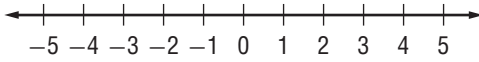


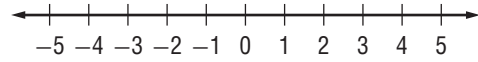
Homework Practice

Graph the integers on a number line.

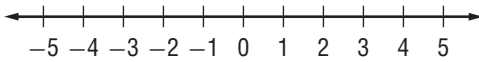
- 1 Graph the integers between -3 and 5 .



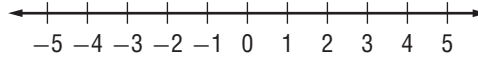
- 2 Graph the positive integers less than 4 .



- 3 Graph the integers -5 , -2 and 4 .



- 4 Graph the negative integers greater than -4 .



Write the integers from least to greatest.

- 5 $-15, 9, -21, -16, 12$ _____
- 6 $45, -53, 47, -45, 54$ _____

Write the integers from greatest to least.

- 7 $72, -65, -74, -27, 67$ _____
- 8 $-34, 43, 41, 46, -43$ _____

Write an integer to represent each statement.

- 9 A diver is 41 feet below sea level.

- 10 Alisa's puppy gained 5 pounds.

- 11 Marco earned \$28 babysitting.

- 12 A company reported a loss of \$300 this quarter. _____

Solve.

- 13 **STOCK MARKET** The stock market had a very good day yesterday. It improved by 271 points. What integer represents yesterday's change in the stock market? _____
- 14 **BANKING** Sook withdrew \$500 from his savings account this morning. What integer represents the change in Sook's bank account from this transaction? _____

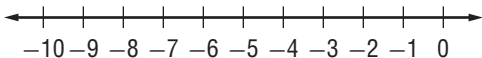
Write the vocabulary word(s) that completes the sentence.

- 15 Integers that are greater than zero are called _____.
- 16 _____ are the whole numbers and their opposites.

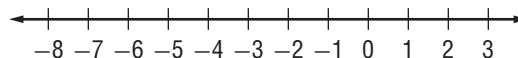
Homework Practice

Find each sum. Use the number line.

1 $-3 + (-5) =$ _____

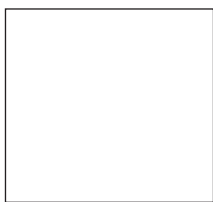


2 $2 + (-6) =$ _____

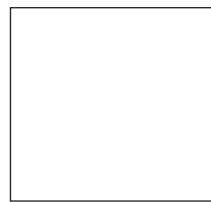


Find each sum. Use algebra tiles.

3 $4 + (-7) =$ _____



4 $3 + (-9) =$ _____



What is the opposite of each number? Use it to show the Identity Property of Addition.

5 -3 _____

6 4 _____

7 5 _____

8 -11 _____

Find each sum.

9 $12 + (-9) =$ _____

10 $-2 + (-8) =$ _____

11 $6 + (-10) =$ _____

12 $-3 + 3 =$ _____

Solve.

13 **BUS STOPS** There were 15 riders on a bus. At the first stop, 3 people got off and 5 people got on. At the next stop, 7 people got off and 1 person got on. How many riders were now on the bus? _____

14 **GAMES** Corey moved 5 spaces forward on his first turn. He then moved 2 spaces forward on his next turn, but drew a card that said to move backward 3 spaces. How far had Corey advanced from the start? _____

Write the vocabulary word that completes the sentence.

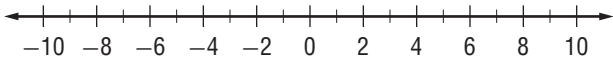
15 The _____ states that for any number, the sum of that number and its opposite is zero.

16 The _____ states that the order in which two numbers are added does not change the sum.

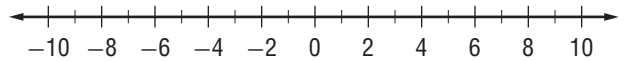
Homework Practice

Find each difference. Use the number line.

1 $-4 - 3 =$ _____



2 $1 - (-6) =$ _____



Find each difference. Use algebra tiles.

3 $-8 - 2 =$ _____



4 $-3 + 5 =$ _____



Which number has the greater absolute value?

5 -3 or 2 _____

6 4 or -4 _____

7 -6 or -9 _____

8 8 or 1 _____

Find each difference.

9 $6 - (-3) =$ _____

10 $-7 - 1 =$ _____

11 $-12 - (-8) =$ _____

12 $4 - 5 =$ _____

Solve.

13 **WEATHER** On the first day of February in upstate New York, the high temperature was 3° F at 2:00 P.M. Over the next 5 hours, the temperature dropped 10 degrees. What was the temperature at 7:00 P.M.?

14 **GEOGRAPHY** Taborri was at camp in Oregon where the elevation is 3,400 feet above sea level. Her mother was on a trip in California where the elevation was 200 feet below sea level. What is the difference in elevations?

Write the vocabulary word that completes each sentence.

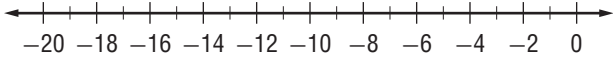
15 Numbers that are the same distance from zero in opposite directions are called _____.

16 The _____ of a number is the distance between the number and zero on a number line.

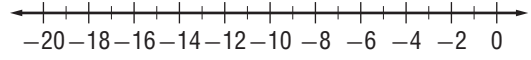
Homework Practice

Find each product. Use a number line.

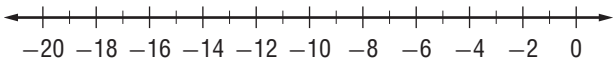
1 $1 \cdot (-9) =$ _____



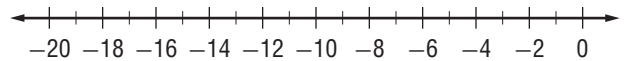
2 $4 \cdot (-4) =$ _____



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



4 $2 \cdot (-7) =$ _____



Find each product.

5 $9 \cdot (-7) =$ _____

6 $15 \cdot 2 =$ _____

7 $-4 \cdot 8 =$ _____

8 $6 \cdot (-7) =$ _____

9 $-12 \cdot (-3) =$ _____

10 $-8 \cdot 11 =$ _____

11 $4 \cdot (-5) =$ _____

12 $-2 \cdot (-9) =$ _____

Find the missing number. Name the multiplication property.

13 $-3 \cdot 1 =$ _____

14 $-2 \cdot 6 =$ _____ $\cdot (-2)$ _____

15 $-8 \cdot 0 =$ _____

16 $-2 \cdot [4 \cdot (-8)] = (-2 \cdot \text{_____}) \cdot (-8)$ _____

Solve.

17 **WEATHER** The daily high temperature has dropped 2° F each day for the past 7 days. What has the change in temperature been for the past week? _____

18 **GOLF** On Saturday, Leon shot -1 (1 under par) for each of the first 3 holes. What is Leon's score after the first 3 holes? _____

Write the vocabulary word that completes each sentence.

19 A _____ is a number that divides into a whole number evenly.

20 The answer or result of a multiplication problem is the _____.

Homework Practice**Find each quotient.**

1 $-5 \div (-1)$ _____

2 $-5 \div 1$ _____

3 $5 \div (-1)$ _____

4 $5 \div 1$ _____

5 $\frac{6}{-2}$ _____

6 $-18 \div (-3)$ _____

7 $-35 \div (-7)$ _____

8 $44 \div 11$ _____

9 $\frac{-54}{6}$ _____

10 $50 \div (-2)$ _____

11 $-25 \div (-5)$ _____

12 $\frac{-70}{-10}$ _____

Solve.

13 **MONEY** A group of 6 friends earned \$90 doing yard work. They want to divide the money equally. How much money does each person get? _____

14 **TRANSPORTATION** A submarine descends 600 feet in 2 minutes. How far does the submarine descend in 1 second? _____

Write the vocabulary word that completes each sentence.

15 A _____ is a number that is being divided.

16 A _____ is the number by which the dividend is being divided.

17 The _____ is the answer to a division problem.

2-1 Homework Practice

Find a rule for each pattern.

- 1 7, 21, 63, 189 _____
- 2 125, 100, 75, 50 _____
- 3 234, 245, 256, 267 _____

In each sequence, find a rule. Then write the next three terms.

- 4 189, 173, 157, 141

Rule: _____

Next terms: _____, _____, _____

- 5 729, 243, 81, 27

Rule: _____

Next terms: _____, _____, _____

Write the next three conversions in each pattern.

6	Number of Tricycles	1	2	3	4
	Number of Wheels	3			

7	Number Hours	1	2	3	4
	Number of Minutes	60			

Solve.

- 8 **RACING** Lance is training for a bike race. Starting on Tuesday, each day he bikes 3 more miles than he did the day before. On Monday he bikes 3 miles. How many miles does he bike on Friday? _____

Write the vocabulary word that completes each sentence.

- 9 A _____ tells how numbers are related to each other.
- 10 A _____ is a sequence of numbers, figures, or symbols that follows a rule or design.
- 11 A list of numbers in a specific order is a _____.

Homework Practice

Write a function to represent each situation.

- There are 8 notes in every octave. _____
- Frankie earns \$5 more per hour than Doris. _____
- Nicole is 6 years younger than her sister. _____

Write a function and make a function table.

- SCIENCE** In an experiment, a scientist used 3 times as much water as solution. Let y = amount of water and let x = amount of solution.

$$y = \underline{\hspace{2cm}}$$

Amount of Solution, x	2	4	6	8	10
Amount of Water, y					

If 8 liters of solution are used, how many liters of water are used? _____

- AGE** Ahanu is 22 years younger than his mother. Let y = Ahanu's age and x = Ahanu's mother's age.

$$y = \underline{\hspace{2cm}}$$

Ahanu's Mother's Age, x	30	35	40	45	50
Ahanu's Age, y					

How old will Ahanu be when his mother is 45? _____

- CALORIES** Jordan is counting the number of calories he consumes in a day. Yesterday he consumed 1,800 calories plus he drank several 8-ounce glasses of milk. Each 8-ounce glass of milk provides 120 calories. Let y = the total number of calories he consumed and let x = the number of 8-ounce glasses of milk he drank.

$$y = \underline{\hspace{2cm}}$$

Number of 8-ounce Glasses of Milk, x	1	2	3	4	5
Total Number of Calories Consumed, y					

If Jordan drank five 8-ounce glasses of milk, how many calories did he consume that day? _____

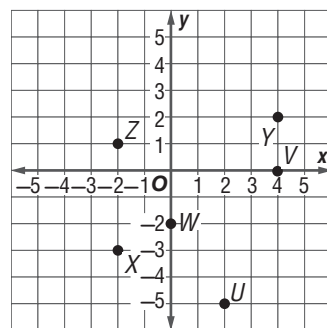
Write the vocabulary word that completes each sentence.

- A symbol used to represent a number is a _____.
- A relationship is a _____ if for every x -value there is exactly one y -value.

Homework Practice

Name the ordered pair for each point.

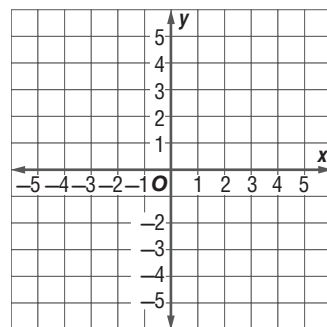
- 1 Z _____
- 2 Y _____
- 3 X _____
- 4 W _____
- 5 V _____
- 6 U _____



Graph the ordered pairs.

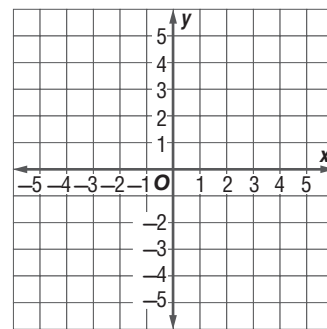
- 7 Graph the ordered pairs $T(4, -1)$ and $S(-1, -1)$. Then connect the points.

$(4, -1)$ and $(-1, -1)$ are on a line parallel to the x -axis because they have the same _____ -coordinate.



- 8 Graph the ordered pairs $R(-1, 4)$ and $Q(-1, 0)$. Then connect the points.

$(-1, 4)$ and $(-1, 0)$ are on a line parallel to the y -axis because they have the same _____ -coordinate.

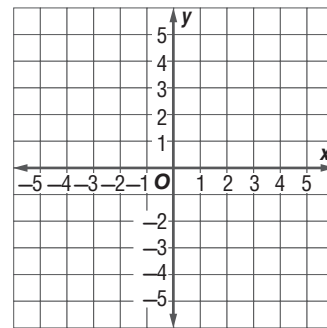


Write the vocabulary word that completes the sentence.

- 9 A _____ is a grid in which a horizontal number line and a vertical number line intersect at their zero points.

Solve.

- 10 **GRAPHING SENSE** Graph the points $(-2, 4)$ and $(-2, -3)$ on the coordinate grid shown. What is the distance between these two points? Give two ways to find the distance.



Homework Practice

Make a table for each equation.

1 $y = \frac{x}{2} + 2$

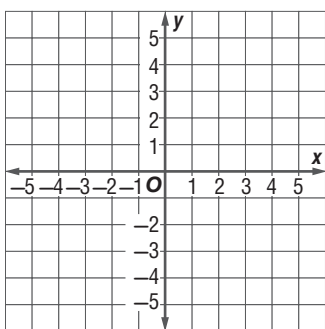
x	y
-4	
-2	
0	
2	
4	

2 $y = -2x - 1$

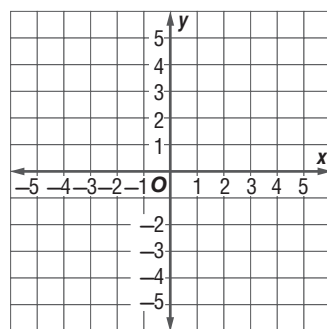
x	y
-2	
-1	
0	
1	
2	

Graph each equation.

3 Graph the equation from Exercise 1.



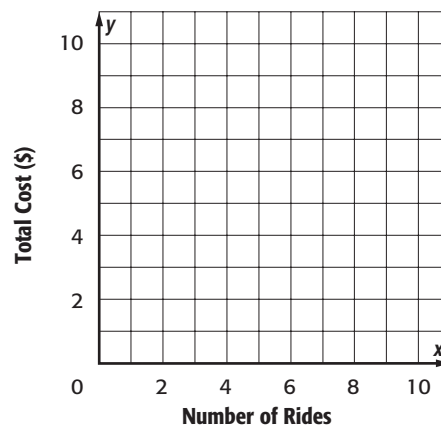
4 Graph the equation from Exercise 2.



Solve.

5 The cost to go on rides at a fair is $x + 5$, where x is the total number of rides. Show the relationship between the number of rides and the total cost in a table and on a coordinate plane. How much money will it cost to go on 4 rides?

x	$x + 5$	y	Ordered Pair
1			
2			
3			
4			
5			



Write the vocabulary word(s) that completes the sentence.

6 A pair of numbers that is the coordinates of a point in a coordinate plane or grid is called an _____.

Homework Practice

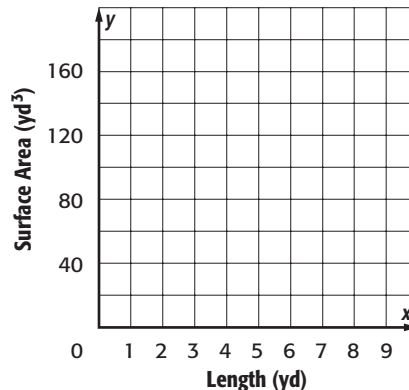
- 1 GEOMETRY** The surface area of a cube is 6 times the square of the length of one of its sides. What is the surface area of a cube with sides that are 4 yards long?

Make a function table using the rule $y = \underline{\hspace{2cm}}$.

Length, x	1	2	3	4	5
Surface Area, y					

Graph the ordered pairs. Evaluate the rate of change.
Connect the points.

A cube with sides 4 yards long has area _____.



Match each function with its function table and its graph.

- 2** $y = -x^2 + 3$
function table _____
graph _____

- 3** $y = x + 1$
function table _____
graph _____

- 4** $y = -x - 1$
function table _____
graph _____

- 5** $y = -2x^2 - 1$
function table _____
graph _____

A

x	-2	-1	0	1	2
y	-9	-3	-1	-3	-9

B

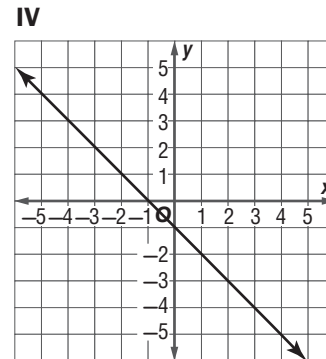
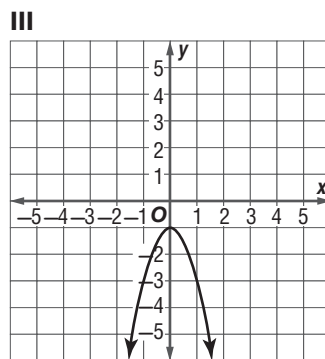
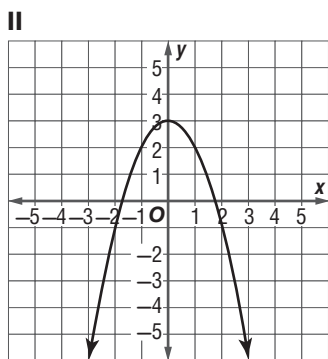
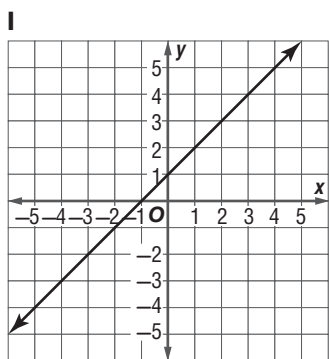
x	-2	-1	0	1	2
y	1	0	-1	-2	-3

C

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

D

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



Write the vocabulary word(s) that completes the sentence.

- 6** A _____ is a function whose graph is not a straight line.

Homework Practice

Name the step that should be performed first in each expression.

1 $7 + 9 - 2 + 4 \cdot 4^2$

2 $3 \cdot 18 + (9 - 2) + 3^3 \div 3$

3 $(9 + 4 \cdot 2) - 12 \div 3 + 8$

4 $20 \div 4 \cdot 2 - 9 \cdot 2 + 5$

Find the value of each expression.

5 $4^2 + 13 + (9 \div 3^2) \cdot 2$

6 $15 \div (2^2 + 1^2) - 3 \cdot 1$

7 $11 + 3 \cdot 2 + 8 - 8 \div 2$

8 $(3 + 8 \cdot 2 - 18 + 3^2) \div 5$

Solve.

- 9 **SNACKS** Marla bought 4 boxes of granola bars. Each box contains 6 granola bars. Marla ate 3 granola bars, and she gave her brother 4 granola bars. Marla then bought 2 more boxes of granola bars. How many granola bars does Marla have now?
- _____

- 10 **BOOKS** Daniel has 65 books on a book shelf. He divides the books equally among 5 shelves. He then moves 5 books on the top shelf to the bottom shelf. He also buys 3 new books and puts them on the top shelf. How many books are on the top shelf?
- _____

Homework Practice

Evaluate each expression when $\square = 2$.

- | | | | | | |
|---|--------------------|-------|---|--------------------|-------|
| 1 | $\square + 17$ | _____ | 2 | $\square - 1$ | _____ |
| 3 | $74 \div \square$ | _____ | 4 | $26 \cdot \square$ | _____ |
| 5 | $47 - \square$ | _____ | 6 | $\square + 139$ | _____ |
| 7 | $\square \cdot 56$ | _____ | 8 | $46 \div \square$ | _____ |

Evaluate each expression when $x = 8$ and $y = 9$.

- | | | | | | |
|----|--------------------------------|-------|----|-------------------------------|-------|
| 9 | $x^2 + 3 - 10 + y^2$ | _____ | 10 | $5y - (x \cdot 2) + 15$ | _____ |
| 11 | $7x + (3 \cdot y)$ | _____ | 12 | $20 - y + 5x$ | _____ |
| 13 | $(6 + y^2 + 12) \cdot (y - x)$ | _____ | 14 | $15 + (x + y) + y \cdot 10$ | _____ |
| 15 | $(y + 2)^2 + 4x$ | _____ | 16 | $4y \div 6 + x^2 - (y - x)^2$ | _____ |

Solve.

- 17 **MUSIC** Jade likes to burn songs onto CDs. A CD can hold about 80 minutes of music. The expression $\frac{80}{s}$ represents how many minutes each song, s , can be to fit on the CD. Jade wants to put 20 songs on a CD. Evaluate the expression to determine how long each song can be. _____
- 18 **BAKING** Oya needs 10 minutes to set up and 40 minutes to bake each batch of bread. The expression $10b + 40b$ represents the time it takes for b batches of bread. Oya wants to make 5 batches of bread tomorrow. How many minutes will it take him? _____

Write the vocabulary word(s) that completes each sentence.

- 19 A(n) _____ is a combination of numbers, variables, and operation symbols.
- 20 The _____ is a set of rules that tells what order to follow in evaluating an expression.

Homework Practice

Find the value of each variable by modeling the equation.

1 $2 \cdot \square = 12$

$\square = \underline{\hspace{2cm}}$



2 $\frac{w}{4} = 3$

$w = \underline{\hspace{2cm}}$



Find the value of each variable in each equation.

3 $4 \cdot \square = 48$

$\square = \underline{\hspace{2cm}}$

4 $2z + 5 = 17$

$z = \underline{\hspace{2cm}}$

5 $\frac{a}{5} - 2 = 3$

$a = \underline{\hspace{2cm}}$

6 $16 - \square = 5$

$\square = \underline{\hspace{2cm}}$

Solve.

7 **TIRES** Reba bought 2 new tires for her bicycle. Each tire cost \$15. She also bought a basket for her bike. Reba spent \$38 in all. How much did the basket cost? _____

8 **FIELD TRIP** Thirty-four students and adults went on a field trip to a museum. Eight adults went on the trip. How many students went? _____

9 **EQUATIONS** Mrs. Ortega wrote the following equation on the board: $6 \cdot r = 42$. Jonah said the $r = 36$. Was Jonah correct? Explain.

Write the vocabulary word(s) that completes each sentence.

10 In the equation $4x + 6 = 14$, x is called the _____.

11 Subtraction is the _____ of addition.

Homework Practice

Find the value of c , when $a = 3$ and $n = 24$.

1 $n = c + a$ $c =$ _____

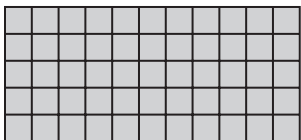
2 $a = c - n$ $c =$ _____

3 $n = c \cdot a$ $c =$ _____

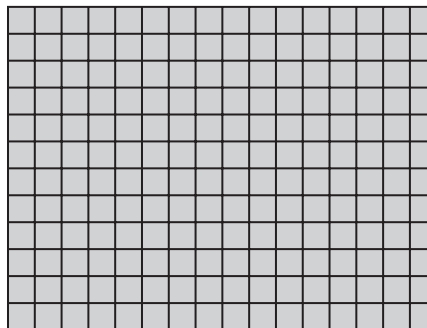
4 $a = n + c$ $c =$ _____

Use the formula $A = \ell \cdot w$ to solve for ℓ , length.

- 5 The area of the rectangle is 55 square meters. Its width is 5 meters. What is the length of the rectangle?



- 6 The area of the rectangle is 192 square feet. Its width is 12 feet. What is the length of the rectangle?



Use the formula $d = r \cdot t$ to solve for t , time.

- 7 Mr. Mason is driving his car at a rate of 58 miles per hour. How long will it take him to travel 232 miles?

- 8 Megan is biking at a rate of 14 miles per hour. How long will it take her to bike 98 miles?

Use the formula $d = r \cdot t$ to solve for the missing variable.

- 9 **EXERCISE** Kevin is training to run in a marathon. He just finished running 9 miles. It took him $1\frac{1}{2}$ hours. What was his rate of speed? _____

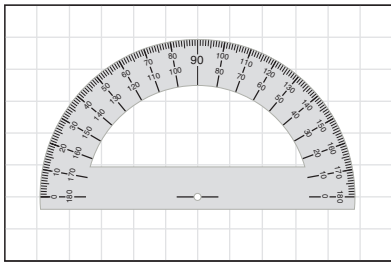
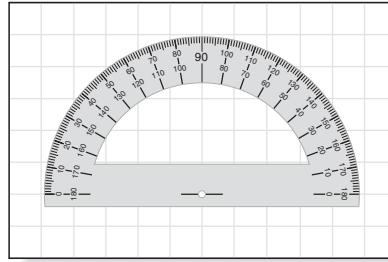
Write the vocabulary word that completes each sentence.

- 10 A ratio comparing two quantities with different kinds of units is called a(n) _____.
- 11 $A = \ell \cdot w$, an equation that shows a relationship among quantities, is an example of a(n) _____.

4-1

Homework Practice

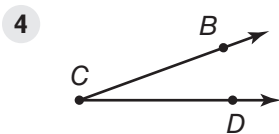
Draw an angle with the given measurement.

1 70° 2 125° 

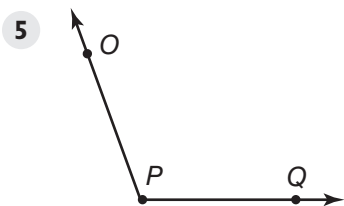
Measure and identify the angle.



$\angle TUV$ measures _____. $\angle TUV$ is a(n) _____ angle.



$\angle BCD$ measures _____. $\angle BCD$ is a(n) _____ angle.



$\angle OPQ$ measures _____. $\angle OPQ$ is a(n) _____ angle.

Solve.

6 **CLOCKS** Sarah had piano lessons at 2:30 PM. What type of angle is formed by the hands of the clock at this time? _____

7 **CARS** Mr. Johnson was cleaning his car. He moved the back of the driver's seat forward to a 45° angle. What type of angle was formed? _____

Write the vocabulary word that completes each sentence.

8 An angle that measures between 90° and 180° is a(n) _____ angle.

9 An angle that measures 180° is a _____ angle.

4-2 Homework Practice

Identify each angle as acute, obtuse, or right.

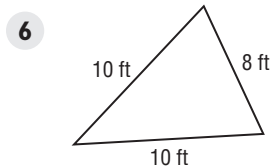
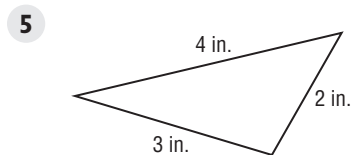
1 56° _____

2 157° _____

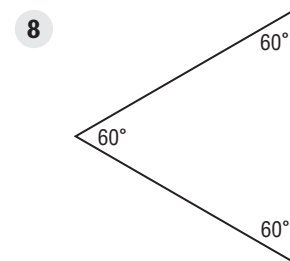
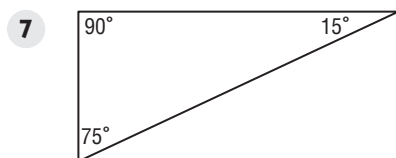
3 92° _____

4 90° _____

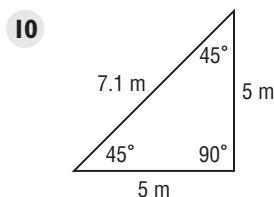
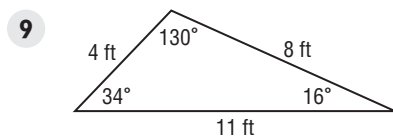
Classify each triangle by the lengths of its sides.



Classify each triangle by the measures of its angles.



Classify each triangle by the lengths of its sides and the measures of its angles.



Solve.

- 11 **ART** Katrina is making a triangular frame for an art project. The measures of the angles of her frame are 30° , 30° , and 120° . Classify Katrina's frame by the measures of its angles. _____

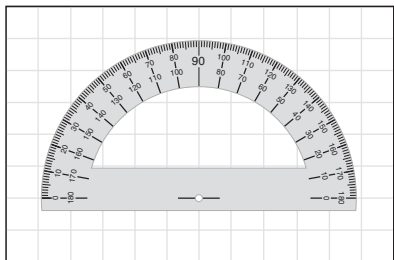
Write the vocabulary word that completes each sentence.

- 12 A triangle with one obtuse angle is a(n) _____ triangle.
- 13 A triangle with all three angles less than 90° is a(n) _____ triangle.
- 14 A triangle with one 90° angle is a(n) _____ triangle.

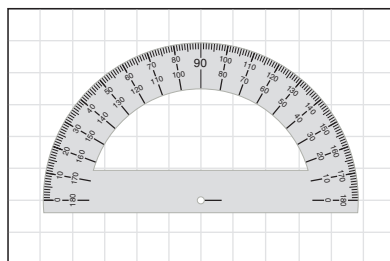
Homework Practice

Sketch each type of angle given.

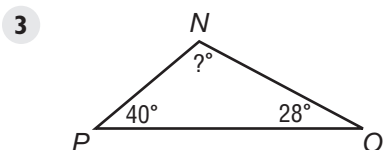
- 1 Sketch supplementary angles.



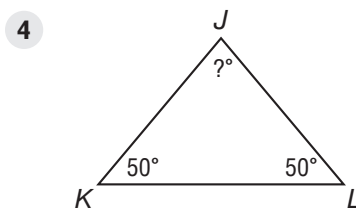
- 2 Sketch complementary angles.



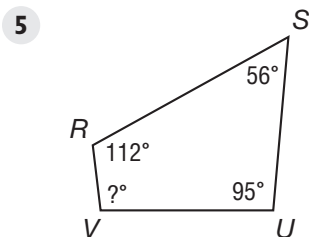
Find the measure of each missing angle.



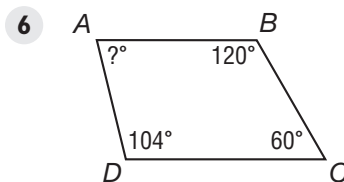
The measure of the missing angle is _____.



The measure of the missing angle is _____.



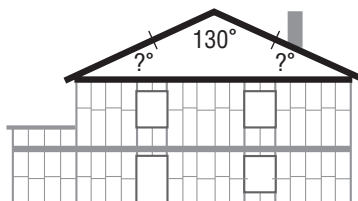
The measure of the missing angle is _____.



The measure of the missing angle is _____.

Solve.

- 7 **ROOF** The roof of a house is an isosceles triangle. What is the measure of each of the missing roof angles?

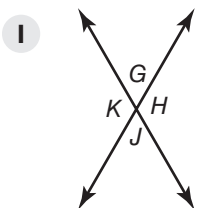


Write the measurement that completes the sentence.

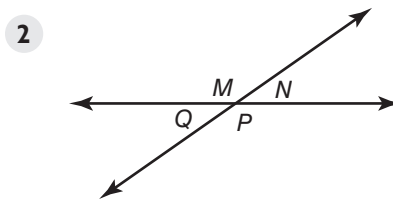
- 8 Complementary angles are two angles that have measures with a sum of _____.
- 9 Supplementary angles are two angles that have measures with a sum of _____.

Homework Practice

Identify the measure of each angle indicated.

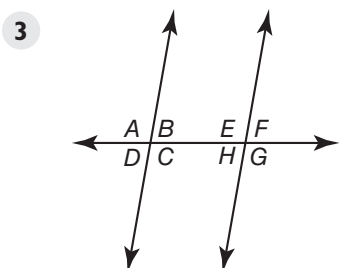


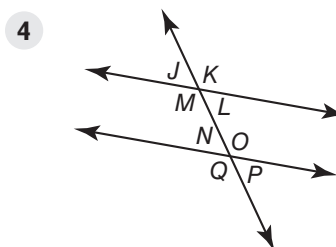
$m\angle H = 120^\circ$, so $m\angle G =$ _____



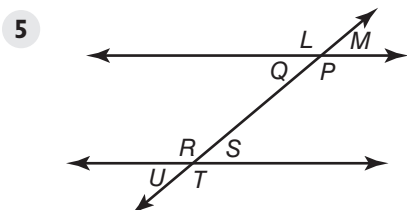
$m\angle N = 35^\circ$, so $m\angle Q =$ _____

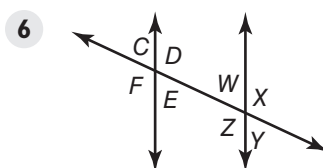
Name the alternate interior angles.





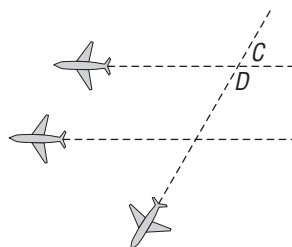
Name the alternate exterior angles.





Solve.

- 7 **AIRPLANES** A pair of jet airplanes were leaving two contrails that ran parallel to each other in the sky. Another jet airplane's contrail crossed the two parallel contrails. In the figure, angle C measures 60° . What is the measure of angle D?

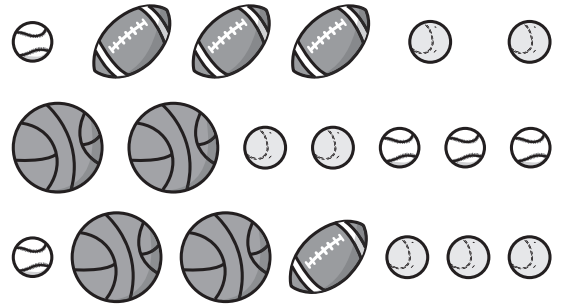


Write the vocabulary word(s) that completes the sentence.

- 8 Exterior angles that lie on opposite sides of the transversal are called _____.

Homework Practice

Use the diagram to write each ratio as a fraction in simplest form.



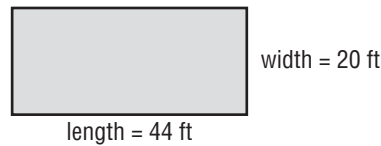
- 1 baseballs and tennis balls to the total number of balls _____
- 2 footballs and basketballs to tennis balls and baseballs _____
- 3 balls that are *not* tennis balls to the total number of balls _____
- 4 footballs to basketballs _____

Write each ratio as a fraction in simplest form.

- 5 Michele ran 3 out of 7 days this week. Write the ratio of days she ran to days she did *not* run. _____
- 6 A bowl of fruit contains 8 apples and 4 oranges. Write the ratio of apples to oranges. _____

Solve.

- 7 **SWIMMING** The dimensions of a rectangular swimming pool are 44 feet long by 20 feet wide. What is the ratio of the pool's width to its length?



Write the vocabulary word(s) that completes each sentence.

- 8 A _____ is a comparison of two numbers by division.
- 9 The greatest number that divides evenly into two or more numbers is called the _____.

Homework Practice

Write each rate as a fraction. Find each unit rate.

- 110 miles in 2 hours _____
- 36 points scored in 3 games _____
- 90 customers served in 4.5 hours _____
- 12 pencils in 2 packs _____

Find each unit rate. Use the unit rate to find the unknown amount.

- 12 gallons in 5 minutes; gallons in 7 minutes

- 140 heartbeats in 2 minutes; heartbeats in 5 minutes

Which product has the lower unit cost?

- a 6-pack of juice for \$1.86 or a 12-pack of juice for \$4.20 _____
- 2 pounds of granola for \$2.50 or 5 pounds of granola for \$6.30 _____
- a box of 30 CDs for \$10.80 or a box of 100 CDs for \$34.00 _____

Solve.

- TRANSPORTATION** A car travels 144 miles on 6 gallons of gasoline. How many miles can the car travel on 15 gallons of gasoline? _____

Write the vocabulary word(s) that completes each sentence.

- The _____ is the cost of a single item or unit.
- A(n) _____ is a comparison of two numbers by division.
- A(n) _____ is a ratio comparing two quantities with different kinds of units.
- A(n) _____ is a rate that has a denominator of 1.

Homework Practice

Determine whether each pair of ratios is proportional. Write = or \neq in each circle.

1 $\frac{6}{10} \bigcirc \frac{39}{62}$

2 $\frac{4}{16} \bigcirc \frac{16}{64}$

3 $\frac{6}{8} \bigcirc \frac{15}{20}$

4 $\frac{8}{14} \bigcirc \frac{28}{49}$

5 $\frac{8}{18} \bigcirc \frac{36}{72}$

6 $\frac{4}{9} \bigcirc \frac{72}{32}$

Solve each proportion.

7 $\frac{18}{21} = \frac{g}{28}$ $g =$ _____

8 $\frac{6}{k} = \frac{36}{42}$ $k =$ _____

9 $\frac{10}{25} = \frac{14}{r}$ $r =$ _____

10 $\frac{12}{16} = \frac{l}{36}$ $l =$ _____

11 $\frac{t}{4} = \frac{30}{60}$ $t =$ _____

12 $\frac{6}{8} = \frac{15}{a}$ $a =$ _____

13 $\frac{4}{y} = \frac{32}{56}$ $y =$ _____

14 $\frac{z}{10} = \frac{4}{20}$ $z =$ _____

Solve.

- 15 **FURNITURE** Lazaro is building chairs. He uses 4 legs and 6 supports for each chair. How many legs are used when 72 supports are used?

- 16 **PAINTING** Latasha is painting a room in her house. The directions on the paint say that she needs 3 pints of paint for every 500 ft². How many pints of paint does Latasha need to paint 2,500 ft²?

Write the vocabulary word(s) that completes each sentence.

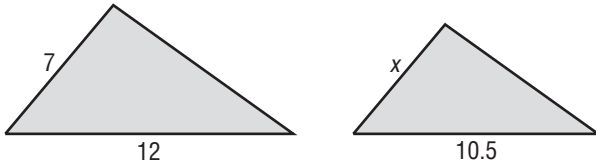
- 17 An equation that states that two ratios are equivalent is a _____.

- 18 In the proportion $\frac{2}{7} = \frac{12}{42}$, $2 \cdot 42$ is called a _____.

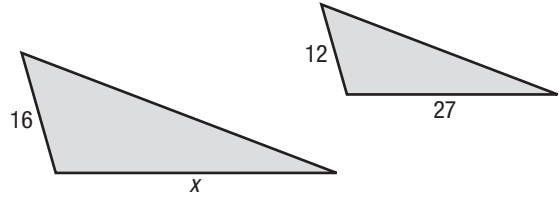
Homework Practice

Find the value of x in each pair of similar figures.

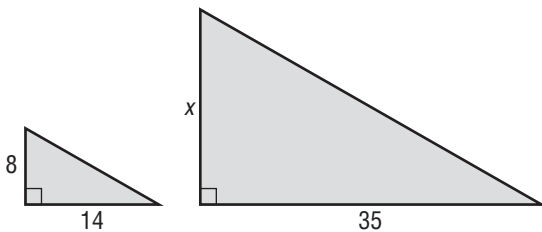
1 $x =$ _____



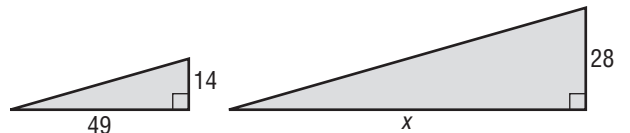
2 $x =$ _____



3 $x =$ _____



4 $x =$ _____



Use a proportion to solve.

- 5 Six kiwis cost a total of \$3.30. What is the total cost of 11 kiwis? _____
- 6 The Min family uses 7 gallons of milk in 2 weeks. How many gallons of milk does the Min family use in 7 weeks? _____

Solve.

- 7 **LAUNDRY** Rosa needs $1\frac{1}{2}$ hours to do 2 loads of laundry. She has 3 loads this week. How long will it take Rosa to do her laundry this week? _____
- 8 **PHOTOGRAPHS** Paco has \$6.00 to buy prints from his digital camera. The store offers 6 prints for \$1.25. How many prints can Paco buy? _____

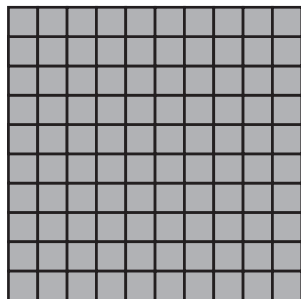
Write the vocabulary word(s) that completes each sentence.

- 9 The lengths of the corresponding sides of similar triangles can be used to write a _____.
- 10 The corresponding angles of _____ are congruent.

6-1 Homework Practice

Write an equation using exponents to represent each model.

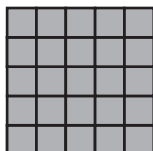
1



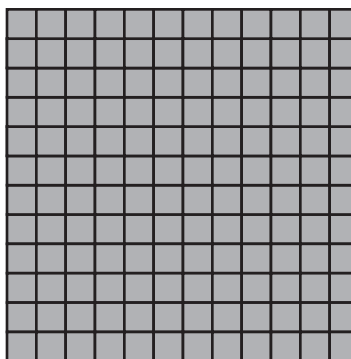
2



3



4



Evaluate each expression.

5 12^2 _____

6 10^2 _____

7 3^2 _____

8 6^2 _____

9 2^2 _____

10 7^2 _____

11 11^2 _____

12 9^2 _____

13 5^2 _____

14 8^2 _____

15 1^2 _____

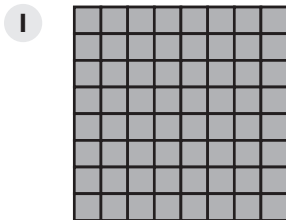
16 4^2 _____

Solve.

- 17 **SCHOOL** Mr. Hatano's classroom has the same number of desks in each row. There is the same number of rows as there are desks in each row. There are 5 rows. How many desks are in Mr. Hatano's classroom?

6-2 Homework Practice

Find the positive square root using an area model.



$$\sqrt{64} = \underline{\hspace{2cm}}$$



$$\sqrt{4} = \underline{\hspace{2cm}}$$

Find the positive square root of each number.

3 16

Write the expression.

Name the factor pairs.

Replace 16 with the set of identical factor pairs.

$$\sqrt{16} = \underline{\hspace{2cm}}$$

4 4

Write the expression.

Name the factor pairs.

Replace 4 with the set of identical factor pairs.

$$\sqrt{4} = \underline{\hspace{2cm}}$$

5 36

Write the expression.

Name the factor pairs.

Replace 36 with the set of identical factor pairs.

$$\sqrt{36} = \underline{\hspace{2cm}}$$

Write the vocabulary word that completes each sentence.

6 A _____ is a number that is multiplied by another number.

7 The product of a number multiplied by itself is the _____.

8 Operations that undo each other are called _____.

Homework Practice

Write an inequality using common square roots.

1 $\sqrt{\quad} < \sqrt{29} < \sqrt{\quad}$

2 $\sqrt{\quad} < \sqrt{84} < \sqrt{\quad}$

3 $\sqrt{\quad} < \sqrt{62} < \sqrt{\quad}$

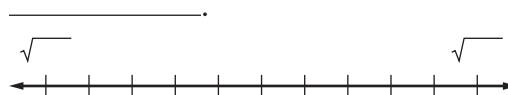
4 $\sqrt{\quad} < \sqrt{12} < \sqrt{\quad}$

Estimate each square root to the nearest whole number. Plot each value on a number line.

5 $\sqrt{23}$ is close to the whole number



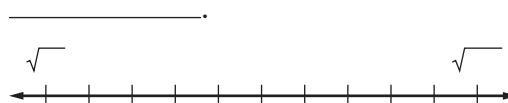
6 $\sqrt{148}$ is close to the whole number



7 $\sqrt{53}$ is close to the whole number



8 $\sqrt{86}$ is close to the whole number



Choose a reasonable estimate for each square root.

9 $\sqrt{2}$

1.0 1.4 1.8

10 $\sqrt{29}$

4.8 5.1 5.4

11 $\sqrt{175}$

13.2 13.6 13.9

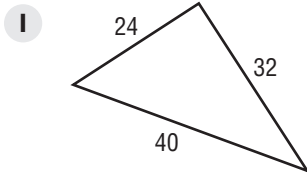
12 $\sqrt{78}$

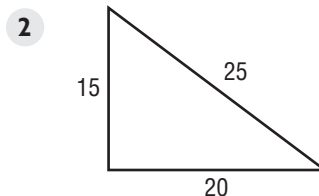
7.6 8.8 9.2

- 13 **CALENDAR** Julie's square calendar has area 7 square inches. She estimated the length and width to be between 3 and 4 inches. Is she correct? Explain.

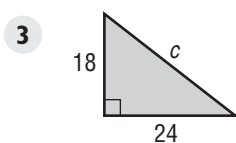
6-4 Homework Practice

Determine if each triangle is a right triangle, using the Pythagorean Theorem.

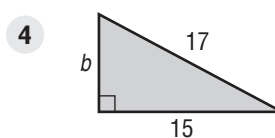




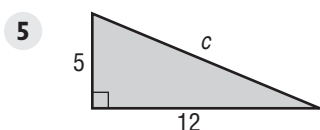
Find the length of the leg or hypotenuse of each right triangle.



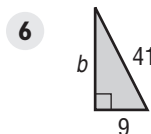
$c =$ _____ units



$b =$ _____ units



$c =$ _____ units



$b =$ _____ units

Solve.

- 7 **TELEVISION** Mr. Patel is buying a new television. He wants to figure out the biggest size television he can get. His cabinet has an opening that is 30 inches tall and 40 inches wide. What is the largest diagonal length of a television Mr. Patel can buy?

- 8 **MAPS** Carisa is making a treasure map. The path from the starting point to the treasure is 28 paces forward then 21 paces to the left. How many paces would it be to go directly from the starting point to the treasure?

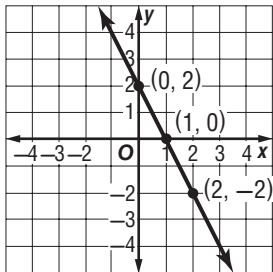
Write the vocabulary word(s) that completes the sentence.

- 9 The _____ of a right triangle are the two sides that form the right angle.
- 10 The _____ is the side opposite the right angle in a right triangle.

Homework Practice

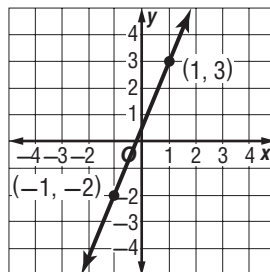
Find the slope of each line.

1



$$\frac{\text{rise}}{\text{run}} = \frac{\boxed{}}{\boxed{}} = \underline{\hspace{2cm}}$$

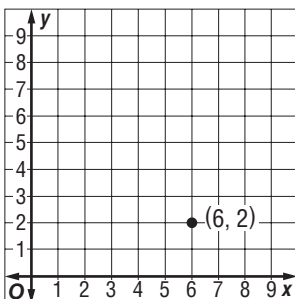
2



$$\frac{\text{rise}}{\text{run}} = \frac{\boxed{}}{\boxed{}}$$

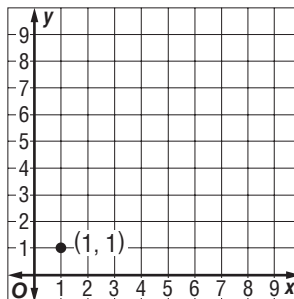
Graph another point on each line, given one point on the line and the slope.

3



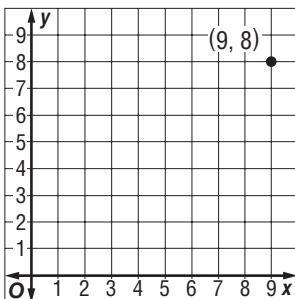
The slope is $-\frac{4}{3}$.

4



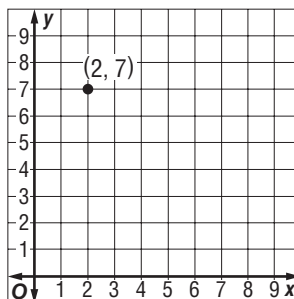
The slope is 2.

5



The slope is $\frac{3}{5}$.

6



The slope is $-\frac{1}{2}$.

Solve.

7 **STAIRS** Each step on a flight of stairs has a height of 6 inches and a width of 9 inches. What is the slope of the stairs? _____

8 **LADDERS** A ladder is leaning against the side of a house. The bottom of the ladder is 12 feet away from the house and the top of the ladder is 15 feet above the ground. What is the slope of the ladder? _____

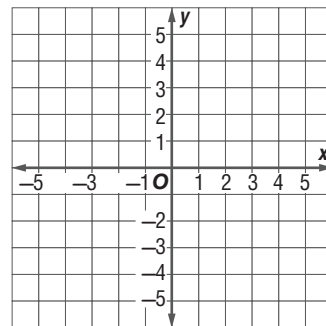
Homework Practice

Graph each equation and determine its slope.

1 $y = 2x + 1$

x	-3	-2	-1
y			

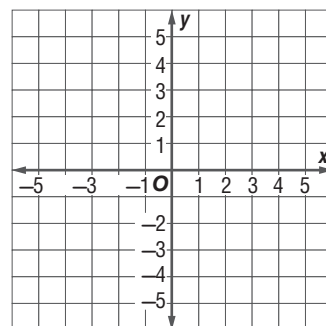
The slope is _____.



2 $y = -\frac{4}{5}x$

x	-5	0	5
y			

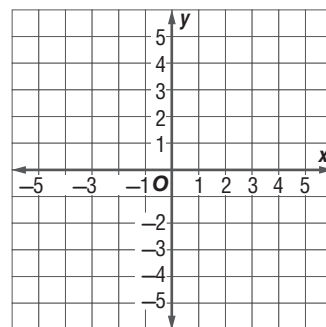
The slope is _____.



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

x	-3	0	3
y			

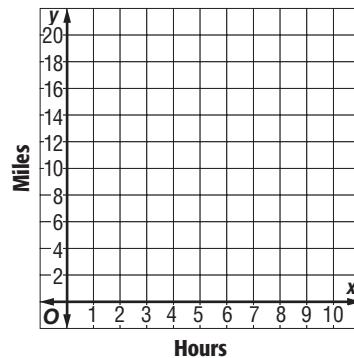
The slope is _____.



4 **ANIMALS** A pig can run at approximately 10 miles per hour. Graph an equation to represent how far a pig can run in x hours.

Write an equation. Let x represent the number of hours and y represent the number of miles.

The slope is _____.



Homework Practice

List the numbers in each category.

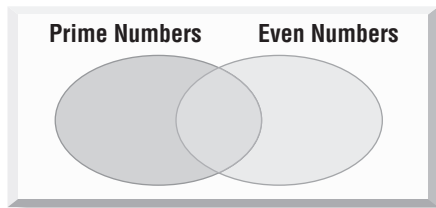
1, 2, 3, 4, 5, 6, 7, 8, 9, 10

- | | |
|---|---|
| <p>1 multiples of 5:
_____</p> | <p>2 even numbers:
_____</p> |
| <p>3 both:
_____</p> | <p>4 neither:
_____</p> |

- 5** Create a Venn diagram to sort the numbers. Classify them as prime numbers or even numbers.

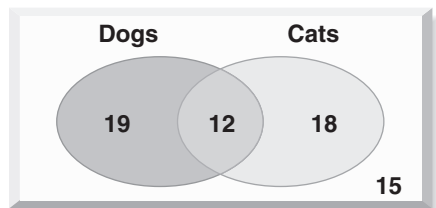
2, 3, 8, 9, 17, 21, 25, 37, 41

Prime Numbers	Even Numbers	Neither
_____	_____	_____



Solve.

- 6 SURVEY** Malcolm took a survey to find out how many students have dogs, cats, or both pets. Malcolm surveyed 64 students and recorded his results in the Venn diagram shown below. Of the students surveyed, how many do not have a dog as a pet? _____



Write the vocabulary word that completes each sentence.

- 7** To put together items that have something in common is to _____.
- 8** A _____ uses overlapping circles to show common elements.

Homework Practice

Find the mode for each given set of data.

1 1, 3, 2, 2, 4, 3, 2, 4, 1

2 7, 8, 5, 8, 4

Find the median for each given set of data.

3 Barb counted the glasses in nine different kitchen cabinets.

11, 12, 4, 7, 9, 5, 13, 8, 12

Arrange the numbers in order:

_____, _____, _____, _____, _____, _____, _____, _____, _____

The median is _____.

4 Juan asked 13 students how many books they read over the summer.

0, 5, 15, 2, 11, 17, 8, 6, 5, 2, 0, 3, 2

Arrange the numbers in order:

_____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

The median is _____.

Find the range for each given set of data.

5 11, 12, 4, 7, 9, 5, 13, 8, 12

The range of glasses in Exercise 3 is _____ - _____ = _____.

6 0, 5, 15, 2, 11, 17, 8, 6, 5, 2, 0, 3, 2

The range of books in Exercise 4 is _____ - _____ = _____.

Solve.

7 **PAY** Julius kept track of the number of hours he worked per week for 15 weeks. The results are shown below. Find the mode, median, and range of the number of hours.

19, 16, 32, 30, 20, 40, 37, 10, 8, 0, 35, 40, 36, 12, 15

Write the vocabulary word that completes the sentence.

8 Information gathered for statistical purposes is called _____.

Homework Practice

Find the mean of each data set.

1 60, 72, 56, 42, 80

2 11, 16, 12

3 5, 14, 25, 17, 14

4 6.2, 3.8, 4.5, 5.5

Find the mean of each set of data. Convert the remainder into a fraction or a decimal.

5 2, 7, 9, 4

6 6.1, 8.2, 9.3, 7.6

7 16, 30, 26, 14, 18

8 2, 1, 9, 4, 0, 6

Find one missing number from a data set when the mean is given.

9 Mean: 6 Data set: 2, 3, 10, _____

10 Mean: 7 Data set: 6.2, 5.2, 9.7, _____

11 Mean: 14.6 Data set: 19, 12, 10, 15, _____

12 Mean: 6 Data set: 4, 6, 3, 6, _____

13 TEMPERATURE Mark recorded the high temperature every day for five days. The temperatures were 52°F, 64°F, 57°F, 61°F, and 70°F. What was the mean high temperature for the week? _____

Write the vocabulary word that completes each sentence.

14 The numbers that are often used to describe the center of a set of data are called the _____.

15 Another name for the mean of a set of data is the _____.

Homework Practice

Use the double-bar graph “Quiz Grades” to compare data.

- 1 How many students earned A’s?

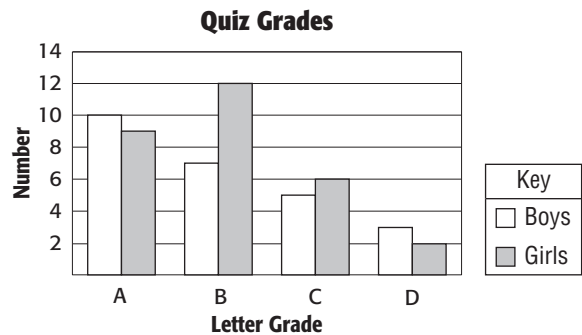
- 2 How many more boys earned B’s than D’s?

- 3 How many girls earned A’s or B’s?

- 4 A total of 11 students earned what grade?

- 5 How many students took the quiz?

- 6 How many more girls than boys earned a C?



Use the bar graph “Favorite Ride” to compare data.

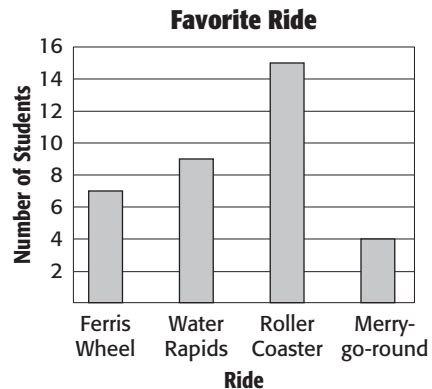
- 7 How many students were surveyed?

- 8 How many students prefer the water rapids to the merry-go-round?

- 9 How many students chose the Ferris wheel or the roller coaster as their favorite ride?

- 10 What is the least favorite ride?

- 11 How many more students prefer the roller coaster than the water rapids? _____



Homework Practice

Use the data in the table to plan a bar graph.

- 1 What is a good title for the graph?

- 2 What are the two main categories?

- 3 What interval could be used for the scale?

- 4 What will the height of each bar represent?

Education of 8 th Graders' Parents	
Educational Level Attained	Number of Students
High School Diploma	17
Some College	29
College Degree	66
Graduate Level Degree	34

Use the data in the table to create a bar graph.

- 5 The table shows the favorite snack of students in summer school.

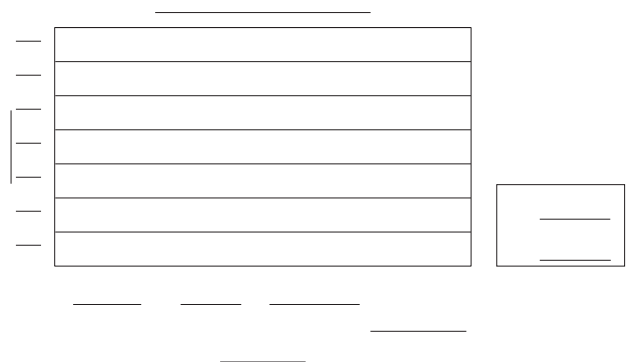
Favorite Snack	
Snack	Number of Students
Cookies	8
Veggies	15
Chips	9
Fruit	6
Milk	4



Use the data in the table to create a double-bar graph.

- 6 The table shows how many juniors and seniors prefer each location for their prom.

Preferred Location for Prom		
Location	Juniors	Seniors
School	10	6
Hotel	26	30
Museum	22	25
Railroad Station	15	19



Homework Practice

Use the line graph “Time to Finish Race” to compare data.

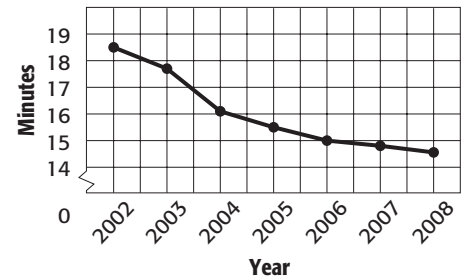
- 1 About how much faster was the time in 2008 than in 2002?

- 2 In what year was the winning time the fastest?

- 3 Describe the trend of the graph. Do the times increase, decrease, or show no change?

- 4 If this trend continues, predict the time in 2010.

Time to Finish Race



Use the double-line graph “Members of Spanish Club” to compare data.

- 5 How many more girls than boys were in Spanish Club in 2002?

- 6 What percent of girls were in Spanish Club in 2004?

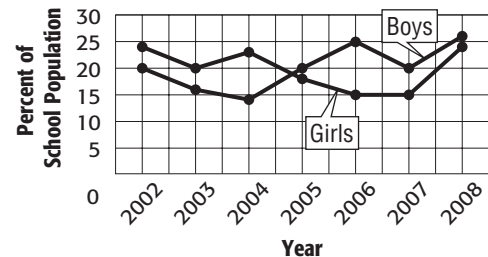
- 7 What percent of boys were in Spanish Club in 2007?

- 8 In what years was there a higher percentage of in Spanish Club?

- 9 What is the scale and what does it represent?

- 10 In which years are the percents of boys and girls the closest to each other?

Members of Spanish Club



Homework Practice

Use the data in the table to plan a line graph.

- 1 What is a good title for the graph?

- 2 What are the two main categories?

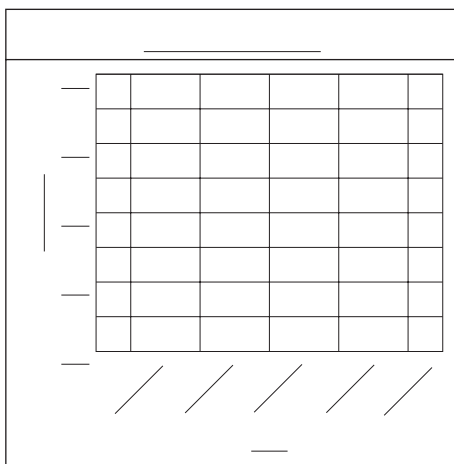
- 3 What interval could be used for the scale?

Amount Spent on Groceries	
Week	Amount
1	\$68
2	\$86
3	\$135
4	\$74
5	\$91
6	\$83

Use the data in the table to create a line or double-line graph.

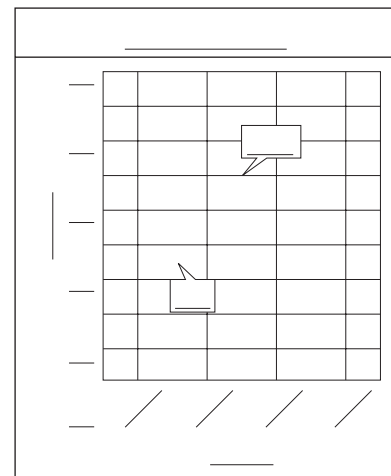
- 4 A scientist records the amount of rain that fell in a city each day.

Amount of Rain	
Day of Week	Inches
Monday	0.25
Tuesday	0.10
Wednesday	0.00
Thursday	1.30
Friday	0.75



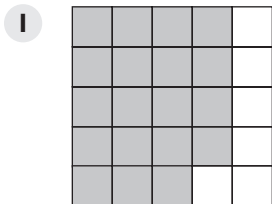
- 5 Ben and Betty's mother would like her children to keep track of how much money they save each month.

Amount Saved		
Month	Ben	Betty
January	\$10	\$15
February	\$12	\$22
March	\$15	\$13
April	\$19	\$11



Homework Practice

Identify each percent that is modeled.



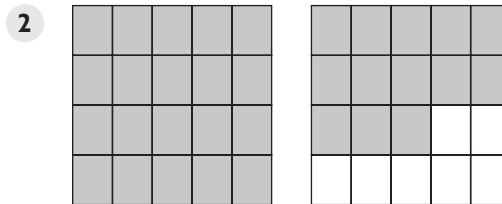
fraction: _____

fraction with denominator of 100:

$$\frac{\cdot}{\cdot} = \frac{\quad}{100}$$

decimal: _____

percent: _____



fraction: _____

fraction with denominator of 100:

$$\frac{\cdot}{\cdot} = \frac{\quad}{100}$$

decimal: _____

percent: _____

Find the missing value.

- 3 What is 68% of 300?

$$\underline{\quad} \cdot \underline{\quad} = \underline{\quad}$$

- 4 What is 3% of 50?

$$\underline{\quad} \cdot \underline{\quad} = \underline{\quad}$$

- 5 What is 75% of 48?

$$\underline{\quad} \cdot \underline{\quad} = \underline{\quad}$$

- 6 What is 15% of 60?

$$\underline{\quad} \cdot \underline{\quad} = \underline{\quad}$$

Solve.

- 7 **PARKING** In section A of the mall parking lot, there are a total of 100 vehicles, of which 54 are minivans. In section B, there are 150 vehicles, of which 90 are minivans. Which section has the greater percentage of minivans? _____

- 8 **SAVINGS** Marcos and Rosita each deposit 12% of their earnings into a savings account. One week, Marcos earned \$80 and Rosita earned \$115. Who deposited the greater amount into their savings account? Explain.

Write the vocabulary word that completes each sentence.

- 9 A _____ is a comparison of two numbers by division.
- 10 A _____ is a ratio that compares a number to 100.

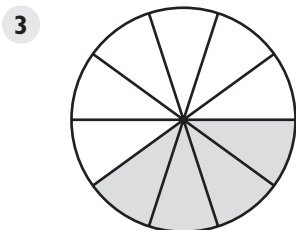
Homework Practice

Use combinations to find the degrees needed to show each sector in a circle graph.

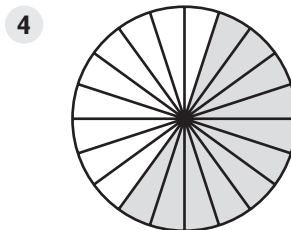
1 $60\% \text{ ______} + \text{______} = 60\%$
 $\text{______} + \text{______} = \text{______}$

2 $15\% \text{ ______} + \text{______} = 15\%$
 $\text{______} + \text{______} = \text{______}$

Name the fraction and the percent of the circle that is shaded.

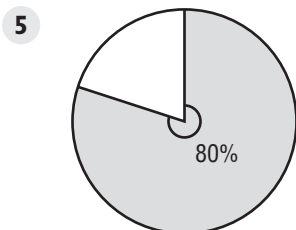


fraction: _____
 $\frac{\boxed{}}{\boxed{}} \cdot \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{100} = \text{______}$

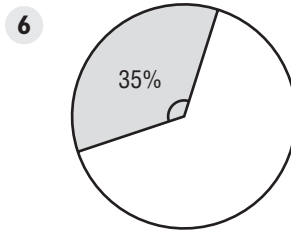


fraction: _____
 $\frac{\boxed{}}{\boxed{}} \cdot \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{100} = \text{______}$

Find the degrees needed to show each sector in a circle graph.



$80\% = \frac{\boxed{}}{100} \div \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$
 $\frac{\boxed{}}{1} \cdot \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}} = \text{______}$



$35\% = \frac{\boxed{}}{100} \div \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$
 $\frac{\boxed{}}{1} \cdot \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}} = \text{______}$

7 **PETS** Randy surveyed the students in his homeroom about the type of pet they have. Of his classmates, 20% have a dog, 30% have a cat, 10% have a fish, and 40% do not have a pet. He wants to make a circle graph to show this data. What is the degree measure of each sector?

Write the vocabulary word that completes each sentence.

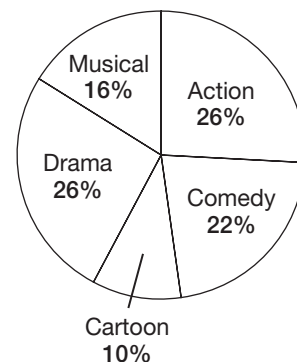
8 A pie-shaped section in a circle is called a(n) _____.

9 The bottom number in a fraction is called the _____.

Homework Practice

MOVIES Lee sorted his 200 movies into categories. The circle graph shows the percentage of each type. Use the circle graph to answer the questions below.

Lee's Movies



- What is the title of the graph?

- Which two types of movies does he have the same number?

- Which two types of movies total the same as the percentage of action movies?

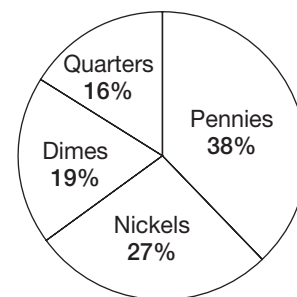
- How many cartoon movies does Lee have?

- How many more drama movies than comedy movies does Lee have?

- How many movies are not action movies?

COIN COLLECTION Reba's coin collection includes 200 coins of different types. The circle graph shows the percentage of each type of coin. Use the circle graph to answer the questions below.

Reba's Coins



- How many nickels has Reba collected?

- How many coins are not pennies?

Write the vocabulary word(s) that complete each sentence.

- A graph used to compare parts of a whole is called a _____.
- Information, often numerical, which is gathered for statistical purposes, is called _____.

Homework Practice

- 1 Complete the table to show the decimal value, the percent, and the degree measure for each type of house for sale.

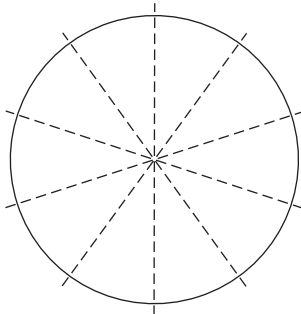
Number of Bedrooms	Number	Decimal Value	Percent	Degree Measure
Two	16			
Three	48			
Four	12			
Five	4			
Total Check	80	1.00	100%	360°

- 2 Complete the table to show the decimal value, the percent, and the degree measure for each type of transaction at a clothing store yesterday.

Transaction	Number	Decimal Value	Percent	Degree Measure
Cash	75			
Check	50			
Bank Credit Card	100			
Store Credit Card	150			
Debit Card	125			
Total Check	500	1.00	100%	360°

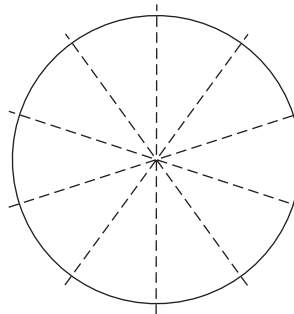
- 3 Use the table in Exercise 1 to create a circle graph.

Number of Bedrooms



- 4 Use the table in Exercise 2 to create a circle graph.

Transaction Types



Homework Practice

Determine which ordered pair below is a solution of each equation.

(36, 4) (2, 14) (1, 10) (0, 4) (5, 16) (2, 9) (5, 2) (6, 54)

1 $y = 9x$ _____

2 $y = x + 12$ _____

3 $y = 2x - 8$ _____

4 $y = 3x + 1$ _____

Complete the table for each equation. Then find three solutions for each equation.

5 $y = 4x - 1$

x	$4x - 1$	y
1	$4(1) - 1$	
3	$4(\underline{\quad}) - 1$	
6	$4(\underline{\quad}) - 1$	

6 $y = 8x$

x	$8x$	y
1	$8(\underline{\quad})$	
2		
3		

7 $y = -x + 10$

x	$-x + 10$	y
1		
2		
3		

8 $y = 2x + 3$

x	$2x + 3$	y
0		
4		
7		

Solve.

- 9 **PHOTOGRAPHS** The equation $y = 12x$ represents the number of wallet-sized pictures y that can be printed on x sheets of photo paper. Find three solutions when $x = 2, 3,$ and 6 . Explain what the solutions mean.

Write the vocabulary word that completes the sentence.

- 10 The value of a variable that makes an equation true is called a _____.

Homework Practice

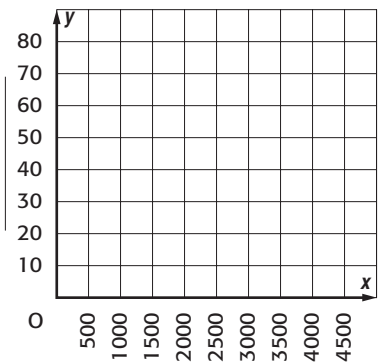
Solve.

- 1 TEMPERATURE** Mr. Ramirez recorded the temperature for July 17 at different elevations. The table below shows the data. Create a scatter plot to find the relationship between the data sets.

Temperature (°F)	500	1,000	1,500	2,000	2,500	3,000	3,500
Elevation (ft)	78	60	56	50	50	42	39

Describe the relationship between elevation and temperature.

Data for July 17



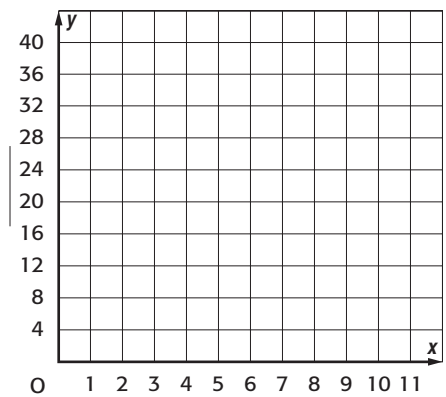
- 2 GASOLINE** Eric recorded his gas purchases over the last several months. The table below shows the data. Create a scatter plot to find the relationship between the data sets.

Gallons of Gasoline	2	3	4	5	5
Cost	\$7	\$11	\$16	\$17	\$18

Gallons of Gasoline	6	7	7	7	9
Cost	\$21	\$23	\$26	\$27	\$31

Describe the relationship between the gallons of gas purchased and the cost.

Eric's Gas Purchases

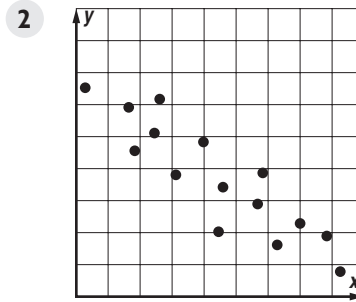
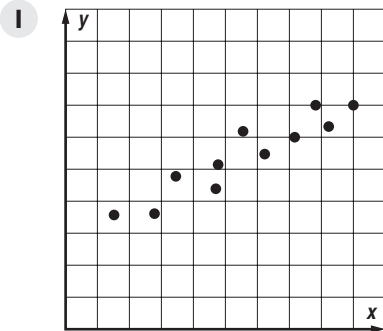


Write the vocabulary word(s) that completes each sentence.

- A(n) _____ is a graph in which two sets of data are plotted as ordered pairs in the coordinate plane.
- A(n) _____ is a grid in which a horizontal number line and a vertical number line intersect at their zero points.
- The horizontal line of the two perpendicular number lines in a coordinate grid is the _____.

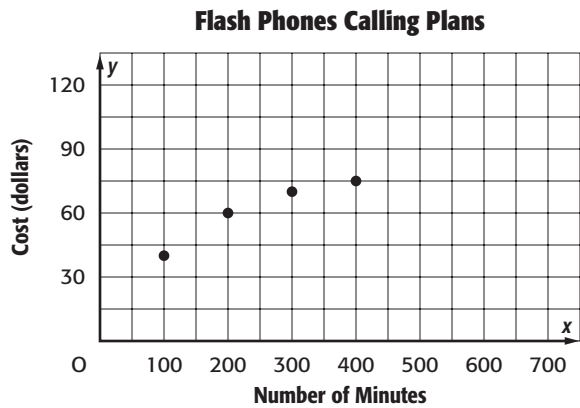
Homework Practice

Draw a line of best fit. Then describe the slope of the line and the trend in the data.



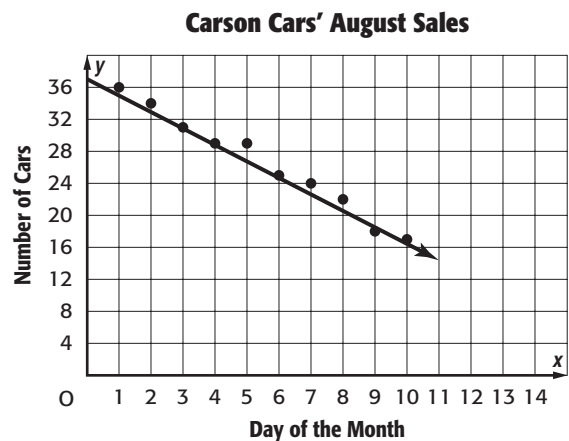
Solve.

- 3 **CALLING PLANS** The scatter plot shows the cost of various cell phone calling plans. Draw a line of best fit. Then describe the slope of the line and the trend of the data.



- 4 Use the line of best fit for Exercise 3 to predict the cost of a calling plan that includes 700 minutes.

- 5 **CAR SALES** The scatter plot shows the number of cars in a showroom for the first 10 days of the month. Use the line of best fit shown to predict how many cars will be in the showroom on the 14th day.



Write the vocabulary word that completes the sentence.

- 6 A line that is very close to most of the data points on a scatter plot is called a _____.