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Credits
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2 3 4 5 6 7 8 9 EB 11 10 09 08 07 06
1. On this hundred grid, dark segments have been drawn separating groups of 9, and the 9s count-bys have been circled. Describe three patterns you see.

1

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100

2. Using words or drawings, tell how you remember the 9s multiplications and divisions.

3. Kristin’s apartment building has 3 floors. Each floor has 9 apartments. How many apartments are there in Kristin’s building?

4. Maria has 6 piles of flash cards. If there are 9 cards in each pile, how many flash cards does Maria have in all?
Solve. Circle any that you did not know right away so you can practice them more.

1. $2 \cdot 1 = \underline{\phantom{0}}$
2. $2 \cdot 10 = \underline{\phantom{0}}$
3. $2 \cdot 6 = \underline{\phantom{0}}$
4. $5 \cdot 7 = \underline{\phantom{0}}$
5. $5 \times 8 = \underline{\phantom{0}}$
6. $5 \times 3 = \underline{\phantom{0}}$
7. $2 \times 8 = \underline{\phantom{0}}$
8. $2 \times 9 = \underline{\phantom{0}}$
9. $5 \cdot 2 = \underline{\phantom{0}}$
10. $2 \cdot 5 = \underline{\phantom{0}}$
11. $5 \cdot 1 = \underline{\phantom{0}}$
12. $2 \cdot 3 = \underline{\phantom{0}}$
13. $2 \times 7 = \underline{\phantom{0}}$
14. $5 \times 6 = \underline{\phantom{0}}$
15. $2 \times 4 = \underline{\phantom{0}}$
16. $5 \times 4 = \underline{\phantom{0}}$
17. $5 \cdot 5 = \underline{\phantom{0}}$
18. $2 \cdot 2 = \underline{\phantom{0}}$
19. $5 \cdot 9 = \underline{\phantom{0}}$
20. $5 \cdot 10 = \underline{\phantom{0}}$
21. $5 \div 5 = \underline{\phantom{0}}$
22. $6 \div 2 = \underline{\phantom{0}}$
23. $2 \frac{12}{12}$
24. $\frac{8}{2} = \underline{\phantom{0}}$
25. $2 \frac{20}{20}$
26. $10 \div 5 = \underline{\phantom{0}}$
27. $\frac{18}{2} = \underline{\phantom{0}}$
28. $5 \frac{30}{30}$
29. $\frac{40}{5} = \underline{\phantom{0}}$
30. $2 \frac{2}{2}$
31. $35 \div 5 = \underline{\phantom{0}}$
32. $\frac{4}{2} = \underline{\phantom{0}}$
33. $14 \div 2 = \underline{\phantom{0}}$
34. $\frac{20}{5} = \underline{\phantom{0}}$
35. $5 \frac{15}{15}$
36. $45 \div 5 = \underline{\phantom{0}}$
37. $5 \frac{25}{25}$
38. $10 \div 2 = \underline{\phantom{0}}$
39. $50 \div 5 = \underline{\phantom{0}}$
40. $2 \frac{16}{16}$

Solve each problem.

41. Penelope has 6 apples. She ate 2 of them. How many apples does she have now?
42. Maurice has 6 pairs of shoes to polish. He polishes 5 shoes. How many does he have to polish now?

43. Write and solve an addition or subtraction word problem.
1. Write two multiplication equations to represent this array.

Make a math drawing for each problem and then solve.

2. Mr. Jones has a small orchard in his backyard. His orchard has 8 rows of apple trees. Each row has 5 trees. How many apple trees are in his orchard?

3. The teachers’ parking lot has 3 rows of parking spaces with the same number of spaces in each row. If 27 cars can park in the lot, many spaces are in each row?

4. On a separate sheet of paper, write and solve an array multiplication problem.

5. **Math Journal** Explain how you know that multiplication is commutative.

Use your Target to practice. Focus on the multiplications and divisions in your Study Plan.
Remembering

Solve.

1. $9 \cdot 1 = \underline{9}$
2. $9 \cdot 10 = \underline{90}$
3. $9 \cdot 6 = \underline{54}$
4. $10 \cdot 7 = \underline{70}$
5. $10 \times 8 = \underline{80}$
6. $10 \times 3 = \underline{30}$
7. $9 \times 8 = \underline{72}$
8. $9 \times 9 = \underline{81}$
9. $9 \cdot 2 = \underline{18}$
10. $9 \cdot 5 = \underline{45}$
11. $10 \cdot 1 = \underline{10}$
12. $9 \cdot 3 = \underline{27}$
13. $9 \times 7 = \underline{63}$
14. $10 \times 6 = \underline{60}$
15. $9 \times 4 = \underline{36}$
16. $10 \times 4 = \underline{40}$
17. $10 \cdot 5 = \underline{50}$
18. $9 \cdot 2 = \underline{18}$
19. $10 \cdot 9 = \underline{90}$
20. $10 \cdot 10 = \underline{100}$
21. $10 \div 10 = \underline{1}$
22. $\frac{27}{9} = \underline{3}$
23. $\sqrt{54}$
24. $36 \div 9 = \underline{4}$
25. $\sqrt{90}$
26. $20 \div 10 = \underline{2}$
27. $70 \div 10 = \underline{7}$
28. $\sqrt{1060}$
29. $\frac{40}{10} = \underline{4}$
30. $\sqrt{9}$
31. $81 \div 9 = \underline{9}$
32. $\frac{18}{9} = \underline{2}$
33. $63 \div 9 = \underline{7}$
34. $80 \div 10 = \underline{8}$
35. $\sqrt{30}$
36. $90 \div 10 = \underline{9}$
37. $\sqrt{50}$
38. $45 \div 9 = \underline{5}$
39. $100 \div 10 = \underline{10}$
40. $\sqrt{72}$

Solve each problem.

41. One day at the pond, Allie caught 12 tadpoles. Mark only caught 6 tadpoles. How many more tadpoles did Allie catch?

42. Jasper knew how to cook 9 recipes. Then he learned 3 more. How many recipes does Jasper know how to cook now?

43. Write and solve an addition or subtraction word problem.

4 UNIT 1 LESSON 2

Arrays and Commutativity
Write a multiplication equation to represent the total.

1. How many eggs?

2. How many legs?

3. How many basketballs?

4. How many points?

5. Complete this function table.

<table>
<thead>
<tr>
<th>Rabbits</th>
<th>3</th>
<th>7</th>
<th>9</th>
<th>8</th>
<th>6</th>
<th>400</th>
</tr>
</thead>
<tbody>
<tr>
<td>r</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ears</td>
<td>e</td>
<td>2</td>
<td>10</td>
<td>8</td>
<td>80</td>
<td>2,000</td>
</tr>
<tr>
<td>2 * r</td>
<td></td>
<td>10</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. On a separate sheet of paper, write a division word problem involving groups in which the group size is unknown. Write your solution underneath the problem.
Multiply.

1. $4 \cdot 5 = \underline{20}$
2. $8 \cdot 2 = \underline{16}$
3. $9 \cdot 5 = \underline{45}$
4. $7 \cdot 2 = \underline{14}$

5. $3 \times 2 = \underline{6}$
6. $3 \times 10 = \underline{30}$
7. $1 \times 2 = \underline{2}$
8. $9 \times 9 = \underline{81}$

9. $4 \cdot 9 = \underline{36}$
10. $2 \cdot 9 = \underline{18}$
11. $6 \cdot 9 = \underline{54}$
12. $3 \cdot 5 = \underline{15}$

13. $10 \times 2 = \underline{20}$
14. $5 \times 5 = \underline{25}$
15. $2 \times 5 = \underline{10}$
16. $1 \times 9 = \underline{9}$

17. $8 \cdot 9 = \underline{72}$
18. $4 \cdot 2 = \underline{8}$
19. $10 \cdot 9 = \underline{90}$
20. $2 \cdot 2 = \underline{4}$

21. $7 \times 5 = \underline{35}$
22. $8 \times 5 = \underline{40}$
23. $6 \times 2 = \underline{12}$
24. $6 \times 5 = \underline{30}$

25. $8 \cdot 10 = \underline{80}$
26. $7 \cdot 9 = \underline{63}$
27. $3 \cdot 9 = \underline{27}$
28. $5 \cdot 9 = \underline{45}$

29. $5 \cdot 2 = \underline{10}$
30. $1 \cdot 5 = \underline{5}$
31. $10 \cdot 5 = \underline{50}$
32. $9 \cdot 2 = \underline{18}$

Solve each problem.

33. Larry has 35 nuts. Seven are almonds and the rest are walnuts. How many are walnuts?

34. Flora planted 4 tulips and 12 snapdragons. How many flowers did she plant?

35. On a separate sheet of paper, write a division word problem involving groups in which the number of groups (the multiplier) is unknown. Then solve it.

Cut out the product cards on pages 7, 8, 9 and 10. Practice your multiplications and divisions using the Product Cards and your Target.
2 \times 2

2 \cdot 3

2 \times 4

2 \times 5

2 \times 6

2 \cdot 7

2 \times 8

2 \times 9

5 \times 2

5 \cdot 3

5 \times 4

5 \times 5

5 \times 6

5 \cdot 7

5 \times 8

5 \times 9

Hint: What is 3 \times 2?

Hint: What is 4 \times 2?

Hint: What is 5 \times 2?

Hint: What is 6 \times 2?

Hint: What is 7 \times 2?

Hint: What is 8 \times 2?

Hint: What is 9 \times 2?

Hint: What is 2 \times 5?

Hint: What is 3 \times 5?

Hint: What is 4 \times 5?

Hint: What is 6 \times 5?

Hint: What is 7 \times 5?

Hint: What is 8 \times 5?

Hint: What is 9 \times 5?
<table>
<thead>
<tr>
<th>Product Card</th>
<th>Hint: What is ( \square \times 2 = )？</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>( \square \times 2 = 10 )?</td>
</tr>
<tr>
<td>8</td>
<td>( \square \times 2 = 8 )?</td>
</tr>
<tr>
<td>6</td>
<td>( \square \times 2 = 6 )?</td>
</tr>
<tr>
<td>4</td>
<td>( \square \times 2 = 4 )?</td>
</tr>
<tr>
<td>18</td>
<td>( \square \times 2 = 18 )?</td>
</tr>
<tr>
<td>16</td>
<td>( \square \times 2 = 16 )?</td>
</tr>
<tr>
<td>14</td>
<td>( \square \times 2 = 14 )?</td>
</tr>
<tr>
<td>12</td>
<td>( \square \times 2 = 12 )?</td>
</tr>
<tr>
<td>25</td>
<td>( \square \times 5 = 25 )?</td>
</tr>
<tr>
<td>20</td>
<td>( \square \times 5 = 20 )?</td>
</tr>
<tr>
<td>15</td>
<td>( \square \times 5 = 15 )?</td>
</tr>
<tr>
<td>10</td>
<td>( \square \times 5 = 10 )?</td>
</tr>
<tr>
<td>45</td>
<td>( \square \times 5 = 45 )?</td>
</tr>
<tr>
<td>40</td>
<td>( \square \times 5 = 40 )?</td>
</tr>
<tr>
<td>35</td>
<td>( \square \times 5 = 35 )?</td>
</tr>
<tr>
<td>30</td>
<td>( \square \times 5 = 30 )?</td>
</tr>
</tbody>
</table>
You can write any numbers on the last 8 cards. Use them to practice difficult problems or if you lose a card.
You can write any numbers on the last 8 cards. Use them to practice difficult problems or if you lose a card.
Study Plan

1. On a separate sheet of paper, make a table of 10 rows and 3 columns. In your table, copy the multiplication and division equations shown on the right. Then:

   - Complete the first column by writing equations to show all 3s multiplication up to $10 \times 3$.
   - Complete the second and third columns by writing division equations.

Write a multiplication equation to represent each total.

2. How many bananas?

   ![Bananas](image)

3. How many holes?

   ![Holes](image)

Solve each problem.

4. Mai-Lin has 3 plums for each of her friends. If she has 6 friends, how many plums does she have?

5. Luis has 18 tickets for the carnival. If each ride costs 3 tickets, how many rides can he go on?
Divide.

1. \(27 \div 9 = \)  
2. \(14 \div 2 = \)  
3. \(45 \div 5 = \)  
4. \(20 \div 5 = \)

5. \(9\overline{45}\)  
6. \(\frac{72}{9} = \)  
7. \(54 \div 9 = \)  
8. \(63 \div 9 = \)

9. \(25 \div 5 = \)  
10. \(18 \div 9 = \)  
11. \(5\overline{30}\)  
12. \(35 \div 5 = \)

13. \(36 \div 9 = \)  
14. \(90 \div 9 = \)  
15. \(81 \div 9 = \)  
16. \(80 \div 10 = \)

17. \(60 \div 10 = \)  
18. \(5\overline{50}\)  
19. \(2\overline{20}\)  
20. \(5\overline{40}\)

21. On the grid to the right, dark segments have been drawn separating groups of 3, and the 3s count-bys have been circled. Describe two patterns you see.

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

Solve each word problem.

22. One day, an animal shelter took in 9 adult cats and 36 kittens. How many new cats did the shelter take in that day?

___________________________________________________________________________

23. One day, an animal shelter had 27 kittens. A family came and adopted 4 of the kittens. How many kittens were left after that?

___________________________________________________________________________

24. Complete this function table.

<table>
<thead>
<tr>
<th>Tricycles</th>
<th>(t)</th>
<th>2</th>
<th>5</th>
<th>0</th>
<th>4</th>
<th>200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheels (3 \cdot t)</td>
<td>(w)</td>
<td>6</td>
<td>9</td>
<td>21</td>
<td>18</td>
<td>300</td>
</tr>
</tbody>
</table>
Complete each Equal-Shares Drawing and Fast Array. Then tell whether the number in the box is a factor or the product.

1. 2. 3. 4. 5. 6.

Use the pictograph to solve each problem.

7. How many dogs did the veterinarian treat?

8. How many more cats than birds did the veterinarian treat?
Solve.

1. \(8 \cdot 9 = \) ____  
2. \(10 \cdot 9 = \) ____  
3. \(8 \times 10 = \) ____  
4. \(7 \cdot 9 = \) ____  

5. \(5 \cdot 9 = \) ____  
6. \(5 \times 5 = \) ____  
7. \(1 \times 9 = \) ____  
8. \(4 \times 9 = \) ____  

9. \(6 \cdot 9 = \) ____  
10. \(3 \cdot 5 = \) ____  
11. \(5 \div 30 = \) \(5\)  
12. \(2 \div 12 = \) \(2\)  
13. \(27 \div 9 = \) ____  
14. \(45 \div 5 = \) ____  
15. \(5 \div 50 = \) \(5\)  
16. \(5 \div 40 = \) \(5\)  

Solve each problem.

17. Kristi has 8 grapes. She put 4 on a plate for herself, and the rest on a plate for her brother. How many grapes are for her brother?  

18. Warren planted 18 tomato plants, but 2 of them died right away. How many tomato plants did he have then?  

19. Copy the chart below onto a separate sheet of paper. Write the 4s multiplications in the first column up to \(10 \times 4\). In the other two columns, write the two divisions you can make from each multiplication. Each column has been started for you.  

\[
\begin{array}{ccc}
1 \times 4 &=& 4 \\
2 \times 4 &=& 8 \\
3 \times 4 &=& 12 \\
4 \div 1 &=& 4 \\
8 \div 2 &=& 4 \\
8 \div 4 &=& 2 \\
\end{array}
\]

20. On this grid, dark segments have been drawn separating groups of 4, and the 4s count-by's have been circled. On a separate sheet of paper, describe two patterns you see.  

21. On a separate sheet of paper, write and solve a 4s multiplication problem and a 4s division problem. One of your problems should be about an array.  

Practice multiplications and divisions with the Target and the Product Cards.
Solve.

1. $0 \cdot 1 = \_\_\_\_\_
   
2. $10 \cdot 0 = \_\_\_\_\_
   
3. $0 \cdot 6 = \_\_\_\_\_
   
4. $1 \cdot 7 = \_\_\_\_\_

5. $1 \cdot 5 = \_\_\_\_\_

6. $0 \cdot 2 = \_\_\_\_\_

7. $9 \cdot 1 = \_\_\_\_\_

8. $1 \cdot 10 = \_\_\_\_\_

9. $1 \div 1 = \_\_\_\_\_

10. $3 \div 3 = \_\_\_\_\_

11. $6 \div 1 = \_\_\_\_\_

12. $5 \div 1 = \_\_\_\_\_

13. $1\overline{10}$

14. $2\overline{2}$

15. $\frac{7}{1} = \_\_\_\_\_

16. $1\overline{6}$

17. $\frac{4}{4} = \_\_\_\_\_

18. $10 / 10 = \_\_\_\_\_\_

19. $\frac{9}{1} = \_\_\_\_\_\_

20. $\frac{5}{5} = \_\_\_\_\_\_\_\_

21. Math Journal Describe how you remember the 0s and 1s multiplications and divisions.

Use the pictograph to solve each problem.

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Number of Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trombone</td>
<td>🎷횟수 Husslehorn</td>
</tr>
<tr>
<td>French Horn</td>
<td>🎷횟수 Husslehorn</td>
</tr>
<tr>
<td>Tuba</td>
<td>🎷횟수 Husslehorn</td>
</tr>
<tr>
<td>Trumpet</td>
<td>🎷횟수 Husslehorn</td>
</tr>
</tbody>
</table>

22. How many trumpets did the store sell?

23. How many total trombones and tubas did the store sell?
Multiply.

1. 7 \times 5 = \_
2. 5 \times 3 = \_
3. 1 \times 9 = \_
4. 9 \times 3 = \_

5. 1 \times 1 = \_
6. 1 \times 10 = \_
7. 6 \times 10 = \_
8. 8 \times 2 = \_

9. 4 \times 9 = \_
10. 2 \times 0 = \_
11. 8 \times 9 = \_
12. 10 \times 9 = \_

13. 3 \times 2 = \_
14. 10 \times 4 = \_
15. 5 \times 1 = \_
16. 6 \times 4 = \_

17. 7 \times 10 = \_
18. 0 \times 3 = \_
19. 4 \times 5 = \_
20. 8 \times 0 = \_

21. 2 \times 4 = \_
22. 6 \times 2 = \_
23. 1 \times 3 = \_
24. 9 \times 1 = \_

Solve each problem.

25. Jude had a package of 15 pencils. He gave 6 to his friend at school. How many pencils did he have left?

26. Sam had 19 toy cars in his collection. Then he received 4 more toy cars for his birthday. How many toy cars does he have altogether?

27. Write and solve an addition or subtraction word problem.

28. Complete the table.

<table>
<thead>
<tr>
<th>Triangles ( t )</th>
<th>( t )</th>
<th>6</th>
<th>1</th>
<th>4</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sides ( 3 \times t )</td>
<td>( s )</td>
<td>27</td>
<td>0</td>
<td>15</td>
<td>900</td>
</tr>
</tbody>
</table>
Solve each problem.

1. Lou arranged 12 cans in an array with 4 columns. How many rows were in the array?

2. Pedro’s family is moving. Pedro packed his model cars in 7 boxes. He put 3 cars in each box. How many model cars did he pack?

3. Pedro’s little sister packed 36 beanbag animals. She put 9 animals in each box. How many boxes did she use?

4. At Ramesh’s piano recital, the chairs in the audience were set up in 9 rows with 6 chairs in each row. How many chairs were set up?

5. Complete the table.

| Horses  
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$h$</td>
<td>3</td>
<td>0</td>
<td>7</td>
<td>5</td>
<td>300</td>
<td></td>
</tr>
</tbody>
</table>
| Legs  
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$4 \cdot h$</td>
<td>1</td>
<td>24</td>
<td>4</td>
<td>36</td>
<td></td>
<td>8,000</td>
</tr>
</tbody>
</table>

6. On a separate sheet of paper, write and solve a multiplication array problem.

7. On the same sheet you used for problem 6, write and solve a division array problem.
Divide.

1. $36 \div 4 = \underline{\hspace{1cm}}$
2. $45 \div 9 = \underline{\hspace{1cm}}$
3. $9)\underline{9}$
4. $4)\underline{28}$
5. $\frac{100}{10} = \underline{\hspace{1cm}}$
6. $\frac{0}{5} = \underline{\hspace{1cm}}$
7. $10 \div 1 = \underline{\hspace{1cm}}$
8. $0 \div 1 = \underline{\hspace{1cm}}$
9. $5\underline{25}$
10. $9\underline{81}$
11. $10 \div 5 = \underline{\hspace{1cm}}$
12. $16 \div 4 = \underline{\hspace{1cm}}$

Use this pictograph to solve each problem.

**Sandra’s Beach Stand Sales**

<table>
<thead>
<tr>
<th>Item</th>
<th>Number of Sales</th>
</tr>
</thead>
</table>
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17. When Juan went fishing, he saw 18 rainbow trout and 6 speckled trout. How many trout did Juan see in all?

18. A diver has a bucket of 26 fish. She puts 8 fish in a tank. How many fish does she have left?
1–7
Homework

<table>
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<tr>
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<tr>
<td>Hint: What is 6 × 4?</td>
<td>Copyright © Houghton Mifflin Company</td>
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Hint: What is $\square \times 3 = 15$?

Hint: What is $\square \times 3 = 12$?

Hint: What is $\square \times 3 = 9$?

Hint: What is $\square \times 3 = 6$?

Hint: What is $\square \times 3 = 27$?

Hint: What is $\square \times 3 = 24$?

Hint: What is $\square \times 3 = 21$?

Hint: What is $\square \times 3 = 18$?

Hint: What is $\square \times 4 = 20$?

Hint: What is $\square \times 4 = 16$?

Hint: What is $\square \times 4 = 12$?

Hint: What is $\square \times 4 = 8$?

Hint: What is $\square \times 4 = 36$?

Hint: What is $\square \times 4 = 32$?

Hint: What is $\square \times 4 = 28$?

Hint: What is $\square \times 4 = 24$?
1. Write eight equations based on this Factor Triangle.

\[
\begin{array}{ccc}
\div & 32 & \div \\
\times & 4 & \times 8 \\
\end{array}
\]

\[
\begin{array}{ccc}
\frac{32}{4} & \frac{32}{8} & \\
\frac{32}{2} & \frac{32}{4} & \\
\end{array}
\]

2. Write eight equations based on this Fast Array.

\[
\begin{array}{ccc}
3 & \circ & \circ \\
6 & \circ & 18 \\
\end{array}
\]

\[
\begin{array}{ccc}
\frac{3}{6} & \frac{3}{18} & \\
\frac{18}{6} & \frac{18}{3} & \\
\end{array}
\]

3. Draw a Factor Triangle and a Fast Array for \(3 \times 7 = 21\).

4. A nonagon is a closed shape with 9 sides.

Complete this function table.

<table>
<thead>
<tr>
<th>Number of Nonagons (n)</th>
<th>(n)</th>
<th>2</th>
<th>4</th>
<th>7</th>
<th>0</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Sides (9 \cdot n)</td>
<td>(s)</td>
<td>54</td>
<td>72</td>
<td>9</td>
<td></td>
<td>2,700</td>
</tr>
</tbody>
</table>
Complete each equation.

1. $12 = 3 \times ____$
2. $8 = ____ \times 4$
3. ____ $= 3 \times 6$
4. $24 = 4 \times ____$
5. $35 = ____ \times 5$
6. ____ $= 8 \times 9$
7. $0 = 5 \times ____$
8. $9 = ____ \times 3$
9. ____ $= 4 \times 5$
10. $9 = 1 \times ____$
11. $36 = ____ \times 4$
12. ____ $= 5 \times 9$
13. $24 = 3 \times ____$
14. $0 = ____ \times 9$
15. ____ $= 4 \times 8$
16. $63 = 9 \times ____$
17. $21 = ____ \times 3$
18. ____ $= 3 \times 1$
19. $4 = 20 \div ____$
20. $4 = ____ \div 10$
21. ____ $= 4 \div 4$
22. $5 = 25 \div ____$
23. $5 = ____ \div 3$
24. ____ $= 40 \div 5$
25. $9 = 54 \div ____$
26. $0 = ____ \div 9$
27. ____ $= 28 \div 4$
28. $3 = 12 \div ____$
29. $9 = ____ \div 2$
30. ____ $= 24 \div 3$
31. $2 = 6 \div ____$
32. $0 = ____ \div 3$
33. ____ $= 7 \div 1$
34. $9 = 36 \div ____$
35. $4 = ____ \div 4$
36. ____ $= 32 \div 4$

Solve each problem.

37. Marcus had 20 days to do his science fair project. Maria only had 10 days. How many more days did Marcus have to do his project?

38. The Parents’ Club had 6 blueberry muffins and 14 raisin muffins for sale. How many muffins did they have for sale in all?
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Read each problem, decide what type of problem it is, then write the equation and solve.

a. Array Multiplication
b. Array Division
c. Repeated-Groups Multiplication
d. Repeated-Groups Division with Unknown Group Size
e. Repeated-Groups Division with Unknown Multiplier

(2) number of groups

1. Mother has cooked 1 dozen eggs for breakfast. If there are 6 people in the family, how many eggs can each person have?
   Problem Type: ______________________
   Equation: ______________________

2. There are 40 eggs in nests in the park. All of the nests have 5 eggs in them. How many nests are there?
   Problem Type: ______________________
   Equation: ______________________

3. A rose garden has 3 rows and 9 bushes in each row. How many rose bushes are there in all?
   Problem Type: ______________________
   Equation: ______________________

4. Amelia wrote 2 pages in her journal every night. How many pages did she write each week?
   Problem Type: ______________________
   Equation: ______________________
Solve each problem.

1. A box of oranges has 4 rows. Each row has 8 oranges. How many oranges are in the box?

2. A classroom has 40 student desks. If there are 5 rows of desks, how many desks are in each row?

3. Keshawn bought 36 animal stickers for his sisters. He gave 9 stickers to each sister and had none left. How many sisters does he have?

4. There are 24 students in the school chorus. During their last concert, they stood in 3 equal rows. How many students stood in each row?

Use a separate sheet of paper for exercises 5 and 6.

5. Write and solve a repeated-groups division problem with unknown group size.

6. Write and solve an array problem.

Use the pictograph to solve each problem.

<table>
<thead>
<tr>
<th>Art Pieces at a Gallery</th>
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<tbody>
<tr>
<td>Type</td>
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<tr>
<td>Drawings</td>
</tr>
<tr>
<td>Paintings</td>
</tr>
<tr>
<td>Sculptures</td>
</tr>
<tr>
<td>Photographs</td>
</tr>
</tbody>
</table>

7. How many photographs does the gallery have?

8. How many more paintings than sculptures does the gallery have?

9. How many drawings and paintings does the gallery have altogether?
This pictograph shows the number of each type of bagel sold at The Bagel Hut.

1. How many plain bagels were sold? 

2. How many wheat and poppy seed bagels were sold altogether? 

3. How many more plain bagels were sold than cinnamon raisin bagels? 

4. On this grid, dark segments have been drawn separating groups of 6, and the 6s count-bys have been circled. Describe two patterns you see. 

Solve each problem.

5. Thirty-six cars were parked in 6 equal rows. How many cars were parked in each row? 

6. Georgia read for 48 minutes. Each page took 8 minutes to read. How many pages did she read?
Solve each multiplication and division problem.

1. $5 \cdot 1 = \underline{\hspace{1cm}}$
2. $2 \cdot 3 = \underline{\hspace{1cm}}$
3. $10 \cdot 4 = \underline{\hspace{1cm}}$
4. $5 \cdot 9 = \underline{\hspace{1cm}}$
5. $4 \cdot 8 = \underline{\hspace{1cm}}$
6. $3 \cdot 9 = \underline{\hspace{1cm}}$
7. $7 \cdot 5 = \underline{\hspace{1cm}}$
8. $8 \cdot 10 = \underline{\hspace{1cm}}$
9. $3 \cdot 7 = \underline{\hspace{1cm}}$
10. $5 \cdot 10 = \underline{\hspace{1cm}}$
11. $9 \cdot 2 = \underline{\hspace{1cm}}$
12. $4 \cdot 7 = \underline{\hspace{1cm}}$
13. $4 \div 36$
14. $24 \div 3 = \underline{\hspace{1cm}}$
15. $60 \div 10 = \underline{\hspace{1cm}}$
16. $6 \div 6 = \underline{\hspace{1cm}}$
17. $30 \div 10 = \underline{\hspace{1cm}}$
18. $5 \div 25$
19. $63 \div 9 = \underline{\hspace{1cm}}$
20. $30 \div 5 = \underline{\hspace{1cm}}$
21. $15 \div 5 = \underline{\hspace{1cm}}$
22. $9 \div 1 = \underline{\hspace{1cm}}$
23. $5 \div 10$
24. $16 \div 4 = \underline{\hspace{1cm}}$

25. Write eight equations based on this Addend Triangle.

- $11$
- $4$
$- 7$

26. George walked 6 blocks to Fred's house. Then he walked 3 more blocks to get to school. How many blocks did George walk in all?

27. Henry had 15 jellybeans. He ate 5 and put the rest away for later. How many jellybeans did he save for later?
1. Complete this function table.

<table>
<thead>
<tr>
<th>Weeks (w)</th>
<th>1</th>
<th>4</th>
<th>5</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days (7w)</td>
<td>d</td>
<td>21</td>
<td>49</td>
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</tbody>
</table>

2. On this grid, dark segments have been drawn separating groups of 8, and the 8s count-bys have been circled. Describe two patterns you see.

- ...
- ...

3. Mei cut a 56-inch piece of yarn into 8-inch pieces. How many pieces does she have?

4. Each box of crayons has 8 crayons. How many crayons are there in 6 boxes?

5. Fiona drinks 3 cups of milk each day. There are 8 ounces of milk in one cup. How many ounces of milk does Fiona drink each day?

6. Bethany is stacking books at her father’s bookstore. She has 42 books. She places them in rows of 7. How many books are there in each row?
Solve each multiplication and division problem.

1. $7 \cdot 4 = \underline{\hspace{1cm}}$
2. $0 \cdot 3 = \underline{\hspace{1cm}}$
3. $6 \cdot 5 = \underline{\hspace{1cm}}$
4. $2 \cdot 8 = \underline{\hspace{1cm}}$
5. $6 \times 1 = \underline{\hspace{1cm}}$
6. $3 \times 9 = \underline{\hspace{1cm}}$
7. $7 \times 0 = \underline{\hspace{1cm}}$
8. $3 \times 10 = \underline{\hspace{1cm}}$
9. $1 \cdot 9 = \underline{\hspace{1cm}}$
10. $2 \cdot 10 = \underline{\hspace{1cm}}$
11. $7 \cdot 1 = \underline{\hspace{1cm}}$
12. $5 \cdot 0 = \underline{\hspace{1cm}}$
13. $2 \times 8 = \underline{\hspace{1cm}}$
14. $3 \times 3 = \underline{\hspace{1cm}}$
15. $5 \times 5 = \underline{\hspace{1cm}}$
16. $8 \times 5 = \underline{\hspace{1cm}}$
17. $5 \overline{)45}$
18. $32 \div 4 = \underline{\hspace{1cm}}$
19. $24 \div 8 = \underline{\hspace{1cm}}$
20. $18 \div 6 = \underline{\hspace{1cm}}$
21. $7 \div 7 = \underline{\hspace{1cm}}$
22. $9 \overline{)81}$
23. $20 \div 4 = \underline{\hspace{1cm}}$
24. $28 \div 4 = \underline{\hspace{1cm}}$
25. $40 \div 5 = \underline{\hspace{1cm}}$
26. $10 \div 10 = \underline{\hspace{1cm}}$
27. $3 \overline{)21}$
28. $8 \div 8 = \underline{\hspace{1cm}}$
29. $12 \div 4 = \underline{\hspace{1cm}}$
30. $4 \overline{)24}$
31. $54 \div 9 = \underline{\hspace{1cm}}$
32. $50 \div 5 = \underline{\hspace{1cm}}$
33. $24 \div 8 = \underline{\hspace{1cm}}$
34. $9 \overline{)63}$
35. $35 \div 5 = \underline{\hspace{1cm}}$
36. $9 \div 1 = \underline{\hspace{1cm}}$

Solve each problem.

37. At a dog kennel, 6 puppies were born in the morning and 5 more were born in the afternoon. How many puppies were born altogether?

38. Eileen has 12 coins. Donald has 9 coins. How many more coins does Eileen have?
This pictograph shows the number of each type of muffin baked for the bake sale. Use the graph to solve problems 1–3.

1. How many chocolate chip muffins were baked?

2. How many blueberry and cranberry muffins were baked altogether?

3. How many more lemon muffins were baked than blueberry muffins?

4. On a separate sheet of paper, describe a strategy for finding \( 6 \times 12 \).

Solve each problem.

5. Bethany arranged some blocks in a square array. The array had 7 rows. How many blocks did she use in all?

6. There are 11 students in Jennifer's math class. Each student needs 7 counters. How many counters are needed altogether?

7. Fiona packed 48 eggs into cartons that hold one dozen eggs each. How many cartons did she use? Hint: 1 dozen eggs = 12 eggs.

8. Carl reserved 3 rows of seats, with 12 seats in each row. How many seats did Carl reserve?
Solve each multiplication and division problem.

1. $4 \cdot 9 = \underline{36}$
2. $5 \cdot 10 = \underline{50}$
3. $7 \cdot 1 = \underline{7}$
4. $3 \cdot 8 = \underline{24}$
5. $10 \times 2 = \underline{20}$
6. $5 \times 5 = \underline{25}$
7. $1 \times 9 = \underline{9}$
8. $3 \times 6 = \underline{18}$
9. $4 \cdot 7 = \underline{28}$
10. $5 \cdot 8 = \underline{40}$
11. $8 \cdot 2 = \underline{16}$
12. $4 \cdot 10 = \underline{40}$
13. $8 \div 8 = \underline{1}$
14. $45 \div 5 = \underline{9}$
15. $32 \div 4 = \underline{8}$
16. $30 \div 10 = \underline{3}$
17. $24 \div 4 = \underline{6}$
18. $5 \div 15 = \underline{\frac{1}{3}}$
19. $12 \div 2 = \underline{6}$
20. $40 \div 4 = \underline{10}$

Use the pictograph for problems 21–25.

21. How many total home runs are shown? ________
22. How many more home runs does Pat have than Juan? ________
23. How many home runs do Miguel and Alan have altogether? ________
24. List the boys’ names in order from greatest to least number of home runs.
   __________________________________________
25. How many more home runs would Juan need in order to tie with Alan? ________
Write your answers for problems 1 and 2 on a separate sheet of paper.

1. Does \((a - b) - c = a - (b - c)\) for all numbers \(a, b,\) and \(c\)? Explain and show an example.

2. Does \(a \cdot (b - c) = a \cdot b - a \cdot c\) for all numbers \(a, b,\) and \(c\)? Explain and show an example.

Name the property used in each equation.

3. \(1 \cdot 37 = 37\) .................................................................

4. \(4 \times 25 = 25 \times 4\) .................................................................

5. \(2 \cdot (60 + 3) = (2 \cdot 60) + (2 \cdot 3)\) .................................................................

6. \((2 \times 3) \times 6 = 2 \times (3 \times 6)\) .................................................................

Use a property to find the value of \(n\).

7. \(54 \times 6 = 6 \times n\) .................................................................

8. \(3 \times (10 + 6) = (3 \times 10) + (3 \times n)\) .................................................................

9. \(16 \times n = 16\) .................................................................

10. \((5 \times 1) \times 8 = 5 \times (1 \times n)\) .................................................................

11. \((n \times 2) \times 10 = 5 \times (2 \times 10)\) .................................................................

12. \(3 \times n = 20 \times 3\) .................................................................
Solve each multiplication and division problem.

1. $5 \times 6 = \underline{30}$
2. $2 \times 1 = \underline{2}$
3. $7 \times 4 = \underline{28}$
4. $6 \times 8 = \underline{48}$
5. $5 \times 5 = \underline{25}$
6. $10 \times 3 = \underline{30}$
7. $1 \times 3 = \underline{3}$
8. $4 \times 9 = \underline{36}$
9. $3 \times 8 = \underline{24}$
10. $2 \times 6 = \underline{12}$
11. $6 \times 10 = \underline{60}$
12. $9 \times 2 = \underline{18}$
13. $8 \times 5 = \underline{40}$
14. $4 \times 7 = \underline{28}$
15. $10 \times 2 = \underline{20}$
16. $6 \times 1 = \underline{6}$
17. $4 \div 32 = \underline{0.125}$
18. $54 \div 9 = \underline{6}$
19. $40 \div 4 = \underline{10}$
20. $15 \div 3 = \underline{5}$
21. $36 \div 6 = \underline{6}$
22. $3 \div 21 = \underline{0.14}$
23. $42 \div 6 = \underline{7}$
24. $80 \div 8 = \underline{10}$
25. $24 \div 4 = \underline{6}$
26. $5 \div 5 = \underline{1}$
27. $1 \div 5 = \underline{0.2}$
28. $45 \div 9 = \underline{5}$
29. $54 \div 6 = \underline{9}$
30. $3 \div 12 = \underline{0.25}$
31. $14 \div 2 = \underline{7}$
32. $50 \div 10 = \underline{5}$
33. $30 \div 5 = \underline{6}$
34. $2 \div 12 = \underline{0.17}$
35. $3 \div 1 = \underline{3}$
36. $18 \div 6 = \underline{3}$

Solve each problem.

37. Gerald picked 7 tulips and 14 daffodils and put them in a vase. How many flowers does he have in his vase?

__________________________

38. Sally lives 8 blocks from school. Maria lives 11 blocks from school. How many more blocks does Maria live from the school?

__________________________
1. Complete this function table.

<table>
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<tr>
<th>Insects</th>
<th>i</th>
<th>1</th>
<th>5</th>
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<tr>
<td>Legs</td>
<td>i</td>
<td>24</td>
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<td></td>
<td>54</td>
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<tr>
<td>$6 \times i$</td>
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</table>

2. On this grid, dark segments have been drawn separating groups of 7, and the 7s count-bys have been circled. Describe two patterns you see.

Find the unknown number in each Factor Triangle.

3. $\frac{35}{5} \times$ __________

4. $\frac{6}{8} \times$ __________

5. $\frac{36}{6} \times$ __________
Solve each multiplication and division problem.

1. \(2 \times 7 = \) ____________
2. \(6 \times 8 = \) ____________
3. \(10 \times 4 = \) ____________
4. \(8 \times 8 = \) ____________

5. \(1 \times 10 = \) ____________
6. \(0 \times 9 = \) ____________
7. \(5 \times 3 = \) ____________
8. \(7 \times 9 = \) ____________

9. \(7 \times 8 = \) ____________
10. \(7 \times 1 = \) ____________
11. \(4 \times 8 = \) ____________
12. \(9 \times 5 = \) ____________

13. \(9 \times 2 = \) ____________
14. \(7 \times 7 = \) ____________
15. \(0 \times 2 = \) ____________
16. \(10 \times 1 = \) ____________

17. \(6 \div 30 = \) ____________
18. \(72 \div 9 = \) ____________
19. \(30 \div 3 = \) ____________
20. \(24 \div 3 = \) ____________

21. \(18 \div 6 = \) ____________
22. \(6 \div 42 = \) ____________
23. \(6 \div 6 = \) ____________
24. \(32 \div 8 = \) ____________

25. \(60 \div 6 = \) ____________
26. \(40 \div 5 = \) ____________
27. \(10 \div 50 = \) ____________
28. \(81 \div 9 = \) ____________

29. \(36 \div 6 = \) ____________
30. \(7 \div 70 = \) ____________
31. \(21 \div 7 = \) ____________
32. \(36 \div 9 = \) ____________

33. \(56 \div 7 = \) ____________
34. \(4 \div 40 = \) ____________
35. \(7 \div 1 = \) ____________
36. \(49 \div 7 = \) ____________

Solve each problem.

37. Sam saw 9 crabs at the beach. Then he saw 9 starfish. How many crabs and starfish did Sam see at the beach? ____________

38. Sean read the first 13 pages of his new book. His book has a total of 25 pages. How many pages does Sam have left to read? ____________
### Target Practice A

#### Table 1

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UNIT 1 LESSON 14

Hint: What is 2 × 6?

Hint: What is 3 × 6?

Hint: What is 4 × 6?

Hint: What is 5 × 6?

Hint: What is 7 × 6?

Hint: What is 8 × 6?

Hint: What is 9 × 6?

Hint: What is 2 × 7?

Hint: What is 3 × 7?

Hint: What is 4 × 7?

Hint: What is 5 × 7?

Hint: What is 6 × 7?

Hint: What is 8 × 7?

Hint: What is 9 × 7?
You can write any numbers on the last 8 cards. Use them to practice difficult problems or if you lose a card.
You can write any numbers on the last 8 cards. Use them to practice difficult problems or if you lose a card.
Use the table to solve problems 1–4.

1. What is the depth of Crater Lake?

2. How many lakes in the table are in the United States?

3. What is the deepest lake in the table?

4. What is the difference in depth between Great Slave Lake and Tahoe Lake?

5. Ask four friends or family members their age and favorite color. Then complete the table.

6. On a separate sheet of paper, write two questions that can be answered using your table.
Solve each multiplication and division problem.

1. $7 \times 6 = \underline{42}$
2. $2 \times 10 = \underline{20}$
3. $3 \times 9 = \underline{27}$
4. $7 \times 8 = \underline{56}$

5. $9 \times 6 = \underline{54}$
6. $1 \times 8 = \underline{8}$
7. $8 \times 5 = \underline{40}$
8. $2 \times 7 = \underline{14}$

9. $10 \times 7 = \underline{70}$
10. $7 \times 7 = \underline{49}$
11. $5 \times 6 = \underline{30}$
12. $4 \times 6 = \underline{24}$

13. $5 \times 10 = \underline{50}$
14. $8 \div 8 = \underline{1}$
15. $64 \div 8 = \underline{8}$
16. $63 \div 7 = \underline{9}$

17. $24 \div 8 = \underline{3}$
18. $1 \div 1 = \underline{1}$
19. $25 \div 5 = \underline{5}$
20. $80 \div 10 = \underline{8}$

21. $32 \div 4 = \underline{8}$
22. $12 \div 6 = \underline{2}$
23. $6 \times 5 = \underline{30}$
24. $48 \div 8 = \underline{6}$

25. Write eight equations based on this factor triangle.

\[ \frac{72}{9 \times 8} \]

26. Allison practiced the piano for 30 minutes. Her brother Sean practiced for 20 minutes. How many more minutes did Allison practice?

27. A farmer had 18 boxes of strawberries to sell. By the afternoon, the farmer sold 6 boxes. How many boxes does the farmer have left to sell?
Complete the table to show all the possible combinations. Then write a multiplication equation to show the total number of combinations.

1. An ice-cream shop has chocolate, vanilla, strawberry, and mint ice cream. The toppings available are chocolate chips, coconut, sprinkles, and candy pieces. How many different sundaes can be made using one type of ice cream and one topping?

<table>
<thead>
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<th>Chocolate Chips</th>
<th>Coconut</th>
<th>Sprinkles</th>
<th>Candy Pieces</th>
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<tr>
<td>Chocolate Ice Cream</td>
<td>chocolate chips on chocolate ice cream</td>
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<tr>
<td>Vanilla Ice Cream</td>
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<td>Strawberry Ice Cream</td>
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<td>Mint Ice Cream</td>
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Solve using any method you choose.

2. Giorgio has brown shoes, black shoes, and white shoes. He has white socks, black socks, gray socks, brown socks, and blue socks. How many different shoe-and-sock combinations can he make?

Show your work.
Remembering

Solve each multiplication and division problem.

1. \(11 \times 6 = \) 
2. \(12 \times 10 = \) 
3. \(3 \times 6 = \) 
4. \(1 \times 8 = \) 

5. \(12 \times 3 = \) 
6. \(6 \times 8 = \) 
7. \(10 \times 5 = \) 
8. \(4 \times 2 = \) 

9. \(2 \times 10 = \) 
10. \(8 \times 8 = \) 
11. \(3 \times 11 = \) 
12. \(5 \times 6 = \) 

Use a property to find the value of \(n\).

13. \(12 \times n = 5 \times 12\) 
14. \(31 \times n = 31\) 

15. \((n \times 4) \times 5 = 6 \times (4 \times 5)\) 
16. \(4 \times (3 + n) = (4 \times 3) + (4 \times 2)\) 

17. \((3 \times 2) \times 10 = 3 \times (2 \times n)\) 
18. \(16 \times 3 = 3 \times n\) 

Use the pictograph to answer problems 19–21.

Laps Swam in Gym Class

19. How many laps did 1st and 5th graders swim altogether?

20. How many laps did 4th and 5th graders swim altogether?

21. Who swam the most laps, 2nd and 3rd graders combined, or 1st and 4th graders?

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Complete this function table.

1. | Spiders s | 5 | 2 | 32 | 64 |
   | Legs 8 • s | / |   |    |    |

Find the unknown number in each Fast Array.

2. 5 6 42

Solve each problem.

4. A landscaper is planting trees in an open area. She will plant 8 trees in each row. She will make 8 rows. How many trees will she need?

5. Harriet is decorating spring baskets for her friends. She needs 6 silk flowers for each basket. If she is making 9 baskets, how many silk flowers does she need?

6. Brian has 56 rolls of film to develop. If he develops one roll of film each day, how many weeks will it take to develop all the film?

7. A grocer is shelving 72 cartons of juice. He can fit 9 cartons in each row. How many rows of juice will he have?
Solve each multiplication and division problem.

1. \(2 \times 12 = \)  
2. \(11 \times 8 = \)  
3. \(7 \times 4 = \)  
4. \(7 \times 8 = \)  
5. \(7 \times 10 = \)  
6. \(9 \times 9 = \)  
7. \(12 \times 0 = \)  
8. \(5 \times 9 = \)  
9. \(2 \times 11 = \)  
10. \(1 \times 9 = \)  
11. \(5 \times 5 = \)  
12. \(10 \times 2 = \)  
13. \(7 \times 2 = \)  
14. \(4 \times 4 = \)  
15. \(0 \times 6 = \)  
16. \(7 \times 4 = \)  
17. \(8 \div 72 = \)  
18. \(32 \div 4 = \)  
19. \(36 \div 12 = \)  
20. \(18 \div 3 = \)  
21. \(56 \div 8 = \)  
22. \(2 \div 14 = \)  
23. \(55 \div 5 = \)  
24. \(9 \div 9 = \)  
25. \(7 \div 1 = \)  
26. \(33 \div 11 = \)  
27. \(3 \div 27 = \)  
28. \(36 \div 9 = \)  
29. \(49 \div 7 = \)  
30. \(12 \div 48 = \)  
31. \(45 \div 5 = \)  
32. \(48 \div 8 = \)  
33. \(32 \div 4 = \)  
34. \(9 \div 63 = \)  
35. \(5 \div 5 = \)  
36. \(0 \div 2 = \)  

Solve each problem.

37. Norman baked 15 cookies. His sister baked 7 more cookies. How many total cookies did they bake?

38. Becky had 13 bracelets. She gave 7 bracelets to a friend. How many bracelets does Becky have left?
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**Home Check Sheet 2A**

**UNIT 1 LESSON 17**

**Name**

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<td>9</td>
<td>7</td>
<td>81</td>
<td>9</td>
<td>9</td>
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</table>
Use the shapes to answer exercises 1–5.

1. How many squares? How many triangles? Use multiplication to find the answers.

2. Because $4 \times \underline{\_\_\_\_\_\_\_} = 12$, there are \underline{\_\_\_\_\_\_\_} times as many squares as triangles.

3. Because $12 \div \underline{\_\_\_\_\_\_\_} = 4$, there are \underline{\_\_\_\_\_\_\_} as many triangles as squares.

4. Write a multiplication equation that compares the number of squares $s$ to the number of triangles $t$. \underline{\_\_\_\_\_\_\_}\n
5. Write a division equation that compares the number of triangles $t$ to the number of squares $s$. \underline{\_\_\_\_\_\_\_}\n
Solve each problem.

6. Elena’s age is 6 times Victor’s age. Elena is 12 years old. How many years old is Victor?

7. Megan walked 6 kilometers. This distance is 6 times as many kilometers as Marco walked. What distance did Marco walk?
Multiply or divide.

1. 36 ÷ 6 = __  
2. 5 × 8 = __  
3. 7 × 9 = __  
4. 56 ÷ 8 = __  
5. 5 × 7 = __  
6. 72 ÷ 9 = __  
7. 42 ÷ 7 = __  
8. 5 × 6 = __  
9. 5 × 3 = __  
10. 63 ÷ 7 = __  
11. 10 × 0 = __  
12. 42 ÷ 6 = __  
13. 72 ÷ 8 = __  
14. 8 × 2 = __  
15. 7 × 7 = __  
16. 54 ÷ 9 = __  

Use the pictograph to answer the exercises.

<table>
<thead>
<tr>
<th>Number of Points Scored</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team 1</td>
</tr>
<tr>
<td>🎳 🎳 🎳</td>
</tr>
</tbody>
</table>

= 8 points

17. What two combined team scores equal 80 points?

18. What team scored the most points? How many?

19. How many more points did Team 2 score than Team 4?

20. Write the team names in order of their scores, from greatest to least.

21. How many more points would Team 4 have needed to tie with Team 3?

22. Write a number sentence comparing Team 2’s points ($t$) and Team 4’s points ($f$).
The graph below shows the amount of snow recorded each month last winter. Use the graph for exercises 1–6.

1. During which month was the amount of snow recorded \( \frac{1}{2} \) as much as was recorded during February?

2. During which month was the amount of snow recorded 4 times greater than the amount recorded during November?

3. The total amount of snow shown in the graph is four times as much snow as was recorded during the winter of 2004. How much snow was recorded during the winter of 2004?

4. Write a multiplication equation that compares the number of inches recorded during December \((d)\) to the number of inches recorded during March \((m)\).

5. Write a division equation that compares the number of inches recorded during November \((n)\) to the number of inches recorded during February \((f)\).

6. On a separate sheet of paper, write a sentence about the graph that contains the words *times as much.*
Use the pictograph below for exercises 1–4.

1. During which hour did the fewest students visit the library?
   __________________________
   How many students visited the library during that hour?
   __________________________

2. During which hour was the number of students 5 times greater than the number of students who visited from 9 A.M. to 10 A.M.?
   __________________________

3. During which 3-hour span did a total of 30 students visit the library?
   __________________________

4. Altogether that day, 75 students visited the school library. How many students visited the library during the afternoon hours?
   __________________________

Multiply or divide.

5. $4 \times 7 = \underline{28}$
6. $72 \div 9 = \underline{8}$
7. $1 \times 2 = \underline{2}$
8. $49 \div 7 = \underline{7}$

9. $54 \div 6 = \underline{9}$
10. $9 \times 7 = \underline{63}$
11. $3 \times 4 = \underline{12}$
12. $45 \div 5 = \underline{9}$

13. $6 \times 6 = \underline{36}$
14. $32 \div 8 = \underline{4}$
15. $56 \div 7 = \underline{8}$
16. $8 \times 8 = \underline{64}$

17. $81 \div 9 = \underline{9}$
18. $5 \times 8 = \underline{40}$
19. $2 \times 9 = \underline{18}$
20. $36 \div 9 = \underline{4}$
Use the graph to answer exercises 1–4.

1. How tall is a polar bear? ________

2. Which animal is the tallest? ________
   How tall is it? ________

3. Which animal is the shortest? ________
   How tall is it? ________

4. What is the difference in height between the tallest and the shortest animals? ________

Use the information below to make a horizontal bar graph.

5. **Number of Gold Medals Won at the 2002 Winter Olympics**

<table>
<thead>
<tr>
<th>Country</th>
<th>China</th>
<th>Germany</th>
<th>Italy</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold Medals</td>
<td>2</td>
<td>12</td>
<td>4</td>
<td>10</td>
</tr>
</tbody>
</table>
Complete each multiplication and division equation.

1. \( 16 = 8 \times \underline{\phantom{0}} \)  
2. \( 25 = \underline{\phantom{0}} \times 5 \)  
3. \( \underline{\phantom{0}} = 4 \times 8 \)  
4. \( 54 = 6 \times \underline{\phantom{0}} \)  
5. \( 4 = \underline{\phantom{0}} \times 2 \)  
6. \( \underline{\phantom{0}} = 2 \times 6 \)  
7. \( 24 = 4 \times \underline{\phantom{0}} \)  
8. \( 21 = \underline{\phantom{0}} \times 3 \)  
9. \( \underline{\phantom{0}} = 9 \times 4 \)  
10. \( 3 = 6 \div \underline{\phantom{0}} \)  
11. \( 6 = \underline{\phantom{0}} \div 4 \)  
12. \( \underline{\phantom{0}} = 12 \div 4 \)  
13. \( 9 = 45 \div \underline{\phantom{0}} \)  
14. \( 9 = \underline{\phantom{0}} \div 3 \)  
15. \( \underline{\phantom{0}} = 80 \div 8 \)  

Solve each division as quickly as you can. Then circle any that you need to practice more.

16. \( 24 \div 6 = \underline{\phantom{0}} \)  
17. \( 64 \div 8 = \underline{\phantom{0}} \)  
18. \( 32 \div 8 = \underline{\phantom{0}} \)  
19. \( 63 \div 7 = \underline{\phantom{0}} \)  
20. \( 36 \div 6 = \underline{\phantom{0}} \)  
21. \( 54 \div 6 = \underline{\phantom{0}} \)  
22. \( 8 \overline{40} = \underline{\phantom{0}} \)  
23. \( 8 \overline{56} = \underline{\phantom{0}} \)  
24. \( 7 \overline{28} = \underline{\phantom{0}} \)  
25. \( 35 \div 7 = \underline{\phantom{0}} \)  
26. \( 42 \div 7 = \underline{\phantom{0}} \)  
27. \( 48 \div 8 = \underline{\phantom{0}} \)  
28. \( 30 \div 6 = \underline{\phantom{0}} \)  
29. \( 72 \div 8 = \underline{\phantom{0}} \)  
30. \( 49 \div 7 = \underline{\phantom{0}} \)  
31. \( 7 \overline{56} = \underline{\phantom{0}} \)  
32. \( 6 \overline{42} = \underline{\phantom{0}} \)  
33. \( 6 \overline{48} = \underline{\phantom{0}} \)  

Solve each problem.

34. Angela sold 7 cakes on Monday. She sold 14 cakes on Wednesday. How many cakes did she sell altogether?

35. Each week, Tanya bicycles 9 miles. Damon bicycles 11 miles. How many more miles does Damon bicycle?

36. Kiko scored 3 soccer goals and Karen scored 1. How many fewer soccer goals did Karen score?

37. Shantee has 8 seashells and Karen has 18. How many more seashells does Karen have?
Complete this function table.

1. | Dozens of Eggs \(d\) | \(d\) | 1 | 5 | 7 | 11 |
<table>
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</thead>
<tbody>
<tr>
<td>Number of Eggs (12 \cdot d)</td>
<td>(n)</td>
<td>36</td>
<td></td>
<td></td>
<td>108</td>
</tr>
</tbody>
</table>

Fill in the missing number in each Fast Array.

2. 

3. 

Solve each problem.

4. Marisa’s age is 4 times Sam’s age. Marisa is 20 years old. How old is Sam?

5. Raul and Rosa were playing basketball. Raul made 10 baskets. Rosa made half as many as Raul. How many baskets did Rosa make?

6. Jeff sold 12 cars on Friday. He sold 3 times as many cars on Saturday. How many cars did Jeff sell on Saturday?

7. Danielle received $32 for her birthday. Three years ago, she received \(\frac{1}{4}\) as much. How much did Danielle receive three years ago?
Use the shapes to answer exercises 1–5.

1. How many circles? How many rectangles?
   Use multiplication to find the answers.

2. Because $6 \times ____ = 12$, there are ____ times as many circles as rectangles.

3. Because $12 \div ____ = 6$, there are ____ as many rectangles as circles.

4. Write a multiplication equation that compares the number of circles $c$ to the number of rectangles $r$.

5. Write a division equation that compares the number of rectangles $r$ to the number of circles $c$.

Multiply or divide.

6. $1 \times 7 = ____$
7. $42 \div 6 = ____$
8. $11 \times 3 = ____$
9. $24 \div 8 = ____$
10. $99 \div 9 = ____$
11. $4 \times 12 = ____$
12. $8 \times 6 = ____$
13. $12 \div 3 = ____$
14. $0 \times 7 = ____$
15. $9 \div 1 = ____$
16. $40 \div 8 = ____$
17. $12 \times 2 = ____$
18. $40 \div 10 = ____$
19. $2 \times 7 = ____$
20. $3 \times 9 = ____$
21. $36 \div 6 = ____$
22. $1 \times 1 = ____$
23. $49 \div 7 = ____$
24. $10 \times 9 = ____$
25. $0 \div 5 = ____$
26. $35 \div 5 = ____$
27. $2 \times 10 = ____$
28. $6 \times 3 = ____$
29. $28 \div 4 = ____$
Solve each problem.

1. \(5 \times 7 + 9 = \)

2. \(9 \times (1 + 3) = \)

3. \(7 - 2 \times 2 = \)

4. \((7 \times 2) + (4 \times 9) = \)

5. \((6 - 2) \times 8 = \)

6. \(2 \times 6 - 4 = \)

7. \((7 - 2) \times (3 + 2) = \)

8. \(8 \times (12 - 7) = \)

9. Whitney and Georgia are at the snack bar. They are buying food for their family. Sandwiches cost $4 each. Salads cost $2 each. How much will it cost them to buy 5 sandwiches and 7 salads?

10. Lisa put tulips and roses into vases. Each vase has 12 flowers. The red vase has 7 tulips. The blue vase has twice as many roses as the red vase. How many roses are in the blue vase?

11. Pam has 9 bags of apples. Each bag contains 6 apples. There are 3 bags of red apples and 1 bag of green apples. The rest of the bags contain yellow apples. How many more yellow apples are there than red apples?

12. Clay works on a farm. He packaged eggs into containers that hold 1 dozen eggs each. He filled 4 containers with white eggs and 5 containers with brown eggs. How many eggs did Clay collect?

Hint: one dozen eggs = 12 eggs
Solve each problem.

A teacher at Lakeside School surveyed the students about their pets. The bar graph shows all the pets in the families of all the students. Use the bar graph to complete exercises 1–3.

1. The number of ________ is \( \frac{1}{2} \) the number of dogs.

2. The number of ________ is 3 times the number of birds.

3. The number of pets in all the families of all the students is ________.

Multiply or divide.

4. \( 6 \times 5 = \) ___  
5. \( 32 \div 4 = \) ___  
6. \( 12 \times 3 = \) ___  
7. \( 72 \div 8 = \) ___  

8. \( 36 \div 9 = \) ___  
9. \( 11 \times 8 = \) ___  
10. \( 7 \times 6 = \) ___  
11. \( 80 \div 8 = \) ___  

12. \( 4 \times 6 = \) ___  
13. \( 16 \div 4 = \) ___  
14. \( 56 \div 8 = \) ___  
15. \( 7 \times 0 = \) ___  

16. \( 22 \div 2 = \) ___  
17. \( 5 \times 5 = \) ___  
18. \( 6 \times 2 = \) ___  
19. \( 28 \div 7 = \) ___  

20. \( 7 \times 1 = \) ___  
21. \( 18 \div 9 = \) ___  
22. \( 5 \times 3 = \) ___  
23. \( 12 \div 4 = \) ___  

24. \( 0 \div 9 = \) ___  
25. \( 4 \times 8 = \) ___  
26. \( 8 \times 1 = \) ___  
27. \( 24 \div 4 = \) ___
List the factor pairs for each number.

1. 35 ________________________________

2. 17 ________________________________

3. 28 ________________________________

4. Make two different Factor Fireworks for 64.

5. Write an equation that shows 64 as a product of prime numbers.

6. Use your equation to help you find $64 \div 16$.

7. Make two different Factor Fireworks for 84.

8. Write an equation that shows 84 as a product of prime factors. Then use your equation to help you find $84 \div 12$ and $84 \div 21$. 

Students in the fourth grade chose their favorite color from 5 choices. The bar graph shows the results.

Use the graph for exercises 1–3.

1. Which color did \( \frac{1}{2} \) as many students choose as blue?
   
   ______

2. Which color did 4 times as many students choose as purple?
   
   ______

3. How many students were asked?
   
   ______

Multiply or divide.

4. \( 12 \times 5 = \) ___

5. \( 40 \div 4 = \) ___

6. \( 9 \times 6 = \) ___

7. \( 32 \div 8 = \) ___

8. \( 90 \div 10 = \) ___

9. \( 7 \times 2 = \) ___

10. \( 9 \times 3 = \) ___

11. \( 42 \div 6 = \) ___

12. \( 11 \times 6 = \) ___

13. \( 81 \div 9 = \) ___

14. \( 24 \div 8 = \) ___

15. \( 0 \times 12 = \) ___

16. \( 56 \div 7 = \) ___

17. \( 3 \times 12 = \) ___

18. \( 4 \times 7 = \) ___

19. \( 44 \div 4 = \) ___

20. \( 1 \times 9 = \) ___

21. \( 24 \div 6 = \) ___

22. \( 7 \times 9 = \) ___

23. \( 15 \div 3 = \) ___

24. \( 16 \div 4 = \) ___

25. \( 10 \times 0 = \) ___

26. \( 12 \times 4 = \) ___

27. \( 40 \div 8 = \) ___
Tell whether each pair of figures looks congruent.

1. [Two circles]

2. [Two rectangles]

3. [Two parallelograms]

4. [Two rhombuses]

5. [Two hexagons]

6. [Two triangles]

Tell whether the dotted line is a line of symmetry.

7. [Circle with a dotted line]

8. [Square with a dotted line]

9. [Triangle with a dotted line]

How many lines of symmetry does each figure have?

10. [Figure with a single line of symmetry]

11. [Figure with two lines of symmetry]

12. [Figure with multiple lines of symmetry]
A–1

Unit A Lesson 1

Congruence and Symmetry

Remembering

Solve each multiplication or division as quickly as you can. Circle any that you didn’t know right away so that you can practice them at home.

1. \(2 \times 3 = \)   
2. \(3 \times 4 = \)   
3. \(4 \div 2 = \)   
4. \(5 \div 10 = \)

5. \(4 \times 0 = \)   
6. \(9 \times 9 = \)   
7. \(15 \div 5 = \)   
8. \(5 \div 1 = \)

9. \(9 \times 5 = \)   
10. \(1 \times 2 = \)   
11. \(10 \div 30 = \)  
12. \(28 \div 4 = \)

13. \(4 \times 1 = \)   
14. \(5 \times 10 = \)   
15. \(3 \div 3 = \)   
16. \(9 \div 63 = \)

17. \(2 \times 10 = \)   
18. \(6 \times 3 = \)   
19. \(0 \div 10 = \)   
20. \(6 \div 2 = \)

21. \(8 \times 4 = \)   
22. \(0 \times 9 = \)   
23. \(9 \div 36 = \)   
24. \(90 \div 10 = \)

25. \(6 \times 9 = \)   
26. \(5 \times 5 = \)   
27. \(20 \div 4 = \)   
28. \(3 \div 21 = \)

Joe has one dozen baseball cards to share. Answer each question.

29. If Joe gives 3 cards to Juan and 4 to Donya, how many cards will Joe still have?

__________________________________________________________

30. If Joe gives away some of his cards and has 9 cards left, how many cards did he give away?

__________________________________________________________

31. If Joe gives each of his friends 2 baseball cards, to how many friends can he give baseball cards?

__________________________________________________________

1. Parallel: ___________  Perpendicular: ___________  
   
2. Parallel: ___________  Perpendicular: ___________  
   
3. Parallel: ___________  Perpendicular: ___________  
   
Name the sides in each figure that look parallel. Name the sides in each figure that look perpendicular. (Not every figure has both.) Explain your thinking.

4. Parallel: ___________  Perpendicular: ___________  
   
5. Parallel: ___________  Perpendicular: ___________  
   
6. Parallel: ___________  Perpendicular: ___________  

UNIT A LESSON 2
### Remembering

Solve each multiplication or division as quickly as you can. Circle any that you didn’t know right away so that you can practice them at home.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1. 10 • 2 =</td>
<td>2. 4 • 2 =</td>
<td>3. 27 ÷ 3 =</td>
<td>4. (9)72)</td>
</tr>
<tr>
<td>5. 5 × 9 =</td>
<td>6. 0 • 5 =</td>
<td>7. 6 / 2 =</td>
<td>8. 9 ÷ 1 =</td>
</tr>
<tr>
<td>9. 8 • 3 =</td>
<td>10. 2 × 9 =</td>
<td>11. (4\sqrt{24})</td>
<td></td>
</tr>
<tr>
<td>13. 7 • 0 =</td>
<td>14. 3 • 3 =</td>
<td>15. 0 ÷ 3 =</td>
<td>16. (5\sqrt{35})</td>
</tr>
<tr>
<td>17. 3 × 5 =</td>
<td>18. 9 • 10 =</td>
<td>19. 70 / 10 =</td>
<td>20. 12 ÷ 3 =</td>
</tr>
<tr>
<td>21. 2 • 1 =</td>
<td>22. 4 • 4 =</td>
<td>23. (1\sqrt{6})</td>
<td>24. 40 / 10 =</td>
</tr>
<tr>
<td>25. 3 • 10 =</td>
<td>26. 8 • 5 =</td>
<td>27. 27 ÷ 9 =</td>
<td>28. (5\sqrt{10})</td>
</tr>
</tbody>
</table>

Han-Ling has one dozen baseball cards to share. Answer each question.

29. If Han-Ling gives each of her friends 3 baseball cards, to how many friends can she give baseball cards?

30. If Han-Ling gives each of her friends 4 baseball cards, to how many friends can she give baseball cards?

31. If Han-Ling gives each of her friends 6 baseball cards, to how many friends can she give baseball cards?
Using the Vocabulary box to the right, write the name of the quadrilateral that best describes each figure. Use each word once. Describe how it is different from other quadrilaterals.

1. 2.

3. 4.

5. 6.
Solve each multiplication or division as quickly as you can. Circle any that you didn’t know right away so that you can practice them at home.

1. $9 \times 4 = ____$
2. $8 \times 5 = ____$
3. $3 \div 1 = ____$
4. $3 \div 6$
5. $3 \times 2 = ____$
6. $9 \times 1 = ____$
7. $80 \div 10 = ____$
8. $45 \div 5 = ____$
9. $2 \times 10 = ____$
10. $0 \times 8 = ____$
11. $4 \div 32$
12. $10 \div 10 = ____$
13. $8 \times 3 = ____$
14. $7 \times 10 = ____$
15. $0 \div 9 = ____$
16. $4 \div 12$
17. $3 \times 0 = ____$
18. $2 \times 4 = ____$
19. $8 \div 2 = ____$
20. $0 \div 5 = ____$
21. $5 \times 1 = ____$
22. $3 \times 9 = ____$
23. $5 \div 5$
24. $16 \div 2 = ____$

Solve each word problem. Use a separate sheet of paper if necessary.

25. After Rudy added 15 new stamps to his collection, he had a total of 62 stamps. How many stamps did he have before he added the new ones?

26. Lily has 3 boxes of markers. If she has 27 markers in all, how many markers are in each box?

27. Bala walked 3 blocks to Lydia’s house and 5 more blocks from Lydia’s house to the library. How many blocks did she walk in all?

28. A parking lot has 8 rows of cars. There are 10 cars in each row. How many cars are there in the entire parking lot?
On a separate sheet of paper, sketch a rectangle for each exercise. Choose a measurement unit for each rectangle and find the area and perimeter. Show your work.

1. 5 by 6
2. 8 by 4
3. 7 by 5
4. 4 by 7

5. **Challenge** Using only whole numbers, make as many different rectangles as you can that have either the same area or the same perimeter as the rectangles in exercises 1–4.

Solve each word problem. Draw a picture if you need to.

6. Enzo is building a dog run that measures 10 feet by 9 feet. How many feet of fencing does he need to fence in the area?

7. A sheet of construction paper is 9 inches across and 11 inches high. How many 1-inch squares of paper can Dwayne cut out of one sheet of paper?

8. Mieko has a rug that is 6 feet long and 8 feet wide. Her room measures 9 feet each way. Will the rug fit in her room? How do you know?
Solve each multiplication or division as quickly as you can. Circle any that you didn’t know right away so that you can practice them at home.

1. $2 \times 0 = ____$
2. $3 \times 1 = ____$
3. $9 \times 5 = ____$
4. $8 \times 10 = ____$

5. $2 \times 2 = ____$
6. $4 \times 9 = ____$
7. $1 \times 3 = ____$
8. $2 \times 5 = ____$

9. $24 \div 3 = ____$
10. $100 \div 10 = ____$
11. $1 \div 4$
12. $36 \div 4 = ____$

13. $0 \div 3 = ____$
14. $9 \div 63$
15. $2 \div 2 = ____$
16. $15 \div 5 = ____$

17. $10 \times 9 = ____$
18. $7 \times 2 = ____$
19. $18 \div 9 = ____$
20. $9 \div 54$

21. $4 \times 3 = ____$
22. $4 \times 5 = ____$
23. $30 \div 3 = ____$
24. $7 \div 1 = ____$

Solve each word problem.

25. Polly and her father went fishing. Each of them caught 4 fish every day. They were away for a week. How many fish did they catch in all? 

__________________________________________________________

26. There are 72 pages in a book. If you read 8 pages a day, how many days will it take you to finish the book?

__________________________________________________________

27. There are 10 seats in each row of the school auditorium and 10 rows of seats in each section. Can all 93 fourth-graders sit together in one section of the auditorium? How do you know?

__________________________________________________________
Name each figure and find its perimeter.

1. \[ \text{3 ft} \]
   \[ \text{9 ft} \]

2. \[ \text{7 mi} \]
   \[ \text{5 mi} \]

3. \[ \text{4 cm} \]
   \[ \text{5 cm} \]

   \[ \text{6 cm} \]

Name each quadrilateral and find its area.

4. \[ \text{3 yd} \]
   \[ \text{7 yd} \]
   \[ \text{6 yd} \]

5. \[ \text{7 m} \]
   \[ \text{7 m} \]

6. \[ \text{6 in.} \]
   \[ \text{5 in.} \]

7. Write the formula for the perimeter and area of a rectangle and of a parallelogram.

   

Solve the problems. Use a drawing to help you.

8. Aaron’s yard is 9 meters long and 8 meters wide. He wants to plant sod grass in the entire yard. How many 1-meter \( \times \) 1-meter squares of sod grass does he need?

   

9. Aaron also wants to fence in the yard. How many meters of fencing would Aaron need to fence in the entire yard?
Write two different factor pairs for each number.

1. 18 _____ _____
2. 12 _____ _____

Complete the equation.

3. _____ \times 3 = 3 \times 8
4. _____ \times 5 = 2 \times 10
5. _____ \times 9 = 3 \times 3
6. _____ \div 3 = 2 \div 2
7. _____ \div 1 = 12 \div 4
8. _____ \times 3 = 2 \times 0

Name each figure.

9. A
10. B
11. C
12. D

13. E
14. F
15. G
16. H

17. Which figures look congruent?

18. Which figures look as if their sides are parallel?

19. Which figures look as if their sides are perpendicular?

20. Which figures look as if their sides are both parallel and perpendicular?
Find the perimeter and area of each complex figure.

1. \[
\begin{array}{c}
4 \text{ yd} \\
7 \text{ yd} \\
11 \text{ yd} \\
3 \text{ yd}
\end{array}
\]

\[P = \quad A = \]

2. \[
\begin{array}{c}
2 \text{ km} \\
3 \text{ km} \\
6 \text{ km} \\
10 \text{ km}
\end{array}
\]

\[P = \quad A = \]

3. \[
\begin{array}{c}
5 \text{ cm} \\
8 \text{ cm} \\
12 \text{ cm}
\end{array}
\]

\[P = \quad A = \]

4. \[
\begin{array}{c}
8 \text{ ft} \\
3 \text{ ft} \\
9 \text{ ft} \\
5 \text{ ft}
\end{array}
\]

\[P = \quad A = \]

5. Draw a complex figure. Label the sides of your figure and find its perimeter and area.
Use the fact that there are 24 hours in a day to solve the word problems.

1. A TV station broadcasts updated weather reports every 3 hours. How many times a day does it update the reports?

2. Bob is sick and has to take 2 pills every 6 hours. How many pills will he take in a day?

3. A news website is updated 6 times a day. How many hours are there between updates?

Draw a quadrilateral that answers each riddle.
Name the figure you draw.

4. I have four congruent sides but I am not a square. What am I?

5. I have four right angles but I am not just a rectangle. What am I?

6. I have parallel opposite sides but I am not a rectangle. What am I?

7. I have two parallel opposite sides but I am not a parallelogram. What am I?
1. Explain how you can find the sum $25 + 59$ without using pencil and paper or a calculator. Then find the sum.

2. Explain how you can find the difference $120 - 70$ using mental math. Then name the difference.

Insert a pair of parentheses ( ) in each equation to show the Associative Property.

3. $(6 + 1) + 8 = 6 + 1 + 8$

4. $9 \times 3 \times 4 = (9 \times 3) \times 4$

5. $2 + 34 + 15 = 2 + (34 + 15)$

6. $11 \times (5 \times 20) = 11 \times 5 \times 20$

Solve.

7. Write two equations that prove the Associative Property is not true for subtraction.

8. Write two equations that prove the Associative Property is not true for division.
Write the missing number.

1. $7 + 8 = \underline{\hspace{1cm}}$  
2. $14 - \underline{\hspace{1cm}} = 7$  
3. $5 + \underline{\hspace{1cm}} = 11$

4. $\underline{\hspace{1cm}} - 7 = 6$  
5. $\underline{\hspace{1cm}} + 9 = 16$  
6. $12 - 9 = \underline{\hspace{1cm}}$

7. $9 + \underline{\hspace{1cm}} = 17$  
8. $16 - \underline{\hspace{1cm}} = 7$  
9. $\underline{\hspace{1cm}} + 6 = 15$

10. $\underline{\hspace{1cm}} - 5 = 7$  
11. $9 + 4 = \underline{\hspace{1cm}}$  
12. $8 - 4 = \underline{\hspace{1cm}}$

13. $7 + 3 = \underline{\hspace{1cm}}$  
14. $15 - \underline{\hspace{1cm}} = 6$  
15. $6 + \underline{\hspace{1cm}} = 14$

16. $\underline{\hspace{1cm}} - 6 = 7$  
17. $\underline{\hspace{1cm}} + 9 = 18$  
18. $16 - 8 = \underline{\hspace{1cm}}$

Solve.

19. On the grid at the right, draw a quadrilateral that is not a parallelogram.

- Grid with a quadrilateral drawn

20. What is a reasonable estimate of the area of your quadrilateral?  
   
   \underline{\hspace{6cm}}\text{square units}

Write the missing number.

21. $4 \times \underline{\hspace{1cm}} = 28$  
22. $15 \div 3 = \underline{\hspace{1cm}}$  
23. $\underline{\hspace{1cm}} \times 8 = 40$

24. $\underline{\hspace{1cm}} \div 9 = 8$  
25. $\underline{\hspace{1cm}} \cdot 7 = 63$  
26. $54 \div 9 = \underline{\hspace{1cm}}$

27. $6 \cdot 5 = \underline{\hspace{1cm}}$  
28. $36 \div \underline{\hspace{1cm}} = 9$  
29. $2 \cdot \underline{\hspace{1cm}} = 16$

30. $42 \div \underline{\hspace{1cm}} = 7$  
31. $3 \times 5 = \underline{\hspace{1cm}}$  
32. $45 / 5 = \underline{\hspace{1cm}}$

33. $\underline{\hspace{1cm}} \times 7 = 56$  
34. $\underline{\hspace{1cm}} \div 8 = 5$  
35. $8 \times \underline{\hspace{1cm}} = 64$

36. $20 \div 4 = \underline{\hspace{1cm}}$  
37. $10 \cdot \underline{\hspace{1cm}} = 40$  
38. $56 \div 8 = \underline{\hspace{1cm}}$
Write a number in each blank to make the equation or inequality true.

1. \(9 + 2 = \Box + 9\)  
2. \(4 + \Box \neq 13 - 6\)  
3. \(4 = 8 - \Box - 2\)  
4. \(16 \neq 17 - \Box\)  
5. \(7 = \Box - 8\)  
6. \(5 + 7 \neq 25 - \Box\)  
7. \(\Box + 3 = 31 - 20\)  
8. \(13 - 5 \neq 1 + 7 + \Box\)  
9. \(d + 6 = \Box + d\)

Write \(=\) or \(\neq\) to make each statement true.

10. \(5 + 2 + 6 \bigcirc 6 + 7\)  
11. \(90 \bigcirc 110 - 9\)  
12. \(70 \bigcirc 30 + 30\)  
13. \(70 \bigcirc 95 - 25\)  
14. \(2 + 8 + 10 \bigcirc 30\)  
15. \(27 - 10 \bigcirc 14 + 3\)  
16. \(51 + 99 \bigcirc 150\)  
17. \(35 \bigcirc 100 - 55\)  
18. \(50 \bigcirc 20 + 5 + 20\)  

Use an inverse operation and solve for the unknown.

19. \(70 = 20 + h\)  
   \(h = \Box\)  
20. \(y + 60 = 90\)  
   \(y = \Box\)  
21. \(100 - c = 10\)  
   \(c = \Box\)  
22. \(n - 7 = 3\)  
   \(n = \Box\)  
23. \(5 = 9 - r\)  
   \(r = \Box\)  
24. \(16 = e + 7\)  
   \(e = \Box\)

25. \(s + 2 = 10\)  
   \(s = \Box\)  
26. \(50 - k = 10\)  
   \(k = \Box\)  
27. \(20 = 16 + m\)  
   \(m = \Box\)

28. Write the eight related addition and subtraction equations for the break-apart drawing.

\[
\begin{array}{c}
48 \\
\downarrow \\
42 \\
\downarrow \\
6 \\
\end{array}
\]

\[
\begin{align*}
48 & = 42 + 6 \\
42 & = 48 - 6 \\
42 & = 6 + 36 \\
6 & = 42 - 36 \\
\end{align*}
\]
Complete.

1. _____ × 5 = 45  
2. _____ ÷ 7 = 9  
3. 8 × _____ = 40  
4. 6 ÷ 24 = _____  
5. 7 • _____ = 42  
6. 30 ÷ 5 = _____  
7. 5 • 5 = _____  
8. 81 ÷ _____ = 9  
9. 9 • _____ = 72  
10. 14 ÷ _____ = 7  
11. 7 × 9 = _____  
12. 48 / 8 = _____  
13. 3 × _____ = 24  
14. 7 ÷ 56 = _____  
15. _____ × 9 = 36  
16. _____ ÷ 10 = 7  
17. _____ • 8 = 48  
18. 36 ÷ 4 = _____

Write all the factor pairs of each number.

19. 10 ___________________________  
20. 24 ___________________________

Write and solve an equation for each problem.

21. Jon’s mother made 27 cupcakes for his birthday. If 9 of his friends come over for a birthday party, how many cupcakes can each of his friends have?

22. Each page of Sara’s photo album contains 4 rows of pictures. If each page holds a total of 16 pictures, how many pictures can she place in each row?

23. Becky has one pair of black shoes and one pair of brown shoes. She wears one pair of shoes with one pair of colored socks everyday. She can choose from 8 different shoe and sock combinations. How many pairs of different colored socks does Becky have?

24. To prepare for a math test, Eric studied three times as long as Kendra and one-half as long as Gerardo. How long did Gerardo study if Kendra studied for 20 minutes?
Write and solve an equation for each problem.

1. At the start of a basketball game, 23 students were sitting on the bleachers. By the end of the game, only 9 students remained. How many students left the basketball game before it ended?

   
   

2. At the beginning of a race, some runners were running in a group. During the race, 15 more runners joined the group. At the end there were 31 runners. How many runners were in the race at the beginning?

   
   

3. When a movie started, 50 people were in the audience. After the movie began, 10 people arrived. How many people are in the audience now?

   
   

4. At the first bus stop, 31 students got off the bus. That made 11 students left on the bus. How many students were on the bus at first?

   
   

5. Write a Change Plus problem and solve.

   
   

6. Write a Change Minus problem and solve.

   
   

Remembering

Solve for each unknown.

1. \(b + 5 = 13\)  
   \(b = \underline{8}\)

2. \(r - 3 = 7\)  
   \(r = \underline{10}\)

3. \(6 + z = 11\)  
   \(z = \underline{5}\)

4. \(12 - 8 = h\)  
   \(h = \underline{4}\)

5. \(1 + 16 = n\)  
   \(n = \underline{17}\)

6. \(14 - q = 5\)  
   \(q = \underline{9}\)

Write and solve an equation for each problem.

7. During a gym class, a group of 16 students was asked to jog one lap around the school track. During the lap, 7 students left the track. How many students jogged the entire lap?
   \[16 - 7 = \underline{9}\]

8. On Wednesday afternoon, a soccer practice began with 19 players. During the practice, 2 more players arrived. How many players attended that practice on Wednesday afternoon?
   \[19 + 2 = \underline{21}\]

Write = or ≠ to make each statement true.

9. \(3 + 4 \bigcirc 7\)
   \(3 + 4 = \underline{7}\)

10. \(80 - 30 \bigcirc 40\)
    \(80 - 30 = \underline{50}\)

11. \(45 - 15 \bigcirc 20\)
    \(45 - 15 = \underline{30}\)

12. \(90 - 20 \bigcirc 70\)
    \(90 - 20 = \underline{70}\)

13. \(25 + 25 \bigcirc 50\)
    \(25 + 25 = \underline{50}\)

14. \(7 + 9 \bigcirc 15\)
    \(7 + 9 = \underline{16}\)

15. \(9 + 9 \bigcirc 81\)
    \(9 + 9 = \underline{18}\)

16. \(20 - 15 \bigcirc 4\)
    \(20 - 15 = \underline{5}\)

17. \(70 - 40 \bigcirc 30\)
    \(70 - 40 = \underline{30}\)

18. \(35 + 10 \bigcirc 50\)
    \(35 + 10 = \underline{45}\)

19. \(5 + 11 \bigcirc 16\)
    \(5 + 11 = \underline{16}\)

20. \(80 - 60 \bigcirc 10\)
    \(80 - 60 = \underline{20}\)

Write the words addend, addend, and total to make each statement true.

21. \(\underline{3} + \underline{5} = \underline{8}\)

22. \(\underline{5} + \underline{2} = \underline{7}\)

23. \(\underline{10} - \underline{3} = \underline{7}\)

24. \(\underline{13} - \underline{5} = \underline{8}\)
UNIT 2 LESSON 4 Addition and Subtraction Collection Problems

In the space to the right of each problem, make a break-apart drawing. Then write and solve an equation using a letter to represent the unknown.

1. In a class, 14 students are doing science or math homework. There are 8 students doing math homework. How many students are doing science homework?

2. A math homework assignment contains 6 word problems to solve and 4 word problems to write. How many word problems will students work on altogether?

3. In a class of 27 students, 15 of the students are girls. How many students in the class are boys?

4. A teacher has 8 red markers and 4 blue markers. How many red and blue markers does she have altogether?

5. Write and solve a Collection problem. The unknown addend should be the answer.

Show your work.
Solve for the unknown.

1. \( a - 10 = 5 \)  
   \( a = \) ______

2. \( s + 9 = 13 \)  
   \( s = \) _____

3. \( 7 - v = 1 \)  
   \( v = \) _____

4. \( 32 + 12 = d \)  
   \( d = \) _____

5. \( 21 - 14 = m \)  
   \( m = \) _____

6. \( 15 + k = 31 \)  
   \( k = \) _____

7. \( z - 4 = 9 \)  
   \( z = \) _____

8. \( b + 10 = 54 \)  
   \( b = \) _____

9. \( 17 - n = 8 \)  
   \( n = \) _____

Write = or ≠ to make each statement true.

10. \( 12 + 8 \) ______ \( 8 + 12 \)

11. \( 90 - 60 \) ______ \( 80 - 60 \)

12. \( 43 - 10 \) ______ \( 53 - 10 \)

13. \( 61 - 30 \) ______ \( 51 - 30 \)

14. \( 40 + 70 \) ______ \( 70 + 40 \)

15. \( 5 + 21 \) ______ \( 21 - 5 \)

16. \( 38 + 10 \) ______ \( 10 + 38 \)

17. \( 21 - 3 \) ______ \( 31 - 3 \)

18. \( 8 + 17 \) ______ \( 17 + 8 \)

19. Which two figures appear to be congruent? Explain how you know.

   A
   B
   C

   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________

20. Write the perimeter \( P \) and the area \( A \) of the rectangle.

   \( P = \) __________________________

   \( A = \) __________________________
In the space to the right of each problem, draw comparison bars. Then write and solve an equation.

1. Terrell has 3 brothers. This is 2 fewer brothers than James has. How many brothers does James have?

2. During the first lunch period, 54 students ate hot lunch. This is 9 fewer students than ate hot lunch during the second lunch period. How many students ate hot lunch during the second lunch period?

3. A zoo cares for 15 tigers and 9 lions. How many fewer lions than tigers are at the zoo?

4. A game is being watched by 60 adults and some children. If there are 20 more adults than children, how many children are watching the game?

5. At the park there are 15 more bushes than trees. There are 50 bushes. How many trees are at the park?

6. Erika and Spencer play the piano. Last month, Erika practiced 4 fewer times than Spencer. If Erika practiced 14 times last month, how many times did Spencer practice?

7. Write a comparison problem. Show a comparison bar and an equation to solve your problem.
Remembering

Complete.

1. $8 \times _____ = 32$
2. $4 \div 28 = _____$
3. _____ $\times 7 = 42$
4. _____ $\div 9 = 8$
5. _____ $\cdot 9 = 54$
6. $18 \div 3 = _____$
7. $4 \cdot 6 = _____$
8. $40 \div _____ = 8$
9. $6 \cdot _____ = 48$
10. $36 \div _____ = 6$
11. $9 \times 3 = _____$
12. $25 \div 5 = _____$
13. _____ $\times 8 = 72$
14. _____ $\div 7 = 8$
15. $5 \times _____ = 40$
16. $\frac{6}{42} = _____$
17. $9 \cdot _____ = 36$
18. $18 \div 2 = _____$

Solve each equation. Label the addends and total if it will help you.

19. $2 + h = 8$
   $h = _____$
20. $m - 6 = 6$
   $m = _____$
21. $c + 7 = 15$
   $c = _____$
22. $r - 50 = 90$
   $r = _____$
23. $60 + x = 110$
   $x = _____$
24. $13 - a = 4$
   $a = _____$

Solve.

25. Write an Unknown Start problem and solve it.

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

26. Write an Unknown Change problem and solve it.

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
Solve each problem.

1. A teacher assigned 13 projects. Zack finished 5 of the projects early and 6 on time. How many projects did he finish late?

2. An electronics store offers 130 different video games for sale. This week, 90 of those games do not have a discounted price. How many games have a discounted price?

3. A red vase has 20 more flowers than a yellow vase. The yellow vase has 30 more flowers than a blue vase. There are 67 flowers in the blue vase. How many flowers are in the red vase?

4. To get ready for a test, Thomas studied for 35 minutes and Elena studied for 1 hour and 10 minutes. How many fewer minutes did Thomas study than Elena?

5. During the morning, 16 students shopped at the school bookstore. By the end of the afternoon, 23 students had shopped. How many fewer students shopped in the afternoon than in the morning?

6. A 64-page notebook contains 35 pages of science notes and 17 pages of math notes. Can the notebook also contain 10 pages of notes about other subjects? Explain why or why not.
Complete.
1. _____ × 3 = 30  
2. _____ ÷ 9 = 7  
3. 7 × _____ = 56
4. \( \frac{8}{40} \) = _____  
5. 6 • _____ = 24  
6. 42 ÷ 7 = _____
7. 5 • 7 = _____  
8. 21 ÷ _____ = 3  
9. 4 • _____ = 20
10. 54 ÷ _____ = 9  
11. 9 × 6 = _____  
12. 30 / 6 = _____

Solve.
13. \( e - 9 = 8 \)  
14. \( t + 3 = 12 \)  
15. \( 60 - g = 40 \)

\[ e = _____ \]  
\[ t = _____ \]  
\[ g = _____ \]
16. \( 100 + 50 = j \)  
17. \( 11 - 5 = p \)  
18. \( 30 + i = 110 \)

\[ j = _____ \]  
\[ p = _____ \]  
\[ i = _____ \]

Write = or ≠ to make each statement true.
19. \( 7 + 6 \bigcirc 15 - 3 \)  
20. \( 70 - 10 \bigcirc 40 + 40 \)  
21. \( 4 + 7 \bigcirc 13 - 2 \)
22. \( 80 - 20 \bigcirc 10 + 50 \)  
23. \( 6 + 9 \bigcirc 10 - 5 \)  
24. \( 90 - 40 \bigcirc 20 + 20 \)

25. Each unit square of the rectangles below represents 1 square inch. Name the rectangle that shows perimeter, and name the perimeter. Then name the rectangle that shows area, and name the area.
Solve.

1. Erin has red, blue, and yellow barrettes. She has 5 times as many blue barrettes as red barrettes, and 2 times as many yellow barrettes as red barrettes. Altogether, she has 24 barrettes. How many of each color does she have?

2. Each guest at a birthday party received 3 presents. Altogether, 24 presents were distributed to guests. How many guests attended the party?

3. A fish biologist counted 7 times as many perch as northern pike. The biologist counted 35 perch. How many northern pike did she count?

4. In a fifth-grade class of 16 students, one-half of the students arrived at school early, one-fourth of the students arrived on time, and one-eighth of the students arrived late. On that day, how many students were absent?

5. 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? Explain your answer.
Complete.

1. $9 \times \underline{} = 63$
2. $8\sqrt{56} = \underline{}$
3. $\underline{} \times 7 = 14$
4. $\underline{} \div 5 = 7$
5. $\underline{} \cdot 9 = 72$
6. $45 \div 9 = \underline{}$
7. $6 \cdot 6 = \underline{}$
8. $36 \div \underline{} = 9$
9. $5 \cdot \underline{} = 20$
10. $72 \div \underline{} = 9$
11. $10 \times 7 = \underline{}$
12. $16 \div 2 = \underline{}$
13. $\underline{} \times 9 = 54$
14. $\underline{} \div 8 = 3$
15. $4 \times \underline{} = 32$
16. $\sqrt{16} = \underline{}$
17. $4 \cdot \underline{} = 12$
18. $21 \div 3 = \underline{}$

This graph shows the average weight in pounds of three sea turtles.

**Sea Turtles**

![Graph showing the average weight of three sea turtles: Loggerhead, Green, and Hawksbill.]

19. About how many more pounds does a loggerhead turtle weigh than a hawksbill?

20. About how many more pounds does a green turtle weigh than a loggerhead?

21. About how many times the weight of a hawksbill turtle is the weight of a green turtle?

22. Four green turtles is about the same weight as what number of hawksbill turtles?
Write the number of tens and the number of ones in each number.

1. 56
   _____ tens
   _____ ones

2. 708
   _____ tens
   _____ ones

3. 6,170
   _____ tens
   _____ ones

Write the number of thousands and the number of hundreds in each number.

4. 4,982
   _____ thousands
   _____ hundreds

5. 316
   _____ thousands
   _____ hundreds

6. 2,057
   _____ thousands
   _____ hundreds

Make a place-value drawing for each number, using ones, quick tens, hundred boxes, and thousand bars.

7. 36

8. 510

9. 403

10. 1,072
Complete.

1. _____ × 6 = 18  
2. _____ ÷ 3 = 4  
3. 8 × _____ = 56

4. 9\(\sqrt{36}\) = _____  
5. 9 • _____ = 18  
6. 64 ÷ 8 = _____

7. 4 • 6 = _____  
8. 35 ÷ _____ = 5  
9. 10 • _____ = 60

10. 28 ÷ _____ = 7  
11. 8 × 5 = _____  
12. 27 ÷ 9 = _____

13. 5 × _____ = 45  
14. 3\(\sqrt{24}\) = _____  
15. _____ × 7 = 49

Write the perimeter (\(P\)) and the area (\(A\)) of each figure.

16. \(\begin{array}{c}
3 \text{ ft} \\
8 \text{ ft}
\end{array}\)

\(P = \) _____  
\(A = \) _____

17. \(\begin{array}{c}
4 \text{ cm} \\
3 \text{ cm} \\
7 \text{ cm}
\end{array}\)

\(P = \) _____  
\(A = \) _____

18. \(\begin{array}{c}
10 \text{ in.} \\
6 \text{ in.} \\
12 \text{ in.}
\end{array}\)

\(P = \) _____  
\(A = \) _____

19. \(\begin{array}{c}
6 \text{ mi} \\
6 \text{ mi}
\end{array}\)

\(P = \) _____  
\(A = \) _____

Write and solve an equation for each problem.

20. Paige read 10 books. This is 4 more books than Gina read. How many books did Gina read?

21. Dominique is 9 years old. She is 14 years younger than Nathaniel. How old is Nathaniel?
Write each number in standard form.

1. two hundred seventy-nine
2. three thousand, fifty-four
3. eight hundred two
4. nine thousand, one hundred

Round each number to the nearest ten.

5. 46
6. 81
7. 75
8. 24

Round each number to the nearest hundred.

9. 789
10. 971
11. 709
12. 148

Round each number to the nearest thousand.

13. 6,578
14. 4,489
15. 8,099
16. 2,761

Solve.

17. When you round a number, which digit in the number helps you decide to round up or round down? Explain your answer.

18. When you round a number, what should you do with the digits to the right of the place you are rounding to?
Complete.

1. $9 \times _____ = 45$  
2. $4\sqrt{32}$ = _____  
3. _____ $\times 7 = 42$

4. _____ $\div 6 = 8$  
5. _____ $\cdot 5 = 35$  
6. $40 \div 5 =$ _____

7. $5 \cdot 6 =$ _____  
8. $63 \div _____ = 9$  
9. $8 \cdot _____ = 40$

10. $72 \div _____ = 9$  
11. $3 \times 8 =$ _____  
12. $24 \div 6 =$ _____

13. _____ $\times 9 = 63$  
14. _____ $\div 3 = 9$  
15. $4 \times _____ = 28$

16. $5\sqrt{30} =$ _____  
17. $8 \cdot _____ = 56$  
18. $12 \div 2 =$ _____

Find the perimeter and area.

19. 

Perimeter: _____________

Area: _______________

Write and solve an equation for each problem.

20. In Kelsey’s class, 4 students earned an A on an exam. In Jordan’s class, 4 times as many students earned an A. How many more students earned an A in Jordan’s class than in Kelsey’s class?

__________________________

__________________________

21. Lorenzo has saved $6 for a new sweater. If he saves another dollar, he will have saved one-fourth of the amount he needs to purchase the sweater. What is the cost of the sweater?

__________________________

__________________________
Compare using $>$ or $<$.

1. $49 \quad \bigcirc \quad 44$
2. $96 \quad \bigcirc \quad 86$
3. $326 \quad \bigcirc \quad 336$
4. $895 \quad \bigcirc \quad 985$
5. $9,865 \quad \bigcirc \quad 8,965$
6. $2,512 \quad \bigcirc \quad 2,521$

Write the largest and the smallest 4-digit number you can using the numerals in each group once.

7. $5, 9, 3, 7$
8. $3, 0, 2, 6$
9. $0, 0, 1, 9$
10. $4, 6, 8, 5$

Explain your answer.

11. Is 65 closer to 59 or 68?

12. Is 9,040 closer to 9,100 or 9,000

13. Is 361 in the range of numbers from 348 to 378?

14. Is 645 in the range of numbers from 655 to 665?

Solve.

15. Maury has 325 stamps in his collection and Jan has 352. Who has more stamps? Use place-value words to explain how you know.

16. El Paso is 1,483 miles from Chicago and 1,280 miles from Nashville. Which city is closer to El Paso? Use place-value words to explain how you know.
Complete.

1. _____ • 7 = 63  
2. _____ ÷ 3 = 3  
3. 6 × _____ = 48
4. 9√72 = _____  
5. 8 • _____ = 32  
6. 20 ÷ 5 = _____
7. 5 * 7 = _____  
8. 10 ÷ _____ = 5  
9. 7 × _____ = 49
10. 32 ÷ _____ = 4  
11. 8 × 9 = _____  
12. 21 / 3 = _____
13. 6 × _____ = 30  
14. 4√20 = _____  
15. _____ × 5 = 45
16. _____ ÷ 6 = 3  
17. _____ • 6 = 12  
18. 48 ÷ 8 = _____

Each figure below has one or more lines of symmetry. Use your ruler and draw the lines of symmetry.

19. 
[Rectangle]
20. 
[Trapezoid]
21. 
[ crescent moon]

Solve.

22. A pastry chef can make pastries that have 3 different shapes and 4 different fillings. How many different pastries can the chef make?

23. Last night, Luis studied for one hour. Ian studied for 5 fewer minutes than one-half the time Luis studied. How many minutes did Ian study?

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

25. A rectangle has a width of 10 inches and an area of 5 square inches. What is the length of the rectangle?
Write each number in standard form.

1. seven thousand, six hundred forty-five

2. one hundred fifty-five thousand, two hundred twenty-three

3. four million, eight hundred seventy-four thousand, sixty-one

4. fifty-five million, eleven thousand, five hundred thirty-two

5. six hundred one million, one hundred two thousand, forty

Write the largest number you can make using the numbers in each group once.

6. 3, 6, 8, 7, 4, 8, 2

7. 2, 6, 4, 9, 1, 5

8. 0, 6, 7, 3, 1, 4, 5

9. 6, 2, 4, 7, 2, 0, 3, 9

Write the smallest number you can make using the numbers in each group once.

10. 5, 7, 2, 1, 9, 6, 3

11. 4, 4, 8, 7, 5, 6

12. 4, 7, 9, 2, 3, 5, 8

13. 8, 8, 6, 0, 1, 4, 7, 5

Solve.

14. The population of France is about 58,109,000 people. The population of Italy is about 58,262,000 people. Which country has a larger population? Use place-value words to explain how you know.

15. A morning newspaper sells about 657,000 copies per day. An evening newspaper sells about 675,000 copies per day. Which paper sells more copies? Use place-value words to explain how you know.
Complete.

1. \(9 \times _____ = 81\)  
2. \(9\sqrt{90} = _____\)  
3. _____ \(\times 4 = 16\)

4. _____ \(\div 3 = 9\)  
5. _____ \(\times 8 = 56\)  
6. \(24 \div 4 = _____\)

7. \(2 \times 5 = _____\)  
8. \(18 \div _____ = 3\)  
9. \(5 \times _____ = 20\)

10. \(45 \div _____ = 5\)  
11. \(4 \times 9 = _____\)  
12. \(63 \div 9 = _____\)

13. _____ \(\times 4 = 28\)  
14. _____ \(\times 8 = 64\)  
15. \(8 \times _____ = 24\)

16. \(\frac{749}{9} = _____\)  
17. \(6 \times _____ = 24\)  
18. \(15 \div 5 = _____\)

The pictograph shows the number of sunny days in three towns last year.

<table>
<thead>
<tr>
<th>City</th>
<th>Number of Sunny Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Springville</td>
<td>☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀</td>
</tr>
<tr>
<td>Hilltop</td>
<td>☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀</td>
</tr>
<tr>
<td>Tinyton</td>
<td>☀ ☀ ☀ ☀</td>
</tr>
</tbody>
</table>

Use the pictograph to answer the following questions.

19. How many days does a whole symbol represent?  
   How many days does a half symbol represent?  

20. Which city or cities had fewer than 100 sunny days?

21. How many more sunny days did Springville have than Tinyton?

22. How many fewer sunny days did Tinyton have than Hilltop?
Use the information in the table to answer the questions.

**Driving Distances (in miles) between Various Cities in the United States**

<table>
<thead>
<tr>
<th>City</th>
<th>New York, NY</th>
<th>Chicago, IL</th>
<th>Los Angeles, CA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta, GA</td>
<td>886</td>
<td>717</td>
<td>2,366</td>
</tr>
<tr>
<td>Dallas, TX</td>
<td>1,576</td>
<td>937</td>
<td>1,450</td>
</tr>
<tr>
<td>Nashville, TN</td>
<td>914</td>
<td>578</td>
<td>2,028</td>
</tr>
<tr>
<td>Omaha, NE</td>
<td>1,257</td>
<td>483</td>
<td>1,561</td>
</tr>
<tr>
<td>Seattle, WA</td>
<td>2,912</td>
<td>2,108</td>
<td>1,141</td>
</tr>
<tr>
<td>Wichita, KS</td>
<td>1,419</td>
<td>740</td>
<td>1,393</td>
</tr>
</tbody>
</table>

1. If you drove from New York to Dallas and then from Dallas to Chicago, how many miles would you have driven?

2. Which two cities are farther apart in driving distance: Seattle and Los Angeles or Wichita and New York? Use place-value words to explain your answer.

3. José drove from Omaha to New York and from New York to Atlanta. Keesha drove from Nashville to Los Angeles. Did José or Keesha travel more miles? Use place-value words to explain your answer.

Use any method to add. On another sheet of paper, make a drawing for exercise 5 to show your new groups.

4. $653 + 908$

5. $369 + 754$

6. $262 + 746$

7. $723 + 265$
Solve each problem.

1. Kai bought 12 rolls of paper towels at the grocery store. Each package contained 3 rolls. How many packages did he buy?

2. Mr. Chen used 18 cups of flour to bake cakes at his bakery. He used 2 cups for each cake. How many cakes did Mr. Chen bake?

3. Six teams entered a basketball tournament. Three teams had 10 players each, and each of the other teams had 9 players. How many players were in the tournament?

4. A rectangle has a length of 10 centimeters and an area of 40 square centimeters. What is the width of the rectangle?

5. The length of a rectangle is 2 inches more than its width. The area of the rectangle is 15 square inches. What are the length and width of the rectangle?

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

6. 65 □ 68
7. 345 □ 354
8. 4,328 □ 4,238
9. 87 □ 77
10. 906 □ 916
11. 13,156 □ 12,561
12. 115 □ 151
13. 1,543 □ 1,453
14. 23,901 □ 32,109
Copy each exercise on another sheet of paper, lining up the places correctly. Then add. Show your new groups.

1. \(51,472 + 7,078 = \)  
2. \(94,280 + 56,173 = \)  
3. \(1,824 + 36,739 = \)  
4. \(372,608 + 51,625 = \)  
5. \(6,314,759 + 2,909,028 = \)  
6. \(9,614,702 + 539,808 = \)  
7. \(801,493,169 + 9,270,541 = \)  
8. \(168,739 + 94,035 = \)

The table at the right shows the surface area of each of the Great Lakes. Use the data in the table to help answer the following questions.

<table>
<thead>
<tr>
<th>Lake</th>
<th>Surface Area (square miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erie</td>
<td>9,906</td>
</tr>
<tr>
<td>Huron</td>
<td>22,973</td>
</tr>
<tr>
<td>Michigan</td>
<td>22,278</td>
</tr>
<tr>
<td>Ontario</td>
<td>7,340</td>
</tr>
<tr>
<td>Superior</td>
<td>31,700</td>
</tr>
</tbody>
</table>

9. Which lake has a greater surface area, Lake Michigan or Lake Huron?

10. What is the sum of the surface areas of Lake Erie and Lake Ontario?

11. Which is greater, the surface area of Lake Superior, or the sum of the surface areas of Lake Michigan and Lake Erie?

12. Which two lakes have a combined surface area of 53,978 square miles?
Complete.

1. \(7 \times _____ = 28\)
2. \(\sqrt{42} = _____\)
3. _____ \(\times 9 = 72\)
4. _____ \(\div 3 = 8\)
5. _____ \(\cdot 4 = 36\)
6. \(64 \div 8 = _____\)
7. \(5 \cdot 7 = _____\)
8. \(63 \div _____ = 7\)
9. \(3 \cdot _____ = 27\)
10. \(36 \div _____ = 6\)
11. \(7 \times 8 = _____\)
12. \(72 \div 8 = _____\)
13. _____ \(\times 6 = 54\)
14. _____ \(\div 8 = 4\)
15. \(7 \times _____ = 49\)
16. \(\sqrt{45} = _____\)
17. \(5 \cdot _____ = 40\)
18. \(28 \div 7 = _____\)

Write as many names as you can for each figure. Choose from quadrilateral, parallelogram, rhombus, rectangle, square, and trapezoid.

19. 
20. 
21. 

22. 
23. 
24. 

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Write a number sentence that shows an estimate of each answer. Then write the exact answer.

1. \(69 + 25\)

2. \(259 + 43\)

3. \(2,009 + 995\)

Solve.

4. Paul’s stamp collection includes 192 domestic and 811 foreign stamps.

   About how many domestic and foreign stamps does Paul have altogether?

   Exactly how many domestic and foreign stamps does Paul have altogether?

5. Four family members visited a café. Bryn’s chicken sandwich cost $5.75. Her sister’s grilled cheese cost $4.25. Her grandfather’s tuna sandwich cost $5.25, and her brother’s turkey club cost $6.75.

   About how much did the sandwiches cost altogether?

   Exactly how much did the sandwiches cost altogether?

   Drinks cost $6.50 and tax totaled $1.71. Exactly how much did the family spend?
Complete.

1. _____ \times 6 = 48
2. _____ \div 4 = 8
3. 5 \times _____ = 30
4. \sqrt{54} = _____
5. 9 \cdot _____ = 81
6. 35 \div 5 = _____
7. 3 \cdot 8 = _____
8. 27 \div _____ = 3
9. 10 \cdot _____ = 50
10. 30 \div _____ = 5
11. 7 \times 5 = _____
12. 49 / 7 = _____
13. 4 \times _____ = 32
14. \sqrt[6]{48} = _____
15. _____ \times 6 = 42

Round each number to the nearest ten and to the nearest hundred.

16. 773
17. 5,197
18. 16,349

19. 54
20. 85
21. 139

22. 960
23. 2,755
24. 1,280

25. Write the missing dimensions. Then write the perimeter (P) and the area (A) of the figure.

\[ P = \quad A = \]
Subtract. On a separate sheet of paper, make a drawing to show how you ungrouped and subtracted.

1. 300 – 165 = ______  
2. 500 – 348 = ______  
3. 700 – 279 = ______

Solve.

4. LaShauna bought a 200-sheet package of construction paper. Twenty-five of the sheets were red, 16 were green, and the rest were other colors. How many sheets were other colors?

5. Mario brought a package of 100 cheese crackers to share with his class. There are 33 students in Mario’s class. If each student is given 2 crackers, how many crackers will not be eaten?

6. The Summer Club is bike-riding for fun. Each rider’s goal is to ride 100 kilometers. During the first week Jerry rode 18 kilometers, and Kim rode twice as far as Jerry. How many more kilometers must Kim ride to reach the goal?

7. Sue Ann practices her violin for 200 minutes each week. If she practices 25 minutes on Monday, on Tuesday, and on Wednesday, how many minutes does she need to practice the rest of the week?

8. In a large backyard, there are 4 times as many shrubs as trees. Altogether, there are 40 trees and shrubs. How many trees are in the yard? How many shrubs?
Write and solve each multiplication or division as quickly as you can. Circle any that you did not know right away so that you can continue to practice them at home.

1. $3 \cdot 9 = \underline{27}$
2. $8 \times 7 = \underline{56}$
3. $2 \cdot 7 = \underline{14}$
4. $8 \times 9 = \underline{72}$
5. $7 \cdot 7 = \underline{49}$
6. $5 \cdot 9 = \underline{45}$
7. $8 \times 8 = \underline{64}$
8. $4 \cdot 9 = \underline{36}$
9. $6 \times 7 = \underline{42}$
10. $2 \cdot 9 = \underline{18}$
11. $6 \times 9 = \underline{54}$
12. $5 \cdot 7 = \underline{35}$
13. $25 \div 5 = \underline{5}$
14. $12 \div 3 = \underline{4}$
15. $5 \div 10 = \underline{0.5}$
16. $35 \div 5 = \underline{7}$
17. $3 \div 24 = \underline{0.125}$
18. $45 \div 5 = \underline{9}$
19. $3 \div 6 = \underline{0.5}$
20. $30 \div 5 = \underline{6}$
21. $21 \div 3 = \underline{7}$
22. $72 \div 8 = \underline{9}$
23. $63 \div 7 = \underline{9}$
24. $8 \div 56 = \underline{0.142857}$

Round each number to the nearest hundred and to the nearest thousand.

25. $54,158$ to the nearest hundred: $\underline{54,200}$
26. $14,273$ to the nearest hundred: $\underline{14,300}$
27. $21,844$ to the nearest hundred: $\underline{21,800}$
28. $61,729$ to the nearest thousand: $\underline{62,000}$

Each figure has one or more lines of symmetry. Use a ruler to draw the lines.

29.
30.
31.
Subtract. Then write and solve an addition problem that checks the subtraction.

1. \(400 - 238 = \) _____  
   Check: _____

2. \(900 - 379 = \) _____  
   Check: _____

3. \(700 - 462 = \) _____  
   Check: _____

Solve.

4. Keesha has 58 books in her collection. Daryl has 63 books. How many books do they have altogether?

5. Daryl told his teacher the number of books he has, and the number of books he and Keesha have altogether. The teacher wanted to know how many books Keesha has. How can Daryl use subtraction to give the teacher an answer?

6. The zoo keepers fed the penguins 79 fish in the morning and 86 fish in the afternoon. How many fish did they feed the penguins altogether?

7. The head keeper knew how many fish the penguins had been fed altogether, and she knew they had been fed 86 fish in the afternoon. Write a subtraction number sentence to show how the keeper could determine the number of fish the penguins had been fed in the morning.

8. **Math Journal** Write and solve a subtraction word problem. Use addition to check your subtraction.
Complete.

1. \( \_ \times 8 = 56 \)  
2. \( \_ \div 9 = 6 \)  
3. \( 7 \times \_ = 49 \)

4. \( \frac{648}{8} = \_ \)
5. \( 8 \times \_ = 72 \)
6. \( 64 \div 8 = \_ \)

Use the graph to answer the questions that follow.

7. Which state receives more average annual rainfall, West Virginia or Indiana?

8. Which state receives an average of 6 fewer inches of rainfall than Kentucky?

9. Which state or states receive more than 3 feet of rainfall annually?

10. Which two states together receive an average of 6 feet of annual rainfall?
Subtract. Make a place-value drawing for each problem if you need to.

1. $621 - 488 = \underline{}$
2. $846 - 282 = \underline{}$
3. $735 - 217 = \underline{}$

Solve.

4. Susan found 329 pennies in a jar in the attic. She gave 175 of the pennies to her brother. How many pennies did she keep for herself?

5. A group of students weighed potatoes for a science experiment. They found one potato had a mass of 346 grams and another had a mass of 278 grams. What is the difference in the mass of the two potatoes?

6. Jeremy received a bag of marbles for his birthday. He counted 183 in all. He gave 85 to his best friend. How many marbles did Jeremy keep for himself?

7. A four-floor apartment building is 40 feet tall. The ground floor is 11 feet tall, and the next two floors are each 9 feet tall. How tall is the fourth floor?

8. Write and solve your own subtraction word problem. The greatest number in your problem should not include zeros.
Write and solve each multiplication or division as quickly as you can. Circle any that you did not know right away so that you can continue to practice them at home.

1. _____ × 5 = 25  
2. _____ ÷ 9 = 2  
3. 7 × _____ = 42  

4. \( \frac{36}{6} \) = _____  
5. 4 • _____ = 32  
6. 40 ÷ 8 = _____  

7. 9 • 0 = _____  
8. 72 ÷ _____ = 9  
9. 9 • _____ = 63  

10. 20 ÷ _____ = 5  
11. 5 × 7 = _____  
12. 30 / 10 = _____  

13. 8 × _____ = 72  
14. \( \frac{28}{4} \) = _____  
15. _____ × 9 = 54  

16. _____ ÷ 6 = 8  
17. _____ • 7 = 56  
18. 63 ÷ 7 = _____  

19. Write a general description about how to round numbers.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

20. Circle all the congruent triangles.

![Triangles](image)

21. Explain why the triangles you circled are congruent.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Subtract. Show your new groups.

1. 7,000
   – 3,264
2. 9,632
   – 3,785
3. 8,054
   – 1,867

4. 6,478 – 3,579 = ____  5. 9,490 – 5,512 = ____  6. 5,000 – 3,609 = ____

Solve.

7. A cross-country automobile rally is 1,025 kilometers long. At a stopping place, the leader had traveled 867 kilometers. How far away was the finish line?

8. A census counted 5,407 people in Marina’s home town. If 3,589 are males, how many are females?

9. A construction company is building a stone wall. The finished wall will contain 5,000 stones. So far, 1,487 stones have been placed. How many stones have not been placed?

10. Jake has 647 pennies in his penny collection album. The album has space for 1,000 pennies. How many more pennies can Jake place in his album?

11. Write and solve a multi-digit subtraction word problem.

Show your work.
Write and solve each multiplication or division as quickly as you can. Circle any that you did not know right away so that you can continue to practice them at home.

1. $9 \cdot 6 = _____$
2. $4 \times 8 = _____$
3. $5 \times 6 = _____$
4. $8 \cdot 8 = _____$
5. $3 \times 6 = _____$
6. $1 \times 8 = _____$
7. $7 \cdot 6 = _____$
8. $5 \times 8 = _____$
9. $7 \cdot 8 = _____$
10. $36 \div 9 = _____$
11. $63 \div 7 = _____$
12. $9\overline{18} _____$
13. $35 \div 7 = _____$
14. $81 \div 9 = _____$
15. $7\overline{49} _____$
16. $9 \div 9 = _____$
17. $21 \div 7 = _____$
18. $6\overline{42} _____$

Add.

19. $900,206 + 832,987 = __________$
20. $895,312,098 + 2,692,312 = __________$
21. $2,354,987 + 3,686,210 = __________$
22. $327,462,111 + 867,241 = __________$

Solve.

23. A rectangle has a perimeter of 60 cm. Its length is 5 times greater than its width. What is its length?

24. The perimeter of a triangle is 30 inches. The first side of the triangle is 1 inch longer than the second side. The second side is 7 inches longer than the third side. What is the length of each side of the triangle?
Subtract.

1. $71,824 - 36,739 = \underline{_____}$

2. $1,660,739 - 894,045 = \underline{_____}$

3. $56,065,717 - 5,682,824 = \underline{_____}$

4. $372,608 - 57,425 = \underline{_____}$

5. $4,597,603 - 704,980 = \underline{_____}$

6. $9,614,702 - 539,508 = \underline{_____}$

7. $724,359 - 99,068 = \underline{_____}$

8. $394,280 - 56,473 = \underline{_____}$

In 1990 there were about 33,000,000 people living in the Great Lakes basin. The table shows how the people were distributed.

<table>
<thead>
<tr>
<th>Lake</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erie</td>
<td>11,682,169</td>
</tr>
<tr>
<td>Huron</td>
<td>2,694,154</td>
</tr>
<tr>
<td>Michigan</td>
<td>10,057,026</td>
</tr>
<tr>
<td>Ontario</td>
<td>8,150,895</td>
</tr>
<tr>
<td>Superior</td>
<td>607,121</td>
</tr>
</tbody>
</table>

Solve.

9. What was the difference between the greatest population and the least population?

10. How many more people lived in the Lake Ontario region than in the Lake Huron region?

11. How many fewer people lived in the Lake Michigan region than in the combined regions of Lake Huron and Lake Ontario?
Write and solve each multiplication or division as quickly as you can. Circle any that you did not know right away so that you can continue to practice them at home.

1. $4 \times _____ = 16$  
2. $7 \div 42 = _____$  
3. _____ $\times 6 = 24$

4. _____ $\div 3 = 7$  
5. _____ $\times 5 = 35$  
6. $9 \div 63 = _____$

7. $5 \times 8 = _____$  
8. $48 _____ = 6$  
9. $9 _____ = 72$

10. $12 _____ = 3$  
11. $1 \times 7 = _____$  
12. $56 \div 7 = _____$

13. _____ $\times 9 = 81$  
14. _____ $\div 9 = 6$  
15. $3 _____ = 24$

Solve.

16. Shawn sold 9 fundraiser tickets. Trina sold 3 times as many tickets as Shawn. How many tickets did Trina sell?

17. A vendor sells 6 roses for $4. At that rate, what is the cost of 2 dozen roses? (1 dozen = 12)

18. Look at the shapes below.

Write the letters for the shapes that are quadrilaterals. _________
This table shows the area in square miles of the five largest islands of the world. Use the data to answer the questions.

<table>
<thead>
<tr>
<th>Island</th>
<th>Location</th>
<th>Area (square miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baffin</td>
<td>North Atlantic Ocean</td>
<td>195,928</td>
</tr>
<tr>
<td>Borneo</td>
<td>Pacific Ocean</td>
<td>285,000</td>
</tr>
<tr>
<td>Greenland</td>
<td>North Atlantic Ocean</td>
<td>840,000</td>
</tr>
<tr>
<td>Madagascar</td>
<td>Indian Ocean</td>
<td>226,658</td>
</tr>
<tr>
<td>New Guinea</td>
<td>Pacific Ocean</td>
<td>305,000</td>
</tr>
</tbody>
</table>

Solve.

1. Estimate the total area of the islands in the table that are located in the North Atlantic Ocean. Explain your thinking.

   __________________________

   __________________________

   __________________________

2. Which is greater: The area of the largest island, or an estimate of the sum of the areas of the next four largest islands? Explain your thinking.

   __________________________

   __________________________

Estimate each sum or difference by rounding each number to the nearest hundred. Then write the exact answer.

3. 321 + 888

   __________________________

4. 1,617 − 514

   __________________________

5. 3,997 + 2,013

   __________________________
Add or subtract. Show your work on a separate sheet of paper.

1. \(1,286,360 - 942,207 = \) ________
2. \(19,280 + 23,521,888 = \) ________

Solve.

3. Blaine has $6.00. He wants to buy action figures that cost $1.95 each. How many action figures can he buy?

   _______________________________________

4. Teresa needs to buy a hat. She also wants to buy gloves for her sister. A hat costs $4.80 and gloves cost $3.25. Teresa has $9.00. Does she have enough money?

   _______________________________________

5. Regina has $10.00. She wants to buy a key chain that costs $2.40 and a book that costs $7.95. Does she have enough money to buy both?

   _______________________________________

6. Bill has 2 hours until bedtime. He needs to spend 30 minutes practicing his trumpet and 30 minutes doing math homework. Then he can read his book. How long can Bill read before bedtime?

   _______________________________________

7. Write the missing dimensions. Then write the perimeter \((P)\) and area \((A)\).

   \[\begin{array}{c}
   \text{8 in.} \\
   \text{5 in.} \\
   \text{3 in.} \\
   \text{4 in.} \\
   \text{15 in.} \\
   \text{6 in.} \\
   \end{array}\]

   \[P = \quad A = \quad\]
Add or subtract.

1. \(12,673 - 9,717 = \)  
2. \(8,406 + 45,286 = \)  
3. \(2,601 - 1,437 = \)

Answer each question about the information in the table.

**Area of the Countries of Central America**

<table>
<thead>
<tr>
<th>Country</th>
<th>Area (square miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belize</td>
<td>8,867</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>19,730</td>
</tr>
<tr>
<td>El Salvador</td>
<td>8,124</td>
</tr>
<tr>
<td>Guatemala</td>
<td>42,042</td>
</tr>
<tr>
<td>Honduras</td>
<td>43,278</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>49,998</td>
</tr>
<tr>
<td>Panama</td>
<td>30,193</td>
</tr>
</tbody>
</table>

4. Which country has a greater area: Guatemala or Honduras? Use place-value words to explain your thinking.

5. What is the total area of Guatemala and Honduras?

6. Which two countries have the least area? What is the sum of their areas?

7. Which is greater: the area of Nicaragua or the total area of Costa Rica and Panama?
Remembering

Subtract. Then write and solve an addition problem to check your answer.

1. $500 - 329 = \underline{\phantom{0000}}$
2. $700 - 677 = \underline{\phantom{0000}}$
3. $300 - 168 = \underline{\phantom{0000}}$

Check: \underline{\phantom{0000}} \hspace{1cm} \underline{\phantom{0000}} \hspace{1cm} \underline{\phantom{0000}}

Solve.

4. Bryant has 347 baseball cards. His brother has 109 more cards. How many cards does Bryant’s brother have?

5. Cheryl read a book that had 292 pages. Tonia read a book that had 436 pages. How many more pages did Tonia read?

6. A bag of flower seeds contains 413 seeds. If 380 seeds grew into flowers, how many seeds did not grow?

Does each figure have at least one line of symmetry? Write yes or no.

7. __________
8. __________
9. __________
10. __________
Write the geometric name for each figure.

1. ____________________

2. ____________________

3. ____________________

4. ____________________

5. ____________________

6. ____________________

7. ____________________

8. ____________________

9. ____________________

10. Describe how lines, line segments, and rays are different.

   ___________________________________________________

   ___________________________________________________

   ___________________________________________________

11. Draw two examples of a line, a line segment, and a ray.
Solve each division as quickly as you can. Circle any that you didn’t know right away so that you can practice them at home.

1. $18 \div 2 = \underline{9}$
2. $4 \div 4 = \underline{1}$
3. $14 \div 2 = \underline{7}$
4. $24 \div 8 = \underline{3}$

5. $42 \div 7 = \underline{6}$
6. $35 \div 7 = \underline{5}$
7. $3 \div 30 = \underline{1}$
8. $48 \div 6 = \underline{8}$

9. $5 \div 10 = \underline{0.5}$
10. $72 \div 9 = \underline{8}$
11. $49 \div 7 = \underline{7}$
12. $8 \div 64 = \underline{0.125}$

13. $16 \div 4 = \underline{4}$
14. $1 \div 5 = \underline{0.2}$
15. $27 \div 9 = \underline{3}$
16. $0 \div 5 = \underline{0}$

Solve each problem.

17. A square garden has a perimeter of 12 m. What is the length of one side of the garden?

18. Hee Sun is putting ribbon around a rectangular box. The sides of the box are 10 cm and 15 cm long. What is the minimum length of ribbon she needs?

19. Julieta is putting a string of lights around her patio. Her patio is 6 m long and 4 m wide. How much lighting does she need?

20. Alec is putting trim around a bulletin board. The bulletin board is 2 m long and 1 m wide. What is the minimum length of trim he needs?
Name each triangle by its angles and then by its sides.

1.  
2.  
3.  
4.  
5.  
6.  
7.  
8.  
9.  
10. Describe how acute, obtuse, and right triangles are different.

11. Describe how scalene, isosceles, and equilateral triangles are different.
Remembering

Solve each division as quickly as you can. Circle any that you didn’t know right away so that you can practice them at home.

1. \(18 \div 9 = \) ___  
2. \(6 \div 6\)  
3. \(14 \div 7 = \) ___  
4. \(24 \div 3 = \) ___  

5. \(42 \div 6 = \) ___  
6. \(35 \div 5 = \) ___  
7. \(10 \div 30\)  
8. \(48 \div 8 = \) ___  

9. \(2 \div 10\)  
10. \(72 \div 8 = \) ___  
11. \(20 \div 4 = \) ___  
12. \(3 \div 12\)  

13. \(25 \div 5 = \) ___  
14. \(1 \div 7\)  
15. \(27 \div 3 = \) ___  
16. \(0 \div 7 = \) ___  

Solve each problem.

17. Jessica wants to cover the top of a box with fabric. The box is 9 cm long and 8 cm wide. How much fabric does she need?

18. A square carpet has an area of 9 square meters. What is the length of one side of the carpet?

19. A quilt is 3 m long and 2 m wide. How many 1-meter squares were used to make the quilt?

20. Henry wants to paint his closet door. The door is 2 m long and 1 m wide. What is the area of the closet door?

Show your work.
1. Draw a rectangle and a parallelogram. Draw one diagonal on each figure. Name the kinds of triangles you made.

2. Draw your figures again. Draw the other diagonal and name the kinds of triangles you made this time.

3. Use geometry words to describe how diagonals of quadrilaterals make triangles.

4. Use geometry words to describe how to join triangles to make quadrilaterals.
1. Beside each letter tell how many lines of symmetry it has.

A__  E__  I__  M__  Q__  U__  Y__
B__  F__  J__  N__  R__  V__  Z__
C__  G__  K__  O__  S__  W__
D__  H__  L__  P__  T__  X__

Solve each problem.

2. Arturo took 9 pencils out of a box. Then there were 5 pencils left in the box. How many pencils were in the box to start with?

3. A sheet of construction paper is 9 inches across and 11 inches high. What is the greatest number of 1-inch squares of paper James can cut from it?

4. Zenaida lives 3 blocks from school. How many blocks does she walk to and from school from Monday through Friday?

5. Sofia has a rug that is 6 feet long and 9 feet wide. Her room measures 8 feet each way. Will the rug fit in her room? How do you know?

6. Hank’s birthday is 2 days after Farha’s. If it is 5 days until Farha’s birthday, how many days is it until Hank’s birthday?
Find the perimeter.

1. \( \text{4 in.} \quad \text{5 in.} \quad \text{7 in.} \) 

2. \( \text{11 m} \) 

3. \( \text{10 cm} \quad \text{6 cm} \)

Find the area.

4. \( \text{4 m} \quad \text{6 m} \)

5. \( \text{8 cm} \quad \text{6 cm} \)

6. \( \text{5 m} \quad \text{8 m} \)

Solve each problem.

7. Ben made a triangle-shaped dog pen that was 6 meters on each side. How much fencing did he need to enclose the dog pen on all sides?

8. A sheet of paper measures 10 inches by 6 inches. Janie cut it on a diagonal into two congruent triangles. What is the area of each triangle?
Remembering

Solve each of the following as quickly as you can. Circle any that you didn’t know right away so that you can practice them at home.

1. $2 \cdot 0 = \underline{\hspace{2cm}}$
2. $5 \times 4 = \underline{\hspace{2cm}}$
3. $24 \div 3 = \underline{\hspace{2cm}}$
4. $\sqrt[3]{15}$

5. $3 \times 1 = \underline{\hspace{2cm}}$
6. $1 \times 10 = \underline{\hspace{2cm}}$
7. $100 \div 10 = \underline{\hspace{2cm}}$
8. $20 \div 10 = \underline{\hspace{2cm}}$

9. $9 \times 5 = \underline{\hspace{2cm}}$
10. $6 \times 2 = \underline{\hspace{2cm}}$
11. $1\frac{1}{4}$
12. $9 \div 9 = \underline{\hspace{2cm}}$

13. $8 \times 10 = \underline{\hspace{2cm}}$
14. $7 \times 3 = \underline{\hspace{2cm}}$
15. $36 \div 4 = \underline{\hspace{2cm}}$
16. $2\frac{1}{4}$

17. Draw a quadrilateral with no parallel sides.

18. Draw a quadrilateral that has exactly two perpendicular sides.

19. Draw a parallelogram. Explain why it is a parallelogram.

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________
1. Label the length and width (in units) of each rectangle.

2. Write the equation representing the area (in square units) of each rectangle shown above.
   a. _________
   b. _________
   c. _________
   d. _________
   e. _________
   f. _________

Find the area (in square units) of a rectangle with the given dimensions.
3. $3 \times 5$ _________
4. $3 \times 50$ _________
5. $30 \times 50$ _________
Use mental math to find each product.

1. $4 \times 5 = \underline{20}$
2. $7 \times 0 = \underline{0}$
3. $4 \times 9 = \underline{36}$
4. $6 \times 1 = \underline{6}$
5. $8 \times 10 = \underline{80}$
6. $3 \times 5 = \underline{15}$
7. $2 \times 9 = \underline{18}$
8. $7 \times 5 = \underline{35}$
9. $10 \times 4 = \underline{40}$

Name each kind of quadrilateral. Then give the area and perimeter of each.

10. Rectangular prism
   - $A = \underline{27}$ square inches
   - $P = \underline{22}$ inches

11. Parallelogram
   - $A = \underline{40}$ square centimeters
   - $P = \underline{22}$ centimeters

12. Square
   - $A = \underline{81}$ square meters
   - $P = \underline{36}$ meters

Solve.

The local grocery store sells oranges in bags of 8.

13. If Jai-Lin’s mother bought 4 bags, how many oranges did she buy?
   - $4 \times 8 = \underline{32}$ oranges

14. If Tom needs 72 oranges, how many bags should he buy?
   - $72 \div 8 = \underline{9}$ bags

Show your work.
Find each product by factoring the tens. Draw rectangles if you need to.

1. $6 \times 2$, $6 \times 20$, and $60 \times 20$

2. $4 \times 8$, $4 \times 80$, and $40 \times 80$

3. $5 \times 5$, $5 \times 50$, and $50 \times 50$

4. $5 \times 9$, $50 \times 9$, and $50 \times 90$

5. $6 \times 5$, $60 \times 5$, and $60 \times 50$

6. $7 \times 6$, $70 \times 6$, and $70 \times 60$

On a sheet of grid paper, draw two different arrays of connected squares for each total. Label the sides and write the multiplication equation for each of your arrays.

7. 18 squares

8. 20 squares

9. 24 squares
Round each number to the nearest ten.

1. 3,852 ____________  
2. 10,609 ____________  
3. 7,243 ____________  
4. 123,327 ____________

Round each number to the nearest thousand.

5. 4,499 ____________  
6. 13,501 ____________  
7. 813,926,704 ____________  
8. 682,517,099 ____________

Determine the number of acute, obtuse, and right angles in each figure.

9.  

10.  

11.  

Solve each problem.

12. Cory has 357 stamps in his collection. His friend Harry has 1,084 stamps. How many stamps do the two boys have altogether?

13. Juanita is doing a 500-piece jigsaw puzzle. She has 87 more pieces to place. How many pieces have already been placed?
Draw a rectangle. Find the tens product, the ones product, and the total product. The first one is done for you.

1. \(5 \times 39\)
   
   \[
   \begin{array}{c|c}
   39 & 30 + 9 \\
   \hline
   5 & 5 \times 30 = 150 \\
   & 5 \times 9 = 45 \\
   \hline
   & 150 + 45 = 195
   \end{array}
   \]

2. \(7 \times 32\)

3. \(9 \times 54\)

4. \(3 \times 47\)

Solve each problem.

5. Maria’s flower garden is 14 feet long and 3 feet wide. How many square feet is her garden?

6. Maria planted 15 trays of flowers. Each tray had 6 flowers in it. How many flowers did she plant?

7. Write and solve a multiplication word problem about your family.

Show your work.
Use mental math to find each product.

1. \(7 \times 60 = \)_____  
2. \(6 \times 70 = \)_____  
3. \(70 \times 8 = \)_____  
4. \(10 \times 30 = \)_____  
5. \(30 \times 30 = \)_____  
6. \(10 \times 80 = \)_____  
7. \(30 \times 40 = \)_____  
8. \(80 \times 90 = \)_____  
9. \(90 \times 90 = \)_____  
10. \(60 \times 50 = \)_____  
11. \(40 \times 50 = \)_____  
12. \(20 \times 50 = \)_____  

Find the perimeter of each quadrilateral.

13. \(3 \text{ in.} \)
14. \(10 \text{ cm} \)
15. \(9 \text{ m} \)

16. The fourth grade locker room has 48 lockers. There are 8 lockers in each row. How many rows of lockers are there in the fourth grade locker room?

17. Alya writes 6 pages in her journal every day. How many pages does she write in 1 week?
Estimate each product. Solve to check your estimate.

1. \(4 \times 26\)  
2. \(5 \times 63\)  
3. \(7 \times 95\)  

   

4. \(4 \times 84\)  
5. \(2 \times 92\)  
6. \(3 \times 76\)  

   

Estimate the answers. Then solve each problem.

7. Tony's little sister read 65 pages for the Summer Reading Club. Tony read 8 times as many pages as his sister. How many pages did Tony read?

   

8. The school fair committee is making clown costumes. They found 23 different wigs and 9 different noses in the storeroom. How many different combinations are possible?

   

9. The school library shows one book and one magazine each day in the display case. If the librarian has 37 books and 7 magazines to use for the display, how many days can a different pair be on display?

   

Write and solve a multiplication word problem.

10. 

   

   

   

   

   

Show your work.
Use mental math to find each quotient.

1. \(2 \div 16\)  
2. \(9 \div 27\)  
3. \(10 \div 60\)

4. \(4 \div 4 = \)  
5. \(30 \div 5 = \)

6. \(20 \div 1 = \)

9. \(\frac{15}{3} = \)

Classify each triangle according to its angles and sides.

10. \[
\begin{array}{c}
\text{7 ft} \\
\text{6 ft} \\
\end{array}
\]

11. \[
\begin{array}{c}
\text{6 yd} \\
\text{16 yd} \\
\text{20 yd} \\
\end{array}
\]

12. \[
\begin{array}{c}
\text{6 m} \\
\end{array}
\]

Solve each problem.

13. A family is driving to a state park 330 miles away from their home. They have already driven 148 miles. How many more miles will they drive until they reach the state park?

14. In a recent city election, 7,285 people voted to build a community swimming pool, and 6,122 people voted against this plan. How many people voted?
Use any method to solve. Sketch a rectangle model if you need to.

1. $7 \times 62$
2. $6 \times 63$
3. $6 \times 82$

4. $57 \times 7$
5. $5 \times 76$
6. $4 \times 65$

7. $7 \times 83$
8. $36 \times 9$
9. $27 \times 8$

Solve each problem.

10. 94 people are sitting down to a fancy six-course meal. The first course is soup, which only needs a spoon. The rest of the courses each need fresh forks. How many forks will be used?

11. Leo is a traveling sign salesperson. He uses plastic letters to make the signs. A dress store chain asks Leo to put signs in front of their 63 stores that say “SALE: HALF PRICE ON ALL DRESSES.” How many plastic “S” letters will Leo need?
Write each number in standard form.

1. three thousand, two hundred sixty-nine __________
2. forty-six thousand, three __________
3. two million, forty thousand, eight hundred nine __________
4. six hundred three million, five hundred twenty-seven thousand, four hundred ninety __________

Write each number using words.

5. 2,800 __________________________
6. 90,039 __________________________
7. 812,047 __________________________
8. 26,004,428 ________________________

Find the area of each quadrilateral.

9. 3 in. 10. 10 cm 11. 9 m

Use the pictograph to solve each problem.

12. How many vanilla ice cream cones were sold? __________________________
13. How many chocolate ice cream cones were sold? __________________________
Solve using any numeric method. Use rounding and estimating to see if your answer makes sense.

1. \(35 \times 9\)  
2. \(5 \times 79\)  
3. \(3 \times 56\)  

4. \(2 \times 94\)  
5. \(4 \times 68\)  
6. \(27 \times 8\)  

7. \(82 \times 6\)  
8. \(7 \times 43\)  
9. \(63 \times 4\)  

Solve each problem.

10. Describe how you solved one of the exercises above. Write at least two sentences.

11. Mariko wrote the full alphabet (26 letters) 9 times. How many letters did she write?

12. Alan has 17 packs of bulletin-board cutouts. Each one contains 9 shapes. How many shapes does he have altogether?
Find the product.

1. $6 \times 52$ 
2. $4 \times 92$ 
3. $7 \times 46$
4. $27 \times 8$
5. $38 \times 9$
6. $74 \times 2$
7. $3 \times 65$
8. $5 \times 43$
9. $81 \times 6$

Find the perimeter of each triangle.

10. [Diagram of a triangle with sides 7 ft, 6 ft, and 6 ft]
11. [Diagram of a triangle with sides 6 yd, 16 yd, and 20 yd]
12. [Diagram of a triangle with sides 6 m and 6 m]

Solve each problem.

13. Jerry walks 6 blocks to school every morning. James lives 3 times as far from school as Jerry and rides his bike. How many blocks does James ride his bike to school every morning?

14. Sam and his dad are making a basketball practice court for Sam with 1-foot square tiles. If they lay 50 tiles one way and 60 tiles the other way, how many square feet is Sam’s practice court?

15. Write Your Own Write and solve a word problem of your own using multiplication.
Sketch rectangles and solve by any method that relates to your sketch.

1. \(3 \times 687\) 
2. \(8 \times 572\)

3. \(5 \times 919\) 
4. \(6 \times 458\)

5. The soccer season lasts for 9 weeks. Lavonne’s team practices 45 minutes on Saturdays. Jason’s team practices 25 minutes on Mondays and on Thursdays. Which team practices more each week? How many more minutes do they practice during the season?

6. Susie’s grandmother lives about 800 miles away from her. Her mother’s car can go about 350 miles on one tank of gasoline. How many times will Susie’s mother have to fill the gas tank in order to drive to and from her grandmother’s house?

7. Zack has 42 basketball cards in his collection. Morry has 7 times as many cards as Zack. How many basketball cards do Zack and Morry have together?

8. Write and solve a multiplication word problem with a three-digit number.
Use mental math to find each product.

1. $3 \times 3 = \underline{\phantom{000}}$
2. $6 \times 6 = \underline{\phantom{000}}$
3. $12 \times 12 = \underline{\phantom{000}}$

4. $5 \times 5 = \underline{\phantom{000}}$
5. $10 \times 12 = \underline{\phantom{000}}$
6. $7 \times 7 = \underline{\phantom{000}}$

7. $11 \times 11 = \underline{\phantom{000}}$
8. $8 \times 8 = \underline{\phantom{000}}$
9. $12 \times 11 = \underline{\phantom{000}}$

Find the perimeter of each figure.

10. [Diagram of figure with measurements]

11. [Diagram of figure with measurements]

Solve each problem.

12. The soccer league has 96 players. If an equal number of players are put on 12 teams, how many players are on each team?

13. The flower shop has 63 red tulips. If the florist uses these tulips to make bouquets containing 9 tulips, how many bouquets can she make?

14. Write and solve a division word problem.

Show your work.
5. Describe the steps you used for one of your solutions to exercises 1–4.

6. A fourth-grade class is counting the supplies in their art cupboard. Help them to finish their count.

They have 2 rolls of white craft paper. The paper on the rolls is 4 feet wide and 72 feet long. How many square feet of craft paper do they have altogether?

7. They counted 88 boxes of colored pencils and 63 boxes of markers. If each box holds 8 pencils or markers, how many colored pencils and markers do they have altogether?

8. They found 9 boxes of glass beads. There are 376 beads per box. How many glass beads do they have in all?

9. They found 23 full pads of sketching paper and another 64 loose sheets. If each full pad has 90 sheets of paper, how many sheets of sketching paper do they have in all?

On a separate sheet of paper, sketch a rectangle for each problem and solve using any method. Round and estimate to check your answer.

1. \(5 \times 475\) _______  
2. \(7 \times 60\) _______  
3. \(6 \times 521\) _______  
4. \(8 \times 386\) _______

Show your work.
Compare each pair of numbers using the greater than (>)
or less than (<) sign.

1. 45 ___ 54   2. 7,325 ___ 7,235   3. 232,164 ___ 232,614
4. 64 ___ 63   5. 3,889 ___ 3,898   6. 810,001 ___ 809,999
7. 574 ___ 754   8. 91,009 ___ 90,900  9. 492,395 ___ 429,593

Find the area of each triangle.

10. 11. 12.

Solve each problem.

13. Jacob has collected 186 baseball cards. Aimee has collected 152 cards. How many cards have they collected in all?

14. If you drove 740 miles from Wichita, Kansas, to Chicago, Illinois, and then drove 578 more miles to Nashville, Tennessee, how many miles would you have driven?

15. Write and solve an addition word problem.
Cross out the extra numerical information and solve.

1. A gymnastic meet is 2 hours long. It has 8 competitors and each competes in 4 events. How many events will be scored?

2. George makes $20 doing lawn work for 4 hours each week. He wants to buy a $2,500 used car from his grandmother. He has been saving this money for 30 weeks. How much has he saved?

3. The fourth grade is raising money by selling roses for $2 a piece. Yesterday they paid $100 for 400 roses and sold 137 roses. How many roses are left?

Tell what additional information is needed to solve the problem.

4. Michelle is saving $20 each week for the bike of her dreams. How long until she can purchase her bike?

5. A teacher sees a sale on packages of pencils. She wants to give each of her students a pencil. How many packages should she buy?

6. Create a problem similar to exercise 4 or 5, but include the missing information.
Find the product.

1. $2 \times 65 = \underline{}$
2. $7 \times 39 = \underline{}$
3. $5 \times 82 = \underline{}$
4. $8 \times 48 = \underline{}$
5. $3 \times 16 = \underline{}$
6. $9 \times 57 = \underline{}$
7. $6 \times 91 = \underline{}$
8. $8 \times 74 = \underline{}$
9. $4 \times 23 = \underline{}$

Find the area of each figure.

10. \[ \text{Area} = \underline{} \]
11. \[ \text{Area} = \underline{} \]

Solve each problem.

12. An elementary school has 402 students. There are 197 boys that attend the school. How many girls attend the school?

13. Natalie is reading a 216-page book. She has read 159 pages. How many more pages does she have to read?

14. Write and solve a subtraction word problem.

Show your work.
Solve each problem and label your answer. Write hidden questions if you need to.

1. The school office prints a newsletter every month that uses 2 pieces of paper. They make 35 copies for each room. How many pieces of paper do they need to print copies for 10 rooms?

2. There are 18 windows on each side of a rectangular building. It takes the window washer 3 minutes to wash each window. How many minutes will it take to finish the job?

3. There are 34 parking spaces on each block of Main Street and another 94 spaces in the village lot. How many parking spaces are there on all 6 blocks of Main Street and in the lot?
Use mental math to find each quotient.

1. \(7 \div 49\)
2. \(12 \div 132\)
3. \(12 \div 84\)
4. \(88 \div 8 = \)_____
5. \(25 \div 5 = \)_____
6. \(81 \div 9 = \)_____
7. \(\frac{36}{12} = \)_____
8. \(\frac{96}{12} = \)_____
9. \(\frac{55}{11} = \)_____

Identify the number of acute, obtuse, and right angles in each figure.

10. 

11. 

12. 

Solve each problem. Show your work.

13. Mary has 143 shells and Casey has 86 shells. How many more shells does Mary have than Casey?

14. Martin has 3 times as many baseball cards as Brad. Brad has 90 baseball cards. How many does Martin have?

15. Write and solve a comparison word problem.
Sketch an area model for each exercise. Then find the product.

1. $74 \times 92$  
2. $65 \times 37$

3. $55 \times 84$  
4. $49 \times 63$

5. $34 \times 52$  
6. $24 \times 91$

7. Write a word problem for one exercise above.

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
Solve each word problem.

7. A teddy bear company lets customers choose the fur color and jacket color of their bears. They have 4 colors of fur and 6 colors for the jackets. How many different teddy bears can a customer create?

8. Suppose your school requires exactly 30 minutes of homework daily in each of the following subjects: math, science, English, and social studies. How many minutes of homework would you have each day?
Multiply using any method. If you use an area model to multiply, show your sketch.

1. \(45 \times 79\)
2. \(88 \times 29\)
3. \(74 \times 57\)
4. \(84 \times 68\)

Mr. Gomez’s class is learning about multiplication. The class wants to see what multiplications they can find in their school. Solve each problem.

5. The class counts 37 tiles across the front of their room and 64 tiles down one side. How many floor tiles are in their classroom?

6. The back of their classroom is a brick wall. Down one side, they count 26 rows of bricks. Across the bottom, they count 29 bricks. How many bricks make up the wall?

7. In the school, there are 3 classrooms for each grade: kindergarten, 1, 2, 3, 4, 5, and 6. Each classroom has 32 lockers. How many lockers are there in the school building?

8. The school auditorium has 69 rows of seats. Each row has 48 seats across. If 6,000 people want to see the school talent show, how many times do the students have to do the show?

Write two multiplication word problems of your own. Then solve each problem.

9. 

10. 

Name __________________________ Date __________________________
Find the product.

1. $6 \times 250 = \underline{1500}$
2. $4 \times 380 = \underline{1520}$
3. $7 \times 640 = \underline{4480}$
4. $275 \times 8 = \underline{2200}$

Classify each triangle according to its angles and sides.

5. ____________  
6. ____________  
7. ____________

Solve each problem.

8. George has 600 baseball cards. Joycelyn has one fifth as many baseball cards as George. How many baseball cards does Joycelyn have?

9. Dawn has decided to read twice as much as she watches TV. Last week she watched 90 minutes of TV. How much reading did she do?

10. When Adrian was in first grade, he joined a stamp club that sent him 5 stamps every month. If he participates in the club for 12 years, how many stamps will he have?
Solve each multiplication problem using any method. Use rounding and estimation to check your work.

1. $45 \times 61$

2. $24 \times 56$

3. $83 \times 27$

4. $39 \times 48$

5. $36 \times 96$

6. $63 \times 87$

7. $58 \times 79$

8. $15 \times 92$

9. $33 \times 43$

10. $76 \times 29$

11. $69 \times 63$

12. $84 \times 23$
Identify the property that is shown.

1. \(2 \times 8 \times 5 = 2 \times 5 \times 8\)

2. \((9 \times 4) \times 2 = 9 \times (4 \times 2)\)

3. \(2 \times (5 \times 9) = (2 \times 5) \times 9\)

4. \(2(6 + 7) = 2 \times 6 + 2 \times 7\)

Find the area of each figure.

5. 

\[
\begin{array}{c}
4 \text{ ft} \\
5 \text{ ft} \\
4 \text{ ft} \\
10 \text{ ft} \\
6 \text{ ft}
\end{array}
\]

6. 

\[
\begin{array}{c}
8 \text{ m} \\
4 \text{ m} \\
3 \text{ m} \\
7 \text{ m}
\end{array}
\]

Solve.

7. Ben has 15 puzzles and 27 CDs. When he takes a trip, he likes to bring one puzzle and one CD as entertainment. How many trips can he take with a different puzzle and CD pair?

8. A bike club wants to make license plates for the neighborhood bikes. Each license plate has a letter followed by a digit. How many different license plates can be made?
Solve using any method and show your work. Check your work with estimation.

1. \(55 \times 64\) 
2. \(42 \times 67\) 
3. \(59 \times 32\) 
4. \(78 \times 44\)

5. \(62 \times 23\) 
6. \(53 \times 28\) 
7. \(71 \times 35\) 
8. \(22 \times 66\)

Solve.

9. Keesha walks 12 blocks to school every day. One day, she counts 88 sidewalk squares in one block. If each block has the same number of sidewalk squares, how many squares does Keesha walk on as she walks to and from school each day?

10. The Card Collector’s Club is having a meeting. Each member brings 25 sports cards to show and trade. If 35 members attend, how many cards do they bring altogether?

11. On a separate sheet of paper, write and solve your own multiplication word problem.
Subtract. Show your work.

1. \(25,063 - 5,867\)  
2. \(40,000 - 18,794\)  
3. \(1,460,376 - 672,807\)

Find the perimeter of each figure.

4. 
   - Triangle with sides 8 in., 12 in., and 5 in.
5. 
   - Triangle with sides 15 mi, 9 mi, and 12 mi.
6. 
   - Triangle with sides 5 ft, 10 ft, and 9 ft.

Solve each problem using the following information.

Rachina’s family has a jar of money. Over a whole year, the family members put their change in the jar. When their vacation time comes, they use the money to have some fun together. Help Rachina’s family figure out how much money they saved this year.

7. Rachina makes exactly 3 piles of 40 quarters. What is the value of all the quarters they saved?

8. Her Uncle Jake puts the pennies in rolls. There are 50 pennies in 1 roll. He makes 26 rolls of pennies and has 16 pennies left over. How much money in pennies did their jar contain?

9. Her mother counts the nickels. She makes piles of 10 nickels and comes up with 12 piles plus 6 more nickels. What is the value of all of the nickels in the jar?
Multiply using your favorite method. Show your work.

1. $7 \times 800$
2. $58 \times 700$
3. $36 \times 500$
4. $67 \times 800$

Solve.

5. During her 8-week summer vacation, Jamie read an average of 3 books per week. Each book had about 40 pages. About how many pages did Jamie read over the summer?

6. A female fly lays about 200 eggs at a time. If she lays eggs twice a week, about how many eggs will she lay in 4 weeks?

7. The city needs to pave two sections of road. One section is 9 meters wide and 90 meters long. The other is the same width and twice as long. How many square meters of paving material do they need to do the job?

8. There are 30 students in Mr. Lee’s science class. For an experiment, he gives each student 8 glass tubes, 2 plastic hoses, and 12 pieces of paper. How many items does Mr. Lee give out in all to the students?
Find the product.

1. $36 \times 27 = \underline{978}$
2. $42 \times 18 = \underline{756}$
3. $71 \times 64 = \underline{4576}$
4. $53 \times 83 = \underline{4359}$

This is an overhead map of Gretchen's home and yard. Use your centimeter ruler and the map to answer the questions below.

5. The line ( — — — — ) that goes around 3 sides of the yard shows a fence. What is the total length of the fence?

6. What is the area of the house? of the garage? of the doghouse? of the sidewalk, including the part in front of the door and the driveway?
Multiply using your favorite method. Show each step.

1. \(4 \times 7,000\)  
2. \(29 \times 3,000\)  
3. \(52 \times 8,000\)  
4. \(35 \times 5,000\)

Complete each equation.

5. \(3 \times 1 = \) ________  
6. \(1 \times 3 = \) ________

7. \(3 \times 10 = \) ________  
8. \(10 \times 3 = \) ________

9. \(3 \times 100 = \) ________  
10. \(100 \times 3 = \) ________

11. \(3 \times 1,000 = \) ________  
12. \(1,000 \times 3 = \) ________

13. \(30 \times 1 = \) ________  
14. \(1 \times 30 = \) ________

15. \(30 \times 10 = \) ________  
16. \(10 \times 30 = \) ________

17. \(30 \times 100 = \) ________  
18. \(100 \times 30 = \) ________

19. \(30 \times 1,000 = \) ________  
20. \(1,000 \times 30 = \) ________

21. Write three sentences to tell what you notice about the patterns in the numbers.

________________________________________

________________________________________

________________________________________
Factor each number into its prime factors.

1. 14  
2. 24  
3. 36  
4. 42  
5. 50  
6. 63  
7. 78  
8. 88  
9. 95  

Find the area of each figure.

10.  
11.  
12.  

Solve each problem.

13. Mrs. Bergen is buying a 6-foot by 5-foot rug. How many square feet will the rug cover?

14. Molly runs 6 lengths of a 50-yard track. How far does she run?

15. Mr. Jordan is painting the side of a barn that is 50 feet wide and 60 feet high. How many square feet will he paint?

Show your work.
Write each measurement in millimeters (mm). Round the measurement to the nearest centimeter (cm).

1. _____ mm rounds to _____ cm
2. _____ mm rounds to _____ cm
3. _____ mm rounds to _____ cm
4. _____ mm rounds to _____ cm
5. _____ mm rounds to _____ cm
6. _____ mm rounds to _____ cm
7. _____ mm rounds to _____ cm
8. _____ mm rounds to _____ cm

Write a number sentence to answer each question.

9. How many meters are equal to 7 kilometers?

10. How many centimeters are equal to 4 meters?

11. How many millimeters are equal to 15 centimeters?

12. How many kilometers are equal to 3,000 meters?

13. How many centimeters are equal to 2 kilometers?

Solve.

14. Chester has a ribbon that is 2 meters long. He wants to cut it into 5 equal pieces. How many centimeters long will each piece be?

Show your work.
On a separate sheet of paper, make a place-value drawing for each number.

1. 8  
2. 205  
3. 148  
4. 620  
5. 4,153  
6. 2,097

Compare. Write >, <, or =.

7. 12 ___ 21  
8. 347 ___ 437  
9. 2,103 ___ 2,013  
10. 39 ___ 35  
11. 889 ___ 898  
12. 26,501 ___ 25,601  
13. 38 ___ 28  
14. 2,658 ___ 2,568  
15. 44,388 ___ 44,389  
16. 186 ___ 681  
17. 6,014 ___ 6,401  
18. 41,620 ___ 40,620

Label the missing measurements. Then find the perimeter and area of each figure.

19.  

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

20.  

\[ P = \]  
\[ A = \]
Solve the word problem.

1. A room is 5 m wide and 7 m long. What is the area of the floor?

2. A farm is 1 km wide and 2 km long. What is its area in square kilometers?

3. Write and solve two metric-area word problems.

Show your work.
Write the number for the word name.

1. one thousand, forty ________
2. six thousand, thirty-seven ________
3. nine thousand, four hundred sixty-three ________
4. one hundred fifty thousand, two ________

Write the word name for the number.

5. 204 ________________________________
6. 4,827 ________________________________
7. 11,005 ________________________________
8. 56,000,789 ________________________________

Round each number to the nearest ten, hundred, and thousand.

<table>
<thead>
<tr>
<th>Ten</th>
<th>Hundred</th>
<th>Thousand</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. 1,748</td>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>10. 50,637</td>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>11. 739</td>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>12. 2,009,584</td>
<td>_______</td>
<td>_______</td>
</tr>
</tbody>
</table>

Solve.

13. Augusto had four cards each, measuring 3 in. by 5 in. He taped them together to make one larger card. Draw the new arrangement of cards and name its perimeter.

Show your work.
Complete.

1. How many milliliters are equal to 3 L?
   ______________

2. How many milliliters are equal to 35 L?
   ______________

3. How many liters are equal to 5,000 milliliters?
   ______________

4. How many kiloliters are equal to 5,000 liters?
   ______________

Solve.

5. Every morning for breakfast, Mika drinks 200 mL of orange juice. How many liters of orange juice does she drink in 10 days?
   ______________________________________

6. Steven’s crayon box is 7 cm wide, 2 dm long, and 4 cm deep. What is the volume of Steven’s crayon box in cubic centimeters?
   ______________________________________

7. Write and solve a metric-volume word problem and a metric-capacity word problem.
   ______________________________________
   ______________________________________
   ______________________________________
   ______________________________________
   ______________________________________
   ______________________________________

Show your work.
Use each digit once. Write the greatest number and the least number you can make.

<table>
<thead>
<tr>
<th></th>
<th>Greatest</th>
<th>Least</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 9, 4, 8, 1, 2, 4, 0, 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. 6, 4, 1, 9, 2, 1, 3, 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. 7, 0, 6, 3, 0, 5, 8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. 5, 3, 7, 0, 4, 2, 6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

5. $8,135 \quad 8,153$
6. $67,280 \quad 68,720$
7. $153,609 \quad 156,390$
8. $2,409 \quad 2,904$
9. $92,416 \quad 91,426$
10. $502,147 \quad 520,147$
11. $6,711 \quad 6,171$
12. $89,735 \quad 83,597$
13. $620,793 \quad 620,739$

Solve.

14. Mr. Okutani is decorating a bulletin board that is 5 dm high and 7 dm wide. He has 2 packages of border. Each package contains 125 cm of border. Does he have enough border to go all the way around the outside of the bulletin board? How do you know?

---

Show your work.
Complete.

1. How many grams are in 4 kg? ____________

2. How many grams are in 40 kg? ____________

3. How many grams are in 400 kg? ____________

4. How many grams are in 5,000 kg? ____________

5. How many grams are in 50,000 kg? ____________

6. How many grams are in 500,000 kg? ____________

Solve.

7. Angie’s puppy weighed 3 kg when she first got it. Two years later, it weighed 9 kg. How many grams of weight did the puppy gain?
   __________________________________________________________________________

8. Mr. Silverstein bought 3 packages of rice at the store. The big package contained 1 kg. Each of the 2 smaller packages contained 450 grams. How many grams of rice did he buy in all?
   __________________________________________________________________________

9. Write and solve two metric-mass or metric-weight word problems.
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________
Add or subtract. Round and estimate the addition or subtraction to see if your answer makes sense.

1. \(37,496 + 1,530\)  
2. \(165,309 + 31,284\)  
3. \(9,488,531 - 408,260\)

4. \(8,195,307 + 40,682\)  
5. \(6,514 + 3,278,093\)  
6. \(67,694,301 - 950,682\)

7. \(6,830 + 270,915\)  
8. \(5,750,813 - 41,978\)  
9. \(709,835,061 - 84,255\)

Solve.

10. Every year, Edith runs 5K (5 km) races each month for 6 months. The other 6 months she runs 10K races. How many kilometers does she run in races each year?

11. The floor of Rachel’s bedroom is 16 sq m. Reggie’s bedroom is 4 m wide and 5 m long. Whose bedroom is bigger? Explain your thinking.
This table shows average temperatures in degrees Celsius for some U.S. cities in January and July.

Use the information in the table to answer the questions.

<table>
<thead>
<tr>
<th>City and State</th>
<th>Average Temperatures (°C)</th>
<th>January</th>
<th>July</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bismarck, North Dakota</td>
<td></td>
<td>−14</td>
<td>21</td>
</tr>
<tr>
<td>Caribou, Maine</td>
<td></td>
<td>−12</td>
<td>18</td>
</tr>
<tr>
<td>Fairbanks, Alaska</td>
<td></td>
<td>−25</td>
<td>15</td>
</tr>
<tr>
<td>Honolulu, Hawaii</td>
<td></td>
<td>22</td>
<td>27</td>
</tr>
<tr>
<td>Houston, Texas</td>
<td></td>
<td>11</td>
<td>28</td>
</tr>
<tr>
<td>Olympia, Washington</td>
<td></td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>Phoenix, Arizona</td>
<td></td>
<td>11</td>
<td>34</td>
</tr>
<tr>
<td>St. Louis, Missouri</td>
<td></td>
<td>−2</td>
<td>26</td>
</tr>
<tr>
<td>San Francisco, California</td>
<td></td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>Savannah, Georgia</td>
<td></td>
<td>10</td>
<td>27</td>
</tr>
</tbody>
</table>

1. Which city has the warmest average temperature in January? ______________

2. Which city has the coldest average temperature in January? ______________

3. Which city has the warmest average temperature in July? ______________

4. Which city has the coldest average temperature in July? ______________

5. Which city has the smallest variation in average temperatures between January and July? Explain.

   ____________________________________________________________________________________

   ____________________________________________________________________________________

6. Which city has the greatest variation in average temperatures between January and July? Explain.

   ____________________________________________________________________________________

7. On a separate sheet of paper, write and solve two word problems about the temperatures shown in the table.
Multiply.

1. 67
2. 98
3. 35
4. 26
5. 44
6. 59

× 3
× 7
× 8
× 13
× 37
× 82

Write the metric unit that you think best measures each amount or distance. Explain your thinking.

7. the distance between two cities
8. the amount of water in a glass

9. the height of a building
10. the width of a piece of paper

Solve.

11. Melba has a 2-liter bottle of water. She and 2 friends each drink 250 mL of the water. Together, did they drink more than or less than half of the bottle of water? Explain your thinking.

12. Two bottles of apple juice cost the same amount of money. One contains 1 L and the other contains 1,200 mL. Which bottle is the better buy?
Solve.

1. $5 \overline{)28}$  
   $5 \overline{)29}$  
   $5 \overline{)30}$  
   $5 \overline{)31}$  
   $5 \overline{)32}$  
   $5 \overline{)33}$  

2. $5 \overline{)36}$  
   $5 \overline{)37}$  
   $5 \overline{)38}$  
   $5 \overline{)39}$  
   $5 \overline{)40}$  
   $5 \overline{)41}$  

3. $5 \overline{)201}$  
   $5 \overline{)202}$  
   $5 \overline{)203}$  
   $5 \overline{)204}$  
   $5 \overline{)205}$  
   $5 \overline{)206}$  

4. $5 \overline{)154}$  
   $5 \overline{)155}$  
   $5 \overline{)156}$  
   $5 \overline{)157}$  
   $5 \overline{)158}$  
   $5 \overline{)159}$  

5. Describe any pattern you notice in the first row.
   
   
   
Solve using any method.

6. $5 \overline{)47}$  
   7. $5 \overline{)14}$  
   8. $5 \overline{)35}$  
   9. $5 \overline{)49}$  

10. $5 \overline{)45}$  
   11. $5 \overline{)200}$  
   12. $5 \overline{)403}$  
   13. $5 \overline{)104}$  

Solve.

14. For the school field day, the students are divided into 5 same-size teams. Any extra students will serve as substitutes. If 243 students participate, how many students will be on each team? How many substitutes will there be?

15. A fruit stand sells packages containing 1 peach, 1 pear, 1 apple, 1 banana, and 1 mango each. One week they sold a total of 395 pieces of fruit. How many packages did they sell?

16. An orchard has 415 new cherry trees in 5 equal rows. How many trees are in each row? Are any trees left over?
Solve each problem as quickly as you can.

1. \(7 \times 8 = \) 
2. \(6 \times 4 = \) 
3. \(7 \times 9 = \) 
4. \(6 \times 6 = \) 
5. \(7 \times 4 = \) 
6. \(8 \times 9 = \) 
7. \(8 \times 6 = \) 
8. \(7 \times 5 = \) 
9. \(6 \times 8 = \) 
10. \(8 \times 4 = \) 
11. \(6 \times 7 = \) 
12. \(8 \times 5 = \) 
13. \(7 \times 3 = \) 
14. \(8 \times 8 = \) 
15. \(6 \times 3 = \) 
16. \(7 \times 6 = \) 
17. \(6 \times 9 = \) 
18. \(8 \times 3 = \) 
19. \(6 \times 5 = \) 
20. \(8 \times 7 = \) 
21. \(18 \div 6 = \) 
22. \(63 \div 7 = \) 
23. \(6 \div 54 = \) 
24. \(42 \div 7 = \) 
25. \(36 \div 6 = \) 
26. \(6 \div 48 = \) 
27. \(72 \div 8 = \) 
28. \(56 \div 7 = \) 
29. \(6 \div 30 = \) 
30. \(56 \div 8 = \)

Tell whether each triangle is scalene, equilateral, or isosceles. Then find its perimeter and area.

31. Name: 
   Perimeter: 
   Area: 
32. Name: 
   Perimeter: 
   Area: 
33. Name: 
   Perimeter: 
   Area:
Solve.

1. \(5 \div 150\)  \(5 \div 200\)  \(5 \div 250\)  \(5 \div 300\)  \(5 \div 350\)

2. \(5 \div 1,500\)  \(5 \div 2,000\)  \(5 \div 2,500\)  \(5 \div 3,000\)  \(5 \div 3,500\)

3. Describe how the repeating pattern in row 1 is different from the pattern in row 2.

4. Describe how the patterns are alike.

Solve using any method.

5. \(5 \div 652\)

6. \(5 \div 6,502\)

7. \(5 \div 20,467\)

8. \(5 \div 837\)

9. \(5 \div 8,370\)

10. \(5 \div 16,894\)

Solve.

11. A park has a 5-foot wide straight path from one end of the park to the other. If the area of the path is 1,036 square feet, how long is it?

12. Joe counted 5 birch trees in the park. Sara counted 235 pine trees. How many times as many pine trees as birch trees did they count?

13. Joe saw 5 squirrels. Joe had 146 peanuts in his pockets. He fed all of them to the squirrels. If each squirrel got the same number of peanuts, how many did each squirrel get?

14. The main parking lot for the park has 5 identical rows of parking spaces. If there are a total of 615 spaces, how many cars can park in each row?
Solve. Show your work on a separate sheet of paper.

1. 73,169 + 42,508 = ________  
2. 670,087 − 4,369 = ________  
3. 302,136 − 9,747 = ________  
4. 1,046,259 + 8,637 = ________  
5. 273,450 − 18,094 = ________  
6. 720,503 − 29,653 = ________  
7. 11,947 + 202,638 = ________  
8. 5,876,247 − 67,408 = ________

9. Jerry’s mother gave each member of the scout troop a box of apple juice. If there are 25 scouts in the troop and juice boxes come in packages of 5, how many packages did she need to buy?  

Show your work.

10. Mazie has a goal of practicing her piano 3 hours a week. If she practices 25 minutes each day, does she reach her goal? Explain your thinking.

______________________________  
______________________________  
______________________________

Find the perimeter and area.

11.  

Perimeter: ________  
Area: ________

12.  

Perimeter: ________  
Area: ________
Solve.

1. $3 \div 21 \hspace{1cm} 3 \div 22 \hspace{1cm} 3 \div 23 \hspace{1cm} 3 \div 24 \hspace{1cm} 3 \div 25$

2. $7 \div 21 \hspace{1cm} 7 \div 22 \hspace{1cm} 7 \div 23 \hspace{1cm} 7 \div 24 \hspace{1cm} 7 \div 25$

3. Describe how the repeating pattern in row 1 is different from the pattern in row 2. Explain why.

Solve using any method.

4. $9 \div 2,359$

5. $2 \div 5,389$

6. $4 \div 1,648$

7. $5 \div 1,456$

8. $8 \div 2,506$

9. $6 \div 8,473$

Solve.

10. Mr. Beene brought 354 dishes to sell at the community yard sale. He sold sets of 3 dishes for $1.00 a set. If he sold all of his dishes, how much money did he make?

11. Mr. James arranged his collection of 861 baseball cards in 7 equal rows. How many cards were in each row?

Show your work.
This table shows the driving distances in kilometers between some cities of Mexico.

### Driving Distances in Mexico

<table>
<thead>
<tr>
<th></th>
<th>Cancún</th>
<th>Guadalajara</th>
<th>Mazatlán</th>
<th>México City</th>
<th>Monterrey</th>
<th>Querétaro</th>
<th>Tapachula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acapulco</td>
<td>1,862</td>
<td>1,033</td>
<td>1,469</td>
<td>415</td>
<td>1,404</td>
<td>616</td>
<td>1,466</td>
</tr>
<tr>
<td>Ciudad Juárez</td>
<td>3,745</td>
<td>1,547</td>
<td>1,250</td>
<td>2,145</td>
<td>1,203</td>
<td>1,620</td>
<td>3,050</td>
</tr>
<tr>
<td>Mérida</td>
<td>319</td>
<td>2,231</td>
<td>2,752</td>
<td>1,555</td>
<td>2,213</td>
<td>1,765</td>
<td>1,382</td>
</tr>
<tr>
<td>México City</td>
<td>1,874</td>
<td>676</td>
<td>1,197</td>
<td>—</td>
<td>989</td>
<td>210</td>
<td>1,220</td>
</tr>
<tr>
<td>Oaxaca</td>
<td>1,793</td>
<td>1,222</td>
<td>1,743</td>
<td>546</td>
<td>1,535</td>
<td>926</td>
<td>674</td>
</tr>
<tr>
<td>San Luis Potosí</td>
<td>2,287</td>
<td>348</td>
<td>869</td>
<td>413</td>
<td>537</td>
<td>203</td>
<td>1,633</td>
</tr>
</tbody>
</table>

Use the table to answer problems 1–4.

1. Between which two cities is the distance the shortest?
   
2. Between which two cities is the distance the longest?
   
3. What is the total driving distance of a trip from Ciudad Juárez to México City and then from México City to Tapachula?
   
4. Which would be a greater distance:
   a. A round trip from Mazatlán to San Luis Potosí and back
   b. A one-way trip from Oaxaca to Mazatlán?
Solve.

1. 4\(\overline{21}\)  4\(\overline{22}\)  4\(\overline{23}\)  4\(\overline{24}\)  4\(\overline{25}\)

2. 6\(\overline{21}\)  6\(\overline{22}\)  6\(\overline{23}\)  6\(\overline{24}\)  6\(\overline{25}\)

3. Describe how the repeating pattern in row 1 is different from the pattern in row 2. Explain why.

Solve using any method.

4. 8\(\overline{6,758}\)

5. 7\(\overline{9,259}\)

6. 3\(\overline{1,774}\)

7. 2\(\overline{8,037}\)

8. 9\(\overline{3,385}\)

9. 5\(\overline{2,347}\)

Solve.

10. There are 271 students registered for summer camp. If the camp has 8 cabins, how many campers live in each cabin?

11. The camp has a rectangular batting cage where campers can practice hitting a baseball. It is 9 feet wide and has an area of 1,872 square feet. How long is the batting cage?

12. The campers went to the frog pond. Sue caught 6 big frogs in her bucket, and Josie caught 72 little frogs. How many times as many frogs did Josie catch than Sue?

13. The camp playground is 55 feet wide by 72 feet long. It is divided into 6 play areas of equal size. What is the area of each play area?
Solve each problem as quickly as you can.

1. \(5 \div 37\)  
2. \(5 \div 24\)  
3. \(5 \div 46\)
4. \(5 \div 31\)  
5. \(5 \div 52\)  
6. \(5 \div 26\)
7. \(5 \div 41\)  
8. \(5 \div 39\)  
9. \(5 \div 54\)
10. \(5 \div 21\)  
11. \(5 \div 34\)  
12. \(5 \div 43\)

Solve.

13. There are 30 students in Jamie’s class. His mother bought apple muffins for the class. Apple muffins are sold in trays of 4, and Jamie’s mother bought 8 trays. Did she buy enough apple muffins for each student in Jamie’s class?

14. In the school jump-rope contest, Lashaun jumped 37 times without missing. Then Maria jumped 4 times as many as Lashaun without missing. How many times did Maria jump without missing?

Write the name of each triangle according to its side lengths. Then find its perimeter and area.

15. Name: ________  
    Perimeter: ________  
    Area: ________

16. Name: ________  
    Perimeter: ________  
    Area: ________

17. Name: ________  
    Perimeter: ________  
    Area: ________
Homework

Solve by any method on a separate sheet of paper. Then check your answer by rounding and estimating.

1. $3 \div 246$

2. $6 \div 75$

3. $7 \div 60$

4. $4 \div 58$

5. $4 \div 65$

6. $8 \div 91$

7. $6 \div 71$

8. $6 \div 86$

9. $2 \div 313$

10. $3 \div 256$

11. $4 \div 805$

12. $5 \div 927$

13. $4 \div 325$

14. $4 \div 378$

15. $6 \div 432$

16. $6 \div 490$

17. $9 \div 338$

18. $8 \div 658$

19. $5 \div 1,838$

20. $4 \div 2,715$

21. $7 \div 3,042$

22. $3 \div 6,127$

23. $4 \div 4,587$

24. $4 \div 9,029$

Solve.

25. The area of Matt’s bedroom is 96 square feet. If the room is 8 feet wide, how long is it?

26. The fourth-grade students at Lincoln Elementary School are attending an assembly. There are 7 equal rows of seats in the assembly hall. If there are 392 fourth-grade students, how many students will sit in each row?

27. Pablo is packing books into crates. He has 9 crates. Each crate will contain the same number of books. If he has 234 books, how many books can he put into each crate?

Show your work.
1. How many fourth grade students said swimming was their favorite sport? __________

2. Which sport is most popular? __________ How many students chose it? __________

3. How many more students picked softball than swimming? __________

4. Altogether, how many students picked basketball or softball? __________

Solve.

5. $8 \times 700 = \underline{5600}$

6. $7 \times 931 = \underline{6517}$

7. $42 \times 52 = \underline{2184}$

8. $300 \times 4 = \underline{1200}$

9. $282 \times 5 = \underline{1410}$

10. $81 \times 73 = \underline{5903}$
Solve. Write the remainder as a whole number and as a fraction.

1. $7 \div 7,012$
2. $9 \div 8,410$
3. $2 \div 7,825$

4. $5 \div 3,512$
5. $6 \div 6,618$
6. $8 \div 7,225$

Solve.

7. $8 \divann 50.00$
8. $6 \divann 49.62$
9. $9 \divann 31.68$

10. Write how each solution below is different and how it is the same.

   a. $4 \divann 153$
   b. $4 \divann 153$
   c. $4 \divann 153.00$

11. Write and solve two division problems in which the remainders mean different things.
Solve by any method on a separate sheet of paper.

1. $5 \div 27$
2. $8 \div 99$
3. $5 \div 29$
4. $6 \div 95$
5. $4 \div 327$
6. $9 \div 314$
7. $5 \div 51$
8. $8 \div 93$
9. $5 \div 123$
10. $4 \div 173$
11. $3 \div 106$
12. $4 \div 66$

13. Students worked in teams to rake leaves. The Red team filled 3 trash bags. The Green team filled 8 times as many bags. How many bags did the Green team fill?

14. The students helped city workers trim the branches on the trees along 14 blocks. If there are 86 trees on each block, how many trees did they help trim?

15. What is the side length in centimeters of a square that has an area of 9 square meters?

16. What is the side length in meters of a square that has an area of 9 square meters?

17. How many one-meter squares fit inside a square that has an area of 9 square meters?

18. How many one-centimeter squares fit inside a square that has an area of 9 square meters?

19. The garden store donated 8 packages of flowers to plant in a park. Five packages contain 12 flowers each. The rest of the packages contain 24 flowers each. How many flowers did they donate in all?
When the Johnson School fourth grade classes were studying butterflies, they took a field trip to a butterfly garden.

**Use the proper operation or combination of operations to solve each problem.**

1. Nine buses of students, teachers, and parents went on the field trip. If 5 of the buses held 63 people each and the other buses held 54 people each, how many people went in all?

2. Some female butterflies lay their eggs in clusters. If one kind of butterfly lays 12 eggs at a time and another kind lays 18 eggs at a time, how many eggs would 8 of each kind of butterfly lay?

3. Teachers divided students into groups of 3. Each group of 3 wrote a report that had 24 pictures in it. The students used 1,560 pictures altogether. How many students were there in all?

4. Driving to and from the butterfly garden took 45 minutes each way. The students spent 3 hours in the garden and 30 minutes eating lunch. If the groups left the school at 9:00 AM, what time did they get back?
Solve.

1. $4 \times 34$  
2. $9 \times 80$  
3. $6 \times 39$  
4. $8 \times 27$

5. $4 \times 43$  
6. $6 \times 64$  
7. $5 \times 91$  
8. $2 \times 55$

9. $5 \times 72$  
10. $3 \times 49$  
11. $4 \times 93$  
12. $9 \times 111$

13. $7 \times 148$  
14. $4 \times 103$  
15. $3 \times 246$  
16. $8 \times 692$

17. $3 \times 346$  
18. $7 \times 906$  
19. $5 \times 529$  
20. $4 \times 805$

21. $5 \times 3,513$  
22. $4 \times 3,281$  
23. $8 \times 7,730$  
24. $7 \times 2,884$

Solve.

25. A farmer planted 120 tomato plants in 8 equal rows. How many plants are in each row?


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Solve. Write the remainder as a whole number and as a fraction.

1. \(4 \div 9,813\)  
2. \(3 \div 3,712\)  
3. \(5 \div 7,082\)  
4. \(2 \div 6,129\)

5. \(7 \div 8,063\)  
6. \(8 \div 8,240\)  
7. \(3 \div 4,319\)  
8. \(6 \div 7,023\)

9. \(5 \div 8,115\)  
10. \(9 \div 10,909\)  
11. \(7 \div 9,315\)  
12. \(9 \div 10,542\)

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

13. 31, 42, 34, 21, 33, 31  
   Mean: _____  
   Median: _____  
   Mode: _____

14. 561, 567, 561, 539  
   Mean: _____  
   Median: _____  
   Mode: _____

15. 4, 3, 2, 7, 6, 4, 7, 4, 8  
   Mean: _____  
   Median: _____  
   Mode: _____

Solve.

16. Hannah has four school workbooks. Their weights are 12 ounces, 14 ounces, 9 ounces, and 13 ounces. What is the mean weight of her workbooks?  
   Show your work.

17. Jose did 25 sit-ups on Monday, 20 on Tuesday, 23 on Wednesday, 27 on Thursday, and 30 on Friday. What was the mean number of sit-ups he did?  
   Show your work.

18. Mrs. Kay works at a shoe store. Yesterday, she sold shoes in sizes 8, 6, 7, 9, 7, 8, and 5. What was the median shoe size she sold?  
   Show your work.
This table shows the cards that 6 members of the Sports Card club have in their collections.

<table>
<thead>
<tr>
<th>Club Member</th>
<th>Sport</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Baseball</td>
</tr>
<tr>
<td>Alice</td>
<td>10</td>
</tr>
<tr>
<td>Kwami</td>
<td>0</td>
</tr>
<tr>
<td>Maureen</td>
<td>3</td>
</tr>
<tr>
<td>Nina</td>
<td>12</td>
</tr>
<tr>
<td>Ryan</td>
<td>30</td>
</tr>
<tr>
<td>Wally</td>
<td>20</td>
</tr>
</tbody>
</table>

1. Which member has 3 more ice hockey cards than Wally?
   __________________________________________

2. Write an additive comparison sentence to tell about the numbers of soccer cards that Alice and Wally have.
   __________________________________________

3. Which member has 10 times as many baseball cards as Maureen? __________________

4. Write a multiplication comparison sentence to tell about the numbers of basketball cards that Alice and Wally have.
   __________________________________________

Write the metric unit you would use to measure each of the following.

5. Area of a field __________________
6. Volume of a glass __________________
7. Perimeter of a postcard ____________
8. Distance between towns ____________
Name the polygon and write how many sides it has.

1. octagon
2. hexagon
3. octagon
4. octagon
5. square
6. pentagon
7. triangle
8. octagon
9. octagon

10. All of the polygons above are regular polygons. Write how to find the perimeter of polygon number 3.

What is the total perimeter of each group of regular polygons?

11. 6 ft 6 ft 6 ft
12. 9 in. 9 in. 4 in. 4 in.

13. 28 m 28 m 12 m
14. 39 cm 19 cm 35 cm 26 cm
Remembering

Multiply.

1. \(3 \times 65 = \) ______  
2. \(4 \times 128 = \) ______  
3. \(53 \times 91 = \) ______  

4. \(72 \times 44 = \) ______  
5. \(47 \times 9 = \) ______  
6. \(276 \times 8 = \) ______  

7. \(88 \times 63 = \) ______  
8. \(96 \times 15 = \) ______  

Solve.

9. Maurice made a rectangle by putting together two 5-cm squares. What is the perimeter of his rectangle?
   __________________________________________

10. Sheila drew some 3-cm squares and some 2-cm squares. The total area of all her squares was 35 sq cm. How many squares of each size did she draw?
    __________________________________________

11. Write and solve an area or perimeter problem.
    __________________________________________
    __________________________________________
    __________________________________________
    __________________________________________
    __________________________________________
    __________________________________________

Show your work.
1. Use a compass or a piece of paper to draw two different-sized circles. Label the parts of both circles: center, radius, diameter, and circumference. Then measure the diameter of each circle in centimeters.

2. Explain how to calculate the circumference of your circles.

Estimate the circumference of each circle. Use $\pi = 3$ to make your estimates.

3. $d = 6$ ft

4. $d = 4$ m

5. $d = 8$ yd

6. $d = 5$ cm
Add or subtract.

1. $4,679 + 135,820$
2. $63,159,240 - 42,851$
3. $35,947,821 - 6,538,041$
4. $594,163 + 42,750$
5. $729,315 - 40,856$
6. $903,492,517 - 65,340$
7. $87,624 + 61,305,087$
8. $24,678,305 - 94,513$
9. $1,649,315 - 276,894$

Solve.

10. A football field is 1,000 yd long. Each of the two end zones adds an extra 10 yd. The field is 160 ft wide. What is the area of the whole field?

11. An apartment building has 45 windows on each side. Each window is a rectangle that is 2 ft $\times$ 4 ft. What is the area of glass in the building?

12. A rectangle has an area of 8 sq in. and a square has an area of 9 sq in. What is the area of a surface covered by 16 squares and 14 rectangles?

13. Write and solve a multi-step word problem about measurement.

---

Show your work.
Luisa is in fourth grade. Her brother Emilio is in high school. These circle graphs show how they spend their days.

1. Who usually spends more hours eating or snacking?

2. Which two activities usually occupy half of Luisa’s day?

3. On what activity do Luisa and Emilio usually spend about the same amount of time?

4. Luisa spends about 2 hours doing homework. About how much time does Emilio spend doing homework?

Solve.

5. The part of Emilio’s graph that shows “Other Activities” represents 1 hour. Based on the size of this part, estimate the number of whole hours Emilio spends on Playing or Having Fun.

6. On a separate sheet of paper, make a circle graph to show how you spend your time on a typical school day. Then write two questions to compare your day with Luisa’s or Emilio’s day.
This bar graph shows the area of some countries in Africa.

1. Which two countries are the smallest in area?

2. Which three countries are more than 900,000 square kilometers in area?

3. What is the area of Zambia? How do you know?

4. Which country is about three times the area of Senegal?

5. What is the combined approximate area of Zimbabwe and Mozambique? Show your work.

6. On a separate sheet of paper, write and solve two word problems about the bar graph.
On a separate sheet of paper, draw an analog clock face to show the time.

1. 3:30 P.M.
2. 6:15 A.M.
3. 23 minutes past 3:30 P.M.
4. 43 minutes before 6:15 A.M.
5. 1 hour 18 minutes past 8:45 A.M.
6. 4 hours 28 minutes before 2:20 P.M.

Find the number of hours and minutes that have passed between the times on each pair of digital clocks.

7. 9:16 A.M. to 9:53 A.M.
8. 8:35 P.M. to 6:15 A.M.
9. 1:36 P.M. to 3:18 P.M.
10. 11:06 A.M. to 4:21 P.M.

The fourth-grade students at Fairview School are participating in Spring Games.

11. The Games start at 8:30 A.M., and the first break is at 10:15 A.M. How many minutes have passed when the first break starts?

12. If Emma starts running at 10:45 A.M. and runs for 3 hours and 20 minutes, what time does she stop running?

13. The afternoon mini-marathon will start at 1:15 P.M. The runners need 20 minutes to warm up. What time do they need to start the warm-up period before the race?

14. One game is a 20-person relay race. If each leg of the race takes about 4 minutes, how many hours and minutes does it take to complete the race?

15. On a separate sheet of paper, write and solve a word problem about the passing of time.
Divide.

1. $675 \div 5 = \underline{135}$
2. $471 \div 3 = \underline{157}$
3. $875 \div 7 = \underline{125}$

4. $987 \div 4 = \underline{246}$
5. $362 \div 8 = \underline{45}$
6. $446 \div 9 = \underline{49}$

7. $575 \div 7 = \underline{82}$
8. $216 \div 6 = \underline{36}$
9. $870 \div 5 = \underline{174}$

10. $1,025 \div 5 = \underline{205}$
11. $849 \div 3 = \underline{283}$
12. $2,106 \div 7 = \underline{300}$

13. $667 \div 4 = \underline{167}$
14. $2,441 \div 8 = \underline{305}$
15. $969 \div 9 = \underline{108}$

16. $972 \div 7 = \underline{138}$
17. $1,943 \div 6 = \underline{323}$
18. $1,011 \div 5 = \underline{202}$

Solve.

19. Two bottles of ketchup cost the same amount. One bottle contains 900 mL and the other contains 1 L. Which bottle is the better buy? Explain.

   
   Show your work.

20. One serving of milk is 250 mL. If you have 4 servings each day, how many days will a 2-L carton last? Explain.

   
   Show your work.

21. A box is 25 cm long, 2 dm high, and 1 dm deep. What is the volume of the box in cubic centimeters? in cubic decimeters?
Write the chain of unit fractions for each fraction.

1. \(\frac{2}{4} = \) 
2. \(\frac{5}{8} = \) 
3. \(\frac{2}{6} = \) 
4. \(\frac{7}{8} = \) 
5. \(\frac{4}{12} = \) 
6. \(\frac{6}{12} = \) 
7. \(\frac{8}{12} = \) 
8. \(\frac{4}{6} = \) 

Name the fraction for each chain of unit fractions.

9. \(\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \) 
10. \(\frac{1}{8} + \frac{1}{8} + \frac{1}{8} = \) 
11. \(\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} = \) 
12. \(\frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} = \) 
13. \(\frac{1}{12} + \frac{1}{12} = \) 
14. \(\frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \) 
15. \(\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \) 
16. \(\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} = \) 

Write three things you learned today about fractions.

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

UNIT 5 LESSON 1

Understand Fractions
Solve.

1. \(942 + 4,605 = \) ______
2. \(31,582 - 9,406 = \) ______
3. \(72 \times 54 = \) ______
4. \(847 \div 3 = \) ______
5. \(178 + 45,947 = \) ______
6. \(56,168 - 963 = \) ______
7. \(93 \times 27 = \) ______
8. \(1,983 \div 5 = \) ______
9. \(23,019 + 1,932 = \) ______
10. \(52,635 - 7,068 = \) ______
11. \(68 \times 36 = \) ______
12. \(4,294 \div 7 = \) ______

Find the perimeter and area for each group of shapes. Show your work.

13. Perimeter: ________________
   Area: ________________

14. Perimeter: ________________
   Area: ________________

15. Perimeter: ________________
   Area: ________________
Name the fraction of the shape that is shaded and the fraction of the shape that is not shaded. Then, write an equation that shows how the two fractions make one whole.

1. shaded: _________  
   unshaded: _________  
   equation: _________

2. shaded: _________  
   unshaded: _________  
   equation: _________

3. shaded: _________  
   unshaded: _________  
   equation: _________

4. shaded: _________  
   unshaded: _________  
   equation: _________

5. shaded: _________  
   unshaded: _________  
   equation: _________

Name the fraction that will complete each equation.

6. $\frac{3}{3} = \frac{1}{3} + _________$

7. $\frac{8}{8} = \frac{3}{8} + _________$

8. $\frac{4}{4} = \frac{2}{4} + _________$

9. $\frac{10}{10} = \frac{7}{10} + _________$

10. $\frac{6}{6} = \frac{5}{6} + _________$

11. $\frac{9}{9} = \frac{8}{9} + _________$

12. $\frac{7}{7} = \frac{4}{7} + _________$

13. $\frac{12}{12} = \frac{9}{12} + _________$

Solve.

14. By Friday afternoon $\frac{3}{12}$ of the biographies in the school library had been checked out. What fraction of the biographies were still in the library?

Show your work.
Solve.

1. Martin has 13 red marbles, 25 silver marbles, and 74 green marbles. If he mixes them all together and divides them among his 8 friends, how many marbles will each friend get?

2. Julio bought a bag of 70 oranges. His family ate 7 of the oranges. Julio divided the rest into 7 bags. How many oranges were in each bag?

3. Ricky has a box of 24 crayons. Jane’s box has 8 times as many crayons as Ricky’s. How many crayons do Ricky and Jane have altogether?

Find perimeter and area of each figure.
(Note: All angles are right angles.)

4. Perimeter: _____
   Area: _____

5. Perimeter: _____
   Area: _____
Write < or > to make each statement true.

1. \( \frac{1}{5} \bigcirc \frac{1}{4} \)
2. \( \frac{6}{12} \bigcirc \frac{5}{12} \)
3. \( \frac{4}{10} \bigcirc \frac{4}{11} \)
4. \( \frac{3}{5} \bigcirc \frac{4}{5} \)
5. \( \frac{3}{7} \bigcirc \frac{3}{8} \)
6. \( \frac{7}{9} \bigcirc \frac{8}{9} \)

Solve. Explain your answers.

7. Juan took \( \frac{2}{12} \) of the fruit salad and Harry took \( \frac{3}{12} \) of the same salad. Who took more of the salad?

   
   
   
   
   

8. Kim drank \( \frac{1}{3} \) of a carton of milk. Joan drank \( \frac{1}{4} \) of a carton. Who drank more?

   
   
   
   

9. Maria read \( \frac{1}{8} \) of a story. Darren read \( \frac{1}{7} \) of the same story. Who read more of the story?

   
   
   
   

10. Write 2 things you learned today about comparing fractions.

   
   
   
   

11. Write and solve a fraction word problem of your own.

   
   
   
   

1. Mattie’s summer reading goal was 3,000 pages. She has already read 147 pages. How many more pages must she read to reach her goal?

2. Jin-Lee read that about 9 inches of snow has the same amount of water as 1 inch of rain. At Jin-Lee’s house it rained 2 inches one day and 3 inches the next day. If it had snowed instead, how many inches of snow would have fallen at Jin-Lee’s house over the 2 days?

3. Austin’s family drove 1,215 miles from New York to Florida. They drove for 3 days and traveled the same distance each day. How many miles did they travel each day?

Find the perimeter and area of each figure. (Note: All angles are right angles.)

4. Perimeter: Perimeter:
Area: Area:

5. Perimeter: Perimeter:
Area: Area:
1. Draw a small, a medium, and a large square. Shade \( \frac{1}{6} \) of each.

2. Draw a small, a medium, and a large circle. Shade \( \frac{3}{4} \) of each.

3. Draw a short, a medium, and a long rectangle. Shade \( \frac{3}{5} \) of each.

4. Look at the different size shapes you shaded in problems 1–3. Describe what they show about fractions of different wholes.

5. Kris ate \( \frac{3}{8} \) of a pizza and Kim ate \( \frac{4}{8} \) of the same pizza. Did they eat the whole pizza? Explain.

6. Amena ate \( \frac{1}{2} \) of a sandwich. Lavonne ate \( \frac{1}{2} \) of a different sandwich. Amena said they ate the same amount. Lavonne said Amena ate more. Could Lavonne be correct? Explain your thinking.
Draw, divide, and color or shade a shape of your choice to show each fraction. Be sure to divide the shape into equal-size parts. Label the whole and all the parts.

1. \( \frac{3}{8} \)  
2. \( \frac{3}{4} \)  
3. \( \frac{8}{10} \)  
4. \( \frac{1}{5} \)

5. \( \frac{7}{12} \)  
6. \( \frac{6}{7} \)  
7. \( \frac{2}{6} \)  
8. \( \frac{3}{9} \)

Solve.

9. \( 5 \div 59 \)  
10. \( 4 \div 98 \)  
11. \( 6 \div 814 \)  
12. \( 4 \div 387 \)

13. \( 3 \div 74 \)  
14. \( 6 \div 54 \)  
15. \( 7 \div 609 \)  
16. \( 9 \div 640 \)

17. \( 7 \div 84 \)  
18. \( 8 \div 95 \)  
19. \( 3 \div 643 \)  
20. \( 8 \div 471 \)

Tell which metric unit you would use for each measurement.

21. the length of a paper clip  
22. the area of a field  
23. the length of a driveway  
24. the area of a postcard  
25. the distance between cities
Solve.

1. \(\frac{4}{8} + \frac{2}{8} = \) 

2. \(\frac{3}{11} + \frac{6}{11} = \) 

3. \(\frac{3}{4} - \frac{2}{4} = \) 

4. \(\frac{3}{5} + \frac{4}{5} = \) 

5. \(\frac{2}{6} + \frac{1}{6} = \) 

6. \(\frac{6}{7} - \frac{2}{7} = \) 

7. \(\frac{5}{12} + \frac{4}{12} = \) 

8. \(\frac{9}{10} - \frac{3}{10} = \) 

10. Sue is driving to see her mom. The first day she traveled \(\frac{2}{5}\) of the distance. The next day she traveled another \(\frac{2}{5}\) of the distance. What fraction of the distance has she driven?

11. When Keshawn sharpens her pencil, she loses about \(\frac{1}{12}\) of the length. One day, she sharpened her pencil 3 times. The next day she sharpened the same pencil 5 times. What fraction of the pencil did Keshawn sharpen away?

12. One day, a flower shop sold \(\frac{7}{10}\) of its roses in the morning and \(\frac{2}{10}\) of its roses in the afternoon. What fraction of its roses did the shop sell that day?

13. Bonnie’s orange was cut into eighths. She ate \(\frac{3}{8}\) of the orange and her friend ate \(\frac{3}{8}\) of it. Did they eat the whole orange? Explain.

14. Write and solve a fraction word problem of your own.
Write the answers as quickly as you can.

1. \(30 \div 6 = \) _____
2. \(49 \div 7 = \) _____
3. \(45 \div 9 = \) _____
4. \(48 \div 8 = \) _____
5. \(20 \div 4 = \) _____
6. \(16 \div 4 = \) _____
7. \(32 \div 4 = \) _____
8. \(36 \div 6 = \) _____
9. \(64 \div 8 = \) _____
10. \(56 \div 7 = \) _____
11. \(72 \div 9 = \) _____
12. \(25 \div 5 = \) _____
13. \(24 \div 4 = \) _____
14. \(40 \div 8 = \) _____
15. \(54 \div 9 = \) _____

Solve.

16. There are 157 students in the fourth grade. If they each donate 5 pennies to the book fund, how many pennies will they donate in all?

   
   
   

17. In one week, Mary practiced the piano for 358 minutes. About how many minutes did she practice each day of the week? Explain.

   
   
   

Name each triangle by its sides and then by its angles.

18. 

19. 

20. 

21. 

Show your work.
Write the equivalent improper fraction.

1. \(6\frac{2}{5} = \) _____  
2. \(2\frac{3}{8} = \) _____  
3. \(4\frac{6}{7} = \) _____  
4. \(8\frac{1}{3} = \) _____  
5. \(3\frac{7}{10} = \) _____  
6. \(5\frac{5}{6} = \) _____  
7. \(7\frac{3}{4} = \) _____  
8. \(1\frac{4}{9} = \) _____

Write the equivalent mixed number.

9. \(\frac{50}{7} = \) _____  
10. \(\frac{16}{10} = \) _____  
11. \(\frac{23}{4} = \) _____  
12. \(\frac{50}{5} = \) _____  
13. \(\frac{21}{8} = \) _____  
14. \(\frac{11}{3} = \) _____  
15. \(\frac{60}{9} = \) _____  
16. \(\frac{23}{5} = \) _____

Solve.

17. Castor brought \(6\frac{3}{4}\) small carrot cakes to share with the 26 students in his class. Did Castor bring enough for each student to have \(\frac{1}{4}\) of a cake? Explain your thinking.

________________________________________________________

________________________________________________________

18. Claire cut some apples into eighths. She and her friends ate all but 17 pieces. How many whole apples and parts of apples did she have left over? Tell how you know.

________________________________________________________

________________________________________________________

19. Write and solve a fraction word problem of your own.

________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________
Remembering

Solve.

1. \(4 \times 4 = \) 
2. \(9 \times 6 = \) 
3. \(8 \times 3 = \) 
4. \(6 \times 7 = \) 
5. \(8 \times 8 = \) 
6. \(6 \times 6 = \) 
7. \(8 \times 7 = \) 
8. \(6 \times 3 = \) 
9. \(9 \times 8 = \) 
10. \(9 \times 4 = \) 
11. \(8 \times 4 = \) 
12. \(7 \times 7 = \) 
13. \(3 \times 9 = \) 
14. \(7 \times 9 = \) 
15. \(9 \times 9 = \) 
16. \(8 \times 6 = \) 
17. \(7 \times 4 = \) 
18. \(3 \times 7 = \) 

Solve.

19. \(3\sqrt{84} \) 
20. \(4\sqrt{98} \) 
21. \(3\sqrt{184} \) 
22. \(2\sqrt{7,834} \) 
23. \(5\sqrt{96} \) 
24. \(2\sqrt{47} \) 
25. \(8\sqrt{609} \) 
26. \(6\sqrt{6,034} \) 
27. \(9\sqrt{37} \) 
28. \(6\sqrt{95} \) 
29. \(5\sqrt{437} \) 
30. \(4\sqrt{4,176} \) 
31. \(7\sqrt{18} \) 
32. \(8\sqrt{49} \) 
33. \(7\sqrt{298} \) 
34. \(9\sqrt{5,307} \)

Write the name of each triangle based on its sides. Then find the area and perimeter.

35. 

Name: 
Area: 
Perimeter: 

36. 

Name: 
Area: 
Perimeter: 

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Add.

1. \(3 \frac{2}{6} + 6 \frac{3}{6}\)
2. \(8 \frac{5}{10} + 9 \frac{6}{10}\)
3. \(7 \frac{3}{4} + 4 \frac{2}{4}\)
4. \(1 \frac{5}{9} + 5 \frac{7}{9}\)

Subtract.

5. \(7 \frac{2}{3} - 3 \frac{1}{3}\)
6. \(8 \frac{2}{7} - 5 \frac{5}{7}\)
7. \(6 \frac{1}{4} - 2 \frac{3}{4}\)
8. \(9 \frac{1}{8} - 4 \frac{5}{8}\)

Add or subtract.

9. \(\frac{1}{4} + \frac{7}{4}\) = 
10. \(\frac{3}{8} + \frac{6}{8}\) = 
11. \(\frac{9}{6} - \frac{8}{6}\) = 

12. \(\frac{5}{9} + \frac{6}{9}\) = 
13. \(\frac{9}{2} - \frac{6}{2}\) = 
14. \(\frac{5}{10} - \frac{2}{10}\) = 

15. \(\frac{2}{5} + \frac{4}{5}\) = 
16. \(\frac{8}{7} - \frac{3}{7}\) = 
17. \(\frac{7}{3} - \frac{2}{3}\) = 

18. Write and solve a mixed number word problem.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Solve.

1. \(653 + 15,710 = \) 
2. \(85,132 - 6,409 = \) 
3. \(67 \times 45 = \)

4. \(784 \div 4 = \)
5. \(8,147 + 54,479 = \)
6. \(81,656 - 1,639 = \)

7. \(39 \times 76 = \)
8. \(8,931 \div 6 = \)
9. \(32,910 + 2,319 = \)

10. \(65,325 - 8,607 = \)
11. \(82 \times 61 = \)
12. \(9,424 \div 9 = \)

Solve.

13. The school baseball team played 56 games. They scored a mean (average) of 4 runs in each game. How many runs did they score in all?

14. Matt collects football cards. His album holds 9 cards on each page. If he has 125 cards for his album, what is the greatest number of pages he can fill?

Find the area and perimeter of each triangle.

15.

Area: 

Perimeter: 

16.

Area: 

Perimeter:
Insert > or < to make a true statement.

1. \(\frac{2}{3} \bigcirc \frac{2}{4}\)
2. \(\frac{5}{8} \bigcirc \frac{5}{7}\)
3. \(\frac{3}{5} \bigcirc \frac{3}{6}\)
4. \(\frac{7}{9} \bigcirc \frac{8}{9}\)
5. \(\frac{5}{11} \bigcirc \frac{6}{11}\)
6. \(\frac{4}{7} \bigcirc \frac{3}{7}\)

Write each mixed number as an improper fraction.

7. \(6\frac{5}{8} =\)
8. \(2\frac{1}{4} =\)
9. \(8\frac{3}{10} =\)
10. \(4\frac{2}{6} =\)

Write each improper fraction as a mixed number.

11. \(\frac{26}{3} =\)
12. \(\frac{47}{7} =\)
13. \(\frac{59}{9} =\)
14. \(\frac{44}{5} =\)

Add or subtract.

15. \(\frac{2}{3} + \frac{2}{3} =\)
16. \(\frac{4}{10} + \frac{12}{10} =\)
17. \(\frac{5}{7} - \frac{3}{7} =\)
18. \(1\frac{3}{9} + \frac{7}{9} =\)
19. \(\frac{3}{4} + 3\frac{3}{4} =\)
20. \(2\frac{4}{15} - \frac{10}{15} =\)
21. \(\frac{6}{12} + \frac{5}{12} =\)
22. \(\frac{15}{20} - \frac{6}{20} =\)
23. \(3\frac{3}{5} - 3\frac{1}{5} =\)
24. \(\frac{3}{6} + 2\frac{6}{6} =\)
25. \(2\frac{7}{8} - 1\frac{2}{8} =\)
26. \(1\frac{8}{11} - \frac{10}{11} =\)
Solve these problems about Mellie’s Deli sandwiches.

**Mellie’s Deli**

- Regular (serves 2) $3.00
- Friendship (serves 4) $5.00
- Super (serves 10) $12.00
- Magna (serves 18) $20.00

1. Suppose 5 friends each want 1 serving of a sandwich. How many Regular sandwiches will they need? If they ordered Friendship sandwiches, how many would they need?

2. Ten friends go to Mellie’s after a soccer game and order 3 Friendship sandwiches. If each person has 1 sandwich serving, what fraction of the Friendship sandwiches will they eat all together?

3. There will be 25 people at Morey’s graduation party. Should Morey order Super or Magna sandwiches? Explain your thinking.

4. Draw and label a right angle, an acute angle, and an obtuse angle.
Shade the fraction bar to show the fraction of items sold. Group the unit fractions to form an equivalent fraction in simplest form. Show your work numerically.

1. The manager of Fantasy Flowers made 8 bouquets of wild flowers. By noon, she sold 2 of the bouquets. What fraction did she sell?

| 1/8 | 1/8 | 1/8 | 1/8 | 1/8 | 1/8 | 1/8 | 1/8 |

Group size: ________ Fraction of bouquets sold: \( \frac{2}{8} \div = \) ________

2. A car dealer had 12 red cars on his lot at the beginning of the month. The first week he sold 4 of them. What fraction did he sell that week?

| 1/12 | 1/12 | 1/12 | 1/12 | 1/12 | 1/12 | 1/12 | 1/12 | 1/12 | 1/12 | 1/12 |

Group size: ________ Fraction of red cars sold: \( \frac{8}{12} \div = \) ________

3. A music store received 10 copies of a new CD. They sold 6 of them in the first hour. What fraction did the store sell in the first hour?

| 1/10 | 1/10 | 1/10 | 1/10 | 1/10 | 1/10 | 1/10 | 1/10 | 1/10 | 1/10 |

Group size: ________ Fraction of CDs sold: \( \frac{6}{10} \div = \) ________

Simplify each fraction.

5. \( \frac{3}{24} \div = \) ________

6. \( \frac{12}{16} \div = \) ________

7. \( \frac{21}{49} \div = \) ________

8. \( \frac{18}{45} \div = \) ________
Two years ago, the village of Jefferson Square opened a new park. The bar graph below shows how many people visited the new park during its first two summers.

1. About how many people visited the new park in April of Year 1? ____________

2. About how many people visited the new park in April of Year 2? ____________

3. About how many more people visited the new park in April of Year 2 than in April of Year 1? ____________

4. About how many times as many people visited the new park in May of Year 2 than in May of Year 1? ____________

5. About how many times as many people visited the new park in August of Year 2 than in May of Year 1? ____________

Solve.

6. What is the side length of a square with an area of 81 square inches? ____________

7. How many one-meter squares fit inside a square with an area of 36 square meters? ____________

8. What is the side length of a square with area 49 square feet? ____________
Find a common denominator and then add.

1. \( \frac{1}{4} + \frac{2}{3} = \) ________________

<table>
<thead>
<tr>
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</tbody>
</table>

Write the equivalent fraction shown by the second shape. Then fill in the blanks to complete the sentences in exercises 3 and 4.

2. \( \frac{1}{3} = \) __________

3. The shaded part of the first shape is divided into _______ equal parts to make the shaded parts of the second shape.

4. The numerator and denominator of \( \frac{1}{3} \) is multiplied by _______ to make the equivalent fraction.

Find a common denominator and add. Do not change improper fractions to mixed numbers.

5. \( \frac{1}{6} + \frac{3}{5} = \) __________

6. \( \frac{3}{8} + \frac{3}{4} = \) __________

7. \( \frac{1}{4} + \frac{1}{6} = \) __________

8. \( \frac{5}{7} + \frac{2}{3} = \) __________

9. \( \frac{2}{3} + \frac{1}{2} = \) __________

10. \( \frac{2}{5} + \frac{7}{10} = \) __________
Solve. Use a separate sheet of paper if necessary.

1. \( \frac{5}{6} \div 1 \)  
2. \( \frac{6}{7} \div 18 \)  
3. \( \frac{9}{3} \div 047 \)  
4. \( 3 \div 8,716 \)

5. \( 8 \div 53 \)  
6. \( 4 \div 296 \)  
7. \( 2 \div 4,521 \)  
8. \( 9 \div 1,809 \)

9. \( 4 \div 95 \)  
10. \( 7 \div 614 \)  
11. \( 3 \div 7,608 \)  
12. \( 5 \div 5,283 \)


Every year, Joey and Jane plant a vegetable garden together. Solve these problems about their gardening.

14. The first day of the gardening season, Joey planted \( \frac{2}{5} \) of the garden and Jane planted \( \frac{1}{3} \). What fraction of their garden did they plant that day?

15. Joey and Jane have seeds to plant in their garden. Joey planted \( \frac{3}{8} \) and Jane planted \( \frac{2}{6} \) of their seeds. What total fraction of their seeds did Joey and Jane plant in all?
For each pair of fractions, find equivalent fractions with a common denominator. Then compare, add, and subtract the fractions.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Find equivalent fractions.</th>
<th>Compare.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/7 2/3</td>
<td>5 × 3 7 × 3 = 15 21  2 × 7 3 × 7 = 14 21</td>
<td>5/7 &gt; 2/3</td>
</tr>
</tbody>
</table>

Add.

\[
\frac{15}{21} + \frac{14}{21} = \frac{29}{21}
\]

Subtract.

\[
\frac{15}{21} - \frac{14}{21} = \frac{1}{21}
\]

1. \(\frac{2}{5} \quad \frac{1}{6}\)

2. \(\frac{5}{6} \quad \frac{3}{4}\)

3. \(\frac{5}{6} \quad \frac{2}{3}\)

Solve.

4. Marlon ate \(\frac{1}{3}\) of the banana. His sister ate \(\frac{4}{9}\) of the banana. How much of the banana did they eat in all?

\[
\frac{1}{3} + \frac{4}{9} = \frac{7}{9}
\]

5. A glass held \(\frac{2}{5}\) cup of water. Carlo poured out \(\frac{3}{8}\) cup. How much water was left in the glass?

\[
\frac{2}{5} - \frac{3}{8} = \frac{1}{40}
\]

6. Craig and Nora are taking paper to the recycling center. Craig has \(\frac{5}{7}\) pound of paper. Nora has \(\frac{2}{3}\) pound of paper. Who is taking less paper to the recycling center?

\[
\frac{5}{7} - \frac{2}{3} = \frac{1}{21}
\]

How much less?

Find equivalent fractions.

7. \(\frac{2}{3} = \frac{15}{45}\)

8. \(\frac{4}{7} = \frac{21}{49}\)

9. \(\frac{24}{32} = \frac{4}{8}\)

10. \(\frac{70}{90} = \frac{7}{9}\)
Find the simplest equivalent fraction.

1. \( \frac{20}{30} = \) ______  
2. \( \frac{18}{42} = \) ______  
3. \( \frac{10}{18} = \) ______  
4. \( \frac{18}{24} = \) ______

5. \( \frac{18}{36} = \) ______  
6. \( \frac{42}{48} = \) ______  
7. \( \frac{10}{24} = \) ______  
8. \( \frac{36}{48} = \) ______

9. \( \frac{20}{80} = \) ______  
10. \( \frac{36}{45} = \) ______  
11. \( \frac{24}{54} = \) ______  
12. \( \frac{28}{35} = \) ______

Tell how much time has passed between the times shown on each pair of clocks. Be sure to pay attention to the AM and PM markings on the clocks.

13.  ______  
14.  ______

15.  ______  
16.  ______

Find the total perimeter of each group of regular polygons.

17.  ______  
18.  ______
A bucket of 100 marbles contains 10 green marbles, 20 purple marbles, 30 yellow marbles, and 40 red marbles. Harry takes one marble out of the bucket without looking.

1. Is Harry's marble more likely to be red or yellow? Explain.

2. What is the probability that Harry's marble is purple?

3. What is the probability that Harry's marble is purple or yellow? Explain.

4. What is the probability that Harry's marble is white? Explain.

5. Suppose Harry takes out all of the green marbles and then chooses a marble. What is the probability he will get a purple marble?

6. Suppose Harry adds 10 more red marbles to the bucket. What is the probability he will get a purple marble?

7. Write and solve your own probability problem about Harry's bucket of marbles.

Suppose you spin the spinner at the right one time.

8. What is the probability you will win? _________

9. What is the probability you will lose? _________

10. What is the probability you will not win? _________
Write the equivalent improper fraction.

1. \( \frac{87}{8} = \) _____  
2. \( \frac{92}{3} = \) _____  
3. \( \frac{73}{10} = \) _____  
4. \( \frac{31}{4} = \) _____  
5. \( \frac{42}{5} = \) _____  
6. \( \frac{65}{9} = \) _____  
7. \( \frac{25}{6} = \) _____  
8. \( \frac{54}{7} = \) _____  

Write the equivalent mixed number.

9. \( \frac{50}{9} = \) _____  
10. \( \frac{25}{3} = \) _____  
11. \( \frac{22}{6} = \) _____  
12. \( \frac{52}{8} = \) _____  
13. \( \frac{33}{7} = \) _____  
14. \( \frac{18}{5} = \) _____  
15. \( \frac{46}{10} = \) _____  
16. \( \frac{35}{4} = \) _____  

Solve.

17. Kam cut a melon into eighths. Her four brothers each ate one piece. What fraction of the melon did they eat in all?

18. Mel cut a pizza into 6 equal pieces. She and her three friends each ate one piece. What fraction of the pizza did they eat?

Find the total perimeter of each group of regular polygons.

19. 

- Triangle: 48 ft
- Hexagon: 25 ft
- Circle: 13 ft

20. 

- Circle: 16 cm
- Octagon: 26 cm
- Pentagon: 38 cm
- Triangle: 49 cm
Insert <, >, or = to make a true statement

1. \( \frac{5}{6} \square \frac{9}{10} \)
2. \( \frac{2}{8} \square \frac{4}{16} \)
3. \( \frac{7}{5} \square \frac{5}{3} \)
4. \( \frac{6}{7} \square \frac{4}{6} \)
5. \( \frac{7}{8} \square \frac{10}{12} \)
6. \( \frac{3}{4} \square \frac{8}{12} \)

Add or subtract.

7. \( \frac{3}{6} + \frac{4}{8} = \)
8. \( \frac{2}{4} + \frac{9}{10} = \)
9. \( \frac{4}{5} - \frac{5}{7} = \)
10. \( \frac{2}{5} + \frac{2}{9} = \)
11. \( \frac{6}{7} + \frac{1}{3} = \)
12. \( \frac{4}{9} - \frac{1}{5} = \)
13. \( \frac{1}{4} + \frac{2}{7} = \)
14. \( \frac{7}{9} - \frac{2}{6} = \)
15. \( \frac{7}{8} - \frac{3}{4} = \)
16. \( \frac{1}{2} + \frac{7}{10} = \)
17. \( \frac{5}{8} - \frac{3}{5} = \)
18. \( \frac{5}{6} - \frac{4}{10} = \)

Find the simplest equivalent fraction.

19. \( \frac{20}{30} = \)
20. \( \frac{18}{42} = \)
21. \( \frac{10}{18} = \)
22. \( \frac{18}{24} = \)
23. \( \frac{18}{36} = \)
24. \( \frac{42}{48} = \)
25. \( \frac{10}{24} = \)
26. \( \frac{36}{48} = \)
27. \( \frac{21}{28} = \)
Write each mixed number as an improper fraction.

1. \(2 \frac{2}{15} = \frac{32}{15}\)  
2. \(1 \frac{3}{4} = \frac{7}{4}\)  
3. \(6 \frac{7}{10} = \frac{67}{10}\)  
4. \(5 \frac{1}{2} = \frac{11}{2}\)  
5. \(3 \frac{5}{8} = \frac{29}{8}\)  
6. \(4 \frac{5}{6} = \frac{29}{6}\)

Write each improper fraction as a mixed number.

7. \(\frac{21}{12} = 1 \frac{9}{12}\)  
8. \(\frac{14}{3} = 4 \frac{2}{3}\)  
9. \(\frac{31}{9} = 3 \frac{4}{9}\)  
10. \(\frac{45}{7} = 6 \frac{3}{7}\)  
11. \(\frac{44}{20} = 2 \frac{2}{5}\)  
12. \(\frac{28}{5} = 5 \frac{3}{5}\)

The Fin and Fur Pet Shop has 35 puppies ready for adoption. Solve each problem about the puppies.

13. Twenty of the puppies are housebroken. What fraction are housebroken?

14. If \(\frac{3}{5}\) of the puppies are terriers, what fraction are not terriers?

15. Maggie walked \(\frac{2}{7}\) of the puppies. Josh walked \(\frac{1}{5}\) of the puppies. What fraction of the puppies did they walk altogether?

16. Jing fed \(\frac{3}{7}\) of the puppies. Theo fed \(\frac{2}{5}\) of the puppies. Who fed fewer puppies? How many fewer?

Complete each row.

<table>
<thead>
<tr>
<th>Millimeters</th>
<th>Centimeters</th>
<th>Decimeters</th>
<th>Meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>17. 40</td>
<td>4</td>
<td></td>
<td>0.04</td>
</tr>
<tr>
<td>18. _______</td>
<td>30</td>
<td>3</td>
<td>0.3</td>
</tr>
<tr>
<td>19. 7,500</td>
<td>750</td>
<td>75</td>
<td>______</td>
</tr>
</tbody>
</table>

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Show your work.
Multiply.

1. \(3 \times \frac{1}{4} = \) _____
2. \(5 \times \frac{1}{3} = \) _____
3. \(4 \times \frac{1}{6} = \) _____
4. \(7 \times \frac{1}{7} = \) _____
5. \(2 \times \frac{1}{8} = \) _____
6. \(3 \times \frac{1}{10} = \) _____
7. \(2 \times \frac{3}{4} = \) _____
8. \(12 \times \frac{2}{3} = \) _____
9. \(12 \times \frac{5}{6} = \) _____
10. \(3 \times \frac{2}{7} = \) _____
11. \(24 \times \frac{5}{8} = \) _____
12. \(8 \times \frac{3}{10} = \) _____
13. \(20 \times \frac{3}{5} = \) _____
14. \(9 \times \frac{5}{9} = \) _____
15. \(10 \times \frac{7}{12} = \) _____

Solve.

16. Manuel eats \(\frac{1}{8}\) of a melon for a snack each day. How much melon does he eat in five days?

17. Shannen collects paper for recycling. If she collects \(\frac{1}{3}\) of a pound of paper each week, how much paper will she collect in 4 weeks?

18. Aisha is unpacking boxes. If it takes \(\frac{3}{4}\) hour to unpack each box, how long will it take her to unpack 6 boxes?

19. Mrs. Suarez cut a pizza into 8 equal pieces. Each person in her family ate 2 pieces. If there are 3 people in her family, what fraction of the pizza did they eat altogether?

20. Hailey is knitting a scarf. Each half hour, she adds \(\frac{3}{7}\) of an inch to the scarf’s length. How much length will she add to the scarf in 6 hours?

Show your work.
Insert > or < to make each statement true.

1. \( \frac{4}{6} \) \( \bigcirc \) \( \frac{4}{5} \)
2. \( \frac{8}{9} \) \( \bigcirc \) \( \frac{7}{9} \)
3. \( \frac{10}{15} \) \( \bigcirc \) \( \frac{10}{16} \)
4. \( \frac{5}{7} \) \( \bigcirc \) \( \frac{6}{7} \)
5. \( \frac{9}{10} \) \( \bigcirc \) \( \frac{9}{12} \)
6. \( \frac{2}{9} \) \( \bigcirc \) \( \frac{3}{9} \)

Solve.

7. Jerome sold \( \frac{1}{4} \) of his coin collection one weekend. The next weekend he sold another \( \frac{2}{5} \) of his collection. What fraction of his collection did he sell?

8. Tom’s spent \( \frac{2}{4} \) of his allowance at the video arcade. What fraction of his allowance does he have left?

Divide.

9. \( 5 \div 16 \)
10. \( 6 \div 781 \)
11. \( 9 \div 7,904 \)
12. \( 3 \div 7,681 \)

Tell whether each figure has line symmetry.

13. [Diagram]
14. [Diagram]
15. [Diagram]
The librarian sorted social studies books into eight equal piles.
Two of the piles were books about history.
Three of the piles were books about geography.
Two of the piles were books about people.
The books in the last pile were about other topics.

Then the librarian made a circle graph about the piles.

1. Write the book topic for each section of the circle graph.
   Section A: ___________________
   Section B: ___________________
   Section C: ___________________
   Section D: ___________________

2. Is there another possible answer for problem 1? Explain.
   ____________________________________________________________

Solve.

3. \( \frac{1}{4} \times 20 = \) _____  4. \( \frac{1}{3} \times 18 = \) _____  5. \( \frac{1}{8} \times 7 = \) _____
6. \( \frac{7}{10} \times 80 = \) _____  7. \( \frac{3}{5} \times 30 = \) _____  8. \( \frac{4}{9} \times 54 = \) _____

Solve each problem.

9. David exercised for 45 minutes. He jumped rope for \( \frac{1}{9} \) of the time. How many minutes did he jump rope?
   ____________________________________________________________

10. Marlon collected 36 cans for recycling. He put \( \frac{3}{4} \) of the cans in a bag to take to the recycling center. How many cans did he put in the bag?
    ____________________________________________________________

11. Tara earned $25 from babysitting. She put \( \frac{2}{5} \) of the money into a savings account. How much money did she put in her savings account?
    ____________________________________________________________

12. Tony got \( \frac{5}{6} \) of the problems on the math test correct. There were 42 problems on the test. How many problems did Tony get wrong?
    ____________________________________________________________
Add or subtract.

1. \(\frac{2}{8} + \frac{3}{8} = \)

2. \(\frac{1}{6} + \frac{3}{6} = \)

3. \(\frac{4}{9} + \frac{2}{9} = \)

4. \(\frac{4}{7} - \frac{1}{7} = \)

5. \(\frac{5}{6} - \frac{2}{6} = \)

6. \(\frac{7}{9} - \frac{3}{9} = \)

7. \(\frac{1}{9} + \frac{2}{3} = \)

8. \(\frac{5}{6} + \frac{2}{5} = \)

9. \(\frac{3}{8} + \frac{2}{7} = \)

10. \(\frac{3}{4} - \frac{1}{8} = \)

11. \(\frac{4}{7} - \frac{1}{2} = \)

12. \(\frac{4}{5} - \frac{2}{3} = \)

Solve each problem.

13. Mr. Sanchez planted a garden that is 35 feet wide and 84 feet long. What is the area of the garden?

14. Clair packed 342 books into boxes. She put 9 books in each box. How many boxes did she use?

15. Lincoln Middle School put on a play as a fundraiser. Tickets to the play cost $8. If 231 people attended the play, how much money did they raise?

Find the perimeter and area of each figure.

16. \[\text{Perimeter: } \boxed{ } \quad \text{Area: } \boxed{ } \]

17. \[\text{Perimeter: } \boxed{ } \quad \text{Area: } \boxed{ } \]
The graph below shows the number of goals scored last season by five players on one soccer team.

### Goals Scored

- **Number of Goals**
  - Ali: 8
  - Dan: 14
  - Kate: 6
  - Sue: 20
  - Tim: 4

### Complete each comparison sentence.

1. Ali scored ______ as many goals as Sue scored.
   
   Sue scored ______ times as many goals as Ali scored.

2. Kate scored ______ as many goals as Sue scored.
   
   Sue scored ______ times as many goals as Kate scored.

3. Dan scored ______ times as many goals as Tim scored.
   
   Tim scored ______ as many goals as Dan scored.

### Solve. Draw comparison bars if you need to.

4. While on vacation, Holly sent 17 postcards to her friends. Megan sent 3 times as many postcards as Holly. How many postcards did Megan send?
   
   **Show your work.**

5. Max did 19 sit-ups. This is \( \frac{1}{7} \) as many sit-ups as Isabel did. How many sit-ups did Isabel do?
Compare each pair of numbers. Then add the numbers and subtract the smaller number from the larger number.

1. \( \frac{8}{9}, \frac{1}{4} \)  
2. \( \frac{1}{4}, \frac{3}{7} \)

3. \( \frac{6}{2}, \frac{8}{3} \)  
4. \( 2\frac{1}{3}, 2\frac{5}{9} \)

5. \( 1\frac{2}{7}, 2\frac{1}{4} \)  
6. \( 3\frac{3}{8}, 3\frac{4}{9} \)

Solve each problem.

7. Geneva has 35 trading cards. One-seventh of them are baseball cards. How many baseball cards does Geneva have? ________________

8. Ming had 64 newspapers to deliver. She delivered \( \frac{7}{8} \) of the newspapers so far. How many papers does she still have left to deliver? ________________

9. The school store orders pencils in boxes of 24 per box. They sell \( 3\frac{3}{8} \) boxes of pencils one week. How many pencils is this? ________________

Name each figure.

10.  
11.  
12.  

_______  
_______  
_______
Give two equivalent fractions or mixed numbers for each lettered dot. Fractions can be improper.

1. 

\[ \begin{align*} 
\text{a.} & \quad \quad \text{b.} & \quad \quad \text{c.} & \quad \quad \text{d.} & \quad \quad \\
\text{e.} & \quad \quad \text{f.} & \quad \quad \text{g.} & \quad \quad \text{h.} & \quad \quad 
\end{align*} \]

2. 

\[ \begin{align*} 
\text{a.} & \quad \quad \text{b.} & \quad \quad \text{c.} & \quad \quad \\
\text{d.} & \quad \quad \text{e.} & \quad \quad \text{f.} & \quad \quad 
\end{align*} \]

3. Mark and label the point for each fraction or mixed number with it’s letter.

\[ \begin{align*} 
\text{a.} & \quad \quad \text{b.} & \quad \quad \text{c.} & \quad \quad \text{d.} & \quad \quad \text{e.} & \quad \quad \\
\text{f.} & \quad \quad \text{g.} & \quad \quad \text{h.} & \quad \quad \text{i.} & \quad \quad \text{j.} & \quad \quad 
\end{align*} \]

4. Draw your own number line and mark some points and label them.
Find the equivalent mixed number.

1. \(\frac{50}{7}\)  
2. \(\frac{16}{10}\)  
3. \(\frac{23}{4}\)  
4. \(\frac{50}{5}\)  

5. \(\frac{21}{8}\)  
6. \(\frac{11}{3}\)  
7. \(\frac{60}{9}\)  
8. \(\frac{23}{5}\)  

Write the equivalent improper fraction.

9. \(\frac{62}{5}\)  
10. \(\frac{23}{8}\)  
11. \(\frac{46}{7}\)  
12. \(\frac{81}{3}\)  

13. \(\frac{37}{10}\)  
14. \(\frac{55}{6}\)  
15. \(\frac{73}{4}\)  
16. \(\frac{14}{9}\)  

Solve each problem.

17. The fruit market buys oranges in boxes of 48 and apples in boxes of 36. They sold \(\frac{1}{3}\) of a box of oranges and \(\frac{1}{9}\) of a box of apples. How many oranges did they sell? How many apples did they sell? How many pieces of fruit did they sell in all?

18. Harry has a package of 45 sheets of colored paper. He uses 6 sheets. Shari’s package of colored paper has 90 sheets. If Shari uses the same fraction of her package as Harry used of his, how many sheets will she use?

Label each angle as right, acute, or obtuse.

19.  
20.  
21. 
Write >, <, or = to make each statement true.

1. \( \frac{5}{8} \) \( \bigcirc \) \( \frac{1}{2} \)
2. \( \frac{2}{9} \) \( \bigcirc \) \( \frac{1}{4} \)
3. \( \frac{2}{3} \) \( \bigcirc \) \( \frac{3}{6} \)
4. \( \frac{5}{6} \) \( \bigcirc \) \( \frac{7}{8} \)

Write the fractions in order from greatest to least.

5. \( \frac{2}{6}, \frac{2}{4}, \frac{2}{8} \) _________
6. \( \frac{5}{10}, \frac{5}{9}, \frac{5}{7} \) _________

Add or subtract.

7. \( \frac{2}{5} + \frac{1}{5} = \)
8. \( \frac{7}{8} - \frac{5}{8} = \)
9. \( \frac{2}{5} + \frac{5}{6} = \)
10. \( \frac{3}{4} - \frac{1}{8} = \)
11. \( 7 \frac{1}{4} + 3 \frac{5}{7} = \)
12. \( 6 \frac{1}{6} - 3 \frac{2}{5} = \)

Write the simplest equivalent fraction.

13. \( \frac{20}{40} = \)
14. \( \frac{14}{42} = \)
15. \( \frac{5}{30} = \)
16. \( \frac{20}{28} = \)

Multiply.

17. \( \frac{1}{8} \times 40 = \) _____
18. \( 30 \times \frac{5}{6} = \) _____
19. \( \frac{3}{7} \times 42 = \) _____
20. \( \frac{1}{5} \times 12 = \) _____
21. \( 27 \times \frac{1}{4} = \) _____
22. \( \frac{2}{5} \times 12 = \) _____
Solve each problem.

1. Dottie walks 21 blocks to school each day. That is 3 times as many blocks as Jed walks. How many blocks does Jed walk?

2. A child’s train ticket costs $7. That is $\frac{1}{4}$ as much as an adult’s ticket. How much does an adult’s train ticket cost?

Mr. Wong’s class raised $72 to buy books for their class library.

3. Darnell earned $\frac{1}{6}$ of the money doing extra chores at home. How much did he earn?

4. Susanna and her sister had a bake sale, and earned $\frac{2}{9}$ of the money. How much did they earn?

5. Maria earned $\frac{1}{3}$ of the money helping neighborhood children with their homework. How much did Maria earn?

Find the perimeter and area.

6. Perimeter: ____ Area: ____

7. Perimeter: ____ Area: ____

8. Perimeter: ____ Area: ____
Name each figure. Describe what makes each figure different from the others.

1. 2. 3. 4.

Write the number of cubes in each stack.

5. 6. 7.

Can you fold each net to make a cube? Write yes or no. If necessary, test the nets by tracing them on paper and cutting them out and making a cube.

8. 9. 10.
Solve.

1. \[ \frac{2}{3} + \frac{1}{3} = \quad \frac{3}{5} - \frac{1}{5} = \quad \]
2. \[ \frac{3}{8} + \frac{7}{8} = \quad \frac{4}{6} + \frac{5}{6} = \quad \]
3. \[ \frac{1}{10} + \frac{7}{10} = \quad \frac{5}{4} - \frac{3}{4} = \quad \]
4. A DVD machine can duplicate one disc every 3 seconds. At this rate, how many discs can the machine duplicate in 1 hour?
5. A CD holds 80 minutes of music. If each song on the CD is an average of 3 minutes, about how many songs can fit on the CD?

Name each regular polygon and find its perimeter.

9. \[ \text{12 cm} \]
10. \[ \text{9 in.} \]
11. \[ \text{6 in.} \]
12. \[ \text{11 yd} \]
13. \[ \text{15 m} \]
14. \[ \text{17 m} \]
Name the prisms that have these figures as their bases.

1. 

2. 

3. 

4. 

5. 

6. 

Find the surface area of each prism. Show your work. 
Remember: A small mark ( – ) means that the edges are congruent.

7. 

8. 
Complete each number sentence. Show your work on a separate sheet of paper.

1. $1,326 + 456,106 = \underline{_______}$  
   2. $8,215,005 - 23,749 = \underline{_______}$

3. $7 \times 634 = \underline{_______}$  
   4. $87 \div 7 = \underline{_______}$

5. $63,808 + 4,775,096 = \underline{_______}$  
   6. $912,634 - 8,856 = \underline{_______}$

7. $91 \times 28 = \underline{_______}$  
   8. $917 \div 5 = \underline{_______}$

9. $536,697 + 14,194 = \underline{_______}$  
   10. $503,652 - 46,847 = \underline{_______}$

11. $18 \times 39 = \underline{_______}$  
   12. $639 \div 9 = \underline{_______}$

Find the perimeter of each regular polygon.

13.  
   14.  
   15.  
   16.  

Find the perimeter and area of each figure. Show your work.

17.  

$$P = \underline{_______}$$  
$$A = \underline{_______}$$

18.  

$$P = \underline{_______}$$  
$$A = \underline{_______}$$
Name each solid. Also name the base, where possible.

1. 
2. 
3. 
4. 
5. 
6. 

7. Describe one similarity and one difference among spheres, cones, and cylinders.

8. Describe one similarity and one difference among cubes, square prisms, and square pyramids.
Divide. Show your work on a separate sheet of paper.

1. \(5,232 \div 6 = \underline{\phantom{0000}}\)
2. \(2,036 \div 4 = \underline{\phantom{0000}}\)
3. \(4,945 \div 5 = \underline{\phantom{0000}}\)
4. \(1,285 \div 3 = \underline{\phantom{0000}}\)
5. \(5,855 \div 9 = \underline{\phantom{0000}}\)
6. \(3,555 \div 7 = \underline{\phantom{0000}}\)

Solve.

7. The surface area of a cube is 1,950 sq cm. What is the area of each face of the cube?
   
   
   
8. Miguel is painting letters of the alphabet on cubes. He will paint a different letter 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 only once? How many faces on the last cube will be empty?
   
   
   
Describe each figure using geometry language.

9. __________
10. __________
11. __________
12. __________
13. __________
14. __________
Write a fraction and a decimal number to show what part of each bar is shaded.

1. Fraction: ___________  Decimal Number: ___________

2. Fraction: ___________  Decimal Number: ___________

Write these amounts as decimal numbers.

3. 5 tenths ______
4. 9 hundredths ______
5. 56 hundredths ______
6. \( \frac{84}{100} \) ______
7. \( \frac{3}{10} \) ______
8. \( \frac{1}{100} \) ______
9. 3 cents ______
10. 2 quarters ______
11. 3 nickels ______

Answer the questions below.

12. If you took a test with 10 questions and got 7 of them right, what decimal part would that be? ______ What decimal part did you get wrong? ______

13. If you had a dollar and spent 5 cents, what decimal amount did you spend? ______ What decimal amount do you have left? ______

14. If you had a bag of 100 beads and used 40, what decimal number did you use? Express this number in both tenths and hundredths. ______  ______

15. If you had to travel 100 miles and went 25, what decimal part of the trip did you travel? ______ What decimal part of the trip do you still have left? ______
Name the fraction for each chain of fraction units.

1. \( \frac{1}{3} + \frac{1}{3} \) 

2. \( \frac{1}{6} + \frac{1}{6} + \frac{1}{6} \)

3. \( \frac{1}{4} + \frac{1}{4} + \frac{1}{4} \)

4. \( \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} \)

5. \( \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} \)

6. \( \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} \)

Divide.

7. \( 7 \div 16 \) \( 7 \div 32 \) \( 7 \div 29 \) \( 7 \div 86 \) \( 7 \div 73 \) \( 7 \div 90 \)

8. \( 7 \div 129 \) \( 7 \div 108 \) \( 7 \div 401 \) \( 7 \div 304 \) \( 7 \div 403 \) \( 7 \div 158 \)

Solve.

9. Kari made a cake shaped like a rectangle. She cut the cake into 8 equal pieces. She and her mother each ate one piece. What fraction of the cake was left? 

How many cubes were used to make each stack?

10.

11.

12.
Write the decimal numbers that come next.

1. 0.05 0.06 0.07 _____ _____ _____ _____
2. 0.26 0.27 0.28 _____ _____ _____ _____
3. 0.3 0.4 0.5 _____ _____ _____ _____

Write each number in decimal form.

4. 9 tenths _____
5. 5 hundredths _____
6. 29 hundredths _____
7. \(\frac{73}{100}\) _____
8. \(\frac{2}{10}\) _____
9. \(\frac{8}{100}\) _____
10. 4 pennies _____
11. 3 quarters _____
12. 6 dimes and 1 nickel _____

Solve.

A small jar contains 4 white gumballs and 6 red gumballs.

13. What decimal number shows which part of the gumballs are red? _____
14. What decimal number shows which part of the gumballs are white? _____
15. A large jar of 100 gumballs has the same fractions of red and white gumballs as the small jar. How many gumballs in the large jar are red? _____ How many are white? _____

A sidewalk has 100 squares. There are cracks in 9 of the squares.

16. What decimal number shows what part of the sidewalk is cracked? _____
17. What fraction shows what part of the sidewalk is cracked? _____

Write each decimal tenth as a decimal hundredth.

18. 0.6 = _____
19. 0.2 = _____
20. 0.5 = _____
Complete each equation.

1. \( \frac{1}{4} + \_ = \frac{4}{4} = 1 \)

2. \( \_ + \frac{5}{8} = \frac{8}{8} = 1 \)

3. \( \frac{3}{6} + \_ = \frac{6}{6} = 1 \)

4. \( \_ + \frac{2}{12} = \frac{12}{12} = 1 \)

5. \( \frac{2}{7} + \_ = \frac{7}{7} = 1 \)

6. \( \_ + \frac{4}{9} = \frac{9}{9} = 1 \)

7. \( \frac{1}{3} + \_ = \frac{3}{3} = 1 \)

8. \( \_ + \frac{1}{2} = \frac{2}{2} = 1 \)

Divide.

9. \( 8 \sqrt{21} \)

10. \( 8 \sqrt{18} \)

11. \( 8 \sqrt{97} \)

12. \( 8 \sqrt{139} \)

13. \( 8 \sqrt{142} \)

14. \( 8 \sqrt{204} \)

15. \( 8 \sqrt{135} \)

16. \( 8 \sqrt{302} \)

Solve.

17. In the school library, \( \frac{6}{8} \) of the tables were filled with students. What fraction of the tables were not filled?

\( \_ \)

Tell whether each triangle is scalene, equilateral, or isosceles. Then tell whether each triangle is acute, right, or obtuse. Finally, find its perimeter.

18. \( \begin{align*}
\text{Name: } & \quad \text{Perimeter: } \\
5 \text{ ft} & \quad 6 \text{ ft} \\
\end{align*} \)

19. \( \begin{align*}
\text{Name: } & \quad \text{Perimeter: } \\
25 \text{ m} & \quad 25 \text{ m} \\
18 \text{ m} & \quad 18 \text{ m} \\
15 \text{ m} & \quad 15 \text{ m} \\
\end{align*} \)

20. \( \begin{align*}
\text{Name: } & \quad \text{Perimeter: } \\
10 \text{ in.} & \quad 10 \text{ in.} \\
8 \text{ in.} & \quad 8 \text{ in.} \\
6 \text{ in.} & \quad 6 \text{ in.} \\
\end{align*} \)
Write each number in decimal form.

1. 6 tenths ______
2. 85 thousandths ______
3. 9 hundredths ______
4. 7 thousandths ______
5. $\frac{4}{100}$ ______
6. $2\frac{9}{10}$ ______
7. $\frac{915}{1,000}$ ______
8. $11\frac{3}{100}$ ______
9. 6 cents ______
10. twelve and 5 hundredths ______
11. thirty and 25 thousandths ______

Use the graph to answer questions 12–14.

12. What decimal part of all the melons did Amy pick? ______
13. What decimal part of all the melons did Paco pick? ______
14. What decimal part of all the melons did Joey and Lisa pick together? ______

Solve.

15. A centipede has 100 legs. What decimal part is one leg? ______
16. A millipede has 1,000 legs. What decimal part is 1 leg? ______
17. At a banquet, each cake was cut into 100 pieces. The guests ate 4 whole cakes and all but one piece of another. What decimal number represents the number of cakes that were eaten? ______
18. Miguel earned $10 and saved $3. What decimal part did he save? ______
19. Jing earned $100, and saved $30. What decimal part did she save? ______
20. Darnell earned $1,000, and saved $300. What decimal part did he save? ______
Insert > or < to make a true statement.

1. \( \frac{2}{4} \) \( \bigcirc \) \( \frac{2}{3} \)
2. \( \frac{3}{12} \) \( \bigcirc \) \( \frac{4}{12} \)
3. \( \frac{3}{4} \) \( \bigcirc \) \( \frac{3}{5} \)
4. \( \frac{2}{6} \) \( \bigcirc \) \( \frac{2}{7} \)
5. \( \frac{7}{9} \) \( \bigcirc \) \( \frac{7}{10} \)
6. \( \frac{1}{4} \) \( \bigcirc \) \( \frac{2}{4} \)
7. \( \frac{5}{8} \) \( \bigcirc \) \( \frac{4}{8} \)
8. \( \frac{10}{11} \) \( \bigcirc \) \( \frac{10}{12} \)
9. \( \frac{2}{6} \) \( \bigcirc \) \( \frac{3}{6} \)

Solve.

10. Meg served \( \frac{3}{7} \) of an apple pie and \( \frac{1}{8} \) of a cherry pie of the same size. Which pie did she serve more of? Explain your thinking.

11. Kyle and Shawn each had the same size sandwich. Kyle ate \( \frac{1}{3} \) of his sandwich. Shawn ate \( \frac{1}{6} \) of his sandwich. Who ate more? Explain.

Find the surface area of each prism. Explain how you got your answer.

12. 
![Diagram of a rectangular prism]
13. 
![Diagram of a cube]

Show your work.
The number line below shows one whole divided into hundredths.

1. What decimal hundredth is marked by the fish? _______
   Round this number to the nearest tenth. _______

2. What decimal hundredth is marked by the dog? _______
   Round this number to the nearest tenth. _______

3. What decimal hundredth is marked by the cat? _______
   Round this number to the nearest tenth. _______

4. On the number line, draw arrows to mark 78 hundredths and to mark 9 tenths.

Round to the nearest tenth.

5. 0.31 _______
6. 0.93 _______
7. 0.57 _______
8. 0.25 _______
9. 1.19 _______
10. 5.08 _______

Round to the nearest whole number.

11. 6.7 _______
12. 5.3 _______
13. 14.5 _______
14. 29.7 _______
15. 8.39 _______
16. 3.07 _______

17. What is $13.92 rounded to the nearest dollar? _______
18. What is $0.43 rounded to the nearest tenth of a dollar, or dime? _______
Solve the problems.

1. Mrs. Kim ordered 2 sub sandwiches. One was 12 inches long. The other was 16 inches long. She cut each into 4 equal pieces. Which sub had larger pieces? Explain.

2. Mike took 24 cookies to the picnic. Alma took 12 cookies to the picnic. At the end of the picnic, Mike had $\frac{1}{4}$ of his cookies left and Alma had $\frac{1}{3}$ of her cookies left. Who had more cookies left? Explain.

3. The math club has 14 members. The reading club has 18 members. Each club sent $\frac{1}{2}$ of its members to the monthly school meeting. Which club sent fewer members to the meeting? Explain.

4. Mr. Kane served $\frac{5}{8}$ of an apple pie and $\frac{5}{8}$ of a berry pie. The berry pie was larger than the apple pie. Which pie had a greater amount left? Explain.
Write these amounts as decimal numbers.

1. 4 tenths _______  
2. 72 thousandths _______  
3. 9 hundredths _______
4. 8 cents _______
5. \(\frac{68}{100}_______\)  
6. \(9\frac{4}{10}_______\)
7. \(\frac{16}{1000}_______\)  
8. \(6\frac{7}{100}_______\)
9. 3 thousandths _______

Circle the number that does not have the same value as the others.

10. 0.95  0.950  0.905  0.95  
11. 0.2  0.20  \(\frac{2}{10}\)  0.02
12. 0.730  0.703  0.73  0.73  
13. 1.6  1.60  1.06  1.6000
14. 0.59  5.90  0.590  \(\frac{59}{100}\)  
15. 0.08  0.008  0.08  0.080

Insert < or > to make a true statement.

16. 0.67  \(\bigcirc\)  0.7  
17. 0.315  \(\bigcirc\)  0.42  
18. 0.58  \(\bigcirc\)  0.5  
19. 8.3  \(\bigcirc\)  0.83
20. 0.921  \(\bigcirc\)  0.912  
21. 2.3  \(\bigcirc\)  0.84  
22. 0.1  \(\bigcirc\)  0.01  
23. 0.74  \(\bigcirc\)  0.714

The table shows how far four students jumped in the long jump contest. Use the table to answer the questions.

<table>
<thead>
<tr>
<th>Name</th>
<th>Length of Jump</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joshua</td>
<td>1.610 meters</td>
</tr>
<tr>
<td>Amanda</td>
<td>1.592 meters</td>
</tr>
<tr>
<td>Hester</td>
<td>1.7 meters</td>
</tr>
<tr>
<td>Miguel</td>
<td>1.61 meters</td>
</tr>
</tbody>
</table>

24. Whose jump was longest? _________
25. Whose jump was shortest? _________
26. Which two students jumped the same distance? _________________________
Add or subtract.

1. \( \frac{2}{6} + \frac{3}{6} = \)
2. \( \frac{8}{9} - \frac{4}{9} = \)
3. \( \frac{7}{8} - \frac{5}{8} = \)
4. \( \frac{4}{7} + \frac{1}{7} = \)
5. \( \frac{9}{10} - \frac{3}{10} = \)
6. \( \frac{10}{12} - \frac{6}{12} = \)
7. \( \frac{2}{5} + \frac{2}{5} = \)
8. \( \frac{3}{4} - \frac{2}{4} = \)
9. \( \frac{6}{11} - \frac{4}{11} = \)

Solve.

10. Lori ate \( \frac{1}{4} \) of her sandwich at lunch. She ate \( \frac{2}{4} \) more sandwich for a snack later on. How much of her sandwich is left?

11. Felix cut a mushroom pizza into eightths. Jenny ate \( \frac{2}{8} \) of the pizza. Felix ate \( \frac{3}{8} \) of the pizza. What fraction of the pizza was left?

12. Ben used a \( \frac{1}{3} \)-foot piece of string for an art project. Then he decided to use another \( \frac{1}{3} \)-foot piece of string. What was the total length of the strings Ben used?

13. Missy made some cupcakes. She gave \( \frac{4}{9} \) of the cupcakes to her sisters. She gave \( \frac{1}{9} \) of the cupcakes to her brother. What fraction of the cupcakes did she have left?

Name each figure. Then tell the name of the shapes of its bases and faces.

14.

15.
Solve.

1. Look at the centimeter ruler below. Round the length of the string to the nearest centimeter. _______________

   ![Image of a centimeter ruler]

The table to the right shows the rainfall in 3 towns last month.

2. Which town had the most rain? _______________

3. Which town had the least rain? _______________

The table to the right shows the rainfall in 3 towns last month.

<table>
<thead>
<tr>
<th>Town</th>
<th>Rainfall in Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beanville</td>
<td>0.6</td>
</tr>
<tr>
<td>Cloverdale</td>
<td>0.131</td>
</tr>
<tr>
<td>Wheatburg</td>
<td>0.82</td>
</tr>
</tbody>
</table>

Follow the directions for each number. Start with the original number each time.

4. Make the number a tenth more. _______________

4.528

5. Make the number 0.01 less. _______________

6. Increase the digit in the ones place by 1. _______________

7. Decrease the digit in the thousandths place by 1. _______________

65.703

8. Make the number 10 more. _______________

8. Make the number 0.1 less. _______________

9. Make the number 0.1 less. _______________

10. Increase the digit in the hundredths place by 1. _______________

11. Decrease the digit in the thousandths place by 1. _______________
Change each mixed number to an improper fraction.

1. \(2 \frac{3}{6}\)  
2. \(1 \frac{9}{10}\)  
3. \(7 \frac{8}{9}\)  
4. \(4 \frac{5}{7}\)  
5. \(6 \frac{2}{4}\)  
6. \(8 \frac{4}{5}\)  
7. \(3 \frac{5}{8}\)  
8. \(9 \frac{1}{3}\)

Change each improper fraction to a mixed number.

9. \(\frac{15}{2}\)  
10. \(\frac{38}{5}\)  
11. \(\frac{27}{4}\)  
12. \(\frac{36}{8}\)  
13. \(\frac{14}{3}\)  
14. \(\frac{55}{6}\)  
15. \(\frac{47}{9}\)  
16. \(\frac{65}{7}\)

Solve.

17. There were \(4 \frac{5}{8}\) pies in the case at the diner. Then 30 people each had \(\frac{1}{8}\) of a pie. What fraction of a pie was left?

18. Each person in a family of 8 people had \(\frac{2}{6}\) of a sub. What mixed number tells how many subs the family ate in all?

Name the pyramid that would be made from the net when it is folded. Then name the shapes of the base and the faces.

19. 

20. 


Add. Watch the place values.

1. $37 + 21¢ = _____  
2. 0.4 + 0.05 = _____  
3. 73 + 0.32 = _____  

4. $52.07 + 83¢ = _____  
5. 0.56 + 0.19 = _____  
6. 97.2 + 0.361 = _____  

7. 18¢ + $6.29 = _____  
8. 0.003 + 0.06 = _____  
9. 83.27 + 4.5 = _____  

10. Which sum is incorrect? Explain why.
    A. 45 + 0.38 = 45.38  
    B. 67¢ + $54 = $54.67  
    C. 0.14 + 0.5 = 0.19  

Solve.

11. Yesterday, the snow was 4.68 centimeters deep. Last night 0.3 centimeters of new snow fell. How deep is the snow now?  

12. Dana walks 0.4 miles to the bus stop and then rides the bus 3.05 miles to school. How far away is Dana’s school?  

13. Cowboy Jones is 1.95 meters tall. His cowboy hat makes him 0.09 meters taller. How tall is Cowboy Jones when he is wearing his hat?
20. Annie had 2 oranges. She cut each orange into sixths. She used 8 sixths to make a fruit salad. What fraction of an orange was left?

21. Some friends bought 3 pizzas. Each pizza was cut into eighths. The friends ate 18 slices. What fraction of a pizza was left?
Find the difference. Use a separate sheet of paper if necessary.

1. $59 - 14\,\text{¢} = \underline{\hspace{1cm}}$  
2. $0.4 - 0.07 = \underline{\hspace{1cm}}$  
3. $26 - 0.36 = \underline{\hspace{1cm}}$

4. $42.06 - 23\,\text{¢} = \underline{\hspace{1cm}}$  
5. $0.95 - 0.38 = \underline{\hspace{1cm}}$  
6. $67 - 0.49 = \underline{\hspace{1cm}}$

7. $0.87 - 0.19 = \underline{\hspace{1cm}}$  
8. $0.16 - 0.004 = \underline{\hspace{1cm}}$  
9. $52.17 - 1.09 = \underline{\hspace{1cm}}$

Solve.

10. A scientist found two dinosaur tracks. One was 70.36 centimeters long, and the other was 91.405 centimeters long. What is the difference in the sizes of the tracks?

11. A race is 5.65 kilometers long. Paolo has run 3.48 kilometers so far. How much farther does he need to run?

12. A caterpillar was 0.452 centimeters long when it hatched. Since then, it has grown 0.5 centimeters. How long is the caterpillar now?

13. A recipe calls for 0.85 pounds of dark chocolate and 0.7 pounds of white chocolate. How much chocolate is needed altogether?

14. Carla’s pet rat weighs 0.905 pounds, and Jenny’s weighs 0.78 pounds. Which rat is smaller? How much smaller?
Add or subtract.

1. \(\frac{10}{11} - \frac{2}{3} = \)
2. \(\frac{9}{6} + \frac{7}{3} = \)
3. \(1\frac{3}{8} - \frac{3}{5} = \)

Subtract the smaller number from the larger number.

4. \(1\frac{5}{6} - \frac{8}{6} = \)
5. \(\frac{15}{9} - 2\frac{3}{9} = \)
6. \(6\frac{7}{8} - 7\frac{5}{8} = \)

Solve.

7. Karina is walking a trail that is \(1\frac{1}{3}\) miles long. So far, she has walked \(\frac{1}{6}\) of a mile. How far does she still have left to walk?

8. Terrell rode his bicycle \(\frac{3}{5}\) of a mile to the store. Then he rode \(\frac{2}{4}\) of a mile to school. How many miles did he ride in all?

Name the prism that has each shape as its bases.

9. 

10. 

Show your work.
Estimate the answers by rounding to the nearest tenth.

1. 0.49 – 0.17  About _____  2. 0.91 – 0.07  About _____
3. 0.32 + 0.21  About _____  4. 0.65 – 0.38  About _____
5. 0.87 – 0.34  About _____  6. 0.18 + 0.04  About _____

Estimate the answers by rounding to the nearest whole number.

7. 3.49 + 5.17  About _____  8. 8.91 – 0.97  About _____
9. 9.32 – 3.81  About _____  10. 5.65 + 1.98  About _____
11. 11.87 + 1.39 About _____  12. 24.18 – 3.14 About _____

Use estimation to answer the following questions.

13. Ernesto wants to buy a sleeping bag for $79.89 and a flashlight for $9.16. He has $89.00. Does he have enough money? Explain.

14. Mr. Reyes has $2.50 in his pocket. He wants to buy a toothbrush for $0.95 and a bar of soap for $1.49. Does he have enough money? Explain.

Estimate each answer by rounding to the nearest tenth. Then find the exact answer.

15. 0.656 – 0.37  Estimated Answer _____  Exact Answer _____
16. 0.09 + 0.801 Estimated Answer _____  Exact Answer _____
17. 0.79 – 0.310 Estimated Answer _____  Exact Answer _____
Divide.

1. \(5\overline{196}\) \hspace{1cm} 2. \(3\overline{83}\) \hspace{1cm} 3. \(4\overline{91}\)

4. \(6\overline{75}\) \hspace{1cm} 5. \(7\overline{95}\) \hspace{1cm} 6. \(9\overline{88}\)

7. \(4\overline{313}\) \hspace{1cm} 8. \(8\overline{975}\) \hspace{1cm} 9. \(2\overline{517}\)

10. \(3\overline{265}\) \hspace{1cm} 11. \(6\overline{164}\) \hspace{1cm} 12. \(5\overline{359}\)

13. \(8\overline{2,198}\) \hspace{1cm} 14. \(7\overline{1,713}\) \hspace{1cm} 15. \(9\overline{3,212}\)

Solve.

16. Milton packs milk bottles into crates. Each crate has 4 rows and can fit 7 bottles in each row. If Milton has 224 bottles, how many rows can he fill?

17. Selena wants to make 8 necklaces with the same number of beads in each necklace. If she has 584 beads, what is the greatest number of beads she can use for each necklace?

Find the perimeter and area of each triangle.

18. \(9\text{ ft}\) \hspace{1cm} \(15\text{ ft}\) \hspace{1cm} \(12\text{ ft}\)

- Perimeter: __________
- Area: __________

19. \(13\text{ cm}\) \hspace{1cm} \(10\text{ cm}\) \hspace{1cm} \(12\text{ cm}\)

- Perimeter: __________
- Area: __________
The Scaly Creatures Reptile Park has animals such as turtles, snakes, alligators, and crocodiles. Answer the questions about the reptiles.

1. Last year, the largest alligator, Alex, was 3.9 meters long. This year Alex is 4.15 meters long. How much did Alex grow in one year?

2. The turtles are fed 12.75 pounds of food in the morning and 10.5 pounds in the evening. How much food do they get each day?

3. Giant tortoises can grow to be 1.4 meters long. Shelley the tortoise is 0.65 meters long. How much longer could she get?

4. Crocodiles can live to be 75 years old. The oldest crocodile in the park, Olga, is now 63.5 years old. How much longer could she live?

5. One of the rattlesnakes was 5.85 centimeters long when she hatched last year. During the year, she grew 7.65 centimeters. How long is she now?

6. The largest python at the park weighs 31.72 pounds. The smallest python weighs 9.08 pounds. What is the difference in their weights?

Subtract.

7. $46 - 19¢ = _____  
8. 0.5 - 0.07 = _____  
9. 36 - 0.16 = _____

10. $52.09 - 36¢ = _____  
11. 0.85 - 0.58 = _____  
12. 97.2 - 0.24 = _____

13. 0.67 - 0.19 = _____  
14. 0.15 - 0.003 = _____  
15. 42.18 - 1.07 = _____
Divide. Write the quotient with a remainder.

1. \(5\overline{)4,793}\)  
2. \(3\overline{)2,351}\)  
3. \(4\overline{)9,083}\)

4. \(7\overline{)6,204}\)  
5. \(9\overline{)9,918}\)  
6. \(6\overline{)8,795}\)

Divide.

7. \(2\overline{)56.18}\)  
8. \(7\overline{)90.02}\)  
9. \(8\overline{)25.36}\)

Find the perimeter and area of each figure.

10.  

   - Perimeter: 
   - Area: 

11.  

   - Perimeter: 
   - Area:
Write the measurement marked on each ruler.

1. [Image of a ruler with a measurement mark]
   
   2. [Image of a ruler with a measurement mark]
   
   3. [Image of a ruler with a measurement mark]

Measure each line segment to the nearest \( \frac{1}{8} \) inch.

4. [Blank line segment]

5. [Blank line segment]

6. [Blank line segment]

7. [Blank line segment]

Draw a line segment with the length shown.

8. \( 4\frac{7}{8} \) inches

9. \( 2\frac{3}{8} \) inches

10. \( 3\frac{1}{2} \) inches
Complete each equation.

1. \( \frac{2}{5} + \_ = \frac{5}{5} = 1 \)
2. \( \_ + \frac{7}{12} = \frac{12}{12} = 1 \)
3. \( \frac{8}{10} + \_ = \frac{10}{10} = 1 \)
4. \( \_ + \frac{4}{6} = \frac{6}{6} = 1 \)
5. \( \frac{5}{9} + \_ = \frac{9}{9} = 1 \)
6. \( \_ + \frac{3}{4} = \frac{4}{4} = 1 \)
7. \( \frac{6}{7} + \_ = \frac{7}{7} = 1 \)
8. \( \_ + \frac{1}{8} = \frac{8}{8} = 1 \)

Name each plane figure.

9. 
10. 
11. 

Name each solid.

12. 
13. 
14. 

Solve.

15. Amanda checked out 7 books with 64 pages each. She also checked out 4 books with 89 pages each. How many total pages is Amanda going to read?
Solve.

1. Denzel's father installed carpet tiles in the family room. The room is 12 feet by 16 feet. Each tile measured 1 square foot. How many tiles did he use?

2. Brady built a doghouse for his new puppy. The inside of the doghouse measured 2 feet wide, 3 feet deep, and 4 feet tall. How many cubic feet of space are inside the doghouse?

3. A play area measures 20 yards long and 15 yards wide. It costs $2.00 per square yard to cover the area with wood chips. What is the cost of new wood chips for the entire play area?

4. Awan keeps his art supplies in a special box. The box is 18 inches long, 9 inches wide, and 6 inches deep. How many cubic inches of space are inside the box?

Solve each problem about objects in your home.

5. Measure the area of an object at home. Name the object and the unit or units you used to measure its area.

6. Measure the volume of an object at home. Name the object and the unit or units you used to measure its volume.
Write a > or < to compare the fractions.

1. \( \frac{3}{6} \) _____ \( \frac{3}{5} \)
2. \( \frac{6}{10} \) _____ \( \frac{7}{10} \)
3. \( \frac{2}{3} \) _____ \( \frac{2}{4} \)

4. \( \frac{4}{7} \) _____ \( \frac{3}{7} \)
5. \( \frac{3}{9} \) _____ \( \frac{3}{8} \)
6. \( \frac{10}{15} \) _____ \( \frac{9}{15} \)

Add or subtract.

7. \( \frac{2}{9} + \frac{5}{9} = \) _____
8. \( \frac{2}{5} + 3\frac{1}{5} = \) _____
9. \( 1\frac{4}{10} - \frac{9}{10} = \) _____

10. \( 2\frac{3}{4} + \frac{3}{8} = \) _____
11. \( \frac{3}{2} + \frac{2}{5} = \) _____
12. \( 5\frac{1}{6} - 1\frac{2}{3} = \) _____

How many cubes can you see in each stack?
How many cubes can you not see?
How many cubes total are in each stack?

13. 
____ cubes can be seen
____ cubes cannot be seen
____ cubes total

14. 
____ cubes can be seen
____ cube cannot be seen
____ cubes total

15. 
____ cubes can be seen
____ cubes cannot be seen
____ cubes total

16. Inez bought 3 pairs of socks for $2.35 each and a hat for $6.95. She paid with a $20 bill. How much change should she receive?

17. Ali received $5.65 change from a $20 bill. He bought a present for $11.95 and a card. What was the cost of the card?
Solve. Remember: 1 pound = 16 ounces.

1. A female rabbit gave birth to 6 babies. Each baby weighed 4 ounces. How many ounces did the babies weigh in all?

2. One watermelon weighs 8 pounds 2 ounces. Another weighs 7 pounds 12 ounces. Which watermelon is heavier? By how many ounces?

3. A box of cereal weighs 21 ounces. Does it weigh more or less than 1 pound? How much more or less?

4. At the beginning of the school year, Jared’s dog weighed $46\frac{1}{2}$ pounds. At the end of the school year, it weighed 50 pounds. How much weight did Jared’s dog gain during that time? How many ounces is this?

5. Claire has 8 books. Each book weighs 8 ounces. How many pounds do her books weigh altogether?

6. A bread recipe calls for $6\frac{1}{4}$ pounds of flour. How many batches of bread can a baker make with 25 pounds of flour?
Remembering

Solve on a separate sheet of paper.

1. $5\overline{)93}$  
2. $9\overline{)513}$  
3. $7\overline{)764}$  
4. $8\overline{)7,235}$

5. $4\overline{)54}$  
6. $6\overline{)624}$  
7. $4\overline{)861}$  
8. $6\overline{)9,387}$

9. $7\overline{)75}$  
10. $2\overline{)734}$  
11. $3\overline{)970}$  
12. $2\overline{)5,678}$

13. $3\overline{)66}$  
14. $8\overline{)538}$  
15. $5\overline{)477}$  
16. $9\overline{)7,805}$

17. Check two of your divisions by multiplying and adding the remainder.

Is each figure a net for a cube? Write yes or no.

18.  
19.  
20.  

Solve.

21. There are 6 pennies, 5 dimes, and 4 quarters in Josela’s pocket. What fraction of the coins are pennies?

22. Luis and Sasha have identical notebooks. Luis’s notebook is $\frac{3}{4}$ full. Sasha’s notebook is $\frac{5}{8}$ full. Whose notebook has less space remaining?

Show your work.
Percy and Grace are making a birthday cake for their father. Their only measuring container holds $\frac{1}{4}$ cup.

**Solve.**

1. They need 2 cups of flour. How many $\frac{1}{4}$ cups should they measure?

   ____________________________________________

2. They need $1\frac{1}{2}$ cups of sugar. How many $\frac{1}{4}$ cups should they measure?

   ____________________________________________

3. The recipe calls for $\frac{3}{4}$ cup of cocoa. How many $\frac{1}{4}$ cups of cocoa should they measure?

   ____________________________________________

4. The recipe calls for $\frac{1}{8}$ cup of oil. How can they use their $\frac{1}{4}$ cup to measure the oil they need?

   ____________________________________________

5. Write and solve your own measurement word problem that uses fractions.

   ____________________________________________

   ____________________________________________

   ____________________________________________

   ____________________________________________
Solve on a separate sheet of paper.

1. $37,619 + 24,850$
2. $867,027 - 9,436$
3. $630,631 - 9,747$
4. $2,604,925 + 3,687$
5. $437,025 - 18,094$
6. $320,705 - 56,923$
7. $17,491 + 820,623$
8. $7,586,742 - 87,604$
9. $746,502 - 75,575$

Name each triangle by letters, angles, and sides.

10. \[ \triangle ABC \]
11. \[ \triangle JKL \]
12. \[ \triangle PQR \]

Make a sketch to match the description.

13. intersecting lines
14. parallel lines
15. perpendicular lines

Solve.

16. In how many different ways can Dwayne, Peter, and Marta stand in a line?

17. Five teams are competing in a basketball tournament. Each team must play one game with every team in the tournament. How many games altogether will be played in the tournament?
Solve.

1. Sancho practices his trumpet every day from quarter to 5 to quarter past 5. How many minutes a day does he practice? How many hours?

2. Ella and her brother are going to a movie. It starts at quarter past 5 and lasts $2\frac{1}{4}$ hours. At what time will the movie end?

3. Jenn has soccer practice for $\frac{3}{4}$ of an hour on Tuesdays and Thursdays, and a game that lasts for about 1 hour on Saturdays. How many hours does she spend at soccer each week?

4. Before a storm, the outside temperature was 65°F. The storm caused the temperature to drop by 21°F. What was the outside temperature after the storm?

5. Write and solve your own word problem about time or temperature.
Solve on a separate sheet of paper.

1. $6 \times 80$
2. $3 \times 139$
3. $37 \times 18$
4. $7 \times 900$
5. $5 \times 228$
6. $25 \times 25$
7. $3 \times 4,000$
8. $31 \times 48$
9. $46 \times 85$
10. $7 \times 467$
11. $45 \times 14$
12. $45 \times 50$

Find the surface area of each prism.

13. \[
\text{3 in.} \\
\text{2 in.} \\
\text{9 in.}
\]

14. \[
\text{3 m} \\
\text{4 m} \\
\text{6 m}
\]

Solve.

15. In Lian’s collection of 42 stamps, $\frac{2}{3}$ of the stamps are from foreign countries. In Mark’s collection of 42 stamps, $\frac{3}{7}$ of the stamps are from foreign countries. Who has collected the greater number of foreign stamps?

16. Laura is $\frac{1}{7}$ as old as her grandfather. If her grandfather is 63 years old, how much older is her grandfather than Laura?