

1-1**Practice: Skills*****A Plan for Problem Solving***

Use the four-step plan to solve each problem.

- 1. GEOGRAPHY** The president is going on a campaign trip to California, first flying about 2,840 miles from Washington D.C. to San Francisco and then another 390 to Los Angeles before returning the 2,650 miles back to the capital. How many miles will the president have flown?
- 2. POPULATION** In 1990, the total population of Sacramento, CA was 369,365. In 2000, its population was 407,018. How much did the population increase?
- 3. MONEY** The Palmer family wants to purchase a DVD player in four equal installments of \$64. What is the cost of the DVD player?
- 4. COMMERCIALS** The highest average cost of a 30-second commercial in October, 2002 is \$455,700. How much is this commercial worth per second?
- 5.** A tennis tournament starts with 16 people. The number in each round is shown in the table. How many players will be in the 4th round?

1st Round	16
2nd Round	8
3rd Round	4
4th Round	?

Complete the pattern.

- 6.** 2, 4, 8, 16, 32, ...
- 7.** 16, 19, 22, 25, 28, 31, ...
- 8.** 81, 72, 63, 54, ...
- 9.** 5, 15, 20, 30, 35, 45, 50, ...
- 10.** 50, 40, 45, 35, 40, 30, 35, ____, ____, ____, ____
- 11.** 6, 12, 18, ____, ____, ____, ____

1-2**Practice: Skills*****Divisibility Patterns***

Tell whether the first number is divisible by the second number.

- | | | | |
|------------|---------------|--------------|-------------|
| 1. 527; 3 | 2. 1,048; 6 | 3. 693; 9 | 4. 1,974; 2 |
| 5. 305; 10 | 6. 860; 5 | 7. 4,672; 9 | 8. 2,310; 6 |
| 9. 816; 3 | 10. 13,509; 5 | 11. 2,847; 2 | 12. 192; 6 |

Tell whether each number is divisible by 2, 3, 4, 5, 6, 9, or 10. Then classify the number as *even* or *odd*.

- | | | |
|------------|------------|------------|
| 13. 24 | 14. 27 | 15. 90 |
| 16. 81 | 17. 104 | 18. 205 |
| 19. 1,000 | 20. 6,598 | 21. 399 |
| 22. 27,453 | 23. 33,324 | 24. 16,335 |

Use divisibility rules to find each missing digit. List all possible answers.

25. 1_2 is divisible by 9
26. $1,_24$ is divisible by 4
27. $1,25_$ is divisible by 3
28. $5,_32$ is divisible by 6
29. $31,45_$ is divisible by 5
30. $1,679,83_$ is divisible by 2

1-3**Practice: Skills*****Prime Factors***

Tell whether each number is *prime*, *composite*, or *neither*.

1. 0

2. 1

3. 2

4. 3

5. 4

6. 5

7. 6

8. 7

9. 8

10. 9

11. 10

12. 11

Find the prime factorization of each number.

13. 9

14. 25

15. 28

16. 54

17. 34

18. 72

19. 55

20. 63

SCHOOL For Exercises 21–24, use the table below.

Marisa's History Test Scores	
Date	Test Score
January 28	67
February 15	81
March 5	97
March 29	100

21. Which test scores are prime numbers?

22. Which prime number is the least prime number?

23. Find the prime factorization of 100.

24. Find the prime factorization of 81.

1-4**Practice: Skills*****Powers and Exponents***

Write each expression in words.

1. 7^2

2. 8^3

3. 4^4

4. 5^6

Write each product using an exponent. Then find the value of the power.

5. $4 \cdot 4 \cdot 4 \cdot 4$

6. $3 \cdot 3 \cdot 3 \cdot 3$

7. $5 \cdot 5 \cdot 5 \cdot 5$

8. $7 \cdot 7$

9. $3 \cdot 3 \cdot 3 \cdot 3 \cdot 3$

10. $2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2$

11. $6 \cdot 6 \cdot 6$

12. $6 \cdot 6 \cdot 6 \cdot 6$

Write each power as a product. Then find the value of the product.

13. 3^8

14. 2^5

15. 8^3

16. 10^5

17. 6^2

18. 7^4

19. 2^3

20. 3^5

21. 6^5

22. 2^7

Write the prime factorization of each number using exponents.

23. 54

24. 36

25. 63

26. 245

1-5**Practice: Skills*****Order of Operations*****Find the value of each expression.**

1. $7 - 6 + 5$

2. $31 + 19 - 8$

3. $64 - 8 + 21$

4. $17 + 34 - 2$

5. $28 + (89 - 67)$

6. $(8 + 1) \times 12 - 13$

7. $63 \div 9 + 8$

8. $5 \times 6 - (9 - 4)$

9. $13 \times 4 - 72 \div 8$

10. $16 \div 2 + 8 \times 3$

11. $30 \div (21 - 6) \times 4$

12. $6 \times 7 \div (6 + 8)$

13. $88 - 16 \times 5 + 2 - 3$

14. $(2 + 6) \div 2 + 4 \times 3$

15. $4^3 - 24 \div 8$

16. $100 \div 5^2 \times 4^3$

17. $48 \div 2^3 + 25 \times (9 - 7)$

18. $45 \div 9 + 8 - 7 + 2 \times 3$

19. $18 + 7^2 \times (8 - 2) \div 3 + 8$

20. $(5^2 + 3^3) \times (81 + 9) \div 10$

1-6**Practice: Skills****Algebra: Variables and Expressions**

Complete the table.

Algebraic Expressions	Variables	Numbers	Operations
1. $5d + 2c$?	?	?
2. $5w - 4y + 2s$?	?	?
3. $xy \div 4 + 3m - 6$?	?	?

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

4. $10 + b$

5. $2a + 8$

6. $4b - 5a$

7. $a \times b$

8. $7a \times 9b$

9. $8a - 9$

10. $b \times 22$

11. $a^2 + 1$

12. $18 \div 2a$

13. $a^2 \times b^2$

14. $ab \div 3$

15. $15a - 4b$

16. $ab + 7 \times 11$

17. $36 \div 6a$

18. $7a + 8b \times 2$

Evaluate each expression if $x = 7$, $y = 15$, and $z = 8$.

19. $x + y + z$

20. $x + 2z$

21. $xz + 3y$

22. $4x - 3z$

23. $z^2 \div 4$

24. $6z - 5z$

25. $9y \div (2x + 1)$

26. $15y + x^2$

27. $y^2 + 4 \times 6$

28. $y^2 - 2x^2$

29. $x^2 + 30 - 18$

30. $13y - zx \div 4$

31. $xz - 2y + 8$

32. $z^2 + 5y - 20$

33. $3y \times 40x - 1,000$

1-7**Practice: Skills****Algebra: Solving Equations**

Solve each equation mentally.

1. $9 - m = 8$

2. $4 + k = 11$

3. $23 - x = 10$

4. $31 - h = 21$

5. $18 = 20 - b$

6. $16 + z = 25$

7. $y - 25 = 3$

8. $7 + f = 15$

9. $20 + r = 25$

10. $18 - v = 9$

11. $26 - d = 19$

12. $49 - c = 41$

13. $45 + r = 59$

14. $64 + n = 70$

15. $175 = w + 75$

True or False?

16. If $31 + h = 50$, then $h = 29$.

17. If $48 = 40 + k$, then $k = 8$.

18. If $17 - x = 9$, then $x = 7$.

19. If $98 - g = 87$, then $g = 11$.

20. If $p - 8 = 45$, then $p = 51$.

Identify the solution of each equation from the list given.

21. $s + 12 = 17$; 5, 6, 7

22. $59 - x = 42$; 15, 16, 17

23. $24 - k = 3$; 21, 22, 23

24. $h - 15 = 31$; 44, 45, 46

25. $69 = 50 + s$; 17, 18, 19

26. $34 - b = 13$; 20, 21, 22

27. $66 - d = 44$; 21, 22, 23

28. $h + 39 = 56$; 15, 16, 17

29. $54 + f = 70$; 16, 17, 18

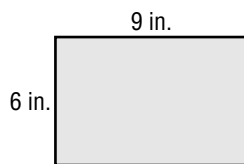
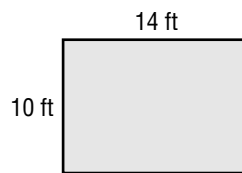
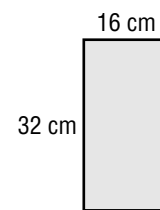
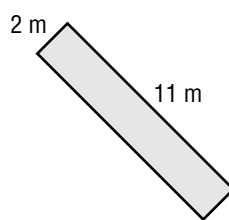
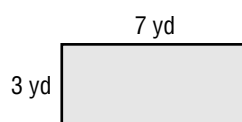
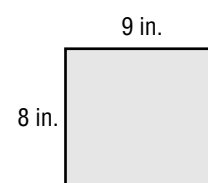
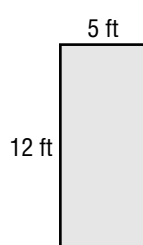
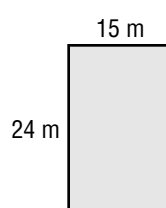
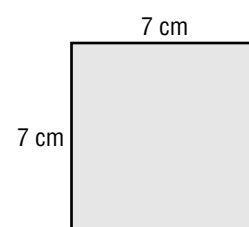
30. $47 = 72 - b$; 25, 26, 27

31. $28 + v = 92$; 64, 65, 66

32. $56 + c = 109$; 52, 53, 54

1-8**Practice: Skills****Geometry: Area of Rectangles****Complete each problem.**

1. Give the formula for finding the area of a rectangle.
2. Draw and label a rectangle that has an area of 18 square units.
3. Give the dimensions of another rectangle that has the same area as the one in Exercise 2.
4. Find the area of a rectangle with a length of 3 miles and a width of 7 miles.
5. Find the area of a rectangle with a width of 54 centimeters and a length of 12 centimeters.

Find the area of each rectangle.**6.****7.****8.****9.****10.****11.****12.****13.****14.**

2-1**Practice: Skills****Frequency Tables**

Make a frequency table for each set of data.

1. **Class Quiz Scores**

4	10	8
6	9	9
8	7	7
7	5	8
8	8	10
9	6	8

2. **Students' Eye Colors**

R	G	R	L	H
L	L	V	G	R
R	R	L	R	R
R	H	L	R	H
H	R	R	G	R

L = Blue R = Brown
 G = Green H = Hazel
 V = Violet

MOVIES Use the frequency table shown.

- Describe the scale.
- Describe the interval.
- What is the most common gross sales category?
- How many films grossed more than \$299 million?

All-Time Top 27 Kids' Films		
Gross Sales (millions \$)	Tally	Frequency
100–149		14
150–199		5
200–249		2
250–299		4
300–349		2

2-2**Practice: Skills****Bar Graphs and Line Graphs**

Make a bar graph for each set of data.

1.

Cars Made in 2000	
Country	Cars (millions)
Brazil	1
Japan	8
Germany	5
Spain	2
U.S.A.	6

2.

People in America in 1630	
Colony	People (hundreds)
Maine	4
New Hampshire	5
Massachusetts	9
New York	4
Virginia	25

Use the bar graph made in Exercise 1.

3. Which country made the greatest number of cars?
4. How does the number of cars made in Japan compare to the number made in Spain?

For Exercises 5 and 6, make a line graph for each set of data.

5.

Yuba County, California	
Year	Population (thousands)
1990	59
1992	61
1994	62
1996	61
1998	60
2000	60

6.

Everglades National Park	
Month	Rainfall (inches)
January	2
February	2
March	2
April	2
May	7
June	10

7. **POPULATION** Refer to the graph made in Exercise 5. Describe the change in Yuba County's population from 1990 to 2000.
8. **WEATHER** Refer to the graph made in Exercise 6. Describe the change in the amount of rainfall from January to June.

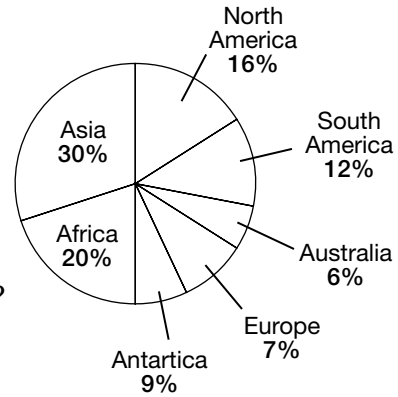
2-3

Practice: Skills

Circle Graphs

GEOGRAPHY Use the graph that shows how much of Earth's land that each continent represents.

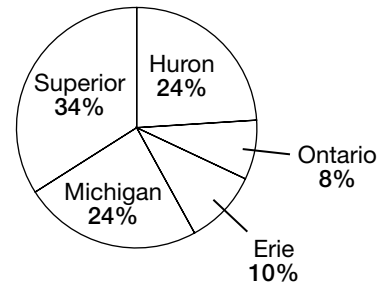
Continents



1. Which continent has the greatest area?
2. Which two continents are the smallest?
3. How does the size of Europe compare to the size of Africa?
4. How much larger is Asia than Africa?

LAKES Use the graph that shows how much of the total surface of the Great Lakes each lake takes up.

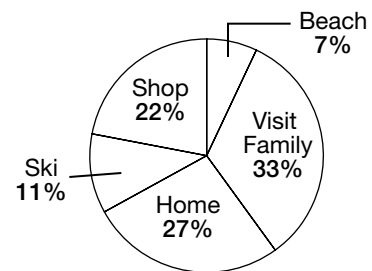
Great Lakes



5. Which of the Great Lakes is the smallest?
6. Which two lakes are about the same size?
7. How does Lake Erie compare to Lake Ontario?
8. Which two lakes together are the same size as Lake Superior?

VACATIONS Use the graph that shows how families will spend winter vacation.

Winter Vacation



9. How will most families spend their vacations?
10. Will more families go to the beach or go shopping?
11. Compare how many families will be skiing to how many will be visiting family.

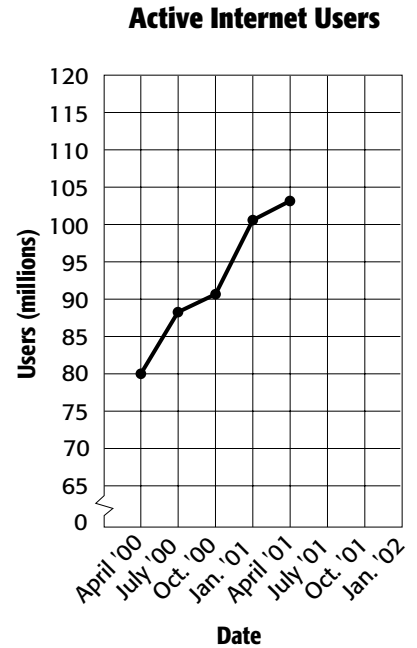
2-4

Practice: Skills

Making Predictions

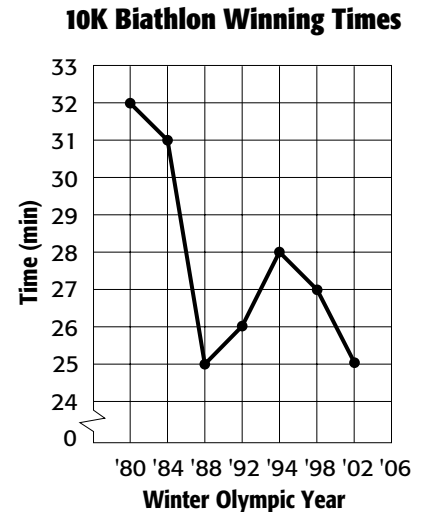
INTERNET Use the graph that shows Internet users in the United States.

- Describe the change in active Internet users from April 2000 to April 2001.
- Predict how many active users there were in October 2001 if the trend continued.
- Predict when the number of active users exceeded 115 million if the trend continued.
- Were there more active users in January 2002 or October 2001? Explain.



SPORTS Use the graph that shows the winning times of the 10K Biathlon rounded to the nearest minute.

- How did the winning time change from 1980 to 2002?
- To the nearest minute, by how much did the winning time change from 1980 to 2002?
- Predict the winning time for 2006 if the trend continues.
- Predict when the winning time will be less than 20 minutes if the trend continues.



2-5**Practice: Skills*****Stem-and-Leaf Plots***

Make a stem-and-leaf plot for each set of data.

1. 18, 16, 13, 20, 33, 58, 32, 14, 61, 67, 52 2. 61, 75, 62, 63, 74, 71, 75, 82, 64, 81, 91, 65

3. \$52, \$49, \$37, \$21, \$65, \$23, \$49, \$51, \$22, \$21, \$24, \$47, \$44, \$53, \$61 4. 82° , 91° , 80° , 55° , 63° , 54° , 83° , 90° , 84° , 91° , 59° , 62° , 50° , 92° , 85° , 92° , 92°

SPORTS For Exercises 5–8, use the stem-and-leaf plot that shows the total number of points earned by each volleyball team at a tournament.

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

$4|5 = 45$ points

5. What was the greatest number of points earned?
6. What was the least number of points earned?
7. How many teams earned more than 50 points?
8. Between what numbers are most of the points earned?

2-6

Practice: Skills

Mean

Find the mean for each set of data.

- 1. 6, 9, 2, 4, 3, 6, 5
- 2. 25, 18, 14, 27, 25, 14, 18, 25, 23
- 3. 13, 6, 7, 13, 6
- 4. 8, 2, 9, 4, 6, 8, 5
- 5. 13, 7, 17, 19, 7, 15, 11, 7
- 6. 1, 15, 9, 12, 18, 9, 5, 14, 7
- 7. 28, 32, 23, 43, 32, 27, 21, 34
- 8. 30, 16, 29, 32, 14, 21, 26
- 9. 42, 35, 27, 42, 38, 35, 29, 24
- 10. 157, 124, 157, 124, 157, 139

Identify the outlier or outliers in each set of data.

11.

Price	Tally	Frequency
\$10		4
\$20		5
\$30		3
\$40		1

12.

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

$2 | 4 = 24$

WEATHER Use the data in the table that shows daily temperatures.

Day	Temp. (°F)
Monday	69
Tuesday	70
Wednesday	73
Thursday	35
Friday	68

- 13. Identify the outlier.
- 14. What is the mean of the data with the outlier included?
- 15. What is the mean of the data without the outlier included?
- 16. How does the outlier temperature affect the mean of the data?

2-7**Practice: Skills*****Median, Mode, and Range***

Find the mean, median, mode, and range for each set of data.

1. 6, 9, 2, 4, 3, 6, 5

2. 13, 6, 7, 13, 6

3. 1, 15, 9, 12, 18, 9, 5, 14, 7

4. 13, 7, 17, 19, 7, 15, 11, 7

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

6. 25, 18, 14, 27, 25, 14, 18, 25, 23

7. 8, 3, 9, 4, 6, 7, 5

8. 28, 32, 23, 43, 32, 27, 21, 34

9. 157, 124, 157, 124, 157, 139

10. 42, 35, 27, 42, 38, 35, 29, 24

11. Write a sentence that describes how the data items in Exercise 5 vary.

12. Why is mode not the best choice to describe the data in Exercise 5?
Explain.

MUSEUMS Use the table showing the number of visitors to the art museum each month.

13. What is the mean of the data?

14. What is the median of the data?

15. What is the mode of the data?

16. Which measure of central tendency best describes the data? Explain.

Visitors to the Art Museum (thousands)			
3	11	5	4
5	3	6	3
12	2	2	4

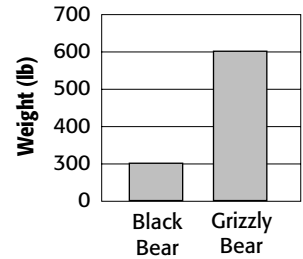
2-8

Practice: Skills

Analyzing Graphs

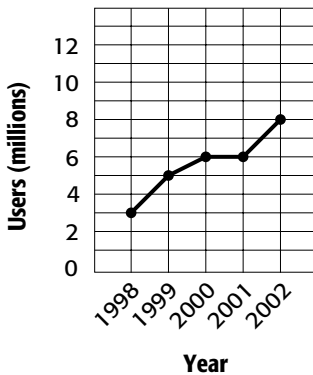
ANIMALS For Exercises 1–3, use the graph that shows the weight of bears.

Weight of Bears Graph A

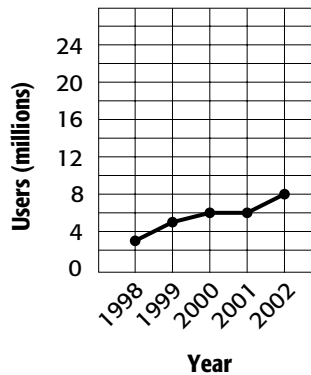


- About how many times heavier does a grizzly bear appear to be than a black bear?
- Explain how this graph is misleading.
- Redraw the graph so that it is not so misleading.
- BUSINESS** The graphs below show company sales. Which graph makes the sales appear to be increasing more rapidly? Explain.

Company Sales Graph A



Company Sales Graph B



BUDGETS Use the table that shows the 2003 budgets for eight national parks.

National Park 2003 Budget	
Park	Budget (\$)
Acadia	6,000,000
Crater Lake	4,000,000
Denali	11,000,000
Everglades	14,000,000
Mammoth Cave	6,000,000
Olympic	10,000,000
Great Smokies	15,000,000
Zion	6,000,000

- Find the mean, median, and mode of the data.
- Which measure would be misleading in describing the average budget for these parks? Explain.
- Which measure describes the data most accurately? Explain.

3-1**Practice: Skills*****Representing Decimals***

Write each decimal in word form.

1. 6.5

2. 0.3

3. 39.2

4. 0.83

5. 5.67

6. 14.006

7. 12.001

8. 0.5214

9. 12.0905

Write each decimal in standard form and expanded form.

10. three tenths

11. fifteen and one tenth

12. eight and four hundredths

13. seventy-two and sixteen thousandths

14. one hundred and one hundredth

15. four hundred seven thousandths

16. four hundred seven ten-thousandths

17. one hundred and one thousandth

18. Express $(2 \times 100) + (3 \times 10) + (1 \times 1) + (4 \times 0.1) + (5 \times 0.01)$ in word form.

3-2**Practice: Skills*****Comparing and Ordering Decimals***

Use $>$, $<$, or $=$ to compare each pair of decimals.

1. $2.4 \bullet 2.04$

2. $6.23 \bullet 6.32$

3. $0.02 \bullet 0.020$

4. $12.05 \bullet 12.50$

5. $0.92 \bullet 0.095$

6. $39.21 \bullet 39.021$

7. $0.849 \bullet 0.0851$

8. $12.1 \bullet 12.10$

9. $21.967 \bullet 2.1968$

10. $0.0128 \bullet 0.128$

11. $1.4601 \bullet 1.460$

12. $19.08 \bullet 19.079$

13. $28.003 \bullet 28.03$

14. $0.831 \bullet 0.0835$

15. $39.020 \bullet 39.0200$

16. $15.6243 \bullet 15.6234$

17. $12.0905 \bullet 12.10$

18. $56.7 \bullet 5.67$

Order each set of decimals from least to greatest.

19. 1.25, 1.52, 1.02, 1.50

20. 67.39, 68.004, 67.039, 67.04

21. 15.0421, 14.52, 14.521, 15.421

22. 0.0012, 0.0211, 0.0002, 0.0022

Order each set of decimals from greatest to least.

23. 4.99, 4.001, 5.0, 4.01

24. 12.0012, 120.012, 12.012, 12.12

25. 3.5, 3.05, 3.55, 3.555

26. 45.0, 40.5, 40.09, 49.5

3-3**Practice: Skills*****Rounding Decimals***

Round each decimal to the indicated place-value position.

1. 54.38; ones
2. 2.671; tenths
3. \$87.01; tens
4. 12.0905; tenths
5. 441.031; ones
6. 7.892; tenths
7. 20.2093; hundredths
8. 5.5252; ones
9. 16.01; tens
10. 0.58; tenths
11. 0.2859; hundredths
12. 145.15455; thousandths
13. \$10.65; ones
14. 3.0188; thousandths
15. 0.01426; thousandths
16. 4.8255; thousandths
17. 0.830528; ten-thousandths
18. 143.09354; ten-thousandths
19. 0.0523413; ten-thousandths
20. 137.892; hundredths

3-4**Practice: Skills*****Estimating Sums and Differences*****Estimate using rounding.**

1. $2.32 + 2.52$

2. $87.146 - 24.953$

3. $18.93 + 27.45$

4. $\$46.83 + \18.60

5. $\$13.23 - \2.87

6. $43.058 - 15.726$

Estimate using front-end estimation.

7.
$$\begin{array}{r} 51.62 \\ + 6.58 \\ \hline \end{array}$$

8.
$$\begin{array}{r} \$233.10 \\ - 23.62 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 4.57360 \\ - 0.58256 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 820.1 \\ + 3.2 \\ \hline \end{array}$$

11. $\$102.34 + \$23.00 + \$32.67$

12. $652.355 - 52.736$

Estimate using clustering.

13. $59.62 + 60.4 + 60 + 61$

14. $\$4.79 + \$5.29 + \$4.99$

15. $8.2 + 7.8 + 7.2 + 7.99$

16. $89.04 + 87.55 + 90.101 + 91$

17. $15.044 + 14.765 + 14.689$

18. $\$1.44 + \$0.86 + \$1.00 + \0.7

3-5**Practice: Skills*****Adding and Subtracting Decimals*****Add or subtract.**

1.
$$\begin{array}{r} 0.581 \\ + 11 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 4.78 \\ + 6 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 9.6 \\ + 5.2 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 7.8 \\ - 4.3 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 16.79 \\ - 0.51 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 1.02 \\ - 0.38 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 20.1 \\ + 3.2 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 0.86 \\ + 0.38 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 3.84 \\ + 2.69 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 4.17 \\ - 2.58 \\ \hline \end{array}$$

11.
$$\begin{array}{r} 47.06 \\ - 38.27 \\ \hline \end{array}$$

12.
$$\begin{array}{r} 96.293 \\ - 68.501 \\ \hline \end{array}$$

Add or subtract.

13. $8.5 + 0.5$

14. $8.3 + 7.9$

15. $5.21 + 4 + 0.2$

16. $3.4 + 3.2 - 6$

17. $0.485 + 9.32$

18. $362 - 145.9$

19. $19.4 - 7.86$

20. $4 + 8.5 + 2$

21. $8.3 + 5.41 + 3.2$

22. **ALGEBRA** Evaluate $b - a$ if $a = 113.04$ and $b = 241.931$.23. **ALGEBRA** Evaluate $x + y$ if $x = 2.057$ and $y = 16.3$.**Find the value of each expression.**

24. $3.4 \times 2 - 6$

25. $16.9 - 2^2$

26. $7 + 2.3 - 5.8$

4-1**Practice: Skills*****Multiplying Decimals by Whole Numbers*****Multiply.**

1.
$$\begin{array}{r} 1.5 \\ \times 3 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 0.9 \\ \times 6 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 0.45 \\ \times 5 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 3.12 \\ \times 8 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 3.47 \\ \times 5 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 2.08 \\ \times 6 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 9.14 \\ \times 2 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 0.82 \\ \times 9 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 6.3 \\ \times 9 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 0.02 \\ \times 3 \\ \hline \end{array}$$

11.
$$\begin{array}{r} 9.12 \\ \times 4 \\ \hline \end{array}$$

12.
$$\begin{array}{r} 27.3 \\ \times 8 \\ \hline \end{array}$$

13.
$$\begin{array}{r} 4.007 \\ \times 4 \\ \hline \end{array}$$

14.
$$\begin{array}{r} 3.13 \\ \times 3 \\ \hline \end{array}$$

15.
$$\begin{array}{r} 5.02 \\ \times 8 \\ \hline \end{array}$$

16.
$$\begin{array}{r} 6.31 \\ \times 6 \\ \hline \end{array}$$

17.
$$\begin{array}{r} 8.01 \\ \times 5 \\ \hline \end{array}$$

18.
$$\begin{array}{r} 4.325 \\ \times 7 \\ \hline \end{array}$$

19.
$$\begin{array}{r} 0.762 \\ \times 2 \\ \hline \end{array}$$

20.
$$\begin{array}{r} 0.08 \\ \times 8 \\ \hline \end{array}$$

21. 6×3.04

22. 2.6×9

23. 13×2.5

24. 1.006×4

25. Evaluate $42.3t$ if $t = 110$.26. Evaluate $231a$ if $a = 3.6$ **Write each number in standard form.**

27. 3.15×10^4

28. 2.6×10^5

29. 5×10^6

4-2**Practice: Skills*****Multiplying Decimals*****Multiply.**

1. 0.3×0.5

2. 1.2×2.1

3. 2.5×6.7

4. 0.4×8.3

5. 2.3×1.21

6. 0.6×0.91

7. 6.5×0.04

8. 8.54×3.27

9. 5.02×1.07

10. 0.003×2.9

11. 0.93×6.8

12. 7.1×0.004

13. 3.007×6.1

14. 2.52×0.15

15. 2.6×5.46

16. 16.25×1.3

17. 3.5×24.09

18. 0.025×17.1

19. 11.04×6.18

20. 14.83×16.7

21. 27.1×10.105

Evaluate each expression if $x = 2.1$, $y = 0.031$, and $z = 3.05$.

22. $xy + z$

23. $y + xz$

24. $x \times 13.55 - y$

4-3**Practice: Skills*****Dividing Decimals by Whole Numbers***

Divide. Round to the nearest tenth if necessary.

1. $3\overline{)9.6}$

2. $5\overline{)5.15}$

3. $2\overline{)16.08}$

4. $7\overline{)24.64}$

5. $11\overline{)132.22}$

6. $16\overline{)142.4}$

7. $79.2 \div 9$

8. $47.4 \div 15$

9. $217.14 \div 21$

10. $5\overline{)34.65}$

11. $8\overline{)20.72}$

12. $10\overline{)72.6}$

13. $15\overline{)57.48}$

14. $25\overline{)264.5}$

15. $34\overline{)317.594}$

16. $122.32 \div 11$

17. $42.48 \div 18$

18. $323.316 \div 24$

4-4**Practice: Skills*****Dividing by Decimals*****Divide. Round to the nearest hundredth if necessary.**

1. $0.2 \overline{)4.86}$

2. $0.7 \overline{)2.52}$

3. $1.2 \overline{)14.4}$

4. $3.8 \overline{)17.1}$

5. $1.32 \overline{)3.96}$

6. $34.9 \overline{)628.2}$

7. $0.105 \div 0.5$

8. $1.296 \div 0.16$

9. $3.825 \div 2.5$

10. $0.5 \overline{)8.253}$

11. $0.8 \overline{)0.9944}$

12. $0.32 \overline{)1.50048}$

13. $0.75 \overline{)13.59}$

14. $1.8 \overline{)4.4208}$

15. $4.02 \overline{)16.1604}$

16. $160.3639 \div 25.1$

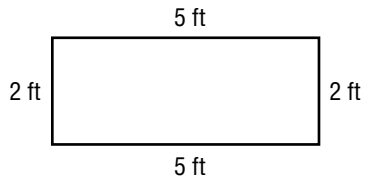
17. $246.3293 \div 13.3$

18. $106.288 \div 6.5$

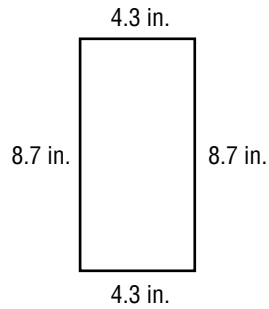
4-5**Practice: Skills*****Perimeter***

Find the perimeter of each figure.

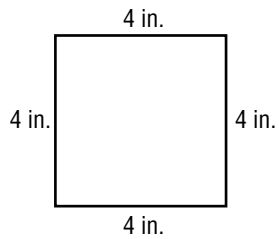
1.



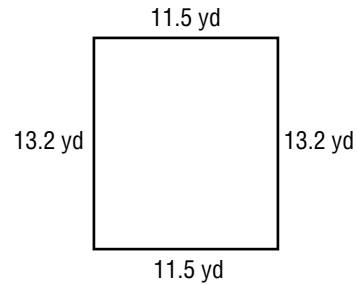
2.



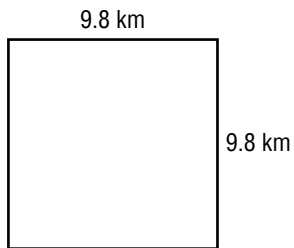
3.



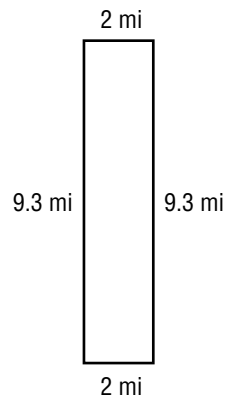
4.



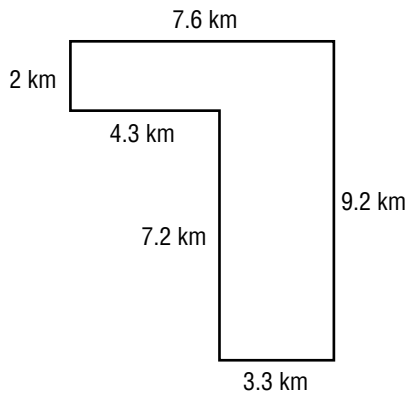
5.



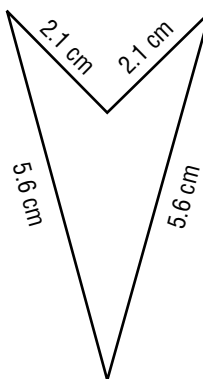
6.



7.



8.



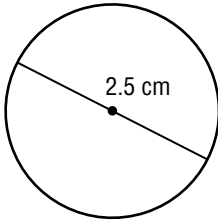
4-6

Practice: Skills

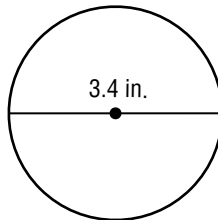
Circumference

Find the circumference of each circle shown or described. Use 3.14 for π . Round to the nearest tenth.

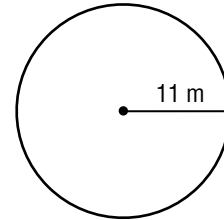
1.



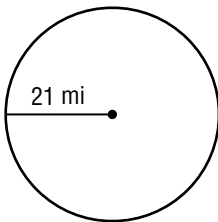
2.



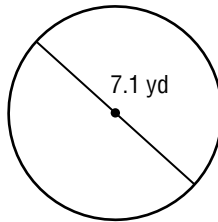
3.



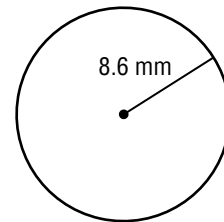
4.



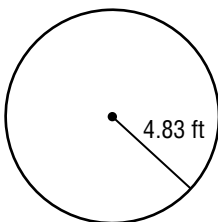
5.



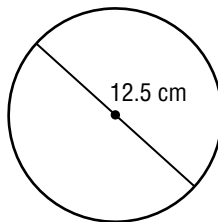
6.



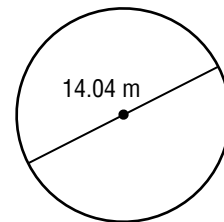
7.



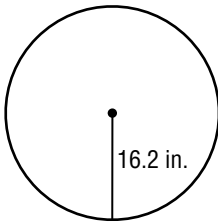
8.



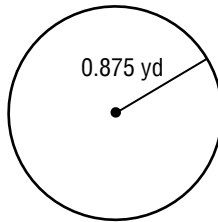
9.



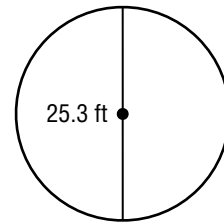
10.



11.



12.



13. $r = 13$ cm

14. $d = 4.1$ ft

15. $r = 22$ mm

16. $d = 1.25$ in.

17. $r = 10.6$ mi

18. $d = 14.23$ yd

5-1**Practice: Skills*****Greatest Common Factor***

Find the GCF of each set of numbers by making a list.

1. 12 and 20

2. 24 and 30

3. 18 and 27

Find the GCF of each set of numbers by using prime factors.

4. 10 and 25

5. 6 and 21

6. 14 and 42

Find the GCF of each set of numbers.

7. 15 and 40

8. 16 and 36

9. 12 and 54

10. 24 and 64

11. 39 and 26

12. 35 and 63

13. 36 and 48

14. 35 and 28

15. 40 and 56

16. 56 and 14

17. 27 and 63

18. 88 and 66

19. 60 and 84

20. 45 and 90

21. 85 and 51

22. 54 and 72

23. 48 and 80

24. 63 and 108

25. 21, 30, 44

26. 16, 24, 56

27. 27, 54, 81

5-2**Practice: Skills*****Simplifying Fractions***

Replace each ● with a number so that the fractions are equivalent.

1. $\frac{1}{5} = \frac{\bullet}{35}$

2. $\frac{\bullet}{15} = \frac{2}{5}$

3. $\frac{1}{6} = \frac{\bullet}{24}$

4. $\frac{10}{15} = \frac{2}{\bullet}$

5. $\frac{4}{\bullet} = \frac{20}{45}$

6. $\frac{1}{\bullet} = \frac{4}{16}$

7. $\frac{1}{3} = \frac{27}{\bullet}$

8. $\frac{\bullet}{7} = \frac{8}{28}$

9. $\frac{18}{24} = \frac{\bullet}{4}$

Write each fraction in simplest form. If the fraction is already in simplest form, write *simplest form*.

10. $\frac{1}{2}$

11. $\frac{8}{10}$

12. $\frac{20}{60}$

13. $\frac{6}{15}$

14. $\frac{15}{60}$

15. $\frac{7}{8}$

16. $\frac{27}{81}$

17. $\frac{7}{12}$

18. $\frac{28}{36}$

19. $\frac{90}{100}$

20. $\frac{8}{21}$

21. $\frac{14}{35}$

22. $\frac{23}{46}$

23. $\frac{9}{13}$

24. $\frac{12}{27}$

25. $\frac{4}{12}$

26. $\frac{75}{100}$

27. $\frac{60}{110}$

28. $\frac{10}{25}$

29. $\frac{15}{19}$

30. $\frac{20}{28}$

31. $\frac{49}{56}$

32. $\frac{49}{70}$

33. $\frac{24}{64}$

5-3**Practice: Skills*****Mixed Numbers and Improper Fractions***

Draw a model for each mixed number. Then write the mixed number as an improper fraction.

1. $4\frac{1}{3}$

2. $3\frac{3}{8}$

3. $2\frac{2}{5}$

Write each mixed number as an improper fraction.

4. $6\frac{1}{2}$

5. $1\frac{5}{6}$

6. $1\frac{3}{8}$

7. $3\frac{1}{3}$

8. $3\frac{7}{8}$

9. $2\frac{1}{4}$

10. $2\frac{8}{9}$

11. $4\frac{5}{6}$

12. $8\frac{3}{5}$

13. $5\frac{4}{7}$

14. $10\frac{2}{3}$

15. $9\frac{1}{4}$

Write each improper fraction as a mixed number.

16. $\frac{9}{5}$

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

18. $\frac{15}{4}$

19. $\frac{17}{8}$

20. $\frac{19}{6}$

21. $\frac{27}{4}$

22. $\frac{25}{2}$

23. $\frac{31}{7}$

24. $\frac{52}{9}$

25. $\frac{41}{3}$

26. $\frac{37}{5}$

27. $\frac{77}{8}$

5-4**Practice: Skills*****Least Common Multiple*****Find the LCM of each set of numbers.**

1. 4 and 36

2. 5 and 25

3. 3 and 42

4. 4 and 5

5. 3 and 8

6. 5 and 13

7. 7 and 10

8. 7 and 49

9. 6 and 9

10. 6 and 30

11. 5 and 6

12. 12 and 18

13. 8 and 28

14. 6 and 14

15. 5 and 14

16. 12 and 15

17. 9 and 24

18. 15 and 18

19. 12 and 14

20. 3, 5, and 12

21. 6, 16, and 24

22. 12, 18, and 24

23. 7, 10, and 14

24. 2, 5, and 12

5-5**Practice: Skills*****Comparing and Ordering Fractions***

Replace each ● with <, >, or = to make a true sentence.

1. $\frac{2}{3} \bullet \frac{3}{4}$

2. $\frac{3}{8} \bullet \frac{6}{16}$

3. $\frac{5}{8} \bullet \frac{7}{12}$

4. $\frac{1}{2} \bullet \frac{6}{7}$

5. $\frac{3}{9} \bullet \frac{1}{3}$

6. $\frac{1}{6} \bullet \frac{9}{10}$

7. $\frac{5}{6} \bullet \frac{7}{8}$

8. $\frac{5}{8} \bullet \frac{5}{12}$

9. $\frac{4}{5} \bullet \frac{2}{3}$

10. $\frac{6}{7} \bullet \frac{4}{5}$

11. $\frac{5}{12} \bullet \frac{3}{16}$

12. $\frac{3}{4} \bullet \frac{2}{9}$

13. $\frac{5}{7} \bullet \frac{7}{10}$

14. $\frac{2}{15} \bullet \frac{1}{6}$

15. $\frac{5}{12} \bullet \frac{2}{5}$

16. $\frac{3}{10} \bullet \frac{5}{14}$

17. $\frac{4}{9} \bullet \frac{3}{7}$

18. $\frac{3}{5} \bullet \frac{5}{9}$

19. $\frac{1}{6} \bullet \frac{2}{12}$

20. $\frac{7}{9} \bullet \frac{4}{7}$

21. $\frac{9}{10} \bullet \frac{11}{12}$

22. $\frac{1}{4} \bullet \frac{2}{8}$

23. $\frac{8}{9} \bullet \frac{7}{8}$

24. $\frac{2}{9} \bullet \frac{4}{15}$

Order the fractions from least to greatest.

25. $\frac{3}{4}, \frac{2}{5}, \frac{5}{8}, \frac{1}{2}$

26. $\frac{1}{3}, \frac{2}{7}, \frac{3}{14}, \frac{1}{6}$

27. $\frac{2}{3}, \frac{4}{9}, \frac{5}{6}, \frac{7}{12}$

28. $\frac{4}{5}, \frac{2}{3}, \frac{13}{15}, \frac{7}{9}$

29. $\frac{11}{12}, \frac{5}{6}, \frac{3}{4}, \frac{9}{16}$

30. $\frac{7}{15}, \frac{3}{5}, \frac{5}{12}, \frac{1}{2}$

5-6**Practice: Skills*****Writing Decimals as Fractions***

Write each decimal as a fraction or mixed number in simplest form.

1. 0.6

2. 10.9

3. 0.08

4. 6.25

5. 4.125

6. 0.075

7. 9.35

8. 3.56

9. 8.016

10. 21.5

11. 0.055

12. 7.42

13. 5.006

14. 3.875

15. 1.29

16. 2.015

17. 6.48

18. 0.004

19. 4.95

20. 8.425

21. 9.74

22. 0.47

23. 5.019

24. 1.062

25. 3.96

26. 0.824

27. 20.8

28. 6.45

29. 4.672

30. 0.375

5-7**Practice: Skills*****Writing Fractions as Decimals***

Write each fraction or mixed number as a decimal.

1. $\frac{9}{10}$

2. $\frac{21}{100}$

3. $\frac{3}{4}$

4. $\frac{1}{2}$

5. $\frac{1}{6}$

6. $\frac{5}{6}$

7. $\frac{4}{9}$

8. $3\frac{7}{8}$

9. $9\frac{2}{5}$

10. $\frac{8}{11}$

11. $4\frac{2}{3}$

12. $6\frac{5}{8}$

13. $5\frac{1}{3}$

14. $12\frac{3}{8}$

15. $10\frac{17}{20}$

16. $2\frac{11}{18}$

17. $3\frac{11}{16}$

18. $6\frac{4}{5}$

19. $1\frac{5}{9}$

20. $10\frac{1}{8}$

21. $2\frac{13}{18}$

22. $3\frac{7}{12}$

23. $5\frac{8}{9}$

24. $3\frac{24}{25}$

6-1**Practice: Skills*****Rounding Fractions and Mixed Numbers***

Round each number to the nearest half.

1. $\frac{2}{3}$

2. $2\frac{1}{9}$

3. $1\frac{4}{7}$

4. $\frac{11}{12}$

5. $2\frac{1}{5}$

6. $1\frac{1}{3}$

7. $7\frac{3}{4}$

8. $3\frac{2}{5}$

9. $\frac{5}{12}$

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

11. $9\frac{7}{8}$

12. $4\frac{3}{8}$

13. $8\frac{6}{7}$

14. $1\frac{5}{12}$

15. $\frac{1}{18}$

16. $3\frac{8}{9}$

17. $\frac{9}{16}$

18. $2\frac{11}{13}$

19. $5\frac{3}{20}$

20. $7\frac{9}{11}$

21. $10\frac{1}{7}$

22. $\frac{13}{15}$

23. $6\frac{4}{25}$

24. $8\frac{9}{19}$

Tell whether each number should be rounded up or down.

25. the amount of wrapping paper for a gift that is $2\frac{4}{7}$ feet wide

26. the length of a strip of wallpaper to hang on a wall $7\frac{5}{6}$ feet high

27. the width of a CD player to fit into a width of $18\frac{2}{5}$ inches

28. the height of a notebook that must fit inside a backpack $1\frac{3}{4}$ feet tall

Find the length of each line segment to the nearest half inch.

29. _____

30. _____

31. _____

32. _____

6-2**Practice: Skills*****Estimating Sums and Differences*****Estimate.**

1. $\frac{2}{3} + \frac{7}{8}$

2. $\frac{5}{6} - \frac{1}{7}$

3. $\frac{9}{10} + \frac{7}{8}$

4. $\frac{11}{12} - \frac{7}{16}$

5. $\frac{5}{8} + \frac{4}{5}$

6. $1\frac{1}{3} - \frac{3}{8}$

7. $2\frac{6}{7} + 1\frac{1}{8}$

8. $\frac{9}{10} - \frac{3}{5}$

9. $\frac{7}{15} + 2\frac{2}{9}$

10. $3\frac{15}{16} - \frac{7}{16}$

11. $8\frac{3}{10} + 5\frac{13}{15}$

12. $4\frac{13}{16} - \frac{4}{9}$

13. $\frac{1}{10} + 7\frac{1}{3}$

14. $12\frac{11}{14} - 7\frac{5}{7}$

15. $\frac{4}{7} + 3\frac{5}{8}$

16. $4\frac{1}{3} - \frac{1}{10}$

17. $8\frac{3}{10} + 8\frac{7}{8}$

18. $10\frac{2}{7} - 9\frac{5}{9}$

19. $3\frac{1}{8} + 3\frac{5}{8}$

20. $6\frac{7}{13} - \frac{1}{15}$

21. $8\frac{1}{6} + \frac{14}{15}$

6-3**Practice: Skills*****Adding and Subtracting Fractions with Like Denominators*****Add or subtract. Write in simplest form.**

1. $\frac{2}{9} + \frac{4}{9}$

2. $\frac{2}{5} + \frac{4}{5}$

3. $\frac{2}{3} - \frac{1}{3}$

4. $\frac{3}{4} + \frac{1}{4}$

5. $\frac{7}{8} - \frac{3}{8}$

6. $\frac{9}{12} + \frac{3}{12}$

7. $\frac{5}{6} - \frac{1}{6}$

8. $\frac{1}{6} + \frac{5}{6}$

9. $\frac{11}{12} - \frac{7}{12}$

10. $\frac{7}{8} + \frac{3}{8}$

11. $\frac{9}{10} - \frac{4}{10}$

12. $\frac{3}{8} + \frac{1}{8}$

13. $\frac{10}{11} - \frac{2}{11}$

14. $\frac{7}{9} + \frac{2}{9}$

15. $\frac{5}{6} + \frac{4}{6}$

16. $\frac{3}{10} - \frac{1}{10}$

17. $\frac{3}{10} + \frac{3}{10}$

18. $\frac{5}{6} + \frac{3}{6}$

19. $\frac{5}{8} - \frac{3}{8}$

20. $\frac{5}{7} - \frac{2}{7}$

21. $\frac{6}{7} + \frac{5}{7}$

22. How much is $\frac{2}{9}$ pound plus $\frac{1}{9}$ pound?23. How much longer is $\frac{3}{8}$ foot than $\frac{1}{8}$ foot?24. How much more than $\frac{1}{4}$ cup is $\frac{3}{4}$ cup?25. What is the sum of $\frac{2}{11}$, $\frac{7}{11}$, and $\frac{1}{11}$?

6-4**Practice: Skills*****Adding and Subtracting Fractions with Unlike Denominators***

Add or subtract. Write in simplest form.

1.
$$\begin{array}{r} \frac{2}{3} \\ + \frac{5}{6} \\ \hline \end{array}$$

2.
$$\begin{array}{r} \frac{5}{6} \\ + \frac{3}{4} \\ \hline \end{array}$$

3.
$$\begin{array}{r} \frac{2}{3} \\ - \frac{1}{6} \\ \hline \end{array}$$

4.
$$\begin{array}{r} \frac{1}{2} \\ + \frac{7}{8} \\ \hline \end{array}$$

5.
$$\begin{array}{r} \frac{4}{7} \\ - \frac{1}{2} \\ \hline \end{array}$$

6.
$$\begin{array}{r} \frac{1}{6} \\ - \frac{1}{12} \\ \hline \end{array}$$

7. $\frac{5}{8} - \frac{1}{4}$

8. $\frac{1}{3} + \frac{5}{7}$

9. $\frac{1}{5} + \frac{5}{6}$

10. $\frac{3}{4} + \frac{11}{12}$

11. $\frac{1}{2} - \frac{2}{5}$

12. $\frac{11}{12} - \frac{3}{4}$

13. $\frac{3}{4} - \frac{1}{12}$

14. $\frac{4}{5} + \frac{1}{2}$

15. $\frac{3}{5} + \frac{2}{3}$

16. $\frac{2}{3} - \frac{1}{4}$

17. $\frac{11}{12} - \frac{1}{6}$

18. $\frac{3}{5} + \frac{9}{10}$

19. How much more is $\frac{3}{8}$ gallon than $\frac{1}{4}$ gallon?20. How much more is $\frac{3}{4}$ ounce than $\frac{1}{3}$ ounce?21. Evaluate $x - y$ if $x = \frac{7}{10}$ and $y = \frac{3}{5}$.22. Evaluate $s + t$ if $s = \frac{2}{3}$ and $t = \frac{5}{6}$.

6-5**Practice: Skills*****Adding and Subtracting Mixed Numbers***

Add or subtract. Write in simplest form.

$$\begin{array}{r} 1. \quad 2\frac{1}{4} \\ + 3\frac{3}{4} \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 4\frac{5}{6} \\ - 3\frac{1}{6} \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 8\frac{5}{12} \\ - 1\frac{1}{12} \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 2\frac{3}{7} \\ + 4\frac{2}{7} \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 6\frac{2}{3} \\ + 3\frac{4}{9} \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 8\frac{7}{12} \\ - 5\frac{5}{12} \\ \hline \end{array}$$

$$7. \quad 9\frac{3}{4} - 7\frac{1}{2}$$

$$8. \quad 2\frac{1}{8} + 5\frac{7}{8}$$

$$9. \quad 1\frac{2}{3} + 4\frac{8}{9}$$

$$10. \quad 10\frac{3}{5} - 2\frac{1}{2}$$

$$11. \quad 6\frac{5}{6} + \frac{3}{8}$$

$$12. \quad 9\frac{4}{5} + 2\frac{2}{3}$$

$$13. \quad 5\frac{2}{3} - \frac{1}{6}$$

$$14. \quad 8\frac{1}{2} - 5\frac{3}{10}$$

$$15. \quad 4\frac{3}{5} + 9\frac{1}{3}$$

$$16. \quad 7\frac{11}{12} - 3\frac{7}{12}$$

$$17. \quad 5\frac{8}{9} - 3\frac{1}{6}$$

$$18. \quad 8\frac{3}{4} + 6\frac{2}{5}$$

Evaluate each expression if $a = 1\frac{2}{3}$, $b = \frac{1}{4}$, and $c = 3\frac{5}{6}$.

19. $a + b$

20. $c + a$

21. $c - b$

22. $c - a$

6-6**Practice: Skills*****Subtracting Mixed Numbers with Renaming*****Subtract. Write in simplest form.**

1.
$$\begin{array}{r} 4\frac{5}{7} \\ -1\frac{6}{7} \\ \hline \end{array}$$

2.
$$\begin{array}{r} 4 \\ -3\frac{1}{3} \\ \hline \end{array}$$

3.
$$\begin{array}{r} 7\frac{1}{6} \\ -3\frac{5}{6} \\ \hline \end{array}$$

4.
$$\begin{array}{r} 6\frac{1}{5} \\ -2\frac{7}{10} \\ \hline \end{array}$$

5.
$$\begin{array}{r} 10\frac{5}{9} \\ -2\frac{2}{3} \\ \hline \end{array}$$

6.
$$\begin{array}{r} 11\frac{1}{4} \\ -5\frac{3}{8} \\ \hline \end{array}$$

7.
$$\begin{array}{r} 3\frac{1}{4} \\ -1\frac{5}{8} \\ \hline \end{array}$$

8.
$$\begin{array}{r} 15\frac{1}{3} \\ -6\frac{1}{2} \\ \hline \end{array}$$

9.
$$\begin{array}{r} 12\frac{2}{5} \\ -4\frac{3}{4} \\ \hline \end{array}$$

10.
$$\begin{array}{r} 10 \\ -5\frac{1}{4} \\ \hline \end{array}$$

11.
$$\begin{array}{r} 12\frac{5}{8} \\ -3\frac{3}{4} \\ \hline \end{array}$$

12.
$$\begin{array}{r} 9\frac{2}{5} \\ -7\frac{9}{10} \\ \hline \end{array}$$

13.
$$\begin{array}{r} 13\frac{1}{2} \\ -7\frac{4}{5} \\ \hline \end{array}$$

14.
$$\begin{array}{r} 8\frac{1}{3} \\ -2\frac{5}{9} \\ \hline \end{array}$$

15.
$$\begin{array}{r} 9\frac{7}{10} \\ -6\frac{4}{5} \\ \hline \end{array}$$

16.
$$\begin{array}{r} 12 \\ -5\frac{7}{11} \\ \hline \end{array}$$

17. $5\frac{1}{2} - \frac{5}{8}$

18. $4\frac{1}{5} - 1\frac{1}{2}$

19. $7 - 2\frac{3}{8}$

20. $7\frac{1}{4} - 6\frac{5}{6}$

21. $6 - 5\frac{5}{6}$

22. $8\frac{3}{10} - 2\frac{1}{2}$

7-1**Practice: Skills*****Estimating Products*****Estimate each product.**

1. $\frac{1}{5} \times 26$

2. $\frac{10}{11} \times \frac{1}{9}$

3. $\frac{1}{2} \times 17$

4. $\frac{6}{7} \times \frac{1}{8}$

5. $\frac{1}{3} \times \frac{4}{11}$

6. $2\frac{4}{5} \times 5\frac{1}{4}$

7. $\frac{3}{7} \times 29$

8. $\frac{5}{6} \times \frac{2}{7}$

9. $6\frac{3}{10} \times 4\frac{7}{9}$

10. $\frac{3}{5} \times \frac{6}{7}$

11. $\frac{7}{8} \times \frac{8}{9}$

12. $4\frac{1}{3} \times 3\frac{7}{8}$

13. $9\frac{1}{8} \times \frac{1}{3}$

14. $\frac{2}{9} \times 26$

15. $\frac{5}{8} \times 41$

16. $\frac{7}{8} \times 30$

17. $7\frac{2}{3} \times 9\frac{3}{8}$

18. $\frac{3}{4} \times 35$

19. $\frac{5}{9} \times \frac{1}{7}$

20. $\frac{1}{12} \times \frac{5}{9}$

21. $3\frac{1}{4} \times 7\frac{7}{8}$

22. $\frac{2}{3} \times 35$

23. $6\frac{7}{12} \times 8\frac{5}{12}$

24. $\frac{6}{11} \times 32$

25. Estimate $\frac{4}{5}$ of 49.26. Estimate the product of $2\frac{4}{11}$ and $16\frac{1}{5}$.

7-2**Practice: Skills****Multiplying Fractions****Multiply. Write in simplest form.**

1. $\frac{3}{4} \times \frac{1}{2}$

2. $\frac{1}{3} \times \frac{2}{5}$

3. $\frac{1}{3} \times 6$

4. $\frac{2}{5} \times \frac{3}{7}$

5. $\frac{3}{8} \times 10$

6. $\frac{1}{6} \times \frac{3}{5}$

7. $\frac{2}{9} \times 3$

8. $\frac{9}{10} \times \frac{4}{5}$

9. $\frac{7}{8} \times \frac{2}{9}$

10. $11 \times \frac{3}{4}$

11. $\frac{5}{6} \times \frac{1}{4}$

12. $\frac{4}{9} \times \frac{2}{3}$

13. $\frac{7}{12} \times \frac{6}{11}$

14. $16 \times \frac{5}{12}$

15. $\frac{4}{9} \times \frac{1}{8}$

16. $\frac{1}{5} \times \frac{10}{11}$

17. $\frac{5}{12} \times \frac{3}{8}$

18. $\frac{1}{10} \times \frac{4}{7}$

19. $21 \times \frac{4}{7}$

20. $\frac{5}{9} \times 18$

21. $\frac{5}{6} \times \frac{8}{9}$

For Exercises 22–24, evaluate each expression if $x = 4$, $y = \frac{2}{3}$, and $z = \frac{1}{4}$.

22. $\frac{3}{8}x$

23. xz

24. $3x$

25. xy

26. $9y$

27. $\frac{1}{3}x$

28. yz

29. $8z$

30. xyz

31. If $a = \frac{6}{7}$, what is $\frac{2}{3}a$?

32. Evaluate st if $s = \frac{3}{8}$ and $t = 24$.

7-3**Practice: Skills*****Multiplying Mixed Numbers*****Multiply. Write in simplest form.**

1. $\frac{1}{3} \times 1\frac{1}{4}$

2. $2\frac{1}{2} \times \frac{3}{5}$

3. $\frac{3}{4} \times 3\frac{1}{3}$

4. $6\frac{1}{5} \times \frac{1}{2}$

5. $1\frac{3}{5} \times 3\frac{2}{3}$

6. $\frac{5}{7} \times 4\frac{1}{5}$

7. $\frac{4}{7} \times 3\frac{1}{9}$

8. $1\frac{3}{8} \times 2\frac{2}{7}$

9. $4\frac{1}{6} \times \frac{9}{10}$

10. $3\frac{1}{3} \times 2\frac{1}{4}$

11. $\frac{8}{9} \times 5\frac{1}{7}$

12. $2\frac{5}{8} \times 6$

13. $3\frac{3}{4} \times 2\frac{4}{5}$

14. $\frac{5}{7} \times 4\frac{3}{8}$

15. $20 \times 1\frac{2}{5}$

16. $2\frac{4}{9} \times \frac{6}{11}$

17. $5\frac{3}{4} \times 1\frac{1}{11}$

18. $14 \times 2\frac{5}{7}$

For Exercises 19–24, evaluate each expression if $r = 1\frac{2}{3}$, $s = 2\frac{1}{5}$, and $t = \frac{3}{4}$.

19. $4t$

20. st

21. $\frac{1}{2}r$

22. rs

23. $\frac{1}{11}s$

24. rt

25. Evaluate $\frac{2}{3}m$ if $m = 5\frac{1}{6}$.

26. What is ab if $a = 1\frac{5}{11}$ and $b = \frac{7}{8}$?

7-4**Practice: Skills*****Dividing Fractions***

Find the reciprocal of each number.

1. $\frac{1}{2}$

2. $\frac{3}{5}$

3. 7

4. $\frac{8}{11}$

5. 12

6. $\frac{9}{10}$

7. $\frac{5}{8}$

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

Divide. Write in simplest form.

9. $\frac{5}{6} \div \frac{1}{3}$

10. $\frac{9}{10} \div \frac{1}{2}$

11. $\frac{1}{2} \div \frac{3}{5}$

12. $8 \div \frac{4}{5}$

13. $\frac{7}{12} \div \frac{5}{6}$

14. $\frac{9}{10} \div \frac{1}{4}$

15. $\frac{3}{8} \div 9$

16. $\frac{9}{10} \div \frac{3}{4}$

17. $\frac{2}{5} \div \frac{4}{7}$

18. $15 \div \frac{5}{9}$

19. $\frac{6}{7} \div \frac{3}{11}$

20. $\frac{1}{9} \div \frac{5}{12}$

21. $\frac{5}{6} \div \frac{5}{12}$

22. $\frac{10}{11} \div 5$

23. $\frac{7}{9} \div \frac{1}{7}$

24. $\frac{6}{7} \div \frac{8}{9}$

25. $\frac{3}{5} \div \frac{9}{11}$

26. $5 \div \frac{4}{9}$

Find the value of each expression if $x = \frac{1}{4}$, $y = \frac{3}{5}$, and $z = \frac{2}{3}$.

27. $x \div y$

28. $z \div 2$

29. $y \div z$

30. $z \div x$

31. $\frac{1}{3} \div x$

32. $5 \div y$

7-5**Practice: Skills*****Dividing Mixed Numbers***

Divide. Write in simplest form.

1. $2\frac{5}{6} \div 6\frac{4}{5}$

2. $4\frac{6}{7} \div 3\frac{2}{5}$

3. $31\frac{2}{3} \div 7\frac{3}{5}$

4. $1\frac{1}{3} \div 3$

5. $6 \div 2\frac{2}{5}$

6. $1\frac{3}{4} \div \frac{3}{4}$

7. $2\frac{1}{2} \div 4\frac{2}{7}$

8. $3\frac{1}{9} \div 7$

9. $6\frac{2}{3} \div \frac{4}{5}$

10. $1\frac{2}{9} \div 1\frac{5}{6}$

11. $6\frac{3}{4} \div 1\frac{7}{20}$

12. $\frac{7}{10} \div 2\frac{5}{8}$

13. $3\frac{5}{6} \div 1\frac{1}{3}$

14. $1\frac{7}{9} \div \frac{4}{9}$

15. $5 \div 8\frac{3}{4}$

16. $2\frac{2}{9} \div 1\frac{1}{3}$

17. $3\frac{1}{5} \div 1\frac{7}{9}$

18. $6\frac{1}{6} \div 3\frac{1}{3}$

Evaluate each expression if $a = 1\frac{3}{8}$, $b = 4\frac{5}{7}$, and $c = 3\frac{3}{10}$.

19. $b \div a$

20. $a \div c$

21. $c \div b$

For Exercises 22–24, evaluate each expression if $a = 3\frac{3}{4}$, $b = 1\frac{1}{2}$, and $c = 4\frac{1}{8}$.

22. $a \div b$

23. $c \div a$

24. $b \div c$

25. What is the value of $r \div t$ if $r = 4\frac{1}{3}$ and $t = 2\frac{3}{5}$?

26. If $x = 4\frac{2}{3}$ what is $1\frac{1}{6} \div x$?

7-6**Practice: Skills****Sequences**

Describe each pattern. Then find the next two numbers in the sequence.

1. 6, 10, 14, 18, ...

2. 31, 26, 21, 16, ...

3. 12, 24, 48, 96, ...

4. 16, 8, 4, 2, ...

5. 108, 36, 12, 4, ...

6. $1, 1\frac{1}{5}, 1\frac{2}{5}, 1\frac{3}{5}, \dots$

7. $\frac{1}{64}, \frac{1}{32}, \frac{1}{16}, \frac{1}{8}, \dots$

8. 43, 38, 33, 28, ...

9. 63, 56, 49, 42, ...

10. 2, 15, 28, 41, ...

11. 5, 20, 35, 50, ...

12. $1, 1\frac{2}{3}, 2\frac{1}{3}, 3, \dots$

13. 4, 12, 36, 108, ...

14. 1, 5, 25, 125, ...

Find the missing number in each sequence.

15. 54, $\underline{\quad}$, 42, 36, ...

16. $\frac{1}{6}, \frac{1}{3}, \underline{\quad}, \frac{2}{3}, \dots$

17. $\underline{\quad}, 12, 48, 192, \dots$

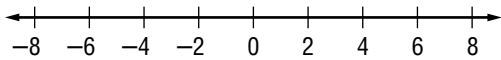
18. $\frac{1}{81}, \frac{1}{27}, \underline{\quad}, \frac{1}{3}, \dots$

19. 16, 4, $\underline{\quad}, \frac{1}{4}, \dots$

20. $\underline{\quad}, 1, 5, 25, \dots$

8-1**Practice: Skills****Integers****Write an integer to describe each situation.**

- | | |
|---------------------------|------------------------------|
| 1. a loss of 8 yards | 2. an increase of 2 inches |
| 3. 5 feet above sea level | 4. a decrease of 6 members |
| 5. scored 10 fewer points | 6. earned 7 dollars interest |
| 7. a gain of 5 pounds | 8. 4 degrees below normal |

Graph each integer on the number line.

- | | | | |
|--------|--------|--------|--------|
| 9. 0 | 10. -3 | 11. 4 | 12. +6 |
| 13. -5 | 14. 1 | 15. -8 | 16. 7 |

Replace each \bullet with $<$, $>$, or $=$ to make a true sentence.

- | | | |
|-----------------------|-----------------------|-----------------------|
| 17. $-9 \bullet 8$ | 18. $0 \bullet -1$ | 19. $+6 \bullet 6$ |
| 20. $-3 \bullet 3$ | 21. $12 \bullet -21$ | 22. $-12 \bullet -10$ |
| 23. $5 \bullet -5$ | 24. $-83 \bullet -80$ | 25. $-9 \bullet -9$ |
| 26. $-57 \bullet -75$ | 27. $-56 \bullet 56$ | 28. $0 \bullet 0$ |

Write the opposite of each integer.

- | | | | |
|--------|---------|---------|---------|
| 29. -2 | 30. +6 | 31. -9 | 32. +8 |
| 33. -7 | 34. +10 | 35. +14 | 36. +12 |

Order each set of integers from least to greatest.

- | | |
|-------------------|--------------------|
| 37. 2, -6, -2, 0 | 38. 9, -8, 4, -9 |
| 39. 5, -3, -11, 9 | 40. -3, 2, -4, -17 |

8-2**Practice: Skills*****Adding Integers***

Add. Use counters or a number line if necessary.

1. $6 + (-8)$

2. $9 + (-3)$

3. $-5 + (-4)$

4. $-13 + 7$

5. $-2 + 11$

6. $10 + (-6)$

7. $4 + (-4)$

8. $-7 + (-4)$

9. $-12 + 3$

10. $-5 + 14$

11. $-10 + (-2)$

12. $6 + (-1)$

13. $-3 + 4$

14. $+4 + (+4)$

15. $-2 + (-1)$

16. $6 + (-3)$

17. $8 + 7$

18. $-5 + (-6)$

19. $-11 + 4$

20. $-6 + 13$

21. $-12 + 6$

22. $-7 + 12$

23. $9 + (-9)$

24. $-5 + (-5)$

25. $3 + (-11)$

26. $-14 + 9$

27. $15 + (-7)$

28. $-15 + 15$

29. What is the sum of positive six and negative four?

30. What is the sum of negative five and positive five?

31. Find the result when negative eight is added to positive 4.

32. Find the sum of negative 1 and positive 7.

33. **ALGEBRA** Find the value of $c + d$ if $c = -4$ and $d = 6$.

8-3**Practice: Skills*****Subtracting Integers*****Subtract. Use counters if necessary.**

1. $9 - 4$

2. $10 - 7$

3. $+8 - 5$

4. $+12 - 6$

5. $-3 - (-7)$

6. $5 - (-9)$

7. $-8 - 7$

8. $2 - 6$

9. $-16 - (-9)$

10. $4 - (-15)$

11. $-18 - 5$

12. $-6 - 6$

13. $7 - 4$

14. $-4 - (-2)$

15. $-8 - 10$

16. $9 - (-7)$

17. $3 - 12$

18. $-3 - (-10)$

19. $-13 - 7$

20. $-5 - (-2)$

21. $6 - 6$

22. $3 - 5$

23. $-8 - 6$

24. $-2 - (-2)$

25. $7 - (-4)$

26. $-16 - (-8)$

27. $12 - (-12)$

28. $-3 - 10$

29. $-1 - (-4)$

30. $9 - (-6)$

31. **ALGEBRA** Find the value of $a - b$ if $a = 5$ and $b = 8$.32. **ALGEBRA** Find the value of $c - d$ if $c = -7$ and $d = -2$.

8-4**Practice: Skills*****Multiplying Integers*****Multiply.**

1. $6 \times (-4)$

2. -8×7

3. $-2 \times (-9)$

4. $5(-5)$

5. $-5(-3)$

6. $-4(8)$

7. $9(-2)$

8. $-5(-6)$

9. $3(-10)$

10. $-4(2)$

11. $-4(-4)$

12. $-9(6)$

13. $7(-3)$

14. $-2(-8)$

15. $-5(-10)$

16. $2(-1)$

17. $-3(6)$

18. $4(-5)$

19. $-7(7)$

20. $-2(-7)$

21. $-6(-1)$

22. $4(-3)$

23. $-6(-5)$

24. $-9(10)$

25. $-3(-8)$

26. $7(-5)$

27. $-2(2)$

28. $8(-8)$

29. $-9(1)$

30. $-7(-4)$

31. $-7(6)$

32. $-5(12)$

33. $-4(-8)$

8-5**Practice: Skills*****Dividing Integers*****Divide.**

1. $-4 \div 2$

2. $6 \div (-2)$

3. $-8 \div (-2)$

4. $3 \div (-3)$

5. $9 \div (+3)$

6. $-10 \div 5$

7. $56 \div (-7)$

8. $-45 \div 9$

9. $-12 \div (-6)$

10. $15 \div (-3)$

11. $-24 \div 6$

12. $-18 \div (-3)$

13. $48 \div (-8)$

14. $-40 \div 8$

15. $-20 \div (-5)$

16. $36 \div (-9)$

17. $-42 \div 7$

18. $-54 \div (-6)$

19. $20 \div (-10)$

20. $-12 \div 4$

21. $-35 \div (-5)$

22. $-27 \div 9$

23. $10 \div (-2)$

24. $-32 \div (-8)$

25. $-68 \div 4$

26. $30 \div (-3)$

27. $-36 \div (-4)$

28. $-16 \div (-8)$

29. $49 \div (-7)$

30. $-18 \div 2$

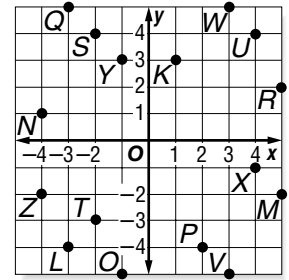
31. **ALGEBRA** For what value of v is $42 \div v = 6$ true?32. **ALGEBRA** Find the value of $m \div n$ if $m = -24$ and $n = -4$.33. **ALGEBRA** For what value of b is $b \div 4 = -9$ true?34. **ALGEBRA** Find the value of $x \div y$ if $x = -50$ and $y = 10$.

8-6

Practice: Skills

The Coordinate Plane

For Exercises 1–8, use the coordinate plane at the right. Identify the point for each ordered pair.

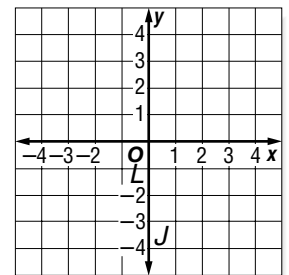


- | | |
|--------------|---------------|
| 1. $(-2, 4)$ | 2. $(-2, -3)$ |
| 3. $(4, 4)$ | 4. $(3, -5)$ |
| 5. $(3, 5)$ | 6. $(4, -1)$ |
| 7. $(-1, 3)$ | 8. $(-4, -2)$ |

For Exercises 9–16, use the coordinate plane above. Write the ordered pair that names each point. Then identify the quadrant where each point is located.

- | | |
|--------------|--------------|
| 9. <i>K</i> | 10. <i>L</i> |
| 11. <i>M</i> | 12. <i>N</i> |
| 13. <i>O</i> | 14. <i>P</i> |
| 15. <i>Q</i> | 16. <i>R</i> |

Graph and label each point on the coordinate plane at the right.



- | | |
|-----------------|-----------------|
| 17. $A(-5, 2)$ | 18. $I(2, 1)$ |
| 19. $J(1, -3)$ | 20. $B(-5, -1)$ |
| 21. $C(3, 3)$ | 22. $K(-1, 2)$ |
| 23. $L(0, -1)$ | 24. $D(2, -5)$ |
| 25. $E(3, -2)$ | 26. $M(-4, -5)$ |
| 27. $N(1, 5)$ | 28. $F(-2, 5)$ |
| 29. $G(-1, -4)$ | 30. $O(5, -5)$ |

9-1**Practice: Skills*****Properties***

Find each product mentally. Use the Distributive Property.

1. 5×15

2. 7×12

3. 4×24

4. 6×51

5. 3×81

6. 2×72

7. 20×1.7

8. 11×2.1

9. 15×3.4

Rewrite each expression using the Distributive Property. Then evaluate.

10. $5(20 + 8)$

11. $3(50 + 8)$

12. $(30 + 5)6$

13. $(40 + 5)6$

14. $11(20 + 5)$

15. $13(30 + 4)$

16. $(10 \times 50) + (10 \times 9)$

17. $(12 \times 40) + (12 \times 2)$

Identify the property shown by each equation.

18. $7 \times 8 = 8 \times 7$

19. $4 + 5 = 5 + 4$

20. $14 + 27 + 16 = 14 + 16 + 27$

21. $9 \times 1 = 9$

22. $(7 \times 2) \times 4 = 7 \times (2 \times 4)$

23. $2 \times 3 \times 4 = 2 \times 4 \times 3$

24. $0 + 11 = 11$

25. $(6 \times 4) \times 2 = 2 \times (6 \times 4)$

26. $15(5 + 7) = 15 \times 5 + 15 \times 7$

27. $5 + (15 + 9) = (15 + 9) + 5$

Find each sum or product mentally.

28. $5 \times 19 \times 2$

29. $12 + 14 + 8$

30. $5 \times 23 \times 20$

31. $15 + 17 + 15$

32. $4 \times 27 \times 25$

33. $14 + 37 + 26$

34. $25 + 26 + 15$

35. $25 \times 6 \times 2$

36. $13 + 6 + 17$

9-2**Practice: Skills*****Solving Addition Equations***

Solve each equation. Use models if necessary. Check your solution.

1. $x + 8 = 10$

2. $y + 3 = 7$

3. $z + 4 = 6$

4. $1 + a = 9$

5. $b + 2 = -4$

6. $5 + c = -1$

7. $g + 5 = 2$

8. $6 + h = 3$

9. $k + 7 = 5$

10. $8 = m + 2$

11. $-5 = 2 + n$

12. $4 + s = 1$

13. $-6 = z + 4$

14. $b + 6 = 7$

15. $7 + g = 4$

16. $n + 6 = 4$

17. $s + 5 = 9$

18. $-4 = x + 3$

19. $5 = 1 + k$

20. $8 + c = 3$

21. $9 + m = 5$

22. $-2 = 7 + a$

23. $h + 3 = -3$

24. $-5 = y + 4$

25. Find the value of r if $r + 7 = 2$.

26. If $z + 5 = 1$, what is the value of z ?

9-3**Practice: Skills*****Solving Subtraction Equations***

Solve each equation. Use models if necessary. Check your solution.

1. $a - 1 = 7$

2. $b - 2 = 1$

3. $3 = c - 1$

4. $x - 3 = -1$

5. $-3 = y - 4$

6. $2 = k - 4$

7. $m - 5 = -6$

8. $n - 6 = -9$

9. $-10 = s - 8$

10. $t - 9 = -1$

11. $v - 9 = -5$

12. $-6 = v - 7$

13. $3 = g - 6$

14. $-3 = h - 8$

15. $-5 = z - 7$

16. $z - 3 = 7$

17. $5 = f - 1$

18. $-1 = d - 2$

19. $e - 9 = -6$

20. $1 = t - 8$

21. $i - 5 = 4$

22. $g - 4 = 1$

23. $-3 = x - 2$

24. $y - 4 = -7$

25. If $r - 7 = -7$, what is the value of r ?

26. Find the value of b if $b - 2 = 5$.

9-4**Practice: Skills*****Solving Multiplication Equations***

Solve each equation. Use models if necessary. Check your solution.

1. $3a = 9$

2. $7b = 14$

3. $36 = 9c$

4. $-15 = 5x$

5. $-42 = 6y$

6. $8z = -16$

7. $-4m = 28$

8. $-2n = 8$

9. $-21 = 7s$

10. $-25 = -5r$

11. $-18 = -6t$

12. $-9p = -18$

13. $2x = 18$

14. $4w = 24$

15. $6g = 9$

16. $-32 = 2v$

17. $-18 = 3b$

18. $7h = -35$

19. $-8k = 20$

20. $14 = -4d$

21. $-72 = 9r$

22. $-3z = 27$

23. $5x = -35$

24. $28 = 8y$

25. Solve the equation $9y = 81$.

26. What is w if $2w = 16$?

9-5**Practice: Skills*****Solving Two-Step Equations***

Solve each equation. Use models if necessary.

1. $2a + 4 = 6$

2. $3b + 4 = 10$

3. $7 = 4c - 5$

4. $3x - 3 = -6$

5. $4y - 2 = -14$

6. $3 = 2g + 5$

7. $1 = 2f - 7$

8. $2 = 3h + 8$

9. $5z + 1 = 16$

10. $7m - 5 = 9$

11. $1 = 8n - 7$

12. $-11 = 9s + 7$

13. $4t + 7 = -5$

14. $4v + 10 = -6$

15. $6 = 2x - 10$

16. $3w + 5 = -7$

17. $2r - 5 = 3$

18. $5 = 2z - 9$

19. Fourteen less than four times a number is six. What is the number?

20. Two is four more than twice a number. What is the number?

21. Nine less than three times a number is zero. What is the number?

22. Two is seventeen more than three times what number?

9-6**Practice: Skills****Functions**

Complete each function table.

1.

Input (x)	Output ($x + 3$)
0	
2	
4	

2.

Input (x)	Output ($-3x$)
-1	
1	
2	

3.

Input (x)	Output ($x - 1$)
-5	
-1	
4	

4.

Input (x)	Output ($\frac{1}{4}x$)
-8	
0	
8	

5. If a function rule is $2x - 3$, what is the output for 3?6. If a function rule is $4 - x$, what is the output for -2?

Find the rule for each function table. Write the rule in the table.

7.

x	
-1	-4
0	-3
2	-1

8.

x	
-3	-12
0	-9
4	-5

9.

x	
-3	-15
-2	-10
3	15

10.

x	
-12	6
1	$-\frac{1}{2}$
6	-3

9-7

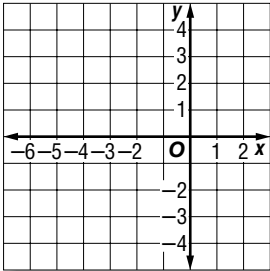
Practice: Skills

Graphing Functions

Complete each function table. Then graph the function.

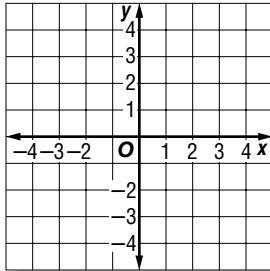
1.

Input (x)	Output ($x + 4$)
-5	
-3	
0	



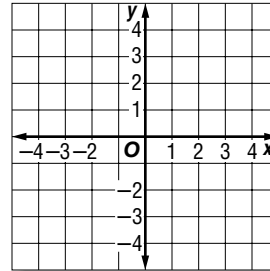
2.

Input (x)	Output ($3 - x$)
2	
3	
4	

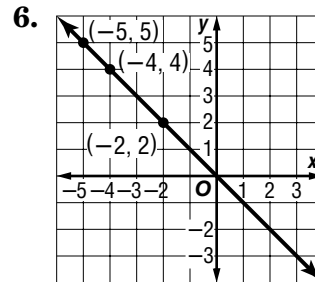
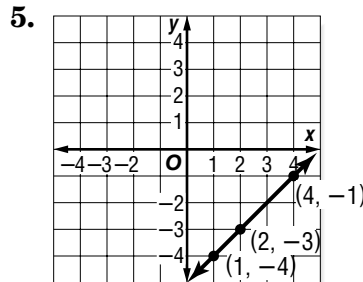
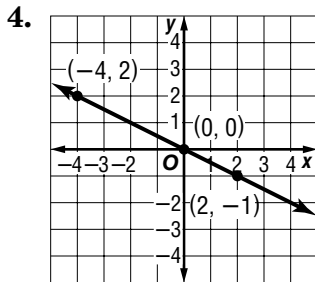


3.

Input (x)	Output ($\frac{1}{3}x$)
-3	
0	
3	



Make a function table for each graph. Then determine the function rule.



10-1**Practice: Skills****Ratios**

Write each ratio as a fraction in simplest form.

1. 3 sailboats to 6 motorboats
2. 4 tulips to 9 daffodils
3. 5 baseballs to 25 softballs
4. 2 days out of 8 days
5. 6 poodles out of 18 dogs
6. 10 yellow eggs out of 12 colored eggs
7. 12 sheets of paper out of 28
8. 18 hours out of 24 hours
9. 16 elms out of 20 trees
10. 15 trumpets to 9 trombones
11. 5 ducks to 30 geese
12. 14 lions to 10 tigers
13. 6 sodas out of 16 drinks
14. 20 blue jays out of 35 birds

Write each ratio as a unit rate.

15. 14 hours in 2 weeks
16. 36 pieces of candy for 6 children
17. 8 teaspoons for 4 cups
18. 8 tomatoes for \$2
19. \$28 for 4 hours
20. 150 miles in 3 hours
21. \$18 for 3 CDs
22. 48 logs on 6 trucks
23. Write the ratio *21 wins to 9 losses* as a fraction in simplest form.
24. Write the ratio *\$12 dollars for 3 tickets* as a unit rate.

10-2**Practice: Skills****Solving Proportions**

Solve each proportion.

1. $\frac{2}{5} = \frac{8}{x}$

2. $\frac{2}{7} = \frac{4}{y}$

3. $\frac{3}{5} = \frac{b}{30}$

4. $\frac{2}{9} = \frac{c}{36}$

5. $\frac{4}{5} = \frac{d}{25}$

6. $\frac{20}{4} = \frac{10}{f}$

7. $\frac{g}{2} = \frac{28}{14}$

8. $\frac{2}{x} = \frac{10}{25}$

9. $\frac{4}{3} = \frac{h}{18}$

10. $\frac{10}{30} = \frac{2}{r}$

11. $\frac{t}{18} = \frac{3}{6}$

12. $\frac{2}{3} = \frac{6}{m}$

13. $\frac{9}{2} = \frac{s}{6}$

14. $\frac{n}{36} = \frac{2}{6}$

15. $\frac{4}{u} = \frac{12}{21}$

16. $\frac{5}{6} = \frac{m}{12}$

17. $\frac{d}{27} = \frac{4}{9}$

18. $\frac{5}{8} = \frac{15}{q}$

19. $\frac{15}{27} = \frac{5}{k}$

20. $\frac{4}{x} = \frac{20}{30}$

21. $\frac{b}{3} = \frac{24}{9}$

22. $\frac{z}{35} = \frac{4}{7}$

23. $\frac{6}{c} = \frac{24}{28}$

24. $\frac{6}{8} = \frac{x}{24}$

25. $\frac{14}{16} = \frac{b}{8}$

26. $\frac{8}{r} = \frac{24}{27}$

27. $\frac{16}{36} = \frac{t}{9}$

28. $\frac{1.2}{2.4} = \frac{2.4}{n}$

29. $\frac{0.5}{1.8} = \frac{s}{9}$

30. $\frac{1.6}{w} = \frac{8}{16}$

31. What is the solution of $\frac{3}{5} = \frac{2}{k}$? Round to the nearest tenth.32. Find the solution of $\frac{4.3}{3} = \frac{n}{2.2}$ to the nearest tenth.

10-3**Practice: Skills****Scale Drawings and Models**

DRAFTING On a set of drawings, the scale is 2 inches = 3 feet. Find the actual measurements.

	Object	Drawing	Actual Size
1.	table	4 inches	
2.	wall	10 inches	
3.	road	18 inches	
4.	door	5 inches	
5.	computer	1 inch	
6.	lamp	0.5 inch	

LIZARDS Models of lizards were made using the given scales. Find the actual measurements.

Scale: 1 inch = $\frac{1}{2}$ inch

	Whiptail Lizard	Model	Actual Size
7.	body length	6 inches	
8.	tail length	12 inches	

Scale: 2 inches = 3 inches

	Desert Iguana	Model	Actual Size
9.	body length	9 inches	
10.	tail length	18 inches	

Scale: 4 inches = 5 inches

	Ground Gecko	Model	Actual Size
11.	body length	3.6 inches	
12.	tail length	2 inches	

MAPS A map has a scale of 3 inches = 7 miles. Find the actual distance between the cities with the map distances given.

13. 8.4 inches between Fall City and Summit

14. 2 inches between Potter and Green River

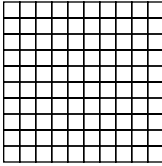
10-4

Practice: Skills

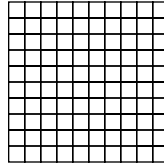
Modeling Percents

Model each percent.

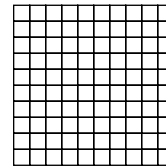
1. 15%



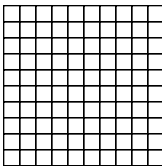
2. 50%



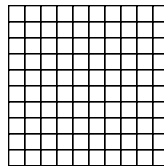
3. 75%



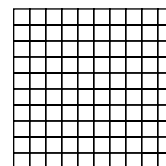
4. 80%



5. 21%

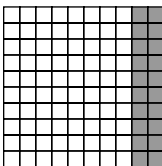


6. 48%

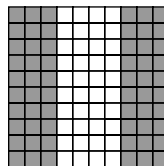


Identify each percent that is modeled.

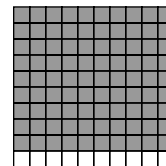
7.



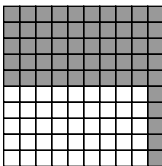
8.



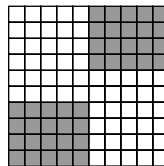
9.



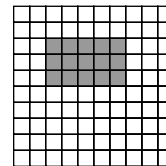
10.



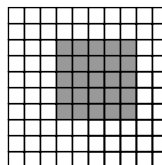
11.



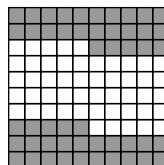
12.



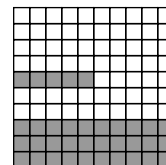
13.



14.



15.



10-5**Practice: Skills*****Percents and Fractions***

Write each percent as a fraction in simplest form.

1. 40%

2. 30%

3. 55%

4. 75%

5. 140%

6. 175%

7. 24%

8. 68%

9. 44%

10. 92%

11. 110%

12. 155%

13. 18%

14. 74%

15. 43%

Write each fraction as a percent.

16. $\frac{4}{5}$

17. $\frac{3}{20}$

18. $\frac{7}{10}$

19. $\frac{3}{5}$

20. $\frac{3}{2}$

21. $\frac{5}{4}$

22. $\frac{6}{5}$

23. $\frac{9}{20}$

24. $\frac{13}{20}$

25. $\frac{17}{20}$

26. $\frac{9}{5}$

27. $\frac{11}{10}$

28. $\frac{19}{20}$

29. $\frac{13}{10}$

30. $\frac{21}{100}$

10-6**Practice: Skills*****Percents and Decimals***

Write each percent as a decimal.

1. 5%

2. 8%

3. 37%

4. 12%

5. 29%

6. 54%

7. 48%

8. 79%

9. 0.1%

10. 0.6%

11. 0.2%

12. 0.5%

13. 123%

14. 102%

15. 135%

16. 310%

Write each decimal as a percent.

17. 0.3

18. 0.7

19. 0.19

20. 0.74

21. 0.66

22. 0.52

23. 0.21

24. 0.81

25. 0.13

26. 0.362

27. 0.528

28. 0.245

29. 0.194

30. 0.334

31. 0.426

32. 0.059

10-7**Practice: Skills*****Percent of a Number*****Find the percent of each number.**

1. 25% of 16

2. 50% of 70

3. 10% of 30

4. 60% of 40

5. 75% of 20

6. 20% of 90

7. 30% of 110

8. 50% of 140

9. 25% of 80

10. 4% of 100

11. 75% of 36

12. 90% of 120

13. 125% of 40

14. 8% of 25

15. 150% of 22

16. 110% of 50

17. 125% of 60

18. 0.4% of 5

19. 6.5% of 40

20. 0.5% of 14

21. 0.1% of 29

22. 130% of 80

23. 4.5% of 60

24. 0.5% of 34

25. 14.5% of 60

26. 14% of 30

27. 24% of 15

28. 140% of 30

29. 6% of 55

30. 160% of 22

10-8

Practice: Skills

Estimating with Percents

Estimate each percent.

1. 58% of 5

2. 41% of 10

3. 75% of 17

4. 50% of 39

5. 24% of 13

6. 82% of 24

7. 19% of 31

8. 73% of 61

9. 62% of 34

10. 49% of 71

11. 38% of 42

12. 27% of 81

13. 79% of 16

14. 52% of 118

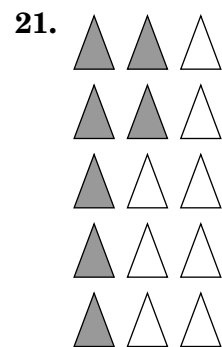
15. 19% of 94

16. 33% of 61

17. 91% of 82

18. 67% of 241

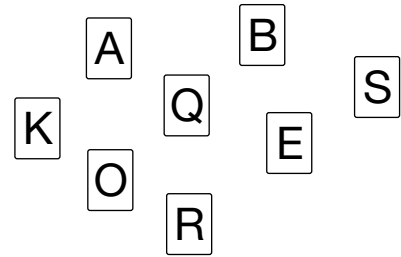
Estimate the percent of the figure that is shaded.



11-1**Practice: Skills****Theoretical Probability**

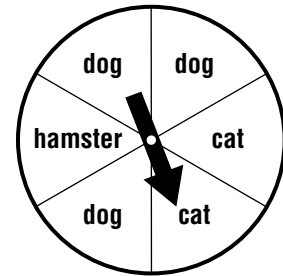
A card is randomly chosen. Find each probability. Write each answer as a fraction, a decimal, and a percent.

- $P(B)$
- $P(Q \text{ or } R)$
- $P(\text{vowel})$
- $P(\text{consonant or vowel})$
- $P(\text{consonant or } A)$
- $P(T)$



The spinner shown is spun once. Write a sentence explaining how likely it is for each event to occur.

- $P(\text{dog})$
- $P(\text{hamster})$
- $P(\text{dog or cat})$
- $P(\text{bird})$
- $P(\text{mammal})$



WEATHER The weather reporter says that there is a 12% chance that it will be moderately windy tomorrow.

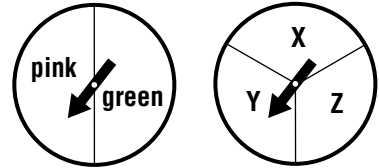
- What is the probability that it will not be windy?
- Will tomorrow be a good day to fly a kite? Explain.

11-2**Practice: Skills****Outcomes**

1. In how many ways can 2 coins be chosen from a set of 1 penny, 1 nickel, 1 dime, and 1 quarter? Make a list to show the sample space.

Draw a tree diagram to show the sample space for each situation. Then tell how many outcomes are possible and find the given probability.

2. Each spinner is spun once. How many outcomes are possible? Find $P(\text{pink}, Z)$.



3. chocolate, vanilla, strawberry, or mint ice cream with sugar or waffle cone
How many outcomes are possible? Find $P(\text{vanilla}, \text{waffle})$.

4. paint room cream, violet, or blue with red, white or gold trim
How many outcomes are possible? Find $P(\text{blue}, \text{red})$.

11-3**Practice: Skills*****Making Predictions***

Determine whether each sample is a good sample. Explain.

- 250 people at the beach in the summer are asked to name their favorite vacation spot.
- Every fourth shopper at a grocery store is asked whether or not he or she owns a pet.

For Exercise 3–6, use the table and the following information. A survey of students' favorite sports was taken from a random sample of students in a school. The results are shown in the table.

Students' Favorite Sports	
Soccer	8
Baseball /Softball	3
Volleyball	5
Track & Field	4

- What is the size of the sample?
- What is the probability that a student will prefer soccer?
- What is the probability that a student will prefer volleyball?
- There are 550 students in the school. Predict how many students at the school prefer track and field.

For Exercises 7–10, use the table and the following information. A random sample of 40 flower shop customers was surveyed to find customers' favorite flowers. The table shows the results. The shop expects to sell 50 bunches of flowers on Sunday. How many bunches of each flower should the shop order?

Favorite Flower	
Type	Shoppers
Daisy	8
Gardenia	4
Mum	8
Rose	20

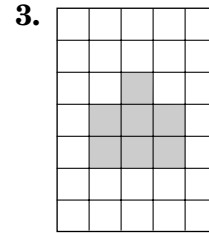
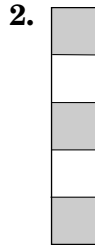
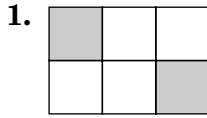
- daisy
- rose
- mum
- gardenia

11-4

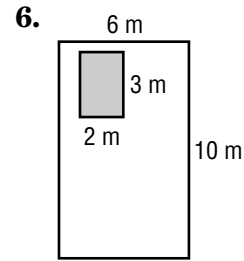
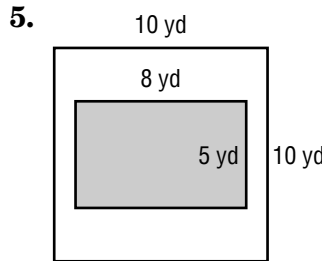
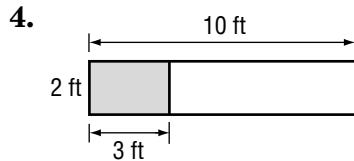
Practice: Skills

Probability and Area

Find the probability that a randomly thrown dart will land in the shaded region of each dartboard.



Suppose you randomly throw 10 darts at each dartboard below. How many darts would you expect to land in each shaded area?



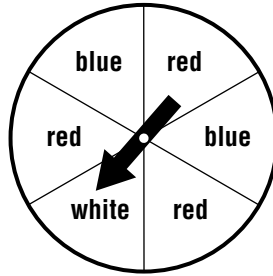
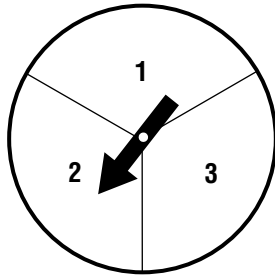
Use the dartboard at the right.

V	Q	W	O
E	Z	I	X

- What is the probability of a randomly thrown dart landing on a consonant?
- If 40 darts are randomly thrown, how many would you predict to land on a consonant?
- What is the probability that a randomly thrown dart would land on a vowel?
- If 200 darts are randomly thrown, how many would you predict to land on a vowel?

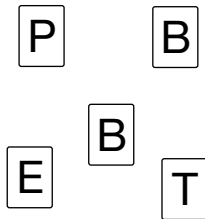
11-5**Practice: Skills*****Probability of Independent Events***

The two spinners shown are spun. Find the probability of each event.



1. $P(1 \text{ and white})$
2. $P(3 \text{ and red})$
3. $P(2 \text{ and blue})$
4. $P(\text{odd and red})$
5. $P(4 \text{ and white})$
6. $P(\text{even and any color other than white})$

Suppose you select a card from the pile shown and then roll a number cube. Find the probability of each event.



7. $P(B \text{ and } 4)$
8. $P(B \text{ and even})$
9. $P(\text{consonant and } 5)$
10. $P(\text{vowel and odd})$
11. $P(E \text{ and number less than } 7)$
12. $P(5 \text{ and odd})$

13. **NATURE** The table lists the autumn leaves each girl collected. Each girl reaches into her own bag and randomly selects a leaf. Find the probability that Jane chooses a maple and Mary chooses an aspen leaf.

Name	Maple	Cottonwood	Aspen
Jane	14	8	6
Mary	8	10	2

12-1**Practice: Skills*****Length in the Customary System*****Complete.**

1. 2 ft = ? in.

2. 5 yd = ? ft

3. 18 ft = ? yd

4. 60 in. = ? ft

5. 3,520 yd = ? mi

6. 36 in. = ? yd

7. 3 yd = ? in.

8. $3\frac{1}{2}$ yd = ? ft

9. 2 mi = ? ft

Draw a line segment of each length.

10. $3\frac{1}{2}$ in.

11. $1\frac{3}{4}$ in.

12. $2\frac{1}{8}$ in.

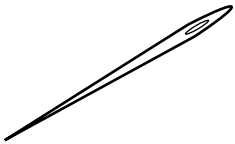
13. $1\frac{7}{8}$ in.

14. $2\frac{1}{4}$ in.

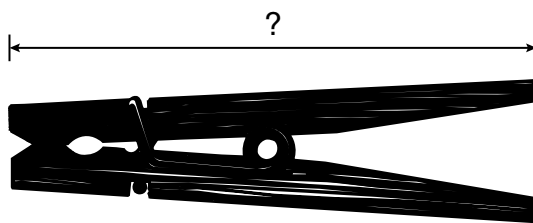
15. $\frac{5}{8}$ in.

For Exercises 16–18, find the length of each line segment or object to the nearest half, fourth, or eighth inch.

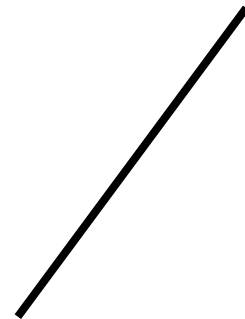
16.



17.



18.

19. Which is greater: $2\frac{1}{4}$ feet or 26 inches? Explain.20. Which is greater: $3\frac{1}{3}$ yards or 12 feet? Explain.

12-2**Practice: Skills****Capacity and Weight in the Customary System****Complete.**

1. $2 \text{ lb} = \underline{\quad? \quad} \text{ oz}$

2. $3 \text{ gal} = \underline{\quad? \quad} \text{ qt}$

3. $40 \text{ fl oz} = \underline{\quad? \quad} \text{ c}$

4. $32 \text{ oz} = \underline{\quad? \quad} \text{ lb}$

5. $4 \text{ pt} = \underline{\quad? \quad} \text{ c}$

6. $16 \text{ pt} = \underline{\quad? \quad} \text{ qt}$

7. $2\frac{1}{2} \text{ pt} = \underline{\quad? \quad} \text{ c}$

8. $6 \text{ c} = \underline{\quad? \quad} \text{ pt}$

9. $1\frac{1}{2} \text{ T} = \underline{\quad? \quad} \text{ lb}$

10. $44 \text{ qt} = \underline{\quad? \quad} \text{ gal}$

11. $3\frac{3}{4} \text{ pt} = \underline{\quad? \quad} \text{ c}$

12. $3 \text{ gal} = \underline{\quad? \quad} \text{ pt}$

13. $10,000 \text{ lb} = \underline{\quad? \quad} \text{ T}$

14. $2 \text{ T} = \underline{\quad? \quad} \text{ oz}$

15. $1\frac{1}{2} \text{ qt} = \underline{\quad? \quad} \text{ c}$

16. $3\frac{1}{2} \text{ c} = \underline{\quad? \quad} \text{ fl oz}$

17. $96 \text{ oz} = \underline{\quad? \quad} \text{ lb}$

18. $64 \text{ fl oz} = \underline{\quad? \quad} \text{ c}$

19. $32,000 \text{ oz} = \underline{\quad? \quad} \text{ T}$

20. $2\frac{1}{2} \text{ lb} = \underline{\quad? \quad} \text{ oz}$

21. $11 \text{ qt} = \underline{\quad? \quad} \text{ gal}$

Choose the better estimate for each measure.

22. the weight of a bag of potatoes: 5 tons or 5 pounds

23. the amount of water in a sports bottle: 16 fluid ounces or 4 pints

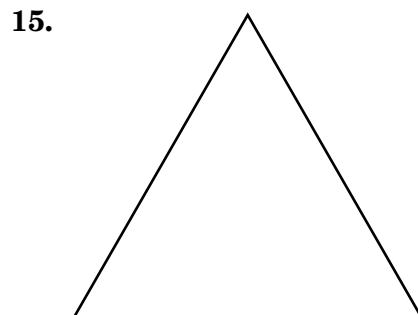
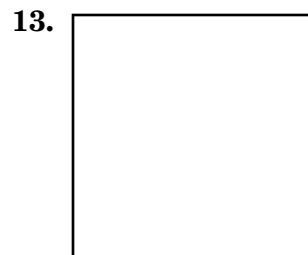
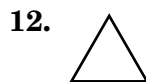
24. the weight of an apple: $\frac{1}{2}$ pound or 32 ounces

12-3**Practice: Skills*****Length in the Metric System***

Write the metric unit of length you would use to measure each of the following.

1. depth of an ocean
2. length of an eyelash
3. length of your bedroom
4. length of the Panama Canal
5. height of a can of soup
6. depth of a swimming pool
7. length of the eye of a needle
8. height of a washing machine
9. length of a pencil
10. width of a pencil

Measure each line segment or side of each figure in centimeters and millimeters.



12-4**Practice: Skills*****Mass and Capacity in the Metric System***

Write the metric unit of mass or capacity that you would use to measure each of the following. Then estimate the mass or capacity.

1. leaf
2. large cup of hot chocolate
3. home aquarium
4. feather
5. crayon
6. water in a plastic wading pool
7. mosquito
8. penny
9. spaghetti sauce in a saucepan
10. bowling ball
11. liquid in a thermometer
12. teaspoon of vanilla extract
13. rectangular eraser
14. grain of sand
15. wheat bread sandwich
16. banana
17. pot of tea
18. calculator
19. house cat
20. car key
21. small glass of juice
22. pair of skis
23. water in a washing machine for large load
24. piano
25. tube of oil paint
26. small bucket of soapy water
27. feather pillow
28. hammer
29. surfboard
30. can of soup

12-5**Practice: Skills****Changing Metric Units****Complete.**

1. 530 mm = ? cm
2. 23 kg = ? g
3. 1,500 mL = ? L
4. ? m = 340 cm
5. 13 cm = ? mm
6. 16 g = ? mg
7. 3.72 L = ? mL
8. ? cm = 9.75 m
9. 149 cm = ? m
10. ? m = 524 cm
11. ? g = 0.56 kg
12. 3 mm = ? cm
13. 1.5 km = ? m
14. 4,200 mm = ? m
15. ? L = 650 mL
16. 2.5 L = ? mL
17. 13.2 m = ? cm
18. ? mm = 8.3 m
19. 2 kg = ? mg
20. 6,000,000 mm = ? km
21. 0.89 m = ? cm
22. 0.085 g = ? mg
23. ? m = 4,600 mm
24. ? kg = 7,124 g
25. ? cm = 40 mm
26. ? m = 7 km
27. ? mL = 0.0817 L
28. 480 mL = ? L
29. 5,000 mg = ? kg
30. 4.8 km = ? cm

12-6**Practice: Skills*****Measures of Time*****Add or subtract.**

1.
$$\begin{array}{r} 23 \text{ min } 16 \text{ s} \\ + 12 \text{ min } 34 \text{ s} \\ \hline \end{array}$$

2.
$$\begin{array}{r} 9 \text{ h } 42 \text{ min} \\ - 3 \text{ h } 18 \text{ min} \\ \hline \end{array}$$

3.
$$\begin{array}{r} 6 \text{ h } 38 \text{ min} \\ + 5 \text{ h } 22 \text{ min} \\ \hline \end{array}$$

4.
$$\begin{array}{r} 6 \text{ min } 15 \text{ s} \\ - 2 \text{ min } 32 \text{ s} \\ \hline \end{array}$$

5.
$$\begin{array}{r} 4 \text{ h } 43 \text{ min} \\ + 11 \text{ h } 27 \text{ min} \\ \hline \end{array}$$

6.
$$\begin{array}{r} 12 \text{ min } 43 \text{ s} \\ + 9 \text{ min } 58 \text{ s} \\ \hline \end{array}$$

7.
$$\begin{array}{r} 21 \text{ min } 54 \text{ s} \\ + 26 \text{ min } 19 \text{ s} \\ \hline \end{array}$$

8.
$$\begin{array}{r} 14 \text{ h} \\ - 9 \text{ h } 43 \text{ min} \\ \hline \end{array}$$

9.
$$\begin{array}{r} 2 \text{ h } 13 \text{ min } 28 \text{ s} \\ + 8 \text{ h } 20 \text{ min } 15 \text{ s} \\ \hline \end{array}$$

10.
$$\begin{array}{r} 12 \text{ h } 20 \text{ min } 38 \text{ s} \\ - 7 \text{ h } 13 \text{ min } 20 \text{ s} \\ \hline \end{array}$$

11.
$$\begin{array}{r} 2 \text{ h } 15 \text{ min } 2 \text{ s} \\ + 4 \text{ h } 48 \text{ min } 9 \text{ s} \\ \hline \end{array}$$

12.
$$\begin{array}{r} 11 \text{ h } 14 \text{ min } 27 \text{ s} \\ - 2 \text{ h } 13 \text{ min } 45 \text{ s} \\ \hline \end{array}$$

13.
$$\begin{array}{r} 11 \text{ h } 23 \text{ min } 6 \text{ s} \\ - 5 \text{ h } 36 \text{ min } 29 \text{ s} \\ \hline \end{array}$$

14.
$$\begin{array}{r} 6 \text{ h } 10 \text{ min } 47 \text{ s} \\ + 2 \text{ h } 51 \text{ min } 28 \text{ s} \\ \hline \end{array}$$

15.
$$\begin{array}{r} 20 \text{ h} \\ - 8 \text{ h } 33 \text{ min } 18 \text{ s} \\ \hline \end{array}$$

Find each elapsed time.

16. 6:35 A.M. to 9:55 A.M.

17. 12:20 P.M. to 3:05 P.M.

18. 11:05 A.M. to 4:37 P.M.

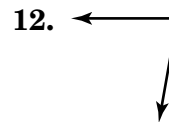
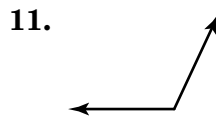
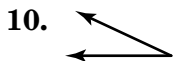
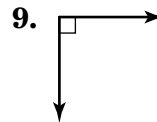
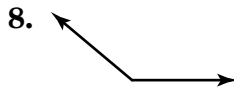
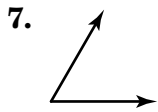
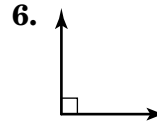
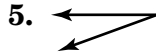
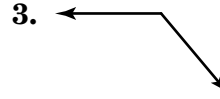
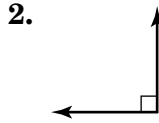
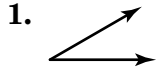
19. 10:45 A.M. to 5:25 P.M.

20. 9:18 P.M. to 1:33 A.M.

21. 9:52 A.M. to 5:20 P.M.

13-1**Practice: Skills****Angles**

Use a protractor to find the measure of each angle. Then classify each angle as *acute*, *obtuse*, *right*, or *straight*.

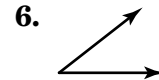
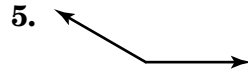
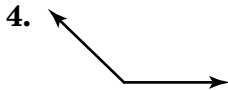
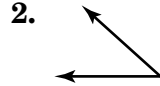
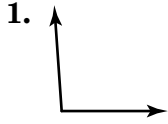


13. **ALGEBRA** If $m\angle K = 60^\circ$ and $\angle J$ and $\angle K$ are complementary, what is $m\angle J$?

14. **ALGEBRA** Angles A and B are supplementary. What is $m\angle B$ if $m\angle A = 120^\circ$?

13-2**Practice: Skills****Using Angle Measures**

Estimate the measure of each angle.



Use a protractor and straightedge to draw angles having the following measurements.

7. 105°

8. 40°

9. 80°

10. 64°

11. 123°

12. 167°

13. 93°

14. 26°

15. 142°

13-3**Practice: Skills*****Bisectors***

Draw each line segment or angle having the given measurement. Then use a straightedge and a compass to bisect the line segment or angle.

1. 80°

2. 1 in.

3. 120° 4. 40°

5. 2 cm

6. 90°

7. 3 cm

8. 78°

9. 1.25 in.

10. 25° 11. 165°

12. 2.25 in.

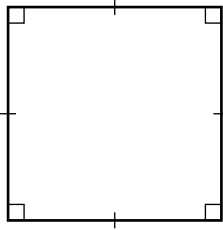
13-4

Practice: Skills

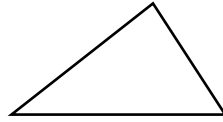
Two-Dimensional Figures

Identify each polygon. Then tell if it is a regular polygon.

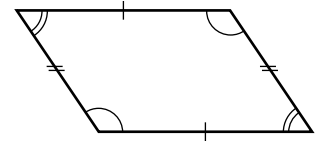
1.



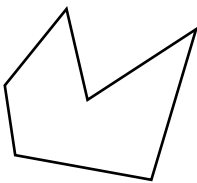
2.



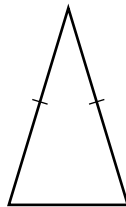
3.



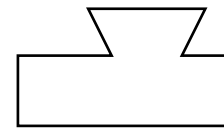
4.



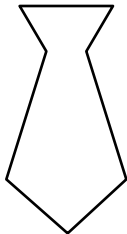
5.



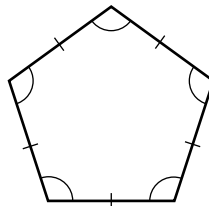
6.



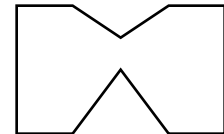
7.



8.



9.



Draw an example of each polygon.

10. pentagon

11. a scalene triangle

12. a quadrilateral that is not a rectangle

13-5

Practice: Skills

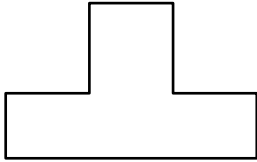
Lines of Symmetry

Draw all lines of symmetry for each figure.

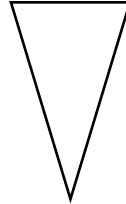
1.



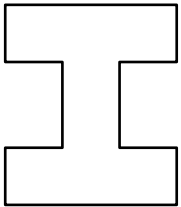
2.



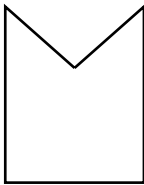
3.



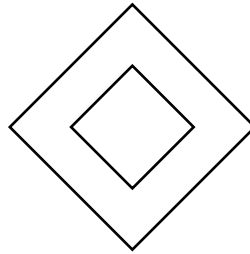
4.



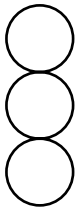
5.



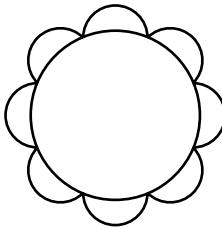
6.



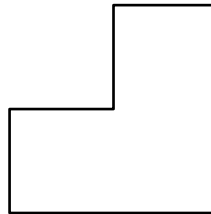
7.



8.

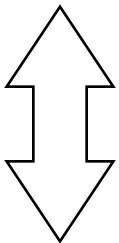


9.

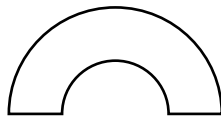


Tell whether each figure has rotational symmetry. Write *yes* or *no*.

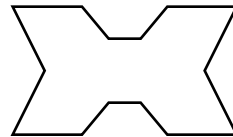
10.



11.



12.

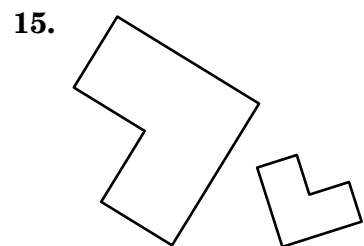
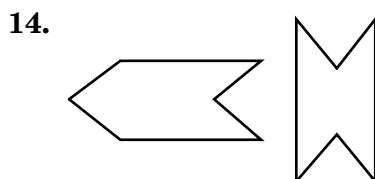
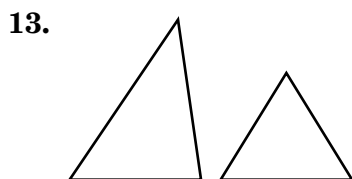
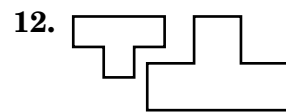
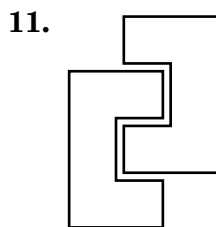
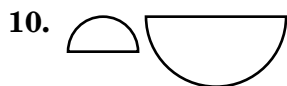
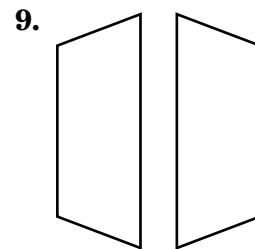
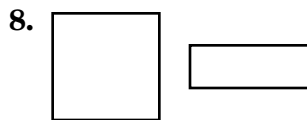
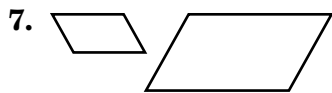
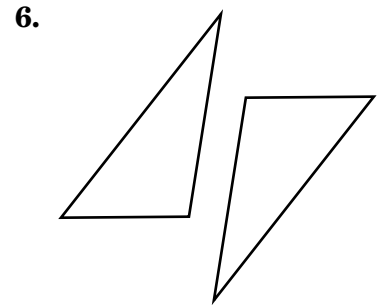
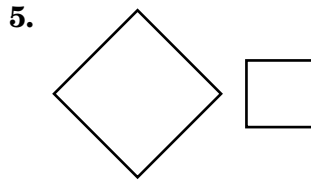
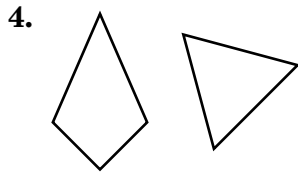
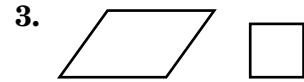
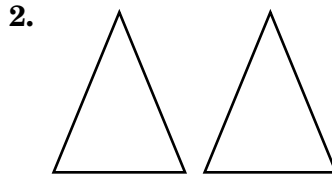
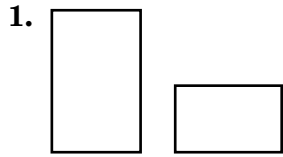


13-6

Practice: Skills

Similar and Congruent Figures

Tell whether each pair of figures is *similar*, *congruent*, or *neither*.

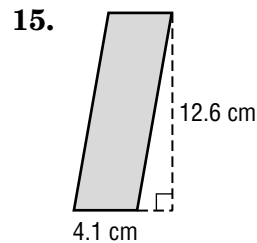
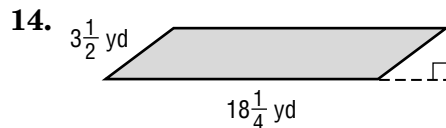
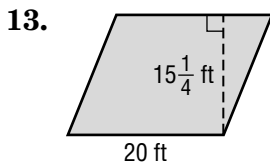
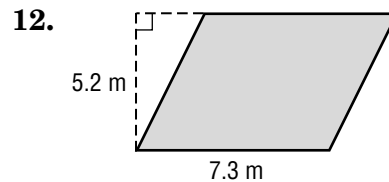
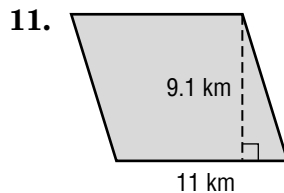
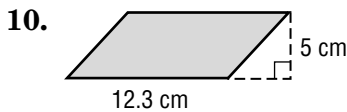
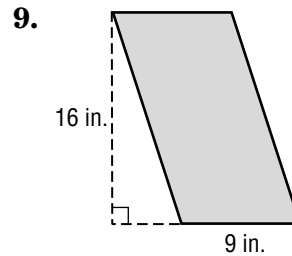
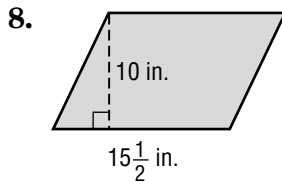
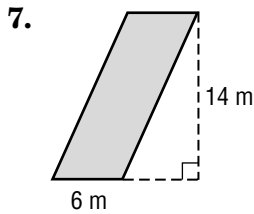
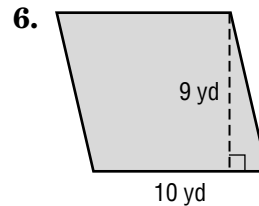
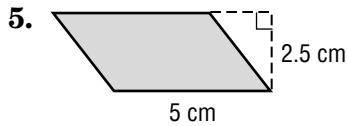
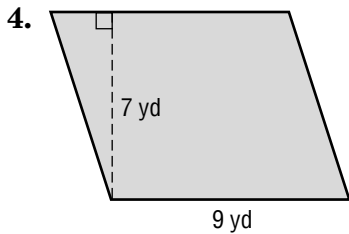
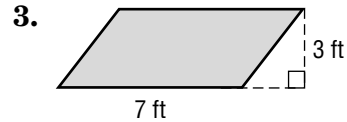
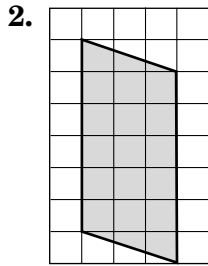
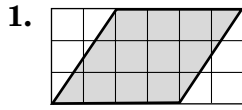


14-1

Practice: Skills

Area of Parallelograms

Find the area of each parallelogram. Round to the nearest tenth if necessary.



16. What is the measure of the area of a parallelogram with a base of $6\frac{2}{3}$ inches and a height of $1\frac{1}{2}$ inches?

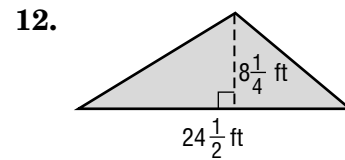
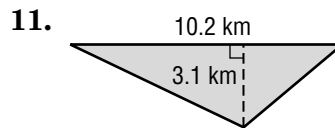
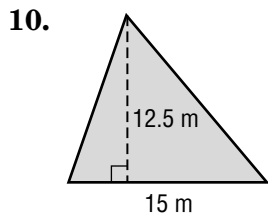
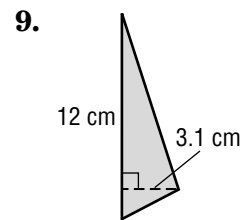
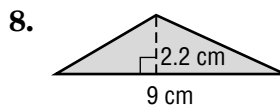
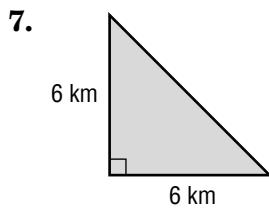
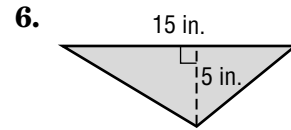
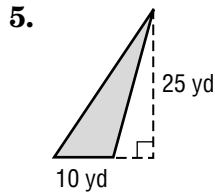
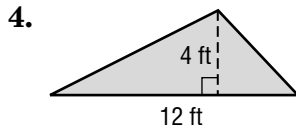
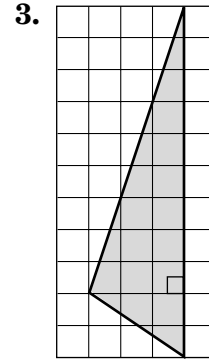
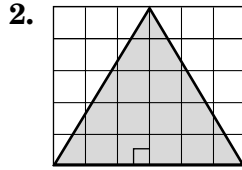
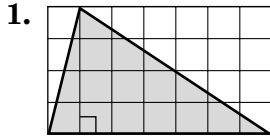
17. Find the area of a parallelogram with base $7\frac{1}{5}$ yards and height $1\frac{1}{9}$ yards.

14-2

Practice: Skills

Area of Triangles

Find the area of each triangle. Round to the nearest tenth if necessary.



13. base: 4 in.
height: 11 in.

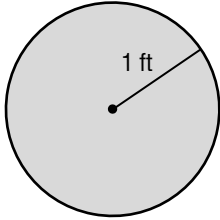
14. base: $4\frac{3}{4}$ yd
height: $1\frac{1}{3}$ yd

15. base: $5\frac{1}{4}$ ft
height: $2\frac{2}{3}$ ft

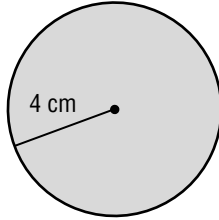
14-3**Practice: Skills****Area of Circles**

Find the area of each circle to the nearest tenth. Use 3.14 for π .

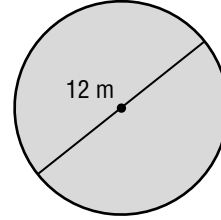
1.



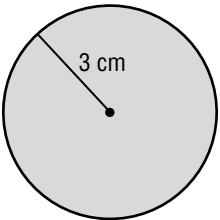
2.



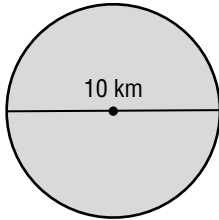
3.



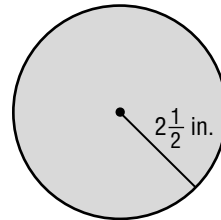
4.



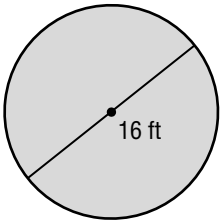
5.



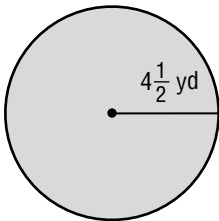
6.



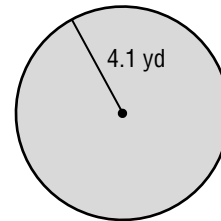
7.



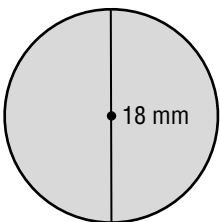
8.



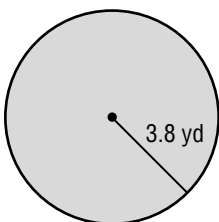
9.



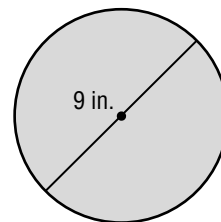
10.



11.



12.



13. What is the area of a circle whose radius is 4.2 yards?

14. Find the area of a circle with a diameter of 13 meters.

15. What is the area of a circle whose radius is 6.6 inches?

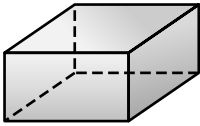
14-4

Practice: Skills

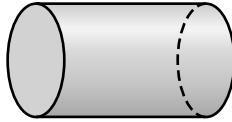
Three-Dimensional Figures

Identify each figure.

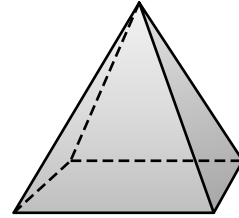
1.



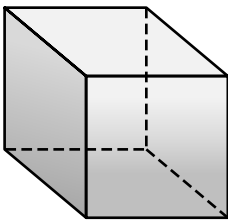
2.



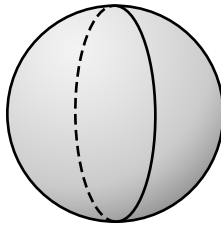
3.



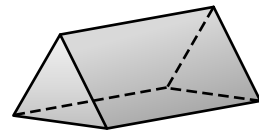
4.



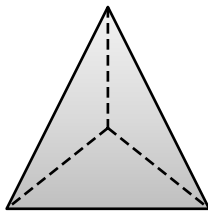
5.



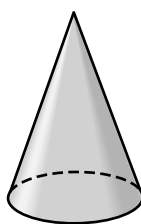
6.



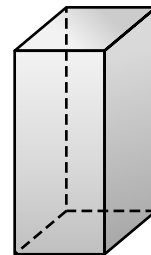
7.



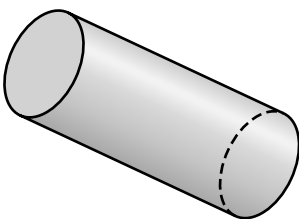
8.



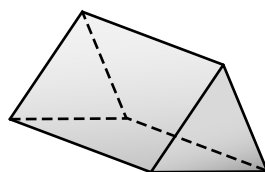
9.



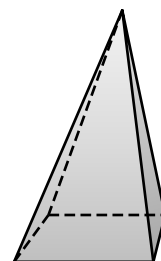
10.



11.

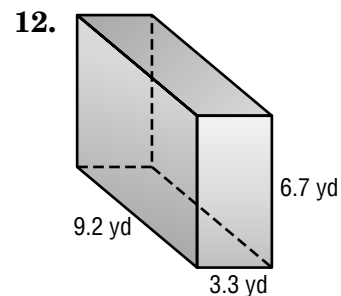
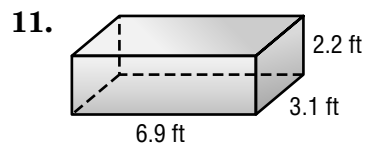
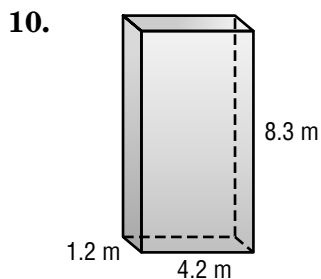
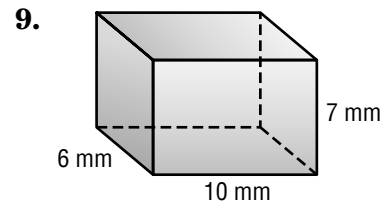
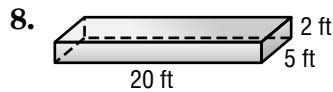
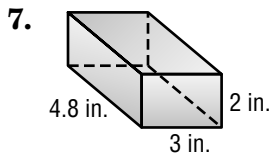
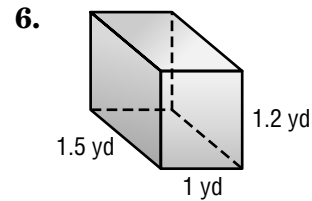
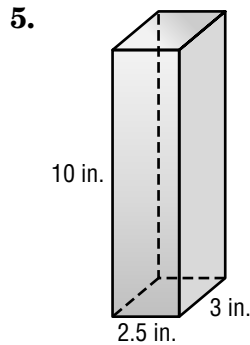
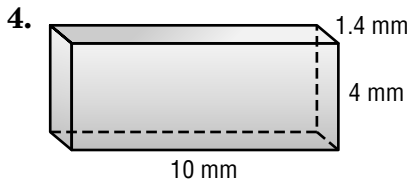
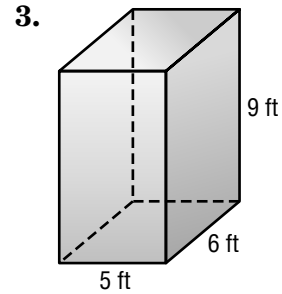
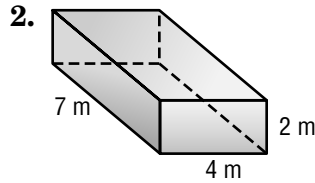
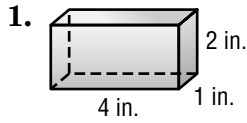


12.



14-5**Practice: Skills*****Volume of Rectangular Prisms***

Find the volume of each rectangular prism. Round to the nearest tenth if necessary.



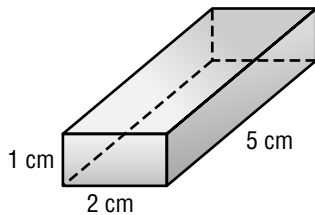
13. Find the volume of a rectangular prism with length 9 meters, width 4 meters, and height 5 meters.

14. What is the volume, to the nearest tenth, of a rectangular prism with length 6.2 yards, width 2.6 yards, and a height of 1.5 yards?

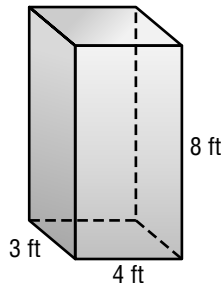
14-6**Practice: Skills****Surface Area of Rectangular Prisms**

Find the surface area of each rectangular prism. Round to the nearest tenth if necessary.

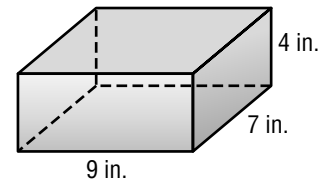
1.



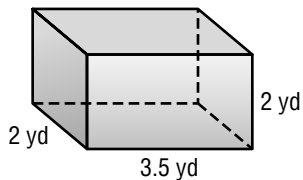
2.



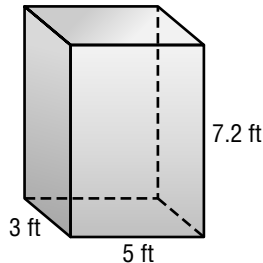
3.



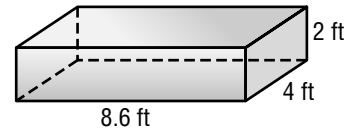
4.



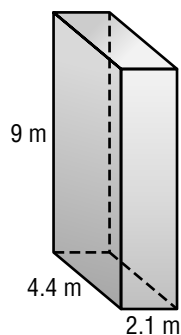
5.



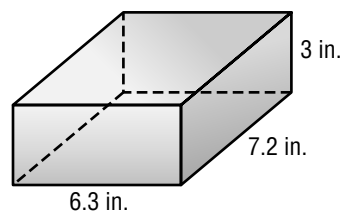
6.



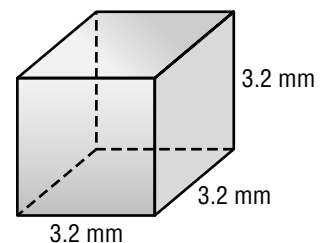
7.



8.



9.



10. Find the surface area of a rectangular prism that is $3\frac{1}{2}$ feet by $4\frac{1}{4}$ feet by 6 feet.

11. What is the surface area of a rectangular prism that measures $2\frac{1}{3}$ meters by $2\frac{1}{2}$ meters by 4 meters?