COUNTRY ID=Australia SCALE=Algebra

Eighth Grade

			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	77	0.9	78	1.1	76	1.2
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	71	1.3	68	1.8	74	1.8
C05	No	Determine number which continues pattern based on figures.	63	1.2	61	1.8	65	1.6
D10	No	Identify equation which solves word problem: C=(100+6n).	49	1.3	46	1.8	52	1.5
E05	No	Find relationship between numbers in a set of ordered pairs.	71	1.3	68	1.8	74	1.5
F11	No	Solve multi-step problem using linear equations.	55	1.7	55	2.3	55	2.0
G06	No	Find solution to -3X for given value of X.	46	1.8	45	2.4	48	2.2
H10	No	Identify equation expressing xy relationship from table of values.	63	1.7	61	2.2	65	2.1
H12	No	Select symbolic linear equation which fits word problem.	86	1.0	85	1.4	88	1.3
I01	Yes	Identify meaning of symbol in word problem equation.	37	2.1	34	2.9	39	2.9
I04	Yes	Determine next number which occurs in two number sequences.	45	2.1	42	2.8	48	2.7
J18	Yes	Identify missing number in table showing xy relationship.	54	2.2	53	3.0	54	3.0
K04	Yes	Identify expression equivalent to linear inequality.	43	1.8	41	2.8	45	2.8
L11	Yes	Solve multi-step word problem using pattern.	34	2.0	32	2.9	36	2.6
L13	Yes	Identify matching patterns of symbols.	93	1.3	92	1.9	95	1.4
L16	Yes	Simplify and solve linear equation for X.	34	2.0	31	2.6	36	2.8
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	57	2.2	54	3.2	59	2.7
O07	Yes	Solve linear equation for X.	73	1.6	69	2.6	78	2.4
P10	Yes	Identify equivalent algebraic expressions.	65	1.8	64	2.9	65	2.6
P15	Yes	Identify equivalent expression for a cubic relationship.	72	2.0	70	3.0	75	2.6
Q01	Yes	Identify linear expression based on word problem.	45	2.0	43	2.9	47	2.8
Q02	Yes	Subtract fractional expressions of X.	48	2.1	47	2.5	50	2.9
Q07	Yes	Solve P=LW for W given values for P and L.	69	1.7	63	2.9	75	2.5
R09	Yes	Identify equivalent expressions from properties of real numbers.	33	2.0	31	2.6	34	2.7
R11	Yes	Solve algebra word problem: linear equation.	48	1.8	46	2.5	50	2.7
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	80	1.3	78	2.2	83	1.9
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	32	1.8	30	2.7	35	2.3
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	34	1.8	34	2.3	34	2.5
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	34	2.0	33	2.4	34	2.5

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Australia SCALE=Data Rep., Analysis & Prob.

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	74	0.9	70	1.1	77	0.9
B07	No	Interpret line graph to find region of largest increase.	71	1.2	69	1.4	74	1.5
C02	No	Interpret pie graph to determine distribution.	84	1.1	85	1.4	82	1.4
E01	No	Interpret line graph to determine intersection point of two plots.	76	1.1	77	1.6	75	1.4
F08	No	Predict probability of occurrence for independent coin toss.	70	1.2	69	1.8	72	1.4
G01	No	Interpret frequency table to find number above a given level.	53	1.2	53	1.8	53	1.6
H07	No	Interpret barchart histogram to find number above a given level.	81	1.0	80	1.3	81	1.4
H11	No	Predict number of total defective bulbs based on random sample.	63	1.5	65	1.7	61	2.0
I09	Yes	Predict most likely color of random card based on fraction of colors.	74	2.1	71	3.0	76	2.2
J13	Yes	Draw pictograph to represent number given in table.	88	1.4	85	1.9	90	1.8
K07	Yes	Determine the number of blue pens given probability of selection.	58	2.2	62	3.1	55	2.6
L10	Yes	Use data in a chart to identify time/day with highest temperature.	92	1.4	89	2.0	94	1.2
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	84	1.6	84	2.2	84	2.1
N18	Yes	Find probability of drawing an even number from 1 to 9.	72	2.1	71	3.0	74	2.4
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	72	1.7	74	2.5	71	2.4
O05	Yes	Calculate number of cube faces from probability of toss.	53	2.2	53	3.7	53	2.6
P17	Yes	Identify thermometer which shows temperature given in data table.	73	1.6	69	2.2	76	2.2
Q04	Yes	Interpret data in bar graph.	87	1.3	84	1.7	90	1.6
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	59	1.6	59	3.1	60	2.6
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	22	1.3	19	1.8	25	1.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Australia SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	65	1.3	66	1.6	64	1.6
B09	No	Identify shaded figure which shows 2/5 = 4/10.	66	1.1	65	1.4	66	1.6
B10	No	Identify smallest of decimal fractions.	53	1.6	58	2.1	49	2.1
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	54	1.4	56	1.4	52	1.6
C06	No	Determine the worst estimate of: 848 + 677.	82	0.9	81	1.4	83	1.3
D09	No	Identify smallest fraction.	79	1.2	78	1.6	79	1.6
D12	No	Estimate rational number from point on number line.	84	1.0	83	1.3	86	1.3
E03	No	Find fraction of hour between two time points.	69	1.2	71	1.5	68	1.9
E04	No	Solve multi-step word problem: 4-digit whole numbers.	70	1.4	64	2.0	76	1.6
F09	No	Identify decimal fraction between 0.07 and 0.08.	74	1.4	74	1.9	75	1.7
F12	No	Identify fraction of circle which is shaded.	67	1.3	66	1.9	69	1.5
G05	No	Identify fraction represented in word problem.	70	1.5	68	2.2	73	1.6
H08	No	Identify figure showing 2/3 shaded.	84	1.2	80	1.7	88	1.3
H09	No	Identify sum which is closest to 691 + 208.	92	0.8	92	1.2	93	0.9
I02	Yes	Solve multi-step word problem: common fractions.	65	1.9	62	2.3	68	2.5
I05	Yes	Solve subtraction word problem: rational numbers.	72	1.7	67	2.9	77	2.2
I06	Yes	Write a fraction larger than a given number.	78	1.6	79	2.2	77	2.4
I07	Yes	Recognize when estimation is appropriate.	78	1.8	74	2.3	82	2.4
J12	Yes	Divide fractions.	25	1.8	21	2.2	29	2.6
J14	Yes	Divide rational numbers, fractional divisor.	23	1.8	24	2.5	22	2.2
J17	Yes	Use map and scale to find distance between two cities.	69	1.8	70	3.0	68	2.5
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	74	1.7	74	2.5	74	2.2
K02	Yes	Find total volume of mixture using rational number addition.	64	2.1	58	3.0	70	2.5
K06	Yes	Approximate amount increased by 15%.	50	2.2	55	2.7	45	2.6
K09	Yes	Compute sum of three fractions.	35	2.2	32	2.8	37	3.1
L08	Yes	Estimate actual height from diagram of relative heights.	67	1.6	70	2.5	64	2.2
L09	Yes	Identify 504.7 from its expression in words.	85	1.4	83	2.1	86	1.8
L17	Yes	Subtract three fractions.	49	2.5	46	2.9	52	3.2
M04	Yes	Identify the largest fraction.	43	1.9	50	2.5	36	2.7
M08	Yes	Multiply two decimal fractions.	25	2.0	26	3.1	24	2.1
N11	Yes	Identify number rounded to 18200.	92	1.0	91	1.5	93	1.2
N14	Yes	Identify list of equivalent fractions.	69	1.9	71	2.7	67	2.6
N16	Yes	Solve algebra word problem with fractions.	46	1.9	45	2.7	48	2.7
N17	Yes	Solve multi-step word problem: decimal fractions.	42	2.2	44	2.8	40	2.9
N19	Yes	Shade a given fraction of the squares in a grid.	60	2.0	61	2.6	59	2.7
O02	Yes	Calculate percent increase.	28	1.9	34	2.9	23	2.1
O04	Yes	Identify number rounded to the nearest 100th.	44	2.2	45	3.3	42	3.1
O09	Yes	Solve division word problem: common fractions.	65	2.2	67	3.3	63	2.6
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	77	1.7	73	2.5	81	2.6
P13	Yes	Use heart beats/min to find beats per hour.	65	2.1	65	2.8	64	3.0
P14	Yes	Solve subtraction word problem: common fractions.	85	1.2	80	2.0	90	1.7
P16	Yes	Reduce decimal to fraction in lowest terms.	39	2.4	38	3.0	41	2.9
Q06	Yes	Approximate water use/year from use/week.	48	1.9	48	3.1	48	2.5
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	47	2.1	49	2.5	45	3.2
Q09	Yes	Perform multiple operations of common fractions.	39	1.9	37	2.8	41	2.6
R06	Yes	Subtract two decimal numbers.	68	1.8	60	2.4	75	2.3
R07	Yes	Solve division word problem involving decimals.	45	1.9	47	2.4	44	2.7
R12	Yes	Subtract 4-digit whole numbers.	82	1.7	76	2.3	87	1.7
R13	Yes	Determine how much money left after spending 7/9.	34	1.8	34	2.9	34	2.3
U01A	Yes	Estimate the time required to record 5 songs.	51	1.7	50	2.4	52	2.1
U01B	Yes	Explain method of estimation.	42	1.8	39	2.4	45	2.2
V01	Yes	Determine actual weight from rounded value.	81	1.4	79	2.0	82	1.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Australia SCALE=Geometry

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                                                                                       Eighth Grade

                                                                            Overall      Boys       Girls

ITEM    REL   LABEL                                                          %   (se)   %   (se)   %   (se)
-------------------------------------------------------------------------------------------------------------
A05     No    Identify congruent triangles in a rectangle.                  50  1.4    49  1.9    51  1.5
B11     No    Identify cube made by folding 2-dimensional net.              72  1.3    73  1.7    71  1.5
C03     No    Identify properties of congruent trapezoids.                  66  1.5    62  2.1    71  1.9
D07     No    Identify relationship of angles in symmetric polygon.         62  1.5    61  2.1    64  1.9
E02     No    Determine angle in congruent triangles.                       46  1.5    45  2.1    47  2.0
G03     No    Find sum of vertical angles from diagram of intersecting lines. 52 1.7   53  2.2    51  2.1
I08     Yes   Identify point on a line defined by two other points.         51  1.8    53  2.3    50  2.4
J11     Yes   Identify properties of a parallelogram.                       46  2.1    44  3.4    47  2.8
J15     Yes   Identify similar triangles of different size.                 73  1.5    74  2.4    73  2.5
J16     Yes   Identify coordinates for point on a grid.                     64  2.2    63  2.8    65  2.8
K03     Yes   Identify figure from rotation of 3-dimensional object.        73  1.7    77  2.8    70  2.2
K08     Yes   Determine unknown angle in rotated congruent triangles.       34  1.8    37  2.4    32  2.5
L15     Yes   Find fourth quadrilateral angle, given the other three.       45  2.0    44  2.9    46  3.0
M02     Yes   Identify all lines of symmetry for a rectangle.               69  2.0    65  2.7    72  2.6
M05     Yes   Find diagram resulting from rotation of a 2-dimensional figure. 43 2.0   46  2.8    40  2.7
M07     Yes   Find angle based on supplementary pairs.                      75  1.7    74  2.4    75  2.6
N12     Yes   Identify point on number line from distance of other points.  73  1.8    72  2.4    73  2.5
O03     Yes   Identify supplementary angles formed by parallel and intersecting lines. 53 2.2  53  3.1  52  2.8
O08     Yes   Find center point of rotation for symmetry-related figures.   74  1.6    71  2.6    76  2.4
P08     Yes   Know relationship between side and perimeter for square.      60  2.1    59  2.8    61  2.8
P09     Yes   Find length of side for similar triangles.                    34  1.9    37  2.8    32  2.4
Q10     Yes   Perform calculation involving addition/subtraction of angles. 45  2.0    43  2.7    48  2.8
R10     Yes   Determine into how many triangles a trapezoid can be divided. 60  1.8    59  2.6    60  2.7
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REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Australia SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	72	1.1	72	1.5	73	1.2
C01	No	Compare volumes of different stacks of blocks.	69	1.1	73	1.4	66	1.7
D11	No	Identify best unit to measure the mass of an egg.	90	0.6	91	0.8	89	0.9
E06	No	Solve word problem to find length of rectangle from width and perimeter.	50	1.4	49	2.0	51	1.6
F10	No	Determine measurement accuracy of ruler.	65	1.6	67	2.0	62	1.9
G02	No	Read meter scale to determine length of a pipe.	80	1.1	80	1.4	79	1.5
I03	Yes	Find number of 750 mL bottles filled by a large volume.	47	2.0	51	2.5	44	2.7
J10	Yes	Determine area of sheet not covered by rectangular picture.	47	2.1	45	2.6	49	3.0
K05	Yes	Calculate area of a rectangle given its length and perimeter.	42	2.3	42	2.8	42	3.1
L12	Yes	Find longest pace from chart showing number of paces to cross room.	70	1.9	70	2.2	69	2.8
M01	Yes	Read mass shown on scale.	94	0.9	92	1.5	95	1.1
N15	Yes	Identify drawing with angle closest to 30 degrees.	64	2.3	66	3.0	61	2.9
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	80	1.7	76	2.2	83	2.4
P11	Yes	Use ruler to determine approximate length of pencil.	55	1.9	59	2.7	50	2.8
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	36	1.4	35	2.2	36	2.4
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	61	1.9	58	2.7	65	2.3
S02B	Yes	Calculate length of side of square given area.	28	2.3	29	3.1	28	2.4
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	27	1.9	26	2.7	27	2.3
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	31	1.6	30	2.1	32	2.0
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	15	1.2	15	1.6	15	1.4
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	46	1.6	50	2.3	43	2.0

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Australia SCALE=Proportionality

			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	56	1.0	62	1.1	50	1.5
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	65	1.0	65	1.4	66	1.3
D08	No	Solve ratio problem for x: 7/13 = x/52.	80	1.1	79	1.6	80	1.5
F07	No	Solve word problem to find average speed from distance and time.	30	1.3	32	1.9	27	1.7
G04	No	Solve simple proportionality equation.	77	1.3	77	1.8	77	1.5
L14	Yes	Identify missing numbers in table of proportional x and y values.	22	1.7	21	2.2	23	2.3
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	50	2.3	54	3.3	46	3.2
Q05	Yes	Solve word problem involving ratios.	74	1.4	73	2.2	74	2.1
R14	Yes	Solve multi-step word problem involving ratios.	31	1.8	31	2.6	31	2.6
T02A	Yes	Solve algebra word problem involving ratios.	25	1.6	22	2.0	27	2.0
T02B	Yes	Solve multi-step word problem computing fractions.	8	0.9	9	1.2	8	1.1
V03	Yes	Determine ratio of red paint in a mixture.	42	2.0	39	2.5	45	2.3

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Austria SCALE=Algebra

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	82	1.0	84	1.5	80	1.8
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	71	1.4	68	2.0	74	2.5
C05	No	Determine number which continues pattern based on figures.	55	2.2	56	2.5	52	3.2
D10	No	Identify equation which solves word problem: C=(100+6n).	51	2.2	49	2.6	53	2.7
E05	No	Find relationship between numbers in a set of ordered pairs.	60	1.9	60	2.8	60	2.7
F11	No	Solve multi-step problem using linear equations.	46	1.8	47	2.2	46	2.9
G06	No	Find solution to -3X for given value of X.	52	1.9	50	2.7	52	3.5
H10	No	Identify equation expressing xy relationship from table of values.	48	1.8	48	2.7	48	2.3
H12	No	Select symbolic linear equation which fits word problem.	82	1.5	79	2.3	85	2.2
I01	Yes	Identify meaning of symbol in word problem equation.	39	2.8	38	4.3	41	4.6
I04	Yes	Determine next number which occurs in two number sequences.	57	3.1	56	4.8	57	4.8
J18	Yes	Identify missing number in table showing xy relationship.	45	3.2	44	4.2	45	4.8
K04	Yes	Identify expression equivalent to linear inequality.	52	3.4	51	4.3	52	5.1
L11	Yes	Solve multi-step word problem using pattern.	38	3.0	44	4.4	33	4.2
L13	Yes	Identify matching patterns of symbols.	95	1.4	93	2.3	98	1.4
L16	Yes	Simplify and solve linear equation for X.	67	3.4	65	5.1	70	4.5
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	60	2.6	51	4.1	67	4.4
O07	Yes	Solve linear equation for X.	80	2.1	81	3.6	80	3.7
P10	Yes	Identify equivalent algebraic expressions.	73	2.8	74	4.1	73	3.6
P15	Yes	Identify equivalent expression for a cubic relationship.	86	2.1	90	2.6	84	3.9
Q01	Yes	Identify linear expression based on word problem.	51	3.1	42	4.3	59	4.2
Q02	Yes	Subtract fractional expressions of X.	69	3.4	66	4.5	72	4.7
Q07	Yes	Solve P=LW for W given values for P and L.	71	2.9	68	4.5	75	3.9
R09	Yes	Identify equivalent expressions from properties of real numbers.	46	3.0	52	5.0	41	3.9
R11	Yes	Solve algebra word problem: linear equation.	52	3.2	54	5.0	52	4.3
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	91	2.1	93	2.3	90	3.0
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	35	3.4	32	4.6	38	5.1
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	39	2.1	43	2.7	35	3.8
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	39	2.5	42	2.9	37	3.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Austria SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	80	1.2	80	1.4	80	1.8
B07	No	Interpret line graph to find region of largest increase.	75	1.1	71	1.8	78	1.8
C02	No	Interpret pie graph to determine distribution.	85	1.6	86	2.4	86	1.9
E01	No	Interpret line graph to determine intersection point of two plots.	82	1.7	86	1.8	79	2.3
F08	No	Predict probability of occurrence for independent coin toss.	61	1.8	61	2.7	61	2.3
G01	No	Interpret frequency table to find number above a given level.	62	1.8	60	2.2	64	2.7
H07	No	Interpret barchart histogram to find number above a given level.	67	1.5	66	2.6	68	2.7
H11	No	Predict number of total defective bulbs based on random sample.	68	1.7	69	2.3	65	2.6
I09	Yes	Predict most likely color of random card based on fraction of colors.	79	3.1	85	3.3	73	4.8
J13	Yes	Draw pictograph to represent number given in table.	87	2.1	85	3.0	91	2.5
K07	Yes	Determine the number of blue pens given probability of selection.	49	3.4	49	4.6	48	4.6
L10	Yes	Use data in a chart to identify time/day with highest temperature.	91	1.9	92	2.2	89	2.7
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	82	2.3	82	3.5	82	3.3
N18	Yes	Find probability of drawing an even number from 1 to 9.	63	3.5	61	4.6	63	4.4
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	74	2.2	76	3.3	72	4.3
O05	Yes	Calculate number of cube faces from probability of toss.	54	3.3	55	4.2	54	5.2
P17	Yes	Identify thermometer which shows temperature given in data table.	94	1.6	96	1.9	92	2.6
Q04	Yes	Interpret data in bar graph.	85	2.0	80	3.7	89	2.5
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	57	3.7	60	5.5	55	4.4
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	25	1.8	25	2.4	24	3.0

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Austria SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	62	1.5	65	1.9	59	2.2
B09	No	Identify shaded figure which shows 2/5 = 4/10.	52	1.7	53	2.5	52	2.9
B10	No	Identify smallest of decimal fractions.	68	1.6	79	2.0	58	2.3
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	60	1.3	63	2.4	58	2.4
C06	No	Determine the worst estimate of: 848 + 677.	76	1.6	77	2.5	76	2.0
D09	No	Identify smallest fraction.	87	1.4	91	1.7	82	2.1
D12	No	Estimate rational number from point on number line.	78	1.7	80	1.8	76	2.6
E03	No	Find fraction of hour between two time points.	64	1.7	70	2.2	58	2.7
E04	No	Solve multi-step word problem: 4-digit whole numbers.	80	1.6	77	2.2	83	2.1
F09	No	Identify decimal fraction between 0.07 and 0.08.	77	1.5	75	2.4	80	1.9
F12	No	Identify fraction of circle which is shaded.	66	1.9	66	2.4	66	2.5
G05	No	Identify fraction represented in word problem.	52	1.8	50	2.4	54	3.0
H08	No	Identify figure showing 2/3 shaded.	79	1.4	78	2.5	80	2.1
H09	No	Identify sum which is closest to 691 + 208.	90	1.1	91	1.5	88	1.8
I02	Yes	Solve multi-step word problem: common fractions.	69	3.3	78	3.9	60	5.0
I05	Yes	Solve subtraction word problem: rational numbers.	84	2.4	83	3.5	84	3.2
I06	Yes	Write a fraction larger than a given number.	87	1.7	88	2.3	86	2.6
I07	Yes	Recognize when estimation is appropriate.	67	2.9	65	4.3	71	4.5
J12	Yes	Divide fractions.	52	3.2	48	4.4	56	4.1
J14	Yes	Divide rational numbers, fractional divisor.	59	3.3	57	4.9	63	4.4
J17	Yes	Use map and scale to find distance between two cities.	78	3.6	83	3.8	73	5.1
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	78	2.8	75	4.1	80	3.9
K02	Yes	Find total volume of mixture using rational number addition.	79	2.9	79	3.7	79	4.5
K06	Yes	Approximate amount increased by 15%.	61	3.1	62	4.5	60	4.4
K09	Yes	Compute sum of three fractions.	64	3.5	63	4.0	66	5.2
L08	Yes	Estimate actual height from diagram of relative heights.	64	3.0	68	3.3	59	4.1
L09	Yes	Identify 504.7 from its expression in words.	94	1.7	92	2.7	96	1.8
L17	Yes	Subtract three fractions.	60	2.8	59	4.8	61	4.6
M04	Yes	Identify the largest fraction.	43	3.2	53	4.2	32	4.3
M08	Yes	Multiply two decimal fractions.	71	3.3	67	4.5	75	4.0
N11	Yes	Identify number rounded to 18200.	91	1.6	90	3.1	92	2.3
N14	Yes	Identify list of equivalent fractions.	70	2.3	64	3.6	75	3.9
N16	Yes	Solve algebra word problem with fractions.	50	3.2	51	4.2	50	4.4
N17	Yes	Solve multi-step word problem: decimal fractions.	33	2.7	37	4.4	29	4.0
N19	Yes	Shade a given fraction of the squares in a grid.	54	3.4	48	4.5	59	4.8
O02	Yes	Calculate percent increase.	40	2.7	39	4.2	41	4.7
O04	Yes	Identify number rounded to the nearest 100th.	45	3.0	48	4.6	41	4.8
O09	Yes	Solve division word problem: common fractions.	67	2.5	72	3.5	63	3.8
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	78	2.4	80	3.8	78	3.7
P13	Yes	Use heart beats/min to find beats per hour.	74	2.8	79	3.7	71	4.0
P14	Yes	Solve subtraction word problem: common fractions.	89	2.2	89	2.7	89	2.7
P16	Yes	Reduce decimal to fraction in lowest terms.	37	3.0	36	4.0	39	3.9
Q06	Yes	Approximate water use/year from use/week.	43	3.0	46	4.8	40	4.2
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	62	2.9	71	4.0	54	4.3
Q09	Yes	Perform multiple operations of common fractions.	63	3.2	60	5.0	68	4.2
R06	Yes	Subtract two decimal numbers.	83	2.4	81	3.5	85	2.9
R07	Yes	Solve division word problem involving decimals.	61	3.0	62	4.3	61	4.3
R12	Yes	Subtract 4-digit whole numbers.	96	1.2	97	1.4	95	2.2
R13	Yes	Determine how much money left after spending 7/9.	42	3.2	47	4.3	38	4.0
U01A	Yes	Estimate the time required to record 5 songs.	42	2.4	43	3.2	42	3.3
U01B	Yes	Explain method of estimation.	41	2.2	39	2.5	43	3.5
V01	Yes	Determine actual weight from rounded value.	63	2.1	64	2.9	62	3.5

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Austria SCALE=Geometry

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	56	1.5	55	1.6	56	2.2
B11	No	Identify cube made by folding 2-dimensional net.	70	1.8	74	2.0	67	2.7
C03	No	Identify properties of congruent trapezoids.	55	2.0	52	2.5	59	2.7
D07	No	Identify relationship of angles in symmetric polygon.	62	1.9	62	2.5	62	2.7
E02	No	Determine angle in congruent triangles.	41	1.8	47	2.7	34	2.7
G03	No	Find sum of vertical angles from diagram of intersecting lines.	51	2.2	51	2.6	52	3.2
I08	Yes	Identify point on a line defined by two other points.	54	3.3	58	4.0	50	5.3
J11	Yes	Identify properties of a parallelogram.	48	3.5	44	4.0	53	5.0
J15	Yes	Identify similar triangles of different size.	66	3.1	65	4.0	66	4.3
J16	Yes	Identify coordinates for point on a grid.	63	2.8	62	3.4	65	4.1
K03	Yes	Identify figure from rotation of 3-dimensional object.	80	2.8	80	3.5	79	4.7
K08	Yes	Determine unknown angle in rotated congruent triangles.	29	2.9	35	4.1	22	3.7
L15	Yes	Find fourth quadrilateral angle, given the other three.	44	3.3	44	4.6	45	5.6
M02	Yes	Identify all lines of symmetry for a rectangle.	57	3.9	55	4.9	59	5.1
M07	Yes	Find angle based on supplementary pairs.	79	2.5	80	3.9	78	4.0
N12	Yes	Identify point on number line from distance of other points.	70	2.9	66	4.9	74	3.9
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	42	2.7	42	3.6	41	4.4
O08	Yes	Find center point of rotation for symmetry-related figures.	78	2.7	75	4.2	81	4.2
P08	Yes	Know relationship between side and perimeter for square.	69	3.0	72	4.5	68	4.3
P09	Yes	Find length of side for similar triangles.	46	3.0	41	4.0	51	4.2
Q10	Yes	Perform calculation involving addition/subtraction of angles.	47	3.1	46	4.2	47	4.7
R10	Yes	Determine into how many triangles a trapezoid can be divided.	54	3.2	55	4.7	54	4.1

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Austria SCALE=Measurement

			Eighth Grade					
ITEM	REL	LABEL	Overall		Boys		Girls	
			%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	88	0.9	87	1.3	88	1.3
C01	No	Compare volumes of different stacks of blocks.	68	2.0	74	2.4	62	2.4
D11	No	Identify best unit to measure the mass of an egg.	84	1.6	80	2.0	87	2.1
E06	No	Solve word problem to find length of rectangle from width and perimeter.	46	1.7	47	2.4	45	3.0
F10	No	Determine measurement accuracy of ruler.	65	1.8	69	2.5	60	2.4
G02	No	Read meter scale to determine length of a pipe.	86	1.5	85	1.9	85	1.9
I03	Yes	Find number of 750 mL bottles filled by a large volume.	45	3.3	53	3.9	38	4.5
J10	Yes	Determine area of sheet not covered by rectangular picture.	60	2.8	59	3.8	62	4.3
K05	Yes	Calculate area of a rectangle given its length and perimeter.	59	3.6	60	4.5	59	5.3
L12	Yes	Find longest pace from chart showing number of paces to cross room.	86	2.3	86	3.3	84	3.2
M01	Yes	Read mass shown on scale.	90	2.2	90	2.9	91	2.5
N15	Yes	Identify drawing with angle closest to 30 degrees.	74	3.1	72	4.2	76	3.9
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	86	1.8	88	2.4	85	3.5
P11	Yes	Use ruler to determine approximate length of pencil.	73	2.5	75	3.4	71	3.9
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	35	2.2	45	4.1	27	2.7
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	79	2.6	84	2.8	75	4.2
S02B	Yes	Calculate length of side of square given area.	48	3.4	57	4.5	40	4.0
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	39	2.7	46	4.0	33	4.0
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	51	2.8	49	3.7	53	4.4
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	8	1.3	10	1.6	7	1.8
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	52	2.8	55	3.3	49	4.0

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Austria SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	60	1.2	68	1.7	52	1.8
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	77	1.5	76	1.8	78	2.0
D08	No	Solve ratio problem for x: 7/13 = x/52.	74	1.8	74	2.0	74	2.7
F07	No	Solve word problem to find average speed from distance and time.	36	2.0	39	2.6	33	2.7
G04	No	Solve simple proportionality equation.	72	1.3	71	2.5	73	2.2
L14	Yes	Identify missing numbers in table of proportional x and y values.	18	2.1	20	3.2	16	3.0
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	46	2.6	47	4.6	44	4.5
Q05	Yes	Solve word problem involving ratios.	73	2.7	78	3.7	70	3.8
R14	Yes	Solve multi-step word problem involving ratios.	67	3.0	68	4.4	67	3.9
T02A	Yes	Solve algebra word problem involving ratios.	31	2.4	30	3.0	31	3.3
T02B	Yes	Solve multi-step word problem computing fractions.	11	1.5	11	1.8	13	2.4
V03	Yes	Determine ratio of red paint in a mixture.	21	1.9	22	2.6	21	3.0

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Belgium (Fl) SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	81	1.0	81	2.0	80	1.3
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	78	2.8	75	4.0	81	4.0
C05	No	Determine number which continues pattern based on figures.	67	2.1	63	3.2	71	2.7
D10	No	Identify equation which solves word problem: C=(100+6n).	63	2.1	56	2.8	69	2.5
E05	No	Find relationship between numbers in a set of ordered pairs.	70	2.2	66	3.5	74	2.7
F11	No	Solve multi-step problem using linear equations.	67	2.9	65	4.5	69	4.4
G06	No	Find solution to -3X for given value of X.	65	2.6	62	3.4	68	3.3
H10	No	Identify equation expressing xy relationship from table of values.	54	2.4	53	3.6	54	3.1
H12	No	Select symbolic linear equation which fits word problem.	87	2.0	84	3.7	90	1.6
I01	Yes	Identify meaning of symbol in word problem equation.	44	2.5	44	3.1	44	4.0
I04	Yes	Determine next number which occurs in two number sequences.	56	3.3	49	4.7	63	5.3
J18	Yes	Identify missing number in table showing xy relationship.	42	2.8	42	4.0	42	4.0
K04	Yes	Identify expression equivalent to linear inequality.	57	2.5	52	4.0	62	3.4
L11	Yes	Solve multi-step word problem using pattern.	40	3.7	40	4.4	40	5.2
L13	Yes	Identify matching patterns of symbols.	94	2.2	91	4.2	97	1.3
L16	Yes	Simplify and solve linear equation for X.	47	3.5	43	4.8	51	6.1
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	60	4.4	57	5.0	63	6.0
O07	Yes	Solve linear equation for X.	80	2.8	72	5.1	88	2.1
P10	Yes	Identify equivalent algebraic expressions.	69	4.2	72	5.7	65	6.5
P15	Yes	Identify equivalent expression for a cubic relationship.	68	3.5	67	6.3	69	3.9
Q01	Yes	Identify linear expression based on word problem.	53	3.8	44	4.4	62	5.6
Q02	Yes	Subtract fractional expressions of X.	61	3.2	61	4.5	61	4.3
Q07	Yes	Solve P=LW for W given values for P and L.	77	2.7	78	5.2	76	3.2
R09	Yes	Identify equivalent expressions from properties of real numbers.	61	3.0	58	4.1	65	5.1
R11	Yes	Solve algebra word problem: linear equation.	59	2.5	54	4.3	64	3.7
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	83	2.4	84	3.0	82	3.2
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	31	2.9	31	3.8	32	4.6
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	52	3.0	51	3.1	54	5.2
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	56	3.2	54	3.4	57	5.4

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Belgium (Fl) SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	82	1.4	80	2.6	84	1.4
B07	No	Interpret line graph to find region of largest increase.	63	2.1	62	3.1	65	2.3
C02	No	Interpret pie graph to determine distribution.	84	2.9	83	4.0	85	4.0
E01	No	Interpret line graph to determine intersection point of two plots.	71	1.7	68	1.9	73	2.7
F08	No	Predict probability of occurrence for independent coin toss.	71	2.0	68	3.3	74	2.6
G01	No	Interpret frequency table to find number above a given level.	66	2.2	65	3.4	67	2.7
H07	No	Interpret barchart histogram to find number above a given level.	80	1.7	84	2.1	77	2.9
H11	No	Predict number of total defective bulbs based on random sample.	76	1.9	78	3.2	74	2.5
I09	Yes	Predict most likely color of random card based on fraction of colors.	85	3.8	87	3.0	82	6.4
J13	Yes	Draw pictograph to represent number given in table.	86	3.8	82	7.3	89	2.7
K07	Yes	Determine the number of blue pens given probability of selection.	79	2.8	78	4.1	79	3.8
L10	Yes	Use data in a chart to identify time/day with highest temperature.	91	2.5	90	4.3	92	2.6
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	86	1.9	85	2.7	87	3.2
N18	Yes	Find probability of drawing an even number from 1 to 9.	78	3.6	86	2.4	69	6.7
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	82	3.8	80	6.4	84	4.0
O05	Yes	Calculate number of cube faces from probability of toss.	68	2.7	65	4.2	72	3.2
P17	Yes	Identify thermometer which shows temperature given in data table.	97	1.2	95	2.2	98	0.9
Q04	Yes	Interpret data in bar graph.	92	1.7	87	2.6	96	1.8
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	53	3.7	59	4.6	46	5.7
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	23	1.9	21	2.7	25	2.5

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Belgium (Fl) SCALE=Fractions and number sense

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                                                                                         Eighth Grade

                                                                                 Overall      Boys       Girls

                                                                                 %   (se)    %   (se)    %   (se)
        ITEM    REL   LABEL
        ----------------------------------------------------------------------------------------------------------
        A01     No    Determine shaded squares in rectangle = 4/5.              83   2.3    83   2.2    82   3.9
        B09     No    Identify shaded figure which shows 2/5 = 4/10.            74   1.6    71   2.1    78   2.9
        B10     No    Identify smallest of decimal fractions.                   65   2.1    70   3.5    61   2.3
        C04     No    Select correct pair of numbers: # 1 < 2.25 < # 2.         62   2.0    60   3.3    63   3.0
        C06     No    Determine the worst estimate of: 848 + 677.               82   1.4    77   3.0    86   2.1
        D09     No    Identify smallest fraction.                               85   2.2    87   2.9    82   3.2
        D12     No    Estimate rational number from point on number line.       82   1.5    82   2.8    82   1.7
        E03     No    Find fraction of hour between two time points.            71   1.8    72   2.8    71   2.4
        E04     No    Solve multi-step word problem: 4-digit whole numbers.     81   1.3    82   2.6    79   1.6
        F09     No    Identify decimal fraction between 0.07 and 0.08.          80   1.3    82   2.1    79   1.9
        F12     No    Identify fraction of circle which is shaded.              70   2.0    70   3.8    71   1.8
        G05     No    Identify fraction represented in word problem.            74   1.5    74   2.0    73   2.1
        H08     No    Identify figure showing 2/3 shaded.                       92   1.7    91   3.1    93   2.1
        H09     No    Identify sum which is closest to 691 + 208.               93   1.4    92   2.6    93   1.1
        I02     Yes   Solve multi-step word problem: common fractions.          76   3.9    73   4.0    80   6.5
        I05     Yes   Solve subtraction word problem: rational numbers.         80   3.9    78   4.0    81   6.5
        I06     Yes   Write a fraction larger than a given number.              81   3.1    82   4.5    79   3.9
        I07     Yes   Recognize when estimation is appropriate.                 74   2.9    76   3.7    73   4.2
        J12     Yes   Divide fractions.                                         54   4.0    49   6.6    59   5.4
        J14     Yes   Divide rational numbers, fractional divisor.              56   4.3    57   4.6    54   6.2
        J17     Yes   Use map and scale to find distance between two cities.    84   2.6    85   3.5    84   3.6
        K01     Yes   Identify circle with same fraction shaded as rectangular figure. 81 3.7  82   3.8    79   6.0
        K02     Yes   Find total volume of mixture using rational number addition. 80  3.2  77   4.7    83   3.9
        K06     Yes   Approximate amount increased by 15%.                      51   3.1    57   3.4    45   5.0
        K09     Yes   Compute sum of three fractions.                           86   2.6    81   3.4    91   2.9
        L08     Yes   Estimate actual height from diagram of relative heights.  68   2.8    68   5.0    69   2.8
        L09     Yes   Identify 504.7 from its expression in words.              91   2.4    92   2.7    89   3.6
        L17     Yes   Subtract three fractions.                                 78   2.6    74   4.3    83   3.0
        M04     Yes   Identify the largest fraction.                            53   4.3    55   4.5    50   5.6
        M08     Yes   Multiply two decimal fractions.                           50   3.9    53   4.6    47   4.9
        N11     Yes   Identify number  rounded to 18200.                        95   1.5    96   2.1    95   2.1
        N14     Yes   Identify list of equivalent fractions.                    90   3.1    90   4.3    91   4.9
        N16     Yes   Solve algebra word problem with fractions.                51   2.7    57   4.2    45   4.2
        N17     Yes   Solve multi-step word problem: decimal fractions.         49   3.0    47   4.4    52   3.6
        N19     Yes   Shade a given fraction of the squares in a grid.          83   5.1    83   7.2    84   4.6
        O02     Yes   Calculate percent increase.                              33   2.4    38   3.3    29   3.4
        O04     Yes   Identify number rounded to the nearest 100th.             55   2.7    55   4.5    55   3.3
        O09     Yes   Solve division word problem: common fractions.            74   3.5    76   5.1    73   4.6
        P12     Yes   Solve word problem: identify best estimate of 84 x 57.    82   2.3    78   3.6    87   3.0
        P13     Yes   Use heart beats/min to find  beats per hour.              82   2.6    77   4.4    87   2.3
        P14     Yes   Solve subtraction word problem: common fractions.         86   3.4    88   5.6    84   3.5
        P16     Yes   Reduce decimal to fraction in lowest terms.               54   4.0    50   5.1    57   5.6
        Q06     Yes   Approximate water use/year from use/week.                 58   3.5    60   4.7    56   4.6
        Q08     Yes   Identify fractions and decimals ranked smallest to largest. 62 4.4  68   6.1    55   5.6
        Q09     Yes   Perform multiple operations of common fractions.          76   3.2    76   5.0    76   4.9
        R06     Yes   Subtract two decimal numbers.                             82   2.2    72   3.5    91   2.1
        R07     Yes   Solve division word problem involving decimals.           56   3.8    57   4.1    56   5.9
        R12     Yes   Subtract 4-digit whole numbers.                           93   2.9    90   5.3    95   1.9
        R13     Yes   Determine how much money left after spending 7/9.         52   3.4    49   4.7    55   5.0
        U01A    Yes   Estimate the time required to record 5 songs.             48   1.9    50   3.0    46   3.0
        U01B    Yes   Explain method of estimation.                             47   2.2    50   3.4    45   3.0
        V01     Yes   Determine actual weight from rounded value.               65   2.4    65   3.9    65   3.2
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REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Belgium (Fl) SCALE=Geometry

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                                                                              Eighth Grade

                                                             Overall      Boys       Girls

ITEM    REL  LABEL                                            %   (se)    %   (se)    %   (se)
---------------------------------------------------------------------------------------------
A05     No   Identify congruent triangles in a rectangle.     65  1.8    64  2.7    66  2.4
B11     No   Identify cube made by folding 2-dimensional net. 78  1.3    76  2.6    80  1.6
C03     No   Identify properties of congruent trapezoids.     68  2.5    62  4.1    75  2.4
D07     No   Identify relationship of angles in symmetric polygon. 72  2.3    73  3.6    71  2.3
E02     No   Determine angle in congruent triangles.          52  1.9    52  3.1    52  2.9
G03     No   Find sum of vertical angles from diagram of intersecting lines. 59  1.9    58  2.9    60  2.8
I08     Yes  Identify point on a line defined by two other points. 44  3.5    47  4.4    41  5.1
J11     Yes  Identify properties of a parallelogram.          79  2.0    76  3.3    81  2.8
J15     Yes  Identify similar triangles of different size.    65  4.1    65  5.7    64  5.7
J16     Yes  Identify coordinates for point on a grid.        45  2.3    39  3.5    50  3.7
K03     Yes  Identify figure from rotation of 3-dimensional object. 83  2.1    87  2.1    79  3.2
K08     Yes  Determine unknown angle in rotated congruent triangles. 43  2.8    41  4.8    45  3.2
L15     Yes  Find fourth quadrilateral angle, given the other three. 58  3.1    55  4.3    62  4.8
M02     Yes  Identify all lines of symmetry for a rectangle.  78  3.3    76  4.6    80  4.2
M05     Yes  Find diagram resulting from rotation of a 2-dimensional figure. 54  4.0    56  4.9    52  5.2
M07     Yes  Find angle based on supplementary pairs.         85  2.1    86  2.6    85  3.5
N12     Yes  Identify point on number line from distance of other points. 73  3.0    67  6.1    80  2.8
O03     Yes  Identify supplementary angles formed by parallel and intersecting lines. 59  2.9    54  3.7    64  4.8
O08     Yes  Find center point of rotation for symmetry-related figures. 78  2.5    81  3.5    75  3.4
P08     Yes  Know relationship between side and perimeter for square. 72  3.5    70  6.4    73  3.2
P09     Yes  Find length of side for similar triangles.       52  3.1    55  5.3    49  3.1
Q10     Yes  Perform calculation involving addition/subtraction of angles. 45  3.6    50  4.2    41  5.3
R10     Yes  Determine into how many triangles a trapezoid can be divided. 54  3.6    53  5.3    56  5.3
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REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Belgium (Fl) SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	81	1.5	80	2.1	83	2.4
C01	No	Compare volumes of different stacks of blocks.	65	3.2	67	4.0	63	4.3
D11	No	Identify best unit to measure the mass of an egg.	94	0.9	94	1.7	95	1.0
E06	No	Solve word problem to find length of rectangle from width and perimeter.	56	2.5	56	3.2	56	4.0
F10	No	Determine measurement accuracy of ruler.	79	1.7	81	2.8	78	2.3
G02	No	Read meter scale to determine length of a pipe.	88	1.8	90	1.5	85	3.4
I03	Yes	Find number of 750 mL bottles filled by a large volume.	57	2.9	55	3.8	58	4.8
J10	Yes	Determine area of sheet not covered by rectangular picture.	52	3.9	52	6.2	52	4.8
K05	Yes	Calculate area of a rectangle given its length and perimeter.	55	3.3	57	5.0	54	4.9
L12	Yes	Find longest pace from chart showing number of paces to cross room.	86	2.7	86	3.6	86	4.6
M01	Yes	Read mass shown on scale.	98	0.7	98	1.0	99	0.8
N15	Yes	Identify drawing with angle closest to 30 degrees.	64	3.2	69	4.3	59	6.0
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	72	3.6	72	4.9	72	5.5
P11	Yes	Use ruler to determine approximate length of pencil.	69	3.3	61	5.3	77	3.7
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	49	3.1	51	4.8	47	4.0
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	68	4.4	63	5.9	72	6.2
S02B	Yes	Calculate length of side of square given area.	30	3.0	33	4.2	27	4.0
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	23	2.2	24	3.5	22	2.9
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	48	2.2	49	3.4	47	3.8
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	9	1.2	9	1.6	8	1.7
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	45	2.7	49	2.8	42	4.2

REL: Release Status (Yes= Item in Released Item Set)

Third International Mathematics and Science Study - 1995 Assessment
Percent Correct on the Mathematics Items - Eighth Grade

May 11, 1998 18

COUNTRY ID=Belgium (Fl) SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	72	2.3	77	1.5	66	3.5
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	69	2.5	68	3.2	70	3.3
D08	No	Solve ratio problem for x: 7/13 = x/52.	77	2.2	76	2.9	77	3.3
F07	No	Solve word problem to find average speed from distance and time.	43	2.8	42	3.2	43	4.3
G04	No	Solve simple proportionality equation.	87	2.1	87	3.4	87	2.6
L14	Yes	Identify missing numbers in table of proportional x and y values.	33	2.9	33	3.7	33	4.9
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	34	3.7	37	4.6	30	4.6
Q05	Yes	Solve word problem involving ratios.	82	2.9	77	4.7	87	3.0
R14	Yes	Solve multi-step word problem involving ratios.	58	4.1	56	5.4	60	6.0
T02A	Yes	Solve algebra word problem involving ratios.	24	1.5	23	2.3	26	2.6
T02B	Yes	Solve multi-step word problem computing fractions.	7	1.1	6	1.2	8	1.7
V03	Yes	Determine ratio of red paint in a mixture.	48	2.4	47	2.8	50	3.8

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Belgium (Fr) SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	77	1.3	78	1.5	77	1.7
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	69	1.8	68	2.5	69	2.4
C05	No	Determine number which continues pattern based on figures.	57	2.0	55	3.0	59	2.8
D10	No	Identify equation which solves word problem: C=(100+6n).	35	1.6	34	2.3	36	2.4
E05	No	Find relationship between numbers in a set of ordered pairs.	35	2.3	38	2.8	33	3.4
F11	No	Solve multi-step problem using linear equations.	60	2.4	58	3.2	63	2.8
G06	No	Find solution to -3X for given value of X.	54	3.0	52	3.2	56	4.1
H10	No	Identify equation expressing xy relationship from table of values.	36	2.5	36	3.5	36	2.6
H12	No	Select symbolic linear equation which fits word problem.	80	1.8	75	2.9	85	2.4
I01	Yes	Identify meaning of symbol in word problem equation.	36	3.4	37	5.3	34	4.6
I04	Yes	Determine next number which occurs in two number sequences.	49	3.4	46	4.3	52	5.1
J18	Yes	Identify missing number in table showing xy relationship.	39	3.7	42	4.6	36	5.6
K04	Yes	Identify expression equivalent to linear inequality.	35	3.4	34	4.6	36	4.1
L11	Yes	Solve multi-step word problem using pattern.	37	3.3	38	4.7	38	4.7
L13	Yes	Identify matching patterns of symbols.	96	1.4	98	1.4	95	2.2
L16	Yes	Simplify and solve linear equation for X.	41	3.6	36	4.9	47	4.8
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	59	2.8	57	4.5	61	4.2
O07	Yes	Solve linear equation for X.	76	2.5	73	4.9	79	3.2
P10	Yes	Identify equivalent algebraic expressions.	64	2.7	64	4.2	64	4.1
P15	Yes	Identify equivalent expression for a cubic relationship.	81	3.1	78	4.1	85	3.1
Q01	Yes	Identify linear expression based on word problem.	46	3.1	41	4.8	51	4.1
Q02	Yes	Subtract fractional expressions of X.	52	2.4	47	4.1	58	4.4
Q07	Yes	Solve P=LW for W given values for P and L.	61	3.7	59	4.8	63	4.2
R09	Yes	Identify equivalent expressions from properties of real numbers.	52	3.4	46	4.7	58	4.4
R11	Yes	Solve algebra word problem: linear equation.	46	3.3	45	4.5	48	4.8
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	84	2.5	87	3.0	83	4.3
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	22	2.5	23	4.4	21	2.8
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	40	3.3	41	3.7	40	4.8
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	40	3.5	40	3.8	41	4.6

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Belgium (Fr) SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	76	1.1	76	1.7	76	1.4
B07	No	Interpret line graph to find region of largest increase.	58	1.8	56	2.7	61	2.2
C02	No	Interpret pie graph to determine distribution.	82	1.8	83	2.4	81	2.7
E01	No	Interpret line graph to determine intersection point of two plots.	75	1.9	77	2.8	73	3.0
F08	No	Predict probability of occurrence for independent coin toss.	67	1.6	68	2.5	66	2.7
G01	No	Interpret frequency table to find number above a given level.	72	1.6	73	2.4	72	2.1
H07	No	Interpret barchart histogram to find number above a given level.	71	1.4	71	2.3	72	1.9
H11	No	Predict number of total defective bulbs based on random sample.	73	2.0	73	2.9	74	2.8
I09	Yes	Predict most likely color of random card based on fraction of colors.	68	3.7	65	4.9	72	4.6
J13	Yes	Draw pictograph to represent number given in table.	82	2.8	84	3.3	81	4.7
K07	Yes	Determine the number of blue pens given probability of selection.	63	3.4	63	5.1	64	4.5
L10	Yes	Use data in a chart to identify time/day with highest temperature.	90	2.3	90	3.0	90	2.9
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	85	2.3	88	3.3	84	3.5
N18	Yes	Find probability of drawing an even number from 1 to 9.	63	3.2	69	3.9	59	4.7
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	64	3.8	65	5.9	64	4.1
O05	Yes	Calculate number of cube faces from probability of toss.	61	3.8	64	6.8	57	4.0
P17	Yes	Identify thermometer which shows temperature given in data table.	93	2.2	93	2.6	93	2.6
Q04	Yes	Interpret data in bar graph.	87	2.3	86	3.4	89	2.6
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	62	2.9	65	4.8	57	4.6
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	20	2.5	22	4.3	18	2.3

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Belgium (Fr) SCALE=Fractions and number sense

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	74	1.5	73	1.9	74	1.8
B09	No	Identify shaded figure which shows 2/5 = 4/10.	66	2.2	63	2.6	70	2.8
B10	No	Identify smallest of decimal fractions.	59	1.7	64	2.3	53	2.4
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	76	1.4	77	2.5	75	2.2
C06	No	Determine the worst estimate of: 848 + 677.	63	1.6	62	2.8	64	2.3
D09	No	Identify smallest fraction.	79	2.0	82	2.5	76	3.3
D12	No	Estimate rational number from point on number line.	77	1.7	81	2.4	74	2.2
E03	No	Find fraction of hour between two time points.	56	2.6	59	3.6	53	3.0
E04	No	Solve multi-step word problem: 4-digit whole numbers.	45	2.4	48	2.9	43	3.2
F09	No	Identify decimal fraction between 0.07 and 0.08.	72	2.2	76	3.6	68	2.5
F12	No	Identify fraction of circle which is shaded.	67	1.7	68	2.5	68	2.8
G05	No	Identify fraction represented in word problem.	65	2.1	63	2.9	67	2.7
H08	No	Identify figure showing 2/3 shaded.	87	1.6	86	2.7	88	1.8
H09	No	Identify sum which is closest to 691 + 208.	91	1.0	91	1.6	91	2.1
I02	Yes	Solve multi-step word problem: common fractions.	70	3.3	65	5.0	75	4.0
I05	Yes	Solve subtraction word problem: rational numbers.	77	2.4	75	3.7	78	3.8
I06	Yes	Write a fraction larger than a given number.	72	2.6	76	4.0	68	3.5
I07	Yes	Recognize when estimation is appropriate.	69	2.8	68	3.8	71	4.5
J12	Yes	Divide fractions.	41	2.9	38	4.4	44	3.9
J14	Yes	Divide rational numbers, fractional divisor.	38	2.8	37	3.9	40	4.0
J17	Yes	Use map and scale to find distance between two cities.	82	3.1	81	4.0	84	4.6
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	77	2.1	79	3.7	76	3.3
K02	Yes	Find total volume of mixture using rational number addition.	74	3.7	68	4.3	79	5.8
K06	Yes	Approximate amount increased by 15%.	48	3.0	59	4.8	40	4.2
K09	Yes	Compute sum of three fractions.	62	3.4	64	4.5	61	5.1
L08	Yes	Estimate actual height from diagram of relative heights.	61	3.0	62	4.6	60	4.1
L09	Yes	Identify 504.7 from its expression in words.	91	1.8	88	4.5	95	2.1
L17	Yes	Subtract three fractions.	57	3.3	55	5.1	57	4.1
M04	Yes	Identify the largest fraction.	48	3.8	56	4.7	39	5.1
M08	Yes	Multiply two decimal fractions.	44	2.9	45	3.9	42	5.3
N11	Yes	Identify number rounded to 18200.	87	2.2	83	3.2	89	2.7
N14	Yes	Identify list of equivalent fractions.	81	2.2	80	3.3	81	2.8
N16	Yes	Solve algebra word problem with fractions.	40	3.3	40	4.8	39	3.8
N17	Yes	Solve multi-step word problem: decimal fractions.	36	2.6	42	3.9	31	3.8
N19	Yes	Shade a given fraction of the squares in a grid.	71	3.0	66	4.6	75	4.2
O02	Yes	Calculate percent increase.	36	4.4	43	7.6	28	3.2
O04	Yes	Identify number rounded to the nearest 100th.	47	2.9	43	4.9	50	3.6
O09	Yes	Solve division word problem: common fractions.	67	4.2	70	6.3	63	5.1
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	65	3.2	64	4.7	67	4.9
P13	Yes	Use heart beats/min to find beats per hour.	72	3.0	68	3.9	78	4.0
P14	Yes	Solve subtraction word problem: common fractions.	81	2.1	76	3.7	87	3.1
P16	Yes	Reduce decimal to fraction in lowest terms.	44	4.0	42	5.1	48	5.2
Q06	Yes	Approximate water use/year from use/week.	51	3.4	47	4.3	55	4.9
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	52	3.4	51	4.2	52	4.9
Q09	Yes	Perform multiple operations of common fractions.	58	3.5	55	4.5	62	4.7
R06	Yes	Subtract two decimal numbers.	77	3.0	71	4.4	84	3.3
R07	Yes	Solve division word problem involving decimals.	53	3.1	55	4.1	50	4.7
R12	Yes	Subtract 4-digit whole numbers.	91	1.6	89	2.9	95	2.1
R13	Yes	Determine how much money left after spending 7/9.	35	3.1	42	4.4	26	4.1
U01A	Yes	Estimate the time required to record 5 songs.	36	2.3	44	3.7	28	2.3
U01B	Yes	Explain method of estimation.	21	2.2	25	3.3	18	2.2
V01	Yes	Determine actual weight from rounded value.	30	2.6	40	4.2	19	2.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Belgium (Fr) SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	75	1.3	70	1.9	80	1.6
B11	No	Identify cube made by folding 2-dimensional net.	76	1.6	74	1.8	77	2.6
C03	No	Identify properties of congruent trapezoids.	64	1.8	63	3.0	65	2.6
D07	No	Identify relationship of angles in symmetric polygon.	72	2.0	74	2.8	70	2.3
E02	No	Determine angle in congruent triangles.	47	2.2	54	3.1	40	3.0
G03	No	Find sum of vertical angles from diagram of intersecting lines.	60	1.9	61	2.6	59	3.3
I08	Yes	Identify point on a line defined by two other points.	22	2.6	24	3.8	22	4.3
J11	Yes	Identify properties of a parallelogram.	57	2.5	56	3.8	58	4.0
J15	Yes	Identify similar triangles of different size.	31	2.8	34	4.0	27	4.0
J16	Yes	Identify coordinates for point on a grid.	32	2.8	29	4.1	35	3.5
K03	Yes	Identify figure from rotation of 3-dimensional object.	74	2.4	79	4.0	71	3.4
K08	Yes	Determine unknown angle in rotated congruent triangles.	32	2.8	39	5.0	28	3.8
L15	Yes	Find fourth quadrilateral angle, given the other three.	53	2.9	65	4.7	43	3.9
M02	Yes	Identify all lines of symmetry for a rectangle.	80	2.4	82	3.6	80	3.4
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	63	3.3	68	4.8	55	4.3
M07	Yes	Find angle based on supplementary pairs.	78	3.3	82	3.6	74	5.5
N12	Yes	Identify point on number line from distance of other points.	69	3.0	69	4.6	69	4.3
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	52	3.4	53	5.0	52	4.1
O08	Yes	Find center point of rotation for symmetry-related figures.	81	2.2	86	3.2	77	3.7
P08	Yes	Know relationship between side and perimeter for square.	62	3.1	60	4.6	66	4.6
P09	Yes	Find length of side for similar triangles.	60	3.4	62	4.4	59	4.2
Q10	Yes	Perform calculation involving addition/subtraction of angles.	46	3.2	46	4.1	47	5.0
R10	Yes	Determine into how many triangles a trapezoid can be divided.	56	3.2	54	4.0	58	4.3

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Belgium (Fr) SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	51	1.2	49	1.7	53	1.6
C01	No	Compare volumes of different stacks of blocks.	63	1.9	67	2.4	59	3.2
D11	No	Identify best unit to measure the mass of an egg.	92	1.4	90	1.6	94	1.9
E06	No	Solve word problem to find length of rectangle from width and perimeter.	60	2.1	63	2.9	58	3.2
F10	No	Determine measurement accuracy of ruler.	74	2.2	80	2.7	69	3.3
G02	No	Read meter scale to determine length of a pipe.	86	1.3	86	1.7	86	1.4
I03	Yes	Find number of 750 mL bottles filled by a large volume.	48	3.5	52	4.6	44	4.9
J10	Yes	Determine area of sheet not covered by rectangular picture.	43	3.2	47	4.9	39	4.5
K05	Yes	Calculate area of a rectangle given its length and perimeter.	46	3.5	51	5.4	42	4.2
L12	Yes	Find longest pace from chart showing number of paces to cross room.	84	2.0	80	4.3	87	4.2
M01	Yes	Read mass shown on scale.	89	2.7	87	3.2	92	3.2
N15	Yes	Identify drawing with angle closest to 30 degrees.	67	2.7	71	3.3	63	4.5
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	88	2.6	90	4.4	87	3.5
P11	Yes	Use ruler to determine approximate length of pencil.	57	3.7	54	4.3	60	5.0
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	37	2.9	39	4.6	35	3.6
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	72	2.5	68	3.5	76	3.6
S02B	Yes	Calculate length of side of square given area.	37	2.7	41	4.2	34	3.8
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	22	2.7	21	4.3	22	3.7
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	43	2.5	44	3.5	43	3.5
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	5	1.1	5	1.2	5	1.9
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	40	2.7	44	3.9	37	2.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Belgium (Fr) SCALE=Proportionality

Eighth Grade

			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	58	1.5	63	2.0	52	2.0
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	72	2.3	73	2.8	71	2.7
D08	No	Solve ratio problem for x: 7/13 = x/52.	61	2.1	63	2.6	60	2.6
F07	No	Solve word problem to find average speed from distance and time.	42	2.0	46	2.7	40	2.6
G04	No	Solve simple proportionality equation.	82	1.3	80	2.2	83	1.7
L14	Yes	Identify missing numbers in table of proportional x and y values.	19	2.6	21	3.9	17	3.4
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	48	3.1	54	4.5	42	4.7
Q05	Yes	Solve word problem involving ratios.	76	2.8	79	3.0	72	4.4
R14	Yes	Solve multi-step word problem involving ratios.	41	3.1	40	4.8	44	4.2
T02A	Yes	Solve algebra word problem involving ratios.	18	1.9	19	2.6	18	2.5
T02B	Yes	Solve multi-step word problem computing fractions.	6	1.1	4	1.3	7	1.7
V03	Yes	Determine ratio of red paint in a mixture.	49	2.9	49	3.9	49	4.0

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Bulgaria SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	87	1.2	.	.	.	.
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	78	1.7	.	.	.	.
C05	No	Determine number which continues pattern based on figures.	67	2.8	.	.	.	.
D10	No	Identify equation which solves word problem: C=(100+6n).	63	3.0	.	.	.	.
E05	No	Find relationship between numbers in a set of ordered pairs.	54	3.1	.	.	.	.
F11	No	Solve multi-step problem using linear equations.	76	3.3	.	.	.	.
G06	No	Find solution to -3X for given value of X.	75	2.2	.	.	.	.
H10	No	Identify equation expressing xy relationship from table of values.	59	3.0	.	.	.	.
H12	No	Select symbolic linear equation which fits word problem.	79	1.8	.	.	.	.
I01	Yes	Identify meaning of symbol in word problem equation.	50	5.1	.	.	.	.
I04	Yes	Determine next number which occurs in two number sequences.	46	4.3	.	.	.	.
J18	Yes	Identify missing number in table showing xy relationship.	57	6.1	.	.	.	.
K04	Yes	Identify expression equivalent to linear inequality.	51	5.2	.	.	.	.
L11	Yes	Solve multi-step word problem using pattern.	44	5.1	.	.	.	.
L13	Yes	Identify matching patterns of symbols.	88	3.4	.	.	.	.
L16	Yes	Simplify and solve linear equation for X.	77	3.3	.	.	.	.
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	76	3.6	.	.	.	.
O07	Yes	Solve linear equation for X.	84	2.6	.	.	.	.
P10	Yes	Identify equivalent algebraic expressions.	72	3.1	.	.	.	.
P15	Yes	Identify equivalent expression for a cubic relationship.	72	3.2	.	.	.	.
Q01	Yes	Identify linear expression based on word problem.	64	3.9	.	.	.	.
Q02	Yes	Subtract fractional expressions of X.	74	3.1	.	.	.	.
Q07	Yes	Solve P=LW for W given values for P and L.	73	3.4	.	.	.	.
R09	Yes	Identify equivalent expressions from properties of real numbers.	43	4.8	.	.	.	.
R11	Yes	Solve algebra word problem: linear equation.	50	4.5	.	.	.	.
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	76	3.5	.	.	.	.
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	18	3.5	.	.	.	.
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	30	3.8	.	.	.	.
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	36	3.7	.	.	.	.

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Bulgaria SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	87	1.1	.	.	.	.
B07	No	Interpret line graph to find region of largest increase.	65	2.3	.	.	.	.
C02	No	Interpret pie graph to determine distribution.	85	1.9	.	.	.	.
E01	No	Interpret line graph to determine intersection point of two plots.	77	2.7	.	.	.	.
F08	No	Predict probability of occurrence for independent coin toss.	78	3.0	.	.	.	.
G01	No	Interpret frequency table to find number above a given level.	54	4.1	.	.	.	.
H07	No	Interpret barchart histogram to find number above a given level.	68	2.3	.	.	.	.
H11	No	Predict number of total defective bulbs based on random sample.	75	1.9	.	.	.	.
I09	Yes	Predict most likely color of random card based on fraction of colors.	54	4.2	.	.	.	.
J13	Yes	Draw pictograph to represent number given in table.	75	4.1	.	.	.	.
K07	Yes	Determine the number of blue pens given probability of selection.	46	4.5	.	.	.	.
L10	Yes	Use data in a chart to identify time/day with highest temperature.	81	2.8	.	.	.	.
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	85	3.8	.	.	.	.
N18	Yes	Find probability of drawing an even number from 1 to 9.	73	4.3	.	.	.	.
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	49	4.3	.	.	.	.
O05	Yes	Calculate number of cube faces from probability of toss.	46	5.7	.	.	.	.
P17	Yes	Identify thermometer which shows temperature given in data table.	89	2.5	.	.	.	.
Q04	Yes	Interpret data in bar graph.	85	2.0	.	.	.	.
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	36	4.4	.	.	.	.
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	6	1.4	.	.	.	.

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Bulgaria SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	62	2.4	.	.	.	.
B09	No	Identify shaded figure which shows 2/5 = 4/10.	63	2.7	.	.	.	.
B10	No	Identify smallest of decimal fractions.	52	2.9	.	.	.	.
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	67	2.3	.	.	.	.
C06	No	Determine the worst estimate of: 848 + 677.	72	2.9	.	.	.	.
D09	No	Identify smallest fraction.	65	2.8	.	.	.	.
D12	No	Estimate rational number from point on number line.	65	2.5	.	.	.	.
E03	No	Find fraction of hour between two time points.	67	3.0	.	.	.	.
E04	No	Solve multi-step word problem: 4-digit whole numbers.	74	1.9	.	.	.	.
F09	No	Identify decimal fraction between 0.07 and 0.08.	80	3.2	.	.	.	.
F12	No	Identify fraction of circle which is shaded.	68	4.5	.	.	.	.
G05	No	Identify fraction represented in word problem.	60	3.4	.	.	.	.
H08	No	Identify figure showing 2/3 shaded.	70	2.5	.	.	.	.
H09	No	Identify sum which is closest to 691 + 208.	82	1.9	.	.	.	.
I02	Yes	Solve multi-step word problem: common fractions.	61	4.8	.	.	.	.
I05	Yes	Solve subtraction word problem: rational numbers.	66	4.8	.	.	.	.
I06	Yes	Write a fraction larger than a given number.	64	4.7	.	.	.	.
I07	Yes	Recognize when estimation is appropriate.	59	5.3	.	.	.	.
J12	Yes	Divide fractions.	67	5.2	.	.	.	.
J14	Yes	Divide rational numbers, fractional divisor.	57	5.7	.	.	.	.
J17	Yes	Use map and scale to find distance between two cities.	75	4.4	.	.	.	.
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	75	3.6	.	.	.	.
K02	Yes	Find total volume of mixture using rational number addition.	68	4.3	.	.	.	.
K06	Yes	Approximate amount increased by 15%.	40	5.0	.	.	.	.
K09	Yes	Compute sum of three fractions.	60	4.8	.	.	.	.
L08	Yes	Estimate actual height from diagram of relative heights.	71	4.7	.	.	.	.
L09	Yes	Identify 504.7 from its expression in words.	88	2.6	.	.	.	.
L17	Yes	Subtract three fractions.	70	4.2	.	.	.	.
M04	Yes	Identify the largest fraction.	53	7.6	.	.	.	.
M08	Yes	Multiply two decimal fractions.	63	7.7	.	.	.	.
N11	Yes	Identify number rounded to 18200.	85	2.7	.	.	.	.
N14	Yes	Identify list of equivalent fractions.	79	3.3	.	.	.	.
N16	Yes	Solve algebra word problem with fractions.	65	4.4	.	.	.	.
N17	Yes	Solve multi-step word problem: decimal fractions.	63	5.2	.	.	.	.
N19	Yes	Shade a given fraction of the squares in a grid.	65	4.7	.	.	.	.
O02	Yes	Calculate percent increase.	29	4.6	.	.	.	.
O04	Yes	Identify number rounded to the nearest 100th.	40	4.6	.	.	.	.
O09	Yes	Solve division word problem: common fractions.	44	4.0	.	.	.	.
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	57	4.7	.	.	.	.
P13	Yes	Use heart beats/min to find beats per hour.	64	3.1	.	.	.	.
P14	Yes	Solve subtraction word problem: common fractions.	63	3.0	.	.	.	.
P16	Yes	Reduce decimal to fraction in lowest terms.	31	5.2	.	.	.	.
Q06	Yes	Approximate water use/year from use/week.	50	4.8	.	.	.	.
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	37	4.0	.	.	.	.
Q09	Yes	Perform multiple operations of common fractions.	61	3.6	.	.	.	.
R06	Yes	Subtract two decimal numbers.	69	3.1	.	.	.	.
R07	Yes	Solve division word problem involving decimals.	46	4.8	.	.	.	.
R12	Yes	Subtract 4-digit whole numbers.	78	2.8	.	.	.	.
R13	Yes	Determine how much money left after spending 7/9.	35	5.0	.	.	.	.
U01A	Yes	Estimate the time required to record 5 songs.	19	3.8	.	.	.	.
U01B	Yes	Explain method of estimation.	16	3.5	.	.	.	.
V01	Yes	Determine actual weight from rounded value.	44	3.8	.	.	.	.

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Bulgaria SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	80	1.2	.	.	.	.
B11	No	Identify cube made by folding 2-dimensional net.	64	2.4	.	.	.	.
C03	No	Identify properties of congruent trapezoids.	77	2.0	.	.	.	.
D07	No	Identify relationship of angles in symmetric polygon.	86	1.7	.	.	.	.
E02	No	Determine angle in congruent triangles.	74	2.4	.	.	.	.
G03	No	Find sum of vertical angles from diagram of intersecting lines.	75	2.3	.	.	.	.
I08	Yes	Identify point on a line defined by two other points.	38	5.1	.	.	.	.
J11	Yes	Identify properties of a parallelogram.	78	4.5	.	.	.	.
J15	Yes	Identify similar triangles of different size.	78	4.5	.	.	.	.
J16	Yes	Identify coordinates for point on a grid.	70	4.3	.	.	.	.
K03	Yes	Identify figure from rotation of 3-dimensional object.	58	5.3	.	.	.	.
K08	Yes	Determine unknown angle in rotated congruent triangles.	44	5.1	.	.	.	.
L15	Yes	Find fourth quadrilateral angle, given the other three.	64	4.7	.	.	.	.
M02	Yes	Identify all lines of symmetry for a rectangle.	78	4.7	.	.	.	.
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	68	6.1	.	.	.	.
M07	Yes	Find angle based on supplementary pairs.	74	4.0	.	.	.	.
N12	Yes	Identify point on number line from distance of other points.	76	3.2	.	.	.	.
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	56	4.8	.	.	.	.
O08	Yes	Find center point of rotation for symmetry-related figures.	79	3.1	.	.	.	.
P08	Yes	Know relationship between side and perimeter for square.	56	3.4	.	.	.	.
P09	Yes	Find length of side for similar triangles.	25	3.5	.	.	.	.
Q10	Yes	Perform calculation involving addition/subtraction of angles.	53	3.5	.	.	.	.
R10	Yes	Determine into how many triangles a trapezoid can be divided.	53	3.8	.	.	.	.

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Bulgaria SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	43	2.5	.	.	.	.
C01	No	Compare volumes of different stacks of blocks.	72	2.6	.	.	.	.
D11	No	Identify best unit to measure the mass of an egg.	93	1.1	.	.	.	.
E06	No	Solve word problem to find length of rectangle from width and perimeter.	50	3.0	.	.	.	.
F10	No	Determine measurement accuracy of ruler.	76	3.0	.	.	.	.
G02	No	Read meter scale to determine length of a pipe.	80	2.3	.	.	.	.
I03	Yes	Find number of 750 mL bottles filled by a large volume.	47	5.4	.	.	.	.
J10	Yes	Determine area of sheet not covered by rectangular picture.	61	4.7	.	.	.	.
K05	Yes	Calculate area of a rectangle given its length and perimeter.	46	5.6	.	.	.	.
L12	Yes	Find longest pace from chart showing number of paces to cross room.	77	3.4	.	.	.	.
M01	Yes	Read mass shown on scale.	87	4.4	.	.	.	.
N15	Yes	Identify drawing with angle closest to 30 degrees.	78	3.3	.	.	.	.
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	48	5.2	.	.	.	.
P11	Yes	Use ruler to determine approximate length of pencil.	45	4.5	.	.	.	.
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	48	6.6	.	.	.	.
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	66	3.5	.	.	.	.
S02B	Yes	Calculate length of side of square given area.	42	6.0	.	.	.	.
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	30	4.9	.	.	.	.
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	27	3.7	.	.	.	.
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	10	3.1	.	.	.	.
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	48	3.5	.	.	.	.

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Bulgaria SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	57	2.0	.	.	.	.
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	75	1.6	.	.	.	.
D08	No	Solve ratio problem for x: 7/13 = x/52.	64	2.9	.	.	.	.
F07	No	Solve word problem to find average speed from distance and time.	54	4.9	.	.	.	.
G04	No	Solve simple proportionality equation.	74	2.3	.	.	.	.
L14	Yes	Identify missing numbers in table of proportional x and y values.	44	6.4	.	.	.	.
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	54	4.3	.	.	.	.
Q05	Yes	Solve word problem involving ratios.	57	4.4	.	.	.	.
R14	Yes	Solve multi-step word problem involving ratios.	34	4.4	.	.	.	.
T02A	Yes	Solve algebra word problem involving ratios.	12	2.6	.	.	.	.
T02B	Yes	Solve multi-step word problem computing fractions.	7	2.3	.	.	.	.
V03	Yes	Determine ratio of red paint in a mixture.	37	3.8	.	.	.	.

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Canada SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	76	0.6	78	1.2	75	0.9
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	74	1.4	72	1.7	77	1.8
C05	No	Determine number which continues pattern based on figures.	62	1.0	60	1.6	64	1.7
D10	No	Identify equation which solves word problem: C=(100+6n).	47	1.5	45	2.2	49	2.0
E05	No	Find relationship between numbers in a set of ordered pairs.	65	1.5	63	2.1	66	2.5
F11	No	Solve multi-step problem using linear equations.	51	1.5	53	2.1	50	2.0
G06	No	Find solution to -3X for given value of X.	44	2.0	43	2.5	44	2.1
H10	No	Identify equation expressing xy relationship from table of values.	44	1.6	42	2.5	46	1.8
H12	No	Select symbolic linear equation which fits word problem.	83	1.3	81	1.6	86	1.9
I01	Yes	Identify meaning of symbol in word problem equation.	34	2.4	34	3.2	34	2.8
I04	Yes	Determine next number which occurs in two number sequences.	56	2.3	50	2.9	62	3.3
J18	Yes	Identify missing number in table showing xy relationship.	44	2.3	47	3.3	42	3.2
K04	Yes	Identify expression equivalent to linear inequality.	41	2.7	39	4.1	44	3.5
L11	Yes	Solve multi-step word problem using pattern.	36	2.6	31	3.8	41	3.1
L13	Yes	Identify matching patterns of symbols.	97	0.8	97	1.0	97	1.2
L16	Yes	Simplify and solve linear equation for X.	27	2.5	29	3.2	25	3.2
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	64	2.6	59	3.7	71	2.8
O07	Yes	Solve linear equation for X.	73	2.6	76	2.6	71	4.9
P10	Yes	Identify equivalent algebraic expressions.	61	2.1	65	2.6	56	3.2
P15	Yes	Identify equivalent expression for a cubic relationship.	73	2.5	72	3.4	75	3.0
Q01	Yes	Identify linear expression based on word problem.	45	2.7	39	3.5	52	3.8
Q02	Yes	Subtract fractional expressions of X.	41	2.6	41	3.5	42	3.9
Q07	Yes	Solve P=LW for W given values for P and L.	69	2.5	65	3.7	72	3.1
R09	Yes	Identify equivalent expressions from properties of real numbers.	38	2.3	35	3.3	40	2.9
R11	Yes	Solve algebra word problem: linear equation.	44	2.4	45	3.4	43	3.6
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	82	1.7	81	2.5	82	2.5
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	33	2.4	28	2.4	39	3.8
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	33	1.7	31	2.5	36	2.4
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	33	1.9	30	2.6	37	2.6

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Canada SCALE=Data Rep., Analysis & Prob.

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	78	1.0	76	1.1	81	1.2
B07	No	Interpret line graph to find region of largest increase.	69	1.1	67	1.5	73	1.3
C02	No	Interpret pie graph to determine distribution.	81	0.8	81	1.9	81	1.7
E01	No	Interpret line graph to determine intersection point of two plots.	74	1.2	75	1.6	73	2.0
F08	No	Predict probability of occurrence for independent coin toss.	67	1.5	67	2.4	68	1.8
G01	No	Interpret frequency table to find number above a given level.	49	1.5	48	2.1	51	1.9
H07	No	Interpret barchart histogram to find number above a given level.	73	1.3	73	1.7	74	1.6
H11	No	Predict number of total defective bulbs based on random sample.	65	1.5	66	2.5	64	1.8
I09	Yes	Predict most likely color of random card based on fraction of colors.	76	1.9	78	2.9	76	2.7
J13	Yes	Draw pictograph to represent number given in table.	89	1.5	89	2.3	90	2.0
K07	Yes	Determine the number of blue pens given probability of selection.	62	2.3	64	3.6	61	2.9
L10	Yes	Use data in a chart to identify time/day with highest temperature.	91	1.7	92	1.8	91	2.2
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	90	1.1	90	1.6	90	1.7
N18	Yes	Find probability of drawing an even number from 1 to 9.	74	2.6	77	2.4	71	4.5
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	66	1.9	71	2.7	60	4.0
O05	Yes	Calculate number of cube faces from probability of toss.	57	2.2	59	3.4	55	3.8
P17	Yes	Identify thermometer which shows temperature given in data table.	85	1.6	83	2.7	87	2.2
Q04	Yes	Interpret data in bar graph.	90	1.3	86	2.4	94	1.2
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	61	2.3	64	3.3	58	3.4
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	24	1.7	25	2.5	25	1.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Canada SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	67	0.9	68	1.2	66	1.2
B09	No	Identify shaded figure which shows 2/5 = 4/10.	68	1.2	66	1.5	71	1.8
B10	No	Identify smallest of decimal fractions.	57	1.3	61	1.8	55	1.8
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	53	1.3	54	1.8	52	1.9
C06	No	Determine the worst estimate of: 848 + 677.	86	0.9	85	1.4	87	1.3
D09	No	Identify smallest fraction.	79	1.3	81	2.1	78	1.4
D12	No	Estimate rational number from point on number line.	82	1.0	82	1.7	83	1.3
E03	No	Find fraction of hour between two time points.	62	1.5	63	2.4	61	1.5
E04	No	Solve multi-step word problem: 4-digit whole numbers.	76	1.5	75	2.0	78	1.5
F09	No	Identify decimal fraction between 0.07 and 0.08.	77	1.2	76	1.8	78	1.5
F12	No	Identify fraction of circle which is shaded.	64	1.7	64	1.9	64	2.2
G05	No	Identify fraction represented in word problem.	69	1.2	68	1.8	71	1.6
H08	No	Identify figure showing 2/3 shaded.	86	0.9	84	1.4	88	1.3
H09	No	Identify sum which is closest to 691 + 208.	92	1.0	91	1.5	92	1.1
I02	Yes	Solve multi-step word problem: common fractions.	57	2.8	57	3.7	59	3.3
I05	Yes	Solve subtraction word problem: rational numbers.	80	2.0	75	3.1	86	2.1
I06	Yes	Write a fraction larger than a given number.	80	1.6	82	2.1	77	2.6
I07	Yes	Recognize when estimation is appropriate.	86	1.7	82	2.9	89	2.0
J12	Yes	Divide fractions.	29	2.3	25	3.2	33	3.1
J14	Yes	Divide rational numbers, fractional divisor.	48	2.6	43	3.5	51	3.4
J17	Yes	Use map and scale to find distance between two cities.	63	2.0	65	2.7	61	2.9
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	73	1.9	77	2.8	69	2.7
K02	Yes	Find total volume of mixture using rational number addition.	75	2.7	72	4.5	78	2.8
K06	Yes	Approximate amount increased by 15%.	46	2.5	48	3.6	45	3.6
K09	Yes	Compute sum of three fractions.	47	2.9	45	4.0	50	4.0
L08	Yes	Estimate actual height from diagram of relative heights.	60	2.1	64	3.7	56	2.8
L09	Yes	Identify 504.7 from its expression in words.	90	2.5	87	3.3	92	2.5
L17	Yes	Subtract three fractions.	56	2.5	55	3.3	58	3.2
M04	Yes	Identify the largest fraction.	57	2.5	60	3.7	54	3.1
M08	Yes	Multiply two decimal fractions.	53	2.6	48	3.6	57	2.9
N11	Yes	Identify number rounded to 18200.	92	1.1	92	1.8	92	2.3
N14	Yes	Identify list of equivalent fractions.	78	2.1	74	2.8	82	2.6
N16	Yes	Solve algebra word problem with fractions.	46	3.0	46	3.6	46	3.9
N17	Yes	Solve multi-step word problem: decimal fractions.	36	2.0	35	2.9	39	3.0
N19	Yes	Shade a given fraction of the squares in a grid.	66	2.4	66	3.6	66	3.2
O02	Yes	Calculate percent increase.	20	1.7	22	2.6	19	2.5
O04	Yes	Identify number rounded to the nearest 100th.	70	1.7	70	2.7	70	3.3
O09	Yes	Solve division word problem: common fractions.	55	2.2	62	3.7	49	3.6
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	82	1.7	83	1.8	82	2.8
P13	Yes	Use heart beats/min to find beats per hour.	75	2.5	75	2.8	74	3.6
P14	Yes	Solve subtraction word problem: common fractions.	79	2.0	77	2.7	81	3.3
P16	Yes	Reduce decimal to fraction in lowest terms.	46	2.2	47	3.3	46	3.2
Q06	Yes	Approximate water use/year from use/week.	47	2.6	49	3.1	45	3.3
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	50	2.2	51	3.3	49	4.0
Q09	Yes	Perform multiple operations of common fractions.	48	2.7	44	3.0	52	3.8
R06	Yes	Subtract two decimal numbers.	81	1.9	75	2.7	87	2.6
R07	Yes	Solve division word problem involving decimals.	47	2.1	45	3.0	50	3.1
R12	Yes	Subtract 4-digit whole numbers.	91	1.7	88	2.4	94	2.1
R13	Yes	Determine how much money left after spending 7/9.	31	2.5	36	3.0	26	3.3
U01A	Yes	Estimate the time required to record 5 songs.	49	1.5	49	2.6	50	2.2
U01B	Yes	Explain method of estimation.	43	1.5	39	2.1	46	2.5
V01	Yes	Determine actual weight from rounded value.	67	1.7	67	2.4	69	2.4

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Canada SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	60	0.9	57	1.5	62	1.2
B11	No	Identify cube made by folding 2-dimensional net.	71	1.1	70	1.5	71	1.3
C03	No	Identify properties of congruent trapezoids.	72	1.3	66	1.8	78	1.5
D07	No	Identify relationship of angles in symmetric polygon.	68	1.4	69	2.0	68	1.8
E02	No	Determine angle in congruent triangles.	47	1.4	48	1.9	48	2.0
G03	No	Find sum of vertical angles from diagram of intersecting lines.	48	1.4	52	1.9	44	2.1
I08	Yes	Identify point on a line defined by two other points.	49	2.0	51	3.1	47	2.9
J11	Yes	Identify properties of a parallelogram.	48	2.5	42	3.4	52	3.1
J15	Yes	Identify similar triangles of different size.	72	1.9	69	3.3	75	2.5
J16	Yes	Identify coordinates for point on a grid.	53	2.7	51	4.2	55	3.0
K03	Yes	Identify figure from rotation of 3-dimensional object.	75	2.1	76	3.4	74	3.2
K08	Yes	Determine unknown angle in rotated congruent triangles.	29	2.5	31	4.1	28	3.1
L15	Yes	Find fourth quadrilateral angle, given the other three.	34	2.0	37	2.8	32	3.0
M02	Yes	Identify all lines of symmetry for a rectangle.	76	2.1	79	2.5	73	3.0
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	56	2.2	58	3.1	56	3.2
M07	Yes	Find angle based on supplementary pairs.	78	1.5	79	2.1	76	2.1
N12	Yes	Identify point on number line from distance of other points.	67	2.1	67	3.3	68	3.2
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	44	2.2	41	3.1	46	3.5
O08	Yes	Find center point of rotation for symmetry-related figures.	78	2.0	78	3.2	78	2.7
P08	Yes	Know relationship between side and perimeter for square.	69	1.8	73	2.3	64	2.9
P09	Yes	Find length of side for similar triangles.	37	2.8	39	3.9	36	3.3
Q10	Yes	Perform calculation involving addition/subtraction of angles.	45	2.7	44	3.5	45	3.6
R10	Yes	Determine into how many triangles a trapezoid can be divided.	55	2.7	54	3.9	56	3.3

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Canada SCALE=Measurement

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	70	0.9	68	1.1	72	1.1
C01	No	Compare volumes of different stacks of blocks.	60	1.6	64	2.2	55	2.1
D11	No	Identify best unit to measure the mass of an egg.	82	1.0	84	1.9	79	1.6
E06	No	Solve word problem to find length of rectangle from width and perimeter.	44	1.6	45	1.9	44	2.3
F10	No	Determine measurement accuracy of ruler.	50	1.5	55	1.9	46	2.0
G02	No	Read meter scale to determine length of a pipe.	81	1.0	80	1.4	82	1.5
I03	Yes	Find number of 750 mL bottles filled by a large volume.	39	2.6	43	3.9	34	2.9
J10	Yes	Determine area of sheet not covered by rectangular picture.	46	2.7	45	4.0	47	3.1
K05	Yes	Calculate area of a rectangle given its length and perimeter.	41	2.7	44	4.4	39	3.3
L12	Yes	Find longest pace from chart showing number of paces to cross room.	70	2.3	73	3.1	68	3.2
M01	Yes	Read mass shown on scale.	90	1.6	92	1.8	89	2.3
N15	Yes	Identify drawing with angle closest to 30 degrees.	65	2.1	67	2.7	63	3.7
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	71	1.7	77	2.2	67	2.7
P11	Yes	Use ruler to determine approximate length of pencil.	53	2.0	57	3.5	49	2.9
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	41	2.4	43	3.9	39	3.6
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	69	2.4	66	3.2	72	2.6
S02B	Yes	Calculate length of side of square given area.	23	2.5	25	3.5	21	2.8
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	23	2.2	23	3.3	22	2.4
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	27	1.7	26	2.1	30	2.3
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	17	1.2	17	1.7	18	1.6
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	43	1.7	41	2.5	45	1.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Canada SCALE=Proportionality

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	54	1.1	60	1.4	49	1.4
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	71	1.2	70	1.6	72	1.3
D08	No	Solve ratio problem for x: 7/13 = x/52.	80	1.0	80	1.6	80	1.3
F07	No	Solve word problem to find average speed from distance and time.	32	1.3	31	2.0	33	2.2
G04	No	Solve simple proportionality equation.	83	1.2	84	1.4	83	1.7
L14	Yes	Identify missing numbers in table of proportional x and y values.	26	2.1	29	3.2	22	2.8
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	43	2.4	44	3.4	43	3.4
Q05	Yes	Solve word problem involving ratios.	66	2.5	65	3.2	67	3.4
R14	Yes	Solve multi-step word problem involving ratios.	26	2.3	26	3.1	27	3.4
T02A	Yes	Solve algebra word problem involving ratios.	27	2.1	23	1.9	30	3.1
T02B	Yes	Solve multi-step word problem computing fractions.	8	0.9	7	1.3	9	1.4
V03	Yes	Determine ratio of red paint in a mixture.	56	1.8	52	2.3	60	2.2

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Colombia SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	49	1.4	50	2.2	49	2.5
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	28	2.4	26	2.9	30	4.1
C05	No	Determine number which continues pattern based on figures.	41	2.5	40	4.5	41	2.4
D10	No	Identify equation which solves word problem: C=(100+6n).	29	1.7	28	2.3	29	2.1
E05	No	Find relationship between numbers in a set of ordered pairs.	34	1.8	36	3.1	32	3.9
F11	No	Solve multi-step problem using linear equations.	20	1.8	23	2.7	17	2.3
G06	No	Find solution to -3X for given value of X.	23	1.8	19	2.3	26	2.5
H10	No	Identify equation expressing xy relationship from table of values.	21	2.0	21	3.0	20	3.3
H12	No	Select symbolic linear equation which fits word problem.	44	2.0	45	2.9	43	3.7
I01	Yes	Identify meaning of symbol in word problem equation.	21	4.1	18	3.7	24	7.1
I04	Yes	Determine next number which occurs in two number sequences.	29	4.3	28	4.9	31	7.1
J18	Yes	Identify missing number in table showing xy relationship.	36	3.7	34	5.5	38	4.1
K04	Yes	Identify expression equivalent to linear inequality.	33	3.9	31	4.1	34	6.3
L11	Yes	Solve multi-step word problem using pattern.	25	2.9	21	4.3	29	3.6
L13	Yes	Identify matching patterns of symbols.	55	4.2	52	6.3	59	4.6
L16	Yes	Simplify and solve linear equation for X.	7	1.9	7	2.9	6	2.0
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	15	4.0	12	2.8	17	6.8
O07	Yes	Solve linear equation for X.	43	3.7	46	5.7	39	5.3
P10	Yes	Identify equivalent algebraic expressions.	34	4.5	30	4.8	37	6.7
P15	Yes	Identify equivalent expression for a cubic relationship.	37	4.4	34	4.4	39	6.5
Q01	Yes	Identify linear expression based on word problem.	33	3.7	36	4.1	30	5.1
Q02	Yes	Subtract fractional expressions of X.	37	4.2	37	5.1	36	5.0
Q07	Yes	Solve P=LW for W given values for P and L.	26	3.9	27	4.4	26	4.8
R09	Yes	Identify equivalent expressions from properties of real numbers.	22	3.7	23	4.4	20	4.2
R11	Yes	Solve algebra word problem: linear equation.	29	2.7	29	3.6	30	4.0
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	46	4.2	49	6.4	44	6.1
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	11	4.1	11	2.7	12	7.7
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	4	0.9	5	1.6	3	1.0
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	4	1.0	4	1.7	3	1.1

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Colombia SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	70	1.4	68	3.0	72	1.5
B07	No	Interpret line graph to find region of largest increase.	37	2.7	36	3.6	38	3.8
C02	No	Interpret pie graph to determine distribution.	50	2.4	52	4.3	49	2.9
E01	No	Interpret line graph to determine intersection point of two plots.	41	2.4	44	3.2	38	3.7
F08	No	Predict probability of occurrence for independent coin toss.	42	2.1	39	4.2	45	2.5
G01	No	Interpret frequency table to find number above a given level.	36	2.2	35	4.9	38	2.3
H07	No	Interpret barchart histogram to find number above a given level.	35	2.3	37	3.9	35	2.4
H11	No	Predict number of total defective bulbs based on random sample.	43	2.2	47	3.6	38	3.5
I09	Yes	Predict most likely color of random card based on fraction of colors.	25	4.3	23	4.7	26	7.1
J13	Yes	Draw pictograph to represent number given in table.	64	4.2	70	7.3	59	4.7
K07	Yes	Determine the number of blue pens given probability of selection.	29	3.3	33	4.7	26	4.6
L10	Yes	Use data in a chart to identify time/day with highest temperature.	71	4.0	68	7.3	75	3.4
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	47	4.0	49	5.8	44	6.3
N18	Yes	Find probability of drawing an even number from 1 to 9.	23	2.4	27	4.0	19	3.3
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	20	2.7	25	4.3	15	2.8
O05	Yes	Calculate number of cube faces from probability of toss.	15	2.0	16	3.1	13	2.9
P17	Yes	Identify thermometer which shows temperature given in data table.	57	3.6	63	3.9	51	5.3
Q04	Yes	Interpret data in bar graph.	63	3.5	60	3.9	65	4.9
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	26	3.8	29	4.3	23	4.4
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	1	0.5	2	0.9	1	0.5

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Colombia SCALE=Fractions and number sense

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                                                                                    Eighth Grade

                                                                        Overall      Boys       Girls

                                                                        %   (se)    %   (se)    %   (se)
ITEM    REL  LABEL
----------------------------------------------------------------------------------------------------------
A01     No   Determine shaded squares in rectangle = 4/5.               22  1.5    23  2.7    22  2.2
B09     No   Identify shaded figure which shows 2/5 = 4/10.             45  2.0    39  2.2    50  3.6
B10     No   Identify smallest of decimal fractions.                     9  2.0     7  1.7    10  4.7
C04     No   Select correct pair of numbers: # 1 < 2.25 < # 2.          31  1.9    29  3.3    33  2.0
C06     No   Determine the worst estimate of: 848 + 677.                51  2.2    54  3.4    48  2.4
D09     No   Identify smallest fraction.                                12  1.6    14  2.6    11  1.7
D12     No   Estimate rational number from point on number line.        42  1.8    40  3.6    44  2.8
E03     No   Find fraction of hour between two time points.             29  1.6    34  3.1    25  3.9
E04     No   Solve multi-step word problem: 4-digit whole numbers.      43  2.8    42  4.0    43  3.7
F09     No   Identify decimal fraction between 0.07 and 0.08.           36  1.6    39  2.6    34  2.9
F12     No   Identify fraction of circle which is shaded.               28  1.8    29  4.2    27  3.0
G05     No   Identify fraction represented in word problem.             27  1.9    24  2.6    31  2.4
H08     No   Identify figure showing 2/3 shaded.                        33  2.4    36  4.2    30  2.6
H09     No   Identify sum which is closest to 691 + 208.                65  2.0    71  3.5    58  2.3
I02     Yes  Solve multi-step word problem: common fractions.           26  4.3    26  4.7    25  7.2
I05     Yes  Solve subtraction word problem: rational numbers.          44  4.4    43  6.0    44  6.5
I06     Yes  Write a fraction larger than a given number.               77  2.8    77  3.8    76  4.1
I07     Yes  Recognize when estimation is appropriate.                  42  4.3    43  5.9    41  6.5
J12     Yes  Divide fractions.                                          24  3.2    22  5.0    25  4.2
J14     Yes  Divide rational numbers, fractional divisor.               13  2.6    18  4.6     8  2.2
J17     Yes  Use map and scale to find distance between two cities.     31  3.1    27  4.2    34  4.2
K01     Yes  Identify circle with same fraction shaded as rectangular figure.  45  3.5    43  4.4    48  5.4
K02     Yes  Find total volume of mixture using rational number addition.  24  3.0    26  4.4    23  4.3
K06     Yes  Approximate amount increased by 15%.                       29  3.2    26  3.2    31  5.3
K09     Yes  Compute sum of three fractions.                            20  3.0    19  3.5    21  4.5
L08     Yes  Estimate actual height from diagram of relative heights.   36  3.9    44  6.6    26  3.8
L09     Yes  Identify 504.7 from its expression in words.               73  4.2    75  6.9    71  4.1
L17     Yes  Subtract three fractions.                                  22  4.0    27  6.8    16  3.4
M04     Yes  Identify the largest fraction.                              7  2.4     6  2.3     9  3.9
M08     Yes  Multiply two decimal fractions.                            22  4.2    19  4.0    23  7.0
N11     Yes  Identify number  rounded to 18200.                         49  3.9    46  5.3    51  5.2
N14     Yes  Identify list of equivalent fractions.                     43  4.2    44  5.4    43  6.5
N16     Yes  Solve algebra word problem with fractions.                 29  3.6    34  6.4    26  3.6
N17     Yes  Solve multi-step word problem: decimal fractions.          29  3.4    28  5.0    30  4.5
N19     Yes  Shade a given fraction of the squares in a grid.           11  3.8     9  2.3    13  6.7
O02     Yes  Calculate percent increase.                                11  2.0    16  3.2     6  2.1
O04     Yes  Identify number rounded to the nearest 100th.              26  2.9    24  4.0    28  4.2
O09     Yes  Solve division word problem: common fractions.             15  2.3    21  3.4    10  2.5
P12     Yes  Solve word problem: identify best estimate of 84 x 57.     50  3.7    54  4.3    46  5.5
P13     Yes  Use heart beats/min to find  beats per hour.               47  3.9    45  4.3    49  5.6
P14     Yes  Solve subtraction word problem: common fractions.          54  3.7    63  4.2    47  4.9
P16     Yes  Reduce decimal to fraction in lowest terms.                 5  3.7     7  3.9     4  3.8
Q06     Yes  Approximate water use/year from use/week.                  16  3.6    16  4.1    15  3.8
Q08     Yes  Identify fractions and decimals ranked smallest to largest.  11  3.7    12  3.9    10  4.0
Q09     Yes  Perform multiple operations of common fractions.           28  3.8    29  4.4    27  4.6
R06     Yes  Subtract two decimal numbers.                              56  3.9    47  5.8    63  4.1
R07     Yes  Solve division word problem involving decimals.            27  4.0    33  5.3    22  4.2
R12     Yes  Subtract 4-digit whole numbers.                            64  4.0    56  6.5    72  4.4
R13     Yes  Determine how much money left after spending 7/9.           8  3.6    10  4.0     7  3.6
U01A    Yes  Estimate the time required to record 5 songs.               4  0.7     7  1.5     2  0.7
U01B    Yes  Explain method of estimation.                              2  0.4     3  0.9     2  0.6
V01     Yes  Determine actual weight from rounded value.                 6  1.1     6  1.6     6  1.4
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REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Colombia SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	30	1.0	32	1.8	29	1.6
B11	No	Identify cube made by folding 2-dimensional net.	29	2.3	30	3.1	28	4.1
C03	No	Identify properties of congruent trapezoids.	40	1.9	38	2.7	42	2.8
D07	No	Identify relationship of angles in symmetric polygon.	25	2.1	30	3.7	19	1.9
E02	No	Determine angle in congruent triangles.	18	1.7	17	3.1	19	4.0
G03	No	Find sum of vertical angles from diagram of intersecting lines.	21	1.7	23	2.9	20	2.0
I08	Yes	Identify point on a line defined by two other points.	28	4.3	22	3.7	32	6.9
J11	Yes	Identify properties of a parallelogram.	34	3.9	35	7.2	33	3.7
J15	Yes	Identify similar triangles of different size.	42	3.5	39	5.9	45	4.0
J16	Yes	Identify coordinates for point on a grid.	19	3.1	20	5.0	18	3.3
K03	Yes	Identify figure from rotation of 3-dimensional object.	41	3.6	43	4.7	39	5.7
K08	Yes	Determine unknown angle in rotated congruent triangles.	12	2.6	11	2.9	12	4.2
L15	Yes	Find fourth quadrilateral angle, given the other three.	13	1.8	11	2.8	13	2.6
M02	Yes	Identify all lines of symmetry for a rectangle.	44	3.9	46	6.0	42	5.5
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	27	3.2	29	4.4	27	4.3
M07	Yes	Find angle based on supplementary pairs.	38	4.4	38	5.8	39	6.6
N12	Yes	Identify point on number line from distance of other points.	53	4.2	51	7.4	55	5.1
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	17	2.7	18	3.9	17	3.5
O08	Yes	Find center point of rotation for symmetry-related figures.	52	4.4	49	6.6	54	5.8
P08	Yes	Know relationship between side and perimeter for square.	37	4.2	36	4.6	37	6.0
P09	Yes	Find length of side for similar triangles.	18	2.0	20	2.9	15	2.7
Q10	Yes	Perform calculation involving addition/subtraction of angles.	10	2.0	9	2.9	11	2.4
R10	Yes	Determine into how many triangles a trapezoid can be divided.	22	3.0	23	4.1	21	4.1

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Colombia SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	21	1.3	20	2.6	22	2.2
C01	No	Compare volumes of different stacks of blocks.	28	2.0	28	3.5	28	2.1
D11	No	Identify best unit to measure the mass of an egg.	65	3.1	66	4.4	65	3.1
E06	No	Solve word problem to find length of rectangle from width and perimeter.	22	1.4	21	3.2	22	3.7
F10	No	Determine measurement accuracy of ruler.	30	2.6	29	4.5	31	2.2
G02	No	Read meter scale to determine length of a pipe.	49	2.5	47	3.6	51	2.5
I03	Yes	Find number of 750 mL bottles filled by a large volume.	26	4.5	24	5.1	27	7.2
J10	Yes	Determine area of sheet not covered by rectangular picture.	9	1.8	10	3.1	9	2.2
K05	Yes	Calculate area of a rectangle given its length and perimeter.	5	1.4	7	2.3	3	1.5
L12	Yes	Find longest pace from chart showing number of paces to cross room.	55	3.8	59	6.4	51	4.5
M01	Yes	Read mass shown on scale.	58	4.5	60	6.6	56	5.8
N15	Yes	Identify drawing with angle closest to 30 degrees.	37	3.6	41	5.9	33	4.4
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	45	4.3	46	6.7	43	5.5
P11	Yes	Use ruler to determine approximate length of pencil.	29	2.5	37	4.2	22	3.3
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	19	2.4	23	3.5	16	3.1
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	24	6.9	22	6.6	28	13.7
S02B	Yes	Calculate length of side of square given area.	9	3.5	5	1.2	14	7.2
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	8	7.3	1	1.0	16	15.6
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	5	1.0	6	1.6	4	1.1
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	0	0.2	1	0.5	.	.
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	10	4.0	8	2.0	12	7.6

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Colombia SCALE=Proportionality

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	38	1.4	42	2.3	34	1.8
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	63	2.2	61	4.1	66	2.7
D08	No	Solve ratio problem for x: 7/13 = x/52.	28	2.3	28	3.3	29	3.6
F07	No	Solve word problem to find average speed from distance and time.	17	1.4	18	3.1	18	2.8
G04	No	Solve simple proportionality equation.	49	1.9	52	2.4	46	2.9
L14	Yes	Identify missing numbers in table of proportional x and y values.	11	2.2	15	4.0	7	1.9
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	12	2.0	12	3.0	12	2.8
Q05	Yes	Solve word problem involving ratios.	30	3.9	33	5.3	27	4.6
R14	Yes	Solve multi-step word problem involving ratios.	7	1.6	11	2.9	4	1.5
T02A	Yes	Solve algebra word problem involving ratios.	2	0.6	2	0.9	1	0.9
T02B	Yes	Solve multi-step word problem computing fractions.	2	0.5	3	0.8	1	0.5
V03	Yes	Determine ratio of red paint in a mixture.	15	2.1	13	2.5	17	3.2

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Cyprus SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	69	1.0	70	1.6	69	1.4
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	63	1.6	60	2.2	66	2.1
C05	No	Determine number which continues pattern based on figures.	43	1.7	43	2.7	44	2.3
D10	No	Identify equation which solves word problem: C=(100+6n).	37	1.9	36	2.3	39	2.9
E05	No	Find relationship between numbers in a set of ordered pairs.	34	1.7	31	2.4	36	2.7
F11	No	Solve multi-step problem using linear equations.	46	1.8	43	2.4	48	2.2
G06	No	Find solution to -3X for given value of X.	49	2.1	45	3.0	52	2.3
H10	No	Identify equation expressing xy relationship from table of values.	37	2.1	36	2.4	39	3.0
H12	No	Select symbolic linear equation which fits word problem.	72	1.5	71	2.2	73	2.0
I01	Yes	Identify meaning of symbol in word problem equation.	31	2.7	33	3.3	29	4.1
I04	Yes	Determine next number which occurs in two number sequences.	37	2.6	34	3.4	39	4.0
J18	Yes	Identify missing number in table showing xy relationship.	30	2.7	29	3.7	30	3.3
K04	Yes	Identify expression equivalent to linear inequality.	47	3.2	45	3.6	48	4.2
L11	Yes	Solve multi-step word problem using pattern.	32	2.5	31	3.4	33	3.3
L13	Yes	Identify matching patterns of symbols.	83	2.6	82	3.3	85	3.2
L16	Yes	Simplify and solve linear equation for X.	57	2.4	50	3.4	64	3.7
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	48	2.6	45	4.2	51	3.8
O07	Yes	Solve linear equation for X.	71	3.2	66	5.0	75	3.4
P10	Yes	Identify equivalent algebraic expressions.	59	2.9	60	3.9	57	4.4
P15	Yes	Identify equivalent expression for a cubic relationship.	65	2.8	66	3.3	65	4.5
Q01	Yes	Identify linear expression based on word problem.	47	3.0	47	4.0	47	4.2
Q02	Yes	Subtract fractional expressions of X.	48	3.2	47	4.1	50	4.9
Q07	Yes	Solve P=LW for W given values for P and L.	64	2.5	58	3.2	70	3.8
R09	Yes	Identify equivalent expressions from properties of real numbers.	38	3.1	41	3.8	36	4.3
R11	Yes	Solve algebra word problem: linear equation.	37	3.0	37	3.6	37	4.4
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	69	2.7	68	3.8	70	3.1
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	20	2.4	19	2.6	21	3.2
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	27	1.6	27	2.7	28	2.3
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	39	1.8	37	2.9	42	2.5

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Cyprus SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	70	1.1	70	1.5	71	1.4
B07	No	Interpret line graph to find region of largest increase.	40	1.5	37	1.7	43	2.1
C02	No	Interpret pie graph to determine distribution.	62	1.8	60	2.2	63	2.6
E01	No	Interpret line graph to determine intersection point of two plots.	64	1.6	68	2.2	61	2.2
F08	No	Predict probability of occurrence for independent coin toss.	55	1.4	55	2.0	55	2.3
G01	No	Interpret frequency table to find number above a given level.	43	1.7	41	2.2	45	2.3
H07	No	Interpret barchart histogram to find number above a given level.	55	1.7	57	2.5	54	2.7
H11	No	Predict number of total defective bulbs based on random sample.	60	1.8	63	2.6	57	2.3
I09	Yes	Predict most likely color of random card based on fraction of colors.	69	2.4	69	3.7	69	3.1
J13	Yes	Draw pictograph to represent number given in table.	82	1.8	79	2.7	86	2.3
K07	Yes	Determine the number of blue pens given probability of selection.	54	2.6	53	4.1	55	3.5
L10	Yes	Use data in a chart to identify time/day with highest temperature.	78	2.5	75	4.0	81	2.6
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	68	2.9	66	3.4	71	4.2
N18	Yes	Find probability of drawing an even number from 1 to 9.	44	2.7	45	3.9	43	3.5
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	40	3.2	40	4.5	40	5.3
O05	Yes	Calculate number of cube faces from probability of toss.	46	3.0	50	4.4	43	3.3
P17	Yes	Identify thermometer which shows temperature given in data table.	67	3.0	60	4.2	76	3.7
Q04	Yes	Interpret data in bar graph.	71	2.9	65	3.6	79	3.0
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	40	3.1	44	3.9	34	4.9
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	8	1.6	8	2.3	8	2.1

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Cyprus SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	60	1.1	61	1.5	60	1.7
B09	No	Identify shaded figure which shows 2/5 = 4/10.	55	1.5	50	2.3	61	2.1
B10	No	Identify smallest of decimal fractions.	25	1.6	27	1.8	22	2.0
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	52	1.6	53	2.0	51	2.2
C06	No	Determine the worst estimate of: 848 + 677.	66	1.4	68	1.9	64	2.1
D09	No	Identify smallest fraction.	69	1.6	70	2.4	69	1.9
D12	No	Estimate rational number from point on number line.	40	1.5	40	2.3	39	2.5
E03	No	Find fraction of hour between two time points.	56	1.8	58	2.1	55	2.8
E04	No	Solve multi-step word problem: 4-digit whole numbers.	54	2.0	54	2.7	54	2.3
F09	No	Identify decimal fraction between 0.07 and 0.08.	53	1.6	54	2.2	52	2.6
F12	No	Identify fraction of circle which is shaded.	45	1.8	45	2.2	46	2.5
G05	No	Identify fraction represented in word problem.	58	1.6	56	2.3	61	2.2
H08	No	Identify figure showing 2/3 shaded.	81	1.3	78	1.8	84	1.9
H09	No	Identify sum which is closest to 691 + 208.	81	1.3	82	1.8	80	1.7
I02	Yes	Solve multi-step word problem: common fractions.	53	2.9	53	3.7	54	4.0
I05	Yes	Solve subtraction word problem: rational numbers.	68	2.5	64	3.1	73	3.7
I06	Yes	Write a fraction larger than a given number.	77	2.4	76	3.6	78	3.4
I07	Yes	Recognize when estimation is appropriate.	41	2.8	40	3.1	42	3.7
J12	Yes	Divide fractions.	48	2.5	40	3.3	56	3.7
J14	Yes	Divide rational numbers, fractional divisor.	48	2.8	45	3.8	51	3.5
J17	Yes	Use map and scale to find distance between two cities.	61	2.7	66	3.8	57	3.6
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	64	2.5	68	3.8	60	4.3
K02	Yes	Find total volume of mixture using rational number addition.	50	3.1	46	4.3	54	4.3
K06	Yes	Approximate amount increased by 15%.	32	3.2	37	4.0	28	3.9
K09	Yes	Compute sum of three fractions.	62	3.2	60	4.4	64	3.5
L08	Yes	Estimate actual height from diagram of relative heights.	47	2.8	50	3.8	45	4.1
L09	Yes	Identify 504.7 from its expression in words.	60	2.8	63	3.6	57	4.0
L17	Yes	Subtract three fractions.	50	3.1	55	3.9	44	4.5
M04	Yes	Identify the largest fraction.	38	2.6	39	3.5	38	4.3
M08	Yes	Multiply two decimal fractions.	41	3.0	36	3.5	47	4.3
N11	Yes	Identify number rounded to 18200.	65	2.7	69	3.8	62	3.5
N14	Yes	Identify list of equivalent fractions.	74	2.7	75	4.0	73	3.9
N16	Yes	Solve algebra word problem with fractions.	38	2.9	39	4.1	38	3.3
N17	Yes	Solve multi-step word problem: decimal fractions.	30	2.5	29	3.6	31	3.5
N19	Yes	Shade a given fraction of the squares in a grid.	52	2.9	52	5.1	52	3.3
O02	Yes	Calculate percent increase.	19	2.8	17	3.3	22	3.8
O04	Yes	Identify number rounded to the nearest 100th.	38	3.3	37	4.0	40	4.0
O09	Yes	Solve division word problem: common fractions.	37	2.9	45	5.1	30	3.4
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	62	3.2	67	4.1	56	4.8
P13	Yes	Use heart beats/min to find beats per hour.	59	3.0	55	3.7	63	4.6
P14	Yes	Solve subtraction word problem: common fractions.	72	2.7	71	3.3	74	3.7
P16	Yes	Reduce decimal to fraction in lowest terms.	22	2.9	20	3.1	26	4.6
Q06	Yes	Approximate water use/year from use/week.	30	2.8	36	4.3	23	3.5
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	29	2.9	32	3.3	26	4.0
Q09	Yes	Perform multiple operations of common fractions.	55	2.8	49	3.9	63	4.1
R06	Yes	Subtract two decimal numbers.	63	2.8	58	4.3	70	3.3
R07	Yes	Solve division word problem involving decimals.	29	2.2	33	3.6	24	3.4
R12	Yes	Subtract 4-digit whole numbers.	85	2.2	83	3.4	88	3.0
R13	Yes	Determine how much money left after spending 7/9.	34	2.6	34	2.5	35	4.8
U01A	Yes	Estimate the time required to record 5 songs.	14	1.2	14	2.0	14	1.8
U01B	Yes	Explain method of estimation.	18	1.6	14	2.3	22	2.0
V01	Yes	Determine actual weight from rounded value.	17	1.9	16	2.3	17	2.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Cyprus SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	75	1.0	73	1.4	77	1.2
B11	No	Identify cube made by folding 2-dimensional net.	47	1.6	47	2.3	47	2.2
C03	No	Identify properties of congruent trapezoids.	56	1.9	49	2.5	62	2.6
D07	No	Identify relationship of angles in symmetric polygon.	66	1.9	64	2.4	68	2.5
E02	No	Determine angle in congruent triangles.	50	1.6	49	2.1	51	2.2
G03	No	Find sum of vertical angles from diagram of intersecting lines.	45	1.8	45	2.2	45	2.7
I08	Yes	Identify point on a line defined by two other points.	30	2.5	35	3.0	25	3.6
J11	Yes	Identify properties of a parallelogram.	41	3.0	38	4.1	45	4.3
J15	Yes	Identify similar triangles of different size.	54	3.2	52	4.1	56	3.4
J16	Yes	Identify coordinates for point on a grid.	22	2.3	19	2.5	24	3.4
K03	Yes	Identify figure from rotation of 3-dimensional object.	43	3.0	44	3.8	43	4.3
K08	Yes	Determine unknown angle in rotated congruent triangles.	41	2.4	42	3.3	41	3.1
L15	Yes	Find fourth quadrilateral angle, given the other three.	39	2.5	42	3.6	36	4.1
M02	Yes	Identify all lines of symmetry for a rectangle.	58	2.2	55	3.9	61	3.6
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	29	2.6	28	3.5	29	3.3
M07	Yes	Find angle based on supplementary pairs.	65	2.6	68	3.7	64	4.1
N12	Yes	Identify point on number line from distance of other points.	64	2.9	68	4.4	61	4.1
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	36	3.0	34	3.8	39	4.8
O08	Yes	Find center point of rotation for symmetry-related figures.	57	3.2	51	4.6	64	4.2
P08	Yes	Know relationship between side and perimeter for square.	55	2.7	55	3.6	57	4.0
P09	Yes	Find length of side for similar triangles.	29	2.5	32	3.2	24	3.7
Q10	Yes	Perform calculation involving addition/subtraction of angles.	41	3.2	38	4.2	46	4.4
R10	Yes	Determine into how many triangles a trapezoid can be divided.	41	3.0	44	4.1	39	4.1

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Cyprus SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	39	1.3	39	1.6	39	1.9
C01	No	Compare volumes of different stacks of blocks.	46	2.0	49	2.3	43	2.7
D11	No	Identify best unit to measure the mass of an egg.	70	1.6	72	2.1	69	2.2
E06	No	Solve word problem to find length of rectangle from width and perimeter.	35	1.6	39	2.4	31	2.1
F10	No	Determine measurement accuracy of ruler.	21	1.5	27	1.9	15	1.8
G02	No	Read meter scale to determine length of a pipe.	59	2.1	58	3.3	60	2.6
I03	Yes	Find number of 750 mL bottles filled by a large volume.	25	3.1	28	3.2	22	4.2
J10	Yes	Determine area of sheet not covered by rectangular picture.	52	2.8	52	3.7	52	4.5
K05	Yes	Calculate area of a rectangle given its length and perimeter.	43	2.9	44	4.0	41	3.4
L12	Yes	Find longest pace from chart showing number of paces to cross room.	63	2.9	62	3.7	64	4.2
M01	Yes	Read mass shown on scale.	72	2.4	67	3.7	77	3.3
N15	Yes	Identify drawing with angle closest to 30 degrees.	64	2.8	63	4.1	66	3.7
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	79	2.1	79	3.0	80	3.6
P11	Yes	Use ruler to determine approximate length of pencil.	40	3.4	42	4.4	38	4.7
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	27	2.4	31	3.2	23	3.4
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	50	3.0	51	3.8	49	4.3
S02B	Yes	Calculate length of side of square given area.	32	3.3	35	4.0	28	4.0
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	17	2.3	20	3.4	14	2.9
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	35	2.1	31	3.5	38	2.9
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	20	1.8	16	2.6	24	2.4
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	41	2.8	37	3.9	45	3.2

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Cyprus SCALE=Proportionality

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	48	1.4	52	1.7	44	1.8
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	72	1.3	67	1.8	77	1.7
D08	No	Solve ratio problem for x: 7/13 = x/52.	68	1.6	66	2.2	70	2.0
F07	No	Solve word problem to find average speed from distance and time.	24	1.5	24	2.1	24	2.2
G04	No	Solve simple proportionality equation.	69	1.6	66	2.6	71	1.9
L14	Yes	Identify missing numbers in table of proportional x and y values.	24	2.4	25	3.3	22	2.7
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	24	2.6	30	3.6	18	3.5
Q05	Yes	Solve word problem involving ratios.	63	2.7	68	3.9	57	3.9
R14	Yes	Solve multi-step word problem involving ratios.	30	3.0	32	3.7	28	4.4
T02A	Yes	Solve algebra word problem involving ratios.	13	1.8	11	2.3	14	2.0
T02B	Yes	Solve multi-step word problem computing fractions.	5	1.2	5	1.4	4	1.4
V03	Yes	Determine ratio of red paint in a mixture.	34	2.1	34	2.9	35	3.0

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Czech Republic SCALE=Algebra

Eighth Grade

			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	86	1.1	88	1.3	83	1.5
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	79	1.5	78	1.7	80	2.0
C05	No	Determine number which continues pattern based on figures.	66	2.1	59	2.7	73	2.2
D10	No	Identify equation which solves word problem: C=(100+6n).	58	1.7	58	1.9	59	2.6
E05	No	Find relationship between numbers in a set of ordered pairs.	72	1.8	71	2.0	74	2.2
F11	No	Solve multi-step problem using linear equations.	47	2.5	47	2.6	47	3.1
G06	No	Find solution to -3X for given value of X.	73	2.3	73	2.5	73	3.2
H10	No	Identify equation expressing xy relationship from table of values.	75	2.0	77	2.3	72	2.6
H12	No	Select symbolic linear equation which fits word problem.	83	1.6	83	1.7	82	2.6
I01	Yes	Identify meaning of symbol in word problem equation.	43	2.9	45	4.3	41	3.3
I04	Yes	Determine next number which occurs in two number sequences.	57	3.1	50	3.3	65	4.0
J18	Yes	Identify missing number in table showing xy relationship.	49	3.1	52	3.7	45	5.0
K04	Yes	Identify expression equivalent to linear inequality.	55	3.5	55	4.8	56	4.1
L11	Yes	Solve multi-step word problem using pattern.	44	2.8	42	4.5	45	4.4
L13	Yes	Identify matching patterns of symbols.	98	0.6	99	0.6	98	1.1
L16	Yes	Simplify and solve linear equation for X.	80	3.1	78	4.6	82	3.9
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	70	3.3	70	4.8	70	3.5
O07	Yes	Solve linear equation for X.	86	2.2	85	2.7	87	2.9
P10	Yes	Identify equivalent algebraic expressions.	75	2.7	75	3.1	74	4.3
P15	Yes	Identify equivalent expression for a cubic relationship.	85	2.5	85	2.7	85	3.9
Q01	Yes	Identify linear expression based on word problem.	70	3.7	66	4.4	74	4.3
Q02	Yes	Subtract fractional expressions of X.	58	3.2	50	4.6	66	3.3
Q07	Yes	Solve P=LW for W given values for P and L.	76	2.4	71	3.8	81	2.9
R09	Yes	Identify equivalent expressions from properties of real numbers.	58	3.1	55	4.2	61	4.2
R11	Yes	Solve algebra word problem: linear equation.	49	2.6	51	3.0	46	4.4
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	75	2.4	73	3.6	76	3.5
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	32	3.4	32	3.3	33	5.5
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	51	3.0	52	3.6	51	3.8
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	53	3.2	53	3.8	54	4.1

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Czech Republic SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	88	0.8	88	1.1	88	1.1
B07	No	Interpret line graph to find region of largest increase.	61	1.9	63	2.1	59	2.5
C02	No	Interpret pie graph to determine distribution.	83	1.4	82	2.1	84	2.0
E01	No	Interpret line graph to determine intersection point of two plots.	88	1.2	90	1.4	86	2.1
F08	No	Predict probability of occurrence for independent coin toss.	75	1.3	77	1.9	72	1.7
G01	No	Interpret frequency table to find number above a given level.	64	1.8	65	2.6	64	2.7
H07	No	Interpret barchart histogram to find number above a given level.	68	2.0	70	2.8	65	2.4
H11	No	Predict number of total defective bulbs based on random sample.	76	1.5	82	1.7	70	2.8
I09	Yes	Predict most likely color of random card based on fraction of colors.	67	2.8	70	3.9	64	4.9
J13	Yes	Draw pictograph to represent number given in table.	84	2.3	86	2.6	82	3.5
K07	Yes	Determine the number of blue pens given probability of selection.	58	3.0	56	4.0	60	4.2
L10	Yes	Use data in a chart to identify time/day with highest temperature.	96	0.8	96	1.7	95	2.2
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	76	2.8	78	3.5	75	3.8
N18	Yes	Find probability of drawing an even number from 1 to 9.	55	3.2	61	4.2	49	4.5
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	71	2.8	75	3.3	67	4.1
O05	Yes	Calculate number of cube faces from probability of toss.	36	3.2	39	4.6	34	4.8
P17	Yes	Identify thermometer which shows temperature given in data table.	97	1.0	96	1.6	97	1.2
Q04	Yes	Interpret data in bar graph.	89	1.7	89	2.3	88	2.4
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	53	3.0	63	4.3	42	4.5
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	28	2.6	27	2.9	28	3.5

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Czech Republic SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	60	2.1	63	2.2	57	3.0
B09	No	Identify shaded figure which shows 2/5 = 4/10.	51	1.6	52	2.4	51	2.2
B10	No	Identify smallest of decimal fractions.	64	2.2	67	2.6	60	3.0
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	66	2.0	69	2.3	62	2.9
C06	No	Determine the worst estimate of: 848 + 677.	86	1.3	88	1.3	84	2.0
D09	No	Identify smallest fraction.	68	2.1	71	2.3	66	2.6
D12	No	Estimate rational number from point on number line.	81	1.7	84	1.9	77	2.3
E03	No	Find fraction of hour between two time points.	59	2.4	59	2.8	59	3.1
E04	No	Solve multi-step word problem: 4-digit whole numbers.	69	1.9	70	2.1	68	2.8
F09	No	Identify decimal fraction between 0.07 and 0.08.	78	1.4	80	1.8	76	2.2
F12	No	Identify fraction of circle which is shaded.	54	2.0	56	2.9	52	2.4
G05	No	Identify fraction represented in word problem.	58	2.1	60	2.8	56	3.6
H08	No	Identify figure showing 2/3 shaded.	68	2.0	72	2.4	64	2.7
H09	No	Identify sum which is closest to 691 + 208.	94	0.7	95	0.9	94	1.1
I02	Yes	Solve multi-step word problem: common fractions.	63	3.0	62	3.8	64	4.0
I05	Yes	Solve subtraction word problem: rational numbers.	86	2.1	82	3.3	89	2.3
I06	Yes	Write a fraction larger than a given number.	83	2.1	82	2.8	84	2.9
I07	Yes	Recognize when estimation is appropriate.	75	2.0	66	3.4	85	2.6
J12	Yes	Divide fractions.	66	3.1	59	4.1	74	4.1
J14	Yes	Divide rational numbers, fractional divisor.	72	2.8	76	3.7	69	4.3
J17	Yes	Use map and scale to find distance between two cities.	83	2.5	85	3.6	81	2.8
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	84	2.0	89	2.6	79	2.8
K02	Yes	Find total volume of mixture using rational number addition.	73	2.4	74	3.2	72	3.5
K06	Yes	Approximate amount increased by 15%.	59	3.1	63	4.4	56	3.7
K09	Yes	Compute sum of three fractions.	76	2.8	72	3.6	81	4.0
L08	Yes	Estimate actual height from diagram of relative heights.	70	3.0	73	3.2	67	4.8
L09	Yes	Identify 504.7 from its expression in words.	98	0.8	96	1.3	99	0.6
L17	Yes	Subtract three fractions.	70	2.8	68	4.2	72	4.3
M04	Yes	Identify the largest fraction.	39	2.8	44	5.4	33	3.9
M08	Yes	Multiply two decimal fractions.	81	2.7	76	3.1	86	3.3
N11	Yes	Identify number rounded to 18200.	95	1.4	96	1.5	94	2.1
N14	Yes	Identify list of equivalent fractions.	80	2.1	81	3.0	78	3.2
N16	Yes	Solve algebra word problem with fractions.	50	3.0	55	4.3	44	3.9
N17	Yes	Solve multi-step word problem: decimal fractions.	43	4.1	50	5.4	36	5.3
N19	Yes	Shade a given fraction of the squares in a grid.	52	3.5	58	4.4	47	4.0
O02	Yes	Calculate percent increase.	38	3.4	43	4.3	32	4.2
O04	Yes	Identify number rounded to the nearest 100th.	73	2.9	72	3.6	75	4.1
O09	Yes	Solve division word problem: common fractions.	57	2.8	60	4.5	54	3.3
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	86	2.1	84	3.1	88	2.2
P13	Yes	Use heart beats/min to find beats per hour.	88	1.8	92	2.0	84	3.0
P14	Yes	Solve subtraction word problem: common fractions.	87	1.8	85	2.8	89	2.2
P16	Yes	Reduce decimal to fraction in lowest terms.	34	3.1	37	4.4	31	3.2
Q06	Yes	Approximate water use/year from use/week.	57	3.0	57	3.8	58	4.6
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	55	3.2	59	3.8	51	4.8
Q09	Yes	Perform multiple operations of common fractions.	72	2.3	69	3.7	76	3.3
R06	Yes	Subtract two decimal numbers.	90	2.1	90	2.5	90	2.7
R07	Yes	Solve division word problem involving decimals.	64	3.7	64	4.9	63	4.2
R12	Yes	Subtract 4-digit whole numbers.	97	0.9	97	1.2	98	1.0
R13	Yes	Determine how much money left after spending 7/9.	35	3.8	40	4.7	30	4.9
U01A	Yes	Estimate the time required to record 5 songs.	58	2.5	58	3.1	58	3.0
U01B	Yes	Explain method of estimation.	53	2.0	52	2.4	54	2.7
V01	Yes	Determine actual weight from rounded value.	80	1.7	80	2.3	80	2.3

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Czech Republic SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	83	1.2	82	1.4	84	1.4
B11	No	Identify cube made by folding 2-dimensional net.	78	1.4	81	1.4	76	2.3
C03	No	Identify properties of congruent trapezoids.	71	1.8	71	2.2	72	2.1
D07	No	Identify relationship of angles in symmetric polygon.	84	1.2	85	1.6	84	1.9
E02	No	Determine angle in congruent triangles.	65	2.0	69	2.2	60	2.8
G03	No	Find sum of vertical angles from diagram of intersecting lines.	57	2.4	58	2.7	56	3.3
I08	Yes	Identify point on a line defined by two other points.	34	3.1	35	3.8	33	5.1
J11	Yes	Identify properties of a parallelogram.	57	3.0	51	4.7	63	4.1
J15	Yes	Identify similar triangles of different size.	77	2.9	79	4.2	76	4.0
J16	Yes	Identify coordinates for point on a grid.	72	2.6	70	3.5	74	3.5
K03	Yes	Identify figure from rotation of 3-dimensional object.	87	1.9	89	2.6	85	2.7
K08	Yes	Determine unknown angle in rotated congruent triangles.	51	3.0	50	4.9	51	3.3
L15	Yes	Find fourth quadrilateral angle, given the other three.	48	3.3	49	4.2	46	5.5
M02	Yes	Identify all lines of symmetry for a rectangle.	74	2.6	73	3.7	76	4.5
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	65	3.0	72	4.2	59	4.1
M07	Yes	Find angle based on supplementary pairs.	82	2.3	82	3.2	83	3.0
N12	Yes	Identify point on number line from distance of other points.	72	2.4	78	3.0	65	3.5
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	57	3.1	61	4.2	53	3.8
O08	Yes	Find center point of rotation for symmetry-related figures.	78	2.2	77	3.0	80	3.0
P08	Yes	Know relationship between side and perimeter for square.	60	2.9	59	3.5	60	3.6
P09	Yes	Find length of side for similar triangles.	50	3.2	59	3.9	40	5.1
Q10	Yes	Perform calculation involving addition/subtraction of angles.	58	3.2	59	3.5	57	4.7
R10	Yes	Determine into how many triangles a trapezoid can be divided.	66	2.4	67	3.9	66	3.0

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Czech Republic SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	93	0.5	94	0.7	93	0.9
C01	No	Compare volumes of different stacks of blocks.	73	1.7	79	2.1	67	2.4
D11	No	Identify best unit to measure the mass of an egg.	96	0.8	96	0.9	95	1.1
E06	No	Solve word problem to find length of rectangle from width and perimeter.	49	2.1	51	2.7	48	2.8
F10	No	Determine measurement accuracy of ruler.	77	1.4	82	2.0	72	1.8
G02	No	Read meter scale to determine length of a pipe.	91	1.0	92	1.1	91	1.4
I03	Yes	Find number of 750 mL bottles filled by a large volume.	51	3.0	55	4.3	47	3.9
J10	Yes	Determine area of sheet not covered by rectangular picture.	59	3.5	60	4.3	58	3.9
K05	Yes	Calculate area of a rectangle given its length and perimeter.	53	3.6	56	4.7	51	4.5
L12	Yes	Find longest pace from chart showing number of paces to cross room.	94	1.4	94	1.9	93	1.9
M01	Yes	Read mass shown on scale.	92	1.7	91	2.5	93	2.1
N15	Yes	Identify drawing with angle closest to 30 degrees.	76	3.0	77	3.7	75	4.4
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	84	1.9	81	2.9	87	2.4
P11	Yes	Use ruler to determine approximate length of pencil.	67	2.6	69	3.6	65	3.7
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	40	3.4	49	3.7	30	5.2
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	69	2.8	71	3.5	66	4.1
S02B	Yes	Calculate length of side of square given area.	42	3.4	45	4.0	40	5.7
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	33	2.7	37	3.8	29	5.9
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	36	2.4	34	3.3	38	3.1
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	13	2.0	17	3.2	9	2.0
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	46	3.0	47	3.5	44	3.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Czech Republic SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	61	1.4	68	1.6	54	2.1
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	78	1.3	76	1.7	80	2.1
D08	No	Solve ratio problem for x: 7/13 = x/52.	77	1.9	80	2.2	73	2.8
F07	No	Solve word problem to find average speed from distance and time.	46	2.4	49	3.2	42	2.9
G04	No	Solve simple proportionality equation.	76	1.5	81	2.0	72	2.0
L14	Yes	Identify missing numbers in table of proportional x and y values.	30	3.2	38	5.2	21	3.3
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	60	3.7	57	4.6	62	4.2
Q05	Yes	Solve word problem involving ratios.	70	2.7	76	3.6	63	3.5
R14	Yes	Solve multi-step word problem involving ratios.	63	2.8	66	3.2	60	4.1
T02A	Yes	Solve algebra word problem involving ratios.	18	2.2	18	2.9	17	2.6
T02B	Yes	Solve multi-step word problem computing fractions.	12	2.1	12	2.1	12	3.4
V03	Yes	Determine ratio of red paint in a mixture.	29	1.9	30	2.8	28	2.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Slovak Republic SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	87	0.7	87	1.0	86	1.1
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	80	1.6	77	2.0	82	1.5
C05	No	Determine number which continues pattern based on figures.	64	1.4	59	2.1	69	2.1
D10	No	Identify equation which solves word problem: C=(100+6n).	41	1.7	43	2.2	39	2.1
E05	No	Find relationship between numbers in a set of ordered pairs.	62	1.7	61	2.2	64	2.0
F11	No	Solve multi-step problem using linear equations.	45	2.1	45	3.1	46	2.1
G06	No	Find solution to -3X for given value of X.	70	1.5	65	2.3	75	1.9
H10	No	Identify equation expressing xy relationship from table of values.	71	1.7	69	2.1	74	2.0
H12	No	Select symbolic linear equation which fits word problem.	76	1.5	76	2.1	76	2.0
I01	Yes	Identify meaning of symbol in word problem equation.	43	3.4	47	4.5	40	3.7
I04	Yes	Determine next number which occurs in two number sequences.	49	2.5	39	3.6	59	3.1
J18	Yes	Identify missing number in table showing xy relationship.	43	3.3	44	4.3	41	4.0
K04	Yes	Identify expression equivalent to linear inequality.	53	2.7	55	3.5	52	4.2
L11	Yes	Solve multi-step word problem using pattern.	41	3.0	39	3.7	42	3.8
L13	Yes	Identify matching patterns of symbols.	92	1.5	90	2.2	94	1.8
L16	Yes	Simplify and solve linear equation for X.	74	2.3	70	3.3	78	3.3
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	72	2.1	68	3.0	76	2.9
O07	Yes	Solve linear equation for X.	84	2.1	81	3.1	88	2.4
P10	Yes	Identify equivalent algebraic expressions.	77	2.6	76	3.5	77	2.9
P15	Yes	Identify equivalent expression for a cubic relationship.	85	3.1	87	3.1	84	3.8
Q01	Yes	Identify linear expression based on word problem.	65	2.6	60	3.5	70	3.3
Q02	Yes	Subtract fractional expressions of X.	69	2.6	64	3.8	73	3.0
Q07	Yes	Solve P=LW for W given values for P and L.	74	2.3	70	3.9	78	2.9
R09	Yes	Identify equivalent expressions from properties of real numbers.	57	2.8	53	4.2	61	4.1
R11	Yes	Solve algebra word problem: linear equation.	48	2.8	52	3.9	45	4.1
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	73	2.4	69	3.8	76	2.9
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	27	2.4	25	3.3	29	3.4
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	45	2.1	42	2.6	49	2.9
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	51	2.0	47	2.7	54	2.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Slovak Republic SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	89	0.7	88	0.9	89	1.0
B07	No	Interpret line graph to find region of largest increase.	65	1.4	65	1.8	64	1.9
C02	No	Interpret pie graph to determine distribution.	86	1.1	85	1.5	87	1.5
E01	No	Interpret line graph to determine intersection point of two plots.	83	1.1	86	1.4	79	1.5
F08	No	Predict probability of occurrence for independent coin toss.	67	1.8	69	2.0	65	2.6
G01	No	Interpret frequency table to find number above a given level.	45	2.0	44	2.6	46	2.8
H07	No	Interpret barchart histogram to find number above a given level.	64	1.7	63	2.1	64	2.1
H11	No	Predict number of total defective bulbs based on random sample.	67	1.5	73	1.8	62	2.1
I09	Yes	Predict most likely color of random card based on fraction of colors.	70	2.4	71	3.2	69	3.4
J13	Yes	Draw pictograph to represent number given in table.	80	2.0	78	3.1	83	2.6
K07	Yes	Determine the number of blue pens given probability of selection.	43	2.5	47	4.0	37	3.5
L10	Yes	Use data in a chart to identify time/day with highest temperature.	93	1.4	93	1.8	94	1.8
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	70	2.6	70	4.2	70	3.3
N18	Yes	Find probability of drawing an even number from 1 to 9.	38	2.5	41	3.9	34	3.2
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	56	2.8	53	4.4	60	3.0
O05	Yes	Calculate number of cube faces from probability of toss.	43	2.9	43	4.2	43	3.4
P17	Yes	Identify thermometer which shows temperature given in data table.	93	1.3	94	2.1	93	1.7
Q04	Yes	Interpret data in bar graph.	84	1.9	79	3.4	88	2.2
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	49	2.4	53	3.7	45	3.7
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	15	1.7	14	2.0	15	2.1

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Slovak Republic SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	67	1.5	68	1.6	65	1.7
B09	No	Identify shaded figure which shows 2/5 = 4/10.	53	1.9	51	2.1	56	2.2
B10	No	Identify smallest of decimal fractions.	64	1.6	66	1.8	63	2.2
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	62	1.5	62	1.8	61	2.2
C06	No	Determine the worst estimate of: 848 + 677.	81	1.1	80	1.6	83	1.5
D09	No	Identify smallest fraction.	71	1.8	75	2.3	68	2.2
D12	No	Estimate rational number from point on number line.	75	1.3	76	1.7	74	1.8
E03	No	Find fraction of hour between two time points.	66	1.6	66	1.9	65	2.1
E04	No	Solve multi-step word problem: 4-digit whole numbers.	77	1.5	74	2.1	79	1.9
F09	No	Identify decimal fraction between 0.07 and 0.08.	73	1.6	75	2.1	71	1.8
F12	No	Identify fraction of circle which is shaded.	51	1.8	50	2.2	53	2.2
G05	No	Identify fraction represented in word problem.	50	1.7	48	2.1	52	2.0
H08	No	Identify figure showing 2/3 shaded.	66	1.8	67	2.4	64	2.5
H09	No	Identify sum which is closest to 691 + 208.	87	1.0	86	1.4	89	1.1
I02	Yes	Solve multi-step word problem: common fractions.	65	2.5	64	3.7	66	3.2
I05	Yes	Solve subtraction word problem: rational numbers.	81	1.9	75	3.1	86	2.2
I06	Yes	Write a fraction larger than a given number.	85	1.8	85	2.1	86	2.6
I07	Yes	Recognize when estimation is appropriate.	76	2.1	71	3.1	82	2.7
J12	Yes	Divide fractions.	76	2.5	76	3.4	77	3.0
J14	Yes	Divide rational numbers, fractional divisor.	69	2.9	67	3.7	71	3.3
J17	Yes	Use map and scale to find distance between two cities.	76	2.3	75	3.1	77	3.0
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	75	2.2	81	2.8	69	3.7
K02	Yes	Find total volume of mixture using rational number addition.	74	2.3	73	3.6	76	3.5
K06	Yes	Approximate amount increased by 15%.	50	2.4	56	3.7	44	3.4
K09	Yes	Compute sum of three fractions.	76	2.3	72	3.4	81	3.2
L08	Yes	Estimate actual height from diagram of relative heights.	74	2.1	78	2.6	70	3.2
L09	Yes	Identify 504.7 from its expression in words.	97	0.9	96	1.3	97	1.2
L17	Yes	Subtract three fractions.	73	2.1	67	3.0	79	3.0
M04	Yes	Identify the largest fraction.	45	2.5	45	3.5	45	3.5
M08	Yes	Multiply two decimal fractions.	76	2.6	72	3.3	79	3.6
N11	Yes	Identify number rounded to 18200.	91	1.6	92	1.9	91	2.1
N14	Yes	Identify list of equivalent fractions.	70	2.9	69	3.5	70	3.8
N16	Yes	Solve algebra word problem with fractions.	48	2.5	50	3.6	45	3.6
N17	Yes	Solve multi-step word problem: decimal fractions.	38	2.4	45	4.0	31	3.2
N19	Yes	Shade a given fraction of the squares in a grid.	56	2.5	58	3.4	53	3.7
O02	Yes	Calculate percent increase.	34	2.6	34	3.7	35	3.3
O04	Yes	Identify number rounded to the nearest 100th.	68	2.4	71	3.2	65	3.3
O09	Yes	Solve division word problem: common fractions.	51	3.3	55	4.9	48	3.8
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	83	2.1	84	2.8	82	2.9
P13	Yes	Use heart beats/min to find beats per hour.	80	2.1	83	2.6	78	3.2
P14	Yes	Solve subtraction word problem: common fractions.	84	2.0	85	3.0	83	2.5
P16	Yes	Reduce decimal to fraction in lowest terms.	33	3.1	36	3.7	29	4.3
Q06	Yes	Approximate water use/year from use/week.	45	2.7	50	3.9	42	3.3
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	54	3.2	58	3.7	51	4.1
Q09	Yes	Perform multiple operations of common fractions.	75	2.4	68	3.7	80	2.7
R06	Yes	Subtract two decimal numbers.	88	1.8	85	2.9	91	2.0
R07	Yes	Solve division word problem involving decimals.	60	2.4	66	3.1	55	3.8
R12	Yes	Subtract 4-digit whole numbers.	93	1.3	89	2.4	96	1.3
R13	Yes	Determine how much money left after spending 7/9.	35	2.7	35	3.5	34	3.7
U01A	Yes	Estimate the time required to record 5 songs.	44	2.0	49	2.7	38	2.8
U01B	Yes	Explain method of estimation.	44	2.1	47	2.6	41	2.8
V01	Yes	Determine actual weight from rounded value.	52	2.1	53	2.5	50	2.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Slovak Republic SCALE=Geometry

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                                                                            Eighth Grade

                                                                   Overall      Boys       Girls

ITEM    REL   LABEL                                                 %   (se)    %   (se)    %   (se)
-----------------------------------------------------------------------------------------------------
A05     No    Identify congruent triangles in a rectangle.         75   0.9   74   1.3    76   1.1
B11     No    Identify cube made by folding 2-dimensional net.     70   1.6   73   1.9    68   1.9
C03     No    Identify properties of congruent trapezoids.         66   1.5   63   2.3    70   2.0
D07     No    Identify relationship of angles in symmetric polygon. 81  1.2   81   1.7    81   1.5
E02     No    Determine angle in congruent triangles.              70   1.7   70   2.2    69   2.2
G03     No    Find sum of vertical angles from diagram of intersecting lines. 62 1.9 63 2.4 61 2.5
I08     Yes   Identify point on a line defined by two other points. 40  2.8   44   3.5    36   3.8
J11     Yes   Identify properties of a parallelogram.              46   3.3   44   4.5    49   3.9
J15     Yes   Identify similar triangles of different size.        77   2.4   77   3.2    76   3.1
J16     Yes   Identify coordinates for point on a grid.            69   2.6   66   3.7    72   3.4
K03     Yes   Identify figure from rotation of 3-dimensional object. 81 2.1   88   2.1    74   3.5
K08     Yes   Determine unknown angle in rotated congruent triangles. 45 2.5  46   3.5    43   3.6
L15     Yes   Find fourth quadrilateral angle, given the other three. 41 2.5  39   3.2    43   3.7
M02     Yes   Identify all lines of symmetry for a rectangle.      75   2.2   75   2.9    75   3.4
M05     Yes   Find diagram resulting from rotation of a 2-dimensional figure. 55 2.8 60 3.6 49 3.9
M07     Yes   Find angle based on supplementary pairs.             81   2.1   83   2.6    78   3.1
N12     Yes   Identify point on number line from distance of other points. 64 2.4 70 3.1 59 3.6
O03     Yes   Identify supplementary angles formed by parallel and intersecting lines. 50 3.1 51 4.6 49 3.7
O08     Yes   Find center point of rotation for symmetry-related figures. 87 1.6 89 2.4 86 2.1
P08     Yes   Know relationship between side and perimeter for square. 67 2.3 71 3.5 64 3.2
P09     Yes   Find length of side for similar triangles.           46   3.1   46   3.8    47   3.9
Q10     Yes   Perform calculation involving addition/subtraction of angles. 51 2.8 57 4.2 46 3.5
R10     Yes   Determine into how many triangles a trapezoid can be divided. 54 3.0 58 4.2 52 3.4
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REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Slovak Republic SCALE=Measurement

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	89	0.7	89	0.8	90	0.8
C01	No	Compare volumes of different stacks of blocks.	68	1.7	70	2.1	67	2.4
D11	No	Identify best unit to measure the mass of an egg.	94	0.8	94	1.1	93	1.1
E06	No	Solve word problem to find length of rectangle from width and perimeter.	46	1.8	48	2.6	44	2.1
F10	No	Determine measurement accuracy of ruler.	68	1.5	74	1.9	62	2.0
G02	No	Read meter scale to determine length of a pipe.	87	1.0	87	1.2	87	1.5
I03	Yes	Find number of 750 mL bottles filled by a large volume.	52	2.7	52	3.5	53	3.3
J10	Yes	Determine area of sheet not covered by rectangular picture.	64	2.8	64	3.7	64	3.7
K05	Yes	Calculate area of a rectangle given its length and perimeter.	52	2.9	52	4.1	53	4.2
L12	Yes	Find longest pace from chart showing number of paces to cross room.	88	1.7	87	2.3	90	2.2
M01	Yes	Read mass shown on scale.	88	1.6	90	2.2	87	2.1
N15	Yes	Identify drawing with angle closest to 30 degrees.	74	2.4	77	3.2	70	3.3
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	88	2.0	90	2.6	86	2.9
P11	Yes	Use ruler to determine approximate length of pencil.	63	2.8	69	3.7	58	3.5
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	33	2.4	40	3.5	27	3.3
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	71	2.4	68	3.6	75	3.2
S02B	Yes	Calculate length of side of square given area.	50	2.7	47	3.6	52	4.0
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	37	2.8	37	3.8	36	3.9
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	35	2.1	34	2.7	36	2.9
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	15	1.5	16	2.2	14	1.9
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	52	2.4	54	2.8	51	2.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Slovak Republic SCALE=Proportionality

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	59	1.5	63	1.7	54	2.0
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	80	1.3	80	1.9	80	1.5
D08	No	Solve ratio problem for x: 7/13 = x/52.	71	1.8	72	2.1	71	2.3
F07	No	Solve word problem to find average speed from distance and time.	46	1.8	47	2.4	45	2.3
G04	No	Solve simple proportionality equation.	72	1.4	74	1.7	70	2.1
L14	Yes	Identify missing numbers in table of proportional x and y values.	27	2.9	31	3.9	23	3.4
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	58	2.7	55	4.1	60	3.1
Q05	Yes	Solve word problem involving ratios.	62	2.9	59	4.4	63	3.3
R14	Yes	Solve multi-step word problem involving ratios.	54	2.7	56	3.6	53	4.1
T02A	Yes	Solve algebra word problem involving ratios.	23	2.2	24	2.8	21	2.7
T02B	Yes	Solve multi-step word problem computing fractions.	6	0.9	7	1.4	5	1.4
V03	Yes	Determine ratio of red paint in a mixture.	32	2.1	31	2.5	32	2.8

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Denmark SCALE=Algebra

| | | | Eighth Grade |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	82	1.0	85	1.0	80	1.5
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	57	2.0	59	2.6	55	2.7
C05	No	Determine number which continues pattern based on figures.	55	1.9	54	3.0	56	2.4
D10	No	Identify equation which solves word problem: C=(100+6n).	33	1.7	33	2.5	33	2.5
E05	No	Find relationship between numbers in a set of ordered pairs.	44	1.7	42	2.5	45	2.2
F11	No	Solve multi-step problem using linear equations.	48	2.2	51	3.0	46	2.7
G06	No	Find solution to -3X for given value of X.	26	2.8	28	3.2	25	3.3
H10	No	Identify equation expressing xy relationship from table of values.	38	2.1	39	2.7	38	2.9
H12	No	Select symbolic linear equation which fits word problem.	71	1.9	71	2.4	71	2.9
I01	Yes	Identify meaning of symbol in word problem equation.	21	2.4	29	3.7	13	2.9
I04	Yes	Determine next number which occurs in two number sequences.	50	3.2	49	4.7	51	4.1
J18	Yes	Identify missing number in table showing xy relationship.	39	3.1	49	4.6	30	4.0
K04	Yes	Identify expression equivalent to linear inequality.	31	3.0	24	4.1	38	4.6
L11	Yes	Solve multi-step word problem using pattern.	31	3.4	33	4.5	30	4.3
L13	Yes	Identify matching patterns of symbols.	93	1.8	94	2.2	91	2.5
L16	Yes	Simplify and solve linear equation for X.	41	3.6	44	4.5	39	4.9
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	47	3.3	50	5.3	43	4.9
O07	Yes	Solve linear equation for X.	70	3.3	73	3.9	65	4.5
P10	Yes	Identify equivalent algebraic expressions.	36	3.1	46	4.3	26	4.0
P15	Yes	Identify equivalent expression for a cubic relationship.	70	2.6	71	3.9	71	4.2
Q01	Yes	Identify linear expression based on word problem.	29	2.8	32	4.0	27	4.0
Q02	Yes	Subtract fractional expressions of X.	38	3.4	40	4.9	35	4.1
Q07	Yes	Solve P=LW for W given values for P and L.	42	3.2	43	4.8	41	4.6
R09	Yes	Identify equivalent expressions from properties of real numbers.	26	2.7	30	3.6	21	4.1
R11	Yes	Solve algebra word problem: linear equation.	49	3.4	46	3.8	53	5.7
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	77	2.9	79	4.1	76	4.2
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	24	3.4	26	4.5	22	4.6
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	27	1.8	26	2.6	28	2.6
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	27	1.9	27	3.1	28	2.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Denmark SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	75	1.0	74	1.3	77	1.5
B07	No	Interpret line graph to find region of largest increase.	69	1.6	71	2.1	68	2.3
C02	No	Interpret pie graph to determine distribution.	78	1.8	82	2.3	76	2.5
E01	No	Interpret line graph to determine intersection point of two plots.	88	1.3	90	1.5	85	1.8
F08	No	Predict probability of occurrence for independent coin toss.	74	2.2	75	2.6	74	2.8
G01	No	Interpret frequency table to find number above a given level.	58	2.1	61	2.7	55	2.8
H07	No	Interpret barchart histogram to find number above a given level.	79	1.6	81	2.3	76	2.4
H11	No	Predict number of total defective bulbs based on random sample.	55	2.0	60	2.5	50	2.5
I09	Yes	Predict most likely color of random card based on fraction of colors.	67	3.3	75	3.6	58	4.8
J13	Yes	Draw pictograph to represent number given in table.	88	2.2	91	2.5	86	3.4
K07	Yes	Determine the number of blue pens given probability of selection.	47	3.1	51	4.9	44	3.9
L10	Yes	Use data in a chart to identify time/day with highest temperature.	92	2.1	89	2.8	95	2.1
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	83	2.2	82	3.6	84	3.5
N18	Yes	Find probability of drawing an even number from 1 to 9.	67	3.2	65	4.5	70	3.9
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	75	2.8	79	3.5	70	4.3
O05	Yes	Calculate number of cube faces from probability of toss.	46	2.9	50	4.1	40	4.7
P17	Yes	Identify thermometer which shows temperature given in data table.	90	1.6	91	2.6	89	2.1
Q04	Yes	Interpret data in bar graph.	88	2.0	89	2.7	88	2.8
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	45	3.7	49	4.6	41	5.7
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	22	2.2	25	2.7	18	2.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Denmark SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	61	1.6	65	1.9	57	2.0
B09	No	Identify shaded figure which shows 2/5 = 4/10.	59	1.9	55	2.4	63	2.6
B10	No	Identify smallest of decimal fractions.	55	2.0	64	2.4	45	2.4
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	46	2.2	49	2.6	44	3.2
C06	No	Determine the worst estimate of: 848 + 677.	74	1.9	74	2.2	74	2.6
D09	No	Identify smallest fraction.	67	1.8	72	2.2	62	2.7
D12	No	Estimate rational number from point on number line.	75	2.1	80	2.3	70	2.8
E03	No	Find fraction of hour between two time points.	58	1.8	64	2.5	54	2.6
E04	No	Solve multi-step word problem: 4-digit whole numbers.	52	1.8	48	2.7	55	2.8
F09	No	Identify decimal fraction between 0.07 and 0.08.	66	1.7	72	2.5	62	2.3
F12	No	Identify fraction of circle which is shaded.	64	1.6	69	2.6	59	2.2
G05	No	Identify fraction represented in word problem.	67	2.0	67	2.6	67	2.8
H08	No	Identify figure showing 2/3 shaded.	74	2.1	74	2.4	74	2.6
H09	No	Identify sum which is closest to 691 + 208.	89	1.3	90	1.6	88	1.8
I02	Yes	Solve multi-step word problem: common fractions.	42	3.8	48	4.7	37	5.4
I05	Yes	Solve subtraction word problem: rational numbers.	69	3.0	72	4.3	67	4.0
I06	Yes	Write a fraction larger than a given number.	65	3.8	77	4.0	54	5.4
I07	Yes	Recognize when estimation is appropriate.	62	2.9	60	4.7	62	3.8
J12	Yes	Divide fractions.	5	1.5	7	2.7	3	1.5
J14	Yes	Divide rational numbers, fractional divisor.	24	3.0	27	4.4	22	4.0
J17	Yes	Use map and scale to find distance between two cities.	85	2.3	84	3.5	85	3.1
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	71	2.9	76	4.1	66	4.2
K02	Yes	Find total volume of mixture using rational number addition.	56	3.4	53	4.6	59	4.3
K06	Yes	Approximate amount increased by 15%.	39	2.9	51	4.5	29	3.7
K09	Yes	Compute sum of three fractions.	35	3.8	34	4.9	36	4.6
L08	Yes	Estimate actual height from diagram of relative heights.	58	2.9	60	4.2	55	4.8
L09	Yes	Identify 504.7 from its expression in words.	68	3.2	69	4.7	67	4.0
L17	Yes	Subtract three fractions.	39	3.1	45	4.3	34	4.5
M04	Yes	Identify the largest fraction.	29	2.6	37	3.8	20	3.8
M08	Yes	Multiply two decimal fractions.	33	2.7	31	3.4	34	4.0
N11	Yes	Identify number rounded to 18200.	94	1.6	95	2.3	93	2.1
N14	Yes	Identify list of equivalent fractions.	60	3.0	67	4.6	54	4.4
N17	Yes	Solve multi-step word problem: decimal fractions.	31	3.5	27	4.3	35	4.8
N19	Yes	Shade a given fraction of the squares in a grid.	60	3.4	64	4.8	56	5.0
O02	Yes	Calculate percent increase.	22	2.3	25	3.8	19	4.0
O04	Yes	Identify number rounded to the nearest 100th.	31	3.3	31	4.1	31	4.8
O09	Yes	Solve division word problem: common fractions.	55	2.6	61	3.8	50	4.0
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	70	3.2	70	4.4	70	4.5
P13	Yes	Use heart beats/min to find beats per hour.	69	2.8	68	4.2	71	4.0
P14	Yes	Solve subtraction word problem: common fractions.	84	2.4	87	3.2	81	3.5
P16	Yes	Reduce decimal to fraction in lowest terms.	17	2.6	19	3.6	14	3.3
Q06	Yes	Approximate water use/year from use/week.	35	3.3	36	4.7	35	4.8
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	40	3.3	51	4.7	28	4.0
Q09	Yes	Perform multiple operations of common fractions.	24	2.5	26	3.7	22	3.5
R06	Yes	Subtract two decimal numbers.	77	3.2	72	4.2	82	3.6
R07	Yes	Solve division word problem involving decimals.	39	3.5	41	4.0	37	5.0
R12	Yes	Subtract 4-digit whole numbers.	88	2.0	84	3.3	92	2.5
R13	Yes	Determine how much money left after spending 7/9.	31	3.6	32	5.0	29	4.7
U01A	Yes	Estimate the time required to record 5 songs.	18	2.1	19	2.8	17	2.7
U01B	Yes	Explain method of estimation.	18	1.9	18	2.5	19	2.7
V01	Yes	Determine actual weight from rounded value.	71	2.0	74	2.3	68	3.6

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Denmark SCALE=Geometry

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                                                                                Eighth Grade

                                                                    Overall      Boys       Girls

ITEM    REL   LABEL                                                  %   (se)    %   (se)   %   (se)
---------------------------------------------------------------------------------------------------
A05     No    Identify congruent triangles in a rectangle.          59  1.3    58  1.9    60  1.9
B11     No    Identify cube made by folding 2-dimensional net.      68  1.9    67  2.0    68  2.7
C03     No    Identify properties of congruent trapezoids.          56  2.1    56  2.7    55  2.9
D07     No    Identify relationship of angles in symmetric polygon. 58  2.1    61  2.7    56  2.7
E02     No    Determine angle in congruent triangles.               40  2.6    42  3.4    39  3.3
G03     No    Find sum of vertical angles from diagram of intersecting lines. 35  1.8  38  2.4  32  2.4
I08     Yes   Identify point on a line defined by two other points. 51  3.7    53  4.3    50  5.6
J11     Yes   Identify properties of a parallelogram.               43  3.0    42  4.3    45  4.3
J15     Yes   Identify similar triangles of different size.         71  3.3    75  4.4    68  4.6
J16     Yes   Identify coordinates for point on a grid.             66  3.1    70  4.3    63  4.7
K03     Yes   Identify figure from rotation of 3-dimensional object. 73  3.1   73  4.4    73  3.6
K08     Yes   Determine unknown angle in rotated congruent triangles. 33  3.2  31  4.5    34  4.6
L15     Yes   Find fourth quadrilateral angle, given the other three. 32  3.3  37  4.7    28  4.3
M02     Yes   Identify all lines of symmetry for a rectangle.       52  3.2    55  4.1    47  4.5
M05     Yes   Find diagram resulting from rotation of a 2-dimensional figure. 61  3.2  69  4.4  53  4.5
M07     Yes   Find angle based on supplementary pairs.              75  3.3    79  4.1    72  4.1
N12     Yes   Identify point on number line from distance of other points. 60  3.1  62  4.5  58  4.3
O03     Yes   Identify supplementary angles formed by parallel and intersecting lines. 40  2.8  37  4.2  44  4.5
O08     Yes   Find center point of rotation for symmetry-related figures. 81  2.3  82  3.0  81  3.9
P08     Yes   Know relationship between side and perimeter for square. 35  3.1  39  4.6  31  4.4
P09     Yes   Find length of side for similar triangles.            40  3.0    42  4.6    39  4.6
Q10     Yes   Perform calculation involving addition/subtraction of angles. 51  3.2  56  4.9  46  4.7
R10     Yes   Determine into how many triangles a trapezoid can be divided. 70  2.9  72  3.8  69  4.3
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REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Denmark SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	77	1.2	81	1.3	74	1.8
C01	No	Compare volumes of different stacks of blocks.	56	2.0	62	2.4	52	2.8
D11	No	Identify best unit to measure the mass of an egg.	89	1.2	91	1.5	87	1.8
E06	No	Solve word problem to find length of rectangle from width and perimeter.	37	1.7	42	2.5	33	2.5
F10	No	Determine measurement accuracy of ruler.	60	1.9	63	2.6	58	2.3
G02	No	Read meter scale to determine length of a pipe.	72	1.8	78	2.5	67	2.2
I03	Yes	Find number of 750 mL bottles filled by a large volume.	40	2.8	47	4.1	33	4.2
J10	Yes	Determine area of sheet not covered by rectangular picture.	43	3.7	47	5.7	40	4.7
K05	Yes	Calculate area of a rectangle given its length and perimeter.	37	3.3	36	4.4	39	5.1
L12	Yes	Find longest pace from chart showing number of paces to cross room.	80	2.6	81	3.6	80	3.9
M01	Yes	Read mass shown on scale.	88	1.6	93	2.1	84	3.1
N15	Yes	Identify drawing with angle closest to 30 degrees.	69	3.1	72	4.7	67	4.3
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	83	2.4	86	3.0	82	3.3
P11	Yes	Use ruler to determine approximate length of pencil.	52	3.2	53	4.4	52	4.0
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	33	3.0	40	3.9	24	4.3
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	47	3.7	52	4.2	42	5.1
S02B	Yes	Calculate length of side of square given area.	20	2.7	24	3.5	15	3.9
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	21	2.8	27	3.7	15	3.4
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	24	2.1	24	3.4	23	2.3
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	5	1.0	7	1.9	4	1.2
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	39	2.6	39	3.1	39	3.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Denmark SCALE=Proportionality

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                                                                                            Eighth Grade

                                                                                 Overall      Boys       Girls

ITEM     REL   LABEL                                                              %   (se)    %   (se)    %   (se)
---------------------------------------------------------------------------------------------------------------------
A04      No    Solve word problem using proportions: 4/3 = 12/?                   72   1.1    76   1.6    69   1.3
B08      No    Solve word problem using proportions: 300 calories/100g = ?/30g.  65   1.5    65   2.0    65   2.3
D08      No    Solve ratio problem for x: 7/13 = x/52.                            56   1.9    58   2.5    53   2.7
F07      No    Solve word problem to find average speed from distance and time.  25   1.8    28   2.4    22   2.5
G04      No    Solve simple proportionality equation.                            67   2.2    70   2.8    63   2.7
L14      Yes   Identify missing numbers in table of proportional x and y values. 13   2.3    17   3.5    10   2.5
M06      Yes   Compute number of girls, given total students and girl:boy ratio. 34   3.5    39   4.6    30   4.8
Q05      Yes   Solve word problem involving ratios.                              68   2.9    70   4.3    67   3.9
R14      Yes   Solve multi-step word problem involving ratios.                   28   2.6    25   3.7    32   4.5
T02A     Yes   Solve algebra word problem involving ratios.                      21   2.3    21   2.9    22   3.1
T02B     Yes   Solve multi-step word problem computing fractions.                10   1.4    11   2.1     8   1.7
V03      Yes   Determine ratio of red paint in a mixture.                        31   2.1    35   2.9    28   3.3
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REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=France SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	81	1.0	81	1.2	82	1.3
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	79	1.3	81	1.8	78	1.7
C05	No	Determine number which continues pattern based on figures.	56	1.9	54	2.6	59	2.5
D10	No	Identify equation which solves word problem: C=(100+6n).	35	1.6	32	2.2	37	2.1
E05	No	Find relationship between numbers in a set of ordered pairs.	67	1.8	67	2.2	66	2.4
F11	No	Solve multi-step problem using linear equations.	49	1.6	51	1.9	48	2.8
G06	No	Find solution to -3X for given value of X.	54	2.1	54	2.7	55	2.8
H10	No	Identify equation expressing xy relationship from table of values.	48	2.0	47	2.4	50	2.9
H12	No	Select symbolic linear equation which fits word problem.	86	1.1	85	1.9	88	1.3
I01	Yes	Identify meaning of symbol in word problem equation.	41	2.9	43	4.1	40	4.5
I04	Yes	Determine next number which occurs in two number sequences.	54	2.8	51	4.4	57	4.0
J18	Yes	Identify missing number in table showing xy relationship.	38	3.2	37	4.8	39	4.2
K04	Yes	Identify expression equivalent to linear inequality.	42	2.8	39	3.7	46	3.6
L11	Yes	Solve multi-step word problem using pattern.	37	2.3	35	4.0	37	3.5
L13	Yes	Identify matching patterns of symbols.	92	1.4	95	1.3	89	2.2
L16	Yes	Simplify and solve linear equation for X.	51	3.3	53	4.6	50	3.9
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	58	2.7	56	3.6	64	3.9
O07	Yes	Solve linear equation for X.	82	2.3	81	3.5	84	3.3
P10	Yes	Identify equivalent algebraic expressions.	65	2.5	66	3.4	63	3.4
P15	Yes	Identify equivalent expression for a cubic relationship.	46	2.8	49	3.5	43	4.1
Q01	Yes	Identify linear expression based on word problem.	55	2.8	55	4.0	53	3.7
Q02	Yes	Subtract fractional expressions of X.	59	2.7	57	4.1	61	3.9
Q07	Yes	Solve P=LW for W given values for P and L.	68	3.0	69	3.7	69	4.1
R09	Yes	Identify equivalent expressions from properties of real numbers.	50	3.2	50	3.9	50	4.4
R11	Yes	Solve algebra word problem: linear equation.	46	3.2	53	4.2	38	4.1
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	80	2.1	78	3.4	81	2.9
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	18	2.5	20	3.3	16	3.5
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	27	2.2	28	3.0	26	2.8
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	30	2.2	31	3.0	28	3.1

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=France SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	84	1.0	84	1.4	84	1.4
B07	No	Interpret line graph to find region of largest increase.	75	1.3	74	1.6	77	1.7
C02	No	Interpret pie graph to determine distribution.	72	1.6	72	2.2	72	2.4
E01	No	Interpret line graph to determine intersection point of two plots.	82	1.5	85	2.7	80	1.8
F08	No	Predict probability of occurrence for independent coin toss.	65	1.4	64	2.0	68	1.9
G01	No	Interpret frequency table to find number above a given level.	63	1.4	62	2.6	65	2.0
H07	No	Interpret barchart histogram to find number above a given level.	80	1.5	83	1.9	77	2.0
H11	No	Predict number of total defective bulbs based on random sample.	69	1.4	73	2.1	66	2.4
I09	Yes	Predict most likely color of random card based on fraction of colors.	72	2.8	79	3.7	65	4.0
J13	Yes	Draw pictograph to represent number given in table.	88	1.6	89	2.4	87	2.9
K07	Yes	Determine the number of blue pens given probability of selection.	55	3.0	57	4.1	54	4.3
L10	Yes	Use data in a chart to identify time/day with highest temperature.	90	1.7	90	2.6	89	2.5
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	82	2.3	87	2.6	77	4.1
N18	Yes	Find probability of drawing an even number from 1 to 9.	68	1.9	69	3.3	69	3.3
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	81	2.5	85	2.6	78	4.1
O05	Yes	Calculate number of cube faces from probability of toss.	54	3.0	58	3.8	52	4.4
P17	Yes	Identify thermometer which shows temperature given in data table.	97	1.0	97	1.3	97	1.5
Q04	Yes	Interpret data in bar graph.	93	1.5	90	2.3	95	1.9
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	72	2.6	77	3.6	66	4.5
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	26	2.1	25	2.8	27	2.6

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=France SCALE=Fractions and number sense

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	65	1.5	68	2.0	63	1.9
B09	No	Identify shaded figure which shows 2/5 = 4/10.	64	1.5	63	2.1	65	2.1
B10	No	Identify smallest of decimal fractions.	81	1.2	83	1.5	79	1.8
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	62	2.0	64	2.7	61	2.8
C06	No	Determine the worst estimate of: 848 + 677.	73	1.6	73	2.0	72	2.0
D09	No	Identify smallest fraction.	74	1.6	75	2.1	73	2.4
D12	No	Estimate rational number from point on number line.	76	1.4	76	2.0	75	2.2
E03	No	Find fraction of hour between two time points.	47	1.8	49	2.5	47	2.6
E04	No	Solve multi-step word problem: 4-digit whole numbers.	70	1.6	69	2.1	72	2.3
F09	No	Identify decimal fraction between 0.07 and 0.08.	86	1.2	86	1.8	87	1.7
F12	No	Identify fraction of circle which is shaded.	66	1.5	66	2.1	68	2.2
G05	No	Identify fraction represented in word problem.	70	2.0	68	2.8	74	1.9
H08	No	Identify figure showing 2/3 shaded.	82	1.4	82	2.3	84	1.8
H09	No	Identify sum which is closest to 691 + 208.	91	1.1	92	1.6	90	1.5
I02	Yes	Solve multi-step word problem: common fractions.	54	2.5	59	3.2	49	3.9
I05	Yes	Solve subtraction word problem: rational numbers.	87	1.7	85	2.5	87	2.2
I06	Yes	Write a fraction larger than a given number.	75	2.4	75	3.9	78	3.2
I07	Yes	Recognize when estimation is appropriate.	58	2.4	58	3.3	59	4.3
J12	Yes	Divide fractions.	53	3.1	52	3.7	53	4.3
J14	Yes	Divide rational numbers, fractional divisor.	70	3.0	72	3.9	69	4.3
J17	Yes	Use map and scale to find distance between two cities.	84	2.0	83	2.8	85	2.8
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	74	2.5	81	3.4	65	4.1
K02	Yes	Find total volume of mixture using rational number addition.	79	2.4	79	3.4	80	3.7
K06	Yes	Approximate amount increased by 15%.	52	2.4	51	4.8	52	3.6
K09	Yes	Compute sum of three fractions.	61	2.9	52	4.1	70	4.0
L08	Yes	Estimate actual height from diagram of relative heights.	62	2.7	64	3.8	60	3.6
L09	Yes	Identify 504.7 from its expression in words.	91	1.7	90	2.8	93	1.8
L17	Yes	Subtract three fractions.	67	3.2	68	4.8	68	4.1
M04	Yes	Identify the largest fraction.	50	2.8	48	3.4	54	4.1
M08	Yes	Multiply two decimal fractions.	72	2.7	73	3.7	70	3.8
N11	Yes	Identify number rounded to 18200.	90	1.8	88	2.9	93	1.9
N14	Yes	Identify list of equivalent fractions.	79	2.7	82	2.8	78	3.5
N16	Yes	Solve algebra word problem with fractions.	38	2.3	42	4.0	35	3.7
N17	Yes	Solve multi-step word problem: decimal fractions.	34	2.5	34	3.8	34	4.2
N19	Yes	Shade a given fraction of the squares in a grid.	61	2.8	65	4.5	58	3.6
O02	Yes	Calculate percent increase.	29	2.7	35	3.5	25	3.7
O04	Yes	Identify number rounded to the nearest 100th.	48	2.6	50	4.1	47	3.5
O09	Yes	Solve division word problem: common fractions.	51	3.1	59	4.4	44	3.8
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	71	2.4	75	3.1	69	3.6
P13	Yes	Use heart beats/min to find beats per hour.	80	2.2	82	2.9	79	3.5
P14	Yes	Solve subtraction word problem: common fractions.	80	2.2	81	3.4	79	3.2
P16	Yes	Reduce decimal to fraction in lowest terms.	18	2.6	19	3.4	18	3.3
Q06	Yes	Approximate water use/year from use/week.	47	3.3	52	4.4	43	3.7
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	76	3.0	79	3.7	72	3.8
Q09	Yes	Perform multiple operations of common fractions.	68	2.5	69	4.0	65	3.5
R06	Yes	Subtract two decimal numbers.	88	1.7	87	3.0	90	2.3
R07	Yes	Solve division word problem involving decimals.	64	3.0	64	4.1	64	4.1
R12	Yes	Subtract 4-digit whole numbers.	97	1.2	96	1.5	97	1.4
R13	Yes	Determine how much money left after spending 7/9.	28	2.7	33	3.8	24	3.5
U01A	Yes	Estimate the time required to record 5 songs.	20	1.6	20	2.2	21	2.4
U01B	Yes	Explain method of estimation.	14	1.4	13	1.9	16	2.0

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=France SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	80	0.9	78	1.3	82	1.2
B11	No	Identify cube made by folding 2-dimensional net.	77	1.2	80	1.5	75	2.2
C03	No	Identify properties of congruent trapezoids.	85	1.2	84	2.0	87	1.7
D07	No	Identify relationship of angles in symmetric polygon.	84	1.2	85	1.8	83	1.5
E02	No	Determine angle in congruent triangles.	63	2.1	71	2.0	57	3.0
G03	No	Find sum of vertical angles from diagram of intersecting lines.	59	2.0	56	2.5	59	2.4
I08	Yes	Identify point on a line defined by two other points.	34	2.5	35	4.0	33	3.3
J11	Yes	Identify properties of a parallelogram.	62	3.0	61	3.6	67	4.3
J15	Yes	Identify similar triangles of different size.	81	2.6	83	3.5	79	3.2
J16	Yes	Identify coordinates for point on a grid.	56	2.9	51	4.1	62	3.6
K03	Yes	Identify figure from rotation of 3-dimensional object.	77	2.1	82	2.7	73	3.2
K08	Yes	Determine unknown angle in rotated congruent triangles.	50	2.8	54	4.2	44	4.2
L15	Yes	Find fourth quadrilateral angle, given the other three.	39	3.0	42	3.7	36	4.4
M02	Yes	Identify all lines of symmetry for a rectangle.	80	2.3	79	3.1	81	3.1
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	66	2.4	70	4.5	63	3.9
M07	Yes	Find angle based on supplementary pairs.	77	1.9	76	3.3	77	3.1
N12	Yes	Identify point on number line from distance of other points.	74	2.5	75	3.2	73	3.6
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	47	3.4	46	4.3	48	4.7
O08	Yes	Find center point of rotation for symmetry-related figures.	81	2.7	88	3.0	76	4.0
P08	Yes	Know relationship between side and perimeter for square.	69	2.5	72	3.3	66	3.8
P09	Yes	Find length of side for similar triangles.	58	3.2	62	4.4	56	4.1
Q10	Yes	Perform calculation involving addition/subtraction of angles.	48	3.0	50	3.7	43	4.3
R10	Yes	Determine into how many triangles a trapezoid can be divided.	65	3.2	63	3.8	66	4.7

REL: Release Status (Yes= Item in Released Item Set)

Third International Mathematics and Science Study - 1995 Assessment
Percent Correct on the Mathematics Items - Eighth Grade

May 11, 1998 71

COUNTRY ID=France SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	55	1.1	57	1.5	54	1.5
C01	No	Compare volumes of different stacks of blocks.	62	1.9	66	2.5	57	2.7
D11	No	Identify best unit to measure the mass of an egg.	91	0.9	91	1.4	90	1.4
E06	No	Solve word problem to find length of rectangle from width and perimeter.	56	1.6	60	2.4	53	2.2
F10	No	Determine measurement accuracy of ruler.	77	1.6	80	2.1	75	2.3
G02	No	Read meter scale to determine length of a pipe.	88	1.3	87	1.7	88	2.0
I03	Yes	Find number of 750 mL bottles filled by a large volume.	48	2.9	51	3.8	43	4.3
J10	Yes	Determine area of sheet not covered by rectangular picture.	52	3.0	51	3.7	53	4.3
K05	Yes	Calculate area of a rectangle given its length and perimeter.	36	2.8	38	4.1	34	4.2
L12	Yes	Find longest pace from chart showing number of paces to cross room.	81	2.6	82	4.1	80	2.8
M01	Yes	Read mass shown on scale.	94	1.5	95	1.8	93	2.5
N15	Yes	Identify drawing with angle closest to 30 degrees.	76	2.5	77	3.9	73	3.2
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	87	2.0	87	2.5	86	2.9
P11	Yes	Use ruler to determine approximate length of pencil.	61	2.6	65	3.6	57	2.8
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	43	3.4	48	4.3	39	4.1
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	73	2.7	76	3.4	70	3.6
S02B	Yes	Calculate length of side of square given area.	34	2.6	41	3.9	28	4.3
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	24	2.5	28	3.5	22	3.8
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	43	2.2	39	3.1	47	3.2
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	6	0.9	5	1.1	6	1.4
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	44	2.3	42	3.1	45	3.2

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=France SCALE=Proportionality

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	49	1.2	53	1.6	44	1.8
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	70	1.5	73	2.2	67	2.1
D08	No	Solve ratio problem for x: 7/13 = x/52.	66	1.6	68	2.1	64	2.4
F07	No	Solve word problem to find average speed from distance and time.	38	1.9	39	2.6	37	2.4
G04	No	Solve simple proportionality equation.	80	1.3	79	2.1	82	1.8
L14	Yes	Identify missing numbers in table of proportional x and y values.	33	2.6	33	3.5	32	4.0
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	43	3.1	44	4.3	41	4.2
Q05	Yes	Solve word problem involving ratios.	75	2.4	77	3.5	72	3.3
R14	Yes	Solve multi-step word problem involving ratios.	54	2.9	55	4.2	53	4.8
T02A	Yes	Solve algebra word problem involving ratios.	21	1.9	23	2.5	20	2.5
T02B	Yes	Solve multi-step word problem computing fractions.	6	1.0	7	1.2	6	1.4
V03	Yes	Determine ratio of red paint in a mixture.	51	2.5	48	3.6	53	2.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Germany SCALE=Algebra

Eighth Grade

			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	80	1.1	80	1.3	81	1.4
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	67	2.2	65	2.8	70	2.5
C05	No	Determine number which continues pattern based on figures.	45	1.9	45	2.7	46	2.3
D10	No	Identify equation which solves word problem: C=(100+6n).	46	1.6	47	2.5	44	2.3
E05	No	Find relationship between numbers in a set of ordered pairs.	52	2.4	47	2.8	57	3.4
F11	No	Solve multi-step problem using linear equations.	38	2.0	41	2.6	35	2.7
G06	No	Find solution to -3X for given value of X.	43	2.6	42	3.5	45	2.9
H10	No	Identify equation expressing xy relationship from table of values.	38	2.7	33	2.7	43	4.0
H12	No	Select symbolic linear equation which fits word problem.	71	1.7	70	1.8	72	2.5
I01	Yes	Identify meaning of symbol in word problem equation.	27	2.8	28	3.8	26	4.2
I04	Yes	Determine next number which occurs in two number sequences.	40	3.0	36	3.9	45	5.0
J18	Yes	Identify missing number in table showing xy relationship.	35	2.9	39	4.1	30	4.6
K04	Yes	Identify expression equivalent to linear inequality.	41	3.0	41	4.6	42	4.2
L11	Yes	Solve multi-step word problem using pattern.	32	3.1	27	3.8	36	4.7
L13	Yes	Identify matching patterns of symbols.	92	1.6	89	3.2	95	1.6
L16	Yes	Simplify and solve linear equation for X.	43	3.1	44	4.7	43	4.0
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	50	3.1	43	4.3	56	4.4
O07	Yes	Solve linear equation for X.	79	2.0	78	3.1	80	3.1
P10	Yes	Identify equivalent algebraic expressions.	57	3.3	54	4.3	62	4.2
P15	Yes	Identify equivalent expression for a cubic relationship.	73	3.0	69	3.9	78	3.7
Q01	Yes	Identify linear expression based on word problem.	41	3.0	39	4.0	43	4.4
Q02	Yes	Subtract fractional expressions of X.	38	2.9	46	4.1	33	4.1
Q07	Yes	Solve P=LW for W given values for P and L.	57	3.4	57	4.9	58	4.7
R09	Yes	Identify equivalent expressions from properties of real numbers.	32	2.9	28	4.2	35	4.0
R11	Yes	Solve algebra word problem: linear equation.	40	3.1	43	4.4	39	4.0
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	81	2.4	74	4.0	88	2.3
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	18	2.6	16	3.1	20	3.4
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	25	2.1	25	3.5	24	2.3
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	26	2.0	25	3.0	26	2.6

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Germany SCALE=Data Rep., Analysis & Prob.

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	74	1.0	74	1.5	75	1.7
B07	No	Interpret line graph to find region of largest increase.	68	1.9	68	2.3	69	2.4
C02	No	Interpret pie graph to determine distribution.	77	1.8	74	2.4	80	2.3
E01	No	Interpret line graph to determine intersection point of two plots.	79	1.6	82	1.9	76	2.4
F08	No	Predict probability of occurrence for independent coin toss.	63	2.0	64	2.7	62	2.6
G01	No	Interpret frequency table to find number above a given level.	60	2.1	61	3.0	59	2.5
H07	No	Interpret barchart histogram to find number above a given level.	73	1.7	71	2.5	76	2.5
H11	No	Predict number of total defective bulbs based on random sample.	68	1.6	70	2.2	65	2.4
I09	Yes	Predict most likely color of random card based on fraction of colors.	75	2.6	72	4.2	78	2.8
J13	Yes	Draw pictograph to represent number given in table.	82	2.7	81	3.6	83	3.3
K07	Yes	Determine the number of blue pens given probability of selection.	46	3.2	47	4.9	46	3.8
L10	Yes	Use data in a chart to identify time/day with highest temperature.	87	2.2	87	2.8	86	2.8
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	83	2.2	88	3.1	80	3.2
N18	Yes	Find probability of drawing an even number from 1 to 9.	55	3.3	51	4.8	58	4.2
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	69	3.2	76	3.7	63	4.7
O05	Yes	Calculate number of cube faces from probability of toss.	45	3.5	45	3.9	44	5.0
P17	Yes	Identify thermometer which shows temperature given in data table.	93	1.5	95	1.9	94	1.8
Q04	Yes	Interpret data in bar graph.	86	2.1	85	2.9	89	2.8
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	59	2.9	55	4.0	64	4.0
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	14	1.7	14	2.2	15	2.5

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Germany SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	55	1.8	58	2.5	53	2.0
B09	No	Identify shaded figure which shows 2/5 = 4/10.	53	1.7	53	2.6	53	2.1
B10	No	Identify smallest of decimal fractions.	75	1.8	80	2.1	71	2.2
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	54	1.9	51	2.5	56	2.9
C06	No	Determine the worst estimate of: 848 + 677.	68	2.3	64	2.7	71	3.0
D09	No	Identify smallest fraction.	76	1.7	81	2.5	71	2.3
D12	No	Estimate rational number from point on number line.	84	1.4	84	1.8	84	1.9
E03	No	Find fraction of hour between two time points.	57	2.2	59	2.8	56	2.8
E04	No	Solve multi-step word problem: 4-digit whole numbers.	65	2.0	61	2.7	69	2.4
F09	No	Identify decimal fraction between 0.07 and 0.08.	74	1.6	79	2.3	69	2.4
F12	No	Identify fraction of circle which is shaded.	57	1.8	57	2.7	58	2.5
G05	No	Identify fraction represented in word problem.	54	2.1	50	2.9	59	2.6
H08	No	Identify figure showing 2/3 shaded.	67	1.6	69	2.4	66	2.3
H09	No	Identify sum which is closest to 691 + 208.	87	1.1	87	1.5	88	1.5
I02	Yes	Solve multi-step word problem: common fractions.	49	3.1	53	4.5	46	4.0
I05	Yes	Solve subtraction word problem: rational numbers.	68	2.8	63	4.2	73	3.7
I06	Yes	Write a fraction larger than a given number.	81	2.3	81	3.9	82	3.3
I07	Yes	Recognize when estimation is appropriate.	73	2.8	68	4.4	78	3.0
J12	Yes	Divide fractions.	44	3.5	43	4.7	46	4.4
J14	Yes	Divide rational numbers, fractional divisor.	44	3.4	48	4.6	39	4.4
J17	Yes	Use map and scale to find distance between two cities.	72	2.9	75	4.1	69	3.7
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	73	2.7	77	3.2	70	3.6
K02	Yes	Find total volume of mixture using rational number addition.	69	2.9	65	4.3	74	3.4
K06	Yes	Approximate amount increased by 15%.	52	2.9	55	4.7	50	4.1
K09	Yes	Compute sum of three fractions.	47	3.1	42	4.3	52	4.5
L08	Yes	Estimate actual height from diagram of relative heights.	60	2.9	67	4.3	54	3.8
L09	Yes	Identify 504.7 from its expression in words.	82	2.4	85	3.3	81	3.4
L17	Yes	Subtract three fractions.	50	3.1	46	4.3	55	4.2
M04	Yes	Identify the largest fraction.	37	3.4	46	4.9	28	3.8
M08	Yes	Multiply two decimal fractions.	49	3.1	48	4.2	51	4.1
N11	Yes	Identify number rounded to 18200.	85	2.3	87	2.5	82	3.7
N14	Yes	Identify list of equivalent fractions.	64	3.0	59	4.5	69	3.8
N16	Yes	Solve algebra word problem with fractions.	35	3.0	39	4.0	31	3.6
N17	Yes	Solve multi-step word problem: decimal fractions.	37	2.7	40	3.9	35	3.8
N19	Yes	Shade a given fraction of the squares in a grid.	48	2.9	49	4.8	48	3.3
O02	Yes	Calculate percent increase.	32	3.5	38	4.1	27	4.8
O04	Yes	Identify number rounded to the nearest 100th.	36	3.2	39	4.6	32	4.1
O09	Yes	Solve division word problem: common fractions.	58	3.6	67	4.3	49	5.0
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	73	2.7	73	4.2	76	3.5
P13	Yes	Use heart beats/min to find beats per hour.	63	2.8	66	4.0	60	4.2
P14	Yes	Solve subtraction word problem: common fractions.	77	2.9	80	3.4	78	3.9
P16	Yes	Reduce decimal to fraction in lowest terms.	33	3.2	35	4.2	33	4.2
Q06	Yes	Approximate water use/year from use/week.	35	2.7	40	4.5	32	3.4
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	58	3.0	65	4.4	54	4.4
Q09	Yes	Perform multiple operations of common fractions.	50	3.4	47	4.6	54	4.6
R06	Yes	Subtract two decimal numbers.	72	2.5	69	3.9	74	3.7
R07	Yes	Solve division word problem involving decimals.	48	3.8	53	4.4	44	4.7
R12	Yes	Subtract 4-digit whole numbers.	89	2.0	88	3.0	91	2.5
R13	Yes	Determine how much money left after spending 7/9.	30	3.0	34	4.5	26	3.6
U01A	Yes	Estimate the time required to record 5 songs.	41	2.5	45	3.8	38	3.1
U01B	Yes	Explain method of estimation.	31	2.2	31	3.1	31	2.8
V01	Yes	Determine actual weight from rounded value.	55	2.4	61	3.3	49	2.8

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Germany SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	51	2.3	48	2.5	54	2.6
B11	No	Identify cube made by folding 2-dimensional net.	71	1.9	69	2.3	73	2.4
C03	No	Identify properties of congruent trapezoids.	53	2.3	51	2.7	56	3.0
D07	No	Identify relationship of angles in symmetric polygon.	60	1.9	61	2.6	58	2.5
E02	No	Determine angle in congruent triangles.	44	2.3	41	3.0	48	3.1
G03	No	Find sum of vertical angles from diagram of intersecting lines.	46	2.2	51	2.7	43	2.9
I08	Yes	Identify point on a line defined by two other points.	38	2.9	38	4.3	39	3.8
J11	Yes	Identify properties of a parallelogram.	55	3.2	51	4.3	60	4.8
J15	Yes	Identify similar triangles of different size.	56	3.0	53	3.8	59	4.1
J16	Yes	Identify coordinates for point on a grid.	59	2.9	54	3.6	65	3.9
K03	Yes	Identify figure from rotation of 3-dimensional object.	72	2.7	69	4.8	75	3.5
K08	Yes	Determine unknown angle in rotated congruent triangles.	29	3.0	32	4.6	28	3.8
L15	Yes	Find fourth quadrilateral angle, given the other three.	39	3.4	41	4.4	39	5.0
M02	Yes	Identify all lines of symmetry for a rectangle.	64	3.1	68	3.8	60	4.8
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	50	3.3	54	4.5	46	4.5
M07	Yes	Find angle based on supplementary pairs.	68	3.2	70	4.7	67	4.3
N12	Yes	Identify point on number line from distance of other points.	62	3.0	62	4.3	63	3.8
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	40	3.3	41	4.2	39	4.1
O08	Yes	Find center point of rotation for symmetry-related figures.	67	3.3	70	4.2	63	4.4
P08	Yes	Know relationship between side and perimeter for square.	45	3.3	39	4.9	52	3.8
P09	Yes	Find length of side for similar triangles.	37	2.8	40	4.3	36	3.1
Q10	Yes	Perform calculation involving addition/subtraction of angles.	34	3.0	26	3.8	42	4.5
R10	Yes	Determine into how many triangles a trapezoid can be divided.	39	2.9	33	3.8	46	4.5

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Germany SCALE=Measurement

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	84	1.0	82	1.7	87	1.2
C01	No	Compare volumes of different stacks of blocks.	58	2.0	60	2.8	56	2.5
D11	No	Identify best unit to measure the mass of an egg.	86	1.3	85	1.9	88	1.8
E06	No	Solve word problem to find length of rectangle from width and perimeter.	37	2.0	37	2.5	38	2.6
F10	No	Determine measurement accuracy of ruler.	58	2.1	63	2.9	54	2.8
G02	No	Read meter scale to determine length of a pipe.	85	1.3	88	1.4	82	2.2
I03	Yes	Find number of 750 mL bottles filled by a large volume.	48	2.8	55	3.7	40	4.2
J10	Yes	Determine area of sheet not covered by rectangular picture.	41	3.3	45	4.3	36	4.2
K05	Yes	Calculate area of a rectangle given its length and perimeter.	29	3.4	27	3.8	31	4.8
L12	Yes	Find longest pace from chart showing number of paces to cross room.	79	2.4	81	3.4	79	3.5
M01	Yes	Read mass shown on scale.	94	1.6	96	1.5	93	2.3
N15	Yes	Identify drawing with angle closest to 30 degrees.	63	2.8	62	4.2	64	4.2
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	86	2.3	86	3.2	87	3.1
P11	Yes	Use ruler to determine approximate length of pencil.	72	3.0	73	4.4	72	3.5
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	26	2.8	34	4.2	20	3.6
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	54	3.3	50	4.4	59	4.5
S02B	Yes	Calculate length of side of square given area.	23	2.8	21	3.7	25	4.2
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	17	2.7	15	3.1	20	4.0
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	34	2.6	35	3.4	34	3.0
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	4	0.8	4	1.2	4	1.1
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	39	2.6	44	3.6	33	3.0

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Germany SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	63	1.5	68	1.9	57	1.9
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	66	1.4	65	2.0	67	1.7
D08	No	Solve ratio problem for x: 7/13 = x/52.	68	2.2	69	2.4	68	3.0
F07	No	Solve word problem to find average speed from distance and time.	24	1.6	26	2.6	22	2.3
G04	No	Solve simple proportionality equation.	72	2.0	73	2.7	71	2.7
L14	Yes	Identify missing numbers in table of proportional x and y values.	18	2.2	20	3.6	16	2.8
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	30	3.4	40	5.0	23	3.7
Q05	Yes	Solve word problem involving ratios.	67	3.3	67	4.6	70	4.4
R14	Yes	Solve multi-step word problem involving ratios.	37	3.4	44	4.9	32	4.1
T02A	Yes	Solve algebra word problem involving ratios.	24	2.4	21	3.2	27	3.0
T02B	Yes	Solve multi-step word problem computing fractions.	7	1.1	7	1.4	8	1.5
V03	Yes	Determine ratio of red paint in a mixture.	26	2.1	26	2.8	26	2.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Greece SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	67	1.0	69	1.3	65	1.4
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	72	1.4	70	1.7	74	2.1
C05	No	Determine number which continues pattern based on figures.	43	1.6	43	2.4	43	1.7
D10	No	Identify equation which solves word problem: C=(100+6n).	56	1.7	55	2.0	58	2.4
E05	No	Find relationship between numbers in a set of ordered pairs.	48	1.6	48	2.1	48	2.3
F11	No	Solve multi-step problem using linear equations.	32	1.9	31	2.7	33	2.1
G06	No	Find solution to -3X for given value of X.	39	2.1	40	2.3	39	2.5
H10	No	Identify equation expressing xy relationship from table of values.	45	1.6	45	2.1	45	2.2
H12	No	Select symbolic linear equation which fits word problem.	68	1.2	68	2.0	68	1.9
I01	Yes	Identify meaning of symbol in word problem equation.	28	1.9	28	2.6	29	3.0
I04	Yes	Determine next number which occurs in two number sequences.	39	2.0	35	2.9	43	3.5
J18	Yes	Identify missing number in table showing xy relationship.	35	2.1	39	3.2	32	3.0
K04	Yes	Identify expression equivalent to linear inequality.	41	2.5	41	3.4	41	3.5
L11	Yes	Solve multi-step word problem using pattern.	29	2.3	27	3.6	31	2.7
L13	Yes	Identify matching patterns of symbols.	86	1.6	86	2.3	85	2.6
L16	Yes	Simplify and solve linear equation for X.	43	3.0	38	4.3	48	3.4
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	47	2.6	47	3.7	48	3.6
O07	Yes	Solve linear equation for X.	75	2.2	74	3.2	76	2.6
P10	Yes	Identify equivalent algebraic expressions.	57	2.5	56	3.2	57	3.6
P15	Yes	Identify equivalent expression for a cubic relationship.	68	2.1	71	3.1	66	3.0
Q01	Yes	Identify linear expression based on word problem.	36	2.7	37	3.0	35	4.1
Q02	Yes	Subtract fractional expressions of X.	35	2.3	36	3.5	33	3.4
Q07	Yes	Solve P=LW for W given values for P and L.	57	2.5	58	3.5	56	3.2
R09	Yes	Identify equivalent expressions from properties of real numbers.	34	2.2	33	3.0	34	3.3
R11	Yes	Solve algebra word problem: linear equation.	38	2.8	36	3.1	41	5.3
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	79	2.2	77	3.1	81	2.9
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	13	2.1	11	2.3	15	3.3
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	21	1.4	23	2.0	18	2.1
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	22	1.6	25	2.3	19	2.2

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Greece SCALE=Data Rep., Analysis & Prob.

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	77	0.8	77	1.0	77	1.2
B07	No	Interpret line graph to find region of largest increase.	61	1.2	60	1.8	63	1.6
C02	No	Interpret pie graph to determine distribution.	71	1.2	75	1.6	68	1.9
E01	No	Interpret line graph to determine intersection point of two plots.	64	1.5	67	1.9	61	2.2
F08	No	Predict probability of occurrence for independent coin toss.	55	1.6	53	2.4	58	1.7
G01	No	Interpret frequency table to find number above a given level.	61	1.8	62	2.2	60	2.4
H07	No	Interpret barchart histogram to find number above a given level.	51	1.4	53	1.9	49	2.1
H11	No	Predict number of total defective bulbs based on random sample.	57	1.9	61	3.6	53	2.0
I09	Yes	Predict most likely color of random card based on fraction of colors.	55	2.5	58	3.1	53	3.8
J13	Yes	Draw pictograph to represent number given in table.	77	2.5	78	3.1	76	3.4
K07	Yes	Determine the number of blue pens given probability of selection.	50	2.5	59	3.2	41	3.6
L10	Yes	Use data in a chart to identify time/day with highest temperature.	85	1.7	87	2.2	83	2.5
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	71	1.9	71	2.6	72	3.2
N18	Yes	Find probability of drawing an even number from 1 to 9.	41	2.4	46	3.9	36	3.3
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	48	2.8	49	3.6	47	3.7
O05	Yes	Calculate number of cube faces from probability of toss.	37	2.6	41	3.3	34	3.5
P17	Yes	Identify thermometer which shows temperature given in data table.	74	1.9	73	3.2	75	3.0
Q04	Yes	Interpret data in bar graph.	77	2.1	77	2.7	78	3.2
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	52	2.5	56	3.7	47	5.0
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	13	1.2	12	1.7	13	1.6

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Greece SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	54	1.4	58	1.7	49	1.6
B09	No	Identify shaded figure which shows 2/5 = 4/10.	53	1.3	51	1.5	55	1.9
B10	No	Identify smallest of decimal fractions.	46	1.5	48	1.7	44	2.0
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	52	1.3	55	2.2	49	1.6
C06	No	Determine the worst estimate of: 848 + 677.	64	1.2	65	1.7	63	2.0
D09	No	Identify smallest fraction.	64	1.7	72	1.9	55	2.7
D12	No	Estimate rational number from point on number line.	77	1.4	79	1.7	76	1.9
E03	No	Find fraction of hour between two time points.	52	1.8	56	1.9	48	2.4
E04	No	Solve multi-step word problem: 4-digit whole numbers.	69	1.5	71	1.9	68	1.9
F09	No	Identify decimal fraction between 0.07 and 0.08.	60	2.0	59	2.6	61	2.1
F12	No	Identify fraction of circle which is shaded.	47	1.4	49	1.8	45	1.9
G05	No	Identify fraction represented in word problem.	65	1.4	65	2.2	65	1.8
H08	No	Identify figure showing 2/3 shaded.	75	1.7	76	2.1	74	1.9
H09	No	Identify sum which is closest to 691 + 208.	81	1.3	84	1.7	79	1.6
I02	Yes	Solve multi-step word problem: common fractions.	55	2.6	58	3.5	51	3.6
I05	Yes	Solve subtraction word problem: rational numbers.	72	2.3	70	2.9	74	3.2
I06	Yes	Write a fraction larger than a given number.	77	2.0	77	2.9	78	2.9
I07	Yes	Recognize when estimation is appropriate.	57	2.3	59	3.2	55	4.0
J12	Yes	Divide fractions.	36	2.5	34	3.5	38	3.4
J14	Yes	Divide rational numbers, fractional divisor.	38	2.5	35	3.0	41	3.7
J17	Yes	Use map and scale to find distance between two cities.	50	2.4	49	3.8	51	3.5
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	67	2.1	71	3.2	62	3.2
K02	Yes	Find total volume of mixture using rational number addition.	63	2.6	63	3.8	64	2.9
K06	Yes	Approximate amount increased by 15%.	39	2.5	48	3.4	30	3.8
K09	Yes	Compute sum of three fractions.	42	2.8	36	3.3	47	3.8
L08	Yes	Estimate actual height from diagram of relative heights.	51	2.4	58	2.8	45	3.7
L09	Yes	Identify 504.7 from its expression in words.	94	1.1	96	1.2	91	1.7
L17	Yes	Subtract three fractions.	34	2.6	36	3.9	31	2.9
M04	Yes	Identify the largest fraction.	26	2.2	30	3.4	21	3.0
M08	Yes	Multiply two decimal fractions.	50	3.0	49	4.4	52	3.5
N11	Yes	Identify number rounded to 18200.	79	1.9	81	2.5	76	2.9
N14	Yes	Identify list of equivalent fractions.	62	2.7	61	3.7	64	2.9
N16	Yes	Solve algebra word problem with fractions.	49	2.2	49	3.2	48	3.2
N17	Yes	Solve multi-step word problem: decimal fractions.	29	2.6	27	2.9	31	3.7
N19	Yes	Shade a given fraction of the squares in a grid.	45	3.1	52	4.0	36	3.5
O02	Yes	Calculate percent increase.	19	2.0	19	2.4	19	2.7
O04	Yes	Identify number rounded to the nearest 100th.	32	2.1	36	3.1	27	3.0
O09	Yes	Solve division word problem: common fractions.	29	2.3	33	3.4	25	2.8
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	63	2.3	68	3.3	58	3.6
P13	Yes	Use heart beats/min to find beats per hour.	68	2.4	68	3.6	69	2.5
P14	Yes	Solve subtraction word problem: common fractions.	66	2.3	68	3.3	63	4.1
P16	Yes	Reduce decimal to fraction in lowest terms.	20	2.0	25	2.7	15	2.7
Q06	Yes	Approximate water use/year from use/week.	38	2.9	40	3.8	36	3.4
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	38	2.3	40	3.3	36	3.3
Q09	Yes	Perform multiple operations of common fractions.	49	2.1	46	3.0	52	3.0
R06	Yes	Subtract two decimal numbers.	78	1.9	75	2.8	82	2.5
R07	Yes	Solve division word problem involving decimals.	41	2.6	45	3.3	38	3.0
R12	Yes	Subtract 4-digit whole numbers.	91	1.4	90	2.3	92	1.9
R13	Yes	Determine how much money left after spending 7/9.	26	2.3	30	2.7	22	3.2
U01A	Yes	Estimate the time required to record 5 songs.	27	1.5	31	2.2	22	2.0
U01B	Yes	Explain method of estimation.	24	1.3	25	2.0	22	1.9
V01	Yes	Determine actual weight from rounded value.	56	2.0	56	2.5	56	2.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Greece SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	65	1.0	66	1.3	65	1.3
B11	No	Identify cube made by folding 2-dimensional net.	47	1.2	48	1.7	46	1.8
C03	No	Identify properties of congruent trapezoids.	66	1.5	64	2.0	70	2.0
D07	No	Identify relationship of angles in symmetric polygon.	69	1.8	69	2.3	69	2.1
E02	No	Determine angle in congruent triangles.	51	1.5	52	1.8	49	2.1
G03	No	Find sum of vertical angles from diagram of intersecting lines.	49	1.7	50	1.9	47	2.2
I08	Yes	Identify point on a line defined by two other points.	25	2.4	29	3.5	20	2.7
J11	Yes	Identify properties of a parallelogram.	47	2.7	43	3.6	51	3.4
J15	Yes	Identify similar triangles of different size.	43	2.4	46	3.4	39	2.9
J16	Yes	Identify coordinates for point on a grid.	49	2.6	47	3.6	51	3.4
K03	Yes	Identify figure from rotation of 3-dimensional object.	64	2.7	68	3.5	60	3.4
K08	Yes	Determine unknown angle in rotated congruent triangles.	37	2.3	42	3.9	33	3.1
L15	Yes	Find fourth quadrilateral angle, given the other three.	37	2.3	44	3.2	30	3.1
M02	Yes	Identify all lines of symmetry for a rectangle.	62	3.0	61	4.4	62	3.2
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	50	2.1	53	3.2	48	3.4
M07	Yes	Find angle based on supplementary pairs.	72	2.2	77	2.7	67	3.4
N12	Yes	Identify point on number line from distance of other points.	64	2.3	69	3.0	58	3.3
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	45	2.5	50	3.3	41	3.5
O08	Yes	Find center point of rotation for symmetry-related figures.	61	2.3	62	3.3	60	3.5
P08	Yes	Know relationship between side and perimeter for square.	61	2.2	62	2.9	60	3.7
P09	Yes	Find length of side for similar triangles.	28	2.3	31	3.2	24	3.0
Q10	Yes	Perform calculation involving addition/subtraction of angles.	37	2.3	40	3.1	33	3.2
R10	Yes	Determine into how many triangles a trapezoid can be divided.	33	2.1	37	3.3	29	2.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Greece SCALE=Measurement

Eighth Grade

ITEM	REL	LABEL	Overall %	(se)	Boys %	(se)	Girls %	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	59	1.5	58	1.5	60	1.9
C01	No	Compare volumes of different stacks of blocks.	48	1.6	49	2.1	46	2.4
D11	No	Identify best unit to measure the mass of an egg.	88	0.8	89	1.1	88	1.2
E06	No	Solve word problem to find length of rectangle from width and perimeter.	34	1.4	39	2.2	28	1.7
F10	No	Determine measurement accuracy of ruler.	39	1.6	41	2.5	37	1.7
G02	No	Read meter scale to determine length of a pipe.	76	1.5	77	2.2	75	1.7
I03	Yes	Find number of 750 mL bottles filled by a large volume.	24	2.1	27	2.9	22	2.8
J10	Yes	Determine area of sheet not covered by rectangular picture.	36	2.7	35	3.4	38	3.5
K05	Yes	Calculate area of a rectangle given its length and perimeter.	26	2.3	31	3.3	22	2.9
L12	Yes	Find longest pace from chart showing number of paces to cross room.	70	2.2	74	3.1	66	3.6
M01	Yes	Read mass shown on scale.	86	1.7	88	2.3	84	2.6
N15	Yes	Identify drawing with angle closest to 30 degrees.	64	2.3	63	3.3	65	3.0
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	75	2.8	75	3.5	75	3.5
P11	Yes	Use ruler to determine approximate length of pencil.	33	2.5	40	3.8	25	2.9
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	25	2.5	35	3.0	15	2.7
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	52	3.0	49	3.7	55	3.9
S02B	Yes	Calculate length of side of square given area.	21	2.2	24	2.8	18	3.2
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	19	2.1	22	2.7	15	2.8
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	23	1.8	24	2.5	22	2.2
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	12	1.3	12	1.8	12	1.7
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	33	2.1	32	3.0	34	2.6

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Greece SCALE=Proportionality

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	36	1.2	43	1.4	29	1.5
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	69	1.4	67	1.7	71	1.9
D08	No	Solve ratio problem for x: 7/13 = x/52.	64	2.1	64	2.3	64	2.5
F07	No	Solve word problem to find average speed from distance and time.	23	1.2	25	1.9	22	1.4
G04	No	Solve simple proportionality equation.	64	1.4	64	1.8	64	1.9
L14	Yes	Identify missing numbers in table of proportional x and y values.	30	2.3	29	3.6	31	3.0
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	13	1.9	19	2.8	8	2.0
Q05	Yes	Solve word problem involving ratios.	59	2.5	64	3.3	55	3.3
R14	Yes	Solve multi-step word problem involving ratios.	39	2.7	43	3.1	35	3.4
T02A	Yes	Solve algebra word problem involving ratios.	17	1.4	18	1.8	15	2.2
T02B	Yes	Solve multi-step word problem computing fractions.	5	0.7	5	1.0	6	1.0
V03	Yes	Determine ratio of red paint in a mixture.	50	2.1	49	3.0	52	2.4

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Hong Kong SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	78	1.1	79	1.4	77	1.1
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	90	1.4	90	2.0	90	1.8
C05	No	Determine number which continues pattern based on figures.	66	1.8	67	2.3	65	2.7
D10	No	Identify equation which solves word problem: C=(100+6n).	72	1.7	71	2.1	74	2.2
E05	No	Find relationship between numbers in a set of ordered pairs.	64	1.8	66	2.4	62	2.5
F11	No	Solve multi-step problem using linear equations.	86	2.3	88	2.8	85	2.4
G06	No	Find solution to -3X for given value of X.	79	2.3	80	2.7	78	3.0
H10	No	Identify equation expressing xy relationship from table of values.	64	2.0	67	2.6	60	2.8
H12	No	Select symbolic linear equation which fits word problem.	88	1.3	88	1.7	88	1.9
I01	Yes	Identify meaning of symbol in word problem equation.	55	2.9	53	3.7	56	3.3
I04	Yes	Determine next number which occurs in two number sequences.	47	2.5	48	3.8	46	4.3
J18	Yes	Identify missing number in table showing xy relationship.	53	3.2	56	3.8	50	4.6
K04	Yes	Identify expression equivalent to linear inequality.	61	2.2	62	3.2	59	3.6
L11	Yes	Solve multi-step word problem using pattern.	37	2.8	35	3.4	39	4.0
L13	Yes	Identify matching patterns of symbols.	90	2.1	89	2.6	91	2.4
L16	Yes	Simplify and solve linear equation for X.	71	3.0	70	3.5	73	3.9
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	75	2.0	75	2.7	75	3.2
O07	Yes	Solve linear equation for X.	92	1.9	94	2.2	90	3.3
P10	Yes	Identify equivalent algebraic expressions.	79	3.3	83	3.2	74	5.6
P15	Yes	Identify equivalent expression for a cubic relationship.	86	2.6	90	2.3	81	4.2
Q01	Yes	Identify linear expression based on word problem.	65	3.2	64	3.9	67	4.6
Q02	Yes	Subtract fractional expressions of X.	78	2.7	79	3.1	77	4.0
Q07	Yes	Solve P=LW for W given values for P and L.	91	1.5	91	2.1	90	2.6
R09	Yes	Identify equivalent expressions from properties of real numbers.	65	3.3	64	3.9	66	5.5
R11	Yes	Solve algebra word problem: linear equation.	71	2.6	75	2.9	67	4.2
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	82	1.9	79	3.0	85	2.8
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	48	2.7	48	3.5	48	3.8
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	47	2.8	49	3.3	44	3.9
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	54	2.9	57	3.1	51	4.3

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Hong Kong SCALE=Data Rep., Analysis & Prob.

			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	87	1.1	87	1.1	87	1.3
B07	No	Interpret line graph to find region of largest increase.	81	1.3	80	1.4	82	2.1
C02	No	Interpret pie graph to determine distribution.	83	1.4	83	1.6	83	2.2
E01	No	Interpret line graph to determine intersection point of two plots.	81	1.3	82	1.7	80	1.8
F08	No	Predict probability of occurrence for independent coin toss.	57	1.8	60	2.6	53	2.3
G01	No	Interpret frequency table to find number above a given level.	44	1.9	48	2.5	40	2.6
H07	No	Interpret barchart histogram to find number above a given level.	86	1.2	88	1.5	85	1.9
H11	No	Predict number of total defective bulbs based on random sample.	73	2.1	75	2.5	69	2.5
I09	Yes	Predict most likely color of random card based on fraction of colors.	87	2.1	88	2.7	86	3.1
J13	Yes	Draw pictograph to represent number given in table.	81	2.0	80	3.2	82	3.0
K07	Yes	Determine the number of blue pens given probability of selection.	76	2.6	75	2.9	76	3.6
L10	Yes	Use data in a chart to identify time/day with highest temperature.	79	2.8	79	3.4	79	3.6
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	89	1.6	92	1.8	87	2.7
N18	Yes	Find probability of drawing an even number from 1 to 9.	56	2.8	59	3.2	53	3.7
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	65	2.5	70	3.0	58	4.0
O05	Yes	Calculate number of cube faces from probability of toss.	72	2.7	78	3.0	65	3.9
P17	Yes	Identify thermometer which shows temperature given in data table.	76	2.4	75	2.8	77	3.2
Q04	Yes	Interpret data in bar graph.	90	1.5	88	2.2	92	1.8
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	68	2.6	71	3.1	65	3.8
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	37	2.5	41	3.5	32	3.0

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Hong Kong SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	83	1.6	85	2.0	80	2.0
B09	No	Identify shaded figure which shows 2/5 = 4/10.	80	1.4	80	1.7	81	2.2
B10	No	Identify smallest of decimal fractions.	77	1.8	81	2.0	73	2.4
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	64	1.4	67	1.6	61	2.1
C06	No	Determine the worst estimate of: 848 + 677.	66	1.8	68	2.7	63	2.5
D09	No	Identify smallest fraction.	89	1.6	91	1.7	87	2.2
D12	No	Estimate rational number from point on number line.	87	1.4	89	1.8	86	1.9
E03	No	Find fraction of hour between two time points.	79	2.1	81	2.5	75	2.9
E04	No	Solve multi-step word problem: 4-digit whole numbers.	86	1.5	85	1.8	87	1.8
F09	No	Identify decimal fraction between 0.07 and 0.08.	80	1.8	82	2.2	79	2.3
F12	No	Identify fraction of circle which is shaded.	70	1.9	74	2.1	65	2.7
G05	No	Identify fraction represented in word problem.	82	1.9	82	2.4	83	2.6
H08	No	Identify figure showing 2/3 shaded.	89	1.3	90	1.5	88	2.1
H09	No	Identify sum which is closest to 691 + 208.	90	1.2	93	1.0	86	1.9
I02	Yes	Solve multi-step word problem: common fractions.	76	2.7	78	3.3	74	3.9
I05	Yes	Solve subtraction word problem: rational numbers.	86	1.8	85	2.5	87	2.6
I06	Yes	Write a fraction larger than a given number.	85	2.2	86	3.0	84	3.3
I07	Yes	Recognize when estimation is appropriate.	67	2.2	66	3.5	69	3.6
J12	Yes	Divide fractions.	70	3.5	71	4.0	69	5.4
J14	Yes	Divide rational numbers, fractional divisor.	70	3.0	69	3.6	72	3.8
J17	Yes	Use map and scale to find distance between two cities.	64	2.5	64	3.8	63	3.7
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	72	2.4	75	2.8	70	3.8
K02	Yes	Find total volume of mixture using rational number addition.	75	2.6	74	3.6	76	3.1
K06	Yes	Approximate amount increased by 15%.	60	2.8	65	3.9	55	3.5
K09	Yes	Compute sum of three fractions.	79	2.5	81	3.3	78	3.5
L08	Yes	Estimate actual height from diagram of relative heights.	60	2.8	63	3.0	56	4.4
L09	Yes	Identify 504.7 from its expression in words.	90	1.6	93	2.2	86	2.9
L17	Yes	Subtract three fractions.	78	2.9	79	3.1	78	3.8
M04	Yes	Identify the largest fraction.	59	2.8	64	3.9	54	3.2
M08	Yes	Multiply two decimal fractions.	73	2.7	71	3.4	75	4.1
N11	Yes	Identify number rounded to 18200.	89	2.1	91	2.4	86	2.9
N14	Yes	Identify list of equivalent fractions.	81	2.0	83	2.6	78	2.6
N16	Yes	Solve algebra word problem with fractions.	55	2.3	58	3.6	51	3.6
N17	Yes	Solve multi-step word problem: decimal fractions.	48	3.1	52	4.3	42	4.1
N19	Yes	Shade a given fraction of the squares in a grid.	86	2.4	87	2.9	85	3.4
O02	Yes	Calculate percent increase.	54	2.7	56	3.5	52	3.9
O04	Yes	Identify number rounded to the nearest 100th.	45	3.1	51	3.9	37	3.9
O09	Yes	Solve division word problem: common fractions.	70	3.3	78	3.3	60	4.5
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	82	2.3	82	3.3	82	3.2
P13	Yes	Use heart beats/min to find beats per hour.	79	2.5	80	2.8	77	3.8
P14	Yes	Solve subtraction word problem: common fractions.	83	2.1	84	3.0	83	3.5
P16	Yes	Reduce decimal to fraction in lowest terms.	63	3.1	69	3.8	55	5.0
Q06	Yes	Approximate water use/year from use/week.	47	2.7	48	4.2	45	4.2
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	70	2.9	75	3.3	65	4.2
Q09	Yes	Perform multiple operations of common fractions.	76	2.8	78	3.3	73	4.8
R06	Yes	Subtract two decimal numbers.	85	1.9	83	3.0	88	3.1
R07	Yes	Solve division word problem involving decimals.	73	2.2	73	3.2	73	3.7
R12	Yes	Subtract 4-digit whole numbers.	89	1.9	91	2.2	86	2.5
R13	Yes	Determine how much money left after spending 7/9.	56	2.7	60	3.3	50	4.1
U01A	Yes	Estimate the time required to record 5 songs.	44	2.5	47	3.3	40	3.2
U01B	Yes	Explain method of estimation.	27	2.3	30	3.2	25	2.8
V01	Yes	Determine actual weight from rounded value.	56	2.8	58	3.3	53	3.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Hong Kong SCALE=Geometry

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	74	1.8	76	1.9	71	2.4
B11	No	Identify cube made by folding 2-dimensional net.	84	1.1	87	1.2	80	2.0
C03	No	Identify properties of congruent trapezoids.	75	2.1	75	2.9	75	2.7
D07	No	Identify relationship of angles in symmetric polygon.	76	2.1	81	2.4	71	2.9
E02	No	Determine angle in congruent triangles.	76	2.2	78	2.3	73	3.1
G03	No	Find sum of vertical angles from diagram of intersecting lines.	81	1.8	79	2.2	82	2.2
I08	Yes	Identify point on a line defined by two other points.	50	2.8	46	3.6	54	3.5
J11	Yes	Identify properties of a parallelogram.	56	2.5	55	3.5	57	3.6
J15	Yes	Identify similar triangles of different size.	83	2.4	86	2.9	80	3.7
J16	Yes	Identify coordinates for point on a grid.	81	3.0	81	3.6	81	4.3
K03	Yes	Identify figure from rotation of 3-dimensional object.	75	2.7	78	3.2	72	3.9
K08	Yes	Determine unknown angle in rotated congruent triangles.	61	2.7	59	3.9	63	3.2
L15	Yes	Find fourth quadrilateral angle, given the other three.	64	3.0	68	4.1	60	3.5
M02	Yes	Identify all lines of symmetry for a rectangle.	73	2.4	71	3.5	75	2.9
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	73	2.1	77	2.9	69	3.4
M07	Yes	Find angle based on supplementary pairs.	82	2.2	82	3.0	83	3.2
N12	Yes	Identify point on number line from distance of other points.	77	2.4	81	3.1	72	3.6
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	73	2.2	77	2.8	67	3.3
O08	Yes	Find center point of rotation for symmetry-related figures.	83	2.2	86	2.2	80	3.7
P08	Yes	Know relationship between side and perimeter for square.	71	2.6	74	3.6	66	4.1
P09	Yes	Find length of side for similar triangles.	57	3.0	60	3.5	53	5.0
Q10	Yes	Perform calculation involving addition/subtraction of angles.	71	2.9	74	3.4	69	4.8
R10	Yes	Determine into how many triangles a trapezoid can be divided.	80	2.1	81	2.7	78	3.1

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Hong Kong SCALE=Measurement

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	82	1.5	83	1.9	81	1.7
C01	No	Compare volumes of different stacks of blocks.	84	1.6	86	2.0	83	1.9
D11	No	Identify best unit to measure the mass of an egg.	77	1.7	79	1.7	75	2.3
E06	No	Solve word problem to find length of rectangle from width and perimeter.	59	2.4	62	2.7	56	3.3
F10	No	Determine measurement accuracy of ruler.	63	2.3	69	2.7	56	2.7
G02	No	Read meter scale to determine length of a pipe.	89	1.2	87	1.5	91	1.7
I03	Yes	Find number of 750 mL bottles filled by a large volume.	43	3.0	50	3.8	36	4.1
J10	Yes	Determine area of sheet not covered by rectangular picture.	80	2.8	83	3.5	77	3.6
K05	Yes	Calculate area of a rectangle given its length and perimeter.	63	3.4	67	3.8	58	4.6
L12	Yes	Find longest pace from chart showing number of paces to cross room.	72	2.8	75	3.4	69	3.9
M01	Yes	Read mass shown on scale.	91	1.7	92	1.8	89	2.3
N15	Yes	Identify drawing with angle closest to 30 degrees.	68	2.3	70	3.6	66	3.4
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	62	3.2	71	3.6	50	4.6
P11	Yes	Use ruler to determine approximate length of pencil.	60	3.2	62	3.6	57	4.0
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	42	2.4	48	3.3	36	3.2
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	87	2.3	86	3.1	87	2.9
S02B	Yes	Calculate length of side of square given area.	72	2.9	75	3.5	69	3.8
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	61	3.0	63	3.3	58	4.3
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	46	2.8	49	3.4	42	3.6
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	25	2.4	27	2.9	24	3.4
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	70	2.6	75	2.8	64	3.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Hong Kong SCALE=Proportionality

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                                                                                        Eighth Grade

                                                                        Overall      Boys       Girls

ITEM    REL  LABEL                                                       %   (se)    %   (se)    %   (se)
-----------------------------------------------------------------------------------------------------------
A04     No   Solve word problem using proportions: 4/3 = 12/?           66  1.4    70  1.6    61  2.1
B08     No   Solve word problem using proportions: 300 calories/100g = ?/30g.   82  1.2    81  1.3    84  1.8
D08     No   Solve ratio problem for x: 7/13 = x/52.                    87  1.3    90  1.3    85  1.9
F07     No   Solve word problem to find average speed from distance and time.   59  2.2    63  2.6    55  3.0
G04     No   Solve simple proportionality equation.                     87  1.7    87  2.1    86  2.0
L14     Yes  Identify missing numbers in table of proportional x and y values.  38  2.9    37  3.0    39  4.0
M06     Yes  Compute number of girls, given total students and girl:boy ratio.  63  3.3    63  4.2    63  4.5
Q05     Yes  Solve word problem involving ratios.                       78  1.7    77  2.6    80  3.3
R14     Yes  Solve multi-step word problem involving ratios.            62  3.2    64  4.0    60  4.1
T02A    Yes  Solve algebra word problem involving ratios.               31  2.5    33  2.8    29  3.0
T02B    Yes  Solve multi-step word problem computing fractions.         15  1.7    18  2.1    12  1.9
V03     Yes  Determine ratio of red paint in a mixture.                 70  2.4    70  2.9    70  2.9
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REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Hungary SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	81	0.9	84	1.1	79	1.3
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	81	1.5	79	1.7	82	1.8
C05	No	Determine number which continues pattern based on figures.	62	1.8	59	2.4	64	2.1
D10	No	Identify equation which solves word problem: C=(100+6n).	48	1.5	48	2.2	48	2.2
E05	No	Find relationship between numbers in a set of ordered pairs.	65	1.8	60	2.3	69	2.4
F11	No	Solve multi-step problem using linear equations.	60	1.6	58	2.4	63	2.0
G06	No	Find solution to -3X for given value of X.	73	1.6	68	2.1	79	1.9
H10	No	Identify equation expressing xy relationship from table of values.	78	1.7	74	2.5	81	1.9
H12	No	Select symbolic linear equation which fits word problem.	77	1.4	75	1.9	79	1.9
I01	Yes	Identify meaning of symbol in word problem equation.	47	2.7	45	3.7	49	4.1
I04	Yes	Determine next number which occurs in two number sequences.	56	2.7	52	4.0	60	3.3
J18	Yes	Identify missing number in table showing xy relationship.	49	2.6	49	3.2	49	3.4
K04	Yes	Identify expression equivalent to linear inequality.	53	2.7	47	4.1	60	3.8
L11	Yes	Solve multi-step word problem using pattern.	40	2.9	36	3.5	43	3.7
L13	Yes	Identify matching patterns of symbols.	93	1.3	92	2.1	93	1.8
L16	Yes	Simplify and solve linear equation for X.	72	2.3	66	3.7	77	3.2
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	77	2.3	72	3.1	81	3.1
O07	Yes	Solve linear equation for X.	89	1.7	90	2.5	89	2.4
P10	Yes	Identify equivalent algebraic expressions.	72	2.4	74	3.3	70	3.1
P15	Yes	Identify equivalent expression for a cubic relationship.	69	2.5	66	3.5	71	3.6
Q01	Yes	Identify linear expression based on word problem.	57	3.0	55	3.9	58	4.0
Q02	Yes	Subtract fractional expressions of X.	65	2.9	66	3.9	65	4.1
Q07	Yes	Solve P=LW for W given values for P and L.	66	2.3	59	3.7	72	2.9
R09	Yes	Identify equivalent expressions from properties of real numbers.	53	2.9	47	4.2	57	4.0
R11	Yes	Solve algebra word problem: linear equation.	40	2.4	38	3.3	42	3.4
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	91	1.4	92	2.1	90	1.9
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	34	2.8	33	3.6	34	3.6
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	46	2.1	44	2.7	47	3.1
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	51	2.3	46	2.9	56	3.3

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Hungary SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	80	0.9	77	1.2	82	1.0
B07	No	Interpret line graph to find region of largest increase.	64	1.5	64	2.2	64	1.9
C02	No	Interpret pie graph to determine distribution.	86	1.2	85	1.5	86	1.4
E01	No	Interpret line graph to determine intersection point of two plots.	78	1.4	79	1.9	78	1.8
F08	No	Predict probability of occurrence for independent coin toss.	82	1.4	81	1.7	82	1.9
G01	No	Interpret frequency table to find number above a given level.	62	1.4	63	2.0	61	1.9
H07	No	Interpret barchart histogram to find number above a given level.	67	1.5	67	2.1	67	1.9
H11	No	Predict number of total defective bulbs based on random sample.	71	1.6	74	1.9	69	2.2
I09	Yes	Predict most likely color of random card based on fraction of colors.	73	2.3	73	3.2	72	3.2
J13	Yes	Draw pictograph to represent number given in table.	87	1.7	84	2.6	89	2.4
K07	Yes	Determine the number of blue pens given probability of selection.	51	2.5	54	3.9	48	3.6
L10	Yes	Use data in a chart to identify time/day with highest temperature.	91	1.4	90	2.4	91	2.0
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	82	2.1	84	3.3	80	2.5
N18	Yes	Find probability of drawing an even number from 1 to 9.	47	2.7	45	3.6	50	4.0
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	60	2.7	65	4.1	56	3.7
O05	Yes	Calculate number of cube faces from probability of toss.	55	2.8	56	3.7	54	4.0
P17	Yes	Identify thermometer which shows temperature given in data table.	88	1.9	89	2.7	87	2.7
Q04	Yes	Interpret data in bar graph.	84	2.2	82	3.0	85	3.0
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	51	2.9	53	3.8	49	4.0
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	20	1.6	22	2.3	18	1.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Hungary SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	66	1.5	67	1.7	66	1.8
B09	No	Identify shaded figure which shows 2/5 = 4/10.	51	1.5	51	2.1	51	1.9
B10	No	Identify smallest of decimal fractions.	53	1.8	59	2.1	47	2.3
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	57	1.6	58	2.2	56	2.2
C06	No	Determine the worst estimate of: 848 + 677.	82	1.5	84	1.9	80	2.0
D09	No	Identify smallest fraction.	72	1.6	75	2.0	69	2.3
D12	No	Estimate rational number from point on number line.	77	1.6	78	2.3	77	1.9
E03	No	Find fraction of hour between two time points.	60	1.5	63	1.9	56	2.3
E04	No	Solve multi-step word problem: 4-digit whole numbers.	65	1.6	63	2.1	66	2.3
F09	No	Identify decimal fraction between 0.07 and 0.08.	67	1.6	68	2.0	66	2.2
F12	No	Identify fraction of circle which is shaded.	52	1.6	51	2.0	53	2.2
G05	No	Identify fraction represented in word problem.	45	1.9	44	2.3	47	2.5
H08	No	Identify figure showing 2/3 shaded.	74	1.7	75	2.2	74	2.3
H09	No	Identify sum which is closest to 691 + 208.	90	1.0	90	1.5	90	1.3
I02	Yes	Solve multi-step word problem: common fractions.	63	2.7	63	3.8	62	3.7
I05	Yes	Solve subtraction word problem: rational numbers.	77	2.1	75	3.3	79	3.2
I06	Yes	Write a fraction larger than a given number.	87	1.9	82	3.0	91	2.0
I07	Yes	Recognize when estimation is appropriate.	82	2.0	78	3.0	85	2.4
J12	Yes	Divide fractions.	69	2.3	64	3.6	74	2.9
J14	Yes	Divide rational numbers, fractional divisor.	68	2.6	66	4.1	70	3.2
J17	Yes	Use map and scale to find distance between two cities.	82	2.0	81	3.1	84	2.6
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	73	2.6	76	3.8	69	3.8
K02	Yes	Find total volume of mixture using rational number addition.	79	1.9	79	2.9	78	2.7
K06	Yes	Approximate amount increased by 15%.	58	2.9	60	4.2	57	4.0
K09	Yes	Compute sum of three fractions.	79	2.5	78	3.4	81	2.9
L08	Yes	Estimate actual height from diagram of relative heights.	65	2.2	70	3.5	60	3.0
L09	Yes	Identify 504.7 from its expression in words.	96	1.2	94	1.8	97	1.3
M04	Yes	Identify the largest fraction.	49	3.0	49	4.5	49	3.7
M08	Yes	Multiply two decimal fractions.	73	2.5	71	3.7	75	3.3
N11	Yes	Identify number rounded to 18200.	92	1.3	90	2.0	93	1.8
N14	Yes	Identify list of equivalent fractions.	73	2.2	69	3.4	76	3.2
N16	Yes	Solve algebra word problem with fractions.	53	2.8	55	3.8	52	3.9
N17	Yes	Solve multi-step word problem: decimal fractions.	45	3.0	45	3.8	46	3.7
N19	Yes	Shade a given fraction of the squares in a grid.	64	2.5	61	3.6	67	3.2
O02	Yes	Calculate percent increase.	46	2.8	51	3.9	41	3.8
O04	Yes	Identify number rounded to the nearest 100th.	54	3.0	54	4.6	53	4.0
O09	Yes	Solve division word problem: common fractions.	51	2.7	60	3.4	42	4.3
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	80	2.6	78	3.5	81	3.2
P13	Yes	Use heart beats/min to find beats per hour.	75	2.5	76	3.5	74	3.3
P14	Yes	Solve subtraction word problem: common fractions.	75	2.5	69	3.6	80	3.0
P16	Yes	Reduce decimal to fraction in lowest terms.	43	2.7	40	4.0	45	3.8
Q06	Yes	Approximate water use/year from use/week.	45	2.9	40	4.1	50	3.9
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	35	3.0	32	4.0	38	3.8
R06	Yes	Subtract two decimal numbers.	90	1.9	84	3.1	95	1.7
R07	Yes	Solve division word problem involving decimals.	55	2.7	55	3.9	56	3.9
R12	Yes	Subtract 4-digit whole numbers.	96	1.2	94	1.8	97	1.3
R13	Yes	Determine how much money left after spending 7/9.	40	2.6	39	3.7	41	3.4
U01A	Yes	Estimate the time required to record 5 songs.	35	2.1	35	3.2	35	2.8
U01B	Yes	Explain method of estimation.	27	2.2	26	2.9	29	2.7
V01	Yes	Determine actual weight from rounded value.	67	2.0	68	2.4	65	2.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Hungary SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	49	1.5	48	1.8	50	1.7
B11	No	Identify cube made by folding 2-dimensional net.	67	1.5	72	1.9	63	2.1
C03	No	Identify properties of congruent trapezoids.	72	1.5	69	2.1	75	2.0
D07	No	Identify relationship of angles in symmetric polygon.	52	2.0	52	2.6	53	2.5
E02	No	Determine angle in congruent triangles.	44	1.8	45	2.2	43	2.4
G03	No	Find sum of vertical angles from diagram of intersecting lines.	53	1.9	54	2.3	52	2.5
I08	Yes	Identify point on a line defined by two other points.	51	2.6	56	4.2	46	3.5
J11	Yes	Identify properties of a parallelogram.	57	2.6	53	4.0	62	3.7
J15	Yes	Identify similar triangles of different size.	77	2.2	75	2.8	78	2.9
J16	Yes	Identify coordinates for point on a grid.	71	2.4	66	3.4	77	2.9
K03	Yes	Identify figure from rotation of 3-dimensional object.	71	2.6	76	3.4	66	3.1
K08	Yes	Determine unknown angle in rotated congruent triangles.	39	2.8	36	4.2	43	3.7
L15	Yes	Find fourth quadrilateral angle, given the other three.	35	2.6	32	3.3	37	4.1
M02	Yes	Identify all lines of symmetry for a rectangle.	82	2.1	81	3.3	84	2.7
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	67	2.6	71	3.2	64	3.7
M07	Yes	Find angle based on supplementary pairs.	86	1.8	87	2.8	84	2.6
N12	Yes	Identify point on number line from distance of other points.	71	2.5	69	3.6	73	3.1
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	55	2.9	57	4.3	52	3.9
O08	Yes	Find center point of rotation for symmetry-related figures.	86	2.2	90	2.5	81	3.1
P08	Yes	Know relationship between side and perimeter for square.	55	2.7	58	4.1	52	3.8
P09	Yes	Find length of side for similar triangles.	38	2.4	39	3.8	37	3.6
Q10	Yes	Perform calculation involving addition/subtraction of angles.	45	2.6	44	3.9	45	3.9
R10	Yes	Determine into how many triangles a trapezoid can be divided.	63	2.8	63	4.1	64	3.5

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Hungary SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	90	0.7	91	0.8	90	0.9
C01	No	Compare volumes of different stacks of blocks.	69	1.6	70	2.1	67	2.2
D11	No	Identify best unit to measure the mass of an egg.	95	0.6	95	1.0	96	0.9
E06	No	Solve word problem to find length of rectangle from width and perimeter.	33	1.8	36	2.1	31	2.5
F10	No	Determine measurement accuracy of ruler.	70	1.5	74	1.9	67	2.2
G02	No	Read meter scale to determine length of a pipe.	83	1.4	83	1.6	83	1.9
I03	Yes	Find number of 750 mL bottles filled by a large volume.	45	3.0	49	4.1	41	4.0
J10	Yes	Determine area of sheet not covered by rectangular picture.	51	2.6	48	3.6	55	3.4
K05	Yes	Calculate area of a rectangle given its length and perimeter.	47	3.0	45	3.9	49	4.3
L12	Yes	Find longest pace from chart showing number of paces to cross room.	59	2.6	56	3.4	63	3.8
M01	Yes	Read mass shown on scale.	92	1.5	94	1.8	90	2.4
N15	Yes	Identify drawing with angle closest to 30 degrees.	77	2.3	77	3.1	77	3.2
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	90	1.6	89	2.4	91	2.3
P11	Yes	Use ruler to determine approximate length of pencil.	58	2.6	60	3.8	56	3.4
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	40	2.5	40	3.5	40	3.3
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	68	2.6	70	3.3	67	3.7
S02B	Yes	Calculate length of side of square given area.	35	2.5	39	3.5	32	3.2
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	25	2.6	32	3.6	18	3.0
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	43	2.1	45	3.0	42	2.8
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	9	0.9	9	1.4	8	1.5
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	44	1.9	48	2.9	41	2.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Hungary SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	47	1.3	53	1.6	41	1.6
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	72	1.4	73	1.8	71	2.0
D08	No	Solve ratio problem for x: 7/13 = x/52.	71	1.6	69	2.3	73	2.0
F07	No	Solve word problem to find average speed from distance and time.	40	1.6	41	2.3	40	2.0
G04	No	Solve simple proportionality equation.	75	1.5	74	1.9	77	2.1
L14	Yes	Identify missing numbers in table of proportional x and y values.	24	2.4	26	3.3	22	3.2
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	57	2.6	52	4.3	62	3.6
Q05	Yes	Solve word problem involving ratios.	67	2.3	69	3.4	66	3.3
R14	Yes	Solve multi-step word problem involving ratios.	42	2.5	42	3.7	41	3.6
T02A	Yes	Solve algebra word problem involving ratios.	19	1.7	20	2.3	17	2.2
T02B	Yes	Solve multi-step word problem computing fractions.	10	1.2	11	2.1	9	1.6
V03	Yes	Determine ratio of red paint in a mixture.	36	2.1	35	2.7	37	2.8

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Iceland SCALE=Algebra

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                                                                                         Eighth Grade

                                                                              Overall      Boys       Girls

ITEM    REL  LABEL                                                            %   (se)    %   (se)    %   (se)
----------------------------------------------------------------------------------------------------------------
A02     No   Solve algebraic word problem equating masses on a scale.        77   1.6    77   2.5    76   1.7
B12     No   Identify algebraic equation to solve word problem: 7n+6=41.     51   2.4    49   3.8    53   3.3
C05     No   Determine number which continues pattern based on figures.      50   2.0    44   3.1    57   2.6
D10     No   Identify equation which solves word problem:  C=(100+6n).       41   2.3    40   3.4    42   3.1
E05     No   Find relationship between numbers in a set of ordered pairs.    37   2.7    29   2.9    44   4.2
F11     No   Solve multi-step problem using linear equations.               48   2.9    42   2.3    53   4.3
G06     No   Find solution to -3X for given value of X.                      4   0.8     4   1.2     5   1.7
H10     No   Identify equation expressing xy relationship from table of values. 26 2.7  27   3.3    24   3.0
H12     No   Select symbolic linear equation which fits word problem.        69   2.5    66   2.5    72   5.2
I01     Yes  Identify meaning of symbol in word problem equation.            34   4.7    30   5.7    38   6.6
I04     Yes  Determine next number which occurs in two number sequences.     28   3.2    24   5.5    31   5.5
J18     Yes  Identify missing number in table showing xy relationship.       44   4.9    44   4.9    45   8.9
K04     Yes  Identify expression equivalent to linear inequality.           31   4.3    27   5.2    34   5.7
L11     Yes  Solve multi-step word problem using pattern.                    36   3.7    32   4.8    40   5.9
L13     Yes  Identify matching patterns of symbols.                          83   3.7    82   5.4    85   4.4
L16     Yes  Simplify and solve linear equation for X.                       15   2.5    21   3.8     9   3.9
N13     Yes  Calculate (7X+4)/(5X-4) for a given value of X.                 31   3.9    27   4.5    35   5.3
O07     Yes  Solve linear equation for X.                                    56   3.4    60   4.8    49   5.8
P10     Yes  Identify equivalent algebraic expressions.                      59   4.0    52   4.6    65   6.6
P15     Yes  Identify equivalent expression for a cubic relationship.        35   3.6    35   4.3    35   6.6
Q01     Yes  Identify linear expression based on word problem.               14   3.2     8   2.9    20   6.2
Q02     Yes  Subtract fractional expressions of X.                          43   3.8    46   4.7    40   5.3
Q07     Yes  Solve P=LW for W given values for P and L.                       41   5.3    42   7.1    41   6.8
R09     Yes  Identify equivalent expressions from properties of real numbers. 25 2.6    29   4.1    22   5.1
R11     Yes  Solve algebra word problem: linear equation.                    39   3.6    39   4.3    39   4.4
S01A    Yes  Complete chart by observing sequence of triangles in each of 3 figures. 77 3.6 79 4.8 75 4.7
S01B    Yes  Extend triangle pattern from 3 figures to 8th.                  16   2.7    20   4.7    13   2.9
T01A    Yes  Solve multi-step algebra word problem of simultaneous equations. 27 3.3   25   3.8    28   4.5
T01B    Yes  Solve multi-step algebra word problem of simultaneous equations. 30 3.1   28   4.3    31   4.6
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REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Iceland SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	71	1.6	65	1.9	77	1.8
B07	No	Interpret line graph to find region of largest increase.	72	1.6	70	2.6	73	2.9
C02	No	Interpret pie graph to determine distribution.	81	1.9	79	2.8	82	2.0
E01	No	Interpret line graph to determine intersection point of two plots.	64	2.4	64	3.3	65	2.5
F08	No	Predict probability of occurrence for independent coin toss.	56	2.2	62	2.5	51	3.3
G01	No	Interpret frequency table to find number above a given level.	64	2.0	63	2.4	65	3.2
H07	No	Interpret barchart histogram to find number above a given level.	78	3.3	77	4.8	78	3.4
H11	No	Predict number of total defective bulbs based on random sample.	54	3.0	60	3.7	45	4.3
I09	Yes	Predict most likely color of random card based on fraction of colors.	79	3.5	79	6.1	80	4.1
J13	Yes	Draw pictograph to represent number given in table.	87	2.9	88	3.5	85	4.7
K07	Yes	Determine the number of blue pens given probability of selection.	44	5.1	43	7.0	45	5.2
L10	Yes	Use data in a chart to identify time/day with highest temperature.	90	2.2	90	4.0	90	3.3
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	77	2.8	78	5.4	76	4.4
N18	Yes	Find probability of drawing an even number from 1 to 9.	64	3.1	69	5.1	59	7.2
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	56	4.3	64	6.7	45	6.4
O05	Yes	Calculate number of cube faces from probability of toss.	57	4.2	61	6.0	51	7.3
P17	Yes	Identify thermometer which shows temperature given in data table.	81	3.6	73	5.6	90	3.7
Q04	Yes	Interpret data in bar graph.	85	3.5	81	5.7	88	4.0
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	45	4.7	50	6.3	39	7.3
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	15	1.8	14	2.1	16	3.1

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Iceland SCALE=Fractions and number sense

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	46	2.3	50	2.4	41	4.0
B09	No	Identify shaded figure which shows 2/5 = 4/10.	52	3.4	51	4.8	53	3.8
B10	No	Identify smallest of decimal fractions.	69	2.9	69	4.7	68	3.2
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	57	2.7	59	2.5	54	4.4
C06	No	Determine the worst estimate of: 848 + 677.	76	2.0	74	2.8	78	3.1
D09	No	Identify smallest fraction.	86	1.5	88	2.5	84	2.4
D12	No	Estimate rational number from point on number line.	79	2.2	75	3.2	83	2.7
E03	No	Find fraction of hour between two time points.	63	2.3	60	3.9	66	2.8
E04	No	Solve multi-step word problem: 4-digit whole numbers.	61	2.8	51	4.5	71	3.6
F09	No	Identify decimal fraction between 0.07 and 0.08.	81	2.6	81	2.6	81	3.8
F12	No	Identify fraction of circle which is shaded.	56	2.8	58	4.6	54	3.2
G05	No	Identify fraction represented in word problem.	58	3.4	53	5.0	63	3.1
H08	No	Identify figure showing 2/3 shaded.	80	1.8	80	2.9	80	2.7
H09	No	Identify sum which is closest to 691 + 208.	90	1.1	88	2.5	93	1.9
I02	Yes	Solve multi-step word problem: common fractions.	59	6.1	62	8.0	56	5.7
I05	Yes	Solve subtraction word problem: rational numbers.	73	3.2	69	5.9	78	4.8
I06	Yes	Write a fraction larger than a given number.	89	2.8	89	3.8	89	3.6
I07	Yes	Recognize when estimation is appropriate.	73	3.6	66	7.1	80	3.6
J12	Yes	Divide fractions.	5	2.1	4	2.1	6	2.8
J14	Yes	Divide rational numbers, fractional divisor.	20	4.1	20	4.9	19	4.6
J17	Yes	Use map and scale to find distance between two cities.	68	4.4	64	6.8	72	4.3
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	70	3.5	72	5.9	68	4.8
K02	Yes	Find total volume of mixture using rational number addition.	66	5.5	54	6.9	79	5.0
K06	Yes	Approximate amount increased by 15%.	50	6.5	49	7.2	50	7.8
K09	Yes	Compute sum of three fractions.	10	1.9	5	1.5	15	3.8
L08	Yes	Estimate actual height from diagram of relative heights.	64	2.8	58	5.4	70	5.2
L09	Yes	Identify 504.7 from its expression in words.	68	5.2	68	6.6	68	6.5
L17	Yes	Subtract three fractions.	28	4.0	33	6.4	22	4.4
M04	Yes	Identify the largest fraction.	29	3.7	31	4.5	26	5.8
M08	Yes	Multiply two decimal fractions.	33	4.1	24	4.6	42	6.1
N11	Yes	Identify number rounded to 18200.	89	2.5	87	2.9	91	4.1
N14	Yes	Identify list of equivalent fractions.	41	3.1	50	5.0	30	4.6
N16	Yes	Solve algebra word problem with fractions.	48	6.4	53	6.5	41	7.9
N17	Yes	Solve multi-step word problem: decimal fractions.	25	4.1	23	5.3	28	3.7
N19	Yes	Shade a given fraction of the squares in a grid.	44	3.3	46	6.4	41	6.3
O02	Yes	Calculate percent increase.	24	3.2	30	4.8	15	3.3
O09	Yes	Solve division word problem: common fractions.	49	5.2	54	6.3	41	7.3
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	78	3.4	69	6.0	87	3.6
P13	Yes	Use heart beats/min to find beats per hour.	67	3.0	69	6.7	64	6.1
P14	Yes	Solve subtraction word problem: common fractions.	78	4.3	72	6.5	84	4.3
P16	Yes	Reduce decimal to fraction in lowest terms.	5	1.4	3	2.1	8	4.3
Q06	Yes	Approximate water use/year from use/week.	44	3.4	47	4.6	42	4.8
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	62	4.2	59	6.2	65	6.3
Q09	Yes	Perform multiple operations of common fractions.	13	2.6	13	3.0	14	5.1
R06	Yes	Subtract two decimal numbers.	75	3.6	74	6.7	77	3.8
R07	Yes	Solve division word problem involving decimals.	38	4.4	44	7.8	33	6.1
R12	Yes	Subtract 4-digit whole numbers.	89	3.2	86	5.4	92	3.2
R13	Yes	Determine how much money left after spending 7/9.	30	3.4	29	3.9	32	6.5
U01A	Yes	Estimate the time required to record 5 songs.	37	2.5	44	3.3	30	3.8
U01B	Yes	Explain method of estimation.	28	3.3	31	4.7	25	4.8
V01	Yes	Determine actual weight from rounded value.	59	4.1	60	6.3	58	4.3

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Iceland SCALE=Geometry

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	51	1.8	48	2.1	56	2.3
B11	No	Identify cube made by folding 2-dimensional net.	70	2.7	67	3.3	73	3.9
C03	No	Identify properties of congruent trapezoids.	50	2.4	45	3.2	56	3.9
D07	No	Identify relationship of angles in symmetric polygon.	43	3.1	45	3.2	41	3.6
E02	No	Determine angle in congruent triangles.	48	2.6	44	3.4	51	3.5
G03	No	Find sum of vertical angles from diagram of intersecting lines.	35	2.4	31	3.1	39	3.5
I08	Yes	Identify point on a line defined by two other points.	43	3.4	54	5.4	32	4.3
J11	Yes	Identify properties of a parallelogram.	43	3.3	44	5.9	42	6.0
J15	Yes	Identify similar triangles of different size.	59	4.4	56	6.2	62	5.0
J16	Yes	Identify coordinates for point on a grid.	48	5.0	45	5.0	51	7.9
K03	Yes	Identify figure from rotation of 3-dimensional object.	81	2.2	78	4.3	84	3.6
K08	Yes	Determine unknown angle in rotated congruent triangles.	43	3.6	39	5.5	46	5.8
L15	Yes	Find fourth quadrilateral angle, given the other three.	48	3.6	44	5.0	53	4.2
M02	Yes	Identify all lines of symmetry for a rectangle.	55	3.5	50	7.5	60	4.7
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	65	4.5	70	6.3	59	5.1
M07	Yes	Find angle based on supplementary pairs.	75	4.3	82	4.1	67	5.8
N12	Yes	Identify point on number line from distance of other points.	66	3.2	68	5.8	65	4.2
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	42	4.2	44	4.7	39	5.8
O08	Yes	Find center point of rotation for symmetry-related figures.	48	4.0	55	4.9	39	6.1
P08	Yes	Know relationship between side and perimeter for square.	32	3.1	32	5.8	33	5.5
P09	Yes	Find length of side for similar triangles.	38	4.1	34	4.9	43	5.5
Q10	Yes	Perform calculation involving addition/subtraction of angles.	32	3.5	29	3.7	35	6.0
R10	Yes	Determine into how many triangles a trapezoid can be divided.	57	6.1	52	8.3	62	6.0

REL: Release Status (Yes= Item in Released Item Set)

Third International Mathematics and Science Study - 1995 Assessment
Percent Correct on the Mathematics Items - Eighth Grade

May 11, 1998 101

COUNTRY ID=Iceland SCALE=Measurement

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	61	2.0	59	2.5	64	2.9
C01	No	Compare volumes of different stacks of blocks.	63	2.9	64	3.0	61	3.4
D11	No	Identify best unit to measure the mass of an egg.	88	1.3	87	1.8	90	1.8
E06	No	Solve word problem to find length of rectangle from width and perimeter.	32	2.1	35	3.4	29	2.5
F10	No	Determine measurement accuracy of ruler.	48	3.2	48	3.6	47	3.9
G02	No	Read meter scale to determine length of a pipe.	82	2.2	81	2.5	83	3.1
I03	Yes	Find number of 750 mL bottles filled by a large volume.	35	4.0	42	8.2	29	5.6
J10	Yes	Determine area of sheet not covered by rectangular picture.	32	4.2	35	4.9	29	5.0
K05	Yes	Calculate area of a rectangle given its length and perimeter.	32	3.0	24	5.1	40	6.6
L12	Yes	Find longest pace from chart showing number of paces to cross room.	80	4.0	81	3.7	79	5.4
M01	Yes	Read mass shown on scale.	88	2.2	91	2.9	86	3.4
N15	Yes	Identify drawing with angle closest to 30 degrees.	61	4.4	60	7.2	61	7.7
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	73	3.8	74	4.9	72	4.7
P11	Yes	Use ruler to determine approximate length of pencil.	27	2.6	25	4.0	28	4.7
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	31	4.7	36	6.4	27	6.0
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	49	3.9	39	6.6	58	7.5
S02B	Yes	Calculate length of side of square given area.	10	2.9	12	4.4	8	3.5
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	18	4.9	18	5.4	19	6.5
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	18	2.3	16	2.9	20	3.0
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	5	1.4	5	2.3	5	1.8
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	42	3.1	43	4.0	42	4.8

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Iceland SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	61	2.6	66	2.5	54	3.8
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	61	2.0	64	2.8	58	2.6
D08	No	Solve ratio problem for x: 7/13 = x/52.	63	2.2	63	3.1	62	3.0
F07	No	Solve word problem to find average speed from distance and time.	25	2.3	29	3.5	20	2.3
G04	No	Solve simple proportionality equation.	54	2.4	56	3.1	51	3.7
L14	Yes	Identify missing numbers in table of proportional x and y values.	14	3.2	13	4.7	15	4.0
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	18	3.1	21	3.4	15	4.5
Q05	Yes	Solve word problem involving ratios.	66	4.6	69	5.4	64	6.4
R14	Yes	Solve multi-step word problem involving ratios.	25	4.1	29	5.8	20	5.9
T02A	Yes	Solve algebra word problem involving ratios.	22	3.2	20	3.1	24	5.0
T02B	Yes	Solve multi-step word problem computing fractions.	4	1.2	6	2.1	2	1.2
V03	Yes	Determine ratio of red paint in a mixture.	49	4.1	44	5.3	54	4.8

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Iran, Islamic Rep. SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	65	1.8	70	1.8	58	2.8
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	49	1.7	50	2.3	48	2.7
C05	No	Determine number which continues pattern based on figures.	37	2.3	35	2.8	41	3.2
D10	No	Identify equation which solves word problem: C=(100+6n).	30	1.8	27	2.6	34	2.4
E05	No	Find relationship between numbers in a set of ordered pairs.	39	1.9	35	2.4	43	2.7
F11	No	Solve multi-step problem using linear equations.	38	2.2	43	3.4	32	2.7
G06	No	Find solution to -3X for given value of X.	56	2.2	54	3.5	59	2.8
H10	No	Identify equation expressing xy relationship from table of values.	35	2.3	38	3.0	31	3.1
H12	No	Select symbolic linear equation which fits word problem.	50	2.0	51	3.2	48	2.3
I01	Yes	Identify meaning of symbol in word problem equation.	23	2.4	20	3.0	28	3.4
I04	Yes	Determine next number which occurs in two number sequences.	24	2.9	28	4.6	20	3.2
J18	Yes	Identify missing number in table showing xy relationship.	25	2.9	32	3.7	18	4.0
K04	Yes	Identify expression equivalent to linear inequality.	40	3.2	38	4.8	42	3.6
L11	Yes	Solve multi-step word problem using pattern.	30	4.3	25	6.7	34	5.0
L13	Yes	Identify matching patterns of symbols.	95	1.3	95	1.7	95	2.0
L16	Yes	Simplify and solve linear equation for X.	22	3.7	21	5.9	23	4.4
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	41	3.6	40	3.4	43	6.1
O07	Yes	Solve linear equation for X.	47	3.7	47	5.1	47	4.8
P10	Yes	Identify equivalent algebraic expressions.	34	3.2	32	4.6	36	4.7
P15	Yes	Identify equivalent expression for a cubic relationship.	53	4.3	49	6.3	57	4.9
Q01	Yes	Identify linear expression based on word problem.	38	3.8	32	6.3	45	4.1
Q02	Yes	Subtract fractional expressions of X.	25	2.8	22	3.1	29	5.3
Q07	Yes	Solve P=LW for W given values for P and L.	50	3.2	49	5.3	51	3.8
R09	Yes	Identify equivalent expressions from properties of real numbers.	25	2.8	18	3.0	34	4.9
R11	Yes	Solve algebra word problem: linear equation.	31	2.9	29	3.9	33	4.2
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	65	2.8	62	3.9	70	4.6
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	12	2.7	9	2.2	15	5.1
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	12	2.1	14	3.6	10	1.6
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	10	2.2	11	3.9	10	1.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Iran, Islamic Rep. SCALE=Data Rep., Analysis & Prob.

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	76	1.2	75	1.6	77	1.9
B07	No	Interpret line graph to find region of largest increase.	20	1.5	21	2.2	19	2.6
C02	No	Interpret pie graph to determine distribution.	70	1.8	73	2.8	66	2.3
E01	No	Interpret line graph to determine intersection point of two plots.	27	1.4	27	2.4	27	1.9
F08	No	Predict probability of occurrence for independent coin toss.	29	2.1	29	3.4	29	2.1
G01	No	Interpret frequency table to find number above a given level.	45	2.3	44	3.3	46	3.2
H07	No	Interpret barchart histogram to find number above a given level.	48	1.5	48	2.2	48	2.6
H11	No	Predict number of total defective bulbs based on random sample.	47	1.5	52	2.1	40	2.3
I09	Yes	Predict most likely color of random card based on fraction of colors.	41	3.8	49	5.9	31	3.6
J13	Yes	Draw pictograph to represent number given in table.	67	2.9	69	3.9	65	4.4
K07	Yes	Determine the number of blue pens given probability of selection.	42	3.3	42	5.4	43	3.9
L10	Yes	Use data in a chart to identify time/day with highest temperature.	75	2.9	76	4.5	74	4.1
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	37	3.1	41	4.0	32	4.3
N18	Yes	Find probability of drawing an even number from 1 to 9.	38	3.7	37	4.6	40	5.5
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	25	2.8	28	3.1	22	4.5
O05	Yes	Calculate number of cube faces from probability of toss.	24	3.9	29	6.0	18	3.3
P17	Yes	Identify thermometer which shows temperature given in data table.	64	2.9	62	3.7	67	4.1
Q04	Yes	Interpret data in bar graph.	73	4.3	68	7.0	79	3.5
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	27	2.9	31	3.7	21	4.3
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	1	0.4	1	0.3	1	0.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Iran, Islamic Rep. SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	43	1.6	50	2.2	36	2.5
B09	No	Identify shaded figure which shows 2/5 = 4/10.	58	2.4	57	3.7	59	2.5
B10	No	Identify smallest of decimal fractions.	11	1.1	11	1.5	11	1.6
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	42	1.8	44	2.1	40	2.7
C06	No	Determine the worst estimate of: 848 + 677.	52	2.1	56	3.1	47	2.3
D09	No	Identify smallest fraction.	48	2.1	57	3.1	38	2.5
D12	No	Estimate rational number from point on number line.	23	1.5	24	2.2	21	2.4
E03	No	Find fraction of hour between two time points.	38	1.8	41	1.9	34	3.9
E04	No	Solve multi-step word problem: 4-digit whole numbers.	70	2.5	69	3.5	70	3.3
F09	No	Identify decimal fraction between 0.07 and 0.08.	31	1.8	33	2.6	28	2.5
F12	No	Identify fraction of circle which is shaded.	32	1.5	33	2.2	30	2.3
G05	No	Identify fraction represented in word problem.	43	1.6	44	2.6	42	2.6
H08	No	Identify figure showing 2/3 shaded.	78	2.0	80	2.9	75	2.3
H09	No	Identify sum which is closest to 691 + 208.	60	1.8	70	1.9	48	2.4
I02	Yes	Solve multi-step word problem: common fractions.	38	3.2	45	4.7	29	4.0
I05	Yes	Solve subtraction word problem: rational numbers.	62	3.3	58	5.0	68	3.6
I06	Yes	Write a fraction larger than a given number.	31	3.2	34	3.8	27	4.7
I07	Yes	Recognize when estimation is appropriate.	41	2.8	40	3.3	41	5.4
J12	Yes	Divide fractions.	55	3.0	51	4.4	59	4.3
J14	Yes	Divide rational numbers, fractional divisor.	17	2.4	14	3.3	20	3.9
J17	Yes	Use map and scale to find distance between two cities.	32	3.2	39	5.0	24	3.2
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	46	2.8	49	3.6	45	3.9
K02	Yes	Find total volume of mixture using rational number addition.	55	2.4	50	3.4	60	4.2
K06	Yes	Approximate amount increased by 15%.	13	2.0	16	3.1	10	2.8
K09	Yes	Compute sum of three fractions.	45	2.9	43	3.7	49	4.2
L08	Yes	Estimate actual height from diagram of relative heights.	46	3.2	51	4.4	40	3.7
L09	Yes	Identify 504.7 from its expression in words.	72	2.8	78	3.5	65	3.9
L17	Yes	Subtract three fractions.	27	3.3	24	5.2	31	3.7
M04	Yes	Identify the largest fraction.	10	1.9	13	3.2	6	2.0
M08	Yes	Multiply two decimal fractions.	50	2.7	49	4.3	53	3.1
N11	Yes	Identify number rounded to 18200.	41	3.1	43	4.0	37	5.4
N14	Yes	Identify list of equivalent fractions.	67	2.3	69	2.8	65	4.7
N16	Yes	Solve algebra word problem with fractions.	45	4.0	47	6.7	43	3.9
N17	Yes	Solve multi-step word problem: decimal fractions.	30	2.3	28	2.8	31	4.3
N19	Yes	Shade a given fraction of the squares in a grid.	31	4.0	36	5.8	25	4.9
O02	Yes	Calculate percent increase.	11	2.2	15	3.4	4	1.4
O04	Yes	Identify number rounded to the nearest 100th.	32	2.6	31	3.2	34	4.2
O09	Yes	Solve division word problem: common fractions.	23	2.4	26	3.2	17	2.7
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	46	3.8	50	6.2	39	4.1
P13	Yes	Use heart beats/min to find beats per hour.	39	3.5	42	5.7	35	4.3
P14	Yes	Solve subtraction word problem: common fractions.	48	3.7	46	5.2	50	4.5
P16	Yes	Reduce decimal to fraction in lowest terms.	54	3.2	52	4.7	56	4.4
Q06	Yes	Approximate water use/year from use/week.	22	2.8	23	4.0	19	3.5
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	12	2.3	12	3.5	11	2.5
Q09	Yes	Perform multiple operations of common fractions.	49	3.0	40	3.7	61	4.7
R06	Yes	Subtract two decimal numbers.	63	3.4	61	4.8	65	4.9
R07	Yes	Solve division word problem involving decimals.	24	2.6	24	4.5	25	2.8
R12	Yes	Subtract 4-digit whole numbers.	83	2.6	86	3.1	79	3.7
R13	Yes	Determine how much money left after spending 7/9.	13	2.1	17	3.0	7	2.3
U01A	Yes	Estimate the time required to record 5 songs.	6	1.2	5	1.1	8	2.0
U01B	Yes	Explain method of estimation.	11	1.3	11	1.7	11	2.1
V01	Yes	Determine actual weight from rounded value.	6	1.1	5	1.5	8	1.8

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Iran, Islamic Rep. SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	52	1.1	54	1.4	50	1.5
B11	No	Identify cube made by folding 2-dimensional net.	24	1.6	27	2.1	19	2.2
C03	No	Identify properties of congruent trapezoids.	46	2.0	46	2.9	46	2.5
D07	No	Identify relationship of angles in symmetric polygon.	54	1.9	60	2.5	47	2.8
E02	No	Determine angle in congruent triangles.	42	1.9	41	2.8	43	2.5
G03	No	Find sum of vertical angles from diagram of intersecting lines.	47	2.3	51	3.6	42	2.7
I08	Yes	Identify point on a line defined by two other points.	17	2.4	20	3.8	13	2.7
J11	Yes	Identify properties of a parallelogram.	31	2.4	32	3.0	30	3.3
J15	Yes	Identify similar triangles of different size.	70	2.8	74	3.4	64	4.9
J16	Yes	Identify coordinates for point on a grid.	38	3.1	40	4.7	36	4.1
K03	Yes	Identify figure from rotation of 3-dimensional object.	42	2.6	45	3.2	37	3.9
K08	Yes	Determine unknown angle in rotated congruent triangles.	35	2.8	30	4.2	42	3.6
L15	Yes	Find fourth quadrilateral angle, given the other three.	29	2.2	34	2.8	25	4.0
M02	Yes	Identify all lines of symmetry for a rectangle.	68	3.3	69	4.4	67	4.4
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	41	3.2	48	4.8	32	3.1
M07	Yes	Find angle based on supplementary pairs.	57	4.2	57	6.5	57	4.7
N12	Yes	Identify point on number line from distance of other points.	48	3.5	51	4.1	45	5.6
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	45	3.5	49	5.0	38	4.8
O08	Yes	Find center point of rotation for symmetry-related figures.	58	4.3	62	6.5	53	5.0
P08	Yes	Know relationship between side and perimeter for square.	50	3.6	54	5.5	46	5.5
P09	Yes	Find length of side for similar triangles.	18	2.8	18	4.4	18	3.4
Q10	Yes	Perform calculation involving addition/subtraction of angles.	40	4.4	39	6.7	42	4.8
R10	Yes	Determine into how many triangles a trapezoid can be divided.	34	3.4	32	4.3	36	4.5

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Iran, Islamic Rep. SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	12	0.9	12	1.2	11	1.2
C01	No	Compare volumes of different stacks of blocks.	28	1.9	37	2.3	17	2.3
D11	No	Identify best unit to measure the mass of an egg.	78	2.0	86	1.9	69	3.2
E06	No	Solve word problem to find length of rectangle from width and perimeter.	24	1.8	24	2.3	23	2.8
F10	No	Determine measurement accuracy of ruler.	20	1.5	23	2.0	18	2.3
G02	No	Read meter scale to determine length of a pipe.	24	2.0	26	3.0	23	1.9
I03	Yes	Find number of 750 mL bottles filled by a large volume.	21	2.6	23	3.7	20	3.3
J10	Yes	Determine area of sheet not covered by rectangular picture.	24	2.4	29	3.8	19	3.1
K05	Yes	Calculate area of a rectangle given its length and perimeter.	13	2.7	15	4.3	12	3.1
L12	Yes	Find longest pace from chart showing number of paces to cross room.	57	3.3	62	4.8	52	4.4
M01	Yes	Read mass shown on scale.	71	2.9	75	3.6	65	5.2
N15	Yes	Identify drawing with angle closest to 30 degrees.	63	2.7	63	2.8	63	4.8
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	27	4.2	32	6.3	20	5.1
P11	Yes	Use ruler to determine approximate length of pencil.	34	3.3	38	3.7	28	5.4
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	31	2.6	32	3.6	29	3.8
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	44	3.6	42	5.6	46	4.9
S02B	Yes	Calculate length of side of square given area.	6	2.3	8	3.9	3	1.4
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	1	0.4	1	0.7	0	0.1
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	24	2.0	29	2.9	17	2.6
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	8	1.4	8	1.9	7	2.3
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	25	3.7	27	6.1	23	2.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Iran, Islamic Rep. SCALE=Proportionality

			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	57	1.4	64	1.3	49	1.7
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	69	1.3	70	2.0	67	1.8
D08	No	Solve ratio problem for x: 7/13 = x/52.	59	1.6	61	2.7	56	2.1
F07	No	Solve word problem to find average speed from distance and time.	19	1.3	22	1.8	17	2.1
G04	No	Solve simple proportionality equation.	66	2.6	66	4.4	67	3.3
L14	Yes	Identify missing numbers in table of proportional x and y values.	31	4.3	26	5.8	38	6.3
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	22	2.4	23	3.6	20	4.3
Q05	Yes	Solve word problem involving ratios.	51	3.2	58	4.0	42	4.9
R14	Yes	Solve multi-step word problem involving ratios.	19	2.6	24	3.9	11	3.0
T02A	Yes	Solve algebra word problem involving ratios.	9	2.3	9	3.8	8	2.1
T02B	Yes	Solve multi-step word problem computing fractions.	2	0.4	2	0.8	2	0.8
V03	Yes	Determine ratio of red paint in a mixture.	31	2.3	33	3.6	29	2.2

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Ireland SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	73	1.2	76	1.5	71	1.7
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	66	2.0	67	2.5	65	2.8
C05	No	Determine number which continues pattern based on figures.	62	1.9	59	3.1	65	2.5
D10	No	Identify equation which solves word problem: C=(100+6n).	44	1.7	44	2.4	45	2.1
E05	No	Find relationship between numbers in a set of ordered pairs.	69	2.0	67	2.4	70	2.7
F11	No	Solve multi-step problem using linear equations.	64	2.0	67	3.1	60	2.2
G06	No	Find solution to -3X for given value of X.	49	2.4	51	3.4	47	3.1
H10	No	Identify equation expressing xy relationship from table of values.	42	2.1	45	3.2	40	2.5
H12	No	Select symbolic linear equation which fits word problem.	86	1.3	84	2.0	87	1.6
I01	Yes	Identify meaning of symbol in word problem equation.	35	2.3	37	3.2	33	3.6
I04	Yes	Determine next number which occurs in two number sequences.	57	2.9	50	3.9	63	3.6
J18	Yes	Identify missing number in table showing xy relationship.	41	2.6	48	3.4	34	3.4
K04	Yes	Identify expression equivalent to linear inequality.	45	2.5	44	3.5	46	3.3
L11	Yes	Solve multi-step word problem using pattern.	35	2.3	30	3.3	39	3.5
L13	Yes	Identify matching patterns of symbols.	94	1.3	92	2.0	95	1.7
L16	Yes	Simplify and solve linear equation for X.	44	3.5	40	4.3	47	4.7
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	52	2.9	54	4.2	51	3.7
O07	Yes	Solve linear equation for X.	72	3.0	71	4.2	73	3.8
P10	Yes	Identify equivalent algebraic expressions.	53	2.8	55	3.7	51	4.1
P15	Yes	Identify equivalent expression for a cubic relationship.	70	2.7	69	3.7	71	3.7
Q01	Yes	Identify linear expression based on word problem.	51	2.6	50	4.1	52	3.6
Q02	Yes	Subtract fractional expressions of X.	39	2.8	40	3.6	37	3.8
Q07	Yes	Solve P=LW for W given values for P and L.	66	2.7	61	4.2	71	3.4
R09	Yes	Identify equivalent expressions from properties of real numbers.	35	2.7	33	4.0	36	3.8
R11	Yes	Solve algebra word problem: linear equation.	40	2.9	42	4.1	37	3.5
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	73	2.3	72	2.8	73	3.4
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	25	2.6	25	3.0	25	3.8
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	38	2.4	45	3.3	31	3.3
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	41	2.6	46	3.2	36	3.8

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Ireland SCALE=Data Rep., Analysis & Prob.

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	87	1.0	85	1.5	88	1.1
B07	No	Interpret line graph to find region of largest increase.	71	1.9	70	2.7	72	2.3
C02	No	Interpret pie graph to determine distribution.	83	1.4	84	2.1	82	1.8
E01	No	Interpret line graph to determine intersection point of two plots.	66	1.9	70	2.4	62	3.0
F08	No	Predict probability of occurrence for independent coin toss.	66	1.8	66	2.6	66	2.4
G01	No	Interpret frequency table to find number above a given level.	56	1.6	58	2.4	53	2.1
H07	No	Interpret barchart histogram to find number above a given level.	80	1.4	81	2.3	79	1.6
H11	No	Predict number of total defective bulbs based on random sample.	63	2.1	70	3.0	57	2.8
I09	Yes	Predict most likely color of random card based on fraction of colors.	84	2.3	82	3.5	87	3.0
J13	Yes	Draw pictograph to represent number given in table.	89	1.8	85	2.9	93	1.8
K07	Yes	Determine the number of blue pens given probability of selection.	73	2.4	70	3.5	75	3.2
L10	Yes	Use data in a chart to identify time/day with highest temperature.	92	1.6	93	2.6	92	2.1
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	82	2.1	79	3.0	84	2.4
N18	Yes	Find probability of drawing an even number from 1 to 9.	63	2.7	67	3.5	59	4.2
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	63	2.4	67	3.8	59	3.5
O05	Yes	Calculate number of cube faces from probability of toss.	64	3.3	69	4.2	59	4.2
P17	Yes	Identify thermometer which shows temperature given in data table.	81	1.8	81	2.3	81	2.9
Q04	Yes	Interpret data in bar graph.	94	1.3	91	2.1	96	1.4
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	47	2.7	52	3.3	42	4.2
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	25	2.3	28	3.1	23	2.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Ireland SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	67	1.8	71	2.6	63	2.3
B09	No	Identify shaded figure which shows 2/5 = 4/10.	58	1.6	55	2.3	60	2.1
B10	No	Identify smallest of decimal fractions.	48	1.9	56	2.7	40	2.5
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	54	1.6	57	2.2	52	2.3
C06	No	Determine the worst estimate of: 848 + 677.	82	1.4	80	2.0	83	1.9
D09	No	Identify smallest fraction.	89	1.4	90	1.7	88	1.8
D12	No	Estimate rational number from point on number line.	81	1.5	82	2.0	80	1.9
E03	No	Find fraction of hour between two time points.	74	1.9	76	2.5	72	2.8
E04	No	Solve multi-step word problem: 4-digit whole numbers.	79	2.1	77	2.8	81	2.9
F09	No	Identify decimal fraction between 0.07 and 0.08.	70	1.9	73	2.6	67	2.5
F12	No	Identify fraction of circle which is shaded.	67	1.8	66	2.4	69	2.4
G05	No	Identify fraction represented in word problem.	75	1.6	75	2.5	74	2.0
H08	No	Identify figure showing 2/3 shaded.	85	1.5	85	2.1	84	2.0
H09	No	Identify sum which is closest to 691 + 208.	91	0.9	92	1.5	90	1.3
I02	Yes	Solve multi-step word problem: common fractions.	74	2.5	76	3.5	73	3.7
I05	Yes	Solve subtraction word problem: rational numbers.	82	2.4	78	3.4	86	3.1
I06	Yes	Write a fraction larger than a given number.	82	2.0	82	2.8	82	2.8
I07	Yes	Recognize when estimation is appropriate.	80	2.4	75	3.5	85	3.0
J12	Yes	Divide fractions.	43	2.9	40	3.7	47	4.2
J14	Yes	Divide rational numbers, fractional divisor.	39	3.4	38	4.5	39	4.3
J17	Yes	Use map and scale to find distance between two cities.	67	2.4	66	3.7	68	2.8
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	73	2.2	78	2.7	68	3.3
K02	Yes	Find total volume of mixture using rational number addition.	71	2.5	67	3.7	75	3.4
K06	Yes	Approximate amount increased by 15%.	45	2.9	51	4.2	40	4.2
K09	Yes	Compute sum of three fractions.	47	3.2	49	3.9	45	5.0
L08	Yes	Estimate actual height from diagram of relative heights.	61	2.7	63	3.8	59	3.9
L09	Yes	Identify 504.7 from its expression in words.	85	1.9	85	2.5	85	2.9
L17	Yes	Subtract three fractions.	52	3.1	50	4.3	54	3.8
M04	Yes	Identify the largest fraction.	48	2.9	58	3.8	37	3.9
M08	Yes	Multiply two decimal fractions.	43	2.8	39	4.2	47	3.4
N11	Yes	Identify number rounded to 18200.	92	1.6	92	2.4	92	2.0
N14	Yes	Identify list of equivalent fractions.	74	2.3	76	3.4	72	3.4
N16	Yes	Solve algebra word problem with fractions.	48	2.6	47	3.4	50	3.5
N17	Yes	Solve multi-step word problem: decimal fractions.	42	2.5	44	3.8	40	3.4
N19	Yes	Shade a given fraction of the squares in a grid.	67	2.5	73	3.7	61	3.4
O02	Yes	Calculate percent increase.	39	3.2	45	4.5	32	4.1
O04	Yes	Identify number rounded to the nearest 100th.	39	2.5	41	4.3	37	3.3
O09	Yes	Solve division word problem: common fractions.	70	2.7	76	3.7	64	3.6
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	80	2.6	79	3.7	82	3.2
P13	Yes	Use heart beats/min to find beats per hour.	77	2.4	74	3.7	79	3.3
P14	Yes	Solve subtraction word problem: common fractions.	90	1.7	87	2.5	93	2.0
P16	Yes	Reduce decimal to fraction in lowest terms.	64	2.6	58	3.6	70	3.6
Q06	Yes	Approximate water use/year from use/week.	52	2.9	52	4.6	52	3.8
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	41	2.7	46	3.8	36	3.6
Q09	Yes	Perform multiple operations of common fractions.	57	3.0	56	4.2	57	4.0
R06	Yes	Subtract two decimal numbers.	85	2.2	79	3.5	91	2.1
R07	Yes	Solve division word problem involving decimals.	42	2.8	44	3.5	40	4.0
R12	Yes	Subtract 4-digit whole numbers.	94	1.5	91	2.5	96	1.5
R13	Yes	Determine how much money left after spending 7/9.	52	2.8	50	3.8	55	4.0
U01A	Yes	Estimate the time required to record 5 songs.	50	2.3	49	3.2	51	3.3
U01B	Yes	Explain method of estimation.	41	2.5	41	3.4	41	3.3
V01	Yes	Determine actual weight from rounded value.	68	2.0	70	3.3	66	2.6

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Ireland SCALE=Geometry

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	44	1.6	46	2.3	43	1.9
B11	No	Identify cube made by folding 2-dimensional net.	56	1.8	58	2.4	53	2.6
C03	No	Identify properties of congruent trapezoids.	64	2.2	63	2.9	66	2.6
D07	No	Identify relationship of angles in symmetric polygon.	51	2.1	55	2.8	46	3.0
E02	No	Determine angle in congruent triangles.	44	2.2	44	3.0	45	2.6
G03	No	Find sum of vertical angles from diagram of intersecting lines.	51	1.7	53	2.4	49	2.1
I08	Yes	Identify point on a line defined by two other points.	46	2.6	53	4.0	39	3.2
J11	Yes	Identify properties of a parallelogram.	47	2.9	47	3.8	47	4.1
J15	Yes	Identify similar triangles of different size.	61	2.5	62	3.6	60	4.0
J16	Yes	Identify coordinates for point on a grid.	50	3.2	50	4.9	51	4.3
K03	Yes	Identify figure from rotation of 3-dimensional object.	75	2.5	78	3.4	72	3.6
K08	Yes	Determine unknown angle in rotated congruent triangles.	34	2.6	37	3.3	32	4.0
L15	Yes	Find fourth quadrilateral angle, given the other three.	42	2.8	42	4.0	41	3.9
M02	Yes	Identify all lines of symmetry for a rectangle.	64	2.6	68	4.0	60	3.4
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	39	2.9	42	4.4	34	3.9
M07	Yes	Find angle based on supplementary pairs.	69	2.5	72	3.2	65	3.6
N12	Yes	Identify point on number line from distance of other points.	71	2.2	77	3.3	65	3.4
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	38	2.9	40	4.5	37	3.7
O08	Yes	Find center point of rotation for symmetry-related figures.	65	3.0	67	4.2	63	3.8
P08	Yes	Know relationship between side and perimeter for square.	54	3.2	57	4.0	50	4.1
P09	Yes	Find length of side for similar triangles.	34	2.8	35	3.2	33	4.0
Q10	Yes	Perform calculation involving addition/subtraction of angles.	43	2.7	44	3.8	42	4.1
R10	Yes	Determine into how many triangles a trapezoid can be divided.	38	3.2	42	4.3	34	4.0

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Ireland SCALE=Measurement

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                                                                             Eighth Grade

                                                                 Overall     Boys      Girls

ITEM    REL   LABEL                                              %   (se)   %   (se)   %   (se)
------------------------------------------------------------------------------------------------
A03     No    Determine actual length of box which is rounded to 9 cm.      74   1.5   75   2.2   73   1.9
C01     No    Compare volumes of different stacks of blocks.               51   1.8   58   2.7   44   2.2
D11     No    Identify best unit to measure the mass of an egg.            81   1.4   85   2.0   76   2.1
E06     No    Solve word problem to find length of rectangle from width and perimeter.   37   2.1   43   3.2   31   2.5
F10     No    Determine measurement accuracy of ruler.                     52   1.9   61   2.8   42   2.4
G02     No    Read meter scale to determine length of a pipe.              75   1.7   77   2.5   73   2.1
I03     Yes   Find number of 750 mL bottles filled by a large volume.      38   2.6   39   3.3   37   4.0
J10     Yes   Determine area of sheet not covered by rectangular picture.  51   2.8   52   4.4   51   3.4
K05     Yes   Calculate area of a rectangle given its length and perimeter. 40   3.2   45   4.1   36   4.6
L12     Yes   Find longest pace from chart showing number of paces to cross room.   83   2.0   85   3.3   81   2.6
M01     Yes   Read mass shown on scale.                                    91   1.7   90   3.0   92   2.0
N15     Yes   Identify drawing with angle closest to 30 degrees.           63   2.6   68   3.8   58   3.3
O06     Yes   Calculate time to remove cake after baking 3/4 hour.         89   1.2   88   2.2   89   2.0
P11     Yes   Use ruler to determine approximate length of pencil.         52   2.4   56   3.2   48   3.3
Q03     Yes   Use day/hours/minutes/seconds conversions to calculate longest time.   41   2.9   41   4.6   42   3.9
S02A    Yes   Calculate area square given area of rectangle containing 5 squares.   73   2.3   72   3.1   73   3.7
S02B    Yes   Calculate length of side of square given area.               28   2.7   29   3.1   27   4.2
S02C    Yes   Find perimeter of rectangle containing 5 squares of known size.   20   2.3   22   2.9   17   3.3
U02A    Yes   Draw new rectangle based length/width ratios of another rectangle.   35   2.5   33   3.1   37   3.3
U02B    Yes   Calculate ratio of rectangle areas given relationship between sides.   20   1.8   21   2.6   20   2.4
V04     Yes   Calculate area of parallelogram inscribed in a rectangle.    39   2.4   42   3.5   36   3.1
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REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Ireland SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	58	1.3	65	1.7	51	1.8
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	75	1.2	77	1.7	73	1.5
D08	No	Solve ratio problem for x: 7/13 = x/52.	78	1.8	81	2.6	75	2.1
F07	No	Solve word problem to find average speed from distance and time.	29	1.7	29	2.3	29	2.1
G04	No	Solve simple proportionality equation.	80	1.6	83	2.5	78	2.1
L14	Yes	Identify missing numbers in table of proportional x and y values.	25	2.1	27	3.7	22	2.7
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	56	2.9	59	3.8	52	4.0
Q05	Yes	Solve word problem involving ratios.	78	2.4	79	3.3	77	3.2
R14	Yes	Solve multi-step word problem involving ratios.	41	3.3	41	4.5	42	4.6
T02A	Yes	Solve algebra word problem involving ratios.	32	2.4	30	3.1	35	3.3
T02B	Yes	Solve multi-step word problem computing fractions.	13	1.4	13	1.8	13	2.1
V03	Yes	Determine ratio of red paint in a mixture.	42	2.3	40	3.3	45	2.6

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Israel SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	71	1.6	75	2.0	68	1.8
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	85	2.0	87	2.3	83	2.7
C05	No	Determine number which continues pattern based on figures.	60	2.0	63	3.2	55	4.0
D10	No	Identify equation which solves word problem: C=(100+6n).	46	2.5	48	3.6	46	3.6
E05	No	Find relationship between numbers in a set of ordered pairs.	61	2.5	64	3.1	60	3.7
F11	No	Solve multi-step problem using linear equations.	57	2.8	61	4.0	55	4.1
G06	No	Find solution to -3X for given value of X.	69	2.7	71	2.8	68	3.8
H10	No	Identify equation expressing xy relationship from table of values.	44	3.8	46	4.4	45	4.2
H12	No	Select symbolic linear equation which fits word problem.	85	1.9	86	2.4	85	2.4
I01	Yes	Identify meaning of symbol in word problem equation.	41	3.7	40	5.1	42	4.4
I04	Yes	Determine next number which occurs in two number sequences.	47	4.0	47	5.5	46	5.4
J18	Yes	Identify missing number in table showing xy relationship.	41	4.5	48	5.7	35	6.1
K04	Yes	Identify expression equivalent to linear inequality.	52	4.4	57	4.8	48	7.4
L11	Yes	Solve multi-step word problem using pattern.	32	4.0	31	5.2	32	5.4
L13	Yes	Identify matching patterns of symbols.	91	1.4	91	3.5	90	2.3
L16	Yes	Simplify and solve linear equation for X.	69	3.9	66	4.6	69	5.7
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	62	4.1	60	5.4	62	5.3
O07	Yes	Solve linear equation for X.	86	2.9	90	4.3	81	4.9
P10	Yes	Identify equivalent algebraic expressions.	70	3.7	72	5.7	69	5.5
P15	Yes	Identify equivalent expression for a cubic relationship.	81	4.0	88	4.5	77	5.0
Q01	Yes	Identify linear expression based on word problem.	73	3.3	71	4.9	79	5.1
Q02	Yes	Subtract fractional expressions of X.	64	3.8	69	3.6	61	5.6
Q07	Yes	Solve P=LW for W given values for P and L.	75	3.7	75	4.9	77	5.1
R09	Yes	Identify equivalent expressions from properties of real numbers.	54	5.0	56	5.6	52	7.4
R11	Yes	Solve algebra word problem: linear equation.	57	4.1	61	7.1	53	5.4
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	78	2.7	78	4.4	78	4.6
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	25	3.4	34	6.5	18	3.7
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	45	3.3	49	3.6	41	4.4
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	46	3.5	49	4.0	42	4.4

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Israel SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	82	1.2	80	1.7	85	1.6
B07	No	Interpret line graph to find region of largest increase.	57	2.3	59	3.2	57	2.6
C02	No	Interpret pie graph to determine distribution.	81	1.8	84	2.4	78	3.0
E01	No	Interpret line graph to determine intersection point of two plots.	71	2.9	75	3.0	69	4.3
F08	No	Predict probability of occurrence for independent coin toss.	55	1.9	63	3.7	49	2.9
G01	No	Interpret frequency table to find number above a given level.	63	2.6	68	3.4	58	3.4
H07	No	Interpret barchart histogram to find number above a given level.	63	2.3	65	3.1	63	3.6
H11	No	Predict number of total defective bulbs based on random sample.	60	2.4	65	3.6	58	3.8
I09	Yes	Predict most likely color of random card based on fraction of colors.	78	3.3	85	3.7	74	5.3
J13	Yes	Draw pictograph to represent number given in table.	87	3.3	87	4.2	89	3.6
K07	Yes	Determine the number of blue pens given probability of selection.	53	3.3	54	4.8	53	5.2
L10	Yes	Use data in a chart to identify time/day with highest temperature.	89	2.2	93	2.6	86	3.4
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	77	3.2	77	5.6	78	3.9
N18	Yes	Find probability of drawing an even number from 1 to 9.	60	4.4	63	6.8	58	6.5
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	56	4.1	60	4.6	55	5.2
O05	Yes	Calculate number of cube faces from probability of toss.	53	4.4	66	7.4	42	6.1
P17	Yes	Identify thermometer which shows temperature given in data table.	82	3.9	84	4.7	79	5.9
Q04	Yes	Interpret data in bar graph.	89	2.4	86	3.6	90	3.1
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	50	3.6	60	4.7	41	4.9
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	15	2.5	19	3.9	12	2.8

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Israel SCALE=Fractions and number sense

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	65	2.4	71	2.7	60	2.5
B09	No	Identify shaded figure which shows 2/5 = 4/10.	67	2.2	66	3.5	68	3.1
B10	No	Identify smallest of decimal fractions.	36	2.2	47	3.8	25	2.4
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	57	2.0	67	3.3	48	2.4
C06	No	Determine the worst estimate of: 848 + 677.	68	2.3	72	3.0	64	3.6
D09	No	Identify smallest fraction.	88	1.1	90	2.1	85	1.8
D12	No	Estimate rational number from point on number line.	76	1.7	79	2.4	72	2.2
E03	No	Find fraction of hour between two time points.	67	2.7	72	3.0	63	3.4
E04	No	Solve multi-step word problem: 4-digit whole numbers.	79	1.8	79	2.5	79	3.1
F09	No	Identify decimal fraction between 0.07 and 0.08.	61	2.4	67	3.0	54	3.6
F12	No	Identify fraction of circle which is shaded.	62	2.7	66	3.0	59	3.6
G05	No	Identify fraction represented in word problem.	77	2.7	77	2.9	79	3.3
H08	No	Identify figure showing 2/3 shaded.	83	1.6	85	2.3	82	2.0
H09	No	Identify sum which is closest to 691 + 208.	89	1.5	91	2.2	87	2.3
I02	Yes	Solve multi-step word problem: common fractions.	56	4.3	61	5.6	54	5.0
I05	Yes	Solve subtraction word problem: rational numbers.	72	4.3	73	4.0	72	6.3
I06	Yes	Write a fraction larger than a given number.	80	3.1	87	2.8	74	4.8
I07	Yes	Recognize when estimation is appropriate.	64	4.3	69	5.1	63	4.9
J12	Yes	Divide fractions.	48	4.7	42	5.3	54	6.9
J14	Yes	Divide rational numbers, fractional divisor.	55	4.6	58	6.8	55	5.9
J17	Yes	Use map and scale to find distance between two cities.	59	3.3	56	4.9	61	5.5
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	65	3.5	67	5.1	63	5.7
K02	Yes	Find total volume of mixture using rational number addition.	67	3.4	61	4.9	74	5.9
K06	Yes	Approximate amount increased by 15%.	49	3.4	52	5.4	46	5.0
K09	Yes	Compute sum of three fractions.	61	4.6	57	4.6	69	6.8
L08	Yes	Estimate actual height from diagram of relative heights.	51	4.1	49	6.3	49	5.5
L09	Yes	Identify 504.7 from its expression in words.	81	3.2	86	3.7	77	4.0
L17	Yes	Subtract three fractions.	61	5.1	66	5.0	54	7.4
M04	Yes	Identify the largest fraction.	46	4.7	59	6.6	35	5.8
M08	Yes	Multiply two decimal fractions.	61	3.8	59	4.9	60	6.2
N11	Yes	Identify number rounded to 18200.	78	2.9	84	4.8	74	4.5
N14	Yes	Identify list of equivalent fractions.	57	4.6	66	6.3	53	5.4
N16	Yes	Solve algebra word problem with fractions.	41	4.0	50	7.5	31	3.5
N17	Yes	Solve multi-step word problem: decimal fractions.	41	5.1	44	5.9	42	6.3
N19	Yes	Shade a given fraction of the squares in a grid.	57	4.4	61	6.0	50	6.8
O02	Yes	Calculate percent increase.	31	4.5	40	5.4	23	5.5
O04	Yes	Identify number rounded to the nearest 100th.	31	3.2	40	4.8	27	5.0
O09	Yes	Solve division word problem: common fractions.	52	4.3	60	5.3	45	5.7
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	75	3.2	79	5.1	71	4.0
P13	Yes	Use heart beats/min to find beats per hour.	75	3.9	79	4.0	72	6.5
P14	Yes	Solve subtraction word problem: common fractions.	80	3.2	84	4.1	78	4.2
P16	Yes	Reduce decimal to fraction in lowest terms.	47	4.2	45	5.5	48	6.4
Q06	Yes	Approximate water use/year from use/week.	42	3.6	50	4.7	37	5.8
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	34	3.9	41	6.5	28	6.3
Q09	Yes	Perform multiple operations of common fractions.	59	3.4	63	5.4	58	5.7
R06	Yes	Subtract two decimal numbers.	80	3.2	76	4.7	86	3.3
R07	Yes	Solve division word problem involving decimals.	43	4.5	52	7.6	39	5.2
R12	Yes	Subtract 4-digit whole numbers.	95	1.4	97	1.9	95	2.8
R13	Yes	Determine how much money left after spending 7/9.	43	3.5	56	5.4	32	5.0
U01A	Yes	Estimate the time required to record 5 songs.	32	3.0	31	4.6	35	3.7
U01B	Yes	Explain method of estimation.	30	3.1	32	5.0	30	2.9
V01	Yes	Determine actual weight from rounded value.	63	3.6	74	4.2	57	4.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Israel SCALE=Geometry

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	71	2.3	74	2.1	70	3.6
B11	No	Identify cube made by folding 2-dimensional net.	63	1.7	69	3.0	57	2.2
C03	No	Identify properties of congruent trapezoids.	77	2.0	81	3.2	74	3.2
D07	No	Identify relationship of angles in symmetric polygon.	69	1.7	72	2.6	66	2.8
E02	No	Determine angle in congruent triangles.	56	3.0	59	3.2	54	4.0
G03	No	Find sum of vertical angles from diagram of intersecting lines.	53	3.8	55	5.0	55	3.7
I08	Yes	Identify point on a line defined by two other points.	42	3.6	44	5.1	40	4.7
J11	Yes	Identify properties of a parallelogram.	57	3.1	57	4.5	55	5.0
J15	Yes	Identify similar triangles of different size.	48	4.8	49	6.5	49	6.5
J16	Yes	Identify coordinates for point on a grid.	44	3.1	49	4.4	45	5.6
K03	Yes	Identify figure from rotation of 3-dimensional object.	57	3.5	64	4.1	52	6.0
K08	Yes	Determine unknown angle in rotated congruent triangles.	43	3.4	45	4.2	40	6.4
L15	Yes	Find fourth quadrilateral angle, given the other three.	53	3.7	53	4.2	52	5.7
M02	Yes	Identify all lines of symmetry for a rectangle.	76	3.5	76	4.7	76	4.4
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	55	4.3	64	5.7	49	5.7
M07	Yes	Find angle based on supplementary pairs.	67	3.2	77	4.6	60	5.4
N12	Yes	Identify point on number line from distance of other points.	67	4.3	78	3.9	60	6.6
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	53	3.5	52	5.4	50	4.9
O08	Yes	Find center point of rotation for symmetry-related figures.	72	3.0	79	4.9	64	5.5
P08	Yes	Know relationship between side and perimeter for square.	69	3.5	73	4.6	66	5.9
P09	Yes	Find length of side for similar triangles.	34	4.7	33	5.1	34	6.4
Q10	Yes	Perform calculation involving addition/subtraction of angles.	40	4.2	45	5.3	35	5.5
R10	Yes	Determine into how many triangles a trapezoid can be divided.	54	4.8	50	7.0	59	5.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Israel SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	59	1.8	62	2.1	57	2.5
C01	No	Compare volumes of different stacks of blocks.	55	1.9	70	2.5	42	3.2
D11	No	Identify best unit to measure the mass of an egg.	89	1.6	90	2.1	87	2.1
E06	No	Solve word problem to find length of rectangle from width and perimeter.	45	3.0	49	3.7	40	4.0
F10	No	Determine measurement accuracy of ruler.	61	2.8	69	2.9	55	4.0
G02	No	Read meter scale to determine length of a pipe.	70	2.2	76	3.0	65	3.1
I03	Yes	Find number of 750 mL bottles filled by a large volume.	30	3.3	34	4.8	27	4.4
J10	Yes	Determine area of sheet not covered by rectangular picture.	38	4.1	44	4.9	36	5.9
K05	Yes	Calculate area of a rectangle given its length and perimeter.	44	4.0	42	4.0	46	6.0
L12	Yes	Find longest pace from chart showing number of paces to cross room.	79	3.3	83	3.6	76	4.9
M01	Yes	Read mass shown on scale.	86	3.5	88	4.2	88	3.7
N15	Yes	Identify drawing with angle closest to 30 degrees.	50	4.2	50	5.7	50	6.5
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	77	3.4	82	3.7	77	5.3
P11	Yes	Use ruler to determine approximate length of pencil.	44	4.4	47	6.0	38	5.4
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	39	4.4	45	6.9	34	5.8
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	56	4.3	62	5.8	51	5.3
S02B	Yes	Calculate length of side of square given area.	20	3.0	23	4.9	17	4.3
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	3	1.3	2	1.4	4	2.1
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	48	3.1	49	3.8	48	3.9
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	7	1.7	11	3.0	5	1.5
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	37	2.9	42	4.2	33	3.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Israel SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	53	1.8	63	2.4	45	2.1
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	75	1.8	78	2.2	74	2.6
D08	No	Solve ratio problem for x: 7/13 = x/52.	67	2.7	73	2.9	61	4.3
F07	No	Solve word problem to find average speed from distance and time.	36	3.2	42	4.3	31	3.8
G04	No	Solve simple proportionality equation.	74	2.8	79	3.7	71	3.8
L14	Yes	Identify missing numbers in table of proportional x and y values.	17	2.8	21	4.4	15	3.1
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	22	3.4	26	4.7	21	4.8
Q05	Yes	Solve word problem involving ratios.	75	4.0	77	5.9	75	4.3
R14	Yes	Solve multi-step word problem involving ratios.	42	4.8	52	6.6	36	6.4
T02A	Yes	Solve algebra word problem involving ratios.	18	2.6	20	2.9	17	3.3
T02B	Yes	Solve multi-step word problem computing fractions.	2	0.9	2	0.9	3	1.2
V03	Yes	Determine ratio of red paint in a mixture.	39	4.2	46	5.6	36	4.3

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Japan SCALE=Algebra

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                                                                                        Eighth Grade

                                                                        Overall      Boys       Girls

ITEM    REL   LABEL                                                      %   (se)    %   (se)    %   (se)
------------------------------------------------------------------------------------------------------------
A02     No    Solve algebraic word problem equating masses on a scale.   86  0.5    86  0.7    85  0.7
B12     No    Identify algebraic equation to solve word problem: 7n+6=41. 88  0.7    87  1.2    90  0.7
C05     No    Determine number which continues pattern based on figures.  71  1.1    71  1.8    71  1.5
D10     No    Identify equation which solves word problem:  C=(100+6n).   70  1.3    68  1.6    71  1.7
E05     No    Find relationship between numbers in a set of ordered pairs. 81  0.9    81  1.2    82  1.2
F11     No    Solve multi-step problem using linear equations.            71  1.0    72  1.5    70  1.5
G06     No    Find solution to -3X for given value of X.                  78  1.0    79  1.3    76  1.3
H10     No    Identify equation expressing xy relationship from table of values. 78  1.1    77  1.4    79  1.5
H12     No    Select symbolic linear equation which fits word problem.    83  0.8    83  1.2    84  1.1
I01     Yes   Identify meaning of symbol in word problem equation.        62  2.3    61  2.8    62  3.4
I04     Yes   Determine next number which occurs in two number sequences. 60  1.9    59  2.9    61  2.6
J18     Yes   Identify missing number in table showing xy relationship.   56  2.1    59  3.0    53  3.2
K04     Yes   Identify expression equivalent to linear inequality.        69  2.2    72  2.7    65  3.2
L11     Yes   Solve multi-step word problem using pattern.                41  2.0    38  3.2    44  2.8
L13     Yes   Identify matching patterns of symbols.                      96  0.8    95  1.2    98  0.9
L16     Yes   Simplify and solve linear equation for X.                   86  1.5    82  2.3    89  1.7
N13     Yes   Calculate (7X+4)/(5X-4) for a given value of X.             69  1.8    69  2.4    69  2.8
O07     Yes   Solve linear equation for X.                                90  1.3    89  1.7    91  1.8
P10     Yes   Identify equivalent algebraic expressions.                  75  1.9    77  2.4    74  2.8
P15     Yes   Identify equivalent expression for a cubic relationship.    86  1.7    88  2.2    84  2.2
Q01     Yes   Identify linear expression based on word problem.           57  2.2    55  2.9    59  3.1
Q02     Yes   Subtract fractional expressions of X.                       82  1.7    80  2.5    84  2.4
Q07     Yes   Solve P=LW for W given values for P and L.                  88  1.5    87  2.2    90  2.1
R09     Yes   Identify equivalent expressions from properties of real numbers. 53  2.4    53  2.9    54  3.2
R11     Yes   Solve algebra word problem: linear equation.                70  1.9    72  2.8    69  2.7
S01A    Yes   Complete chart by observing sequence of triangles in each of 3 figures. 94  0.8    92  1.4    97  0.9
S01B    Yes   Extend triangle pattern from 3 figures to 8th.              52  2.2    51  2.8    53  3.4
T01A    Yes   Solve multi-step algebra word problem of simultaneous equations. 54  1.8    56  2.4    52  2.2
T01B    Yes   Solve multi-step algebra word problem of simultaneous equations. 59  1.7    61  2.3    57  2.0
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REL: Release Status (Yes= Item in Released Item Set)

Third International Mathematics and Science Study - 1995 Assessment
Percent Correct on the Mathematics Items - Eighth Grade

May 11, 1998 122

COUNTRY ID=Japan SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	87	0.4	85	0.7	88	0.6
B07	No	Interpret line graph to find region of largest increase.	88	0.7	88	1.0	89	0.8
C02	No	Interpret pie graph to determine distribution.	93	0.6	92	0.9	93	0.8
E01	No	Interpret line graph to determine intersection point of two plots.	97	0.4	97	0.6	97	0.6
F08	No	Predict probability of occurrence for independent coin toss.	53	1.2	59	1.8	46	1.5
G01	No	Interpret frequency table to find number above a given level.	55	1.2	57	1.5	52	2.0
H07	No	Interpret barchart histogram to find number above a given level.	84	0.8	84	1.1	85	1.2
H11	No	Predict number of total defective bulbs based on random sample.	73	0.9	75	1.4	71	1.3
I09	Yes	Predict most likely color of random card based on fraction of colors.	87	1.3	90	1.5	84	2.1
J13	Yes	Draw pictograph to represent number given in table.	94	1.0	93	1.5	95	1.2
K07	Yes	Determine the number of blue pens given probability of selection.	74	2.0	77	2.4	71	2.7
L10	Yes	Use data in a chart to identify time/day with highest temperature.	93	1.1	92	1.7	94	1.4
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	83	1.4	84	2.0	82	2.2
N18	Yes	Find probability of drawing an even number from 1 to 9.	82	1.8	82	2.4	82	2.3
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	75	1.8	75	2.3	74	2.4
O05	Yes	Calculate number of cube faces from probability of toss.	75	1.6	74	2.4	76	2.4
P17	Yes	Identify thermometer which shows temperature given in data table.	81	1.7	80	2.3	83	2.2
Q04	Yes	Interpret data in bar graph.	88	1.3	85	1.9	91	1.6
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	75	1.9	79	2.4	71	2.4
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	47	1.5	50	2.2	44	1.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Japan SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	81	0.6	81	0.8	80	0.9
B09	No	Identify shaded figure which shows 2/5 = 4/10.	82	0.8	81	1.2	82	1.1
B10	No	Identify smallest of decimal fractions.	72	0.9	78	1.0	65	1.5
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	60	1.3	63	1.7	57	1.8
C06	No	Determine the worst estimate of: 848 + 677.	70	1.1	68	1.9	72	1.5
D09	No	Identify smallest fraction.	90	0.8	91	0.9	90	1.2
D12	No	Estimate rational number from point on number line.	93	0.6	93	0.9	92	1.1
E03	No	Find fraction of hour between two time points.	72	1.0	73	1.4	70	1.6
E04	No	Solve multi-step word problem: 4-digit whole numbers.	87	0.9	86	1.2	88	1.1
F09	No	Identify decimal fraction between 0.07 and 0.08.	85	0.9	85	1.1	85	1.3
F12	No	Identify fraction of circle which is shaded.	63	1.3	64	1.6	61	1.7
G05	No	Identify fraction represented in word problem.	70	1.0	69	1.4	72	1.5
H08	No	Identify figure showing 2/3 shaded.	91	0.7	89	1.1	92	0.9
H09	No	Identify sum which is closest to 691 + 208.	94	0.6	94	0.7	93	0.8
I02	Yes	Solve multi-step word problem: common fractions.	79	1.4	78	2.2	80	1.9
I05	Yes	Solve subtraction word problem: rational numbers.	86	1.3	84	1.9	88	2.1
I06	Yes	Write a fraction larger than a given number.	87	1.2	90	1.7	84	1.9
I07	Yes	Recognize when estimation is appropriate.	71	1.5	70	2.2	73	2.2
J12	Yes	Divide fractions.	82	1.7	79	2.4	84	2.3
J14	Yes	Divide rational numbers, fractional divisor.	71	1.8	67	2.8	75	2.6
J17	Yes	Use map and scale to find distance between two cities.	79	1.7	83	1.7	75	2.6
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	81	1.6	82	2.0	81	2.4
K02	Yes	Find total volume of mixture using rational number addition.	87	1.4	88	1.7	86	2.3
K06	Yes	Approximate amount increased by 15%.	58	2.1	65	2.7	50	3.2
K09	Yes	Compute sum of three fractions.	87	1.4	87	2.0	88	1.9
L08	Yes	Estimate actual height from diagram of relative heights.	79	1.7	80	2.6	77	2.3
L09	Yes	Identify 504.7 from its expression in words.	84	1.4	80	2.1	87	1.7
L17	Yes	Subtract three fractions.	80	1.6	76	2.4	83	2.5
M04	Yes	Identify the largest fraction.	60	2.2	63	3.2	56	3.0
M08	Yes	Multiply two decimal fractions.	60	2.1	63	3.1	58	2.6
N11	Yes	Identify number rounded to 18200.	93	0.9	92	1.4	94	1.3
N14	Yes	Identify list of equivalent fractions.	82	1.6	84	2.3	80	2.2
N16	Yes	Solve algebra word problem with fractions.	58	2.0	60	2.7	56	3.0
N19	Yes	Shade a given fraction of the squares in a grid.	80	1.9	80	2.5	80	2.4
O02	Yes	Calculate percent increase.	41	2.0	49	2.8	32	2.9
O04	Yes	Identify number rounded to the nearest 100th.	58	2.1	59	2.8	56	2.9
O09	Yes	Solve division word problem: common fractions.	54	1.9	57	2.8	52	2.9
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	84	1.6	83	2.4	84	2.2
P13	Yes	Use heart beats/min to find beats per hour.	85	1.5	85	2.0	84	2.1
P14	Yes	Solve subtraction word problem: common fractions.	84	1.6	78	2.5	90	1.6
P16	Yes	Reduce decimal to fraction in lowest terms.	70	2.1	70	2.8	71	2.9
Q06	Yes	Approximate water use/year from use/week.	50	2.1	52	2.7	48	2.8
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	65	2.1	72	2.9	57	3.1
Q09	Yes	Perform multiple operations of common fractions.	88	1.3	85	2.2	92	1.8
R06	Yes	Subtract two decimal numbers.	84	1.5	82	2.4	87	1.7
R07	Yes	Solve division word problem involving decimals.	75	1.8	77	2.4	73	2.6
R12	Yes	Subtract 4-digit whole numbers.	93	1.2	95	1.4	90	1.8
R13	Yes	Determine how much money left after spending 7/9.	57	2.0	59	2.9	55	2.8
U01A	Yes	Estimate the time required to record 5 songs.	78	1.3	78	1.9	77	1.5
U01B	Yes	Explain method of estimation.	59	1.7	58	2.0	60	2.2
V01	Yes	Determine actual weight from rounded value.	76	1.3	79	1.8	72	1.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Japan SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	82	0.6	81	0.8	83	0.8
B11	No	Identify cube made by folding 2-dimensional net.	91	0.6	92	0.8	91	0.9
C03	No	Identify properties of congruent trapezoids.	80	1.1	77	1.5	83	1.3
D07	No	Identify relationship of angles in symmetric polygon.	82	1.0	82	1.3	82	1.5
E02	No	Determine angle in congruent triangles.	83	0.8	83	1.2	84	1.1
G03	No	Find sum of vertical angles from diagram of intersecting lines.	84	0.9	85	1.1	83	1.2
I08	Yes	Identify point on a line defined by two other points.	47	2.2	47	3.0	46	2.7
J15	Yes	Identify similar triangles of different size.	93	1.2	91	1.7	95	1.3
J16	Yes	Identify coordinates for point on a grid.	83	1.5	81	2.3	85	2.1
K03	Yes	Identify figure from rotation of 3-dimensional object.	80	1.3	85	1.9	75	2.6
K08	Yes	Determine unknown angle in rotated congruent triangles.	69	1.7	69	2.2	68	2.6
L15	Yes	Find fourth quadrilateral angle, given the other three.	54	2.2	52	3.3	55	2.7
M02	Yes	Identify all lines of symmetry for a rectangle.	77	1.6	76	2.3	78	2.4
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	83	1.5	87	2.1	79	2.4
M07	Yes	Find angle based on supplementary pairs.	87	1.4	90	1.8	84	2.3
N12	Yes	Identify point on number line from distance of other points.	83	1.6	85	2.0	82	2.5
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	83	1.7	82	2.1	85	2.3
O08	Yes	Find center point of rotation for symmetry-related figures.	93	1.0	92	1.5	94	1.4
P08	Yes	Know relationship between side and perimeter for square.	80	1.6	79	2.3	82	2.5
P09	Yes	Find length of side for similar triangles.	71	2.0	68	2.8	75	2.5
Q10	Yes	Perform calculation involving addition/subtraction of angles.	85	1.6	85	2.0	85	2.4
R10	Yes	Determine into how many triangles a trapezoid can be divided.	84	1.7	85	2.2	83	2.2

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Japan SCALE=Measurement

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                                                                                 Eighth Grade

                                                                       Overall      Boys       Girls

ITEM   REL  LABEL                                                       %   (se)    %   (se)    %   (se)
---------------------------------------------------------------------------------------------------------
A03    No   Determine actual length of box which is rounded to 9 cm.    64  0.7    65  1.0     64  1.1
C01    No   Compare volumes of different stacks of blocks.              86  0.9    86  1.2     86  1.2
D11    No   Identify best unit to measure the mass of an egg.           98  0.4    97  0.6     98  0.5
E06    No   Solve word problem to find length of rectangle from width and perimeter.  70  1.1    72  1.3     68  1.5
F10    No   Determine measurement accuracy of ruler.                    38  1.2    42  1.8     34  1.6
G02    No   Read meter scale to determine length of a pipe.             96  0.4    96  0.5     96  0.6
I03    Yes  Find number of 750 mL bottles filled by a large volume.     49  2.0    53  2.8     43  2.9
J10    Yes  Determine area of sheet not covered by rectangular picture. 76  1.8    72  2.7     80  2.5
K05    Yes  Calculate area of a rectangle given its length and perimeter. 65  1.7    68  2.4     63  2.3
L12    Yes  Find longest pace from chart showing number of paces to cross room. 86  1.3    87  1.9     85  1.8
M01    Yes  Read mass shown on scale.                                   97  0.6    97  0.9     97  0.9
N15    Yes  Identify drawing with angle closest to 30 degrees.          76  1.8    78  2.6     74  2.6
O06    Yes  Calculate time to remove cake after baking 3/4 hour.        71  1.9    70  2.3     72  2.8
P11    Yes  Use ruler to determine approximate length of pencil.        64  2.3    66  2.6     61  3.0
Q03    Yes  Use day/hours/minutes/seconds conversions to calculate longest time. 62  2.3    66  2.6     58  3.3
S02A   Yes  Calculate area square given area of rectangle containing 5 squares. 89  1.1    87  1.7     91  1.6
S02B   Yes  Calculate length of side of square given area.              52  2.1    54  3.0     50  3.0
S02C   Yes  Find perimeter of rectangle containing 5 squares of known size. 56  1.8    55  2.9     56  2.4
V04    Yes  Calculate area of parallelogram inscribed in a rectangle.   76  1.2    77  1.6     74  1.7
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REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Japan SCALE=Proportionality

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	73	0.7	80	0.8	65	1.0
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	63	1.2	65	1.5	62	1.3
D08	No	Solve ratio problem for x: 7/13 = x/52.	82	1.0	81	1.2	82	1.3
F07	No	Solve word problem to find average speed from distance and time.	49	1.2	53	1.8	44	1.6
G04	No	Solve simple proportionality equation.	84	0.8	85	1.1	83	1.5
L14	Yes	Identify missing numbers in table of proportional x and y values.	49	2.2	48	2.8	49	2.8
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	53	1.8	51	3.2	55	2.9
Q05	Yes	Solve word problem involving ratios.	82	1.9	80	2.4	85	2.5
R14	Yes	Solve multi-step word problem involving ratios.	71	2.0	74	2.6	69	2.8
T02A	Yes	Solve algebra word problem involving ratios.	41	1.4	41	2.0	40	2.3
T02B	Yes	Solve multi-step word problem computing fractions.	17	1.3	19	1.9	16	1.6
V03	Yes	Determine ratio of red paint in a mixture.	66	1.4	68	2.1	64	1.8

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Korea SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	80	0.8	81	1.0	79	1.1
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	82	1.1	84	1.6	80	1.6
C05	No	Determine number which continues pattern based on figures.	73	1.4	75	1.8	72	2.1
D10	No	Identify equation which solves word problem: C=(100+6n).	73	1.3	71	1.8	76	1.8
E05	No	Find relationship between numbers in a set of ordered pairs.	86	0.9	87	1.1	84	1.6
F11	No	Solve multi-step problem using linear equations.	80	1.2	82	1.6	78	1.8
G06	No	Find solution to -3X for given value of X.	80	1.3	81	1.8	78	1.8
H10	No	Identify equation expressing xy relationship from table of values.	83	1.2	84	1.6	81	1.9
H12	No	Select symbolic linear equation which fits word problem.	81	1.1	80	1.6	82	1.4
I01	Yes	Identify meaning of symbol in word problem equation.	52	2.8	54	3.5	50	4.2
I04	Yes	Determine next number which occurs in two number sequences.	67	2.3	66	3.2	68	3.5
J18	Yes	Identify missing number in table showing xy relationship.	60	2.9	62	4.1	58	4.1
K04	Yes	Identify expression equivalent to linear inequality.	67	2.6	68	3.6	67	3.4
L11	Yes	Solve multi-step word problem using pattern.	36	2.6	30	3.0	42	4.2
L13	Yes	Identify matching patterns of symbols.	97	0.9	97	1.4	98	1.1
L16	Yes	Simplify and solve linear equation for X.	75	1.9	75	3.3	75	2.7
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	72	2.7	71	3.6	75	4.0
O07	Yes	Solve linear equation for X.	92	1.6	91	2.3	92	2.0
P10	Yes	Identify equivalent algebraic expressions.	65	2.6	66	3.4	63	3.4
P15	Yes	Identify equivalent expression for a cubic relationship.	83	1.8	83	2.4	84	2.8
Q01	Yes	Identify linear expression based on word problem.	64	2.7	63	3.8	65	3.9
Q02	Yes	Subtract fractional expressions of X.	70	2.8	67	3.6	72	3.7
Q07	Yes	Solve P=LW for W given values for P and L.	82	2.1	82	3.2	81	3.3
R09	Yes	Identify equivalent expressions from properties of real numbers.	58	2.5	57	3.3	58	3.8
R11	Yes	Solve algebra word problem: linear equation.	63	2.5	66	3.4	60	3.9
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	84	2.1	87	2.3	80	3.3
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	38	2.6	40	3.5	34	4.0
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	43	2.1	45	2.6	41	3.5
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	47	2.0	49	2.5	45	3.2

REL: Release Status (Yes= Item in Released Item Set)

Third International Mathematics and Science Study - 1995 Assessment
Percent Correct on the Mathematics Items - Eighth Grade

May 11, 1998 128

COUNTRY ID=Korea SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	90	0.6	91	0.9	90	0.8
B07	No	Interpret line graph to find region of largest increase.	88	0.8	88	1.1	89	1.1
C02	No	Interpret pie graph to determine distribution.	90	0.9	92	1.1	88	1.2
E01	No	Interpret line graph to determine intersection point of two plots.	83	1.6	85	2.3	81	2.1
F08	No	Predict probability of occurrence for independent coin toss.	68	1.6	72	2.1	64	2.2
G01	No	Interpret frequency table to find number above a given level.	83	1.2	86	1.9	80	1.4
H07	No	Interpret barchart histogram to find number above a given level.	92	0.9	94	0.9	89	1.6
H11	No	Predict number of total defective bulbs based on random sample.	84	1.1	87	1.5	80	1.9
I09	Yes	Predict most likely color of random card based on fraction of colors.	63	2.5	70	3.0	54	4.1
J13	Yes	Draw pictograph to represent number given in table.	90	1.6	90	2.2	91	2.1
K07	Yes	Determine the number of blue pens given probability of selection.	81	2.0	84	2.6	77	3.2
L10	Yes	Use data in a chart to identify time/day with highest temperature.	85	1.8	88	2.4	83	2.8
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	91	1.6	93	2.0	88	2.6
N18	Yes	Find probability of drawing an even number from 1 to 9.	90	1.7	91	1.9	89	2.8
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	67	2.6	72	3.5	61	4.1
O05	Yes	Calculate number of cube faces from probability of toss.	68	3.2	72	4.4	62	4.2
P17	Yes	Identify thermometer which shows temperature given in data table.	86	2.0	84	2.8	88	3.0
Q04	Yes	Interpret data in bar graph.	77	2.4	75	3.7	79	2.9
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	56	2.6	56	3.6	57	3.4
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	50	1.8	57	2.8	42	2.5

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Korea SCALE=Fractions and number sense

Eighth Grade

ITEM	REL	LABEL	Overall %	(se)	Boys %	(se)	Girls %	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	79	0.8	81	0.9	77	1.3
B09	No	Identify shaded figure which shows 2/5 = 4/10.	81	1.1	82	1.5	81	1.5
B10	No	Identify smallest of decimal fractions.	81	1.2	84	1.3	78	1.9
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	75	1.4	77	1.8	72	2.2
C06	No	Determine the worst estimate of: 848 + 677.	83	1.1	84	1.2	82	1.9
D09	No	Identify smallest fraction.	80	1.1	84	1.5	76	1.6
D12	No	Estimate rational number from point on number line.	79	1.5	79	2.1	77	2.1
E03	No	Find fraction of hour between two time points.	71	1.5	77	1.9	64	2.3
E04	No	Solve multi-step word problem: 4-digit whole numbers.	89	1.0	91	1.3	86	1.7
F09	No	Identify decimal fraction between 0.07 and 0.08.	83	1.0	86	1.2	80	1.7
F12	No	Identify fraction of circle which is shaded.	49	1.3	52	1.6	46	2.1
G05	No	Identify fraction represented in word problem.	90	0.9	90	1.3	91	1.5
H08	No	Identify figure showing 2/3 shaded.	86	1.1	88	1.4	84	2.0
H09	No	Identify sum which is closest to 691 + 208.	93	0.9	93	1.3	93	1.2
I02	Yes	Solve multi-step word problem: common fractions.	79	1.8	83	2.5	74	3.5
I05	Yes	Solve subtraction word problem: rational numbers.	88	2.2	88	3.1	87	3.0
I06	Yes	Write a fraction larger than a given number.	84	2.2	87	2.5	79	4.0
I07	Yes	Recognize when estimation is appropriate.	62	2.5	58	3.2	69	3.4
J12	Yes	Divide fractions.	78	2.1	74	3.0	83	3.3
J14	Yes	Divide rational numbers, fractional divisor.	63	2.3	60	3.3	67	3.4
J17	Yes	Use map and scale to find distance between two cities.	74	2.3	77	2.8	71	3.9
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	84	2.0	87	2.6	81	3.2
K02	Yes	Find total volume of mixture using rational number addition.	83	1.9	84	2.8	81	2.9
K06	Yes	Approximate amount increased by 15%.	55	3.0	60	3.9	49	4.4
K09	Yes	Compute sum of three fractions.	81	1.8	83	2.6	80	2.3
L08	Yes	Estimate actual height from diagram of relative heights.	77	2.0	80	2.8	74	3.2
L09	Yes	Identify 504.7 from its expression in words.	86	1.9	88	2.5	85	2.6
L17	Yes	Subtract three fractions.	78	2.0	78	2.6	78	2.9
M04	Yes	Identify the largest fraction.	69	2.3	74	3.2	63	3.1
M08	Yes	Multiply two decimal fractions.	54	2.7	53	3.9	55	3.4
N11	Yes	Identify number rounded to 18200.	91	1.7	93	1.9	89	3.1
N14	Yes	Identify list of equivalent fractions.	90	1.6	90	2.2	90	2.4
N16	Yes	Solve algebra word problem with fractions.	62	2.6	65	3.6	60	4.0
N17	Yes	Solve multi-step word problem: decimal fractions.	50	2.7	54	3.5	44	3.8
N19	Yes	Shade a given fraction of the squares in a grid.	81	1.9	81	2.7	81	2.8
O02	Yes	Calculate percent increase.	37	2.8	47	4.3	25	3.3
O04	Yes	Identify number rounded to the nearest 100th.	71	2.9	75	4.2	67	3.5
O09	Yes	Solve division word problem: common fractions.	57	3.2	65	4.5	47	3.8
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	80	2.2	82	2.9	79	3.1
P13	Yes	Use heart beats/min to find beats per hour.	79	2.3	82	3.1	75	3.5
P14	Yes	Solve subtraction word problem: common fractions.	74	2.6	72	3.8	77	3.2
P16	Yes	Reduce decimal to fraction in lowest terms.	68	2.4	66	3.0	72	3.6
Q06	Yes	Approximate water use/year from use/week.	54	2.9	54	4.1	54	4.0
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	61	2.6	64	3.2	58	3.8
Q09	Yes	Perform multiple operations of common fractions.	79	2.0	75	3.0	84	3.0
R06	Yes	Subtract two decimal numbers.	86	1.5	84	2.4	88	2.3
R07	Yes	Solve division word problem involving decimals.	66	2.1	64	3.3	69	3.5
R12	Yes	Subtract 4-digit whole numbers.	89	1.8	91	2.4	87	2.5
R13	Yes	Determine how much money left after spending 7/9.	51	2.4	53	3.2	49	4.0
U01A	Yes	Estimate the time required to record 5 songs.	58	2.2	63	3.4	53	2.8
U01B	Yes	Explain method of estimation.	56	2.1	61	3.4	51	2.9
V01	Yes	Determine actual weight from rounded value.	85	1.3	89	1.4	81	2.2

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Korea SCALE=Geometry

			Eighth Grade					
ITEM	REL	LABEL	Overall		Boys		Girls	
			%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	88	0.5	89	0.7	87	0.9
B11	No	Identify cube made by folding 2-dimensional net.	85	1.0	87	1.0	82	1.7
C03	No	Identify properties of congruent trapezoids.	82	1.2	81	1.6	83	1.8
D07	No	Identify relationship of angles in symmetric polygon.	75	1.3	76	1.8	73	2.1
E02	No	Determine angle in congruent triangles.	80	1.3	82	1.5	77	2.1
G03	No	Find sum of vertical angles from diagram of intersecting lines.	86	1.1	85	1.4	86	1.7
I08	Yes	Identify point on a line defined by two other points.	42	3.2	49	4.2	33	4.0
J11	Yes	Identify properties of a parallelogram.	79	2.1	79	2.8	79	2.5
J15	Yes	Identify similar triangles of different size.	86	1.9	90	2.2	82	3.1
J16	Yes	Identify coordinates for point on a grid.	85	1.7	84	2.5	87	2.5
K03	Yes	Identify figure from rotation of 3-dimensional object.	74	2.6	80	3.1	66	4.1
K08	Yes	Determine unknown angle in rotated congruent triangles.	66	2.1	69	3.1	62	3.2
L15	Yes	Find fourth quadrilateral angle, given the other three.	60	2.7	65	3.8	54	3.8
M02	Yes	Identify all lines of symmetry for a rectangle.	58	2.7	59	4.1	56	3.6
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	61	2.7	67	3.9	54	3.3
M07	Yes	Find angle based on supplementary pairs.	80	2.0	84	2.7	76	3.3
N12	Yes	Identify point on number line from distance of other points.	77	2.3	78	3.1	76	3.5
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	79	2.3	84	2.8	74	3.7
O08	Yes	Find center point of rotation for symmetry-related figures.	87	2.1	88	2.7	86	2.8
P08	Yes	Know relationship between side and perimeter for square.	78	2.1	75	2.7	82	2.6
P09	Yes	Find length of side for similar triangles.	62	2.7	59	3.6	65	4.1
Q10	Yes	Perform calculation involving addition/subtraction of angles.	78	2.2	78	3.2	78	2.9
R10	Yes	Determine into how many triangles a trapezoid can be divided.	81	2.3	79	3.3	84	2.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Korea SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	92	0.5	93	0.7	90	0.8
C01	No	Compare volumes of different stacks of blocks.	88	1.0	88	1.4	89	1.7
D11	No	Identify best unit to measure the mass of an egg.	92	0.8	93	1.0	90	1.4
E06	No	Solve word problem to find length of rectangle from width and perimeter.	63	1.4	70	1.7	55	2.4
F10	No	Determine measurement accuracy of ruler.	58	1.8	64	2.0	51	2.4
G02	No	Read meter scale to determine length of a pipe.	92	0.9	93	1.1	92	1.4
I03	Yes	Find number of 750 mL bottles filled by a large volume.	34	2.7	40	3.5	25	3.5
J10	Yes	Determine area of sheet not covered by rectangular picture.	71	2.3	69	3.1	73	3.3
K05	Yes	Calculate area of a rectangle given its length and perimeter.	66	2.2	69	3.2	61	3.2
L12	Yes	Find longest pace from chart showing number of paces to cross room.	77	2.2	83	2.5	70	3.4
M01	Yes	Read mass shown on scale.	95	1.2	96	1.7	94	1.6
N15	Yes	Identify drawing with angle closest to 30 degrees.	76	2.2	79	2.8	72	3.8
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	60	2.8	64	3.8	54	3.8
P11	Yes	Use ruler to determine approximate length of pencil.	60	2.7	62	4.2	59	3.6
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	56	2.4	57	3.1	55	4.0
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	74	2.1	76	2.5	71	3.4
S02B	Yes	Calculate length of side of square given area.	46	2.7	50	3.4	39	3.9
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	41	2.6	47	3.3	31	3.5
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	54	2.1	56	2.7	52	3.3
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	39	2.5	40	2.9	37	3.9
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	69	2.0	73	2.3	64	3.4

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Korea SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	52	0.8	53	1.3	50	1.4
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	84	1.0	85	1.4	84	1.5
D08	No	Solve ratio problem for x: 7/13 = x/52.	90	0.8	91	1.2	89	1.4
F07	No	Solve word problem to find average speed from distance and time.	37	1.4	42	2.0	32	2.0
G04	No	Solve simple proportionality equation.	86	0.9	87	1.4	86	1.6
L14	Yes	Identify missing numbers in table of proportional x and y values.	41	2.6	45	4.0	37	3.1
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	64	2.6	61	3.8	67	3.3
Q05	Yes	Solve word problem involving ratios.	82	2.2	82	3.2	82	3.2
R14	Yes	Solve multi-step word problem involving ratios.	62	2.5	62	3.4	61	3.8
T02A	Yes	Solve algebra word problem involving ratios.	39	2.0	39	2.6	38	3.0
T02B	Yes	Solve multi-step word problem computing fractions.	14	1.6	14	2.1	15	2.1
V03	Yes	Determine ratio of red paint in a mixture.	87	1.4	86	2.1	88	1.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Kuwait SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	48	1.5	.	.	.	.
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	32	1.9	.	.	.	.
C05	No	Determine number which continues pattern based on figures.	29	2.1	.	.	.	.
E05	No	Find relationship between numbers in a set of ordered pairs.	39	2.7	.	.	.	.
F11	No	Solve multi-step problem using linear equations.	18	2.1	.	.	.	.
G06	No	Find solution to -3X for given value of X.	43	2.0	.	.	.	.
H10	No	Identify equation expressing xy relationship from table of values.	47	2.3	.	.	.	.
H12	No	Select symbolic linear equation which fits word problem.	52	2.0	.	.	.	.
I04	Yes	Determine next number which occurs in two number sequences.	11	2.4	.	.	.	.
K04	Yes	Identify expression equivalent to linear inequality.	28	4.4	.	.	.	.
L11	Yes	Solve multi-step word problem using pattern.	34	3.3	.	.	.	.
L13	Yes	Identify matching patterns of symbols.	78	3.7	.	.	.	.
L16	Yes	Simplify and solve linear equation for X.	3	0.7	.	.	.	.
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	26	4.0	.	.	.	.
O07	Yes	Solve linear equation for X.	50	4.3	.	.	.	.
P10	Yes	Identify equivalent algebraic expressions.	29	3.0	.	.	.	.
P15	Yes	Identify equivalent expression for a cubic relationship.	43	4.3	.	.	.	.
Q01	Yes	Identify linear expression based on word problem.	27	4.4	.	.	.	.
Q02	Yes	Subtract fractional expressions of X.	36	3.1	.	.	.	.
Q07	Yes	Solve P=LW for W given values for P and L.	54	3.6	.	.	.	.
R09	Yes	Identify equivalent expressions from properties of real numbers.	19	3.1	.	.	.	.
R11	Yes	Solve algebra word problem: linear equation.	26	3.4	.	.	.	.
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	34	3.7	.	.	.	.
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	20	4.1	.	.	.	.
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	4	1.1	.	.	.	.
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	2	0.7	.	.	.	.

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Kuwait SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	56	1.7	.	.	.	.
B07	No	Interpret line graph to find region of largest increase.	29	2.1	.	.	.	.
C02	No	Interpret pie graph to determine distribution.	59	2.0	.	.	.	.
E01	No	Interpret line graph to determine intersection point of two plots.	41	2.0	.	.	.	.
F08	No	Predict probability of occurrence for independent coin toss.	37	2.1	.	.	.	.
G01	No	Interpret frequency table to find number above a given level.	43	2.6	.	.	.	.
H07	No	Interpret barchart histogram to find number above a given level.	42	2.0	.	.	.	.
H11	No	Predict number of total defective bulbs based on random sample.	40	2.8	.	.	.	.
I09	Yes	Predict most likely color of random card based on fraction of colors.	35	3.3	.	.	.	.
J13	Yes	Draw pictograph to represent number given in table.	29	4.7	.	.	.	.
K07	Yes	Determine the number of blue pens given probability of selection.	32	5.3	.	.	.	.
L10	Yes	Use data in a chart to identify time/day with highest temperature.	82	3.4	.	.	.	.
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	53	3.7	.	.	.	.
N18	Yes	Find probability of drawing an even number from 1 to 9.	30	4.4	.	.	.	.
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	24	3.1	.	.	.	.
O05	Yes	Calculate number of cube faces from probability of toss.	19	3.9	.	.	.	.
P17	Yes	Identify thermometer which shows temperature given in data table.	51	5.1	.	.	.	.
Q04	Yes	Interpret data in bar graph.	70	2.9	.	.	.	.
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	30	4.7	.	.	.	.
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	4	1.2	.	.	.	.

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Kuwait SCALE=Fractions and number sense

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	23	1.1	.	.	.	.
B09	No	Identify shaded figure which shows 2/5 = 4/10.	28	2.3	.	.	.	.
B10	No	Identify smallest of decimal fractions.	4	0.9	.	.	.	.
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	36	2.2	.	.	.	.
C06	No	Determine the worst estimate of: 848 + 677.	34	2.2	.	.	.	.
D09	No	Identify smallest fraction.	33	2.1	.	.	.	.
D12	No	Estimate rational number from point on number line.	42	2.0	.	.	.	.
E03	No	Find fraction of hour between two time points.	50	1.9	.	.	.	.
E04	No	Solve multi-step word problem: 4-digit whole numbers.	40	2.3	.	.	.	.
F09	No	Identify decimal fraction between 0.07 and 0.08.	31	2.4	.	.	.	.
F12	No	Identify fraction of circle which is shaded.	36	2.1	.	.	.	.
G05	No	Identify fraction represented in word problem.	25	1.9	.	.	.	.
H08	No	Identify figure showing 2/3 shaded.	34	2.9	.	.	.	.
H09	No	Identify sum which is closest to 691 + 208.	60	2.4	.	.	.	.
I02	Yes	Solve multi-step word problem: common fractions.	26	3.2	.	.	.	.
I05	Yes	Solve subtraction word problem: rational numbers.	29	3.4	.	.	.	.
I06	Yes	Write a fraction larger than a given number.	37	5.7	.	.	.	.
I07	Yes	Recognize when estimation is appropriate.	37	4.3	.	.	.	.
J12	Yes	Divide fractions.	12	3.8	.	.	.	.
J14	Yes	Divide rational numbers, fractional divisor.	14	3.2	.	.	.	.
J17	Yes	Use map and scale to find distance between two cities.	30	4.1	.	.	.	.
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	43	4.1	.	.	.	.
K02	Yes	Find total volume of mixture using rational number addition.	16	2.2	.	.	.	.
K06	Yes	Approximate amount increased by 15%.	22	3.0	.	.	.	.
K09	Yes	Compute sum of three fractions.	13	2.7	.	.	.	.
L08	Yes	Estimate actual height from diagram of relative heights.	35	4.3	.	.	.	.
L09	Yes	Identify 504.7 from its expression in words.	61	4.6	.	.	.	.
L17	Yes	Subtract three fractions.	24	3.9	.	.	.	.
M04	Yes	Identify the largest fraction.	15	3.4	.	.	.	.
M08	Yes	Multiply two decimal fractions.	18	3.9	.	.	.	.
N11	Yes	Identify number rounded to 18200.	51	3.5	.	.	.	.
N14	Yes	Identify list of equivalent fractions.	35	3.8	.	.	.	.
N16	Yes	Solve algebra word problem with fractions.	42	3.8	.	.	.	.
N17	Yes	Solve multi-step word problem: decimal fractions.	22	3.1	.	.	.	.
N19	Yes	Shade a given fraction of the squares in a grid.	8	2.3	.	.	.	.
O02	Yes	Calculate percent increase.	13	2.5	.	.	.	.
O09	Yes	Solve division word problem: common fractions.	22	2.6	.	.	.	.
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	31	3.3	.	.	.	.
P13	Yes	Use heart beats/min to find beats per hour.	27	2.7	.	.	.	.
P14	Yes	Solve subtraction word problem: common fractions.	66	3.5	.	.	.	.
P16	Yes	Reduce decimal to fraction in lowest terms.	4	1.4	.	.	.	.
Q06	Yes	Approximate water use/year from use/week.	15	2.4	.	.	.	.
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	9	2.3	.	.	.	.
Q09	Yes	Perform multiple operations of common fractions.	19	3.2	.	.	.	.
R06	Yes	Subtract two decimal numbers.	43	5.0	.	.	.	.
R07	Yes	Solve division word problem involving decimals.	21	4.0	.	.	.	.
R12	Yes	Subtract 4-digit whole numbers.	52	3.5	.	.	.	.
R13	Yes	Determine how much money left after spending 7/9.	2	1.0	.	.	.	.
U01A	Yes	Estimate the time required to record 5 songs.	5	1.4	.	.	.	.
U01B	Yes	Explain method of estimation.	8	1.8	.	.	.	.
V01	Yes	Determine actual weight from rounded value.	10	1.9	.	.	.	.

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Kuwait SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	40	1.6	.	.	.	.
B11	No	Identify cube made by folding 2-dimensional net.	29	1.8	.	.	.	.
C03	No	Identify properties of congruent trapezoids.	43	2.2	.	.	.	.
D07	No	Identify relationship of angles in symmetric polygon.	55	2.8	.	.	.	.
E02	No	Determine angle in congruent triangles.	57	2.0	.	.	.	.
G03	No	Find sum of vertical angles from diagram of intersecting lines.	35	2.1	.	.	.	.
I08	Yes	Identify point on a line defined by two other points.	24	3.1	.	.	.	.
J11	Yes	Identify properties of a parallelogram.	13	2.7	.	.	.	.
J15	Yes	Identify similar triangles of different size.	56	3.9	.	.	.	.
J16	Yes	Identify coordinates for point on a grid.	46	5.1	.	.	.	.
K03	Yes	Identify figure from rotation of 3-dimensional object.	29	3.3	.	.	.	.
K08	Yes	Determine unknown angle in rotated congruent triangles.	20	2.8	.	.	.	.
L15	Yes	Find fourth quadrilateral angle, given the other three.	42	4.6	.	.	.	.
M02	Yes	Identify all lines of symmetry for a rectangle.	61	4.3	.	.	.	.
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	42	4.6	.	.	.	.
M07	Yes	Find angle based on supplementary pairs.	52	4.3	.	.	.	.
N12	Yes	Identify point on number line from distance of other points.	44	4.0	.	.	.	.
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	36	3.9	.	.	.	.
O08	Yes	Find center point of rotation for symmetry-related figures.	52	3.8	.	.	.	.
P08	Yes	Know relationship between side and perimeter for square.	38	4.8	.	.	.	.
P09	Yes	Find length of side for similar triangles.	14	2.1	.	.	.	.
Q10	Yes	Perform calculation involving addition/subtraction of angles.	16	2.1	.	.	.	.
R10	Yes	Determine into how many triangles a trapezoid can be divided.	21	2.8	.	.	.	.

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Kuwait SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	26	1.5	.	.	.	.
C01	No	Compare volumes of different stacks of blocks.	39	1.9	.	.	.	.
D11	No	Identify best unit to measure the mass of an egg.	52	2.9	.	.	.	.
E06	No	Solve word problem to find length of rectangle from width and perimeter.	26	2.1	.	.	.	.
F10	No	Determine measurement accuracy of ruler.	24	2.5	.	.	.	.
G02	No	Read meter scale to determine length of a pipe.	21	2.0	.	.	.	.
I03	Yes	Find number of 750 mL bottles filled by a large volume.	28	2.9	.	.	.	.
J10	Yes	Determine area of sheet not covered by rectangular picture.	11	2.1	.	.	.	.
K05	Yes	Calculate area of a rectangle given its length and perimeter.	8	2.0	.	.	.	.
L12	Yes	Find longest pace from chart showing number of paces to cross room.	39	3.8	.	.	.	.
M01	Yes	Read mass shown on scale.	58	2.9	.	.	.	.
N15	Yes	Identify drawing with angle closest to 30 degrees.	49	3.3	.	.	.	.
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	22	3.5	.	.	.	.
P11	Yes	Use ruler to determine approximate length of pencil.	31	3.5	.	.	.	.
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	18	2.4	.	.	.	.
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	17	2.9	.	.	.	.
S02B	Yes	Calculate length of side of square given area.	6	1.7	.	.	.	.
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	8	2.2	.	.	.	.
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	10	2.8	.	.	.	.
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	6	2.5	.	.	.	.
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	7	1.3	.	.	.	.

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Kuwait SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	39	1.7	.	.	.	.
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	44	2.3	.	.	.	.
D08	No	Solve ratio problem for x: 7/13 = x/52.	49	2.1	.	.	.	.
G04	No	Solve simple proportionality equation.	40	1.9	.	.	.	.
L14	Yes	Identify missing numbers in table of proportional x and y values.	15	2.5	.	.	.	.
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	12	3.7	.	.	.	.
Q05	Yes	Solve word problem involving ratios.	25	3.0	.	.	.	.
R14	Yes	Solve multi-step word problem involving ratios.	2	0.8	.	.	.	.
T02A	Yes	Solve algebra word problem involving ratios.	1	0.5	.	.	.	.
T02B	Yes	Solve multi-step word problem computing fractions.	0	0.1	.	.	.	.
V03	Yes	Determine ratio of red paint in a mixture.	14	2.0	.	.	.	.

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Latvia (LSS) SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	82	1.1	84	1.3	80	1.5
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	66	1.9	61	2.6	71	2.1
C05	No	Determine number which continues pattern based on figures.	47	2.0	45	2.6	48	2.5
D10	No	Identify equation which solves word problem: C=(100+6n).	27	1.7	26	2.2	29	2.6
E05	No	Find relationship between numbers in a set of ordered pairs.	58	2.1	53	2.8	63	2.8
F11	No	Solve multi-step problem using linear equations.	44	1.9	43	2.6	46	2.7
G06	No	Find solution to -3X for given value of X.	60	2.3	58	3.0	61	2.7
H10	No	Identify equation expressing xy relationship from table of values.	39	2.1	38	2.8	39	2.7
H12	No	Select symbolic linear equation which fits word problem.	69	1.9	69	2.7	70	2.5
I01	Yes	Identify meaning of symbol in word problem equation.	38	3.2	39	4.5	38	4.2
I04	Yes	Determine next number which occurs in two number sequences.	33	2.9	25	4.0	41	4.4
J18	Yes	Identify missing number in table showing xy relationship.	30	2.6	33	4.7	27	3.3
K04	Yes	Identify expression equivalent to linear inequality.	38	3.0	45	4.5	33	4.4
L11	Yes	Solve multi-step word problem using pattern.	24	2.8	25	4.2	23	3.6
L13	Yes	Identify matching patterns of symbols.	96	1.2	96	1.7	96	1.6
L16	Yes	Simplify and solve linear equation for X.	58	3.8	55	5.4	60	4.2
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	57	3.9	53	4.9	62	4.7
O07	Yes	Solve linear equation for X.	75	2.5	74	3.6	76	3.6
P10	Yes	Identify equivalent algebraic expressions.	58	3.0	55	4.1	61	3.6
P15	Yes	Identify equivalent expression for a cubic relationship.	71	2.9	71	4.0	71	3.9
Q01	Yes	Identify linear expression based on word problem.	42	3.3	38	4.5	46	4.5
Q02	Yes	Subtract fractional expressions of X.	65	3.1	62	4.8	68	3.8
Q07	Yes	Solve P=LW for W given values for P and L.	63	3.1	59	4.9	66	3.7
R09	Yes	Identify equivalent expressions from properties of real numbers.	52	3.2	50	4.8	54	4.3
R11	Yes	Solve algebra word problem: linear equation.	46	2.9	53	4.5	41	3.7
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	76	2.7	76	4.1	76	3.8
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	17	2.4	20	3.4	15	3.2
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	25	2.4	29	3.2	22	2.4
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	28	2.2	30	2.8	26	2.6

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Latvia (LSS) SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	72	1.4	71	1.6	74	1.8
B07	No	Interpret line graph to find region of largest increase.	57	1.8	53	2.5	61	2.6
C02	No	Interpret pie graph to determine distribution.	82	1.2	79	2.3	85	1.5
E01	No	Interpret line graph to determine intersection point of two plots.	70	1.8	75	2.1	66	2.6
F08	No	Predict probability of occurrence for independent coin toss.	65	1.7	65	2.4	65	2.4
G01	No	Interpret frequency table to find number above a given level.	43	2.1	45	2.7	42	2.9
H07	No	Interpret barchart histogram to find number above a given level.	51	2.1	51	2.8	51	2.7
H11	No	Predict number of total defective bulbs based on random sample.	64	1.7	70	2.5	59	2.3
I09	Yes	Predict most likely color of random card based on fraction of colors.	65	3.3	64	4.6	66	4.3
J13	Yes	Draw pictograph to represent number given in table.	82	1.9	79	3.8	85	2.9
K07	Yes	Determine the number of blue pens given probability of selection.	43	2.7	40	4.1	46	3.9
L10	Yes	Use data in a chart to identify time/day with highest temperature.	86	2.2	82	3.9	90	2.4
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	60	3.0	63	4.2	57	3.8
N18	Yes	Find probability of drawing an even number from 1 to 9.	33	2.8	37	4.6	28	3.9
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	57	3.0	63	4.1	52	4.4
O05	Yes	Calculate number of cube faces from probability of toss.	28	3.0	35	4.3	22	3.6
P17	Yes	Identify thermometer which shows temperature given in data table.	88	2.2	92	2.4	86	3.2
Q04	Yes	Interpret data in bar graph.	88	2.4	84	3.6	91	2.4
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	42	3.2	46	4.5	38	4.3
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	9	1.2	11	1.8	8	1.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Latvia (LSS) SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	50	1.7	52	2.1	49	2.1
B09	No	Identify shaded figure which shows 2/5 = 4/10.	48	1.6	49	2.3	48	2.4
B10	No	Identify smallest of decimal fractions.	36	1.7	40	2.2	33	2.2
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	45	1.7	49	2.6	42	2.4
C06	No	Determine the worst estimate of: 848 + 677.	58	1.8	55	2.5	60	2.5
D09	No	Identify smallest fraction.	50	2.1	55	2.6	47	3.1
D12	No	Estimate rational number from point on number line.	73	1.7	77	2.5	69	2.3
E03	No	Find fraction of hour between two time points.	60	2.0	63	2.6	57	2.7
E04	No	Solve multi-step word problem: 4-digit whole numbers.	74	1.9	70	2.8	77	2.2
F09	No	Identify decimal fraction between 0.07 and 0.08.	60	1.7	62	2.7	57	2.1
F12	No	Identify fraction of circle which is shaded.	41	1.9	41	3.1	41	2.4
G05	No	Identify fraction represented in word problem.	38	2.0	36	2.6	40	2.4
H08	No	Identify figure showing 2/3 shaded.	55	2.3	57	3.1	53	2.7
H09	No	Identify sum which is closest to 691 + 208.	85	1.2	86	1.5	84	1.7
I02	Yes	Solve multi-step word problem: common fractions.	52	3.1	55	4.0	48	3.8
I05	Yes	Solve subtraction word problem: rational numbers.	69	3.2	66	4.9	73	4.1
I06	Yes	Write a fraction larger than a given number.	69	3.1	71	4.1	66	4.9
I07	Yes	Recognize when estimation is appropriate.	66	2.5	64	4.1	67	3.8
J12	Yes	Divide fractions.	64	3.1	56	4.6	69	3.6
J14	Yes	Divide rational numbers, fractional divisor.	62	3.0	56	4.8	66	3.7
J17	Yes	Use map and scale to find distance between two cities.	70	2.8	64	4.5	74	3.4
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	71	2.9	70	4.3	73	3.9
K02	Yes	Find total volume of mixture using rational number addition.	53	3.3	52	4.1	53	4.7
K06	Yes	Approximate amount increased by 15%.	29	2.7	35	4.3	24	3.7
K09	Yes	Compute sum of three fractions.	46	3.1	35	4.5	55	4.3
L08	Yes	Estimate actual height from diagram of relative heights.	64	3.2	68	4.4	61	4.2
L09	Yes	Identify 504.7 from its expression in words.	89	2.2	88	3.4	91	2.7
L17	Yes	Subtract three fractions.	55	3.8	51	5.1	58	4.6
M04	Yes	Identify the largest fraction.	23	2.9	27	3.7	19	3.7
M08	Yes	Multiply two decimal fractions.	64	3.0	57	3.9	73	4.3
N11	Yes	Identify number rounded to 18200.	79	2.3	81	3.5	77	3.5
N14	Yes	Identify list of equivalent fractions.	59	3.2	58	5.1	60	4.1
N16	Yes	Solve algebra word problem with fractions.	55	3.0	54	4.2	55	4.3
N17	Yes	Solve multi-step word problem: decimal fractions.	38	3.3	37	4.0	40	4.6
N19	Yes	Shade a given fraction of the squares in a grid.	36	2.9	39	4.3	33	3.7
O02	Yes	Calculate percent increase.	17	2.4	20	3.8	13	2.7
O04	Yes	Identify number rounded to the nearest 100th.	31	2.7	37	4.1	26	3.5
O09	Yes	Solve division word problem: common fractions.	42	3.0	47	4.3	38	4.2
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	61	3.3	62	4.8	60	4.1
P13	Yes	Use heart beats/min to find beats per hour.	63	4.0	57	5.2	68	4.3
P14	Yes	Solve subtraction word problem: common fractions.	75	2.5	74	4.7	77	3.3
P16	Yes	Reduce decimal to fraction in lowest terms.	29	2.9	27	4.3	31	3.9
Q06	Yes	Approximate water use/year from use/week.	26	2.7	33	3.9	21	3.7
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	28	3.2	31	4.5	25	3.5
Q09	Yes	Perform multiple operations of common fractions.	56	3.3	46	4.4	64	4.2
R06	Yes	Subtract two decimal numbers.	74	2.7	68	4.2	78	3.5
R07	Yes	Solve division word problem involving decimals.	47	3.0	43	4.1	50	4.5
R12	Yes	Subtract 4-digit whole numbers.	89	2.1	87	3.2	91	2.6
R13	Yes	Determine how much money left after spending 7/9.	26	3.0	29	4.9	24	3.3
U01A	Yes	Estimate the time required to record 5 songs.	16	1.9	20	2.7	13	2.0
U01B	Yes	Explain method of estimation.	19	1.8	25	2.6	13	2.1
V01	Yes	Determine actual weight from rounded value.	49	2.5	49	3.2	48	3.0

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Latvia (LSS) SCALE=Geometry

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                                                                                    Eighth Grade

                                                                        Overall      Boys       Girls

ITEM    REL   LABEL                                                      %    (se)   %    (se)   %    (se)
--------------------------------------------------------------------------------------------------------
A05     No    Identify congruent triangles in a rectangle.              78   1.2    74   1.6    81   1.3
B11     No    Identify cube made by folding 2-dimensional net.          70   1.4    72   2.1    68   2.0
C03     No    Identify properties of congruent trapezoids.              74   1.7    70   2.0    78   2.7
D07     No    Identify relationship of angles in symmetric polygon.     67   1.9    68   2.6    67   2.6
E02     No    Determine angle in congruent triangles.                   54   1.6    56   2.4    52   2.6
G03     No    Find sum of vertical angles from diagram of intersecting lines.  60   2.2    60   2.8    60   3.1
I08     Yes   Identify point on a line defined by two other points.     38   3.0    43   4.1    33   4.6
J11     Yes   Identify properties of a parallelogram.                   50   3.1    45   4.6    54   3.9
J15     Yes   Identify similar triangles of different size.             77   2.8    81   3.5    74   4.1
J16     Yes   Identify coordinates for point on a grid.                 49   3.2    46   4.8    52   4.1
K03     Yes   Identify figure from rotation of 3-dimensional object.    81   2.6    83   3.2    80   3.9
K08     Yes   Determine unknown angle in rotated congruent triangles.   25   2.9    29   4.2    21   3.9
L15     Yes   Find fourth quadrilateral angle, given the other three.   41   3.0    38   4.2    43   4.2
M02     Yes   Identify all lines of symmetry for a rectangle.           50   3.1    50   4.4    49   4.0
M05     Yes   Find diagram resulting from rotation of a 2-dimensional figure.  57   2.6    61   3.3    53   4.7
M07     Yes   Find angle based on supplementary pairs.                  73   2.8    77   3.6    67   3.9
N12     Yes   Identify point on number line from distance of other points.  59   3.0    64   4.7    54   4.1
O03     Yes   Identify supplementary angles formed by parallel and intersecting lines.  52   2.8    53   4.7    52   4.6
O08     Yes   Find center point of rotation for symmetry-related figures.  76   2.5    75   3.9    76   3.4
P08     Yes   Know relationship between side and perimeter for square.  54   3.2    58   4.4    51   3.9
P09     Yes   Find length of side for similar triangles.                32   3.3    34   4.4    29   4.5
Q10     Yes   Perform calculation involving addition/subtraction of angles.  41   3.2    41   3.9    42   4.2
R10     Yes   Determine into how many triangles a trapezoid can be divided.  49   3.4    45   4.8    51   3.9
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REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Latvia (LSS) SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	61	1.2	62	1.6	61	1.6
C01	No	Compare volumes of different stacks of blocks.	56	2.1	61	2.7	51	2.6
D11	No	Identify best unit to measure the mass of an egg.	92	1.0	93	1.3	92	1.3
E06	No	Solve word problem to find length of rectangle from width and perimeter.	43	2.0	45	3.0	42	2.7
F10	No	Determine measurement accuracy of ruler.	69	2.0	70	2.9	68	2.2
G02	No	Read meter scale to determine length of a pipe.	73	1.6	73	2.1	73	2.4
I03	Yes	Find number of 750 mL bottles filled by a large volume.	39	2.8	42	4.0	36	3.4
J10	Yes	Determine area of sheet not covered by rectangular picture.	30	3.0	30	4.1	30	4.2
K05	Yes	Calculate area of a rectangle given its length and perimeter.	30	2.9	34	3.8	26	3.9
L12	Yes	Find longest pace from chart showing number of paces to cross room.	91	1.5	86	3.0	95	1.7
M01	Yes	Read mass shown on scale.	84	2.2	82	3.5	87	3.0
N15	Yes	Identify drawing with angle closest to 30 degrees.	65	3.0	67	4.5	62	3.7
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	44	3.7	47	4.4	42	5.1
P11	Yes	Use ruler to determine approximate length of pencil.	60	2.5	62	4.3	58	4.1
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	25	2.4	29	3.6	21	2.9
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	60	3.1	58	4.2	62	4.1
S02B	Yes	Calculate length of side of square given area.	24	2.6	28	4.1	21	3.4
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	18	2.6	18	3.6	17	3.4
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	31	2.3	32	3.3	30	3.2
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	6	1.4	9	2.4	4	1.2
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	29	2.1	29	2.8	29	3.0

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Latvia (LSS) SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	51	1.4	62	2.0	42	1.8
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	69	1.5	73	2.2	66	2.0
D08	No	Solve ratio problem for x: 7/13 = x/52.	60	2.0	63	2.8	58	2.6
F07	No	Solve word problem to find average speed from distance and time.	27	1.5	30	2.6	24	2.3
G04	No	Solve simple proportionality equation.	61	2.1	64	3.0	59	2.5
L14	Yes	Identify missing numbers in table of proportional x and y values.	21	2.6	21	4.1	20	3.5
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	32	3.1	34	4.1	30	4.1
Q05	Yes	Solve word problem involving ratios.	57	3.4	54	4.2	60	4.1
R14	Yes	Solve multi-step word problem involving ratios.	39	2.9	40	4.4	38	4.1
T02A	Yes	Solve algebra word problem involving ratios.	14	1.7	16	2.5	13	2.2
T02B	Yes	Solve multi-step word problem computing fractions.	11	1.3	11	2.0	11	1.8
V03	Yes	Determine ratio of red paint in a mixture.	27	1.9	25	2.4	29	2.8

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Lithuania SCALE=Algebra

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                                                                                      Eighth Grade

                                                                          Overall     Boys       Girls

   ITEM    REL   LABEL                                                     %   (se)    %   (se)    %   (se)
   -------------------------------------------------------------------------------------------------------
   A02     No    Solve algebraic word problem equating masses on a scale.  81   1.0   84   1.5   79   1.4
   B12     No    Identify algebraic equation to solve word problem: 7n+6=41. 66  2.0  64   2.3   67   2.5
   C05     No    Determine number which continues pattern based on figures. 57  2.2   57   3.1   57   2.6
   D10     No    Identify equation which solves word problem:  C=(100+6n).  31  1.9   28   2.7   33   2.4
   E05     No    Find relationship between numbers in a set of ordered pairs. 58 2.1  54   2.9   61   3.0
   G06     No    Find solution to -3X for given value of X.                 61   2.2   57   2.9   64   3.2
   H10     No    Identify equation expressing xy relationship from table of values. 30 2.3 27 2.7 32 2.7
   H12     No    Select symbolic linear equation which fits word problem.   57   2.0   52   2.5   61   2.5
   I01     Yes   Identify meaning of symbol in word problem equation.       24   2.3   23   3.6   25   3.2
   I04     Yes   Determine next number which occurs in two number sequences. 35  3.5   35   5.2   35   4.2
   J18     Yes   Identify missing number in table showing xy relationship.  29   2.3   34   4.0   24   3.2
   K04     Yes   Identify expression equivalent to linear inequality.       25   2.7   25   3.8   25   3.7
   L11     Yes   Solve multi-step word problem using pattern.               23   3.0   20   3.6   24   4.4
   L13     Yes   Identify matching patterns of symbols.                     91   1.9   86   3.4   95   1.4
   L16     Yes   Simplify and solve linear equation for X.                  56   3.9   45   5.7   65   4.7
   N13     Yes   Calculate (7X+4)/(5X-4) for a given value of X.            57   3.5   51   4.3   63   5.0
   O07     Yes   Solve linear equation for X.                               72   3.4   75   4.4   70   4.7
   P10     Yes   Identify equivalent algebraic expressions.                 56   3.8   53   4.9   57   4.6
   P15     Yes   Identify equivalent expression for a cubic relationship.   59   3.5   57   4.4   61   4.2
   Q01     Yes   Identify linear expression based on word problem.          46   3.5   49   5.3   43   4.1
   Q02     Yes   Subtract fractional expressions of X.                      51   3.3   44   4.8   55   4.6
   Q07     Yes   Solve P=LW for W given values for P and L.                 55   3.5   56   4.8   54   4.7
   R09     Yes   Identify equivalent expressions from properties of real numbers. 45 3.5 49 5.5 42 4.0
   R11     Yes   Solve algebra word problem: linear equation.               45   3.4   47   4.8   44   4.3
   S01A    Yes   Complete chart by observing sequence of triangles in each of 3 figures. 66 3.2 60 5.2 70 3.8
   S01B    Yes   Extend triangle pattern from 3 figures to 8th.             13   2.2   13   3.1   14   2.9
   T01A    Yes   Solve multi-step algebra word problem of simultaneous equations. 26 2.6 23 3.4 28 3.0
   T01B    Yes   Solve multi-step algebra word problem of simultaneous equations. 28 2.7 25 3.5 31 3.4
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REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Lithuania SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	83	1.2	81	1.6	84	1.5
B07	No	Interpret line graph to find region of largest increase.	56	2.0	53	2.9	58	2.5
C02	No	Interpret pie graph to determine distribution.	71	2.1	70	2.8	71	2.6
E01	No	Interpret line graph to determine intersection point of two plots.	74	2.0	75	2.5	74	2.5
F08	No	Predict probability of occurrence for independent coin toss.	55	2.1	52	3.0	58	2.5
G01	No	Interpret frequency table to find number above a given level.	43	2.0	43	2.7	44	2.7
H07	No	Interpret barchart histogram to find number above a given level.	51	2.1	50	2.8	51	2.8
H11	No	Predict number of total defective bulbs based on random sample.	51	2.2	52	2.8	50	2.8
I09	Yes	Predict most likely color of random card based on fraction of colors.	49	3.7	48	4.7	50	4.4
J13	Yes	Draw pictograph to represent number given in table.	75	2.8	78	4.0	72	3.8
K07	Yes	Determine the number of blue pens given probability of selection.	31	3.0	28	4.2	34	3.3
L10	Yes	Use data in a chart to identify time/day with highest temperature.	87	2.1	83	3.4	90	2.5
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	68	2.9	60	4.6	76	3.2
N18	Yes	Find probability of drawing an even number from 1 to 9.	26	3.0	29	3.7	24	4.5
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	53	3.3	65	4.7	45	4.4
O05	Yes	Calculate number of cube faces from probability of toss.	22	2.9	26	4.3	19	3.5
P17	Yes	Identify thermometer which shows temperature given in data table.	84	2.3	83	3.7	84	2.9
Q04	Yes	Interpret data in bar graph.	82	2.4	81	3.5	84	2.8
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	40	3.6	47	4.7	36	4.6
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	7	1.2	8	1.8	6	1.5

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Lithuania SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	45	2.2	48	2.4	42	2.7
B09	No	Identify shaded figure which shows 2/5 = 4/10.	46	2.1	43	2.9	48	2.7
B10	No	Identify smallest of decimal fractions.	56	1.9	57	2.9	55	2.2
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	48	2.0	49	2.5	47	3.0
C06	No	Determine the worst estimate of: 848 + 677.	76	2.0	74	2.7	78	2.2
D09	No	Identify smallest fraction.	46	2.5	50	3.1	44	3.0
D12	No	Estimate rational number from point on number line.	56	2.0	59	2.8	54	2.6
E03	No	Find fraction of hour between two time points.	43	2.1	43	2.8	43	2.5
E04	No	Solve multi-step word problem: 4-digit whole numbers.	68	2.4	63	3.7	71	2.5
F09	No	Identify decimal fraction between 0.07 and 0.08.	65	2.2	63	2.9	66	2.7
F12	No	Identify fraction of circle which is shaded.	31	1.9	31	2.6	31	2.7
G05	No	Identify fraction represented in word problem.	32	2.0	30	2.8	33	2.6
H08	No	Identify figure showing 2/3 shaded.	40	2.1	39	3.2	41	2.7
H09	No	Identify sum which is closest to 691 + 208.	82	1.5	84	1.9	81	2.0
I02	Yes	Solve multi-step word problem: common fractions.	33	2.4	33	3.7	33	3.6
I05	Yes	Solve subtraction word problem: rational numbers.	72	2.9	70	4.3	74	3.6
I06	Yes	Write a fraction larger than a given number.	67	3.0	66	4.6	68	3.8
I07	Yes	Recognize when estimation is appropriate.	52	3.6	51	5.8	53	4.5
J12	Yes	Divide fractions.	60	3.4	55	4.8	64	4.3
J14	Yes	Divide rational numbers, fractional divisor.	72	3.3	68	4.5	76	4.3
J17	Yes	Use map and scale to find distance between two cities.	67	3.0	70	4.5	65	4.0
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	67	2.7	70	3.5	64	4.0
K02	Yes	Find total volume of mixture using rational number addition.	61	3.2	61	4.8	61	4.3
K06	Yes	Approximate amount increased by 15%.	37	3.4	42	4.5	33	4.3
K09	Yes	Compute sum of three fractions.	44	3.5	33	4.3	53	4.7
L08	Yes	Estimate actual height from diagram of relative heights.	64	3.4	59	5.3	68	3.9
L09	Yes	Identify 504.7 from its expression in words.	89	2.0	84	3.5	93	2.1
L17	Yes	Subtract three fractions.	54	3.3	37	5.1	69	3.7
M04	Yes	Identify the largest fraction.	28	2.6	25	3.7	31	3.4
M08	Yes	Multiply two decimal fractions.	78	3.1	72	5.0	84	3.2
N11	Yes	Identify number rounded to 18200.	70	2.7	65	4.2	75	3.4
N14	Yes	Identify list of equivalent fractions.	51	3.4	45	3.7	57	5.0
N16	Yes	Solve algebra word problem with fractions.	46	2.8	47	3.8	45	4.6
N17	Yes	Solve multi-step word problem: decimal fractions.	38	3.3	44	4.3	33	4.8
N19	Yes	Shade a given fraction of the squares in a grid.	27	3.0	29	4.1	25	3.9
O02	Yes	Calculate percent increase.	14	2.5	14	3.4	13	3.2
O04	Yes	Identify number rounded to the nearest 100th.	53	2.9	62	3.9	47	4.2
O09	Yes	Solve division word problem: common fractions.	32	3.3	40	4.8	26	3.9
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	64	3.4	63	4.5	65	4.0
P13	Yes	Use heart beats/min to find beats per hour.	64	3.1	68	4.4	61	4.1
P14	Yes	Solve subtraction word problem: common fractions.	67	2.6	70	4.4	64	3.7
P16	Yes	Reduce decimal to fraction in lowest terms.	22	2.8	20	4.3	23	3.5
Q06	Yes	Approximate water use/year from use/week.	35	3.1	42	4.7	30	4.0
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	39	3.3	42	4.9	37	4.0
Q09	Yes	Perform multiple operations of common fractions.	49	3.3	41	4.6	55	4.1
R06	Yes	Subtract two decimal numbers.	84	2.2	79	3.9	88	3.1
R07	Yes	Solve division word problem involving decimals.	55	3.3	58	4.7	53	4.1
R12	Yes	Subtract 4-digit whole numbers.	92	1.6	93	2.5	92	2.1
R13	Yes	Determine how much money left after spending 7/9.	15	2.5	22	3.8	11	3.0
U01A	Yes	Estimate the time required to record 5 songs.	13	1.6	13	2.2	12	2.0
U01B	Yes	Explain method of estimation.	7	1.2	7	1.8	7	1.3
V01	Yes	Determine actual weight from rounded value.	47	2.5	48	3.7	46	3.0

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Lithuania SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	77	1.4	75	1.9	78	1.7
B11	No	Identify cube made by folding 2-dimensional net.	62	2.1	62	2.9	61	2.5
C03	No	Identify properties of congruent trapezoids.	70	2.2	68	2.8	71	2.8
D07	No	Identify relationship of angles in symmetric polygon.	73	2.2	74	2.5	73	2.7
E02	No	Determine angle in congruent triangles.	52	2.5	51	3.0	54	3.4
G03	No	Find sum of vertical angles from diagram of intersecting lines.	49	2.3	48	3.2	49	2.8
I08	Yes	Identify point on a line defined by two other points.	24	2.8	29	4.6	20	3.7
J11	Yes	Identify properties of a parallelogram.	47	3.2	44	4.4	49	4.0
J15	Yes	Identify similar triangles of different size.	72	2.7	76	3.5	68	4.0
J16	Yes	Identify coordinates for point on a grid.	47	3.1	47	4.3	47	4.0
K03	Yes	Identify figure from rotation of 3-dimensional object.	69	3.1	73	4.3	65	4.0
K08	Yes	Determine unknown angle in rotated congruent triangles.	27	2.8	26	3.9	28	3.9
L15	Yes	Find fourth quadrilateral angle, given the other three.	30	3.2	24	3.9	35	4.7
M02	Yes	Identify all lines of symmetry for a rectangle.	58	3.6	55	5.5	61	4.1
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	53	3.1	53	5.2	52	3.8
M07	Yes	Find angle based on supplementary pairs.	73	3.0	76	3.8	71	3.8
N12	Yes	Identify point on number line from distance of other points.	60	3.4	57	4.1	63	5.0
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	46	3.1	47	4.8	46	4.0
O08	Yes	Find center point of rotation for symmetry-related figures.	69	3.0	69	4.5	70	4.3
P08	Yes	Know relationship between side and perimeter for square.	46	3.0	50	5.0	44	3.5
P09	Yes	Find length of side for similar triangles.	27	3.2	29	4.6	26	3.5
Q10	Yes	Perform calculation involving addition/subtraction of angles.	43	3.3	41	5.4	45	4.4
R10	Yes	Determine into how many triangles a trapezoid can be divided.	52	3.7	59	4.6	47	4.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Lithuania SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	22	1.3	21	1.5	22	1.8
C01	No	Compare volumes of different stacks of blocks.	59	2.3	66	2.9	52	3.0
D11	No	Identify best unit to measure the mass of an egg.	89	1.2	92	1.4	87	1.5
E06	No	Solve word problem to find length of rectangle from width and perimeter.	32	1.9	34	2.4	31	2.7
F10	No	Determine measurement accuracy of ruler.	61	1.9	62	2.6	60	2.7
G02	No	Read meter scale to determine length of a pipe.	79	1.5	80	2.2	78	2.1
I03	Yes	Find number of 750 mL bottles filled by a large volume.	35	2.8	47	4.5	26	3.9
J10	Yes	Determine area of sheet not covered by rectangular picture.	34	2.7	36	4.4	33	3.7
K05	Yes	Calculate area of a rectangle given its length and perimeter.	35	3.0	38	4.4	32	3.8
L12	Yes	Find longest pace from chart showing number of paces to cross room.	74	3.4	74	4.0	74	4.8
M01	Yes	Read mass shown on scale.	84	2.2	87	3.2	81	2.8
N15	Yes	Identify drawing with angle closest to 30 degrees.	63	2.9	62	4.0	64	3.6
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	37	3.4	44	5.1	32	3.9
P11	Yes	Use ruler to determine approximate length of pencil.	41	3.1	40	4.6	41	4.0
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	31	2.9	37	4.4	27	3.6
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	55	3.6	54	4.7	55	4.5
S02B	Yes	Calculate length of side of square given area.	24	2.8	25	4.3	23	3.5
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	13	2.2	16	3.1	10	2.9
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	24	2.1	22	2.5	26	2.7
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	6	1.0	7	1.3	6	1.2
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	32	2.7	31	3.5	32	3.4

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Lithuania SCALE=Proportionality

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                                                                                      Eighth Grade

                                                                        Overall      Boys        Girls

ITEM    REL   LABEL                                                      %   (se)    %   (se)    %   (se)
-----------------------------------------------------------------------------------------------------------
A04     No    Solve word problem using proportions: 4/3 = 12/?           55  1.7    62  2.1     49  2.0
B08     No    Solve word problem using proportions: 300 calories/100g = ?/30g.   52  1.9    50  2.9     54  2.4
D08     No    Solve ratio problem for x: 7/13 = x/52.                    56  2.6    56  3.1     55  3.2
F07     No    Solve word problem to find average speed from distance and time.   41  2.3    38  2.7     43  3.1
G04     No    Solve simple proportionality equation.                     56  2.3    56  2.9     55  2.9
L14     Yes   Identify missing numbers in table of proportional x and y values.   14  2.2    12  3.0     16  3.3
M06     Yes   Compute number of girls, given total students and girl:boy ratio.   30  2.7    22  3.9     38  4.3
Q05     Yes   Solve word problem involving ratios.                       51  3.0    51  4.3     51  4.3
R14     Yes   Solve multi-step word problem involving ratios.            36  3.2    42  4.5     31  4.0
T02A    Yes   Solve algebra word problem involving ratios.                9  1.6     8  2.0     10  1.9
T02B    Yes   Solve multi-step word problem computing fractions.          2  0.6     2  0.9      2  0.8
V03     Yes   Determine ratio of red paint in a mixture.                 14  1.5    14  2.4     14  2.1
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REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Netherlands SCALE=Algebra

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                                                                                 Eighth Grade

                                                                      Overall      Boys        Girls

ITEM    REL   LABEL                                                    %   (se)    %   (se)    %   (se)
----------------------------------------------------------------------------------------------------------
A02     No    Solve algebraic word problem equating masses on a scale.  82  1.8    83  2.3    82  1.7
B12     No    Identify algebraic equation to solve word problem: 7n+6=41. 67 2.7   70  3.1    64  2.9
C05     No    Determine number which continues pattern based on figures. 57  2.5   55  3.1    60  3.6
D10     No    Identify equation which solves word problem:  C=(100+6n).  68  2.3   66  2.5    69  3.1
E05     No    Find relationship between numbers in a set of ordered pairs. 66 2.8  67  3.1    65  3.9
F11     No    Solve multi-step problem using linear equations.          39  2.6    42  3.6    34  3.1
G06     No    Find solution to -3X for given value of X.                40  2.7    38  3.4    42  3.3
H10     No    Identify equation expressing xy relationship from table of values. 67 3.5 71 3.2 63 4.8
H12     No    Select symbolic linear equation which fits word problem.  86  1.8    84  2.7    88  1.7
I01     Yes   Identify meaning of symbol in word problem equation.      37  3.6    39  5.3    34  5.5
I04     Yes   Determine next number which occurs in two number sequences. 38 3.1   36  4.5    39  4.0
J18     Yes   Identify missing number in table showing xy relationship. 55  3.3    55  4.6    54  4.8
K04     Yes   Identify expression equivalent to linear inequality.      49  3.6    46  4.8    52  4.9
L11     Yes   Solve multi-step word problem using pattern.              32  3.8    36  4.8    29  4.7
L13     Yes   Identify matching patterns of symbols.                    91  1.9    91  2.5    90  3.3
L16     Yes   Simplify and solve linear equation for X.                 21  3.6    25  4.4    17  5.0
N13     Yes   Calculate (7X+4)/(5X-4) for a given value of X.           37  3.4    31  4.2    44  4.7
O07     Yes   Solve linear equation for X.                              65  4.3    70  5.0    59  5.4
P10     Yes   Identify equivalent algebraic expressions.                51  4.5    54  6.1    48  5.1
P15     Yes   Identify equivalent expression for a cubic relationship.  69  3.0    72  5.1    66  4.5
Q01     Yes   Identify linear expression based on word problem.         45  4.0    40  5.8    47  5.5
Q02     Yes   Subtract fractional expressions of X.                     35  2.5    40  5.2    32  3.5
Q07     Yes   Solve P=LW for W given values for P and L.                74  4.3    68  5.3    79  4.7
R09     Yes   Identify equivalent expressions from properties of real numbers. 27 3.0 21 3.9 30 5.1
R11     Yes   Solve algebra word problem: linear equation.              50  4.5    46  5.8    54  5.4
S01A    Yes   Complete chart by observing sequence of triangles in each of 3 figures. 84 2.5 78 4.8 91 3.1
S01B    Yes   Extend triangle pattern from 3 figures to 8th.            38  3.8    36  4.6    40  4.7
T01A    Yes   Solve multi-step algebra word problem of simultaneous equations. 36 3.1 33 3.9 37 3.6
T01B    Yes   Solve multi-step algebra word problem of simultaneous equations. 36 3.1 32 4.0 39 3.6
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REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Netherlands SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	75	2.4	76	2.6	74	2.5
B07	No	Interpret line graph to find region of largest increase.	77	2.0	77	2.8	77	2.2
C02	No	Interpret pie graph to determine distribution.	84	2.3	83	3.2	85	2.3
E01	No	Interpret line graph to determine intersection point of two plots.	82	1.8	84	2.1	80	3.2
F08	No	Predict probability of occurrence for independent coin toss.	72	2.1	71	2.6	73	2.7
G01	No	Interpret frequency table to find number above a given level.	70	2.6	68	3.5	73	3.0
H07	No	Interpret barchart histogram to find number above a given level.	81	1.7	81	2.7	81	2.3
H11	No	Predict number of total defective bulbs based on random sample.	79	2.3	86	2.0	73	3.7
I09	Yes	Predict most likely color of random card based on fraction of colors.	81	3.3	82	5.1	81	3.9
J13	Yes	Draw pictograph to represent number given in table.	87	3.6	85	5.0	90	3.8
K07	Yes	Determine the number of blue pens given probability of selection.	59	3.7	61	4.1	56	5.2
L10	Yes	Use data in a chart to identify time/day with highest temperature.	89	2.4	91	2.5	87	4.2
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	91	1.9	91	3.1	91	2.7
N18	Yes	Find probability of drawing an even number from 1 to 9.	63	4.2	67	4.7	60	5.7
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	76	3.8	81	5.1	70	4.3
O05	Yes	Calculate number of cube faces from probability of toss.	62	3.6	76	5.4	47	4.0
P17	Yes	Identify thermometer which shows temperature given in data table.	96	1.4	94	2.4	97	1.4
Q04	Yes	Interpret data in bar graph.	87	2.0	82	3.2	90	2.7
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	64	3.9	63	4.7	63	4.9
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	24	2.6	28	3.9	20	2.8

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Netherlands SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	70	2.3	74	2.6	65	2.7
B09	No	Identify shaded figure which shows 2/5 = 4/10.	65	2.6	63	3.2	67	3.1
B10	No	Identify smallest of decimal fractions.	62	2.5	71	3.0	53	3.1
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	53	1.7	51	2.7	55	2.7
C06	No	Determine the worst estimate of: 848 + 677.	72	2.0	69	2.8	76	2.9
D09	No	Identify smallest fraction.	84	1.8	88	2.3	81	1.9
D12	No	Estimate rational number from point on number line.	92	1.0	92	1.5	93	1.3
E03	No	Find fraction of hour between two time points.	69	1.8	70	2.3	68	2.4
E04	No	Solve multi-step word problem: 4-digit whole numbers.	54	2.7	49	2.9	58	3.7
F09	No	Identify decimal fraction between 0.07 and 0.08.	79	2.0	83	2.0	75	3.0
F12	No	Identify fraction of circle which is shaded.	69	2.0	70	2.6	68	2.4
G05	No	Identify fraction represented in word problem.	71	2.7	69	4.1	73	2.4
H08	No	Identify figure showing 2/3 shaded.	88	2.1	90	1.5	85	3.4
H09	No	Identify sum which is closest to 691 + 208.	92	1.6	95	1.2	89	2.9
I02	Yes	Solve multi-step word problem: common fractions.	72	4.2	72	5.0	70	4.9
I05	Yes	Solve subtraction word problem: rational numbers.	68	3.1	61	5.0	75	4.1
I06	Yes	Write a fraction larger than a given number.	76	3.3	82	3.7	70	6.2
I07	Yes	Recognize when estimation is appropriate.	52	3.2	40	4.8	67	4.6
J12	Yes	Divide fractions.	16	2.4	16	3.3	15	4.6
J14	Yes	Divide rational numbers, fractional divisor.	34	3.3	33	4.8	36	4.5
J17	Yes	Use map and scale to find distance between two cities.	74	3.7	77	5.1	71	4.9
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	78	2.6	85	3.4	71	4.5
K02	Yes	Find total volume of mixture using rational number addition.	55	3.2	48	4.4	63	5.1
K06	Yes	Approximate amount increased by 15%.	51	3.2	56	4.9	47	5.3
K09	Yes	Compute sum of three fractions.	29	3.4	25	4.4	32	4.3
L08	Yes	Estimate actual height from diagram of relative heights.	69	3.2	74	4.0	65	4.8
L09	Yes	Identify 504.7 from its expression in words.	93	1.7	90	3.0	96	1.6
L17	Yes	Subtract three fractions.	51	4.3	57	5.1	46	6.6
M04	Yes	Identify the largest fraction.	41	3.7	47	6.2	35	4.6
M08	Yes	Multiply two decimal fractions.	27	3.4	30	5.1	23	3.4
N11	Yes	Identify number rounded to 18200.	94	2.1	97	1.4	92	4.2
N14	Yes	Identify list of equivalent fractions.	73	3.7	74	4.8	73	4.2
N16	Yes	Solve algebra word problem with fractions.	54	4.1	58	5.3	50	5.6
N17	Yes	Solve multi-step word problem: decimal fractions.	50	3.5	48	5.2	52	5.8
N19	Yes	Shade a given fraction of the squares in a grid.	64	3.9	65	4.5	62	5.2
O02	Yes	Calculate percent increase.	44	3.1	53	4.7	35	4.9
O04	Yes	Identify number rounded to the nearest 100th.	53	3.8	62	5.1	44	4.8
O09	Yes	Solve division word problem: common fractions.	75	2.9	84	4.7	66	4.5
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	81	3.0	86	3.4	77	5.1
P13	Yes	Use heart beats/min to find beats per hour.	62	3.8	61	5.0	62	5.3
P14	Yes	Solve subtraction word problem: common fractions.	91	2.6	93	2.4	89	4.5
P16	Yes	Reduce decimal to fraction in lowest terms.	29	3.9	27	4.4	31	4.9
Q06	Yes	Approximate water use/year from use/week.	54	3.5	58	5.8	49	4.9
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	50	3.3	55	5.1	45	5.1
Q09	Yes	Perform multiple operations of common fractions.	37	3.0	37	4.8	36	3.9
R06	Yes	Subtract two decimal numbers.	59	4.3	59	5.9	59	4.9
R07	Yes	Solve division word problem involving decimals.	54	4.6	58	6.2	51	4.9
R12	Yes	Subtract 4-digit whole numbers.	82	3.6	79	4.8	84	3.6
R13	Yes	Determine how much money left after spending 7/9.	42	3.9	44	5.9	40	4.3
U01A	Yes	Estimate the time required to record 5 songs.	47	2.7	53	3.6	41	3.6
U01B	Yes	Explain method of estimation.	43	3.0	44	4.7	41	3.6
V01	Yes	Determine actual weight from rounded value.	61	2.9	68	3.3	53	3.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Netherlands SCALE=Geometry

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                                                                                      Eighth Grade

                                                                           Overall     Boys      Girls

ITEM    REL   LABEL                                                         %   (se)    %   (se)   %   (se)
---------------------------------------------------------------------------------------------------------
A05     No    Identify congruent triangles in a rectangle.                 71   2.4   68   3.0   73   2.3
B11     No    Identify cube made by folding 2-dimensional net.             80   1.8   82   3.0   79   2.2
C03     No    Identify properties of congruent trapezoids.                 65   2.6   63   3.0   66   3.6
D07     No    Identify relationship of angles in symmetric polygon.        59   2.0   61   3.4   57   3.1
E02     No    Determine angle in congruent triangles.                      39   2.6   39   3.0   38   3.6
G03     No    Find sum of vertical angles from diagram of intersecting lines.  60   2.4   59   4.1   60   2.7
I08     Yes   Identify point on a line defined by two other points.        66   4.5   69   5.5   62   5.4
J11     Yes   Identify properties of a parallelogram.                      37   3.8   40   5.3   34   5.2
J15     Yes   Identify similar triangles of different size.                78   3.3   71   5.0   86   3.7
J16     Yes   Identify coordinates for point on a grid.                    73   3.7   71   5.4   75   5.2
K03     Yes   Identify figure from rotation of 3-dimensional object.       77   2.7   78   4.4   75   4.5
K08     Yes   Determine unknown angle in rotated congruent triangles.      21   3.0   21   4.0   21   3.8
L15     Yes   Find fourth quadrilateral angle, given the other three.      38   3.9   41   4.4   35   5.8
M02     Yes   Identify all lines of symmetry for a rectangle.              72   3.9   75   7.7   69   4.2
M05     Yes   Find diagram resulting from rotation of a 2-dimensional figure.  70   2.6   73   3.8   66   4.7
M07     Yes   Find angle based on supplementary pairs.                     74   3.3   77   4.9   70   4.4
N12     Yes   Identify point on number line from distance of other points. 78   2.8   77   4.0   77   5.1
O03     Yes   Identify supplementary angles formed by parallel and intersecting lines.  42   2.6   46   4.9   39   3.9
O08     Yes   Find center point of rotation for symmetry-related figures.  67   3.2   76   4.0   56   5.5
P08     Yes   Know relationship between side and perimeter for square.     60   4.5   57   6.0   62   5.6
P09     Yes   Find length of side for similar triangles.                   35   3.6   40   5.4   31   4.6
Q10     Yes   Perform calculation involving addition/subtraction of angles. 46   3.6   42   5.0   49   4.4
R10     Yes   Determine into how many triangles a trapezoid can be divided. 62   3.1   67   3.9   58   4.5
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REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Netherlands SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	85	2.2	85	1.9	84	2.9
C01	No	Compare volumes of different stacks of blocks.	78	2.4	79	2.7	76	3.1
D11	No	Identify best unit to measure the mass of an egg.	89	2.0	87	3.0	90	1.7
E06	No	Solve word problem to find length of rectangle from width and perimeter.	48	2.3	51	3.0	46	3.2
F10	No	Determine measurement accuracy of ruler.	69	2.4	72	2.9	65	3.3
G02	No	Read meter scale to determine length of a pipe.	86	1.5	86	2.6	87	2.2
I03	Yes	Find number of 750 mL bottles filled by a large volume.	51	3.4	53	5.0	50	6.5
J10	Yes	Determine area of sheet not covered by rectangular picture.	55	3.3	51	5.0	58	6.3
K05	Yes	Calculate area of a rectangle given its length and perimeter.	48	3.8	48	4.9	47	4.9
L12	Yes	Find longest pace from chart showing number of paces to cross room.	82	3.0	85	4.0	78	4.2
M01	Yes	Read mass shown on scale.	97	1.1	99	0.8	95	2.0
N15	Yes	Identify drawing with angle closest to 30 degrees.	64	3.3	68	5.4	61	4.9
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	91	2.3	91	3.5	91	2.9
P11	Yes	Use ruler to determine approximate length of pencil.	62	3.3	61	5.4	62	4.2
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	27	3.3	28	5.5	26	4.5
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	61	4.1	59	4.9	62	5.1
S02B	Yes	Calculate length of side of square given area.	24	3.6	26	4.7	20	4.5
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	29	3.3	29	5.2	29	4.1
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	40	3.2	37	4.7	42	3.5
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	8	1.5	9	1.9	7	1.6
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	39	2.6	45	3.4	33	3.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Netherlands SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	66	1.3	71	1.9	61	1.6
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	67	1.9	70	2.5	64	2.3
D08	No	Solve ratio problem for x: 7/13 = x/52.	66	2.9	67	3.5	65	3.4
F07	No	Solve word problem to find average speed from distance and time.	37	2.2	42	3.5	32	2.7
G04	No	Solve simple proportionality equation.	76	3.1	72	4.9	80	2.3
L14	Yes	Identify missing numbers in table of proportional x and y values.	29	3.1	33	4.5	26	4.5
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	43	4.6	50	6.9	37	4.8
Q05	Yes	Solve word problem involving ratios.	77	2.7	84	3.2	72	4.3
R14	Yes	Solve multi-step word problem involving ratios.	41	3.7	38	4.6	42	4.7
T02A	Yes	Solve algebra word problem involving ratios.	36	3.1	34	4.1	36	3.7
T02B	Yes	Solve multi-step word problem computing fractions.	13	2.0	12	2.6	15	2.7
V03	Yes	Determine ratio of red paint in a mixture.	65	2.7	72	4.1	58	2.8

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=New Zealand SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	79	1.0	81	1.2	76	1.4
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	57	1.9	56	2.5	59	2.5
C05	No	Determine number which continues pattern based on figures.	60	1.7	57	2.2	62	2.3
D10	No	Identify equation which solves word problem: C=(100+6n).	49	1.6	47	2.2	52	1.9
E05	No	Find relationship between numbers in a set of ordered pairs.	68	1.8	68	2.2	68	2.6
F11	No	Solve multi-step problem using linear equations.	45	2.0	46	2.8	44	2.6
G06	No	Find solution to -3X for given value of X.	28	1.9	26	2.7	29	2.6
H10	No	Identify equation expressing xy relationship from table of values.	53	2.3	53	2.8	53	2.9
H12	No	Select symbolic linear equation which fits word problem.	79	1.4	79	1.7	79	2.0
I01	Yes	Identify meaning of symbol in word problem equation.	36	2.2	39	3.5	33	3.3
I04	Yes	Determine next number which occurs in two number sequences.	45	2.6	40	3.2	49	3.7
J18	Yes	Identify missing number in table showing xy relationship.	45	2.6	47	3.6	42	3.7
K04	Yes	Identify expression equivalent to linear inequality.	35	2.4	36	3.5	35	3.3
L11	Yes	Solve multi-step word problem using pattern.	33	2.8	33	3.6	32	3.7
L13	Yes	Identify matching patterns of symbols.	94	1.2	92	1.7	96	1.3
L16	Yes	Simplify and solve linear equation for X.	19	2.5	20	3.5	18	3.2
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	44	2.6	42	3.8	47	3.3
O07	Yes	Solve linear equation for X.	69	2.4	71	3.8	66	3.3
P10	Yes	Identify equivalent algebraic expressions.	55	2.6	53	3.6	58	4.0
P15	Yes	Identify equivalent expression for a cubic relationship.	64	2.8	62	4.1	67	3.6
Q01	Yes	Identify linear expression based on word problem.	38	2.6	38	4.0	39	3.7
Q02	Yes	Subtract fractional expressions of X.	41	2.8	39	3.8	44	3.3
Q07	Yes	Solve P=LW for W given values for P and L.	59	2.6	57	3.8	61	3.5
R09	Yes	Identify equivalent expressions from properties of real numbers.	28	2.4	26	2.8	31	3.8
R11	Yes	Solve algebra word problem: linear equation.	45	2.6	46	3.5	44	3.8
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	81	2.0	78	2.9	84	2.6
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	31	2.5	29	3.2	33	3.6
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	27	2.0	29	2.6	25	2.8
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	27	2.1	28	2.8	27	2.8

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=New Zealand SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	69	0.9	67	1.4	70	1.3
B07	No	Interpret line graph to find region of largest increase.	73	1.3	72	1.7	75	1.9
C02	No	Interpret pie graph to determine distribution.	81	1.5	82	1.9	79	1.8
E01	No	Interpret line graph to determine intersection point of two plots.	74	1.6	76	1.8	72	2.3
F08	No	Predict probability of occurrence for independent coin toss.	71	1.8	71	2.4	71	2.4
G01	No	Interpret frequency table to find number above a given level.	53	2.0	54	2.6	52	2.5
H07	No	Interpret barchart histogram to find number above a given level.	80	1.2	83	1.5	76	1.9
H11	No	Predict number of total defective bulbs based on random sample.	61	1.6	64	1.9	58	2.1
I09	Yes	Predict most likely color of random card based on fraction of colors.	79	2.2	82	2.8	77	3.1
J13	Yes	Draw pictograph to represent number given in table.	92	1.4	90	2.1	93	1.8
K07	Yes	Determine the number of blue pens given probability of selection.	51	2.5	53	4.2	48	3.6
L10	Yes	Use data in a chart to identify time/day with highest temperature.	93	1.3	93	2.2	93	1.6
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	82	1.7	84	2.1	80	2.5
N18	Yes	Find probability of drawing an even number from 1 to 9.	65	2.8	65	4.1	65	3.2
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	66	2.6	70	3.4	62	3.5
O05	Yes	Calculate number of cube faces from probability of toss.	52	2.4	61	3.4	42	3.5
P17	Yes	Identify thermometer which shows temperature given in data table.	79	2.0	76	3.5	82	2.7
Q04	Yes	Interpret data in bar graph.	89	1.6	86	2.3	92	1.8
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	49	2.6	52	3.1	45	4.0
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	22	2.0	20	2.4	23	2.8

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=New Zealand SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	59	1.9	62	2.1	57	2.6
B09	No	Identify shaded figure which shows 2/5 = 4/10.	61	1.4	60	1.9	61	1.8
B10	No	Identify smallest of decimal fractions.	42	2.0	48	2.9	37	2.5
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	53	1.3	54	2.0	51	2.0
C06	No	Determine the worst estimate of: 848 + 677.	82	1.4	83	1.6	81	2.1
D09	No	Identify smallest fraction.	81	1.5	84	1.9	77	2.0
D12	No	Estimate rational number from point on number line.	78	1.4	79	1.7	77	2.0
E03	No	Find fraction of hour between two time points.	64	1.7	64	2.1	64	2.5
E04	No	Solve multi-step word problem: 4-digit whole numbers.	63	1.7	60	2.4	66	2.3
F09	No	Identify decimal fraction between 0.07 and 0.08.	69	1.6	71	2.1	68	2.2
F12	No	Identify fraction of circle which is shaded.	67	1.6	67	2.2	66	2.1
G05	No	Identify fraction represented in word problem.	74	1.7	72	2.4	77	2.1
H08	No	Identify figure showing 2/3 shaded.	86	1.3	87	1.6	85	1.8
H09	No	Identify sum which is closest to 691 + 208.	91	1.1	92	1.4	90	1.4
I02	Yes	Solve multi-step word problem: common fractions.	58	2.6	60	3.6	55	3.4
I05	Yes	Solve subtraction word problem: rational numbers.	64	2.6	62	3.6	65	3.5
I06	Yes	Write a fraction larger than a given number.	80	2.0	79	2.8	81	2.8
I07	Yes	Recognize when estimation is appropriate.	74	2.0	73	2.7	75	3.0
J12	Yes	Divide fractions.	9	1.6	10	2.5	9	2.1
J14	Yes	Divide rational numbers, fractional divisor.	23	2.1	23	2.6	23	3.3
J17	Yes	Use map and scale to find distance between two cities.	67	2.2	69	3.0	65	3.1
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	77	1.9	81	2.3	74	3.0
K02	Yes	Find total volume of mixture using rational number addition.	65	2.5	63	3.7	67	3.3
K06	Yes	Approximate amount increased by 15%.	43	2.6	49	3.7	37	3.1
K09	Yes	Compute sum of three fractions.	20	2.2	21	3.7	18	3.1
L08	Yes	Estimate actual height from diagram of relative heights.	61	2.5	63	3.2	59	4.2
L09	Yes	Identify 504.7 from its expression in words.	85	1.7	83	2.5	88	2.2
L17	Yes	Subtract three fractions.	41	2.5	42	3.5	39	3.9
M04	Yes	Identify the largest fraction.	46	3.0	54	4.3	38	3.5
M08	Yes	Multiply two decimal fractions.	21	2.4	23	3.3	18	3.3
N11	Yes	Identify number rounded to 18200.	89	1.7	88	2.2	89	2.2
N14	Yes	Identify list of equivalent fractions.	61	2.5	63	3.3	59	3.6
N16	Yes	Solve algebra word problem with fractions.	49	2.3	53	3.2	46	3.4
N17	Yes	Solve multi-step word problem: decimal fractions.	40	2.7	40	3.6	39	4.3
N19	Yes	Shade a given fraction of the squares in a grid.	52	2.8	57	4.0	47	3.7
O02	Yes	Calculate percent increase.	30	2.4	39	3.7	21	3.0
O04	Yes	Identify number rounded to the nearest 100th.	39	2.1	44	3.4	33	2.8
O09	Yes	Solve division word problem: common fractions.	60	2.6	66	3.6	53	3.7
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	73	2.1	71	3.4	75	3.1
P13	Yes	Use heart beats/min to find beats per hour.	58	3.0	53	4.4	62	3.7
P14	Yes	Solve subtraction word problem: common fractions.	87	1.8	85	2.4	89	2.5
P16	Yes	Reduce decimal to fraction in lowest terms.	23	2.4	24	3.5	22	3.2
Q06	Yes	Approximate water use/year from use/week.	40	2.8	40	3.7	40	4.0
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	35	2.8	40	4.0	29	3.8
Q09	Yes	Perform multiple operations of common fractions.	32	2.3	33	3.1	31	3.8
R06	Yes	Subtract two decimal numbers.	52	2.4	50	3.8	55	3.3
R07	Yes	Solve division word problem involving decimals.	35	2.4	40	3.5	30	2.9
R12	Yes	Subtract 4-digit whole numbers.	71	2.3	67	3.4	75	3.0
R13	Yes	Determine how much money left after spending 7/9.	28	2.3	29	3.5	27	3.0
U01A	Yes	Estimate the time required to record 5 songs.	49	2.0	48	2.9	50	2.7
U01B	Yes	Explain method of estimation.	57	1.7	54	2.1	59	2.7
V01	Yes	Determine actual weight from rounded value.	74	1.8	78	2.2	70	2.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=New Zealand SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	46	1.1	43	1.3	49	1.5
B11	No	Identify cube made by folding 2-dimensional net.	72	1.6	74	2.0	70	2.3
C03	No	Identify properties of congruent trapezoids.	63	1.5	61	2.2	64	2.0
D07	No	Identify relationship of angles in symmetric polygon.	59	2.1	61	2.7	56	2.9
E02	No	Determine angle in congruent triangles.	39	2.0	38	3.0	41	2.4
G03	No	Find sum of vertical angles from diagram of intersecting lines.	49	1.7	50	2.2	48	2.2
I08	Yes	Identify point on a line defined by two other points.	52	2.8	52	3.5	53	3.9
J11	Yes	Identify properties of a parallelogram.	44	2.8	40	3.9	49	3.9
J15	Yes	Identify similar triangles of different size.	68	2.0	67	3.0	70	2.7
J16	Yes	Identify coordinates for point on a grid.	63	2.6	62	3.6	64	3.5
K03	Yes	Identify figure from rotation of 3-dimensional object.	67	2.3	70	2.7	64	3.4
K08	Yes	Determine unknown angle in rotated congruent triangles.	26	2.5	25	3.2	27	3.8
L15	Yes	Find fourth quadrilateral angle, given the other three.	35	2.7	38	3.7	31	3.7
M02	Yes	Identify all lines of symmetry for a rectangle.	80	2.0	75	3.1	85	2.2
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	52	2.8	53	4.1	51	4.2
M07	Yes	Find angle based on supplementary pairs.	73	2.6	73	3.4	72	3.5
N12	Yes	Identify point on number line from distance of other points.	69	2.6	68	3.5	69	3.4
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	42	2.3	46	3.5	39	3.6
O08	Yes	Find center point of rotation for symmetry-related figures.	74	2.5	74	3.6	74	3.4
P08	Yes	Know relationship between side and perimeter for square.	48	2.5	49	3.6	47	4.1
P09	Yes	Find length of side for similar triangles.	33	2.4	34	3.8	32	3.5
Q10	Yes	Perform calculation involving addition/subtraction of angles.	44	2.3	43	3.1	45	3.3
R10	Yes	Determine into how many triangles a trapezoid can be divided.	55	2.5	55	3.7	54	3.6

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=New Zealand SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	66	1.5	66	1.9	66	1.8
C01	No	Compare volumes of different stacks of blocks.	61	1.8	65	2.3	55	2.4
D11	No	Identify best unit to measure the mass of an egg.	84	1.3	88	1.6	80	1.8
E06	No	Solve word problem to find length of rectangle from width and perimeter.	45	1.8	48	2.2	42	2.6
F10	No	Determine measurement accuracy of ruler.	61	1.8	62	2.4	59	2.3
G02	No	Read meter scale to determine length of a pipe.	78	1.3	79	1.7	77	1.8
I03	Yes	Find number of 750 mL bottles filled by a large volume.	39	2.3	42	3.2	36	3.4
J10	Yes	Determine area of sheet not covered by rectangular picture.	33	2.8	36	3.7	31	3.5
K05	Yes	Calculate area of a rectangle given its length and perimeter.	34	2.7	35	3.9	33	4.0
L12	Yes	Find longest pace from chart showing number of paces to cross room.	69	2.3	69	3.0	68	3.4
M01	Yes	Read mass shown on scale.	91	1.4	91	2.2	91	1.9
N15	Yes	Identify drawing with angle closest to 30 degrees.	63	2.4	67	3.2	58	3.4
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	80	2.1	85	2.1	75	3.5
P11	Yes	Use ruler to determine approximate length of pencil.	51	2.7	53	3.6	50	3.7
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	31	2.5	31	3.5	30	3.4
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	54	2.7	53	3.9	54	3.6
S02B	Yes	Calculate length of side of square given area.	15	2.0	18	3.2	11	2.4
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	22	2.4	25	3.4	20	2.8
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	27	1.7	29	2.5	24	2.1
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	8	1.4	9	2.0	8	1.7
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	38	2.3	40	2.9	37	3.0

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=New Zealand SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	49	1.5	56	2.0	41	1.9
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	67	1.1	67	1.6	68	1.6
D08	No	Solve ratio problem for x: 7/13 = x/52.	70	1.7	74	2.2	66	2.3
F07	No	Solve word problem to find average speed from distance and time.	25	1.3	28	1.9	22	1.8
G04	No	Solve simple proportionality equation.	70	1.6	72	2.0	68	2.6
L14	Yes	Identify missing numbers in table of proportional x and y values.	19	2.1	20	3.0	18	2.8
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	37	2.5	41	3.5	32	3.6
Q05	Yes	Solve word problem involving ratios.	70	2.3	72	3.5	68	3.2
R14	Yes	Solve multi-step word problem involving ratios.	22	2.0	23	3.0	21	3.1
T02A	Yes	Solve algebra word problem involving ratios.	22	2.0	22	2.8	22	2.5
T02B	Yes	Solve multi-step word problem computing fractions.	8	1.2	9	1.8	7	1.5
V03	Yes	Determine ratio of red paint in a mixture.	47	1.9	44	2.7	50	2.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Norway SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	76	1.0	77	1.3	75	1.4
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	62	1.5	59	1.8	64	2.2
C05	No	Determine number which continues pattern based on figures.	50	1.6	47	2.2	53	2.3
D10	No	Identify equation which solves word problem: C=(100+6n).	39	1.8	39	2.4	40	2.4
E05	No	Find relationship between numbers in a set of ordered pairs.	48	1.5	45	2.0	52	2.1
F11	No	Solve multi-step problem using linear equations.	38	1.5	36	2.2	40	1.9
G06	No	Find solution to -3X for given value of X.	26	1.7	26	2.0	25	2.2
H10	No	Identify equation expressing xy relationship from table of values.	32	1.6	31	2.0	33	2.2
H12	No	Select symbolic linear equation which fits word problem.	78	1.3	76	1.5	80	1.9
I01	Yes	Identify meaning of symbol in word problem equation.	26	2.3	28	3.3	25	3.4
I04	Yes	Determine next number which occurs in two number sequences.	50	2.7	49	3.1	51	4.5
J18	Yes	Identify missing number in table showing xy relationship.	34	2.7	35	3.7	33	3.4
K04	Yes	Identify expression equivalent to linear inequality.	39	2.5	40	3.9	37	3.3
L11	Yes	Solve multi-step word problem using pattern.	32	3.0	29	3.4	36	3.7
L13	Yes	Identify matching patterns of symbols.	92	1.5	90	2.1	94	1.8
L16	Yes	Simplify and solve linear equation for X.	39	2.5	32	3.0	46	3.6
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	39	2.8	36	3.5	43	4.4
O07	Yes	Solve linear equation for X.	52	2.5	50	3.4	54	3.4
P10	Yes	Identify equivalent algebraic expressions.	52	2.7	50	3.8	53	4.2
P15	Yes	Identify equivalent expression for a cubic relationship.	60	2.9	57	4.0	63	3.8
Q01	Yes	Identify linear expression based on word problem.	23	2.3	22	3.0	25	3.1
Q02	Yes	Subtract fractional expressions of X.	57	2.6	55	3.5	59	3.9
Q07	Yes	Solve P=LW for W given values for P and L.	53	2.6	52	3.6	53	3.9
R09	Yes	Identify equivalent expressions from properties of real numbers.	28	2.4	28	3.2	27	3.9
R11	Yes	Solve algebra word problem: linear equation.	41	2.7	40	3.4	42	3.8
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	77	2.3	75	2.7	80	3.0
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	22	2.4	19	2.4	25	4.1
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	31	1.9	35	2.5	27	2.4
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	32	1.9	35	2.3	30	2.6

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Norway SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	71	0.9	69	1.3	73	1.2
B07	No	Interpret line graph to find region of largest increase.	73	1.1	74	1.4	71	1.8
C02	No	Interpret pie graph to determine distribution.	75	1.3	75	1.8	75	1.8
E01	No	Interpret line graph to determine intersection point of two plots.	65	1.5	65	2.2	66	2.1
F08	No	Predict probability of occurrence for independent coin toss.	72	1.5	68	2.3	75	1.8
G01	No	Interpret frequency table to find number above a given level.	43	1.4	44	2.2	42	1.8
H07	No	Interpret barchart histogram to find number above a given level.	75	1.3	73	2.0	77	1.7
H11	No	Predict number of total defective bulbs based on random sample.	61	1.7	63	2.3	58	2.4
I09	Yes	Predict most likely color of random card based on fraction of colors.	71	2.2	74	2.7	68	4.1
J13	Yes	Draw pictograph to represent number given in table.	86	1.9	80	3.2	91	1.7
K07	Yes	Determine the number of blue pens given probability of selection.	41	2.6	41	3.7	42	3.4
L10	Yes	Use data in a chart to identify time/day with highest temperature.	92	1.5	91	2.1	93	2.2
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	85	1.7	86	2.7	83	2.6
N18	Yes	Find probability of drawing an even number from 1 to 9.	66	2.9	64	3.8	67	4.3
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	73	2.3	80	2.8	66	3.3
O05	Yes	Calculate number of cube faces from probability of toss.	57	2.6	60	3.9	54	3.9
P17	Yes	Identify thermometer which shows temperature given in data table.	97	1.0	95	1.6	98	0.9
Q04	Yes	Interpret data in bar graph.	89	1.9	88	2.1	90	3.2
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	65	2.4	70	3.3	59	3.9
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	23	1.6	26	2.5	19	1.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Norway SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	59	1.1	62	1.5	57	1.2
B09	No	Identify shaded figure which shows 2/5 = 4/10.	51	1.5	47	2.0	55	1.7
B10	No	Identify smallest of decimal fractions.	65	1.5	69	1.8	61	1.9
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	52	1.5	52	2.1	51	2.2
C06	No	Determine the worst estimate of: 848 + 677.	75	1.4	74	2.2	77	1.8
D09	No	Identify smallest fraction.	76	1.5	81	1.8	71	2.1
D12	No	Estimate rational number from point on number line.	80	1.4	82	2.1	79	1.7
E03	No	Find fraction of hour between two time points.	62	1.5	64	2.0	60	2.1
E04	No	Solve multi-step word problem: 4-digit whole numbers.	50	1.6	50	1.9	51	2.4
F09	No	Identify decimal fraction between 0.07 and 0.08.	69	1.3	68	2.1	70	1.9
F12	No	Identify fraction of circle which is shaded.	62	1.7	61	2.6	62	2.0
G05	No	Identify fraction represented in word problem.	72	1.3	72	1.8	71	2.1
H08	No	Identify figure showing 2/3 shaded.	77	1.5	76	2.1	78	2.1
H09	No	Identify sum which is closest to 691 + 208.	90	1.1	91	1.5	88	1.6
I02	Yes	Solve multi-step word problem: common fractions.	55	2.3	57	3.4	54	3.6
I05	Yes	Solve subtraction word problem: rational numbers.	72	2.4	67	3.3	77	3.2
I06	Yes	Write a fraction larger than a given number.	84	1.6	83	2.4	86	2.6
I07	Yes	Recognize when estimation is appropriate.	76	2.1	72	3.3	80	3.0
J12	Yes	Divide fractions.	30	2.6	26	3.6	34	3.3
J14	Yes	Divide rational numbers, fractional divisor.	30	2.9	29	4.0	30	3.5
J17	Yes	Use map and scale to find distance between two cities.	65	2.7	63	3.9	67	3.9
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	75	2.5	77	3.5	73	3.2
K02	Yes	Find total volume of mixture using rational number addition.	60	2.5	61	3.8	58	3.3
K06	Yes	Approximate amount increased by 15%.	48	2.5	57	3.8	41	3.3
K09	Yes	Compute sum of three fractions.	38	2.3	37	3.4	38	3.1
L08	Yes	Estimate actual height from diagram of relative heights.	72	2.2	75	2.9	69	3.5
L09	Yes	Identify 504.7 from its expression in words.	78	2.2	76	2.8	79	2.9
L17	Yes	Subtract three fractions.	36	2.9	30	3.3	43	3.7
M04	Yes	Identify the largest fraction.	39	2.5	41	3.8	36	3.9
M08	Yes	Multiply two decimal fractions.	49	2.8	46	3.8	53	4.0
N11	Yes	Identify number rounded to 18200.	91	1.6	92	2.0	91	2.5
N14	Yes	Identify list of equivalent fractions.	63	2.6	62	3.0	63	4.1
N16	Yes	Solve algebra word problem with fractions.	49	2.3	54	3.5	43	3.3
N17	Yes	Solve multi-step word problem: decimal fractions.	37	2.7	39	3.7	35	3.7
N19	Yes	Shade a given fraction of the squares in a grid.	43	2.9	42	3.5	44	4.2
O02	Yes	Calculate percent increase.	29	2.5	36	3.9	22	3.3
O04	Yes	Identify number rounded to the nearest 100th.	39	2.6	43	3.6	33	3.8
O09	Yes	Solve division word problem: common fractions.	48	3.0	56	3.5	40	4.3
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	65	2.6	63	4.2	67	3.2
P13	Yes	Use heart beats/min to find beats per hour.	68	2.2	63	3.2	73	3.2
P14	Yes	Solve subtraction word problem: common fractions.	71	2.6	68	3.4	73	3.9
P16	Yes	Reduce decimal to fraction in lowest terms.	17	1.9	19	2.8	16	2.7
Q06	Yes	Approximate water use/year from use/week.	49	2.9	47	3.5	51	4.0
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	55	2.7	58	3.5	52	4.1
Q09	Yes	Perform multiple operations of common fractions.	44	2.7	45	3.7	43	3.6
R06	Yes	Subtract two decimal numbers.	75	2.2	68	3.2	83	2.7
R07	Yes	Solve division word problem involving decimals.	47	2.4	46	3.8	48	3.9
R12	Yes	Subtract 4-digit whole numbers.	87	2.0	80	3.4	94	1.7
R13	Yes	Determine how much money left after spending 7/9.	31	2.2	29	3.2	33	3.4
U01A	Yes	Estimate the time required to record 5 songs.	45	1.7	49	3.0	41	2.3
U01B	Yes	Explain method of estimation.	48	2.1	48	3.1	48	2.7
V01	Yes	Determine actual weight from rounded value.	77	1.6	78	1.8	77	2.3

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Norway SCALE=Geometry

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	53	1.2	52	1.5	54	1.8
B11	No	Identify cube made by folding 2-dimensional net.	64	1.4	62	1.7	66	1.8
C03	No	Identify properties of congruent trapezoids.	58	1.6	55	2.3	62	1.8
D07	No	Identify relationship of angles in symmetric polygon.	68	1.5	67	2.1	69	1.9
E02	No	Determine angle in congruent triangles.	40	2.0	40	2.4	39	2.5
G03	No	Find sum of vertical angles from diagram of intersecting lines.	38	1.4	38	2.1	37	1.9
I08	Yes	Identify point on a line defined by two other points.	44	3.1	44	3.7	43	4.3
J11	Yes	Identify properties of a parallelogram.	45	2.6	43	4.3	46	3.5
J15	Yes	Identify similar triangles of different size.	63	3.0	55	4.5	70	3.5
J16	Yes	Identify coordinates for point on a grid.	44	2.8	41	4.3	47	3.5
K03	Yes	Identify figure from rotation of 3-dimensional object.	78	2.1	81	2.9	75	3.3
K08	Yes	Determine unknown angle in rotated congruent triangles.	30	2.3	29	3.6	30	2.8
L15	Yes	Find fourth quadrilateral angle, given the other three.	37	2.9	40	3.9	34	3.6
M02	Yes	Identify all lines of symmetry for a rectangle.	42	2.7	42	3.7	43	3.7
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	56	2.4	56	3.3	56	3.1
M07	Yes	Find angle based on supplementary pairs.	88	1.6	87	2.4	89	2.1
N12	Yes	Identify point on number line from distance of other points.	63	2.5	65	3.5	61	3.4
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	43	2.5	45	3.4	41	3.6
O08	Yes	Find center point of rotation for symmetry-related figures.	42	3.1	49	3.8	35	4.1
P08	Yes	Know relationship between side and perimeter for square.	41	2.5	39	3.3	42	3.9
P09	Yes	Find length of side for similar triangles.	38	2.2	38	3.2	37	3.6
Q10	Yes	Perform calculation involving addition/subtraction of angles.	47	2.9	43	3.8	53	3.9
R10	Yes	Determine into how many triangles a trapezoid can be divided.	50	2.7	45	3.7	55	3.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Norway SCALE=Measurement

			Eighth Grade
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	71	0.9	72	1.3	69	1.4
C01	No	Compare volumes of different stacks of blocks.	53	1.5	59	2.1	48	2.2
D11	No	Identify best unit to measure the mass of an egg.	88	1.0	87	1.6	88	1.5
E06	No	Solve word problem to find length of rectangle from width and perimeter.	36	1.6	35	2.3	38	1.8
F10	No	Determine measurement accuracy of ruler.	62	1.7	63	2.1	62	2.2
G02	No	Read meter scale to determine length of a pipe.	75	1.3	78	1.9	71	2.1
I03	Yes	Find number of 750 mL bottles filled by a large volume.	53	2.7	58	4.1	48	3.6
J10	Yes	Determine area of sheet not covered by rectangular picture.	38	2.6	36	4.6	40	3.6
K05	Yes	Calculate area of a rectangle given its length and perimeter.	44	3.0	42	4.6	45	3.5
L12	Yes	Find longest pace from chart showing number of paces to cross room.	79	2.2	79	3.1	78	3.1
M01	Yes	Read mass shown on scale.	88	1.7	89	2.8	88	2.0
N15	Yes	Identify drawing with angle closest to 30 degrees.	70	2.0	72	3.0	68	3.4
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	80	2.4	83	3.1	78	3.1
P11	Yes	Use ruler to determine approximate length of pencil.	62	2.4	65	3.5	59	3.2
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	30	2.2	34	3.7	25	3.3
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	64	2.9	62	3.9	65	4.1
S02B	Yes	Calculate length of side of square given area.	14	1.8	20	3.1	8	2.2
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	24	2.2	29	3.1	19	3.1
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	32	1.7	31	2.4	32	2.5
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	2	0.5	3	0.9	2	0.6
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	39	1.9	40	2.5	37	2.4

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Norway SCALE=Proportionality

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	58	1.0	64	1.1	52	1.4
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	63	1.3	62	1.9	64	1.7
D08	No	Solve ratio problem for x: 7/13 = x/52.	64	1.5	67	2.1	61	1.9
F07	No	Solve word problem to find average speed from distance and time.	27	1.5	32	2.1	23	1.9
G04	No	Solve simple proportionality equation.	62	1.6	64	1.9	61	2.4
L14	Yes	Identify missing numbers in table of proportional x and y values.	15	1.8	14	2.5	17	2.9
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	19	2.2	22	3.2	15	3.1
Q05	Yes	Solve word problem involving ratios.	73	2.4	70	3.3	75	3.0
R14	Yes	Solve multi-step word problem involving ratios.	27	2.4	25	2.9	29	3.4
T02A	Yes	Solve algebra word problem involving ratios.	30	1.7	29	2.1	32	2.6
T02B	Yes	Solve multi-step word problem computing fractions.	8	1.0	9	1.8	7	1.3
V03	Yes	Determine ratio of red paint in a mixture.	37	2.0	34	2.5	39	2.6

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Portugal SCALE=Algebra

			Eighth Grade		
			Overall	Boys	Girls
ITEM	REL	LABEL	% (se)	% (se)	% (se)
A02	No	Solve algebraic word problem equating masses on a scale.	79 0.9	83 1.1	75 1.3
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	49 1.9	48 2.4	50 2.1
C05	No	Determine number which continues pattern based on figures.	51 1.8	51 2.5	50 2.2
D10	No	Identify equation which solves word problem: C=(100+6n).	42 1.7	38 2.0	46 2.3
E05	No	Find relationship between numbers in a set of ordered pairs.	44 1.8	44 2.1	45 2.8
F11	No	Solve multi-step problem using linear equations.	19 1.6	19 1.9	19 2.1
G06	No	Find solution to -3X for given value of X.	31 2.1	31 2.4	32 2.6
H10	No	Identify equation expressing xy relationship from table of values.	34 1.8	34 2.4	35 2.1
H12	No	Select symbolic linear equation which fits word problem.	73 1.6	74 1.9	73 2.3
I01	Yes	Identify meaning of symbol in word problem equation.	23 2.3	22 3.0	24 3.4
I04	Yes	Determine next number which occurs in two number sequences.	35 2.5	27 3.1	43 3.6
J18	Yes	Identify missing number in table showing xy relationship.	33 2.4	33 3.5	33 3.6
K04	Yes	Identify expression equivalent to linear inequality.	30 2.3	25 3.3	36 2.7
L11	Yes	Solve multi-step word problem using pattern.	28 2.2	24 3.2	32 3.4
L13	Yes	Identify matching patterns of symbols.	94 1.3	92 2.2	97 1.2
L16	Yes	Simplify and solve linear equation for X.	30 3.1	27 3.5	33 4.1
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	37 3.0	37 3.7	38 4.0
O07	Yes	Solve linear equation for X.	60 2.2	58 3.4	62 3.6
P10	Yes	Identify equivalent algebraic expressions.	42 2.9	42 4.0	42 3.7
P15	Yes	Identify equivalent expression for a cubic relationship.	67 2.7	64 4.3	70 2.9
Q01	Yes	Identify linear expression based on word problem.	42 2.3	45 3.4	39 3.8
Q02	Yes	Subtract fractional expressions of X.	39 2.9	43 4.4	35 3.2
Q07	Yes	Solve P=LW for W given values for P and L.	41 2.6	46 3.3	37 3.5
R09	Yes	Identify equivalent expressions from properties of real numbers.	23 2.3	24 3.0	23 2.9
R11	Yes	Solve algebra word problem: linear equation.	33 2.7	34 3.6	32 3.3
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	71 2.6	74 3.2	68 3.4
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	13 1.8	13 2.6	13 2.5
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	8 1.0	10 1.5	6 1.2
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	8 1.1	9 1.6	7 1.4

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Portugal SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	74	0.9	75	1.0	73	1.4
B07	No	Interpret line graph to find region of largest increase.	59	1.2	58	1.7	60	1.8
C02	No	Interpret pie graph to determine distribution.	72	1.5	72	2.1	72	1.8
E01	No	Interpret line graph to determine intersection point of two plots.	60	1.5	62	2.1	57	2.2
F08	No	Predict probability of occurrence for independent coin toss.	54	1.4	56	2.2	53	2.0
G01	No	Interpret frequency table to find number above a given level.	53	1.6	55	2.4	51	2.1
H07	No	Interpret barchart histogram to find number above a given level.	67	1.4	71	1.9	63	2.1
H11	No	Predict number of total defective bulbs based on random sample.	50	1.8	52	1.9	47	2.3
I09	Yes	Predict most likely color of random card based on fraction of colors.	42	2.7	43	3.8	41	3.8
J13	Yes	Draw pictograph to represent number given in table.	86	1.8	85	2.8	88	2.6
K07	Yes	Determine the number of blue pens given probability of selection.	38	3.0	35	3.7	41	3.8
L10	Yes	Use data in a chart to identify time/day with highest temperature.	90	1.6	90	1.9	89	2.4
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	67	2.3	74	2.7	60	3.6
N18	Yes	Find probability of drawing an even number from 1 to 9.	39	2.5	42	3.6	35	3.0
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	49	2.6	53	3.2	45	3.8
O05	Yes	Calculate number of cube faces from probability of toss.	21	1.9	20	2.6	23	2.7
P17	Yes	Identify thermometer which shows temperature given in data table.	95	1.2	95	1.7	95	1.7
Q04	Yes	Interpret data in bar graph.	84	2.2	85	2.7	83	2.8
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	37	2.3	40	3.8	33	3.3
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	8	0.9	9	1.5	7	1.3

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Portugal SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	29	1.3	30	1.5	27	1.5
B09	No	Identify shaded figure which shows 2/5 = 4/10.	39	1.5	37	2.2	42	2.0
B10	No	Identify smallest of decimal fractions.	28	1.7	35	2.1	20	1.9
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	71	1.5	69	1.8	72	2.1
C06	No	Determine the worst estimate of: 848 + 677.	63	1.6	62	2.3	64	1.8
D09	No	Identify smallest fraction.	38	1.7	43	2.2	33	2.4
D12	No	Estimate rational number from point on number line.	75	1.5	73	2.0	76	1.8
E03	No	Find fraction of hour between two time points.	31	1.3	34	1.8	27	2.1
E04	No	Solve multi-step word problem: 4-digit whole numbers.	63	1.5	62	1.9	65	2.3
F09	No	Identify decimal fraction between 0.07 and 0.08.	56	1.9	59	2.3	52	2.5
F12	No	Identify fraction of circle which is shaded.	41	1.6	39	1.9	42	2.4
G05	No	Identify fraction represented in word problem.	37	1.7	37	2.3	38	2.2
H08	No	Identify figure showing 2/3 shaded.	37	1.8	40	2.2	34	2.1
H09	No	Identify sum which is closest to 691 + 208.	77	1.5	80	1.6	75	2.0
I02	Yes	Solve multi-step word problem: common fractions.	38	2.6	40	3.5	36	3.7
I05	Yes	Solve subtraction word problem: rational numbers.	60	2.4	58	3.6	61	3.3
I06	Yes	Write a fraction larger than a given number.	63	2.7	63	3.4	64	3.7
I07	Yes	Recognize when estimation is appropriate.	53	2.7	54	3.6	51	3.4
J12	Yes	Divide fractions.	13	1.9	11	2.3	16	2.7
J14	Yes	Divide rational numbers, fractional divisor.	26	3.4	22	3.7	30	4.4
J17	Yes	Use map and scale to find distance between two cities.	56	2.6	60	3.8	51	3.8
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	68	2.7	67	4.0	69	4.3
K02	Yes	Find total volume of mixture using rational number addition.	72	2.5	68	3.3	76	3.6
K06	Yes	Approximate amount increased by 15%.	41	2.3	49	3.0	33	3.3
K09	Yes	Compute sum of three fractions.	31	2.7	31	3.5	31	3.8
L08	Yes	Estimate actual height from diagram of relative heights.	58	2.4	60	3.2	55	3.5
L09	Yes	Identify 504.7 from its expression in words.	87	1.7	89	2.1	86	2.5
L17	Yes	Subtract three fractions.	20	2.3	20	2.8	21	3.1
M04	Yes	Identify the largest fraction.	20	1.8	19	2.8	21	3.1
M08	Yes	Multiply two decimal fractions.	37	2.6	33	4.3	41	3.7
N11	Yes	Identify number rounded to 18200.	80	2.0	79	2.9	81	3.0
N14	Yes	Identify list of equivalent fractions.	58	2.9	62	4.1	54	3.7
N16	Yes	Solve algebra word problem with fractions.	42	2.6	44	3.9	41	3.2
N17	Yes	Solve multi-step word problem: decimal fractions.	37	2.6	39	4.1	36	3.7
N19	Yes	Shade a given fraction of the squares in a grid.	17	2.5	21	3.8	12	2.6
O02	Yes	Calculate percent increase.	11	1.6	17	2.7	5	1.4
O04	Yes	Identify number rounded to the nearest 100th.	45	2.3	43	3.5	46	3.1
O09	Yes	Solve division word problem: common fractions.	26	2.9	30	3.3	22	3.6
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	60	2.6	64	3.7	56	3.7
P13	Yes	Use heart beats/min to find beats per hour.	58	2.5	66	3.2	51	3.6
P14	Yes	Solve subtraction word problem: common fractions.	56	2.5	59	3.4	53	3.2
P16	Yes	Reduce decimal to fraction in lowest terms.	7	1.3	7	2.1	8	1.7
Q06	Yes	Approximate water use/year from use/week.	20	2.0	27	3.3	14	2.5
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	25	2.3	34	3.3	16	2.5
Q09	Yes	Perform multiple operations of common fractions.	41	2.8	43	3.5	40	3.7
R06	Yes	Subtract two decimal numbers.	74	2.5	71	3.2	77	3.3
R07	Yes	Solve division word problem involving decimals.	44	2.8	47	4.2	41	3.5
R12	Yes	Subtract 4-digit whole numbers.	87	1.7	84	2.2	89	2.4
R13	Yes	Determine how much money left after spending 7/9.	5	1.0	7	1.7	3	1.2
U01A	Yes	Estimate the time required to record 5 songs.	10	1.1	9	1.5	11	1.4
U01B	Yes	Explain method of estimation.	13	1.2	14	1.7	12	1.8
V01	Yes	Determine actual weight from rounded value.	33	1.9	37	2.7	29	2.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Portugal SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	59	1.3	60	1.7	57	1.4
B11	No	Identify cube made by folding 2-dimensional net.	53	1.8	57	2.5	49	2.3
C03	No	Identify properties of congruent trapezoids.	51	1.8	50	2.5	53	2.2
D07	No	Identify relationship of angles in symmetric polygon.	58	1.6	61	1.9	54	2.6
E02	No	Determine angle in congruent triangles.	28	1.7	31	2.2	24	1.9
G03	No	Find sum of vertical angles from diagram of intersecting lines.	41	1.6	45	2.1	37	2.3
I08	Yes	Identify point on a line defined by two other points.	46	2.5	48	3.2	43	3.7
J11	Yes	Identify properties of a parallelogram.	33	2.2	32	3.1	34	3.0
J15	Yes	Identify similar triangles of different size.	68	2.3	68	3.4	67	3.3
J16	Yes	Identify coordinates for point on a grid.	29	2.2	30	3.4	28	2.9
K03	Yes	Identify figure from rotation of 3-dimensional object.	58	2.5	64	3.5	52	3.1
K08	Yes	Determine unknown angle in rotated congruent triangles.	21	2.3	23	3.5	19	3.0
L15	Yes	Find fourth quadrilateral angle, given the other three.	23	2.3	24	3.0	22	3.0
M02	Yes	Identify all lines of symmetry for a rectangle.	44	2.7	44	3.7	44	3.3
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	35	2.2	36	3.3	34	2.9
M07	Yes	Find angle based on supplementary pairs.	56	2.6	64	3.5	48	3.5
N12	Yes	Identify point on number line from distance of other points.	66	2.3	65	3.2	68	3.4
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	30	2.8	33	4.3	28	3.2
O08	Yes	Find center point of rotation for symmetry-related figures.	63	2.4	65	3.7	61	3.3
P08	Yes	Know relationship between side and perimeter for square.	48	2.3	52	3.1	45	3.3
P09	Yes	Find length of side for similar triangles.	32	2.1	31	3.1	33	3.0
Q10	Yes	Perform calculation involving addition/subtraction of angles.	31	2.6	33	3.9	30	3.5
R10	Yes	Determine into how many triangles a trapezoid can be divided.	41	3.1	42	3.7	40	4.0

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Portugal SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	62	1.3	65	1.5	60	1.8
C01	No	Compare volumes of different stacks of blocks.	45	1.8	49	2.5	41	2.3
D11	No	Identify best unit to measure the mass of an egg.	85	1.0	87	1.2	84	1.5
E06	No	Solve word problem to find length of rectangle from width and perimeter.	29	1.5	32	1.8	26	2.1
F10	No	Determine measurement accuracy of ruler.	35	1.7	39	2.1	30	2.3
G02	No	Read meter scale to determine length of a pipe.	68	1.5	70	1.8	66	1.9
I03	Yes	Find number of 750 mL bottles filled by a large volume.	43	2.6	53	3.6	31	3.2
J10	Yes	Determine area of sheet not covered by rectangular picture.	19	2.3	19	3.0	18	3.1
K05	Yes	Calculate area of a rectangle given its length and perimeter.	20	1.9	21	3.0	19	2.5
L12	Yes	Find longest pace from chart showing number of paces to cross room.	79	2.2	84	2.7	74	3.3
M01	Yes	Read mass shown on scale.	84	2.0	90	2.1	77	3.0
N15	Yes	Identify drawing with angle closest to 30 degrees.	48	2.8	46	3.9	51	3.7
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	74	2.2	78	3.0	71	2.9
P11	Yes	Use ruler to determine approximate length of pencil.	43	2.7	49	3.9	37	3.2
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	20	1.8	27	3.3	15	2.3
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	42	2.8	41	4.0	43	3.5
S02B	Yes	Calculate length of side of square given area.	8	1.5	7	1.9	8	2.3
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	8	1.5	7	1.7	9	2.1
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	22	1.8	24	2.6	20	2.0
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	2	0.5	2	0.7	2	0.7
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	19	1.5	20	2.3	18	2.1

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Portugal SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	37	1.4	43	1.7	30	1.6
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	69	1.2	71	1.7	67	1.8
D08	No	Solve ratio problem for x: 7/13 = x/52.	54	1.6	54	2.2	54	1.9
F07	No	Solve word problem to find average speed from distance and time.	20	1.4	21	1.7	19	2.1
G04	No	Solve simple proportionality equation.	55	2.0	58	2.5	53	2.5
L14	Yes	Identify missing numbers in table of proportional x and y values.	21	2.3	18	2.6	24	3.2
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	17	1.8	18	2.5	16	2.6
Q05	Yes	Solve word problem involving ratios.	50	2.6	50	3.5	50	3.6
R14	Yes	Solve multi-step word problem involving ratios.	20	2.5	22	3.2	19	2.8
T02A	Yes	Solve algebra word problem involving ratios.	10	1.2	11	1.4	9	1.7
T02B	Yes	Solve multi-step word problem computing fractions.	5	0.8	5	0.9	4	1.1
V03	Yes	Determine ratio of red paint in a mixture.	21	1.6	21	2.1	21	2.2

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Romania SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	79	1.3	79	1.7	78	1.4
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	69	1.9	67	2.3	70	2.2
C05	No	Determine number which continues pattern based on figures.	58	2.3	60	3.0	55	2.5
D10	No	Identify equation which solves word problem: C=(100+6n).	36	2.0	33	2.6	39	2.4
E05	No	Find relationship between numbers in a set of ordered pairs.	39	2.1	35	2.5	42	2.7
F11	No	Solve multi-step problem using linear equations.	41	2.2	39	2.6	43	2.6
G06	No	Find solution to -3X for given value of X.	60	2.3	58	2.8	61	2.9
H10	No	Identify equation expressing xy relationship from table of values.	34	2.2	35	2.9	33	2.4
H12	No	Select symbolic linear equation which fits word problem.	67	2.1	67	2.5	68	2.3
I01	Yes	Identify meaning of symbol in word problem equation.	45	2.8	42	3.6	47	4.0
I04	Yes	Determine next number which occurs in two number sequences.	38	2.7	33	3.5	43	3.5
J18	Yes	Identify missing number in table showing xy relationship.	34	2.3	33	3.3	34	3.2
K04	Yes	Identify expression equivalent to linear inequality.	53	3.0	49	4.2	56	3.6
L11	Yes	Solve multi-step word problem using pattern.	26	2.4	24	3.1	29	3.3
L13	Yes	Identify matching patterns of symbols.	85	2.0	85	2.9	85	2.7
L16	Yes	Simplify and solve linear equation for X.	67	2.8	67	3.7	67	4.0
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	62	3.0	59	4.1	64	3.7
O07	Yes	Solve linear equation for X.	77	2.7	73	3.6	81	3.0
P10	Yes	Identify equivalent algebraic expressions.	64	2.7	62	3.7	65	3.3
P15	Yes	Identify equivalent expression for a cubic relationship.	59	3.3	60	4.2	59	3.9
Q01	Yes	Identify linear expression based on word problem.	52	3.0	48	3.9	56	3.6
Q02	Yes	Subtract fractional expressions of X.	68	2.7	66	3.5	69	3.4
Q07	Yes	Solve P=LW for W given values for P and L.	59	2.8	56	3.4	61	3.6
R09	Yes	Identify equivalent expressions from properties of real numbers.	49	2.9	49	3.9	49	3.8
R11	Yes	Solve algebra word problem: linear equation.	41	2.5	42	3.0	40	3.7
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	63	2.6	60	3.6	65	3.3
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	20	2.4	20	3.1	19	3.1
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	36	2.3	33	2.7	39	3.1
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	40	2.3	37	2.8	44	3.0

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Romania SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	82	1.0	82	1.3	83	1.2
B07	No	Interpret line graph to find region of largest increase.	36	1.9	36	2.3	36	2.2
C02	No	Interpret pie graph to determine distribution.	68	1.9	69	2.5	68	2.1
E01	No	Interpret line graph to determine intersection point of two plots.	65	2.3	64	2.7	67	2.8
F08	No	Predict probability of occurrence for independent coin toss.	47	1.9	45	2.7	48	2.3
G01	No	Interpret frequency table to find number above a given level.	47	2.0	48	2.6	46	2.3
H07	No	Interpret barchart histogram to find number above a given level.	47	2.4	47	2.6	47	2.7
H11	No	Predict number of total defective bulbs based on random sample.	61	1.8	65	2.1	57	2.3
I09	Yes	Predict most likely color of random card based on fraction of colors.	52	3.0	51	4.4	52	3.6
J13	Yes	Draw pictograph to represent number given in table.	64	2.7	64	3.8	65	3.5
K07	Yes	Determine the number of blue pens given probability of selection.	50	3.3	48	4.4	52	4.1
L10	Yes	Use data in a chart to identify time/day with highest temperature.	69	2.8	72	3.7	65	3.8
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	52	2.7	54	3.8	50	4.0
N18	Yes	Find probability of drawing an even number from 1 to 9.	31	2.7	32	3.7	30	3.5
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	36	2.8	35	3.4	36	3.8
O05	Yes	Calculate number of cube faces from probability of toss.	33	2.8	31	3.3	34	3.8
P17	Yes	Identify thermometer which shows temperature given in data table.	74	2.4	77	3.2	70	3.4
Q04	Yes	Interpret data in bar graph.	65	2.8	60	3.9	71	3.2
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	29	2.7	31	3.9	26	3.0
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	12	1.7	13	2.2	11	1.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Romania SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	59	2.0	60	2.4	59	2.2
B09	No	Identify shaded figure which shows 2/5 = 4/10.	44	1.7	44	2.1	43	2.2
B10	No	Identify smallest of decimal fractions.	28	1.9	30	2.3	27	2.1
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	55	2.0	56	2.6	53	2.3
C06	No	Determine the worst estimate of: 848 + 677.	64	1.9	63	2.5	65	2.1
D09	No	Identify smallest fraction.	50	2.0	49	2.8	51	2.4
D12	No	Estimate rational number from point on number line.	48	1.8	49	2.4	48	2.3
E03	No	Find fraction of hour between two time points.	49	1.8	50	2.2	48	2.4
E04	No	Solve multi-step word problem: 4-digit whole numbers.	69	2.2	66	2.5	72	2.5
F09	No	Identify decimal fraction between 0.07 and 0.08.	48	2.0	47	2.6	48	2.3
F12	No	Identify fraction of circle which is shaded.	39	2.2	40	2.4	39	2.6
G05	No	Identify fraction represented in word problem.	36	1.9	37	2.6	34	2.2
H08	No	Identify figure showing 2/3 shaded.	46	2.0	46	2.6	46	2.3
H09	No	Identify sum which is closest to 691 + 208.	75	1.5	76	2.2	74	1.9
I02	Yes	Solve multi-step word problem: common fractions.	51	2.8	47	3.7	55	3.3
I05	Yes	Solve subtraction word problem: rational numbers.	68	2.4	69	3.3	68	3.3
I06	Yes	Write a fraction larger than a given number.	64	2.7	64	3.6	65	3.5
I07	Yes	Recognize when estimation is appropriate.	46	3.0	44	4.1	48	4.0
J12	Yes	Divide fractions.	64	2.6	62	3.7	67	3.2
J14	Yes	Divide rational numbers, fractional divisor.	44	2.6	43	3.9	46	2.7
J17	Yes	Use map and scale to find distance between two cities.	50	2.7	55	3.7	46	3.8
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	64	2.9	66	3.5	62	3.9
K02	Yes	Find total volume of mixture using rational number addition.	61	2.5	60	3.5	62	3.8
K06	Yes	Approximate amount increased by 15%.	35	2.8	35	3.8	34	3.8
K09	Yes	Compute sum of three fractions.	66	2.4	60	3.8	71	2.7
L08	Yes	Estimate actual height from diagram of relative heights.	54	3.0	58	3.5	50	4.7
L09	Yes	Identify 504.7 from its expression in words.	69	2.3	70	3.2	67	3.3
L17	Yes	Subtract three fractions.	58	3.1	58	3.8	59	4.2
M04	Yes	Identify the largest fraction.	33	2.8	34	3.7	33	3.4
M08	Yes	Multiply two decimal fractions.	48	2.7	46	4.1	49	3.4
N11	Yes	Identify number rounded to 18200.	60	3.1	64	3.8	56	4.0
N14	Yes	Identify list of equivalent fractions.	54	3.0	55	4.2	52	3.7
N16	Yes	Solve algebra word problem with fractions.	39	2.8	43	3.9	36	3.7
N17	Yes	Solve multi-step word problem: decimal fractions.	39	2.9	38	4.0	41	4.0
N19	Yes	Shade a given fraction of the squares in a grid.	43	3.1	46	4.0	40	4.0
O02	Yes	Calculate percent increase.	20	2.2	22	3.1	19	2.9
O04	Yes	Identify number rounded to the nearest 100th.	27	2.8	26	3.6	27	3.3
O09	Yes	Solve division word problem: common fractions.	41	3.0	42	3.8	41	3.7
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	60	2.9	63	3.6	57	3.8
P13	Yes	Use heart beats/min to find beats per hour.	60	2.6	61	3.8	58	3.5
P14	Yes	Solve subtraction word problem: common fractions.	70	2.6	70	3.1	71	3.8
P16	Yes	Reduce decimal to fraction in lowest terms.	39	2.9	38	4.2	40	3.5
Q06	Yes	Approximate water use/year from use/week.	31	3.1	31	3.8	30	3.9
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	25	2.4	28	3.3	22	2.8
Q09	Yes	Perform multiple operations of common fractions.	59	3.4	54	4.3	63	4.0
R06	Yes	Subtract two decimal numbers.	67	2.5	67	3.7	67	3.5
R07	Yes	Solve division word problem involving decimals.	36	2.7	40	3.6	32	3.5
R12	Yes	Subtract 4-digit whole numbers.	79	2.4	78	3.0	81	3.2
R13	Yes	Determine how much money left after spending 7/9.	19	2.4	19	3.2	19	3.1
U01A	Yes	Estimate the time required to record 5 songs.	7	1.2	6	1.5	7	1.7
U01B	Yes	Explain method of estimation.	10	1.5	10	1.8	11	1.9
V01	Yes	Determine actual weight from rounded value.	25	2.0	28	2.7	24	2.3

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Romania SCALE=Geometry

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	70	1.8	70	2.2	71	1.8
B11	No	Identify cube made by folding 2-dimensional net.	44	2.0	46	2.7	42	2.3
C03	No	Identify properties of congruent trapezoids.	69	2.0	70	2.4	69	2.3
D07	No	Identify relationship of angles in symmetric polygon.	74	1.4	74	2.0	74	1.8
E02	No	Determine angle in congruent triangles.	51	2.6	54	3.2	48	2.9
G03	No	Find sum of vertical angles from diagram of intersecting lines.	62	2.0	61	2.6	63	2.5
I08	Yes	Identify point on a line defined by two other points.	22	2.3	25	3.2	20	3.0
J11	Yes	Identify properties of a parallelogram.	67	2.9	62	3.7	72	3.8
J15	Yes	Identify similar triangles of different size.	68	2.4	69	3.2	68	3.3
J16	Yes	Identify coordinates for point on a grid.	41	3.3	41	4.0	42	4.4
K03	Yes	Identify figure from rotation of 3-dimensional object.	53	2.4	57	3.8	49	3.4
K08	Yes	Determine unknown angle in rotated congruent triangles.	41	2.9	41	3.9	42	3.9
L15	Yes	Find fourth quadrilateral angle, given the other three.	50	2.7	54	3.3	46	4.1
M02	Yes	Identify all lines of symmetry for a rectangle.	46	2.7	46	3.7	47	3.4
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	27	2.5	31	3.7	24	3.3
M07	Yes	Find angle based on supplementary pairs.	60	2.8	61	4.0	60	3.2
N12	Yes	Identify point on number line from distance of other points.	61	2.8	63	4.1	60	3.6
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	44	3.1	49	3.8	41	3.9
O08	Yes	Find center point of rotation for symmetry-related figures.	62	2.8	64	3.6	59	3.8
P08	Yes	Know relationship between side and perimeter for square.	59	2.8	57	3.9	61	3.4
P09	Yes	Find length of side for similar triangles.	38	2.9	37	3.6	40	3.4
Q10	Yes	Perform calculation involving addition/subtraction of angles.	45	3.0	50	3.9	40	3.5
R10	Yes	Determine into how many triangles a trapezoid can be divided.	44	2.7	47	3.5	41	3.4

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Romania SCALE=Measurement

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                                                                                          Eighth Grade

                                                                          Overall       Boys       Girls

ITEM    REL   LABEL                                                          %   (se)    %   (se)    %   (se)
----------------------------------------------------------------------------------------------------------
C01     No    Compare volumes of different stacks of blocks.               44   2.2    49   3.0    38   2.3
D11     No    Identify best unit to measure the mass of an egg.            87   1.1    87   1.5    88   1.4
E06     No    Solve word problem to find length of rectangle from width and perimeter.  47   2.2    48   2.7    46   2.6
F10     No    Determine measurement accuracy of ruler.                     39   2.1    45   2.7    33   2.3
G02     No    Read meter scale to determine length of a pipe.              69   1.8    68   2.1    70   2.3
I03     Yes   Find number of 750 mL bottles filled by a large volume.      42   2.9    47   3.7    38   3.8
J10     Yes   Determine area of sheet not covered by rectangular picture.  42   3.1    43   4.1    42   3.7
K05     Yes   Calculate area of a rectangle given its length and perimeter. 49   3.0    47   4.0    51   4.1
L12     Yes   Find longest pace from chart showing number of paces to cross room. 70   2.9    69   3.7    72   3.3
M01     Yes   Read mass shown on scale.                                    74   2.3    76   3.6    73   3.1
N15     Yes   Identify drawing with angle closest to 30 degrees.           59   2.9    61   3.9    58   3.6
O06     Yes   Calculate time to remove cake after baking 3/4 hour.         73   2.2    72   3.1    73   3.0
P11     Yes   Use ruler to determine approximate length of pencil.         41   2.6    41   3.2    41   3.8
Q03     Yes   Use day/hours/minutes/seconds conversions to calculate longest time. 31   2.6    37   3.6    26   2.9
S02A    Yes   Calculate area square given area of rectangle containing 5 squares. 62   3.1    60   3.7    64   3.7
S02B    Yes   Calculate length of side of square given area.               47   3.2    46   4.1    47   3.8
S02C    Yes   Find perimeter of rectangle containing 5 squares of known size. 21   2.1    24   3.1    17   2.5
U02A    Yes   Draw new rectangle based length/width ratios of another rectangle. 28   2.1    26   2.5    29   2.7
U02B    Yes   Calculate ratio of rectangle areas given relationship between sides. 15   1.9    16   2.8    14   2.0
V04     Yes   Calculate area of parallelogram inscribed in a rectangle.    33   2.7    32   3.1    34   3.2
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REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Romania SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	48	1.5	49	1.9	46	1.9
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	75	1.7	75	2.0	75	2.1
D08	No	Solve ratio problem for x: 7/13 = x/52.	66	1.5	66	2.1	66	2.1
F07	No	Solve word problem to find average speed from distance and time.	37	2.0	38	2.7	36	2.1
G04	No	Solve simple proportionality equation.	67	1.7	65	2.1	69	2.3
L14	Yes	Identify missing numbers in table of proportional x and y values.	29	2.9	29	3.7	29	3.5
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	29	2.7	29	3.8	29	3.4
Q05	Yes	Solve word problem involving ratios.	52	3.0	54	3.7	50	4.0
R14	Yes	Solve multi-step word problem involving ratios.	32	2.6	33	3.3	30	3.5
T02A	Yes	Solve algebra word problem involving ratios.	18	2.5	17	2.9	19	2.9
T02B	Yes	Solve multi-step word problem computing fractions.	9	1.6	7	1.6	11	2.1
V03	Yes	Determine ratio of red paint in a mixture.	39	2.4	37	3.2	41	2.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Russian Federation SCALE=Algebra

			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	89	1.0	90	1.2	88	1.1
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	83	1.4	78	2.6	87	1.2
C05	No	Determine number which continues pattern based on figures.	57	2.2	56	3.0	57	1.9
D10	No	Identify equation which solves word problem: C=(100+6n).	41	1.7	40	2.4	42	2.4
E05	No	Find relationship between numbers in a set of ordered pairs.	67	2.4	64	2.7	70	2.6
F11	No	Solve multi-step problem using linear equations.	66	1.9	63	3.4	68	2.1
G06	No	Find solution to -3X for given value of X.	78	1.4	74	2.0	82	1.9
H10	No	Identify equation expressing xy relationship from table of values.	59	2.8	56	4.2	62	2.5
H12	No	Select symbolic linear equation which fits word problem.	77	1.8	77	2.3	78	1.9
I01	Yes	Identify meaning of symbol in word problem equation.	52	3.4	50	4.4	54	4.1
I04	Yes	Determine next number which occurs in two number sequences.	50	3.9	48	3.8	53	5.1
J18	Yes	Identify missing number in table showing xy relationship.	31	2.6	34	3.8	27	2.8
K04	Yes	Identify expression equivalent to linear inequality.	48	3.3	47	4.6	49	3.4
L11	Yes	Solve multi-step word problem using pattern.	31	2.2	28	3.3	34	3.0
L13	Yes	Identify matching patterns of symbols.	95	1.2	93	2.0	97	1.0
L16	Yes	Simplify and solve linear equation for X.	79	2.0	76	4.0	82	2.4
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	75	2.6	74	4.0	77	3.2
O07	Yes	Solve linear equation for X.	88	1.7	88	2.0	88	2.8
P10	Yes	Identify equivalent algebraic expressions.	75	2.9	75	4.0	75	3.6
P15	Yes	Identify equivalent expression for a cubic relationship.	78	2.9	76	3.9	79	3.3
Q01	Yes	Identify linear expression based on word problem.	58	3.8	60	5.8	56	3.7
Q02	Yes	Subtract fractional expressions of X.	64	3.3	58	4.0	70	3.7
Q07	Yes	Solve P=LW for W given values for P and L.	76	2.9	69	4.7	84	2.5
R09	Yes	Identify equivalent expressions from properties of real numbers.	56	3.3	54	3.5	57	4.4
R11	Yes	Solve algebra word problem: linear equation.	62	2.6	63	3.5	61	3.0
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	76	2.3	73	2.4	79	3.1
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	22	2.0	25	1.9	21	3.5
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	44	3.3	41	2.9	47	4.3
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	48	3.4	45	3.2	50	4.0

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Russian Federation SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	80	1.8	78	2.2	81	1.7
B07	No	Interpret line graph to find region of largest increase.	71	2.3	70	2.8	73	2.1
C02	No	Interpret pie graph to determine distribution.	77	1.5	76	1.9	79	2.1
E01	No	Interpret line graph to determine intersection point of two plots.	83	1.7	85	2.0	81	2.1
F08	No	Predict probability of occurrence for independent coin toss.	60	2.7	58	3.0	62	3.2
G01	No	Interpret frequency table to find number above a given level.	56	2.2	54	2.5	57	3.6
H07	No	Interpret barchart histogram to find number above a given level.	59	1.5	59	2.5	59	2.5
H11	No	Predict number of total defective bulbs based on random sample.	66	2.2	70	2.3	62	2.6
I09	Yes	Predict most likely color of random card based on fraction of colors.	70	2.9	70	3.4	70	4.2
J13	Yes	Draw pictograph to represent number given in table.	78	2.2	77	2.8	80	2.5
K07	Yes	Determine the number of blue pens given probability of selection.	59	3.3	59	4.0	59	4.7
L10	Yes	Use data in a chart to identify time/day with highest temperature.	91	1.5	89	2.6	93	1.2
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	70	2.5	71	2.1	70	4.3
N18	Yes	Find probability of drawing an even number from 1 to 9.	39	3.5	42	4.5	36	3.9
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	49	3.0	52	3.3	46	3.9
O05	Yes	Calculate number of cube faces from probability of toss.	33	2.6	34	3.8	33	3.0
P17	Yes	Identify thermometer which shows temperature given in data table.	81	2.6	79	3.4	83	3.5
Q04	Yes	Interpret data in bar graph.	83	2.5	79	4.2	87	2.2
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	41	3.0	45	4.4	38	3.5
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	14	1.7	15	1.9	14	2.2

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Russian Federation SCALE=Fractions and number sense

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	61	3.2	63	3.5	60	3.2
B09	No	Identify shaded figure which shows 2/5 = 4/10.	63	2.1	60	3.4	65	1.9
B10	No	Identify smallest of decimal fractions.	50	2.5	52	3.0	47	2.7
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	58	1.7	61	2.4	55	2.2
C06	No	Determine the worst estimate of: 848 + 677.	73	1.7	73	1.9	72	2.1
D09	No	Identify smallest fraction.	55	2.3	58	3.4	53	2.4
D12	No	Estimate rational number from point on number line.	76	1.4	75	1.9	76	2.1
E03	No	Find fraction of hour between two time points.	61	2.9	63	3.3	59	3.1
E04	No	Solve multi-step word problem: 4-digit whole numbers.	77	2.2	74	2.8	79	2.5
F09	No	Identify decimal fraction between 0.07 and 0.08.	67	2.0	68	2.6	66	2.7
F12	No	Identify fraction of circle which is shaded.	52	2.4	52	2.7	52	2.9
G05	No	Identify fraction represented in word problem.	56	2.4	53	2.8	58	2.7
H08	No	Identify figure showing 2/3 shaded.	61	2.1	63	2.8	58	2.2
H09	No	Identify sum which is closest to 691 + 208.	86	1.3	86	1.8	85	1.6
I02	Yes	Solve multi-step word problem: common fractions.	55	2.9	56	4.1	53	2.8
I05	Yes	Solve subtraction word problem: rational numbers.	83	2.1	82	2.6	85	3.0
I06	Yes	Write a fraction larger than a given number.	83	1.9	84	3.4	83	2.6
I07	Yes	Recognize when estimation is appropriate.	58	2.7	59	4.1	58	3.1
J12	Yes	Divide fractions.	70	2.8	65	4.3	75	3.2
J14	Yes	Divide rational numbers, fractional divisor.	78	1.8	72	3.1	83	2.3
J17	Yes	Use map and scale to find distance between two cities.	77	2.3	80	3.0	75	2.6
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	76	2.5	79	3.5	74	2.6
K02	Yes	Find total volume of mixture using rational number addition.	72	2.7	74	3.5	71	3.3
K06	Yes	Approximate amount increased by 15%.	42	3.6	49	3.4	36	5.0
K09	Yes	Compute sum of three fractions.	65	2.5	53	4.1	74	2.9
L08	Yes	Estimate actual height from diagram of relative heights.	62	3.1	66	3.9	59	3.4
L09	Yes	Identify 504.7 from its expression in words.	94	1.2	91	1.9	95	1.4
L17	Yes	Subtract three fractions.	68	3.1	63	4.5	73	3.6
M04	Yes	Identify the largest fraction.	37	3.7	30	3.5	42	6.0
M08	Yes	Multiply two decimal fractions.	84	1.6	77	2.8	90	1.7
N11	Yes	Identify number rounded to 18200.	75	2.5	76	2.9	74	3.3
N14	Yes	Identify list of equivalent fractions.	71	2.3	64	3.4	78	3.2
N16	Yes	Solve algebra word problem with fractions.	47	2.4	47	3.7	48	3.1
N17	Yes	Solve multi-step word problem: decimal fractions.	41	2.9	45	3.6	37	3.3
N19	Yes	Shade a given fraction of the squares in a grid.	46	2.5	47	4.1	44	3.4
O02	Yes	Calculate percent increase.	26	2.4	27	4.3	26	2.8
O04	Yes	Identify number rounded to the nearest 100th.	67	2.6	69	4.5	65	3.7
O09	Yes	Solve division word problem: common fractions.	47	2.7	46	4.3	48	3.6
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	68	2.8	69	3.1	67	4.0
P13	Yes	Use heart beats/min to find beats per hour.	73	2.4	73	3.3	74	3.3
P14	Yes	Solve subtraction word problem: common fractions.	71	2.7	67	3.8	75	3.0
P16	Yes	Reduce decimal to fraction in lowest terms.	60	3.4	56	4.5	64	3.6
Q06	Yes	Approximate water use/year from use/week.	41	2.4	47	3.9	35	3.3
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	39	3.3	41	5.5	36	3.4
Q09	Yes	Perform multiple operations of common fractions.	62	3.5	56	6.4	67	2.7
R06	Yes	Subtract two decimal numbers.	87	1.9	85	2.8	90	2.2
R07	Yes	Solve division word problem involving decimals.	59	2.7	57	3.9	61	3.7
R12	Yes	Subtract 4-digit whole numbers.	92	1.6	90	2.8	95	1.4
R13	Yes	Determine how much money left after spending 7/9.	24	2.4	27	3.1	22	3.4
U01A	Yes	Estimate the time required to record 5 songs.	33	2.8	33	2.8	33	3.7
U01B	Yes	Explain method of estimation.	22	1.5	21	2.3	23	2.1
V01	Yes	Determine actual weight from rounded value.	59	2.8	58	3.1	59	3.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Russian Federation SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	77	1.4	75	1.5	79	1.8
B11	No	Identify cube made by folding 2-dimensional net.	64	2.4	65	2.7	64	2.6
C03	No	Identify properties of congruent trapezoids.	80	1.4	76	1.8	84	1.9
D07	No	Identify relationship of angles in symmetric polygon.	76	1.4	78	1.9	75	2.4
E02	No	Determine angle in congruent triangles.	64	2.4	67	3.1	63	2.6
G03	No	Find sum of vertical angles from diagram of intersecting lines.	66	1.7	67	1.6	65	2.4
I08	Yes	Identify point on a line defined by two other points.	46	3.3	49	3.4	43	4.7
J11	Yes	Identify properties of a parallelogram.	69	3.3	64	5.1	75	2.7
J15	Yes	Identify similar triangles of different size.	74	3.2	71	3.6	77	4.3
J16	Yes	Identify coordinates for point on a grid.	63	3.0	62	4.3	65	3.2
K03	Yes	Identify figure from rotation of 3-dimensional object.	75	2.8	76	3.9	75	3.4
K08	Yes	Determine unknown angle in rotated congruent triangles.	39	2.9	34	3.4	43	3.7
L15	Yes	Find fourth quadrilateral angle, given the other three.	44	2.9	44	5.8	44	2.4
M02	Yes	Identify all lines of symmetry for a rectangle.	67	3.3	62	3.7	71	4.5
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	58	3.1	58	4.9	57	5.0
M07	Yes	Find angle based on supplementary pairs.	76	2.1	71	3.1	80	2.7
N12	Yes	Identify point on number line from distance of other points.	80	2.2	76	3.2	85	3.1
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	60	2.8	58	3.9	61	3.5
O08	Yes	Find center point of rotation for symmetry-related figures.	79	2.4	80	2.9	77	3.4
P08	Yes	Know relationship between side and perimeter for square.	55	4.3	56	5.7	54	4.3
P09	Yes	Find length of side for similar triangles.	41	3.2	45	4.2	37	4.3
Q10	Yes	Perform calculation involving addition/subtraction of angles.	50	3.2	47	4.1	54	5.1
R10	Yes	Determine into how many triangles a trapezoid can be divided.	54	2.9	54	4.1	54	3.4

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Russian Federation SCALE=Measurement

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	57	2.3	54	2.7	60	2.2
C01	No	Compare volumes of different stacks of blocks.	57	2.5	59	3.1	55	2.8
D11	No	Identify best unit to measure the mass of an egg.	93	0.8	93	1.3	94	1.0
E06	No	Solve word problem to find length of rectangle from width and perimeter.	48	3.0	52	3.6	46	3.3
F10	No	Determine measurement accuracy of ruler.	74	1.4	77	1.9	72	2.5
G02	No	Read meter scale to determine length of a pipe.	83	1.6	84	1.6	83	1.9
I03	Yes	Find number of 750 mL bottles filled by a large volume.	46	2.5	53	3.1	40	3.8
J10	Yes	Determine area of sheet not covered by rectangular picture.	49	4.2	51	5.7	47	3.8
K05	Yes	Calculate area of a rectangle given its length and perimeter.	48	4.3	48	3.9	47	5.6
L12	Yes	Find longest pace from chart showing number of paces to cross room.	89	1.5	88	2.2	89	2.2
M01	Yes	Read mass shown on scale.	92	1.3	93	1.9	92	1.8
N15	Yes	Identify drawing with angle closest to 30 degrees.	72	2.8	74	2.5	71	4.1
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	61	2.9	58	3.9	63	3.1
P11	Yes	Use ruler to determine approximate length of pencil.	59	3.1	63	5.5	55	3.4
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	33	2.6	34	3.8	31	3.0
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	75	3.0	72	3.1	78	3.5
S02B	Yes	Calculate length of side of square given area.	43	4.2	46	4.2	39	5.8
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	24	4.2	26	3.8	23	5.3
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	39	2.8	35	2.7	41	4.6
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	17	2.0	16	2.5	18	2.9
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	41	2.7	37	3.3	44	3.1

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Russian Federation SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	61	1.8	71	1.9	53	2.1
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	80	1.6	77	2.2	82	2.0
D08	No	Solve ratio problem for x: 7/13 = x/52.	72	2.3	70	3.1	74	2.1
F07	No	Solve word problem to find average speed from distance and time.	51	3.2	48	3.4	52	3.6
G04	No	Solve simple proportionality equation.	72	2.1	68	2.3	76	2.8
L14	Yes	Identify missing numbers in table of proportional x and y values.	27	2.3	27	3.2	27	3.3
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	37	3.1	37	3.8	37	4.5
Q05	Yes	Solve word problem involving ratios.	47	2.5	46	3.4	49	3.4
R14	Yes	Solve multi-step word problem involving ratios.	49	3.8	48	5.2	50	3.8
T02A	Yes	Solve algebra word problem involving ratios.	35	4.1	38	3.6	32	5.1
T02B	Yes	Solve multi-step word problem computing fractions.	7	1.4	7	1.5	8	1.7
V03	Yes	Determine ratio of red paint in a mixture.	39	2.6	33	3.0	43	3.8

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Singapore SCALE=Algebra

			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	85	0.8	86	0.9	84	1.2
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	94	0.8	93	1.0	95	0.8
C05	No	Determine number which continues pattern based on figures.	74	1.6	72	1.9	77	2.2
D10	No	Identify equation which solves word problem: C=(100+6n).	60	1.8	60	2.3	61	2.0
E05	No	Find relationship between numbers in a set of ordered pairs.	74	1.7	73	2.5	76	2.0
F11	No	Solve multi-step problem using linear equations.	85	1.5	84	1.9	85	1.7
G06	No	Find solution to -3X for given value of X.	78	1.7	76	2.4	81	1.7
H10	No	Identify equation expressing xy relationship from table of values.	72	2.1	70	2.6	74	2.5
H12	No	Select symbolic linear equation which fits word problem.	96	0.6	97	0.7	96	0.7
I01	Yes	Identify meaning of symbol in word problem equation.	50	2.6	48	3.8	51	3.6
I04	Yes	Determine next number which occurs in two number sequences.	62	2.6	59	3.2	66	3.3
J18	Yes	Identify missing number in table showing xy relationship.	50	2.8	51	3.4	49	3.7
K04	Yes	Identify expression equivalent to linear inequality.	69	2.5	68	3.2	71	3.5
L11	Yes	Solve multi-step word problem using pattern.	42	2.5	38	2.9	46	3.8
L13	Yes	Identify matching patterns of symbols.	95	0.8	95	1.2	96	1.2
L16	Yes	Simplify and solve linear equation for X.	79	2.3	80	2.5	78	2.9
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	80	1.8	78	2.7	82	2.9
O07	Yes	Solve linear equation for X.	96	0.9	94	1.5	97	1.1
P10	Yes	Identify equivalent algebraic expressions.	82	2.0	81	3.0	83	2.0
P15	Yes	Identify equivalent expression for a cubic relationship.	91	1.4	93	1.8	90	1.7
Q01	Yes	Identify linear expression based on word problem.	86	1.7	82	2.6	89	2.0
Q02	Yes	Subtract fractional expressions of X.	82	1.8	83	2.7	80	2.2
Q07	Yes	Solve P=LW for W given values for P and L.	96	0.8	97	1.0	95	1.4
R09	Yes	Identify equivalent expressions from properties of real numbers.	68	2.4	64	2.9	72	2.9
R11	Yes	Solve algebra word problem: linear equation.	79	2.0	78	2.5	80	2.7
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	83	1.5	86	2.2	80	2.3
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	50	2.8	52	3.7	47	3.6
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	71	2.2	71	2.8	72	2.9
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	76	2.1	75	2.7	76	2.8

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Singapore SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	93	0.5	93	0.6	94	0.5
B07	No	Interpret line graph to find region of largest increase.	88	0.9	88	1.2	89	1.1
C02	No	Interpret pie graph to determine distribution.	89	1.0	90	1.2	88	1.3
E01	No	Interpret line graph to determine intersection point of two plots.	80	1.4	80	1.7	80	2.0
F08	No	Predict probability of occurrence for independent coin toss.	46	1.9	47	2.5	46	2.6
G01	No	Interpret frequency table to find number above a given level.	65	1.7	66	2.1	64	2.5
H07	No	Interpret barchart histogram to find number above a given level.	89	0.9	89	1.2	89	1.1
H11	No	Predict number of total defective bulbs based on random sample.	84	1.2	85	1.6	82	1.5
I09	Yes	Predict most likely color of random card based on fraction of colors.	92	1.4	93	1.7	91	2.1
J13	Yes	Draw pictograph to represent number given in table.	94	1.1	94	1.7	93	1.6
K07	Yes	Determine the number of blue pens given probability of selection.	92	1.1	92	1.8	94	1.2
L10	Yes	Use data in a chart to identify time/day with highest temperature.	88	1.4	86	2.2	90	1.9
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	81	1.9	80	2.5	83	2.3
N18	Yes	Find probability of drawing an even number from 1 to 9.	67	2.7	66	3.6	67	3.2
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	67	2.0	68	3.4	66	2.4
O05	Yes	Calculate number of cube faces from probability of toss.	88	1.7	86	2.2	91	2.0
P17	Yes	Identify thermometer which shows temperature given in data table.	80	1.9	80	2.9	81	2.4
Q04	Yes	Interpret data in bar graph.	93	1.0	91	1.8	96	1.0
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	49	2.7	53	3.9	44	3.0
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	55	2.0	54	2.8	56	2.6

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Singapore SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	90	0.8	90	1.1	91	1.0
B09	No	Identify shaded figure which shows 2/5 = 4/10.	85	1.1	85	1.4	85	1.3
B10	No	Identify smallest of decimal fractions.	88	0.8	90	1.0	85	1.2
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	74	1.6	75	2.1	73	2.2
C06	No	Determine the worst estimate of: 848 + 677.	89	0.8	89	1.2	90	1.1
D09	No	Identify smallest fraction.	93	0.6	94	0.9	92	0.9
D12	No	Estimate rational number from point on number line.	91	0.8	92	1.2	91	1.0
E03	No	Find fraction of hour between two time points.	87	1.1	88	1.4	86	1.6
E04	No	Solve multi-step word problem: 4-digit whole numbers.	93	0.8	92	1.1	94	1.0
F09	No	Identify decimal fraction between 0.07 and 0.08.	88	0.9	89	1.3	87	1.3
F12	No	Identify fraction of circle which is shaded.	76	1.3	77	1.7	73	2.2
G05	No	Identify fraction represented in word problem.	92	0.9	91	1.1	93	1.0
H08	No	Identify figure showing 2/3 shaded.	96	0.4	95	0.7	97	0.5
H09	No	Identify sum which is closest to 691 + 208.	97	0.4	98	0.5	96	0.7
I02	Yes	Solve multi-step word problem: common fractions.	94	1.1	93	1.8	96	1.2
I05	Yes	Solve subtraction word problem: rational numbers.	93	1.2	91	1.9	95	1.4
I06	Yes	Write a fraction larger than a given number.	88	1.6	92	1.6	84	2.8
I07	Yes	Recognize when estimation is appropriate.	80	1.9	74	2.8	85	2.1
J12	Yes	Divide fractions.	87	1.5	84	2.3	90	1.9
J14	Yes	Divide rational numbers, fractional divisor.	68	2.5	65	3.3	72	3.1
J17	Yes	Use map and scale to find distance between two cities.	84	1.6	83	2.2	84	2.0
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	80	2.1	80	2.5	80	2.4
K02	Yes	Find total volume of mixture using rational number addition.	92	1.2	92	1.8	93	1.7
K06	Yes	Approximate amount increased by 15%.	67	2.4	68	3.0	67	3.1
K09	Yes	Compute sum of three fractions.	90	1.4	89	2.2	92	1.8
L08	Yes	Estimate actual height from diagram of relative heights.	64	2.2	63	3.4	66	2.7
L09	Yes	Identify 504.7 from its expression in words.	94	1.1	94	1.5	93	1.7
L17	Yes	Subtract three fractions.	93	1.0	92	1.4	94	1.6
M04	Yes	Identify the largest fraction.	76	2.3	76	3.3	76	2.7
M08	Yes	Multiply two decimal fractions.	66	2.4	64	3.6	68	2.3
N11	Yes	Identify number rounded to 18200.	98	0.6	99	0.7	97	1.0
N14	Yes	Identify list of equivalent fractions.	90	1.3	89	2.0	92	1.8
N16	Yes	Solve algebra word problem with fractions.	66	2.5	69	2.7	64	3.8
N17	Yes	Solve multi-step word problem: decimal fractions.	70	2.6	68	3.0	73	3.3
N19	Yes	Shade a given fraction of the squares in a grid.	92	1.5	92	2.0	92	1.9
O02	Yes	Calculate percent increase.	78	2.4	76	3.4	79	2.6
O04	Yes	Identify number rounded to the nearest 100th.	57	2.2	58	3.4	57	3.0
O09	Yes	Solve division word problem: common fractions.	84	1.9	84	2.4	84	2.2
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	92	1.4	92	1.8	91	1.9
P13	Yes	Use heart beats/min to find beats per hour.	86	1.7	85	2.4	86	1.9
P14	Yes	Solve subtraction word problem: common fractions.	92	1.1	90	1.8	93	1.0
P16	Yes	Reduce decimal to fraction in lowest terms.	90	1.3	89	2.0	91	1.5
Q06	Yes	Approximate water use/year from use/week.	55	2.4	51	3.5	59	2.8
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	84	1.8	86	2.5	82	2.6
Q09	Yes	Perform multiple operations of common fractions.	89	1.3	87	2.0	92	1.7
R06	Yes	Subtract two decimal numbers.	88	1.3	85	2.0	91	1.8
R07	Yes	Solve division word problem involving decimals.	71	2.2	70	2.8	72	3.0
R12	Yes	Subtract 4-digit whole numbers.	98	0.7	98	0.6	97	1.0
R13	Yes	Determine how much money left after spending 7/9.	79	1.9	77	3.1	82	2.4
U01A	Yes	Estimate the time required to record 5 songs.	70	1.7	70	2.2	70	2.4
U01B	Yes	Explain method of estimation.	71	1.8	71	2.4	72	2.4
V01	Yes	Determine actual weight from rounded value.	89	1.3	90	1.7	89	1.8

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Singapore SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	76	1.3	76	1.6	76	1.5
B11	No	Identify cube made by folding 2-dimensional net.	85	0.9	88	1.2	81	1.3
C03	No	Identify properties of congruent trapezoids.	82	1.2	81	1.6	84	1.5
D07	No	Identify relationship of angles in symmetric polygon.	79	1.4	81	2.0	78	1.7
E02	No	Determine angle in congruent triangles.	82	1.2	83	1.5	82	1.7
G03	No	Find sum of vertical angles from diagram of intersecting lines.	85	1.1	84	1.7	85	1.3
I08	Yes	Identify point on a line defined by two other points.	59	2.3	57	3.3	62	3.0
J11	Yes	Identify properties of a parallelogram.	57	2.3	52	3.3	64	3.3
J15	Yes	Identify similar triangles of different size.	83	1.8	82	2.4	85	2.5
J16	Yes	Identify coordinates for point on a grid.	91	1.3	91	1.6	90	1.9
K03	Yes	Identify figure from rotation of 3-dimensional object.	79	1.9	79	2.4	78	2.8
K08	Yes	Determine unknown angle in rotated congruent triangles.	69	2.3	67	3.2	72	3.0
L15	Yes	Find fourth quadrilateral angle, given the other three.	63	2.0	61	3.0	65	3.2
M02	Yes	Identify all lines of symmetry for a rectangle.	81	2.1	82	2.9	81	2.9
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	62	2.5	64	3.5	60	3.3
M07	Yes	Find angle based on supplementary pairs.	92	1.3	91	1.9	92	1.6
N12	Yes	Identify point on number line from distance of other points.	73	2.1	74	3.0	73	3.0
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	77	2.5	76	3.4	78	2.8
O08	Yes	Find center point of rotation for symmetry-related figures.	86	1.7	90	2.0	81	2.6
P08	Yes	Know relationship between side and perimeter for square.	80	1.8	77	2.8	84	1.9
P09	Yes	Find length of side for similar triangles.	67	2.4	65	3.5	69	3.0
Q10	Yes	Perform calculation involving addition/subtraction of angles.	70	2.4	71	3.2	69	3.1
R10	Yes	Determine into how many triangles a trapezoid can be divided.	74	1.8	75	2.7	74	2.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Singapore SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	93	0.5	93	0.6	93	0.8
C01	No	Compare volumes of different stacks of blocks.	93	0.8	95	0.9	92	1.0
D11	No	Identify best unit to measure the mass of an egg.	96	0.5	96	0.7	96	0.8
E06	No	Solve word problem to find length of rectangle from width and perimeter.	83	1.4	83	1.8	84	1.6
F10	No	Determine measurement accuracy of ruler.	53	2.2	55	2.6	51	2.7
G02	No	Read meter scale to determine length of a pipe.	96	0.5	96	0.7	97	0.6
I03	Yes	Find number of 750 mL bottles filled by a large volume.	66	2.7	67	3.5	65	3.1
J10	Yes	Determine area of sheet not covered by rectangular picture.	90	1.4	88	2.0	92	1.9
K05	Yes	Calculate area of a rectangle given its length and perimeter.	86	1.9	86	2.5	85	2.4
L12	Yes	Find longest pace from chart showing number of paces to cross room.	77	2.3	78	2.8	75	3.2
M01	Yes	Read mass shown on scale.	96	0.9	97	1.2	96	1.3
N15	Yes	Identify drawing with angle closest to 30 degrees.	73	1.9	70	2.8	77	2.7
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	84	1.8	83	2.8	85	2.0
P11	Yes	Use ruler to determine approximate length of pencil.	64	2.3	67	2.9	61	3.4
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	55	2.3	53	3.3	57	3.4
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	96	0.8	96	1.2	96	1.1
S02B	Yes	Calculate length of side of square given area.	90	1.5	90	2.1	90	1.9
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	67	2.3	66	3.2	68	3.3
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	81	1.7	82	2.1	80	2.2

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Singapore SCALE=Proportionality

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	81	1.0	82	1.1	80	1.3
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	91	0.7	91	1.1	92	1.0
D08	No	Solve ratio problem for x: 7/13 = x/52.	98	0.4	98	0.5	98	0.5
F07	No	Solve word problem to find average speed from distance and time.	72	1.9	72	2.8	72	2.0
G04	No	Solve simple proportionality equation.	94	0.7	95	0.8	94	0.9
L14	Yes	Identify missing numbers in table of proportional x and y values.	47	2.8	49	3.5	44	3.6
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	92	1.3	88	2.2	95	1.3
Q05	Yes	Solve word problem involving ratios.	85	1.7	86	2.1	84	2.7
R14	Yes	Solve multi-step word problem involving ratios.	83	1.8	80	2.4	85	2.2
T02A	Yes	Solve algebra word problem involving ratios.	47	2.7	48	3.2	46	3.7
T02B	Yes	Solve multi-step word problem computing fractions.	21	1.8	21	2.6	21	2.2
V03	Yes	Determine ratio of red paint in a mixture.	95	0.8	93	1.2	97	0.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=South Africa SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	29	1.8	33	2.5	25	1.8
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	25	2.0	25	2.8	26	2.3
C05	No	Determine number which continues pattern based on figures.	22	2.2	23	2.7	20	2.7
D10	No	Identify equation which solves word problem: C=(100+6n).	25	1.6	25	2.3	24	1.9
E05	No	Find relationship between numbers in a set of ordered pairs.	24	1.8	23	2.2	24	2.8
F11	No	Solve multi-step problem using linear equations.	26	1.6	30	2.3	24	1.9
G06	No	Find solution to -3X for given value of X.	15	1.7	14	2.1	15	1.9
H10	No	Identify equation expressing xy relationship from table of values.	18	1.5	17	1.9	19	1.8
H12	No	Select symbolic linear equation which fits word problem.	40	2.2	42	3.2	37	2.4
I01	Yes	Identify meaning of symbol in word problem equation.	30	2.2	35	3.2	27	3.1
I04	Yes	Determine next number which occurs in two number sequences.	9	2.4	10	2.7	8	2.9
J18	Yes	Identify missing number in table showing xy relationship.	22	2.0	24	2.9	19	2.4
K04	Yes	Identify expression equivalent to linear inequality.	22	2.1	21	2.8	23	2.8
L11	Yes	Solve multi-step word problem using pattern.	38	2.4	38	3.2	38	3.7
L13	Yes	Identify matching patterns of symbols.	53	3.3	56	3.9	51	3.7
L16	Yes	Simplify and solve linear equation for X.	5	1.8	5	2.2	6	2.1
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	12	2.6	9	2.6	15	3.7
O07	Yes	Solve linear equation for X.	39	2.5	40	3.8	39	3.4
P10	Yes	Identify equivalent algebraic expressions.	33	2.7	34	3.4	33	3.8
P15	Yes	Identify equivalent expression for a cubic relationship.	39	2.6	38	4.0	40	4.3
Q01	Yes	Identify linear expression based on word problem.	19	2.4	20	3.2	19	3.0
Q02	Yes	Subtract fractional expressions of X.	35	2.2	36	3.6	33	3.4
Q07	Yes	Solve P=LW for W given values for P and L.	30	3.0	30	4.8	30	4.5
R09	Yes	Identify equivalent expressions from properties of real numbers.	17	1.8	16	2.6	19	2.8
R11	Yes	Solve algebra word problem: linear equation.	29	1.9	26	2.5	33	2.9
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	20	2.5	21	3.8	19	3.2
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	3	1.3	4	2.6	1	0.7
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	3	1.0	2	1.0	3	1.4
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	3	1.2	4	1.8	3	1.4

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=South Africa SCALE=Data Rep., Analysis & Prob.

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	49	1.7	49	2.6	49	1.8
B07	No	Interpret line graph to find region of largest increase.	26	1.7	26	2.0	26	2.2
C02	No	Interpret pie graph to determine distribution.	38	2.2	41	2.5	36	2.7
E01	No	Interpret line graph to determine intersection point of two plots.	26	1.5	26	2.4	25	1.9
F08	No	Predict probability of occurrence for independent coin toss.	34	1.5	35	2.1	34	1.9
G01	No	Interpret frequency table to find number above a given level.	22	1.2	24	1.6	21	1.7
H07	No	Interpret barchart histogram to find number above a given level.	24	1.6	29	2.3	18	1.8
H11	No	Predict number of total defective bulbs based on random sample.	28	1.4	28	2.0	28	1.7
I09	Yes	Predict most likely color of random card based on fraction of colors.	42	2.8	42	3.7	43	3.7
J13	Yes	Draw pictograph to represent number given in table.	17	3.1	25	5.3	9	2.2
K07	Yes	Determine the number of blue pens given probability of selection.	24	2.2	25	3.3	24	2.9
L10	Yes	Use data in a chart to identify time/day with highest temperature.	55	2.6	55	3.7	55	3.1
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	28	2.8	29	3.6	27	3.4
N18	Yes	Find probability of drawing an even number from 1 to 9.	24	2.2	24	3.5	23	3.3
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	17	2.3	21	3.5	13	2.3
O05	Yes	Calculate number of cube faces from probability of toss.	15	1.9	18	3.8	12	2.3
P17	Yes	Identify thermometer which shows temperature given in data table.	32	2.7	33	4.3	32	3.4
Q04	Yes	Interpret data in bar graph.	32	3.5	33	5.4	30	4.2
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	20	2.4	23	3.7	17	3.0
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	2	1.1	3	1.5	2	1.3

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=South Africa SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	15	1.6	16	2.2	14	1.8
B09	No	Identify shaded figure which shows 2/5 = 4/10.	32	1.7	33	2.2	32	2.1
B10	No	Identify smallest of decimal fractions.	8	1.6	10	2.2	6	1.5
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	47	1.7	47	2.2	46	1.9
C06	No	Determine the worst estimate of: 848 + 677.	45	2.2	47	2.5	44	2.9
D09	No	Identify smallest fraction.	32	2.0	40	2.7	24	2.4
D12	No	Estimate rational number from point on number line.	44	2.1	50	2.9	38	2.1
E03	No	Find fraction of hour between two time points.	25	1.3	24	2.1	25	1.7
E04	No	Solve multi-step word problem: 4-digit whole numbers.	31	2.0	33	2.6	28	2.2
F09	No	Identify decimal fraction between 0.07 and 0.08.	33	1.6	35	2.4	32	2.0
F12	No	Identify fraction of circle which is shaded.	27	1.7	31	2.2	24	2.3
G05	No	Identify fraction represented in word problem.	26	2.2	26	3.2	26	2.5
H08	No	Identify figure showing 2/3 shaded.	22	2.4	21	3.3	23	2.3
H09	No	Identify sum which is closest to 691 + 208.	41	2.5	44	3.0	38	3.1
I02	Yes	Solve multi-step word problem: common fractions.	23	2.6	24	4.2	23	3.0
I05	Yes	Solve subtraction word problem: rational numbers.	33	3.0	32	4.5	33	3.5
I06	Yes	Write a fraction larger than a given number.	50	2.4	49	3.3	49	3.6
I07	Yes	Recognize when estimation is appropriate.	42	2.6	41	3.8	41	3.5
J12	Yes	Divide fractions.	10	1.9	12	3.0	8	2.5
J14	Yes	Divide rational numbers, fractional divisor.	23	3.0	23	4.0	22	3.6
J17	Yes	Use map and scale to find distance between two cities.	24	2.2	30	3.8	19	2.7
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	29	2.6	31	3.4	26	3.1
K02	Yes	Find total volume of mixture using rational number addition.	29	3.5	31	4.6	28	4.0
K06	Yes	Approximate amount increased by 15%.	13	1.7	13	2.7	12	2.5
K09	Yes	Compute sum of three fractions.	15	2.2	17	3.6	14	2.8
L08	Yes	Estimate actual height from diagram of relative heights.	23	3.0	24	4.4	22	3.5
L09	Yes	Identify 504.7 from its expression in words.	37	3.1	42	4.5	31	3.4
L17	Yes	Subtract three fractions.	20	2.7	22	4.5	17	2.7
M04	Yes	Identify the largest fraction.	8	1.8	9	2.8	6	2.1
M08	Yes	Multiply two decimal fractions.	16	3.1	16	4.0	16	3.4
N11	Yes	Identify number rounded to 18200.	41	2.8	41	3.7	42	3.8
N14	Yes	Identify list of equivalent fractions.	41	2.9	44	4.5	40	3.6
N16	Yes	Solve algebra word problem with fractions.	37	2.5	36	3.8	38	3.3
N17	Yes	Solve multi-step word problem: decimal fractions.	23	2.1	25	3.6	21	2.9
N19	Yes	Shade a given fraction of the squares in a grid.	8	2.5	9	3.0	8	2.7
O02	Yes	Calculate percent increase.	18	1.7	17	2.3	18	2.6
O04	Yes	Identify number rounded to the nearest 100th.	21	2.6	21	3.9	20	3.1
O09	Yes	Solve division word problem: common fractions.	6	1.7	8	2.6	4	1.4
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	35	2.3	36	3.5	34	3.4
P13	Yes	Use heart beats/min to find beats per hour.	22	2.5	25	4.0	18	2.8
P14	Yes	Solve subtraction word problem: common fractions.	45	3.1	51	4.2	38	3.6
P16	Yes	Reduce decimal to fraction in lowest terms.	5	2.1	8	3.8	2	1.4
Q06	Yes	Approximate water use/year from use/week.	12	2.4	15	3.8	9	2.1
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	18	1.9	13	2.8	22	2.8
Q09	Yes	Perform multiple operations of common fractions.	25	2.5	27	4.0	23	3.1
R06	Yes	Subtract two decimal numbers.	48	3.2	49	4.3	47	3.9
R07	Yes	Solve division word problem involving decimals.	35	3.0	39	4.7	29	3.5
R12	Yes	Subtract 4-digit whole numbers.	56	3.3	56	4.6	56	4.0
R13	Yes	Determine how much money left after spending 7/9.	4	1.2	5	2.3	2	1.2
U01A	Yes	Estimate the time required to record 5 songs.	5	1.4	8	2.3	3	1.2
U01B	Yes	Explain method of estimation.	6	1.4	8	2.4	4	1.4
V01	Yes	Determine actual weight from rounded value.	16	2.2	19	2.8	13	2.5

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=South Africa SCALE=Geometry

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	29	0.8	28	1.1	29	1.2
B11	No	Identify cube made by folding 2-dimensional net.	17	1.9	19	2.9	14	1.8
C03	No	Identify properties of congruent trapezoids.	25	2.1	27	2.7	24	2.4
D07	No	Identify relationship of angles in symmetric polygon.	21	1.6	24	2.6	18	1.8
E02	No	Determine angle in congruent triangles.	25	1.4	23	1.9	27	1.9
G03	No	Find sum of vertical angles from diagram of intersecting lines.	19	1.8	21	2.5	16	2.0
I08	Yes	Identify point on a line defined by two other points.	25	2.2	25	3.2	26	2.4
J11	Yes	Identify properties of a parallelogram.	27	2.0	24	3.6	30	2.7
J15	Yes	Identify similar triangles of different size.	25	2.4	26	3.5	25	2.5
J16	Yes	Identify coordinates for point on a grid.	14	1.8	16	3.2	11	2.2
K03	Yes	Identify figure from rotation of 3-dimensional object.	36	2.3	41	3.5	32	2.6
K08	Yes	Determine unknown angle in rotated congruent triangles.	14	1.8	14	2.4	14	2.5
L15	Yes	Find fourth quadrilateral angle, given the other three.	12	1.9	13	2.7	11	2.3
M02	Yes	Identify all lines of symmetry for a rectangle.	29	2.3	30	3.4	28	2.7
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	17	2.1	18	3.0	16	2.8
M07	Yes	Find angle based on supplementary pairs.	47	2.4	48	3.4	46	2.8
N12	Yes	Identify point on number line from distance of other points.	41	2.6	39	4.0	43	3.5
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	25	2.4	29	3.6	21	2.8
O08	Yes	Find center point of rotation for symmetry-related figures.	37	3.0	39	3.7	35	4.3
P08	Yes	Know relationship between side and perimeter for square.	31	2.5	32	3.4	30	3.7
P09	Yes	Find length of side for similar triangles.	22	2.1	22	2.8	23	2.8
Q10	Yes	Perform calculation involving addition/subtraction of angles.	10	2.3	13	3.7	8	2.4
R10	Yes	Determine into how many triangles a trapezoid can be divided.	14	2.1	12	2.7	16	3.1

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=South Africa SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	15	1.8	16	2.3	14	1.9
C01	No	Compare volumes of different stacks of blocks.	23	2.0	26	2.9	20	2.0
D11	No	Identify best unit to measure the mass of an egg.	54	2.1	59	2.8	48	2.3
E06	No	Solve word problem to find length of rectangle from width and perimeter.	16	1.2	16	1.8	15	1.6
F10	No	Determine measurement accuracy of ruler.	26	1.6	27	2.3	25	1.7
G02	No	Read meter scale to determine length of a pipe.	45	2.1	48	2.9	44	2.5
I03	Yes	Find number of 750 mL bottles filled by a large volume.	33	2.7	34	4.2	30	2.9
J10	Yes	Determine area of sheet not covered by rectangular picture.	13	1.9	14	3.3	13	2.6
K05	Yes	Calculate area of a rectangle given its length and perimeter.	4	1.3	4	2.0	4	1.5
L12	Yes	Find longest pace from chart showing number of paces to cross room.	23	2.7	26	4.6	20	2.6
M01	Yes	Read mass shown on scale.	52	2.5	51	3.8	52	2.8
N15	Yes	Identify drawing with angle closest to 30 degrees.	34	2.5	37	3.9	31	3.0
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	12	2.7	13	3.5	11	2.9
P11	Yes	Use ruler to determine approximate length of pencil.	17	2.1	21	3.7	13	2.0
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	13	2.0	15	2.9	11	2.3
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	15	3.2	20	4.8	11	3.0
S02B	Yes	Calculate length of side of square given area.	2	1.0	3	2.0	2	0.5
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	3	1.1	3	2.0	3	1.3
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	4	1.3	5	1.7	3	1.4
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	0	0.2	0	0.4	.	.
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	5	1.3	9	2.6	1	0.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=South Africa SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	55	1.3	55	1.7	54	1.5
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	39	1.8	43	2.8	35	1.7
D08	No	Solve ratio problem for x: 7/13 = x/52.	40	2.1	43	2.7	37	2.6
F07	No	Solve word problem to find average speed from distance and time.	14	1.1	16	1.5	13	1.4
G04	No	Solve simple proportionality equation.	32	2.5	36	3.6	28	3.0
L14	Yes	Identify missing numbers in table of proportional x and y values.	13	1.4	13	2.4	12	1.9
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	9	1.7	11	2.4	7	2.1
Q05	Yes	Solve word problem involving ratios.	31	2.2	37	3.7	26	3.1
R14	Yes	Solve multi-step word problem involving ratios.	2	0.8	2	1.3	1	0.8
T02A	Yes	Solve algebra word problem involving ratios.	3	0.9	3	1.2	3	1.2
T02B	Yes	Solve multi-step word problem computing fractions.	3	0.5	3	1.0	3	0.7
V03	Yes	Determine ratio of red paint in a mixture.	16	1.5	16	2.3	17	1.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Spain SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	72	0.9	74	1.3	70	1.2
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	72	1.4	73	1.9	71	1.7
C05	No	Determine number which continues pattern based on figures.	56	1.5	55	2.0	56	2.3
D10	No	Identify equation which solves word problem: C=(100+6n).	55	1.6	53	2.6	58	2.1
E05	No	Find relationship between numbers in a set of ordered pairs.	53	1.5	52	2.0	54	2.0
F11	No	Solve multi-step problem using linear equations.	34	1.7	35	2.3	33	2.1
G06	No	Find solution to -3X for given value of X.	63	1.6	62	2.3	64	1.9
H10	No	Identify equation expressing xy relationship from table of values.	48	1.7	49	2.0	48	2.4
H12	No	Select symbolic linear equation which fits word problem.	70	1.3	68	2.1	73	1.7
I01	Yes	Identify meaning of symbol in word problem equation.	47	2.7	46	3.5	48	4.0
I04	Yes	Determine next number which occurs in two number sequences.	46	2.6	44	3.9	48	3.4
J18	Yes	Identify missing number in table showing xy relationship.	40	2.6	46	3.4	36	3.3
K04	Yes	Identify expression equivalent to linear inequality.	44	2.2	45	3.1	43	3.1
L11	Yes	Solve multi-step word problem using pattern.	31	2.3	25	3.1	37	3.5
L13	Yes	Identify matching patterns of symbols.	93	1.3	93	1.8	94	1.6
L16	Yes	Simplify and solve linear equation for X.	67	2.8	67	3.7	66	3.8
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	59	2.9	56	3.7	64	4.2
O07	Yes	Solve linear equation for X.	76	2.3	74	3.7	78	2.9
P10	Yes	Identify equivalent algebraic expressions.	59	2.7	62	3.4	55	3.8
P15	Yes	Identify equivalent expression for a cubic relationship.	63	2.7	64	3.4	62	3.6
Q01	Yes	Identify linear expression based on word problem.	61	2.3	60	3.3	63	3.6
Q02	Yes	Subtract fractional expressions of X.	68	2.5	74	3.2	63	3.6
Q07	Yes	Solve P=LW for W given values for P and L.	63	2.3	63	3.1	64	3.3
R09	Yes	Identify equivalent expressions from properties of real numbers.	50	2.7	49	3.9	51	3.3
R11	Yes	Solve algebra word problem: linear equation.	41	2.8	44	3.5	38	4.0
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	80	2.0	81	3.1	79	2.7
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	22	2.0	23	3.2	21	2.3
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	28	1.9	29	2.8	26	2.3
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	29	2.0	29	2.8	30	2.4

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Spain SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	82	0.7	82	1.0	82	1.1
B07	No	Interpret line graph to find region of largest increase.	60	1.3	58	1.7	62	1.8
C02	No	Interpret pie graph to determine distribution.	75	1.4	76	1.8	74	1.8
E01	No	Interpret line graph to determine intersection point of two plots.	73	1.3	77	1.9	69	1.8
F08	No	Predict probability of occurrence for independent coin toss.	70	1.4	72	1.6	68	1.8
G01	No	Interpret frequency table to find number above a given level.	52	1.6	52	2.0	52	2.3
H07	No	Interpret barchart histogram to find number above a given level.	58	1.6	61	2.1	55	2.1
H11	No	Predict number of total defective bulbs based on random sample.	66	1.5	68	2.0	64	2.2
I09	Yes	Predict most likely color of random card based on fraction of colors.	45	2.6	54	3.5	37	3.5
J13	Yes	Draw pictograph to represent number given in table.	86	1.7	86	2.4	87	2.4
K07	Yes	Determine the number of blue pens given probability of selection.	50	2.4	51	3.5	50	3.9
L10	Yes	Use data in a chart to identify time/day with highest temperature.	88	1.7	86	2.8	91	1.8
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	83	2.0	80	2.8	85	2.4
N18	Yes	Find probability of drawing an even number from 1 to 9.	58	2.6	60	3.1	55	4.1
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	47	2.6	51	3.9	44	4.1
O05	Yes	Calculate number of cube faces from probability of toss.	34	2.6	37	3.8	31	3.6
P17	Yes	Identify thermometer which shows temperature given in data table.	85	2.0	88	2.4	83	3.0
Q04	Yes	Interpret data in bar graph.	86	2.0	83	3.3	89	2.3
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	41	2.7	46	3.7	36	3.3
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	15	1.3	14	1.8	16	1.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Spain SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	40	1.5	43	1.8	37	1.8
B09	No	Identify shaded figure which shows 2/5 = 4/10.	59	1.4	54	1.8	64	2.0
B10	No	Identify smallest of decimal fractions.	36	1.2	42	2.0	30	1.8
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	53	1.3	55	1.9	51	1.7
C06	No	Determine the worst estimate of: 848 + 677.	62	1.3	61	1.6	64	2.1
D09	No	Identify smallest fraction.	46	1.7	48	2.1	45	2.3
D12	No	Estimate rational number from point on number line.	59	1.6	59	2.5	59	2.0
E03	No	Find fraction of hour between two time points.	37	1.2	39	2.0	36	1.6
E04	No	Solve multi-step word problem: 4-digit whole numbers.	74	1.3	73	2.0	75	1.8
F09	No	Identify decimal fraction between 0.07 and 0.08.	60	1.5	66	2.1	55	1.9
F12	No	Identify fraction of circle which is shaded.	51	1.5	50	2.3	51	2.0
G05	No	Identify fraction represented in word problem.	59	1.6	58	2.4	59	2.1
H08	No	Identify figure showing 2/3 shaded.	74	1.5	73	1.8	76	2.0
H09	No	Identify sum which is closest to 691 + 208.	87	1.0	88	1.4	85	1.3
I02	Yes	Solve multi-step word problem: common fractions.	49	2.4	52	3.8	46	3.3
I05	Yes	Solve subtraction word problem: rational numbers.	73	2.0	65	2.8	79	2.6
I06	Yes	Write a fraction larger than a given number.	71	2.0	72	3.2	70	2.8
I07	Yes	Recognize when estimation is appropriate.	62	2.3	63	3.4	61	2.9
J12	Yes	Divide fractions.	58	2.4	58	4.0	58	3.3
J14	Yes	Divide rational numbers, fractional divisor.	34	2.3	31	3.1	37	3.1
J17	Yes	Use map and scale to find distance between two cities.	62	2.3	66	3.3	59	3.8
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	68	1.8	69	3.0	67	2.6
K02	Yes	Find total volume of mixture using rational number addition.	71	2.2	71	3.2	72	2.7
K06	Yes	Approximate amount increased by 15%.	34	2.0	37	3.8	32	3.0
K09	Yes	Compute sum of three fractions.	62	2.7	59	3.5	65	3.3
L08	Yes	Estimate actual height from diagram of relative heights.	59	2.4	65	3.3	52	3.3
L09	Yes	Identify 504.7 from its expression in words.	94	1.3	94	1.6	94	1.8
L17	Yes	Subtract three fractions.	33	2.6	32	3.1	35	3.9
M04	Yes	Identify the largest fraction.	24	2.1	27	2.8	21	2.8
M08	Yes	Multiply two decimal fractions.	58	2.7	58	4.1	58	3.4
N11	Yes	Identify number rounded to 18200.	77	2.3	79	2.9	74	3.0
N14	Yes	Identify list of equivalent fractions.	78	1.9	77	2.6	79	2.4
N16	Yes	Solve algebra word problem with fractions.	41	2.4	41	3.1	41	3.8
N17	Yes	Solve multi-step word problem: decimal fractions.	25	2.2	22	2.5	28	3.5
N19	Yes	Shade a given fraction of the squares in a grid.	34	2.8	37	3.4	31	3.9
O02	Yes	Calculate percent increase.	11	1.6	13	2.8	9	1.8
O04	Yes	Identify number rounded to the nearest 100th.	28	2.3	32	3.6	24	3.3
O09	Yes	Solve division word problem: common fractions.	40	2.3	45	3.6	36	3.6
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	55	2.3	57	3.1	54	3.4
P13	Yes	Use heart beats/min to find beats per hour.	70	2.1	71	2.5	70	3.2
P14	Yes	Solve subtraction word problem: common fractions.	62	2.3	63	3.5	60	3.1
P16	Yes	Reduce decimal to fraction in lowest terms.	17	2.2	19	3.0	15	2.6
Q06	Yes	Approximate water use/year from use/week.	38	2.6	36	3.0	39	3.7
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	27	2.2	32	3.5	22	3.0
Q09	Yes	Perform multiple operations of common fractions.	66	2.6	66	3.5	66	3.3
R06	Yes	Subtract two decimal numbers.	86	1.8	82	2.7	90	2.1
R07	Yes	Solve division word problem involving decimals.	37	2.7	39	4.2	35	3.4
R12	Yes	Subtract 4-digit whole numbers.	98	0.7	97	1.1	98	0.9
R13	Yes	Determine how much money left after spending 7/9.	18	2.0	22	3.1	13	2.3
U01A	Yes	Estimate the time required to record 5 songs.	21	1.5	23	2.0	19	1.8
U01B	Yes	Explain method of estimation.	27	1.6	30	2.3	24	2.0
V01	Yes	Determine actual weight from rounded value.	28	2.1	27	2.7	28	2.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Spain SCALE=Geometry

			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	69	1.2	69	1.4	70	1.6
B11	No	Identify cube made by folding 2-dimensional net.	62	1.3	63	1.8	61	1.7
C03	No	Identify properties of congruent trapezoids.	64	1.7	59	2.3	69	2.2
D07	No	Identify relationship of angles in symmetric polygon.	55	1.7	58	2.2	53	2.5
E02	No	Determine angle in congruent triangles.	25	1.6	26	1.9	23	2.1
G03	No	Find sum of vertical angles from diagram of intersecting lines.	48	1.6	50	2.0	45	2.2
I08	Yes	Identify point on a line defined by two other points.	39	2.6	42	3.8	35	3.5
J11	Yes	Identify properties of a parallelogram.	40	2.5	42	3.7	38	2.9
J15	Yes	Identify similar triangles of different size.	58	2.7	60	3.9	56	3.7
J16	Yes	Identify coordinates for point on a grid.	39	2.3	37	3.7	41	3.4
K03	Yes	Identify figure from rotation of 3-dimensional object.	71	2.2	73	3.2	69	3.1
K08	Yes	Determine unknown angle in rotated congruent triangles.	14	1.9	17	2.7	12	2.5
L15	Yes	Find fourth quadrilateral angle, given the other three.	24	2.2	24	3.1	24	2.7
M02	Yes	Identify all lines of symmetry for a rectangle.	51	2.5	50	3.3	52	3.8
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	45	2.3	50	3.6	40	3.4
M07	Yes	Find angle based on supplementary pairs.	67	2.5	74	3.4	61	3.5
N12	Yes	Identify point on number line from distance of other points.	73	2.3	77	2.7	68	3.4
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	36	2.3	34	3.5	37	3.3
O08	Yes	Find center point of rotation for symmetry-related figures.	67	2.1	71	3.3	63	3.0
P08	Yes	Know relationship between side and perimeter for square.	55	2.6	54	3.4	57	3.6
P09	Yes	Find length of side for similar triangles.	32	2.1	38	3.2	26	2.9
Q10	Yes	Perform calculation involving addition/subtraction of angles.	46	2.8	49	3.8	43	4.0
R10	Yes	Determine into how many triangles a trapezoid can be divided.	55	3.0	55	4.0	55	3.5

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Spain SCALE=Measurement

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                                                                                    Eighth Grade

                                                                            Overall      Boys       Girls

ITEM   REL  LABEL                                                            %    (se)   %    (se)   %    (se)
----------------------------------------------------------------------------------------------------------------
A03    No   Determine actual length of box which is rounded to 9 cm.        44   1.2    45   1.5    43   1.6
C01    No   Compare volumes of different stacks of blocks.                  49   1.5    54   2.1    44   2.2
D11    No   Identify best unit to measure the mass of an egg.               88   0.8    90   1.3    87   1.2
E06    No   Solve word problem to find length of rectangle from width and perimeter.  25   1.3    28   2.0    22   1.6
F10    No   Determine measurement accuracy of ruler.                        44   1.9    48   2.6    40   2.1
G02    No   Read meter scale to determine length of a pipe.                 70   1.2    74   1.9    66   1.9
I03    Yes  Find number of 750 mL bottles filled by a large volume.         42   2.2    51   3.4    35   3.1
J10    Yes  Determine area of sheet not covered by rectangular picture.     34   2.4    33   3.6    35   2.9
K05    Yes  Calculate area of a rectangle given its length and perimeter.   27   2.5    30   3.4    25   3.2
L12    Yes  Find longest pace from chart showing number of paces to cross room.  81   1.7    83   2.7    80   2.6
M01    Yes  Read mass shown on scale.                                       83   1.8    86   2.4    81   2.5
N15    Yes  Identify drawing with angle closest to 30 degrees.             59   2.3    59   2.9    59   3.6
O06    Yes  Calculate time to remove cake after baking 3/4 hour.           82   1.8    85   2.6    80   2.9
P11    Yes  Use ruler to determine approximate length of pencil.           52   2.6    56   3.9    47   3.7
Q03    Yes  Use day/hours/minutes/seconds conversions to calculate longest time.  36   2.4    37   3.4    34   3.4
S02A   Yes  Calculate area square given area of rectangle containing 5 squares.  54   2.5    56   3.9    52   3.1
S02B   Yes  Calculate length of side of square given area.                  22   2.4    24   3.4    20   2.8
S02C   Yes  Find perimeter of rectangle containing 5 squares of known size.  15   1.9    17   3.0    13   2.1
U02A   Yes  Draw new rectangle based length/width ratios of another rectangle.  28   1.7    31   2.7    25   1.9
U02B   Yes  Calculate ratio of rectangle areas given relationship between sides.   2   0.4     3   0.8     1   0.4
V04    Yes  Calculate area of parallelogram inscribed in a rectangle.       25   1.9    27   2.4    24   2.6
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REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Spain SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	43	1.2	50	1.5	36	1.6
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	75	1.0	75	1.5	76	1.4
D08	No	Solve ratio problem for x: 7/13 = x/52.	62	1.5	63	2.2	60	1.9
F07	No	Solve word problem to find average speed from distance and time.	28	1.6	31	2.4	26	1.9
G04	No	Solve simple proportionality equation.	73	1.5	74	1.9	72	2.1
L14	Yes	Identify missing numbers in table of proportional x and y values.	10	1.5	13	2.4	7	1.6
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	24	2.2	29	3.2	19	2.9
Q05	Yes	Solve word problem involving ratios.	62	3.0	63	3.9	61	3.5
R14	Yes	Solve multi-step word problem involving ratios.	42	2.7	40	3.7	44	3.4
T02A	Yes	Solve algebra word problem involving ratios.	22	1.5	24	2.5	20	1.7
T02B	Yes	Solve multi-step word problem computing fractions.	7	1.1	10	2.0	5	1.0
V03	Yes	Determine ratio of red paint in a mixture.	34	1.7	32	2.6	36	2.1

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Sweden SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	84	0.8	85	1.0	82	1.0
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	68	1.6	64	2.1	71	1.9
C05	No	Determine number which continues pattern based on figures.	54	1.5	52	2.0	58	1.9
D10	No	Identify equation which solves word problem: C=(100+6n).	61	1.6	59	1.9	64	2.2
E05	No	Find relationship between numbers in a set of ordered pairs.	42	1.7	42	2.1	42	2.1
F11	No	Solve multi-step problem using linear equations.	49	1.8	48	2.2	50	2.1
G06	No	Find solution to -3X for given value of X.	11	1.0	10	1.0	11	1.5
H10	No	Identify equation expressing xy relationship from table of values.	29	1.5	28	1.9	30	1.7
H12	No	Select symbolic linear equation which fits word problem.	78	1.4	76	2.0	80	1.7
I01	Yes	Identify meaning of symbol in word problem equation.	30	1.9	29	3.1	32	2.9
I04	Yes	Determine next number which occurs in two number sequences.	44	2.4	38	3.9	51	3.7
J18	Yes	Identify missing number in table showing xy relationship.	42	2.0	42	3.0	41	3.2
K04	Yes	Identify expression equivalent to linear inequality.	39	2.4	41	3.0	36	3.5
L11	Yes	Solve multi-step word problem using pattern.	33	2.1	34	3.2	32	2.8
L13	Yes	Identify matching patterns of symbols.	89	1.4	89	1.9	90	2.0
L16	Yes	Simplify and solve linear equation for X.	9	1.7	9	1.8	9	2.3
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	30	2.4	28	2.5	32	3.2
O07	Yes	Solve linear equation for X.	51	2.7	50	4.2	52	3.2
P10	Yes	Identify equivalent algebraic expressions.	51	2.6	48	2.8	54	3.7
P15	Yes	Identify equivalent expression for a cubic relationship.	36	2.5	36	3.4	36	3.1
Q01	Yes	Identify linear expression based on word problem.	20	2.0	21	2.9	20	2.7
Q02	Yes	Subtract fractional expressions of X.	35	2.4	34	3.5	36	2.9
Q07	Yes	Solve P=LW for W given values for P and L.	62	2.5	61	3.3	64	3.8
R09	Yes	Identify equivalent expressions from properties of real numbers.	26	2.1	24	2.5	29	3.0
R11	Yes	Solve algebra word problem: linear equation.	46	1.9	46	2.7	46	2.8
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	75	2.1	73	3.0	78	3.3
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	17	2.0	16	2.4	20	3.3
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	34	2.1	32	2.4	36	2.8
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	34	2.1	32	2.5	35	2.8

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Sweden SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	74	0.9	73	1.2	75	1.2
B07	No	Interpret line graph to find region of largest increase.	73	1.2	73	1.5	73	1.7
C02	No	Interpret pie graph to determine distribution.	84	1.2	84	1.6	84	1.5
E01	No	Interpret line graph to determine intersection point of two plots.	78	1.5	81	1.5	74	2.1
F08	No	Predict probability of occurrence for independent coin toss.	79	1.2	78	1.6	80	1.6
G01	No	Interpret frequency table to find number above a given level.	60	1.2	62	1.5	59	1.9
H07	No	Interpret barchart histogram to find number above a given level.	75	1.3	75	1.7	75	2.1
H11	No	Predict number of total defective bulbs based on random sample.	68	1.5	70	1.9	65	2.0
I09	Yes	Predict most likely color of random card based on fraction of colors.	82	2.1	81	2.6	82	2.6
J13	Yes	Draw pictograph to represent number given in table.	87	1.5	87	2.3	88	2.4
K07	Yes	Determine the number of blue pens given probability of selection.	47	2.2	46	3.0	48	3.3
L10	Yes	Use data in a chart to identify time/day with highest temperature.	94	1.3	93	1.8	95	1.5
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	81	1.9	86	2.4	77	2.8
N18	Yes	Find probability of drawing an even number from 1 to 9.	68	2.3	71	3.0	64	3.4
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	74	2.3	73	3.1	75	3.5
O05	Yes	Calculate number of cube faces from probability of toss.	55	2.7	53	3.4	57	3.8
P17	Yes	Identify thermometer which shows temperature given in data table.	95	1.0	94	1.4	95	1.4
Q04	Yes	Interpret data in bar graph.	92	1.4	91	2.1	94	1.5
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	64	2.1	68	2.7	60	3.1
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	23	1.7	23	2.1	24	2.2

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Sweden SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	68	1.2	70	1.6	66	1.5
B09	No	Identify shaded figure which shows 2/5 = 4/10.	64	1.3	59	1.9	70	1.7
B10	No	Identify smallest of decimal fractions.	71	1.6	76	1.6	66	2.1
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	55	1.3	55	2.0	56	2.2
C06	No	Determine the worst estimate of: 848 + 677.	74	1.5	74	1.8	75	1.9
D09	No	Identify smallest fraction.	85	1.2	87	1.5	83	1.6
D12	No	Estimate rational number from point on number line.	88	0.9	89	1.1	88	1.3
E03	No	Find fraction of hour between two time points.	64	1.6	64	2.0	63	2.6
E04	No	Solve multi-step word problem: 4-digit whole numbers.	76	1.6	73	1.9	79	2.1
F09	No	Identify decimal fraction between 0.07 and 0.08.	78	1.5	80	1.9	77	1.9
F12	No	Identify fraction of circle which is shaded.	67	1.2	67	2.0	66	1.7
G05	No	Identify fraction represented in word problem.	71	1.5	69	2.0	72	1.9
H08	No	Identify figure showing 2/3 shaded.	84	1.2	83	1.5	84	1.5
H09	No	Identify sum which is closest to 691 + 208.	92	0.8	93	1.0	92	1.0
I02	Yes	Solve multi-step word problem: common fractions.	63	2.8	61	3.7	65	4.0
I05	Yes	Solve subtraction word problem: rational numbers.	77	2.1	73	3.0	81	2.9
I06	Yes	Write a fraction larger than a given number.	78	2.5	75	3.8	81	2.8
I07	Yes	Recognize when estimation is appropriate.	81	2.3	79	2.9	83	3.0
J12	Yes	Divide fractions.	11	1.8	11	2.4	12	2.3
J14	Yes	Divide rational numbers, fractional divisor.	35	2.5	31	3.1	39	3.1
J17	Yes	Use map and scale to find distance between two cities.	77	1.9	79	2.5	76	2.8
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	77	2.2	79	2.5	75	3.6
K02	Yes	Find total volume of mixture using rational number addition.	64	2.3	64	3.2	66	3.6
K06	Yes	Approximate amount increased by 15%.	51	2.7	56	3.2	45	3.5
K09	Yes	Compute sum of three fractions.	24	2.3	24	3.0	25	3.3
L08	Yes	Estimate actual height from diagram of relative heights.	69	1.9	71	2.6	68	2.8
L09	Yes	Identify 504.7 from its expression in words.	94	1.2	93	1.7	95	1.4
L17	Yes	Subtract three fractions.	36	2.1	37	3.4	35	2.5
M04	Yes	Identify the largest fraction.	49	2.6	51	3.5	48	3.2
M08	Yes	Multiply two decimal fractions.	35	2.9	32	3.6	37	3.6
N11	Yes	Identify number rounded to 18200.	94	0.9	94	1.5	93	1.5
N14	Yes	Identify list of equivalent fractions.	60	2.1	64	2.8	56	3.1
N16	Yes	Solve algebra word problem with fractions.	53	2.5	56	3.0	50	3.5
N17	Yes	Solve multi-step word problem: decimal fractions.	43	2.8	41	3.3	44	3.6
N19	Yes	Shade a given fraction of the squares in a grid.	59	2.3	59	2.9	59	3.3
O02	Yes	Calculate percent increase.	32	2.1	34	2.5	30	3.3
O04	Yes	Identify number rounded to the nearest 100th.	52	2.5	53	3.6	51	3.6
O09	Yes	Solve division word problem: common fractions.	53	2.7	52	3.1	54	3.6
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	79	2.1	78	2.4	79	2.9
P13	Yes	Use heart beats/min to find beats per hour.	71	2.0	72	3.1	70	3.4
P14	Yes	Solve subtraction word problem: common fractions.	81	1.8	78	2.6	85	2.0
P16	Yes	Reduce decimal to fraction in lowest terms.	8	1.2	8	1.7	9	1.6
Q06	Yes	Approximate water use/year from use/week.	51	2.3	49	3.2	52	3.8
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	61	2.3	63	3.0	60	2.9
Q09	Yes	Perform multiple operations of common fractions.	32	2.3	34	2.8	30	3.0
R06	Yes	Subtract two decimal numbers.	77	1.7	73	2.7	81	1.9
R07	Yes	Solve division word problem involving decimals.	50	2.1	48	3.4	53	2.7
R12	Yes	Subtract 4-digit whole numbers.	88	1.6	86	2.2	91	1.9
R13	Yes	Determine how much money left after spending 7/9.	38	2.2	36	3.4	41	3.0
U01A	Yes	Estimate the time required to record 5 songs.	58	1.5	63	2.1	53	2.2
U01B	Yes	Explain method of estimation.	36	1.8	34	2.2	39	2.5
V01	Yes	Determine actual weight from rounded value.	88	1.3	89	1.6	88	1.8

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Sweden SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	56	1.1	53	1.5	59	1.2
B11	No	Identify cube made by folding 2-dimensional net.	69	1.2	69	1.5	68	1.5
C03	No	Identify properties of congruent trapezoids.	57	1.4	52	2.0	62	1.9
D07	No	Identify relationship of angles in symmetric polygon.	53	1.6	55	2.0	51	2.2
E02	No	Determine angle in congruent triangles.	35	1.6	37	2.2	32	2.0
G03	No	Find sum of vertical angles from diagram of intersecting lines.	40	1.4	41	2.0	40	2.0
I08	Yes	Identify point on a line defined by two other points.	51	2.3	49	3.1	52	3.4
J11	Yes	Identify properties of a parallelogram.	44	2.6	38	2.9	49	3.5
J15	Yes	Identify similar triangles of different size.	56	2.6	54	3.0	58	3.5
J16	Yes	Identify coordinates for point on a grid.	20	1.8	21	2.7	19	2.4
K03	Yes	Identify figure from rotation of 3-dimensional object.	53	2.6	55	3.0	51	3.9
K08	Yes	Determine unknown angle in rotated congruent triangles.	34	2.4	35	3.1	33	3.7
L15	Yes	Find fourth quadrilateral angle, given the other three.	33	2.6	31	3.5	34	3.4
M02	Yes	Identify all lines of symmetry for a rectangle.	44	2.4	45	4.1	43	3.0
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	61	2.4	65	3.3	57	3.2
M07	Yes	Find angle based on supplementary pairs.	75	1.7	72	2.6	78	2.3
N12	Yes	Identify point on number line from distance of other points.	65	2.3	70	3.0	60	3.4
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	36	2.3	33	3.3	39	3.3
O08	Yes	Find center point of rotation for symmetry-related figures.	53	2.3	53	3.0	54	3.6
P08	Yes	Know relationship between side and perimeter for square.	47	2.5	49	4.0	46	2.7
P09	Yes	Find length of side for similar triangles.	38	1.8	36	3.1	40	3.2
Q10	Yes	Perform calculation involving addition/subtraction of angles.	35	2.4	34	3.2	36	3.2
R10	Yes	Determine into how many triangles a trapezoid can be divided.	58	2.4	58	2.9	57	3.1

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Sweden SCALE=Measurement

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                                                                                    Eighth Grade

                                                                         Overall      Boys       Girls

ITEM   REL  LABEL                                                         %   (se)    %   (se)    %   (se)
------------------------------------------------------------------------------------------------------------
A03    No   Determine actual length of box which is rounded to 9 cm.      82  1.0    82  1.2     81  1.2
C01    No   Compare volumes of different stacks of blocks.                49  1.7    51  2.1     47  2.2
D11    No   Identify best unit to measure the mass of an egg.             94  0.6    94  0.9     94  0.8
E06    No   Solve word problem to find length of rectangle from width and perimeter.  48  1.8    47  2.4     49  2.2
F10    No   Determine measurement accuracy of ruler.                      82  1.3    85  1.6     79  1.7
G02    No   Read meter scale to determine length of a pipe.               89  1.0    88  1.4     89  1.2
I03    Yes  Find number of 750 mL bottles filled by a large volume.       56  2.3    63  3.1     48  3.4
J10    Yes  Determine area of sheet not covered by rectangular picture.   45  2.1    45  2.9     45  3.2
K05    Yes  Calculate area of a rectangle given its length and perimeter. 46  2.5    45  3.3     47  4.7
L12    Yes  Find longest pace from chart showing number of paces to cross room.  86  1.8    87  2.1     85  2.9
M01    Yes  Read mass shown on scale.                                     92  1.3    92  2.0     92  1.7
N15    Yes  Identify drawing with angle closest to 30 degrees.            61  2.5    61  3.1     61  3.1
O06    Yes  Calculate time to remove cake after baking 3/4 hour.          85  1.6    86  2.6     83  2.5
P11    Yes  Use ruler to determine approximate length of pencil.          67  2.0    68  3.1     65  2.7
Q03    Yes  Use day/hours/minutes/seconds conversions to calculate longest time.  39  2.0    40  3.6     37  3.3
S02A   Yes  Calculate area square given area of rectangle containing 5 squares.   59  2.7    55  4.0     64  3.9
S02B   Yes  Calculate length of side of square given area.                17  1.9    18  2.9     16  3.0
S02C   Yes  Find perimeter of rectangle containing 5 squares of known size.      28  2.1    29  3.3     28  3.9
U02A   Yes  Draw new rectangle based length/width ratios of another rectangle.   30  1.9    32  2.2     28  2.4
U02B   Yes  Calculate ratio of rectangle areas given relationship between sides. 11  1.2    12  1.5     10  1.5
V04    Yes  Calculate area of parallelogram inscribed in a rectangle.     45  1.6    48  2.3     43  2.3
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REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Sweden SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	62	1.0	68	1.3	56	1.4
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	52	1.2	55	1.5	50	1.7
D08	No	Solve ratio problem for x: 7/13 = x/52.	63	1.4	67	1.9	59	2.3
F07	No	Solve word problem to find average speed from distance and time.	29	1.4	32	1.8	26	1.5
G04	No	Solve simple proportionality equation.	64	1.5	65	1.7	63	2.3
L14	Yes	Identify missing numbers in table of proportional x and y values.	14	1.8	13	2.6	15	2.5
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	24	2.0	30	3.0	19	2.5
Q05	Yes	Solve word problem involving ratios.	74	2.0	76	2.6	71	3.1
R14	Yes	Solve multi-step word problem involving ratios.	30	2.0	29	3.0	31	2.8
T02A	Yes	Solve algebra word problem involving ratios.	43	2.4	41	3.0	46	2.8
T02B	Yes	Solve multi-step word problem computing fractions.	11	0.9	12	1.3	10	1.5
V03	Yes	Determine ratio of red paint in a mixture.	64	1.7	62	2.0	66	2.4

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Switzerland SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	84	0.8	85	0.9	83	1.2
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	64	1.6	63	1.9	65	2.1
C05	No	Determine number which continues pattern based on figures.	66	1.5	65	2.3	67	1.9
D10	No	Identify equation which solves word problem: C=(100+6n).	40	1.3	41	2.1	40	2.0
E05	No	Find relationship between numbers in a set of ordered pairs.	61	1.6	62	2.4	61	2.3
F11	No	Solve multi-step problem using linear equations.	59	1.6	63	2.3	56	2.1
G06	No	Find solution to -3X for given value of X.	20	1.3	21	1.7	18	1.9
H10	No	Identify equation expressing xy relationship from table of values.	45	1.9	44	2.4	47	2.5
H12	No	Select symbolic linear equation which fits word problem.	77	1.4	76	2.0	79	1.9
I01	Yes	Identify meaning of symbol in word problem equation.	40	2.6	40	3.7	39	3.3
I04	Yes	Determine next number which occurs in two number sequences.	55	2.7	53	4.0	57	3.1
J18	Yes	Identify missing number in table showing xy relationship.	45	2.9	45	3.9	46	3.7
K04	Yes	Identify expression equivalent to linear inequality.	39	2.4	38	3.5	40	3.1
L11	Yes	Solve multi-step word problem using pattern.	39	2.5	37	3.8	41	3.1
L13	Yes	Identify matching patterns of symbols.	95	1.4	92	2.3	98	1.1
L16	Yes	Simplify and solve linear equation for X.	26	2.4	25	3.1	27	3.3
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	40	2.3	37	2.7	44	4.0
O07	Yes	Solve linear equation for X.	77	2.2	74	4.0	80	2.7
P10	Yes	Identify equivalent algebraic expressions.	54	2.7	55	3.4	54	3.4
P15	Yes	Identify equivalent expression for a cubic relationship.	78	2.7	77	4.0	79	3.4
Q01	Yes	Identify linear expression based on word problem.	41	3.1	37	4.3	43	4.0
Q02	Yes	Subtract fractional expressions of X.	47	2.6	44	3.5	49	3.4
Q07	Yes	Solve P=LW for W given values for P and L.	55	2.5	52	4.1	57	3.7
R09	Yes	Identify equivalent expressions from properties of real numbers.	46	2.5	49	3.4	44	3.3
R11	Yes	Solve algebra word problem: linear equation.	58	2.8	59	4.5	57	3.3
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	86	1.7	90	2.3	82	2.2
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	38	2.5	40	4.1	36	3.3
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	38	1.9	41	2.7	35	2.7
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	39	1.8	40	2.5	37	2.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Switzerland SCALE=Data Rep., Analysis & Prob.

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	83	1.0	81	1.4	85	1.1
B07	No	Interpret line graph to find region of largest increase.	77	1.4	78	1.6	76	1.8
C02	No	Interpret pie graph to determine distribution.	85	1.1	84	1.3	86	1.4
E01	No	Interpret line graph to determine intersection point of two plots.	78	1.5	82	2.2	73	1.9
F08	No	Predict probability of occurrence for independent coin toss.	72	1.6	70	2.1	75	2.2
G01	No	Interpret frequency table to find number above a given level.	64	1.4	65	2.3	62	2.0
H07	No	Interpret barchart histogram to find number above a given level.	77	1.5	77	1.9	77	2.0
H11	No	Predict number of total defective bulbs based on random sample.	76	1.6	78	2.7	73	2.1
I09	Yes	Predict most likely color of random card based on fraction of colors.	80	2.1	82	3.0	77	2.7
J13	Yes	Draw pictograph to represent number given in table.	88	2.1	89	2.2	87	3.1
K07	Yes	Determine the number of blue pens given probability of selection.	60	2.8	58	3.8	63	3.6
L10	Yes	Use data in a chart to identify time/day with highest temperature.	92	1.8	93	2.1	90	2.2
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	86	1.4	86	2.4	87	2.0
N18	Yes	Find probability of drawing an even number from 1 to 9.	68	2.6	68	3.5	68	3.1
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	77	2.3	80	3.3	74	2.8
O05	Yes	Calculate number of cube faces from probability of toss.	64	3.0	66	4.0	63	3.9
P17	Yes	Identify thermometer which shows temperature given in data table.	97	1.0	96	2.0	98	0.7
Q04	Yes	Interpret data in bar graph.	92	1.4	92	2.3	92	2.1
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	63	2.3	69	3.3	57	3.7
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	26	1.5	29	2.0	22	2.0

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Switzerland SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	73	1.3	74	1.6	72	1.5
B09	No	Identify shaded figure which shows 2/5 = 4/10.	64	1.4	64	2.0	64	2.0
B10	No	Identify smallest of decimal fractions.	77	1.4	81	1.8	72	1.9
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	59	1.5	58	2.1	60	2.4
C06	No	Determine the worst estimate of: 848 + 677.	80	1.4	78	1.8	81	1.8
D09	No	Identify smallest fraction.	84	1.4	86	2.0	83	1.6
D12	No	Estimate rational number from point on number line.	83	1.2	85	1.7	81	1.5
E03	No	Find fraction of hour between two time points.	61	1.5	64	2.4	58	2.4
E04	No	Solve multi-step word problem: 4-digit whole numbers.	82	1.0	80	1.9	83	1.7
F09	No	Identify decimal fraction between 0.07 and 0.08.	81	1.4	85	1.6	78	2.2
F12	No	Identify fraction of circle which is shaded.	69	1.7	70	2.0	68	2.2
G05	No	Identify fraction represented in word problem.	67	1.7	67	2.0	68	2.9
H08	No	Identify figure showing 2/3 shaded.	83	1.4	82	1.7	84	1.9
H09	No	Identify sum which is closest to 691 + 208.	92	1.0	92	1.6	92	1.3
I02	Yes	Solve multi-step word problem: common fractions.	72	2.4	74	3.2	71	3.7
I05	Yes	Solve subtraction word problem: rational numbers.	86	2.5	86	3.1	87	2.9
I06	Yes	Write a fraction larger than a given number.	83	2.0	87	2.4	80	3.5
I07	Yes	Recognize when estimation is appropriate.	64	2.3	64	3.6	63	4.0
J12	Yes	Divide fractions.	32	2.8	29	4.1	35	3.1
J14	Yes	Divide rational numbers, fractional divisor.	45	2.8	47	3.7	42	4.1
J17	Yes	Use map and scale to find distance between two cities.	81	2.5	79	3.8	84	2.6
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	77	2.0	79	3.6	75	2.9
K02	Yes	Find total volume of mixture using rational number addition.	73	2.7	71	3.8	75	4.0
K06	Yes	Approximate amount increased by 15%.	46	2.7	48	4.2	43	3.6
K09	Yes	Compute sum of three fractions.	56	2.6	52	3.5	60	4.1
L08	Yes	Estimate actual height from diagram of relative heights.	66	2.5	68	3.6	64	3.1
L09	Yes	Identify 504.7 from its expression in words.	91	1.6	91	2.5	91	2.0
L17	Yes	Subtract three fractions.	62	3.4	62	4.5	62	3.9
M04	Yes	Identify the largest fraction.	56	3.0	59	4.0	53	3.6
M08	Yes	Multiply two decimal fractions.	43	3.0	41	4.2	45	4.1
N11	Yes	Identify number rounded to 18200.	87	2.0	88	2.7	87	3.0
N14	Yes	Identify list of equivalent fractions.	79	2.6	79	3.6	80	3.6
N16	Yes	Solve algebra word problem with fractions.	47	2.8	46	3.8	48	3.8
N17	Yes	Solve multi-step word problem: decimal fractions.	44	2.1	42	3.1	47	3.5
N19	Yes	Shade a given fraction of the squares in a grid.	74	2.3	73	2.8	74	4.0
O02	Yes	Calculate percent increase.	25	1.8	28	2.8	21	2.7
O04	Yes	Identify number rounded to the nearest 100th.	49	2.9	46	3.7	51	4.0
O09	Yes	Solve division word problem: common fractions.	73	2.6	77	3.6	68	3.3
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	81	2.0	81	2.7	81	2.8
P13	Yes	Use heart beats/min to find beats per hour.	82	2.3	85	2.9	80	3.0
P14	Yes	Solve subtraction word problem: common fractions.	92	1.5	91	2.7	92	1.6
P16	Yes	Reduce decimal to fraction in lowest terms.	41	2.4	44	3.7	39	3.2
Q06	Yes	Approximate water use/year from use/week.	50	2.5	50	3.6	50	3.7
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	63	2.9	67	3.5	60	3.7
Q09	Yes	Perform multiple operations of common fractions.	53	2.9	51	3.8	55	3.7
R06	Yes	Subtract two decimal numbers.	81	2.3	80	3.3	81	3.3
R07	Yes	Solve division word problem involving decimals.	59	2.4	61	3.2	57	3.0
R12	Yes	Subtract 4-digit whole numbers.	96	1.1	96	1.5	96	1.6
R13	Yes	Determine how much money left after spending 7/9.	48	2.3	49	3.9	47	3.7
U01A	Yes	Estimate the time required to record 5 songs.	50	1.9	49	2.4	51	2.6
U01B	Yes	Explain method of estimation.	49	1.9	47	2.7	51	2.7
V01	Yes	Determine actual weight from rounded value.	59	1.8	61	2.3	56	2.4

REL: Release Status (Yes= Item in Released Item Set)

Third International Mathematics and Science Study - 1995 Assessment
Percent Correct on the Mathematics Items - Eighth Grade

May 11, 1998 214

COUNTRY ID=Switzerland SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	59	1.1	59	1.4	59	1.4
B11	No	Identify cube made by folding 2-dimensional net.	80	1.3	80	1.8	79	1.7
C03	No	Identify properties of congruent trapezoids.	61	1.4	61	1.7	62	2.6
D07	No	Identify relationship of angles in symmetric polygon.	73	1.6	75	2.0	71	2.4
E02	No	Determine angle in congruent triangles.	45	1.9	45	3.0	44	2.0
G03	No	Find sum of vertical angles from diagram of intersecting lines.	49	1.8	51	2.3	48	2.3
I08	Yes	Identify point on a line defined by two other points.	51	2.7	56	4.0	47	4.0
J11	Yes	Identify properties of a parallelogram.	52	2.9	53	3.6	52	4.0
J15	Yes	Identify similar triangles of different size.	68	2.3	70	3.2	66	3.5
J16	Yes	Identify coordinates for point on a grid.	59	2.4	56	3.1	62	3.3
K03	Yes	Identify figure from rotation of 3-dimensional object.	82	2.0	84	3.2	80	2.5
K08	Yes	Determine unknown angle in rotated congruent triangles.	33	2.8	34	4.2	31	3.5
L15	Yes	Find fourth quadrilateral angle, given the other three.	40	3.1	41	4.2	40	3.5
M02	Yes	Identify all lines of symmetry for a rectangle.	76	2.6	76	3.4	76	3.4
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	63	2.7	63	3.6	62	3.4
M07	Yes	Find angle based on supplementary pairs.	75	2.2	79	2.9	72	2.6
N12	Yes	Identify point on number line from distance of other points.	62	3.0	62	4.0	62	4.1
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	54	2.5	52	3.9	56	3.6
O08	Yes	Find center point of rotation for symmetry-related figures.	81	2.6	85	3.1	76	3.8
P08	Yes	Know relationship between side and perimeter for square.	55	2.4	59	3.5	51	3.4
P09	Yes	Find length of side for similar triangles.	41	2.9	41	4.4	40	3.7
Q10	Yes	Perform calculation involving addition/subtraction of angles.	54	2.5	50	3.1	57	3.5
R10	Yes	Determine into how many triangles a trapezoid can be divided.	56	2.8	53	4.2	59	3.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Switzerland SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	83	1.0	83	1.4	83	1.1
C01	No	Compare volumes of different stacks of blocks.	67	1.6	70	1.8	63	2.1
D11	No	Identify best unit to measure the mass of an egg.	86	1.5	84	2.3	88	1.8
E06	No	Solve word problem to find length of rectangle from width and perimeter.	54	1.7	57	2.3	52	2.2
F10	No	Determine measurement accuracy of ruler.	77	1.5	80	1.7	74	1.8
G02	No	Read meter scale to determine length of a pipe.	89	1.2	90	1.3	88	1.7
I03	Yes	Find number of 750 mL bottles filled by a large volume.	57	3.1	65	3.8	50	4.9
J10	Yes	Determine area of sheet not covered by rectangular picture.	54	2.4	54	3.7	54	3.9
K05	Yes	Calculate area of a rectangle given its length and perimeter.	53	2.8	56	3.8	51	4.2
L12	Yes	Find longest pace from chart showing number of paces to cross room.	87	1.6	85	2.5	89	1.8
M01	Yes	Read mass shown on scale.	97	1.1	99	0.5	95	2.2
N15	Yes	Identify drawing with angle closest to 30 degrees.	73	2.4	75	3.4	69	3.9
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	88	1.8	91	2.1	84	2.7
P11	Yes	Use ruler to determine approximate length of pencil.	73	2.6	76	3.6	70	3.6
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	40	2.5	39	3.4	40	3.2
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	72	2.4	72	3.1	72	3.4
S02B	Yes	Calculate length of side of square given area.	31	2.4	37	3.5	24	2.9
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	28	2.3	32	3.2	23	3.0
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	47	1.9	45	2.5	48	2.7
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	7	1.0	10	1.6	6	1.2
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	51	2.3	53	3.0	49	2.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Switzerland SCALE=Proportionality

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                                                                                     Eighth Grade

                                                                          Overall      Boys       Girls

ITEM   REL  LABEL                                                          %   (se)    %   (se)    %   (se)
-----------------------------------------------------------------------------------------------------------
A04    No   Solve word problem using proportions: 4/3 = 12/?              72   1.2    76   1.4    67   1.6
B08    No   Solve word problem using proportions: 300 calories/100g = ?/30g.  75   1.1    72   1.7    78   1.4
D08    No   Solve ratio problem for x: 7/13 = x/52.                       72   1.4    73   1.9    70   2.0
F07    No   Solve word problem to find average speed from distance and time.  38   1.7    41   2.5    35   2.0
G04    No   Solve simple proportionality equation.                        80   1.4    80   2.2    80   1.8
L14    Yes  Identify missing numbers in table of proportional x and y values.  29   2.4    25   2.7    33   3.5
M06    Yes  Compute number of girls, given total students and girl:boy ratio.  38   2.5    45   3.2    31   3.4
Q05    Yes  Solve word problem involving ratios.                          76   2.2    72   3.3    80   2.5
R14    Yes  Solve multi-step word problem involving ratios.               60   2.4    55   3.3    65   3.1
T02A   Yes  Solve algebra word problem involving ratios.                  32   1.8    34   2.6    29   2.5
T02B   Yes  Solve multi-step word problem computing fractions.            14   1.7    16   2.6    11   1.7
V03    Yes  Determine ratio of red paint in a mixture.                    42   1.9    41   2.2    43   2.8
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REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Thailand SCALE=Algebra

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                                                                               Eighth Grade

                                                                     Overall      Boys       Girls

ITEM    REL  LABEL                                                    %   (se)    %   (se)    %   (se)
-----------------------------------------------------------------------------------------------------
A02     No   Solve algebraic word problem equating masses on a scale.     65   1.5   65   1.7   65   2.0
B12     No   Identify algebraic equation to solve word problem: 7n+6=41.  76   1.7   72   2.4   79   1.6
C05     No   Determine number which continues pattern based on figures.   61   1.7   60   2.2   62   2.2
D10     No   Identify equation which solves word problem:  C=(100+6n).    73   1.3   70   1.9   75   1.4
E05     No   Find relationship between numbers in a set of ordered pairs. 43   1.7   41   2.0   44   2.4
F11     No   Solve multi-step problem using linear equations.            45   2.9   44   3.0   46   3.7
G06     No   Find solution to -3X for given value of X.                  54   2.3   52   2.4   56   3.0
H10     No   Identify equation expressing xy relationship from table of values. 51 2.6 48 2.9 54 2.9
H12     No   Select symbolic linear equation which fits word problem.    73   1.7   70   2.1   75   1.9
I01     Yes  Identify meaning of symbol in word problem equation.        25   2.8   26   3.4   25   3.6
I04     Yes  Determine next number which occurs in two number sequences. 40   3.0   38   3.9   42   3.4
J18     Yes  Identify missing number in table showing xy relationship.   37   2.8   39   3.5   36   3.6
L11     Yes  Solve multi-step word problem using pattern.                39   2.6   34   3.0   42   3.6
L13     Yes  Identify matching patterns of symbols.                      96   0.8   96   1.5   96   1.0
L16     Yes  Simplify and solve linear equation for X.                   41   3.6   42   4.0   40   4.4
N13     Yes  Calculate (7X+4)/(5X-4) for a given value of X.             61   2.4   58   3.4   63   3.5
O07     Yes  Solve linear equation for X.                                78   2.2   73   3.3   82   2.3
P10     Yes  Identify equivalent algebraic expressions.                  49   3.2   43   4.2   52   3.6
P15     Yes  Identify equivalent expression for a cubic relationship.    68   2.5   64   4.3   70   2.8
Q01     Yes  Identify linear expression based on word problem.           46   2.6   40   3.9   49   3.1
Q02     Yes  Subtract fractional expressions of X.                       36   2.8   32   3.4   38   3.8
Q07     Yes  Solve P=LW for W given values for P and L.                  73   2.2   71   3.4   75   2.7
R09     Yes  Identify equivalent expressions from properties of real numbers. 58 2.7 50 3.7 63 3.2
R11     Yes  Solve algebra word problem: linear equation.               69   2.3   62   3.7   73   2.5
S01A    Yes  Complete chart by observing sequence of triangles in each of 3 figures. 86 1.3 86 2.1 85 1.8
S01B    Yes  Extend triangle pattern from 3 figures to 8th.             26   2.7   27   3.5   25   3.2
T01A    Yes  Solve multi-step algebra word problem of simultaneous equations. 28 2.5 25 2.6 29 3.4
T01B    Yes  Solve multi-step algebra word problem of simultaneous equations. 26 2.5 23 2.6 28 3.4
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REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Thailand SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	82	0.8	80	1.3	83	0.9
B07	No	Interpret line graph to find region of largest increase.	66	1.6	62	1.8	68	1.9
C02	No	Interpret pie graph to determine distribution.	88	1.0	88	1.5	89	1.1
E01	No	Interpret line graph to determine intersection point of two plots.	59	1.8	60	2.4	59	2.0
F08	No	Predict probability of occurrence for independent coin toss.	21	1.3	22	1.6	20	1.9
G01	No	Interpret frequency table to find number above a given level.	60	1.6	59	1.9	60	2.2
H07	No	Interpret barchart histogram to find number above a given level.	80	1.1	80	1.8	80	1.4
H11	No	Predict number of total defective bulbs based on random sample.	75	1.7	74	2.3	75	2.0
I09	Yes	Predict most likely color of random card based on fraction of colors.	66	2.6	63	3.6	69	2.9
J13	Yes	Draw pictograph to represent number given in table.	94	1.0	96	1.5	93	1.6
K07	Yes	Determine the number of blue pens given probability of selection.	66	2.2	61	3.7	69	2.7
L10	Yes	Use data in a chart to identify time/day with highest temperature.	86	1.5	85	2.4	86	1.7
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	76	1.9	74	3.3	78	2.5
N18	Yes	Find probability of drawing an even number from 1 to 9.	37	2.0	37	3.3	38	2.6
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	56	2.7	60	2.8	55	3.3
O05	Yes	Calculate number of cube faces from probability of toss.	54	2.9	53	4.3	55	3.5
P17	Yes	Identify thermometer which shows temperature given in data table.	90	1.3	88	2.3	91	1.5
Q04	Yes	Interpret data in bar graph.	89	1.4	85	2.3	92	1.4
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	36	2.4	40	3.7	34	2.6
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	21	2.5	19	2.5	22	3.3

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Thailand SCALE=Fractions and number sense

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	67	1.8	66	2.2	67	2.2
B09	No	Identify shaded figure which shows 2/5 = 4/10.	73	1.7	72	2.1	74	1.9
B10	No	Identify smallest of decimal fractions.	57	2.2	54	2.6	59	2.7
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	73	1.4	73	2.0	73	1.9
C06	No	Determine the worst estimate of: 848 + 677.	72	1.5	69	2.0	74	1.8
D09	No	Identify smallest fraction.	64	2.3	63	2.7	64	2.7
D12	No	Estimate rational number from point on number line.	68	1.6	68	1.9	67	2.0
E03	No	Find fraction of hour between two time points.	58	1.8	57	2.4	58	2.4
E04	No	Solve multi-step word problem: 4-digit whole numbers.	73	1.8	71	2.1	74	1.9
F09	No	Identify decimal fraction between 0.07 and 0.08.	63	1.9	63	2.3	63	2.4
F12	No	Identify fraction of circle which is shaded.	34	1.4	34	1.8	34	1.9
G05	No	Identify fraction represented in word problem.	68	1.6	63	2.1	72	1.8
H08	No	Identify figure showing 2/3 shaded.	86	1.3	85	1.6	87	1.6
H09	No	Identify sum which is closest to 691 + 208.	84	1.2	85	1.5	84	1.5
I02	Yes	Solve multi-step word problem: common fractions.	65	2.6	58	3.7	70	2.8
I05	Yes	Solve subtraction word problem: rational numbers.	80	2.3	76	3.9	82	2.2
I06	Yes	Write a fraction larger than a given number.	73	2.1	75	2.8	73	2.5
I07	Yes	Recognize when estimation is appropriate.	61	2.3	57	3.4	64	2.8
J12	Yes	Divide fractions.	59	3.3	58	3.9	59	4.4
J14	Yes	Divide rational numbers, fractional divisor.	34	3.1	32	3.4	35	4.3
J17	Yes	Use map and scale to find distance between two cities.	66	2.2	68	2.4	66	3.1
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	74	1.6	79	2.6	70	2.3
K02	Yes	Find total volume of mixture using rational number addition.	78	2.0	75	2.6	80	2.5
K06	Yes	Approximate amount increased by 15%.	35	2.6	32	3.2	37	3.4
K09	Yes	Compute sum of three fractions.	48	3.2	41	3.9	52	3.8
L08	Yes	Estimate actual height from diagram of relative heights.	59	2.6	59	3.7	58	3.0
L09	Yes	Identify 504.7 from its expression in words.	87	1.5	88	2.0	86	2.0
L17	Yes	Subtract three fractions.	52	3.1	50	3.8	54	3.7
M04	Yes	Identify the largest fraction.	34	3.0	33	3.9	34	3.9
M08	Yes	Multiply two decimal fractions.	54	2.7	50	3.6	57	3.3
N11	Yes	Identify number rounded to 18200.	89	1.4	90	2.2	89	1.7
N14	Yes	Identify list of equivalent fractions.	74	2.6	69	3.6	78	2.9
N16	Yes	Solve algebra word problem with fractions.	61	2.2	63	3.3	60	2.9
N17	Yes	Solve multi-step word problem: decimal fractions.	44	2.7	48	3.5	41	3.4
N19	Yes	Shade a given fraction of the squares in a grid.	67	2.8	67	3.4	68	3.4
O02	Yes	Calculate percent increase.	33	3.3	33	4.5	33	3.9
O04	Yes	Identify number rounded to the nearest 100th.	62	2.9	61	4.4	63	3.2
O09	Yes	Solve division word problem: common fractions.	48	3.0	47	3.4	48	3.9
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	70	2.1	67	3.2	71	2.6
P13	Yes	Use heart beats/min to find beats per hour.	74	2.4	72	3.3	75	2.7
P14	Yes	Solve subtraction word problem: common fractions.	65	2.5	65	3.3	65	3.2
P16	Yes	Reduce decimal to fraction in lowest terms.	38	3.5	33	4.2	41	4.3
Q06	Yes	Approximate water use/year from use/week.	43	3.2	36	3.9	46	3.9
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	48	2.7	42	3.4	51	3.6
Q09	Yes	Perform multiple operations of common fractions.	60	2.8	56	3.9	62	3.3
R06	Yes	Subtract two decimal numbers.	86	1.6	83	2.8	88	1.8
R07	Yes	Solve division word problem involving decimals.	39	2.4	45	3.7	36	3.1
R12	Yes	Subtract 4-digit whole numbers.	86	1.6	86	2.6	87	2.1
R13	Yes	Determine how much money left after spending 7/9.	40	3.3	36	4.6	42	4.1
U01A	Yes	Estimate the time required to record 5 songs.	33	1.5	32	2.2	33	2.0
U01B	Yes	Explain method of estimation.	20	1.7	16	2.2	22	2.3
V01	Yes	Determine actual weight from rounded value.	40	2.4	40	3.0	40	2.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Thailand SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	77	1.1	75	1.5	78	1.3
B11	No	Identify cube made by folding 2-dimensional net.	63	2.0	64	2.5	63	2.2
C03	No	Identify properties of congruent trapezoids.	71	1.7	70	2.3	71	2.1
D07	No	Identify relationship of angles in symmetric polygon.	70	1.6	70	2.3	70	2.1
E02	No	Determine angle in congruent triangles.	66	1.9	66	2.7	66	2.2
G03	No	Find sum of vertical angles from diagram of intersecting lines.	59	2.0	59	2.5	59	2.3
I08	Yes	Identify point on a line defined by two other points.	44	2.6	47	3.5	41	3.3
J11	Yes	Identify properties of a parallelogram.	62	2.4	60	3.2	64	3.2
J15	Yes	Identify similar triangles of different size.	91	1.3	90	1.7	91	1.6
J16	Yes	Identify coordinates for point on a grid.	57	2.6	54	3.4	59	3.2
K03	Yes	Identify figure from rotation of 3-dimensional object.	50	2.5	52	3.2	49	3.6
K08	Yes	Determine unknown angle in rotated congruent triangles.	33	2.2	28	2.8	36	3.2
L15	Yes	Find fourth quadrilateral angle, given the other three.	38	2.3	38	3.3	38	3.3
M02	Yes	Identify all lines of symmetry for a rectangle.	80	1.8	77	2.9	81	2.0
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	43	2.7	41	3.7	45	3.2
M07	Yes	Find angle based on supplementary pairs.	79	2.1	81	2.7	78	2.4
N12	Yes	Identify point on number line from distance of other points.	68	2.3	63	3.5	70	3.1
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	72	2.5	71	3.4	74	2.8
O08	Yes	Find center point of rotation for symmetry-related figures.	80	2.1	77	3.5	82	2.3
P08	Yes	Know relationship between side and perimeter for square.	64	2.3	57	4.1	69	2.4
P09	Yes	Find length of side for similar triangles.	40	3.3	35	4.0	42	4.1
Q10	Yes	Perform calculation involving addition/subtraction of angles.	58	2.5	59	3.9	57	2.9
R10	Yes	Determine into how many triangles a trapezoid can be divided.	55	2.6	47	4.1	60	2.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Thailand SCALE=Measurement

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	62	2.2	61	2.6	63	2.4
C01	No	Compare volumes of different stacks of blocks.	74	1.6	75	2.2	74	1.8
D11	No	Identify best unit to measure the mass of an egg.	83	1.4	84	1.8	82	1.7
E06	No	Solve word problem to find length of rectangle from width and perimeter.	38	2.4	38	2.6	37	3.1
F10	No	Determine measurement accuracy of ruler.	45	1.8	46	2.3	45	2.1
G02	No	Read meter scale to determine length of a pipe.	75	1.4	74	1.6	76	1.8
I03	Yes	Find number of 750 mL bottles filled by a large volume.	37	2.1	38	3.1	36	2.7
J10	Yes	Determine area of sheet not covered by rectangular picture.	61	2.7	62	3.4	61	3.5
K05	Yes	Calculate area of a rectangle given its length and perimeter.	32	3.0	31	3.6	33	4.3
L12	Yes	Find longest pace from chart showing number of paces to cross room.	81	1.8	83	2.5	80	2.5
M01	Yes	Read mass shown on scale.	92	1.1	96	1.1	90	1.7
N15	Yes	Identify drawing with angle closest to 30 degrees.	78	1.7	79	2.4	76	2.5
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	44	3.2	44	4.4	44	4.0
P11	Yes	Use ruler to determine approximate length of pencil.	57	2.5	54	3.7	58	3.1
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	43	2.6	44	4.3	44	2.8
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	78	2.1	76	3.3	80	2.6
S02B	Yes	Calculate length of side of square given area.	36	3.3	35	4.3	37	4.2
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	22	2.7	20	3.2	22	3.7
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	20	1.7	20	2.2	20	2.0
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	12	1.5	10	1.7	13	1.8
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	43	2.3	44	3.2	43	3.0

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Thailand SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	61	1.9	61	2.2	61	2.2
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	82	1.1	80	1.4	83	1.5
D08	No	Solve ratio problem for x: 7/13 = x/52.	80	1.7	80	2.2	80	1.8
F07	No	Solve word problem to find average speed from distance and time.	39	2.3	41	2.7	39	2.9
G04	No	Solve simple proportionality equation.	80	1.5	78	2.2	81	1.7
L14	Yes	Identify missing numbers in table of proportional x and y values.	39	2.5	37	3.9	41	3.1
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	48	2.7	50	3.8	48	3.4
Q05	Yes	Solve word problem involving ratios.	56	2.7	50	4.0	60	3.3
R14	Yes	Solve multi-step word problem involving ratios.	43	2.9	38	3.7	47	3.6
T02A	Yes	Solve algebra word problem involving ratios.	26	2.2	24	2.3	26	2.7
T02B	Yes	Solve multi-step word problem computing fractions.	6	0.9	5	1.1	6	1.1
V03	Yes	Determine ratio of red paint in a mixture.	55	2.4	54	3.5	57	2.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=England SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	79	1.0	81	1.3	77	1.4
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	61	1.8	58	2.5	64	2.4
C05	No	Determine number which continues pattern based on figures.	63	1.8	58	2.9	68	2.5
D10	No	Identify equation which solves word problem: C=(100+6n).	56	1.8	54	3.1	58	2.5
E05	No	Find relationship between numbers in a set of ordered pairs.	76	1.7	75	2.6	77	2.3
F11	No	Solve multi-step problem using linear equations.	42	2.2	42	3.5	41	2.9
G06	No	Find solution to -3X for given value of X.	29	2.0	30	2.8	27	2.8
H10	No	Identify equation expressing xy relationship from table of values.	55	2.3	54	3.3	55	3.3
H12	No	Select symbolic linear equation which fits word problem.	82	1.5	78	2.5	86	1.8
I01	Yes	Identify meaning of symbol in word problem equation.	37	3.1	36	4.6	39	4.5
I04	Yes	Determine next number which occurs in two number sequences.	54	3.6	48	4.8	61	4.7
J18	Yes	Identify missing number in table showing xy relationship.	51	3.4	53	4.7	48	5.4
K04	Yes	Identify expression equivalent to linear inequality.	33	3.4	31	4.6	34	4.3
L11	Yes	Solve multi-step word problem using pattern.	34	3.6	32	5.0	36	5.1
L13	Yes	Identify matching patterns of symbols.	95	1.6	94	2.3	95	1.7
L16	Yes	Simplify and solve linear equation for X.	21	3.1	23	5.1	20	3.4
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	46	3.9	48	5.7	43	5.4
O07	Yes	Solve linear equation for X.	61	3.4	64	4.4	59	5.1
P10	Yes	Identify equivalent algebraic expressions.	42	3.6	39	4.4	45	4.9
P15	Yes	Identify equivalent expression for a cubic relationship.	46	3.6	37	4.7	58	5.0
Q01	Yes	Identify linear expression based on word problem.	37	3.0	27	4.4	49	4.6
Q02	Yes	Subtract fractional expressions of X.	35	3.4	32	4.3	38	4.9
Q07	Yes	Solve P=LW for W given values for P and L.	53	3.6	46	5.3	61	4.6
R09	Yes	Identify equivalent expressions from properties of real numbers.	28	3.3	22	4.3	34	4.5
R11	Yes	Solve algebra word problem: linear equation.	39	3.3	36	4.6	44	4.4
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	86	2.4	85	3.1	87	3.2
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	42	3.4	42	5.0	43	4.9
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	24	2.1	27	3.7	21	2.5
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	24	2.2	26	3.6	22	2.6

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=England SCALE=Data Rep., Analysis & Prob.

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	67	1.3	67	1.8	68	1.9
B07	No	Interpret line graph to find region of largest increase.	73	1.3	72	2.0	74	2.4
C02	No	Interpret pie graph to determine distribution.	81	1.9	82	2.7	80	2.6
E01	No	Interpret line graph to determine intersection point of two plots.	75	1.8	77	2.5	72	2.5
F08	No	Predict probability of occurrence for independent coin toss.	78	1.7	77	2.5	80	2.4
G01	No	Interpret frequency table to find number above a given level.	54	1.8	55	2.3	53	2.7
H07	No	Interpret barchart histogram to find number above a given level.	78	1.6	79	2.2	76	2.3
H11	No	Predict number of total defective bulbs based on random sample.	58	1.8	60	2.6	56	2.7
I09	Yes	Predict most likely color of random card based on fraction of colors.	71	3.1	75	4.2	66	4.3
J13	Yes	Draw pictograph to represent number given in table.	92	1.7	93	2.3	92	2.3
K07	Yes	Determine the number of blue pens given probability of selection.	50	4.0	51	5.5	50	5.1
L10	Yes	Use data in a chart to identify time/day with highest temperature.	91	2.2	90	2.9	91	3.0
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	86	2.3	88	3.1	84	4.2
N18	Yes	Find probability of drawing an even number from 1 to 9.	75	3.3	75	4.3	75	4.8
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	69	3.1	73	4.8	65	4.2
O05	Yes	Calculate number of cube faces from probability of toss.	39	3.1	49	5.0	30	3.9
P17	Yes	Identify thermometer which shows temperature given in data table.	73	2.7	68	3.8	78	3.9
Q04	Yes	Interpret data in bar graph.	88	2.2	85	3.2	92	2.6
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	61	3.3	66	3.8	56	5.2
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	20	2.0	21	2.9	18	2.8

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=England SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	54	1.4	56	2.0	52	2.1
B09	No	Identify shaded figure which shows 2/5 = 4/10.	60	1.4	56	2.5	63	1.9
B10	No	Identify smallest of decimal fractions.	47	1.9	50	2.7	43	2.8
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	53	2.2	53	2.9	52	3.1
C06	No	Determine the worst estimate of: 848 + 677.	84	1.4	85	1.8	83	2.2
D09	No	Identify smallest fraction.	70	2.0	75	2.7	64	2.9
D12	No	Estimate rational number from point on number line.	89	1.4	91	1.7	87	2.2
E03	No	Find fraction of hour between two time points.	67	1.9	70	2.6	63	2.8
E04	No	Solve multi-step word problem: 4-digit whole numbers.	58	1.9	58	3.2	58	2.6
F09	No	Identify decimal fraction between 0.07 and 0.08.	71	1.8	70	2.5	73	2.7
F12	No	Identify fraction of circle which is shaded.	71	1.8	73	2.5	69	2.9
G05	No	Identify fraction represented in word problem.	71	2.1	68	3.4	75	2.5
H08	No	Identify figure showing 2/3 shaded.	79	1.7	76	2.7	82	2.4
H09	No	Identify sum which is closest to 691 + 208.	91	1.1	92	1.5	90	1.5
I02	Yes	Solve multi-step word problem: common fractions.	64	3.3	63	4.2	64	4.7
I05	Yes	Solve subtraction word problem: rational numbers.	63	3.1	65	4.3	60	4.3
I06	Yes	Write a fraction larger than a given number.	79	2.6	78	3.8	81	3.4
I07	Yes	Recognize when estimation is appropriate.	86	2.2	82	3.5	90	2.7
J12	Yes	Divide fractions.	8	2.0	9	2.6	7	2.8
J14	Yes	Divide rational numbers, fractional divisor.	19	2.7	21	3.7	16	3.6
J17	Yes	Use map and scale to find distance between two cities.	69	3.1	73	4.5	65	4.4
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	79	3.1	82	4.2	75	3.8
K02	Yes	Find total volume of mixture using rational number addition.	51	3.4	50	5.0	52	4.6
K06	Yes	Approximate amount increased by 15%.	38	3.2	44	5.1	31	4.8
K09	Yes	Compute sum of three fractions.	12	2.1	16	3.6	8	2.5
L08	Yes	Estimate actual height from diagram of relative heights.	67	3.3	66	4.8	68	5.3
L09	Yes	Identify 504.7 from its expression in words.	78	2.9	80	4.3	76	4.1
L17	Yes	Subtract three fractions.	25	2.9	30	4.0	20	3.9
M04	Yes	Identify the largest fraction.	36	3.0	41	4.3	31	4.3
M08	Yes	Multiply two decimal fractions.	8	2.2	8	2.8	8	2.5
N11	Yes	Identify number rounded to 18200.	93	1.7	92	2.6	95	2.2
N14	Yes	Identify list of equivalent fractions.	52	3.5	52	4.9	53	4.9
N16	Yes	Solve algebra word problem with fractions.	45	3.9	43	5.2	48	5.2
N17	Yes	Solve multi-step word problem: decimal fractions.	40	2.9	43	4.4	36	5.1
N19	Yes	Shade a given fraction of the squares in a grid.	43	3.7	45	5.1	41	5.2
O02	Yes	Calculate percent increase.	21	2.5	26	4.2	15	2.9
O04	Yes	Identify number rounded to the nearest 100th.	28	2.8	27	4.3	29	3.8
O09	Yes	Solve division word problem: common fractions.	52	3.6	55	5.9	50	5.0
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	73	2.9	72	3.8	75	4.6
P13	Yes	Use heart beats/min to find beats per hour.	48	3.3	45	4.7	52	4.8
P14	Yes	Solve subtraction word problem: common fractions.	88	2.2	85	3.3	91	2.9
P16	Yes	Reduce decimal to fraction in lowest terms.	16	2.7	16	3.8	15	3.9
Q06	Yes	Approximate water use/year from use/week.	33	3.2	31	5.0	35	4.3
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	37	3.2	35	4.0	40	4.9
Q09	Yes	Perform multiple operations of common fractions.	21	2.3	20	3.4	23	3.9
R06	Yes	Subtract two decimal numbers.	53	3.3	49	4.6	57	4.9
R07	Yes	Solve division word problem involving decimals.	35	3.4	35	4.5	35	4.6
R12	Yes	Subtract 4-digit whole numbers.	65	3.2	60	4.7	72	4.7
R13	Yes	Determine how much money left after spending 7/9.	26	3.1	25	3.8	28	4.2
U01A	Yes	Estimate the time required to record 5 songs.	57	2.3	60	3.9	53	3.0
U01B	Yes	Explain method of estimation.	46	2.7	44	4.3	49	3.4
V01	Yes	Determine actual weight from rounded value.	72	2.5	74	3.1	71	3.6

REL: Release Status (Yes= Item in Released Item Set)

Third International Mathematics and Science Study - 1995 Assessment
Percent Correct on the Mathematics Items - Eighth Grade

May 11, 1998 226

COUNTRY ID=England SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	39	1.1	38	1.8	40	1.5
B11	No	Identify cube made by folding 2-dimensional net.	71	1.4	73	2.1	69	2.3
C03	No	Identify properties of congruent trapezoids.	64	2.3	61	3.2	68	3.1
D07	No	Identify relationship of angles in symmetric polygon.	49	1.9	47	3.1	51	2.4
E02	No	Determine angle in congruent triangles.	38	2.3	39	3.2	37	3.0
G03	No	Find sum of vertical angles from diagram of intersecting lines.	47	2.0	46	3.0	48	2.9
I08	Yes	Identify point on a line defined by two other points.	55	3.7	57	5.1	53	5.0
J11	Yes	Identify properties of a parallelogram.	48	3.4	46	5.0	50	4.9
J15	Yes	Identify similar triangles of different size.	72	2.7	73	4.3	70	4.2
J16	Yes	Identify coordinates for point on a grid.	79	2.7	78	3.9	79	4.3
K03	Yes	Identify figure from rotation of 3-dimensional object.	77	2.9	83	3.3	70	4.5
K08	Yes	Determine unknown angle in rotated congruent triangles.	31	3.7	32	5.3	29	4.3
L15	Yes	Find fourth quadrilateral angle, given the other three.	38	3.3	41	4.5	35	4.7
M02	Yes	Identify all lines of symmetry for a rectangle.	82	2.6	77	3.7	88	3.0
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	57	3.1	60	4.8	53	5.1
M07	Yes	Find angle based on supplementary pairs.	67	2.6	64	3.9	71	4.8
N12	Yes	Identify point on number line from distance of other points.	68	3.5	67	4.6	70	5.0
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	37	3.1	38	4.8	35	4.6
O08	Yes	Find center point of rotation for symmetry-related figures.	62	3.7	60	5.1	64	4.9
P08	Yes	Know relationship between side and perimeter for square.	52	3.3	53	4.0	51	5.2
P09	Yes	Find length of side for similar triangles.	29	2.7	30	4.3	26	3.6
Q10	Yes	Perform calculation involving addition/subtraction of angles.	34	3.8	31	5.1	39	4.9
R10	Yes	Determine into how many triangles a trapezoid can be divided.	55	3.5	54	4.6	56	5.4

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=England SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	72	1.3	73	1.9	71	2.0
C01	No	Compare volumes of different stacks of blocks.	63	1.8	66	2.6	59	2.7
D11	No	Identify best unit to measure the mass of an egg.	85	1.1	86	1.8	85	1.9
E06	No	Solve word problem to find length of rectangle from width and perimeter.	48	1.9	53	2.5	43	2.8
F10	No	Determine measurement accuracy of ruler.	59	1.8	59	3.0	58	2.7
G02	No	Read meter scale to determine length of a pipe.	76	1.9	78	2.1	73	2.9
I03	Yes	Find number of 750 mL bottles filled by a large volume.	40	3.8	45	5.4	34	4.8
J10	Yes	Determine area of sheet not covered by rectangular picture.	32	3.3	33	4.2	30	5.5
K05	Yes	Calculate area of a rectangle given its length and perimeter.	34	3.4	41	5.5	27	4.1
L12	Yes	Find longest pace from chart showing number of paces to cross room.	73	3.5	75	4.5	71	5.0
M01	Yes	Read mass shown on scale.	94	1.7	93	2.6	94	2.0
N15	Yes	Identify drawing with angle closest to 30 degrees.	62	2.9	59	3.8	65	4.6
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	81	2.7	85	3.5	76	3.8
P11	Yes	Use ruler to determine approximate length of pencil.	52	3.0	50	4.0	54	4.6
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	27	3.3	28	4.4	26	4.8
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	52	3.3	51	4.4	54	4.8
S02B	Yes	Calculate length of side of square given area.	23	2.7	23	4.4	22	4.1
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	26	3.3	24	4.2	28	4.8
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	28	2.1	32	3.2	24	3.0
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	12	1.9	13	2.4	11	2.6
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	43	2.4	41	4.1	44	3.6

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=England SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	44	1.6	50	2.2	38	1.8
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	69	1.3	70	2.1	68	1.9
D08	No	Solve ratio problem for x: 7/13 = x/52.	71	1.7	73	2.5	69	2.1
F07	No	Solve word problem to find average speed from distance and time.	26	1.4	29	2.3	24	2.4
G04	No	Solve simple proportionality equation.	62	2.1	61	3.1	63	2.9
L14	Yes	Identify missing numbers in table of proportional x and y values.	18	3.0	21	4.2	16	3.3
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	42	3.4	46	4.8	37	4.9
Q05	Yes	Solve word problem involving ratios.	69	3.3	68	4.5	71	4.7
R14	Yes	Solve multi-step word problem involving ratios.	17	2.9	14	3.4	22	4.7
T02A	Yes	Solve algebra word problem involving ratios.	28	2.0	28	3.0	28	3.2
T02B	Yes	Solve multi-step word problem computing fractions.	11	1.3	10	1.9	13	2.0
V03	Yes	Determine ratio of red paint in a mixture.	39	2.7	39	4.1	38	3.6

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Scotland SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	77	1.1	80	1.0	74	1.5
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	56	2.5	54	3.2	57	2.6
C05	No	Determine number which continues pattern based on figures.	52	2.5	52	3.1	52	3.2
D10	No	Identify equation which solves word problem: C=(100+6n).	51	2.0	50	2.5	51	2.5
E05	No	Find relationship between numbers in a set of ordered pairs.	70	1.8	71	2.4	69	2.2
F11	No	Solve multi-step problem using linear equations.	40	2.5	44	3.3	36	2.8
G06	No	Find solution to -3X for given value of X.	19	1.9	18	2.7	20	2.2
H10	No	Identify equation expressing xy relationship from table of values.	49	2.6	49	3.1	50	3.2
H12	No	Select symbolic linear equation which fits word problem.	78	1.8	77	2.3	79	1.9
I01	Yes	Identify meaning of symbol in word problem equation.	33	2.6	31	3.8	34	3.6
I04	Yes	Determine next number which occurs in two number sequences.	52	3.2	49	4.1	56	4.2
J18	Yes	Identify missing number in table showing xy relationship.	46	3.1	49	4.7	43	3.5
K04	Yes	Identify expression equivalent to linear inequality.	31	2.7	30	3.6	32	3.8
L11	Yes	Solve multi-step word problem using pattern.	30	3.0	26	4.0	33	3.6
L13	Yes	Identify matching patterns of symbols.	94	1.1	94	1.8	95	1.7
L16	Yes	Simplify and solve linear equation for X.	25	3.3	27	4.3	22	3.6
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	36	3.2	35	4.5	36	4.5
O07	Yes	Solve linear equation for X.	62	2.8	59	4.1	65	2.8
P10	Yes	Identify equivalent algebraic expressions.	53	3.0	52	3.8	54	4.1
P15	Yes	Identify equivalent expression for a cubic relationship.	44	3.1	40	4.3	49	4.4
Q01	Yes	Identify linear expression based on word problem.	36	3.1	34	4.5	38	3.7
Q02	Yes	Subtract fractional expressions of X.	34	2.4	34	3.1	34	4.3
Q07	Yes	Solve P=LW for W given values for P and L.	50	3.1	53	4.5	46	3.8
R09	Yes	Identify equivalent expressions from properties of real numbers.	26	2.8	29	4.1	22	3.5
R11	Yes	Solve algebra word problem: linear equation.	39	3.1	39	4.0	38	4.1
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	89	1.8	89	2.3	89	2.7
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	35	2.8	32	4.0	39	4.4
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	23	2.2	23	2.9	23	2.9
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	25	2.3	26	3.0	25	3.2

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Scotland SCALE=Data Rep., Analysis & Prob.

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	72	1.4	73	1.7	72	1.6
B07	No	Interpret line graph to find region of largest increase.	68	2.0	68	2.5	67	2.3
C02	No	Interpret pie graph to determine distribution.	80	1.8	82	2.2	78	2.1
E01	No	Interpret line graph to determine intersection point of two plots.	73	1.6	78	1.7	68	2.6
F08	No	Predict probability of occurrence for independent coin toss.	69	2.0	69	2.5	69	2.6
G01	No	Interpret frequency table to find number above a given level.	51	1.9	54	2.6	48	2.5
H07	No	Interpret barchart histogram to find number above a given level.	78	1.5	80	1.8	77	2.1
H11	No	Predict number of total defective bulbs based on random sample.	58	2.2	62	2.8	54	2.7
I09	Yes	Predict most likely color of random card based on fraction of colors.	73	2.7	75	3.6	70	4.1
J13	Yes	Draw pictograph to represent number given in table.	88	1.7	90	2.6	86	2.5
K07	Yes	Determine the number of blue pens given probability of selection.	49	3.1	53	4.2	45	4.5
L10	Yes	Use data in a chart to identify time/day with highest temperature.	91	1.7	94	1.9	88	2.5
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	82	2.0	87	2.6	78	3.2
N18	Yes	Find probability of drawing an even number from 1 to 9.	58	3.0	61	4.4	55	3.5
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	70	2.7	76	3.2	65	4.2
O05	Yes	Calculate number of cube faces from probability of toss.	48	3.3	51	4.4	45	4.1
P17	Yes	Identify thermometer which shows temperature given in data table.	81	2.1	82	3.0	81	3.4
Q04	Yes	Interpret data in bar graph.	87	1.8	88	2.3	86	3.0
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	57	3.2	59	4.3	53	3.7
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	20	2.3	20	3.0	20	2.6

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Scotland SCALE=Fractions and number sense

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	54	2.3	59	2.7	49	2.3
B09	No	Identify shaded figure which shows 2/5 = 4/10.	52	1.7	51	2.3	53	2.5
B10	No	Identify smallest of decimal fractions.	41	2.4	45	3.3	36	2.3
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	51	1.5	54	2.2	49	2.0
C06	No	Determine the worst estimate of: 848 + 677.	80	1.5	83	1.9	77	2.1
D09	No	Identify smallest fraction.	78	1.8	82	2.0	75	2.6
D12	No	Estimate rational number from point on number line.	86	1.3	86	1.3	85	2.0
E03	No	Find fraction of hour between two time points.	65	2.0	69	2.4	61	2.6
E04	No	Solve multi-step word problem: 4-digit whole numbers.	59	2.1	57	2.8	62	2.8
F09	No	Identify decimal fraction between 0.07 and 0.08.	66	2.0	68	2.7	64	2.3
F12	No	Identify fraction of circle which is shaded.	74	1.8	76	2.2	71	2.3
G05	No	Identify fraction represented in word problem.	73	1.8	72	2.2	73	2.2
H08	No	Identify figure showing 2/3 shaded.	83	1.6	81	2.1	85	1.8
H09	No	Identify sum which is closest to 691 + 208.	91	0.9	92	1.3	90	1.5
I02	Yes	Solve multi-step word problem: common fractions.	63	3.0	68	4.1	58	3.7
I05	Yes	Solve subtraction word problem: rational numbers.	65	3.0	65	3.8	66	3.9
I06	Yes	Write a fraction larger than a given number.	81	2.4	81	3.2	81	3.4
I07	Yes	Recognize when estimation is appropriate.	83	2.5	83	3.0	84	3.6
J12	Yes	Divide fractions.	4	1.1	3	1.4	4	1.4
J14	Yes	Divide rational numbers, fractional divisor.	15	2.1	16	2.7	15	2.9
J17	Yes	Use map and scale to find distance between two cities.	65	3.1	68	3.4	62	3.9
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	68	2.5	74	3.5	60	3.5
K02	Yes	Find total volume of mixture using rational number addition.	53	3.2	51	4.5	55	4.0
K06	Yes	Approximate amount increased by 15%.	43	2.9	49	4.3	37	3.9
K09	Yes	Compute sum of three fractions.	9	2.6	11	4.2	7	2.0
L08	Yes	Estimate actual height from diagram of relative heights.	59	3.2	61	4.1	57	4.9
L09	Yes	Identify 504.7 from its expression in words.	79	2.7	82	3.1	77	4.2
L17	Yes	Subtract three fractions.	25	2.9	28	3.9	22	3.5
M04	Yes	Identify the largest fraction.	34	3.1	39	4.3	30	3.8
M08	Yes	Multiply two decimal fractions.	8	1.9	9	2.4	7	2.6
N11	Yes	Identify number rounded to 18200.	93	1.4	95	1.8	91	2.2
N14	Yes	Identify list of equivalent fractions.	54	2.9	53	3.5	54	4.0
N16	Yes	Solve algebra word problem with fractions.	53	2.8	59	3.9	47	3.6
N17	Yes	Solve multi-step word problem: decimal fractions.	38	2.9	41	4.2	34	3.7
N19	Yes	Shade a given fraction of the squares in a grid.	49	3.5	52	5.0	47	4.1
O02	Yes	Calculate percent increase.	25	3.2	33	4.0	17	3.6
O04	Yes	Identify number rounded to the nearest 100th.	33	2.5	34	3.9	32	3.3
O09	Yes	Solve division word problem: common fractions.	61	3.3	67	3.9	55	4.7
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	70	2.7	68	4.1	72	3.7
P13	Yes	Use heart beats/min to find beats per hour.	45	3.1	46	4.5	44	3.8
P14	Yes	Solve subtraction word problem: common fractions.	89	1.7	88	2.3	90	2.0
P16	Yes	Reduce decimal to fraction in lowest terms.	14	1.9	15	2.6	12	2.6
Q06	Yes	Approximate water use/year from use/week.	29	2.7	30	3.4	28	3.9
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	27	2.8	32	4.1	22	3.3
Q09	Yes	Perform multiple operations of common fractions.	20	2.5	19	3.2	22	3.3
R06	Yes	Subtract two decimal numbers.	57	3.7	52	4.6	62	4.7
R07	Yes	Solve division word problem involving decimals.	37	2.7	37	4.5	38	3.2
R12	Yes	Subtract 4-digit whole numbers.	72	2.5	69	3.1	75	3.5
R13	Yes	Determine how much money left after spending 7/9.	23	2.5	25	3.2	21	3.3
U01A	Yes	Estimate the time required to record 5 songs.	51	2.1	56	2.6	45	2.9
U01B	Yes	Explain method of estimation.	44	2.1	46	2.5	41	2.9
V01	Yes	Determine actual weight from rounded value.	74	2.0	75	2.5	72	2.7

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Scotland SCALE=Geometry

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	42	1.5	42	2.0	42	1.9
B11	No	Identify cube made by folding 2-dimensional net.	67	1.6	69	2.3	65	2.0
C03	No	Identify properties of congruent trapezoids.	58	2.5	58	3.1	58	3.2
D07	No	Identify relationship of angles in symmetric polygon.	54	2.5	55	2.9	52	2.9
E02	No	Determine angle in congruent triangles.	43	2.4	45	3.1	41	2.8
G03	No	Find sum of vertical angles from diagram of intersecting lines.	44	1.8	46	2.6	43	2.5
I08	Yes	Identify point on a line defined by two other points.	52	3.1	56	4.0	48	4.4
J11	Yes	Identify properties of a parallelogram.	42	2.5	39	3.8	45	3.6
J15	Yes	Identify similar triangles of different size.	69	3.2	68	4.4	71	3.6
J16	Yes	Identify coordinates for point on a grid.	75	2.5	71	3.2	78	3.4
K03	Yes	Identify figure from rotation of 3-dimensional object.	72	2.3	73	3.0	71	3.9
K08	Yes	Determine unknown angle in rotated congruent triangles.	29	2.7	31	3.8	26	3.7
L15	Yes	Find fourth quadrilateral angle, given the other three.	38	3.1	41	4.0	35	3.7
M02	Yes	Identify all lines of symmetry for a rectangle.	86	1.7	88	2.4	84	3.0
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	40	2.8	41	3.8	39	3.6
M07	Yes	Find angle based on supplementary pairs.	62	2.6	66	3.3	58	3.7
N12	Yes	Identify point on number line from distance of other points.	65	2.7	73	3.5	58	3.9
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	34	2.9	39	3.4	29	4.2
O08	Yes	Find center point of rotation for symmetry-related figures.	60	2.8	61	3.6	59	3.7
P08	Yes	Know relationship between side and perimeter for square.	48	3.0	52	3.7	45	4.1
P09	Yes	Find length of side for similar triangles.	32	2.7	34	3.7	30	3.4
Q10	Yes	Perform calculation involving addition/subtraction of angles.	35	3.0	34	4.5	36	4.0
R10	Yes	Determine into how many triangles a trapezoid can be divided.	49	3.4	50	4.1	47	4.2

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Scotland SCALE=Measurement

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	73	1.6	75	1.8	71	1.8
C01	No	Compare volumes of different stacks of blocks.	71	1.8	75	2.2	68	2.2
D11	No	Identify best unit to measure the mass of an egg.	82	1.5	84	1.6	79	2.0
E06	No	Solve word problem to find length of rectangle from width and perimeter.	42	1.9	44	2.3	40	2.8
F10	No	Determine measurement accuracy of ruler.	54	2.3	58	3.0	49	2.7
G02	No	Read meter scale to determine length of a pipe.	78	1.6	77	1.9	79	2.4
I03	Yes	Find number of 750 mL bottles filled by a large volume.	37	2.8	42	3.6	33	3.7
J10	Yes	Determine area of sheet not covered by rectangular picture.	32	3.2	34	4.4	31	3.5
K05	Yes	Calculate area of a rectangle given its length and perimeter.	33	3.5	35	5.0	30	4.0
L12	Yes	Find longest pace from chart showing number of paces to cross room.	66	3.0	70	3.9	62	4.5
M01	Yes	Read mass shown on scale.	92	1.5	97	1.3	87	2.6
N15	Yes	Identify drawing with angle closest to 30 degrees.	58	2.7	59	4.1	57	4.1
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	86	1.9	90	2.1	82	3.1
P11	Yes	Use ruler to determine approximate length of pencil.	45	3.0	49	4.0	40	3.8
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	26	2.9	31	4.4	21	3.1
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	61	2.7	59	3.9	62	3.9
S02B	Yes	Calculate length of side of square given area.	19	2.8	19	4.2	19	3.2
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	18	2.7	19	4.0	17	3.6
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	27	2.7	28	3.5	25	3.4
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	12	2.2	15	3.7	8	1.6
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	40	2.4	42	3.2	38	3.0

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Scotland SCALE=Proportionality

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	43	1.7	52	2.1	34	1.8
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	67	1.3	69	1.2	64	2.0
D08	No	Solve ratio problem for x: 7/13 = x/52.	71	1.7	75	2.0	66	2.4
F07	No	Solve word problem to find average speed from distance and time.	23	2.1	27	2.8	19	2.1
G04	No	Solve simple proportionality equation.	64	2.2	68	2.8	61	2.4
L14	Yes	Identify missing numbers in table of proportional x and y values.	15	2.4	15	3.0	16	3.0
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	37	3.3	45	4.9	29	3.7
Q05	Yes	Solve word problem involving ratios.	71	2.7	73	3.6	69	3.4
R14	Yes	Solve multi-step word problem involving ratios.	19	2.6	18	3.5	20	3.3
T02A	Yes	Solve algebra word problem involving ratios.	23	2.8	24	4.0	22	2.8
T02B	Yes	Solve multi-step word problem computing fractions.	10	1.1	11	1.7	8	1.6
V03	Yes	Determine ratio of red paint in a mixture.	38	2.2	35	3.0	40	2.7

REL: Release Status (Yes= Item in Released Item Set)

Third International Mathematics and Science Study - 1995 Assessment
Percent Correct on the Mathematics Items - Eighth Grade

May 11, 1998 235

COUNTRY ID=United States SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	72	1.2	75	1.2	68	1.5
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	76	1.8	74	1.9	78	2.0
C05	No	Determine number which continues pattern based on figures.	51	1.6	50	2.0	52	2.1
D10	No	Identify equation which solves word problem: C=(100+6n).	51	1.6	48	1.8	55	1.8
E05	No	Find relationship between numbers in a set of ordered pairs.	62	1.7	60	2.0	64	2.0
F11	No	Solve multi-step problem using linear equations.	44	2.0	46	2.3	43	2.3
G06	No	Find solution to -3X for given value of X.	50	2.4	49	2.8	51	2.5
H10	No	Identify equation expressing xy relationship from table of values.	47	2.2	44	2.9	50	2.2
H12	No	Select symbolic linear equation which fits word problem.	83	1.1	81	1.6	85	1.3
I01	Yes	Identify meaning of symbol in word problem equation.	32	1.6	34	3.0	30	2.6
I04	Yes	Determine next number which occurs in two number sequences.	42	2.6	37	3.3	46	2.6
J18	Yes	Identify missing number in table showing xy relationship.	39	2.1	37	3.3	40	2.6
K04	Yes	Identify expression equivalent to linear inequality.	52	1.9	53	2.9	51	2.3
L11	Yes	Solve multi-step word problem using pattern.	27	1.9	26	2.6	27	2.5
L13	Yes	Identify matching patterns of symbols.	93	0.8	92	1.3	95	1.0
L16	Yes	Simplify and solve linear equation for X.	31	2.8	31	4.0	32	2.9
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	57	3.0	57	3.8	57	3.8
O07	Yes	Solve linear equation for X.	73	2.3	74	2.3	70	3.3
P10	Yes	Identify equivalent algebraic expressions.	46	2.5	50	3.4	42	2.4
P15	Yes	Identify equivalent expression for a cubic relationship.	74	1.8	74	2.4	73	2.4
Q01	Yes	Identify linear expression based on word problem.	49	2.3	46	2.9	52	3.3
Q02	Yes	Subtract fractional expressions of X.	42	2.3	38	3.4	45	2.7
Q07	Yes	Solve P=LW for W given values for P and L.	71	2.1	70	2.8	72	2.6
R09	Yes	Identify equivalent expressions from properties of real numbers.	37	2.6	37	3.5	37	3.0
R11	Yes	Solve algebra word problem: linear equation.	43	2.5	46	3.8	40	2.6
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	75	2.2	71	3.0	79	2.2
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	25	1.6	26	2.7	25	2.5
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	25	1.8	26	2.3	23	2.0
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	26	2.0	25	2.4	27	2.2

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=United States SCALE=Data Rep., Analysis & Prob.

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	76	1.0	73	1.3	78	0.9
B07	No	Interpret line graph to find region of largest increase.	70	1.3	70	1.4	70	1.6
C02	No	Interpret pie graph to determine distribution.	75	1.6	77	2.0	74	1.7
E01	No	Interpret line graph to determine intersection point of two plots.	71	1.6	72	2.0	71	1.7
F08	No	Predict probability of occurrence for independent coin toss.	60	1.3	59	1.8	62	1.5
G01	No	Interpret frequency table to find number above a given level.	53	1.2	52	1.5	54	2.0
H07	No	Interpret barchart histogram to find number above a given level.	73	1.1	70	1.3	76	1.4
H11	No	Predict number of total defective bulbs based on random sample.	54	1.7	56	2.0	52	1.9
I09	Yes	Predict most likely color of random card based on fraction of colors.	68	2.5	67	3.2	68	3.1
J13	Yes	Draw pictograph to represent number given in table.	89	1.2	88	1.9	91	1.5
K07	Yes	Determine the number of blue pens given probability of selection.	53	2.5	55	3.4	52	2.6
L10	Yes	Use data in a chart to identify time/day with highest temperature.	90	1.1	90	1.5	90	1.7
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	86	1.2	85	2.2	86	2.0
N18	Yes	Find probability of drawing an even number from 1 to 9.	74	2.5	73	3.1	75	2.8
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	72	1.9	72	2.4	72	3.1
O05	Yes	Calculate number of cube faces from probability of toss.	47	3.0	49	2.9	44	4.6
P17	Yes	Identify thermometer which shows temperature given in data table.	80	1.8	78	2.5	83	2.5
Q04	Yes	Interpret data in bar graph.	88	1.4	87	2.2	89	1.6
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	54	2.4	59	3.0	50	4.1
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	18	1.6	16	1.4	20	2.5

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=United States SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	51	1.9	54	2.0	48	2.0
B09	No	Identify shaded figure which shows 2/5 = 4/10.	60	1.2	59	1.4	62	1.5
B10	No	Identify smallest of decimal fractions.	48	1.9	51	1.9	44	2.5
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	55	1.2	58	1.8	52	1.5
C06	No	Determine the worst estimate of: 848 + 677.	74	1.5	72	1.9	76	1.9
D09	No	Identify smallest fraction.	71	1.8	76	1.7	66	2.3
D12	No	Estimate rational number from point on number line.	78	1.7	78	2.0	77	1.9
E03	No	Find fraction of hour between two time points.	57	1.4	59	2.0	54	1.7
E04	No	Solve multi-step word problem: 4-digit whole numbers.	73	1.5	69	2.2	76	1.4
F09	No	Identify decimal fraction between 0.07 and 0.08.	69	1.6	71	1.9	67	1.8
F12	No	Identify fraction of circle which is shaded.	60	1.8	63	2.3	58	1.8
G05	No	Identify fraction represented in word problem.	64	1.4	62	1.8	66	2.1
H08	No	Identify figure showing 2/3 shaded.	85	1.1	84	1.5	87	1.3
H09	No	Identify sum which is closest to 691 + 208.	93	0.7	92	1.1	94	0.8
I02	Yes	Solve multi-step word problem: common fractions.	54	2.2	55	2.6	53	3.1
I05	Yes	Solve subtraction word problem: rational numbers.	78	2.0	74	2.7	82	2.0
I06	Yes	Write a fraction larger than a given number.	81	1.9	84	2.3	78	2.7
I07	Yes	Recognize when estimation is appropriate.	83	1.8	78	2.8	87	2.1
J12	Yes	Divide fractions.	45	2.4	44	3.0	46	2.6
J14	Yes	Divide rational numbers, fractional divisor.	46	2.3	46	3.2	46	2.4
J17	Yes	Use map and scale to find distance between two cities.	61	2.5	67	3.6	55	2.6
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	62	2.1	61	2.7	62	2.8
K02	Yes	Find total volume of mixture using rational number addition.	71	2.4	69	3.4	72	2.5
K06	Yes	Approximate amount increased by 15%.	40	2.1	41	3.5	40	2.2
K09	Yes	Compute sum of three fractions.	45	2.9	41	4.1	49	3.4
L08	Yes	Estimate actual height from diagram of relative heights.	53	2.4	56	3.4	49	2.8
L09	Yes	Identify 504.7 from its expression in words.	91	1.2	89	2.0	93	1.3
L17	Yes	Subtract three fractions.	51	2.6	51	3.3	52	3.5
M04	Yes	Identify the largest fraction.	39	1.9	40	3.4	39	2.7
M08	Yes	Multiply two decimal fractions.	54	2.3	49	3.1	60	2.9
N11	Yes	Identify number rounded to 18200.	88	1.7	88	1.7	88	2.3
N14	Yes	Identify list of equivalent fractions.	67	2.1	68	3.0	67	3.0
N16	Yes	Solve algebra word problem with fractions.	39	2.2	41	3.1	36	3.6
N17	Yes	Solve multi-step word problem: decimal fractions.	34	1.8	36	2.2	32	3.2
N19	Yes	Shade a given fraction of the squares in a grid.	43	1.9	47	3.2	40	3.3
O02	Yes	Calculate percent increase.	20	1.8	23	2.1	16	2.6
O04	Yes	Identify number rounded to the nearest 100th.	65	2.2	68	2.5	62	3.3
O09	Yes	Solve division word problem: common fractions.	51	2.8	58	3.3	42	4.3
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	77	1.8	75	2.3	79	2.2
P13	Yes	Use heart beats/min to find beats per hour.	66	2.1	65	2.5	66	3.0
P14	Yes	Solve subtraction word problem: common fractions.	77	1.8	76	2.4	79	2.2
P16	Yes	Reduce decimal to fraction in lowest terms.	46	3.1	49	3.9	43	3.2
Q06	Yes	Approximate water use/year from use/week.	41	2.2	43	2.9	39	2.4
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	47	2.1	51	2.9	42	3.3
Q09	Yes	Perform multiple operations of common fractions.	50	2.3	47	3.6	53	3.1
R06	Yes	Subtract two decimal numbers.	74	1.6	72	2.4	76	2.2
R07	Yes	Solve division word problem involving decimals.	39	2.5	45	3.1	32	2.6
R12	Yes	Subtract 4-digit whole numbers.	90	1.1	89	1.9	92	1.1
R13	Yes	Determine how much money left after spending 7/9.	21	1.7	23	2.4	18	1.9
U01A	Yes	Estimate the time required to record 5 songs.	47	1.8	47	2.6	48	2.2
U01B	Yes	Explain method of estimation.	45	1.9	44	2.8	46	2.4
V01	Yes	Determine actual weight from rounded value.	66	2.1	66	2.0	66	3.1

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=United States SCALE=Geometry

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	54	1.3	53	1.8	55	1.3
B11	No	Identify cube made by folding 2-dimensional net.	63	1.5	66	1.7	60	1.9
C03	No	Identify properties of congruent trapezoids.	63	1.7	60	2.3	67	1.9
D07	No	Identify relationship of angles in symmetric polygon.	48	1.6	51	2.1	45	1.8
E02	No	Determine angle in congruent triangles.	31	1.5	32	1.9	31	1.7
G03	No	Find sum of vertical angles from diagram of intersecting lines.	40	1.6	41	2.0	40	2.1
I08	Yes	Identify point on a line defined by two other points.	41	1.8	44	2.8	38	3.2
J11	Yes	Identify properties of a parallelogram.	40	2.2	37	3.3	43	2.3
J15	Yes	Identify similar triangles of different size.	70	1.6	70	2.6	71	1.7
J16	Yes	Identify coordinates for point on a grid.	58	2.5	55	4.2	61	2.4
K03	Yes	Identify figure from rotation of 3-dimensional object.	62	2.5	63	3.3	61	2.9
K08	Yes	Determine unknown angle in rotated congruent triangles.	17	1.6	17	2.1	17	2.1
L15	Yes	Find fourth quadrilateral angle, given the other three.	22	2.2	24	3.6	21	2.4
M02	Yes	Identify all lines of symmetry for a rectangle.	70	2.2	67	2.8	73	2.6
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	42	2.0	43	2.6	40	2.9
M07	Yes	Find angle based on supplementary pairs.	61	1.9	63	3.0	59	2.9
N12	Yes	Identify point on number line from distance of other points.	68	2.2	69	2.6	67	3.5
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	33	2.5	37	2.8	28	3.7
O08	Yes	Find center point of rotation for symmetry-related figures.	65	2.2	67	2.2	62	3.8
P08	Yes	Know relationship between side and perimeter for square.	55	1.9	56	2.6	53	2.9
P09	Yes	Find length of side for similar triangles.	28	1.7	30	2.1	27	2.7
Q10	Yes	Perform calculation involving addition/subtraction of angles.	34	2.9	36	4.0	32	3.3
R10	Yes	Determine into how many triangles a trapezoid can be divided.	44	2.5	46	3.3	40	2.4

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=United States SCALE=Measurement

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	59	2.0	58	2.2	60	2.2
C01	No	Compare volumes of different stacks of blocks.	43	1.4	48	2.2	39	1.5
D11	No	Identify best unit to measure the mass of an egg.	72	1.5	72	1.4	71	2.1
E06	No	Solve word problem to find length of rectangle from width and perimeter.	32	1.3	33	1.8	30	1.6
F10	No	Determine measurement accuracy of ruler.	38	1.8	41	2.0	35	2.2
G02	No	Read meter scale to determine length of a pipe.	72	1.5	73	1.9	71	1.6
I03	Yes	Find number of 750 mL bottles filled by a large volume.	31	1.8	35	2.9	28	2.3
J10	Yes	Determine area of sheet not covered by rectangular picture.	33	2.4	38	3.3	28	2.8
K05	Yes	Calculate area of a rectangle given its length and perimeter.	22	1.7	20	2.3	24	2.4
L12	Yes	Find longest pace from chart showing number of paces to cross room.	48	2.6	52	4.0	45	2.9
M01	Yes	Read mass shown on scale.	86	1.7	88	2.0	85	2.4
N15	Yes	Identify drawing with angle closest to 30 degrees.	57	1.7	58	2.2	55	3.0
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	56	2.7	58	2.9	55	4.1
P11	Yes	Use ruler to determine approximate length of pencil.	45	2.2	52	3.0	37	3.5
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	36	2.1	36	3.1	36	2.5
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	57	2.3	56	3.4	58	2.7
S02B	Yes	Calculate length of side of square given area.	15	1.4	17	2.2	14	2.0
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	15	1.5	17	2.1	13	2.3
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	16	1.6	16	2.4	16	1.4
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	10	0.9	12	1.5	8	1.1
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	27	1.6	28	2.2	27	2.0

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=United States SCALE=Proportionality

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	46	1.3	53	1.5	39	1.5
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	70	1.0	70	1.4	69	1.5
D08	No	Solve ratio problem for x: 7/13 = x/52.	76	1.3	77	1.6	75	1.8
F07	No	Solve word problem to find average speed from distance and time.	26	1.1	27	1.6	24	1.6
G04	No	Solve simple proportionality equation.	75	1.3	75	1.7	74	1.9
L14	Yes	Identify missing numbers in table of proportional x and y values.	20	1.6	18	2.1	22	2.4
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	34	2.3	34	2.4	34	2.8
Q05	Yes	Solve word problem involving ratios.	62	2.2	66	2.8	57	3.4
R14	Yes	Solve multi-step word problem involving ratios.	23	2.2	22	2.4	25	3.0
T02A	Yes	Solve algebra word problem involving ratios.	15	1.4	15	1.5	15	1.9
T02B	Yes	Solve multi-step word problem computing fractions.	6	0.6	5	0.8	6	0.9
V03	Yes	Determine ratio of red paint in a mixture.	53	1.8	49	2.5	58	2.1

REL: Release Status (Yes= Item in Released Item Set)

Third International Mathematics and Science Study - 1995 Assessment
Percent Correct on the Mathematics Items - Eighth Grade

May 11, 1998 241

COUNTRY ID=Slovenia SCALE=Algebra

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A02	No	Solve algebraic word problem equating masses on a scale.	85	0.8	87	1.0	83	1.1
B12	No	Identify algebraic equation to solve word problem: 7n+6=41.	85	1.2	85	1.6	85	1.5
C05	No	Determine number which continues pattern based on figures.	58	1.6	57	2.2	59	2.4
D10	No	Identify equation which solves word problem: C=(100+6n).	55	1.9	53	2.4	57	2.4
E05	No	Find relationship between numbers in a set of ordered pairs.	68	1.4	67	2.1	69	1.7
F11	No	Solve multi-step problem using linear equations.	52	1.9	52	2.1	52	2.7
G06	No	Find solution to -3X for given value of X.	63	1.9	58	2.3	68	2.5
H10	No	Identify equation expressing xy relationship from table of values.	64	1.9	64	2.3	65	2.8
H12	No	Select symbolic linear equation which fits word problem.	80	1.4	82	1.9	79	1.9
I01	Yes	Identify meaning of symbol in word problem equation.	43	2.8	41	4.3	44	4.2
I04	Yes	Determine next number which occurs in two number sequences.	46	3.1	43	3.9	49	4.0
J18	Yes	Identify missing number in table showing xy relationship.	44	3.2	48	4.3	41	3.8
K04	Yes	Identify expression equivalent to linear inequality.	50	2.8	47	3.9	52	3.9
L11	Yes	Solve multi-step word problem using pattern.	38	3.0	41	3.6	36	4.1
L13	Yes	Identify matching patterns of symbols.	89	1.6	85	2.8	92	1.9
L16	Yes	Simplify and solve linear equation for X.	74	2.6	73	3.7	76	3.3
N13	Yes	Calculate (7X+4)/(5X-4) for a given value of X.	74	2.4	73	3.7	75	3.2
O07	Yes	Solve linear equation for X.	86	1.8	88	2.3	85	3.0
P10	Yes	Identify equivalent algebraic expressions.	75	2.7	77	3.1	73	4.1
P15	Yes	Identify equivalent expression for a cubic relationship.	86	2.3	87	2.6	84	3.3
Q01	Yes	Identify linear expression based on word problem.	55	3.0	57	4.2	52	4.0
Q02	Yes	Subtract fractional expressions of X.	69	2.8	73	3.7	66	4.1
Q07	Yes	Solve P=LW for W given values for P and L.	86	2.1	88	2.9	84	2.8
R09	Yes	Identify equivalent expressions from properties of real numbers.	50	3.2	51	4.4	49	4.0
R11	Yes	Solve algebra word problem: linear equation.	44	3.4	47	4.4	41	4.8
S01A	Yes	Complete chart by observing sequence of triangles in each of 3 figures.	82	2.4	80	3.7	83	3.1
S01B	Yes	Extend triangle pattern from 3 figures to 8th.	31	3.2	31	4.0	32	4.2
T01A	Yes	Solve multi-step algebra word problem of simultaneous equations.	30	2.3	30	3.5	30	2.4
T01B	Yes	Solve multi-step algebra word problem of simultaneous equations.	35	2.2	35	3.4	36	2.6

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Slovenia SCALE=Data Rep., Analysis & Prob.

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A06	No	Find difference between the means of two sets of data.	83	0.9	81	1.2	85	1.2
B07	No	Interpret line graph to find region of largest increase.	75	1.4	77	1.7	74	1.7
C02	No	Interpret pie graph to determine distribution.	82	1.3	81	1.8	83	1.8
E01	No	Interpret line graph to determine intersection point of two plots.	87	1.2	89	1.3	85	1.9
F08	No	Predict probability of occurrence for independent coin toss.	69	1.5	65	2.5	72	1.9
G01	No	Interpret frequency table to find number above a given level.	62	2.1	61	2.4	63	2.8
H07	No	Interpret barchart histogram to find number above a given level.	73	1.6	76	2.2	70	2.2
H11	No	Predict number of total defective bulbs based on random sample.	71	1.6	78	1.9	64	1.9
I09	Yes	Predict most likely color of random card based on fraction of colors.	75	2.4	74	3.7	76	4.1
J13	Yes	Draw pictograph to represent number given in table.	77	2.0	78	3.3	76	2.1
K07	Yes	Determine the number of blue pens given probability of selection.	57	2.7	53	4.0	61	3.7
L10	Yes	Use data in a chart to identify time/day with highest temperature.	95	1.2	93	1.9	95	1.6
M03	Yes	Compare chance of picking a red marble from 3 sizes of marble bags.	85	2.2	85	2.9	86	2.9
N18	Yes	Find probability of drawing an even number from 1 to 9.	46	2.8	46	4.0	46	3.8
O01	Yes	Interpret distance/speed line graph to determine speed at given distance.	57	2.9	66	3.6	49	3.7
O05	Yes	Calculate number of cube faces from probability of toss.	42	2.7	48	4.3	36	3.4
P17	Yes	Identify thermometer which shows temperature given in data table.	95	1.3	96	1.4	94	1.7
Q04	Yes	Interpret data in bar graph.	90	1.7	88	2.2	91	2.4
R08	Yes	Interpret distance/speed line graph to determine distance at given speed.	42	2.7	44	4.5	39	4.0
V02	Yes	Solve word problem: determine cheaper rental rate by unit comparison.	20	1.6	22	2.5	19	2.2

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Slovenia SCALE=Fractions and number sense

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A01	No	Determine shaded squares in rectangle = 4/5.	68	1.7	70	1.8	67	1.9
B09	No	Identify shaded figure which shows 2/5 = 4/10.	62	1.8	61	2.3	64	2.4
B10	No	Identify smallest of decimal fractions.	58	1.8	66	2.3	51	2.6
C04	No	Select correct pair of numbers: # 1 < 2.25 < # 2.	57	1.8	62	2.7	52	2.6
C06	No	Determine the worst estimate of: 848 + 677.	75	1.6	72	2.3	77	2.2
D09	No	Identify smallest fraction.	79	1.8	82	2.1	75	2.3
D12	No	Estimate rational number from point on number line.	74	1.6	78	2.0	70	2.1
E03	No	Find fraction of hour between two time points.	68	1.7	72	1.9	65	2.5
E04	No	Solve multi-step word problem: 4-digit whole numbers.	81	1.3	78	2.1	84	1.6
F09	No	Identify decimal fraction between 0.07 and 0.08.	73	1.5	74	2.3	72	2.2
F12	No	Identify fraction of circle which is shaded.	57	1.6	59	2.4	55	2.3
G05	No	Identify fraction represented in word problem.	60	1.9	58	2.6	61	2.4
H08	No	Identify figure showing 2/3 shaded.	78	1.7	80	1.9	76	2.3
H09	No	Identify sum which is closest to 691 + 208.	89	1.2	89	1.6	89	1.5
I02	Yes	Solve multi-step word problem: common fractions.	61	2.6	61	4.0	61	3.8
I05	Yes	Solve subtraction word problem: rational numbers.	83	2.2	85	3.0	81	3.0
I06	Yes	Write a fraction larger than a given number.	77	2.7	76	3.3	78	3.9
I07	Yes	Recognize when estimation is appropriate.	52	2.3	54	3.8	49	3.4
J12	Yes	Divide fractions.	71	2.7	68	3.9	74	3.5
J14	Yes	Divide rational numbers, fractional divisor.	61	3.5	55	4.7	67	4.7
J17	Yes	Use map and scale to find distance between two cities.	76	2.2	79	3.3	72	3.2
K01	Yes	Identify circle with same fraction shaded as rectangular figure.	77	2.3	76	3.3	78	3.4
K02	Yes	Find total volume of mixture using rational number addition.	74	2.9	72	4.2	75	3.6
K06	Yes	Approximate amount increased by 15%.	44	3.1	51	4.4	38	3.9
K09	Yes	Compute sum of three fractions.	79	2.5	72	3.8	85	3.1
L08	Yes	Estimate actual height from diagram of relative heights.	67	2.5	71	3.2	62	3.6
L09	Yes	Identify 504.7 from its expression in words.	94	1.5	93	2.2	95	1.5
L17	Yes	Subtract three fractions.	70	2.8	69	4.2	72	3.2
M04	Yes	Identify the largest fraction.	42	3.1	39	4.3	44	4.2
M08	Yes	Multiply two decimal fractions.	68	3.0	65	4.2	71	3.7
N11	Yes	Identify number rounded to 18200.	89	2.1	88	2.9	89	2.3
N14	Yes	Identify list of equivalent fractions.	68	2.9	65	3.5	71	4.2
N16	Yes	Solve algebra word problem with fractions.	47	3.1	48	4.0	47	4.2
N17	Yes	Solve multi-step word problem: decimal fractions.	31	2.9	34	4.0	28	3.7
N19	Yes	Shade a given fraction of the squares in a grid.	50	3.3	51	4.2	48	4.0
O02	Yes	Calculate percent increase.	31	2.6	37	3.9	25	3.2
O04	Yes	Identify number rounded to the nearest 100th.	49	2.7	46	3.4	53	4.3
O09	Yes	Solve division word problem: common fractions.	51	2.9	60	3.9	41	4.1
P12	Yes	Solve word problem: identify best estimate of 84 x 57.	72	2.4	76	3.4	67	3.2
P13	Yes	Use heart beats/min to find beats per hour.	82	2.2	86	2.7	77	3.4
P14	Yes	Solve subtraction word problem: common fractions.	81	2.3	83	3.2	78	3.4
P16	Yes	Reduce decimal to fraction in lowest terms.	42	3.3	39	4.0	44	4.3
Q06	Yes	Approximate water use/year from use/week.	36	3.2	39	4.4	34	3.9
Q08	Yes	Identify fractions and decimals ranked smallest to largest.	51	2.6	59	3.8	42	4.1
Q09	Yes	Perform multiple operations of common fractions.	75	2.7	75	3.6	75	3.8
R06	Yes	Subtract two decimal numbers.	85	2.4	83	3.4	87	3.1
R07	Yes	Solve division word problem involving decimals.	52	3.1	57	3.8	47	4.6
R12	Yes	Subtract 4-digit whole numbers.	98	0.8	97	1.3	98	1.0
R13	Yes	Determine how much money left after spending 7/9.	27	2.9	34	4.1	20	3.7
U01A	Yes	Estimate the time required to record 5 songs.	29	2.0	29	2.4	28	2.8
U01B	Yes	Explain method of estimation.	32	2.2	33	2.9	31	2.8
V01	Yes	Determine actual weight from rounded value.	38	2.4	40	3.4	36	2.6

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Slovenia SCALE=Geometry

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A05	No	Identify congruent triangles in a rectangle.	70	1.2	68	1.6	72	1.5
B11	No	Identify cube made by folding 2-dimensional net.	65	1.6	68	1.8	63	2.2
C03	No	Identify properties of congruent trapezoids.	73	1.5	72	2.2	74	2.0
D07	No	Identify relationship of angles in symmetric polygon.	73	1.5	75	2.1	71	2.3
E02	No	Determine angle in congruent triangles.	43	2.2	43	2.6	42	2.9
G03	No	Find sum of vertical angles from diagram of intersecting lines.	58	1.6	58	2.2	58	2.3
I08	Yes	Identify point on a line defined by two other points.	32	2.9	35	4.4	28	3.4
J11	Yes	Identify properties of a parallelogram.	40	2.9	34	3.1	45	4.2
J15	Yes	Identify similar triangles of different size.	71	2.5	73	3.2	70	3.7
J16	Yes	Identify coordinates for point on a grid.	70	2.9	69	4.5	71	3.1
K03	Yes	Identify figure from rotation of 3-dimensional object.	73	2.5	74	3.5	72	3.5
K08	Yes	Determine unknown angle in rotated congruent triangles.	37	3.3	38	3.7	36	4.3
L15	Yes	Find fourth quadrilateral angle, given the other three.	46	3.0	48	3.9	44	3.5
M02	Yes	Identify all lines of symmetry for a rectangle.	69	2.5	64	3.7	72	3.6
M05	Yes	Find diagram resulting from rotation of a 2-dimensional figure.	58	2.9	60	4.8	57	4.0
M07	Yes	Find angle based on supplementary pairs.	87	1.7	89	2.4	85	2.5
N12	Yes	Identify point on number line from distance of other points.	58	3.1	65	4.0	52	4.0
O03	Yes	Identify supplementary angles formed by parallel and intersecting lines.	42	3.1	44	4.4	41	4.4
O08	Yes	Find center point of rotation for symmetry-related figures.	83	1.9	85	2.8	82	2.8
P08	Yes	Know relationship between side and perimeter for square.	69	2.7	72	3.7	66	3.9
P09	Yes	Find length of side for similar triangles.	47	3.2	49	4.1	45	4.8
Q10	Yes	Perform calculation involving addition/subtraction of angles.	61	3.0	61	3.9	61	4.4
R10	Yes	Determine into how many triangles a trapezoid can be divided.	63	3.1	67	3.9	59	4.3

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Slovenia SCALE=Measurement

			Eighth Grade					
			Overall		Boys		Girls	
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A03	No	Determine actual length of box which is rounded to 9 cm.	61	1.4	62	1.7	61	1.9
C01	No	Compare volumes of different stacks of blocks.	62	2.0	67	2.7	57	2.7
D11	No	Identify best unit to measure the mass of an egg.	94	0.7	96	1.0	92	1.1
E06	No	Solve word problem to find length of rectangle from width and perimeter.	48	1.6	47	2.7	50	2.4
F10	No	Determine measurement accuracy of ruler.	79	1.4	82	1.9	76	2.0
G02	No	Read meter scale to determine length of a pipe.	85	1.2	86	1.6	84	1.8
I03	Yes	Find number of 750 mL bottles filled by a large volume.	39	2.7	41	3.8	37	4.0
J10	Yes	Determine area of sheet not covered by rectangular picture.	48	2.6	49	3.9	47	3.8
K05	Yes	Calculate area of a rectangle given its length and perimeter.	48	2.8	46	4.6	51	3.8
L12	Yes	Find longest pace from chart showing number of paces to cross room.	90	1.7	94	1.9	87	2.6
M01	Yes	Read mass shown on scale.	95	1.3	95	1.7	94	1.9
N15	Yes	Identify drawing with angle closest to 30 degrees.	77	2.6	76	3.6	78	3.6
O06	Yes	Calculate time to remove cake after baking 3/4 hour.	80	2.1	85	2.8	74	3.4
P11	Yes	Use ruler to determine approximate length of pencil.	70	2.8	71	3.8	68	4.0
Q03	Yes	Use day/hours/minutes/seconds conversions to calculate longest time.	48	3.2	52	4.2	43	4.3
S02A	Yes	Calculate area square given area of rectangle containing 5 squares.	74	2.6	73	3.4	75	3.4
S02B	Yes	Calculate length of side of square given area.	45	3.3	51	4.2	41	4.4
S02C	Yes	Find perimeter of rectangle containing 5 squares of known size.	30	3.1	32	3.9	29	4.2
U02A	Yes	Draw new rectangle based length/width ratios of another rectangle.	37	2.3	38	3.2	36	3.0
U02B	Yes	Calculate ratio of rectangle areas given relationship between sides.	10	1.4	10	1.7	10	1.9
V04	Yes	Calculate area of parallelogram inscribed in a rectangle.	45	2.3	50	2.9	41	2.9

REL: Release Status (Yes= Item in Released Item Set)

COUNTRY ID=Slovenia SCALE=Proportionality

| | | | Eighth Grade | | | | | |
| | | | Overall | | Boys | | Girls | |
ITEM	REL	LABEL	%	(se)	%	(se)	%	(se)
A04	No	Solve word problem using proportions: 4/3 = 12/?	56	1.3	62	1.5	50	1.8
B08	No	Solve word problem using proportions: 300 calories/100g = ?/30g.	79	1.2	78	1.7	80	1.7
D08	No	Solve ratio problem for x: 7/13 = x/52.	76	1.3	77	1.7	75	2.1
F07	No	Solve word problem to find average speed from distance and time.	43	1.8	42	2.4	44	2.7
G04	No	Solve simple proportionality equation.	71	1.6	73	2.1	70	2.2
L14	Yes	Identify missing numbers in table of proportional x and y values.	24	2.1	27	3.3	21	3.1
M06	Yes	Compute number of girls, given total students and girl:boy ratio.	43	2.7	36	3.5	49	4.1
Q05	Yes	Solve word problem involving ratios.	66	2.5	72	3.5	61	4.3
R14	Yes	Solve multi-step word problem involving ratios.	52	3.0	56	4.0	48	4.0
T02A	Yes	Solve algebra word problem involving ratios.	34	2.3	37	3.0	31	3.0
T02B	Yes	Solve multi-step word problem computing fractions.	9	1.3	10	1.7	8	1.7
V03	Yes	Determine ratio of red paint in a mixture.	39	2.2	34	3.1	43	3.1

REL: Release Status (Yes= Item in Released Item Set)