

George started a coin collection. His dad gave him 75 coins. Each month he will add 20 coins to the collection.

Which equation can be used to find y , the total number of coins in George’s collection after x months?

- A** $y = 75x + 20$
- B** $y = 20x + 75$
- C** $y = 75x - 20$
- D** $y = 20x - 75$

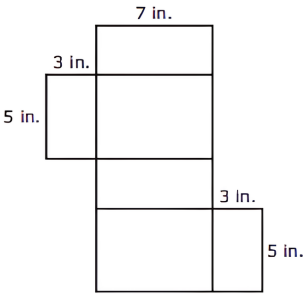
Marco has two number cubes. The faces of each number cube are numbered 1 to 6. Marco rolled the number cubes and recorded the number showing on the top face of each number cube. The results are shown in the table.

4, 2	5, 2	3, 1	3, 4	2, 6
1, 1	4, 2	2, 3	3, 3	5, 1
1, 5	5, 2	1, 5	1, 2	1, 5
2, 4	4, 2	2, 4	5, 3	2, 4

Based on these results, what is the experimental probability that the next time the number cubes are rolled, they will land with a 2 showing on the top face of one number cube and a 4 showing on the top face of the other number cube?

- F** $\frac{3}{10}$
- G** $\frac{11}{20}$
- H** $\frac{9}{20}$
- J** $\frac{1}{36}$

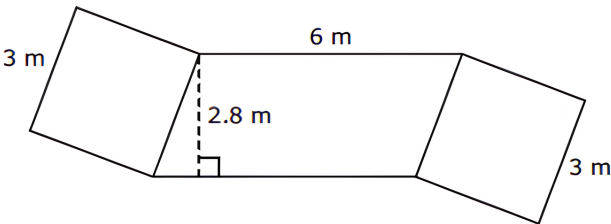
The dimensions of a rectangular prism are given in the net shown.



What is the total surface area of the rectangular prism in square inches?

- F** 71 in.^2
- G** 58 in.^2
- H** 142 in.^2
- J** 105 in.^2

Two congruent squares and a parallelogram were used to form the figure shown.



What is the area of the figure in square meters?

- A** 25.8 m^2
- B** 40.8 m^2
- C** 34.8 m^2
- D** 28.8 m^2

What is the value of this expression:

$$26.95 \div -5\frac{1}{2}?$$

F -0.49

G -4.9

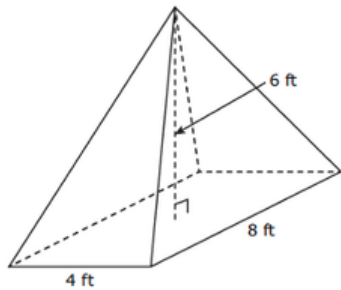
H -3.3

J -5.3

What is the solution to this equation?

$$-12x - 7 = 53$$

The dimensions of a rectangular pyramid are shown.



What is the volume of this rectangular pyramid in cubic feet?

A 96 ft^3

B 18 ft^3

C 64 ft^3

D 192 ft^3

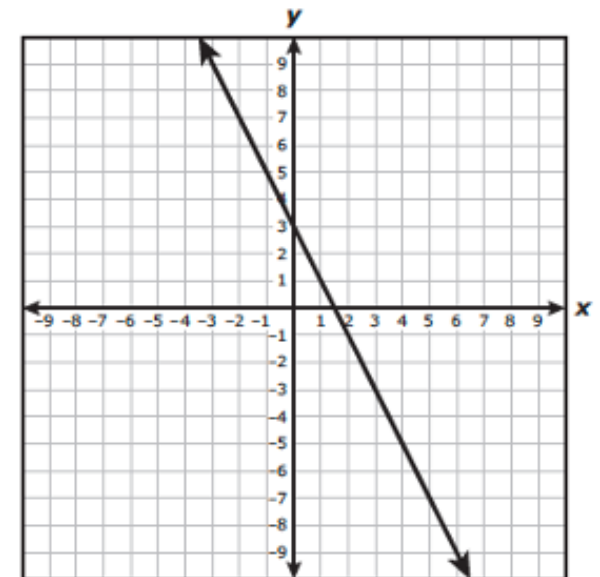
Which equation best represents the relationship between x and y in the graph?

F $y = 3x - 2$

G $y = -\frac{1}{2}x + 3$

H $y = -2x + 3$

J $y = 2x + \frac{3}{2}$



Which equation is true when $c = 3$?

F $2c + 8 = 31$

G $5(7 - c) = 32$

H $9 - 6c = 0$

J $4(c + 2) = 20$

During one month Andre used 785 gallons of water at his home. There are approximately 3.8 liters in 1 gallon.

Which measurement is closest to the number of liters Andre used during this month?

A 206.6 L

B 2,709 L

C 2,983 L

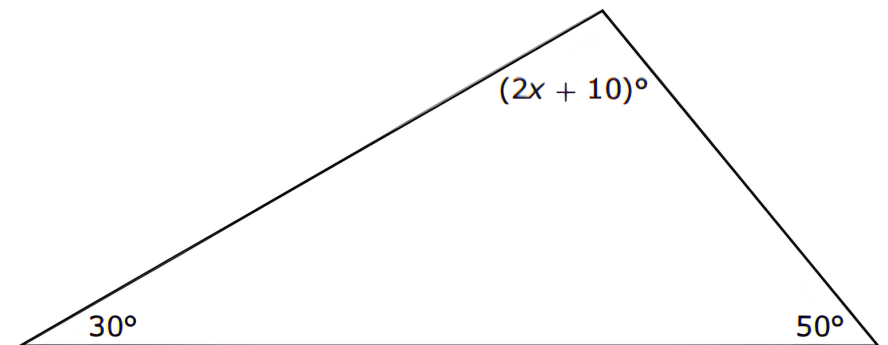
D 20.7 L

A bag contains flavored lollipops. A lollipop will be randomly selected from the bag.

- 17 lollipops are grape flavored
- 8 lollipops are cherry flavored
- 14 lollipops are watermelon flavored
- 16 lollipops are strawberry flavored

What is the probability in decimal form that the selected lollipop will be either cherry flavored or watermelon flavored?

The angle measures of a triangle are shown in the diagram.



What is the value of x ?

What is the solution set for the inequality $4 - 5g > 39$?

F $g > -7$

G $g < -7$

H $g < 7$

J $g > 7$

The length of a ruler is 12 inches. There are approximately 25.4 millimeters in 1 inch.

Which measurement is closest to the length of the ruler in millimeters?

A 3,048 mm

B 30.48 mm

C 304.8 mm

D 3.048 mm

Natasha has a job putting letters in envelopes to be mailed.

In 1 hour she put 42 letters in envelopes.

Which equation best represents y , the total number of letters Natasha puts in envelopes in x hours if she continues at this rate?

F $x = y + 42$

G $y = x + 42$

H $x = 42y$

J $y = 42x$

The table shows the numbers of bags of different flavors of potato chips on a store shelf. A customer will randomly select one bag of potato chips from the shelf.

Potato Chips

Flavor	Number of Bags
Plain	12
Jalapeño	18
Ranch	8
Cheese	20

Which statement about the flavor of the potato chips chosen is best supported by the information in the table?

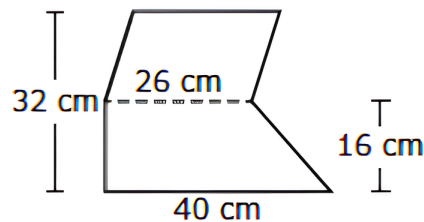
F The flavor is least likely to be plain.

G The flavor is twice as likely to be jalapeño as ranch.

H The flavor is equally likely to be plain, jalapeño, ranch, or cheese.

J The flavor is more than twice as likely to be cheese as it is to be ranch.

The figure is composed of a parallelogram and a trapezoid.



What is the area of the figure in square centimeters?

F $1,056 \text{ cm}^2$

G $1,360 \text{ cm}^2$

H 944 cm^2

J 528 cm^2

Which equation is true when

$x = 4$?

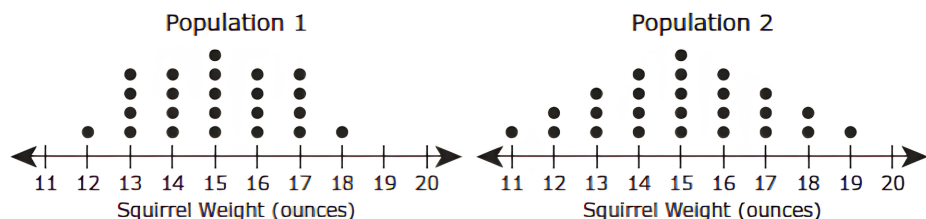
F $3x + 4 = 8$

G $5x - 2 = 18$

H $2x + 8 = 40$

J $4x + 4 = 12$

A scientist measured the weights of squirrels in two populations. The dot plot displays data from each population.



Which statement is best supported by the information in the dot plots?

F The two populations have different mode weights.

G The two populations have different median weights.

H The data for the two populations have different skews.

J The data for the two populations have different ranges.

One year on Venus is equivalent to 224.7 days on Earth.

How many days on Earth, in decimal form, are equivalent to $9 \frac{1}{2}$ years on Venus?

The table shows the numbers of different colors of pencils in a pencil case. A student will randomly select one pencil from the pencil case.

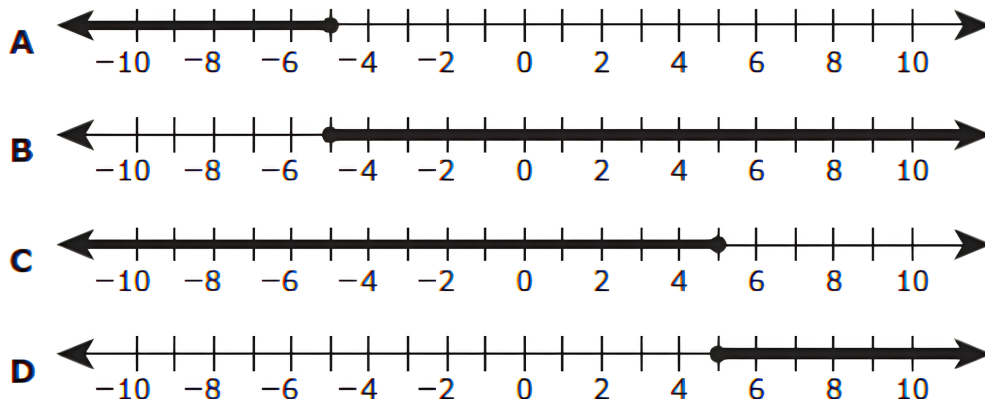
Colored Pencils	
Color	Number of Pencils
Red	2
Purple	8
Blue	4
Green	5

Based on the information in the table, which statement is true?

- F** The pencil is least likely to be blue.
- G** The pencil is 4 times as likely to be purple as it is to be red.
- H** The pencil is equally likely to be blue or green.
- J** The pencil is more likely to be purple than all other colors combined.

Which number line represents the solution to this inequality:

$$3x - 8 \geq 7?$$



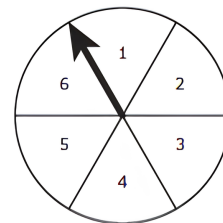
Angle F and angle H are supplementary angles.

- The measure of angle F is 77° .
- The measure of angle H is $(5x + 18)^\circ$.

Which equation can be used to find the value of x ?

- F** $77 = 5x + 18$
- G** $77 + (5x + 18) = 180$
- H** $77 + (5x + 18) = 90$
- J** $77 + (5x + 18) = 360$

A spinner with 6 equal sections is shown.



What is the probability of spinning a number greater than 4?

- A** $\frac{1}{6}$
- B** $\frac{2}{3}$
- C** $\frac{1}{2}$
- D** $\frac{1}{3}$

What is the solution set for this inequality?

$$-5d + 5\frac{1}{2} \leq 17$$

A $d \geq -2\frac{3}{10}$

B $d \leq -2\frac{3}{10}$

C $d \leq -4\frac{1}{2}$

D $d \geq -4\frac{1}{2}$