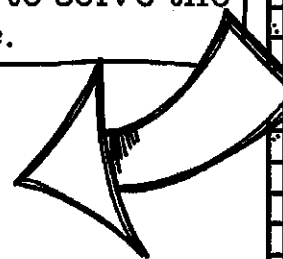


Integers Math Riddle

Solve the math problems. Find the answer below and write the letter to solve the riddle.



E $(-17) + 53 =$ _____

T $82 + (-25) =$ _____

B $9 \cdot (-4) =$ _____

A $(-72) \div (-8) =$ _____

L $(-3) \cdot (-8) =$ _____

H $(-39) + (-42) =$ _____

N $13 - 56 =$ _____

P $(-42) \div 6 =$ _____

R $(-29) - (-33) =$ _____

S $96 - (-21) =$ _____

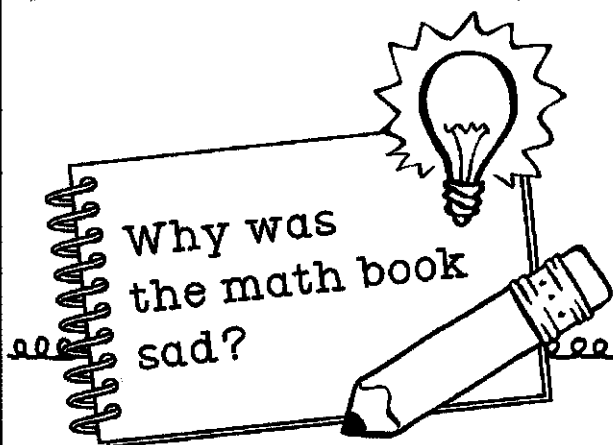
I $4 \cdot 4 =$ _____

O $18 \div (-6) =$ _____

M $(-5) \cdot 7 =$ _____

Y $(-68) - 46 =$ _____

D $58 + (-39) =$ _____



16

57

-81

9

19

57

-3

-3

-35

9

-43

-114

-7

4

-3

-36

24

36

-35

117

Name _____ Date _____

Add Integers

M	N	N	C	C	P	P	C	G	P	P	G	M	N	N	N
M	N	P	G	G	G	C	C	G	P	P	G	P	N	N	N
M	G	P	G	P	P	C	C	C	P	P	G	P	C	N	N
M	P	P	G	P	P	G	C	C	L	L	L	P	P	N	N
G	C	P	G	P	P	G	P	L	L	H	L	L	C	P	P
G	P	P	Q	B	E	P	P	L	B	Q	B	L	P	G	G
G	C	A	P	P	C	H	C	L	L	E	L	L	C	G	G
G	P	P	P	P	C	P	P	L	L	L	L	G	P	G	G
G	C	P	P	G	G	G	G	G	P	C	P	C	P	C	C
P	P	A	E	Q	A	Q	A	Q	A	Q	A	Q	P	P	P
M	G	E	E	H	F	D	D	D	F	E	E	H	P	M	M
M	C	C	Q	H	D	J	K	J	D	B	Q	P	C	M	M
N	M	P	G	B	K	D	K	D	F	B	P	G	N	M	M
N	M	N	P	C	D	K	D	J	D	C	P	N	N	M	M
N	M	N	N	N	N	D	K	D	M	N	N	N	N	M	M

ANSWERS

A	B	C	D	E
-4	-5	22	4	-32
F	G	H	J	K
-8	-29	13	-76	-9
L	M	N	P	Q
-67	-12	-38	0	8

MATH Mystery Picture

DIRECTIONS: Match each problem to a letter with one of the answer choices. Color the letter in the grid the color from the problem box to reveal your Mystery Picture.

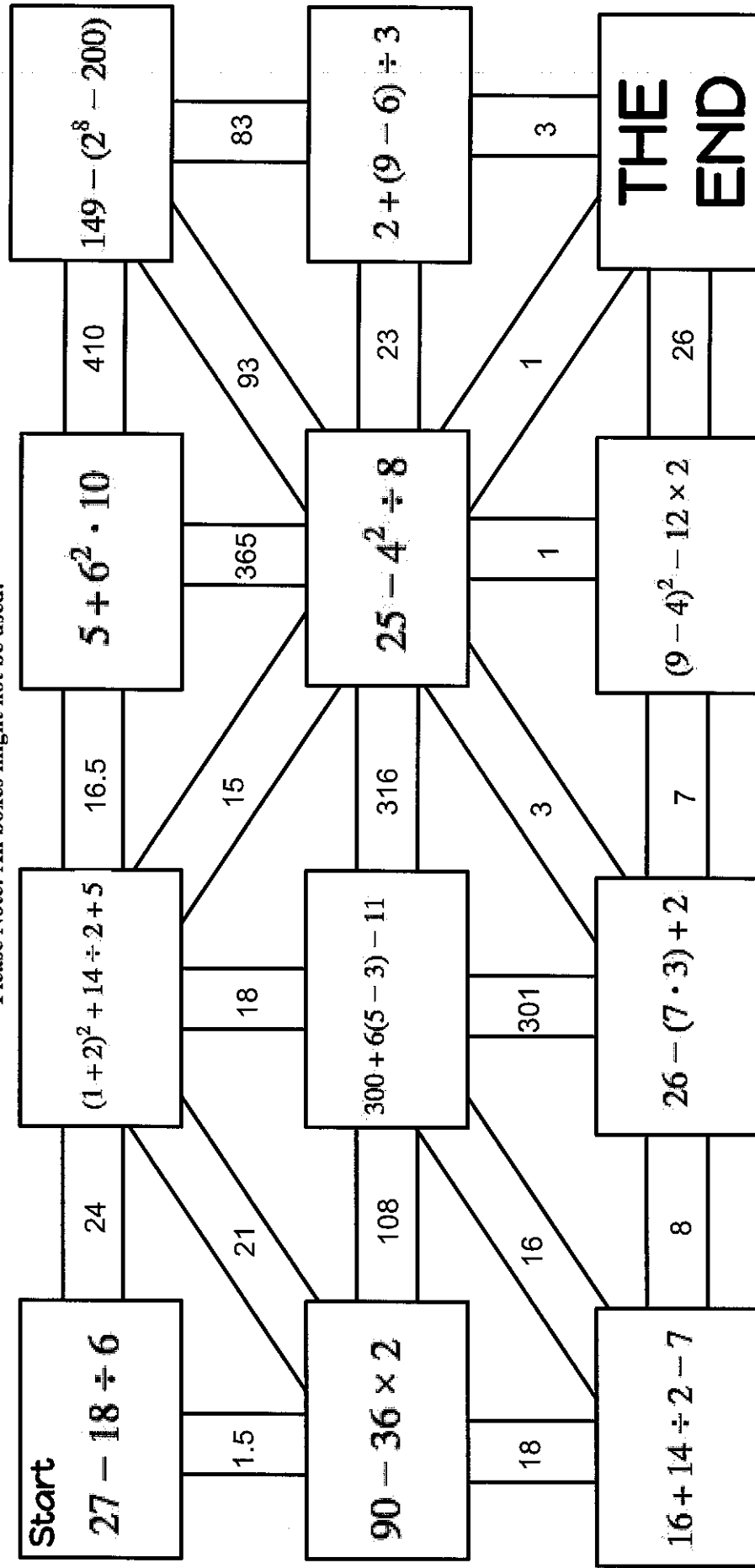
1.) PINK $-3 + 7$	2.) BLACK $-8 + 4$	3.) BLUE $-16 + 4$
4.) BLACK $-16 + 24$	5.) PINK $-14 + 6$	6.) BLACK $3 + (-8)$
7.) PINK $-31 + (-45)$	8.) WHITE $-42 + (-25)$	9.) YELLOW $-30 + 1$
10.) BLACK $-3 + (-29)$	11.) YELLOW $-50 + 72$	12.) BLACK $15 + (-2)$
13.) BLUE $-23 + (-15)$	14.) YELLOW $2 + (-2)$	15.) PINK $-5 + (-4)$

Name: _____ Class: _____ Date: _____

Operation: find the order!

Directions: Simplify the expressions beginning at the "start" box. Find the correct answer out of the choices given and get to the end!

Please Note: All boxes might not be used!



Name : _____ Score : _____

Teacher : _____ Date : _____

Order of Operations

1) $(8 + 43 - 3) \div 6 + 3$

6) $(12 + 26 - 6) \div 8 + 4$

2) $(17 + 2) \times (14 + 6) + 9$

7) $(8 + 43 - 3) \div (31 - 7)$

3) $(14 + 28 - 2) \div (0 + 2)$

8) $(11 + 3) + (16 + 18 \div 3)$

4) $(21 - 4) \times (8 + 4) - 7$

9) $(16 - 2) + (15 - 15 \div 5)$

5) $7 \times (5 \times 5 - 2) + 10$

10) $9 \times (3 \times 7 - 8) - 6$



Name: _____

Distributive Property Practice

Simplify each expression using distributive property.

$$3(4x + 7)$$

$$4(6m - 4)$$

$$- 11(4y - 3)$$

$$5(2y - 7)$$

$$12(4x + 1)$$

$$8(10 - m)$$

$$- 2(3k + 6)$$

$$3(5 - x)$$

$$- 3(8h + 7)$$

$$6(- 4 + w)$$

$$- (4x + 3)$$

$$11(2x + 4)$$

$$9(- x - 3)$$

$$9(- 5p - 7)$$

$$2(8x + 4)$$

$$- 10(4y - 8)$$

$$- 7(7x + 2)$$

$$5(6 - 3x)$$

Name: ANSWER KEY

Distributive Property Practice

Simplify each expression using distributive property.

$$3(4x + 7)$$

$$12x + 21$$

$$5(2y - 7)$$

$$10y - 35$$

$$- 2(3k + 6)$$

$$- 6k - 12$$

$$6(- 4 + w)$$

$$- 24 + 6w$$

$$9(- x - 3)$$

$$- 9x - 27$$

$$- 10(4y - 8)$$

$$- 40y + 80$$

$$4(6m - 4)$$

$$24m - 16$$

$$12(4x + 1)$$

$$48x + 12$$

$$3(5 - x)$$

$$15 - 3x$$

$$- (4x + 3)$$

$$- 4x - 3$$

$$9(- 5p - 7)$$

$$- 45p - 63$$

$$- 7(7x + 2)$$

$$- 49x - 14$$

$$- 11(4y - 3)$$

$$- 44y + 33$$

$$8(10 - m)$$

$$80 - 8m$$

$$- 3(8h + 7)$$

$$- 24h - 21$$

$$11(2x + 4)$$

$$22x + 44$$

$$2(8x + 4)$$

$$16x + 8$$

$$5(6 - 3x)$$

$$30 - 15x$$

Name : _____ Score : _____

Teacher : _____ Date : _____

Combining Like Terms

1) $2g + 4g$

6) $-2(-7r + 9)$

2) $-3(8 + 4w)$

7) $9 + 3n + 6n$

3) $3n + 6 - 8 + 9n$

8) $2(3m + 6) - 5m$

4) $2y - 5(3 + 4y)$

9) $z - 2z$

5) $-2q + 3q - 4 + 6$

10) $4 - 8g - 3g$



Name : _____

Score : _____

Teacher : _____

Date : _____

Simplifying Algebraic Expressions

1) $-6(-8 - 5n) - 2$

6) $4(2 + 9g)$

2) $-9(8n + 6) - 3n$

7) $6 + 4(-8 + 7x)$

3) $9(-4f + 2)$

8) $9d + 7(-5d - 6)$

4) $-7(5y - 6)$

9) $8(7m + 4)$

5) $5 + 9(-2p + 7)$

10) $2(-9 + 8z)$



Adding Linear Expressions (A)

Simplify each expression.

1. $(-4y - 1) + (-9y - 2)$

2. $(6h + 2) + (-7h - 8)$

3. $(-4s + 9) + (4s - 6)$

4. $(s - 6) + (8s + 4)$

5. $(8b + 7) + (2b - 9)$

6. $(-3c + 6) + (-c + 8)$

7. $(-6n - 6) + (8n - 6)$

8. $(-9m + 9) + (8m + 8)$

9. $(7z + 1) + (-4z - 5)$

10. $(-n + 7) + (-7n + 6)$

Name : _____

Score : _____

Teacher : _____

Date : _____

Subtracting Mixed Numbers

1) $5\frac{5}{28} - 3\frac{4}{14} =$

2) $6\frac{6}{7} - 1\frac{10}{21} =$

3) $5\frac{2}{11} - 1\frac{1}{22} =$

4) $5\frac{1}{8} - 4\frac{2}{16} =$

5) $5\frac{3}{4} - 4\frac{2}{14} =$

6) $6\frac{7}{26} - 4\frac{3}{13} =$

7) $6\frac{2}{22} - 2\frac{9}{11} =$

8) $8\frac{7}{14} - 4\frac{1}{7} =$

9) $5\frac{1}{3} - 3\frac{1}{4} =$

10) $5\frac{11}{14} - 4\frac{4}{28} =$

Name : _____

Score : _____

Teacher : _____

Date : _____

Multiplying Fractions with Cross Canceling

1) $\frac{1}{3} \times \frac{5}{6} =$

2) $\frac{1}{3} \times \frac{15}{18} =$

3) $\frac{8}{18} \times \frac{17}{20} =$

4) $\frac{5}{10} \times \frac{4}{5} =$

5) $\frac{2}{4} \times \frac{1}{6} =$

6) $\frac{13}{20} \times \frac{1}{4} =$

7) $\frac{3}{7} \times \frac{10}{14} =$

8) $\frac{7}{10} \times \frac{13}{15} =$

9) $\frac{2}{5} \times \frac{9}{18} =$

10) $\frac{3}{16} \times \frac{1}{3} =$

Name : _____

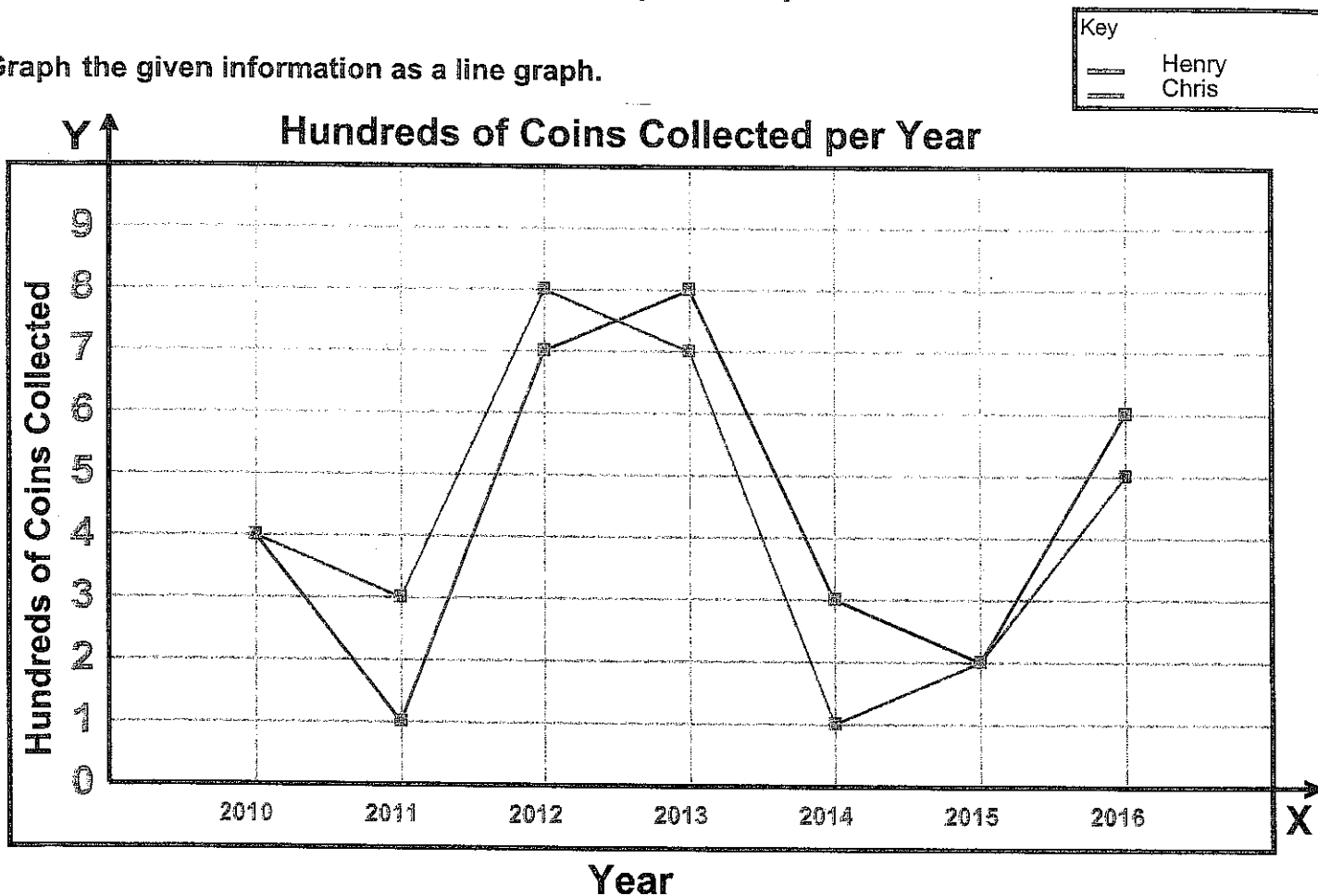
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Date : _____

Double Line Graph Comprehension

Graph the given information as a line graph.



1) How many coins were collected by both Henry & Chris in 2013? _____

2) What was the absolute difference in coins collected between Henry & Chris during the year 2012? _____

3) During which year(s) did Henry collect more coins than Chris? _____

4) In the years of 2015 and 2016 how many coins were collected between both kids? _____

5) How many months did Chris collect more coins than Henry? _____

Name : _____

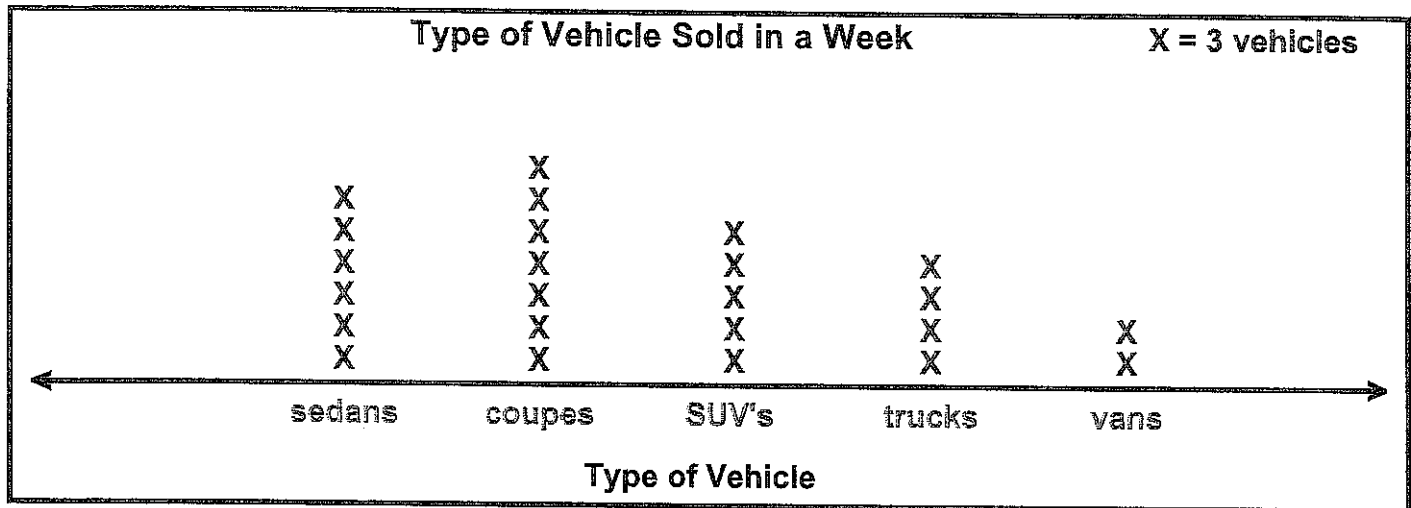
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Teacher : _____

Date : _____

Interpreting Line Plots

One car dealership tracked the types of vehicles sold in a week. Answer the questions.



- 1) How many trucks did the dealership sell that week? _____
- 2) How many cars (sedans & coupes) were sold that week? _____
- 3) Were more vans or SUV's sold at the dealership? _____
- 4) What is the absolute difference in the number of coupes and SUV's sold? _____
- 5) Which type of vehicle was sold the least? _____
- 6) How many sedans were sold that week? _____
- 7) Which vehicle type (if any) was sold more than 18 times? _____
- 8) Which type of vehicle was sold the most that week? _____
- 9) In total, how many vehicles were sold that week by the dealership? _____
- 10) How many coupes were sold? _____

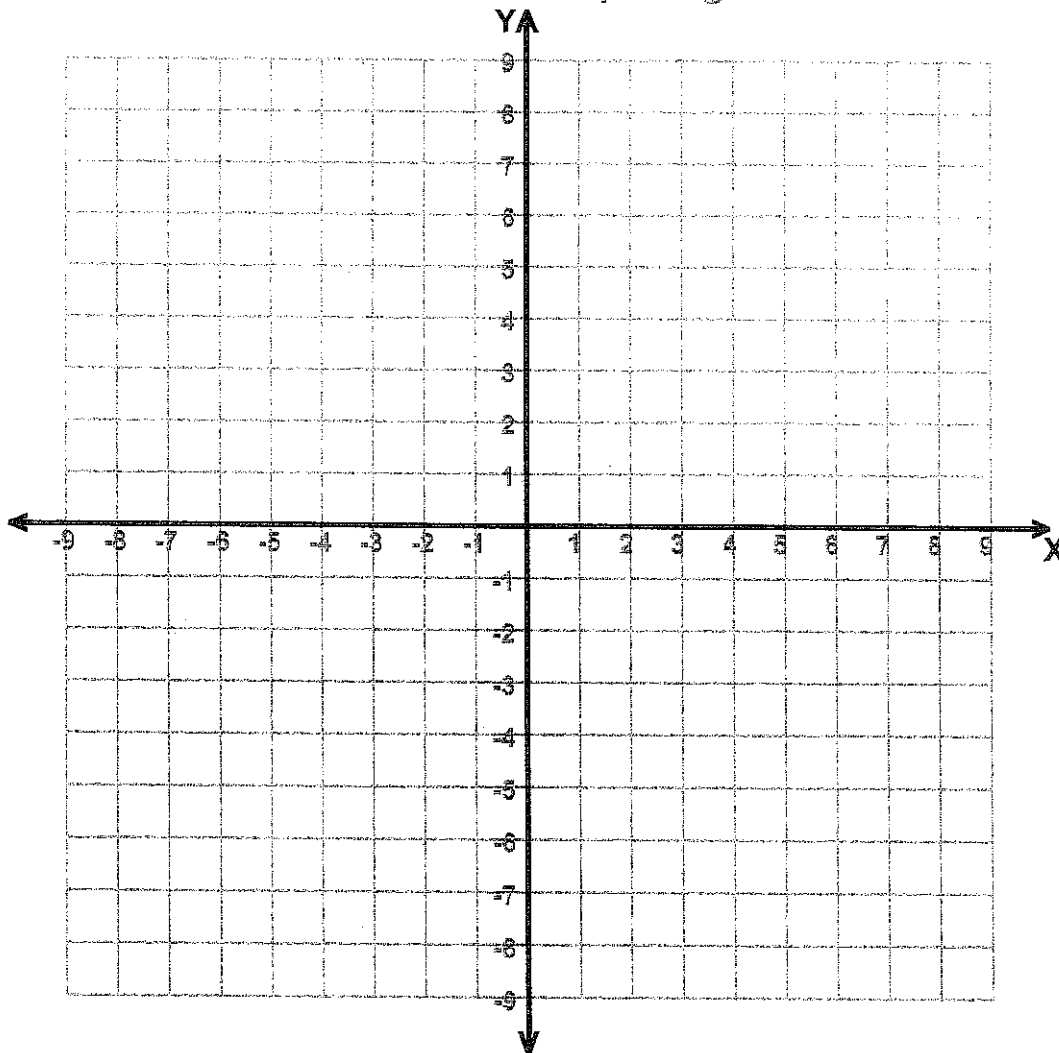
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Teacher : _____

Date : _____

Four Quadrant Graphing Puzzle



Connect each sequence of points with a line.

$(-4,6)$, $(2,6)$, $(2,5)$, $(-3,5)$, $(-3,2)$, $(1,2)$, $(1,1)$

$(-3,1)$, $(-3,-2)$, $(2,-2)$, $(2,-3)$, $(-4,-3)$, $(-4,6)$ End of Sequence

What is the shape ? _____

Performance Task 1

Walk, Don't Run

1. The Walking Club is one of the after-school activities at Jefferson Middle School. It consists of three groups of walkers. Each group walks at a different pace. All groups begin together and walk the same 4-mile trail.

- a. Wendy is new to the club. She asks each group how fast they walk. Each group gives the answer in a different way. Find the speed of each group in miles per hour.

Group 1: We walk $2\frac{1}{2}$ miles per hour.

Group 2: We walk a mile in 20 minutes.

Group 3: We take 2 hours to walk the trail.

- b. Which group will finish first? Explain how you know.

- c. How long will it take Group 1 to complete the trail?

- d. If each group starts promptly at 2:30 P.M., what time will Group 2 finish?

Performance Task 1

Zesty Black Bean Salsa

Zesty Black Bean Salsa

30 ounces canned black beans

16 ounces tomato salsa

2. The Chef's Club is making black bean salsa.

The recipe they are using has just two ingredients.

- a. Using the above recipe, how many ounces of black beans will be used for every ounce of tomato salsa?

- b. The members of the club have decided that they will make $\frac{3}{4}$ of the recipe. How many ounces of black beans will they use? How many ounces of tomato salsa will they use?

- c. Several members decide that they would like to try the recipe at home. They record the amounts of each ingredient that they will use.

Which members' black bean salsa will have the same ratio of beans to tomato salsa as the original recipe?

Name	Black Beans (ounces)	Tomato Salsa (ounces)
Jackson	8	10
Tamisha	20	$10\frac{2}{3}$
Logan	7.5	4
Samina	45	24
Lily	10	$5\frac{1}{3}$

- d. Carrie decides to make a graph of the ordered pairs of numbers in the table in part c. She uses the x-axis to represent the number of ounces of black beans and the y-axis to represent the number of ounces of tomato salsa. Will all of the points lie on a straight line? Explain.

Performance Task 1

Dogs on Ice

1. The Golden Beagles, Webster Middle School's 6th Grade Hockey team, is having a good season. Conference records are shown at the right.

Lockhart:	Won 8, Lost 5
Webster:	Won 7, Lost 4
Camarillo:	Won 6, Lost 3

- a. Hank claims that Webster deserves to be in first place because Webster has won more games than Camarillo and lost fewer games than Lockhart. Is Hank right? How can he prove his claim?
- b. What is the winning percent for each of the three teams? Does it justify your answer to part a?
- c. Webster has 4 games left to play. How many games must the team win in order to match or beat the winning ratio of the team that is currently in 1st place?
- d. Suppose that over the last 5 years Webster has had exactly the same win ratio as it does this season and that over that time it has won almost 50 games. What was Webster's won-loss record over this period? Use the ratio table to find your answer.

Won							
Lost							

Hoop Dreams

2. The Webster Golden Beagles Basketball teams are also doing well this year.

a. Wendy is leading the conference in percent of free throws. Wendy has made 28 out of 32 free throws. What percent of her free throws did Wendy make?

b. Doug made 44 percent of his 3-point shots. In all he made 33 three-point shots. How many 3-point shots did Doug take?

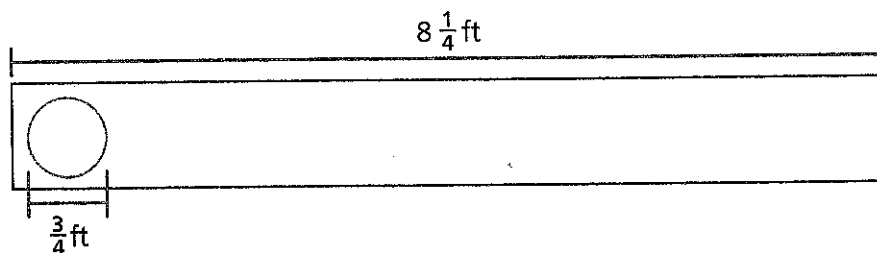
c. Nina made 56 percent of her 2-point shots to score a total of 84 points. How many 2-point shots did Nina take?

d. After 21 minutes in the game, Steve scored 9 points. At this rate, how many points will he score in the 35-minute game?

Performance Task 1

Just for Kicks

3. Yanni is the grounds-person for the Webster Golden Beagles Soccer team.
- a. Yanni stores soccer balls on a shelf $8\frac{1}{4}$ feet long. Each soccer ball takes up $\frac{3}{4}$ foot. How many balls can he store on the shelf?



- b. Soccer fields differ in size. Yanni took measurements of six different fields in Webster's conference. To find the average length, he added the lengths and divided by 6. To find the average width, Yanni added the widths and divided by 6. What was the average length and the average width of a field in yards? Round your answers to the nearest tenth.

Length (yd)	100	112.4	106.7	120.9	114.0	108.6
Width (yd)	64.2	70.0	74.3	80.1	76.4	70.4

- c. In the summer, Yanni waters the soccer field lawn every 4 days, mows the field every 10 days, and grooms the field every 6 days. If Yanni waters, mows, and grooms on July 1, in how many days will he next perform all 3 duties on the same day?

Gridiron Greats

4. The Webster Golden Beagles Flag Football team focuses on having fun.

- a. So far this year the team has scored a total of 39 points by kicking 3-point field goals. Write an equation that you can use to find out how many field goals the team scored. Then solve the equation.

Equation _____

- b. The team has scored a total of 84 points on 6-point touchdowns and 1-point extra point kicks. They have scored the same number of touchdowns as extra point kicks. Write an equation that could be used to find t , the number of touchdowns the team scored.

Equation _____

- c. Over 7 games, more than 1,500 fans came to see the Golden Beagles play. The inequality $7n > 1,500$ can be used to represent this situation; n represents the average number of fans per game.

Is $n = 180$ part of the solution set for this inequality? Explain.

- d. The Golden Beagles scored 8 more points than the Camarillo Foxes over the last 3 games. If the Beagles scored 52 points, how many points did the Foxes score? Write an equation to solve the problem.

Equation _____

Performance Task 1

On the Track

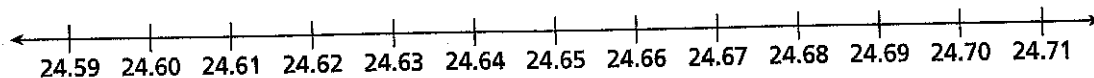
5. The Webster Track Team had its annual conference meet this week.
- a. In the 400 yard relay, Peter ran the first leg in 12.2 seconds, followed by Megan in 11.9 seconds, Pedro in 12.4 seconds, and Kyra in 11.7 seconds. How did the relay team's time compare to the meet record of 47.9 seconds?

- b. Each stride that Kyra takes covers $6\frac{3}{5}$ feet. How many strides does it take for her to cover 66 feet?

- c. Andrew ran the 2-mile race in 12 minutes. What is his rate in minutes per mile? What is his rate in miles per hour?

- d. The runners in the 200 m dash had the times shown. In what order did the runners finish? Show a point for each runner's time on the number line.

Runner Times (seconds)			
A	B	C	D
24.67	24.625	24.65	24.6



Performance Task 2

Quitting Time

1. Jocelyn's band, The Quitters, posted their first song on the Internet 6 days ago and have already gotten 9,600 hits.
 - a. At this pace, how long will it take The Quitters to reach 1 million hits?
 - b. If The Quitters got 9,600 hits in 6 days, about how many hits did they get each *hour* that their song was online?
 - c. About how many hits a day would The Quitters need to reach 1 million hits in 1 month?
 - d. Twenty-five percent of people who played The Quitters' new song said that they would pay \$1 for the song if it were for sale. At their current rate, how much money would The Quitters make in 1 month (30 days)?

Post That Video

2. Marvin is making videos that he posts on the Internet on his channel called Marvin's Marvels.

a. Marvin's first video, "If Life Gives You Lemons," is about how to make lemonade using real lemons. Marvin's recipe fills a 54-ounce jug of lemonade. How many $6\frac{3}{4}$ -ounce containers can be filled?

b. Marvin's Battle of the Marching Bands video features a 36-member band and a 48-member band. Bands must march in rectangular formations. What is the *greatest* number of band members that can fit in a single row in order to have both bands have the same number in each row?

c. Marvin has a total of 8 videos posted on his channel. The number of "likes" for each video is shown below.

24, 26, 20, 32, 350, 15, 22, 29

Find the mean and the median of the data. Which do you think better represents a typical value, the mean or the median? Explain.

d. Marvin made a 54-minute video that is too long and takes up too much memory to post in one segment. To save memory, Marvin is dividing the video into 8 segments. How long will each segment be?

Performance Task 2

Get with the Program

3. Jillian is a programmer who is creating cell phone apps.

- a. Jillian is writing a phone app that will calculate tips for waiters and waitresses. Jillian is calling c the cost of the total dinner bill that the customer pays before the tip. Write an expression for computing a dinner costing c that includes a 15% tip.

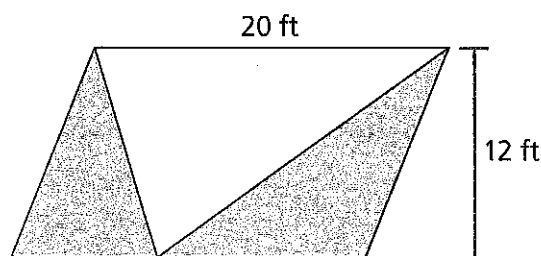
Expression _____

- b. Jillian has budgeted \$600 or $\frac{1}{7}$ of her entire budget, b , for marketing her new calendar app. The inequality $\frac{1}{7}b \leq 600$ shows this relationship. Can Jillian's budget be \$4,900? Explain.
- c. Jillian is writing a score-keeping app for the school basketball coach. The app scores 1 point for free throws (f), 2 points for baskets (b), and 3 points for 3-point baskets (p). Write an expression for finding the total number of points for any number of free throws, baskets, and 3-point baskets. Then evaluate the expression for a game in which the team scored: $f = 10$, $b = 18$, and $p = 6$. How many total points did the team score?
- d. Jillian's new calendar app takes up 5 MB less than 3 times the space that the old app used. Write an expression for this relationship using m for the amount of memory in MB that the old app used. Then evaluate the expression for $m = 12$.

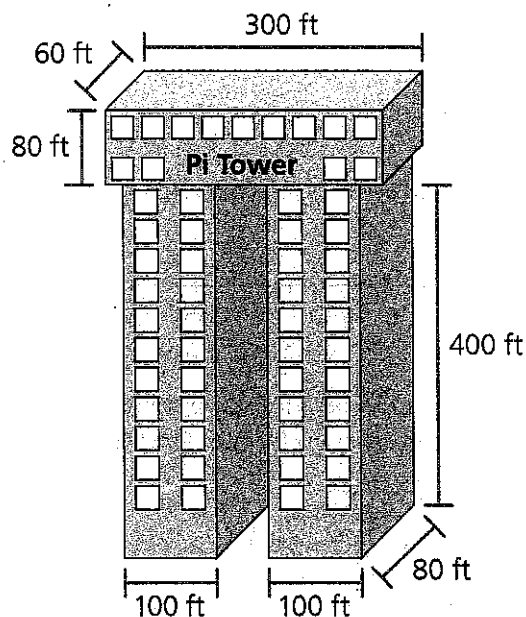
Vika Knows Design

4. Vika is an architect. She uses a computer to create the plans for her designs.

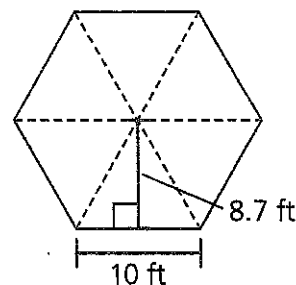
- a. Vika's design needs to be painted. The painters want to know the combined area of the 2 shaded triangles but they don't know the lengths of any of the triangles' sides. How can you find the combined area of these 2 triangles? Explain your strategy.



- b. Vika's Pi Tower building is built roughly in the shape of the Greek letter π . What is the volume of the Pi Tower?



- c. Vika was having trouble finding the area of this hexagon until she realized that it was made of equilateral triangles that each have the same shape and size. Find the area of the hexagon.



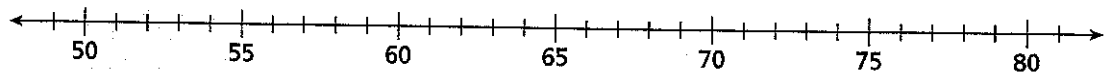
Performance Task 2

Downloader

5. Jamal is creating an app that downloads files quickly. A set of download trials produced the following data in seconds:

68, 49, 75, 63, 55, 60, 80, 65, 77, 53, 81, 64

- Find Q_2 for the data set.
- Find Q_1 and Q_3 for the data set.
- Draw a box-and-whisker plot for the data set.



- d. Jamal had five people test his app and rank it on a scale of 1 to 20. The data are shown below. Find the mean and MAD (Mean Absolute Deviation) for his data.

14, 9, 16, 18 10