Solve for the unknown number.

1. \(3 \times 7 = \) _____  
2. \(32 / 4 = \) _____  
3. \(7 \times 5 = \) _____  
4. \(6 \times \) _____ = 24  
5. \(5 \times \) _____ = 30  
6. \(3 \times \) _____ = 24  
7. \(15 / 3 = \) _____  
8. \(20 / 5 = \) _____  
9. \(18 / 6 = \) _____  
10. \(9 \times 2 = \) _____  
11. \(3 \times 9 = \) _____  
12. \(4 \times 4 = \) _____

Write an equation for each word problem and then solve the problem.

13. There are 4 measuring cups in a set. Mr. Merton’s science class has 7 sets of measuring cups. How many cups are there altogether? ________________

14. A carousel has 40 horses. There are 4 horses in each row. How many rows are there on the carousel? ________________

15. Morgan has 24 dollars. She wants to buy party hats that cost 3 dollars each. How many party hats can Morgan buy? ________________

16. The Garcias have a grandfather clock that needs to be wound once a week. How many times will they need to wind it during the month of February, which has 28 days? ________________

17. There are 8 cars in a repair shop. All 8 cars need 4 new tires. How many tires will be needed in all? ________________

18. Write a multiplication or division word problem of your own. Then write an equation and solve the problem.  
   _______________________________________________________________________________  
   _______________________________________________________________________________  
   _______________________________________________________________________________
Complete.

1. \(2 \times \underline{} = 6\)  
2. \(10 \div 5 = \underline{}\)  
3. \(\underline{} \times 3 = 12\)

4. \(\underline{} \times 5 = 25\)  
5. \(6 \times \underline{} = 24\)  
6. \(7 \times 2 = \underline{}\)

7. \(16 \div 8 = \underline{}\)  
8. \(\underline{} \times 1 = 9\)  
9. \(\underline{} \times 4 = 20\)

10. \(3 \times \underline{} = 18\)  
11. \(\underline{} \times 7 = 28\)  
12. \(9 \div 3 = \underline{}\)

13. \(4 \times 10 = \underline{}\)  
14. \(2 \times \underline{} = 4\)  
15. \(\underline{} \times 6 = 6\)

Write an equation. Then solve the problem.

16. Tanya plans to read 2 books each month. If she achieves her goal, how many books will she read in one year?

\[\text{books} = 2 \times 12\]

17. To prepare for a math test, Elena studied for one and one-half hours. For how many minutes did Elena study?

\[\text{minutes} = \frac{1.5 \times 60}{1}\]

18. Anthony wants to distribute 15 toys equally to each of his 5 friends. How many toys should each friend receive?

\[\text{toys per friend} = \frac{15}{5}\]

19. Kelvin's birthday is 14 days from today. How many weeks will it be until Kelvin celebrates his birthday?

\[\text{weeks} = \frac{14}{7}\]

20. A kennel is caring for 5 pets. Last week, the kennel cared for 3 times as many pets. How many pets did the kennel care for last week?

\[\text{pets last week} = 5 \times 3\]

21. An egg carton has spaces for one dozen eggs. If there are 2 rows of 4 eggs in the carton, how many spaces in the carton are empty?

\[\text{spaces empty} = 12 - (2 \times 4)\]
Name the kind of situation shown and write an equation. Then solve each problem.

1. A large box of crayons holds 60 crayons. There are 10 crayons in each row. How many rows are there?

   Situation: ________________
   Equation: ________________

2. A poster is 4 feet long by 3 feet wide. How many square feet of wall space will it cover?

   Situation: ________________
   Equation: ________________

3. A bingo card has 5 rows and 5 columns of squares. Jasmine and her friend need every square covered to win. How many squares must be covered to win the game?

   Situation: ________________
   Equation: ________________

4. There are 28 students in Mrs. Fletcher’s class. She has divided them into 7 groups for a science project. How many students are there in each group?

   Situation: ________________
   Equation: ________________

Find the unknown length \( l \), width \( w \), or area \( A \). Remember: \( A = l \times w \).

5. \( 6 \times 3 = A \) 
   \( A = _____ \)

6. \( 8 \times w = 32 \) 
   \( w = _____ \)

7. \( A = 7 \times 5 \) 
   \( A = _____ \)

8. \( 45 / 5 = l \) 
   \( l = _____ \)

9. 6 in.

   Area = _____ sq in.

10. 5 in.

   length = _____ cm

   Area = 36 sq cm

11. A rectangle has an area of 18 square meters. The length and width are whole numbers. Write all the possible lengths and widths for this rectangle.
Complete.

1. \(3 \times 3 = \) _____
2. \(10 \times \) _____ = 20
3. _____ \(\times 5 = 30\)
4. _____ \(\times 7 = 21\)
5. \(24 \div 6 = \) _____
6. \(1 \times \) _____ = 11
7. \(4 \times 8 = \) _____
8. \(9 \times \) _____ = 36
9. _____ \(\times 8 = 72\)

Solve for the unknown.

10. \(7 \cdot w = 42\)
11. \(A = 6 \cdot 8\)
12. \(\frac{x}{6} = 3\)

\(w = \) _____
\(A = \) _____
\(x = \) _____

Write the missing measurement.

13. 

\[\text{Area} = \] _____ \text{sq in.}

14. 

\[\text{Area} = 24 \text{ sq ft}\]

\[\text{width} = \] _____ \text{ft}

Write an equation. Then solve the problem.

15. On its keypad, a portable phone has 21 buttons, and there are 3 buttons in each row. How many rows of buttons are on the keypad?

Equation ________________

__________________________

16. Twenty people at Jeff’s school are going on a field trip. If 5 people can ride in each car, how many cars are needed for the field trip?

Equation ________________

__________________________
Write the situation: equal groups, array, or area. Then write an equation and solve the problem.

1. In the Cozy Cafe there are 6 chairs at each table. Altogether there are 42 chairs. How many tables are there at the Cozy Cafe?
   Situation: __________________________
   Equation: __________________________

2. Hester measured the patio in her backyard. It is 10 feet long and 9 feet wide. How many square feet of ground does it cover?
   Situation: __________________________
   Equation: __________________________

3. Miguel visited an apple orchard. He saw 8 rows and 6 columns of trees. How many apple trees are there in all?
   Situation: __________________________
   Equation: __________________________

4. The movie theater in Cloverville has 72 seats arranged in 9 rows. How many seats are in each row?
   Situation: __________________________
   Equation: __________________________

Find the unknown area (A), length (l), or width (w) in each equation.

5. $9 \times 7 = A$
   $A = _____$

6. $l = 81 \div 9$
   $l = _____$

7. $6 \cdot 7 = A$
   $A = _____$

8. $64 \div 8 = w$
   $w = _____$

9. $5 \times l = 35$
   $l = _____$

10. $27 \div 9 = w$
    $w = _____$

11. $40 = 5 \times l$
    $l = _____$

12. $4 \times l = 36$
    $l = _____$

13. $56 \div w = 8$
    $w = _____$

14. $A = 8 \times 6$
    $A = _____$

15. $45 = l \times 5$
    $l = _____$

16. $25 \cdot w = 100$
    $w = _____$

Answer each question.

17. If $8 \times 12 = 96$, then what is $12 \times 8$? _____

18. If $144 \div 9 = 16$, then what is $16 \times 9$? _____

Use your Target to practice multiplications and divisions. Use the Multiplication Tables on the inside back cover of this book.
Multiply or divide.

1. \(8 \cdot 9 = \) ______  
2. \(7 \cdot 7 = \) ______  
3. \(4 \cdot 2 = \) ______

4. \(99 \div 9 = \) ______  
5. \(16 \div 4 = \) ______  
6. \(56 \div 8 = \) ______

7. \(9 \times 9 = \) ______  
8. \(63 \div 7 = \) ______  
9. \(3 \times 7 = \) ______

10. \(20 \div 4 = \) ______  
11. \(5 \times 5 = \) ______  
12. \(13 \times \) ______ = 13

13. \(9 \cdot 5 = \) ______  
14. \(27 \div 9 = \) ______  
15. \(10 \cdot 10 = \) ______

16. \(8 \div 8 = \) ______  
17. \(\frac{18}{9} = \) ______  
18. \(\frac{80}{8} = \) ______

Write each quotient.

19. \(2\overline{20}\)  
20. \(6\overline{30}\)  
21. \(7\overline{63}\)  
22. \(8\overline{24}\)  
23. \(5\overline{0}\)

24. \(5\overline{15}\)  
25. \(4\overline{24}\)  
26. \(9\overline{36}\)  
27. \(3\overline{9}\)  
28. \(4\overline{28}\)

Solve.

29. Aimee invited 5 friends to her birthday party. If Aimee and her friends will sit in equal numbers at 2 tables, how many people will be seated at each table?

30. A quilt is made of 8 rows of squares, and there are 6 squares in each row. Each square measures 1 foot on a side. Explain how to find the area of the quilt in square feet. Then write the area.
Write the situation: equal groups, array, area, or combination. Then write an equation and solve the problem.

1. A chessboard has 8 rows of squares. There are 64 squares total. How many columns are on a chessboard?
   Situation: __________________________
   Equation: __________________________

2. A sandbox is 9 feet long and 6 feet wide. How many square feet of ground does the sandbox cover?
   Situation: __________________________
   Equation: __________________________

3. The Ferris wheel in Paradise Park has 10 seats. Each seat can hold 3 people. How many people can ride the Ferris wheel at the same time?
   Situation: __________________________
   Equation: __________________________

4. Dan makes invitations out of red, white, and blue paper. Each has a star or a flag pattern. How many kinds of invitations can he make?
   Situation: __________________________
   Equation: __________________________

5. Mr. Caruso is a builder who always builds the same kind of house. Only the materials are different. How many different houses can Mr. Caruso build?
   Situation: __________________________
   Equation: __________________________

---

Find the unknown number in each equation.

6. $a = 6 \times 7$
   $a = _____$

7. $b = 81 \div 9$
   $b = _____$

8. $5 \times 8 = c$
   $c = _____$

9. $7e = 21$
   $e = _____$

10. $10f = 50$
    $f = _____$

11. $42 \div 6 = g$
    $g = _____$

12. $72 = 9k$
    $k = _____$

13. $54 = 9p$
    $p = _____$

Practice multiplications and divisions with your Target.
Complete.

1. $11 \times \underline{\hspace{1cm}} = 88$
2. $\underline{\hspace{1cm}} \div 12 = 1$
3. $6 \times 8 = \underline{\hspace{1cm}}$

4. $\underline{\hspace{1cm}} \div 2 = 5$
5. $5 \times \underline{\hspace{1cm}} = 45$
6. $\underline{\hspace{1cm}} \div 6 = 9$

7. $2 \times 3 = \underline{\hspace{1cm}}$
8. $\underline{\hspace{1cm}} \times 5 = 35$
9. $4 \times \underline{\hspace{1cm}} = 16$

10. $\underline{\hspace{1cm}} \div 7 = 7$
11. $20 \div 4 = \underline{\hspace{1cm}}$
12. $35 \div 7 = \underline{\hspace{1cm}}$

13. $2 \times \underline{\hspace{1cm}} = 16$
14. $\underline{\hspace{1cm}} \div 3 = 9$
15. $\underline{\hspace{1cm}} \times 4 = 36$

16. $\underline{\hspace{1cm}} \times 6 = 36$
17. $4 \times \underline{\hspace{1cm}} = 0$
18. $63 \div 7 = \underline{\hspace{1cm}}$

Write each quotient.

19. $8\sqrt{32}$
20. $7\sqrt{14}$
21. $3\sqrt{30}$
22. $5\sqrt{25}$
23. $9\sqrt{81}$

Solve for the unknown.

24. $18 \div l = 6$

\hspace{1cm} \quad l = \underline{\hspace{1cm}}$

25. $8w = 72$

\hspace{1cm} \quad w = \underline{\hspace{1cm}}$

26. $1 \cdot 10 = A$

\hspace{1cm} \quad A = \underline{\hspace{1cm}}$

27. $\frac{12}{w} = 6$

\hspace{1cm} \quad w = \underline{\hspace{1cm}}$

28. $9 \times 3 = A$

\hspace{1cm} \quad A = \underline{\hspace{1cm}}$

29. $\frac{l}{7} = 3$

\hspace{1cm} \quad l = \underline{\hspace{1cm}}$

Write an equation and use it to solve the problem.

30. A café lunch menu offers a choice of a sandwich or salad, and four types of soup. Find the number of different combinations of a sandwich or salad, and a soup. Explain your answer.

\hspace{1cm} 

\hspace{1cm} 

\hspace{1cm} 

\hspace{1cm} 

\hspace{1cm} 

\hspace{1cm} 

\hspace{1cm} 

\hspace{1cm}
The graph below shows the number of planes arriving in River City today.

<table>
<thead>
<tr>
<th>Time</th>
<th>Number of Planes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morning</td>
<td>✈ ✈ ✈ ✈ ✈ ✈</td>
</tr>
<tr>
<td>Afternoon</td>
<td>✈ ✈</td>
</tr>
</tbody>
</table>

Key: ✈ = 1 Plane

1. There were ______ times as many planes in the morning as in the afternoon.

2. There were ______ as many planes in the afternoon as in the morning.

Tell what situation is shown, write an equation, and solve the problem.

3. Amanda has 63 bracelets. She decides to divide the bracelets equally among 7 friends. How many bracelets does she give each friend?

   Situation: ______________________
   Equation: ______________________

4. Mr. Gordon is planting a garden. He plans to make his garden 12 feet by 3 feet. How many square feet will his garden be?

   Situation: ______________________
   Equation: ______________________

Find the unknown number in each equation.

5. 8a = 56
   a = ______

6. b = 63 ÷ 9
   b = ______

7. 5 • 6 = c
   c = ______

8. 6d = 54
   d = ______

9. 49 ÷ 7 = e
   e = ______

10. 7f = 63
    f = ______

11. 5g = 45
    g = ______

12. 64 = 8h
    h = ______

13. 36 / 6 = j
    j = ______

Use your Target to practice multiplications and divisions. Use the Multiplication Tables on the inside back cover of this book.
Solve for the unknown.

1. \[7 = 56 \div k\]  
   \[k = \text{_____}\]

2. \[4 = 28 \div y\]  
   \[y = \text{_____}\]

3. \[10 \times c = 50\]  
   \[c = \text{_____}\]

4. \[24 = 3r\]  
   \[r = \text{_____}\]

5. \[6q = 54\]  
   \[q = \text{_____}\]

6. \[m \div 8 = 6\]  
   \[m = \text{_____}\]

7. \[5 = s \div 9\]  
   \[s = \text{_____}\]

8. \[6 \times 6 = b\]  
   \[b = \text{_____}\]

9. \[40 \div g = 5\]  
   \[g = \text{_____}\]

Write an equation and use it to solve the problem.

10. This summer, it has rained only \(\frac{1}{4}\) as much as last summer. Last summer, 12 inches of rain fell. What amount of rain has fallen this summer?
    
    Equation: \[\text{_______}\]

11. Clarice is \(\frac{1}{5}\) as old as her mother, and twice as old as her brother Jason. Clarice’s mother is 30 years old. How old is Jason?
    
    Equation: \[\text{_______}\]

The graph below shows the number of books that a student in Mrs. Jacobsen’s class read during April and May.

|-------|--------|--------|--------|--------|

Key: \(\text{Book} = 2\)

Complete each statement.

12. There were \(\text{_____}\) times as many books read during May as during April.

13. There were \(\text{_____}\) as many books read during April as during May.
Solve for the unknown.

1. $5 \cdot 6 = a$
   \[ a = \underline{\hspace{1cm}} \]
2. $b = 64 \div 8$
   \[ b = \underline{\hspace{1cm}} \]
3. $c = 7 \times 8$
   \[ c = \underline{\hspace{1cm}} \]
4. $40 \div 5 = d$
   \[ d = \underline{\hspace{1cm}} \]
5. $7e = 49$
   \[ e = \underline{\hspace{1cm}} \]
6. $50 \cdot f = 100$
   \[ f = \underline{\hspace{1cm}} \]
7. $54 \div 9 = g$
   \[ g = \underline{\hspace{1cm}} \]
8. $4h = 28$
   \[ h = \underline{\hspace{1cm}} \]
9. $45 = 5k$
   \[ k = \underline{\hspace{1cm}} \]
10. $6l = 36$
    \[ l = \underline{\hspace{1cm}} \]
11. $9n = 0$
    \[ n = \underline{\hspace{1cm}} \]
12. $72 = 8p$
    \[ p = \underline{\hspace{1cm}} \]

Identify the kind of situation and write an equation. Then solve the problem.

13. Isabel earned 42 dollars mowing lawns last month. Her sister earned only $\frac{1}{6}$ as much. How much money did Isabel’s sister earn?
   
   **Situation:**
   
   **Equation:**

14. Daniel packed black, tan, and blue shorts in his suitcase. He also packed 6 different T-shirts. How many different outfits will Daniel have?
   
   **Situation:**
   
   **Equation:**

15. A large muffin tray holds 5 muffins across and 7 muffins down. How many muffins can the tray hold?
   
   **Situation:**
   
   **Equation:**

16. The Richardson family has a tent that covers 54 square feet of ground. It is 9 feet long. How wide is the tent?
   
   **Situation:**
   
   **Equation:**

17. Farmer O’Malley bought new horseshoes for all of his horses today. He bought 36 horseshoes. How many horses does Farmer O’Malley have?
   
   **Situation:**
   
   **Equation:**

18. Mrs. Pinckett planted 8 rose bushes in her garden. She planted 3 times as many azalea bushes. How many azalea bushes did she plant?
   
   **Situation:**
   
   **Equation:**

Practice multiplications and divisions with your Target.
Solve for the unknown.

1. \( x = 42 \div 7 \)  
   \( x = \) 

2. \( 10 \times y = 50 \)  
   \( y = \) 

3. \( 5c = 45 \)  
   \( c = \) 

4. \( t \times 2 = 0 \)  
   \( t = \) 

5. \( n \div 8 = 9 \)  
   \( n = \) 

6. \( 7 \times 8 = q \)  
   \( q = \) 

7. \( \frac{r}{9} = 7 \)  
   \( r = \) 

8. \( \frac{48}{6} = w \)  
   \( w = \) 

9. \( \frac{36}{f} = 4 \)  
   \( f = \) 

10. \( 4h = 31 - 3 \)  
    \( h = \) 

11. \( k = 27 \div 3 \)  
    \( k = \) 

12. \( 16 - 9 = z \)  
    \( z = \) 

13. \( s \div 6 = 8 \)  
    \( s = \) 

14. \( 45 \div b = 5 \)  
    \( b = \) 

15. \( e = 32 \div 8 \)  
    \( e = \) 

Write an equation. Then use the equation to solve the problem.

16. When deciding what to wear, a student must choose from 2 pairs of jeans and 5 T-shirts. How many different combinations of one pair of jeans and one T-shirt can be made?

17. One section of a theater contains 6 rows of seats. Each row has the same number of seats. Altogether, 54 people can sit in the seats. How many seats are in each row in that section of the theater?

18. The number of basketball coaches in a league is \( \frac{1}{7} \) the number of players. How many coaches are at the school if 63 players are in the league?

19. At a figure skating performance, \( \frac{1}{3} \) of the skaters completed a triple jump. If 18 skaters performed, how many skaters did not complete a triple jump?
Find the unknown number in each equation.

1. $9a = 36$  
   $a = ____$
2. $1 	imes b = 26$  
   $b = ____$
3. $14 	imes c = 0$  
   $c = ____$
4. $81 ÷ 9 = d$  
   $d = ____$
5. $e = 6 \cdot 8$  
   $e = ____$
6. $0 ÷ 16 = f$  
   $f = ____$
7. $g = 49 ÷ 7$  
   $g = ____$
8. $0 \times 9 = h$  
   $h = ____$

For each problem, tell what kind of situation is described. Then write an equation and solve.

9. The leader of a marching band wants to order new uniforms. There are 7 colors and 6 designs to choose from. How many possible band uniforms are there?
   
   **Situation:**
   
   **Equation:**

10. The band has 12 flute players. There are only $\frac{1}{3}$ as many piccolo players as flute players. How many piccolo players does the band have?
   
   **Situation:**
   
   **Equation:**

11. Each drummer has 4 drumsticks, making a total of 36 drumsticks. How many drummers are in the band?
   
   **Situation:**
   
   **Equation:**

12. The band has 48 people. There are 6 people in each row. How many rows are there in the marching band?
   
   **Situation:**
   
   **Equation:**

Which of these answers cannot be right? How do you know?

13. $32 \times 14 = 448$  
    $53 \times 17 = 906$  
    $46 \times 18 = 828$

Use your Target to practice multiplications and divisions.
Solve for the unknown.

1. \( \frac{a}{9} = 8 \)
   \[ a = \phantom{0000} \]

2. \( y = \frac{32}{8} \)
   \[ y = \phantom{0000} \]

3. \( \frac{81}{b} = 9 \)
   \[ b = \phantom{0000} \]

4. \( 5 \times e = 30 \)
   \[ e = \phantom{0000} \]

5. \( 7 = p \div 6 \)
   \[ p = \phantom{0000} \]

6. \( t = 8 \times 8 \)
   \[ t = \phantom{0000} \]

7. \( h = 35 \div 5 \)
   \[ h = \phantom{0000} \]

8. \( 7 \times c = 56 \)
   \[ c = \phantom{0000} \]

9. \( 10s = 100 \)
   \[ s = \phantom{0000} \]

10. \( 7i = 8 + 6 \)
    \[ i = \phantom{0000} \]

11. \( m = 24 \div 6 \)
    \[ m = \phantom{0000} \]

12. \( 15 - 6 = d \)
    \[ d = \phantom{0000} \]

Solve.

13. The attendance for 2 performances of a school play was 361 people in total. If 193 people attended the first performance, how many attended the second?

14. During the first lunch period of the day, 48 students sit in equal groups at each of 8 cafeteria tables. What number of students sit at each table?

15. A classroom contains 4 rows of desks and 7 desks in each row. How many desks does the classroom contain?

16. At Central School, a class period is 5 times longer than a recess. How long is a recess if a class period is 50 minutes?

17. A class has four more girls than boys. The class has 1 teacher and 2 aides. The class has 16 girls. How many boys are in the class?

18. Last night, Taylor studied for twice as long as Eduardo and \( \frac{1}{2} \) as long as Sharice. How long did Sharice study if Eduardo studied for 20 minutes?
For each table, write the rule and complete the table. Then write an equation.

1. **Rule:**
<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>

   Equation: __________

2. **Rule:**
<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

   Equation: __________

For each table, write a rule using words and an equation with two variables. Then complete the table.

3. **Rule in Words**
<table>
<thead>
<tr>
<th>Hours (h)</th>
<th>Distance in miles (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>5</td>
<td>16</td>
</tr>
</tbody>
</table>

   Equation

4. **Rule in Words**
<table>
<thead>
<tr>
<th>Number of insects (i)</th>
<th>Number of legs (l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>18</td>
</tr>
</tbody>
</table>

   Equation

5. **Rule in Words**
<table>
<thead>
<tr>
<th>Number of trees (t)</th>
<th>Number of shrubs (s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>8</td>
<td>32</td>
</tr>
<tr>
<td>9</td>
<td>36</td>
</tr>
</tbody>
</table>

   Equation

6. **Rule in Words**
<table>
<thead>
<tr>
<th>Sue’s age (s)</th>
<th>Ted’s age (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>14</td>
<td>17</td>
</tr>
<tr>
<td>17</td>
<td>27</td>
</tr>
<tr>
<td>27</td>
<td>25</td>
</tr>
</tbody>
</table>
Solve for the unknown.

1. \( q = \frac{56}{8} \)
   
   \( q = \) ______

2. \( 5 = \frac{20}{r} \)
   
   \( r = \) ______

3. \( \frac{v}{9} = 8 \)
   
   \( v = \) ______

4. \( 6c = 36 \)
   
   \( c = \) ______

5. \( 9s = 63 \)
   
   \( s = \) ______

6. \( 45 = a \times 5 \)
   
   \( a = \) ______

7. \( 2g = 8 \)
   
   \( g = \) ______

8. \( n = 49 \div 7 \)
   
   \( n = \) ______

9. \( 9 \times 8 = u \)
   
   \( u = \) ______

Solve.

10. \( 8 \times 0 = \) ______

11. \( 1 \times 12 = \) ______

12. \( 9 \times 1 = \) ______

13. \( 0 \div 6 = \) ______

14. \( 1 \times 19 = \) ______

15. \( 0 \div 45 = \) ______

16. \( 64 \times 1 = \) ______

17. \( 0 \times 82 = \) ______

18. \( 0 \div 27 = \) ______

Identify the type of situation and write an equation. Then solve the problem.

19. Each row of a display contains 4 vases. The display contains 24 vases altogether. How many rows of vases are in the display?
   
   Situation: __________________________
   
   Equation: __________________________

20. Marco has 8 red T-shirts and \( \frac{1}{4} \) as many blue T-shirts as red T-shirts. How many blue T-shirts does Marco have?
   
   Situation: __________________________
   
   Equation: __________________________

Solve.

21. This winter, 36 inches of snow fell. Last winter, only \( \frac{1}{3} \) as much snow fell. How many more inches of snow fell this winter compared to last winter?
   
   __________________________

22. In a class of 18 students at Woodworth School, there are \( \frac{1}{2} \) as many girls as boys. How many girls are in the class? How many boys?
   
   __________________________
Solve each word problem. Label your answer.

1. Randy found 8 seashells on the beach. Maria found 4 times as many. How many did Maria find?

2. Arturo had 4 conch shells and 5 times as many scallop shells. He wants to divide the shells evenly among his 3 best friends. How many seashells will each friend get?

Use the pictograph and key to solve.

Katie planted pumpkins in the spring. Now she is selling them. This pictograph shows how many pumpkins she sold this weekend.

<table>
<thead>
<tr>
<th>Key: = 6 pumpkins</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday</td>
</tr>
<tr>
<td>Saturday</td>
</tr>
<tr>
<td>Sunday</td>
</tr>
</tbody>
</table>

3. How many pumpkins did Katie sell this weekend?

4. How many more pumpkins did she sell on Saturday than on Friday?

5. Katie sells the pumpkins for $3.00 each or 2 for $5.00. What is the least amount of money she could have taken in on Sunday?

6. On Friday Katie sold half the pumpkins for $3.00 each and the rest at 2 for $5.00. How much money did she take in on Friday?
Dear Math Student,

I am giving a party tomorrow and I invited 10 people to come. I bought 10 party bags and planned to put 8 marbles in each bag. Now I hear that my two cousins will be in town and so there will be 12 people altogether.

How many marbles will I need to buy? I don’t know how to multiply $12 \times 8$. It is not part of my multiplication table.

Please send me a letter explaining how to figure this out. Thank you.

Sincerely,

Puzzled Penguin

Will the following products be even or odd? How do you know?

1. $57 \times 57$  
2. $82 \times 96$
3. $91 \times 23$  
4. $76 \times 75$
5. $27 \times 81$  
6. $92 \times 20$
7. $45 \times 55$  
8. $31 \times 31$
9. $73 \times 84$  
10. $52 \times 32$
Solve.

1. \(8 \times c = 0\)  
   \(c = \underline{\hspace{2cm}}\)

2. \(1 \cdot b = 28\)  
   \(b = \underline{\hspace{2cm}}\)

3. \(6a = 36\)  
   \(a = \underline{\hspace{2cm}}\)

4. \(63 \div 9 = d\)  
   \(d = \underline{\hspace{2cm}}\)

5. \(h \cdot 7 = 56\)  
   \(h = \underline{\hspace{2cm}}\)

6. \(3m = 27\)  
   \(m = \underline{\hspace{2cm}}\)

7. \(50 \div j = 10\)  
   \(j = \underline{\hspace{2cm}}\)

8. \(6 \times d = 12\)  
   \(d = \underline{\hspace{2cm}}\)

9. If \(14 \times 12 = 168\), then what is \(168 \div 12\)?

10. If \(315 \div 21 = 15\), then what is \(15 \times 21\)?

Write a multiplication rule using two variables for each function.

11. Rule in Words | Equation
    
    Cars \((c)\) | 1 | 2 | 3 | 4
    Wheels \((w)\) | 4 | 12 | 16 | 20

12. Rule in Words | Equation
    
    Pages of homework \((p)\) | 1 | 2 | 3 | 4 | 5
    Number of problems \((n)\) | 6 | 12 | 18 | 30

13. Rule in Words | Equation
    
    Pizzas \((p)\) | 1 | 2 | 4 | 5
    Number of slices \((s)\) | 8 | 16 | 24 | 32

14. Rule in Words | Equation
    
    Lee’s age \((l)\) | 4 | 9 | 14 | 19 | 30
    Ali’s age \((a)\) | 8 | 13 | 29 | 34

15. On a separate sheet of paper, write one problem for each type: Equal Groups, Array or Area, Comparison, Combination.
Solve for the unknown.

1. \( \frac{54}{9} = a \)
   \[ a = \underline{\hspace{2cm}} \]

2. \( \frac{24}{i} = 3 \)
   \[ i = \underline{\hspace{2cm}} \]

3. \( \frac{u}{8} = 9 \)
   \[ u = \underline{\hspace{2cm}} \]

4. \( z \times 4 = 16 \)
   \[ z = \underline{\hspace{2cm}} \]

5. \( 5 \times w = 40 \)
   \[ w = \underline{\hspace{2cm}} \]

6. \( 12g = 24 \)
   \[ g = \underline{\hspace{2cm}} \]

7. \( 35 = 5c \)
   \[ c = \underline{\hspace{2cm}} \]

8. \( m \div 6 = 8 \)
   \[ m = \underline{\hspace{2cm}} \]

9. \( 9 \times 7 = p \)
   \[ p = \underline{\hspace{2cm}} \]

10. \( h \div 11 = 1 \)
    \[ h = \underline{\hspace{2cm}} \]

11. \( 56 \div x = 8 \)
    \[ x = \underline{\hspace{2cm}} \]

12. \( r = 64 \div 8 \)
    \[ r = \underline{\hspace{2cm}} \]

Complete.

13. If \( 10 \times 25 = 250 \), then what is \( 250 \div 10 \)?
    \[ \underline{\hspace{2cm}} \]

14. If \( 144 \div 24 = 6 \), then what is \( 6 \times 24 \)?
    \[ \underline{\hspace{2cm}} \]

15. If \( 15 \times 15 = 225 \), then what is \( 225 \div 15 \)?
    \[ \underline{\hspace{2cm}} \]

16. If \( 156 \div 13 = 12 \), then what is \( 156 \div 12 \)?
    \[ \underline{\hspace{2cm}} \]

17. If \( 288 \div 18 = 16 \), then what is \( 18 \times 16 \)?
    \[ \underline{\hspace{2cm}} \]

18. If \( 9 \times 45 = 405 \), then what is \( 405 \div 45 \)?
    \[ \underline{\hspace{2cm}} \]

Write an equation. Then use the equation to solve the problem.

19. Derek has twice as many brothers as Mallory. Derek has 2 brothers. How many brothers does Mallory have?
    \[ \underline{\hspace{2cm}} \]

20. Devin’s age is one-sixth of Gabriela’s age. How old is Gabriela if Devin is 2 years old?
    \[ \underline{\hspace{2cm}} \]

21. Tina’s age is one-seventh of her mother’s age. How old is Tina’s mother if Tina is 5 years old?
    \[ \underline{\hspace{2cm}} \]

22. Walt has four times as many pins as Kyle. Walt has 16 pins. How many pins does Kyle have?
    \[ \underline{\hspace{2cm}} \]
1. Write the next two numbers in this sequence:
   9 18 27 36 45 _____ _____

2. If you multiply $67 \times 67$, will your answer be even or odd?
   _____ How do you know? _____________________________

3. If $35 \times 25$ is 875, then what is $875 \div 25$? _____

4. What is $n$ in this equation: $18 \times 3 = 9 \times n$? _____

5. What is $n$ in this equation: $7 \times 6 = 5 \times 6 + n \times 6$? _____

6. If one person counts by 3 to 60 and another person counts by 6 to 60, will any of those numbers be the same? Explain.
   ______________________________________________________
   ______________________________________________________
   ______________________________________________________

7. Complete the Scrambled Multiplication Table.

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>20</td>
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<td>70</td>
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<tr>
<td>14</td>
<td>63</td>
<td>21</td>
<td>49</td>
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<td>35</td>
</tr>
<tr>
<td>80</td>
<td></td>
<td>64</td>
<td>48</td>
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<tr>
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<tr>
<td>1</td>
<td>9</td>
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<td></td>
<td>12</td>
<td>18</td>
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<tr>
<td>60</td>
<td>18</td>
<td>42</td>
<td>36</td>
<td></td>
<td></td>
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<td>5</td>
<td>45</td>
<td>40</td>
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<td></td>
</tr>
<tr>
<td>20</td>
<td>18</td>
<td>8</td>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Solve.

8. At the dog show there are 56 retrievers. There are only $\frac{1}{8}$ as many collies. How many collies are at the show?
   ______________________

9. A small track has 9 rows of bleachers. Each row holds 8 people. How many people can sit in the bleachers?
   ______________________
Complete the Scrambled Multiplication Table.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>56</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>20</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>45</td>
<td></td>
<td></td>
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<tr>
<td>21</td>
<td>30</td>
<td>15</td>
<td></td>
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<tr>
<td>27</td>
<td>36</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>40</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Write an equation and solve the problem.

2. Zachary’s birthday is 9 weeks from today. In how many days will Zachary be celebrating his birthday?

3. A school bus can carry 40 passengers seated in rows of 4. How many rows of seats are in the bus?

4. A board game is shaped like a square array and is made up of 36 squares. How many rows and how many columns are in the array?

5. In a middle school fifth-grade class, there are 5 girls for every 4 boys. Altogether, the class has 27 students. How many boys are in the class?

6. On a separate sheet of paper, write an equal groups problem and an area problem. Make one be a division problem.
Find the unknown number in each equation.

1. \( p = 3 + (4 \times 5) \) __________  
2. \( 4t + 1 = 25 \) __________  
3. \( 5 \times (6 + 3) = m \) __________  
4. \( 6r - 3 = 15 \) __________  
5. \( (12 - 8) \times 7 = b \) __________  
6. \( n = 16 - (3 \times 4) \) __________  
7. \( 9s = 17 + 1 \) __________  
8. \( 5 + (8 \times 6) = c \) __________  
9. \( 7d + 5 = 26 \) __________  
10. \( (6 \times 5) - (4 \times 5) = h \) __________  

Write an equation. Then solve the problem.

1. Mr. Corelli made a tray of cookies that held 5 across and 7 down. There are 38 students in Mr. Corelli’s class. How many more cookies does he need if each student is to get one cookie?  
   Equation: ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________

2. Leah bought 2 boxes of cookies. She ate 3 cookies and found that she had 21 left. How many cookies were in each box?  
   Equation: ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________

3. Arturo built 3 sandcastles with 6 towers each. Paco built 5 sandcastles with 4 towers each. Who built more towers? How many more?  
   Equation: ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________

4. Ashley has 35 dollars. She wants to buy 4 bags of peanuts at 2 dollars each. How much money will she have left?  
   Equation: ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________
Write an equation. Then solve the problem.

1. The Parkers’ lawn is 10 yards long by 9 yards wide. They want to build a patio that is 4 yards by 5 yards. How many square yards of lawn will the Parkers have left when the patio is done?

   Equation: ________________________________

2. Sarah sleeps 10 hours each night. Julio sleeps only 8 hours each night. How much more sleep does Sarah get in a week than Julio?

   Equation: ________________________________

Complete the Scrambled Multiplication Table below.

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>49</td>
<td>7</td>
<td>70</td>
<td>14</td>
<td>28</td>
<td>56</td>
</tr>
<tr>
<td>70</td>
<td>10</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>50</td>
</tr>
<tr>
<td>1</td>
<td>10</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>60</td>
<td>24</td>
<td>36</td>
<td>48</td>
<td>18</td>
<td>30</td>
</tr>
<tr>
<td>14</td>
<td>2</td>
<td>20</td>
<td>4</td>
<td>12</td>
<td>16</td>
<td>6</td>
</tr>
<tr>
<td>56</td>
<td>80</td>
<td>16</td>
<td>32</td>
<td>48</td>
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<td>21</td>
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<td>63</td>
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<td>18</td>
<td>54</td>
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<td>50</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>15</td>
</tr>
</tbody>
</table>
Solve each problem.

1. Michael has 21 T-shirts. One third of them are blue. How many of Michael’s T-shirts are blue?

2. A gift wrapping department has 4 colors of ribbon, 2 kinds of bows, and 7 kinds of wrapping paper. How many different gift wrap styles are possible?

3. Anne-Marie has saved 9 dollars for a new coat. That is \(\frac{1}{6}\) as much money as she needs. How much does the coat cost?

4. Last year it rained on 63 days in Mudville. There were 7 times as many days of rain in Mudville as in Desert Hills. How many days did it rain in Desert Hills last year?

5. Mrs. Ricardo makes toy cars to sell at craft fairs. She has 8 colors of paint, 5 body styles, and 2 kinds of wheels. How many different kinds of cars can she make?

6. At a country music concert, 48 people played guitars. That number is 6 times as many as the number of people who played banjos. How many people at the concert played banjos?

7. There are 8 apples left on the table. There are \(\frac{1}{4}\) as many apples as bananas left on the table. How many bananas are there?
Use the pictograph and key to solve.

Bob, Reza, and Yoshi run laps around the track every day after school. This pictograph shows how many laps they ran last week.

<table>
<thead>
<tr>
<th>Bob</th>
<th>Reza</th>
<th>Yoshi</th>
</tr>
</thead>
<tbody>
<tr>
<td>🏃️‍♂️ 8</td>
<td>🏃️‍♂️ 8</td>
<td>🏃️‍♂️ 8</td>
</tr>
</tbody>
</table>

Key: 🏃️‍♂️ = 8 laps

1. How many laps did Reza run last week? ______________________

2. How many more laps did Bob run than Yoshi? ______________________

3. How many more or fewer laps did Bob and Yoshi together run than Reza?

4. Yoshi ran the same number of laps every day except Friday when he ran 12 laps. How many laps did he run on Wednesday?

Complete the Scrambled Multiplication Table.

5. | x   | 18 | 30 | 20 | 16 | 30 | 18 | 30 |
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
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<td>540</td>
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<td>256</td>
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<tr>
<td>4</td>
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<td>120</td>
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<tr>
<td>4</td>
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<td>80</td>
<td>64</td>
<td>120</td>
<td>72</td>
<td>120</td>
</tr>
</tbody>
</table>
Solve each problem. Label your answer.

1. Rachel has 4 times as many markers as Polly has. Rachel has 36 markers. How many markers does Polly have?

2. Sean sold 63 balloons at the fair. That is 7 times as many as Oscar sold. How many balloons did Oscar sell?

3. Ramon scored 72 points in basketball games this year. His friend Paco scored \( \frac{1}{8} \) as many points as Ramon. How many points did Paco score?

4. Chris has 6 different cookie cutters, 4 kinds of frosting, and 2 kinds of sprinkles. How many different kinds of cookies can she make?

5. Meg and Kurt are building a tree house. They have 3 kinds of roofing material, 4 colors of paint, and 2 doors to choose from. How many different ways could they build the tree house?

6. Mrs. Grant’s garden is a square that is 5 yards on each side. Mrs. Diego’s garden is a square that is 10 yards on each side. The area of Mrs. Diego’s garden is how many times as large as the area of Mrs. Grant’s garden?

Solve each Factor Puzzle.

7.  

   \[
   \begin{array}{cc}
   2 & 10 \\
   15 & \ \\
   \end{array}
   \]

8.  

   \[
   \begin{array}{cc}
   27 & \ \\
   35 & 45 \\
   \end{array}
   \]

9.  

   \[
   \begin{array}{cc}
   7 & \ \\
   25 & 35 \\
   \end{array}
   \]

10.  

   \[
   \begin{array}{cc}
   27 & 24 \\
   35 & \ \\
   \end{array}
   \]

11.  

   \[
   \begin{array}{cc}
   6 & 9 \\
   8 & \ \\
   \end{array}
   \]

12.  

   \[
   \begin{array}{cc}
   15 & \ \\
   9 & 6 \\
   \end{array}
   \]

13.  

   \[
   \begin{array}{cc}
   12 & \ \\
   24 & 32 \\
   \end{array}
   \]

14.  

   \[
   \begin{array}{cc}
   25 & 50 \\
   30 & \ \\
   \end{array}
   \]

15. On a separate sheet of paper, write a Factor Puzzle for your classmates to solve. You may use the Multiplication Tables on the back cover.
Complete.

1. Write the next two numbers: 9, 18, 27, _____, _____

2. If you multiply $51 \times 51$, will your answer be even or odd? _____ How do you know? ______________________

3. If $52 \times 38 = 1,976$, then what is $1,976 \div 38$? _____

4. What is $b$ in this equation: $15 \times 7 = 21 \times b$? _____

5. What is $b$ in this equation: $5 \times 6 = 5 \times 4 + 5 \times b$? _____

6. If one person counts by 4s to 80 and another person counts by 8s to 80, will any of those numbers be the same? Explain which ones.
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

7. Which two of these answers cannot be right? How do you know?
   a. $18 \times 17 = 305$  b. $21 \times 21 = 441$  c. $32 \times 48 = 1,535$
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

Find the unknown number in each equation.

8. $8a = 48$  
   $a = _____$

9. $5b + 1 = 46$  
   $b = _____$

10. $3 \times (6 + 2) = d$  
    $d = _____$

11. $7e - 2 = 47$  
    $e = _____$

12. $\frac{1}{3}g = 8$  
    $g = _____$

13. $16 + h = 24$  
    $h = _____$
Solve.

1. A fruit company makes two gift boxes of oranges—the Ruby Box and the Emerald Box. The Ruby Box has 8 rows and 6 columns of oranges. The Emerald Box has 7 rows and 7 columns of oranges. Which box has more oranges? How many more?

2. On his camping trip, Gus saw 18 hawks. He saw 6 times as many hawks as owls. How many owls did Gus see?

3. Melissa collected three kinds of autumn leaves when she was out walking today—elm, maple, and oak. She has 2 times as many maple leaves as elm leaves and 5 times as many oak leaves as elm leaves. Altogether she has 32 leaves. How many of each kind does she have?

4. Everyone at Luke’s party has 2 balloons except Ashley, because one of her balloons popped. There are 17 balloons at the party. How many people are at the party?

5. Patty bought 5 harmonicas for 3 dollars each and 4 whistles for 3 dollars each. How much money did Patty spend?

Find the unknown number in each equation. Write a 1 in front of an unknown that is alone if it will help you.

6. \( c + 3c = 32 \)

7. \( 6d - 3d + 2d = 35 \)

8. \( 5a - a - 2a = 18 \)
Find the unknown number in each equation below.

1. \(6h + 3h = 63\)  
   \(h = \) ____

2. \(5(4 \times 2) = g\)  
   \(g = \) ____

3. \(l = (2 \times 8) - (3 \times 2)\)  
   \(l = \) ____

4. \(m + 3m = 28\)  
   \(m = \) ____

5. \(56 \div r = 8\)  
   \(r = \) ____

6. \(\frac{1}{8}b = 6\)  
   \(b = \) ____

7. \(s = 9(7 - 2)\)  
   \(s = \) ____

8. \(4d + d = 45\)  
   \(d = \) ____

9. \(8w - 4w = 20\)  
   \(w = \) ____

Write odd or even.

10. The product of two even numbers is an _____ number.

11. The product of an odd number and an even number is an _____ number.

12. The product of two odd numbers is an _____ number.

Write an equation and use it to solve the problem.

13. A rectangle has an area of 48 sq cm and a length of 16 cm. What is the width of the rectangle?

   _______________________________________

14. A rectangle has a width of 10 inches and an area of 5 square inches. What is the length of the rectangle?

   _______________________________________

Solve. Explain your answer.

15. A stamp collector is arranging 100 stamps in rows with the same number of stamps in each row. How many different ways could she arrange the stamps if she would like more than 2 rows but fewer than 10 rows?

   _______________________________________
   _______________________________________
   _______________________________________
   _______________________________________
   _______________________________________
Use the Commutative Property to solve for $n$ in these equations.

1. $45 \times 7 = 7 \times n$
   
   $n = \underline{\quad}$

2. $n \times 8 = 8 \times 29$
   
   $n = \underline{\quad}$

3. $36 \times n = 9 \times 36$
   
   $n = \underline{\quad}$

Use the Associative Property to solve each problem.

4. $(9 \times 3) \times 3 = \underline{\quad}$

5. $2 \times (5 \times 7) = \underline{\quad}$

6. $(8 \times 4) \times 2 = \underline{\quad}$

Use the Distributive Property to write each problem with only two factors. Then solve the problems.

7. $(7 \times 3) + (7 \times 5) = \underline{\quad}$

8. $(3 \times 9) + (4 \times 9) = \underline{\quad}$

9. $(8 \times 5) + (8 \times 4) = \underline{\quad}$

10. $(2 \times 6) + (8 \times 6) = \underline{\quad}$

Solve.

11. For Fall Festival, Mrs. Marco bought 6 bags of Golden Delicious apples. She handed out 43 apples and had 5 left over. How many apples were in each bag?

   
   $\underline{\quad}$

12. Juice boxes are sold in packs of 6. Tony brought 5 packs of juice boxes to a party, and Victor brought 4 packs. How many juice boxes are there at the party altogether?

   
   $\underline{\quad}$

13. Everyone in Mrs. Bowman’s art class has 8 jars of paint except Jerome, who has 10. There are 74 jars of paint in the room. How many students are there in Mrs. Bowman’s art class?

   
   $\underline{\quad}$

14. Lisa needs to make 2 times as many tuna as cheese sandwiches and 4 times as many ham as cheese sandwiches. If Lisa makes 56 sandwiches, how many of each of the 3 kinds will she make?

   
   $\underline{\quad}$
Find the unknown number in each equation.

1. \(6h + 3h = 63\)  
   \(h = \) ______

2. \(5(4 \times 2) = g\)  
   \(g = \) ______

3. \(4 \times (5 + 1) = i\)  
   \(i = \) ______

4. \(l = (2 \times 8) - (3 \times 2)\)  
   \(l = \) ______

5. \(m + 3m = 28\)  
   \(m = \) ______

6. \((48 \div 8) - 3 = p\)  
   \(p = \) ______

7. \(56 \div r = 8\)  
   \(r = \) ______

8. \(\frac{1}{8}b = 6\)  
   \(b = \) ______

9. \((3 \times 9) - (5 \times 0)\)  
   \(k = \) ______

10. \(s = 9(7 - 2)\)  
    \(s = \) ______

11. \(4d + d = 45\)  
    \(d = \) ______

12. \(r = 17 + (6 \times 5)\)  
    \(r = \) ______

Complete each Factor Puzzle.

13.  
   
   

14.  
   
   

For each function table, write the rule in words and as an equation. Then complete the table.

15. | Rule in Words | Equation |
    |----------------|----------|
    | Number of people \(p\) | 1 | 2 | 4 | 6 | 7 |
    | Number of feet \(f\) | 2 | 6 | 8 | 10 | 12 |

16. | Rule in Words | Equation |
    |----------------|----------|
    | Number of eyes \(e\) | 0 | 3 | 5 | 6 | 10 |
    | Number of legs \(l\) | 6 | 9 | 15 | 24 | 30 |
1. How many decimeters make 1 meter? ________________
2. How many square decimeters make 1 square meter? ________________
3. How many centimeters make 1 meter? ________________
4. How many square centimeters make 1 square meter? ________________
5. How many millimeters make 1 meter? ________________
6. How many square millimeters make 1 square meter? ________________

Find the area of each rectangle. Show your work.

7. 8. 9.

10. Jason is tiling a patio. The tiles are each 1 square decimeter. The patio is 6 meters long and 4 meters wide. How many tiles will Jason need? ________________

What metric unit would you use to find each?

11. the area of a gymnasium ______ 12. the length of a pencil ______
13. the area of a door ______ 14. the length of an eyelash ______
15. the area of a book cover ______ 16. the area of a driveway ______
Marville and Geotown had a new voter registration contest. The pictograph shows the results by day.

<table>
<thead>
<tr>
<th>Election</th>
<th>Marville</th>
<th>Geotown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday</td>
<td>📃 📃 📃 📃</td>
<td>📃 📃 📃 📃 📃 📃 📃</td>
</tr>
<tr>
<td>Saturday</td>
<td>📃 📃 📃 📃 📃</td>
<td>📃 📃 📃 📃 📃</td>
</tr>
<tr>
<td>Sunday</td>
<td>📃 📃 📃</td>
<td>📃 📃 📃 📃 📃 🔰</td>
</tr>
</tbody>
</table>

Key: 📃 = 8 new voters

Use the pictograph and key to solve.

1. Which town was in the lead on Saturday?

2. By how many new voters was that town ahead on Saturday?

3. How many more new voters were registered on Sunday in Marville than in Geotown?

Solve the problems below. Make a drawing if it helps.

4. Ramon planted 3 rows of seeds. He put 8 seeds in each row. Each row of seeds was 42 inches long. How far apart did Ramon plant the seeds?

5. Bunches of 6 roses were selling for $8. Anita paid $40 for roses. How many roses did she buy?

6. Ms. Goldfarb has 12 turquoise beads and 3 times as many amber beads. She is making 8 pins with the same number of beads on each pin. How many beads will be on a pin?
Find the perimeter and area of each rectangle.

1. \[ \begin{array}{c}
3 \text{ cm} \\
5 \text{ cm}
\end{array} \quad \begin{array}{c}
3 \text{ cm} \\
5 \text{ cm}
\end{array} \]

\[ P = \quad \]

\[ A = \quad \]

3. \[ \begin{array}{c}
3 \text{ cm} \\
6 \text{ cm}
\end{array} \]

\[ P = \quad \]

\[ A = \quad \]

5. \[ \begin{array}{c}
4 \text{ cm}
\end{array} \]

\[ P = \quad \]

\[ A = \quad \]

2. \[ \begin{array}{c}
8 \text{ cm} \\
5 \text{ cm}
\end{array} \]

\[ P = \quad \]

\[ A = \quad \]

4. \[ \begin{array}{c}
7 \text{ cm} \\
2 \text{ cm}
\end{array} \]

\[ P = \quad \]

\[ A = \quad \]

Solve the word problem.

6. Kaya is wallpapering one wall of her room. The wall is 10 feet long and 8 feet tall. How many square feet of wallpaper will Kaya need? \[ \quad \]

7. Kaya’s room is 12 feet long and 10 feet wide. She wants to put a border at the top of the walls. How many feet of border does she need? \[ \quad \]
Solve.

1. \(18 \times 0 = \) 
2. \(98 \times 1 = \) 
3. \(0 \div 85 = \) 
4. \(54 \div 1 = \)

5. \(0 \div 22 = \)
6. \(98 \div 1 = \)
7. \(0 \times 14 = \)
8. \(54 \times 1 = \)

9. \(y = 5. \) Find \(30 \div y. \)
10. \(z = 7. \) Find \(3 \times z. \)

11. \(t = 2. \) Find \(10 \div t. \)
12. \(x = 6. \) Find \(18 \div x. \)

13. \(s = 11. \) Find \(5 \times s. \)
14. \(u = 8. \) Find \(6 \times u. \)

15. If \(h = 12\) and \(t = 36, \) what is \(t \div h? \)
16. If \(a = 4\) and \(s = 10, \) what is \(a \times s? \)
17. If \(v = 9\) and \(m = 8, \) what is \(v \times m? \)
18. If \(u = 77\) and \(d = 7, \) what is \(u \div d? \)
19. If \(s = 4\) and \(t = 20, \) what is \(s \div t? \)
20. If \(m = 12\) and \(p = 5, \) what is \(m \times p? \)

Solve the problems below.

21. Simon bought 4 packages of holiday greeting cards. Each package was $6. How much did he spend?

22. Simon’s packages contained 36 cards altogether. How many cards were in each package?

23. Each package contained 3 different designs of cards. How many cards of each design did Simon buy?

Remember to use your Target and Division Cards to practice.
1. Look at the parallelograms. Which two parallelograms have the same area? Show your work.

   A
   \[ \text{5 cm} \]
   \[ \text{6 cm} \]
   B
   \[ \text{4 cm} \]
   \[ \text{6 cm} \]
   C
   \[ \text{3 cm} \]
   \[ \text{8 cm} \]

2. Look at the right triangles. Which two triangles have the same area? Show your work.

   E
   \[ \text{9 cm} \]
   \[ \text{4 cm} \]
   F
   \[ \text{5 cm} \]
   \[ \text{8 cm} \]
   G
   \[ \text{6 cm} \]
   \[ \text{6 cm} \]

3. For each right triangle, draw the rectangle made by drawing sides opposite the two shorter sides in the triangle. Find the area of each rectangle.

4. How does the area of each rectangle relate to the area of either right triangle inside it?
There are 36 buttons in a jar. There are 3 times as many red buttons as white buttons.

1. How many white buttons are there? _____
2. How many red buttons are there? _____

Hint: Let $w =$ the number of white buttons and $3w =$ the number of red buttons.

There are 40 yellow and blue marbles in a bag. There are 4 times as many blue marbles as yellow marbles.

3. How many yellow marbles are there? _____
4. How many blue marbles are there? _____

A board game comes with 9 white and green number cubes. There are twice as many white cubes as green cubes.

5. How many green number cubes are there? _____
6. How many white number cubes are there? _____

There are 30 bows in a bag. There are 5 times as many small bows as large bows.

7. How many large bows are there? _____
8. How many small bows are there? _____

There are 20 red and blue pens in a box. There are 3 times as many blue pens as red pens.

9. How many red pens are there? _____
10. How many blue pens are there? _____
Find the area of each triangle.

1. \[ \text{Area} = \frac{1}{2} \times 9 \text{ cm} \times 10 \text{ cm} \]

2. \[ \text{Area} = \frac{1}{2} \times 5 \text{ cm} \times 4 \text{ cm} \]

3. \[ \text{Area} = \frac{1}{2} \times 8 \text{ cm} \times 8 \text{ cm} \]

4. \[ \text{Area} = \frac{1}{2} \times 7 \text{ cm} \times 9 \text{ cm} \]

5. \[ \text{Area} = \frac{1}{2} \times 12 \text{ cm} \times 5 \text{ cm} \]

6. \[ \text{Area} = \frac{1}{2} \times 7 \text{ cm} \times 6 \text{ cm} \]
Find the unknown number.

1. \( k \div 7 = 8 \)
   \[ k = \____ \]

2. \( 63 \div s = 7 \)
   \[ s = \____ \]

3. \( 21 = 3d \)
   \[ d = \____ \]

4. \( 32 + p = 40 \)
   \[ p = \____ \]

5. \( z = (8 \times 8) + (2 \times 5) \)
   \[ z = \____ \]

6. \( 4c + 2 = 18 \)
   \[ c = \____ \]

7. \( t = 7 \times (6 + 3) \)
   \[ t = \____ \]

8. \( 12 - (10 - 3) = w \)
   \[ w = \____ \]

Solve the problems below.

9. Julie walked 6 times as far as Sylvia. If Sylvia walked 5 km, then how far did Julie walk?
   
   

10. Andrew spent half as much money as Justin. If Justin spent $16, then how much money did Andrew spend?

11. Brian owns 3 times as many puzzles as Jenna. If Jenna has 4 puzzles, then how many puzzles does Brian own?

12. Emilio has 3 times as many coins as Anna. If Emilio has 27 coins, then how many coins does Anna have?
Find the perimeter and area.

1. 
   \[
   P = \quad A = \quad
   \]

2. 
   \[
   P = \quad A = \quad
   \]

3. 
   \[
   P = \quad A = \quad
   \]

4. 
   \[
   P = \quad A = \quad
   \]

5. 
   \[
   P = \quad A = \quad
   \]

6. 
   \[
   P = \quad A = \quad
   \]
Find the perimeter and area.

1. \[ \text{6 cm} \quad 7 \text{ cm} \quad 15 \text{ cm} \quad 8 \text{ cm} \]
   \[ P = \] 
   \[ A = \]

2. \[ 8 \text{ cm} \quad 7 \text{ cm} \quad 9 \text{ cm} \]
   \[ P = \] 
   \[ A = \]

3. \[ 10 \text{ cm} \quad 7 \text{ cm} \]
   \[ P = \] 
   \[ A = \]

4. \[ 5 \text{ cm} \quad 3 \text{ cm} \quad 4 \text{ cm} \]
   \[ P = \] 
   \[ A = \]

Solve the Factor Puzzles.

5. 
   \[ 
   \begin{array}{ccc}
   15 & & \\
   9 & 6 & \\
   & & \\
   \end{array}
   \]

6. 
   \[ 
   \begin{array}{ccc}
   25 & 50 & \\
   & 30 & \\
   12 & 32 & \\
   27 & \\
   \end{array}
   \]

7. 
   \[ 
   \begin{array}{ccc}
   56 & \\
   49 & 63 & \\
   72 & 28 & 32 \\
   \end{array}
   \]
Complete.

1. 36 in. = _____ ft
2. 12 ft = _____ yd
3. 36 in. = _____ yd
4. _____ in. = 4 ft
5. _____ ft = 2 yd
6. _____ in. = 3 yd

Find the perimeter and area of each figure in feet.

7. 

\[ P = \ldots \]

\[ A = \ldots \]

8. 

\[ P = \ldots \]

\[ A = \ldots \]

Find the perimeter and area of each figure in yards.

9. 

\[ P = \ldots \]

\[ A = \ldots \]

10. 

\[ P = \ldots \]

\[ A = \ldots \]
Solve the Factor Puzzles.

1.  

2.  

3.  

4.  

Which one of the equations is not true? 

Explain your answer.

5.  $9 \times 3 = 3 \times 9$

6.  $9 + 3 = 3 + 9$

7.  $9 \div 3 = 3 \div 9$

Solve the word problems.

8. Mrs. Armstrong’s class made a paper chain that is 15 feet long. They want to put it around the bulletin board. The bulletin board is 4 feet long and 3 feet wide. Is the chain long enough to go all the way around? How do you know?

9. The Sanchez family is building a sandbox 6 feet long and 4 feet wide. How many square feet will the sandbox cover?
Write each amount as a decimal number.

1. 7 tenths
2. 45 thousandths
3. 8 hundredths
4. \(\frac{915}{1,000}\)
5. \(\frac{4}{100}\)
6. \(2\frac{9}{10}\)
7. \(8\frac{3}{100}\)
8. \(2\frac{50}{1,000}\)
9. \(15\frac{1}{10}\)
10. 6 cents
11. 9 thousandths
12. 73¢

Solve.

13. A large building has 1,000 windows, and 5 of the windows need to be replaced. What decimal represents the number of windows that need to be replaced?

14. At a reception, 23 of 100 pieces of wedding cake have been eaten. What decimal represents that number of pieces?

15. Jody made 10 party invitations. Yesterday she mailed 4 of them. What decimal represents the number of invitations that have been mailed?

16. If you had a dollar and then spent 15 cents, what decimal represents the amount of money you did not spend?

17. There are 1,000 vehicles in a stadium parking lot; 422 of the vehicles are trucks. What decimal represents the number of the vehicles that are trucks?
Solve for each unknown.

1. \(9 \times w = 63\)  
   \(w = \)_______

2. \(42 \div 7 = c\)  
   \(c = \)_______

3. \(q \times 8 = 40\)  
   \(q = \)_______

4. \(k \div 6 = 9\)  
   \(k = \)_______

5. \(d \times 7 = 56\)  
   \(d = \)_______

6. \(28 \div 4 = x\)  
   \(x = \)_______

7. \(6 \times 8 = h\)  
   \(h = \)_______

8. \(36 \div z = 9\)  
   \(z = \)_______

9. \(8 \times g = 72\)  
   \(g = \)_______

In each table, write a multiplication rule. Include two variables in each rule you write. Then complete the table.

10. Rule:

    | Number of frogs (f) | 1 | 2 | 5 | 8 |
    |---------------------|---|---|---|---|
    | Number of legs (l)  | 4 | 12| 20| 32|

11. Rule:

    | Number of spiders (s) | 2 | 4 | 6 | 11 |
    |------------------------|---|---|---|----|
    | Number of legs (l)     | 16| 32| 64|  |

12. For the figure below, determine the missing measures. Then write its perimeter and its area.

   ![Figure with measurements 6 in, 8 in, 14 in, 12 in]

   Perimeter = _________

   Area = _________
Write each amount as a decimal number.

1. 9 tenths ______
2. 52 thousandths ______
3. 8 hundredths ______
4. 3 cents ______
5. \[\frac{65}{100}\] ______
6. \[9\frac{5}{10}\] ______
7. \[\frac{12}{1,000}\] ______
8. \[7\frac{3}{100}\] ______
9. 4 thousandths ______

Circle the value that is not equivalent to the other values.

10. 0.47 0.470 0.407 0.4700
11. 0.5 0.50 \[\frac{5}{10}\] 0.05
12. 0.801 0.810 0.81 0.8100
13. 2.6 2.60 2.06 2.600
14. 0.39 0.390 \[\frac{39}{100}\] \[\frac{39}{1,000}\]
15. 0.04 0.40 0.040 0.0400

Compare. Write > (greater than) or < (less than).

16. 0.36 \(\bigcirc\) 0.8
17. 0.405 \(\bigcirc\) 0.62
18. 1.0 \(\bigcirc\) 0.95
19. 0.621 \(\bigcirc\) 0.612
20. 0.7 \(\bigcirc\) 0.07
21. 0.504 \(\bigcirc\) 0.54

The chart at the right shows the average speed of four horses during a race. Use the data to answer each question.

22. Which horse had the greatest speed?
   ________________________________

23. Which horse had the slowest speed?
   ________________________________

24. Which horses had identical speeds?
   ________________________________
Solve for each unknown.

1. \(h \times 7 = 49\)  
   \(h = \underline{7}\)

2. \(s \div 8 = 7\)  
   \(s = \underline{56}\)

3. \(8 \times b = 32\)  
   \(b = \underline{4}\)

4. \(48 \div 6 = x\)  
   \(x = \underline{8}\)

5. \(10 \cdot a = 0\)  
   \(a = \underline{0}\)

6. \(54 \div 9 = y\)  
   \(y = \underline{6}\)

7. \(5 \cdot 4 = d\)  
   \(d = \underline{20}\)

8. \(63 \div n = 9\)  
   \(n = \underline{7}\)

9. \(6 \cdot t = 36\)  
   \(t = \underline{6}\)

10. \(72 \div r = 9\)  
    \(r = \underline{8}\)

11. \(5 \times 9 = v\)  
    \(v = \underline{45}\)

12. \(\frac{27}{3} = m\)  
    \(m = \underline{9}\)

Solve the Factor Puzzles.

13. 

\[
\begin{array}{c|c|c}
| & | & 48 \\
\hline 21 & 24 & |
\end{array}
\]

14. 

\[
\begin{array}{c|c|c|c}
| & 21 & |
\hline 63 & 54 & |
\end{array}
\]

15. 

\[
\begin{array}{c|c|c|c}
| & 21 & 63 \\
\hline | & | & 36
\end{array}
\]

16. 

\[
\begin{array}{c|c|c}
36 & 54 & |
\hline 42 & | & 20
\end{array}
\]

17. 

\[
\begin{array}{c|c|c}
72 & 32 & |
\hline 20 & | & |
\end{array}
\]

18. 

\[
\begin{array}{c|c|c}
3 & | & |
\hline 4 & 36 & |
\end{array}
\]

19. 

\[
\begin{array}{c|c|c|c}
| & 10 & |
\hline 21 & 35 & |
\end{array}
\]

20. 

\[
\begin{array}{c|c|c|c}
| & 20 & |
\hline 32 & 72 & |
\end{array}
\]

21. 

\[
\begin{array}{c|c|c}
| & 6 & 21 \\
\hline | & | & 63
\end{array}
\]

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Write a decimal number for each word name.

1. nine thousand, six hundred five and nine tenths

2. one million, two hundred ten thousand, fifty and nineteen hundredths

Write each amount as a decimal number.

3. 3 tenths

4. 7 thousandths

5. 8 hundredths

6. \(\frac{602}{1,000}\)

7. \(\frac{21}{100}\)

8. \(4\frac{9}{10}\)

Copy each exercise. Then add or subtract.

9. \(0.9 + 0.06 = \)____

10. \(0.47 + 0.258 = \)____

11. \(0.56 + 0.913 = \)____

12. \(1.4 - 0.9 = \)____

13. \(5 - 1.5 = \)____

14. \(3.7 - 2.49 = \)____

15. \(0.008 + 0.6 = \)____

16. \(0.482 + 0.309 = \)____

17. \(19 + 1.044 = \)____

18. \(3 - 0.005 = \)____

19. \(0.409 - 0.20 = \)____

20. \(6.07 - 4 = \)____
1. $6 \times a = 24$
   
   $a = \underline{\hspace{2cm}}$

2. $28 \div 7 = x$
   
   $x = \underline{\hspace{2cm}}$

3. $j \times 7 = 42$
   
   $j = \underline{\hspace{2cm}}$

4. $y \times 9 = 54$
   
   $y = \underline{\hspace{2cm}}$

5. $k \cdot 9 = 81$
   
   $k = \underline{\hspace{2cm}}$

6. $56 \div 8 = s$
   
   $s = \underline{\hspace{2cm}}$

7. $8 \cdot 5 = z$
   
   $z = \underline{\hspace{2cm}}$

8. $63 \div u = 9$
   
   $u = \underline{\hspace{2cm}}$

9. $6 \cdot n = 48$
   
   $n = \underline{\hspace{2cm}}$

Write whether the two lines appear to be parallel, perpendicular, or oblique.

10. 

11. 

12. 

13. Erika drew a triangle having a base of 6 inches and a height of 8 inches. Trevor drew a square having a side measure of 5 inches. Rena drew a parallelogram having a base of 12 inches and a height of 2 inches.

Of the figures that were drawn, which has the greatest area? On the lines below, explain your answer.

\[
\text{area of a parallelogram} = \text{base} \times \text{height}
\]
\[
\text{area of a square} = \text{side} \times \text{side}
\]
\[
\text{area of a triangle} = \frac{\text{base} \times \text{height}}{2}
\]
Compare. Write $>$ (greater than) or $<$ (less than).

1. $0.15 \bigcirc 0.9$
2. $0.52 \bigcirc 0.0307$
3. $0.48 \bigcirc 0.6$
4. $0.283 \bigcirc 0.238$
5. $0.75 \bigcirc 1.4$
6. $0.5 \bigcirc 0.05$
7. $2 \bigcirc 0.2$
8. $3.088 \bigcirc 3.1$
9. $7.40 \bigcirc 4.7$

Write each whole number.

10. 80 thousand = ____________
11. nine million = ____________
12. seven billion = ____________
13. 42 million,120 = ____________

Copy each exercise. Then add.

14. $0.7 + 0.05 = _____$
15. $0.48 + 0.159 = _____$
16. $0.25 + 0.618 = _____$

Copy each exercise. Then subtract.

17. $10 – 0.35 = _____$
18. $0.7 – 0.19 = _____$
19. $3.6 – 2 = _____$

Solve.

20. How many times greater is one billion than one million?

21. It takes about 11.57 days for one million seconds to elapse.
   How many days does it take for one billion seconds to elapse?

22. Use a calculator or estimate: How many years does it take for one billion seconds to elapse?
Solve for each unknown.

1. \( s \times 4 = 16 \)  
   \( s = \) ______

2. \( d \div 2 = 10 \)  
   \( d = \) ______

3. \( 7 \times e = 49 \)  
   \( e = \) ______

4. \( 72 \div 9 = x \)  
   \( x = \) ______

5. \( 6 \cdot c = 42 \)  
   \( c = \) ______

6. \( 54 \div 9 = r \)  
   \( r = \) ______

7. \( 8 \cdot 6 = \nu \)  
   \( \nu = \) ______

8. \( 32 \div g = 8 \)  
   \( g = \) ______

9. \( 7 \cdot t = 63 \)  
   \( t = \) ______

Write acute, right, or obtuse for each triangle.

10. __________________________

11. __________________________

12. __________________________

In each table, write a multiplication rule in words and as an equation with two variables. Then complete the table.

### Table 13:

<table>
<thead>
<tr>
<th>Rule in words:</th>
<th>Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours (( h ))</td>
<td>1 2 3 6</td>
</tr>
<tr>
<td>Distance in miles (( m ))</td>
<td>45 90 225 270</td>
</tr>
</tbody>
</table>

### Table 14:

<table>
<thead>
<tr>
<th>Rule in words:</th>
<th>Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance in feet (( f ))</td>
<td>1 4 2 5</td>
</tr>
<tr>
<td>Seconds (( s ))</td>
<td>0 2 4 10</td>
</tr>
</tbody>
</table>
Write the word name for each decimal number.

1. 0.06 ____________________________
2. 24.7 ____________________________
3. 1.308 ____________________________

Follow the directions to change the number in the box.

4. Increase the number by 100,000. __________
5. Decrease the number by 1 hundredth. __________
6. Increase the number by 5 tenths. __________
7. Write a number with 2 more in the ten thousands place. __________
8. Rearrange the digits to make the greatest possible decimal number with two decimal places. __________

Write each number.

9. five hundred thousand = __________
10. 4 thousand and 6 tenths = __________
11. 10 and 8 hundredths = __________
12. 390 and 7 thousandths = __________

Solve.

13. A light year is the distance light travels in one year. Use the Internet or another reference source to learn about a light year. Then on the lines below, write the length of a light year in miles. Give a reason why you think the unit was invented.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Copy each exercise. Then add or subtract.

1. \(23 + 1.75 = \) _____  
2. \(0.9 - 0.62 = \) _____  
3. \(0.41 + 0.007 = \) _____

4. \(6.12 - 3.1 = \) _____  
5. \(5 + 2.01 = \) _____  
6. \(5 - 4.106 = \) _____

Use these numbers for exercises 7 and 8: 3.7 0.196 3.07 0.02 0.5

7. Order the numbers from least to greatest. _________________________
8. Order the numbers from greatest to least. _________________________

Choose the correct number from the box at the right.

9. three hundred and fifteen hundredths _________
10. eighty-eight and seven tenths _________
11. forty and two hundred eighty-seven thousandths _________
12. ninety-one and eight tenths _________

Solve.

13. What is the perimeter, in centimeters, of the figure below?
   
   Perimeter = _________________________

   ![Diagram of a figure with sides 8.4 cm, 3.9 cm, 3.9 cm, 6.6 cm, and 8.4 cm]
Use the number 724,062.581 for each exercise.

1. Increase the number by 0.007. ______________
2. Decrease the number by 100,000. ______________
3. Add 8 in the hundreds place. ______________
4. Subtract 2 from the hundredths place. ______________

Copy each exercise. Then add or subtract.

5. $37 + 45¢ = _____  6. $82.06 + 25¢ = _____  7. 59¢ + $4.23 = _____

8. 9 m + 0.05 m = _____  9. 6.4 m + 0.07 m = _____  10. 5 m + 0.08 m = _____

11. 231 + 0.26 = _____  12. 46.08 + 0.97 = _____  13. 92.24 + 3.6 = _____

Solve.

14. Olivia is buying a jacket that costs $84.50. The sales tax that will be added to the cost of the jacket is $4.65. What is the total cost of the jacket?

____________________________
Compare. Write $=$ (is equal to) or $\neq$ (is not equal to).

1. $6.003 \bigcirc 6.03$
2. $106.72 \bigcirc 106.9$
3. $98.07 \bigcirc 98.070$
4. $5 \bigcirc 5.000$
5. $0.14 \bigcirc 0.104$
6. $0.1 \bigcirc 0.100$
7. $0.000 \bigcirc 0$
8. $11.0 \bigcirc 11$
9. $5.020 \bigcirc 5.002$
10. $18.6 \bigcirc 18.60$
11. $0.2 \bigcirc 2.0$
12. $7.04 \bigcirc 7.40$


13. The digit 7 is in the __________ place.
14. The digit 1 is in the __________ place.
15. What digit is in the hundreds place? __________
16. What digit is in the thousandths place? __________
17. The digit 9 is in the __________ place.
18. What digit is in the ten thousands place? __________
19. The digit 4 is in the __________ place.
20. Write the number using words.

Use the digits 6, 9, and 1 for exercises 21–24. Use each digit once.

21. Write the greatest three-digit whole number. __________
22. Write the smallest three-digit whole number. __________
23. Write the greatest three-digit decimal number in hundredths. __________
24. Write the smallest three-digit decimal number in tenths. __________
Add each pair of numbers.

1. 80,615.405 + 3,468.27
   ___________

2. 512,019 + 6,478.084
   ___________

3. 2.765 + 19.6529
   ___________

4. 0.825 + 647.52
   ___________

Use the number 620,961.084 for exercises 5–8.

5. Increase the number by 0.01. ___________

6. Decrease the number by 200,000. ___________

7. Add 7 to the thousands place. ___________

8. Subtract 3 from the tenths place. ___________

Use the number $4,697,385.65$ for exercises 9–14.

9. Add 3 million dollars. ___________

10. Subtract 5 thousand dollars. ___________

11. Add 20 dollars. ___________

12. Take $10,000 away. ___________

13. Add 2 dimes. ___________

14. Subtract 1 penny. ___________
Solve for each unknown.

1. \((5 \cdot 8) \div 4 = c\)  
   \(c = \)  

2. \(d = 72 \div (9 - 1)\)  
   \(d = \)  

3. \(a = (5 \times 6) - 17\)  
   \(a = \)  

4. \((35 + 7) \div 7 = r\)  
   \(r = \)  

5. \(21 \cdot s = 0\)  
   \(s = \)  

6. \(3t = (4 + 5) \times 3\)  
   \(t = \)

Solve.

Emilio is planting a garden, but he has mixed up the seeds. The seeds now need to be sorted. He has a book that tells him the lengths of different seeds. The lengths are shown below.

Emilio doesn’t completely understand decimal numbers. You can help him by listing the seeds from longest to shortest. Then Emilio will be able to identify and sort his seeds.

Sizes of Seeds

<table>
<thead>
<tr>
<th>Seed</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomato</td>
<td>0.3 cm</td>
</tr>
<tr>
<td>Pumpkin</td>
<td>1.25 cm</td>
</tr>
<tr>
<td>Watermelon</td>
<td>0.9 cm</td>
</tr>
<tr>
<td>Carrot</td>
<td>0.15 cm</td>
</tr>
<tr>
<td>Corn</td>
<td>0.75 cm</td>
</tr>
<tr>
<td>Eggplant</td>
<td>0.25 cm</td>
</tr>
</tbody>
</table>

Seeds in Order of Size

7. Longest  
8.  
9.  
10.  
11.  
12. Shortest

Write the perimeter and the area of the figure below.

13. Perimeter =  
14. Area =  

\[
\begin{array}{c}
\text{Perimeter} = \\
\text{Area} = \\
\end{array}
\]
Copy each exercise. Then subtract.

1. $6,000 - 348 = \underline{\quad}$
2. $7,364 - 937 = \underline{\quad}$
3. $50,821 - 3,617 = \underline{\quad}$
4. $720.95 - 286.4 = \underline{\quad}$
5. $18,652 - 4.31 = \underline{\quad}$
6. $350.6 - 176.54 = \underline{\quad}$

Solve.

7. Ahmad had a piece of rope that was 7.14 meters long. He cut off 0.095 meters to practice making knots. What was the length of the rope after the cut?

8. Natasha has a large collection of books. The thickest book measures 4.9 centimeters. The thinnest book measures 1.8 centimeters. What is the difference in thicknesses of those two books?

9. Yoshi saved $1,238.46 for a vacation in Mexico. While in Mexico, she spent $975. What amount of money did Yoshi not spend?

10. Tarantulas are one of the largest spiders on Earth. A tarantula can grow to be about 6.8 centimeters long. A spitting spider can grow to be about 0.9 centimeters long. About how much longer are tarantulas than spitting spiders?
Circle the value in each group that is not equivalent to the other values.

1. 9.050 9.05 09.050 0.950 09.05
2. 1.410 1.041 01.41 1.4100 01.410
3. 2.650 02.65 2.605 2.65 02.650

Write each decimal number.

4. 2 thousand and 8 tenths
5. 31 thousand and 57 hundredths
6. 94 thousand, 631 and 7 thousandths
7. six million and five hundredths

Write each amount as a decimal number.

8. 6 tenths
9. 4 thousandths
10. 2 hundredths
11. \(\frac{18}{100}\)
12. \(9\frac{3}{10}\)
13. \(\frac{26}{1,000}\)
14. 73 hundredths
15. 1 tenth
16. 8 thousandths

Calculate the perimeter (P) of each figure in feet.

17. P = 
18. P = 
19. P = 

Solve the Factor Puzzles.

20. 

21. 

22. 

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Use the data in the table to answer the questions that follow.

**Lakefront Summer Concerts**

<table>
<thead>
<tr>
<th>Musical Group</th>
<th>Date</th>
<th>Audience Size</th>
<th>Ticket Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wink</td>
<td>May 5</td>
<td>47,591</td>
<td>$475,910</td>
</tr>
<tr>
<td>Fred’s Garage</td>
<td>May 26</td>
<td>59,985</td>
<td>$599,850</td>
</tr>
<tr>
<td>The Insiders</td>
<td>June 8</td>
<td>51,872</td>
<td>$518,720</td>
</tr>
<tr>
<td>The Beat Masters</td>
<td>June 19</td>
<td>43,469</td>
<td>$434,690</td>
</tr>
<tr>
<td>Paparazzi</td>
<td>June 27</td>
<td>56,327</td>
<td>$563,270</td>
</tr>
</tbody>
</table>

1. Which musical group entertained the largest audience?

   

2. How many total people were in the audience at the concerts during May? During June?

   May ____________________________
   June ___________________________

3. For each concert, 60,000 tickets could have been sold. How many tickets were not sold when The Insiders performed? When Paparazzi performed?

   The Insiders ____________________________
   Paparazzi _____________________________

4. What amount of money represents the total ticket sales for May? for June?

   May ____________________________
   June ____________________________

5. What pattern do you see between the audience size and the ticket sales? ____________________________

6. What does this tell you about the cost of the tickets? ____________________________
Use the number 24,168.05 for exercises 1–6.

1. Increase the number by 1,000.

2. Write the number with 2 fewer tens.

3. Decrease the number by 3 hundredths.

4. Write the number with 5 more ten thousands.

5. Write the number with 9 more in the tenths place.

6. Increase the number by 500.

Use the decimal numbers below to answer the questions that follow.

0.2698  2.698  0.02698  0.26980  26.980

7. Which number is the least?

8. Which number is the greatest?

9. Which two numbers are equivalent?

Write the equivalent measurement.

10. 36 in. = _____ ft

11. 24 ft = _____ yd

12. 36 in. = _____ yd

13. 2 yd = _____ in.

14. 4 ft = _____ in.

15. 8 yd = _____ ft

Calculate the perimeter (P) and the area (A) of each rectangle.

16.

17.

P = ____________________________

A = ____________________________

P = ____________________________

A = ____________________________
Use the Commutative Property to solve for \( n \).

1. \( 26,184 + 1,546 = 1,546 + n \) 
   \[ n = \blank \]
2. \( 17.39 + 12.58 = 12.58 + n \) 
   \[ n = \blank \]

Regroup the numbers using the Associative Property. Then add.

3. \( (389 + 700) + 300 = \)

4. \( 1.02 + (0.98 + 4.87) = \)

Use the Distributive Property to rewrite each problem so it has only two factors. Then solve.

5. \( (8 \times 700) + (8 \times 300) = \)

6. \( (25 \times 9) + (75 \times 9) = \)

Group the numbers to make the addition easier. Then add.

7. \[
\begin{align*}
&20,000 \\
&70,000 \\
&30,000 \\
&68,000 \\
&+ 80,000
\end{align*}
\]
8. \[
\begin{align*}
&10,000 \\
&25,000 \\
&89,000 \\
&75,000 \\
&+ 90,000
\end{align*}
\]
9. \[
\begin{align*}
&10.75 \\
&10.4 \\
&10.25 \\
&10.57 \\
&+ 10.6
\end{align*}
\]
10. \[
\begin{align*}
&1.600 \\
&1.200 \\
&1.200 \\
&+ 1.479
\end{align*}
\]

Subtract.

11. \( $182.09 - 37\text{¢} = \blank \)
12. \( $5,287.32 - 59\text{¢} = \blank \)
13. \( 362 - 48\text{¢} = \blank \)
14. \( 6 \text{ m} - 0.03 \text{ m} = \blank \)
15. \( 8 \text{ dm} - 0.5 \text{ dm} = \blank \)
16. \( 4 \text{ m} - 0.032 \text{ m} = \blank \)

UNIT 2 LESSON 10

Properties and Strategies 63
Use these decimal numbers to answer the questions that follow.

68.70  6.870  6.087  6.87  0.6870

1. Which number is the least? _____________
2. Which number is the greatest? ______________
3. Which two numbers are equivalent? ______________

Compare. Write $>$, $<$, or $=$.

4. 0.09 ___ 0.7
5. 0.30 ___ 0.3
6. 0.86 ___ 0.7
7. 0.461 ___ 0.416
8. 1.9 ___ 0.83
9. 0.5 ___ 0.500
10. 1.26 ___ 12.6
11. 7.00 ___ 7
12. 2 ___ 0.2

Solve.

13. What is the greatest 3-digit whole number you can make using the digits 5, 8, and 2 once? What is the least 3-digit whole number you can make?

______________________________

14. What is the smallest decimal number you can make using the digits 5, 0, 8, and 2 once?

______________________________

15. Cherise is growing a tomato plant for her science project. At the end of the first week, the plant was 4.7 cm tall. During the second week, the plant had grown 0.9 cm. How tall was the plant at the end of the second week?

______________________________

Show your work.
Use the information in each problem to make a pictograph.

1. The Horizon Book Company needs a pictograph showing the number of books sold this year. Using the information shown, make a pictograph. Give your graph a title and a key.

   **Key:**

   - Books for Children
   - Books for Adults

   | Children 500,000 |
   | Adults 700,000 |

2. The Melodic Music Company needs a pictograph showing the number of CDs sold this year. Using the information shown, make a pictograph. Remember to include the title and the key.

   **Key:**

   - Rock
   - Country
   - Jazz
   - Classical

   | Rock 40,000 |
   | Country 30,000 |
   | Jazz 15,000 |
   | Classical 5,000 |

3. Ask 2 questions about your pictograph for problem 2 and then answer them.

   ____________________________________________

   ____________________________________________

   ____________________________________________

   ____________________________________________
Answer each question about the decimal numbers.

| 58.76  | 5.876  | 0.05876 | 5.8760 | 0.5876 |

1. Which number is the smallest?

2. Which number is the greatest?

3. Which two numbers are equivalent?

Write each number.

4. seven tenths

5. thirty million

6. eight hundredths

7. four million one

8. forty-five thousand six

9. seven hundred fifty thousand ten

10. eighty thousand twenty-nine

11. two thousandths

For each measurement, write an equivalent length in decimeters (dm), centimeters (cm), and millimeters (mm).

12. 13.74 m  _______ dm  _______ cm  _______ mm

13. 0.85 m  _______ dm  _______ cm  _______ mm
Round to the nearest ten.

1. 62 ______
2. 91 ______

Round to the nearest thousand.

3. 3,205 ______
4. 8,500 ______

Round to the nearest hundred.

5. 493 ______
6. 1,580 ______

Round to the nearest 10 thousand.

7. 50,926 ______
8. 75,612 ______

Decide whether a safe or an ordinary estimate is needed. Then estimate to find each answer.

9. Amy has 5,805 large beads and 3,950 small beads. About how many more large beads than small beads does Amy have?

________

10. Lincoln School has 54 fifth-graders, and Elm School has 38 fifth-graders. The two schools will have a party together. Each fifth-grade student will get a balloon. About how many balloons should the teachers buy?

________

11. In a parking garage, there are 598 cars and 214 vans. About how many vehicles are in the parking garage altogether?

________

12. A sports shop sold $15,679 worth of roller blades and $16,231 worth of skateboards this year. About how much money did the shop make on these two items?

________
At the county fair each August, there is a contest to see who can grow the tallest sunflower. Below is a table that shows how tall each sunflower plant is.

1. Make a list showing whose plants got first place, second place, and third place.

   **Sunflower Growers**
   
<table>
<thead>
<tr>
<th>Grower</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arturo</td>
<td>4.781 m</td>
</tr>
<tr>
<td>Jan</td>
<td>5.935 m</td>
</tr>
<tr>
<td>Shen</td>
<td>6.105 m</td>
</tr>
<tr>
<td>Max</td>
<td>6.20 m</td>
</tr>
<tr>
<td>Madison</td>
<td>5.92 m</td>
</tr>
<tr>
<td>Alex</td>
<td>5.915 m</td>
</tr>
</tbody>
</table>

Solve.

2. Michaela, Simone, and Veronica want to buy T-shirts for the science club. If the club treasurer gives them $35.00, and they spend $27.50 on the T-shirts, how much money will they have left?

   

3. Michaela, Simone, and Veronica want to buy special glitter paint with the leftover money. The paint is on sale. They can buy 3 tubes for $6.00. Do they have enough money to buy 3 tubes of paint? If so, how much money will they have left?

   

Find the area of each right triangle.

4. 
   
   ![Triangle 1](image)
   
   

5. 
   
   ![Triangle 2](image)
   
   

6. 
   
   ![Triangle 3](image)
A forest ranger estimated the number of trees in the forest and made this bar graph.

1. About how many maple trees are in the forest? ________

2. About how many fir and pine trees are there altogether? ________

3. About how many more oak trees are there than birch trees? ________

4. Write an estimate of the total number of trees in the forest. ________

Make a bar graph.

The table below shows an estimate of the number of cats, dogs, and birds kept as pets in the United States.

5. Make a bar graph to show these data. Make your own scale.

<table>
<thead>
<tr>
<th>Common Pets in the United States</th>
<th>Cats 59,000,000</th>
<th>Dogs 53,000,000</th>
<th>Birds 13,000,000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Types of Pets</td>
<td>Cats</td>
<td>Dogs</td>
<td>Birds</td>
</tr>
</tbody>
</table>
Add or subtract. Use a separate sheet of paper.

1. $2,387,046 + 6,125,348 = \quad 2. 38.567 + 4.286 =

3. $50,000 - 8,936.2 = \quad 4. 5.004 + 0.38 =

5. $0.0852 - 0.039 = \quad 6. 5.004 - 0.38 =

Use the pictograph to solve.

Seashells Collected

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Meg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kelly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roberto</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

= 50 seashells

7. Who has more seashells than Meg?

8. How many more seashells did Jon collect than Carol?

9. How many seashells did Kelly collect?

Solve the Factor Puzzles.

10. __ __
    __ __

11. __ __
    __ __

12. __ __
    __ __
Use the line graph below to answer the questions that follow.

1. The graph shows the turtle population at the end of each year during a 5-year period. What was the turtle population in Year 4? ______________

2. How much greater was the population in Year 1 than in Year 2? ______________

3. Which year represents the greatest turtle population? What was the population that year?

Make a line graph.

4. The table at the right shows a store's inventory of kites at the end of 4 months. Make a graph below to show an estimate of the number of kites at the end of each month. Make your own scale and title.

<table>
<thead>
<tr>
<th>Month</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory</td>
<td>135</td>
<td>382</td>
<td>673</td>
<td>424</td>
</tr>
</tbody>
</table>
Estimate the area and perimeter of each figure. Each side of each grid square represents 1 cm.

1. [Grid diagram]

\[ P = \quad \]
\[ A = \quad \]

2. [Grid diagram]

\[ P = \quad \]
\[ A = \quad \]

Solve.

3. Chris counted the number of steps he took on his way to school. He took 943 steps to get to his friend’s house, and then another 1,208 steps to get to school. How many steps did he take altogether?

4. Devon cares for two puppies. One puppy weighs 8.54 pounds. The other puppy weighs 12.39 pounds. How much do the two puppies weigh altogether?

Solve the Factor Puzzles.

5. __ __

\[ \begin{array}{c}
  35 \\
  9 \\
  15 \\
\end{array} \]

6. \[ \begin{array}{c}
  30 \\
  12 \\
  8 \\
\end{array} \]

7. \[ \begin{array}{c}
  42 \\
  48 \\
  63 \\
\end{array} \]

Show your work.
Jamal’s basketball coach made a line graph to show what part of his free-throws Jamal made over the last 4 weeks.

1. What part of his free-throws did he make the first week?

2. By what decimal did his free-throw part increase between Week 1 and Week 2?

3. What part of his free-throws did Jamal make in Week 4?

4. In which week did the portion of free-throws Jamal made increase the most over the previous week?

The table shows the amount of rainfall this month in 4 different cities.

5. Make a bar graph showing this information. Remember to give your graph a title and a scale.
Estimate.

1. The bird watchers of Pine County counted 2,956 cardinals, 3,204 finches, and 978 hawks this summer. About how many cardinals, finches, and hawks did they count in all?

2. Anne-Marie has $125. She wants to buy a jacket for $94 and some boots for $32. Should she estimate the total with a safe estimate or an ordinary estimate? Does she have enough money?

3. The Lightfoot Library has 31,823 books, but 9,625 are checked out right now. About how many books are still on the shelves?

4. A toothbrush factory made 2,461,200 electric toothbrushes and 5,847,500 regular toothbrushes this week. About how many toothbrushes did the factory make in all?

Write a decimal equivalent for each fraction.

5. \( \frac{76}{100} \)

6. \( \frac{349}{100} \)

7. \( \frac{9}{100} \)

8. \( \frac{5}{100} \)

9. \( \frac{2}{10} \)

10. How many congruent isosceles triangles are inside the regular octagon? ________

11. What is the area of each triangle? ________

12. What is the area of the octagon? ________
In your Math Journal or on a sheet of paper, write a word problem for each situation and answer the questions.

Situation 1

1. Write a word problem that represents a change situation.
2. Did you write a change plus or a change minus situation?
3. Is your situation an unknown result, unknown change, or unknown start?

Situation 2

4. Write a word problem that represents a collection situation.
5. Does your situation include an unknown total or an unknown partner?
6. Does your situation represent a take apart, put together, or no action situation?

Situation 3

7. Write a word problem that represents a comparison situation.
8. Does your situation have an unknown difference or an unknown quantity?

Solve these comparison problems.

9. Camille collected 13 shells from the beach. Her friend Sarah collected 10 times as many. How many shells did Sarah collect? ______________________

10. Last week, Armando read 285 pages of a book. This week, he read 196 pages. How many fewer pages did he read this week? ______________________

11. The Eiffel Tower in Paris is 300 meters tall. It is 253.5 meters taller than the Statue of Liberty. How tall is the Statue of Liberty? ______________________
Add or subtract. Use a separate sheet of paper.

1. $17,092 - 3,746 = \underline{13,346}$
2. $657.92 + 53.035 = \underline{710.955}$
3. $62.004 - 48.65 = \underline{13.354}$
4. $831.5 - 46.75 = \underline{784.75}$
5. $190.98 + 256.3 = \underline{447.28}$
6. $41.003 - 7.02 = \underline{33.983}$
7. $24 - 0.04 = \underline{23.96}$
8. $9.72 + 31 = \underline{39.72}$

Use the Commutative Property to solve for $n$.

9. $98,551 + 2,841 = 2,841 + n$ \hspace{1cm} $n = \underline{98,832}$
10. $65.18 + 75.43 = 75.43 + n$ \hspace{1cm} $n = \underline{140.61}$

Use the Associative Property to regroup the numbers. Then add.

11. $(496 + 800) + 200$
   \hspace{1cm} $\underline{1596}$

12. $2.25 + (0.75 + 8.57)$
   \hspace{1cm} $\underline{11.57}$

Use the Distributive Property to rewrite the expressions. Then multiply.

13. $(7 \times 600) + (7 \times 400)$
    \hspace{1cm} $\underline{7000}$

14. $(30 \times 6) + (70 \times 6)$
    \hspace{1cm} $\underline{540}$
Write a situation equation and a solution equation for each problem. Then solve the problem.

1. At the chicken ranch this morning there were 7,149 chicks. Later today some more chicks hatched. Now the ranch has 8,945 chicks. How many new chicks hatched today?

   Situation Equation: \[7,149 + x = 8,945\]
   Solution Equation: \[x = 8,945 - 7,149\]
   Answer: \[x = 1,805\]

2. The library had a large collection of books. Then the librarian ordered 2,000 more books. Now there are 12,358 books. How many books were there at the start?

   Situation Equation: \[x + 2,000 = 12,358\]
   Solution Equation: \[x = 12,358 - 2,000\]
   Answer: \[x = 10,358\]

3. Rosa’s parents collected $682 at their yard sale. They paid her for helping out that day. Now they have $662.25. How much money did Rosa’s parents pay her?

   Situation Equation: \[R + \text{money} = 682\]
   Solution Equation: \[R = 682 - \text{money}\]
   Answer: \[R = 662.25\]

4. Marco sells caramel apples at the state fair. Today he sold 957 apples, and now he has 1,062 left to sell. How many caramel apples did Marco begin with?

   Situation Equation: \[957 + x = 1,062\]
   Solution Equation: \[x = 1,062 - 957\]
   Answer: \[x = 105\]

Find the unknown number. Use mental math if you can.

5. \[80,000 + r = 82,000\] \[r = \underline{2,000}\]
6. \[0.005 + g = 0.105\] \[g = \underline{0.100}\]
7. \[r + 655 = 2,655\] \[t = \underline{2,000}\]
8. \[b + 0.36 = 25.36\] \[b = \underline{25.00}\]
9. \[6,500 = 7,000 - z\] \[z = \underline{500}\]
10. \[0.135 = 0.130 + c\] \[c = \underline{0.005}\]
11. \[f - 10,000 = 25,000\] \[f = \underline{35,000}\]
12. \[w - 2.5 = 0.3\] \[w = \underline{2.8}\]
Name the most sensible metric unit for each measurement.

1. The width of this button.

2. The length of this pencil.

3. The length of an ant.

4. The longest dimension of your classroom.

Write a whole or decimal number for each word name.

5. eight tenths

6. twenty million

7. five million, ten

8. sixty-five thousand, four

9. two hundred forty thousand, twelve

10. six hundred four thousand

Use the bar graph at the right to answer the following questions.

11. How many angelfish are in the aquarium?

12. How many catfish and clown fish are there altogether?
Solve.

1. There are 476,092 fish in the city aquarium. That number of fish is 476,070 more fish than Nadia has in her aquarium. How many fish does Nadia have in her aquarium?

2. The Follett family traveled 2,145 miles this summer. They traveled 1,296 fewer miles than the Garcia family. How far did the Garcia family travel?

3. A 15-year-old boy built the largest house of cards on record. It was made of 15,714 cards. Today Michael built a house of cards that was made of 200 cards. How many more cards must he use to tie the record?

4. Maria wants to buy a new car. She will choose a green car or a silver car. The green car costs $16,898, and the silver car costs $1,059.75 less than the green car. What is the cost of the silver car?

5. A bakery has produced 5,285 loaves of bread so far this year. That number of loaves is 200 more loaves than the bakery produced last year. How many loaves of bread did the bakery produce last year?

Find the unknown number. Use mental math if you can.

6. $80,000 − q = 60,000 \quad q = \quad$

7. $0.003 + p = 0.403 \quad p = \quad$

8. $t − 8,500 = 9,000 \quad t = \quad$

9. $b + 0.005 = 0.015 \quad b = \quad$

10. $7,000,000 = 7,000,020 − z \quad z = \quad$

11. $37.96 = 39.96 − c \quad c = \quad$

12. $f − 986 = 12,000 \quad f = \quad$

13. $w − 0.5 = 16 \quad w = \quad$
Write a situation equation and a solution equation for each problem. Then solve the problem.

1. There were 761 campers at a campground. After a number of campers went home, 659 campers remained at the campground. How many campers went home?

<table>
<thead>
<tr>
<th>Situation Equation</th>
<th>Solution Equation</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. After 143 new students arrived at Elm Street School, the enrollment was 1,356 students. How many students were enrolled before the new students arrived?

<table>
<thead>
<tr>
<th>Situation Equation</th>
<th>Solution Equation</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. April sold 200 stamps from her collection. Now she has 2,250 stamps. How many stamps were in her collection before the sale?

<table>
<thead>
<tr>
<th>Situation Equation</th>
<th>Solution Equation</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Round to the nearest thousand.

4. 4,195
5. 9,947
6. 14,861
7. 21,253

Round to the nearest million.

8. 7,956,122
9. 2,305,472
10. 19,037,513
11. 31,894,567

Complete.

12. 48 in. = _____ ft
13. 36 ft = _____ yd
14. 7 yd = _____ ft
15. 3 yd = _____ in.
16. 2 ft = _____ in.
17. 36 in. = _____ yd
Complete one or more steps to solve each problem.

1. The regular price of an item is $9,985. The sale price of the item is $9,575. What is the difference between the sale price and the regular price of 10 items?

2. The Stein family plans to drive 125.7 miles to Middletown. They drive 62.5 miles before they have to go back 10.2 miles for something they leave behind at a restaurant. How far from Middletown is the restaurant?

3. A toy factory made 15,000 toys and packed them in boxes of 10 each. The factory loaded 1,275 boxes on a delivery truck. How many boxes of toys were not loaded on the truck?

Use the table to solve problems 4–6.

<table>
<thead>
<tr>
<th>T-Shirts Sold This Year</th>
<th>Short Sleeve</th>
<th>Long Sleeve</th>
<th>Sleeveless</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>28,640</td>
<td>White 31,637</td>
<td>Yellow 62,852</td>
</tr>
<tr>
<td>Green</td>
<td>19,509</td>
<td>Gray 29,904</td>
<td>Blue 90,491</td>
</tr>
<tr>
<td>Blue</td>
<td>34,205</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. How many more sleeveless shirts than long sleeve shirts were sold?

5. How many short sleeve shirts were sold?

6. How many more blue short sleeve shirts than white long sleeve shirts were sold?
Round to the nearest 10,000 and the nearest 1,000.

1. 11,287 2. 45,732 3. 9,674 4. 89,135

Write an object you can measure using each of these units.

5. Last year Paco’s bonsai tree was 6.75 centimeters tall. Today it is 8.40 centimeters tall. How much has the tree grown?

6. This morning the temperature outside was 12.5°C. At noon it was 3.7 degrees warmer. What was the temperature at noon?

7. A tomato seed is about 0.295 centimeters long. A cucumber seed is about 0.38 centimeters long.
   Which seed is shorter? How much shorter?

8. The Harrisons’ dining room table with the table extension is 2.55 meters long. Without the extension the table is 2.25 meters long.
   How long is the extension?

9. The perimeter of an equilateral triangle is 45 inches. A rectangle whose width is \(\frac{1}{3}\) its length has a perimeter of 48 inches. Which figure has the longest side? Explain.
1. Use your ruler. Draw two lines that intersect. Label the lines and their point of intersection.

2. Name all the lines in your drawing.

3. Name four rays in your drawing.

4. Name four angles in your drawing.

5. Name two pairs of vertical angles formed by the intersecting lines below.

Use this diagram for exercises 6–9.

6. Which angles are complementary angles?

7. Which angles are supplementary angles?

8. Which angle is a straight angle?

9. Which angles are right angles?
Solve.

1. \(28 \div 4 = \) _____  
2. \(2 \times 9 = \) _____  
3. \(54 \div 6 = \) _____  
4. \(8 \times 0 = \) _____  

5. \(5 \times 5 = \) _____  
6. \(63 \div 7 = \) _____  
7. \(3 \times 4 = \) _____  
8. \(20 \div 5 = \) _____  

9. \(81 \div 9 = \) _____  
10. \(12 \times 1 = \) _____  
11. \(15 \div 3 = \) _____  
12. \(6 \times 5 = \) _____  

13. \(3 \times 7 = \) _____  
14. \(18 \div 2 = \) _____  
15. \(7 \times 6 = \) _____  
16. \(45 \div 9 = \) _____  

17. \(80 \div 8 = \) _____  
18. \(4 \times 8 = \) _____  
19. \(0 \div 4 = \) _____  
20. \(9 \times 1 = \) _____  

21. Ah Lam and George worked on a puzzle from 5:27 P.M. to 7:11 P.M. How long did they work on the puzzle?  

22. Deacon’s baby brother began napping at 12:17 P.M. He slept for 2 hours and 12 minutes. What time did he wake up?  

23. Rebecca and her friends finished watching a movie at 2:25 P.M. The movie was 1 hour and 43 minutes long. At what time did they start the movie?  

24. The Diaz family left to visit with friends at 10:43 A.M. They arrived at their friends’ home at 1:09 P.M. How long was the trip?
Complete each statement.

1. The total of the angle measures of a _____________ is always 180°.

2. The total of the angle measures of a _____________ is always 360°.

Write the measure of the unknown angle.

3. [Diagram of triangle with angles 50°, 80°, and unknown angle.]

4. [Diagram of triangle with angles 33° and right angle.]

5. [Diagram of parallelogram with angles 75°, 75°, 105°, and unknown angle.]

6. [Diagram of parallelogram with angles 80° and unknown angle.]

7. One angle measure in an isosceles triangle is 100°. What is the measure of each of the other angles?

8. Two angle measures in a parallelogram are 80°. What is the measure of each of the other angles?
Solve.

1. $2 \times 3 = $  
2. $77 \div 7 = $  
3. $8 \times 6 = $  
4. $10 \div 1 = $  

5. $49 \div 7 = $  
6. $10 \times 4 = $  
7. $4 \div 2 = $  
8. $7 \times 0 = $  

9. $4 \times 4 = $  
10. $64 \div 8 = $  
11. $1 \times 3 = $  
12. $12 \div 3 = $  

13. $10 \div 2 = $  
14. $8 \times 3 = $  
15. $6 \div 1 = $  
16. $2 \times 10 = $  

17. $11 \times 1 = $  
18. $72 \div 8 = $  
19. $7 \times 5 = $  
20. $0 \div 6 = $  

21. The Smiths hiked a trail marked “2 hours and 30 minutes.” They took a 20-minute break. If they arrived at the end of the trail at 5:15 P.M., at what time did they start their hike?

22. A play runs for 1 hour and 56 minutes. Part way through the play, there is a 15-minute break. If the play started at 4:30 P.M., what time will it finish?

23. Kuri watched a movie that was 2 hours and 13 minutes long. She stopped the movie for 17 minutes. If she started watching at 11:30 A.M., at what time was her movie finished?
In each row, circle all of the figures that look congruent.

1. 

2. 

3. 

Write *always*, *sometimes*, or *never* to complete each statement.

4. A quadrilateral _________ has exactly two congruent angles.

5. A quadrilateral _________ has exactly three congruent angles.

6. Draw a figure that is congruent to the figure below.
Solve.

1. $0.123 + 1.30 = \underline{\hspace{2cm}}$
2. $4.50 - 3.50 = \underline{\hspace{2cm}}$
3. $1.27 + 2.40 = \underline{\hspace{2cm}}$
4. $10.405 - 9.10 = \underline{\hspace{2cm}}$
5. $2.8 + 2.7 = \underline{\hspace{2cm}}$
6. $5.6 - 1.2 = \underline{\hspace{2cm}}$
7. $3.08 + 4.10 = \underline{\hspace{2cm}}$
8. $10.39 - 8.40 = \underline{\hspace{2cm}}$
9. $8.54 + 2.039 = \underline{\hspace{2cm}}$
10. $15.45 - 10.157 = \underline{\hspace{2cm}}$
11. $0.87 + 0.10 = \underline{\hspace{2cm}}$
12. $12.78 - 3.43 = \underline{\hspace{2cm}}$
13. $7.609 - 2.01 = \underline{\hspace{2cm}}$
14. $18.0 - 15.5 = \underline{\hspace{2cm}}$
15. $20.05 + 10.05 = \underline{\hspace{2cm}}$
16. $13.93 - 10.70 = \underline{\hspace{2cm}}$
17. $9.7 + 1.2 = \underline{\hspace{2cm}}$
18. $10.19 - 3.2 = \underline{\hspace{2cm}}$

Complete the statements.

19. The total of the measures of two __________________________ angles is $180^\circ$.
20. The total of the measures of two __________________________ angles is $90^\circ$.
21. A __________________________ is a quadrilateral with two pairs of parallel sides.
22. A __________________________ is a quadrilateral with four right angles.
23. A __________________________ is a set of points forming a straight path extending infinitely in opposite directions.
24. A __________________________ is part of a line beginning at an endpoint and extending infinitely in one direction.
25. Two rays that share an endpoint form a(n) __________________________.

Write true or false.

26. A quadrilateral can have each of 4 angles a different measure. __________________________
27. A ray extends infinitely in both directions. __________________________
28. A polygon has sides that are line segments. __________________________
The measure of each shaded angle is given. Write the measure of each angle that is not shaded.

1. 2.

3. 4.

5. Draw the figure after a turn of 180° clockwise.

6. Draw the figure after a turn of 90° counterclockwise.
Solve.

1. $4.09 + 4.38 = \underline{8.47}$
2. $5.6 - 1.8 = \underline{3.8}$
3. $16.0 + 2.316 = \underline{18.316}$
4. $3.34 + 9.01 = \underline{12.35}$
5. $11.70 - 10.358 = \underline{1.342}$
6. $8.87 - 4.56 = \underline{4.31}$
7. $0.43 + 1.07 = \underline{1.5}$
8. $14.4 - 6.2 = \underline{8.2}$
9. $14.34 + 11.48 = \underline{25.82}$
10. $7.40 + 1.93 = \underline{9.33}$
11. $13.4 - 6.28 = \underline{7.12}$
12. $8.7 - 4.3 = \underline{4.4}$

Solve the Factor Puzzles.

13. \[\boxed{27} \times \boxed{3} = \boxed{81}\]
14. \[\boxed{6} \times \boxed{1} = \boxed{6}\]
15. \[\boxed{8} \times \boxed{8} = \boxed{64}\]

Complete the statements.

16. A \underline{straight} angle has a measure of $180^\circ$.
17. A(n) \underline{acute} angle has a measure less than $90^\circ$.
18. A(n) \underline{obtuse} angle has a measure greater than $90^\circ$ and less than $180^\circ$.
19. \underline{Right} angles are pairs of opposite and congruent angles formed by intersecting lines.
20. A \underline{right} angle has a measure of $90^\circ$.
21. \underline{Parallel} lines are always the same distance apart.
22. Lines that form right angles at the point of intersection are \underline{perpendicular} lines.
23. \underline{Perpendicular} lines are lines that form acute or obtuse angles at the point of intersection.
1. In the space below, draw a figure that has at least one line of symmetry.

Consider these letters of the alphabet.

A B C D E F G H I J K L M
N O P Q R S T U V W X Y Z

2. Which letters have line symmetry?

________________________________________________________________________

________________________________________________________________________

3. Which letters have rotational symmetry?

________________________________________________________________________

________________________________________________________________________

4. Which letters have line symmetry and rotational symmetry?

________________________________________________________________________

________________________________________________________________________
Solve for the unknown number.

1. $1.4 + a = 5.7$  
2. $e - 1 = 1.75$  
3. $b + 0.25 = 1$  
4. $2.54 - m = 1.50$  
5. $5.6 + c = 6.0$  
6. $n - 3.7 = 1.7$  
7. $p + 10.01 = 10.45$  
8. $3.9 - d = 1.2$  
9. $0.5 + s = 0.8$  
10. $t - 4.13 = 0.40$  
11. $y + 0.8 = 4.1$  
12. $5.87 - h = 4.33$  
13. $7.4 + r = 9.5$  
14. $f - 9.7 = 4.3$  
15. $x + 1.88 = 4.91$  
16. $8.69 - g = 5.82$  
17. $10.04 + k = 11.00$  
18. $w - 5.0 = 11.73$  

19. What is the measure of the base of a triangle that has a height of 8 centimeters and an area of 24 square centimeters? Explain your thinking.

20. What is the measure of the length of a rectangle that has a width of 2 meters and a perimeter of 14 meters? Explain your thinking.

21. Round each decimal to the nearest whole number.

21. $12.3$  
22. $25.6$  
23. $19.8$  
24. $10.45$  
25. $99.9$  
26. $100.09$  
27. $41.67$  
28. $35.70$  
29. $50.51$
Use the circle graph to answer questions 1–3.

1. Which types of days occur equally often, according to the graph?

2. If you visited Honolulu for ten days, how many of those days would you expect it to be partly cloudy? Explain your reasoning.

3. Out of the 365 days in a year, about how many sunny days would you expect in Honolulu? How do you know?

4. Last night, Sharise studied for 60 minutes. The table below shows the subjects she studied and how long she studied each subject. Show the data on this circle graph.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science</td>
<td>20 minutes</td>
</tr>
<tr>
<td>Reading</td>
<td>30 minutes</td>
</tr>
<tr>
<td>Spelling</td>
<td>10 minutes</td>
</tr>
</tbody>
</table>
Use the line graph to answer each question.

1. What was the temperature at 10:00 A.M.? _____
2. What was the temperature at noon? _____
3. What was the temperature at 4:00 P.M.? _____
4. At what time was the temperature 18°C? _____
5. What is the highest temperature? _____
6. What is the lowest temperature? _____

Find the perimeter of each figure.

7. _______
8. _______
9. _______

10. What is the measure of the side length of a square that has an area of 49 square centimeters? Explain your thinking.

11. What is the measure of the base of a triangle that has side lengths of 3 meters and 2 meters, and a perimeter of 9 meters? Explain your thinking.
Use the given measures to estimate the circumference of each circle. Use 3 for $\pi$.

1. 
   
   
   
   
   

2. 
   
   
   
   
   

3. 
   
   
   
   
   

4. The circumference of a circle is 24 meters. About how long is a diameter of that circle?

5. The circumference of a circle is 30 inches. About how long is a radius of that circle?
Solve for the unknown.

1. \( z + 0.02 = 0.94 \) ____  
2. \( 12.4 - b = 8.5 \) ____  
3. \( 3.46 + d = 4.10 \) ____  
4. \( p - 8.0 = 4.9 \) ____  
5. \( m + 0.57 = 0.61 \) ____  
6. \( 2.44 - w = 1.00 \) ____  
7. \( 14.1 + e = 16.0 \) ____  
8. \( n - 3.00 = 7.29 \) ____  
9. \( a + 0.3 = 1.2 \) ____  
10. \( 8.56 - h = 2.50 \) ____  
11. \( 4.4 + h = 5.5 \) ____  
12. \( s - 8.21 = 5.47 \) ____  
13. \( r + 14.1 = 18.7 \) ____  
14. \( 7.8 - x = 6.9 \) ____  
15. \( 0.51 + t = 1.00 \) ____  
16. \( y - 0.4 = 0.1 \) ____  
17. \( c + 7.16 = 9.01 \) ____  
18. \( 1.32 - f = 0.74 \) ____

Find the area of each shaded region. Explain your thinking.

19. \[ \text{Diagram of a triangle with sides 6 cm and 12 cm.} \]

20. \[ \text{Diagram of a triangle with sides 6 yd, 7 yd, and 10 yd.} \]

21. \[ \text{Diagram of a hexagon with a shaded region.} \]
Write an equation that shows the total of all the unit fractions.
Each bar is 1 whole.

1. \[ \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} \]

2. \[ \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} \]

Write an equation that shows the total of the circled parts.

3. \[ \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} \]

4. \[ \frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} \]

Add.

5. \[ \frac{1}{8} + \frac{4}{8} = \]  \[ \frac{2}{7} + \frac{3}{7} = \]  \[ \frac{3}{9} + \frac{2}{9} + \frac{1}{9} + \frac{2}{9} = \]

8. Circle the unit fractions.

9. Put hats on \( \frac{3}{5} \) of the heads.

10. This car is \( \frac{1}{5} \) of the train.
Use rectangles to draw the whole train.

Use the circle graph to answer questions 11–12.

11. What fraction of the clothes are hats? __________

12. What fraction of the clothes are shirts? __________

13. I practiced soccer for \( \frac{1}{4} \) of an hour and volleyball for \( \frac{2}{4} \) of an hour. What fraction of an hour did I practice? __________

14. The porch floor has 9 identical boards. Jody painted 4 boards and Chris painted 3 boards. What fraction of the porch floor have they painted so far? __________
Find the unknown numbers.

1. \(3d = 21\)  
   \(\quad d = \)  

2. \(4d + 1 = 17\)  
   \(\quad d = \)  

3. \(z = (8 \times 8) + (2 \times 5)\)  
   \(\quad z = \)  

4. \(7 \times (6 + 3) = t\)  
   \(\quad t = \)  

5. \(63 \div s = 7\)  
   \(\quad s = \)  

6. \(\frac{1}{6}k = 8\)  
   \(\quad k = \)  

7. \(32 + p = 40\)  
   \(\quad p = \)  

8. \(v \div 7 = 56\)  
   \(\quad v = \)  

9. \(4r - 4 = 8\)  
   \(\quad r = \)  

Find the perimeter and area.

10. \(P\)  
    \(\quad P = \)  

11. \(P\)  
    \(\quad P = \)  

12. \(P\)  
    \(\quad P = \)  

\[
\begin{align*}
&\text{10.} &\quad \begin{array}{c}
\begin{array}{c}
5 \text{ cm}
\end{array}
\end{array} &\quad \begin{array}{c}
\begin{array}{c}
3 \text{ cm}
\end{array}
\end{array} \\
&\text{11.} &\quad \begin{array}{c}
\begin{array}{c}
6 \text{ cm}
\end{array}
\end{array} &\quad \begin{array}{c}
\begin{array}{c}
4 \text{ cm}
\end{array}
\end{array} \\
&\text{12.} &\quad \begin{array}{c}
\begin{array}{c}
2 \text{ cm}
\end{array}
\end{array} &\quad \begin{array}{c}
\begin{array}{c}
7 \text{ cm}
\end{array}
\end{array}
\end{align*}
\]

\[
\begin{align*}
\text{10.} &\quad A = \text{ } \\
\text{11.} &\quad A = \text{ } \\
\text{12.} &\quad A = \text{ }
\end{align*}
\]

Solve.

13. A group of scientists discovered 9 stegosaurus footprints and 6 times as many tyrannosaurus footprints. How many dinosaur footprints were there altogether?

14. The scientists discovered 21 tyrannosaurus eggs. Some eggs were broken. There were 6 times as many unbroken eggs as broken eggs. How many eggs were not broken?
Circle the greater fraction. Then write the correct sign (> or <) between them.

1. \(\frac{1}{3}\) \(\frac{1}{4}\)  
2. \(\frac{1}{9}\) \(\frac{1}{7}\)  
3. \(\frac{1}{98}\) \(\frac{1}{99}\)  
4. \(\frac{5}{7}\) 1  
5. 1 \(\frac{7}{8}\)  
6. 1 \(\frac{51}{52}\)  
7. \(\frac{5}{6}\) \(\frac{4}{6}\)  
8. \(\frac{51}{68}\) \(\frac{53}{68}\)  
9. \(\frac{2}{5}\) \(\frac{2}{8}\)  
10. \(\frac{1}{10}\) \(\frac{1}{2}\)  
11. \(\frac{9}{10}\) \(\frac{9}{100}\)  
12. \(\frac{3}{5}\) \(\frac{3}{4}\)  

13. Claire and Ramona each have a banana the same size. Claire cuts hers into fourths. Ramona cuts hers into sixths. Whose banana has bigger pieces?

14. Jorge rode his bicycle \(\frac{2}{5}\) of a mile. Andrew rode his \(\frac{4}{5}\) of a mile. Julio rode his \(\frac{3}{5}\) of a mile. Who rode the farthest?

15. At a basketball game, Tessa scored \(\frac{1}{10}\) of the points, Erica scored \(\frac{1}{12}\) of the points, and Kenya scored \(\frac{1}{9}\) of the points. Who scored the most points?

16. Tony and Kurt are reading the same book. Tony has read \(\frac{136}{200}\) of the book. Kurt has read \(\frac{124}{200}\) of the book. Who has read more of it?
Solve the Factor Puzzles.

1. \[
\begin{array}{cc}
3 & 4 \\
7 & 28 \\
\end{array}
\]

2. \[
\begin{array}{cc}
5 & 40 \\
2 & 8 \\
\end{array}
\]

3. \[
\begin{array}{cc}
56 & 35 \\
12 & 24 \\
\end{array}
\]

4. \[
\begin{array}{cc}
14 & 60 \\
2 & 36 \\
\end{array}
\]

5. \[
\begin{array}{cc}
3 & 18 \\
21 & 20 \\
\end{array}
\]

6. \[
\begin{array}{cc}
21 & 24 \\
16 & 35 \\
\end{array}
\]

7. \[
\begin{array}{cc}
16 & 24 \\
32 & 24 \\
\end{array}
\]

8. \[
\begin{array}{cc}
40 & 55 \\
35 & 60 \\
\end{array}
\]

Find the perimeter and area.

9. \[\text{P} = \quad \text{A} = \quad \]

10. \[\text{P} = \quad \text{A} = \quad \]

11. \[\text{P} = \quad \text{A} = \quad \]

Solve.

12. At your lemonade stand you charge $0.50 for a half cup and $0.75 for a full cup. At the end of the day, you see that 12 cups have been used and you have made $8.00. How many of each size of drink did you sell?

13. Anna is 3 years older than Laura. The product of their ages is double the sum of their ages. How old are they?
Add or subtract.

1. \( \frac{1}{6} + \frac{4}{6} = \) \[ = \]

2. \( \frac{3}{7} + \frac{2}{7} + \frac{1}{7} = \) \[ = \]

3. \( \frac{3}{5} - \frac{1}{5} = \) \[ = \]

Find \( n \) or \( d \).

4. \( \frac{7}{8} - \frac{2}{8} = \frac{n}{8} \)
   \( n = \) \[ = \]

5. \( \frac{3}{4} - \frac{1}{4} = \frac{2}{d} \)
   \( d = \) \[ = \]

6. \( \frac{4}{15} + \frac{6}{15} + \frac{2}{15} = \frac{n}{15} \)
   \( n = \) \[ = \]

7. \( \frac{2}{d} + \frac{2}{d} + \frac{2}{d} + \frac{2}{d} = \frac{8}{15} \)
   \( d = \) \[ = \]

8. \( \frac{5}{12} + \frac{2}{12} + \frac{3}{12} = \frac{10}{d} \)
   \( d = \) \[ = \]

9. \( \frac{1}{d} + \frac{1}{d} + \frac{1}{d} + \frac{1}{d} + \frac{1}{d} = \frac{d}{d} \)
   \( d = \) \[ = \]

Circle the greater fraction.

10. \( \frac{1}{5} \quad \frac{1}{9} \) \[ = \]

11. \( \frac{3}{d} \quad \frac{7}{d} \) \[ = \]

12. \( \frac{8}{d} \quad \frac{6}{d} \) \[ = \]

13. What is \( \frac{n}{d} \)? \[ = \]

14. What fraction is circled? \[ = \]

15. What fraction of the class likes winter or summer best? \[ = \]

16. What fraction of the class likes fall best? \[ = \]

17. Use the circle graph to find \( d \).
   \( \frac{3}{4} + \frac{2}{d} = 1 \)
   \( d = \) \[ = \]

18. The grade 5 class sold cheese for a fundraiser.
    What fraction of the orders did each of the four students take?

Bill
Jenn
Amy
Gregg

\[ = 4 \text{ orders} \]

UNIT 3 LESSON 3
Subtract Fractions 101
Add or subtract.

1. \(0.75 + 0.2 = \) ______  
2. \(3.5 + 2.5 = \) ______  
3. \(0.5 - 0.2 = \) ______  
4. \(0.175 + 0.250 = \) ______  
5. \(5.835 + 1.35 = \) ______  
6. \(3.7 - 1.6 = \) ______  
7. \(0.072 - 0.03 = \) ______  
8. \(0.001 + 0.959 = \) ______  
9. \(8.206 + 1.5 = \) ______  
10. \(3.504 - 1.25 = \) ______  
11. \(4.0 - 0.8 = \) ______  
12. \(6.34 - 2.28 = \) ______

Find the area of the shaded region.

13. [Diagram of a triangle with dimensions 4 in., 5 in., 6 in.]

14. [Diagram of a rectangle with dimensions 10 ft, 8 ft, and a smaller shaded rectangle with dimensions 4 ft, 4 in.]

Use the bar graph to solve problems 15–17.

15. How many students in the class have at least 1 brother or sister?

16. How many more students have 1 brother or sister than have 3?

17. The number of students with 2 children in the family is double the number of students with how many children in the family?
Add or subtract.

1. \(\frac{4}{7} - \frac{1}{7} = \) ______  
2. \(\frac{6}{52} + \frac{4}{52} = \) ______  
3. \(\frac{8}{15} + \frac{7}{15} = \) ______  
4. \(\frac{5}{60} + \frac{12}{60} = \) ______  
5. \(\frac{6}{37} + \frac{6}{37} = \) ______  
6. \(\frac{50}{100} - \frac{40}{100} = \) ______

Find \(n\) or \(d\).

7. \(1 - \frac{7}{13} = \frac{n}{d}\)  
8. \(1 - \frac{5}{40} = \frac{n}{d}\)  
9. \(\frac{5}{8} + \frac{n}{d} = 1\)

\[\frac{n}{d} = \]  \[\frac{n}{d} = \]  \[\frac{n}{d} = \]

10. \(\frac{3}{16} + \frac{n}{d} = 1\)  
11. \(\frac{20}{25} + \frac{n}{d} = 1\)  
12. \(\frac{150}{200} + \frac{n}{d} = 1\)

\[\frac{n}{d} = \]  \[\frac{n}{d} = \]  \[\frac{n}{d} = \]

Solve.

13. Hannah’s joke made \(\frac{25}{32}\) of the class laugh. What fraction of the class did not laugh at her joke?  
   
   _________________________

14. Tyler’s joke made \(\frac{28}{32}\) of the class laugh. What fraction of the class did not laugh at his joke?  
   
   _________________________

15. Who told the funnier joke?  
   
   _________________________

16. In Mrs. Lopez’ class, \(\frac{9}{24}\) of the students take the bus to school and \(\frac{8}{24}\) come in a car. The rest of the students walk to school. What fraction of the students walk?  
   
   _________________________
Find the unknown.

1. \(6b = 42\)  
   \(b = \)_____

2. \(5c + 1 = 36\)  
   \(c = \)_____

3. \(d = (4 \times 5) + (2 \times 9)\)  
   \(d = \)_____

4. \(64 \div s = 8\)  
   \(s = \)_____

5. \(\frac{1}{6}m = 9\)  
   \(m = \)_____

6. \(28 + p = 32\)  
   \(p = \)_____

7. \(7(5 + 3) = t\)  
   \(t = \)_____

8. \(k = 4(6 + 3)\)  
   \(k = \)_____

9. \(6v = 72\)  
   \(v = \)_____

Label each angle as acute, obtuse, or right.

10.  

11.  

12.  

13.  

14.  

Solve.

15. The bookstore staff sold 700 books in one week. If they sold the same number of books each day, how many books had they sold after 3 days?

16. The grade 5 students are raising money for a trip that will cost $175. Students have taken orders for 92 buckets of frozen cookie dough at a price of $6.00 each. If the students have to pay $4.00 for each bucket, will they make enough money for their trip?
What fraction of each group of ice cream cones has a cherry?

1. ![Ice Cream Cones]

2. ![Ice Cream Cones]

3. ![Ice Cream Cones]


Dear Math Student,

I just learned that $\frac{1}{3}$ of the students in my class play soccer. My friend in another class says that $\frac{1}{3}$ of the students in her class also play soccer.

I said, “Oh, then the same number of students play soccer in each class.” She answered, “No, I don’t think that’s true.”

Now I’m confused. If the same fraction of students play soccer, wouldn’t that mean that the same number of students play soccer? Who do you think is right? Can you explain this to me?

Thank you.

Puzzled Penguin
1. 692 + 463 = ______
2. 1,843 + 199 = ______
3. 567 + 4,968 = ______
4. 746 − 99 = ______
5. 2,420 − 398 = ______
6. 62,685 − 810 = ______
7. 6,874 + 552 = ______
8. 7,502 + 2,539 = ______
9. 29,463 + 14,054 = ______
10. 3,985 − 1,775 = ______

Find the perimeter and area of each figure.

11.

\[ P = \] _________
\[ A = \] _________

12.

\[ P = \] _________
\[ A = \] _________

13.

\[ P = \] _________
\[ A = \] _________

14.

\[ P = \] _________
\[ A = \] _________

Solve.

15. Hayley has twice as many stamps in her collection as Kevin does. Kevin has three times as many stamps as Jen. If Kevin has 60 stamps, how many do the three friends have altogether?

______

16. Jon has 32 books on his shelf. He has 7 times the number of mystery books as science fiction. How many of each kind does he have?

______
Name the mixed number shown by the shaded parts.

1. ________
2. ________
3. ________

Write the mixed number as an improper fraction.
4. \(2\frac{1}{3} = \) ________
5. \(4\frac{2}{5} = \) ________
6. \(3\frac{3}{4} = \) ________
7. \(1\frac{5}{8} = \) ________

Write the improper fraction as a mixed number.
8. \(\frac{7}{6} = \) ________
9. \(\frac{8}{3} = \) ________
10. \(\frac{9}{2} = \) ________
11. \(\frac{10}{7} = \) ________

Complete. Give the answer as a mixed number.
12. \(\frac{3}{5} + \frac{4}{5} = \) ________
13. \(\frac{6}{4} + \frac{3}{4} = \) ________
14. \(\frac{2}{9} + \frac{8}{9} = \) ________
15. \(7 + \frac{2}{3} = \) ________

Solve.
16. Alicia walked \(\frac{7}{8}\) mile on Saturday and \(\frac{6}{8}\) mile on Sunday. How far did she walk over the weekend? Give the answer as a mixed number.

17. The dark chain is \(\frac{5}{12}\) yard long. The white one is \(\frac{9}{12}\) yard long. How long will they be if they are joined? Give the answer as a mixed number.
Solve.

1. The dog has gone $\frac{5}{8}$ of the way across the yard. How much farther does it have to go to reach the gate? __________

2. The cat has gone $\frac{7}{16}$ of the way across the yard. How much farther does it have to go to reach the gate? __________

3. I cleaned $\frac{6}{9}$ of my room, and my friend cleaned $\frac{2}{9}$ of my room. How much of my room do we still have to clean? __________

4. Mrs. Spencer’s class is signing up to play sports. $\frac{8}{26}$ of the students want to play soccer and $\frac{12}{26}$ want to play basketball. The rest of the students want to play baseball. What fraction of the students wants to play baseball? __________

Solve the Factor Puzzles.

5. \[ \begin{array}{ccc} 5 & & \\ 25 & 35 & \end{array} \]

6. \[ \begin{array}{ccc} & 6 & \\ 12 & 8 & \end{array} \]

7. \[ \begin{array}{ccc} 30 & 27 & \\ & 18 & \end{array} \]

8. \[ \begin{array}{ccc} & 64 & \\ 36 & 72 & \end{array} \]

9. \[ \begin{array}{ccc} 9 & 12 & \\ & 21 & \end{array} \]

10. \[ \begin{array}{ccc} 4 & \\ 10 & 25 & \end{array} \]
Complete each equation. Express answers as mixed numbers.

1. $\frac{3}{5} + \frac{4}{5} = ____$
2. $\frac{6}{4} + \frac{3}{4} = ____$
3. $\frac{4}{9} + \frac{7}{9} = ____$
4. $1\frac{7}{8} + 3\frac{3}{8} = ____$

5. $4\frac{1}{2} + 5\frac{1}{2} = ____$
6. $3\frac{1}{7} + 2\frac{1}{7} = ____$
7. $1\frac{5}{7} + 1\frac{3}{7} = ____$
8. $50\frac{1}{3} + 50\frac{1}{3} = ____$

9. A group of campers hiked for $5\frac{3}{4}$ hours today and $6\frac{3}{4}$ hours yesterday. How many hours did they hike in all? __________

10. What fractional parts are shown on the number line below? __________

11. What mixed number is marked by the sun? __________

12. What mixed number is marked by the moon? __________

13. What mixed number is marked by the star? __________

14. What fractional parts are shown on the inch ruler above? __________

15. How long is the ribbon on top? __________

16. How long is the ribbon on the bottom? __________

17. If you place the two ribbons end-to-end, how long are they? __________
Add.

1. \[ 363.12 + 422.51 \]
2. \[ 86,435.717 + 3,385.122 \]
3. \[ 1,382,104.405 + 34,208,010.6334 \]

Subtract.

4. \[ 945.3 - 412.1 \]
5. \[ 12,532.36 - 10,801.45 \]
6. \[ 9,112,001.880 - 8,750,500.224 \]

Solve.

7. Sebastián is wrapping a present for his friend. He has 5 kinds of ribbon, 4 types of wrapping paper, and 2 styles of bows. How many different ways can he wrap the present? 

8. The Mahoney family stayed at the seashore for 18 days. They stayed 3 times as long as the Adorno family. How long did the Adorno family stay? 

9. Lisle planted 4 rows of tomatoes with 6 tomato plants in each row. He also planted 3 rows of squash with 7 squash plants in each row. How many plants did Lisle plant in all? 

10. Which triangles are equilateral? 

11. Which triangles are isosceles? 

12. Which triangles are scalene?
3–8 Homework

Subtract.

1. \(1\frac{7}{9} - \frac{4}{9} = \) 
2. \(4\frac{6}{7} - 2\frac{5}{7} = \)
3. \(6\frac{4}{5} - 3\frac{2}{5} = \)
4. \(25\frac{5}{8} - 10\frac{1}{8} = \)

5. \(2 - \frac{1}{3} = \)
6. \(5\frac{3}{8} - 2\frac{7}{8} = \)
7. \(2\frac{1}{6} - 1\frac{5}{6} = \)
8. \(7\frac{2}{5} - 3\frac{3}{5} = \)

Solve.

9. I made a clay snake \(9\frac{5}{8}\) inches long, but a section \(1\frac{7}{8}\) inches long broke off. How long is the snake now?

10. Deacon had \(12\frac{1}{3}\) ounces of juice, but he drank \(3\frac{2}{3}\) ounces. How much juice is left?

How long will each log be after a piece is cut off? Check your answer by adding the lengths of the two pieces.

11. cut off \(3\frac{2}{6}\) feet 

12. cut off \(4\frac{3}{4}\) feet

13. cut off \(6\frac{2}{9}\) feet

14. cut off \(3\frac{2}{5}\) feet

\(\) feet total  
\(\) feet left  
\(\) feet left  
\(\) feet left  
\(\) feet left
Write > or < to show which is greater.

1. \( 209 \quad \_ \quad 290 \)
2. \( 30,502 \quad \_ \quad 30,052 \)
3. \( 128,779 \quad \_ \quad 127,999 \)
4. \( 360.099 \quad \_ \quad 306.990 \)
5. \( 41,772.012 \quad \_ \quad 41,770.228 \)
6. \( 100.096 \quad \_ \quad 100.10 \)

Solve. Use multiplication or division.

7. Jenny prepared 4 rows for bean plants. She can fit 16 bean plants in each row. How many bean plants can she grow?

8. A school bus can carry 60 students. How many buses should a school order to take 520 students on a trip?

9. A hummingbird’s heart beats about 4 times in one second while it is resting. At this rate, how many times does its heart beat in one hour? in one day?

Label each triangle acute, right, or obtuse. Briefly explain.

10. 

11. 

12. 

13.
Subtract.

1. \( \frac{4}{5} - \frac{1}{5} = \)  
2. \( 9\frac{5}{8} - 3\frac{3}{8} = \)  
3. \( 5\frac{1}{6} - 2\frac{5}{6} = \)  
4. \( 18\frac{4}{9} - 10\frac{5}{9} = \)

5. \( 3 - \frac{1}{4} = \)  
6. \( 6\frac{3}{8} - 2\frac{7}{8} = \)  
7. \( 2\frac{1}{3} - 1\frac{2}{3} = \)  
8. \( 6\frac{5}{7} - 3\frac{3}{7} = \)

Solve.

9. Cory planned to practice the piano for \( 1\frac{1}{4} \) hours but he spent \( \frac{3}{4} \) of an hour playing computer games. How long did he actually practice the piano?

---

10. Hala made \( \frac{4}{10} \) of the hits at the baseball game and Ernestina made \( \frac{1}{10} \). Who made more hits? How many more?

---

The campers at Tall Pines Camp saw some animal tracks in the woods. They measured them and made a table showing all the different lengths. Use the table to complete exercises 11–15.

<table>
<thead>
<tr>
<th>Animal Track</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raccoon</td>
<td>( 1\frac{1}{8} ) in.</td>
</tr>
<tr>
<td>Fox</td>
<td>( 3\frac{1}{8} ) in.</td>
</tr>
<tr>
<td>Deer</td>
<td>( 1\frac{6}{8} ) in.</td>
</tr>
<tr>
<td>Moose</td>
<td>( 5\frac{7}{8} ) in.</td>
</tr>
</tbody>
</table>

11. Which track is longer, the raccoon track or the fox track? by how much?

---

12. How much shorter is the deer track than the moose track?

---

13. How much longer is the fox track than the deer track?

---

14. How much shorter is the raccoon track than the deer track?

---

15. List the animal tracks in order from the longest to the shortest.
Find the unknown number in each equation.

1. $s = 4 + (3 \times 9)$  \hspace{1cm} s = \underline{\hspace{2cm}}
2. $12 = t - 7$  \hspace{1cm} t = \underline{\hspace{2cm}}
3. $k = 28 - (2 \times 6)$  \hspace{1cm} k = \underline{\hspace{2cm}}
4. $(14 - 9) \times 3 = m$  \hspace{1cm} m = \underline{\hspace{2cm}}
5. $y = (112 - 94) \times 4$  \hspace{1cm} y = \underline{\hspace{2cm}}
6. $36 = b + 12$  \hspace{1cm} b = \underline{\hspace{2cm}}
7. $h - 15 = 52$  \hspace{1cm} h = \underline{\hspace{2cm}}
8. $70 = p + (3 \times 6)$  \hspace{1cm} p = \underline{\hspace{2cm}}

Solve.

9. Lina has $20 with her. She buys 3 items that cost $6.98, $4.49, and $7.75. Can she also buy a bottle of juice for $1.29?

10. Asim is 11 years old. He went on the bus with his mom, his aunt, his two younger brothers, and his aunt’s 7-year-old daughter. Tickets cost $1.60 for an adult and $0.80 for a child. How much did the trip cost?

11. Graph the data in the table on the circle below. Don’t forget to label the graph.

<table>
<thead>
<tr>
<th>Favorite Fruit</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orange</td>
<td>16</td>
</tr>
<tr>
<td>Banana</td>
<td>2</td>
</tr>
<tr>
<td>Apple</td>
<td>4</td>
</tr>
<tr>
<td>Grape</td>
<td>8</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
</tr>
</tbody>
</table>
The workers at Willow Green Animal Shelter recently took in four new animals. They decided to measure each animal and record the measurements in a table. Use this table to complete exercises 1–4.

1. Which is longer, the pig or the dog? how much longer?

2. How much shorter is the duck than the cat?

3. How much longer is the dog than the duck?

4. How much shorter is the cat than the pig?

<table>
<thead>
<tr>
<th>Animal</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duck</td>
<td>1(\frac{5}{12}) ft</td>
</tr>
<tr>
<td>Cat</td>
<td>2(\frac{8}{12}) ft</td>
</tr>
<tr>
<td>Dog</td>
<td>3(\frac{10}{12}) ft</td>
</tr>
<tr>
<td>Pig</td>
<td>3(\frac{4}{12}) ft</td>
</tr>
</tbody>
</table>

Troy and Francisco decided to make gingerbread people using this recipe. Use it to complete exercises 5–9.

5. Troy has \(\frac{3}{4}\) cup of sugar and Francisco has \(\frac{2}{4}\) cup. How much sugar do they have in all?

6. Will they have any sugar left after making the cookies? How much?

7. Troy and Francisco have \(\frac{3}{4}\) cups of flour. How much more do they need?

8. At the party, the girls ate \(\frac{5}{8}\) of the cookies and the boys ate \(\frac{3}{8}\). How many cookies are left?

9. Troy and Francisco started with 1 pound of butter. How much do they have now?
Circle the greater fraction in each pair. Write a greater than (>) or less than (<) sign between them.

1. \( \frac{6}{700} \) \( \_\_\_\_\_ \) \( \frac{4}{700} \)
2. \( 3\frac{4}{8} \) \( \_\_\_\_\_ \) \( \frac{7}{8} \)
3. \( 7\frac{9}{10} \) \( \_\_\_\_\_ \) \( 7\frac{5}{10} \)
4. \( 10\frac{1}{4} \) \( \_\_\_\_\_ \) \( 9\frac{8}{4} \)

Find each unknown number.

5. \( 7a = 56 \) \( a = \_\_\_\_\_\_ \)
6. \( 9 \times d = 81 \) \( d = \_\_\_\_\_\_ \)
7. \( 42 \times 0 = m \) \( m = \_\_\_\_\_\_ \)
8. \( 27 \div 3 = a \) \( a = \_\_\_\_\_\_ \)
9. \( 36 \div 12 = q \) \( q = \_\_\_\_\_\_ \)
10. \( n \times 5 = 75 \) \( n = \_\_\_\_\_\_ \)
11. \( y \times 4 = 48 \) \( y = \_\_\_\_\_\_ \)
12. \( 72 = 8h \) \( h = \_\_\_\_\_\_ \)

Find the perimeter of each figure.

13. 

\[ \text{Perimeter} = \_\_\_\_\_\_ \]

14. 

\[ \text{Perimeter} = \_\_\_\_\_\_ \]

Show your work.
1. Write a chain of equivalent fractions for the shaded parts.

\[
\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10} = \frac{6}{12}
\]

Use the number lines to complete exercises 2–7.

<table>
<thead>
<tr>
<th>Fourths</th>
<th>Eighths</th>
<th>Twelfths</th>
</tr>
</thead>
<tbody>
<tr>
<td>(0)</td>
<td>(0)</td>
<td>(0)</td>
</tr>
<tr>
<td>(\frac{4}{4})</td>
<td>(\frac{8}{8})</td>
<td>(\frac{12}{12})</td>
</tr>
</tbody>
</table>

2. What fraction is marked by the star? _________

3. What fraction is marked by the heart? _________

4. If you have \(\frac{3}{4}\) cup of flour, how many eighths do you have? _________

5. If you have \(\frac{3}{12}\) of an orange, how many fourths do you have? _________

6. Which is larger, \(\frac{3}{4}\) or \(\frac{10}{12}\)? _________

7. Give two equivalent fractions for \(\frac{6}{8}\). _________________________
Add.

1. \(4,560 + 52,973 = \underline{57,533}\)  
2. \(581,002 + 26,596 = \underline{607,601}\)

3. \(4,300,129 + 3,426 = \underline{4,303,555}\)  
4. \(321,589 + 1,000,000 = \underline{1,321,589}\)

5. \(8,601,308 + 585,434 = \underline{9,186,742}\)  
6. \(2,474,767 + 5,687,136 = \underline{8,161,903}\)

Subtract.

7. \(398,000 - 213,546 = \underline{184,454}\)  
8. \(5,439,456 - 1,217,388 = \underline{4,222,068}\)

9. \(984,305 - 411,900 = \underline{572,405}\)  
10. \(1,473,862 - 24,540 = \underline{1,449,322}\)

11. \(846,549 - 2,308 = \underline{844,241}\)  
12. \(7,458,100 - 3,457 = \underline{7,454,643}\)

Round to the nearest thousand.

13. \(14,541 = \underline{15,000}\)  
14. \(1,543,200 = \underline{1,543,000}\)  
15. \(5,081 = \underline{5,000}\)

16. \(800,760 = \underline{801,000}\)  
17. \(3,894,956 = \underline{3,895,000}\)  
18. \(27,403 = \underline{27,400}\)

This graph represents a survey of students who were asked to name their favorite type of movie.

19. Which types of movie are equally popular? ______________

20. Which type of movie is twice as popular as romance movies? ______________

21. If 50 students named action as their favorite type of movie, how many students named horror as their favorite? ______________

Solve.

22. The Carsons drove 654 km on Monday, 792 km on Tuesday, and 517 km on Wednesday. How many kilometers did they drive in total over the 3 days?

   ______________

23. Otis is 3,750 days old and Casey is 4,539 days old. How many days older than Otis is Casey?

   ______________
1. Write a chain of equivalent fractions for the shaded parts.

\[ \frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10} \]

Write the multiplier or divisor for each pair of equivalent fractions.

2. \( \frac{4}{12} = \frac{1}{3} \)
   
   Divisor = _____
   
   Multiplier = _____

3. \( \frac{2}{9} = \frac{6}{27} \)
   
   Multiplier = _____
   
   Divisor = _____

4. \( \frac{6}{60} = \frac{1}{10} \)
   
   Multiplier = _____

5. \( \frac{3}{10} = \frac{15}{50} \)
   
   Multiplier = _____
   
   Divisor = _____

6. \( \frac{21}{56} = \frac{3}{8} \)
   
   Multiplier = _____
   
   Divisor = _____

7. \( \frac{5}{7} = \frac{30}{42} \)
   
   Multiplier = _____

8. \( \frac{4}{16} = \frac{1}{4} \)
   
   Divisor = _____
   
   Multiplier = _____

9. \( \frac{5}{9} = \frac{25}{45} \)
   
   Divisor = _____
   
   Multiplier = _____

10. \( \frac{10}{60} = \frac{1}{6} \)
    
    Multiplier = _____

11. \( \frac{3}{7} = \frac{18}{42} \)
    
    Multiplier = _____
    
    Divisor = _____

12. \( \frac{24}{56} = \frac{3}{7} \)
    
    Divisor = _____

Complete each exercise about the pairs of fraction bars.

14. What equivalent fractions are shown? ________

15. Identify the multiplier. ________

16. What equivalent fractions are shown? ________

17. Identify the divisor. ________

18. Write a chain with at least six equivalent fractions.

    ________ = ________ = ________ = ________ = ________ = ________
Solve.

1. \[1,000.98 + 265.03\]
2. \[100,289 - 91,460\]
3. \[312,642 + 89,435\]

4. \[10.651 - 8.092\]
5. \[0.354 + 9.717\]
6. \[12.603 - 2.711\]

Find the area of each triangle.

7. \[\text{A} = \frac{1}{2} \times 9 \times 12\]
8. \[\text{A} = \frac{1}{2} \times 6 \times 7\]
9. \[\text{A} = \frac{1}{2} \times 9 \times 3\]

Solve.

10. A restaurant has 60 plates. One night, 9 groups of people with 6 people in each group ate dinner at the restaurant. How many plates were still clean at the end of the night?

11. Clara has a garden that is 7 feet wide and 4 feet long. She has 30 tomato plants to put in the garden. Each plant needs 1 square foot of space. How many leftover plants will Clara have?

12. Carol’s bookshelf has 4 shelves with 6 books on each. Her brother Robert has 3 shelves with 7 books on each. How many books do they have altogether?
Find $n$ or $d$.

1. \( \frac{3}{4} = \frac{n}{12} \) \hspace{1cm} n = \underline{9}
2. \( \frac{1}{5} = \frac{n}{30} \) \hspace{1cm} n = \underline{6}
3. \( \frac{6}{42} = \frac{n}{7} \) \hspace{1cm} n = \underline{1}
4. \( \frac{4}{16} = \frac{2}{d} \) \hspace{1cm} d = \underline{8}
5. \( \frac{2}{7} = \frac{n}{49} \) \hspace{1cm} n = \underline{14}
6. \( \frac{3}{5} = \frac{30}{d} \) \hspace{1cm} d = \underline{50}
7. \( \frac{21}{28} = \frac{n}{4} \) \hspace{1cm} n = \underline{3}
8. \( \frac{7}{63} = \frac{1}{d} \) \hspace{1cm} d = \underline{9}

Answer the questions about the circle graph.
Simplify your answers.

9. What fraction of the vegetables are peppers? \underline{\frac{4}{14}}
10. What fraction of the vegetables are beets? \underline{\frac{2}{14}}
11. What fraction of the vegetables are lettuce? \underline{\frac{6}{14}}
12. Arnetta planted the lettuce and the peppers. What fraction of the vegetables did she plant? \underline{\frac{7}{14}}

Answer the questions about the bar graph.
Simplify your answers.

13. How many balloons are there altogether? \underline{30}
14. What fraction of the balloons are red? \underline{\frac{15}{30}}
15. What fraction of the balloons are white? \underline{\frac{15}{30}}
16. What fraction of the balloons are blue? \underline{\frac{10}{30}}
17. Estevan filled 20 balloons. Did he fill more or less than half? \underline{less than half}
   How do you know?
   \underline{He filled 10 red and 10 white balloons, which is less than half of 20.}
Find the unknown number in each equation.

1. \(6r + 2 = 56\)
   \[r = \ldots\]

2. \(3(7 + 2) = f\)
   \[f = \ldots\]

3. \((8 \times 5) + (3 \times 7) = k\)
   \[k = \ldots\]

4. \(3 + 2t = 13\)
   \[t = \ldots\]

5. \(9(6 - 1) = g\)
   \[g = \ldots\]

6. \((4 \times 6) - (5 \times 2) = b\)
   \[b = \ldots\]

7. \(4s - 6 = 30\)
   \[s = \ldots\]

8. \(a(5 + 6) = 88\)
   \[a = \ldots\]

9. \(c + (9 \times 3) = 30\)
   \[c = \ldots\]

Draw all the lines of symmetry for each figure.

10. [Image of a square]
11. [Image of a pentagon]
12. [Image of a triangle]

Solve each word problem.

13. Cooper has arranged 20 marbles into groups of 5. How many more marbles does he need to have 6 groups of 5 marbles?
   \[\ldots\]

14. Sheila baked 100 muffins for 5 families to share equally. Each family has 4 people in it. How many muffins will each person receive?
   \[\ldots\]

Solve the Factor Puzzles.

   \[49\]

   \[30\]

   \[54\]
Solve. Simplify your answers if possible.

1. What is the probability that the arrow will land on a shaded section of the spinner?

What is the probability that the arrow will land on a white section?

2. If you take one of these donuts from a box, what is the probability that you will get a chocolate one?

What is the probability that you will get a vanilla one?

3. If you take a ring from a box with 8 silver rings and 12 gold rings, what is the probability that you will get a silver ring?

What is the probability that you will get a gold ring?

4. This board game is called Dungeons and Crowns. If you land on one of the dark corner squares, you will be thrown in a dungeon. If you land on one of the squares with a star, you will be crowned monarch.

What is the probability that you will be thrown in a dungeon?

What is the probability that you will be crowned monarch?
Add or subtract. Simplify. Try to do these in your head.

1. \( \frac{4}{3} + \frac{2}{3} = \)  
2. \( \frac{2}{6} - \frac{1}{6} = \)  
3. \( \frac{5}{10} + \frac{1}{10} = \)  

4. \( \frac{3}{4} - \frac{1}{4} = \)  
5. \( \frac{2}{3} + \frac{6}{3} = \)  
6. \( \frac{10}{7} - \frac{5}{7} = \)  

7. \( \frac{1}{8} + \frac{2}{8} = \)  
8. \( \frac{9}{6} - \frac{3}{6} = \)  
9. \( \frac{3}{9} + \frac{4}{9} = \)  

10. \( \frac{5}{5} - \frac{4}{5} = \)  
11. \( \frac{3}{8} + \frac{5}{8} = \)  
12. \( \frac{7}{10} - \frac{3}{10} = \)  

There are 360° in a circle. What fraction of a circle is each angle? Simplify your answers.

13. 90°  
14. 45°  
15. 180°  
16. 120°  
17. 60°  
18. 30°  
19. 10°  
20. 5°  

21. The 2004 population of six states is shown in the bar graph.

Estimate the population of each state to the nearest million.
Add or subtract.

1. \( \frac{1}{3} + \frac{1}{2} = \) _____
2. \( \frac{7}{10} + \frac{1}{5} = \) _____
3. \( \frac{2}{9} - \frac{1}{6} = \) _____

4. \( \frac{5}{32} + \frac{1}{4} = \) _____
5. \( \frac{5}{6} - \frac{2}{3} = \) _____
6. \( \frac{5}{11} + \frac{1}{2} = \) _____

7. \( \frac{13}{16} - \frac{3}{4} = \) _____
8. \( \frac{3}{7} + \frac{1}{3} = \) _____
9. \( \frac{11}{12} - \frac{3}{8} = \) _____

Solve.

10. Leona grew \( \frac{7}{8} \) of an inch this year. Her sister Myra grew \( \frac{3}{4} \) of an inch.
   
   Who grew more? ____________________________
   
   How much more? ____________________________

11. Sack A has 16 horns and 14 harmonicas. Sack B has 7 horns and 8 harmonicas. You are hoping for a harmonica.
   
   Which sack will you draw from? ________________
   
   Why? ______________________________________

12. For breakfast, Oliver drank \( \frac{5}{16} \) of a pitcher of juice. His brother Joey drank \( \frac{3}{8} \) of the pitcher of juice. How much did they drink together?

   __________________________________________

13. If the pitcher in exercise 12 held exactly 1 quart of juice, how much is left?

   __________________________________________
Find the area.

1. \[ \text{A} = \frac{5 \text{ cm}}{12 \text{ cm}} \]

2. \[ \text{A} = \frac{11 \text{ m}}{12 \text{ m}} \]

Solve for \( n \) or for \( d \).

3. \( \frac{1}{6} = \frac{n}{24} \)
4. \( \frac{3}{4} = \frac{15}{d} \)
5. \( \frac{9}{54} = \frac{1}{d} \)
6. \( \frac{10}{18} = \frac{n}{9} \)

7. \( \frac{3}{7} = \frac{18}{d} \)
8. \( \frac{3}{5} = \frac{40}{n} \)
9. \( \frac{27}{36} = \frac{n}{4} \)
10. \( \frac{14}{49} = \frac{2}{d} \)

11. \( \frac{5}{6} = \frac{n}{48} \)
12. \( \frac{1}{3} = \frac{20}{d} \)
13. \( \frac{21}{56} = \frac{3}{d} \)
14. \( \frac{20}{25} = \frac{n}{5} \)

Solve.

15. A truck is 5.4 m tall. It drives under a bridge that is 6.2 m tall. How much space is there between the top of the truck and the bridge?

16. A classroom is 10 yards long. The floor is being tiled with new square tiles that are each 10 inches long. How many tiles are needed to make one row the length of the classroom?
Add or subtract. Give your answers in the simplest form.

1. \(7\frac{1}{2} + 6\frac{5}{8}\)
2. \(2\frac{3}{5} + 5\frac{1}{4}\)
3. \(5\frac{3}{8} + 2\frac{3}{4}\)

4. \(3\frac{4}{15} - 1\frac{1}{5}\)
5. \(9\frac{5}{6} - 4\frac{1}{8}\)
6. \(1\frac{1}{9} + 3\frac{5}{8}\)

7. \(8\frac{1}{6} - 2\frac{7}{12}\)
8. \(6\frac{7}{9} - 4\frac{2}{3}\)
9. \(3\frac{9}{14} - 1\frac{2}{7}\)

Solve. Give your answer in the simplest form.

10. Last year my elm tree was \(8\frac{5}{6}\) feet tall. This year it is \(10\frac{1}{12}\) feet tall. How much did it grow in one year?

11. Luis rode his bicycle \(2\frac{3}{10}\) miles before lunch. He rode \(1\frac{1}{4}\) miles after lunch. How far did Luis ride altogether?

12. Carrie spent \(2\frac{1}{2}\) hours trimming bushes and \(1\frac{1}{4}\) hours weeding the garden. She is supposed to work in the yard for 5 hours. How much longer does she need to work?
Multiply or divide. Try to do these in your head.

1. \(3 \frac{1}{4} + 2 \frac{3}{4} = \) 
2. \(2 \frac{3}{4} - \frac{1}{4} = \) 
3. \(3 \frac{2}{5} + 4 \frac{4}{5} = \) 
4. \(6 \frac{6}{7} - 5 \frac{2}{7} = \) 
5. \(8 \frac{2}{3} + 1 \frac{2}{3} = \) 
6. \(5 \frac{6}{7} - 1 \frac{2}{7} = \) 
7. \(3 \frac{3}{5} + 3 \frac{3}{5} = \) 
8. \(7 \frac{7}{8} - 3 \frac{3}{8} = \) 
9. \(5 \frac{3}{8} + 3 \frac{5}{8} = \) 

Find the area and perimeter.

10. 
   \[\text{\text{P}} = \text{ } \]
   \[\text{\text{A}} = \text{ } \]

11. 
   \[\text{\text{P}} = \text{ } \]
   \[\text{\text{A}} = \text{ } \]

12. 
   \[\text{\text{P}} = \text{ } \]
   \[\text{\text{A}} = \text{ } \]

Solve the Factor Puzzles.

13. 
   \[ \begin{array}{c}
   -
   \hline
   12 \\
   -
   \hline
   -
   \end{array} \]
   \[ \begin{array}{c}
   -
   \hline
   27
   \hline
   45
   \end{array} \]

14. 
   \[ \begin{array}{c}
   -
   \hline
   -
   \end{array} \]
   \[ \begin{array}{c}
   42 \\
   -
   \hline
   45
   \hline
   63
   \end{array} \]

15. 
   \[ \begin{array}{c}
   18
   \hline
   48
   \end{array} \]
   \[ \begin{array}{c}
   -
   \hline
   56
   \end{array} \]

16. 
   \[ \begin{array}{c}
   -
   \hline
   49 \\
   -
   \hline
   -
   \end{array} \]
   \[ \begin{array}{c}
   -
   \hline
   12
   \hline
   21
   \end{array} \]

17. 
   \[ \begin{array}{c}
   36
   \hline
   48
   \end{array} \]
   \[ \begin{array}{c}
   -
   \hline
   56
   \end{array} \]

18. 
   \[ \begin{array}{c}
   30
   \hline
   48
   \end{array} \]
   \[ \begin{array}{c}
   -
   \hline
   45
   \end{array} \]
1. Write a chain of equivalent fractions for the shaded parts of the circles below.

\[
\frac{1}{3} = \frac{2}{6} = \frac{3}{9} = \frac{4}{12} = \frac{5}{15}
\]

Add or subtract. Give your answer in the simplest form.

2. \( \frac{2}{5} + \frac{1}{3} = \) 
3. \( \frac{2}{3} - \frac{1}{6} = \) 
4. \( \frac{13}{16} - \frac{3}{4} = \) 

5. \( \frac{2}{9} + \frac{1}{4} = \) 
6. \( \frac{9}{14} - \frac{2}{7} = \) 
7. \( \frac{3}{32} + \frac{3}{4} = \) 

A gumball machine has 4 kinds of gumballs. There are 36 red ones, 24 white ones, 18 blue ones, and 12 black ones.

8. What is the total number of gumballs in the machine?

9. What fraction of the gumballs are red? Simplify the fraction.

10. What fraction of the gumballs are black? Simplify the fraction.

11. Pang’s favorite flavors are blue and black. What is the probability that he will get one of these flavors?

   Give your answer in the simplest form. ______

12. Tessa’s favorite flavors are red and white. What is the probability that she will get one or the other of these flavors?

   Give your answer in the simplest form. ______

13. Challenge  Suppose Tessa put in a coin and got a red gumball. If she puts in another coin, what is the probability that she will get another red gumball? Can you simplify your answer?
What mixed number is shown by each shaded part?

1.  

2.  

3.  

Answer the questions about the bar graph. Give your answers as simple fractions.

4. How many cookies are there altogether? _____

5. What fraction of the cookies are chocolate chip? _____

6. What fraction of the cookies are oatmeal? _____

7. What fraction of the cookies are peanut butter? _____

8. Melanie baked 25 cookies. Did she bake more or less than half of the cookies? _____
   How do you know? _______________________________________
   _______________________________________
   _______________________________________

Which metric unit would you use to measure each item?

9. the length of your shoe _________________________

10. the length of your classroom _______________________

11. the distance across your state _______________________

12. the length of your street _________________________

13. the circumference of a dinner plate _____________________
Solve.

1. The inside of a refrigerator is 6 feet tall, 3 feet wide, and 2 feet deep. How many cubic feet of space are inside the refrigerator?

2. Isabel wants to estimate the volume of her bedroom, if her bedroom was empty. Her bedroom measures 4 meters long, 3 meters wide, and 3 meters tall. What is the volume of Isabel’s bedroom?

3. Miguel is painting letters of the alphabet on cubes. He will paint one letter of the alphabet on each face of each cube. He knows that there are 26 letters in the alphabet. How many cubes will he need if he paints each letter once? How many faces on the last cube will be empty?

4. How does the volume of a prism change if each dimension of the prism is doubled?

5. A rectangular prism has a length of 4 cm and a width of 5 cm. The volume of the prism is 200 cu cm. The height of the prism is unknown. Explain how to find the height of the prism. Then give the height.
Use multiplication to write three fractions equivalent to each
given fraction.

1. \( \frac{2}{3} \)  
2. \( \frac{3}{5} \)  
3. \( \frac{5}{8} \)  
4. \( \frac{9}{10} \)

Add or subtract.

5. \( \frac{2}{3} + \frac{3}{5} = \)  
6. \( \frac{9}{10} + \frac{3}{5} = \)  
7. \( \frac{5}{8} + \frac{9}{10} = \)  
8. \( \frac{5}{8} + \frac{2}{3} = \)

Calculate the area of each figure in square centimeters.

9. 
10. 

A right triangle has sides of 6 cm, 8 cm, and 1 dm.

11. What is its perimeter in centimeters? ________
12. What is its area in square centimeters? ________

Solve the Factor Puzzles.

13. 
14. 
15. 

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For each question, write whether you would measure for length, area, or volume.

1. The amount of space inside a moving van _____________
2. The number of tiles needed to cover a bathroom floor _____________
3. The distance from a porch to a tree _____________
4. The amount of water a tank holds _____________
5. The height of a flagpole _____________

Solve.

6. A box is 5 inches long, 4 inches wide, and 1 inch deep. How much space is inside the box?
   _____________

7. Aponi built a toy chest for her niece. It has a volume of 12 cubic feet. The chest is 3 feet long and 2 feet wide. How deep is it?
   _____________

8. The rug in Alan’s room has an area of 18 square feet. He is planning to buy another rug that is twice as long and twice as wide. What is the area of the new rug?
   _____________

9. Each drawer in Monique’s nightstand has a volume of 6 cubic decimeters. Each drawer in her dresser is twice as long, twice as wide, and twice as deep. What is the volume of one of Monique’s dresser drawers?
   _____________

10. Fong and Daphne built these structures. Who used more cubes? How many more?
    _____________
1. List the leaves in order from the longest to the shortest.

<table>
<thead>
<tr>
<th>Leaf</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oak</td>
<td>5.04 cm</td>
</tr>
<tr>
<td>Maple</td>
<td>5.030 cm</td>
</tr>
<tr>
<td>Elm</td>
<td>5.023 cm</td>
</tr>
<tr>
<td>Poplar</td>
<td>5.032 cm</td>
</tr>
</tbody>
</table>

Add. Write the answer as a decimal and as a fraction.

<table>
<thead>
<tr>
<th>Decimal</th>
<th>Fraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. 0.8 + 0.09</td>
<td></td>
</tr>
<tr>
<td>3. 0.32 + 0.4</td>
<td></td>
</tr>
<tr>
<td>4. 0.51 + 0.07</td>
<td></td>
</tr>
<tr>
<td>5. 0.006 + 0.2</td>
<td></td>
</tr>
<tr>
<td>6. 0.409 + 0.5</td>
<td></td>
</tr>
</tbody>
</table>
Solve.

1. $3 \text{ kL} = \underline{\hspace{1cm}} \text{ L}$
2. $2,500 \text{ mL} = \underline{\hspace{1cm}} \text{ L}$
3. $5,000 \text{ L} = \underline{\hspace{1cm}} \text{ kL}$

4. $1.5 \text{ L} = \underline{\hspace{1cm}} \text{ mL}$
5. $12 \text{ kL} = \underline{\hspace{1cm}} \text{ L}$
6. $7,500 \text{ mL} = \underline{\hspace{1cm}} \text{ L}$

7. $2 \text{ pt} = \underline{\hspace{1cm}} \text{ qt}$
8. $4 \text{ qt} = \underline{\hspace{1cm}} \text{ gal}$
9. $2 \text{ c} = \underline{\hspace{1cm}} \text{ pt}$

10. $3 \text{ qt} = \underline{\hspace{1cm}} \text{ pt}$
11. $1 \text{ qt} = \underline{\hspace{1cm}} \text{ c}$
12. $5 \text{ gal} = \underline{\hspace{1cm}} \text{ qt}$

Write a fraction.

13. What fraction of 1 gallon is 1 quart?
   \[
   \underline{\hspace{3cm}}
   \]

14. What fraction of 1 liter is 1 milliliter?
   \[
   \underline{\hspace{3cm}}
   \]

15. What fraction of 1 kiloliter is 1 liter?
   \[
   \underline{\hspace{3cm}}
   \]

16. What fraction of 1 pint is 1 cup?
   \[
   \underline{\hspace{3cm}}
   \]

Solve.

17. Cesar bought 2 bags of flour that each weighed a kilogram and another bag that weighed 500 grams. How many grams of flour did he buy?
   \[
   \underline{\hspace{10cm}}
   \]

18. Samantha saw two bottles of ketchup at the store for the same price. One bottle contained a liter of ketchup, and the other contained 750 milliliters of ketchup. Which bottle was the better bargain?
   \[
   \underline{\hspace{10cm}}
   \]

19. A pitcher is full of lemonade. Which unit of capacity best describes the amount of lemonade in the pitcher? Explain.
   \[
   \underline{\hspace{10cm}}
   \]
What is the area of each figure?

1. 

\[3 \text{ cm} \times 3 \text{ cm} = 9 \text{ cm}^2\]

2. 

\[
\frac{1}{2} \times 5 \text{ cm} \times 3 \text{ cm} = \frac{15}{2} \text{ cm}^2 = 7.5 \text{ cm}^2
\]

3. 

\[4 \text{ cm} \times 2 \text{ cm} = 8 \text{ cm}^2\]

4. Look again at the figures above. Which figure has the greatest perimeter?

\[2 \times (3 + 3) = 12 \text{ cm} \quad \text{for the square}\]

\[2 \times (4 + 5 + 3) = 18 \text{ cm} \quad \text{for the triangle}\]

\[2 \times (4 + 2) = 12 \text{ cm} \quad \text{for the rectangle}\]

Therefore, the triangle has the greatest perimeter.

Solve. Write your answers in simplest form.

5. What fraction of 1 foot is 2 inches?

\[\frac{2}{12} = \frac{1}{6}\]

6. What fraction of 1 yard is 18 inches?

\[\frac{18}{36} = \frac{1}{2}\]

For exercise 7, write fractions in simplest form.

7. A paper bag contains 12 marbles. The marbles are identical, except for color. The bag contains 5 red marbles, 4 white marbles, and 3 blue marbles.

What is the probability of reaching into the bag and without looking, choosing:

a white marble?

\[\frac{4}{12} = \frac{1}{3}\]

a red marble or a white marble?

\[\frac{5 + 4}{12} = \frac{9}{12} = \frac{3}{4}\]

a red marble, a white marble, or a blue marble?

\[\frac{5 + 4 + 3}{12} = \frac{12}{12} = 1\]

a blue marble?

\[\frac{3}{12} = \frac{1}{4}\]

a marble that is not white?

\[\frac{5 + 3}{12} = \frac{8}{12} = \frac{2}{3}\]

a red marble, a white marble, or a blue marble?

\[\frac{5 + 4 + 3}{12} = \frac{12}{12} = 1\]
Complete.

1. $3 \text{ g } = \square \text{ mg}$  
2. $50 \text{ kg } = \square \text{ g}$  
3. $2,000 \text{ mg } = \square \text{ g}$  
4. $2 \text{ kg } = \square \text{ g}$  
5. $1,500 \text{ mg } = \square \text{ g}$  
6. $7,500 \text{ g } = \square \text{ kg}$  
7. $1 \text{ lb } = \square \text{ oz}$  
8. $2 \text{ T } = \square \text{ lb}$  
9. $32 \text{ oz } = \square \text{ lb}$  
10. $1,000 \text{ lb } = \square \text{ T}$  
11. $4 \text{ lb } = \square \text{ oz}$  
12. $10,000 \text{ lb } = \square \text{ T}$

Write a mixed number in simplest form to represent each number of ounces.

13. $40 \text{ oz } = \square \text{ lb}$  
14. $50 \text{ oz } = \square \text{ lb}$  
15. $44 \text{ oz } = \square \text{ lb}$  
16. $68 \text{ oz } = \square \text{ lb}$  
17. $22 \text{ oz } = \square \text{ lb}$  
18. $94 \text{ oz } = \square \text{ lb}$

Solve.

19. At a garden center, grass seed sells for $8 per pound. Kalil spend $10 on grass seed. What amount of seed did he buy?  

20. Irina estimates that she is carrying 3 kg in her book bag. If her lunch has a mass of 500 g, what is the mass of everything else in her book bag?  

21. A pickup truck is carrying 500 pounds of cargo. When empty, the truck weighs $2\frac{1}{2} \text{ tons}$. What is the weight of the truck and its cargo in tons?  

22. At a grocery store, salted peanuts in the shell cost 30¢ per ounce. Is $5.00 enough money to buy 1 pound of peanuts? If it is, what amount of money will be left over?
Draw and label each figure. Use your ruler or protractor.

1. ray $AB$
2. line segment $YN$
3. perpendicular lines $CQ$ and $DX$

Find each missing angle measure.

4. $\angle$?

5. $\angle$?

Compare. Write $>$, $<$, or $=$.

6. $27 \bigcirc 31$
7. $54 \bigcirc 80$
8. $106 \bigcirc 101$
9. $330 \bigcirc 303$
10. $\frac{1}{2} \bigcirc \frac{5}{10}$
11. $\frac{1}{3} \bigcirc \frac{2}{3}$
12. $\frac{7}{8} \bigcirc \frac{3}{8}$
13. $\frac{1}{1} \bigcirc \frac{3}{3}$
14. $\frac{3}{4} \bigcirc \frac{7}{8}$
15. $\frac{3}{15} \bigcirc \frac{1}{5}$
16. $\frac{5}{6} \bigcirc \frac{1}{2}$
17. $\frac{1}{4} \bigcirc \frac{1}{3}$

Solve.

18. Three eighths of the interior of a figure is shaded.
   What fraction of the interior of the figure is not shaded?
Solve.

1. \[40 \times 20\]
2. \[400 \times 20\]
3. \[400 \times 200\]
4. \[4000 \times 200\]
5. \[80 \times 60\]
6. \[800 \times 60\]
7. \[800 \times 600\]
8. \[8000 \times 6000\]
9. \[70 \times 20\]
10. \[900 \times 40\]
11. \[800 \times 700\]
12. \[6000 \times 700\]

Solve.

13. A tortoise walks 27 miles in a year. At this rate, how many miles will this tortoise walk in 10 years?

14. If the tortoise lives to be 100 years old, how many miles will it walk during its lifetime?

15. Every month, Paolo earns $40 for walking his neighbor’s dog after school. How much does he earn from this job in one year?

16. There are 60 seconds in a minute and 60 minutes in an hour. How many seconds are there in an hour?

17. An elephant eats about 250 pounds of food each day. About how much food does an elephant eat in 1,000 days?
Complete each Factor Puzzle.

1. 

\[
\begin{array}{ccc}
10 & 5 & \_ \\
24 & & \\
\_ & & \\
\end{array}
\]

2. 

\[
\begin{array}{ccc}
8 & 12 & \_ \\
18 & & \\
\_ & & \\
\end{array}
\]

3. 

\[
\begin{array}{ccc}
9 & 6 & \_ \\
10 & & \\
\_ & & \\
\end{array}
\]

4. 

\[
\begin{array}{ccc}
21 & 28 & \_ \\
6 & & \\
\_ & & \\
\end{array}
\]

5. 

\[
\begin{array}{ccc}
4 & & \_ \\
18 & 24 & \\
\_ & & \\
\end{array}
\]

6. 

\[
\begin{array}{ccc}
40 & & \_ \\
16 & 6 & \\
\_ & & \\
\end{array}
\]

Solve.

7. A box shaped like a rectangular prism is 6 inches long, 4 inches wide, and 2 inches tall. What is the volume of the box?

8. Sandwiches are arranged on 3 trays. Each tray holds 4 sandwiches along the width and 5 sandwiches along the length. How many sandwiches are there in total?

9. A shipping crate measures 4 m long, 3 m wide, and 2 m deep. What volume of goods will fit in the crate?

For each question, write whether you would measure for length, area, or volume. Write the number of measurements you need to make.

10. How far is it from your house to the street? ________

11. How much paper is needed to cover a table? ________

12. How much water will fit in a container shaped like a rectangular prism? ________
Solve the first problem with Rectangle Sections. Solve the other problems using any method you like. Use a separate sheet of paper.

1. \[46 \times 73\]

2. \[84 \times 19\]

3. \[67 \times 53\]

4. \[91 \times 28\]

Solve.

5. Kamini needs to know the area of her yard so that she can buy the right amount of grass seed. The yard is 26 feet by 19 feet. What is the area of Kamini’s yard in square feet?

6. A restaurant has 16 crates of juice. Each crate holds 12 gallons of juice. How many gallons of juice are there altogether?

7. Mr. Jackson is taking 23 students to see a movie. Tickets for the movie cost 75 cents. How much money will Mr. Jackson spend on student tickets?

8. There are usually 20 school days in a month. Grace has band practice for 60 minutes every day after school. How many minutes does she usually practice each month?
Remembering

Write these decimal numbers as fractions.

1. 0.67 = _________  
2. 0.3 = _________  
3. 0.08 = _________  
4. 0.259 = _________  
5. 0.004 = _________  
6. 0.75 = _________

Use the cubes to answer the following questions.

The edges of a cube are each 4 inches long.

7. What is the area of each face? _________
8. What is the volume of the cube? _________

A cube has a volume of 27 cubic centimeters.

9. What is the length of each edge? _________
10. What is the area of each face? _________

One face of a cube has an area of 4 square feet.

11. What is the length of each edge? _________
12. What is the volume of the cube? _________

Solve the Factor Puzzles.

13. __________
14. __________
15. __________
Solve. Use any method.

1. \[78 \times 26\]
2. \[93 \times 42\]
3. \[39 \times 84\]
4. \[56 \times 71\]

The table shows how many newspapers are delivered each week by three paper carriers. Use the table to answer the questions. Use 1 year = 52 weeks.

5. How many papers does Jameel deliver in a year?

6. How many papers does Clare deliver in a year?

7. How many more papers does Mason deliver each week than Clare?

8. How could you find how many papers Mason delivers in a year without doing any multiplication? What is the answer?

Papers Delivered Each Week

<table>
<thead>
<tr>
<th>Name</th>
<th>Papers Delivered Each Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jameel</td>
<td>93</td>
</tr>
<tr>
<td>Clare</td>
<td>97</td>
</tr>
<tr>
<td>Mason</td>
<td>98</td>
</tr>
</tbody>
</table>

Solve.

9. Ray needs to know the area of his floor so he can buy the right amount of carpet. The floor is 21 feet by 17 feet. What is the area of the floor?

10. Maria is buying flowers. Each tray of flowers costs $24. If she buys 15 trays, what will the total cost be?
Solve.

1. Martha and Andy ordered a chicken pot pie to share. Andy ate \(\frac{1}{3}\) of the pie, and Martha ate \(\frac{1}{2}\) of the pie. Who ate more pie? How do you know?

2. How much of the pie did they eat altogether?

3. Look at the two spinners. Which spinner gives you a better chance of landing on a dark space? How do you know?

4. The White Wolf Trail is \(18\frac{9}{10}\) miles long. The Elk Trail is \(15\frac{3}{5}\) miles long. How much longer is the White Wolf Trail?

Complete.

5. \(750 \text{ mL} = \) _____ \(\text{ L}\)  
6. \(2 \text{ kL} = \) _____ \(\text{ L}\)  
7. \(1.5 \text{ L} = \) _____ \(\text{ mL}\)  
8. \(4,000 \text{ L} = \) _____ \(\text{ kL}\)  
9. \(2,500 \text{ mL} = \) _____ \(\text{ L}\)  
10. \(3 \text{ kL} = \) _____ \(\text{ L}\)

Solve.

11. Ricky mixed 500 milliliters of red paint with 750 milliliters of blue paint. How many liters of purple paint did he make?
Solve. You will need a separate sheet of paper for some of the exercises.

1. \[ \begin{array}{c}
87 \\
\times 10
\end{array} \]
2. \[ \begin{array}{c}
23 \\
\times 40
\end{array} \]
3. \[ \begin{array}{c}
112 \\
\times 200
\end{array} \]

4. \[ \begin{array}{c}
852 \\
\times 56
\end{array} \]
5. \[ \begin{array}{c}
938 \\
\times 76
\end{array} \]
6. \[ \begin{array}{c}
768 \\
\times 34
\end{array} \]

7. \[ \begin{array}{c}
592 \\
\times 643
\end{array} \]
8. \[ \begin{array}{c}
475 \\
\times 245
\end{array} \]
9. \[ \begin{array}{c}
318 \\
\times 146
\end{array} \]

Melissa works at Sunny Fields grocery store. Her job is to count the grocery items in the storage room at the end of each day.

Solve.

10. There are 34 boxes of soup with 20 cans in each box. How many cans of soup are there?

11. There are 68 cartons of eggs with a dozen eggs in each carton. How many eggs are there?

12. There are 75 boxes of lemons with 48 lemons in each box. How many lemons are there?

13. There are 478 bags of peanuts with 125 peanuts in each bag. How many peanuts are there?
Tell whether each triangle is acute, obtuse, or right.

1. 

2. 

3. 

4. 

Solve. Watch the signs.

5. \( \frac{2}{5} + \frac{1}{2} = \) 

6. \( \frac{2}{3} - \frac{1}{9} = \) 

7. \( \frac{3}{8} - \frac{1}{4} = \) 

8. \( \frac{2}{7} + 3 = \) 

9. \( \frac{1}{4} + \frac{2}{3} = \) 

10. \( \frac{3}{5} - \frac{1}{4} = \) 

Solve.

11. A sandbox is 6 feet long, 5 feet wide, and \( \frac{1}{2} \) foot deep. What is the volume of the sandbox?

12. A box has the shape of a cube. Each edge is 4 centimeters long. What is the volume of the box?
Solve. You will need a separate sheet of paper.

1. \[65 \times 40\]  
2. \[79 \times 42\]  
3. \[713 \times 60\]  
4. \[184 \times 50\]  
5. \[47 \times 55\]  
6. \[945 \times 32\]  
7. \[126 \times 85\]  
8. \[186 \times 125\]  
9. \[305 \times 273\]

The table shows the sizes of Farmer Reuben’s fields. Use the table and a separate sheet of paper to help you answer each question.

<table>
<thead>
<tr>
<th>Field</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn Field</td>
<td>435 feet by 62 feet</td>
</tr>
<tr>
<td>Wheat Field</td>
<td>731 feet by 120 feet</td>
</tr>
<tr>
<td>Barley Field</td>
<td>256 feet by 194 feet</td>
</tr>
</tbody>
</table>

10. What is the area of the corn field?

11. What is the area of the wheat field?

12. What is the area of the barley field?

13. How many square feet of land did Farmer Reuben plant in all?
Write each mixed number as an improper fraction.

1. \( \frac{4}{3} = \) _____

2. \( \frac{2}{5} = \) _____

3. \( \frac{3}{4} = \) _____

4. \( \frac{1}{7} = \) _____

5. \( \frac{4}{2} = \) _____

6. \( \frac{2}{9} = \) _____

Write each improper fraction as a mixed number.

7. \( \frac{6}{5} = \) _____

8. \( \frac{7}{3} = \) _____

9. \( \frac{9}{2} = \) _____

10. \( \frac{16}{5} = \) _____

11. \( \frac{13}{4} = \) _____

12. \( \frac{11}{3} = \) _____

Use these figures for problems 13–15.

13. Name two straight angles.

_____________  ________________

14. Name two pairs of complementary angles.

_____________  ________________

15. Name two pairs of supplementary angles.

_____________  ________________
Solve. Use a separate sheet of paper or work in your Math Journal.

1. \(93 \times 60\)  
2. \(84 \times 50\)  
3. \(26 \times 89\)  
4. \(35 \times 74\)

5. \(95 \times 68\)  
6. \(86 \times 57\)  
7. \(407 \times 95\)  
8. \(398 \times 76\)

9. \(729 \times 93\)  
10. \(948 \times 75\)  
11. \(825 \times 573\)  
12. \(796 \times 948\)

Solve.

13. Kim is baking cookies for the school bake sale. She can bake 24 cookies on each cookie tray. How many cookies can she bake on 12 trays?

14. The dimensions of the Cloverville soccer field are 110 meters by 75 meters. What is the area of this soccer field?

15. A package of spaghetti weighs 454 grams. William needs 16 packages for a pasta party. How many grams of spaghetti will he have altogether?

16. The Eagle Express is a fast train with 18 cars. Each car has 135 seats. What is the most amount of people who can ride on the Eagle Express at once if one person sits on each seat?

17. A passenger airplane flies 968 miles every day. If there are 365 days in a year, how many miles does the airplane fly each year?
Solve.

1. Hurricanes have winds of about 150 miles per hour. Tornadoes have winds about twice as fast. How fast are tornado winds?

2. The Udder Delight Dairy Farm has 39 barns, and there are 368 cows in each barn. How many cows are there on the farm in all?

3. The Marble Pillar Hotel has 48 floors with guest rooms. There are 52 guest rooms on each floor. How many guest rooms are there at the hotel?

4. Armando earns $296 a week. If he works 52 weeks in a year, how much money will he earn this year?

Solve the Factor Puzzles.

5.  

6.  

7.  

---

Show your work.
Three runners started making a table for April to show how far they run every day, every week, and the entire month.

16. They are not sure how to multiply the decimal numbers. Finish the table for them.

<table>
<thead>
<tr>
<th>Runner</th>
<th>Miles Per Day</th>
<th>Miles Per Week</th>
<th>Miles in April</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cedric</td>
<td>0.6</td>
<td>$7 \times 0.6 =$</td>
<td>$30 \times 0.6 =$</td>
</tr>
<tr>
<td>Shannon</td>
<td>2.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regina</td>
<td>1.75</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

17. May has 31 days. What strategy could they use for finding out how far each runner will run during the month of May?

18. Give the total miles in May for each runner below.
   Cedric:    Shannon:    Regina:
Solve. You may need a separate sheet of paper.

1. \( \frac{50}{20} \)
2. \( \frac{500}{20} \)
3. \( \frac{500}{200} \)
4. \( \frac{5000}{20} \)
5. \( \frac{5000}{200} \)

6. \( 30 \times 60 = \) 
7. \( 300 \times 60 = \)
8. \( 3000 \times 600 = \)

Use the diagrams for problems 9–12.

9. Name a straight angle. 
10. Name a right angle. 
11. Name a pair of complementary angles. 
12. Name a pair of supplementary angles.

Solve.

13. Robyn mixed 500 milliliters of sparkling water with 1,250 milliliters of juice to make punch. How many liters of punch did she make?

14. A recipe for 12 muffins requires \( \frac{23}{4} \) cups of flour. Henry wants to make 6 muffins. How many cups of flour does he need?
Solve.

1. \(0.3 \times 0.6 = \)  
2. \(0.4 \times 0.07 = \)  
3. \(0.003 \times 0.8 = \)  
4. \(5 \times 0.07 = \)  
5. \(0.002 \times 0.3 = \)  
6. \(0.05 \times 0.09 = \)  
7. \(1.8 \times 6\)  
8. \(0.23 \times 40\)  
9. \(0.014 \times 0.9\)  
10. \(0.36 \times 0.82\)

11. Circle the two multiplications that have the same product.

\[3 \times 0.2 \quad 0.03 \times 0.02 \quad 0.03 \times 0.2 \quad 0.3 \times 0.002 \quad 0.03 \times 2\]

Solve.

12. The sunlit zone of the ocean has a depth of about 600 feet. The dark zone, where there is no light at all, begins at 5.5 times that depth. At what depth does the dark zone of the ocean begin?

13. Lauren has 9.9 meters of ribbon. She is cutting it into 100 equal pieces. That is the same as multiplying 9.9 by 0.01. How long will each piece of ribbon be?

14. A furlong is a unit of measure used in horse racing. Every year, horses race 10 furlongs in the Kentucky Derby. One furlong is equal to 0.125 mile. How long is the Kentucky Derby in miles?
Cross out the number that does not mean the same as the others.

1. \( \frac{8}{10} \quad 0.8 \quad \frac{4}{5} \quad 0.08 \)
2. \( 0.25 \quad \frac{1}{4} \quad \frac{3}{9} \quad 0.250 \)

Find the unknown angle measure of each triangle.

3. \( \angle CDB = \) ______  
4. \( \angle QRS = \) ______  

Solve.

5. Each month, Mary pays $250 on a car loan. How much will she have paid after 10 months?

6. Jeremy is buying pizzas for a party. A large pizza costs $12. How much will 18 large pizzas cost?

7. There are 60 seconds in one minute. How many seconds are there in 45 minutes?

Solve the Factor Puzzles.

8. 

\[ \begin{array}{ccc}
12 & 16 \\
15 & & \\
\end{array} \]

9. 

\[ \begin{array}{ccc}
24 & 15 \\
10 & & \\
\end{array} \]

10. 

\[ \begin{array}{ccc}
28 & & \\
36 & 9 & \\
& & \\
\end{array} \]
Solve.

1. \( 4.8 \times 100 \)
2. \( 2.9 \times 0.3 \)
3. \( 0.56 \times 20 \)
4. \( 0.069 \times 0.7 \)
5. \( 2.6 \times 3.4 \)
6. \( 3.8 \times 0.051 \)
7. \( 1.75 \times 4.9 \)
8. \( 3.42 \times 1.67 \)

Solve.

9. Hector and his family will be on vacation for 28 days. Hector’s friend Paco will take care of Hector’s rabbits. The rabbits eat 0.34 kilogram of food each day. How many kilograms of rabbit food will Hector need to leave with Paco?

10. Room temperature is about 72°F. The average temperature on Venus is about 12.5 times that much. What is the average temperature on Venus in °F?

11. The Sunrise Café gets tea bags in boxes of 1,000. If the café charges $1.75 for each cup of tea, and each cup of tea gets one tea bag, how much money does the café make for each box of 1,000 teabags?

12. If a box of tea bags costs $95, how much money does the café actually make after they have used up the box?
Circle each fraction that is equivalent to $\frac{3}{6}$.

1. $\frac{4}{5}$  $\frac{6}{3}$  $\frac{6}{12}$  $\frac{13}{16}$
2. $\frac{1}{2}$  $\frac{1}{6}$  $\frac{1}{4}$  $\frac{1}{3}$

Find each unknown angle measure.

3. \( \angle QRS = \) __________

4. \( \angle HEF = \) __________

Solve.

5. \( \frac{35}{\phantom{100}} \times 30 \)
6. \( \frac{67}{\phantom{100}} \times 13 \)
7. \( \frac{145}{\phantom{100}} \times 62 \)
8. \( \frac{143}{\phantom{100}} \times 30 \)
9. \( \frac{75}{\phantom{100}} \times 18 \)
10. \( \frac{234}{\phantom{100}} \times 73 \)
11. \( \frac{539}{\phantom{100}} \times 200 \)
12. \( \frac{532}{\phantom{100}} \times 421 \)
13. \( \frac{286}{\phantom{100}} \times 34 \)
14. \( \frac{96}{\phantom{100}} \times 73 \)
15. \( \frac{427}{\phantom{100}} \times 393 \)
16. \( \frac{468}{\phantom{100}} \times 300 \)
17. \( \frac{47}{\phantom{100}} \times 14 \)
18. \( \frac{308}{\phantom{100}} \times 271 \)
19. \( \frac{294}{\phantom{100}} \times 176 \)
20. \( \frac{875}{\phantom{100}} \times 30 \)
Round to the nearest tenth.

1. 0.38 ______
2. 0.94 ______
3. 0.621 ______
4. 0.087 ______

Round to the nearest hundredth.

5. 0.285 ______
6. 0.116 ______
7. 0.709 ______
8. 0.563 ______

Write an estimated answer for each problem. Then write each exact answer.

<table>
<thead>
<tr>
<th>Estimated Answer</th>
<th>Exact Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. 38 × 92 ≈ _____ × _____ ≈ _____</td>
<td>38 × 92 = _____</td>
</tr>
<tr>
<td>10. 8.1 × 4.2 ≈ _____ × _____ ≈ _____</td>
<td>8.1 × 4.2 = _____</td>
</tr>
<tr>
<td>11. 7.65 × 0.99 ≈ _____ × _____ ≈ _____</td>
<td>7.65 × 0.99 = _____</td>
</tr>
<tr>
<td>12. 3.8 × 6.02 ≈ _____ × _____ ≈ _____</td>
<td>3.8 × 6.02 = _____</td>
</tr>
</tbody>
</table>

Solve.

13. A factory makes 394 motorcycles each week. If there are 52 weeks in a year, how many motorcycles will the factory make in a year?
   
   Estimate: __________________________
   
   Exact answer: ________________________

14. Suppose you want to buy 3 CDs for $18.95 each. Should you make a safe estimate or an ordinary estimate to find out if you have enough money? What would be a good estimate of how much money you will need? If you have $55, do you have enough money?
   
   __________________________
   
   __________________________
   
   __________________________
Remembering

Write each fraction as a decimal.

1. \( \frac{1}{4} \) ______  
2. \( \frac{9}{10} \) ______  
3. \( \frac{4}{8} \) ______  
4. \( \frac{2}{5} \) ______

Write each decimal as a fraction.

5. 0.2 ______  
6. 0.15 ______  
7. 0.5 ______  
8. 0.75 ______

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

9.  

10.  

Angelo kept track of the high temperature every day for a week. He made a line graph of the data. Use the graph to answer each question.

11. Which day had the highest temperature?
   ________________________________

12. Did the temperature increase or decrease from Wednesday to Thursday?
   ________________________________

13. How much did the temperature change from Thursday to Friday?
   ________________________________
Solve. You may need a separate sheet of paper.

1. $57 \times 0.31$
2. $0.29 \times 74$
3. $7.6 \times 8.3$
4. $0.35 \times 94$

5. $0.048 \times 0.92$
6. $0.605 \times 0.81$
7. $847 \times 0.13$
8. $915 \times 0.24$

Solve.

9. Josefina is buying 10 pounds of salmon, which costs $6.78 per pound. How much will the salmon cost?


10. It is 9.2 miles between Mr. Rossi’s place of work and his home. Because he comes home for lunch, he drives this distance 4 times a day. How far does Mr. Rossi drive each day?


11. Mr. Rossi works 20 days a month. How far does he drive in a month?

Round to the nearest tenth.

12. 0.37
13. 0.59
14. 0.91
15. 0.75

Round to the nearest hundredth.

16. 0.367
17. 0.195
18. 0.742
19. 0.655
Find each product. You may need a separate sheet of paper.

1. \(72 \times 90\)  
2. \(18 \times 29\)  
3. \(245 \times 92\)  
4. \(416 \times 72\)

5. \(0.5 \times 100 = \) \[\_\]
6. \(0.03 \times 1,000 = \) \[\_\]
7. \(0.24 \times 10 = \) \[\_\]

8. \(0.2 \times 3 = \) \[\_\]
9. \(0.04 \times 5 = \) \[\_\]
10. \(0.003 \times 8 = \) \[\_\]

11. \(0.05 \times 0.6\)  
12. \(0.5 \times 20\)  
13. \(0.54 \times 0.7\)  
14. \(0.301 \times 0.9\)

Use your ruler and draw all of the lines of symmetry.

15.  
16.  
17.  
18.
Complete each division.

1. $5 \div 4,820$
2. $8 \div 7,548$
3. $9 \div 7,535$

4. $3 \div 2,958$
5. $7 \div 5,857$
6. $6 \div 5,556$

7. $7 \div 6,945$
8. $8 \div 5,624$
9. $4 \div 3,254$

Solve.

10. Mrs. Wong drove from Chicago to St. Louis 8 times last month. Altogether she drove 2,376 miles. How far is it from Chicago to St. Louis?

11. Jay has 6,200 beads. He is making bracelets with 9 beads each. How many bracelets can he make? How many beads will be left?

12. There are 5,280 feet in a mile. There are 3 feet in a yard. How many yards are there in a mile?

13. The Pencil Pal factory wraps pencils in packages of 6. Today there are 5,750 pencils to be packaged. How many packages will there be? How many pencils will be left over?
Reminding

Solve each exercise.

1. \( \frac{7}{8} - \frac{1}{4} = \) _____
2. \( \frac{4}{9} + \frac{1}{3} = \) _____
3. \( \frac{5}{8} - \frac{1}{2} = \) _____
4. \( \frac{3}{5} - \frac{3}{10} = \) _____
5. \( \frac{1}{2} + \frac{3}{4} = \) _____
6. \( \frac{1}{3} - \frac{1}{6} = \) _____

Use the word ray, angle, or line to name each figure.
7. \( \overrightarrow{BC} \)
8. \( \angle TSU \)
9. \( MN \)

Solve.

10. Mrs. Carranza is planting flowers in her garden. If she plants 11 rows with 14 flowers in each row, how many flowers will she plant?

11. Grant is packing books into boxes. So far, he has packed 17 boxes with 24 books in each box. How many books has he packed so far?

12. Malik does sit-ups every day. He did 125 sit-ups each day for 30 days. How many sit-ups did he do in those 30 days?

Show your work.
Complete each division.

1. $9 \div 6.57$
2. $5 \div 36.41$
3. $4 \div 9.584$

4. $6 \div 207.9$
5. $3 \div 80.07$
6. $7 \div 654.5$

7. $8 \div 4.184$
8. $2 \div 7.006$
9. $6 \div 5.16$

Solve.

10. Teresa bought 8 roses for $10.32. How much did she pay for each rose?

11. Barry’s dog Cubby is 1.26 meters long. Cubby is 7 times as long as Douglas’s guinea pig Taffy. How long is Taffy?

12. Farmer Sanchez has 469.62 acres of land. He will divide it into 9 equal fields for spring planting. How many acres will there be in each field?

13. Six friends will stay at a cabin in the woods this weekend. The cabin is 148.5 miles away from home. Each person will drive one sixth of the distance. How far will each person drive?
Write each decimal as a fraction in simplest form.

1. $0.58 = \frac{\phantom{00}}{100}$
2. $0.4 = \frac{\phantom{00}}{10}$
3. $0.07 = \frac{\phantom{00}}{100}$
4. $0.376 = \frac{\phantom{00}}{1000}$
5. $0.009 = \frac{\phantom{000}}{1000}$
6. $0.285 = \frac{\phantom{000}}{1000}$

Find each unknown angle measure.

7. \[ \angle A = \phantom{000} \]
8. \[ \angle S = \phantom{000} \]
9. \[ \angle N = \phantom{000} \]

Solve.

10. Paolo earns $5.15 per hour at his after-school job. How much will he earn if he works 6 hours one week?

11. Frankie is training for a track meet. Each day, he runs 3.25 miles. How far will he run in one week (7 days)?

12. Carlie is carrying 4 textbooks home. Each book weighs 2.09 pounds. How much do her textbooks weigh altogether?
1. Circle the one that does not mean the same as the others.

\[
\begin{array}{cccc}
0.75 & \frac{3}{4} & 0.750 & \frac{75}{100} \\
& & & 3\overline{4.00} \\
\end{array}
\]

Solve.

2. Clayton walks \(\frac{5}{8}\) mile to school each day. Melinda walks 0.65 mile. Who walks farther? How much farther?

3. In Veronica’s art class 5 out of 9 people speak Spanish. What decimal number shows what part of the class speaks Spanish?

4. Jake has decided to save \(\frac{1}{8}\) of the money he earns each week. After he has earned $100, how much will he have saved?

Complete each division. Add zeros if needed.

\[
\begin{array}{cccc}
5. 8\overline{5} & 6. 4\overline{217} & 7. 7\overline{36.05} & 8. 9\overline{865.8} \\
9. 5\overline{241} & 10. 8\overline{434} & 11. 9\overline{2} & 12. 9\overline{650.07} \\
\end{array}
\]

13. Which exercise has an answer that is a repeating decimal?

_____
Answer each question about the bar graph.

![Bar Graph]

**Babies Born in the United States (2001)**

- **Number of Babies**: 380,000
- **Month**: January, February, March, April, May

1. About how many babies were born in April?

2. About how many more babies were born in January than in February?

3. In which month were the most babies born? About how many babies were born that month?

Solve.

1. About how many babies were born in April?

2. About how many more babies were born in January than in February?

3. In which month were the most babies born? About how many babies were born that month?

Find each unknown angle measure.

4. [Diagram with angles 50°, 130°, 130°]

5. [Diagram with angles 115°, 65°, 65°]

6. [Diagram with angles 210°, 45°]
Divide.

1. $39 \div 2,886$
2. $81 \div 7,533$
3. $68 \div 4,967$
4. $72 \div 4,968$

5. $28 \div 2,520$
6. $33 \div 1,287$
7. $46 \div 1,426$
8. $55 \div 990$

Solve.

9. The lunchroom has enough seats for 168 students. Each class has 24 students. How many classes can eat in the lunchroom at the same time?

Show your work.

10. Mrs. Randall bought tickets to the art museum for all the fifth-grade students. Each ticket cost $12, and the total cost of the tickets was $1,152. How many fifth-grade students are there?

Show your work.

11. The Harmony Hotel has a total of 1,596 rooms. There are 42 rooms on each floor. How many floors does the Harmony Hotel have?
Round to the nearest tenth.

1. 0.76 _____ 2. 0.245 _____ 3. 0.309 _____ 4. 0.92 _____

Round to the nearest hundredth.

5. 0.087 _____ 6. 0.245 _____ 7. 0.309 _____ 8. 0.432 _____

Round to the nearest thousandth.

9. 0.2908 _____ 10. 0.6541 _____ 11. 0.7556 _____ 12. 0.9429 _____

Estimate the circumference of each circle. Use 3 for \( \pi \).

13. [Diagram of a circle with a diameter labeled 15 cm]

14. [Diagram of a circle with a radius labeled 8 ft]

Solve.

15. David spent $216 on photo albums. Each album cost $24. How many albums did he buy?

16. An apple orchard received a shipment of 320 apple trees. The trees will be planted in 12 rows of 26 trees each. How many trees will be left over?
Divide.

1. \(34\div 7,276\)  
2. \(85\div 6,120\)  
3. \(73\div 4,309\)  
4. \(38\div 3,576\)

5. \(57\div 4,722\)  
6. \(26\div 7,903\)  
7. \(65\div 5,918\)  
8. \(69\div 1,796\)

Solve.

9. A carousel factory has 1,252 carousel horses. 48 horses are placed on each carousel.

   How many carousels can the factory build? ____________

   How many horses will be left over? ____________

10. Farmer Parson collected 1,183 chicken eggs this morning. He will put them in cartons that hold a dozen eggs each.

    How many cartons will he fill? ____________

    How many eggs will be left over? ____________


    ______________________________________

    ______________________________________

    ______________________________________
Solve.

1. Caleb has 1,976 pennies. He has 576 fewer pennies than Alec. Alec has 358 more pennies than Jacob. How many pennies does Jacob have?

   ________________________________

2. Martha has $60 to buy a coat. A blue coat costs $57.98, and a red coat is $8.23 less than the blue one. How much change will Martha get if she buys the red coat and there is no tax?

   ________________________________

3. Maya delivered 2,250 newspapers in April last year. That is 450 papers more than she delivered this April. She earns 8¢ for each paper she delivers. How much did she earn this April?

   ________________________________

Find the volume of each rectangular prism.

4. \[ V = \text{_______________________} \]

5. \[ V = \text{_______________________} \]
Solve. Circle the choice that tells how you gave your answer.

1. A Ferris wheel holds 48 people. There are 823 people with tickets to ride the Ferris wheel. How many times will the Ferris wheel need to be run to give everyone a ride?

   whole number only  round up  mixed number  decimal  remainder only

2. Bananas cost 89 cents each at the fruit stand. Isabel has $11.75. How many bananas can she buy?

   whole number only  round up  mixed number  decimal  remainder only

3. The 15 members of the Running Club made $1,338 selling magazines. They will divide the money equally. How much should each runner get?

   whole number only  round up  mixed number  decimal  remainder only

4. There are 524 goldfish in the fish pond. They will be put in indoor tanks for the winter. If each tank holds 45 fish, how many tanks will be needed?

   whole number only  round up  mixed number  decimal  remainder only

5. Mr. Lopez made 339 ounces of strawberry jam. He plans to divide the jam equally among his 12 cousins. How many ounces of jam will each cousin get?

   whole number only  round up  mixed number  decimal  remainder only
Multiply.

1. 65
   \[ \times 38 \]
2. 79
   \[ \times 42 \]
3. 713
   \[ \times 60 \]
4. 184
   \[ \times 56 \]

For each question, write whether you would measure for length, area, or volume. Write the number of measurements you would make.

5. How much sand is in a sand box? ______

6. How long is a fence? ______

7. How much material is needed for a tablecloth? ______

8. How long is one wall of your classroom? ______

Solve.

9. Henry had $20. He bought a hat for $5.99 and a baseball for $3.50. How much did Henry have left?

   

10. Georgia made 3 trays of cookies. Each tray had 12 cookies. She then wrapped the cookies in packages of 6 each. How many packages did she wrap?

   

11. Ralph picked 6 baskets of corn. Each basket held 30 ears of corn. He put 9 ears in each bag he wanted to sell. How many bags did he have?

   

12. Sierra had $35.00. She earned $8.00 raking leaves, $15.00 shoveling snow, and the rest babysitting. How much did Sierra earn babysitting?

   

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172 UNIT 4 LESSON 17
Interpret Remainders

---

Show your work.
Solve.

1. Nella and Lydia are hiking 15 miles today. After every 0.5 mile, they will stop and rest. How many times will they rest during the hike?

2. A cookie cutter shark is 0.4 meter long, and a thresher shark is 6 meters long. How many times as long as the cookie cutter shark is the thresher shark?

3. At a large wedding, the cakes were cut into hundredths, so each piece was 0.01 of a whole cake. If there were 12 cakes, how many pieces were there?

4. A millimeter is 0.001 of a meter. How many millimeters are there in 7 meters?

5. Paco saves $0.75 each day for a new bicycle helmet. He has saved $36. For how many days has Paco been saving?

6. $0.9 | 63$

7. $0.08 | 72$

8. $0.007 | 42$

9. $0.6 | 420$

10. $0.4 | 372$

11. $0.6 | 534$

12. $0.26 | 884$

13. $0.71 | 1,136$
Circle the fraction that is not equivalent to \( \frac{2}{5} \).

1. \( \frac{4}{10} \quad \frac{20}{50} \quad \frac{6}{20} \quad \frac{10}{25} \)

Circle the fraction that is not equivalent to \( \frac{3}{12} \).

2. \( \frac{1}{4} \quad \frac{6}{24} \quad \frac{12}{48} \quad \frac{9}{30} \)

Write each improper fraction as a mixed number.

3. \( \frac{18}{5} = \) ________  
4. \( \frac{25}{4} = \) ________
5. \( \frac{66}{10} = \) ________
6. \( \frac{10}{3} = \) ________  
7. \( \frac{23}{6} = \) ________  
8. \( \frac{38}{12} = \) ________

Use the cubes to answer questions 9–12.

The edges of a cube are 6 inches long.

9. What is the area of each face? ________
10. What is the volume of the cube? ________

A cube has a volume of 125 cu cm.

11. What is the length of each edge? ________
12. What is the area of each face? ________

13. The Eiffel Tower is about 324 meters high. The Sears Tower is 442 meters high. How much higher is the Sears Tower? ________

14. Estimate to find the combined heights of both buildings in meters. ________

Multiply.

15. \( 65 \times 38 \)
16. \( 79 \times 42 \)
17. \( 713 \times 60 \)
18. \( 184 \times 56 \)
Divide.

1. $0.07 \div 4.2$
2. $0.8 \div 2.4$
3. $0.05 \div 4.8$
4. $0.24 \div 2.064$

5. Circle the division that does not have the same answer as the others.

$54 \div 6$  $5.4 \div 0.6$  $0.54 \div 0.6$  $0.54 \div 0.06$  $0.054 \div 0.006$

Solve.

6. A beekeeper collected 7.6 liters of honey. She will pour it into bottles that each hold 0.95 liter. How many bottles will she fill?

7. A very small dinosaur, the microraptor, was only 1.3 feet long. One of the largest dinosaurs, the diplodocus, was about 91 feet long. How many times as long as the microraptor was the diplodocus?

8. Tomorrow in the town of Eastwood there will be a big race that is 5.25 kilometers long. A water station will be set up every 0.75 kilometer, including at the finish line. How many water stations will there be?

9. Marisol’s bedroom has an area of 29.76 square meters. The length of the room is 6.2 meters. What is its width?
Solve.

1. Jessie and Jeff are planting seeds. Jessie said she planted $\frac{3}{8}$ of the seeds and Jeff said he planted $\frac{2}{3}$ of the seeds. Is this possible? Explain why or why not.

2. Ruth needs $3\frac{1}{4}$ yards of fabric to make a small quilt. She has $1\frac{7}{8}$ yards in her fabric box. How much more fabric does she need to buy?

3. Jorge ran $6\frac{1}{4}$ miles on Monday. On Tuesday he ran $\frac{3}{4}$ mile less. How far did he run on Tuesday?

Complete.

<table>
<thead>
<tr>
<th>kiloliter (kL)</th>
<th>hectoliter (hL)</th>
<th>dekaliter (dkL)</th>
<th>liter (L)</th>
<th>deciliter (dL)</th>
<th>centiliter (cL)</th>
<th>milliliter (mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000 L</td>
<td>100 L</td>
<td>10 L</td>
<td>1 L</td>
<td>0.1 L</td>
<td>0.01 L</td>
<td>0.001 L</td>
</tr>
</tbody>
</table>

5. 2kL = ______ L  
6. 3,000 mL = ______ L  
7. 4,500 L = ______ kL  
8. 6.5 L = ______ mL  
9. 9.5 kL = ______ L  
10. 400 mL = ______ L
Divide.

1. $0.7\div 35$
2. $0.06\div 24$
3. $0.8\div 0.64$
4. $0.03\div 18$

5. $3\div 33$
6. $0.05\div 0.65$
7. $12\div 72$
8. $0.04\div 11.56$

9. $8\div 216$
10. $0.8\div 490.4$
11. $28\div 2,380$
12. $0.033\div 5.148$

Solve.

13. Georgia works as a florist. She has 93 roses to arrange in vases. Each vase holds 6 roses. How many roses will Georgia have left over?

14. Julia is jarring peaches. She has 25.5 cups of peaches. Each jar holds 3 cups. How many jars will Julia need to hold all the peaches?

15. The area of a room is 137.5 square feet. The length of the room is 12.5 feet. What is the width of the room?
Find the perimeter and the area.

1. \[
\begin{array}{c}
6 \text{ cm} \\
5 \text{ cm} \\
8 \text{ cm} \\
\end{array}
\]

\[P = \quad \]
\[A = \quad \]

2. \[
\begin{array}{c}
10 \text{ cm} \\
8 \text{ cm} \\
12 \text{ cm} \\
\end{array}
\]

\[P = \quad \]
\[A = \quad \]

3. \[
\begin{array}{c}
8 \text{ cm} \\
10 \text{ cm} \\
6 \text{ cm} \\
\end{array}
\]

\[P = \quad \]
\[A = \quad \]

4. \[
\begin{array}{c}
3 \text{ cm} \\
5 \text{ cm} \\
4 \text{ cm} \\
\end{array}
\]

\[P = \quad \]
\[A = \quad \]

Imagine you spin the spinner one time.
Write each probability as a fraction.

5. What is the probability of landing on a 1?

\[
\]

6. What is the probability of landing on a 2?

\[
\]

7. What is the probability of landing on a 3?

\[
\]

8. What is the probability of landing on a 4?

\[
\]
Multiply or divide. You may need a separate sheet of paper.

1. $1.5 \times 5 = \underline{\hspace{2cm}}$
2. $0.4 \times 0.05 = \underline{\hspace{2cm}}$
3. $0.004 \times 0.03 = \underline{\hspace{2cm}}$

4. $0.55 \times 0.07$
5. $0.25 \times 0.12$
6. $22.3 \times 6.2$
7. $20.8 \times 0.26$

8. $0.3 \div 0.108$
9. $0.11 \div 0.07$
10. $0.67 \div 32.16$
11. $0.44 \div 105.6$

For each problem, decide whether you need to multiply or divide. Then solve.

12. Harriet needs 38 inches of pine board to make a birdhouse. How many birdhouses can she make with 875 inches of board? How many inches of board will be left over?

13. Roberto will save $\frac{1}{6}$ of his allowance each day. If he gets $2.00 a day, about how much money will he save each day? Round your answer to the nearest penny.

14. A large box of cereal contains 17.4 ounces. Six children want to share the cereal equally. How much cereal should each child get?

15. Raisins cost $0.97 per pound. Michael bought $15.52 worth of raisins. How many pounds of raisins did he buy?
Add or subtract.

1. \[3.145 + 0.34\]  
2. \[55.893 - 5.06\]

3. \[29.007 + 9.897\]  
4. \[14.035 - 7.9\]

5. \[76.35 + 2.389\]  
6. \[37.007 - 2.87\]

Solve.

- **5.** A puppy weighs \[4\frac{1}{2}\] pounds. What is the weight of the puppy in ounces?

- **6.** Truck A is carrying 2.5 tons of cargo. Truck B is carrying 4,500 pounds of cargo. Which truck is carrying more?
Complete.

1. Draw a translation along the line.

2. Draw a reflection across the line.

3. Draw a 90° clockwise rotation about point Z.

4. Draw a reflection across the line.

Draw the next figure in the pattern.

5. [Diagram of a sequence of shapes]

6. [Diagram of a sequence of arrows]
Solve.

1. Rectangle \(ABCD\) measures 4 cm by 5 cm. Rectangle \(EFGH\) measures 2 cm by 10 cm. Which rectangle has a greater perimeter? Explain.

2. Which rectangle has a greater area? Explain.

3. The interior of a circle is divided into two central angles. One angle measures 100°. What is the measure of the other angle?

Add or subtract.

4. \(1.58 - 1.12 = \_

5. \(34.5 + 8.62 = \_

6. \(7.9 - 6 = \_

7. \(0.83 + 23 = \_

8. \(9 - 5.01 = \_

9. \(14.4 + 3.81 = \_

Simplify.

10. \(\frac{3}{5} - \frac{1}{6} = \_

11. \(\frac{9}{10} + \frac{1}{2} = \_

12. \(\frac{11}{12} - \frac{2}{3} = \_

13. \(\frac{3}{2} + \frac{2}{3} = \_

14. \(\frac{51}{4} - \frac{3}{4} = \_

15. \(\frac{7}{8} + \frac{5}{6} = \_

Write 3 equivalent fractions for each fraction.

16. \(\frac{3}{8} = \_

17. \(\frac{6}{7} = \_

18. \(\frac{28}{84} = \_

19. \(\frac{10}{24} = \_

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1. Draw an isosceles trapezoid. Write the ordered pairs for its vertices.

2. Now draw an isosceles triangle. Write the ordered pairs for its vertices.

3. Draw a parallelogram. Write the ordered pairs for its vertices. Draw a line of reflection and reflect the parallelogram across the line. Give the ordered pairs for the reflected parallelogram.
Find the perimeter and area.

1. The perimeter of a shape is given by the sum of all its sides. Calculate the perimeter of the shape shown.

   - Perimeter, $P = \ldots$ units
   - Area, $A = \ldots$ square units

2. The area of triangle $ABC$ is 10 square cm. Name a possible base measure and a possible height measure for triangle $ABC$. Explain your answer.

   - Possible base measure: \ldots
   - Possible height measure: \ldots
   - Explanation: \ldots

3. Can one angle of a right triangle measure 100°? Explain your answer.

   - Answer: \ldots
   - Explanation: \ldots

Multiply or divide.

4. $84 \div 6 = \ldots$
5. $27 \times 10 = \ldots$
6. $108 \div 12 = \ldots$
7. $15 \times 100 = \ldots$
8. $144 \div 24 = \ldots$
9. $1,000 \times 3 = \ldots$
10. $8.4 \div 6 = \ldots$
11. $27 \times 0.1 = \ldots$
12. $10.8 \div 12 = \ldots$
13. $1.5 \times 0.01 = \ldots$
14. $144 \div 2.4 = \ldots$
15. $0.100 \times 0.3 = \ldots$
1. Describe the function \( y = 5x \).

2. Write an equation for the function described by this rule: the value of \( y \) is 10 times greater than the value of \( x \).

3. Complete the table of ordered pairs for the function \( y = x + 5 \). Plot the ordered pairs and draw a line to connect the points.

<table>
<thead>
<tr>
<th>( x )</th>
<th>( y )</th>
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<tbody>
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</tr>
</tbody>
</table>

   Write the rule in words:

4. For which function, \( y = 2x \) or \( y = x + 2 \), is the value of \( y \) always greater than the value of \( x \)? Explain your answer.
1. Use your protractor to draw an angle that measures 45°. Label the angle \( \triangle{KLM} \).

2. What kind of angle has twice the measure of \( \angle{KLM} \)?

3. \( \angle{A} \) and \( \angle{B} \) are supplementary angles. \( \angle{S} \) and \( \angle{T} \) are complementary angles. How many times greater is the total of the measures of \( \angle{A} \) and \( \angle{B} \) than the total of the measures of \( \angle{S} \) and \( \angle{T} \)?

4. A rectangular prism measures 5 in. by 8 in. by 13 in. What is the volume of the box in cubic inches?

5. Corey had $16.50 left after he bought a pair of jeans for $19.50. How much money did Corey have before he bought the jeans?

6. What fraction of a dollar is equivalent to 50 cents?

7. Write 5 other fractions equivalent to \( \frac{8}{12} \).
1. Reflect the figure across the $y$-axis of the coordinate plane.

2. Suppose the ordered pairs $(-6, -4), (1, -4), (1, -8), \text{ and } (-6, -8)$ represent the vertices of a rectangle. Translate the rectangle 5 units to the right. What ordered pairs represent the vertices of the new rectangle?
Solve.

1. A rectangular prism measures 2 inches by 4 inches by 8 inches. What is the greatest number of 1-inch by 1-inch by 1-inch cubes that can be placed inside the container?

2. In a 100-yard dash, Jeffrey finished 0.07 seconds behind Claudelle. Jeffrey’s time for the dash was 14.02 seconds. What was Claudelle’s time?

3. ∠ABC and ∠DBE are vertical angles. The measure of ∠DBE is 73°. What is the measure of ∠ABC?

The graph below represents 20 votes and shows the outcome of a class election.

4. Write and answer two questions about the graph.
Solve. Write a multiplication equation for each problem.

Miguel swam 6 lengths of the pool. Po Lan swam 3 times as far as Miguel. Lionel swam \( \frac{1}{3} \) as far as Miguel.

1. How many lengths did Po Lan swim? \( \square \) Write the equation. \( \square \)

2. How many lengths did Lionel swim? \( \square \) Write the equation. \( \square \)

Chris cut a length of rope that was 12 feet long. Dayna cut one that was 4 times as long as Chris’s rope. Benita cut one that was \( \frac{1}{4} \) as long as Chris’s rope.

3. How long is Dayna’s rope? \( \square \) Write the equation. \( \square \)

4. How long is Benita’s rope? \( \square \) Write the equation. \( \square \)

Write two statements for each pair of treats. Use the word times.

5. Compare cookies and drinks.

6. Compare drinks and pizzas.

7. Compare cookies and pizzas.

Solve.

8. \( \frac{1}{3} \times 18 = \square \)

9. \( \frac{1}{4} \) of 12 = \( \square \)

10. \( \frac{1}{8} \times 32 = \square \)

11. \( \frac{1}{9} \) of 27 = \( \square \)

12. \( \frac{1}{8} \times 56 = \square \)

13. \( \frac{1}{3} \) of 15 = \( \square \)

14. \( \frac{1}{6} \times 54 = \square \)

15. \( \frac{1}{5} \times 35 = \square \)

16. \( \frac{1}{10} \) of 60 = \( \square \)
Multiply or divide.

1. \(38 \times 0.69\)
2. \(0.75 \times 54\)
3. \(0.8 \div 7.76\)
4. \(0.13 \div 0.754\)
5. \(42 \times 1.6\)
6. \(0.15 \times 63\)
7. \(0.4 \div 0.168\)
8. \(0.24 \div 0.336\)

Write whether each is a measurement of length, area, or volume.

9. the amount of gravel in a dump truck
10. the distance between two houses
11. the amount of floor covered by a rug
12. the amount of air in a room

Write each measurement using a number and a symbol.

13. 32 hundredths of a centimeter
14. 7 tenths of a millimeter
15. 62 thousandths of a decimeter

Example:

9 tenths of a decimeter = 0.9 dm

Find the number of cubes. Show your work.

16. 
17. 
Multiply.

1. \( \frac{2}{3} \times 15 = \) ____  
2. \( \frac{3}{4} \times 8 = \) ____  
3. \( \frac{7}{8} \times 32 = \) ____  
4. \( \frac{2}{9} \times 27 = \) ____  
5. \( \frac{3}{8} \times 56 = \) ____  
6. \( \frac{3}{4} \times 16 = \) ____  
7. \( \frac{2}{3} \times 21 = \) ____  
8. \( \frac{4}{5} \times 35 = \) ____  
9. \( \frac{5}{7} \times 28 = \) ____  
10. \( \frac{4}{9} \times 45 = \) ____  
11. \( \frac{5}{12} \times 24 = \) ____  
12. \( \frac{9}{10} \times 70 = \) ____

Solve.

13. Rebecca has 21 math problems to solve. She has solved \( \frac{2}{7} \) of them. How many problems has she solved?

14. Tessa threw 36 free throws at basketball practice. She sank 27 of them. What fraction of her free throws did Tessa sink?

15. A carousel has 56 horses. \( \frac{3}{8} \) of them are white. How many horses are not white?

16. Nathan works at a hardware store. Today he sold 48 tools. \( \frac{5}{6} \) of the tools he sold were hammers. How many hammers did Nathan sell today?
Multiply or divide.

1. \(75 \times 0.15\)
2. \(0.62 \times 14\)
3. \(1.9 \times 1.2\)
4. \(0.5 \times 0.5\)

5. \(5 \div 18\)
6. \(7 \div 24.01\)
7. \(11 \div 160.05\)
8. \(6 \div 966\)

9. Plot these points on the coordinate grid:
   A (1, 2)  B (5, 2)  C (3, 5)

10. Join Point A, Point B, and Point C with line segments. Name the geometric figure this makes.

11. Translate the figure 4 units to the right and 2 units up. Name the coordinates of the translated figure.
   \(A'\)  \(B'\)  \(C'\)

Solve.

12. Box A contains 20 marbles and 14 of them are red. Box B contains 10 marbles and 8 of them are red. You will choose one marble from one of the boxes. Which box would you prefer if you want to choose a red marble?

\[
\frac{14}{20} = 0.7 \quad \frac{8}{10} = 0.8
\]

Which box would you prefer?
The campers in each cabin at Bear Claw Camp held a contest to see who could walk the farthest in one day. Write your answers to the questions as improper fractions.

1. The campers in Cabin A walked $\frac{1}{4}$ of the way to Otter Ridge. How many miles did they walk?

2. The campers in Cabin B walked $\frac{2}{3}$ of the way to Silver Stream. How many miles did they walk?

3. The campers in Cabin C walked $\frac{3}{5}$ of the way to Fossil Cave. How many miles did they walk?

4. The campers in Cabin D walked $\frac{1}{6}$ of the way to Mammoth Mountain. How many miles did they walk?

5. Which group of campers walked the farthest that day?

6. Show $\frac{2}{3}$ of 4 on the number line.

7. Write $\frac{2}{3}$ of 4 as an improper fraction. ______

8. Write $\frac{2}{3}$ of 4 as a mixed number. ______

Write your answers as improper fractions.

9. $\frac{2}{7} \times 4 = \underline{\hspace{2cm}}$
10. $\frac{2}{3} \times 8 = \underline{\hspace{2cm}}$
11. $\frac{5}{6} \times 4 = \underline{\hspace{2cm}}$
12. $\frac{2}{9} \times 20 = \underline{\hspace{2cm}}$
13. $\frac{7}{9} \times 2 = \underline{\hspace{2cm}}$
14. $\frac{3}{8} \times 5 = \underline{\hspace{2cm}}$
15. $\frac{2}{3} \times 13 = \underline{\hspace{2cm}}$
16. $\frac{5}{12} \times 18 = \underline{\hspace{2cm}}$
17. $\frac{5}{9} \times 12 = \underline{\hspace{2cm}}$

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Write the decimals as fractions. Simplify your answers.

1. \(0.54 = \frac{54}{100}\)
2. \(0.6 = \frac{6}{10}\)
3. \(0.09 = \frac{9}{100}\)
4. \(0.759 = \frac{759}{1000}\)
5. \(0.008 = \frac{8}{1000}\)
6. \(0.67 = \frac{67}{100}\)
7. \(0.75 = \frac{75}{100}\)
8. \(0.3 = \frac{3}{10}\)
9. \(0.224 = \frac{224}{1000}\)
10. \(0.492 = \frac{492}{1000}\)
11. \(0.004 = \frac{4}{1000}\)
12. \(0.36 = \frac{36}{100}\)

Decide if each angle is obtuse, right, or acute.

13. Obtuse
14. Right
15. Acute

16. Obtuse
17. Right
18. Acute

Solve.

19. Javier has twice as many books as Emily. Emily has one third as many books as Manolo. If Manolo has 12 books, how many books does Javier have?

Show your work.
Tanith is using a number line to find $\frac{3}{4} \times \frac{2}{5}$. This is her work so far:

1. Explain Steps 1 and 2 to someone at home.

2. Finish Tanith’s work by circling $\frac{3}{4}$ of each circled fifth.

   How many 20th’s did you circle altogether? _____

   What is $\frac{3}{4} \times \frac{2}{5}$? _____

3. Use the number line to find $\frac{2}{3} \times \frac{5}{6}$.
   Label all the parts above and below.

4. Four friends at a party popped $\frac{3}{4}$ of a bag of popcorn. They ate half of what was popped. What fraction of the popcorn in the bag did they eat?

5. Ashley brought $\frac{7}{8}$ of a gallon of lemonade to the party. Her friends drank $\frac{2}{3}$ of it. How many gallons of lemonade did they drink?

Multiply. You do not need to simplify.

6. $\frac{2}{7} \times \frac{1}{3} = _____$
7. $\frac{4}{9} \times \frac{2}{9} = _____$
8. $\frac{1}{8} \times \frac{5}{6} = _____$
9. $\frac{2}{7} \times 12 = _____$
10. $\frac{4}{5} \times \frac{2}{3} = _____$
11. $\frac{1}{7} \times \frac{3}{5} = _____$
12. $\frac{9}{10} \times \frac{1}{2} = _____$
13. $\frac{5}{12} \times 3 = _____$
14. $\frac{5}{6} \times \frac{1}{6} = _____$
Estimate each product. Show your work.

1. $4.8 \times 47 \approx ____$
2. $0.211 \times 8 \approx ____$
3. $13.9 \times 11 \approx ____$

Multiply. Compare your answer to your estimate above.

4. $\frac{4.8}{47}$
5. $\frac{0.211}{8}$
6. $\frac{13.9}{11}$

Find the unknown number in each Factor Puzzle.

7. 

8. 

9. 

10. 

Find the perimeter and area of each figure. Show your work.

11. 

12. 

13.
Multiply. Simplify first if you can.

1. \( \frac{2}{5} \times \frac{6}{7} = \) 

2. \( \frac{4}{9} \times \frac{1}{8} = \) 

3. \( \frac{5}{24} \times \frac{8}{15} = \) 

4. \( \frac{2}{17} \times \frac{8}{1} = \) 

5. \( \frac{3}{4} \times \frac{12}{25} = \) 

6. \( \frac{5}{7} \times \frac{3}{8} = \) 

7. \( \frac{3}{10} \times \frac{2}{3} = \) 

8. \( \frac{5}{16} \times \frac{2}{25} = \) 

9. \( \frac{4}{35} \times \frac{7}{12} = \) 

10. \( \frac{5}{6} \times \frac{7}{1} = \) 

11. \( \frac{7}{9} \times \frac{6}{49} = \) 

12. \( \frac{7}{8} \times \frac{2}{3} = \) 

13. Circle the fraction that does not mean the same as the others.

\[
\begin{array}{cccccccc}
\frac{3}{15} & \frac{2}{10} & \frac{1}{5} & \frac{9}{45} & \frac{10}{50} & \frac{6}{40} & \frac{7}{35} & \frac{100}{500}
\end{array}
\]
Solve.

1. Oliver has 395 books. He has 5 times as many books as Vanessa. How many books does Vanessa have?

2. Armando makes clown puppets. He has 3 kinds of faces, 4 kinds of hats, and 2 kinds of clown suits. How many different puppets can Armando make?

3. A farmer owns two orchards. There are 28 columns and 17 rows of trees in the apple orchard and 32 columns and 14 rows of trees in the pear orchard. Which one has more trees? How many more?

4. I bought 2 bagels and a glass of juice this morning. I paid 40 cents for the juice. Altogether I paid $1.00. How much did each bagel cost?

Round to the nearest tenth.

5. 0.67  

6. 0.88  

7. 2.14  

8. 3.81  

Round to the nearest hundredth.

9. 0.789  

10. 0.092  

11. 0.818  

12. 0.477  

Answer each question about the circle graph.

13. What fraction of the class has blonde hair?

14. There are 32 students. How many have each hair color?

15. How many times more students have brown hair than red hair?
Solve. Watch the signs. The operations are mixed.

1. \( \frac{3}{4} \times \frac{1}{8} = \) \_
2. \( \frac{2}{3} - \frac{1}{9} = \) \_
3. \( \frac{1}{10} + \frac{1}{5} = \) \_
4. \( \frac{2}{7} \times 12 = \) \_
5. \( \frac{1}{5} + \frac{2}{3} = \) \_
6. \( \frac{1}{4} + \frac{3}{8} = \) \_
7. \( \frac{5}{7} \times \frac{5}{6} = \) \_
8. \( \frac{11}{12} + 3 = \) \_
9. \( \frac{4}{9} - \frac{2}{9} = \) \_
10. \( \frac{1}{3} \times \frac{1}{8} = \) \_
11. \( \frac{7}{8} \times \frac{3}{4} = \) \_
12. \( 10 - \frac{1}{9} = \) \_

Solve. Simplify before multiplying if you can.

13. Rodrigo’s fish bowl holds \( \frac{7}{8} \) of a gallon of water. It is now \( \frac{1}{2} \) full. How much water is in it?

14. Kenya’s long jump is \( 7 \frac{1}{6} \) feet long. Her friend Janet’s is \( 6 \frac{1}{3} \) feet long. How much longer is Kenya’s jump than Janet’s?

15. A group of hikers walked \( 8 \frac{7}{10} \) miles to Caribou Cave and then \( 5 \frac{1}{5} \) miles to Silver Stream. How far did they walk altogether?

16. Estevan has a recipe that calls for \( \frac{3}{4} \) cup of flour. He wants to make \( \frac{1}{3} \) of the recipe. How much flour will he need?

17. A truck was carrying \( 2 \frac{1}{8} \) tons of sand. When it arrived, only \( 1 \frac{1}{2} \) tons of sand were left. How much sand was lost along the way?

18. On White Gate Chicken Farm, \( \frac{5}{6} \) of the eggs usually hatch. This year only \( \frac{2}{3} \) as many hatched. What fraction of the total eggs hatched this year?
Multiply or divide.

1. 7.33 \times 8
2. 0.83 \times 0.5
3. 3.14 \times 72
4. 9.69 \times 6.1

5. \frac{86.56}{6}
6. \frac{28.88}{6}
7. \frac{40.12}{4}
8. \frac{746.9}{7}

Is each triangle equilateral, isosceles, or scalene?

9.
10.
11.
12.

Write whether you would measure for length, area, or volume.

13. How much of the ground is covered by a tent?

14. How far is it from the front door to the street?

15. How much space is there inside a railroad car?

16. How tall is an oak tree?

17. How much water does an aquarium hold?
Write the fraction and the decimal equivalent for the shaded part.

1. 

2. 

3. 

4. 

5. 

6. 

7. 

8. 

Write the fraction or decimal equivalent.

9. \(0.625 = \) _____

10. \(0.33 = \) _____

11. \(\frac{7}{8} = \) _____

12. \(0.83 = \) _____

13. \(0.375 = \) _____

14. \(0.250 = \) _____

15. \(0.875 = \) _____

16. \(0.6 = \) _____

17. \(0.17 = \) _____

18. Circle the number that is not equal to the others.

\[\frac{4}{5}, 0.8, \frac{16}{20}, 0.08, \frac{8}{10}, 0.80\]

19. Label the number line with decimals above and fractions below.
Solve.

1. Chad’s wagon has a volume of 900 cu in. It is 30 in. long and 10 in. wide. How deep is the wagon?

2. The McDonald family bought a new couch that is 5.4 feet long and 3.2 feet wide. How much floor space will the couch cover?

3. A circular backyard swimming pool is 21 yards around the outside. About how wide is the pool at its widest point?

4. A flower box is 7 feet long, 2 feet wide, and 2 feet deep. How many cubic feet of dirt will it hold?

5. If dirt is sold in bags that hold 3.5 cu ft, how many bags of dirt will it take to fill the box?

Subtract.

6. $7,000 - 472 = \underline{\hspace{2cm}}$

7. $42,819 - 1,367 = \underline{\hspace{2cm}}$

8. $689.46 - 38.2 = \underline{\hspace{2cm}}$

9. $17.89 - 3.215 = \underline{\hspace{2cm}}$
Divide.

1. \(5 \div 6 = \) 
2. \(9 \div \frac{1}{5} = \)
3. \(7 \div 5 = \)
4. \(8 \div \frac{1}{6} = \)
5. \(3 \div 10 = \)
6. \(4 \div \frac{1}{9} = \)
7. \(100 \div \frac{1}{6} = \)
8. \(1 \div 65 = \)

Solve.

9. Alexander is dividing oranges into eighths. He has 5 oranges. How many eighths will he have?

10. Carrie has 32 ounces of ice cream. She will divide it equally among 10 people. How much will each person get? Give your answer as an unsimplified improper fraction and as a simplified mixed number.

11. Nayati wants to swim 50 miles this school year. She plans to swim \(\frac{1}{4}\) mile each day. How many days will it take her to swim 50 miles?

12. Eric has 7 dollars for milk money. He spends $0.25 on milk every day. How long will the 7 dollars last?

13. A vegetable gardener needs to pack 16 pounds of beans into 20 bags. He wants all the bags to weigh about the same. About how much will each bag weigh? Give your answer in both unsimplified and simplest forms.
Write the fraction as a decimal number.

1. \( \frac{1}{3} = \) ______
2. \( \frac{2}{5} = \) ______
3. \( \frac{1}{6} = \) ______
4. \( \frac{14}{1,000} = \) ______
5. \( \frac{4}{5} = \) ______
6. \( \frac{9}{10} = \) ______
7. \( \frac{3}{4} = \) ______
8. \( \frac{3}{8} = \) ______
9. \( \frac{3}{5} = \) ______
10. \( \frac{2}{3} = \) ______
11. \( \frac{5}{6} = \) ______
12. \( \frac{12}{100} = \) ______

Write a decimal or whole number for the expression.

13. Nine tenths ______
14. Seven hundredths ______
15. Three million ______
16. Forty thousand, twenty-one ______
17. Two thousandths ______
18. Sixteen hundredths ______

Answer each question about the graph.

19. How many people are in the class? How do you know?

____________________________________________________________________

20. How many birthdays in the class are in the autumn? What fraction of the whole class is that?

____________________________________________________________________

21. How many more birthdays are in the winter than are in the spring?

____________________________________________________________________

22. How many birthdays are in the summer? In the summer and spring?

____________________________________________________________________
Complete each fraction box.

1. \[ \frac{7}{8} \text{ and } \frac{3}{4} \]

   - > \[ \frac{7}{8} > \frac{3}{4} \text{ or } \frac{7}{8} > \frac{6}{8} \]
   - +
   - –
   - \(x\)

Solve.

3. The Eagle Trucking Company must deliver \(\frac{7}{8}\) of a ton of cement blocks and \(\frac{5}{8}\) of a ton of bricks to one place. How much will this load weigh?

4. A truck carried \(3\frac{1}{3}\) tons of sand, but lost \(\frac{1}{4}\) of a ton along the way. How many tons of sand were delivered?

5. The trucking company also needs to deliver \(1\frac{2}{3}\) tons of oak logs and \(1\frac{7}{12}\) tons of maple logs. Which load weighs more?

6. In a load of \(\frac{3}{4}\) ton of steel rods, \(\frac{1}{8}\) of them are bent. How many tons of steel rods are bent?

7. The truck driver has to deliver \(\frac{3}{5}\) tons of boards to a lumberyard. Circle the correct crate.
Find the perimeter and area of each figure. Show your work.

1.

\[ P = \ldots \]
\[ A = \ldots \]

2.

\[ P = \ldots \]
\[ A = \ldots \]

3.

\[ P = \ldots \]
\[ A = \ldots \]

4.

\[ P = \ldots \]
\[ A = \ldots \]

Multiply or divide.

5. \(0.05 \times 1.2 = \ldots\)
6. \(8.25 \div 10 = \ldots\)
7. \(11 \div 7.81\)

8. \(0.4 \times 6 = \ldots\)
9. \(7.8 \div 6 = \ldots\)
10. \(0.01 \times 0.9 = \ldots\)

11. \(0.001 \times 8 = \ldots\)
12. \(7 \div 5.11\)
13. \(16 \times 9.5 = \ldots\)

14. \(1.44 \div 8 = \ldots\)
15. \(12 \times 0.55 = \ldots\)
16. \($2.48 \div 4 = \ldots\$\)
Solve.

1. The Hot Chocolate Problem

Marco has $\frac{3}{4}$ pint of hot chocolate. He is pouring it into cups that each hold $\frac{3}{8}$ pint. How many cups can he fill?

Think: How many ______s are is in ______?

Write the division equation. ________________

Check your answer by writing the multiplication equation.

2. The Honeybee Problem

A honeybee gathered nectar for $\frac{3}{4}$ of an hour. It returned to the hive every $\frac{1}{12}$ hour. How many trips did the bee make?

Think: How many ______s are is in ______?

Write the division equation. ________________

Check your answer by writing the multiplication equation.

Find each unknown factor. Rewrite each equation as a division equation.

Division Equation

3. $\frac{2}{3} \times _____ = \frac{10}{18}$

   $\frac{10}{18} \div \frac{2}{3} = _____$

4. $\frac{4}{9} \times _____ = \frac{36}{72}$

5. $\frac{5}{6} \times _____ = \frac{60}{150}$

6. $\frac{2}{7} \times _____ = \frac{42}{28}$

7. $\frac{3}{10} \times _____ = \frac{6}{30}$
Multiply.

1. \( \frac{52}{75} \)  
2. \( \frac{263}{38} \)  
3. \( \frac{396}{27} \)  
4. \( \frac{945}{78} \)

5. \( \frac{96}{8.7} \)  
6. \( \frac{0.63}{54} \)  
7. \( \frac{0.75}{0.08} \)  
8. \( \frac{0.049}{0.18} \)

Divide.

9. \( \frac{225}{15} \)  
10. \( \frac{253}{23} \)  
11. \( \frac{574}{41} \)  
12. \( \frac{851}{37} \)

13. \( \frac{28}{5.6} \)  
14. \( \frac{48}{3.2} \)  
15. \( \frac{93}{9.3} \)  
16. \( \frac{111}{7.4} \)

Solve the division problems. Try to do them in your head.

17. \( 7 \div 9 = \) _____  
18. \( 8 \div \frac{1}{5} = \) _____  
19. \( 5 \div 4 = \) _____

20. \( 12 \div \frac{1}{4} = \) _____  
21. \( 1 \div 16 = \) _____  
22. \( 10 \div \frac{1}{7} = \) _____

23. \( 9 \div \frac{1}{6} = \) _____  
24. \( 3 \div 16 = \) _____  
25. \( 1,000 \div \frac{1}{3} = \) _____
Solve.

1. \( \frac{9}{20} \div \frac{3}{5} = \) _________

2. \( \frac{6}{7} \div \frac{2}{7} = \) _________

3. \( \frac{21}{50} \div \frac{7}{10} = \) _________

4. \( \frac{8}{9} \div \frac{2}{3} = \) _________

5. \( \frac{27}{28} \div \frac{9}{7} = \) _________

6. \( \frac{4}{9} \div 2 = \) _________

7. \( \frac{7}{20} \div \frac{7}{5} = \) _________

8. \( 6\frac{3}{10} \div \frac{9}{5} = \) _________

Solve.

9. The Hwang family has a grove of sugar maple trees. They make maple syrup every year to give as gifts. Yesterday they made \( 2\frac{1}{4} \) quarts of syrup. They poured it into bottles that each held \( \frac{3}{4} \) quarts. How many bottles did they fill?

10. Last weekend the Hwangs made \( 2\frac{2}{3} \) quarts of maple syrup. They poured it into bottles that each held \( \frac{1}{3} \) quarts. How many bottles did the Hwangs fill?

11. On Monday the Hwangs made \( 1\frac{7}{8} \) quarts of syrup. They poured it into bottles that each held \( \frac{3}{4} \) quart. How many full bottles are there? What fraction of the last bottle will be filled?

12. Today the Hwangs only made \( \frac{7}{10} \) of a quart of syrup. They will pour it into bottles that each hold \( \frac{1}{2} \) quart. How many full bottles are there? What fraction of the last bottle will be filled?
Add or subtract.

1. \( \frac{1}{2} + \frac{1}{3} = \) _____
2. \( \frac{7}{9} - \frac{2}{3} = \) _____
3. \( \frac{4}{7} + \frac{3}{4} = \) _____
4. \( \frac{7}{10} - \frac{2}{5} = \) _____
5. \( \frac{3}{8} + \frac{1}{4} = \) _____
6. \( \frac{11}{12} - \frac{5}{6} = \) _____
7. \( \frac{2}{11} + \frac{1}{2} = \) _____
8. \( \frac{5}{6} - \frac{2}{3} = \) _____
9. \( \frac{3}{4} + \frac{1}{3} = \) _____
10. \( \frac{1}{5} - \frac{1}{6} = \) _____
11. \( \frac{2}{5} + \frac{1}{3} = \) _____
12. \( \frac{5}{9} - \frac{1}{4} = \) _____

Write the measure of the unknown angle.

13. Angle A = _____

14. Angle B = _____

15. Angle C = _____

Find the area.

16. \( A = \) _____________

17. \( A = \) _____________

Solve.

18. Josie has \( \frac{2}{3} \) of a roll of tape. She used \( \frac{1}{4} \) of the roll while wrapping presents. How much tape does she have left?

19. Ella has \( \frac{1}{2} \) of a bag of marbles. Tyler has \( \frac{1}{4} \) of a bag of marbles. If they combine their marbles together, how many bags do they have?
Solve.

1. \( \frac{7}{8} \div \frac{3}{4} = \) 
2. \( \frac{9}{16} \div \frac{3}{4} = \) 
3. \( \frac{3}{20} \div \frac{3}{5} = \) 
4. \( \frac{3}{4} \div \frac{5}{9} = \) 
5. \( \frac{2}{9} \div \frac{3}{8} = \) 
6. \( \frac{8}{9} \div 4 = \) 
7. \( \frac{3}{7} \div \frac{9}{10} = \) 
8. \( 1\frac{3}{7} \div \frac{1}{2} = \) 
9. \( \frac{2}{3} \div \frac{5}{6} = \) 
10. \( 2\frac{3}{4} \div \frac{2}{3} = \) 

11. Circle the one that does not mean the same as the others.

\[
\frac{1}{2} \div \frac{1}{3} \quad 3 \times \frac{1}{2} \quad \frac{1}{3} \div \frac{1}{2} \quad \frac{1}{2} \times 3 \quad \frac{3}{2}
\]

Solve.

12. Containers of Annie’s Apple Cider come in 2 sizes. The large bottle holds 2\(\frac{1}{4}\) gallons. The small bottle holds \(\frac{3}{4}\) of a gallon. How many small bottles does it take to fill a large bottle?

13. Annie is planning to sell apple cider in small drink boxes. Each box will hold \(\frac{1}{16}\) of a gallon. How many boxes fill a \(\frac{3}{4}\) gallon bottle?

14. How many boxes fill a 2\(\frac{1}{4}\) gallon bottle?

15. Three mugs of apple cider hold \(\frac{1}{4}\) of a gallon. How much does each mug hold?
Solve. Use mental math.

1. \(90,000 - 10,000 = \) _________  
2. \(0.004 + 40 = \) _________  
3. \(8,000 - 500 = \) _________  
4. \(0.030 + 0.007 = \) _________  

5. Graph 8 points for the equation \(y = x + 3\).  

6. Complete the function table for the equation \(y = 2x\). Then plot the points on the graph.  

<table>
<thead>
<tr>
<th>(x)</th>
<th>(y)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Write a verbal rule for the equation.  

7. \(y = \frac{1}{2}x\)  
8. \(y = x + \frac{1}{2}\)
Watch the signs! Give your answer in the simplest form.

1. \( \frac{5}{12} \div \frac{3}{4} = \) ____________
2. \( \frac{11}{15} \div \frac{2}{5} = \) ____________

3. \( \frac{10}{21} \div \frac{2}{3} = \) ____________
4. \( \frac{2}{3} \times \frac{3}{8} = \) ____________

5. \( \frac{5}{9} \times \frac{3}{5} = \) ____________
6. \( \frac{4}{5} \times \frac{3}{8} = \) ____________

7. \( \frac{8}{9} \div 3 = \) ____________
8. \( \frac{1}{12} \div \frac{3}{4} = \) ____________

9. \( \frac{3}{7} \times \frac{2}{3} = \) ____________
10. \( \frac{5}{6} \times \frac{4}{7} = \) ____________

11. \( \frac{7}{11} \times \frac{5}{7} = \) ____________
12. \( \frac{5}{7} \div \frac{2}{3} = \) ____________

13. Circle the one that does not mean the same as the others.

\( \frac{4}{5} \quad \frac{1}{5} \times 4 \quad \frac{1}{5} \div 4 \quad \frac{1}{4} \div \frac{1}{5} \quad 4 \times \frac{1}{5} \)

Solve.

14. Harvest Cereal comes in boxes of different sizes. The regular box holds \( \frac{7}{8} \) pound. The small box holds \( \frac{2}{3} \) as much. How much cereal does the small box hold?

15. The company will soon introduce a new giant size box. It will be \( \frac{11}{2} \) times as big as the regular box, which holds \( \frac{7}{8} \) pound of cereal. How much cereal will the giant box hold?

16. A six-pack of Harvest Cereal holds \( 1\frac{1}{8} \) pounds. How much does each little box hold?

17. If a bowl of cereal holds \( \frac{1}{8} \) pound, how many bowls can you get from a regular box of Harvest Cereal, which holds \( \frac{7}{8} \) pound?
Round to the nearest tenth.

1. 14.57 = _____
2. 52.34 = _____
3. 1.90 = _____
4. 37.88 = _____
5. 5.99 = _____
6. 16.22 = _____

Round to the nearest hundredth.

7. 140.517 = _____
8. 9.432 = _____
9. 74.366 = _____
10. 52.986 = _____
11. 11.681 = _____
12. 5.128 = _____

13. A classroom survey asks how many pets each student has at home. The results are shown in the chart below. Draw and label a circle graph to represent the survey data.

<table>
<thead>
<tr>
<th>Number of Pets</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>more than 2</td>
<td>6</td>
</tr>
</tbody>
</table>

Calculate the circumference of each circle. Use 3.14 for \( \pi \).

14. \( \text{circumference} = \) ______

15. \( \text{circumference} = \) ______

Solve.

16. Lita bought a notebook for $1.29 and a box of crayons for $2.99. How much change did she receive if she paid with a $10-bill?

Show your work.
Solve.

1. Dan’s Ice Cream comes in cartons of two sizes. The large carton holds $4\frac{1}{2}$ pounds. The small carton holds $1\frac{3}{4}$ pounds less. How much ice cream does the small carton hold?

2. Dan is planning to sell ice cream in a new jumbo-size tub. It will hold 2 times as much as the large carton, which holds $4\frac{1}{2}$ pounds. How much ice cream will the jumbo tub hold?

3. Four cones of Dan’s Ice Cream hold $\frac{5}{8}$ pound. How much does each cone hold?

4. If a dish of ice cream holds $\frac{1}{4}$ pound, how many dishes can you get from a large carton of Dan’s Ice Cream?

Answer in the simplest form.

5. $\frac{3}{10} \div \frac{1}{5} = $ 

6. $\frac{3}{4} \div \frac{11}{16} = $ 

7. $\frac{9}{14} \div \frac{3}{7} = $ 

8. $\frac{3}{5} \div 6 = $ 

9. $\frac{1}{3} + \frac{3}{5} = $ 

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

11. $\frac{3}{8} \div 4 = $ 

12. $\frac{2}{5} - \frac{1}{10} = $ 

13. $\frac{5}{7} - \frac{1}{2} = $ 

14. $\frac{7}{8} \times \frac{2}{7} = $ 

15. $\frac{5}{9} \times \frac{2}{3} = $ 

16. $2 - \frac{3}{5} = $
Solve.

1. $8 \div 6.08$
2. $0.9 \div 7.2$
3. $0.04 \div 3.72$
4. $0.21 \div 1.827$

5. $0.19 \div 13.3$
6. $0.8 \div 5.76$
7. $0.06 \div 27.6$
8. $0.32 \div 1.472$

9. $\frac{5}{6} + \frac{1}{9} = \underline{\hspace{2cm}}$
10. $\frac{2}{5} - \frac{1}{10} = \underline{\hspace{2cm}}$
11. $\frac{7}{8} \times \frac{2}{7} = \underline{\hspace{2cm}}$
12. $2 - \frac{3}{5} = \underline{\hspace{2cm}}$

Draw the lines of symmetry.

13. 

14. 

Solve.

15. The Singh drove $50\frac{3}{4}$ miles in one hour. How far will they drive in $1\frac{1}{2}$ hours at the same speed?

16. Julia has $4\frac{1}{2}$ cups of sugar. A cookie recipe calls for $\frac{3}{4}$ of a cup of sugar. How many batches of cookies can she make?

Show your work.
Name the prism for each base.

1. 2. 3.

4. 5. 6.

Find the surface area of each prism.

Remember: a small perpendicular mark (–) means that the edges are congruent.

7. 8.

A cube has a surface area of 24 square centimeters.

9. What is the area of each face? __________________

10. What is the length of each edge? __________________
Write a decimal equivalent for each fraction.

1. \( \frac{1}{2} = \) _____ 2. \( \frac{3}{4} = \) _____ 3. \( \frac{1}{8} = \) _____
4. \( \frac{5}{8} = \) _____ 5. \( \frac{3}{8} = \) _____ 6. \( \frac{7}{8} = \) _____

Write each mixed number as an improper fraction.

7. \( 2 \frac{1}{2} = \) _____ 8. \( 3 \frac{5}{6} = \) _____ 9. \( 2 \frac{1}{10} = \) _____
10. \( 5 \frac{5}{8} = \) _____ 11. \( 8 \frac{3}{5} = \) _____ 12. \( 1 \frac{7}{8} = \) _____

13. Find the perimeter and area of this figure.

14. Sketch and label a figure that has an area of 47 sq cm.
These nets form pyramids.

Name the shape of the base and use it to name the pyramid.

1. Base: 
   Name: 

2. Base: 
   Name: 

3. Base: 
   Name: 

4. Base: 
   Name: 

5. Base: 
   Name: 

6. Base: 
   Name: 

Find the total surface area of each pyramid.

7. 

8. 

UNIT E LESSON 2
Pyramids and Cones 219
Compare. Write < or >.

1. $\frac{3}{4} \bigcirc \frac{1}{4}$
2. $\frac{5}{8} \bigcirc \frac{7}{8}$
3. $\frac{7}{12} \bigcirc \frac{11}{12}$
4. $\frac{1}{2} \bigcirc \frac{1}{3}$
5. $\frac{1}{8} \bigcirc \frac{1}{4}$
6. $\frac{1}{12} \bigcirc \frac{1}{10}$

Write each fraction in simplest form.

7. $\frac{2}{6} = \underline{}$
8. $\frac{5}{10} = \underline{}$
9. $\frac{8}{12} = \underline{}$
10. $\frac{6}{8} = \underline{}$
11. $\frac{6}{9} = \underline{}$
12. $\frac{12}{20} = \underline{}$

Describe each figure using the language of geometry.

13. __________
14. __________
15. __________
16. __________
17. __________
18. __________
19. __________
20. __________
21. __________
1. Draw the front, side, and top views of this solid. Name the solid.

![Image of a cube with dimensions 6 cm x 3 cm x 3 cm]

<table>
<thead>
<tr>
<th>front view</th>
<th>side view</th>
<th>top view</th>
</tr>
</thead>
</table>

Name of Solid: ________________

2. Draw a picture to match the views.
Multiply or divide.

1. \( \frac{3}{4} \times \frac{1}{4} = \) _____  
2. \( \frac{5}{8} \times \frac{2}{5} = \) _____  
3. \( \frac{7}{12} \times \frac{2}{3} = \) _____  
4. \( \frac{1}{2} \div \frac{1}{3} = \) _____  
5. \( \frac{3}{5} \div \frac{1}{4} = \) _____  
6. \( \frac{5}{12} \div \frac{3}{8} = \) _____  
7. \( \frac{5}{6} \times \frac{9}{10} = \) _____  
8. \( \frac{7}{10} \div \frac{4}{5} = \) _____  
9. \( \frac{7}{9} \times \frac{3}{4} = \) _____  
10. \( \frac{3}{7} \div \frac{2}{7} = \) _____  
11. \( \frac{2}{3} \times \frac{6}{7} = \) _____  
12. \( \frac{4}{5} \div \frac{8}{15} = \) _____

Find the area.

13. \( A = \) _____  
14. \( A = \) _____  
15. \( A = \) _____

Solve.

16. A bottle contains \( \frac{3}{4} \) quart of milk. Jan drank \( \frac{1}{2} \) of the milk. What amount of milk did Jan drink?

17. Rob traveled \( \frac{11}{12} \) of a mile on foot. He ran \( \frac{1}{4} \) of that distance. What distance did he walk?
Complete this story about Noreen’s older brother, Tim.
Tim saved $5 every day. He and Noreen started to save on the same day. Draw pictures of Tim’s bank each day if that helps you decide how much he has saved.

On Day 0 Tim did not put money into his bear bank.
On Day 0 Tim’s bear bank was empty. He had $0 in his bank.

1. On Day 1 Tim put $5 into his bear bank.
   On Day 1 Tim had ______ in his bank.

2. On Day 2 Tim put $5 into his bear bank.
   On Day 2 Tim had ______ in his bank.

3. On Day 3 Tim put $5 into his bear bank.
   On Day 3 Tim had ______ in his bank.

4. On Day 4 Tim put $5 into his bear bank.
   On Day 4 Tim had ______ in his bank.

5. On Day 5 Tim put $5 into his bear bank.
   On Day 5 Tim had ______ in his bank.

6. On Day 6 Tim put $5 into his bear bank.
   On Day 6 Tim had ______ in his bank.

7. On Day 7 Tim put $5 into his bear bank.
   On Day 7 Tim had ______ in his bank.

8. On Day 8 Tim put $5 into his bear bank.
   On Day 8 Tim had ______ in his bank.

9. Complete the Multiplication Column Table to show Tim’s savings.

<table>
<thead>
<tr>
<th>Days</th>
<th>Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>+______</td>
</tr>
<tr>
<td>2</td>
<td>+______</td>
</tr>
<tr>
<td>3</td>
<td>+______</td>
</tr>
<tr>
<td>4</td>
<td>+______</td>
</tr>
<tr>
<td>5</td>
<td>+______</td>
</tr>
<tr>
<td>6</td>
<td>+______</td>
</tr>
<tr>
<td>7</td>
<td>+______</td>
</tr>
<tr>
<td>8</td>
<td>+______</td>
</tr>
</tbody>
</table>
Which is greater? How much greater?

1. $32 \times 16$ or $36 \times 12$

2. $8 \times 5$ or $9 \times 4$

3. $20 \times 0.3$ or $0.2 \times 300$

4. $171 \times 28$ or $281 \times 17$

5. Plot these points on a coordinate grid and join them to make a figure. What figure did you make?
   A (6, 12)
   B (11, 12)
   C (2, 3)
   D (13, 3)

Solve.

6. Justin buys a card for his cousin for $3.29 and a card for his aunt for $4.25. He pays with a $10 bill. How much change should Justin receive?

7. Ms. Emerson wants to build a picture frame 28.5 cm by 42.5 cm. She has a piece of wood trim 161 cm long. Does she have enough to make the frame? How do you know?

8. Cheese costs $5.79 per pound. How much will $\frac{1}{3}$ pound of cheese cost?
Grandma Jackson has 8 tomato plants in each row in her garden.

1. Write this story using the word “per.”

2. Make a Multiplication Column Table to describe Grandma Jackson’s tomato plants.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>7</td>
</tr>
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<td>2</td>
<td>14</td>
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<tr>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>4</td>
<td>28</td>
</tr>
<tr>
<td>5</td>
<td>35</td>
</tr>
<tr>
<td>6</td>
<td>42</td>
</tr>
</tbody>
</table>

   +  7
   +  7
   +  7
   +  7
   +  7

Decide whether each story is a multiplication column story. If it is, rewrite it using the words “per” and “each.”

3. The balloon man at the fair gave away 6 balloons in the morning, 15 in the afternoon, and 11 in the evening.

4. A large bag of potatoes costs $8 at Season’s Produce Store.

5. Write a story for this multiplication column table. Label the columns to show your story.

   +  7
Add or subtract.

1. \[23,165.1 + 13,223.7\]
2. \[24,722.30 + 28,149.61\]
3. \[4,598.75 + 133,236.13\]

4. \[410,410.41 - 301,229.60\]
5. \[782,312.5 - 63.4\]
6. \[97,287.811 - 3,719.552\]

Use a protractor to find each unknown angle measure.

7. \[
\begin{array}{c}
\text{?} \\
\end{array}
\]

8. \[
\begin{array}{c}
\text{?} \\
\end{array}
\]

9. \[
\begin{array}{c}
A \quad \text{70°} \quad D \\
\end{array}
\]

Solve.

10. The Lucases made \(14\frac{1}{2}\) pints of jam. They have empty \(\frac{1}{4}\)-pint jars to pour the jam into. How many jars will they need?

---

Show your work.
Decide if each situation is a multiplication column situation or not. Make a Multiplication Column Table for situation 1.

1. Every week, Noreen eats half a dozen oranges.

2. In the spring, David plants 8 carrots in each row of his garden.

3. On the first 4 days of the week, Jeff takes Cooper the dog for 2-mile walks. On the last 3 days, they walk 3 miles each day.

4. José read 5 books this week, but read 6 books last week.

5. Jason saves $4 every day so he can buy a basketball hoop.

6. Carole feeds her tropical fish 6 pinches of fish food every day.

Decide whether each table is a Multiplication Column Table. Explain why or why not.

7. 8. 9. 10.

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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
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<td>2</td>
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<td>4</td>
<td>24</td>
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<td>5</td>
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<p>| | |</p>
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<tr>
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</tr>
<tr>
<td>1</td>
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</tr>
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</tr>
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<td>5</td>
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<tr>
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<p>| | |</p>
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</thead>
<tbody>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>3</td>
<td>27</td>
</tr>
<tr>
<td>4</td>
<td>36</td>
</tr>
<tr>
<td>5</td>
<td>45</td>
</tr>
</tbody>
</table>
Multiply.

1. $\frac{1}{6} \times 42 = \underline{\hspace{2cm}}$
2. $\frac{2}{3} \times 63 = \underline{\hspace{2cm}}$
3. $\frac{3}{5} \times 28 = \underline{\hspace{2cm}}$

4. $\frac{1}{5} \times \frac{1}{2} = \underline{\hspace{2cm}}$
5. $\frac{2}{3} \times \frac{1}{2} = \underline{\hspace{2cm}}$
6. $\frac{1}{4} \times \frac{9}{10} = \underline{\hspace{2cm}}$

7. $\frac{3}{4} \times \frac{2}{9} = \underline{\hspace{2cm}}$
8. $\frac{8}{15} \times \frac{5}{20} = \underline{\hspace{2cm}}$
9. $\frac{22}{25} \times \frac{5}{6} = \underline{\hspace{2cm}}$

Identify the next three elements in each pattern.

10. 

11. 0, $\frac{2}{3}$, $1\frac{1}{3}$, 2, $2\frac{2}{3}$, , ,
12. 2, 6, 18, 54, , , ,

Justine wants to show how her school's population has changed.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>450</td>
</tr>
<tr>
<td>1995</td>
<td>525</td>
</tr>
<tr>
<td>2000</td>
<td>910</td>
</tr>
<tr>
<td>2005</td>
<td>820</td>
</tr>
</tbody>
</table>

13. Draw a graph that will help Justine show the trend in population. Label your graph.
Make a Ratio Table for each situation. Be sure to label the tables.

1. Two bands marched onto the football field. One marches on in rows of 15, and the other marches on in rows of 7.

2. John can plant 7 tomato vines in the time it takes Joanna to plant 4 tomato vines.

3. The twins Diana and Walter make fruit salad. Their recipe is 6 bananas and 4 oranges.

4. Circle each Ratio Table below. Write numbers to show the two multiplication columns that are in each Ratio Table.
Circle the greater fraction in each pair.

1. \(\frac{3}{5}\) or \(\frac{3}{6}\)
2. \(\frac{3}{6}\) or \(\frac{9}{12}\)
3. \(\frac{3}{7}\) or \(\frac{4}{9}\)
4. \(\frac{1}{15}\) or \(\frac{3}{42}\)
5. \(\frac{3}{8}\) or \(\frac{8}{20}\)
6. \(\frac{7}{20}\) or \(\frac{4}{12}\)
7. \(\frac{12}{5}\) or \(2\frac{1}{5}\)
8. \(\frac{4\,\frac{8}{12}}{12}\) or \(\frac{58}{12}\)
9. \(3\frac{2}{7}\) or \(\frac{10}{3}\)

10. Which prism has a greater surface area? How much greater is it?

Solve each problem.

11. The figure skating club has 20 yards of fabric to make costumes. They need 12 costumes. How many yards of fabric can be used for each costume?

12. The start and finish of a bicycling course are 25 miles apart. There are evenly spaced rest stops. Three people have volunteered to look after rest stops. How far apart should the rest stops be?
Explain why each table is or is not a Ratio Table. For the Ratio Tables, tell the Multiplication Columns and the basic ratio.

1. 2. 3.

Solve each Factor Puzzle.

4. Central School has 6 printers and 14 computers. If East School has 28 computers, how many printers does it have?

Multiply.

1. \(3 \times 0.11 = \) ______
2. \(0.5 \times 7 = \) ______
3. \(0.12 \times 0.6 = \) ______
4. \(0.04 \times 0.8 = \) ______
5. \(0.2 \times 0.9 = \) ______
6. \(0.01 \times 1.2 = \) ______
7. \(0 \times 0.8 = \) ______
8. \(1.1 \times 1.2 = \) ______
9. \(0.13 \times 0.04 = \) ______
10. \(1.4 \times 0.1 = \) ______
11. \(0.8 \times 0.2 = \) ______
12. \(3 \times 0.5 = \) ______

The bar graph shows favorite kinds of muffins for a grade 5 class.

![Bar graph showing favorite kinds of muffins](image)

**Answer each question about the bar graph.**

13. Which kind of muffin is the favorite? ______________________

14. Which kind of muffin is the least favorite? ______________________

15. Which kind of muffin is about half as popular as the oatmeal muffin? ______________________

16. Which kind of muffin is three times as popular as the banana muffin? ______________________

**Complete.**

17. \(50 \text{ mm} = \) ______ \(\text{cm}\)
18. \(100 \text{ m} = \) ______ \(\text{cm}\)
19. \(4,000 \text{ mg} = \) ______ \(\text{g}\)
20. \(3 \text{ kg} = \) ______ \(\text{g}\)
21. \(2,000 \text{ mL} = \) ______ \(\text{L}\)
22. \(6 \text{ L} = \) ______ \(\text{mL}\)
Solve the problems.

1. Dana and Sue work in the same office. They leave for work at the same time. It takes Dana 25 minutes to get to work, and Sue 30 minutes to get to work. If it takes Dana 35 minutes to get home, how long does it take Sue to get home?

2. One day Dana got to work sooner than usual because there was very little traffic. It took her only 15 minutes. How long did it take Sue to get to work that day?

3. Maggie is buying vegetables at the farmers’ market to make vegetable soup. The recipe for this soup calls for 6 tomatoes and 9 heads of broccoli. But Maggie wants to make a lot of soup, so she buys 8 tomatoes. How many broccoli heads should she buy?

4. Six of Susan’s cookies weigh the same as 5 of Tara’s cookies. How many of Susan’s cookies weigh the same as 15 of Tara’s cookies?

Tell which table belongs to which story.

5. 6. 7. 8.

5.

Tell which table belongs to which story.

Tell which table belongs to which story.

Tell which table belongs to which story.

Tell which table belongs to which story.

9. Write the basic ratio for each table in the circles.
Divide.

1. \( \frac{5}{60} \)  
2. \( \frac{4}{24} \)  
3. \( \frac{9}{36} \)  
4. \( \frac{3}{39} \)

5. Write an equation for the function tables.

<table>
<thead>
<tr>
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<th>( y )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<table>
<thead>
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<table>
<thead>
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<th>( y )</th>
</tr>
</thead>
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<td>5</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
</tr>
</tbody>
</table>

Find each unknown angle.

6. \( 43^\circ \)

7. \( \angle \)\( 110^\circ \)

Solve.

8. Thomas has 100 stamps. Ten are from Mexico. The rest are from the United States and Canada. He has twice as many U.S. stamps as Canadian. How many U.S. stamps does Thomas have?

9. There are cows and chickens in a farmyard. There are 63 animals and 148 legs. How many cows are there in the farmyard?
Solve the numeric proportion problems using Factor Puzzles.
Use a separate sheet of paper.

1. _______ : 21 = 32 : 56
2. 24 : _______ = 18 : 30
3. 6 : 15 = _______ : 35
4. 56 : 72 = 35 : _______

Tell which are proportion problems and which are not. Solve each proportion problem and write the basic ratio.

5. The law in Sunny Land City says that every 3-story building must have 21 windows. How many windows must an 18-story building have?

6. Josh runs 7 mi for every 8 mi run by Sally. If Sally runs 16 mi, how far does Josh run?

7. In one town, every family has 2 dogs and 5 cats. If 16 dogs live in the town, how many cats live there?

8. Mark drives 28 miles in 40 minutes. How long does it take him to drive 35 miles at the same rate?

9. Andrew and Barbara collect stamps. Every week Andrew adds 5 stamps to his collection, and Barbara adds 7 to hers. When Andrew has collected 30 stamps, how many will Barbara have collected?

10. The daffodils in my garden appeared in April, and the tulips appeared in May. Both the daffodils and the tulips grew 2 in. every week. How tall were the daffodils when the tulips were 10 in. tall? Explain your answer.

11. On the separate sheet of paper, write one proportion problem and one non-proportion problem. Each problem should have 3 numbers and should ask a question.
Solve each expression.

1. \((110 - 50) + 9\) = ______

2. \(3 \times (4 - 1)\) = ______

3. \(14 \div (5 + 2)\) = ______

4. \((10 + 10) - 4\) = ______

5. \((36 \div 9) + 14\) = ______

6. \((6 \times 7) \div 21\) = ______

7. \(16 \times (0 \div 2)\) = ______

8. \(81 - (4 \times 5)\) = ______

The line graph shows the average temperature each month in San Francisco.

Answer each question about the line graph.

9. Which month has the lowest average temperature? ___________________________

10. What is the greatest average temperature? _________________________________

11. Does the average temperature increase or decrease from January to August? ____________________

12. Does the average temperature increase or decrease from September to December? ___________________

Solve.

13. Photo prints were selling for $1.00 for the first print and 75¢ for each additional copy. If Ben paid $4.75, how many prints did he buy? _________________________________

14. Jill doubled a number 3 times and got 56. What was her original number? _________________________________
Solve these proportions.

1. \(32 : 50 = a : 75\)  
2. \(32 : b = 96 : 12\) 

Solve each proportion problem or tell why it is not a proportion problem. For each proportion problem tell your assumptions.

3. Two express elevators leave the ground floor of a skyscraper on their way to the 100th floor and make no stops. They both move at the same speed, but elevator A left before elevator B because its doors close faster. When elevator A passes the 15th floor, elevator B passes the 10th floor. When elevator A gets to the top, where will elevator B be? Explain your answer.

4. Jean used 25 small cans of paint to paint 30 tables. How many tables did she paint with 15 small cans of paint?

5. The Foster Publishers’ printing press can print 5 dictionaries in 8 minutes. How many dictionaries can it print in 32 minutes?

6. Every week Farmer Percy fed 12 buckets of oats to his 3 horses. Then he bought some more horses. Now he feeds his horses 40 buckets of oats. How many horses does Farmer Percy have now?

7. On a separate sheet of paper, write a proportion word problem and a non-proportion problem. Each problem should have 3 numbers and ask a question.
Multiply or divide.

1. $0.4 \times 0.3 = \underline{0.12}$

2. $5.6 \div 0.8 = \underline{7}$

3. $0.35 \times 1.21 = \underline{0.4235}$

4. $1.44 \div 0.12 = \underline{12}$

5. $3.4 \times 2.7 = \underline{9.18}$

6. $36.0 \div 1.6 = \underline{22.5}$

7. $9.1 \times 0.6 = \underline{5.46}$

8. $8.1 \div 0.9 = \underline{9}$

Multiply or Divide. Simplify your answers.

9. $\frac{3}{8} \times 14 = \underline{\frac{21}{4}}$

10. $\frac{9}{6} \div 6 = \underline{\frac{1}{4}}$

11. $\frac{5}{6} \times \frac{3}{4} = \underline{\frac{5}{8}}$

12. $\frac{5}{12} \div \frac{3}{4} = \underline{\frac{5}{9}}$

Find the area of each figure.

13. $A = \underline{225 \text{ mm}^2}$

14. $A = \underline{105 \text{ cm}^2}$
Make up a proportion problem for the proportion. Then solve the problem.

1. \(a : 35 = 32 : 40\)

Solve the proportion.

2. \(18 : 54 = c : 42\)
   \[c = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\]  
3. \(32 : 50 = a : 75\)
   \[a = \_\_\_\_\_\_\_\_\_\_\_\_\_\]  
4. \(32 : b = 56 : 35\)
   \[b = \_\_\_\_\_\_\_\_\_\_\_\_\_\]  
5. \(40 : t = 45 : 54\)
   \[t = \_\_\_\_\_\_\_\_\_\_\_\_\_\]
6. \(c : 24 :: 30 : 36\)
   \[c = \_\_\_\_\_\_\_\_\_\_\_\_\_\]
7. \(27 : 63 = 12 : q\)
   \[q = \_\_\_\_\_\_\_\_\_\_\_\_\_\]

UNIT 6 LESSON 9
Write and Solve Proportion Problems 239
Add or subtract.

1. $4.1 + 3.2 = \underline{\phantom{000}}$
2. $7.9 - 5.3 = \underline{\phantom{000}}$
3. $3.16 + 0.25 = \underline{\phantom{000}}$
4. $1.02 - 0.63 = \underline{\phantom{000}}$
5. $9.63 + 0.07 = \underline{\phantom{000}}$
6. $13.42 - 3.42 = \underline{\phantom{000}}$
7. $10.50 + 2.43 = \underline{\phantom{000}}$
8. $5.01 - 0.02 = \underline{\phantom{000}}$

Solve.

9. Isabel has 27 white balls and 49 black balls in each bucket. She has 19 buckets of balls. How many balls does Isabel have altogether?

10. Tyler has 350 baseball cards. He gives $\frac{1}{5}$ of them to his friend. Then he gives $\frac{1}{4}$ of the rest to his brother. What fraction of his 350 baseball cards does Tyler have left?

Draw all lines of symmetry for each figure.

11. 

12. 

13. 

Find the unknown.

14. $5d + 3 = 28$
   \[ d = \underline{\phantom{000}} \]

15. $\frac{1}{8}r = 8$
   \[ r = \underline{\phantom{000}} \]

16. $32 + f = 40$
   \[ f = \underline{\phantom{000}} \]

17. $9(x + 6) = 81$
   \[ x = \underline{\phantom{000}} \]

18. $7y - 3 = 25$
   \[ y = \underline{\phantom{000}} \]

19. $49 ÷ s = 7$
   \[ s = \underline{\phantom{000}} \]
Circle the percents on the 100 millimeters.

1. 15% 

2. 48% 

3. 85% 

Fill in the missing percents, decimals, and fractions.

4. 

<table>
<thead>
<tr>
<th>Cents</th>
<th>Percent of a dollar</th>
<th>Dollars</th>
<th>Decimal</th>
<th>Fraction of 100</th>
<th>Simplest fraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 ¢</td>
<td>25%</td>
<td>$0.25</td>
<td>0.25</td>
<td>25/100</td>
<td>1/4</td>
</tr>
<tr>
<td>20 ¢</td>
<td></td>
<td>$0.75</td>
<td></td>
<td></td>
<td>1/2</td>
</tr>
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<td></td>
<td>100%</td>
<td></td>
<td></td>
<td>90/100</td>
<td>9/10</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>$0.40</td>
<td>30%</td>
<td></td>
<td>0.6</td>
<td>70/100</td>
<td>7/10</td>
</tr>
</tbody>
</table>
Simplify each fraction.

1. \(\frac{6}{10} = \) _____
2. \(\frac{12}{48} = \) _____
3. \(\frac{35}{42} = \) _____
4. \(\frac{9}{81} = \) _____

5. \(\frac{10}{80} = \) _____
6. \(\frac{3}{6} = \) _____
7. \(\frac{9}{12} = \) _____
8. \(\frac{16}{48} = \) _____

The circle graph shows favorite kinds of television programs for a grade 5 class.

Answer each question about the circle graph.

9. What fraction of the class likes drama programs the best?

10. What is the most popular kind of television program?

11. What fraction of the class likes sports or documentary programs the best?

Find the perimeter of each triangle.

12. \(P = \) _____

13. \(P = \) _____
This is half of a shape.

1. Draw 100% of the shape.
2. Draw 200% of the shape.

This is 80% of a group.

3. Draw 20% of the group.
4. Draw 120% of the group.

Complete each sentence.

5. 24 out of 60 is _____%.
6. What percent of 56 is 14? _____
7. 120% of 25 is _____.
8. 42 is 75% of _____.
9. 15 is 30% of _____.
10. 75% of 96 is _____.

Solve the percent problems using any method.

11. Simon keeps 250 pet spiders in his living room. 70 of these love spinach. What percent of Simon's pet spiders love spinach?

12. John eats 18 raisins. That is 20% of the number of raisins Sam eats. How many raisins does Sam eat?

13. Annie's age is 85% of her brother's age. If her brother is 20, how old is Annie?

14. Six blocks spilled out of a can of blocks. That was 25% of the total number of blocks in the can. How many blocks were in the can to begin with?
Add or subtract.

1. \( \frac{1}{2} + \frac{3}{4} = \) _____
2. \( \frac{5}{12} - \frac{1}{6} = \) _____
3. \( \frac{7}{9} + \frac{3}{18} = \) _____
4. \( \frac{17}{20} - \frac{3}{10} = \) _____

5. \( \frac{2}{3} + \frac{1}{12} = \) _____
6. \( \frac{18}{24} - \frac{3}{12} = \) _____
7. \( \frac{2}{7} + \frac{9}{21} = \) _____
8. \( \frac{9}{10} - \frac{1}{5} = \) _____

Solve. Make a Factor Puzzle for each problem.


10. Maria peels 5 apples in the time it takes Brian to peel 3 apples. How many apples will Brian have peeled when Maria has peeled 20 apples?

11. \( r : 27 = 35 : 45 \)
   
   \( r = \) _____

12. \( 25 : 50 = t : 30 \)
   
   \( t = \) _____

13. \( 15 : 40 = 18 : p \)
   
   \( p = \) _____

Find the area of each rectangle.

14. \( \text{A} = \) _____

   \( 2\frac{1}{4} \text{ in.} \)

15. \( \text{A} = \) _____

   \( 1\frac{3}{4} \text{ ft} \)
Solve each problem using any method.

1. A box of ballpoint pens contains 54 pens with black ink, 36 with blue ink, and 30 with red ink. If you took 20 pens from the box, how many would you expect to have black ink? Blue ink? Red ink?

2. 20 boxes of shirts arrived at the Men’s Shop. 15 of the boxes contained blue shirts and the rest contained white shirts. What are the chances that the first box the owner opens will contain white shirts? Express your answer as a percent.

3. What are your chances of the spinner landing on a white space? Express your answer as a percent.

4. Andy has a drawer full of 24 pairs of socks. Some are black and some are blue. He pulled out 3 pairs. 2 pairs were black and 1 pair was blue. How many pairs of black socks and how many pairs of blue socks do you think Andy has?

5. The town parking lot can hold 200 vehicles. If 600 people in town own SUVs and 900 own cars, how many of each kind of vehicle would you expect to see in the lot when it is full?

6. On average, David throws 8 strikes out of every 10 pitches. If he pitches the ball 15 times, how many strikes would you expect him to throw?
Multiply or divide.

1. \( \frac{5}{8} \times \frac{2}{3} = \) 
2. \( \frac{2}{5} \div \frac{1}{3} = \) 
3. \( \frac{7}{10} \times \frac{1}{2} = \) 
4. \( \frac{11}{12} \div \frac{3}{4} = \)

5. \( \frac{4}{5} \times \frac{8}{9} = \) 
6. \( \frac{6}{8} \div \frac{2}{7} = \) 
7. \( \frac{10}{11} \times \frac{7}{11} = \) 
8. \( \frac{9}{12} \div \frac{3}{12} = \)

Solve. Make a Factor Puzzle for each problem.

9. Coleen did 32 jumping jacks when Nathan did 44 jumping jacks. Earlier, when Coleen did 24 jumping jacks, how many did Nathan do?

10. Sheila saved $16 when Jonathan saved $28. When Sheila saves $40, how much will Jonathan have saved?

11. \(30 : c = 35 : 56\)

\[ c = \] 

12. \(27 : 24 = d : 40\)

\[ d = \] 

13. \(a : 81 = 42 : 63\)

\[ a = \] 

14. Which net will make a cube? 

A. 

B. 

C.
For each figure, write a ratio that compares the base to the height. Then draw a similar figure that is not congruent.

1. \[ \frac{27 \text{ m}}{36 \text{ m}} \]

2. \[ \frac{21 \text{ m}}{25 \text{ mm}} \]

The two figures are similar. Find the unknown measurement. Show your work.

3. \[ EF = \frac{27 \text{ m}}{36 \text{ m}} \]

4. \[ MN = \frac{6 \text{ yd}}{12 \text{ yd}} \]

5. \[ TR = \frac{15 \text{ ft}}{12 \text{ ft}} \]

6. \[ XY = \frac{21 \text{ mm}}{25 \text{ mm}} \]
Add or subtract. Write the answer in simplest form.

1. $\frac{7}{8} - \frac{1}{2} = \underline{\quad}$
2. $\frac{7}{10} - \frac{1}{5} = \underline{\quad}$
3. $\frac{4}{9} + \frac{2}{9} = \underline{\quad}$
4. $\frac{3}{10} + \frac{2}{5} = \underline{\quad}$
5. $\frac{2}{5} - \frac{3}{10} = \underline{\quad}$
6. $\frac{1}{2} - \frac{2}{5} = \underline{\quad}$
7. $2\frac{7}{8} - 1\frac{1}{2} = \underline{\quad}$
8. $2 + 1\frac{4}{6} = \underline{\quad}$
9. $5\frac{3}{8} - 1\frac{1}{4} = \underline{\quad}$
10. $\frac{7}{8} + \frac{1}{2} = \underline{\quad}$
11. $\frac{2}{3} + \frac{2}{9} = \underline{\quad}$
12. $4\frac{1}{5} + 3\frac{1}{2} = \underline{\quad}$

What figure will each net make?

13. 

14. 

15. 

Name the solid. Then draw a net for it.

16. 

Solve.

17. Meg has $15. She wants to buy a DVD that usually costs $18. The DVD is on sale for 25% off. Does Meg have enough money?

18. Last year about 15,000 people went to the fall fair. Attendance this year increased by 15%. About how many people went to the fair this year?

Show your work.
Use the map and an inch ruler to answer the questions below.

1. In the blank spaces on the map, write a name for the island and a scale for the map.

2. List six features you might see on your island. Mark them on the map.

   __________________________  __________________________
   __________________________  __________________________
   __________________________  __________________________

3. Plan a route that allows you to visit all of the features listed above. The route should begin and end at the same feature. Name the features in the order you will visit them.

   __________________________
   __________________________

4. Use the map scale and an inch ruler to estimate the total distance you will travel on your route.
Multiply or divide. Write each answer in simplest form.

1. $\frac{2}{5} \times \frac{5}{6} = \underline{\quad}\quad$ 2. $\frac{4}{5} \div 8 = \underline{\quad}\quad$ 3. $\frac{1}{2} \times \frac{4}{7} = \underline{\quad}\quad$

4. $\frac{1}{3} \div 6 = \underline{\quad}\quad$ 5. $5 \times \frac{3}{4} = \underline{\quad}\quad$ 6. $\frac{2}{3} \div \frac{5}{6} = \underline{\quad}\quad$

7. $1\frac{4}{5} \times 1\frac{1}{2} = \underline{\quad}\quad$ 8. $3 \times 6\frac{2}{3} = \underline{\quad}\quad$ 9. $\frac{7}{8} \div \frac{3}{4} = \underline{\quad}\quad$

10. $5 \div 8 = \underline{\quad}\quad$ 11. $3\frac{1}{3} \times \frac{5}{6} = \underline{\quad}\quad$ 12. $\frac{2}{3} \div 1\frac{1}{2} = \underline{\quad}\quad$

Find the perimeter and area of each figure.

13. \[\begin{array}{c}
36 \text{ in.} \\
60 \text{ in.} \\
48 \text{ in.}
\end{array}\]

\[P = \underline{\quad}\quad \quad A = \underline{\quad}\quad\]

14. \[\begin{array}{c}
14 \text{ m} \\
11 \text{ m}
\end{array}\]

\[P = \underline{\quad}\quad \quad A = \underline{\quad}\quad\]

15. \[\begin{array}{c}
12 \text{ ft} \\
10 \text{ ft} \\
16 \text{ ft}
\end{array}\]

\[P = \underline{\quad}\quad \quad A = \underline{\quad}\quad\]

Solve.

16. The new park will take up 3.5 acres. Four tenths of the park will remain natural forest. How large is the area that will remain natural forest?

\[\underline{\quad}\quad\]

17. Cecilia walks 1.2 miles to get to the corner store. She stops to tie her shoe when she is $\frac{2}{3}$ of the way there. How far does she have left to walk to reach the store?

\[\underline{\quad}\quad\]

18. Emily worked 4.25 hours on Saturday and 6.75 hours on Sunday. If she earned $8.60 per hour, how much did she earn on the weekend?

\[\underline{\quad}\quad\]
These are views, as seen from above, of tables drawn to scale. Which ones could be dining room tables? Explain.

1. 1 cm = 30 cm

2. 1 in. = 1 ft

3. 1 cm = 20 cm

Make a scale drawing of each object. Include a key.

4. a rug that measures 6 feet by 12 feet

5. a desktop that is 36 cm wide and 72 cm long

6. a swimming pool that is 32 feet long and 16 feet wide
Order each set from least to greatest.

1. \( \frac{3}{5} \) 0.25 35%  
2. \( \frac{9}{10} \) 0.65 85%  
3. \( \frac{3}{7} \) 0.4 62%  
4. \( \frac{13}{20} \) 0.75 49%  
5. \( \frac{1}{3} \) 0.5 35%  
6. \( \frac{3}{8} \) 0.23 35%  
7. \( \frac{19}{25} \) 0.25 89%  
8. \( \frac{12}{20} \) 0.3 50%  
9. \( \frac{4}{5} \) 0.81 79%  

Write a number to make each number sentence true.

10. 44% < _____ < 0.77  
11. \( \frac{2}{3} \) < _____ < 69%  
12. \( \frac{1}{16} \) < _____ < 35%  
13. 0.2 < _____ < 23%  
14. \( \frac{3}{5} \) < _____ < 95%  
15. \( \frac{3}{8} \) < _____ < 0.45  

Find the surface area of each solid. Show your work.

16.  
17.  

Solve.

18. Three eighths of Ms. Nester’s class of twenty-four students are on the track team. Three fifths of Mr. Boyko’s class of twenty-five students are not on the track team. In which class are more students on the track team?

19. Ali has seven coins in his pocket that total 81¢. What coins does he have?
Use the scale to solve for $n$. Show your work.

1. $1$ in. = $6$ ft
   
   $3$ in. = $n$ ft

2. $\frac{1}{4}$ in. = $1$ yd
   
   $\frac{1}{2}$ in. = $n$ yd

3. $\frac{1}{8}$ in. = $1$ ft
   
   $n$ in. = $4.5$ ft

4. Make a floor plan of a room using the scale $\frac{1}{4}$ inch = $1$ foot.
   Include the items listed in the box and two others of your choice.

   room size: ________________________________

   item 1: ________________________________

   item 2: ________________________________

   Actual Dimensions
   rug: 6 feet by 9 feet
   chair: 3 feet by 4 feet
   table: 2 feet by 3 feet
   sofa: 3 feet by 8 feet
Find 10% of each number. Then find 20% of each number.

1. 88 ______  ______
2. 420 ______  ______
3. 3,410 ______  ______
4. 6 ______  ______
5. 720.25 ______  ______
6. 2.1305 ______  ______

Solve using any method.

7. ______% of 80 = 24
8. 75% of ______ = 45
9. ______% of 850 = 85
10. 23% of 60 = ______
11. 10% of ______ = 30
12. 8% of 56 = ______
13. 50% of ______ = 36
14. 45% of 800 = ______
15. ______% of 84 = 21

Draw the top, side, and front views.

16. 
17. 

Solve.

18. Each table at the Soccer Awards Banquet seats eight people. Each team has eleven players, and twelve teams are attending. How many tables are needed?

19. Every month Sienna saves $18 and Jake saves $14. How much money will Jake have saved when Sienna has saved $72?

20. Jupiter has a diameter of 88,846 miles. The diameter of Earth is about 9% of the diameter of Jupiter. What is the approximate diameter of Earth?