Grade Seven

Classroom

Strategies

Blackline Masters

Integer Race

-5	-4	-3	-2	-1	0	1	2	3	4	5

Move ahead 2 spaces

Move ahead 2 spaces

Finish

Start

Rational Review Triangle Puzzle

Cooperative Problem Solving Cards -- Proportions

Problem 1

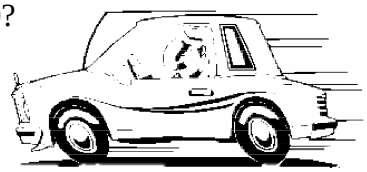
John has an economy car. John figures that it costs him $30 to make a trip of 120 miles.

Problem 1

John's sister's car cost a bit more to operate. She figures that she spends five cents more than John to drive each mile.

Problem 1

How many miles can the sister travel for a cost of $18.00?



Problem 2

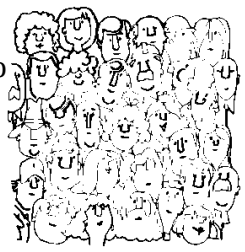
The 7th grade class needs to raise $85.00 per person to pay for a class trip.

Problem 2

The class decides to sell boxes of candy. Each box of candy sold will bring a profit of $1.50 to the class.

Problem 2

If 90 people want to go on the trip, how many boxes of candy must be sold?



Cooperative Problem Solving Cards -- Proportions

Problem 3

Central Middle School has a special car that the mascot drives at games, pep rallies, and parades. The car can drive the length of the football field (100 yards) in four minutes.

Problem 3

The school is thinking of using the mascot car in a parade down Main St. Main St. is 1.5 miles long.

Problem 3

How long will it take the mascot car to drive the length of main street? (5280 feet per mile)

Problem 4

A city aquarium has $48,000 budgeted for animal food.

Problem 4

The aquarium is going to soon get additional animals which will increase the cost of food to $15 per hour.

Problem 4

How many weeks will this budget last?

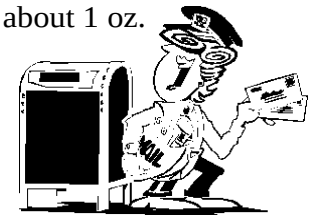
Cooperative Problem Solving Cards -- Proportions

Problem 5

Amy figures that it costs her 30 cents per cookie to make her favorite recipe.

Problem 5

Each cookie weighs about 1 oz. She wants to ship four dozen cookies to her brother.

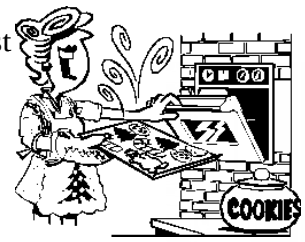


Problem 5

The shipping rate is 75 cents per pound.

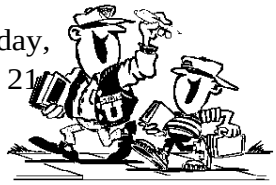
Problem 5

How much will it cost her to make and ship the cookies?



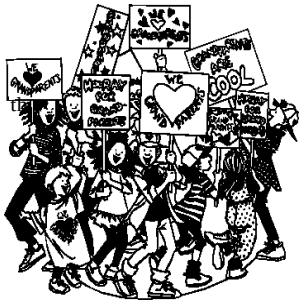
Problem 6

On a certain school spirit day, Mrs. Thomas notices that 21 of her 35 students are wearing school colors.



Problem 6

The school has 340 8th graders, 310 7th graders and 350 6th graders.



Problem 6

If you use Mrs. Thomas' class to get an estimate, what is a good guess for the total number of students wearing school colors?

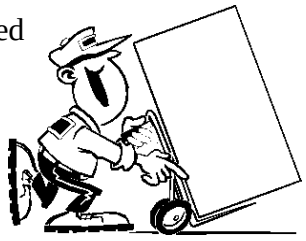
Cooperative Problem Solving Cards -- Proportions

Problem 7

A rectangular garden is 30 feet long and 24 feet wide.

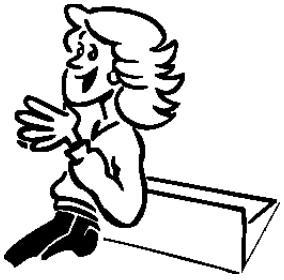
Problem 7

The gardener has used 120 bricks to make a border along the longest edge of the rectangle.



Problem 7

How many bricks will be needed for the entire perimeter?



Problem 8

A huge poster of Arnold Schwarzeneggar is in front of the local movie theatre.

Problem 8

The poster shows the distance between Arnie's eyes to be 13 inches. The true distance between his eyes is 2.6 inches.

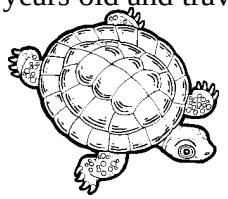
Problem 8

If Arnie is 6 feet tall, how tall is his picture on the poster?

Cooperative Problem Solving Cards -- Proportions

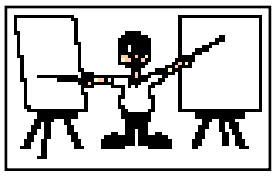
Problem 9
Mark is going to make a graph comparing the age of a tortoise to its speed.

Problem 9
The oldest tortoise is 240 years old and travels only 1 foot per minute.

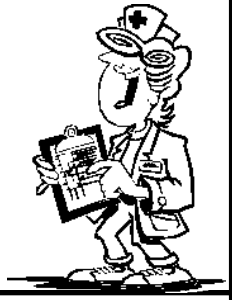


Problem 9
The fastest tortoise is only 5 years old but travels 10 feet per minute.

Problem 9
Mark is using a graph grid with 20 spaces in both the horizontal and vertical direction. What scales should he use on both axes?

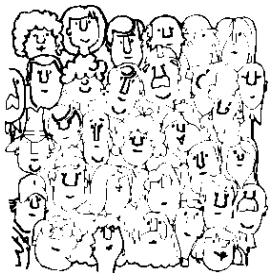


Problem 10
The school nurse has read that 40% of all students miss school due to cold or flu during a school year.



Problem 10

In her school there are 350 6th graders, 300 7th graders, and 375 8th graders.



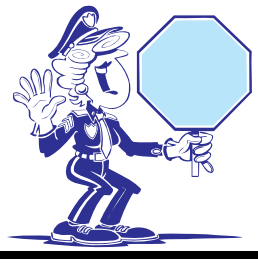
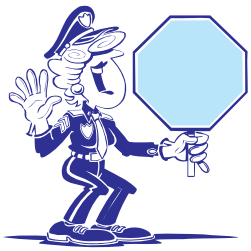
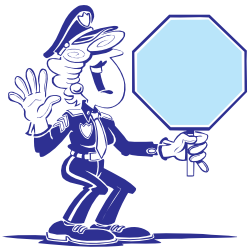
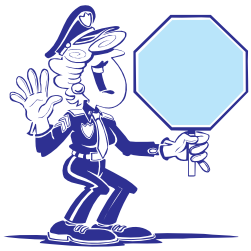
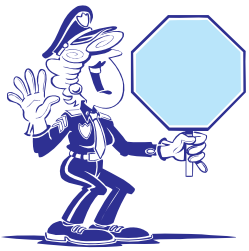
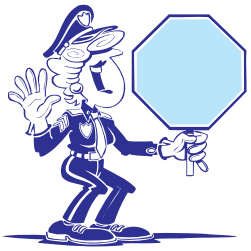
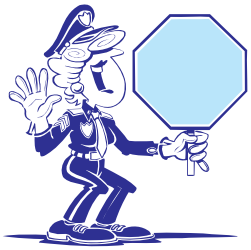
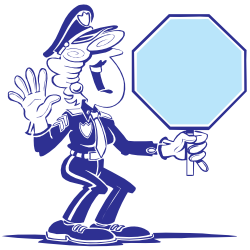
Problem 10

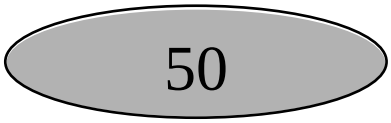
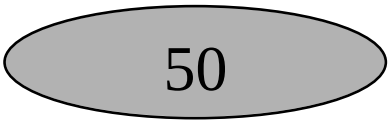
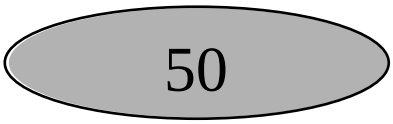
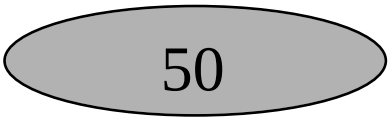
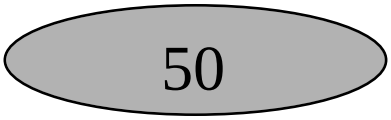
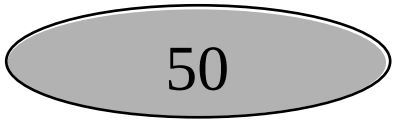
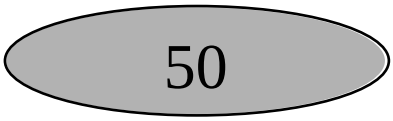
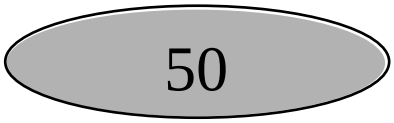
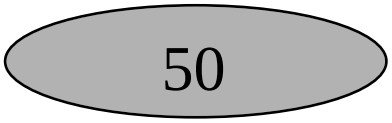
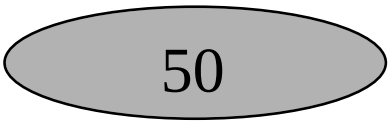
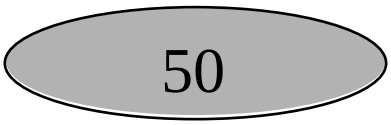
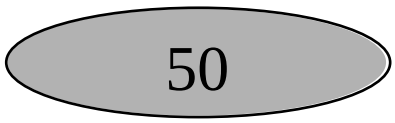
What is the best estimate for the number of students who will miss at least one day of school due to cold or flu?

Thousand Mile Race

	Cards in Play	

Team 1	Team 2	Team 3
	Score	
	Hazards or Stockpiled Cards	

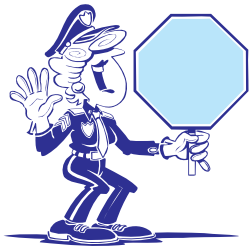
STOP 	STOP 	STOP 
STOP 	STOP 	STOP 
CHASE	CHASE	CHASE
CHASE	STOP 	STOP 

 10% of 120	 50% of 200	 25% of 8
 20% of 100	 10% of 1300	 50% of 650
 25% of 160	 20% of 600	 10% of 450
 110% of 100	 75% of 120	 120% of 35

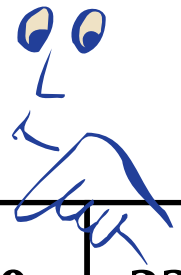
100 50% of 810	100 10% of 37	100 20% of 455
100 25% of 8004	100 150% of 20	100 90% of $4.50
100 33 1/3% of 120	100 75% of 60	100 80% of 250
100 200% of 18	100 150% of 6	100 125% of 20

150 10% of 75	150 20% of 800	150 50% of 6.008
150 25% of 32	150 110% of 80	150 80% of 350
150 150% of 62¢	150 75% of 840	150 110% of $1.20
150 80% of $3.00	150 150% of $5.00	150 90% of $3.40

200 20% of $\frac{3}{4}$	200 25% of $1.08	200 50% of $\frac{2}{3}$
200 10% of $9.60	200 $66\frac{2}{3}$ % of 330	200 75% of 820
200 80% of 300	200 75% of 480	200 150% of $2.40
200 110% of 90	200 80% of 525	200 125% of 600

GO	GO	GO
GO	GO	GO
GO	GO	GO
CHASE	STOP 	GO

Four's A Winner!



320	400	10	250	50	225
90	20	270	100	150	15
150	120	80	30	240	75
180	60	25	200	5	125
40	100	50	135	90	45
75	10	360	20	60	300

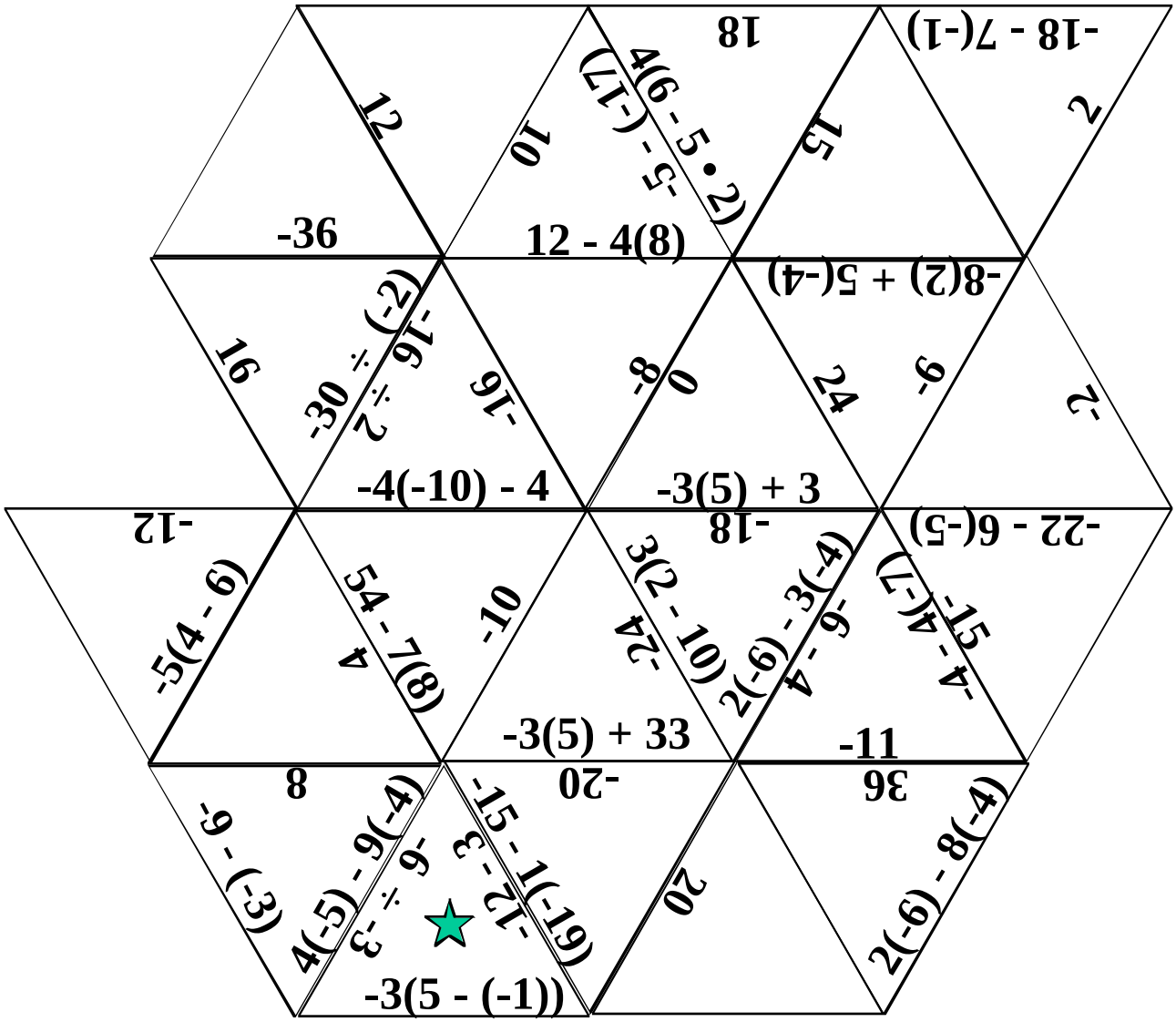
25% of	25% increase	25% decrease
50% of	50% increase	100% increase

20 40 60 80 100 120 160 180 200

Integer Computation Square Puzzle

$-1(40 - 38)$ 15 -19 4	$-2(3) - 13$ -38 ÷ 2 6 16	$(2)(5) + 7$ -2(7 - 10) -4(5) + 9 1	-15 -11 -8 5
$2(2 - 10)$ -10 -14 -2	$10 - 20 + 28$ -2(2) + 5(-2) 0 -7	$(-8 - 2) \div 2$ -6(6) – 4(-9) -4(3) - 5 3	$7(-14 + 16)$ 9 -17 $-3(-2 + 7)$
$(-6)^2 \div (-4)$ 11 2 -16	$-4(-3 + 8)$ 5 + 3(-1) -5(8) ÷ (-4) 18	-13 10 -12 -5	-1 -8(-3) ÷ (-2) -18 14
17 -3 8 -9	13 -4(-12 + 10) -4 -20	7 -9(-4) - 40 $\frac{-70 - 2}{(-3)(2)}$ $-7 - 3(2)$	20 12 -6 $\frac{-5 + 6}{-5 + 4}$

Integer Computation Triangle Puzzle



Rational Math Bingo

B -30 to -19	I -18 to -7	N -6 to 5	G 6 to 17	0 18 to 29
		Free		

Fill in the card above with integers of your choice from –30 to 29. Choose numbers for each column as indicated on the card. For example, under B, choose numbers from –30 to –19. The numbers in each column may be in any order as long as they are from the indicated number range and not repeated.

$-42 + 12$	$-49 + 20$	$\frac{4}{3} \times -21$
9.00×-3.0	$2600 \div (-100)$	$-1 \times (-5)^2$
$6 (-10 + 6)$	$-4 \times 5 - 3$	$-2 - 4 \times 5$
$3 \times (-7)$	$\frac{2 \times 10^5}{-10^4}$	$-14 - \frac{15}{3}$
$-\frac{2}{3} \times 27$	-0.017×1000	$-(2)^4$

$\frac{1}{2} - \frac{13}{26}$	$\frac{1}{2} + \frac{7}{14}$	$16 - 2(7)$
$-1 \div -\frac{1}{3}$	$-8 + (-2)(-6)$	$1.25 \div .25$
$\frac{14}{5} \times \frac{15}{7}$	$1 + 2^2 + 2$	2^3
$\frac{20 + 7}{3}$	$\frac{10^5}{10^4}$	$99 \div 9$
Inches in one foot	$39 \div 3$	$7\frac{3}{4} + 6\frac{1}{4}$

$-\frac{1}{4} \times 60$	$-8 \; -6$	$-2^3 \; -5$
$-6 \div 0.5$	$1 + 3(-4)$	$-(4)^2 + 6$
$-1(4-7)^2$	$(-1 \; -3) \div \frac{1}{2}$	$3 - 2 \times 5$
$-18 + 12$	$\frac{5 \times 10^3}{-10^3}$	$-(2^2 \times 1^2)$
$-\frac{1}{3} \times 3^2$	$-248 \div 124$	$-({}^3/_4 + {}^1/_4)$

$27.17 - 12.17$	2^4	$-34 \div (-2)$
$-6 \div -\frac{1}{3}$	$-1 + (-5)(-4)$	$5 \div .25$
$\frac{14}{5} \times \frac{15}{2}$	$7 + 5(3)$	$-2 + 5^2$
$2^4 + 2^3$	$\frac{5^5}{5^3}$	$(1+1)(6+7)$
$\frac{3^4}{3}$	$-7 \times (-4)$	$23\frac{3}{8} + 5\frac{5}{8}$