

Set 1

D. 84,480

1. The earth is approximately 93,000,000 miles from the sun. What is the distance written in scientific notation?

- A. 9.3×10^6
- B. 93×10^6
- C. 93×10^7
- D. 9.3×10^7

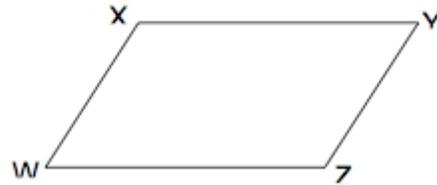
5. In a quadrilateral, each of two angles has a measure of 115 degrees. If the measure of the third angle is 70 degrees, what is the measure of the remaining angle?

- A. 60°
- B. 70°
- C. 130°
- D. 140°

2. $3^3 + 4(8-5) + 6 =$

- A. 6.5
- B. 11
- C. 27.5
- D. 29

6. In the figure below, WXYZ is a parallelogram. Which of the following is NOT necessarily true?



- A. Side WX is parallel to side ZY.
- B. Side XY is parallel to side WZ.
- C. The measures of angles W and Y are equal.
- D. The lengths of sides WX and XY are equal.

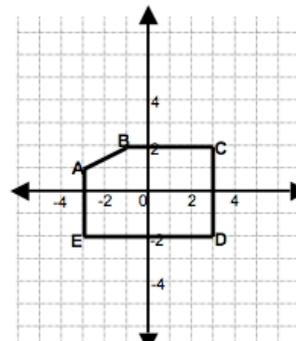
3. The fuel cost of driving a truck is about 12 cents a mile. Approximately how much does it cost to drive a truck 96 miles?

- A. \$0.90
- B. \$6.00
- C. \$8.00
- D. \$12.00

7. Name the coordinates of the vertex B.

4. How many feet are in 15 miles?

- A. 352
- B. 35,200
- C. 79,200



- A. (-1, 2)
- B. (2, -1)
- C. (1, -2)
- D. (-2, 1)

8. Which equation is true for the three pairs of x and y values in the table below?

x	y
0	-3
1	-1
2	1

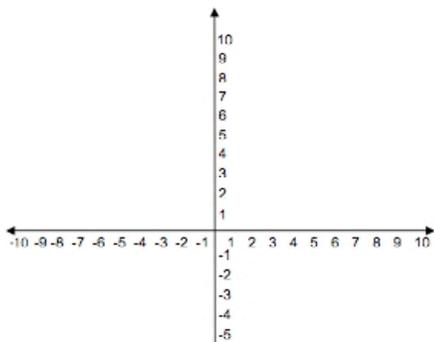
- A. $3x + 2 = y$
- B. $3x - 2 = y$
- C. $2x + 3 = y$
- D. $2x - 3 = y$

9. If $4x - 6 = 14$, what is the value of x?

- A. 2
- B. 3
- C. 4
- D. 5

10. Graph the linear function using the table.

x	y
1	3
-4	0
-9	-3



11. The table below represents a relation between x and y. Which of the following equations could represent the same relations?

x	y
1	1
2	4
3	7
4	10

- A. $y = 2x - 1$
- B. $y = 3x + 2$
- C. $y = 3x + 1$
- D. $y = 3x - 2$

12. There are 15 girls and 11 boys in a mathematics class. If a student is selected at random to run an errand, what is the probability that a boy will be selected?

- A. $\frac{4}{26}$
- B. $\frac{11}{26}$
- C. $\frac{15}{26}$
- D. $\frac{11}{15}$

13. From a batch of 3000 light bulbs, 100 were selected at random and tested. If 5 of the light bulbs in the sample were found to be defective, about how many defective light bulbs would be expected

in the entire batch?

- A. 15
- B. 60
- C. 150
- D. 300

Set 2

1. Simplify the expression below.

$$4^3$$

- A. 7
- B. 12
- C. 43
- D. 64

2. What is the value of the expression below?

$$3^3 - 9 + 15 \div (5 - 2)$$

- A. 1
- B. 5
- C. 11
- D. 23

3. Carla's daily workout at a gym lasts for 30 minutes. She looks at her watch and sees that she has exercised for 9 minutes. About what fractional part of her workout has she completed?

- A. $\frac{4}{5}$
- B. $\frac{3}{10}$
- C. $\frac{3}{12}$
- D. $\frac{1}{9}$

4. How many yards are equal to 72 inches?

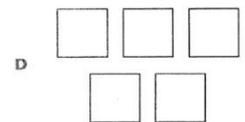
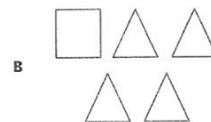
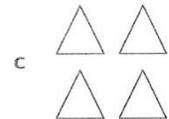
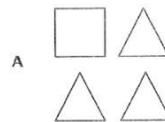
- A. 2 yards
- B. 3 yards
- C. 6 yards
- D. 36 yards

5. For the triangle below, the measure of angle A is 19 degrees and the measure of angle B is 27 degrees. What is the measure of angle C?

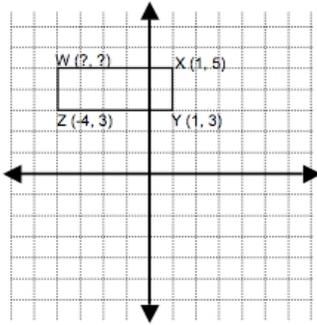


- A. 44°
- B. 46°
- C. 134°
- D. 154°

6. A rectangular pyramid is shown below. Which combination of shapes makes up the bases and faces of the rectangular pyramid?



7. In the figure below, if WXYZ is a rectangle, then the coordinates of vertex W are



- A. (5, -4)
- B. (-4, 5)
- C. (4, 5)
- D. (-5, -4)

8. An artist creates a design by drawing circles in steps, as shown below.



The table below shows a pattern of the total number of circles formed at each step.

Pattern of Circles					
Step	1	2	3	4	5
Total Number of Circles	1	4	13		

If the pattern shown in the table continues, what will be the total number of circles formed at step 5?

- A. 52
- B. 117
- C. 121
- D. 283

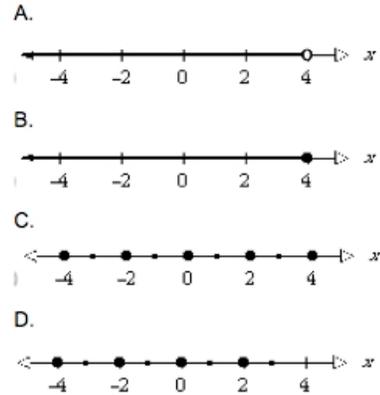
9. What is the value of the expression below when $x = 12$ and $y = -12$?

$$(x - y)(x + y)$$

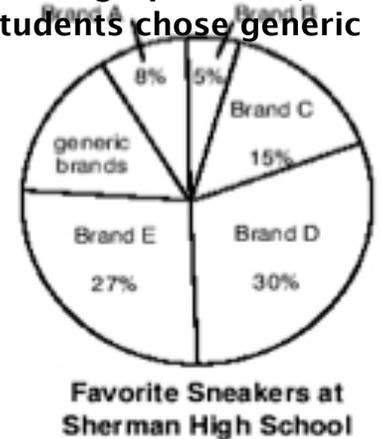
- A. 288
- B. 144
- C. 12
- D. 0

10. Which graph represents the solution to the following inequality?

$$x + 3 \leq 7$$



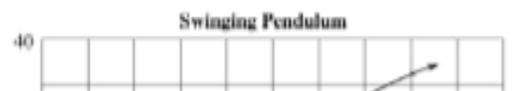
11. According to the graph below, what percent of the students chose generic brands?



- A. 15%
- B. 14%
- C. 17%
- D. 16%

12. A bag contains two red candies and one yellow candy. Kim takes out one candy and eats it, and then Jeff takes out one candy. Which sentence cannot be true?

- A. Kim's candy is red and Jeff's candy is red.
- B. Kim's candy is red and Jeff's candy is yellow.
- C. Kim's candy is yellow and Jeff's candy is red.
- D. Kim's candy is yellow and Jeff's candy is yellow.



13. The graph shows the time taken for a pendulum to swing backwards and forwards 20 times for different lengths of string. The length of a string is 90 cm. About how long would it take for the pendulum to swing backwards and forwards 20 times?

- A. 35 seconds
- B. 38 seconds
- C. 42 seconds
- D. 45 seconds

Set 3

1. What is the prime factorization of 72?

- A. $2^3 \cdot 4^2$
- B. $2^3 \cdot 3^2$
- C. $2 \cdot 3^2 \cdot 4$
- D. $2^5 + 3^3 + 13$

2. Manuel and Jerry are trying to find the value of the expression $(5 + 7)^2$.

Jerry plans to first square 5, then square 7, and then add the products together.

Manuel plans to add five and seven together, then square the sum.

Which statement is true?

- A. Only Jerry has a correct strategy.
- B. Only Manuel has a correct strategy.

- C. Both Manuel and Jerry have a correct strategy.
- D. Neither Manuel nor Jerry has a correct strategy.

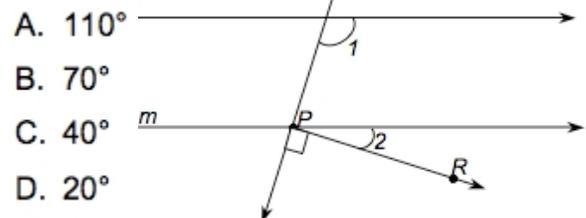
3. About 60% of the used white paper is recycled at Lance's school. The school uses 1,260 pounds of white paper per month. Which is the best estimate for the number of pounds of white paper recycled per month?

- A. 500 - 560
- B. 600 - 660
- C. 720 - 780
- D. 850 - 910

4. Greg is 150 centimeters tall. How many meters is that?

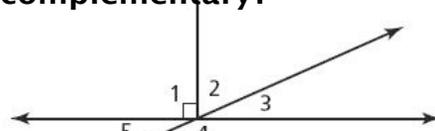
- A. 0.500
- B. 1.5
- C. 15
- D. 15,000

5. In this drawing, line l is parallel to m and line s is perpendicular to ray PR . The measure of angle 1 is 110 degrees. What is the measure of angle 2?



- A. 110°
- B. 70°
- C. 40°
- D. 20°

6. In the diagram below, which angles are complementary?



9. Joey works in a restaurant where he earns \$4.00 an hour in addition to tips he receives from customers. The following expression could be used to calculate Joey's daily pay:

$$D = 4h + t$$

Where D = Joey's pay for the day,
 h = the number of hours he works, and
 t = the tips he receives.

One day, Joey worked for 6 hours and received \$10.00 in tips. How much money did Joey earn that day?

- A. \$14.00
- B. \$16.00
- C. \$34.00
- D. \$64.00

10. The table below shows a relationship between x and y . Which of the equations represents this relationship.

x	y
-4	-2
0	0
4	2
8	4

- A. $y = x^2$
- B. $y = 2x$
- C. $y = \frac{1}{2}(x)$
- D. $y = x - 2$

11. The table below shows test scores for a class. How many students scored in the 80s?

Stem	Leaf
9	0 1 1 5 7
8	0 0 2 4 6 7 9
7	7 7 8 9
6	9
5	2 3
4	4

- A. 2 students
- B. 6 students
- C. 7 students

- A. $\angle 3$ and $\angle 1$
- B. $\angle 3$ and $\angle 2$
- C. $\angle 3$ and $\angle 4$
- D. $\angle 3$ and $\angle 5$

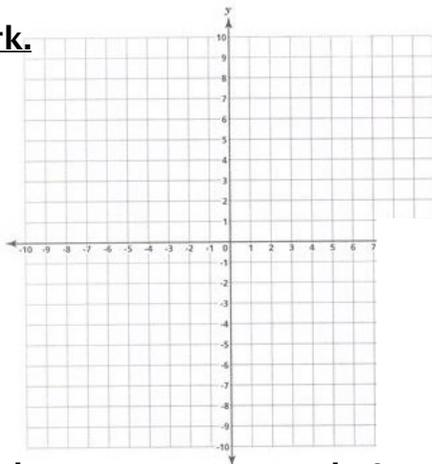
7. On the grid below, plot and label the following coordinates:

$(-1, 3)$, $(7, 3)$, $(7, -1)$ and $(-1, -1)$.

Connect the points with straight lines to create a specific type of polygon and name the polygon.

Now determine the perimeter of the polygon.

Show your work.



8. The table below represents a relation between x and y . What is the missing number in the table?

x	y
1	1
2	?
4	7
7	13

- A. 2
- B. 3
- C. 4
- D. 5

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D. 9 students

12. What is the probability that a teacher chosen at random will be a male?

SCHOOL TEACHERS		
Age in years	Male	Female
Under 25	5	7
25-34	10	11
35-44	15	17
45-54	7	11
55 or over	8	5

- A. $\frac{1}{2}$
- B. $\frac{9}{20}$
- C. $\frac{13}{32}$
- D. $\frac{15}{32}$

13. The chart below shows the pattern of discounts Jake is giving on poster board purchases.

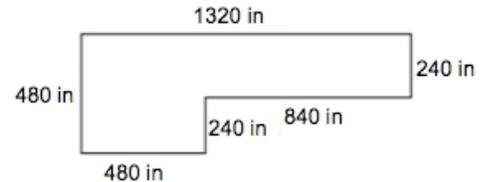
2. A secretary can type 56 words per minute. How much time will she need to type a 4200-word report?

- A. 7 hours 30 minutes
- B. 1 hour 4 minutes
- C. 1 hour 28 minutes
- D. 1 hour 15 minutes

3. A regular human hand contains 27 different bones. There are 206 bones altogether in the human body. Approximately what percent of the bones in a whole human body are in one hand?

- A. about 1.3%
- B. about 7.6%
- C. about 13%
- D. about 26%

4. A farmer needs to put up a fence around her pasture. How many yards of fencing does she need?



- A. 300 yards
- B. 100 yards
- C. 25 yards
- D. 50 yards

5. A circle has a radius of 7 in. What is the approximate area of the circle?



Set 4

1. Solve.

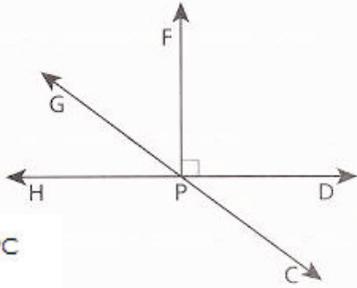
$$\frac{1}{15} + \left(\frac{4}{15} + \frac{1}{3} \right)$$

- A. 1/9
- B. 9
- C. 2/3
- D. 5

- A. 20 square inches
- B. 40 square inches
- C. 90 square inches
- D. 150 square inches

x	y
0	1
1	2
2	5
3	10
4	17
5	?
6	37

6. In the diagram below, $\overrightarrow{PF} \perp \overrightarrow{HD}$. Which two angles are supplementary?



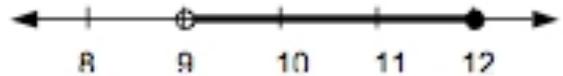
- A. $\angle GPH$ and $\angle DPC$
 - B. $\angle GPF$ and $\angle GPH$
7. Look at this diagram.
- C. $\angle GPD$ and $\angle DPC$
 - D. $\angle GPF$ and $\angle FPC$

- A. 16
- B. 24
- C. 26
- D. 27

9. If $y = -5$, what is the value of $7 + 7y$?

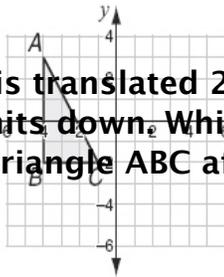
- A. -28
- B. -19
- C. 9
- D. 42

10. Which inequality is represented on the number line below?



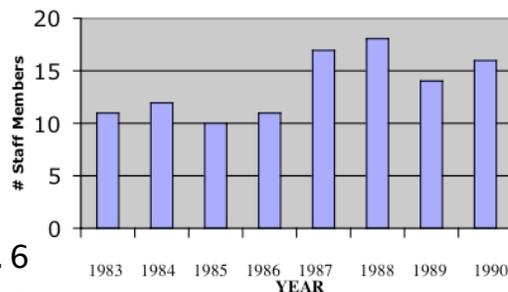
- A. $9 < n < 12$
- B. $9 \leq n < 12$
- C. $9 < n \leq 12$
- D. $9 \leq n \leq 12$

Triangle ABC is translated 2 units to the right and 3 units down. Which triangle is the image of triangle ABC after this translation?



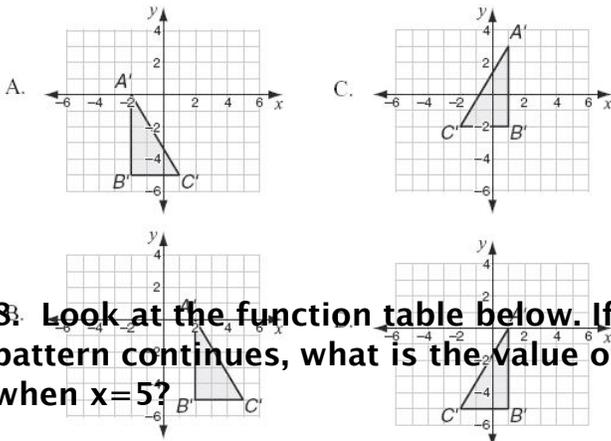
11. The chart below shows the number of members on the school newspaper staff from 1983-1990. What was the increase in the number of staff members from 1986 - 1987?

Number of Members on a Newspaper Staff



- A. 6
- B. 7

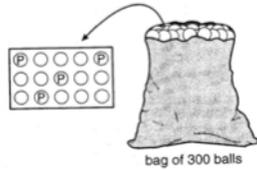
8. Look at the function table below. If the pattern continues, what is the value of y when $x=5$?



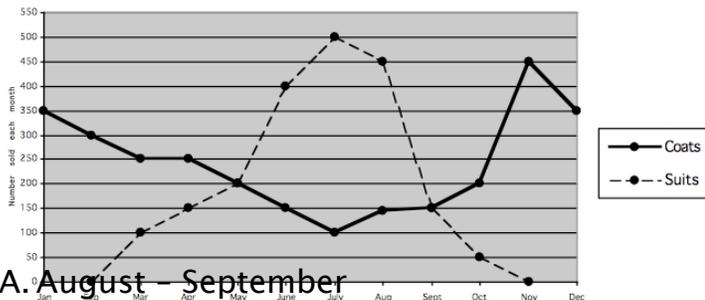
- C. 11
- D. 17

12. Michael has a bag of 300 balls. He randomly chooses 15 balls and 4 are purple (P). How many of the 300 balls are probably purple?

- A. 20
- B. 40
- C. 60
- D. 80



13. The graph below shows the number of suits and coats sold each month. According to the information in this graph, during which two-month period does the greatest increase in coat sales occur?



- A. August – September
- B. May – June
- C. November – December
- D. October – November

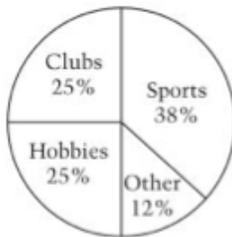
Set 5

1. What is the sum of $(3 + 3)^2$ and 2^3 ?

- A. 18
- B. 20
- C. 26
- D. 44

2. There are 1,200 students enrolled in Adams Middle School. According to the graph below, how many of these students participate in sports?

STUDENT PARTICIPATION IN ACTIVITIES AT ADAMS MIDDLE SCHOOL



- A. 380
- B. 456
- C. 760
- D. 820

3. Jen and Kerry bake 24 mini-cupcakes. Jen eats 25% of the mini-cupcakes and Kerry eats $\frac{1}{3}$ of the mini-cupcakes.

Approximately what percent of the mini-cupcakes are left?

- A. 40%
- B. 50%
- C. 60%
- D. 75%

4. The number of 750 mL bottles that can be filled from 600 L of water is _____ ?

- A. 80 bottles

- B. 800 bottles
- C. 1250 bottles
- D. 1800 bottles

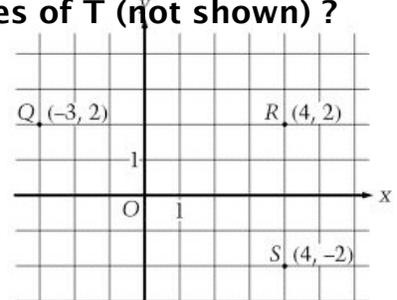
5. If the measure of an exterior angle of a regular polygon is 120° , how many sides does the polygon have?

- A. 3
- B. 4
- C. 5
- D. 6

6. Two angles are complimentary. One angle measures 60 degrees. What is the measure of the other angle?

- A. 30 degrees
- B. 60 degrees
- C. 90 degrees
- D. 120 degrees

7. If the points Q, R, and S shown below are three of the vertices of rectangle QRST, which of the following are the coordinates of T (not shown) ?



- A. (4, -3)
- B. (3, -2)
- C. (-3, 4)
- D. (-3, -2)
- E. (-2, -3)

8. What is the missing number in the pattern below?

2	6	18	54	?	486
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- A. 72
- B. 90
- C. 108
- D. 162

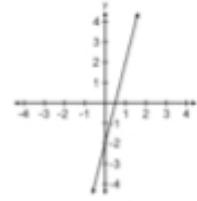
9. What is the value of the expression $3a + 2b$, if $a = 4$ and $b = 9$?

- A. 18
- B. 23
- C. 25
- D. 30

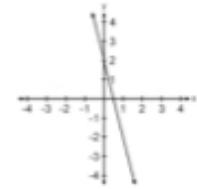
10. Look at the table and select the graph that represents this algebraic relationship.

x	y
-2	10
-1	6
0	2
1	-2
2	-6

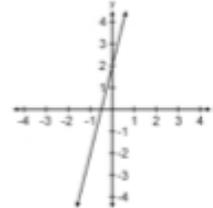
A. Graph A:



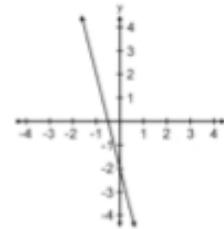
B. Graph B:



C. Graph C:



D. Graph D:



11. Mrs. Smith gave a quiz last week. The results for two of her classes are shown on the box-and-whiskers plots below. Which sentence best describes the quiz results?

- A. The medians for the two classes are the same.
- B. Class A has a smaller range of scores in the upper quartile than Class B.
- C. Class A performed better than Class B.

D. The lower extreme of Class B is greater than the lower extreme of Class A.

12. The numbers 1 through 10 are written on separate pieces of paper and placed in a hat. What is the probability that a number drawn at random is a multiple of 3?

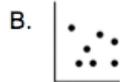
A. $\frac{1}{10}$

B. $\frac{3}{10}$

C. $\frac{1}{3}$

D. $\frac{2}{5}$

13. Which of the following sets of data would show a strong negative relationship?



Set 6

1. Change .35 to a percent.

- A. 0.35%
- B. 3.5%
- C. 35%
- D. 350%

2. Mrs. Todd purchased 4 new tires for her car. The tires cost \$35.00 each, and sales tax is 7%. What was the total cost?

- A. \$44.80
- B. \$140.07
- C. \$147.00
- D. \$149.80

3. Subtract (-)

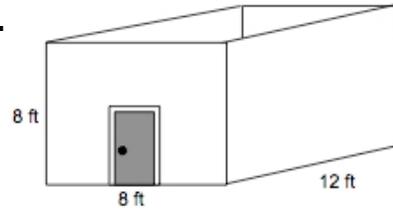
$$\begin{array}{r} 14\frac{5}{8} \\ - 6\frac{1}{2} \\ \hline \end{array}$$

- A. $21\frac{1}{8}$
- B. $8\frac{4}{6}$
- C. $8\frac{1}{8}$
- D. $7\frac{5}{16}$

4. If a thermometer shows a reading of 20 degrees Celsius (C), what is the temperature in degrees Fahrenheit (F)?

- A. 36
- B. 53.8
- C. 68
- D. 93.6

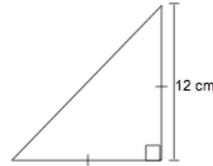
5. Mark plans to hang wallpaper in a rectangular room. The room is shown below.



Mark will hang wallpaper on only three walls. The wall with the door will not be wallpapered. What is the total area that Mark will wallpaper?

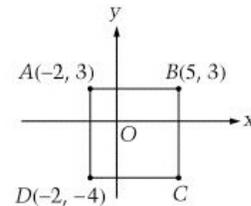
- A. 96 square feet
- B. 256 square feet
- C. 320 square feet
- D. 768 square feet

6. Estimate the length of the hypotenuse.



- A. about 9 cm
- B. about 12 cm
- C. about 17 cm
- D. about 24 cm

7.



In the figure above, if ABCD is a square, then the coordinates of vertex C are

- A. (4,5)
- B. (3,-4)
- C. (3,-2)
- D. (5,-4)
- E. (5,-2)

8. Write the next three numbers in the sequence below. Describe the pattern you used to complete the sequence.

2, -8, 32, -128, _____, _____, _____

9. The cost of one burrito, b , and one taco, a , is less than the cost of two burritos. Which inequality represents this relationship?

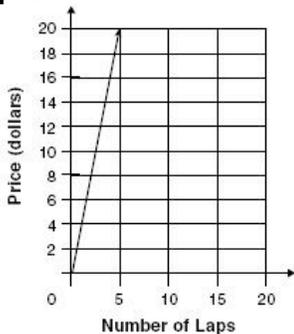
- A. $b + a < 2b$
- B. $b + a < b^2$
- C. $2b < b + a$
- D. $b^2 < a + b$

10. The table below shows the charges for renting and racing a go-cart.

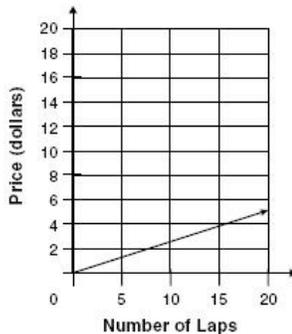
Grand Prix Go-Carts

Number of Laps	0	1	2	3	4	5
Price (dollars)	5	8	11	14	17	20

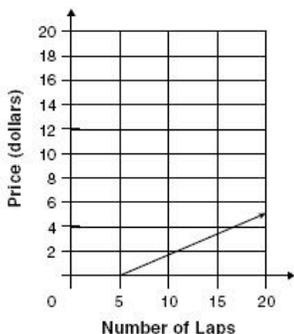
Which graph best represents these prices?



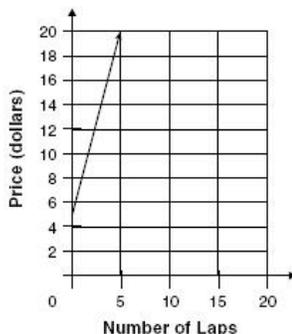
A



C



B



D

11. The points John scored in his first 12 basketball games are shown in increasing order below.

5, 7, 10, 14, 16, 16, 20, 20, 20, 21, 21, 22

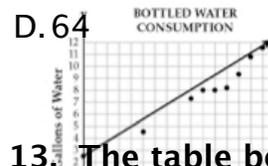
John scores 29 points in the next game. Which statement is true of the median of his points for the 13 games compared to the median of his points for the first 12 games?

- A. The median will stay the same.
- B. The median will increase by one.
- C. The median will increase by two.
- D. The median will increase by four.

12. Sarah and Tom belong to a soccer league that has 8 teams. Each team will play all of the other teams twice. How many games will be played in all?

- A. 16
- B. 28
- C. 56
- D. 64

Graph A



13. The table below shows the consumption of bottled water per person

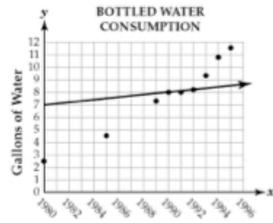
BOTTLED WATER PER PERSON

Year	1991	1992	1993	1994	1995
Consumption (Gallons)	4	6	8	10	12

Graph B

for the years 1980 through 1995. Which graph best models the data?

C. Graph C



D. Graph D



Set 7

1. Of the following, which is closest in value to 0.52?

- A. $1/50$
- B. $1/5$
- C. $1/4$
- D. $1/3$
- E. $1/2$

2. What number completes the proportion below?

$$\frac{6}{15} = \frac{20}{?}$$

- A. 8
- B. 29
- C. 45
- D. 50

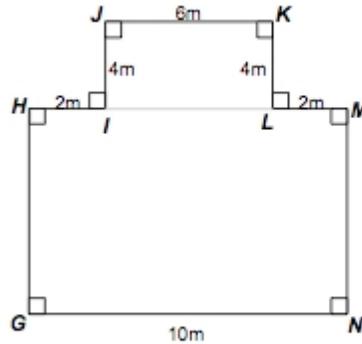
3. Jim has $\frac{3}{4}$ of a yard of string, which he wishes to divide into pieces, each $\frac{1}{8}$ of a yard long. How many pieces will he have?

- A. 3
- B. 4
- C. 6
- D. 8

4. What is the Celsius equivalent of 90 degrees Fahrenheit? Round the answer to the nearest degree.

- A. 18°
- B. 32°
- C. 68°
- D. 130°

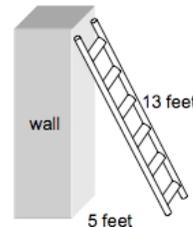
5. The perimeter of this figure is 40 meters.



What is the measure of line HG?

- A. 6 m
- B. 8 m
- C. 10 m
- D. 12 m

6. The bottom of a 13-foot-long ladder is placed 5 feet away from a wall so that the ladder rests against the top, as shown.



Assuming the wall is perpendicular to the ground, what is the height of the wall?

- A. 8 feet
- B. 12 feet
- C. 14 feet
- D. 18 feet

7. In a coordinate plane, the points (2,4) and (3,-1) are on a line. Which of the following must be true?

- A. The line crosses the x-axis.
- B. The line passes through (0,0).

- C. The line stays above the x-axis at all times.
- D. The line rises from the lower left to the upper right.
- E. The line is parallel to the y-axis.

8. The table below shows a relationship between x and y.

x	y
2	8
4	10
6	12
8	14
10	16

Which equation represents the relationship between x and y?

- A. $y = 2x$
- B. $y = 4x$
- C. $y = x + 6$
- D. $y = 2x + 2$

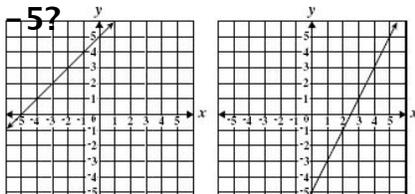
9. Mr. Patel filled a swimming pool with water. When he started, the pool already contained 1,500 gallons of water. The table below shows the number of gallons of water in the pool after filling it for h hours.

Which equation can be used to determine the number of gallons, g, of water in the pool after h hours?

Gallons of Water in Pool (g)	Number of Hours (h)
1,500	0
2,100	1
2,700	2
3,300	3
3,900	4

- A. $g = 600h$
- B. $g = 1,500h$
- C. $g = 1,500 + 600h$
- D. $g = 1,500h + 600$

10. Which best represents the graph of $y = 2x - 5$?



11. How many more people were living in Los Angeles in 1960 than 1940 ?

POPULATIONS OF DETROIT AND LOS ANGELES
1920–1970

YEAR	CITY	
	DETROIT	LOS ANGELES
1920	950,000	500,000
1930	1,500,000	1,050,000
1940	1,800,000	1,500,000
1950	1,900,000	2,000,000
1960	1,700,000	2,500,000
1970	1,500,000	2,800,000

- A. 100,000
- B. 500,000
- C. 800,000
- D. 1,000,000
- E. 2,500,000

12. A restaurant has five different sandwiches and four side dishes. How many side dishes are possible if a person orders one sandwich and one side dish?

MENU	
SANDWICHES	SIDE DISHES
Cheese	French Fries
Turkey	Onion Rings
Fish	Fried Mushrooms
Tuna	
Chicken	

- A. 2 combinations
- B. 6 combinations
- C. 9 combinations
- D. 20 combinations

13. A reporter for a teen magazine surveys teenagers leaving Hot Shots clothing store to determine which brand of clothing teens like best. Which statement best explains why the results of this survey may not be valid?

- A. The survey should have been conducted online.
- B. The group surveyed consisted only of teenagers.
- C. The survey was conducted by a reporter from only one magazine.
- D. The group surveyed consisted only of teenagers who shopped at the same store.

Set 8

1. Erin determined the masses of some samples for her science project. The mass of each sample is listed below.

17, 17.6, 16.7, 16.67

Which of the following correctly lists the samples in order from least mass to the greatest mass?

- A. 17.6, 17, 16.7, 16.67
- B. 16.7, 17.6, 16.67, 17
- C. 16.7, 16.67, 17, 17.6
- D. 16.67, 16.7, 17, 17.6

2. Juliet has collected 22 trading cards from a series that contains a total of 110 cards. Maxwell has collected the same percent of cards as Juliet, but he is collecting a different series. The series Maxwell is collecting has a total of 420. How many cards from his series does Maxwell have?

Show your work.

3. Add the fractions below:

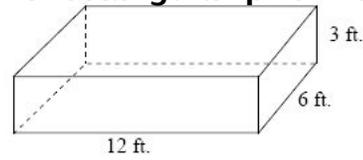
$$\frac{1}{14} + \frac{1}{6}$$

- A. $\frac{1}{24}$
- B. $\frac{1}{10}$
- C. $\frac{1}{5}$
- D. $\frac{5}{21}$

4. Mark's cats eat 72 ounces of food in one week. How many pounds of food do Mark's cats eat in one week?

- A. $\frac{1}{4}$
- B. $3\frac{1}{2}$

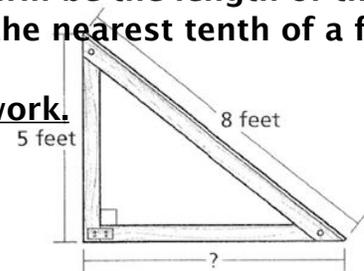
5. What is the volume, in cubic feet, of the right rectangular prism below?



- A. 216 ft.³
- B. 108 ft.³
- C. 54 ft.³
- D. 21 ft.³

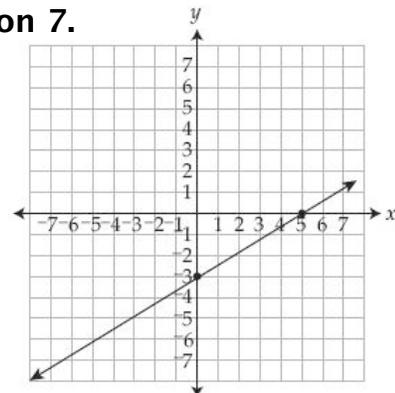
6. Tyrone is building a skateboard ramp with a piece of plywood as shown below. To make a strong ramp, the base must form a right angle with the back of the ramp. What will be the length of the base rounded to the nearest tenth of a foot?

Show your work.



[not drawn to scale]

7. Use the graph below to answer question 7.



At what point does the line intersect the

y -axis?

- A. (- 3, 0)
- B. (0, - 3)
- C. (0, 5)
- D. (5, 0)

8. Dan is filling a swimming pool with water at a constant rate. The table below shows the depth of the water over time.

Time Filling (in hours)	Depth of Water (in feet)
1	$1\frac{1}{2}$
2	2
3	$2\frac{1}{2}$
4	3

How can Dan calculate the depth of the water after 6 hours of filling?

- A. Multiply $\frac{1}{2}$ by 6 and add 1.
- B. Multiply $1\frac{1}{2}$ by 6.
- C. Multiply $2\frac{1}{2}$ by 2.
- D. Multiply 1 by 6 and add $\frac{1}{2}$.

9. What is the value of n in the equation below?

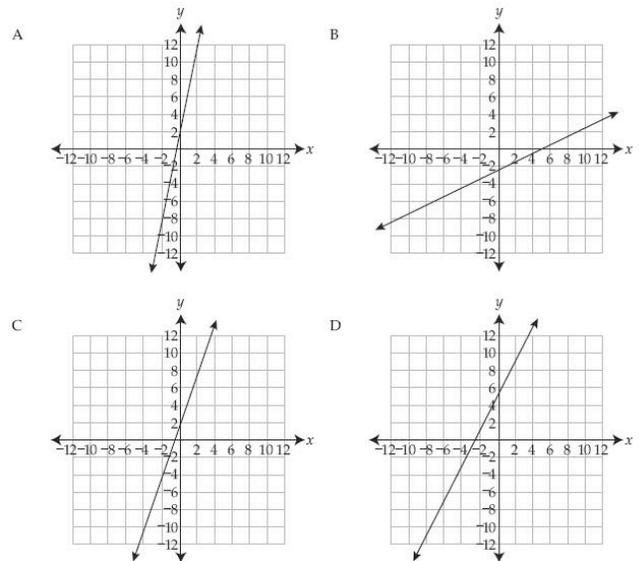
$$2n - 5 = 23$$

- A. 9
- B. 14
- C. 26
- D. 28

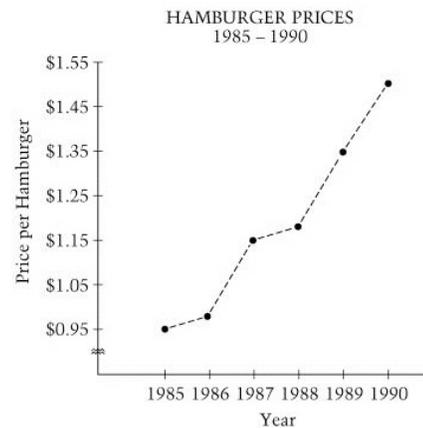
10. Use the table below to answer this question.

x	y
3	11
6	17
9	23
12	29

Which graph shows the relationship?



11.



According to the graph above, how many times did the yearly increase of the price of a hamburger exceed 10 cents?

- A. None
- B. One
- C. Two
- D. Three
- E. Four

12. The menu at a restaurant offers the following choices:

MENU		
Sandwiches	Cheese	Salads
Tuna	American	Potato
Roast Beef	Cheddar	Fruit

How many different combinations are possible when selecting 1 sandwich, 1 cheese, and 1 salad?

- A. 13
- B. 26
- C. 72
- D. 11

13. A poll is being taken at Baker Junior High School to determine whether to change the school mascot. Which of the following would be the best place to find a sample of students to interview that would be most representative of the entire student body?

- A. An algebra class
- B. The cafeteria
- C. The guidance office
- D. A French class

Set 9

1. Select the correct ordering of the following values from smallest to largest:

$\frac{2}{5}$ 2.5 25%

- A. $\frac{2}{5}$, 2.5, 25%
- B. 2.5, 25%, $\frac{2}{5}$
- C. $\frac{2}{5}$, 25%, 2.5
- D. 25%, $\frac{2}{5}$, 2.5

2. A 20-ounce bag of popcorn costs \$2.80. If the unit price stays the same, how much does a 35-ounce bag of popcorn cost?

- A. \$3.60
- B. \$4.00
- C. \$4.50
- D. \$4.90

3. Mara has \$100. She wants to buy 3 pieces of luggage priced as shown below

- suitcase \$39.95
- carry-on bag \$24.95
- tote bag \$16.95

When is an estimate appropriate?

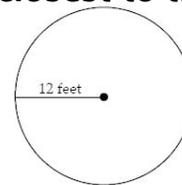
- A. when Mara is deciding if \$100 is enough to buy all 3 pieces
- B. when the salesperson is scanning the cost of each piece
- C. when Mara is told how much money is due

D. when the salesperson is counting out Mara's change

4. Denise drinks 5 gallons of milk per month. How many pints of milk does Denise drink per month?

- A. 10 pints
- B. 20 pints
- C. 40 pints
- D. 80 pints

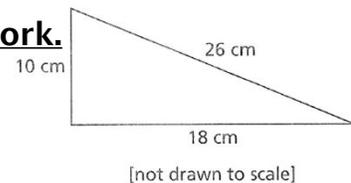
5. Which is closest to the circumference of the circle?



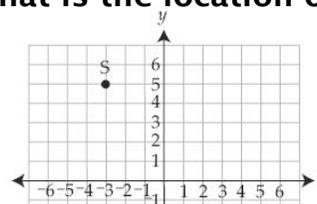
- A. 24 feet
- B. 38 feet
- C. 75 feet
- D. 452 feet

6. Pat drew the triangle below. Is Pat's triangle a right triangle? Use the Pythagorean Theorem to prove whether his triangle is a right triangle.

Show your work.

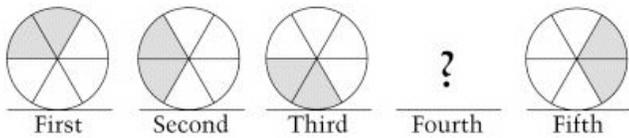


7. What is the location of point S?

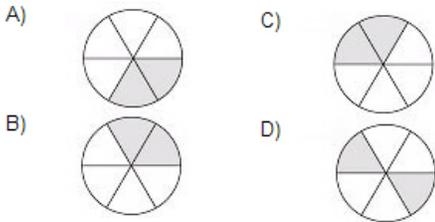


- A. (-3, 5)
- B. (3, 5)
- C. (-5, 3)
- D. (5, -3)

8.



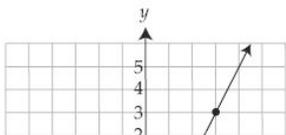
Which of the figures below should be the fourth figure in the pattern shown above?



9. The video store rents movies for \$3.50 the first day. There is a \$2.00 charge for each additional day, d . Which expression represents this relationship?

- A. $\$3.50 + \$2.00d$
- B. $\$3.50d + \2.00
- C. $\$3.50 - \$2.00d$
- D. $\$3.50d - \2.00

10. Use the graph below to answer this question.



Which table of values matches the graphed function?

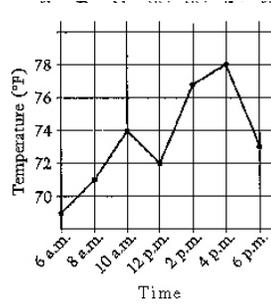


A

x	y
0	-3
1	-1
2	1
3	3

B

x	y
-3	0
-1	1
1	2
3	3



C

x	y
0	-2
1	-1
2	1
3	-3

11.

According to the graph to the left, the temperature at 10 a.m. is approximately how many degrees greater than the temperature at 8 a.m.?

- A. 1
- B. 1.5
- C. 2
- D. 2.5
- E. 3

12. A spinner is divided into 6 equal

sections numbered from 1 to 6. If the arrow is spun once, what is the probability that it will land on a section numbered 4 or 5?

- A. $\frac{1}{6}$
- B. $\frac{2}{6}$
- C. $\frac{4}{6}$
- D. $\frac{5}{6}$

13. Gloria's diving scores from a recent competition are represented in the stem-and-leaf plot shown below. In this plot, 3 | 4 would be read as 3.4.

5	2, 5
6	1
7	7
8	0, 2

What was her lowest score for this competition?

- A. 0.02
- B. 1.0
- C. 2.5
- D. 5.2
- E. 8.0

Set 10

1. The 8th grade party committee has decided to give an equal number of pieces of candy to each participant. There are 256 pieces to give away. If all of the candy is given away, which of these could not be the number of pieces of candy given away to each person under this plan?

- A. 128
- B. 36
- C. 16
- D. 8

2. 7 is what percent of 175?

- A. 4%
- B. 12.25%
- C. 25%
- D. 40%

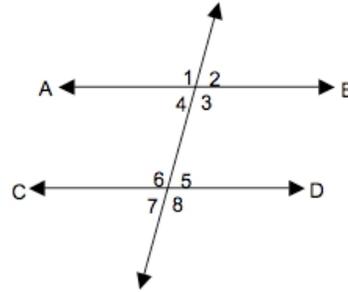
3. If $1 \frac{1}{3}$ cups of flour are needed for a batch of cookies, how many cups of flour will be needed for 3 batches?

- A. $4 \frac{1}{3}$
- B. 4
- C. 3
- D. $2 \frac{2}{3}$

4. A restaurant uses 381,000 grams of flour each day. How many kilograms of flour does the restaurant use each day?

- A. 38.1 kilograms
- B. 381 kilograms
- C. 3,810 kilograms
- D. 38,100 kilograms

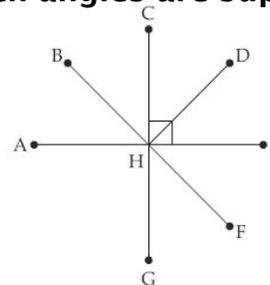
5. In this figure, lines AB and CD are parallel.



Two angles whose measures add up to 180° are:

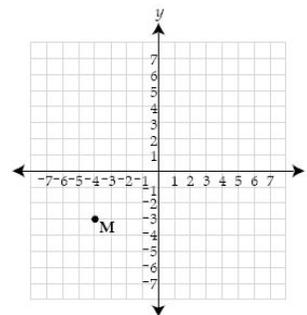
- A. angles 1 and 3
- B. angles 4 and 5
- C. angles 2 and 5
- D. angles 6 and 7

6. Which angles are supplementary?



- A. $\angle AHD$ and $\angle DHE$
- B. $\angle CHD$ and $\angle DHE$
- C. $\angle BHD$ and $\angle DHE$
- D. $\angle BHC$ and $\angle FHG$

7. Point M is graphed below.



Which ordered pair names the location of point M?

- A. (-4, -3)
- B. (-3, -4)
- C. (3, -4)
- D. (4, -3)

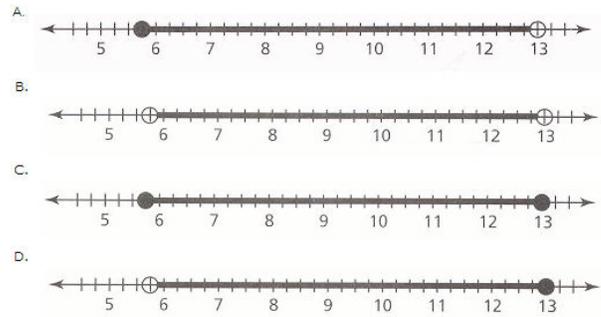
8. Use the table below to answer this question.

x	y
1	-1
3	5
5	11
7	17

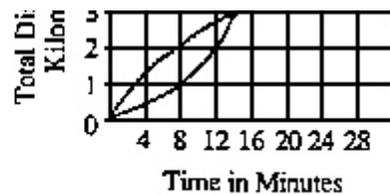
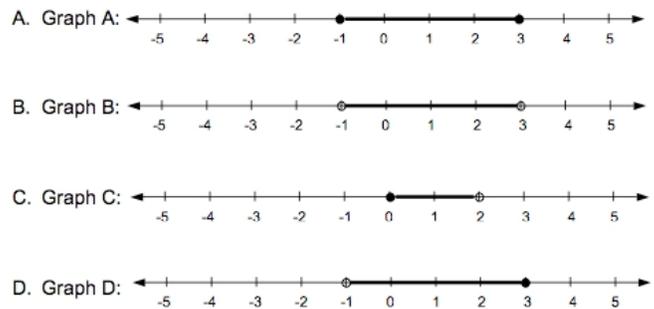
The relationship of the values in the table is based on which rule?

- A. $x - 2 = y$
- B. $x + 2 = y$
- C. $2x - 1 = y$
- D. $3x - 4 = y$

9. Pat said that the amount of money he has in his pocket is greater than or equal to \$5.75 but less than \$13.00. Which number line shows the amount of money Pat might have?



10. Choose the number line below that shows the set of all numbers greater than or equal to -1 and less than or equal to 3.



11. The total distances covered by two runners during the first 28 minutes of a race are shown in the graph below.

How long after the start of the race did one runner pass the other?

- A. 3 minutes
- B. 8 minutes
- C. 12 minutes
- D. 14 minutes
- E. 28 minutes

12. Alicia wears a blouse, a skirt, and a belt each day to school. She has 3 blouses, 3 skirts, and 2 belts. How many different outfits can Alicia create? (Show your work).

13. The number of students buying lunch in the cafeteria during the last 2 weeks of school is shown below.

Students Buying Lunch

8	0	9
9	6	
10	5	5
12	3	8 9
13	7	8

Key
$3 4 = 34$

What is the median number of students buying lunch?

- A. 105
- B. 113
- C. 114
- D. 138