.6	20.2	8.3	3.4	47.6	0.0	0.1	3.3	42.1	52.1
Slovenia	747	45.2	21.9	16.1	12.6	4.1	45.2	0.0	0.0	4.1	37.1	48.1
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	1012	51.3	17.2	12.2	18.9	0.5	51.3	0.0	0.1	0.3	42.8	55.4
Switzerland	1371	31.8	24.4	22.2	16.2	5.5	31.8	0.1	0.0	5.4	24.1	39.1
United States	3114	23.8	26.9	33.7	14.4	1.2	23.8	0.0	0.0	1.2	21.4	26.1
INTERNATIONAL AVG	.	37.8	23.0	21.7	15.1	2.5	37.8	0.1	0.1	2.3	33.5	40.7

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: E10 KEY: A  
 LIGHT PASSING THROUGH LENS (Wave Phenomena)  
 Difficulty: 599

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	661	40.9	25.7	17.0	9.1	5.6	1.6	40.9	0.0	0.0	1.6	29.0	47.0
Austria	777	29.5	24.0	21.8	11.2	11.8	1.7	29.5	0.1	0.1	1.5	21.2	42.6
Canada	2367	45.8	22.9	19.2	5.1	5.8	1.2	45.8	0.0	0.0	1.2	41.1	49.2
Cyprus	368	44.1	19.0	15.4	5.1	11.8	4.6	44.1	0.0	0.0	4.6	37.7	48.5
Czech Republic	1087	29.8	25.8	18.4	9.8	12.5	3.7	29.8	0.2	0.0	3.5	20.7	44.3
Denmark	654	59.2	17.6	12.8	4.7	2.5	3.3	59.2	0.0	0.2	3.2	48.3	62.4
France	1110	50.4	20.7	15.8	5.4	3.2	4.5	50.4	0.0	0.0	4.5	38.2	58.8
Germany	723	54.8	18.9	13.2	4.1	4.5	4.6	54.8	0.1	0.2	4.4	37.4	62.8
Greece	459	45.7	18.5	15.4	5.9	9.7	4.8	45.7	0.0	0.0	4.8	39.1	48.8
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	853	32.4	28.7	23.0	7.3	3.8	4.9	32.4	0.0	0.6	4.3	21.4	35.1
Italy	144	40.9	15.0	12.2	8.7	7.7	15.5	40.9	0.0	0.0	15.5	37.8	43.9
Latvia (LSS)	702	48.7	22.0	14.3	7.3	4.2	3.4	48.7	0.0	0.1	3.3	43.5	53.8
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	1048	67.9	17.0	9.6	3.1	2.0	0.5	67.9	0.0	0.0	0.5	50.6	73.9
Russian Federation	1227	46.2	18.2	17.2	5.6	7.1	5.6	46.2	0.0	0.1	5.5	36.9	54.0
Slovenia	747	50.9	22.2	12.7	4.5	3.0	6.8	50.9	0.0	0.0	6.8	31.9	57.6
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	1012	69.6	17.1	9.4	2.1	1.6	0.2	69.6	0.0	0.1	0.1	57.7	75.3
Switzerland	1371	47.2	20.5	16.9	6.0	3.4	6.0	47.2	0.0	0.0	6.0	33.4	60.1
United States	3114	27.9	28.2	25.6	7.5	9.7	1.0	27.9	0.0	0.0	1.0	24.0	31.6
INTERNATIONAL AVG	.	46.2	21.2	16.1	6.2	6.1	4.1	46.2	0.0	0.1	4.0	36.1	52.8

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: F01 KEY: B  
 FRAUNHOFER LINES (Wave Phenomena)  
 Difficulty: 589

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	201	26.9	47.5	6.8	8.4	9.9	0.7	47.5	0.1	0.0	0.6	56.5	44.1
Austria	201	14.4	51.4	11.5	8.2	11.8	2.7	51.4	0.0	0.0	2.7	49.0	54.4
Canada	653	28.2	38.5	11.9	7.5	13.1	0.9	38.5	0.0	0.0	0.9	33.8	41.5
Cyprus	115	15.2	47.9	17.2	3.2	10.7	5.8	47.9	0.0	0.0	5.8	48.0	49.8
Czech Republic	269	26.9	39.3	5.9	7.8	17.0	3.1	39.3	0.5	0.0	2.6	41.7	35.0
Denmark	188	11.5	42.2	17.7	5.0	16.3	7.4	42.2	1.0	0.0	6.4	34.0	44.5
France	276	13.8	55.5	9.8	6.1	11.0	3.9	55.5	0.4	0.0	3.5	58.9	53.1
Germany	221	14.8	49.6	13.5	3.8	4.3	13.9	49.6	2.3	0.0	11.6	57.6	47.3
Greece	116	5.9	57.3	10.2	1.6	19.7	5.3	57.3	0.0	0.0	5.3	63.9	54.5
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	183	21.9	37.2	12.0	6.0	15.3	7.7	37.2	0.0	0.0	7.7	41.5	35.7
Italy	36	2.5	65.8	6.5	6.0	7.5	11.7	65.8	0.0	0.0	11.7	66.8	65.4
Latvia (LSS)	238	33.8	39.0	10.7	4.9	6.3	5.3	39.0	0.0	0.4	4.9	36.8	41.4
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	350	1.1	82.8	5.6	4.1	5.5	0.9	82.8	0.0	0.0	0.9	82.5	83.0
Russian Federation	325	19.8	49.2	11.1	5.7	8.0	6.1	49.2	0.0	0.0	6.1	52.5	46.1
Slovenia	178	23.4	47.4	7.8	8.2	10.2	3.1	47.4	0.0	0.0	3.1	58.3	44.3
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	266	8.0	49.6	13.6	7.8	16.0	5.1	49.6	3.3	0.0	1.8	52.3	48.3
Switzerland	339	14.7	41.5	9.9	5.8	13.7	14.4	41.5	0.5	0.0	13.8	49.5	36.0
United States	883	12.9	44.9	14.8	16.6	9.5	1.3	44.9	0.3	0.0	0.9	47.8	42.1
INTERNATIONAL AVG	.	16.4	49.3	10.9	6.5	11.4	5.5	49.3	0.5	0.0	5.0	51.7	48.1

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: F02 KEY: C  
 FORCE ON CONNECTED SPRINGS (Mechanics)  
 Difficulty: 813

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	201	43.0	1.3	15.6	39.9	0.2	15.6	0.0	0.0	0.2	9.0	18.0
Austria	201	39.6	3.5	13.9	42.1	1.0	13.9	0.0	0.0	1.0	14.1	14.3
Canada	653	57.9	0.4	8.6	32.5	0.6	8.6	0.0	0.0	0.6	5.9	10.5
Cyprus	115	41.7	2.5	18.9	36.1	0.8	18.9	0.0	0.0	0.8	10.8	23.9
Czech Republic	269	22.9	0.3	16.0	60.7	0.1	16.0	0.0	0.0	0.1	12.1	22.8
Denmark	188	31.2	0.3	29.4	38.0	1.2	29.4	0.8	0.0	0.3	10.0	34.5
France	276	44.1	1.3	11.6	42.8	0.1	11.6	0.0	0.0	0.1	4.7	16.7
Germany	221	30.8	1.4	18.1	49.2	0.5	18.1	0.2	0.0	0.2	5.0	25.2
Greece	116	30.4	4.3	22.6	39.3	3.5	22.6	0.0	0.0	3.5	15.0	25.9
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	183	43.7	0.5	19.1	33.9	2.7	19.1	0.0	0.0	2.7	14.6	19.3
Italy	36	27.6	7.8	15.2	45.4	3.9	15.2	0.0	0.0	3.9	27.7	9.5
Latvia (LSS)	238	29.8	1.8	12.9	51.3	4.1	12.9	0.0	0.4	3.8	7.4	18.7
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	350	31.2	0.6	32.8	35.0	0.4	32.8	0.0	0.0	0.4	23.0	36.5
Russian Federation	325	32.0	0.5	25.0	41.8	0.7	25.0	0.0	0.0	0.7	15.9	33.7
Slovenia	178	33.9	0.0	27.7	38.1	0.3	27.7	0.0	0.0	0.3	18.7	29.3
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	266	33.8	0.8	22.1	43.3	0.0	22.1	0.0	0.0	0.0	7.0	30.3
Switzerland	339	36.3	1.2	19.4	39.8	3.4	19.4	0.0	0.0	3.4	9.8	26.8
United States	883	61.8	1.5	9.0	27.3	0.4	9.0	0.0	0.0	0.4	7.5	10.5
INTERNATIONAL AVG	.	37.3	1.7	18.8	40.9	1.3	18.8	0.1	0.0	1.2	12.1	22.6

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: F03 KEY: C  
 RUTHERFORD EXPERIMENT (Modern Physics)  
 Difficulty: 652

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	201	9.6	8.0	58.7	23.7	0.0	58.7	0.0	0.0	0.0	59.4	58.4
Austria	201	12.6	15.4	28.7	40.4	2.9	28.7	0.0	0.0	2.9	29.0	27.2
Canada	653	4.1	6.6	44.0	42.3	3.0	44.0	0.0	0.0	3.0	38.0	48.2
Cyprus	115	17.0	16.8	44.3	16.1	5.7	44.3	0.0	0.0	5.7	42.5	48.5
Czech Republic	269	12.7	16.2	31.4	37.0	2.7	31.4	0.0	0.0	2.7	23.6	45.3
Denmark	188	2.5	8.2	42.0	44.1	3.1	42.0	0.4	0.0	2.7	20.1	46.7
France	276	2.1	19.7	23.6	49.4	5.3	23.6	0.0	0.0	5.3	20.1	24.9
Germany	221	9.2	6.9	49.9	23.0	11.0	49.9	1.5	0.0	9.6	34.0	57.8
Greece	116	7.6	26.3	22.6	34.1	9.3	22.6	0.0	0.0	9.3	19.7	23.9
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	183	7.7	23.5	30.6	30.6	7.7	30.6	0.0	0.0	7.7	26.8	31.4
Italy	36	9.0	25.8	37.2	6.4	21.6	37.2	0.0	0.0	21.6	44.1	34.1
Latvia (LSS)	238	9.3	17.6	31.4	35.2	6.5	31.4	0.0	0.4	6.1	26.1	36.9
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	350	6.6	6.9	48.9	35.5	2.0	48.9	0.0	0.0	2.0	41.1	51.9
Russian Federation	325	3.5	10.7	53.1	28.8	4.0	53.1	0.0	0.0	4.0	40.6	65.1
Slovenia	178	8.3	27.5	30.7	23.2	10.3	30.7	0.0	0.0	10.3	27.9	32.3
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	266	11.3	9.1	49.5	30.1	0.0	49.5	0.0	0.0	0.0	45.9	51.7
Switzerland	339	9.3	9.4	37.3	32.4	11.5	37.3	0.6	0.0	11.0	33.0	39.5
United States	883	12.2	19.4	30.4	37.3	0.7	30.4	0.0	0.0	0.7	32.6	28.2
INTERNATIONAL AVG	.	8.6	15.2	38.6	31.7	6.0	38.6	0.1	0.0	5.8	33.6	41.8

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

THIRD INTERNATIONAL MATHEMATICS AND SCIENCE STUDY - 1995 ASSESSMENT  
 Percent of responses by Physics Item Categories - Final Year of Secondary School

May 13, 1998 14

Item: F04 KEY: B  
 SPEED OF AIRCRAFT (Mechanics)  
 Difficulty: 579

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	201	15.2	47.1	11.1	9.9	14.6	2.2	47.1	0.0	2.2	45.9	47.5
Austria	201	25.2	17.8	21.9	14.3	18.4	2.4	17.8	0.0	2.4	15.8	21.5
Canada	653	8.3	50.4	10.8	17.4	12.1	1.0	50.4	0.0	1.0	45.0	54.0
Cyprus	115	9.1	69.2	0.8	9.9	10.0	1.0	69.2	0.0	1.0	72.1	67.8
Czech Republic	269	21.6	37.4	9.1	13.8	16.3	1.8	37.4	0.0	1.8	30.5	49.7
Denmark	188	13.7	50.5	9.4	10.8	10.4	5.1	50.5	0.0	5.1	44.1	50.4
France	276	10.4	46.6	2.7	20.0	13.6	6.6	46.6	0.0	6.6	48.6	45.4
Germany	221	15.4	37.8	10.8	9.8	17.7	8.5	37.8	0.0	8.5	28.6	43.1
Greece	116	2.6	72.3	2.4	9.1	12.8	0.8	72.3	0.0	0.8	76.2	70.6
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	183	3.8	77.6	1.1	9.8	7.1	0.5	77.6	0.0	0.5	85.4	75.0
Italy	36	14.9	35.1	27.6	5.9	5.0	11.5	35.1	0.0	11.5	55.0	26.2
Latvia (LSS)	234	18.3	43.4	10.7	11.3	12.8	3.4	43.4	0.4	3.0	33.6	53.5
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	350	3.1	72.2	4.2	9.9	8.3	2.3	72.2	0.0	2.3	75.4	71.0
Russian Federation	325	5.7	73.1	5.6	8.7	4.7	2.2	73.1	0.0	2.2	70.4	75.7
Slovenia	178	9.5	65.9	2.7	9.5	10.6	1.8	65.9	0.0	1.8	63.2	66.1
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	266	6.3	62.7	4.6	10.3	14.6	1.5	62.7	0.0	1.5	65.6	61.0
Switzerland	339	13.6	38.7	12.5	12.5	11.2	11.6	38.7	0.0	11.6	33.2	43.3
United States	883	21.2	25.2	19.7	14.6	18.5	0.8	25.2	0.0	0.8	24.1	26.3
INTERNATIONAL AVG	.	12.1	51.3	9.3	11.5	12.2	3.6	51.3	0.0	3.6	50.7	52.7

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: F05 KEY: C  
 HEAT TRANSFER (Heat)  
 Difficulty: 497

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	201	0.9	5.1	64.4	29.6	0.0	64.4	0.0	0.0	0.0	57.8	66.8
Austria	201	1.8	2.4	61.6	33.1	1.1	61.6	0.0	0.0	1.1	50.2	77.9
Canada	653	2.6	1.5	50.3	45.4	0.1	50.3	0.0	0.0	0.1	32.4	62.1
Cyprus	115	2.5	5.2	52.6	38.9	0.8	52.6	0.0	0.0	0.8	38.5	60.8
Czech Republic	269	0.4	0.0	79.8	19.4	0.4	79.8	0.4	0.0	0.0	79.8	79.7
Denmark	188	0.0	0.2	75.2	23.4	1.2	75.2	0.0	0.0	1.2	54.4	80.6
France	276	0.9	0.2	64.6	31.7	2.5	64.6	0.0	0.0	2.5	61.5	66.8
Germany	221	2.0	0.4	56.0	41.1	0.6	56.0	0.0	0.0	0.6	32.6	66.0
Greece	116	0.0	0.7	69.2	29.1	1.0	69.2	0.0	0.0	1.0	57.5	74.2
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	183	1.1	2.7	49.7	43.2	3.3	49.7	0.0	0.0	3.3	51.2	48.6
Italy	36	0.0	0.0	99.6	0.4	0.0	99.6	0.0	0.0	0.0	99.4	99.7
Latvia (LSS)	234	0.0	0.8	67.4	30.6	1.2	67.4	0.0	0.4	0.8	63.7	71.2
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	350	0.0	0.0	88.9	10.4	0.8	88.9	0.0	0.0	0.8	84.0	90.7
Russian Federation	325	0.0	1.8	73.3	24.2	0.7	73.3	0.0	0.0	0.7	61.6	84.5
Slovenia	178	0.6	3.6	49.8	44.9	1.0	49.8	0.0	0.0	1.0	28.9	54.5
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	266	0.0	0.0	91.0	9.0	0.0	91.0	0.0	0.0	0.0	86.5	93.3
Switzerland	339	3.3	2.5	61.8	28.8	3.6	61.8	0.0	0.0	3.6	50.6	71.2
United States	883	2.8	4.7	35.0	57.0	0.4	35.0	0.0	0.0	0.4	33.2	36.7
INTERNATIONAL AVG	.	1.1	1.8	66.1	30.0	1.0	66.1	0.0	0.0	1.0	56.9	71.4

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: F06 KEY: D  
 DIRECTION OF MAGNETIC FORCE ON ELECTRIC WIRE (Electricity & Magnetism)  
 Difficulty: 718

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	201	9.3	15.3	28.2	37.6	8.3	1.2	37.6	0.0	0.0	1.2	16.1	45.7
Austria	201	16.9	20.2	19.2	19.8	21.9	2.1	19.8	0.0	0.0	2.1	20.4	19.8
Canada	653	20.2	16.4	27.0	14.7	20.8	0.9	14.7	0.0	0.0	0.9	12.3	16.4
Cyprus	115	9.7	18.2	30.5	18.9	21.0	1.6	18.9	0.0	0.0	1.6	6.3	27.0
Czech Republic	.	.	.	.	.	.	.	.	.	.	.	.	.
Denmark	188	14.1	21.1	16.5	31.9	9.1	7.4	31.9	0.5	0.0	6.9	27.5	34.1
France	276	16.0	25.9	22.4	19.5	9.8	6.4	19.5	2.6	0.0	3.9	16.4	20.8
Germany	221	6.6	13.3	25.1	43.7	7.5	3.8	43.7	0.8	0.0	2.9	39.2	48.2
Greece	116	11.4	9.8	24.4	39.6	9.1	5.7	39.6	1.0	0.0	4.8	22.6	46.9
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	183	13.1	10.9	36.6	30.6	8.7	0.0	30.6	0.0	0.0	0.0	26.8	30.7
Italy	36	13.4	2.2	32.0	44.8	5.3	2.3	44.8	0.0	0.0	2.3	42.5	45.8
Latvia (LSS)	238	17.4	14.2	16.9	27.7	21.2	2.6	27.7	0.0	0.4	2.3	25.9	29.5
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	350	10.7	14.0	29.3	40.0	5.7	0.3	40.0	0.0	0.0	0.3	35.9	41.6
Russian Federation	325	11.5	12.4	20.8	37.3	13.5	4.5	37.3	0.0	0.2	4.2	31.9	42.6
Slovenia	178	20.8	15.6	25.6	28.2	7.4	2.4	28.2	0.0	0.0	2.4	39.0	25.0
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	266	5.9	15.6	24.1	52.1	1.9	0.4	52.1	0.0	0.0	0.4	48.8	54.0
Switzerland	339	21.3	11.8	24.5	22.0	13.1	7.3	22.0	0.7	0.0	6.7	19.5	24.1
United States	883	22.6	12.2	24.1	16.1	24.4	0.6	16.1	0.0	0.0	0.6	17.3	15.0
INTERNATIONAL AVG	.	14.2	14.7	25.1	30.9	12.3	2.9	30.9	0.3	0.0	2.6	26.4	33.4

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent



Item: F07 KEY: D  
 PHOTOELECTRIC EFFECT (Modern Physics)  
 Difficulty: 550

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	201	20.8	10.7	14.3	51.5	2.6	51.5	0.1	0.0	2.5	44.5	54.2
Austria	201	28.2	11.5	15.7	41.6	3.0	41.6	0.0	0.0	3.0	44.2	39.9
Canada	653	7.9	13.5	12.3	64.8	1.5	64.8	0.0	0.0	1.5	63.4	65.6
Cyprus	115	13.2	10.7	20.9	48.5	6.7	48.5	0.0	0.0	6.7	50.8	47.9
Czech Republic	269	10.5	8.3	8.8	71.5	0.9	71.5	0.2	0.0	0.7	68.0	77.7
Denmark	.	.	.	.	.	.	.	.	.	.	.	.
France	276	17.2	9.3	16.4	48.6	8.4	48.6	0.0	0.0	8.4	56.0	44.2
Germany	221	14.8	5.5	22.8	38.3	18.5	38.3	4.1	0.0	14.4	43.8	34.1
Greece	116	26.6	9.9	16.2	41.8	5.5	41.8	0.0	0.0	5.5	41.5	41.9
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	183	10.9	15.3	18.0	51.4	4.4	51.4	0.0	0.0	4.4	53.7	50.0
Italy	36	13.0	2.1	11.5	56.4	17.1	56.4	0.0	0.0	17.1	50.1	59.2
Latvia (LSS)	238	17.9	7.5	13.6	56.1	5.0	56.1	0.0	0.4	4.6	52.7	59.6
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	350	11.3	9.1	9.7	69.7	0.3	69.7	0.0	0.0	0.3	80.8	65.4
Russian Federation	325	5.7	11.0	12.8	66.5	3.9	66.5	0.0	0.2	3.7	64.3	68.7
Slovenia	178	7.9	8.2	11.6	67.6	4.7	67.6	0.0	0.0	4.7	73.6	65.6
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	266	4.3	7.4	8.3	79.8	0.2	79.8	0.0	0.0	0.2	84.8	77.1
Switzerland	339	18.7	10.2	25.5	32.1	13.6	32.1	0.3	0.0	13.3	40.1	26.6
United States	883	13.0	13.9	15.4	55.8	2.0	55.8	0.0	0.0	1.9	60.0	51.8
INTERNATIONAL AVG	.	14.2	9.7	14.9	55.4	5.8	55.4	0.3	0.0	5.5	57.2	54.7

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: F08 KEY: C  
 BULBS USING LEAST POWER (Electricity & Magnetism)  
 Difficulty: 610

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	201	24.0	8.3	47.0	19.2	1.4	47.0	0.0	0.0	1.4	39.0	50.0
Austria	201	26.4	15.2	46.3	11.0	1.0	46.3	0.0	0.0	1.0	42.1	51.6
Canada	653	28.7	6.2	46.4	18.4	0.3	46.4	0.1	0.0	0.1	40.3	50.2
Cyprus	115	28.3	8.6	41.2	21.9	0.0	41.2	0.0	0.0	0.0	53.1	35.2
Czech Republic	269	29.7	10.3	42.2	17.6	0.2	42.2	0.0	0.0	0.2	35.9	53.3
Denmark	188	23.1	7.9	47.6	17.6	3.7	47.6	2.7	0.0	1.0	52.5	46.0
France	276	29.9	8.4	48.2	12.5	1.0	48.2	0.2	0.0	0.9	56.6	44.1
Germany	221	13.8	22.7	48.5	7.7	7.3	48.5	6.3	0.2	0.8	40.6	50.7
Greece	116	20.7	9.1	49.5	18.6	2.1	49.5	0.0	0.0	2.1	47.0	50.6
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	183	18.0	16.4	61.2	4.4	0.0	61.2	0.0	0.0	0.0	56.1	62.9
Italy	36	20.3	24.2	41.4	11.4	2.7	41.4	0.0	0.0	2.7	37.1	43.4
Latvia (LSS)	238	24.2	13.7	36.3	22.5	3.3	36.3	0.0	0.4	2.9	35.0	37.6
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	350	23.6	7.9	55.7	11.2	1.7	55.7	0.0	0.0	1.7	49.9	57.9
Russian Federation	325	27.2	11.1	38.8	20.4	2.5	38.8	0.0	0.2	2.3	31.9	45.4
Slovenia	178	27.4	12.8	48.0	11.3	0.6	48.0	0.0	0.0	0.6	47.8	48.0
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	266	16.7	15.8	56.4	10.7	0.5	56.4	0.3	0.0	0.2	54.9	57.5
Switzerland	339	17.6	12.4	53.6	13.2	3.3	53.6	0.7	0.0	2.5	55.2	53.2
United States	883	31.0	13.1	27.6	28.1	0.1	27.6	0.0	0.0	0.1	29.0	26.3
INTERNATIONAL AVG	.	23.9	12.4	46.4	15.4	1.8	46.4	0.6	0.0	1.1	44.7	48.0

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: F09 KEY: B  
 NUCLEAR CHANGE IN AN ATOM (Modern Physics)  
 Difficulty: 737

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	201	13.3	30.0	8.1	21.0	27.1	0.5	30.0	0.0	0.0	0.5	25.3	31.7
Austria	201	13.4	18.0	13.1	26.5	26.2	2.8	18.0	0.0	0.0	2.8	16.8	18.8
Canada	653	10.4	22.3	9.5	24.9	28.2	4.8	22.3	0.0	0.0	4.8	26.5	19.7
Cyprus	115	8.0	32.1	10.2	16.8	22.5	10.4	32.1	0.0	0.0	10.4	35.0	31.1
Czech Republic	269	18.0	26.6	7.9	29.1	16.6	1.8	26.6	0.0	0.0	1.8	28.4	23.5
Denmark	188	6.4	46.9	6.0	17.4	15.6	7.7	46.9	1.0	0.0	6.7	40.7	47.1
France	276	10.2	43.7	5.3	15.3	16.4	9.1	43.7	0.4	0.0	8.7	40.8	46.1
Germany	221	10.4	25.6	6.7	22.5	14.4	20.3	25.6	0.2	0.2	19.9	27.1	24.5
Greece	116	8.0	10.3	10.9	28.2	34.3	8.3	10.3	0.0	0.0	8.3	13.9	8.8
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	183	12.6	18.6	10.4	34.4	16.4	7.7	18.6	0.0	0.0	7.7	22.0	17.9
Italy	36	6.9	17.5	12.4	20.5	10.4	32.3	17.5	0.0	0.0	32.3	15.1	18.6
Latvia (LSS)	238	22.8	38.9	10.6	9.7	11.9	6.1	38.9	0.0	0.4	5.7	44.5	33.0
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	350	14.2	19.0	14.0	27.2	22.8	2.8	19.0	0.0	0.0	2.8	17.5	19.6
Russian Federation	325	5.4	56.9	6.8	13.0	11.5	6.5	56.9	0.0	0.2	6.3	63.1	50.9
Slovenia	178	11.2	28.6	12.8	22.4	14.7	10.3	28.6	0.0	0.0	10.3	19.6	29.3
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	266	13.7	14.0	7.3	40.9	23.6	0.4	14.0	0.0	0.0	0.4	16.0	12.7
Switzerland	339	13.7	20.0	12.1	23.6	18.6	12.0	20.0	0.3	0.0	11.7	18.8	21.1
United States	883	15.4	18.5	13.4	19.1	32.4	1.3	18.5	0.3	0.1	0.9	17.3	19.6
INTERNATIONAL AVG	.	11.9	27.1	9.9	22.9	20.2	8.1	27.1	0.1	0.0	7.9	27.1	26.3

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: F10 KEY: B  
 SPEED-TIME GRAPHS OF BALL (Mechanics)  
 Difficulty: 679

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	201	1.9	26.7	28.7	27.7	15.0	0.0	26.7	0.0	0.0	0.0	20.5	29.0
Austria	201	9.5	42.0	24.9	15.3	8.3	0.0	42.0	0.0	0.0	0.0	37.9	49.4
Canada	653	4.3	24.3	23.9	37.8	9.8	0.0	24.3	0.0	0.0	0.0	22.9	25.4
Cyprus	114	8.4	33.2	12.9	42.3	3.2	0.0	33.2	0.0	0.0	0.0	33.3	34.0
Czech Republic	269	8.3	31.1	19.9	29.4	10.9	0.4	31.1	0.4	0.0	0.0	33.9	26.1
Denmark	188	1.8	42.6	19.0	25.7	9.7	1.2	42.6	0.4	0.0	0.8	35.4	45.0
France	276	1.0	42.5	17.5	32.0	5.8	1.2	42.5	0.9	0.0	0.3	45.6	40.6
Germany	221	0.3	37.9	22.7	25.2	11.1	2.7	37.9	1.4	0.2	1.1	34.6	40.3
Greece	116	8.2	35.6	25.8	27.7	2.0	0.8	35.6	0.0	0.0	0.8	42.9	32.5
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	183	2.7	18.6	24.6	50.3	3.8	0.0	18.6	0.0	0.0	0.0	22.0	17.9
Italy	36	8.3	28.4	15.4	37.4	10.5	0.0	28.4	0.0	0.0	0.0	46.9	20.2
Latvia (LSS)	238	4.9	30.4	17.0	41.7	4.6	1.5	30.4	0.0	0.4	1.1	29.0	31.8
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	350	0.4	40.8	13.0	30.8	14.7	0.4	40.8	0.0	0.0	0.4	23.9	47.1
Russian Federation	325	5.6	25.7	21.5	39.0	6.7	1.6	25.7	0.0	0.2	1.4	29.3	22.3
Slovenia	178	3.7	32.9	22.6	32.0	8.8	0.0	32.9	0.0	0.0	0.0	25.6	35.7
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	266	1.3	46.8	16.4	24.5	11.1	0.0	46.8	0.0	0.0	0.0	31.1	55.4
Switzerland	339	1.3	45.6	26.0	18.2	8.4	0.5	45.6	0.0	0.0	0.5	43.6	47.6
United States	883	12.3	30.4	24.2	23.8	9.4	0.1	30.4	0.0	0.1	0.0	27.2	33.4
INTERNATIONAL AVG	.	4.7	34.2	20.9	31.1	8.5	0.6	34.2	0.2	0.0	0.4	32.5	35.2

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: F11 KEY: A  
 WAVELENGTHS OF RADIATION TYPES (Wave Phenomena)  
 Difficulty: 654

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	201	38.6	12.6	21.3	26.4	1.1	38.6	0.0	0.0	1.1	49.3	34.6
Austria	201	28.6	15.3	14.4	40.8	0.9	28.6	0.0	0.0	0.9	27.0	32.6
Canada	653	28.0	23.5	15.7	31.2	1.6	28.0	0.5	0.0	1.1	20.0	33.4
Cyprus	115	38.6	16.3	23.3	17.1	4.8	38.6	0.0	0.0	4.8	41.2	39.7
Czech Republic	268	36.0	14.3	16.8	32.6	0.3	36.0	0.0	0.0	0.3	27.5	50.7
Denmark	188	53.3	8.5	7.2	27.6	3.4	53.3	0.0	0.0	3.4	39.9	56.1
France	276	34.3	15.9	23.1	21.3	5.3	34.3	0.0	0.0	5.3	27.8	38.1
Germany	221	40.2	11.7	11.7	32.5	3.8	40.2	0.2	0.2	3.4	31.0	45.5
Greece	116	14.4	22.6	29.4	24.5	9.1	14.4	1.0	0.0	8.2	13.3	14.9
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	183	26.2	19.7	22.4	27.3	4.4	26.2	0.5	0.0	3.8	26.8	26.4
Italy	36	37.7	17.8	21.7	12.7	10.1	37.7	0.0	0.0	10.1	30.4	40.9
Latvia (LSS)	235	45.2	12.9	12.8	27.6	1.5	45.2	0.0	0.4	1.2	41.8	48.8
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	349	56.7	8.7	16.0	16.4	2.2	56.7	0.0	0.0	2.2	53.9	57.8
Russian Federation	324	55.2	8.6	15.5	15.7	5.1	55.2	0.0	0.2	4.8	52.4	57.9
Slovenia	178	57.9	10.1	9.2	15.3	7.5	57.9	0.0	0.0	7.5	50.7	60.1
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	266	58.9	8.7	7.3	24.8	0.2	58.9	0.0	0.0	0.2	51.6	63.1
Switzerland	339	25.8	13.0	14.9	35.5	10.9	25.8	0.0	0.0	10.9	16.8	32.7
United States	883	22.4	15.3	28.7	31.9	1.7	22.4	0.0	0.1	1.6	21.0	23.8
INTERNATIONAL AVG	.	38.8	14.2	17.3	25.6	4.1	38.8	0.1	0.0	3.9	34.6	42.1

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: F12  
 TEMPERATURE OF A SYSTEM (Heat)  
 Difficulty: 777

COUNTRY	N	20	29	10	11	12	13	19	70	79	90	99	V1	V2	NOT	1.GIRL	2.BOY	
															REACH ED			OMIT % Right
Australia	201	9.2	0.0	0.0	0.0	5.3	0.0	1.2	17.1	38.1	5.9	23.2	15.7	9.2	0.0	23.2	7.0	10.1
Austria	201	6.1	0.0	0.0	0.0	1.0	0.0	0.0	0.0	38.6	17.2	37.1	7.1	6.1	0.0	37.1	6.7	5.6
Canada	653	12.0	0.0	0.0	0.0	4.7	0.4	3.1	19.2	31.0	8.9	20.6	20.2	12.0	0.1	20.5	4.9	16.7
Cyprus	115	17.1	0.0	0.0	0.8	10.5	1.5	1.9	15.7	9.6	10.1	32.7	31.9	17.1	0.0	32.7	11.8	21.8
Czech Republic	268	13.3	0.0	0.8	0.0	3.3	0.8	0.4	16.0	31.5	21.5	12.3	18.7	13.3	0.0	12.3	6.0	26.3
Denmark	188	22.1	0.0	0.5	0.0	4.8	3.6	1.7	21.2	16.1	2.0	28.1	32.7	22.1	0.5	27.6	8.1	27.2
France	276	1.1	0.0	0.0	0.0	0.2	0.0	2.3	2.9	14.7	4.3	74.5	3.6	1.1	0.0	74.5	0.7	1.4
Germany	220	11.2	0.0	0.0	0.3	0.4	0.0	2.0	4.1	28.6	22.3	31.1	13.9	11.2	0.5	30.5	4.6	14.9
Greece	116	3.7	0.0	0.0	0.5	6.0	0.8	1.0	10.4	14.0	7.4	56.1	12.1	3.7	0.0	56.1	4.1	3.6
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	183	9.3	0.0	0.0	2.2	1.1	0.5	7.1	5.5	19.7	2.7	51.9	20.2	9.3	0.5	51.4	14.6	7.9
Italy	36	3.3	0.0	0.0	0.0	3.7	8.5	0.0	6.0	11.9	8.6	58.0	15.5	3.3	0.0	58.0	0.0	4.8
Latvia (LSS)	233	18.2	0.0	1.1	0.0	2.9	5.0	0.4	1.2	20.6	11.7	38.9	27.6	18.2	0.8	38.1	13.3	23.2
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	349	14.1	0.0	0.3	0.0	5.4	0.7	4.0	17.8	16.0	8.2	33.4	24.5	14.1	0.0	33.4	10.6	15.4
Russian Federation	324	24.4	0.0	0.0	0.0	9.1	2.8	5.4	17.9	6.4	9.3	24.7	41.7	24.4	0.7	24.0	15.8	32.7
Slovenia	178	19.2	0.0	1.1	0.0	16.0	4.6	3.3	2.5	23.1	14.4	15.8	44.2	19.2	0.0	15.8	24.6	17.8
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	266	5.4	6.0	0.3	0.0	0.0	0.2	3.8	1.2	48.6	8.9	25.5	15.8	11.4	0.2	25.3	5.2	14.7
Switzerland	339	15.4	0.0	0.1	0.0	2.6	0.9	3.0	14.9	32.0	13.9	17.2	22.0	15.4	0.8	16.4	7.3	21.7
United States	883	4.6	0.0	0.6	0.1	2.7	0.4	4.3	12.0	49.5	6.2	19.5	12.8	4.6	0.1	19.4	6.2	3.2
INTERNATIONAL AVG	.	11.7	0.3	0.3	0.2	4.4	1.7	2.5	10.3	25.0	10.2	33.4	21.1	12.0	0.2	33.1	8.4	14.9

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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

Item: F13  
 WAVELENGTH IN SHALLOW WATER (Wave Phenomena)  
 Difficulty: 506

COUNTRY	N	10	11	70	71	79	90	99	V1	NOT	OMIT	1.GIRL	2.BOY
										REACH		% Right	% Right
										ED			
Australia	201	77.4	5.4	7.1	1.5	4.2	0.0	4.4	82.8	0.2	4.2	85.4	81.9
Austria	201	40.0	13.2	1.9	4.2	8.9	9.8	22.0	53.2	10.7	11.3	49.7	58.6
Canada	653	69.1	3.8	6.1	7.5	7.4	1.0	5.1	72.9	1.3	3.7	72.8	72.9
Cyprus	115	61.9	11.8	2.8	2.7	2.9	2.7	15.2	73.7	7.7	7.5	79.4	72.1
Czech Republic	267	40.6	6.1	4.3	12.0	13.6	7.1	16.3	46.7	3.3	13.0	41.8	55.3
Denmark	188	49.9	15.2	3.3	1.4	14.0	0.0	16.2	65.1	1.2	15.0	68.1	62.1
France	276	48.7	5.7	4.2	15.6	8.9	2.5	14.5	54.4	0.0	14.5	61.3	49.8
Germany	221	51.1	11.0	3.4	5.1	12.0	4.0	13.5	62.0	4.8	8.7	62.7	63.3
Greece	116	45.7	4.6	5.4	1.0	4.5	2.9	35.9	50.3	9.2	26.7	55.2	48.2
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	183	44.3	9.8	3.8	7.1	7.7	0.0	27.3	54.1	4.9	22.4	53.7	53.6
Italy	36	36.7	15.9	3.7	2.7	10.9	4.2	25.9	52.6	3.8	22.1	41.3	57.7
Latvia (LSS)	233	35.0	15.7	0.7	6.0	12.1	3.3	27.1	50.7	10.4	16.6	47.6	53.9
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	350	66.9	5.6	3.7	7.3	6.7	1.1	8.7	72.5	0.8	7.9	73.5	72.2
Russian Federation	324	49.2	9.5	4.8	6.3	5.7	1.5	23.1	58.7	7.2	15.9	51.8	65.2
Slovenia	178	57.5	5.1	2.6	18.5	8.1	2.0	6.2	62.6	1.9	4.3	69.2	60.1
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	266	84.3	3.5	1.7	6.6	2.3	0.5	1.1	87.8	0.8	0.4	83.3	90.1
Switzerland	339	45.9	9.8	4.6	6.0	8.6	8.6	16.5	55.7	2.1	14.5	53.1	56.9
United States	883	47.0	8.0	4.9	2.7	26.0	3.5	7.9	55.0	2.7	5.2	55.6	54.3
INTERNATIONAL AVG	.	52.8	8.9	3.8	6.4	9.1	3.0	15.9	61.7	4.1	11.9	61.4	62.7

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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

Item: F14  
 MAGNITUDE OF ELECTRIC FIELD'S STRENGTH (Electricity & Magnetism)  
 Difficulty: 749

COUNTRY	N	NOT REACHED										1.GIRL		2.BOY			
		20	10	11	12	19	70	71	79	90	99	V1	V2	ED	OMIT	% Right	% Right
Australia	201	9.3	7.0	0.0	5.7	6.6	11.3	0.8	26.8	4.0	28.6	28.5	9.3	0.2	28.4	5.7	10.6
Austria	201	3.0	2.9	0.0	0.9	0.0	7.3	1.1	20.2	17.0	47.5	6.8	3.0	12.4	35.2	1.1	6.1
Canada	653	16.1	4.0	0.0	4.9	6.3	7.1	2.5	26.2	9.8	23.2	31.3	16.1	2.0	21.2	9.1	20.8
Cyprus	115	14.3	10.2	0.0	4.1	4.2	4.3	1.3	4.7	7.4	49.5	32.8	14.3	8.5	40.9	9.2	17.2
Czech Republic	269	6.6	6.8	0.0	3.9	1.6	6.8	0.0	11.0	17.4	45.9	18.9	6.6	6.8	39.1	5.6	8.6
Denmark	188	33.0	4.0	0.0	5.3	2.1	3.3	3.3	10.8	1.4	36.9	44.4	33.0	4.2	32.7	15.9	37.4
France	276	6.9	7.9	0.2	2.0	1.9	5.1	0.1	9.0	7.4	59.4	18.9	6.9	0.0	59.4	7.5	6.8
Germany	221	28.8	4.9	0.1	4.6	1.2	7.3	0.0	14.2	14.3	24.5	39.7	28.8	5.9	18.7	31.7	29.0
Greece	116	8.4	1.9	0.0	7.7	5.3	8.4	3.0	9.1	16.0	40.2	23.2	8.4	12.0	28.2	9.6	7.8
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	183	14.2	18.6	0.0	4.9	1.1	8.2	4.9	9.3	1.1	37.7	38.8	14.2	4.9	32.8	14.6	14.3
Italy	36	12.0	5.6	0.0	0.0	8.0	5.8	5.9	7.4	8.9	46.4	25.6	12.0	3.8	42.6	0.0	17.4
Latvia (LSS)	233	9.8	5.2	0.0	7.1	0.7	10.6	0.4	6.2	3.2	56.8	22.8	9.8	15.2	41.6	12.6	7.0
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	350	29.3	9.9	0.0	5.1	2.3	7.5	2.3	12.9	4.6	26.1	46.6	29.3	1.5	24.6	26.8	30.2
Russian Federation	324	26.1	3.3	0.0	12.4	0.5	7.5	3.0	4.2	3.8	39.2	42.3	26.1	12.6	26.6	19.5	32.5
Slovenia	178	14.6	5.1	0.0	7.8	1.0	9.4	0.0	7.5	10.9	43.8	28.5	14.6	2.4	41.4	11.5	15.8
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	266	56.1	9.5	0.3	2.5	3.0	0.7	0.0	10.9	3.1	13.8	71.5	56.1	0.8	13.0	56.9	55.6
Switzerland	339	16.2	2.9	0.0	9.0	2.6	11.3	2.6	15.6	14.6	25.2	30.8	16.2	4.5	20.7	8.7	22.0
United States	883	0.4	4.8	0.9	2.0	0.6	4.3	0.0	50.5	7.1	29.4	8.6	0.4	3.9	25.5	0.3	0.5
INTERNATIONAL AVG	.	17.0	6.3	0.1	5.0	2.7	7.0	1.7	14.3	8.4	37.5	31.1	17.0	5.6	31.8	13.7	18.9

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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



Item: F15  
 PHOTOELECTRIC EFFECTS AND DIFFERENT METALS (Modern Physics)  
 Difficulty: 768

COUNTRY	N	20	21	29	10	11	12	19	70	71	79	90	99	V1	V2	NOT	1.GIRL	2.BOY		
																REACH			OMIT	% Right
															ED					
Australia	201	7.8	3.1	0.0	2.8	3.2	0.2	2.8	6.7	0.8	40.2	1.2	31.4	19.8	10.9	4.9	26.4	16.1	8.9	
Austria	201	3.9	0.0	0.0	0.3	0.2	0.0	0.3	6.3	0.0	26.9	17.1	44.9	4.8	3.9	25.2	19.7	4.7	3.0	
Canada	653	4.8	0.3	0.0	0.5	0.1	0.2	0.4	8.5	4.2	39.7	8.1	33.2	6.2	5.1	6.2	27.0	2.5	6.7	
Cyprus	115	6.4	1.3	0.0	1.7	2.3	4.1	4.5	6.0	1.6	15.8	8.0	48.0	20.5	7.8	12.8	35.2	2.0	12.0	
Czech Republic	268	6.7	0.2	0.5	0.7	2.6	0.8	0.8	4.4	3.3	18.3	13.0	48.7	12.4	7.4	16.7	32.0	1.2	18.5	
Denmark	188	16.2	0.0	2.8	2.0	1.5	7.5	3.6	0.0	1.2	4.7	0.4	60.2	33.5	19.0	11.3	48.9	14.5	20.7	
France	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Germany	221	21.5	0.0	0.0	1.8	2.8	0.0	2.7	5.8	0.2	16.6	18.9	29.8	28.7	21.5	8.1	21.7	19.3	23.2	
Greece	116	2.2	0.0	0.0	0.0	0.0	0.0	0.8	6.3	0.0	21.9	3.4	65.4	3.0	2.2	15.7	49.7	2.0	2.2	
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	183	5.5	0.0	0.0	1.1	1.6	0.5	0.0	3.3	0.5	18.6	1.1	67.8	8.7	5.5	8.7	59.0	9.8	4.3	
Italy	36	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	2.7	8.0	86.3	3.0	0.0	22.4	63.9	0.0	0.0	
Latvia (LSS)	233	5.8	0.9	0.0	0.0	0.0	0.0	1.9	3.8	0.4	20.9	2.4	63.8	8.7	6.8	30.5	33.3	4.9	8.8	
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	349	38.1	2.8	0.3	1.0	11.5	2.5	0.9	3.5	0.4	12.2	1.0	25.9	57.1	41.2	5.9	20.0	33.0	44.3	
Russian Federation	324	18.4	0.3	0.9	2.0	8.0	0.7	4.1	2.4	0.0	15.3	4.2	43.7	34.4	19.7	22.6	21.1	11.2	27.8	
Slovenia	178	22.4	0.0	0.0	0.8	1.5	0.9	2.9	7.4	0.1	18.9	9.5	35.5	28.5	22.4	7.8	27.7	4.7	25.6	
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	266	31.0	1.4	0.7	3.8	10.9	1.6	2.7	0.8	1.7	15.2	5.9	24.5	52.0	33.0	2.5	22.0	38.4	30.2	
Switzerland	339	2.4	0.0	0.0	0.0	0.6	0.2	1.2	7.9	0.4	14.5	27.4	45.4	4.4	2.4	8.7	36.7	1.0	3.4	
United States	883	0.4	0.0	0.0	0.0	0.1	0.5	0.1	7.3	2.4	53.1	8.6	27.5	1.1	0.4	8.3	19.2	0.3	0.5	
INTERNATIONAL AVG	.	11.4	0.6	0.3	1.3	2.8	1.2	1.7	4.7	1.0	20.9	8.1	46.0	19.2	12.3	12.8	33.2	9.7	14.1	

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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

Item: F16  
 PERIOD OF A CHARGED PARTICLE MOVING IN A MAGNETIC FIELD (Electricity & Magnetism)  
 Difficulty: 779

COUNTRY	N	20	29	10	11	19	70	71	72	79	90	99	V1	V2	NOT	1.GIRL	2.BOY	
															REACH ED			OMIT % Right
Australia	201	8.6	2.3	0.0	4.6	2.2	3.1	4.8	3.0	25.8	10.1	35.5	17.6	10.9	7.4	28.1	6.4	12.5
Austria	201	0.7	0.0	0.0	0.0	0.0	1.6	0.4	0.8	16.6	22.9	56.9	0.7	0.7	28.5	28.4	0.0	1.8
Canada	653	3.0	0.0	0.0	0.0	0.3	0.1	0.7	3.3	42.5	13.8	36.4	3.3	3.0	7.1	29.3	0.7	4.6
Cyprus	115	13.5	1.3	0.0	0.9	1.6	0.8	0.8	0.0	12.9	5.2	63.0	17.4	14.9	16.5	46.5	11.5	16.7
Czech Republic	269	2.4	0.0	0.3	0.2	0.5	0.0	0.6	2.1	14.6	17.3	62.0	3.5	2.4	21.2	40.8	0.6	5.6
Denmark	188	2.6	0.0	0.0	3.2	1.6	1.6	2.0	2.1	22.5	1.7	62.7	7.4	2.6	16.2	46.4	0.0	3.6
France	276	11.4	2.4	0.6	1.3	2.3	1.4	3.4	2.1	15.1	8.2	51.8	18.0	13.8	16.6	35.1	16.0	12.4
Germany	221	7.1	0.6	0.0	2.7	1.9	1.4	2.5	1.0	21.9	23.0	37.9	12.3	7.6	10.2	27.6	3.3	10.1
Greece	116	43.9	0.0	0.0	2.2	0.8	0.0	0.0	2.1	15.1	5.3	30.6	46.9	43.9	18.1	12.5	44.7	43.5
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	183	21.3	2.2	0.5	4.9	1.1	2.7	4.9	2.2	20.2	2.7	37.2	30.1	23.5	9.3	27.9	29.3	21.4
Italy	36	20.1	0.0	2.8	0.0	3.7	0.0	4.7	2.2	7.0	8.0	51.6	26.6	20.1	26.0	25.6	24.0	18.3
Latvia (LSS)	232	7.9	0.0	0.4	0.0	0.4	0.4	0.4	0.0	3.1	3.4	84.1	8.6	7.9	43.0	41.2	6.5	9.2
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	350	18.1	0.3	0.0	2.6	4.4	5.8	14.8	4.7	19.1	4.5	25.8	25.3	18.4	7.6	18.2	19.1	18.1
Russian Federation	322	18.1	1.0	0.1	0.5	1.0	0.3	2.7	4.1	10.6	2.4	59.3	20.6	19.1	32.3	26.9	17.4	20.7
Slovenia	178	6.9	0.0	0.0	0.7	6.2	0.0	0.0	1.5	8.6	13.2	62.9	13.8	6.9	10.2	52.7	6.6	7.1
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	266	7.8	0.4	0.3	1.2	0.2	3.0	2.3	10.0	31.1	9.4	34.2	9.9	8.2	5.2	29.0	4.5	10.3
Switzerland	339	6.0	0.3	0.7	1.7	1.4	1.6	0.8	1.1	28.8	20.5	37.1	10.0	6.2	12.5	24.6	3.1	8.7
United States	883	0.1	0.0	0.0	0.0	0.0	0.0	0.5	0.2	49.6	11.4	38.2	0.1	0.1	11.1	27.1	0.3	0.0
INTERNATIONAL AVG	.	11.1	0.6	0.3	1.5	1.6	1.3	2.6	2.4	20.3	10.2	48.2	15.1	11.7	16.6	31.6	10.8	12.5

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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

Item: F17A  
 ACCELERATION EXPERIMENT/VALUE OF GRAVITY (Mechanics)  
 Difficulty: 702

COUNTRY	N	NOT REACHED													V1	ED	OMIT	1. GIRL % Right	2. BOY % Right
		10	11	12	13	14	19	70	71	72	73	79	90	99					
Australia	201	11.8	0.8	13.1	0.2	11.1	6.2	11.4	7.8	2.1	1.6	19.8	0.5	13.4	43.3	10.8	2.6	23.8	50.6
Austria	201	0.0	0.0	3.4	0.0	5.1	0.0	0.0	6.2	4.2	1.9	21.1	13.6	44.5	8.5	38.3	6.2	7.1	10.9
Canada	653	3.4	0.7	6.3	1.1	2.5	5.4	14.5	15.8	7.9	0.9	25.8	4.2	11.7	19.3	9.5	2.2	11.6	24.5
Cyprus	115	32.5	0.8	5.8	1.5	15.4	3.5	0.8	0.0	0.8	1.6	4.3	1.9	31.2	59.4	26.3	4.9	54.1	63.9
Czech Republic	269	0.7	0.0	20.4	0.4	6.1	3.5	0.0	1.4	3.3	0.4	10.2	17.5	36.1	31.1	30.3	5.8	18.5	53.3
Denmark	188	21.6	1.7	1.0	0.0	3.2	2.2	23.6	2.1	5.1	7.5	10.3	0.5	21.2	29.7	17.7	3.5	11.4	33.4
France	276	9.4	0.3	2.3	0.0	8.4	0.9	7.4	6.9	4.5	6.7	20.8	3.5	29.0	21.2	20.5	8.5	19.7	22.3
Germany	221	16.4	0.8	8.6	0.4	5.0	3.4	3.3	5.1	4.5	1.2	15.9	12.9	22.4	34.6	12.8	9.6	34.2	34.1
Greece	116	18.2	0.0	2.0	1.8	3.8	22.7	0.0	0.5	0.0	0.0	9.9	4.5	36.6	48.5	20.9	15.7	52.7	46.7
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	183	12.0	0.0	7.7	0.0	29.0	11.5	3.8	1.6	1.6	1.1	18.0	0.0	13.7	60.1	10.4	3.3	65.9	57.9
Italy	36	2.2	0.0	5.1	2.2	0.0	3.7	5.2	4.7	4.5	0.0	8.8	11.8	51.8	13.2	28.9	22.9	23.6	8.6
Latvia (LSS)	232	5.9	0.0	7.0	0.0	3.7	3.2	0.0	2.8	0.8	0.4	8.9	3.5	63.8	19.7	57.9	5.9	13.3	26.4
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	350	22.4	1.2	12.2	0.2	1.8	0.8	14.7	7.6	2.3	9.8	8.8	0.6	17.6	38.6	11.2	6.5	42.2	37.2
Russian Federation	321	2.0	0.5	11.2	1.9	13.4	1.9	0.0	0.9	1.6	1.6	6.2	2.1	56.7	30.9	46.9	9.8	27.2	34.3
Slovenia	178	22.7	1.1	7.4	0.0	6.0	5.0	9.3	3.2	0.9	0.0	15.7	10.1	18.6	42.2	15.8	2.9	42.1	41.5
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	266	25.6	0.3	10.5	0.7	0.6	0.1	11.8	11.5	3.1	11.1	7.9	0.6	16.2	37.8	10.4	5.8	34.6	39.3
Switzerland	339	6.4	0.0	11.1	0.1	6.9	2.6	4.3	6.3	3.4	3.5	18.1	7.9	29.3	27.2	16.8	12.5	17.9	34.6
United States	883	0.4	0.0	2.8	0.0	4.1	0.9	1.7	9.9	7.7	2.9	40.4	5.3	24.0	8.2	16.9	7.1	4.7	11.5
INTERNATIONAL AVG	.	11.9	0.4	7.7	0.6	7.0	4.3	6.2	5.2	3.2	2.9	15.1	5.6	29.9	31.9	22.3	7.5	28.0	35.1

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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

Item: F17B  
 ACCELERATION EXPERIMENT/ MEASUREMENT ERROR (Mechanics)  
 Difficulty: 919

COUNTRY	N	10	11	19	70	71	72	73	74	79	90	99	V1	NOT	OMIT	1.GIRL % Right	2.BOY % Right
														REACH ED			
Australia	201	0.3	0.4	1.6	6.9	0.0	0.7	7.5	16.3	15.6	0.0	50.7	2.2	13.0	37.7	4.7	1.3
Austria	201	2.4	4.7	0.0	0.0	0.0	1.6	0.3	1.3	4.4	10.9	74.4	7.1	44.5	29.9	4.6	11.1
Canada	653	0.1	2.0	2.1	3.1	0.0	2.2	4.2	26.1	20.7	0.5	39.0	4.2	11.4	27.6	5.5	3.4
Cyprus	115	0.0	5.0	1.4	7.3	0.0	0.0	0.0	3.3	9.1	0.0	73.8	6.4	31.2	42.6	3.7	6.8
Czech Republic	268	0.3	5.5	1.5	4.4	0.0	2.7	2.8	1.7	6.6	1.8	72.7	7.3	36.2	36.5	4.3	12.7
Denmark	187	2.9	1.0	2.4	3.4	0.0	0.0	21.5	13.0	3.0	0.0	52.7	6.3	20.5	32.2	2.0	8.3
France	276	1.1	1.3	0.8	1.7	0.2	1.1	1.2	13.8	8.9	0.9	69.1	3.2	28.4	40.6	0.4	4.5
Germany	200	1.9	5.2	1.6	7.1	0.0	6.1	2.7	5.2	14.4	7.8	48.0	8.8	20.3	27.7	8.6	9.5
Greece	115	9.4	5.5	2.8	5.8	0.0	0.8	0.0	0.0	6.5	2.5	66.5	17.8	36.1	30.4	11.5	20.5
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	183	0.0	1.1	0.0	4.4	0.0	0.0	8.7	19.1	10.4	0.0	56.3	1.1	13.1	43.2	0.0	1.4
Italy	33	0.0	2.4	0.0	0.0	0.0	9.1	0.0	0.0	5.2	4.6	78.6	2.4	54.8	23.8	0.0	3.7
Latvia (LSS)	232	2.1	2.8	1.2	3.0	0.0	0.0	0.4	0.0	3.5	2.0	84.9	6.2	63.0	21.9	3.8	8.5
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	350	18.6	7.1	0.2	6.5	6.5	2.4	1.0	1.3	12.8	1.4	42.2	25.9	17.6	24.6	30.9	24.0
Russian Federation	320	0.0	3.1	2.0	4.1	0.0	2.6	0.0	7.3	6.3	1.1	73.5	5.2	56.3	17.1	5.7	4.6
Slovenia	178	20.5	17.9	0.4	4.5	0.0	0.1	0.3	0.0	4.6	2.2	49.5	38.7	18.6	30.9	35.0	38.3
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	266	1.4	2.8	1.0	5.8	0.4	0.4	9.2	10.5	17.9	0.5	50.1	5.2	16.2	34.0	1.9	7.1
Switzerland	339	0.7	3.2	2.4	6.1	1.4	2.2	0.6	3.4	9.9	8.2	62.0	6.2	24.0	38.0	6.0	6.4
United States	883	0.0	1.1	0.4	3.4	0.0	1.3	0.9	11.1	19.1	3.1	59.8	1.4	23.6	36.2	0.7	2.1
INTERNATIONAL AVG	.	3.4	4.0	1.2	4.3	0.5	1.9	3.4	7.4	9.9	2.6	61.3	8.6	29.4	31.9	7.2	9.7

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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

Item: G01 KEY: C  
 PATH OF ELECTRONS TRAVELING THROUGH A MAGNETIC FIELD (Electricity & Magnetism)  
 Difficulty: 644

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	188	18.5	18.3	47.5	15.7	0.1	47.5	0.0	0.0	0.1	47.8	47.3
Austria	191	25.8	28.2	26.9	18.7	0.5	26.9	0.5	0.0	0.0	27.6	25.8
Canada	666	16.6	35.3	27.4	20.2	0.4	27.4	0.0	0.0	0.4	30.6	25.2
Cyprus	92	3.1	50.0	30.2	16.7	0.0	30.2	0.0	0.0	0.0	31.3	29.9
Czech Republic	276	24.0	19.0	27.2	27.9	1.9	27.2	0.3	0.0	1.7	21.2	34.8
Denmark	178	22.5	18.5	40.3	15.6	3.1	40.3	0.0	0.0	3.1	47.0	38.6
France	279	19.2	19.8	46.7	13.3	0.9	46.7	0.0	0.0	0.9	38.9	50.2
Germany	209	23.6	22.3	38.9	13.9	1.3	38.9	0.0	0.0	1.3	32.7	41.2
Greece	120	7.3	25.6	59.7	5.5	1.9	59.7	0.0	0.0	1.9	58.1	60.7
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	171	12.9	19.3	48.5	17.0	2.3	48.5	0.0	0.6	1.8	48.7	49.6
Italy	31	6.7	32.7	32.0	9.3	19.2	32.0	0.0	0.0	19.2	19.8	56.2
Latvia (LSS)	231	23.8	14.4	41.5	16.7	3.5	41.5	0.0	0.0	3.5	41.4	41.7
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	356	9.8	19.2	58.7	11.7	0.6	58.7	0.0	0.0	0.6	50.8	61.1
Russian Federation	329	15.5	25.6	46.8	9.6	2.5	46.8	0.0	0.0	2.5	44.1	48.9
Slovenia	173	19.1	14.1	49.5	13.2	4.2	49.5	0.0	0.0	4.2	47.0	50.1
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	256	22.2	19.1	44.2	14.6	0.0	44.2	0.0	0.0	0.0	44.6	44.0
Switzerland	349	19.2	19.2	37.6	21.2	2.8	37.6	0.0	0.0	2.8	39.7	36.3
United States	892	20.3	31.4	26.2	20.7	1.3	26.2	0.0	0.0	1.3	25.0	27.5
INTERNATIONAL AVG	.	17.2	24.0	40.6	15.6	2.6	40.6	0.0	0.0	2.5	38.7	42.7

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: G02 KEY: A  
 VOLUME OF STEAM (Heat)  
 Difficulty: 502

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	188	79.5	10.4	4.9	2.3	2.9	0.0	79.5	0.0	0.0	0.0	63.9	88.1
Austria	191	40.4	40.0	6.5	3.2	8.2	1.6	40.4	0.5	0.0	1.2	33.8	51.3
Canada	666	73.5	13.3	2.3	3.2	7.6	0.1	73.5	0.0	0.0	0.1	68.5	76.9
Cyprus	92	53.5	13.8	5.2	4.9	21.5	1.1	53.5	0.0	0.0	1.1	51.4	57.1
Czech Republic	276	38.9	15.4	13.3	12.2	19.1	1.2	38.9	1.2	0.0	0.0	30.9	49.0
Denmark	178	78.7	12.1	1.9	2.4	3.2	1.6	78.7	0.8	0.0	0.8	71.2	80.7
France	279	49.5	12.7	4.5	7.4	24.1	1.7	49.5	0.9	0.0	0.8	39.8	54.0
Germany	209	64.1	13.7	2.6	0.1	11.0	8.5	64.1	8.1	0.0	0.3	57.2	67.0
Greece	120	61.7	17.4	7.0	2.4	10.9	0.6	61.7	0.0	0.0	0.6	62.7	61.1
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	171	82.5	5.8	1.2	3.5	6.4	0.6	82.5	0.0	0.6	0.0	87.2	81.9
Italy	31	59.6	33.7	0.5	6.2	0.0	0.0	59.6	0.0	0.0	0.0	55.5	67.8
Latvia (LSS)	231	43.1	19.1	8.7	4.5	23.0	1.6	43.1	0.0	0.0	1.6	32.0	53.6
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	356	80.6	7.9	0.9	1.8	8.9	0.0	80.6	0.0	0.0	0.0	72.6	83.0
Russian Federation	329	72.6	7.9	4.5	2.7	11.3	1.0	72.6	0.0	0.0	1.0	62.1	80.6
Slovenia	173	88.8	1.0	3.5	0.8	5.1	0.7	88.8	0.0	0.0	0.7	87.3	89.4
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	256	83.0	6.1	1.2	2.7	6.7	0.3	83.0	0.0	0.0	0.3	76.0	86.3
Switzerland	349	65.7	12.8	2.0	2.6	15.2	1.7	65.7	1.7	0.0	0.0	53.9	77.9
United States	892	60.0	24.7	8.4	2.8	3.7	0.3	60.0	0.0	0.0	0.3	54.8	64.9
INTERNATIONAL AVG	.	65.3	14.9	4.4	3.7	10.5	1.3	65.3	0.7	0.0	0.5	58.9	70.6

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: G03 KEY: D  
 PHYSICAL PROPERTIES OF TWO GASES AT THE SAME TEMPERATURE (Heat)  
 Difficulty: 637

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	188	22.9	7.0	9.5	60.5	0.1	60.5	0.0	0.0	0.1	52.8	64.7
Austria	191	27.0	12.9	9.3	47.9	3.0	47.9	1.0	0.0	2.1	48.5	49.0
Canada	666	26.3	18.3	10.1	45.1	0.1	45.1	0.0	0.0	0.1	40.3	48.2
Cyprus	92	20.9	21.7	23.4	33.0	1.0	33.0	0.0	0.0	1.0	25.3	38.7
Czech Republic	276	25.3	11.7	32.6	29.4	1.0	29.4	0.5	0.0	0.5	26.7	32.9
Denmark	178	28.2	22.1	10.7	33.7	5.3	33.7	2.6	0.0	2.7	30.6	32.8
France	279	17.6	36.7	19.2	16.9	9.5	16.9	0.2	0.0	9.4	17.8	16.5
Germany	209	31.3	12.7	5.7	42.6	7.6	42.6	1.8	0.0	5.9	51.5	39.5
Greece	120	19.9	4.4	20.0	52.8	2.8	52.8	0.0	0.0	2.8	53.4	52.4
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	171	34.5	19.9	12.9	25.7	7.0	25.7	0.0	0.6	6.4	17.9	29.1
Italy	31	5.8	26.6	0.0	46.7	20.9	46.7	0.0	0.0	20.9	37.6	64.5
Latvia (LSS)	231	32.3	16.9	8.8	39.3	2.8	39.3	0.0	0.0	2.8	34.4	44.0
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	356	26.6	14.5	13.2	44.4	1.3	44.4	0.0	0.0	1.3	48.7	43.1
Russian Federation	329	40.1	8.4	5.0	43.2	3.3	43.2	0.0	0.0	3.3	38.8	46.5
Slovenia	173	24.5	12.2	11.6	49.1	2.6	49.1	0.0	0.0	2.6	53.2	47.0
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	256	21.9	34.6	11.4	31.5	0.6	31.5	0.0	0.0	0.6	33.9	30.5
Switzerland	349	33.7	12.5	7.4	43.2	3.2	43.2	0.1	0.0	3.1	35.4	49.6
United States	892	20.1	15.9	13.9	49.0	1.1	49.0	0.0	0.0	1.1	50.5	47.5
INTERNATIONAL AVG	.	25.5	17.2	12.5	40.8	4.1	40.8	0.3	0.0	3.7	38.7	43.1

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: G04 KEY: C  
 RELATIONSHIP BETWEEN INDUCED CURRENT AND VARYING MAGNETIC FIELD (Electricity & Magnetism)  
 Difficulty: 682

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	188	41.0	11.2	37.7	9.0	1.0	37.7	0.0	0.0	1.0	36.6	38.3
Austria	191	39.4	7.9	36.7	12.6	3.4	36.7	0.5	0.0	2.9	34.7	42.3
Canada	666	43.1	15.8	32.9	7.7	0.4	32.9	0.0	0.0	0.4	36.1	30.8
Cyprus	92	37.7	12.8	30.4	19.2	0.0	30.4	0.0	0.0	0.0	30.4	28.9
Czech Republic	276	50.6	4.2	32.3	11.0	1.9	32.3	0.3	0.0	1.6	25.6	40.7
Denmark	178	50.5	14.1	22.8	8.1	4.5	22.8	0.0	0.0	4.5	27.5	21.1
France	279	23.2	16.6	50.1	4.6	5.5	50.1	0.0	0.0	5.5	54.0	48.2
Germany	209	36.4	11.2	40.8	9.5	2.0	40.8	0.2	0.0	1.8	47.0	38.3
Greece	120	40.1	12.7	29.7	12.0	5.5	29.7	0.8	0.0	4.7	27.9	30.7
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	171	40.9	9.4	35.1	11.1	3.5	35.1	0.0	0.6	2.9	35.9	35.4
Italy	31	32.4	3.3	17.4	34.6	12.4	17.4	0.0	0.0	12.4	22.2	7.9
Latvia (LSS)	231	38.3	13.3	33.6	11.1	3.7	33.6	0.0	0.0	3.7	29.4	37.5
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	356	39.1	11.9	40.0	7.7	1.3	40.0	0.0	0.0	1.3	49.1	37.2
Russian Federation	329	46.5	8.4	32.1	7.4	5.6	32.1	0.0	0.0	5.6	31.0	32.8
Slovenia	173	54.2	9.5	26.8	6.5	2.9	26.8	0.0	0.0	2.9	26.6	27.4
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	256	34.6	12.0	42.3	10.6	0.5	42.3	0.0	0.0	0.5	36.4	45.1
Switzerland	349	37.6	12.6	33.2	9.7	6.8	33.2	0.0	0.0	6.8	34.3	30.9
United States	892	51.0	11.5	26.3	8.9	2.3	26.3	0.2	0.0	2.1	21.6	30.6
INTERNATIONAL AVG	.	40.9	11.0	33.3	11.2	3.5	33.3	0.1	0.0	3.4	33.7	33.6

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent



Item: G05 KEY: A  
 DIRECTION REFRACTED RAY OF LIGHT (Wave Phenomena)  
 Difficulty: 664

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	188	42.4	12.8	30.6	4.8	9.4	0.0	42.4	0.0	0.0	0.0	43.9	41.6
Austria	191	28.7	11.5	22.9	19.8	15.1	2.0	28.7	1.0	0.0	1.1	34.1	17.0
Canada	666	41.9	10.5	20.2	11.8	15.4	0.1	41.9	0.0	0.0	0.1	46.2	39.3
Cyprus	91	47.3	5.2	32.0	6.8	7.6	1.1	47.3	0.0	0.0	1.1	43.8	53.2
Czech Republic	276	34.3	18.4	14.3	11.3	19.2	2.4	34.3	1.7	0.0	0.7	27.5	43.0
Denmark	178	32.0	8.1	30.2	14.9	11.0	3.9	32.0	1.8	0.0	2.1	28.6	33.1
France	279	24.1	21.0	31.0	13.3	10.2	0.5	24.1	0.0	0.0	0.5	29.1	22.2
Germany	209	39.7	6.7	21.3	13.9	12.9	5.5	39.7	3.4	0.0	2.1	39.9	38.8
Greece	120	17.7	20.7	16.6	24.0	17.9	3.2	17.7	0.0	0.0	3.2	10.0	22.0
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	171	39.8	12.3	15.8	15.2	16.4	0.6	39.8	0.0	0.6	0.0	41.0	40.2
Italy	31	25.5	25.9	27.1	9.4	9.4	2.8	25.5	0.0	0.0	2.8	30.3	16.0
Latvia (LSS)	229	41.3	14.0	22.3	12.5	8.7	1.3	41.3	0.0	0.0	1.3	41.0	41.5
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	356	52.5	4.4	30.2	6.0	6.1	0.7	52.5	0.0	0.0	0.7	38.4	56.7
Russian Federation	329	51.8	9.6	24.1	7.4	5.5	1.6	51.8	0.2	0.0	1.5	42.1	59.1
Slovenia	173	29.6	22.1	25.3	7.4	15.2	0.5	29.6	0.5	0.0	0.0	39.6	26.5
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	256	52.5	2.8	30.4	6.5	7.8	0.0	52.5	0.0	0.0	0.0	58.0	50.0
Switzerland	349	33.9	10.0	15.7	24.1	15.1	1.3	33.9	0.7	0.0	0.5	35.0	33.3
United States	892	26.8	13.5	19.2	20.5	19.4	0.5	26.8	0.1	0.0	0.4	20.3	33.0
INTERNATIONAL AVG	.	36.8	12.7	23.8	12.8	12.3	1.6	36.8	0.5	0.0	1.0	36.1	37.0

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: G06 KEY: D  
 PROCESS BY WHICH STARS RELEASE ENERGY (Modern Physics)  
 Difficulty: 541

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	188	14.4	6.1	6.1	61.4	10.1	1.9	61.4	1.8	0.0	0.1	49.2	68.0
Austria	191	10.9	9.3	1.5	64.1	13.7	0.5	64.1	0.5	0.0	0.0	60.2	72.5
Canada	666	14.6	6.0	14.1	56.7	8.4	0.3	56.7	0.0	0.0	0.3	46.0	63.6
Cyprus	92	23.9	13.9	3.6	28.6	27.6	2.4	28.6	0.0	0.0	2.4	17.3	34.3
Czech Republic	276	7.8	1.4	27.3	38.7	23.1	1.6	38.7	1.6	0.0	0.0	34.9	43.6
Denmark	178	1.3	0.9	4.9	82.5	5.0	5.5	82.5	0.7	0.0	4.8	72.7	85.5
France	279	4.4	0.9	6.8	72.4	14.0	1.4	72.4	0.8	0.0	0.6	64.6	75.6
Germany	209	4.7	9.3	4.4	64.2	6.7	10.6	64.2	5.7	0.0	4.9	41.0	73.1
Greece	120	15.8	10.2	10.1	33.6	25.4	4.8	33.6	0.0	0.0	4.8	33.0	33.9
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	171	17.0	18.1	7.6	40.9	11.7	4.7	40.9	0.0	0.6	4.1	28.2	45.7
Italy	31	0.5	0.0	5.8	84.9	6.0	2.8	84.9	0.0	0.0	2.8	90.5	74.1
Latvia (LSS)	229	12.5	8.3	27.5	27.6	19.7	4.4	27.6	0.0	0.0	4.4	25.8	29.2
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	356	1.6	2.3	2.6	90.3	3.3	0.0	90.3	0.0	0.0	0.0	82.8	92.5
Russian Federation	329	3.9	7.2	11.7	64.3	11.1	1.8	64.3	0.2	0.0	1.5	58.1	69.0
Slovenia	173	7.8	4.8	5.7	65.6	14.8	1.3	65.6	0.0	0.0	1.3	67.2	64.4
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	256	4.0	5.5	2.9	74.9	12.7	0.0	74.9	0.0	0.0	0.0	62.1	80.9
Switzerland	349	10.5	8.2	1.7	63.6	13.6	2.5	63.6	0.1	0.0	2.4	56.5	71.2
United States	892	15.9	4.3	13.0	52.3	14.0	0.6	52.3	0.0	0.0	0.6	43.0	60.9
INTERNATIONAL AVG	.	9.5	6.5	8.7	59.3	13.4	2.6	59.3	0.6	0.0	1.9	51.8	63.2

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: G07 KEY: B  
 ENERGY TRANSFORMATION AND COLLISION OF CARS (Mechanics)  
 Difficulty: 719

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	188	27.8	28.1	30.9	13.2	0.0	28.1	0.0	0.0	0.0	35.3	24.1
Austria	191	34.1	16.6	19.0	27.5	2.8	16.6	2.5	0.0	0.3	13.6	21.1
Canada	666	48.5	19.8	21.4	10.2	0.1	19.8	0.1	0.0	0.0	16.9	21.7
Cyprus	92	23.9	25.9	25.4	23.7	1.1	25.9	0.0	0.0	1.1	14.9	31.2
Czech Republic	276	43.4	33.3	14.6	8.6	0.0	33.3	0.0	0.0	0.0	26.7	41.8
Denmark	178	40.1	41.1	8.1	8.8	1.8	41.1	0.4	0.0	1.4	34.9	42.5
France	279	43.5	18.0	14.1	22.2	2.2	18.0	0.0	0.0	2.2	17.9	18.6
Germany	209	39.4	37.1	13.9	8.5	1.2	37.1	0.9	0.0	0.2	23.2	42.9
Greece	120	31.1	14.0	28.7	25.6	0.7	14.0	0.0	0.0	0.7	2.0	20.8
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	171	35.7	38.6	17.5	7.0	1.2	38.6	0.0	0.6	0.6	41.0	37.8
Italy	31	41.2	2.9	24.9	31.0	0.0	2.9	0.0	0.0	0.0	0.0	8.6
Latvia (LSS)	231	40.4	24.0	13.4	21.7	0.4	24.0	0.0	0.0	0.4	23.3	24.7
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	356	41.0	40.1	11.4	6.9	0.7	40.1	0.0	0.0	0.7	26.3	44.3
Russian Federation	329	38.1	28.0	17.2	14.8	1.9	28.0	0.0	0.0	1.9	20.1	34.0
Slovenia	173	35.2	56.4	7.8	0.2	0.4	56.4	0.0	0.0	0.4	37.7	61.1
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	256	29.0	50.5	12.6	7.3	0.6	50.5	0.0	0.0	0.6	48.6	51.4
Switzerland	349	43.8	27.4	18.6	8.9	1.2	27.4	0.0	0.0	1.2	19.7	35.2
United States	892	35.3	22.8	26.7	14.3	0.9	22.8	0.0	0.0	0.9	18.3	27.1
INTERNATIONAL AVG	.	37.3	29.1	18.1	14.5	1.0	29.1	0.2	0.0	0.7	23.3	32.7

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: G08 KEY: E  
 MECHANICAL ENERGY OF BLOCK AND SPRING SYSTEM (Mechanics)  
 Difficulty: 676

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	188	3.2	39.9	12.7	29.6	14.1	0.6	14.1	0.0	0.0	0.6	7.4	17.7
Austria	191	5.2	35.2	9.7	24.7	21.8	3.3	21.8	0.5	0.0	2.9	22.5	22.0
Canada	666	7.7	34.5	3.9	25.9	27.4	0.5	27.4	0.0	0.0	0.5	34.7	22.5
Cyprus	92	3.1	18.0	7.1	23.5	48.2	0.0	48.2	0.0	0.0	0.0	44.5	50.5
Czech Republic	276	4.1	23.6	4.6	32.0	34.9	0.9	34.9	0.0	0.0	0.9	34.9	34.8
Denmark	178	4.2	31.4	2.0	14.1	48.2	0.0	48.2	0.0	0.0	0.0	26.3	53.6
France	279	2.4	26.0	3.9	18.7	47.1	2.0	47.1	0.0	0.0	2.0	39.5	50.7
Germany	209	6.2	29.5	1.6	19.0	43.1	0.6	43.1	0.0	0.0	0.6	30.2	47.7
Greece	120	6.1	18.8	6.8	9.9	56.8	1.6	56.8	0.0	0.0	1.6	51.9	59.6
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	171	7.6	24.6	5.3	21.6	40.4	0.6	40.4	0.0	0.6	0.0	41.0	40.9
Italy	31	0.0	32.9	2.5	31.7	21.7	11.2	21.7	0.0	0.0	11.2	17.6	29.7
Latvia (LSS)	231	3.2	32.2	8.5	20.2	33.1	2.8	33.1	0.0	0.0	2.8	33.2	33.0
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	356	3.0	26.5	2.2	13.1	54.7	0.6	54.7	0.0	0.0	0.6	48.3	56.6
Russian Federation	328	5.5	31.4	2.5	12.3	47.0	1.3	47.0	0.0	0.0	1.3	42.2	50.6
Slovenia	173	3.1	24.2	1.1	21.5	49.8	0.3	49.8	0.0	0.0	0.3	39.8	52.6
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	256	4.7	41.2	5.8	24.2	24.1	0.0	24.1	0.0	0.0	0.0	18.5	26.6
Switzerland	349	5.2	34.3	4.9	32.2	20.0	3.5	20.0	0.0	0.0	3.5	13.9	24.6
United States	892	5.7	33.9	7.4	37.7	12.6	2.7	12.6	0.0	0.0	2.7	10.9	14.2
INTERNATIONAL AVG	.	4.5	29.9	5.2	22.9	35.8	1.8	35.8	0.0	0.0	1.7	31.0	38.2

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: G09 KEY: A  
 DIRECTION OF FORCES IN AMUSEMENT PARK RIDE (Mechanics)  
 Difficulty: 802

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	188	27.4	33.7	22.8	16.1	0.0	27.4	0.0	0.0	0.0	27.7	27.2
Austria	191	5.3	87.2	5.4	1.7	0.5	5.3	0.5	0.0	0.0	7.0	1.9
Canada	666	21.2	52.4	18.2	8.2	0.0	21.2	0.0	0.0	0.0	26.0	18.0
Cyprus	91	51.1	18.3	20.8	8.8	0.9	51.1	0.0	0.0	0.9	40.3	56.5
Czech Republic	276	8.5	71.6	18.2	1.7	0.0	8.5	0.0	0.0	0.0	8.9	7.9
Denmark	178	22.8	39.8	17.2	20.3	0.0	22.8	0.0	0.0	0.0	30.2	22.3
France	279	13.7	45.6	32.7	6.4	1.6	13.7	0.3	0.0	1.3	14.0	13.5
Germany	209	8.7	70.7	16.5	3.9	0.2	8.7	0.0	0.0	0.2	5.7	10.1
Greece	120	19.6	23.3	37.0	18.7	1.4	19.6	0.8	0.6	0.0	16.6	21.4
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	171	26.9	31.6	22.8	17.5	1.2	26.9	0.0	0.6	0.6	33.3	23.6
Italy	31	1.3	85.4	13.1	0.2	0.0	1.3	0.0	0.0	0.0	2.0	0.0
Latvia (LSS)	231	18.0	58.9	17.9	4.5	0.8	18.0	0.0	0.0	0.8	16.8	19.1
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	356	29.1	31.1	11.9	27.7	0.2	29.1	0.0	0.0	0.2	18.3	32.4
Russian Federation	329	13.7	54.3	25.8	5.2	1.0	13.7	0.0	0.0	1.0	14.2	13.3
Slovenia	173	22.5	45.1	22.9	9.5	0.1	22.5	0.0	0.0	0.1	29.3	21.1
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	256	27.9	41.7	14.8	15.6	0.0	27.9	0.0	0.0	0.0	22.5	30.4
Switzerland	349	15.1	57.3	17.2	9.6	0.8	15.1	0.0	0.0	0.8	13.2	17.1
United States	892	15.1	61.0	14.2	9.3	0.4	15.1	0.0	0.0	0.4	17.5	12.8
INTERNATIONAL AVG	.	19.3	50.5	19.4	10.3	0.5	19.3	0.1	0.1	0.3	19.1	19.4

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: G10 KEY: B  
 MINIMUM VOLTAGE NEEDED TO PRODUCE X-RAYS (Modern Physics)  
 Difficulty: 698

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	188	30.8	33.7	18.3	14.1	3.0	33.7	0.0	0.0	3.0	34.1	33.5
Austria	191	32.1	23.0	24.5	15.7	4.7	23.0	0.5	0.0	4.2	26.0	15.3
Canada	666	39.8	21.5	16.1	19.6	2.9	21.5	0.0	0.0	2.9	21.8	21.3
Cyprus	92	28.2	40.0	21.1	8.4	2.3	40.0	0.0	0.0	2.3	35.2	42.4
Czech Republic	276	46.9	25.8	9.4	13.4	4.5	25.8	0.2	0.0	4.3	18.4	35.2
Denmark	178	34.9	22.7	10.5	16.1	15.8	22.7	0.0	0.0	15.8	32.3	21.4
France	279	10.9	31.2	18.2	11.9	27.8	31.2	0.0	0.0	27.8	33.7	30.3
Germany	209	30.1	31.4	5.9	17.7	14.8	31.4	0.1	0.0	14.7	28.0	33.1
Greece	120	31.1	19.2	19.8	13.3	16.6	19.2	0.0	0.6	16.0	16.4	20.7
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	171	21.1	38.0	21.6	9.4	9.9	38.0	0.0	0.6	9.4	41.0	36.2
Italy	31	22.6	8.4	14.7	12.7	41.6	8.4	0.0	0.0	41.6	6.8	11.5
Latvia (LSS)	231	12.3	33.6	26.0	18.0	10.0	33.6	0.0	0.0	10.0	31.0	36.1
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	356	33.2	45.0	8.0	9.2	4.6	45.0	0.0	0.0	4.6	48.3	44.0
Russian Federation	329	8.1	41.7	20.6	18.2	11.3	41.7	0.0	0.0	11.3	35.1	46.7
Slovenia	173	14.9	54.9	7.5	11.6	11.2	54.9	0.0	0.0	11.2	50.1	54.6
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	256	25.3	40.7	14.2	17.0	2.8	40.7	0.0	0.0	2.8	40.8	40.6
Switzerland	349	24.7	22.8	18.3	17.6	16.5	22.8	0.0	0.0	16.5	23.6	22.4
United States	892	32.7	22.6	18.5	19.5	6.7	22.6	0.0	0.0	6.7	20.3	24.8
INTERNATIONAL AVG	.	26.6	30.9	16.3	14.6	11.5	30.9	0.0	0.1	11.4	30.2	31.7

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: G11  
 EFFECT OF ICE MELTING ON WATER LEVEL IN AQUARIUM (Heat)  
 Difficulty: 762

COUNTRY	N	20	29	10	11	19	70	71	72	73	74	79	90	99	V1	V2	NOT	1.GIRL	2.BOY		
																	REACH			ED	OMIT
Australia	188	6.4	2.3	8.9	0.0	0.6	34.8	31.3	0.0	1.2	12.7	0.6	0.0	1.2	18.3	8.8	0.0	1.2	8.1	9.1	
Austria	191	12.0	0.4	9.8	2.8	1.6	34.1	24.8	0.0	4.7	5.9	2.4	0.5	1.1	26.7	12.4	0.0	1.1	9.7	19.4	
Canada	666	7.6	0.9	9.4	0.9	0.3	24.7	33.0	2.8	3.7	9.9	5.0	0.3	1.5	19.2	8.5	0.0	1.5	5.7	10.4	
Cyprus	92	12.5	1.1	12.7	2.9	0.0	37.0	10.7	0.0	3.4	9.9	3.2	3.5	3.2	29.2	13.6	0.0	3.2	17.0	10.5	
Czech Republic	276	3.1	0.6	12.7	1.7	0.5	24.9	33.1	0.5	2.3	9.8	8.4	0.0	2.4	18.6	3.7	0.0	2.4	2.8	4.8	
Denmark	178	7.6	4.1	5.9	3.6	3.4	35.4	25.7	0.3	0.6	5.3	1.7	0.0	6.5	24.6	11.7	0.0	6.5	3.7	12.5	
France	279	6.9	1.8	7.0	1.7	3.6	28.6	30.1	0.9	0.4	6.8	4.1	2.3	5.8	21.0	8.7	0.0	5.8	10.3	7.7	
Germany	209	21.5	0.2	7.4	2.4	3.4	18.4	31.4	1.2	2.5	5.6	2.8	1.8	1.4	34.9	21.7	0.0	1.4	17.9	23.6	
Greece	120	18.0	4.9	4.9	4.0	1.9	26.5	18.0	0.8	2.2	7.5	4.7	0.8	5.6	33.7	23.0	0.6	5.0	21.8	23.6	
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	171	8.8	0.6	10.5	1.8	0.6	35.7	31.6	0.6	0.0	5.3	1.2	1.2	2.3	22.2	9.4	0.6	1.8	2.6	11.8	
Italy	31	3.3	0.0	2.6	3.3	0.0	35.7	22.6	0.0	0.2	9.9	6.2	0.0	16.2	9.1	3.3	0.0	16.2	4.9	0.0	
Latvia (LSS)	231	10.9	3.5	2.4	2.0	0.0	36.6	26.2	0.0	0.0	11.1	5.0	1.1	1.3	18.8	14.4	0.0	1.3	11.7	17.0	
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	356	22.1	0.0	13.3	0.2	0.2	19.6	37.2	1.6	0.9	3.2	0.8	0.0	1.0	35.8	22.1	0.0	1.0	10.5	25.6	
Russian Federation	328	17.9	0.9	6.7	3.7	2.0	33.6	17.5	0.7	0.2	7.9	1.8	1.0	6.0	31.2	18.8	0.0	6.0	16.0	20.9	
Slovenia	173	25.4	0.0	4.6	2.4	0.0	19.9	39.9	0.0	0.6	1.8	1.4	1.1	2.8	32.5	25.4	0.0	2.8	34.5	23.6	
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	256	10.2	1.0	6.3	0.0	5.6	22.2	33.7	5.9	0.3	13.0	1.2	0.0	0.6	23.1	11.3	0.0	0.6	9.6	12.0	
Switzerland	348	18.5	1.7	9.4	1.1	0.7	22.3	31.6	0.4	0.8	7.1	5.8	0.6	0.2	31.3	20.1	0.0	0.2	9.7	30.3	
United States	892	4.3	0.9	23.8	1.6	2.7	22.4	25.9	2.1	4.4	8.1	3.4	0.1	0.4	33.2	5.2	0.0	0.4	4.3	6.0	
INTERNATIONAL AVG	.	12.1	1.4	8.8	2.0	1.5	28.5	28.0	1.0	1.6	7.8	3.3	0.8	3.3	25.7	13.4	0.1	3.2	11.2	14.9	

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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

Item: G12  
 CALCULATION OF MASS USING CONSERVATION OF MOMENTUM (Mechanics)  
 Difficulty: 647

COUNTRY	N	20	10	11	12	13	14	19	70	79	90	99	V1	V2	NOT	1.GIRL	2.BOY
															REACH ED		
Australia	188	36.1	0.8	0.0	11.4	16.8	0.1	1.1	12.6	8.3	0.8	12.0	66.4	36.1	0.0	12.0	39.4
Austria	191	4.0	0.0	0.0	5.6	0.9	0.0	0.6	9.1	23.2	18.8	37.7	11.1	4.0	0.0	37.7	8.9
Canada	666	33.2	3.0	0.0	5.9	8.8	0.4	0.7	19.8	15.0	4.8	8.4	52.0	33.2	0.0	8.4	36.3
Cyprus	92	44.4	1.0	0.0	7.2	19.5	0.0	2.0	1.8	4.3	2.0	17.8	74.1	44.4	0.0	17.8	45.5
Czech Republic	276	13.4	0.8	0.3	1.8	1.6	0.0	4.6	21.2	27.2	3.9	25.1	22.5	13.4	0.0	25.1	20.4
Denmark	178	42.3	0.4	0.0	9.1	4.1	1.0	0.7	23.0	5.0	0.4	14.0	57.6	42.3	0.0	14.0	41.8
France	279	19.8	1.2	0.9	3.8	2.2	0.6	2.1	31.1	7.8	3.6	27.0	30.5	19.8	0.4	26.6	23.1
Germany	209	28.5	0.7	0.0	2.9	8.6	0.3	1.5	16.1	18.5	6.8	16.1	42.6	28.5	0.0	16.1	32.9
Greece	120	53.8	4.3	0.0	1.3	6.5	0.0	0.8	2.9	5.7	2.2	22.5	66.8	53.8	1.9	20.6	46.7
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	171	44.4	16.4	0.0	5.8	10.5	1.2	1.8	7.6	4.1	0.6	7.6	80.1	44.4	0.6	7.0	45.7
Italy	31	9.5	3.3	0.0	0.0	0.2	0.0	0.0	2.7	2.5	4.4	77.3	13.1	9.5	0.0	77.3	18.5
Latvia (LSS)	231	20.8	0.4	0.8	4.4	0.8	0.8	1.7	5.5	20.0	4.9	39.8	29.8	20.8	0.0	39.8	24.8
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	355	64.4	0.8	0.0	5.7	6.5	0.0	1.6	7.4	8.5	1.0	4.1	78.9	64.4	0.0	4.1	65.6
Russian Federation	328	55.3	1.4	0.6	2.1	3.0	1.9	1.4	8.4	6.4	4.9	14.6	65.7	55.3	0.8	13.8	61.7
Slovenia	173	58.2	0.8	0.2	4.5	1.9	2.8	0.0	0.0	11.2	15.9	4.6	68.3	58.2	0.0	4.6	59.4
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	256	64.0	1.9	0.0	2.8	9.3	0.0	2.5	9.7	6.1	0.0	3.8	80.4	64.0	0.0	3.8	69.2
Switzerland	349	18.7	2.6	2.0	4.3	4.1	0.7	1.2	27.0	20.2	4.0	15.3	33.5	18.7	0.0	15.3	19.9
United States	892	13.5	0.5	0.3	2.1	3.4	0.3	1.8	6.5	49.3	5.8	16.4	21.9	13.5	0.1	16.4	18.6
INTERNATIONAL AVG	.	34.7	2.2	0.3	4.5	6.0	0.6	1.4	11.8	13.5	4.7	20.2	49.7	34.7	0.2	20.0	37.7

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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



Item: G13  
 DOPPLER EFFECT AND MOVING CAR (Wave Phenomena)  
 Difficulty: 673

COUNTRY	N	10	11	19	70	71	72	73	79	90	99	V1	NOT	OMIT	1.GIRL	2.BOY
													REACH		% Right	% Right
													ED			
Australia	188	35.3	1.4	16.5	4.2	1.1	10.5	2.3	22.4	0.0	6.3	53.3	0.0	6.3	45.1	57.7
Austria	191	46.0	0.0	4.6	0.9	0.0	27.9	8.1	5.9	5.1	1.4	50.6	0.0	1.4	44.2	66.0
Canada	666	17.7	1.1	3.3	1.2	0.6	11.6	36.9	19.1	0.6	8.0	22.0	0.0	8.0	25.6	19.7
Cyprus	92	60.5	0.0	7.4	1.3	1.0	8.4	0.9	8.8	1.0	10.7	67.9	0.0	10.7	70.5	65.7
Czech Republic	276	2.8	0.0	0.7	3.7	0.0	11.3	49.2	26.2	0.4	5.7	3.5	0.0	5.7	2.3	5.1
Denmark	178	37.5	0.0	3.4	1.4	0.0	6.5	13.9	31.1	0.0	6.1	40.9	0.0	6.1	21.6	44.1
France	279	15.6	0.0	2.2	3.9	0.0	9.4	34.8	15.0	3.5	15.6	17.9	0.4	15.2	15.5	19.5
Germany	209	53.9	0.7	5.0	3.5	1.6	9.8	7.5	9.4	3.3	5.1	59.6	0.2	4.9	52.5	61.9
Greece	120	37.2	0.0	2.9	0.0	0.7	8.6	0.0	17.4	5.7	27.5	40.1	1.9	25.6	39.1	40.7
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	171	7.0	0.6	1.2	0.0	0.0	10.5	48.5	14.6	2.3	15.2	8.8	0.6	14.6	2.6	11.0
Italy	31	47.4	0.0	2.5	0.0	0.0	7.6	0.0	13.9	4.9	23.7	49.9	0.0	23.7	40.2	68.9
Latvia (LSS)	231	39.1	0.0	3.8	0.0	0.0	13.6	0.8	20.6	2.4	19.7	42.9	1.2	18.6	42.3	43.5
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	356	42.5	1.8	0.3	1.5	0.4	8.2	31.3	9.0	1.1	3.9	44.5	0.0	3.9	39.7	46.0
Russian Federation	328	29.1	0.1	0.0	2.1	0.0	8.2	26.7	16.2	3.9	13.7	29.2	1.2	12.5	25.0	32.4
Slovenia	173	51.4	2.1	0.3	10.4	0.0	4.0	3.8	17.7	0.7	9.7	53.8	0.0	9.7	46.0	56.8
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	256	17.8	0.0	2.0	2.7	0.0	6.8	36.2	29.4	0.6	4.4	19.8	0.0	4.4	3.6	27.3
Switzerland	349	24.7	0.6	4.3	6.3	0.5	12.1	21.6	19.4	2.1	8.3	29.7	0.0	8.3	25.4	34.3
United States	892	11.2	0.6	0.3	1.4	0.3	20.4	37.1	25.9	0.3	2.6	12.0	0.3	2.3	7.3	16.5
INTERNATIONAL AVG	.	32.0	0.5	3.4	2.5	0.3	10.9	20.0	17.9	2.1	10.4	35.9	0.3	10.1	30.5	39.8

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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

Item: G14  
 PATHS OF ALPHA, BETA, AND GAMMA RAYS THROUGH AN ELECTRIC FIELD (Modern Physics)  
 Difficulty: 746

COUNTRY	N	10	11	70	71	72	73	79	90	99	V1	NOT	1.GIRL	2.BOY	
												REACH ED			OMIT
Australia	188	34.6	4.4	1.1	0.8	0.3	0.0	45.9	2.0	11.0	39.0	0.0	11.0	25.7	46.2
Austria	191	7.7	0.9	0.0	2.2	0.9	1.1	39.9	26.9	20.5	8.6	0.0	20.5	4.2	19.0
Canada	666	21.0	4.6	2.4	3.5	0.3	0.8	39.5	3.6	24.4	25.6	0.2	24.1	18.6	30.4
Cyprus	92	6.2	0.0	0.0	0.0	4.0	0.0	26.8	8.2	54.9	6.2	1.1	53.8	5.1	7.4
Czech Republic	276	8.6	2.7	0.6	1.0	0.0	0.6	37.6	6.1	42.9	11.3	0.3	42.6	7.1	16.7
Denmark	178	41.0	0.8	0.8	1.8	0.0	17.4	21.1	0.9	16.2	41.9	0.4	15.7	37.0	43.0
France	279	11.9	2.6	3.2	6.0	0.4	2.3	22.3	6.2	45.0	14.6	0.4	44.6	10.9	15.8
Germany	209	36.3	0.0	0.2	4.8	0.0	3.1	26.2	14.9	14.4	36.3	0.2	14.1	15.2	44.5
Greece	120	18.1	0.0	2.2	8.9	0.0	0.0	17.6	8.3	44.9	18.1	2.8	42.1	10.8	22.2
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	171	19.9	4.1	0.6	3.5	0.0	1.2	30.4	1.2	39.2	24.0	1.2	38.0	15.4	27.6
Italy	31	0.5	0.0	3.3	2.6	0.0	0.0	24.1	4.9	64.6	0.5	0.0	64.6	0.0	1.4
Latvia (LSS)	231	24.3	6.9	0.7	0.8	0.0	1.7	5.9	7.7	51.9	31.3	2.0	49.9	24.2	38.0
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	356	54.6	2.4	1.4	3.6	0.6	3.5	24.4	0.5	9.0	57.0	0.2	8.7	48.6	59.5
Russian Federation	328	40.3	11.8	1.6	2.2	2.0	0.1	15.1	3.8	23.1	52.1	1.2	21.9	42.5	59.4
Slovenia	173	29.8	5.6	0.0	0.0	0.0	3.3	15.9	8.1	37.3	35.4	2.3	35.0	29.0	36.4
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	256	31.3	3.0	0.3	0.7	0.0	16.5	25.5	0.2	22.5	34.3	0.0	22.5	17.9	41.9
Switzerland	349	14.2	0.8	0.5	2.6	0.5	2.0	38.8	17.1	23.4	15.0	0.0	23.4	6.2	23.4
United States	892	4.0	0.6	0.3	0.5	0.0	0.9	60.8	7.6	25.4	4.5	0.4	25.0	1.6	7.3
INTERNATIONAL AVG	.	22.5	2.9	1.1	2.5	0.5	3.0	28.8	7.1	31.7	25.3	0.7	31.0	17.8	30.0

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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

Item: G15  
 DIRECTION OF ACCELERATION OF A BOUNCING BALL (Mechanics)  
 Difficulty: 840

COUNTRY	N	10	70	71	72	73	74	79	90	99	V1	NOT	1.GIRL	2.BOY	
												REACH			OMIT
												ED			
Australia	188	30.9	15.7	8.3	23.0	5.0	2.0	13.8	0.0	1.4	30.9	0.0	1.4	22.5	35.5
Austria	191	3.7	2.0	1.1	53.2	3.7	0.0	24.7	1.5	10.1	3.7	0.0	10.1	3.9	3.6
Canada	666	15.7	8.7	7.9	34.1	3.3	2.1	27.4	0.1	0.7	15.7	0.2	0.5	14.6	16.6
Cyprus	92	9.9	1.0	4.6	34.7	6.6	7.7	25.1	1.0	9.4	9.9	1.1	8.3	0.0	17.1
Czech Republic	276	4.1	5.2	0.7	51.7	5.7	3.3	24.2	0.0	5.0	4.1	0.3	4.7	0.9	8.3
Denmark	178	22.7	14.6	4.9	31.9	6.2	3.7	11.2	1.2	3.6	22.7	1.0	2.6	13.9	24.8
France	279	17.1	2.7	1.8	29.6	2.7	22.9	21.0	0.5	1.8	17.1	0.4	1.4	13.7	19.3
Germany	209	7.6	6.6	8.7	32.5	4.1	1.3	32.3	3.2	3.8	7.6	0.2	3.5	7.8	7.1
Greece	120	14.5	4.4	1.0	48.2	6.2	1.5	10.5	1.6	12.2	14.5	2.8	9.3	13.7	15.0
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	171	28.1	6.4	1.8	26.3	5.8	3.5	19.3	0.6	8.2	28.1	1.2	7.0	15.4	32.3
Italy	31	2.8	0.0	0.0	29.2	11.4	3.3	29.4	0.0	23.8	2.8	3.2	20.7	0.0	8.2
Latvia (LSS)	231	9.4	4.9	0.4	45.4	8.3	3.1	17.8	1.6	9.0	9.4	2.7	6.3	6.5	12.2
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	356	45.8	5.7	7.4	13.8	3.7	6.9	14.4	0.0	2.2	45.8	0.2	2.0	25.6	51.9
Russian Federation	328	22.8	2.5	2.3	27.4	6.1	17.3	14.2	1.3	6.1	22.8	2.1	4.0	19.6	25.2
Slovenia	173	15.6	12.1	1.6	29.3	8.6	7.4	17.4	0.4	7.7	15.6	2.3	5.4	8.4	16.9
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	256	22.7	23.8	7.2	18.1	9.2	1.7	16.9	0.0	0.4	22.7	0.4	0.0	9.2	28.9
Switzerland	349	12.0	8.5	4.2	35.2	5.3	2.5	28.2	1.7	2.4	12.0	0.7	1.7	8.1	15.8
United States	892	6.1	9.1	3.3	55.0	2.1	0.3	21.9	0.1	2.1	6.1	0.5	1.7	2.4	9.6
INTERNATIONAL AVG	.	16.2	7.4	3.7	34.4	5.8	5.0	20.5	0.8	6.1	16.2	1.1	5.0	10.3	19.3

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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

Item: G16  
 EFFECT OF PRESSURE ON WATER LEAKING FROM A BOTTLE (Mechanics)  
 Difficulty: 899

COUNTRY	N	20	29	10	11	19	70	71	79	90	99	V1	V2	NOT	OMIT	1.GIRL	2.BOY
														REACH		% Right	% Right
														ED			
Australia	188	3.2	0.0	45.0	1.2	1.8	12.6	5.2	27.2	0.0	3.9	51.1	3.2	0.0	3.9	3.2	3.1
Austria	191	6.7	0.6	52.5	7.2	6.1	6.6	3.1	14.6	0.9	1.8	73.1	7.3	0.0	1.8	6.8	9.1
Canada	666	9.4	1.2	32.0	3.2	8.7	12.5	0.8	28.9	0.5	2.9	54.5	10.6	0.2	2.6	7.5	12.7
Cyprus	92	6.4	1.8	76.6	0.0	6.7	3.2	0.0	1.1	1.0	3.1	91.5	8.2	1.1	2.0	6.3	8.2
Czech Republic	276	3.0	0.0	37.6	10.0	19.7	2.6	4.0	21.5	0.9	0.7	70.3	3.0	0.3	0.4	1.5	5.0
Denmark	178	7.2	0.0	64.2	1.5	4.2	8.8	0.0	6.5	0.0	7.7	77.1	7.2	1.9	5.8	6.3	7.9
France	279	13.3	1.9	27.0	3.6	6.6	7.7	11.2	12.0	5.2	11.4	52.5	15.2	0.4	11.0	5.6	20.5
Germany	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Greece	120	16.1	2.7	51.5	3.6	9.4	2.6	0.0	7.3	0.8	6.0	83.2	18.8	2.8	3.2	20.8	17.6
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	171	0.6	0.0	46.8	4.7	18.1	9.9	2.3	9.9	0.6	7.0	70.2	0.6	1.2	5.8	2.6	0.0
Italy	31	15.2	0.2	23.6	2.5	10.6	0.0	0.0	19.6	0.0	28.2	52.2	15.4	3.2	25.0	14.8	16.7
Latvia (LSS)	231	3.7	0.9	53.9	0.4	7.6	6.9	0.4	17.0	0.4	8.8	66.4	4.6	2.7	6.1	3.4	5.7
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	356	7.7	0.0	58.6	13.9	1.7	8.0	0.0	6.2	0.0	3.9	81.8	7.7	0.2	3.7	5.8	8.2
Russian Federation	328	4.3	0.0	57.1	7.3	3.3	5.1	0.6	11.5	1.1	9.7	72.0	4.3	2.1	7.7	1.8	6.3
Slovenia	173	6.5	0.0	58.5	12.9	4.9	0.2	1.1	12.9	0.0	3.0	82.8	6.5	2.3	0.7	0.0	7.8
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	256	13.7	1.2	47.8	9.1	3.4	7.4	2.5	10.2	0.3	4.4	75.3	14.9	0.4	4.0	14.0	15.4
Switzerland	349	13.5	0.3	40.7	7.3	9.5	5.4	6.4	14.4	0.2	2.3	71.3	13.8	0.7	1.6	6.8	20.7
United States	892	3.1	0.3	26.2	8.2	2.9	10.0	4.4	39.5	0.5	4.8	40.8	3.4	0.5	4.3	2.9	3.9
INTERNATIONAL AVG	.	7.9	0.7	47.0	5.7	7.4	6.4	2.5	15.3	0.7	6.4	68.6	8.5	1.2	5.3	6.5	9.9

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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

Item: G17  
 DIRECTION OF FORCE DUE CURRENT (Electricity & Magnetism)  
 Difficulty: 715

COUNTRY	N	10	70	71	72	79	90	99	V1	NOT	OMIT	1.GIRL	2.BOY
										REACH		% Right	% Right
Australia	188	38.4	26.8	9.2	6.1	17.5	0.7	1.3	38.4	0.1	1.3	37.0	39.2
Austria	191	23.9	24.0	6.0	7.0	10.4	5.8	22.8	23.9	0.0	22.8	21.6	30.9
Canada	666	26.0	39.7	7.1	7.8	12.2	1.4	5.7	26.0	0.2	5.5	19.3	30.5
Cyprus	91	39.2	21.2	9.7	5.5	7.1	2.0	15.3	39.2	1.1	14.2	39.7	41.9
Czech Republic	276	23.2	35.5	5.3	2.8	8.5	0.8	23.9	23.2	0.7	23.2	23.3	23.1
Denmark	178	27.1	39.1	5.5	10.4	4.9	0.4	12.6	27.1	2.4	10.2	46.5	23.9
France	279	20.9	17.2	7.7	9.9	8.1	1.4	34.7	20.9	2.6	32.2	17.2	22.9
Germany	209	31.6	30.6	3.9	5.8	7.3	4.8	16.0	31.6	1.2	14.8	33.1	31.6
Greece	120	25.4	35.9	2.4	2.5	1.5	3.1	29.3	25.4	4.5	24.8	31.5	21.9
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	171	35.1	31.0	7.0	9.9	7.6	0.0	9.4	35.1	1.8	7.6	38.5	35.4
Italy	31	32.7	9.3	8.2	14.0	0.0	0.0	35.7	32.7	3.2	32.5	40.3	17.8
Latvia (LSS)	231	26.0	14.7	2.6	0.8	18.2	0.0	37.7	26.0	6.0	31.7	22.7	29.2
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	356	29.1	41.3	8.7	5.9	4.6	0.6	9.9	29.1	0.2	9.7	24.1	30.6
Russian Federation	328	42.9	33.3	1.1	1.2	1.8	2.9	16.8	42.9	4.0	12.8	36.2	48.0
Slovenia	173	45.7	32.8	1.2	4.1	3.7	0.4	11.9	45.7	2.7	9.3	35.7	48.4
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	256	41.3	26.1	5.4	14.7	5.1	0.0	7.4	41.3	1.3	6.2	32.9	45.2
Switzerland	349	28.4	29.1	2.2	7.9	8.1	4.3	20.0	28.4	0.8	19.3	26.4	30.8
United States	892	11.6	18.1	5.1	8.3	47.5	0.5	8.9	11.6	1.2	7.7	12.3	10.9
INTERNATIONAL AVG	.	30.5	28.1	5.5	6.9	9.7	1.6	17.8	30.5	1.9	15.9	29.9	31.2

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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

Item: G18  
 ALPHA PARTICLES PASSING THROUGH GOLD (Modern Physics)  
 Difficulty: 805

COUNTRY	N	20	29	10	19	70	71	72	73	74	79	90	99	V1	V2	NOT	1.GIRL	2.BOY		
																REACH			OMIT	% Right
																ED				
Australia	188	5.5	2.7	21.4	7.2	7.3	8.6	0.0	1.0	0.0	28.3	0.0	17.9	36.9	8.3	0.4	17.4	11.4	6.6	
Austria	191	5.2	0.0	15.1	1.9	11.8	0.6	0.0	4.9	1.8	24.4	15.4	18.9	22.2	5.2	0.5	18.4	2.1	11.4	
Canada	666	10.2	1.7	15.6	3.3	1.9	21.5	0.3	0.6	0.5	19.6	3.4	21.3	30.8	11.9	2.6	18.6	10.3	13.0	
Cyprus	92	6.2	0.9	14.4	3.4	0.0	5.4	0.0	0.0	0.0	27.9	4.1	37.7	24.9	7.1	6.9	30.8	5.3	8.8	
Czech Republic	276	1.4	0.0	4.9	2.4	2.1	1.5	0.2	1.9	0.9	33.3	4.5	46.9	8.7	1.4	3.3	43.6	0.8	2.1	
Denmark	178	7.0	0.0	5.0	2.7	2.9	10.9	0.0	0.6	0.0	33.8	0.7	36.4	14.7	7.0	4.0	32.3	15.9	5.1	
France	279	4.8	0.4	4.7	5.9	3.0	4.9	0.0	0.2	0.2	17.1	4.1	54.8	15.8	5.1	5.8	49.0	8.0	3.9	
Germany	209	21.4	2.4	3.0	8.4	2.9	4.2	0.0	1.5	0.7	12.8	19.1	23.6	35.2	23.8	2.3	21.3	12.0	28.1	
Greece	120	1.8	0.0	2.2	1.3	4.0	1.7	0.0	0.0	0.0	20.1	8.6	60.2	5.4	1.8	10.0	50.2	0.0	2.9	
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	171	4.1	1.2	8.8	4.1	2.3	4.1	1.8	1.8	0.0	22.8	0.0	49.1	18.1	5.3	2.9	46.2	5.1	5.5	
Italy	31	16.3	0.2	14.1	0.0	0.0	3.3	0.0	0.0	0.0	19.6	0.0	46.4	30.7	16.5	17.9	28.5	16.8	16.0	
Latvia (LSS)	231	5.4	2.4	2.8	8.1	1.7	0.0	0.0	0.0	2.2	22.4	1.7	53.2	18.8	7.8	16.9	36.4	4.8	10.6	
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	356	17.1	0.0	18.9	4.2	4.9	17.1	0.0	2.0	1.2	15.2	3.3	15.9	40.2	17.1	1.6	14.4	15.0	17.7	
Russian Federation	327	7.3	10.4	3.1	6.0	5.5	7.3	0.0	0.2	0.8	18.1	2.3	39.1	26.7	17.7	7.7	31.4	17.2	18.1	
Slovenia	173	21.2	0.0	3.0	0.8	2.2	3.7	0.0	1.0	0.0	34.1	1.7	32.3	25.0	21.2	5.1	27.2	5.7	24.9	
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	256	6.9	0.2	20.8	2.4	3.2	13.0	0.0	4.0	0.3	27.5	0.6	21.0	30.3	7.1	2.6	18.4	2.7	9.1	
Switzerland	349	10.7	2.6	6.9	7.8	2.9	13.0	0.1	0.0	0.9	18.4	11.2	25.4	28.0	13.3	3.9	21.5	5.3	21.1	
United States	892	1.6	0.3	7.3	3.3	2.7	11.1	0.0	0.3	0.2	54.7	4.0	14.6	12.5	1.9	1.6	13.0	1.1	2.5	
INTERNATIONAL AVG	.	8.6	1.4	9.6	4.1	3.4	7.3	0.1	1.1	0.5	25.0	4.7	34.1	23.6	10.0	5.3	28.8	7.7	11.5	

V1 = % Scoring 1 or better    V2 = % Scoring 2 or better    V3 = % 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

Item: G19  
 LENZ'S LAW AND FALLING ALUMINUM RING (Electricity & Magnetism)  
 Difficulty: 759

COUNTRY	N	20	21	29	10	19	70	79	90	99	V1	V2	NOT	OMIT	1.GIRL	2.BOY
													REACH		% Right	% Right
													ED			
Australia	188	11.1	7.4	0.0	3.8	3.4	67.3	4.5	0.4	1.9	25.8	18.6	1.3	0.6	9.9	23.3
Austria	191	6.5	2.4	0.0	1.4	1.9	68.6	10.3	4.6	4.3	12.2	8.9	0.9	3.4	4.5	18.4
Canada	666	3.2	0.4	0.0	2.5	2.7	70.4	14.6	0.3	5.9	8.8	3.6	4.4	1.5	3.4	3.6
Cyprus	92	18.8	5.6	4.2	3.3	13.0	35.4	6.8	1.0	12.1	44.8	28.5	7.9	4.1	13.6	36.6
Czech Republic	276	1.5	0.6	0.4	2.8	2.8	71.9	10.0	0.9	9.2	8.0	2.4	7.7	1.5	0.9	4.4
Denmark	178	2.3	1.0	0.0	1.6	1.8	50.6	25.5	0.4	16.8	6.7	3.3	12.2	4.5	0.0	4.2
France	279	2.1	0.0	0.8	0.5	3.7	60.9	13.9	3.6	14.6	7.1	2.9	9.0	5.6	2.5	3.1
Germany	208	28.9	5.6	1.7	3.0	4.3	30.6	11.0	6.1	8.8	43.5	36.2	6.3	2.5	20.0	42.2
Greece	120	8.2	3.7	0.0	4.2	7.4	34.4	5.6	4.3	32.1	23.5	11.9	26.1	6.0	8.1	14.1
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	171	5.8	3.5	0.6	4.1	0.6	71.3	5.3	0.0	8.8	14.6	9.9	7.0	1.8	5.1	11.8
Italy	31	0.0	11.2	4.9	3.2	0.2	33.2	7.7	0.0	39.5	19.6	16.1	22.4	17.1	16.9	14.6
Latvia (LSS)	231	1.9	2.0	0.4	0.4	6.8	43.8	14.9	0.4	29.5	11.4	4.3	26.3	3.1	1.5	6.9
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	356	19.1	19.4	0.6	6.5	2.8	39.6	6.0	1.0	5.0	48.3	39.0	2.8	2.2	31.5	41.3
Russian Federation	328	11.4	4.7	0.9	10.6	2.8	39.0	11.1	1.4	18.1	30.4	17.0	14.5	3.6	10.3	22.2
Slovenia	173	10.0	5.3	0.6	1.0	0.6	17.4	51.1	0.9	13.0	17.6	16.0	6.4	6.7	12.5	15.9
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	256	6.9	9.5	0.2	5.1	6.5	54.4	8.7	0.0	8.7	28.2	16.6	5.7	3.0	11.6	18.9
Switzerland	349	2.9	3.3	0.0	3.3	5.7	59.6	12.1	6.3	6.7	15.3	6.2	5.2	1.5	2.2	10.2
United States	892	0.5	0.1	0.0	0.9	1.2	75.3	16.3	1.9	3.9	2.6	0.6	2.8	1.1	0.0	1.1
INTERNATIONAL AVG	.	7.8	4.8	0.8	3.2	3.8	51.3	13.1	1.9	13.3	20.5	13.5	9.4	3.9	8.6	16.3

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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

Item: H01 KEY: C  
 BOXES SLIDING DOWN INCLINED PLANES (Mechanics)  
 Difficulty: 650

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	175	17.7	27.3	24.6	30.4	0.0	24.6	0.0	0.0	0.0	21.4	26.6
Austria	202	13.5	21.6	32.5	20.4	12.0	32.5	5.7	0.0	6.3	35.8	28.1
Canada	648	12.8	24.0	40.4	22.4	0.3	40.4	0.0	0.0	0.3	30.7	49.7
Cyprus	99	15.2	24.1	43.3	17.4	0.0	43.3	0.0	0.0	0.0	27.1	53.7
Czech Republic	274	13.9	15.5	42.7	17.0	10.9	42.7	9.7	0.0	1.2	40.0	46.7
Denmark	178	6.4	17.5	33.5	26.6	15.9	33.5	14.7	0.5	0.7	37.6	33.0
France	280	8.5	28.4	42.6	16.9	3.6	42.6	1.7	0.0	1.9	50.6	36.9
Germany	186	15.0	20.8	22.0	17.2	24.9	22.0	24.3	0.0	0.6	23.2	21.8
Greece	113	11.6	35.8	35.4	14.7	2.5	35.4	1.9	0.0	0.6	24.2	41.3
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	187	19.8	23.0	34.8	20.9	1.6	34.8	0.5	0.0	1.1	39.4	34.9
Italy	40	13.8	28.0	32.6	13.7	11.9	32.6	7.3	0.0	4.6	34.4	30.7
Latvia (LSS)	239	10.7	23.2	48.4	10.5	7.1	48.4	0.0	0.0	7.1	47.5	49.4
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	342	9.9	19.3	42.1	22.3	6.4	42.1	0.0	0.0	6.4	35.0	44.8
Russian Federation	331	9.6	20.0	50.0	15.5	4.9	50.0	1.4	0.0	3.5	53.0	47.9
Slovenia	161	7.9	21.4	51.1	13.5	6.2	51.1	6.1	0.0	0.1	58.1	48.9
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	238	21.8	17.7	43.3	17.0	0.2	43.3	0.0	0.0	0.2	37.7	46.4
Switzerland	351	12.1	20.6	39.0	20.7	7.5	39.0	6.8	0.0	0.7	37.7	41.4
United States	903	17.7	15.2	39.8	26.8	0.5	39.8	0.0	0.0	0.5	42.0	37.9
INTERNATIONAL AVG	.	13.2	22.4	38.8	19.1	6.5	38.8	4.5	0.0	2.0	37.5	40.0

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent



Item: H02 KEY: D  
 LIQUID EVAPORATION (Heat)  
 Difficulty: 570

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	175	7.0	39.8	7.2	46.0	0.0	46.0	0.0	0.0	0.0	47.8	44.7
Austria	202	10.0	34.3	13.4	39.6	2.8	39.6	1.3	0.0	1.5	33.7	48.5
Canada	648	8.2	39.2	9.2	43.3	0.1	43.3	0.0	0.0	0.1	34.5	51.9
Cyprus	100	11.9	31.6	11.7	42.0	2.8	42.0	0.0	0.0	2.8	29.1	49.0
Czech Republic	274	6.1	23.4	6.6	61.3	2.6	61.3	2.3	0.0	0.3	60.5	62.4
Denmark	178	4.3	7.6	9.8	66.9	11.3	66.9	9.0	0.5	1.8	57.0	69.6
France	280	2.4	27.0	16.8	49.1	4.6	49.1	1.4	0.0	3.2	50.1	48.4
Germany	186	15.3	24.8	10.0	44.1	5.7	44.1	4.8	0.0	0.9	40.5	45.9
Greece	113	10.4	26.7	21.5	33.9	7.5	33.9	0.6	0.0	6.9	24.8	38.6
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	187	8.0	21.4	9.1	58.8	2.7	58.8	0.5	0.0	2.1	63.6	57.7
Italy	40	0.0	42.6	6.4	51.1	0.0	51.1	0.0	0.0	0.0	39.1	62.8
Latvia (LSS)	239	3.5	11.2	12.5	72.8	0.0	72.8	0.0	0.0	0.0	72.3	73.3
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	342	2.8	14.6	18.9	61.4	2.3	61.4	0.0	0.0	2.3	60.9	61.6
Russian Federation	331	3.1	11.5	5.0	79.7	0.7	79.7	0.0	0.0	0.7	74.2	83.7
Slovenia	161	9.6	23.7	7.6	56.7	2.4	56.7	0.6	0.0	1.8	60.5	55.5
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	238	12.9	10.0	11.3	65.8	0.0	65.8	0.0	0.0	0.0	66.4	65.5
Switzerland	351	12.6	18.1	8.8	56.8	3.8	56.8	2.7	0.0	1.0	57.0	55.7
United States	903	11.1	40.3	9.2	38.7	0.7	38.7	0.0	0.0	0.7	38.9	38.5
INTERNATIONAL AVG	.	7.7	24.9	10.8	53.8	2.8	53.8	1.3	0.0	1.5	50.6	56.3

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: H03 KEY: A  
 PHOTOELECTRIC EFFECT AND KINETIC ENERGY OF EMITTED ELECTRONS (Modern Physics)  
 Difficulty: 666

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	175	28.4	23.0	6.2	41.7	0.6	28.4	0.0	0.0	0.6	20.7	33.4
Austria	202	28.4	16.9	10.3	38.3	6.1	28.4	0.5	0.0	5.6	31.5	24.9
Canada	648	29.9	19.0	9.1	41.1	0.9	29.9	0.0	0.0	0.9	28.5	31.1
Cyprus	100	31.8	16.0	13.7	29.5	9.0	31.8	0.0	0.0	9.0	31.8	32.2
Czech Republic	274	40.7	11.7	6.8	37.3	3.5	40.7	0.9	0.0	2.7	37.1	46.0
Denmark	178	60.9	10.5	3.8	23.3	1.6	60.9	0.0	0.5	1.0	58.3	63.1
France	280	18.0	25.0	11.3	33.3	12.4	18.0	1.2	0.1	11.1	11.4	24.1
Germany	186	50.8	14.2	11.9	19.1	4.0	50.8	1.0	0.0	3.0	25.7	60.1
Greece	113	24.1	16.7	11.9	37.6	9.8	24.1	0.0	0.0	9.8	26.9	22.6
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	187	30.5	15.5	7.5	43.9	2.7	30.5	0.0	0.0	2.7	9.1	34.2
Italy	40	37.8	32.6	9.1	12.1	8.4	37.8	0.0	0.0	8.4	42.6	33.1
Latvia (LSS)	239	37.1	14.0	14.7	27.1	7.2	37.1	0.0	0.0	7.2	29.7	43.9
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	342	63.8	7.8	7.6	19.0	1.8	63.8	0.0	0.0	1.8	60.0	65.2
Russian Federation	331	54.5	9.8	9.5	22.6	3.6	54.5	0.0	0.0	3.6	48.3	58.9
Slovenia	161	45.2	17.1	6.8	27.6	3.4	45.2	0.0	0.0	3.4	36.2	46.9
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	238	61.7	9.5	8.3	20.0	0.5	61.7	0.0	0.0	0.5	58.4	63.5
Switzerland	351	28.2	12.3	7.8	40.4	11.3	28.2	0.1	0.0	11.2	24.8	31.8
United States	903	24.4	17.2	10.2	47.5	0.8	24.4	0.0	0.0	0.8	22.6	25.9
INTERNATIONAL AVG	.	38.7	16.0	9.2	31.2	4.9	38.7	0.2	0.0	4.6	33.5	41.2

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: H04 KEY: A  
 TENSION OF STRING BETWEEN TWO FALLING OBJECTS (Mechanics)  
 Difficulty: 696

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	175	40.8	27.6	14.7	15.9	1.0	40.8	0.0	0.0	1.0	45.0	38.1
Austria	201	23.9	30.4	31.3	13.4	1.0	23.9	0.5	0.0	0.6	19.3	30.6
Canada	648	29.2	40.3	18.3	12.0	0.3	29.2	0.0	0.0	0.3	20.6	37.7
Cyprus	100	41.2	33.4	6.3	19.1	0.0	41.2	0.0	0.0	0.0	33.1	46.8
Czech Republic	274	21.4	45.2	20.5	12.6	0.3	21.4	0.0	0.0	0.3	13.9	32.4
Denmark	178	38.4	41.2	15.7	3.1	1.7	38.4	0.0	0.5	1.2	18.4	41.9
France	280	16.8	38.0	21.3	21.2	2.7	16.8	0.6	0.1	1.9	14.0	19.7
Germany	186	36.1	33.2	20.9	9.4	0.3	36.1	0.0	0.0	0.3	13.6	45.1
Greece	113	29.3	28.9	13.4	25.0	3.4	29.3	0.0	0.0	3.4	16.3	36.1
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	187	51.9	29.4	13.4	5.3	0.0	51.9	0.0	0.0	0.0	57.6	51.0
Italy	40	25.5	45.5	13.4	12.9	2.7	25.5	0.0	0.0	2.7	27.5	23.5
Latvia (LSS)	239	35.7	39.4	20.2	3.0	1.7	35.7	0.0	0.0	1.7	36.8	34.7
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	342	45.5	31.6	13.9	9.0	0.0	45.5	0.0	0.0	0.0	27.1	52.3
Russian Federation	331	46.0	34.5	16.0	2.9	0.6	46.0	0.0	0.0	0.6	41.1	49.6
Slovenia	161	44.8	40.0	10.1	5.1	0.0	44.8	0.0	0.0	0.0	37.0	46.3
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	238	40.3	46.4	8.5	4.9	0.0	40.3	0.0	0.0	0.0	15.7	53.9
Switzerland	351	17.3	45.9	23.1	12.7	1.0	17.3	0.0	0.0	1.0	13.6	22.0
United States	903	33.3	22.8	25.1	18.6	0.2	33.3	0.0	0.0	0.2	22.8	42.6
INTERNATIONAL AVG	.	34.3	36.3	17.0	11.5	0.9	34.3	0.1	0.0	0.8	26.3	39.1

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: H05 KEY: B  
 LENGTH OF SPACESHIP IN FLIGHT (Modern Physics)  
 Difficulty: 619

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	175	26.9	35.8	24.3	8.1	4.8	35.8	0.0	0.0	4.8	38.0	34.4
Austria	201	31.1	32.5	23.3	7.6	5.5	32.5	0.5	0.6	4.5	29.0	37.9
Canada	648	15.7	46.8	29.9	5.7	1.9	46.8	0.0	0.0	1.9	43.0	50.6
Cyprus	100	28.7	25.3	28.7	9.6	7.7	25.3	0.0	0.0	7.7	28.7	23.5
Czech Republic	274	13.8	53.5	23.6	3.5	5.6	53.5	3.1	0.0	2.5	47.8	61.7
Denmark	178	26.4	38.0	21.0	7.6	7.0	38.0	0.0	0.5	6.5	41.9	36.0
France	280	31.0	24.5	19.0	6.7	18.7	24.5	0.0	0.1	18.6	31.1	19.0
Germany	186	24.3	45.1	15.7	6.3	8.7	45.1	0.2	0.0	8.4	47.4	43.7
Greece	113	38.1	28.0	16.9	9.1	8.0	28.0	0.0	0.0	8.0	32.4	25.7
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	187	28.9	33.7	26.7	8.0	2.7	33.7	0.0	0.0	2.7	36.4	34.2
Italy	40	27.1	16.7	28.4	11.6	16.2	16.7	0.0	0.0	16.2	16.0	17.4
Latvia (LSS)	239	22.4	55.4	14.3	2.1	5.7	55.4	0.0	0.0	5.7	55.0	55.9
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	342	9.0	67.4	17.7	4.3	1.6	67.4	0.0	0.0	1.6	67.1	67.5
Russian Federation	331	18.5	67.5	7.9	2.4	3.8	67.5	0.0	0.0	3.8	68.4	66.8
Slovenia	161	7.4	55.9	21.3	8.4	6.9	55.9	0.0	0.0	6.9	50.4	55.9
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	238	10.7	72.6	14.2	2.1	0.5	72.6	0.0	0.0	0.5	75.5	71.0
Switzerland	351	25.2	35.2	24.9	6.9	7.8	35.2	0.0	0.0	7.8	27.7	45.0
United States	903	28.5	33.9	30.9	4.4	2.3	33.9	0.0	0.0	2.3	35.3	32.5
INTERNATIONAL AVG	.	23.0	42.7	21.6	6.4	6.4	42.7	0.2	0.1	6.1	42.8	43.3

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: H06 KEY: C  
 INDUCED emf IN ROTATING COIL (Electricity & Magnetism)  
 Difficulty: 716

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	175	34.4	8.7	22.4	33.6	1.0	22.4	0.0	0.0	1.0	12.9	28.5
Austria	201	17.0	14.5	32.1	32.4	3.9	32.1	0.7	0.6	2.6	36.6	26.9
Canada	648	20.9	15.3	31.8	30.0	2.0	31.8	0.0	0.0	2.0	24.5	39.0
Cyprus	100	26.0	9.0	24.8	37.3	2.9	24.8	0.0	1.0	2.0	26.1	24.3
Czech Republic	274	20.3	5.1	30.3	37.4	6.9	30.3	3.7	0.0	3.3	26.3	36.2
Denmark	178	26.6	4.0	29.7	34.3	5.4	29.7	0.0	0.5	4.8	15.8	32.1
France	280	23.1	7.2	24.7	36.0	9.0	24.7	0.2	0.1	8.7	22.1	27.0
Germany	186	10.4	10.0	34.2	37.4	8.0	34.2	4.5	0.0	3.4	42.5	30.5
Greece	113	25.2	9.2	19.5	41.5	4.6	19.5	0.0	0.0	4.6	20.2	19.2
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	187	28.3	3.2	34.8	30.5	3.2	34.8	0.5	0.0	2.7	39.4	34.2
Italy	40	19.2	2.4	16.4	51.7	10.3	16.4	0.0	0.0	10.3	12.7	20.0
Latvia (LSS)	239	11.1	7.3	39.8	36.3	5.5	39.8	0.0	0.0	5.5	39.4	40.2
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	342	18.9	8.9	32.5	38.8	0.8	32.5	0.0	0.0	0.8	32.6	32.5
Russian Federation	331	22.1	7.2	31.9	31.6	7.2	31.9	0.0	0.0	7.2	28.2	34.6
Slovenia	161	30.1	4.2	32.7	28.0	5.1	32.7	0.9	0.0	4.1	21.0	34.5
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	238	20.8	5.3	39.6	33.3	1.0	39.6	0.0	0.0	1.0	31.3	44.2
Switzerland	351	18.1	11.7	25.4	31.6	13.1	25.4	0.9	0.0	12.2	23.1	28.9
United States	903	12.4	14.3	33.9	37.0	2.5	33.9	0.0	0.0	2.5	29.0	38.2
INTERNATIONAL AVG	.	21.4	8.2	29.8	35.5	5.1	29.8	0.6	0.1	4.4	26.9	31.7

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: H07 KEY: B  
 RELATIONSHIP BETWEEN TEMPERATURE AND PRESSURE WITH CONSTANT VOLUME (Heat)  
 Difficulty: 650

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	175	21.8	39.9	31.7	6.5	0.0	39.9	0.0	0.0	0.0	34.4	43.5
Austria	201	22.6	18.2	52.1	5.9	1.2	18.2	0.5	0.6	0.1	10.9	28.3
Canada	648	22.9	36.5	29.2	11.2	0.2	36.5	0.0	0.0	0.2	32.2	40.9
Cyprus	100	9.3	54.6	16.0	15.4	4.7	54.6	0.0	1.0	3.7	52.5	56.7
Czech Republic	274	29.9	29.3	30.3	9.7	0.7	29.3	0.0	0.0	0.7	19.6	43.6
Denmark	178	24.2	53.1	19.4	1.7	1.5	53.1	0.5	0.5	0.6	40.3	55.8
France	280	16.0	46.1	26.5	8.4	3.0	46.1	0.0	0.1	2.8	41.0	51.2
Germany	186	23.3	35.3	30.1	10.3	1.0	35.3	0.0	0.0	1.0	15.2	42.5
Greece	113	44.3	40.7	10.4	3.2	1.4	40.7	0.0	0.6	0.8	24.9	48.9
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	187	12.8	40.6	31.6	10.7	4.3	40.6	0.0	0.0	4.3	33.3	43.6
Italy	40	40.6	24.2	19.6	13.8	1.8	24.2	0.0	0.0	1.8	13.2	35.2
Latvia (LSS)	239	29.8	38.3	26.1	4.6	1.2	38.3	0.0	0.0	1.2	35.5	40.9
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	342	19.6	45.0	31.6	3.2	0.6	45.0	0.0	0.0	0.6	40.9	46.5
Russian Federation	331	36.0	46.6	9.3	6.4	1.7	46.6	0.0	0.0	1.7	40.6	50.9
Slovenia	161	14.0	63.7	15.3	6.9	0.2	63.7	0.0	0.0	0.2	59.1	63.8
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	238	25.5	53.9	16.8	3.8	0.0	53.9	0.0	0.0	0.0	49.8	56.1
Switzerland	351	18.8	37.3	35.3	5.7	2.9	37.3	0.0	0.0	2.9	29.2	48.2
United States	903	41.0	14.9	32.0	10.9	1.2	14.9	0.0	0.0	1.2	9.3	19.9
INTERNATIONAL AVG	.	25.1	39.9	25.7	7.7	1.5	39.9	0.1	0.2	1.3	32.3	45.4

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: H08 KEY: D  
 PATH OF ELECTRONS IN ELECTRIC FIELD (Electricity & Magnetism)  
 Difficulty: 711

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	175	10.9	38.2	12.3	24.6	14.0	0.0	24.6	0.0	0.0	0.0	18.1	28.8
Austria	202	15.7	33.7	31.2	11.2	3.2	5.0	11.2	2.0	0.6	2.4	9.2	14.1
Canada	648	12.9	42.4	19.9	16.6	7.1	1.1	16.6	0.0	0.0	1.1	12.8	20.5
Cyprus	100	10.7	23.7	31.6	23.8	6.3	3.8	23.8	0.0	1.0	2.9	19.3	27.0
Czech Republic	274	11.1	43.9	24.8	11.6	5.6	2.9	11.6	2.2	0.0	0.7	8.5	16.2
Denmark	178	3.7	38.8	7.5	40.9	4.9	4.2	40.9	2.4	0.5	1.3	36.1	42.3
France	280	4.4	29.5	6.7	53.6	5.7	0.1	53.6	0.0	0.1	0.0	52.1	54.7
Germany	186	5.2	48.0	7.2	35.4	2.9	1.3	35.4	0.9	0.0	0.4	32.2	36.2
Greece	113	5.7	17.2	15.7	48.6	8.4	4.5	48.6	0.0	0.6	3.8	38.5	53.8
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	187	9.6	18.7	9.6	55.1	7.0	0.0	55.1	0.0	0.0	0.0	60.6	54.4
Italy	40	4.7	42.3	34.2	14.6	0.0	4.3	14.6	0.0	0.0	4.3	22.0	7.3
Latvia (LSS)	239	11.1	34.5	17.7	23.5	7.2	6.0	23.5	0.0	0.0	6.0	20.0	26.7
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	342	7.3	21.9	9.5	50.0	11.2	0.2	50.0	0.0	0.0	0.2	43.1	52.5
Russian Federation	331	13.6	29.3	14.1	33.3	6.4	3.4	33.3	0.3	0.0	3.1	26.1	38.4
Slovenia	161	11.1	34.5	8.8	40.3	3.2	2.0	40.3	0.0	0.0	2.0	58.5	36.0
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	238	3.1	30.7	5.7	51.8	8.4	0.3	51.8	0.0	0.0	0.3	49.9	52.9
Switzerland	351	9.6	37.2	11.1	29.8	7.5	4.8	29.8	2.7	0.0	2.1	25.1	36.0
United States	903	12.3	41.5	27.7	11.6	6.0	0.8	11.6	0.0	0.0	0.8	9.7	13.3
INTERNATIONAL AVG	.	9.0	33.7	16.4	32.0	6.4	2.5	32.0	0.6	0.2	1.7	30.1	34.0

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: H09 KEY: B  
 REFRACTION AND VELOCITY OF BLUE LIGHT (Wave Phenomena)  
 Difficulty: 747

COUNTRY	N	A	B	C	D	E	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	175	6.8	50.6	17.8	9.2	15.7	0.0	50.6	0.0	0.0	0.0	30.2	63.6
Austria	202	6.9	13.6	10.6	10.2	57.0	1.7	13.6	0.5	0.6	0.7	7.6	22.1
Canada	648	12.0	28.8	15.9	11.6	31.2	0.5	28.8	0.1	0.0	0.4	23.1	34.5
Cyprus	100	6.9	42.2	8.2	9.9	30.8	2.0	42.2	0.0	1.0	1.0	26.6	52.5
Czech Republic	274	6.9	19.4	15.8	6.4	50.9	0.7	19.4	0.7	0.0	0.0	7.8	36.4
Denmark	178	3.0	27.4	21.4	6.8	36.0	5.4	27.4	1.1	0.5	3.7	17.2	29.7
France	280	3.5	14.6	16.6	9.3	55.0	1.0	14.6	0.2	0.1	0.7	14.0	15.6
Germany	186	9.7	20.1	11.2	14.3	42.0	2.7	20.1	0.0	0.0	2.7	9.2	24.5
Greece	113	2.2	5.8	8.6	15.4	65.2	2.9	5.8	0.0	0.6	2.3	3.8	6.8
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	187	5.9	32.6	14.4	15.5	29.4	2.1	32.6	0.0	0.0	2.1	27.3	34.2
Italy	40	3.8	15.5	8.2	12.6	60.0	0.0	15.5	0.0	0.0	0.0	9.6	21.3
Latvia (LSS)	239	5.5	35.4	19.8	6.8	28.1	4.4	35.4	0.0	0.0	4.4	28.5	41.9
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	342	5.3	21.7	8.4	43.2	21.4	0.0	21.7	0.0	0.0	0.0	7.6	27.0
Russian Federation	331	6.2	30.4	12.3	7.1	42.7	1.3	30.4	0.0	0.0	1.3	21.3	37.0
Slovenia	161	7.4	31.8	20.1	17.6	22.9	0.3	31.8	0.0	0.0	0.3	18.0	33.5
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	238	2.8	40.2	18.6	9.9	28.6	0.0	40.2	0.0	0.0	0.0	28.4	46.7
Switzerland	350	5.6	15.9	20.0	12.5	43.8	2.3	15.9	1.0	0.0	1.2	8.8	24.7
United States	903	11.2	18.9	19.1	10.2	40.5	0.1	18.9	0.0	0.0	0.1	14.5	22.7
INTERNATIONAL AVG	.	6.2	25.8	14.8	12.7	39.0	1.5	25.8	0.2	0.2	1.2	16.9	31.9

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent



Item: H10 KEY: C  
 VECTOR SUM OF ELECTRIC FORCES (Electricity & Magnetism)  
 Difficulty: 709

COUNTRY	N	A	B	C	D	OTHER INCOR RECT	DIFF	INVALID	NOT REACHED	OMIT	1.GIRL % Right	2.BOY % Right
Australia	175	9.2	48.5	33.9	8.3	0.0	33.9	0.0	0.0	0.0	36.3	32.4
Austria	202	23.5	43.0	16.8	9.5	7.3	16.8	0.5	1.2	5.6	14.2	20.6
Canada	648	15.2	45.4	29.9	8.6	0.9	29.9	0.0	0.0	0.9	24.9	35.0
Cyprus	100	12.7	48.1	26.7	8.3	4.2	26.7	0.0	1.0	3.2	15.1	34.3
Czech Republic	274	43.7	34.1	16.6	4.1	1.6	16.6	0.3	0.0	1.2	8.3	28.8
Denmark	178	15.7	31.0	45.3	4.9	3.3	45.3	0.0	0.5	2.7	26.2	51.4
France	280	18.5	43.7	26.2	7.4	4.2	26.2	0.0	0.1	4.1	22.3	30.3
Germany	186	17.5	36.0	32.7	4.1	9.7	32.7	1.5	0.0	8.1	18.5	38.5
Greece	113	19.2	32.1	36.7	10.6	1.4	36.7	0.0	0.6	0.8	36.1	36.9
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	187	14.4	33.7	44.4	6.4	1.1	44.4	0.0	0.0	1.1	36.4	45.0
Italy	40	40.5	41.6	13.3	0.4	4.3	13.3	0.0	0.0	4.3	9.4	17.2
Latvia (LSS)	239	24.0	27.9	34.6	7.1	6.5	34.6	0.0	0.4	6.2	23.5	44.9
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	342	15.7	27.4	52.2	4.5	0.2	52.2	0.0	0.0	0.2	42.0	56.0
Russian Federation	331	14.8	41.7	33.5	6.6	3.3	33.5	0.0	0.0	3.3	23.8	40.6
Slovenia	161	26.7	30.2	31.2	10.9	1.1	31.2	0.0	0.0	1.1	30.6	31.4
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	238	8.6	24.0	51.4	15.4	0.6	51.4	0.0	0.0	0.6	42.5	56.4
Switzerland	351	24.9	31.3	29.9	9.2	4.7	29.9	0.0	0.0	4.7	23.3	38.4
United States	903	21.3	48.7	14.7	13.7	1.6	14.7	0.0	0.0	1.6	10.9	18.2
INTERNATIONAL AVG	.	20.3	37.1	31.7	7.8	3.1	31.7	0.1	0.2	2.8	24.7	36.5

DIFF = Item Difficulty  
 Because of missing gender information, some totals may appear inconsistent

Item: H12  
 PARTICLE MOVEMENT IN A TRANSVERSE WAVE (Wave Phenomena)  
 Difficulty: 752

COUNTRY	N	10	70	71	72	79	90	99	V1	NOT	OMIT	1.GIRL	2.BOY
										REACH		% Right	% Right
Australia	175	46.4	18.0	4.6	15.5	10.2	1.4	4.0	46.4	0.0	4.0	42.1	49.1
Austria	202	4.9	9.4	3.7	51.4	20.2	2.5	8.0	4.9	1.2	6.7	2.0	8.9
Canada	648	23.7	26.0	4.0	33.8	11.0	0.0	1.4	23.7	0.0	1.4	22.3	25.1
Cyprus	100	45.4	28.8	3.1	13.4	7.5	0.9	1.0	45.4	1.0	0.0	32.3	54.3
Czech Republic	274	12.4	15.0	5.0	54.5	12.4	0.0	0.8	12.4	0.0	0.8	5.1	23.2
Denmark	178	37.6	2.7	4.8	39.8	6.2	0.0	8.8	37.6	0.5	8.3	12.2	45.0
France	280	16.2	6.7	6.1	51.6	11.1	1.0	7.3	16.2	0.1	7.1	10.2	21.8
Germany	185	31.3	19.0	1.9	35.2	10.2	0.5	1.8	31.3	0.0	1.8	11.2	38.0
Greece	113	12.8	30.9	1.9	34.4	5.6	1.4	13.1	12.8	0.6	12.5	15.0	11.7
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	187	14.4	15.0	3.2	52.9	10.7	0.0	3.7	14.4	0.5	3.2	9.1	15.4
Italy	40	5.6	16.4	5.7	49.1	16.4	0.0	6.8	5.6	0.0	6.8	0.0	11.2
Latvia (LSS)	236	8.6	19.6	3.3	48.4	9.1	1.7	9.3	8.6	0.8	8.5	3.3	13.7
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	342	40.4	19.7	1.8	27.3	9.3	0.2	1.3	40.4	0.0	1.3	32.0	43.5
Russian Federation	329	22.2	22.2	4.3	37.2	8.8	0.3	4.9	22.2	0.0	4.9	9.2	31.7
Slovenia	161	31.1	22.1	2.3	30.5	10.6	0.0	3.4	31.1	0.0	3.4	7.4	35.4
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	238	64.5	13.8	0.7	13.1	7.8	0.0	0.2	64.5	0.0	0.2	51.7	71.6
Switzerland	351	13.6	16.8	6.3	42.4	14.5	2.0	4.4	13.6	0.0	4.4	7.8	20.9
United States	903	11.5	13.0	10.4	45.4	17.5	0.1	2.2	11.5	0.0	2.2	6.2	16.1
INTERNATIONAL AVG	.	24.6	17.5	4.1	37.5	11.0	0.7	4.6	24.6	0.3	4.3	15.5	29.8

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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

Item: H13  
 INTERPRETATION OF A FORCE VERSUS DISTANCE GRAPH (Mechanics)  
 Difficulty: 690

COUNTRY	N	10	11	19	70	71	72	79	90	99	V1	NOT	1.GIRL	2.BOY	
												REACH ED			OMIT % Right
Australia	175	0.9	27.6	2.6	0.6	0.0	17.5	45.0	0.0	5.8	31.1	0.0	5.8	17.3	39.9
Austria	202	0.0	12.4	6.0	0.9	4.8	18.4	29.1	8.1	20.3	18.4	1.2	19.1	8.8	31.6
Canada	648	0.0	25.0	2.3	0.1	1.9	16.1	48.4	2.2	4.0	27.3	0.0	4.0	17.3	37.3
Cyprus	100	4.0	33.9	8.2	0.0	3.1	5.3	24.7	3.9	16.9	46.1	1.0	15.9	36.6	52.6
Czech Republic	274	0.8	13.3	3.2	1.0	4.0	14.9	41.1	4.8	16.8	17.3	0.0	16.8	9.0	29.6
Denmark	178	3.5	44.5	2.8	1.6	1.9	12.6	19.0	0.0	14.2	50.7	5.5	8.7	38.3	53.6
France	280	1.1	22.3	4.3	1.6	0.3	20.3	27.3	4.0	19.0	27.6	0.1	18.8	24.6	30.2
Germany	186	13.2	30.8	10.7	0.7	2.2	9.1	15.7	9.4	8.3	54.6	0.0	8.3	30.5	63.6
Greece	113	5.7	15.3	6.9	0.0	0.0	5.3	24.6	2.5	39.7	28.0	0.6	39.0	15.7	34.4
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	187	0.0	56.7	0.0	0.5	0.5	20.9	10.7	0.5	10.2	56.7	1.1	9.1	51.5	57.7
Italy	40	0.0	10.6	3.8	0.0	4.0	17.3	13.4	7.0	43.9	14.3	0.0	43.9	12.9	15.7
Latvia (LSS)	236	0.0	17.1	0.8	0.4	0.0	6.8	34.0	0.0	41.0	17.9	4.0	37.0	17.4	18.4
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	342	0.7	56.4	0.0	0.9	0.3	16.7	16.9	2.4	5.8	57.1	0.0	5.8	40.7	63.2
Russian Federation	330	1.2	35.0	0.7	0.1	0.0	12.6	20.1	4.0	26.3	36.9	0.8	25.5	27.4	43.8
Slovenia	161	2.7	52.0	4.3	1.6	0.0	6.6	20.2	0.0	12.5	59.0	0.0	12.5	33.5	63.7
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	238	0.0	53.5	0.5	0.0	2.8	16.1	21.7	0.0	5.5	54.0	0.0	5.5	28.4	68.2
Switzerland	351	1.6	23.7	6.1	0.9	2.3	18.0	35.0	2.6	9.9	31.3	0.5	9.3	20.5	45.3
United States	903	0.2	6.6	0.2	0.1	6.2	19.0	58.1	1.9	7.7	6.9	0.2	7.5	3.5	10.0
INTERNATIONAL AVG	.	2.0	29.8	3.5	0.6	1.9	14.1	28.1	3.0	17.1	35.3	0.8	16.3	24.1	42.2

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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

Item: H14  
 EFFECT OF DENSITY ON THE FREEZING OF WATER (Heat)  
 Difficulty: 804

COUNTRY	N	20	29	10	11	19	70	71	72	73	76	79	90	99	V1	V2	NOT	OMIT	1.GIRL	2.BOY	
																	REACH		% Right	% Right	
																	ED				
Australia	175	0.0	2.2	0.0	46.9	1.6	0.7	3.9	0.0	11.3	1.4	31.1	0.0	1.0	50.7	2.2	0.6	0.4	3.2	1.6	
Austria	202	13.5	3.0	4.9	21.9	4.5	9.1	8.8	0.4	0.0	6.3	22.0	1.1	4.5	47.8	16.5	2.5	2.1	8.7	27.4	
Canada	648	6.6	1.5	0.8	22.4	16.4	0.6	3.3	2.7	11.6	1.9	30.2	0.2	1.9	47.7	8.1	0.2	1.7	7.7	8.6	
Cyprus	100	9.2	3.8	4.6	1.3	34.9	13.6	9.4	1.1	10.1	0.0	8.1	0.0	3.7	53.9	13.0	1.9	1.8	15.7	11.6	
Czech Republic	274	7.9	0.3	5.9	27.5	11.9	9.8	8.0	0.0	3.4	4.3	20.8	0.0	0.3	53.5	8.2	0.0	0.3	3.8	14.7	
Denmark	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
France	280	0.5	16.0	0.0	14.4	23.8	3.9	5.0	0.2	12.0	2.4	15.8	0.1	5.7	54.8	16.6	0.1	5.6	19.8	14.2	
Germany	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Greece	113	1.4	1.3	2.7	7.3	13.6	13.6	5.9	1.5	6.5	4.5	20.4	3.4	17.6	26.5	2.7	3.2	14.4	0.0	4.1	
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	187	1.1	0.5	0.0	50.8	1.6	11.2	4.8	0.0	11.2	0.5	12.3	1.1	4.8	54.0	1.6	1.1	3.7	6.1	0.7	
Italy	40	16.6	0.0	9.3	8.3	14.0	11.1	2.4	0.0	1.9	3.8	6.9	3.5	22.2	48.3	16.6	7.8	14.4	21.4	11.8	
Latvia (LSS)	236	7.5	2.3	0.4	16.8	16.1	14.9	8.8	0.5	4.8	3.4	13.3	0.5	10.9	43.1	9.7	5.9	5.0	7.5	11.9	
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	342	26.5	0.0	10.8	20.6	4.1	3.0	5.6	3.1	5.6	0.6	17.1	0.0	2.9	62.0	26.5	0.6	2.2	20.2	28.8	
Russian Federation	330	5.2	0.0	0.9	12.2	4.9	14.1	4.6	0.6	7.7	0.3	36.6	1.4	11.6	23.2	5.2	2.4	9.2	3.7	6.3	
Slovenia	161	16.5	0.0	0.0	3.9	9.1	9.5	9.4	2.9	0.6	6.5	37.5	1.4	2.6	29.5	16.5	1.5	1.1	5.1	18.5	
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	238	32.2	3.8	11.0	16.3	7.1	1.6	4.3	0.9	4.1	0.4	17.3	0.0	1.1	70.3	36.0	0.0	1.1	29.4	39.6	
Switzerland	351	22.8	1.0	7.7	23.6	5.6	2.5	9.9	0.8	9.3	0.4	14.9	0.8	0.7	60.6	23.8	0.6	0.1	18.4	31.1	
United States	903	1.4	0.7	0.8	36.2	2.5	0.7	7.3	0.3	24.6	3.6	20.8	0.1	1.1	41.6	2.0	0.3	0.8	1.3	2.6	
INTERNATIONAL AVG	.	10.6	2.3	3.7	20.7	10.7	7.5	6.3	0.9	7.8	2.5	20.3	0.8	5.8	48.0	12.8	1.8	4.0	10.7	14.6	

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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

Item: H15  
 DE BROGLIE WAVELENGTH OF A MOBILE ELECTRON (Modern Physics)  
 Difficulty: 759

COUNTRY	N	10	11	12	19	70	71	79	90	99	V1	NOT	1.GIRL	2.BOY	
												REACH ED			OMIT
Australia	175	30.7	0.0	0.0	0.2	7.9	5.5	36.0	0.4	19.3	30.8	0.6	18.7	24.9	34.6
Austria	202	9.1	0.0	0.0	0.6	3.1	1.4	13.0	28.5	44.4	9.7	3.6	40.8	5.0	16.1
Canada	648	33.2	0.1	0.0	0.0	9.2	10.7	21.5	8.0	17.4	33.3	0.2	17.2	24.0	42.2
Cyprus	100	4.0	1.2	0.0	3.4	4.7	7.5	26.7	6.6	45.9	8.6	2.9	43.0	8.5	8.8
Czech Republic	274	23.8	0.0	0.0	0.3	24.7	21.7	8.6	8.4	12.3	24.1	0.0	12.3	17.7	33.6
Denmark	178	23.5	0.0	0.0	2.1	2.1	4.2	6.1	0.8	61.2	25.6	6.7	54.4	33.0	23.0
France	280	13.6	0.0	0.0	0.0	1.7	9.1	10.6	2.5	62.6	13.6	1.2	61.4	13.5	14.0
Germany	186	34.1	0.6	2.0	0.0	6.9	2.5	5.4	20.7	27.8	36.7	0.5	27.4	44.0	34.2
Greece	113	1.0	0.0	0.0	0.9	2.8	4.1	6.1	4.2	80.9	1.9	4.6	76.3	2.9	1.3
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	187	9.6	0.0	0.0	0.0	4.8	6.4	6.4	0.0	72.7	9.6	1.1	71.7	3.0	11.4
Italy	40	3.8	0.0	0.0	0.0	0.2	2.4	5.8	10.5	77.3	3.8	16.7	60.6	0.7	6.8
Latvia (LSS)	236	13.8	0.0	0.0	0.0	10.9	2.7	7.2	2.0	63.3	13.8	7.8	55.5	14.1	13.5
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	342	70.6	0.2	1.8	0.4	6.7	3.0	7.0	1.2	9.1	73.0	0.6	8.5	69.7	74.2
Russian Federation	330	36.4	0.6	0.0	0.0	10.3	3.7	8.1	1.4	39.5	37.0	3.1	36.4	39.1	35.4
Slovenia	161	15.2	0.0	0.0	3.6	0.0	2.0	15.0	15.9	48.3	18.8	1.5	46.7	18.0	16.5
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	238	54.8	0.0	0.3	0.4	4.9	0.0	12.0	1.8	25.8	55.4	0.0	25.8	61.9	51.8
Switzerland	351	8.6	0.2	1.1	0.0	4.4	3.7	11.2	36.5	34.3	9.9	0.6	33.7	8.0	12.3
United States	903	6.6	0.0	0.0	0.0	3.9	7.8	28.3	11.7	41.6	6.7	0.5	41.1	6.8	6.5
INTERNATIONAL AVG	.	21.8	0.2	0.3	0.7	6.1	5.5	13.1	9.0	43.5	22.9	2.9	40.6	21.9	24.2

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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

Item: H16  
 SPEED OF AN ELECTRON TRAVELING THROUGH PERPENDICULAR ELECTRIC AND MAGNETIC FIELD (Electricity & Magnetism)  
 Difficulty: 718

COUNTRY	N	20	21	10	11	12	13	19	70	79	90	99	V1	V2	NOT	1.GIRL	2.BOY	
															REACH ED			OMIT % Right
Australia	175	30.2	0.9	1.8	3.0	0.9	0.4	1.8	0.8	26.8	1.7	31.6	39.0	31.1	0.6	31.1	33.9	29.3
Austria	202	3.3	0.2	0.0	0.8	0.9	0.0	0.0	0.3	8.6	25.4	60.6	5.1	3.5	14.5	46.1	3.4	3.7
Canada	648	10.5	0.0	0.6	1.0	0.7	0.5	1.2	0.3	29.8	11.4	43.9	14.6	10.6	3.1	40.9	8.6	12.6
Cyprus	100	20.8	0.0	0.0	0.0	1.5	0.0	2.8	0.0	16.6	1.7	56.6	25.2	20.8	12.0	44.5	23.9	19.3
Czech Republic	274	12.5	0.0	0.0	0.3	0.0	0.0	0.8	0.0	16.0	6.8	63.6	13.7	12.5	5.8	57.7	8.0	19.2
Denmark	178	27.6	0.0	0.0	0.4	1.0	2.1	1.6	0.0	16.8	0.9	49.5	32.8	27.6	8.8	40.7	33.7	25.5
France	279	19.4	4.1	4.0	0.4	1.9	0.7	11.2	0.2	18.7	3.9	35.7	41.6	23.4	4.4	31.3	23.1	22.8
Germany	186	19.2	0.4	4.0	0.2	1.6	0.5	3.1	0.0	15.8	19.6	35.5	29.1	19.6	1.9	33.6	11.9	22.7
Greece	113	18.2	0.0	8.0	1.3	0.0	0.0	0.6	1.0	14.3	2.2	54.3	28.1	18.2	19.4	34.9	18.3	18.2
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	187	44.4	0.0	0.5	1.6	1.1	3.7	2.1	0.0	11.8	1.6	33.2	53.5	44.4	6.4	26.7	45.5	45.0
Italy	40	6.7	0.0	6.1	0.0	0.0	0.0	7.8	0.0	3.2	10.5	65.8	20.6	6.7	29.6	36.2	13.4	0.0
Latvia (LSS)	236	11.9	0.0	0.0	0.0	0.4	0.4	0.8	0.0	4.6	1.9	80.1	13.5	11.9	24.0	56.1	14.3	9.6
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	340	56.4	0.2	0.8	1.1	1.4	0.7	1.4	0.5	15.4	3.5	18.6	62.0	56.6	1.9	16.7	60.6	55.2
Russian Federation	330	38.9	0.3	1.4	1.0	0.3	0.9	2.7	0.1	4.1	2.1	48.1	45.6	39.2	10.9	37.2	36.8	41.0
Slovenia	161	16.0	0.0	0.2	1.2	0.7	0.7	0.3	0.0	12.6	2.3	66.0	19.2	16.0	2.6	63.4	5.0	17.8
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	238	35.3	0.2	0.0	0.0	0.0	0.7	1.5	0.0	22.9	4.1	35.3	37.7	35.5	1.2	34.1	32.2	37.3
Switzerland	351	11.2	2.4	0.2	0.0	0.0	0.8	4.7	0.4	17.7	18.5	44.1	19.3	13.5	5.4	38.7	6.8	22.0
United States	903	1.5	0.0	0.0	2.7	0.6	0.2	0.1	0.1	38.7	10.8	45.3	5.1	1.5	3.4	41.9	1.8	1.3
INTERNATIONAL AVG	.	21.3	0.5	1.5	0.8	0.7	0.7	2.5	0.2	16.4	7.1	48.2	28.1	21.8	8.7	39.6	21.2	22.4

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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

Item: H17  
 RESISTANCE OF A SERIES CIRCUIT COMPONENT (Electricity & Magnetism)  
 Difficulty: 745

COUNTRY	N	20	21	29	10	11	12	19	70	71	72	79	90	99	V1	V2	NOT	1.GIRL	2.BOY		
																	REACH			% Right	% Right
																	ED	OMIT			
Australia	175	8.4	6.7	2.0	0.0	0.3	1.9	2.8	46.0	6.1	0.6	16.8	0.0	8.2	22.2	17.1	1.2	7.0	8.6	22.6	
Austria	202	1.9	1.3	2.4	0.0	0.0	0.0	0.9	9.0	2.8	1.1	28.5	14.3	37.8	6.5	5.6	17.0	20.7	0.4	12.7	
Canada	648	4.1	6.2	1.2	0.0	0.1	0.1	0.1	36.2	11.1	0.6	19.2	5.2	16.0	11.8	11.5	4.2	11.8	7.9	15.0	
Cyprus	100	9.8	3.5	2.2	0.0	0.0	0.0	5.4	6.2	7.8	0.0	39.6	0.9	24.4	21.0	15.6	16.1	8.3	15.6	15.8	
Czech Republic	274	2.3	3.1	0.3	0.0	0.9	0.0	2.0	33.0	11.8	1.3	16.7	5.3	23.3	8.6	5.7	14.3	9.0	3.1	9.6	
Denmark	178	10.9	7.9	0.8	0.0	1.6	0.7	1.2	27.5	16.6	0.4	13.2	2.3	17.0	23.0	19.6	10.0	7.0	18.3	21.2	
France	279	3.3	4.3	1.2	0.0	0.0	0.4	0.3	26.8	14.3	0.2	8.1	2.0	39.1	9.6	8.8	5.4	33.6	10.3	7.7	
Germany	186	4.2	11.0	2.1	0.0	0.2	0.7	4.2	14.2	4.4	1.8	27.2	16.2	13.8	22.4	17.4	2.1	11.7	9.1	20.7	
Greece	113	14.1	1.6	3.9	0.0	6.0	2.7	4.7	1.6	0.7	0.0	15.4	4.0	45.4	32.9	19.6	19.9	25.4	16.0	21.4	
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	187	17.6	21.4	0.5	0.5	1.1	0.5	2.7	9.1	5.9	0.5	24.1	2.1	13.9	44.4	39.6	7.0	7.0	30.3	40.9	
Italy	40	0.0	0.0	0.0	6.1	0.0	0.0	1.8	9.5	8.3	0.0	8.0	10.5	55.8	7.9	0.0	32.8	22.9	0.0	0.0	
Latvia (LSS)	236	4.2	5.5	0.8	0.4	0.0	0.0	2.1	18.1	4.5	0.7	13.2	2.8	47.7	13.0	10.5	26.9	20.8	7.4	13.6	
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	342	5.7	10.1	0.2	0.0	0.0	0.0	0.6	50.5	12.2	2.2	8.7	1.1	8.5	16.6	16.0	2.4	6.1	12.2	17.4	
Russian Federation	330	13.7	12.7	0.9	0.0	1.8	2.0	5.8	6.3	6.3	0.0	14.9	2.3	33.4	36.9	27.2	14.9	18.5	20.7	32.0	
Slovenia	161	11.0	24.1	1.6	1.4	0.0	0.0	0.0	5.6	6.3	0.0	26.8	5.4	17.8	38.1	36.7	4.6	13.3	17.4	39.0	
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	238	6.9	32.1	4.9	0.6	0.0	3.1	2.4	15.7	14.5	0.0	13.3	0.0	6.4	50.2	44.0	2.7	3.6	35.9	48.4	
Switzerland	351	3.8	5.9	0.3	0.0	0.1	0.7	6.3	21.5	1.7	1.1	22.5	14.1	22.0	17.0	9.9	7.6	14.4	6.8	14.2	
United States	903	1.3	0.3	0.0	0.0	0.0	0.0	0.0	21.6	2.5	0.5	32.7	7.9	33.2	1.6	1.6	4.2	29.1	0.8	2.3	
INTERNATIONAL AVG	.	6.8	8.8	1.4	0.5	0.7	0.7	2.4	19.9	7.6	0.6	19.4	5.4	25.8	21.3	17.0	10.7	15.0	12.3	19.7	

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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

Item: H18  
 TELEVISION AS PARTICLE ACCELERATOR (Modern Physics)  
 Difficulty: 783

COUNTRY	N	20	29	10	19	70	76	79	90	99	V1	V2	NOT	OMIT	1.GIRL	2.BOY
													REACH		% Right	% Right
													ED			
Australia	175	8.3	3.1	8.9	15.3	1.5	9.1	37.3	0.0	16.5	35.7	11.5	1.2	15.3	4.9	15.7
Austria	202	12.5	1.0	14.7	7.8	1.2	4.7	13.5	12.2	32.3	36.0	13.5	17.5	14.8	5.8	23.3
Canada	648	9.0	0.4	21.1	3.6	18.3	8.3	20.2	1.6	17.5	34.1	9.4	4.7	12.8	3.9	14.9
Cyprus	100	4.0	8.4	0.8	3.4	0.0	14.6	10.1	3.3	55.4	16.6	12.4	18.9	36.5	11.1	13.4
Czech Republic	274	11.1	3.2	14.6	3.1	2.0	7.4	12.8	2.7	42.9	32.1	14.4	15.0	28.0	7.6	24.2
Denmark	178	15.6	0.6	23.9	7.1	2.1	7.9	16.1	1.0	25.7	47.2	16.2	11.0	14.7	1.9	19.5
France	279	5.2	3.3	24.2	13.7	2.4	8.2	11.4	1.0	30.6	46.5	8.5	13.0	17.5	4.8	12.0
Germany	186	40.7	9.1	21.3	5.3	1.5	0.9	3.1	2.7	15.4	76.3	49.7	2.4	13.1	32.7	55.9
Greece	113	8.6	5.9	16.2	8.4	1.5	2.3	2.9	8.0	46.3	39.1	14.5	23.8	22.5	18.1	12.6
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	187	8.6	0.0	29.9	3.7	12.8	3.2	8.6	0.0	33.2	42.2	8.6	7.0	26.2	6.1	9.4
Italy	40	2.6	1.8	14.3	6.8	0.0	2.6	5.9	10.5	55.5	25.5	4.4	35.2	20.3	8.5	0.3
Latvia (LSS)	236	9.7	1.9	3.2	17.3	0.4	0.8	21.0	0.0	45.7	32.1	11.6	27.7	18.0	9.2	13.9
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	342	14.4	0.0	28.8	1.2	1.6	7.7	26.9	0.9	18.6	44.3	14.4	2.8	15.8	8.9	16.4
Russian Federation	330	16.5	1.2	27.0	2.1	0.4	9.2	9.6	0.7	33.3	46.7	17.7	18.3	15.0	12.1	21.8
Slovenia	161	20.3	0.0	24.4	2.0	2.7	0.0	13.5	4.5	32.6	46.7	20.3	4.6	28.1	5.6	21.7
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	238	13.1	0.0	37.4	2.8	3.5	15.6	7.9	0.4	19.3	53.3	13.1	3.4	15.9	6.0	17.1
Switzerland	351	8.3	1.9	21.4	11.1	4.3	6.3	18.6	5.6	22.5	42.8	10.3	7.7	14.8	5.4	16.6
United States	903	0.6	0.3	12.1	0.8	7.4	6.0	48.3	2.6	22.0	13.7	0.9	5.1	16.9	0.1	1.5
INTERNATIONAL AVG	.	11.6	2.3	19.1	6.4	3.5	6.4	16.0	3.2	31.4	39.5	14.0	12.2	19.2	8.5	17.2

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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



Item: H19A  
 SPEED OF SOUND EXPERIMENT/OUTLINE (Wave Phenomena)  
 Difficulty: 747

COUNTRY	N	20	29	10	11	12	13	19	70	79	90	99	V1	V2	NOT	1.GIRL	2.BOY	
															REACH			OMIT
															ED			
Australia	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Austria	202	5.5	0.0	0.0	0.0	8.6	10.4	1.0	10.4	7.0	14.5	42.8	25.4	5.5	23.1	19.6	2.0	10.2
Canada	648	15.2	0.9	3.8	1.4	11.5	12.7	1.9	13.9	18.6	2.4	17.7	47.4	16.1	8.7	9.0	9.1	22.7
Cyprus	100	17.0	1.1	0.0	5.1	7.0	6.5	1.7	1.7	7.2	2.6	50.1	38.4	18.1	32.0	18.1	18.7	18.0
Czech Republic	274	7.5	0.0	1.0	0.7	2.4	2.9	8.1	12.4	16.0	4.6	44.5	22.6	7.5	28.9	15.7	1.7	16.1
Denmark	178	32.9	0.0	0.7	1.2	14.5	9.1	3.3	2.3	5.2	0.6	30.2	61.7	32.9	15.6	14.7	25.0	33.8
France	279	7.5	0.2	1.8	1.1	4.6	2.8	9.4	7.9	8.1	0.8	56.0	27.3	7.7	20.2	35.8	5.2	10.1
Germany	186	31.5	1.7	4.3	1.8	3.2	4.2	4.5	8.5	4.8	10.8	24.8	51.2	33.2	6.7	18.1	7.5	43.3
Greece	113	8.1	0.0	3.8	1.6	1.2	1.2	2.3	5.4	6.9	4.8	64.6	18.2	8.1	38.0	26.6	4.6	9.8
Hungary	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Israel	187	19.3	1.1	0.5	1.1	6.4	6.4	0.5	5.3	7.5	2.1	49.7	35.3	20.3	26.2	23.5	15.2	21.5
Italy	40	4.4	0.0	2.4	3.8	3.5	4.0	3.2	8.0	3.8	7.0	59.9	21.3	4.4	44.7	15.2	0.0	8.8
Latvia (LSS)	236	9.5	0.5	1.5	0.0	0.7	7.3	12.3	6.6	5.1	0.0	56.5	31.9	10.0	36.6	19.9	6.0	13.8
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	342	37.6	2.0	3.1	1.4	6.8	3.4	1.0	7.0	9.1	1.8	26.8	55.3	39.5	8.0	18.7	28.2	43.8
Russian Federation	330	24.2	0.5	4.4	0.8	4.5	5.6	1.3	3.4	8.0	0.9	46.1	41.5	24.8	25.4	20.7	14.0	32.6
Slovenia	161	26.3	0.1	4.2	0.0	12.5	0.0	7.8	0.7	3.8	1.1	43.6	50.9	26.5	17.2	26.4	6.4	30.0
South Africa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	238	35.8	0.5	1.0	0.2	6.5	10.5	2.0	8.6	12.1	0.4	22.4	56.5	36.3	9.9	12.5	21.8	44.3
Switzerland	351	16.2	0.2	4.0	0.7	10.9	6.7	1.9	12.8	12.7	6.4	27.5	40.6	16.4	11.5	16.0	8.2	26.9
United States	903	8.9	0.0	0.2	2.5	10.1	6.4	1.1	17.1	29.2	3.8	20.6	29.2	8.9	8.6	12.1	6.0	11.5
INTERNATIONAL AVG	.	18.1	0.5	2.2	1.4	6.8	5.9	3.7	7.8	9.7	3.8	40.2	38.5	18.6	21.2	19.0	10.6	23.4

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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

Item: H19B  
 SPEED OF SOUND EXPERIMENT/REASON (Wave Phenomena)  
 Difficulty: 623

COUNTRY	N	10	11	19	79	90	99	V1	NOT	OMIT	1.GIRL	2.BOY
									REACH		% Right	% Right
									ED			
Australia	175	10.6	40.8	10.8	26.2	0.0	11.5	62.3	10.9	0.7	65.4	60.3
Austria	202	17.6	5.9	13.2	17.7	8.6	37.1	36.7	31.8	5.2	24.3	54.1
Canada	648	6.2	35.2	6.4	34.1	1.7	16.5	47.7	13.9	2.6	44.8	50.3
Cyprus	100	17.6	20.2	9.3	2.0	1.9	49.0	47.1	41.5	7.5	37.3	53.9
Czech Republic	271	4.7	14.9	19.3	19.0	1.9	40.2	38.9	35.2	5.1	26.2	57.9
Denmark	178	12.6	10.1	28.2	12.9	0.6	35.7	50.9	27.6	8.1	34.9	54.4
France	279	7.5	8.2	9.5	18.0	0.5	56.3	25.2	51.2	5.1	19.9	30.6
Germany	186	22.6	18.2	19.6	19.6	4.7	15.3	60.3	11.6	3.8	36.2	70.1
Greece	113	7.4	7.7	2.5	12.9	3.6	65.8	17.6	58.8	7.0	16.2	18.4
Hungary	.	.	.	.	.	.	.	.	.	.	.	.
Iceland	.	.	.	.	.	.	.	.	.	.	.	.
Israel	187	6.4	26.7	4.8	19.3	1.1	41.7	38.0	40.6	1.1	33.3	39.6
Italy	40	3.8	3.5	15.9	13.4	3.5	59.9	23.2	59.9	0.0	8.6	37.6
Latvia (LSS)	236	12.3	5.6	13.6	10.4	0.4	57.7	31.5	50.9	6.7	20.5	41.9
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	.	.	.	.	.	.	.	.	.	.	.	.
Norway	342	27.3	13.8	20.4	12.7	1.5	24.3	61.5	21.3	3.0	50.6	65.6
Russian Federation	330	23.7	4.9	5.9	19.3	2.4	43.8	34.5	40.0	3.8	23.2	42.8
Slovenia	161	30.6	15.5	11.2	7.0	0.8	34.9	57.3	33.9	1.0	30.2	63.6
South Africa	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	238	18.2	30.2	13.9	12.4	0.0	25.4	62.2	20.1	5.3	54.0	66.8
Switzerland	351	22.6	11.8	12.8	22.8	4.5	25.5	47.2	22.7	2.7	36.7	61.0
United States	903	4.9	27.5	4.7	45.0	1.1	16.8	37.1	14.3	2.5	33.9	40.0
INTERNATIONAL AVG	.	14.2	16.7	12.3	18.0	2.2	36.5	43.3	32.6	3.9	33.1	50.5

V1 = % Scoring 1 or better V2 = % Scoring 2 or better V3 = % 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