NAME _____ DATE _____

Lesson 1-1

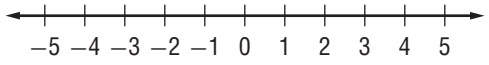
Skills Practice

Write the opposite of each number.

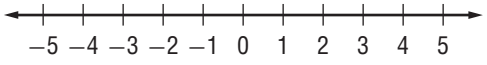
1. -3 _____
2. 2 _____
3. 7 _____
4. 8 _____
5. -5 _____
6. 4 _____

Graph the integers on a number line. Then write them in order from least to greatest.

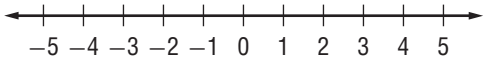
7. $-2, 1, 5, -4, -3$ _____



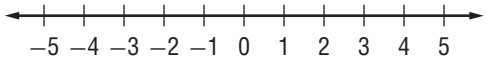
8. $-3, -2, 1, -1, 3$ _____



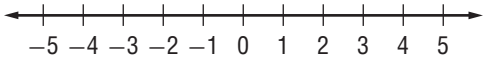
9. $3, -1, 1, 4, -4$ _____



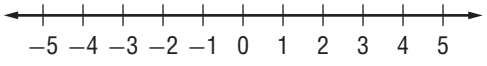
10. $1, -2, 3, -4, 4$ _____



11. $-1, 4, -5, -2, 3$ _____

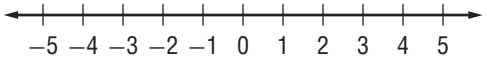


12. $-4, -1, 2, -2, -3$ _____

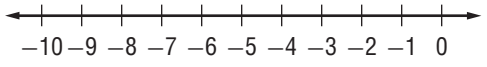


Write <, =, or > in each circle to make a true statement.

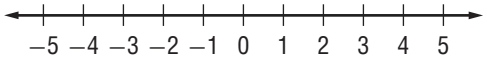
13. $3 \bigcirc -4$



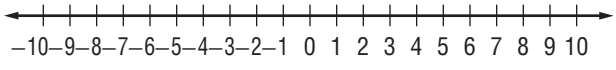
14. $-2 \bigcirc -7$



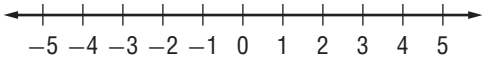
15. $-2 \bigcirc 2$



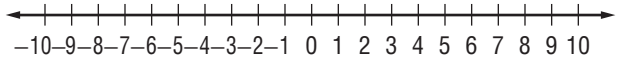
16. $5 \bigcirc -1$



17. $4 \bigcirc -5$



18. $-1 \bigcirc -1$



NAME _____ DATE _____

Lesson 1-2

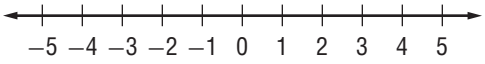
Skills Practice

What is the opposite of each number? Write an addition sentence to show the Inverse Property of Addition.

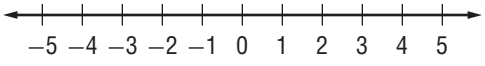
1. -1 _____
2. -2 _____
3. 9 _____
4. 10 _____
5. 6 _____
6. -7 _____
7. -12 _____
8. 8 _____

Find each sum. Use the number line.

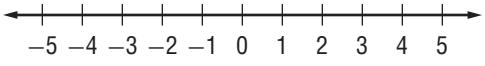
9. $4 + (-2) =$ _____



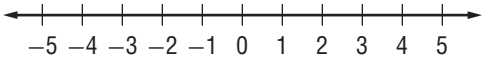
10. $-1 + (-3) =$ _____



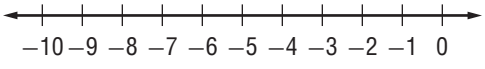
11. $2 + (-7) =$ _____



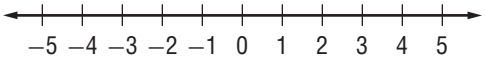
12. $2 + (-3) =$ _____



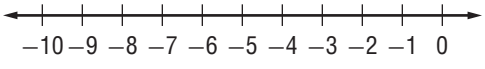
13. $-3 + (-3) =$ _____



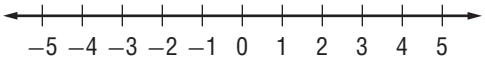
14. $-2 + 2 =$ _____



15. $-5 + 2 =$ _____



16. $1 + (-3) =$ _____



Find each sum.

17. $2 + (-5) =$ _____
18. $4 + (-4) =$ _____
19. $-1 + (-4) =$ _____
20. $-4 + 0 =$ _____
21. $-1 + 5 =$ _____
22. $-2 + (-8) =$ _____
23. $2 + (-2) =$ _____
24. $1 + (-3) =$ _____

NAME _____ DATE _____

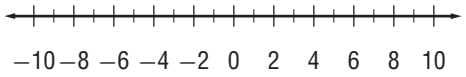
Skills Practice

Find each absolute value.

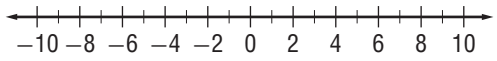
1. $|8| =$ _____
2. $|2| =$ _____
3. $|-4| =$ _____
4. $|-6| =$ _____
5. $|15| =$ _____
6. $|9| =$ _____
7. $|-11| =$ _____
8. $|-1| =$ _____
9. $|-7| =$ _____
10. $|14| =$ _____

Find each difference. Use the number line.

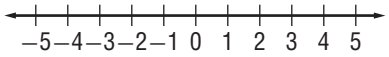
11. $3 - (-4) =$ _____



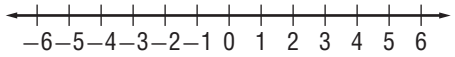
12. $8 - 9 =$ _____



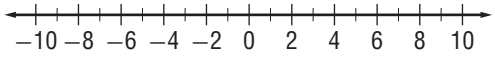
13. $-2 - 1 =$ _____



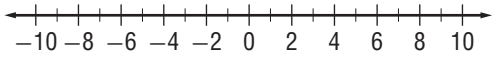
14. $-4 - (-2) =$ _____



15. $-7 - (-3) =$ _____



16. $-9 - (-3) =$ _____



Find each difference.

17. $-5 - (-6) =$ _____
18. $-4 - (-7) =$ _____
19. $10 - (-3) =$ _____
20. $-1 - 6 =$ _____
21. $-8 - 4 =$ _____
22. $3 - (-3) =$ _____
23. $2 - (-3) =$ _____
24. $-9 - (-7) =$ _____
25. $7 - 11 =$ _____
26. $1 - 9 =$ _____

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Lesson 1-4

Skills Practice

Find the missing number. Name the multiplication property.

1. $-8 \cdot 3 = 3 \cdot$ _____ _____

2. $-8(9 + 7) = (-8 \cdot$ _____$) + (-8 \cdot 7)$ _____

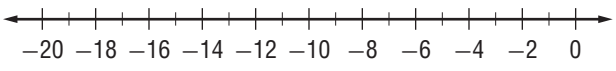
3. $-8 \cdot$ _____ $= -8$ _____

4. $(-8 \cdot 5) \cdot (-4) = -8 \cdot ($_____ $\cdot (-4))$ _____

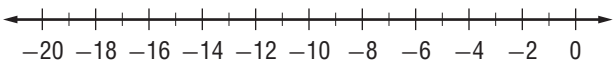
5. $-8 \cdot$ _____ $= 0$ _____

Find each product. Use a number line.

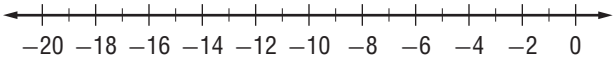
6. $3 \cdot (-6) =$ _____



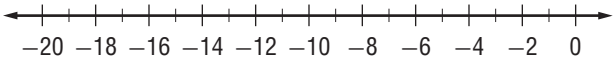
7. $4 \cdot (-3) =$ _____



8. $2 \cdot (-8) =$ _____



9. $2 \cdot (-5) =$ _____



Find each product.

10. $-7 \cdot 3 =$ _____

11. $-10 \cdot 2 =$ _____

12. $5 \cdot (-5) =$ _____

13. $-8 \cdot (-8) =$ _____

14. $-6 \cdot 4 =$ _____

15. $2 \cdot (-9) =$ _____

16. $-7 \cdot (-8) =$ _____

17. $12 \cdot 3 =$ _____

18. $9 \cdot 5 =$ _____

19. $-4 \cdot 11 =$ _____

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Lesson 1-5

Skills Practice

Find each quotient.

1. $10 \div (-1)$ _____
2. $10 \div 1$ _____
3. $-10 \div (-1)$ _____
4. $-10 \div 1$ _____
5. $14 \div (-2)$ _____
6. $\frac{49}{7}$ _____
7. $-55 \div (-11)$ _____
8. $\frac{28}{-4}$ _____
9. $15 \div (-3)$ _____
10. $-36 \div (-6)$ _____
11. $\frac{-9}{3}$ _____
12. $81 \div (-9)$ _____
13. $56 \div 7$ _____
14. $-42 \div (-6)$ _____
15. $100 \div (-25)$ _____
16. $60 \div 5$ _____
17. $-36 \div 4$ _____
18. $\frac{-16}{-4}$ _____
19. $0 \div (-8)$ _____
20. $75 \div 5$ _____

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Lesson 2-1

Skills Practice

Find a rule for each pattern.

1. 10, 20, 30, 40 _____
2. 100, 85, 70, 55 _____
3. 1600, 400, 100, 25 _____
4. 25, 50, 100, 200 _____
5. 12, 17, 22, 27 _____

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

6. 11, 21, 31, 41

   Rule: _____

   Next terms: _____, _____, _____

7. 2,400,000; 240,000; 24,000

   Rule: _____

   Next terms: _____, _____, _____

8. 62, 74, 86, 98

   Rule: _____

   Next terms: _____, _____, _____

9. 6, 18, 54, 162

   Rule: _____

   Next terms: _____, _____, _____

Write the next three conversions in each pattern.

10.

Number of Quarts	1	2	3	4
Number of Pints	2			

11.

Number of Years	1	2	3	4
Number of Months	12			

12.

Number of Yards	1	2	3	4
Number of Inches	36			

NAME _____ DATE _____

Lesson 2-2

Skills Practice

Write a function to represent each situation.

1. Chad completed the race in half the time Jared did. _____
2. Flor is 2 years younger than Hector. _____
3. Each dining room table comes with 6 chairs. _____
4. Amanda has $10 more than Meagan. _____

Write a function and make a function table.

5. **TRAVEL** Adina can paddle a canoe in still water at an average speed of 4 miles per hour. Let y = miles traveled and x = number of hours.

$y =$ _____

Number of Hours, x	1	2	3	4	5
Miles Traveled, y					

If Adina canoed for 4 hours, how many miles did Adina canoe? _____

6. **FITNESS** Kyle began exercising for 25 minutes each day. Each week, he increased the time of his workout by 5 minutes. Let y = length of workout in minutes and x = number of weeks.

$y =$ _____

Number of Weeks, x	1	2	3	4	5	6
Length of Workout, y						

What is the length of Kyle's daily workout after 6 weeks? _____

7. **BABYSITTING** Each Saturday evening, Jaylynn drives across town to babysit for a family with two children. She is paid $5 per hour plus $6 for gas. Let y = amount of money she receives and let x = number of hours she babysits.

$y =$ _____

Number of Hours Babysitting, x	2	3	4	5	6
Amount of Money Made, y					

Jaylynn babysat for 5 hours. How much money did she receive? _____

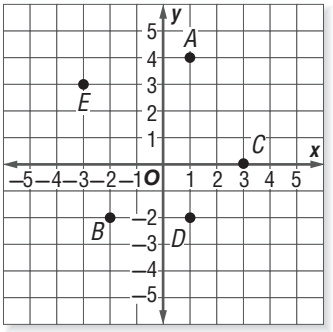
NAME _____ DATE _____

Lesson 2-3

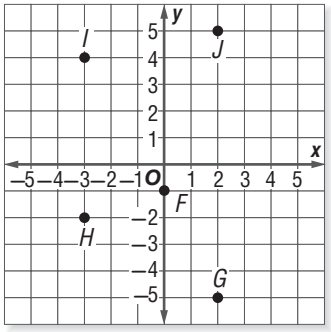
Skills Practice

Name the ordered pair for each point.

1. A _____
2. B _____
3. C _____
4. D _____
5. E _____



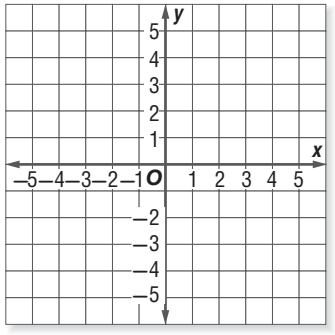
6. F _____
7. G _____
8. H _____
9. I _____
10. J _____



Graph the ordered pairs.

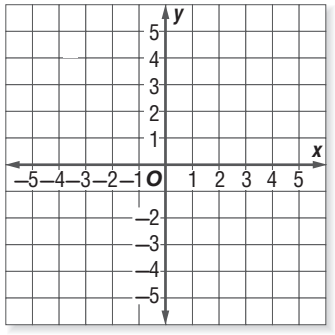
11. Graph the ordered pairs K (3, 1) and L (3, 4). Then connect the points.

    (3, 1) and (3, 4) are on a line parallel to the y-axis because they have the same _____-coordinates.



12. Graph the ordered pairs M (1, 4) and N (–3, 4). Then connect the points.

    (1, 4) and (−3, 4) are on a line parallel to the x-axis because they have the same _____-coordinates.

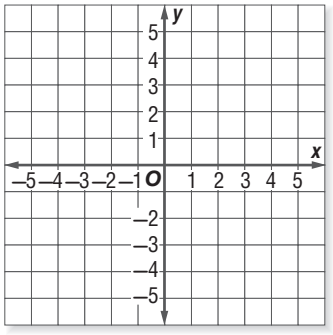


13. Graph the ordered pairs:

    P (−2, −5) Q (−2, 0)

    R (3, 1) S (−5, 2)

    T (3, −2) U (−4, −3)



NAME _____ DATE _____

Lesson 2-4

Skills Practice

Make a table for each equation.

1 $y = x - 3$

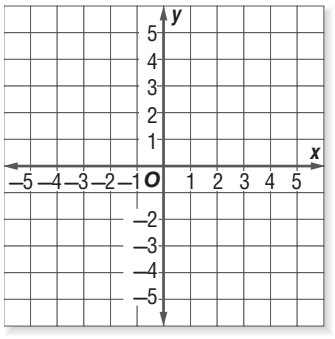
x	$x - 3$	y	Ordered Pair
−2			
−1			
0			
1			
2			

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

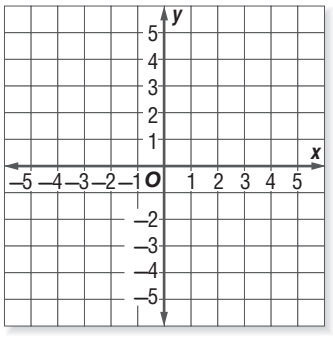
x	$\frac{x}{2} + 3$	y	Ordered Pair
−4			
−2			
0			
2			
4			

Graph each equation.

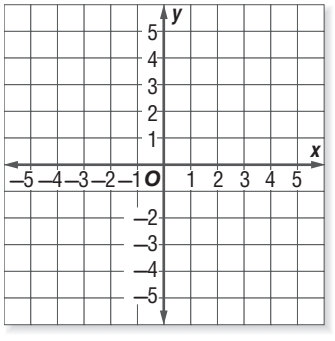
3 Graph the equation from Exercise 1.



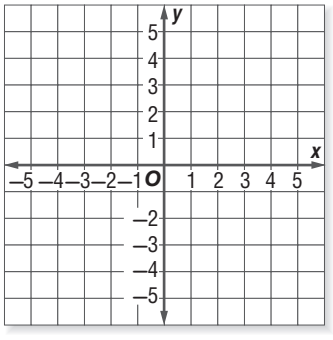
4 Graph the equation from Exercise 2.



5 Graph $y = -\frac{x}{2} + 1$.



6 Graph $y = -2x + 1$.



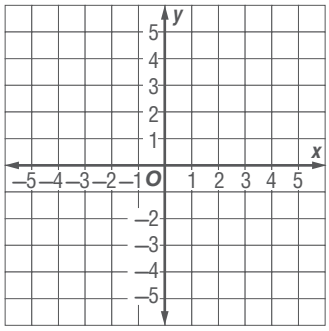
NAME _____ DATE _____

Lesson 2-5

Skills Practice

Write a function, make a function table, and make a graph. Is the function linear or nonlinear?

1 **INTERIOR DESIGN** Kaneesha is putting decorative tiles on the wall above her kitchen sink. The number of tiles is three times the square of the height (in decimeters) of the wall where the tile will go.



$y =$ _____

Height (in decimeters), x	3	4	5	6	7
Number of Tiles, y					

How many tiles are needed for a space with a height of 5 decimeters? _____

The function is _____.

Match each function with its function table and its graph.

2 $y = x$
function
table _____
graph _____

3 $y = 3x - 2$
function
table _____
graph _____

4 $y = -2x + 1$
function
table _____
graph _____

5 $y = x^2$
function
table _____
graph _____

A

x	−2	−1	0	1	2
y	−8	−5	−2	1	4

B

x	−2	−1	0	1	2
y	−2	−1	0	1	2

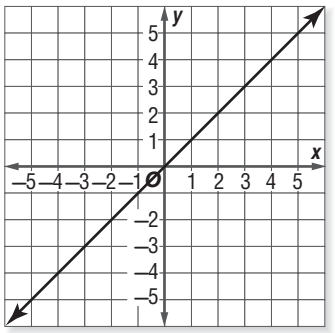
C

x	−2	−1	0	1	2
y	4	1	0	1	4

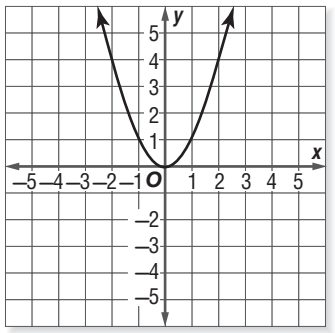
D

x	−2	−1	0	1	2
y	5	3	1	−1	−3

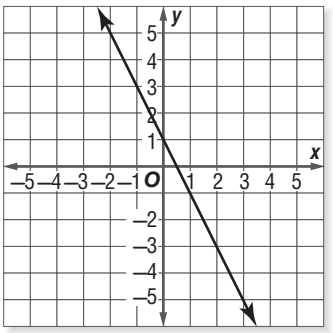
I



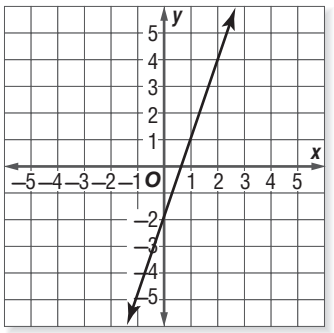
II



III



IV



NAME _____ DATE _____

Lesson 3-1

Skills Practice

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

1. $8 \cdot 6 \div (4 + 2) - 4^2$

   _____

2. $3 \cdot 6 + 3^2 + 9 \div 3$

   _____

3. $5 \div 1 - 3 + 2 \cdot 6$

   _____

4. $9 - 2 + (12 \cdot 6) + 9$

   _____

5. $\frac{6 + 12}{11 - 2} + 7 \cdot 3$

   _____

6. $10 \div 2 \cdot (5 - 1) + 4$

   _____

Find the value of each expression.

7. $4 \cdot (2 + 6) - 30 + 4^2 = 4 \cdot$ _____ $- 30 + 4^2$

   $= 4 \cdot$ _____ $- 30 +$ _____

   $=$ _____ $- 30 +$ _____

   $=$ _____ $+$ _____

   $=$ _____

8. $9 + 7 \cdot 2 - 3^2 + (1 \cdot 8) = 9 + 7 \cdot 2 - 3^2 +$ _____

   $= 9 + 7 \cdot 2 -$ _____ $+$ _____

   $= 9 +$ _____ $-$ _____ $+$ _____

   $=$ _____ $-$ _____ $+$ _____

   $=$ _____

9. $7 - 4 \div 2 + 5^2$

   _____

10. $12 \div 4 \cdot 2^3 - (3 + 2)$

    _____

11. $14 \cdot 2 \div (8 - 4) + 9$

    _____

12. $10 - (12 \div 3) + 2 \cdot 5$

    _____

13. $20 - 6 \cdot 3 \div (7 - 5)$

    _____

14. $7 \div (5 - 4)^3 + 3 \cdot 2$

    _____

NAME _____ DATE _____

Skills Practice

Evaluate each expression when $\Delta = 4$ and $\blacklozenge = 5$.

1. $3 \cdot \blacklozenge + 20 - (6 - 2) + \Delta$

   Replace symbols with values: _____

   Value of the expression: _____

2. $\blacklozenge \cdot 20 - \blacklozenge^2 + 10 - (\Delta + 2)$

   Replace symbols with values: _____

   Value of the expression: _____

3. $(\Delta \cdot 7 - \blacklozenge^2) \div 3$

   Replace symbols with values: _____

   Value of the expression: _____

Evaluate each expression when $\square = 8$.

4. $21 + \square$ _____
5. $64 \div \square$ _____
6. $5 \cdot \square$ _____
7. $\square + 14$ _____
8. $\square \div 2$ _____
9. $36 - \square$ _____
10. $2 \cdot \square + 17$ _____
11. $56 - 4 \cdot \square$ _____
12. $80 - 3 \cdot \square + 5$ _____
13. $3 \cdot \square + 24 \div \square$ _____

Evaluate each expression when $a = 3$ and $b = 4$.

14. $8a + b^2 - (55 \div 5)$ _____
15. $21 - b + 6 - a^2$ _____
16. $(18 + 7) + 12 \cdot (5 - b)$ _____
17. $10b + 5^2 - (16 - 7)$ _____
18. $12 - b \div 2 + (b + 5)^2$ _____
19. $9b \div 6 + 15 + (a \cdot b)^2$ _____
20. $(55 - 10a) \div 5 + 42$ _____
21. $b + 42 - (a \cdot b) + a^2$ _____
22. $10 - 5 + 12 - b + 9 \cdot 7$ _____
23. $14 + a^2 \cdot 7 - 6 + (b \div 2) - 8$ _____

Lesson 3-3

NAME _____ DATE _____

Skills Practice

Find the value of each variable by modeling the equation.

1 $3 + \square = 8$

$\square =$ _____

2 $15 - n = 9$

$n =$ _____

Find the value of each variable in each equation.

3 $\square + 12 = 19$

$\square =$ _____

4 $8 \cdot r = 24$

$r =$ _____

5 $\frac{y}{3} = 5$

$y =$ _____

6 $20 - a = 14$

$a =$ _____

7 $b \cdot 20 = 100$

$b =$ _____

8 $7 + \square = 32$

$\square =$ _____

9 $t - 14 = 16$

$t =$ _____

10 $\frac{\square}{5} = 8$

$\square =$ _____

Lesson 3-4

NAME _____ DATE _____

Skills Practice

Find the value of m, when $p = 18$ and $t = 6$.

1. $p = m + t$

   $m =$ _____

2. $t = m - p$

   $m =$ _____

3. $t = p + m$

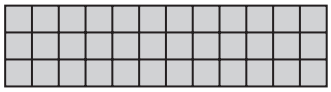
   $m =$ _____

4. $p = m \cdot t$

   $m =$ _____

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

5. The area of the rectangle is 36 square feet. Its width is 3 feet. What is the length of the rectangle?



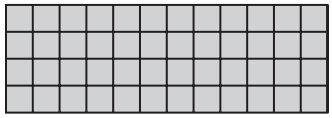
   $\ell =$ _____

6. The area of the rectangle is 18 square meters. Its width is 2 meters. What is the length of the rectangle?

   $\ell =$ _____

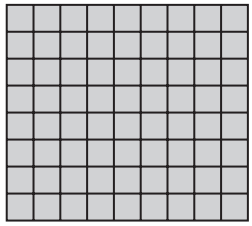
Use the formula $A = \ell \cdot w$ to solve for w, width.

7. The area of the rectangle is 48 square meters. Its length is 12 meters. What is the width of the rectangle?



   $w =$ _____

8. The area of the rectangle is 72 square feet. Its length is 9 feet. What is the width of the rectangle?



   $w =$ _____

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

9. Melissa traveled 86 miles in 2 hours. What was her rate of speed?

   $r =$ _____

10. Jeremy traveled 168 miles in 3 hours. What was his rate of speed?

    $r =$ _____

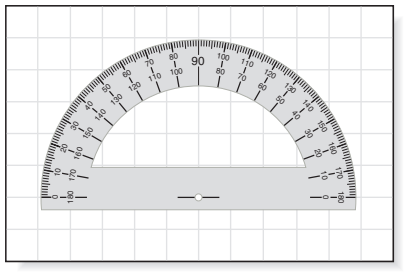
Lesson 4-1

NAME _____ DATE _____

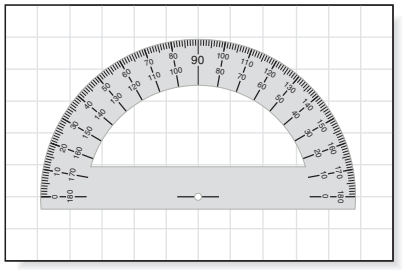
Skills Practice

Draw an angle with the given measurement.

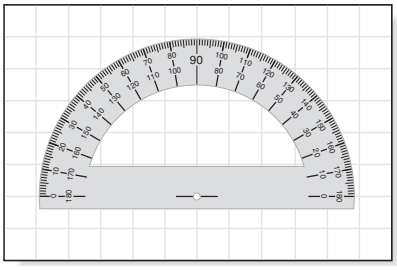
1. 40°



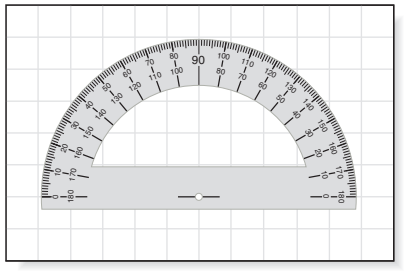
2. 115°



3. 180°

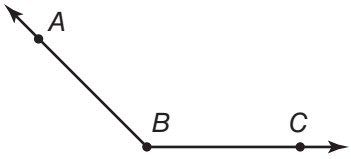


4. 60°

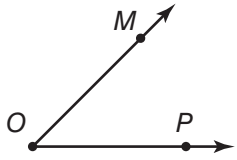


Measure and identify each angle.

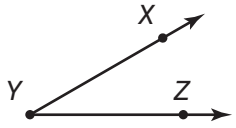
5. $\angle ABC$ measures _____. $\angle ABC$ is a(n) _____ angle.



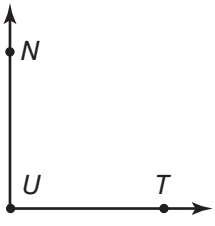
6. $\angle MOP$ measures _____. $\angle MOP$ is a(n) _____ angle.



7. $\angle XYZ$ measures _____. $\angle XYZ$ is a(n) _____ angle.



8. $\angle NUT$ measures _____. $\angle NUT$ is a(n) _____ angle.



NAME _____ DATE _____

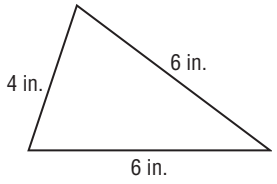
Lesson 4-2

Skills Practice

Identify each angle as acute, obtuse, right, or straight.

1. 117° _____
2. 90° _____
3. 3° _____
4. 180° _____
5. 164° _____
6. 48° _____

Classify each triangle by the lengths of its sides.

7. 

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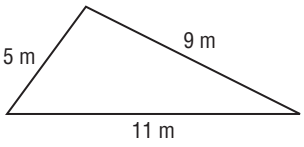
8. 

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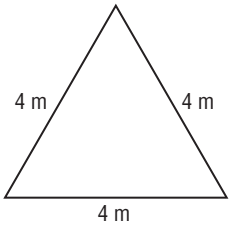
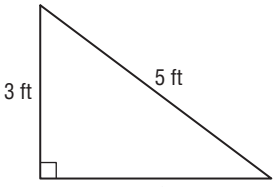
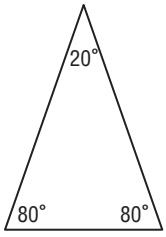
9. 

_____

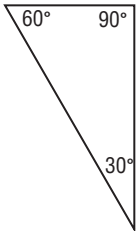
10. 

_____

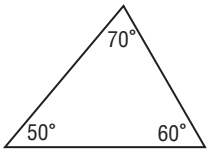
Classify each triangle by the measures of its angles.

11. 

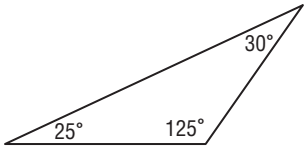
_____

12. 

_____

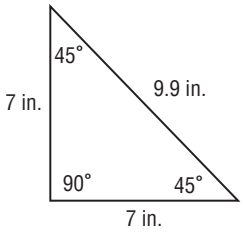
13. 

_____

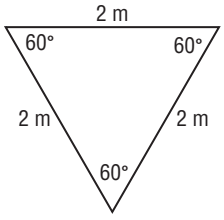
14. 

_____

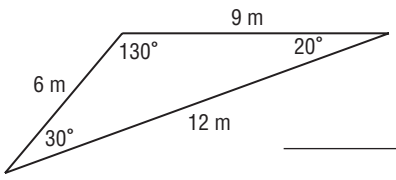
Classify each triangle by the measures of its angles and the lengths of its sides.

15. 

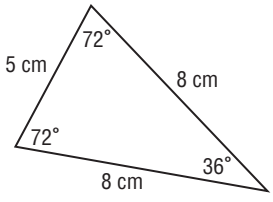
_____

16. 

_____

17. 

_____

18. 

_____

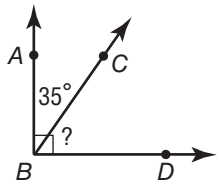
NAME _____ DATE _____

Lesson 4-3

Skills Practice

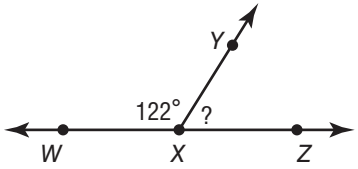
Find the measure of each missing angle.

1



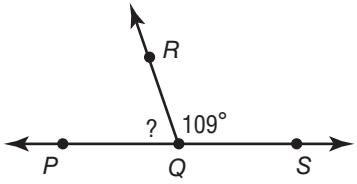
_____

2



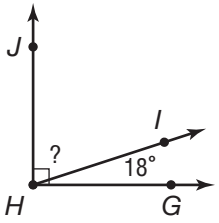
_____

3



_____

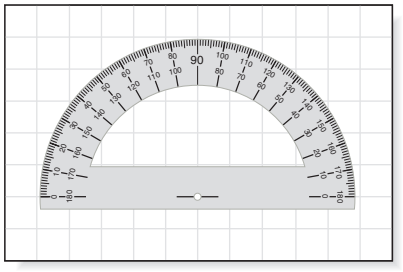
4



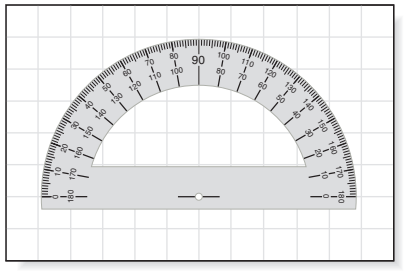
_____

Sketch each type of angle given.

5 Sketch supplementary angles when one angle's measure is 40°.

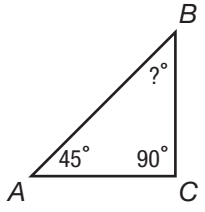


6 Sketch complementary angles when one angle's measure is 10°.



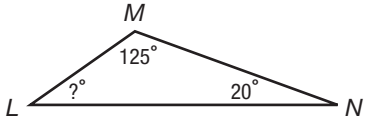
Find the measure of each missing angle.

7



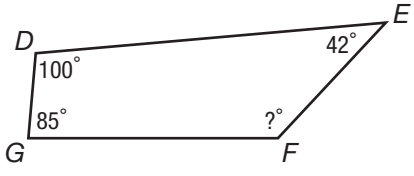
The measure of the missing angle is _____.

8



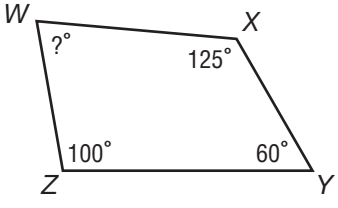
The measure of the missing angle is _____.

9



The measure of the missing angle is _____.

10



The measure of the missing angle is _____.

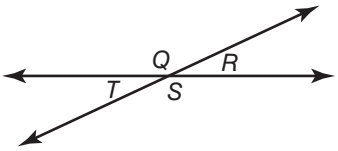
Lesson 4-4

NAME _____ DATE _____

Skills Practice

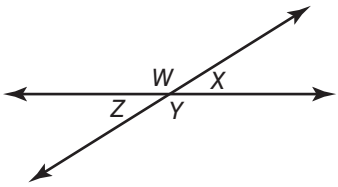
Identify the measure of each angle indicated.

1



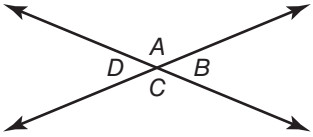
$m\angle R = 25°$, so $m\angle T =$ _____

2



$m\angle W = 148°$, so $m\angle Y =$ _____

3



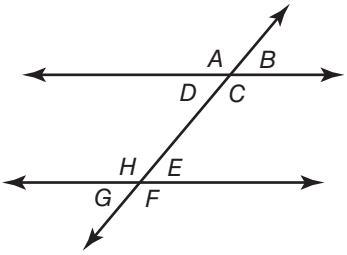
$m\angle B = 45°$, so $m\angle C =$ _____

4

$m\angle K = 87°$, so $m\angle J =$ _____

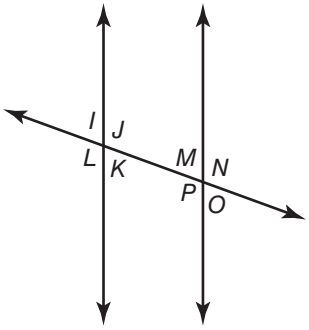
Name the alternate interior angles.

5



_____

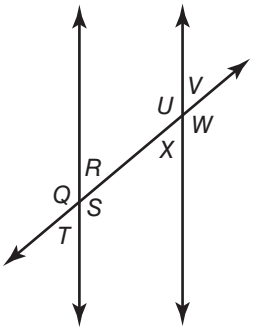
6



_____

Name the alternate exterior angles.

7



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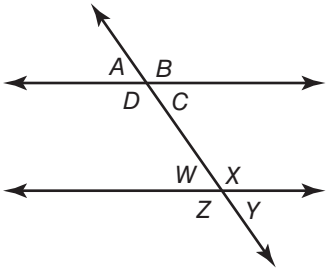
8



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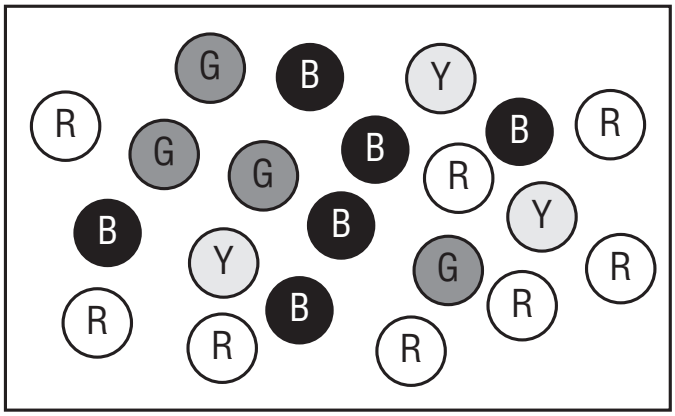
NAME _____ DATE _____

Lesson 5-1

Skills Practice

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



1. the number of yellow marbles to the number of red marbles _____

2. the number of black marbles to the number of green marbles _____

3. the number of green marbles to the number of red marbles _____

4. the number of red marbles to the number of black marbles _____

Write each ratio as a fraction in simplest form.

5. In a computer lab there are 15 desktop computers, 7 laptop computers, and 5 printers. Write the ratio of printers to computers. _____

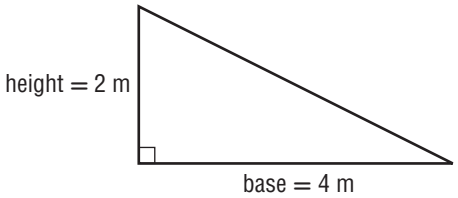
6. A tray of muffins contains 6 chocolate chip muffins, 3 blueberry muffins, 4 pumpkin muffins, and 2 corn muffins. Write the ratio of corn muffins to chocolate chip muffins. _____

7. Rebecca had 7 aces out of 10 serves in her volleyball game. Write the ratio of aces to serves. _____

8. There were 8 cars and 3 buses in the parking lot. Write the ratio of cars to the total number of vehicles. _____

9. In a classroom there are 15 boys and 13 girls. Write the ratio of boys to the total number of students. _____

10. Write the ratio of the length of the base to the height of the triangle as a fraction in simplest form.



_____

Chapter 5

NAME _____ DATE _____

Lesson 5-2

Skills Practice

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

1. 

_____

2. 

_____

3. 250 envelopes in 10 minutes

_____

4. 15 pages in 45 minutes

_____

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

5. 125 miles for 2 hours; ☐ miles for 5 hours _____
6. 64 ounces for 8 people; ☐ ounces for 30 people _____
7. 250 inches in 5 seconds; ☐ inches in 12 seconds _____
8. $65 for 4 CDs; ☐ for 7 CDs _____

Which product has the lower unit cost?

9. a 40-oz bag of dog food for $6.80 or a 24-oz bag of dog food for $3.60 _____
10. 1 pound of pears for $0.99 or 5 pounds of pears for $4.60 _____
11. a 16-oz box of cereal for $4.32 or a 12-oz box of cereal for $3.00 _____
12. a pack of 6 pens for $4.74 or a pack of 15 pens for $12.75 _____

Lesson 5-3

NAME _____ DATE _____

Skills Practice

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

1. $\frac{14}{2} \bigcirc \frac{7}{1}$
2. $\frac{3}{4} \bigcirc \frac{9}{16}$
3. $\frac{3}{8} \bigcirc \frac{12}{32}$
4. $\frac{2}{5} \bigcirc \frac{12}{45}$
5. $\frac{3}{9} \bigcirc \frac{21}{42}$
6. $\frac{14}{16} \bigcirc \frac{49}{56}$
7. $\frac{10}{12} \bigcirc \frac{20}{24}$
8. $\frac{15}{21} \bigcirc \frac{35}{48}$

Solve each proportion.

9. $\frac{3}{9} = \frac{l}{21}$ $l =$ _____
10. $\frac{9}{12} = \frac{x}{28}$ $x =$ _____
11. $\frac{7}{10} = \frac{35}{r}$ $r =$ _____
12. $\frac{6}{15} = \frac{10}{k}$ $k =$ _____
13. $\frac{4}{n} = \frac{12}{18}$ $n =$ _____
14. $\frac{10}{m} = \frac{15}{18}$ $m =$ _____
15. $\frac{8}{2} = \frac{t}{4}$ $t =$ _____
16. $\frac{y}{5} = \frac{28}{70}$ $y =$ _____
17. $\frac{b}{11} = \frac{28}{44}$ $b =$ _____
18. $\frac{6}{14} = \frac{15}{a}$ $a =$ _____

Solve.

19. Twenty-eight cups of sugar are required for 14 cakes. How many cakes require 12 cups of sugar? _____
20. Eighty flowers make 8 bouquets. How many flowers make 11 bouquets? _____
21. Fifty-six buttons are used on 8 sweaters. How many sweaters use 63 buttons? _____
22. Fifty-four balloons are in 3 bags. How many bags have 126 balloons? _____
23. Seventy-five erasers are in 5 boxes. How many boxes have 120 erasers? _____
24. Eighty-one books are on 9 shelves. How many shelves hold 36 books? _____

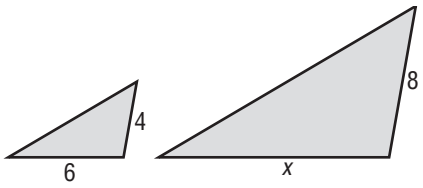
NAME _____ DATE _____

Lesson 5-4

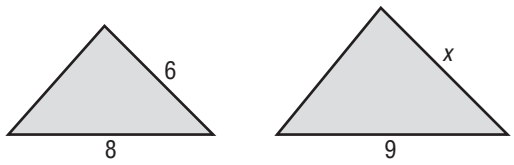
Skills Practice

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

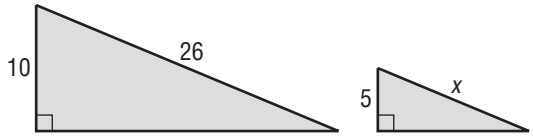
1 $x =$ _____



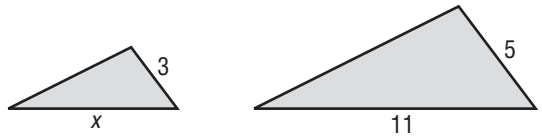
2 $x =$ _____



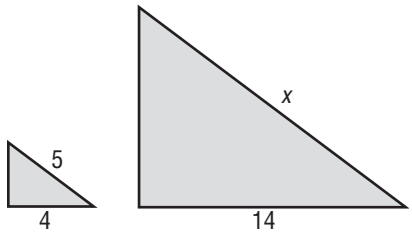
3 $x =$ _____



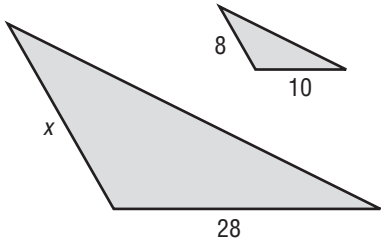
4 $x =$ _____



5 $x =$ _____



6 $x =$ _____



Use a proportion to solve.

7 Mary bought 3 cans of green beans for $1.20. What would it cost her to buy 7 cans of green beans? _____

8 Mr. Garcia drove 186 miles in 3 hours. At this rate, how long would it take him to travel 465 miles? _____

9 Amir sells handmade leather bracelets in packages of 3 for $25.00. A school fundraising group contacted him about making 75 bracelets for their members to sell. How much should he charge for 75 bracelets in order for the unit cost to be the same? _____

10 Kaitlin met with 5 clients in $2\frac{1}{2}$ hours at her investment agency this morning. At this rate, how many clients can she meet with in 4 hours this afternoon? _____

Chapter 5

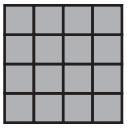
Lesson 6-1

NAME _____ DATE _____

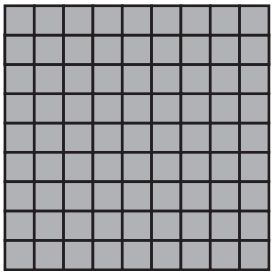
Skills Practice

Write an equation using exponents to represent each model.

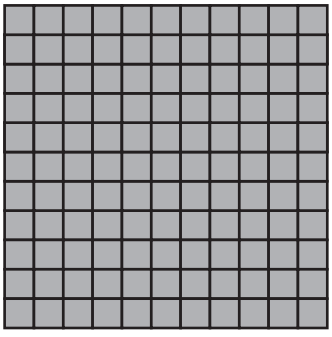
1 _____



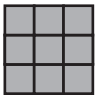
2 _____



3 _____



4 _____



Evaluate each expression.

5 11^2 base: _____

exponent: _____

11^2 = _____ • _____ = _____

6 9^2 _____

7 1^2 _____

8 7^2 _____

9 2^2 _____

10 5^2 _____

11 10^2 _____

12 4^2 _____

13 12^2 _____

14 3^2 _____

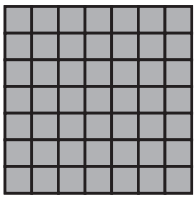
15 6^2 _____

NAME _____ DATE _____

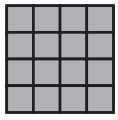
Lesson 6-2

Skills Practice

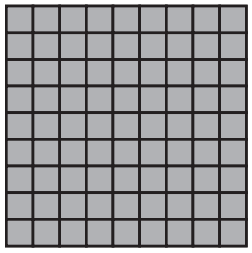
Find the positive square root using an area model.

1 

$\sqrt{49} =$ _____

2 

$\sqrt{16} =$ _____

3 

$\sqrt{81} =$ _____

4 

$\sqrt{9} =$ _____

Find the positive square root of each number.

5 121

Write the expression. _____

Name the factor pairs. _____

Replace 121 with the set of identical factor pairs. _____

$\sqrt{121} =$ _____

6 64

Write the expression. _____

Name the factor pairs. _____

Replace 64 with the set of identical factor pairs. _____

$\sqrt{64} =$ _____

7 1

Write the expression. _____

Name the factor pairs. _____

Replace 1 with the set of identical factor pairs. _____

$\sqrt{1} =$ _____

NAME _____ DATE _____

Lesson 6-3

Skills Practice

Write an inequality using common square roots.

1. $\sqrt{\_\_\_\_} < \sqrt{39} < \sqrt{\_\_\_\_}$

2. $\sqrt{\_\_\_\_} < \sqrt{130} < \sqrt{\_\_\_\_}$

3. $\sqrt{\_\_\_\_} < \sqrt{7} < \sqrt{\_\_\_\_}$

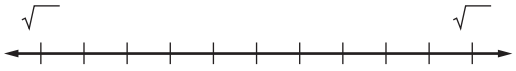
4. $\sqrt{\_\_\_\_} < \sqrt{190} < \sqrt{\_\_\_\_}$

5. $\sqrt{\_\_\_\_} < \sqrt{72} < \sqrt{\_\_\_\_}$

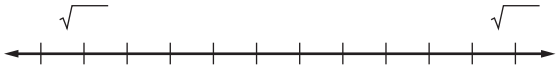
6. $\sqrt{\_\_\_\_} < \sqrt{23} < \sqrt{\_\_\_\_}$

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

7. $\sqrt{66}$ is close to the whole number _____.

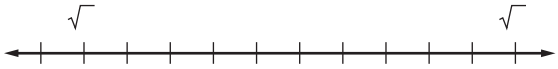


8. $\sqrt{116}$ is close to the whole number _____.



9. $\sqrt{28}$ is close to the whole number _____.

10. $\sqrt{3}$ is close to the whole number _____.



Choose a reasonable estimate for each square root.

11. $\sqrt{140}$

10.6 11.8 12.2

12. $\sqrt{14}$

3.1 3.4 3.7

13. $\sqrt{220}$

14.8 15.2 15.8

14. $\sqrt{58}$

6.8 7.2 7.6

15. $\sqrt{46}$

6.4 6.8 7.2

16. $\sqrt{97}$

9.8 10.3 10.8

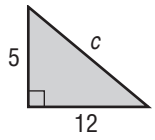
NAME _____ DATE _____

Lesson 6-4

Skills Practice

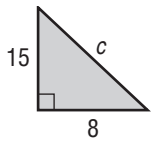
Find the length of the hypotenuse of the right triangle.

1



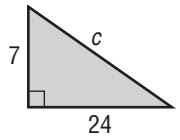
$c =$ _____ units

2



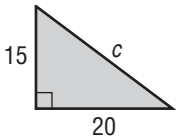
$c =$ _____ units

3



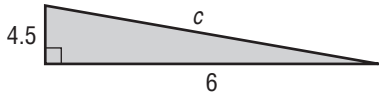
$c =$ _____ units

4



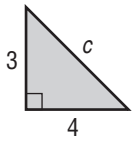
$c =$ _____ units

5



$c =$ _____ units

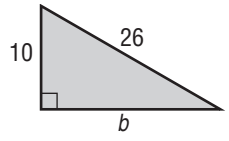
6



$c =$ _____ units

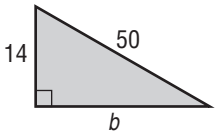
Find the length of the leg of each right triangle.

7



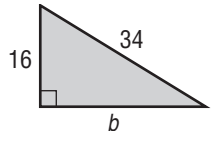
$b =$ _____ units

8



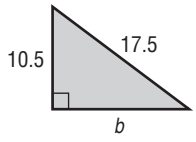
$b =$ _____ units

9



$b =$ _____ units

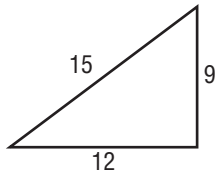
10



$b =$ _____ units

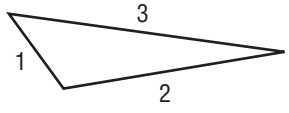
Determine if each triangle is a right triangle, using the Pythagorean Theorem.

11



_____

12



_____

NAME _____ DATE _____

Lesson 6-5

Skills Practice

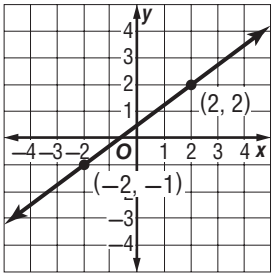
Find the slope of each line.

1 The rise is _____ units.

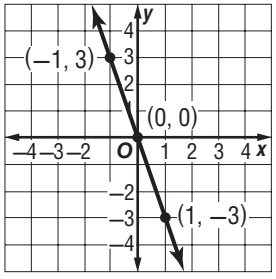
2 The run is _____ units.

3 The slope is _____.

4 $\frac{\text{rise}}{\text{run}} = \frac{\square}{\square}$

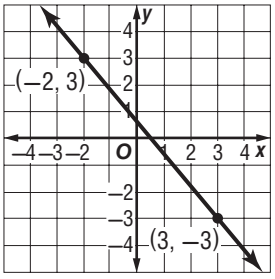


5



$\frac{\text{rise}}{\text{run}} = \frac{\square}{\square} =$ _____

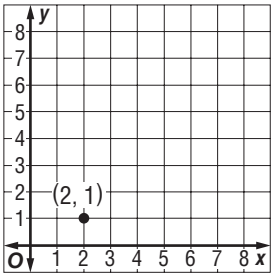
6



$\frac{\text{rise}}{\text{run}} = \frac{\square}{\square} =$ _____

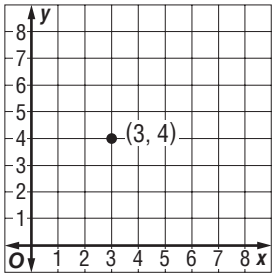
Graph another point on each line, given one point on the line and the slope.

7



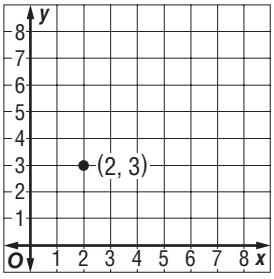
The slope is $\frac{1}{5}$.

8



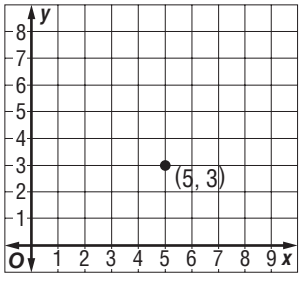
The slope is $-\frac{3}{2}$.

9



The slope is 4.

10



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

NAME _____ DATE _____

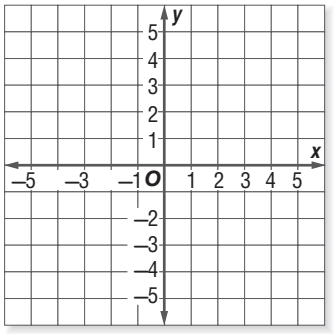
Lesson 6-6

Skills Practice

Graph each equation and determine its slope.

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

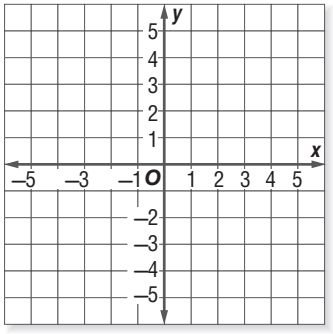
x	-4	0	4
y			



The slope is _____.

2 $y = -3x$

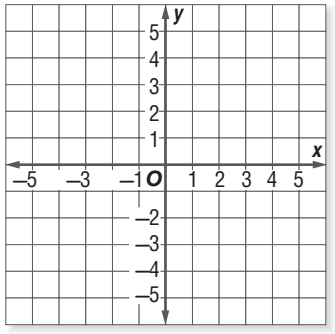
x	-1	0	1
y			



The slope is _____.

3 $y = -\frac{3}{4}x - 2$

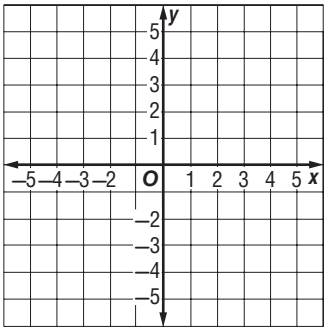
x	-4	0	4
y			



The slope is _____.

4 $y = 4x$

x	-1	0	1
y			



The slope is _____.

NAME _____ DATE _____

Lesson 7-1

Skills Practice

Sort the numbers into each category.

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

1. whole number factors of 18:

_____

2. prime numbers:

_____

3. both:

_____

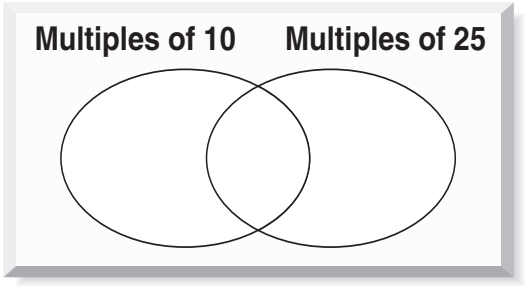
4. neither:

_____

5. Create a Venn diagram to sort the numbers. Classify them as multiples of 10 or multiples of 25.

20, 25, 30, 35, 40, 50, 75, 80, 85, 100

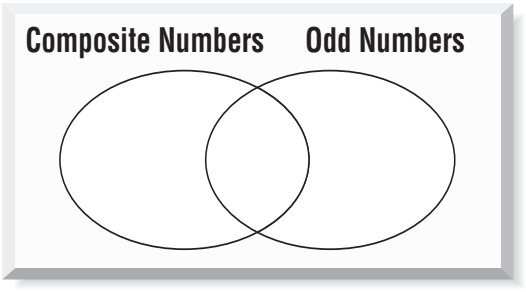
Multiples of 10	Multiples of 25	Neither



6. Create a Venn diagram to sort the numbers. Classify them as composite numbers or odd numbers.

0, 4, 6, 9, 11, 13, 17, 21, 31, 40

Composite Numbers	Odd Numbers	Neither



Lesson 7-2

NAME _____ DATE _____

Skills Practice

Find the mode for each given set of data.

1. 1, 2, 0, 1, 2, 0, 1

   _____

2. 7, 3, 5, 2, 4, 3, 6, 10, 0

   _____

3. 3, 0, 0, 1, 2

   _____

4. 9, 3, 2, 5, 6, 3, 3, 7, 15

   _____

Find the median for each given set of data.

5. Henry asked seven people what the last digit in their telephone number is.

   2, 5, 9, 9, 7, 4, 3

   Arrange the numbers in order: _____, _____, _____, _____, _____, _____, _____

   The median is _____.

6. Christina asked five people how tall they were, in inches.

   54, 63, 62, 48, 68

   Arrange the numbers in order: _____, _____, _____, _____, _____

   The median is _____.

7. Nathan recorded the low temperatures for each day one week.

   34, 32, 41, 29, 42, 32, 50

   Arrange the numbers in order: _____, _____, _____, _____, _____, _____, _____

   The median is _____.

Find the range for each given set of data.

8. 2, 5, 9, 9, 7, 4, 3

   The range of digits in Exercise 5 is _____ − _____ = _____.

9. 54, 63, 62, 48, 68

   The range of heights in Exercise 6 is _____ − _____ = _____.

NAME _____ DATE _____

Lesson 7-3

Skills Practice

Find the mean of each data set.

1. 16, 11, 15, 4

   _____ + _____ + _____ + _____ = _____

   _____ ÷ _____ = _____

   The mean is _____.

2. 16, 24, 32, 18, 10

   _____

3. 65, 42, 38, 27

   _____

4. 2.2, 3.5, 5, 4.1, 5.2

   _____

5. 34, 28, 30, 26, 22

   _____

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

6. 12, 8, 5, 7, 9, 4

   _____

7. 8.3, 3.6, 9.4, 3.9

   _____

8. 9, 2, 1, 7, 17, 8

   _____

9. 48, 59, 72, 66

   _____

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

10. Mean: 7 Data set: 5, 11, 2, _____

11. Mean: 4 Data set: 4.1, 4.3, 3.9, _____

12. Mean: 59 Data set: 56, 63, _____

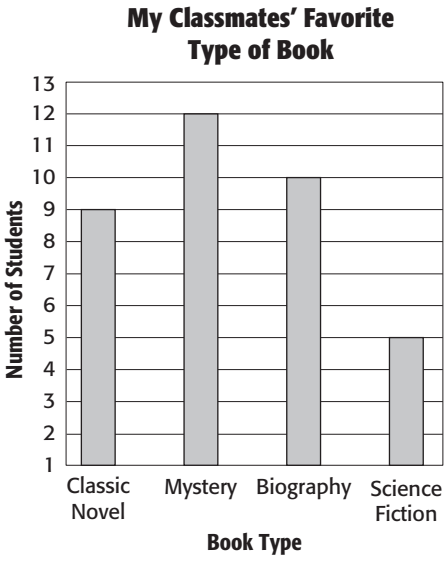
13. Mean: 93 Data set: 99, 84, 88, 92, _____

NAME _____ DATE _____

Lesson 7-4

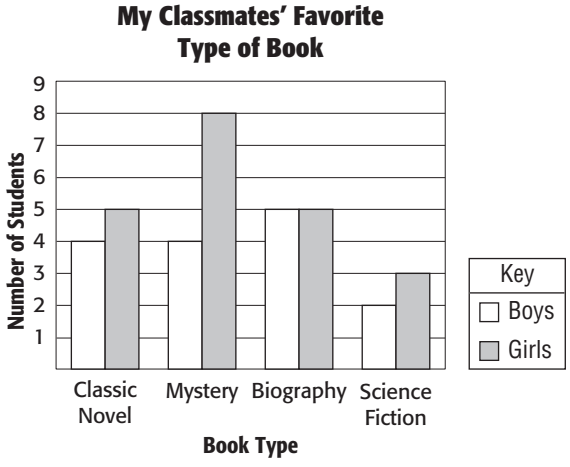
Skills Practice

Use the bar graph "My Classmates' Favorite Type of Book" to compare data.



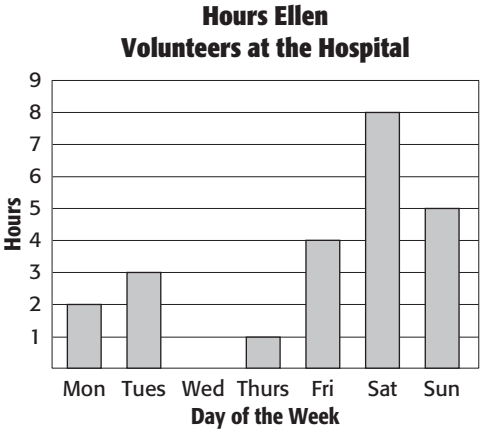
1. How many students chose Mystery as their favorite type of book? _____
2. How many chose Science Fiction? _____
3. How many chose Biography? _____
4. How many more students prefer Mysteries than Classic Novels? _____

Use the double-bar graph "My Classmates' Favorite Type of Book" to compare data.



5. How many girls chose Mystery as their favorite type of book? _____
6. How many girls chose Classic Novel or Biography? _____
7. How many more girls than boys chose Classic Novels? _____
8. What type of book was preferred by the same number of boys and girls? _____

Use the bar graph "Hours Ellen Volunteers at the Hospital" to compare data.



9. What are the categories? _____
10. How many more hours does Ellen volunteer on Saturday than on Sunday? _____
11. How many hours does Ellen volunteer on Monday and Tuesday together? _____
12. How many total hours does Ellen volunteer during the week? _____

Lesson 7-5

NAME _____ DATE _____

Skills Practice

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

The table shows the method students used to get to school.

Method of Getting to School	
Method	**Number of Students**
Car	36
Bus	44
Walk	24
Bike	18

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?

   _____

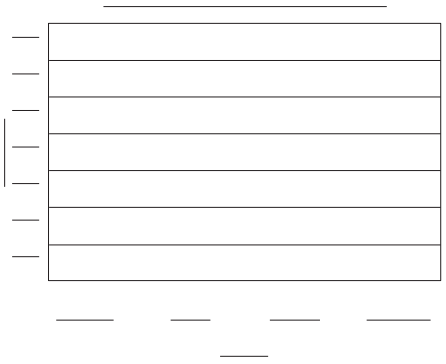
4. What will the height of each bar represent?

   _____

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

5. The table shows the color of each mouse at Cassie's Pet Store.

Mice at Cassie's Pet Store	
Color	**Number**
White	10
Gray	8
Black	6
Brown	12



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

6. The table shows the number of fundraising items sold by the students in each grade.

Items Sold in Fundraiser		
Item	**By Grade 7**	**By Grade 8**
Candles	17	24
Gift Wrap	30	20
Candy	16	22
Nuts	12	15

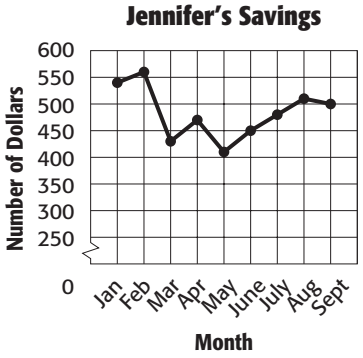
Chapter 7

NAME _____ DATE _____

Lesson 7-6

Skills Practice

Use the line graph "Jennifer's Savings" to compare data.



1. About how many dollars did Jennifer save in January?

   _____

2. In which month did Jennifer save the most?

   _____

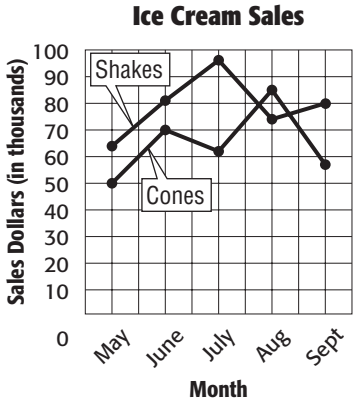
3. What is the interval of the scale?

   _____

4. For the months shown, in which month did Jennifer save the least?

   _____

Use the double-line graph "Ice Cream Sales" to compare data.



5. In which month were more cones sold than shakes?

   _____

6. In which month is there the greatest difference between the number of cones and number of shakes sold?

   _____

7. In which month were the fewest number of shakes sold?

   _____

8. Which month had the fewest number of sales combined?

   _____

9. What is the trend of shakes sold from May through July?

   _____

10. Describe the general trend of the graphs.

    _____

    _____

NAME _____ DATE _____

Lesson 7-7

Skills Practice

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

Digital Camera Ownership	
Year	**Percent of Students**
2005	7
2006	16
2007	21
2008	27
2009	32

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?

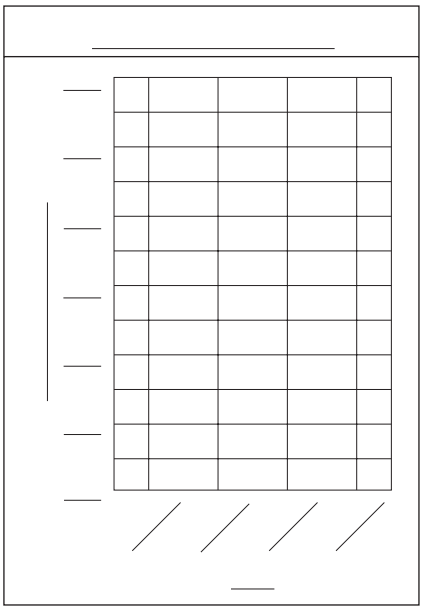
_____

4. Describe the trend of the data. Does the percent of students increase, decrease, or stay the same over time?

_____

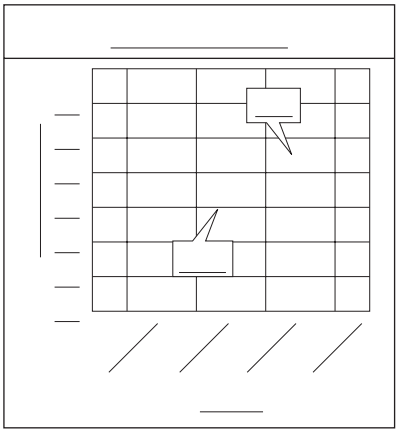
5. Use the data in the table to create a line graph.

Car Wash Fundraiser	
Time	**Money Collected**
8 A.M.	$150
10 A.M.	$70
12 P.M.	$230
2 P.M.	$120



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

Work Schedule		
Month	**Hours Worked**	
	Rob	**Irena**
March	28	17
April	26	16
May	23	12
June	22	10

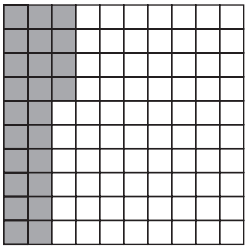


NAME _____ DATE _____

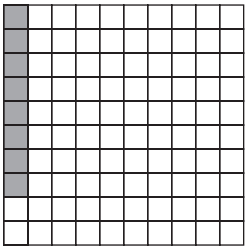
Lesson 8-1

Skills Practice

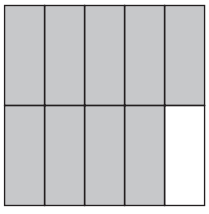
Identify each percent that is modeled.

1 

_____

2 

_____

3 

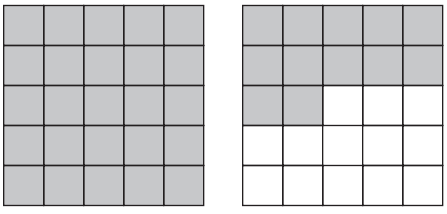
fraction: _____

fraction with a denominator of 100:

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

decimal: _____

percent: _____

4 

fraction: _____

fraction with a denominator of 100:

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

decimal: _____

percent: _____

Find the missing value.

5 What is 25% of 36?

_____ • _____ = _____

6 What is 190% of 30?

_____ • _____ = _____

7 What is 30% of 84?

_____ • _____ = _____

8 What is 42% of 42?

_____ • _____ = _____

Solve.

9 **MOVIES** Mike watched 40% of the DVDs on his bookshelf. If there were 15 DVDs on the shelf, how many did Mike watch? _____

10 **ENTERTAINMENT** Fifteen percent of the people who entered a multi-media attraction at an amusement park yesterday chose to sit in the stationary seating section. If 4,420 people entered the attraction, how many sat in the stationary seating? _____

NAME _____ DATE _____

Lesson 8-2

Skills Practice

1 Find the degrees needed to show a 40% sector in a circle graph.

$$40\% = \frac{\square}{100} \div \frac{\square}{\square} = \frac{\square}{\square}$$

$$\frac{\square}{1} \cdot \frac{\square}{\square} = \frac{\square}{\square} = \_\_\_\_\_$$

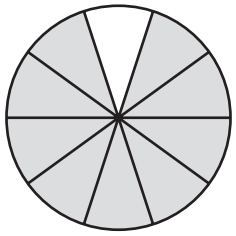
2 Use combinations to find the degrees needed to show a 45% sector in a circle graph.

_____ + _____ + _____ = _____

_____ + _____ + _____ = _____

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

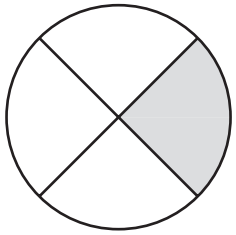
3



fraction: _____

$$\frac{\square}{\square} \cdot \frac{\square}{\square} = \frac{\square}{100} = \_\_\_\_\_$$

4

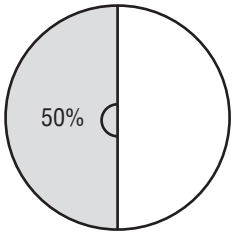


fraction: _____

$$\frac{\square}{\square} \cdot \frac{\square}{\square} = \frac{\square}{100} = \_\_\_\_\_$$

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

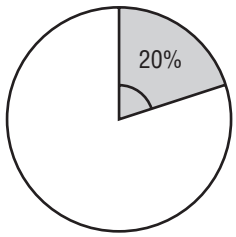
5



$$50\% = \frac{\square}{100} \div \frac{\square}{\square} = \frac{\square}{\square}$$

$$\frac{\square}{1} \cdot \frac{\square}{\square} = \frac{\square}{\square} = \_\_\_\_\_$$

6



$$20\% = \frac{\square}{100} \div \frac{\square}{\square} = \frac{\square}{\square}$$

$$\frac{\square}{1} \cdot \frac{\square}{\square} = \frac{\square}{\square} = \_\_\_\_\_$$

7 If you know that 5% of a circle has a degree measure of 18°, how can you use this information to find the degree measure of a 35% sector?

_____

_____

_____

NAME _____ DATE _____

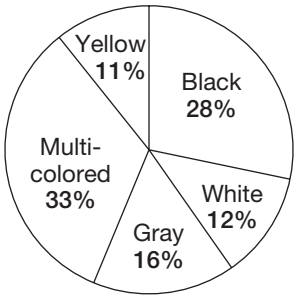
Lesson 8-3

Skills Practice

1 **PET STORE** There are 40 kittens at a pet store. The circle graph shows the percentage of each color. Which two colors together are the same percentage as that of the black kittens?

_____

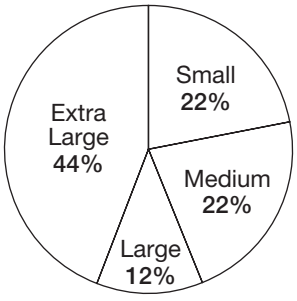
Kitten Colors



2 **BIRDHOUSES** Pat has 50 birdhouses in her backyard. The percentage of each size of birdhouse is shown in the circle graph. What birdhouse size does Pat have twice as many of as compared to the number of medium birdhouses?

_____

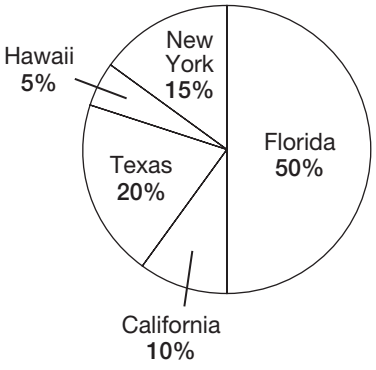
Birdhouse Sizes



3 **TRAVEL** Mr. Leonard asked the students in his geography class about their spring break plans. Twenty of the students were going on vacation. Their destinations are shown in the circle graph. How many are going to California?

_____

Spring Break Destination



Use the circle graph titled "Spring Break Destination" to answer the questions below.

4 How many more students are going to Florida than to Texas? _____

5 The number of students going to which two states combined is the same as the number of students going to Texas? _____

6 How many of the students going on vacation are not going to California or Hawaii? _____

NAME _____ DATE _____

Lesson 8-4

Skills Practice

1 Complete the table to show the decimal value, the percent, and the degree measure for each class president candidate.

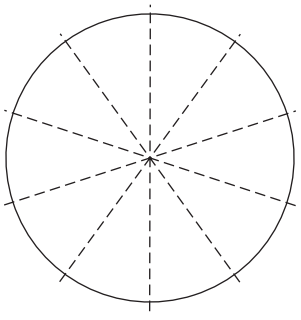
Candidate	Number of Votes	Decimal Value	Percent	Degree Measure
Lucy	50			
Emil	70			
Irma	40			
Dale	40			
Total Check	**200**	**1.00**	**100%**	**360°**

2 **COLLECTIONS** Complete the table to show the decimal value, the percent, and the degree measure for each stuffed animal in Tami's collection.

Animal	Number	Decimal Value	Percent	Degree Measure
Bear	10			
Dog	20			
Rabbit	5			
Tiger	5			
Cat	10			
Total Check	**50**	**1.00**	**100%**	**360°**

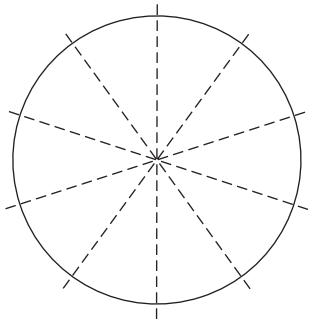
3 Use the table in Exercise 1 to create a circle graph.

Election Results



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

Stuffed Animal Collection



NAME _____ DATE _____

Lesson 9-1

Skills Practice

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

(2, 12) (10, 2) (3, 9) (8, 16)

1 $y = x + 6$ _____

2 $y = x - 8$ _____

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

3 $y = 2x + 6$

x	$2x + 6$	y	(x, y)
1	$2(1) + 6$		
2	$2(\_\_\_\_\_) + 6$		
3	$2(\_\_\_\_\_) + 6$		

_____

4 $y = 3x - 1$

x	$3x - 1$	y	(x, y)
-1	$3(-1) - 1$		
0	$3(\_\_\_\_\_) - 1$		
1	$3(\_\_\_\_\_) - 1$		

_____

5 $y = -4x + 2$

x	$-4x + 2$	y	(x, y)
0	$-4(\_\_\_\_\_) + 2$		
2	$-4(\_\_\_\_\_) + 2$		
4	$-4(\_\_\_\_\_) + 2$		

_____

Find three solutions for each equation.

6 $y = x - 7$ _____

7 $y = -3x$ _____

8 $y = 5x + 4$ _____

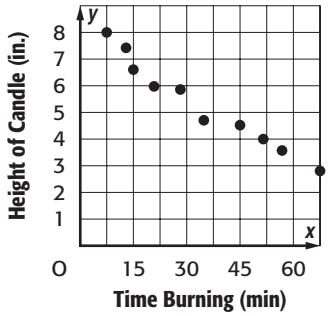
NAME _____ DATE _____

Lesson 9-2

Skills Practice

Explain whether each scatter plot shows a *positive*, *negative*, or *no* relationship.

1

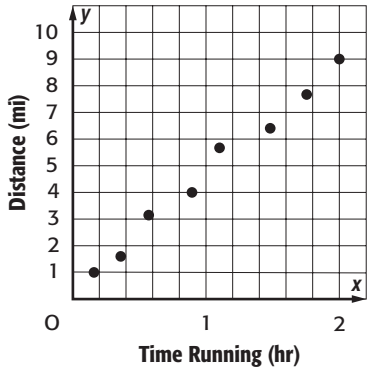


As the time increases, the height of the candle _____.

Describe the relationship between the time and the height of the candle.

_____

2



As the time increases, the distance traveled _____.

Describe the relationship between the time and the distance traveled.

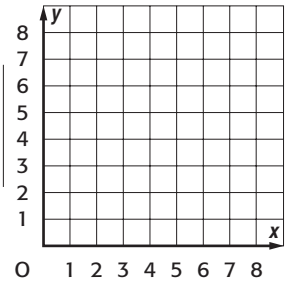
_____

Solve.

3 **SNOWFALL** At a mountain resort in the Colorado Rockies, it has been snowing for the past six days. The table below shows the data. Create a scatter plot to find the relationship between the data sets.

Day	1	2	3	4	5	6
Snowfall (in.)	2	3	2	4	3	5

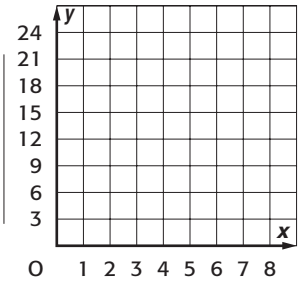
Colorado Snow



4 **SPELLING** Andrea learned her spelling words, but has not continued to practice them. The table below shows the number of words she can still spell correctly for certain days after her test. Create a scatter plot to find the relationship between the data sets.

Day	1	2	3	4	5	6
Number of Words Spelled Correctly	2	3	2	4	3	5

Andrea's Spelling List



Lesson 9-3

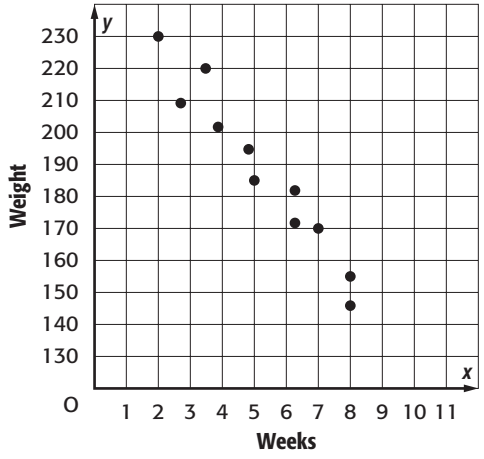
NAME _____ DATE _____

Skills Practice

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

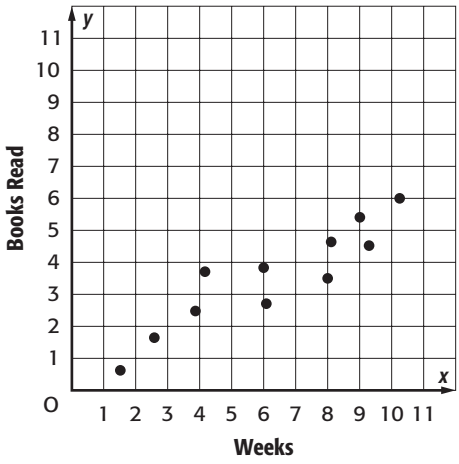
1

Fitness Book Camp



2

Summer Book Club

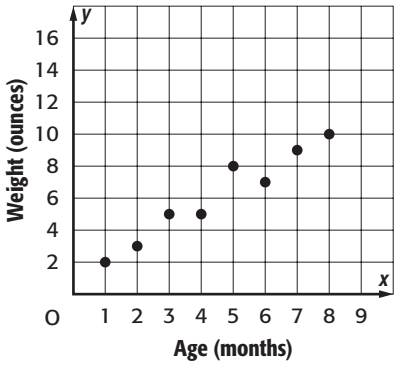


_____ _____

Solve.

3 **PETS** The scatter plot at the right shows the weight and age of a pet rabbit. Draw a line of best fit. Then describe the slope of the line and the trend in the data.

Joey's Pet Rabbit

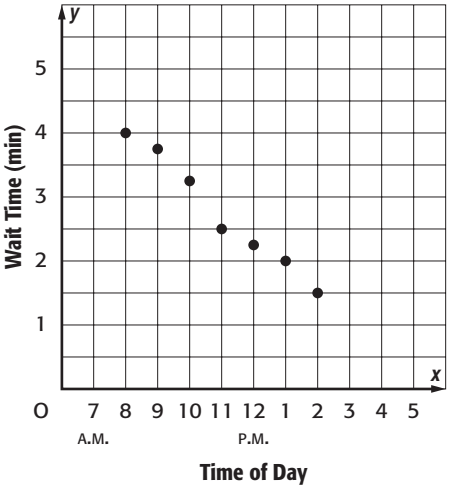


_____

4 Use the line of best fit for Exercise 1 to predict the weight of the rabbit when it is 10 months old.

_____

5 **CUSTOMER SERVICE** The scatter plot at the right shows the wait time to get your phone call answered by the appointment desk in a medical clinic at various times of the day. Draw a line of best fit.



6 Use the line of best fit for Exercise 3 to predict the wait time at 4 PM.

_____