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**Benchmark Numbers**

**Vocabulary**

Fill in the blank.

1. A ____________ is a known number of things that helps you understand the size or amount of a different number of things.

Use the benchmark to decide which is the more reasonable number.

2. Pennies in the jar

500 or 5,000

3. Houses in the neighborhood

100 or 1,000

4. Height of a shrub

20 inches or 200 inches

5. Books on a shelf

200 or 2,000

**Mixed Review**

6. 3 + 8

7. 9 + 5

8. 16 + 12

9. 24 + 51

10. 45 + 22

11. 31 + 18

12. 44 + 29

13. 35 − 17

14. 35 − 27

15. 59 − 31

16. 12 + 11

17. 19 + 49

18. 62 + 21
Understand Place Value

Write the value of the digit 3 in each number.

1. 4,389  
2. 3,270  
3. 56,223  
4. 78,530

Compare the digits to find the value of the change.

5. 67,335 to 47,335  
6. 45,289 to 45,889  
7. 48,367 to 42,367

Change the value of the number by the given amount.

8. 2,305 decreased by 200  
9. 72,358 increased by 6,000

10. 46,883 decreased by 40  
11. 29,402 increased by 40,000

Complete.

12. 56,891 = 50,000 +  
     + 800 + 90 + 1

13. 6,408 = 80,000 +  
     + 6,000 + 400 + 8

14. 42,076 = 40,000 + 2,000 +  
     + 6

15. 37,905 = ________ + 7,000 +  
     + 900 + 5

Mixed Review

16. 420  
    307  
    + 21

17. 818  
    128  
    + 66

18. 77  
    20  
    + 18

19. 213  
    501  
    + 190

20. 633  
    409  
    + 7

21. 100  
    − 22

22. 87  
    − 24

23. 98  
    − 69

24. 53  
    − 8

25. 110  
    − 56
Place Value Through Hundred Thousands

Vocabulary

Write the correct letter that describes each number.

1. 340,548  
   a. expanded form
2. 300,000 + 40,000 + 500 + 40 + 8  
   b. word form
3. three hundred forty thousand, five hundred forty-eight  
   c. standard form

Write each number in two other forms.

4. 408,377
5. 20,000 + 600 + 30 + 2

__________________________  
__________________________
__________________________  
__________________________

6. six hundred fourteen thousand, two hundred thirty-nine
7. 892,200

__________________________  
__________________________
__________________________  
__________________________

Complete.

8. 35,309 = thirty-five __________, three hundred __________ = 30,000 + __________ + 300 + 9
9. 60,000 + 4,000 + __________ + 20 + 5 = __________ thousand, eight hundred twenty-five = ___________4,8__________5

Write the value of the underlined digit.

10. 569,394 ________  
11. 495,294 ________  
12. 384,294 ________

Mixed Review

13. 39,338 – ______ = 34,338  
14. 36 + 88 = ______  
15. 28 – ______ = 19
Place Value Through Millions

Vocabulary

1. The period after thousands is ________________.

Write the value of the bold digit.

2. 45,595,445
3. 3,502,305
4. 735,495,305

Write each number in word form.

5. 6,393,203
6. 492,203,200

Use place value to find each missing number.

7. 32,615,394; 32,715,394; __________; 32,915,394
8. 5,398,394; 6,398,394; __________; 8,398,394

9. Write the standard form of the number which is 1,000,000 less than forty-five million, three hundred twelve thousand, eight hundred.

10. Write 312,393,205 in expanded form.

Mixed Review

Complete.

11. 70,000 + 8,000 + 40 + 9
12. 100,000 + 60,000 + 900 + 3

13. 690 – ______ = 422
14. ______ + 222 = 879
Problem Solving Skill

Use a Graph

The United States Department of Agriculture has named 5 food groups and recommends a maximum number of daily servings from each group.

For 1–8, use the graph.

1. What is the maximum recommended number of meat servings?

2. Which two food groups have the same number of recommended servings?

3. Of which food groups can you eat more than four servings per day?

4. Of which food group can you eat the most servings?

5. Today, Erika ate 5 servings of meat. How would you represent this on the pictograph?

6. What is the total number of fruit and vegetable servings recommended?

7. Rolanda has eaten 7 servings from the bread and cereal group today. How many more servings should she have?

8. At breakfast, Jamika’s banana counted as 2 fruit servings. How many more fruit servings should she have today?

Mixed Review

What is the value of the digit 7?

9. 1,762
10. 7,900,631
11. 44,072,461
12. 817,535
Compare Numbers

Write the greater number.

1. 3,568 or 3,658
2. 8,468 or 8,482
3. 35,689 or 34,690

4. 8,948 or 21,385
5. 389,584 or 388,499
6. 3,843,982 or 3,847,302

7. 25,679 or 22,329
8. 3,457,822 or 3,458,835
9. 9,248,355 or 924,835

Compare. Write <, >, or = in each .

10. 3,489 〇 3,578
   11. 25,899 〇 25,890
   12. 75,673 〇 75,673
   13. 3,142,355 〇 314,235

Find all of the digits that can replace each □.

15. 6□7,348 < 647,348
   16. 35,468,245 < 35,468,□45

Mixed Review

17. Write 8,000,000 + 30,000 + 5,000 + 400 + 30 + 2 in standard form.

18. Write 32,883 in word form.

19. What digit is in the ten thousands place in 32,456,922?

20. Write the value of the digit 8 in the number 385,722.

21. Round 7,899 to the nearest hundred.

22. Round 42,616 to the nearest ten.
Order Numbers

Write the numbers in order from least to greatest.

1. 15,867; 15,394; 15,948; 15,493
2. 65,447; 65,743; 65,446; 65,395

3. 249,330; 247,449; 248,390
4. 3,456,490; 3,458,395; 3,359,498

Write the numbers in order from greatest to least.

5. 45,387; 48,339; 47,110
6. 252,484; 259,793; 258,932

7. 2,783,859; 2,788,394; 2,937,383
8. 360,839; 45,395; 366,395

9. 4,671,302; 4,716,230; 4,716,200
10. 740,516; 74,506; 740,605

Name all of the digits that can replace each □.

11. 4,599 < 4,63□ < 4,634
12. 3,554,684 > 3,□69,304 > 3,184,394

Mixed Review

13. \[
\begin{array}{c}
25 \\
+ 42
\end{array}
\]

14. \[
\begin{array}{c}
99 \\
+ 86
\end{array}
\]

15. \[
\begin{array}{c}
95¢ \\
- 43¢
\end{array}
\]

16. \[
\begin{array}{c}
78¢ \\
- 24¢
\end{array}
\]

17. \[
\begin{array}{c}
13 \\
+ 26
\end{array}
\]

18. Stacey jogged for 25 minutes on Saturday and 38 minutes on Tuesday. How much longer did she jog on Tuesday than on Saturday?

19. Rolanda completed 12 homework problems before dinner and 18 after dinner. How many homework problems did she complete altogether?
Problem Solving Strategy

Make a Table

Make a table to solve.

<table>
<thead>
<tr>
<th>Desert</th>
<th>Continent</th>
<th>Area (sq mi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Sahara Desert in Africa has an area of 3,500,000 square miles.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Simpson Desert in Australia has an area of 56,000 square miles.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In North America, the Mojave Desert has an area of 15,000 square miles; and the Kalahari Desert in Africa has an area of 275,000 square miles.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Which desert has the greatest area?

2. Which two deserts are located on the same continent?

3. Which deserts have an area of less than 100,000 square miles?

4. On which continent is the desert with the least area located?

Mixed Review

5. Write $3,000,000 + 20,000 + 5,000 + 300 + 70 + 2$ in standard form.

6. Write the numbers in order from least to greatest: 254,879; 2,254,920; 1,678,305; 353,502.

Compare. Write $<$, $>$, or $=$ in the $\bigcirc$.

7. 354,992 $\bigcirc$ 288,492

8. 7,394,398 $\bigcirc$ 7,394,398

9. 394,234 $\bigcirc$ 3,294,394

10. 6,187,249 $\bigcirc$ 61,872,490

11. $9,421,720 - 6,198,135$ $\bigcirc$ 210,076 + 935,811

12. 8,176,553 $\bigcirc$ 30,602 $\bigcirc$ 172,442

13. 172,435 $\bigcirc$ 935,811 $\bigcirc$ 6,198,135

14. $786 - 421 = \_\_\_\_\_\_\_$

16. $2,779 - 460 = \_\_\_\_\_\_$
Round Numbers
Round each number to the nearest thousand.

1. 5,339
2. 9,895
3. 75,367
4. 22,022
5. 5,600,679
6. 1,354,029
7. 283,966
8. 636,592

Round each number to the place of the underlined digit.

9. 6,333
10. 837
11. 8,021
12. 45,935
13. 356,882
14. 502,446
15. 24,546
16. 888,044
17. 47,164
18. 1,999,444
19. 1,366,901
20. 9,203,774

Mixed Review

21. 9 + 4 + 5 = ____  
22. 27 + 33 + 59 = ____  
23. 48 − 29 = ____  
24. 6 × 2  
25. 8 × 5  
26. 9 × 8  
27. 7 × 7  

28. What is the value of the digit 7 in 478,394?  
29. What is the value of the digit 5 in 5,394,332?
**Estimate Sums and Differences**

Estimate the sum or difference.

1. \[ 7,379 \quad + \quad 5,496 \]
   \[ = 12,875 \]

2. \[ $479,150 \quad - \quad $371,271 \]
   \[ = $107,879 \]

3. \[ 612,797 \quad + \quad 811,035 \]
   \[ = 1,423,832 \]

4. \[ 638,113 \quad - \quad 415,327 \]
   \[ = 222,786 \]

5. \[ 5,324 \quad + \quad 2,468 \]
   \[ = 7,792 \]

6. \[ $6,372 \quad - \quad $4,047 \]
   \[ = $2,325 \]

7. \[ 721,379 \quad + \quad 15,496 \]
   \[ = 736,875 \]

8. \[ $3,016 \quad - \quad $2,849 \]
   \[ = $167 \]

9. \[ 8,492 \quad + \quad 1,346 \]
   \[ = 9,838 \]

10. \[ 846,134 \quad - \quad 794,134 \]
    \[ = 52,000 \]

11. \[ 461,137 \quad + \quad 91,214 \]
    \[ = 552,351 \]

12. \[ $9,263 \quad - \quad $489 \]
    \[ = $8,774 \]

Write the missing digit for the estimated sum or difference.

13. \[ \square \underline{46,164} \quad - \quad \square \underline{471,467} \]
    \[ = \underline{100,000} \]

14. \[ 23,497 \quad + \quad \square \underline{2,464} \]
    \[ = \underline{80,000} \]

15. \[ \square \underline{631,431} \quad - \quad \square \underline{6,497} \]
    \[ = \underline{520,000} \]

16. \[ \square \underline{79,431} \quad + \quad \square \underline{231,587} \]
    \[ = \underline{400,000} \]

17. \[ \square \underline{21,863} \quad - \quad \square \underline{135,632} \]
    \[ = \underline{300,000} \]

18. \[ 54,961 \quad + \quad \square \underline{5,246} \]
    \[ = \underline{70,000} \]

19. \[ \square \underline{45,239} \quad - \quad \square \underline{32,878} \]
    \[ = \underline{170,000} \]

20. \[ \square \underline{58,138} \quad + \quad \square \underline{3,245} \]
    \[ = \underline{90,000} \]

**Mixed Review**

21. \[ 27 \quad + \quad 49 \]
    \[ = 76 \]

22. \[ 31 \quad + \quad 64 \]
    \[ = 95 \]

23. \[ 92 \quad + \quad 11 \]
    \[ = 103 \]

24. \[ 87 \quad + \quad 34 \]
    \[ = 121 \]

25. \[ 16 \quad + \quad 77 \]
    \[ = 93 \]
Use Mental Math Strategies

For 1–4, use the *break apart* strategy.

1. \(49 + 16\)  
   
2. \(73 - 43\)  
   
3. \(46 - 12\)  
   
4. \(91 - 63\)  

For 5–8, use the *make a ten* strategy.

5. \(94 - 56\)  
   
6. \(88 + 31\)  
   
7. \(72 - 39\)  
   
8. \(84 + 46\)  

For 9–28, add or subtract mentally. Tell the strategy you used.

9. \(78 + 46\)  
   
10. \(61 - 16\)  
    
11. \(40 + 24\)  
    
12. \(37 - 19\)  
    
13. \(64 - 28\)  
    
14. \(45 + 48\)  
    
15. \(58 + 32\)  
    
16. \(67 + 43\)  
    
17. \(82 - 53\)  
    
18. \(66 - 27\)  
    
19. \(53 - 23\)  
    
20. \(75 + 61\)  
    
21. \(51 + 38\)  
    
22. \(49 + 21\)  
    
23. \(82 - 46\)  
    
24. \(49 - 31\)  
    
25. \(83 + 72\)  
    
26. \(28 - 19\)  
    
27. \(93 - 38\)  
    
28. \(26 + 23\)  

Mixed Review

Round each number to the place given.

29. \(568,303\); ten thousand  
   30. \(35,405,203\); million  
   31. \(596,305,003\); ten million  

Write the numbers in order from *least* to *greatest*.

32. \(568,394; 395,205; 562,304\)  
   
33. \(458,404,305; 451,402,305; 455,305,203\)  

Practice PW11
Add and Subtract 4-Digit Numbers

Find the sum or difference. Estimate to check.

1. \(7,503 \quad 2. \quad 2,178 \quad 3. \quad 5,527 \quad 4. \quad 3,092\)
   \[-3,598 \quad +3,703 \quad 2,978 \quad 1,574\]
   \[\underline{+1,852} \quad +1,296\]

5. \(1,468 \quad 6. \quad 2,714 \quad 7. \quad 2,131 \quad 8. \quad 2,858\)
   \[+1,090 \quad -1,833 \quad 1,574 \quad +1,670\]
   \[\underline{+1,078}\]

9. \(4,375 + 5,839\)
10. \(4,793 + 2,988 + 8,349\)

11. \(5,707 - 2,596\)
12. \(3,872 + 2,396 + 7,236\)

For 13–20, find the missing digit.

13. \(7,13\square \quad 14. \quad 4,135 \quad 15. \quad 5,6\square7 \quad 16. \quad 6,465\)
   \[-2,467 \quad +\square,252 \quad -3,684 \quad +1,\square68\]
   \[\underline{4,671} \quad 5,387 \quad 1,953 \quad 8,233\]

17. \(5,\square23 \quad 18. \quad 9,465 \quad 19. \quad \square,254 \quad 20. \quad 6,102\)
   \[+1,820 \quad -8,4\square7 \quad +2,849 \quad -4,58\square\]
   \[\underline{7,043} \quad 968 \quad 7,103 \quad 1,517\]

Mixed Review

21. \(10 + 10 + 10 + 10 = \) \(= \) 
22. \(5 + 5 + 5 + 5 + 5 = \) \(= \)

23. \(42 - 21 = \) \(= \) 
24. \(63 - 12 = \) \(= \)
Subtract Across Zeros

Find the difference. Estimate to check.

1. 3,000  2. 4,003  3. 8,005  4. 6,200
   \[ \begin{array}{c}
   - 2,780 \\
   - 2,232 \\
   - 5,004 \\
   - 4,816 \\
   \end{array} \]

5. 5,700  6. 9,100  7. 20,000  8. 10,000
   \[ \begin{array}{c}
   - 1,751 \\
   - 3,759 \\
   - 13,652 \\
   - 2,842 \\
   \end{array} \]

9. 90,000  10. 50,000  11. 20,000  12. 50,075
   \[ \begin{array}{c}
   - 66,536 \\
   - 13,747 \\
   - 15,136 \\
   - 32,097 \\
   \end{array} \]

13. 70,000  14. 50,000  15. 70,006  16. 20,000
   \[ \begin{array}{c}
   - 29,134 \\
   - 19,673 \\
   - 43,989 \\
   - 9,342 \\
   \end{array} \]

Compare. Write <, >, or = in each \( \bigcirc \).

17. 2,006 \( \bigcirc \) 1,513 \( \bigcirc \) 4,075 \( \bigcirc \) 3,209
18. 7,004 \( \bigcirc \) 6,315 \( \bigcirc \) 5,075 \( \bigcirc \) 4,897
19. 8,003 \( \bigcirc \) 3,695 \( \bigcirc \) 7,473 \( \bigcirc \) 2,127
20. 9,200 \( \bigcirc \) 5,861 \( \bigcirc \) 6,153 \( \bigcirc \) 2,814
21. 3,009 \( \bigcirc \) 1,819 \( \bigcirc \) 8,006 \( \bigcirc \) 6,952
22. 4,284 \( \bigcirc \) 2,651 \( \bigcirc \) 9,000 \( \bigcirc \) 7,367

Mixed Review

23. 6,491  24. 9,403  25. 8,662  26. 7,361
   \[ \begin{array}{c}
   + 8,034 \\
   + 199 \\
   + 8,449 \\
   + 9,170 \\
   \end{array} \]

27. 2,649  28. 2,831  29. 1,424  30. \$2,455
   \[ \begin{array}{c}
   + 3,427 \\
   + 6,923 \\
   + 3,462 \\
   + \$3,119 \\
   \end{array} \]
Choose a Method

Find the sum or difference. Estimate to check.

1. 213,742 2. 408,587 3. 248,232 4. 684,004
   + 170,045   − 345,128   + 236,816   − 195,751

5. 661,119 6. 358,379 7. 568,075 8. 468,951
   − 423,384   + 264,175   − 372,097   + 236,175

Compare. Write <, >, or = in each ⭕.

9. 561,257 − 346,052 ⭕ 846,735 − 612,435
10. 257,132 + 153,087 ⭕ 210,735 + 128,307
11. 976,034 − 780,347 ⭕ 461,597 − 265,910

Find the missing digit.

12. 4□6,341
    − 275,132
    ________
13. 682,318
    − 248,1□6
    434,142
14. 945,132
    + 153,□02
    1,098,734

Mixed Review

Estimate the sum or difference.

15. 6,842
    + 2,981
    ________
16. 1,132
    2,074
    + 2,596
    ________
17. 4,008
    − 2,567
    ________
18. 6,921 − 4,071 = _________
19. 3,460 − 782 = _________
20. 8,130 − 3,471 = _________
21. 1,197 − 238 = _________
Problem Solving Skill

Estimate or Find Exact Answers

Tell whether an estimate or an exact answer is needed. Solve.

1. Mitchell bought a hat and a poster. How much change will he get from $20.00?

2. About how much money does someone need to buy one of each item?

3. Tracy wants to buy a t-shirt and a souvenir cup. If she has $15.00, does she have enough? Explain your answer.

4. Maurice had $15.00. He bought a hat. About how much money is left? Is it enough to buy a poster?

5. Tanisha and Shauna want to share the Animal Encyclopedia. Tanisha has $4.75 and Shauna has $3.25. How much more money do they need to buy the book?

6. D’Angelo wants to buy lunch for $5.75 and buy a poster and souvenir cup. About how much money should he bring to the zoo?

Mixed Review

7. $1.73
   $0.14
   +$0.14

8. $10.00
   $8.59
   −$ 8.59

9. 6,285
   −3,119
   − 3,119

10. 16,212
    +42,080
    +42,080

11. $19.27
    +$11.27
    +$11.27

12. $3,204
    −$2,413
    −$2,413

13. 5,320
    +1,375
    +1,375

14. 9,862
    −7,361
    − 7,361

15. $3,228
    +$4,228
    +$4,228

16. 40,000
    −8,613
    − 8,613
Expressions

Vocabulary

Complete the sentence.

1. ________________ tell which operation to do first.

2. An ________________ is a part of a number sentence that has numbers and operation signs, but no equal sign.

Tell what you would do first.

3. $4 + (8 - 2)$  
4. $(16 - 9) + 3$  
5. $28 + (5 - 2)$

Find the value of each expression.

6. $5 + (20 - 8)$  
7. $25 - (6 + 11)$  
8. $5 + (45 - 22)$

9. $55 + (22 - 9)$  
10. $(33 - 17) + 14$  
11. $(42 - 33) + 54$

12. $(13 + 15 + 9) - 22$  
13. $45 - (22 + 6 + 3)$  
14. $(3,827 - 1,294) + 6,782$

Mixed Review

15. 2,112 + 5,899  
16. 85,584 - 29,920  
17. 50,008 - 28,251  
18. 3,804 + 9,156

19. 3,333 - 1,797  
20. 47,310 - 19,894  
21. 62,809 - 59,345  
22. 8,637 - 4,737
Use Parentheses

Choose the expression that shows the given value. Write $a$ or $b$.

1. 17
   a. $(15 - 2) + 4$
   b. $15 - (2 + 4)$

2. 10
   a. $16 - (8 + 2)$
   b. $(16 - 8) + 2$

3. 13
   a. $(72 - 18) + 41$
   b. $72 - (18 + 41)$

Show where the parentheses should be placed to make the expression equal to the given value.

4. $100 - 8 + 4; 96$

5. $25 - 4 + 8; 13$

6. $150 - 65 + 13; 72$

7. $56 - 24 - 13; 19$

8. $85 - 25 + 13; 73$

9. $150 - 25 + 37; 88$

Find the number that gives the expression a value of 25.

10. $(15 - 7) + □$
11. $50 - (45 - □)$
12. $(31 + □) - 11$

Mixed Review

13. $19 - 8 = □$
14. $6 + 7 = □$
15. $12 - 9 = □$

16. $11 + 8 = □$
17. $13 - 6 = □$
18. $3 + 9 = □$

Find the missing number.

19. □ - 11 = 89
20. □ + 44 = 74
21. □ + 39 = 106
Match Words and Expressions

Choose the expression that matches the words.

1. There were 12 apples in the fruit bowl. Three were eaten and 6 more were added.
   a. \(12 - (3 + 6)\)  
   b. \((12 - 3) + 6\)

3. The library has 86 biographies. Seven are checked out and 4 are thrown away.
   a. \(86 - (7 + 4)\)  
   b. \((86 - 7) + 4\)

5. There are 16 people at the Swim Club meeting. 5 people leave and 7 more people come.

7. Kari had 10 workbook pages for homework. She did 3 after school and 5 after dinner.

8. Lisa earned $20 doing yardwork. She got a $3 tip and spent $12.

2. Emily had $22. She spent $6 at the mall and then earned $8 more.
   a. \($(22 - 6) + 8\)\)  
   b. \$22 - ($6 + 8)\)

4. Riley had 50¢. She spent 10¢ at the store and played a video game for 25¢.
   a. \((50\text{¢} - 10\text{¢}) + 25\text{¢}\)  
   b. \(50\text{¢} - (10\text{¢} + 25\text{¢})\)

Write an expression for each. Solve.

6. Rob had 52 baseball cards. He gave 5 to Larry and 8 to Evan.

Mixed Review

9. \[
\begin{array}{c}
63,899 \\
- 47,641
\end{array}
\]

10. \[
\begin{array}{c}
389,290 \\
+ 491,911
\end{array}
\]

11. \[
\begin{array}{c}
48,001 \\
- 5,842
\end{array}
\]

12. \[
\begin{array}{c}
493,722 \\
+ 105,069
\end{array}
\]

13. \((27 + 3 + 9) - 15\)

14. \(91 - (42 + 18 + 5)\)

15. \((6,963 - 280) + 7,118\)
Use Variables

Vocabulary

Complete the sentence.

1. A ____________________________ is a letter which stands for a number.
2. A number sentence stating that two amounts are equal is an ____________________________.

Write an expression. Choose a variable for the unknown.

3. Thomas had some money in his bank account. He withdrew $10.

4. There were 16 cans on the shelf. Some more cans were placed on the shelf.

5. At the assembly, there are 83 students and some teachers.

6. There are 8 campers in the pool. Some campers come out to have a snack.

Write an equation for each. Choose a variable for the unknown.

7. There are 26 students in Mrs. Philips’ class. Fifteen are boys. The rest are girls.

8. Arturo has 4 posters. He buys some more posters. Now he has 12 posters.

9. Mr. Tran has 45 students in gym class. Thirty-two are playing volleyball. The rest are jogging.

10. Christine adds 4 coins to her piggy bank. There are now 83 coins.

Mixed Review

Evaluate.

11. 3 + (20 − 12) _____ 12. (5 + 8) − (2 + 7) _____ 13. 25 − (4 + 6) _____
Find a Rule

Find a rule. Write the rule as an equation.

1. 2. 3. 4. 

Use the rule and equation to make an input/output table.

5. Add 8.  

10. Subtract 32.  

Use the rule and equation to make an input/output table.

Mixed Review

Round to the nearest million.

13. 58,405,303  
14. 492,920,302  
15. 289,810,304
Equations

Tell whether the values on both sides of the equation are equal. Write yes or no. Explain.

1. $1 \text{ quarter} = 2 \text{ dimes}$

2. $1 \text{ dime} - 2 \text{ pennies} = 1 \text{ nickel} + 3 \text{ pennies}$

3. $3 \text{ dimes and 2 nickels} = 40 \text{ pennies}$

4. $4 \text{ pennies and 1 quarter} = 3 \text{ dimes}$

Complete to make the equation true.

7. $19 + 3 = \underline{19} + 19$

8. $12 + 4 = 6 + \underline{4}$

9. $2 + 7 + \underline{1} = 10 + 7$

10. $15 + 6 = 7 + 7 + \underline{2}$

11. $22 + 8 + 1 = 25 + \underline{8}$

12. $\underline{15} + 5 = 10 + 3 + 1$

Mixed Review

Find the value of each expression.

13. $(9 + 11) - (4 + 4) = \underline{10}$

14. $72 - (41 + 6) = \underline{25}$

15. $35 + (16 - 3) = \underline{52}$

16. $(49\text{¢} - 22\text{¢}) + 17\text{¢} = \underline{44\text{¢}}$

17. $(15 + 11) - 6 = \underline{20}$

18. $(11 - 6) + 15 = \underline{20}$

19. $(43 - 8) + (7 - 5) = \underline{35}$

20. $(90 - 21) + 17 = \underline{86}$

21. $86 + (33 - 15) = \underline{104}$
Problem Solving Strategy

Make a Model

Make a model and solve.

There is a contest among the different grades at Memorial Elementary school. The contest lasts for two weeks. The first grade to collect 20 bags of recyclables wins a pizza party.

1. Students from Grade 2 brought in 4 bags then brought in 7 more bags. How many more bags do they need to win?

2. At the end of the contest, Grade 5 had collected 16 bags. If they collected 5 bags in Week 2, how many did they collect in Week 1?

3. Grades 1 and 3 have decided to work together. If Grade 1 brought in 12 bags and Grade 3 brought in 16 bags, how many do they have altogether?

4. If Grade 6 collects 9 bags in Week 1 and 8 bags in Week 2, how many more do they have than Grade 2?

5. At the end of the contest, Grade 4 had collected 5 more bags than Grades 1 and 3 combined. How many bags of recyclables did Grade 4 collect?

6. How many more bags should Grade 2 collect so that they have the same number as Grades 1 and 3 combined?

Mixed Review

Use the rule and equation to complete the input/output table.

7. Add 6. \[ x + 6 = z \]

8. Subtract 31. \[ m - 31 = r \]

9. Add 19. \[ p + 19 = s \]

10. Subtract 25. \[ c - 25 = a \]

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
<th>Input</th>
<th>Output</th>
<th>Input</th>
<th>Output</th>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>
Collect and Organize Data

Vocabulary

Complete the sentence.

1. The numbers in the __________________________ column show the sum as each new line of data is entered.

For 2–3, use the frequency table.

<table>
<thead>
<tr>
<th>Day</th>
<th>Frequency</th>
<th>Cumulative Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Tuesday</td>
<td>24</td>
<td>39</td>
</tr>
<tr>
<td>Wednesday</td>
<td>19</td>
<td>58</td>
</tr>
<tr>
<td>Thursday</td>
<td>9</td>
<td>67</td>
</tr>
<tr>
<td>Friday</td>
<td>21</td>
<td>88</td>
</tr>
</tbody>
</table>

2. The cumulative frequency for Wednesday is ________. This is the sum of the numbers in the frequency column for which days?

__________, ____________, and ____________.

3. How many frozen pops in all were sold on Monday and Tuesday?

______________________________

Mixed Review

Order the numbers from greatest to least.

4. 234,358; 23,208; 23,098

5. 12,214; 342,351; 120,142

6. 342,253; 34,235; 34,270

7. 824,723; 8,247; 82,492
Find Median and Mode

Vocabulary

Complete the sentence.

1. In a group of numbers ordered from the least to the greatest, the number in the middle is called the ________, and the number that occurs most often is called the ________.

For 2–5, use the table.

<table>
<thead>
<tr>
<th>SWIM TEAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>9</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>11</td>
</tr>
</tbody>
</table>

2. List all of the ages of all the swim team members, from least to greatest.

__________________________________________________________

3. Use your list from problem 1. What is the median age of the swim team members?

__________________________________________________________

4. What is the mode of the ages of the swim team members?

__________________________________________________________

5. What if there were a new swimmer added to the table. Her age is 10. Would that change the mode? Explain.

Mixed Review

Round each number to the nearest hundred.

6. 56,298 __________
7. 355,207 __________
8. 514,899 __________

9. 29,909 __________
10. 17,923 __________
11. 99,903 __________

Find n.

12. $4 \times n = 9 + 3$ __________
13. $n \times 5 = 20 + 5$ __________

14. $8 + n = 10 + 6$ __________
15. $5 \times n = 2 \times 10$ __________

16. $6 + 5 = 9 + n$ __________
17. $8 \times 2 = n + 9$ __________

18. $4 \times n = 11 + 1$ __________
19. $n + 7 = 19 + 12$ __________
Line Plot

Vocabulary

Complete the sentences.

1. A ___________ is a graph that shows data along a number line.
2. The difference between the greatest and the least numbers in a set of data is called the ___________.

For 3–4, use the line plot at right.

3. The X’s on this line plot represent the number of students. What do the numbers on the line plot represent?

4. What number of children do more students have in their families?

5. Use the data in the table to complete the line plot.

Mixed Review

Write each number in standard form.

6. 100,000 + 50,000 + 4,000

7. ninety-six thousand

8. nine hundred seventy thousand, eight hundred fifty-two

9. 400,000 + 80 + 8
Stem-and-Leaf Plot

Vocabulary

Complete the sentences.

1. A __________________________ shows groups of data organized by place value.
2. Each tens digit is called a ________________.
3. The ones digits are called the ________________.

The stem-and-leaf plot below shows the scores that fourth-grade students made in a spelling contest. For 4–6, use the stem-and-leaf plot.

4. What are the least and the greatest scores?

5. What is the mode of the contest scores?

6. What is the median of the contest scores?

Mixed Review

Find the value of $n$.

7. $5 \times 6 = n$ ______ 8. $9 \times 4 = n$ ______ 9. $6 \times 9 = n$ ______

10. $n - 3 = 4$ ______ 11. $7 + 12 = n$ ______ 12. $63 \div n = 9$ ______

13. $10 + n = 13$ ______ 14. $7 \times n = 56$ ______ 15. $8 \times n = 64$ ______

16. Round 39,457 to the nearest 10,000.

17. Ted bought eggs for $1.98, milk for $2.19, and bread for $1.10. What change should he receive from $10.00? ________________
Compare Graphs

Vocabulary

Complete the sentence.

1. The ___________ is the series of numbers placed at fixed distances on the side of a graph.

2. The ___________ of a graph is the difference between any two numbers on the scale.

For 3–6, use the graph.

3. What is the interval of the scale in the graph?

4. How would the bars change in the graph if the interval were 1?

5. Describe how the bars in the graph would look if you made a new graph, using a scale interval of 10.

6. Suppose the scale of a bar graph is 0, 4, 8, 12, 16, 20. Describe the bar length that would represent the number 10.

Mixed Review

7. \(55 + 23\)  
8. \(44 - 23\)  
9. \(12 + 34\)  
10. \(87 + 12\)

11. \(5 \times 6\)  
12. \(72 \div 9\)  
13. \(12 \times 12\)  
14. \(45 \div 5\)

15. A baker can make 8 batches of cookies an hour. How many batches of cookies can the baker make in 7 hours?

16. Kim has a scarf. It has a red stripe, a blue stripe, then a white stripe. This pattern repeats. What color is the eighth stripe?
Problem Solving Strategy

Make a Graph

Vocabulary

Complete the sentences.

1. We can use a ______________ to help see information more easily.
2. Two types of graphs or plots are: ________________________________
   ________________________________

For 3–5, use the following data.

The numbers of servings of fruit the students ate in one day were
1, 1, 1, 2, 2, 2, 3, 3, 4, 4, 4, 4, 5.

3. Make a table to show the data. 4. Make a bar graph of the data.
5. Make a line plot of the data.

Mixed Review

6. Find the mode of these numbers.
   14, 14, 15, 16, 18, 18, 18, 20, 22. _____________

7. $12.75 + $13.22 _____________ 8. $34 \times 3 ___________________
Double-Bar Graphs

Vocabulary

Complete the sentence.

1. A ________________ is used to compare similar kinds of data.

<table>
<thead>
<tr>
<th>Type of Bulb</th>
<th>Kevin’s Flowers</th>
<th>Hillside Nursery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daffodil</td>
<td>$18.00</td>
<td>$14.00</td>
</tr>
<tr>
<td>Tulip</td>
<td>$10.00</td>
<td>$12.00</td>
</tr>
<tr>
<td>Hyacinth</td>
<td>$21.00</td>
<td>$12.00</td>
</tr>
<tr>
<td>Crocus</td>
<td>$5.00</td>
<td>$7.00</td>
</tr>
</tbody>
</table>

2. Make a double-bar graph to compare the cost of bulbs at Kevin’s Flowers and at Hillside Nursery. Use the data from the table above. Choose an appropriate scale. Include a title, labels, a scale, and a key for both stores.

Mixed Review

3. Which is greater, 420,391 or 402,931?

4. Round 225,770 to the nearest thousand.

5. Estimate. 893,232 + 281,932

6. What is the sum of 259,739 and 927,492?
Read Line Graphs

Vocabulary

Complete the sentence.

1. A __________ uses a line to show how something changes over a period of time.

Joyce made this line graph to show the number of pages she read each day in a mystery book. For 2–6, use the graph.

2. On what day did Joyce read the most pages? the fewest pages?

3. How many pages did Joyce read on Thursday?

4. On which two days did Joyce read the same number of pages?

5. How many more pages did Joyce read on Friday than on Monday?

6. How many pages did Joyce read altogether from Monday through Friday?

Mixed Review

7. 35,859 + 91,847 = 127,706
8. 680,005 – 490,948 = 189,057
9. 5,940,394 – 2,518,624 = 3,421,770
10. 9,848,664 + 8,842,231 = 18,690,895

11. 762,063 – 410,978 = 351,085
12. 248,671 + 99,348 = 348,019
13. 7,100,003 – 6,471,691 = 628,312
14. 8,317,062 + 4,065,594 = 12,382,656
Make Line Graphs

For 1–2, complete the line graph.

1. **Daily Temperature**

<table>
<thead>
<tr>
<th>Day</th>
<th>Sun</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
<th>Sat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature (in °F)</td>
<td>65</td>
<td>70</td>
<td>85</td>
<td>75</td>
<td>70</td>
<td>80</td>
<td>80</td>
</tr>
</tbody>
</table>

2. **Touchdowns Made**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Touchdowns</td>
<td>10</td>
<td>12</td>
<td>9</td>
<td>15</td>
<td>18</td>
</tr>
</tbody>
</table>

3. Which day had the highest temperature? What was the temperature on that day?

4. Describe any trends in the number of touchdowns made.

---

**Mixed Review**

5. Compare. Use <, >, or =.
   
   \[ 7,458 \quad \bigcirc \quad 8,125 - 304 \]

6. What number is 100,000 greater than 1,825,435?
Choose an Appropriate Graph

For 1–4, write the kind of graph or plot you would choose.

1. to show a record of a baby’s weight for six months
2. to show how many bicycles were sold each month at a store
3. to find the median age of the teachers at a school
4. to compare the favorite sports of boys and girls in your class

Explain why each graph or plot is not the best choice for the data it shows. Tell which type of graph or plot would be a better choice.

5. ____________

6. ____________

Mixed Review

Complete to make the equation true.

7. $15 + 4 = \underline{} + 10$  
8. $\underline{} + 8 = 13 + 4$  
9. $11 + \underline{} = 20 + 15$
10. Find the value of $48 - (14 + 7)$. ______________
Problem Solving Skill

Draw Conclusions

For 1–7, use the graph.

The parents of Mrs. Watkins' fourth grade students wanted to compare their favorite music choices for the Academic Dinner. Mr. Kennedy took a survey and made a double-bar graph.

1. What is the favorite music choice for men?  

2. What is the favorite music choice for women?

3. How many men prefer to have rock music at the banquet?  

4. How many women prefer classical music?

5. Which type of music is preferred equally by the men and women?  

6. How many men were surveyed altogether? women?

7. Is it reasonable to conclude that the parents chose folk music for the Academic Dinner? Explain.

Mixed Review

8. What number is 100,000 greater than 3,489,234?

9. Round 355,790 to the nearest thousand.

10. Estimate. 390,645 + 71,960  

11. Estimate. 495,931 + 889,853
Before and After the Hour

Write the time as shown on a digital clock.

1. 7 minutes after 3
2. 28 minutes before 11
3. 15 minutes after 5
4. 18 minutes after 2
5. 3 minutes after 12
6. 15 minutes before 7

Write the time shown on the clock in 2 different ways.

7. 8. 9.

Write the letter of the unit used to measure the time. Use each answer only once.

10. to take a shower
11. to drive across the United States
12. to button a button
13. to get a night’s sleep

Mixed Review

14. Find the value of the expression.  
   \[59 - (32 + 12)\]  
15. Find the value of the expression.  
   \[(28 - 9) - (4 + 8)\]  
16. Order from least to greatest:  
   37,623; 37,326; 36,723  
17. Estimate the difference between 47,791 and 35,167.
A.M. and P.M.

Vocabulary

Complete.

1. ______ means “before noon.”
2. ______ means “after noon.”

Write the time, using A.M. or P.M.

3. when the sun rises
4. when you eat dinner
5. when school starts

6. when the gas
station closes
7. when you
eat breakfast
8. when the mall
opens

Write A.M. or P.M.

9. Marty has a doctor’s appointment
   at 11:15 _______.
10. Ron is going shopping from
    3 _______ to 5 _______.

11. Marci is baby-sitting at 9:30
    Saturday morning _______.
12. Juan’s shift begins at 4:45 in
    the afternoon _______.

Mixed Review

Find the value of each expression.

13. $45 + (16 - 8)$
14. $73 - (36 + 23)$

15. Manuela has 2 one dollar bills, 5 quarters, 8 dimes, a nickel and 3 pennies. How much money does she have?

16. Write five million, six hundred thirty thousand, eight hundred ninety-two in standard form.
Elapsed Time

Vocabulary

Complete the sentence.

1. ____________________ is the time that passes from the start of an activity to the end of that activity.

Find the elapsed time.

2. start: 7:30 A.M.  
   end: 3:30 P.M.

3. start: 8:05 A.M.  
   end: 9:55 A.M.

4. start: 9:12 P.M.  
   end: 11:28 P.M.

Complete the table.

<table>
<thead>
<tr>
<th>Start Time</th>
<th>End Time</th>
<th>Elapsed Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:20 A.M.</td>
<td></td>
<td>1 hr 30 min</td>
</tr>
<tr>
<td>10:12 A.M.</td>
<td>4:15 P.M.</td>
<td></td>
</tr>
</tbody>
</table>

For 7–8, use the tour schedule.

7. At about what time does each tour end?

8. The Gutierrez family is seeing a Broadway show at 5:30 P.M. Which tour(s) can they take?

Mixed Review

Find the sum or difference. Estimate to check.

9. \[ 455,967 + 396,128 \]  
   \[ 320,051 - 198,489 \]

10. \[ 4,938,920 + 9,938,593 \]  

TOURS OF NEW YORK CITY

Tours last about 4 hours and 15 minutes.

<table>
<thead>
<tr>
<th>Bus</th>
<th>Departure Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red Coach</td>
<td>9:45 A.M.</td>
</tr>
<tr>
<td>Blue Coach</td>
<td>11:25 A.M.</td>
</tr>
<tr>
<td>Green Coach</td>
<td>1:40 P.M.</td>
</tr>
<tr>
<td>Yellow Coach</td>
<td>3:05 P.M.</td>
</tr>
</tbody>
</table>
Problem Solving Skill

Sequence Information

Mr. Anderson is taking his history class to a museum. The students will take a tour, view 2 movies, and visit the costume room. The bus will drop the class off at 9:15 A.M. and pick them up at 3:30 P.M. Lunch will be from 12:15 P.M. to 12:45 P.M. Tours of the museum last 1 hour and 15 minutes.

1. Will the class be able to see both movies before lunch? If so, name a schedule.

2. If the class begins the museum tour at 9:40 A.M., will it be able to see Revolutionary Heroes and still be ready for lunch at 12:15 P.M.? Explain.

3. If the class visits the costume room at 1:45 P.M. and stays for one hour and 10 minutes, can it view Revolutionary Heroes and be ready to meet the bus?

4. Make a schedule for the class which includes both movies, a tour of the museum, and a visit to the costume room.

**Revolutionary Heroes Movie**

<table>
<thead>
<tr>
<th>Running time: 45 min</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 A.M.</td>
</tr>
<tr>
<td>10:00 A.M.</td>
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<tr>
<td>11:00 A.M.</td>
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</tbody>
</table>

**Battlegrounds Movie**

<table>
<thead>
<tr>
<th>Running time: 37 min</th>
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<tbody>
<tr>
<td>9:30 A.M.</td>
</tr>
<tr>
<td>10:30 A.M.</td>
</tr>
<tr>
<td>11:30 A.M.</td>
</tr>
</tbody>
</table>

**My Museum Tour Schedule**

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Lunch 12:15 P.M.–12:45 P.M.</td>
</tr>
</tbody>
</table>

**Mixed Review**

5. 370,716 – 192,408
6. 971,858 – 863,245
7. 4,330,629 + 6,197,550
8. 3,606,117 – 3,432,980
Elapsed Time on a Calendar

For 1–3, use the calendars.

<table>
<thead>
<tr>
<th>Camp Windy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Session 1: Jul 13–Jul 17</td>
</tr>
<tr>
<td>Session 2: Jul 27–Jul 31</td>
</tr>
<tr>
<td>Session 3: Aug 3–Aug 14</td>
</tr>
</tbody>
</table>

1. The camp director bought art supplies 4 weeks before the beginning of the first session of camp. On what date did she buy art supplies?

2. In Session 3, the campers put on a puppet show on the second Wednesday of the session. What was the date of the puppet show?

3. Jim plans to attend Session 2 of camp. His last day of school is June 19. About how many weeks of summer vacation will Jim have before camp begins?

Mixed Review

Find the value of each expression.

4. \(125 - (65 + 22)\)  
5. \(234 - (24 - 13)\)  
6. \(4,590 - (1,293 - 389)\)

Round to the nearest ten thousand.

7. 472,099  
8. 939,658  
9. 3,514,811
Relate Multiplication and Division

Find the value of the variable. Write a related equation.

1. \(21 \div 3 = t\)
2. \(5 \times 5 = c\)
3. \(16 \div 2 = a\)
4. \(18 \div 6 = d\)

5. \(54 \div 9 = k\)
6. \(4 \times 4 = b\)
7. \(6 \times 2 = f\)
8. \(35 \div 7 = h\)

9. \(8 \div n = 2\)
10. \(4 \times p = 24\)
11. \(30 \div z = 6\)
12. \(6 \times j = 48\)

13. \(g \div 7 = 8\)
14. \(y \div 1 = 6\)
15. \(k \times 6 = 42\)
16. \(n \times 7 = 63\)

Write the fact family for each set of numbers.

17. 3, 4, 12
18. 4, 7, 28

19. 5, 10, 50
20. 8, 9, 72

Mixed Review

21. $11.21 + $12.15 + $1.61
22. 1,242,316 - 164,320
23. 6,548,957 + 9,874,512
24. $15.27 + $7.99 + $3.25

25. \(8 \times 8\)
26. \(9 \times 4\)
27. \(6 \times 7\)
28. \(3 \times 5\)
29. \(7 \times 8\)
Multiply and Divide Facts Through 5

Find a related multiplication or division equation.

1. $2 \times 4 = 8$
   - [ ] [ ] [ ] [ ]

2. $2 \times 5 = 10$
   - [ ] [ ] [ ] [ ]

3. $2 \times 2 = 4$
   - [ ] [ ] [ ]

4. $4 \times 1 = 4$
   - [ ]

Find the product or quotient.

5. $6 \times 2$  
6. $21 \div 7$

7. $9 \times 5$
8. $28 \div 4$

9. $8 \times 3$
10. $24 \div 6$
11. $18 \div 2$
12. $5 \times 8$

Find the value of the variable.

13. $7 \times 2 = 14$, so $(7 \times 2) + 10 = r$.
14. $(36 \div 4) = 9$, so $(36 \div 4) \times 5 = m$.

Write $<$, $>$, or $=$ in each $\bigcirc$.

15. $27 \div 3 \bigcirc 2 \times 4$
16. $32 \div 4 \bigcirc 3 \times 3$

Mixed Review

17. Find the value. $(22 - 6) + 38$
18. In the number 1,257,863 what digit is in the ten thousands place?
Multiply and Divide Facts Through 10

Show how the arrays can be used to find the product.

1. What is $7 \times 8$?
   
   
   
   
   
   
   
   
   $7 \times 4 = \_\_\_\_\_\_\_\_\_\_\_\_$
   
   $7 \times 4 = \_\_\_\_\_\_\_\_\_\_\_\_$
   
   So, $7 \times 8 = \_\_\_\_\_\_\_\_\_\_\_\_$.

2. What is $6 \times 8$?

   
   
   
   
   
   
   
   
   $6 \times 4 = \_\_\_\_\_\_\_\_\_\_\_\_$
   
   $6 \times 4 = \_\_\_\_\_\_\_\_\_\_\_\_$
   
   So, $6 \times 8 = \_\_\_\_\_\_\_\_\_\_\_\_$.

3. $6 \times 6$

4. $56 \div 7$

5. $8 \times 5$

6. $36 \div 4$

7. $10 \times 6$

8. $72 \div 8$

9. $9 \times 7$

10. $56 \div 8$

11. $8 \times 6$

12. $42 \div 6$

13. $90 \div 9$

14. $9 \times 9$

15. $7 \times 6$

16. $8 \times 9$

17. $49 \div 7$

18. $54 \div 9$

Mixed Review

19. In the number 125,588,325 what digit is in the ten millions place?

20. Find the elapsed time.
   
   Start: 7:54 A.M. End: 9:12 P.M.


22. Round 13,567 to the nearest hundred.

23. Write an expression using the variable $n$. There were 9 pears in the bowl. Jenny took some out.

24. Write an equation using the variable $p$. Ed had some pens. He gave Ben 6 and now has 12.
### Multiplication Table Through 12

Use the multiplication table to find the product or quotient.

1. \(40 \div 4\)  
2. \(5 \times 10\)

3. \(70 \div 10\)  
4. \(110 \div 10\)

5. \(11 \div 1\)  
6. \(10 \times 8\)

7. \(12 \times 12\)  
8. \(66 \div 11\)

9. \(7 \times 12\)  
10. \(108 \div 9\)

11. \(11 \times 5\)  
12. \(36 \div 3\)

Find the value of the variable.

13. \(30 \div 10 = t\)  
14. \(121 \div y = 11\)  
15. \(80 \div 8 = h\)  
16. \(n \times 12 = 48\)

17. \(k \times 11 = 132\)  
18. \(10 \times p = 100\)  
19. \(72 \div z = 6\)  
20. \(11 \times j = 99\)

### Mixed Review

21. \$63 + \$48 + \$122

22. Write one thousand, eighty-five in standard form.

23. In 7,894,132, what digit is in the ten thousands place?

24. Round 63,947 to the nearest ten.

25. Find the median.  
15, 18, 22, 11, 20, 20, 13

26. Find the mode.  
15, 18, 22, 11, 20, 20, 13

27. \((14 - 8) + 17 = \) _____

28. \(36 - (3 + 9) = \) _____

29. \((15 + 15) - (12 + 2) = \) _____

30. \((17 - 6) + (42 - 17) = \) _____
Multiply 3 Factors

Find the product.

1. $3 \times (2 \times 4)$
2. $10 \times (2 \times 6)$
3. $(6 \times 5) \times 0$
4. $8 \times (2 \times 6)$

5. $8 \times (1 \times 7)$
6. $6 \times (3 \times 2)$
7. $(2 \times 6) \times 2$
8. $(2 \times 3) \times 9$

9. $(3 \times 4) \times 9$
10. $(3 \times 4) \times 4$
11. $(3 \times 3) \times 3$
12. $10 \times (5 \times 2)$

Show two ways to group by using parentheses. Find the product.

13. $11 \times 1 \times 5$
14. $4 \times 2 \times 6$

15. $2 \times 6 \times 1$
16. $2 \times 4 \times 3$

Write $<$, $>$, or $=$ in each $\bigcirc$.

17. $(1 \times 9) \times 6 \bigcirc 3 \times (6 \times 2)$
18. $(6 \times 2) \times 3 \bigcirc 4 \times (3 \times 3)$
19. $3 \times 4 \times 3 \bigcirc 9 \times 2 \times 2$
20. $(6 \times 2) \times 6 \bigcirc 11 \times (4 \times 3)$

Mixed Review

21. In the number 25,327, what digit is in the thousands place?

22. Round 8,569 to the nearest hundred.

23. $(7,321 - 1,435) + 2,600$
24. $(4,828 + 179) - 3,990$
Problem Solving Skill

Choose the Operation

Solve. Name the operation or operations you used.

1. Kate sold 21 boxes of cookies. Randy sold 32 boxes of cookies. Gina sold 49 boxes of cookies. How many boxes did they sell?

2. Behind home plate there are 5 rows of seats. Each row has 7 seats in it. How many seats are in this section?

3. The pottery classroom has 3 tables. There are 6 people at each table. If each person makes 2 clay animals, how many clay animals are made?

4. The fine for an overdue book at the Cotter Library is 5¢ a day. Tyler returned his books 1 day late. He paid a 30¢ fine. How many books did he return?

5. Ashley, Suzanne and Liz bought a box of chocolates. There are 36 chocolates in the box. How many do they get each?

6. Clyde sleeps 8 hours each night. How many hours does he sleep each week?

7. On Tuesday morning, Mrs. Corbett drove 57 miles to Princeton. Then she drove to Natick. She drove a total of 90 miles. How many miles was it from Princeton to Natick?

8. Peter took a three-day 28-mile backpacking trip. He hiked 9 miles the first day and 11 miles the second day. How many miles did he hike the third day?

Mixed Review

9. Find the median.
   546, 550, 420, 410, 560, 530, 530

10. Find the mode.
    546, 550, 420, 410, 560, 530, 530

11. In the number 12,482 what digit is in the tens place?

12. What is the elapsed time between 9:27 A.M. and 6:32 P.M.?
Expressions with Parentheses

Find the value of the expression.

1. \((49 - 22) \div 3\)  
2. \(88 - (12 \times 4)\)  
3. \(14 + (6 \times 9)\)  
4. \(123 - (45 \div 5)\)  

5. \((42 \div 7) \times 8\)  
6. \(3 \times (4 + 8)\)  
7. \((55 - 35) \div 5\)  
8. \(55 - (35 \div 5)\)  

9. \(34 + (27 \div 9)\)  
10. \(36 \div (4 + 5)\)  
11. \(155 - (81 \div 9)\)  
12. \(7 \times (25 \div 5)\)  

Choose the expression that shows the given value.

13. 55  
   a. \((9 \times 6) + 1\)  
   b. \(9 \times (6 + 1)\)  

14. 70  
   a. \(7 \times (3 + 7)\)  
   b. \((7 \times 3) + 7\)  

15. 8  
   a. \((2 \times 8) \div 2\)  
   b. \(2 \times (8 \div 2)\)  

Find the value of the expression.

16. \((243 - 124) - (4 \times 5)\)  
17. \((15 \div 3) \times (22 - 14)\)  

18. \((14 \div 2) \times (44 - 33)\)  
19. \((7 \times 4) + (18 \div 2)\)  

Mixed Review

Solve.

20. \(9 \times 6\)  
21. \(5 \times 12\)  
22. \(7 \times 8\)  
23. \(10 \times 6\)  
24. \(5 \times 8\)  

25. \(12 \times 7\)  
26. \(4 \times 11\)  
27. \(9 \times 5\)  
28. \(8 \times 8\)  
29. \(6 \times 7\)
Match Words and Expressions

Choose the expression that matches the words.

1. Ali had $9 and then worked 3 hours for $6 per hour.
   a. \((9 + 3) \times 6\)
   b. \(9 + (3 \times 6)\)

2. Jane had 57¢. She lost 2 dimes.
   a. \((57 - 2) \times 10\)
   b. \(57 - (2 \times 10)\)

3. Larry had 12 books. Eleven of the books had 10 pages each. The twelfth book had 15 pages.
   a. \((10 \times 11) + 15\)
   b. \(10 \times (11 + 15)\)

4. Rashid had 16 pens. Nine were broken, then Rashid bought a package that doubled the number of pens he had left.
   a. \((16 - 9) \times 2\)
   b. \(16 - (9 \times 2)\)

5. Jeff bought 5 models which each cost $7. He paid $2 in sales tax.
   a. \((5 \times 2) + 7\)
   b. \((5 \times 7) + 2\)

6. Mr. Gibson’s band room has 8 rows of 6 chairs each. There are also 3 chairs not in rows.
   a. \((8 \times 6) + 3\)
   b. \(3 \times 6 + 8\)

7. Eloise planted 6 rows of tulips with 5 plants in each row. She put 3 more plants in another row.
   a. \((6 \times 5) + 3\)
   b. \(6 \times (5 + 3)\)

8. Joel built 3 birdhouses each day for a week and then the dog knocked over and broke 2 of the birdhouses.
   a. \((3 \times 2) - 7\)
   b. \((3 \times 7) - 2\)

Mixed Review

Find the value of the expression.

9. \((5 + 6) - (3 + 4)\)
10. \(15 - (27 - 14)\)
11. \((2 \times 6) \div 4\)

12. \[
    \begin{array}{c}
      \text{9,002} \\
      \text{−8,008}
    \end{array}
    \]
13. \[
    \begin{array}{c}
      \text{7,958} \\
      \text{+1,798}
    \end{array}
    \]
14. \[
    \begin{array}{c}
      \text{4,621} \\
      \text{+3,299}
    \end{array}
    \]
Equations

Multiply both sides by the given number. Find the new value.

1. 4 pennies = 4 pennies; multiply both sides by 7.
2. 2 dimes = 2 dimes; multiply both sides by 3.

3. 1 nickel = 5 pennies; multiply both sides by 7.
4. 3 nickels = 1 dime 1 nickel; multiply both sides by 3.

5. \((4 + 2) = (3 \times 2)\); multiply both sides by 7.
6. \((6 + 3) = (3 \times 3)\); multiply both sides by 8.

7. 12 = 6 \times 2; multiply both sides by 6.
8. \((3 + 5) = (64 \div 8)\); multiply both sides by 5.

9. 10 = 5 \times 2; multiply both sides by 9.
10. \((6 + 5) = (11 \times 1)\); multiply both sides by 10.

11. \((2 + 3) = (15 \div 3)\); multiply both sides by 6.
12. 1 dime 2 pennies = 12 pennies; multiply both sides by 3.

Mixed Review

Name the place value of the bold digit.

13. \(1,672,439\) ________________
14. \(1,672,439\) ________________
15. \(1,672,439\) ________________
16. \(1,672,439\) ________________

Solve.

17. \(\$719.20\) + \(48.44\) = \(\$767.64\)
18. 2,209 − 1,072 = 1,137
19. 4,476 + 4,467 = 8,943
20. \(\$32.99\) − 12.81 = 20.18
Expressions with Variables

Find the value of the expression.

1. \(6 \times z\) if \(z = 8\)  
2. \(5 \times s\) if \(s = 4\)  
3. \(8 \times t\) if \(t = 9\)  
4. \(7 \times u\) if \(u = 4\)

5. \(8 \div y\) if \(y = 2\)  
6. \(21 \div a\) if \(a = 3\)  
7. \(54 \div x\) if \(x = 9\)  
8. \(120 \div b\) if \(b = 10\)

Choose the expression that matches the words.

9. 3 times the number of people, \(p\), in a room  
   a. \(p - 3\)  
   b. \(3 \times p\)

10. $12 divided by a number of people, \(p\)  
    a. \(p \div $12\)  
    b. \$12 \div p\)

11. 8 times the number of shelves, \(s\), in the library  
    a. \(s \times 8\)  
    b. \(s + 8\)

12. 15 sweaters divided by a number of children, \(c\)  
    a. \(15 - c\)  
    b. \(15 \div c\)

Write an expression that matches the words.

13. 24 players divided by a number of teams, \(t\)

14. 12 times the number of pages, \(p\), in a book

15. a number of cartons, \(c\), times 8 packets

16. a number of marbles, \(m\), divided by 5 bags

Mixed Review

17. \[
\begin{array}{c}
5,203 \\
-3,999
\end{array}
\]

18. \[
\begin{array}{c}
1,364 \\
+5,202
\end{array}
\]

19. \[
\begin{array}{c}
8,714 \\
-7,961
\end{array}
\]

20. Find the median and the mode of the set of numbers.  
    5, 4, 7, 6, 3, 6, 8, 5, 6

21. Write an expression. Ellen painted 5 pictures. She threw 1 away and painted 3 more.
Equations with Variables

Choose the equation that matches the words.

1. The number of dollars, \( d \), divided evenly by 6 people is 4.
   a. \( d \div 4 = 6 \)  
   b. \( d \div 6 = 4 \)  
   c. \( 6 \div 4 = d \)  
   d. \( 4 \div 6 = d \)

2. The number of plants, \( p \), on 8 shelves is 32.
   a. \( p \div 8 = 32 \)  
   b. \( 8 \div p = 32 \)  
   c. \( p \times 8 = 32 \)  
   d. \( 32 \div p = 8 \)

Write an equation for each. Choose a variable for the unknown. Tell what the variable represents.

3. 6 bicycles in each of 6 rows is the total number of bicycles.
   _________________________

4. Some number of plants in each of 7 rows is 84 plants.
   _________________________

5. 12 ounces of water in each of a number of bottles is 60 ounces of water.
   _________________________

6. 72 marbles divided evenly among 8 bags is some number of marbles in each bag.
   _________________________

7. A number of pencils divided equally among 5 boxes is 9 pencils in each box.
   _________________________

8. 25 books divided evenly among some number of students is 5 books per student.
   _________________________

Mixed Review

9. Round 1,793,445 to the nearest million.
   _________________________

10. Round 1,428,739 to the nearest hundred thousand.
    _________________________

11. \( 12 \times 9 = n \)
    _________________________

12. \( 144 \div 12 = n \)
    _________________________

13. \( 90 \div h = 9 \)
    _________________________
Find a Rule

Find a rule. Write the rule as an equation.

1. Multiply by 2.  
   \[ a \times 2 = c \]

2. Divide by 3.  
   \[ r \div 3 = s \]

3. Multiply by 11.  
   \[ p \times 11 = q \]

   \[ y \div 4 = z \]

Use the rule and the equation to make an input/output table.

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
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</tr>
<tr>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td>25</td>
<td>5</td>
</tr>
<tr>
<td>30</td>
<td>6</td>
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<table>
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<tr>
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<tbody>
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<td>4</td>
<td>16</td>
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<tr>
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<td>6</td>
<td>24</td>
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<td>7</td>
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<td>3</td>
<td>24</td>
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<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
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<tr>
<td>6</td>
<td>42</td>
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<tr>
<td>7</td>
<td>49</td>
</tr>
<tr>
<td>8</td>
<td>56</td>
</tr>
</tbody>
</table>

Mixed Review

Find the value of the expression.

9. \[ 12 \times 8 \]

10. \[ 99 \div 11 \]

11. \[ 63 - (14 \div 7) \]

12. What time is 2 hours and 40 minutes after 11:22 A.M.?

13. Write the standard form for three hundred thousand, five.
Problem Solving Strategy

Work Backward

Write an equation and work backward to solve.

1. Alexander had some nickels in his bank. He added 3 dimes to the bank and then he had 85¢. How many nickels did Alexander have?

2. Roz is making a quilt. Yesterday she sewed some squares. Today she sewed together 3 rows with 10 squares each. She has sewn a total of 50 squares. How many squares did Roz sew yesterday?

Work backward to solve.

3. Leo folded a sheet of paper in half a certain number of times. When unfolded, the sheet was divided into 8 sections. How many times did Leo fold the paper in half?

4. Ann is setting a clock. It says 12:00 P.M. She moves the minute hand forward 10 minutes, back 12 minutes, forward 8 minutes, and back some minutes. If the time now reads 12:03 P.M., what was her final move?

5. Holly is going from her home to the grocery store. To get to the store, she walks 3 blocks west and 2 blocks south. When she leaves the store, she walks 3 blocks east. How many blocks and in what direction should Holly walk to get home?

6. Amy and Tim are playing a counting game. They are counting to 30. Amy claps when they say a number that can be divided evenly by 3. Tim claps when they say a number that can be divided evenly by 4. On what numbers do they both clap?

Mixed Review

7. \( 3 \times 8 \)  
8. \( 9 \times 4 \)  
9. \( 9 \times 9 \)  
10. \( 12 \times 6 \)  
11. \( 12 \times 10 \)
Mental Math: Multiplication Patterns

Use a basic fact and a pattern to write each product.

1. **a.** $5 \times 50$
   **b.** $5 \times 500$

2. **a.** $9 \times 80$
   **b.** $9 \times 800$

3. **a.** $2 \times 3,000$
   **b.** $2 \times 30,000$

4. **a.** $9 \times 20$
   **b.** $9 \times 200$

5. **a.** $7 \times 9,000$
   **b.** $7 \times 90,000$

6. **a.** $4 \times 4,000$
   **b.** $4 \times 40,000$

Multiply mentally. Write the basic multiplication fact and the product.

7. $5 \times 700$

8. $9 \times 400$

9. $9 \times 900$

10. $4 \times 500$

11. $3 \times 4,000$

12. $8 \times 3,000$

Find the value of $n$.

13. $6 \times 40,000 = n$

14. $n = 3 \times 600$

15. $n \times 500 = 3,500$

16. $3 \times n = 15,000$

17. $n \times 8 = 640$

18. $7 \times n = 42,000$

19. $7,000 \times n = 49,000$

20. $6 \times n = 5,400$

21. $n \times 6 = 1,800$

Mixed Review

22. Write the time in words.

23. Write the time in words.
Estimate Products

Round one factor. Estimate the product.

1. 512  
   \[ \times 5 \]

2. 93  
   \[ \times 8 \]

3. 1,401  
   \[ \times 7 \]

4. 257  
   \[ \times 3 \]

5. 981  
   \[ \times 7 \]

6. 82  
   \[ \times 4 \]

7. 127  
   \[ \times 9 \]

8. 741  
   \[ \times 9 \]

9. $15.34 \times 7$

10. 903 \times 4

11. 95 \times 9

12. 718 \times 3

13. 1,209 \times 8

14. 657 \times 3

15. 55 \times 2

16. 9,099 \times 4

Choose two factors from the box for each estimated product. You may use each number more than once.

\[
\begin{array}{ccc}
309 & 4 & 759 \\
193 & 3 & 7 \\
\end{array}
\]

17. \( \square \times \Delta = 2,100 \)

18. \( \square \times \Delta = 800 \)

19. \( \square \times \Delta = 900 \)

20. \( \square \times \Delta = 2,400 \)

21. \( \square \times \Delta = 1,200 \)

22. \( \square \times \Delta = 5,600 \)

Mixed Review

23. Order the numbers from least to greatest.
   
   182; 128; 1,028; 1,082

24. Round 194,012 to the nearest ten thousand.

25. Jeremy said the value of 15 – (7 \times 2) is 16. Describe his error.

26. The cost of a pizza is $12.00. If four people share the cost equally, how much should each pay?
Multiply 2-Digit Numbers

Multiply. Tell which place-value positions need to be regrouped.

1. $29 \times 3$
2. $18 \times 4$
3. $37 \times 5$
4. $96 \times 2$

5. $62 \times 4$
6. $15 \times 9$
7. $50 \times 6$
8. $33 \times 6$

Find the product. Estimate to check.

9. $2 \times 26$
10. $3 \times 45$
11. $7 \times 29$
12. $9 \times 63$

13. $3 \times 18$
14. $8 \times 49$
15. $6 \times 19$
16. $3 \times 99$

Compare. Write $<, >, or =$ in each $\bigcirc$.

17. $5 \times 15 \bigcirc 6 \times 12$
18. $3 \times 42 \bigcirc 6 \times 21$
19. $7 \times 22 \bigcirc 8 \times 17$
20. $9 \times 21 \bigcirc 6 \times 37$
21. $2 \times 79 \bigcirc 3 \times 24$
22. $8 \times 23 \bigcirc 4 \times 66$

Mixed Review

23. Which is greater, 909,872 or 990,678?

24. Round 192,875 to the nearest thousand.

25. Find the median.
   10, 12, 19, 18, 12, 13, 12

26. Find the mean.
   33, 36, 39, 45, 29, 58
Model Multiplication

Use base-ten blocks to multiply. Record the product.

1. \(5 \times 503\)  
2. \(4 \times 108\)  
3. \(4 \times 122\)  
4. \(3 \times 206\)

5. \(3 \times 211\)  
6. \(4 \times 127\)  
7. \(2 \times 514\)  
8. \(3 \times 324\)

Multiply. You may wish to use base-ten blocks.

9. \(4 \times 305\)  
10. \(2 \times 108\)  
11. \(3 \times 212\)  
12. \(4 \times 211\)

13. \(2 \times 131\)  
14. \(4 \times 217\)  
15. \(2 \times 415\)  
16. \(2 \times 253\)

Mixed Review

17. \(12,489 + 1,429\)  
18. \(1,227 - 828\)  
19. \(45,123 - 5,124\)  
20. \(73,711 - 25,609\)

For 21–24, use the following graph.

21. What type of graph is shown here?  

22. How much snow fell in Baltimore during the months of January and February?  

23. What two months had a total of 31 inches of snowfall?  

24. What was the total snowfall for all four months?
Multiply 3-Digit Numbers

Multiply. Tell which place-value positions need to be regrouped.

1. 52 \times 5
2. 83 \times 8
3. 401 \times 7
4. 207 \times 3
5. 91 \times 7
6. 862 \times 4
7. 121 \times 9
8. 471 \times 9

Find the product. Estimate to check.

9. 504 \times 6
10. 230 \times 4
11. 59 \times 6
12. 812 \times 3
13. 29 \times 8
14. 57 \times 9
15. 755 \times 4
16. 929 \times 5
17. 291 \times 7
18. 82 \times 6
19. 517 \times 9
20. 771 \times 7

Compare. Write <, >, or = in each

21. 127 \times 6 \bigcirc 308 \times 2
22. 94 \times 5 \bigcirc 57 \times 9
23. 572 \times 2 \bigcirc 143 \times 8

Mixed Review

24. What is the elapsed time between 5:12 A.M. and 6:05 P.M.?

25. What is the value of the digit 4 in the number 189.064?

26. Three brothers each have four pairs of shoes. How many shoes do they have in all?

27. Write 35,801 in expanded form.
Multiply 4-Digit Numbers

1. Explain where to put the decimal point in $13.54 \times 9$.

Find the product. Estimate to check.

2. $5,092 \times 5$
3. $384 \times 5$
4. $4,801 \times 3$
5. $20.72 \times 3$

6. $42.91 \times 7$
7. $6,254 \times 7$
8. $12.18 \times 9$
9. $7.81 \times 9$

10. $46.29 \times 3$
11. $357 \times 6$
12. $5,555 \times 4$
13. $9.24 \times 7$

14. $(6.94 \times 3) \times 2$
15. $(4 \times 12.25) \times 3$
16. $(982 \times 3) \times 7$

Mixed Review

17. If today is July 1, what was yesterday?

18. Michele was assigned a project on March 7. If she was given 3 weeks to complete the project, when was it due?

19. What is the date two weeks before April 23?

20. What is the median number of days in the months of September, October, and November?
Problem Solving Strategy

Write an Equation

For 1–5, write an equation and solve.

1. Theresa’s father works 5 days a week for 48 weeks a year. How many days does her father work in 1 year?

2. Theresa’s father makes $24.50 per hour. How much does he make if he works 8 hours?

3. The football team is raising money for new footballs. How much money does the team need to raise if it wants 6 new footballs and each one costs $17.93?

4. A civil engineer counted the number of cars that passed through an intersection. If 2,457 cars passed through the intersection in one hour, how many cars would pass through the intersection in 8 hours?

5. Brianna practices playing guitar for 60 minutes each day. How many minutes does she practice in one week?

For 6–7, use this information.

Each floor of a nine-story office building has 132 windows.

6. What equation can you use to find the total number of windows?

   A  $9 \times n = 132$
   B  $9 \times 132 = n$

7. How many windows are there in all?

   C  $n \times 132 = 9$
   D  $n \times 9 = 132$

   F  188
   G  881
   H  1,088
   J  1,188

Mixed Review

8. $14 \times 5$
9. $12 \times 8$
10. $26 \times 3$
11. $42 \times 2$
12. $33 \times 5$

13. $2.98 \times 7$
14. $14.81 \times 3$
Mental Math: Patterns with Multiples

Use a basic fact and a pattern to find the product.

1. $6 \times 5 = \underline{\hspace{2cm}}$  
   $6 \times 50 = \underline{\hspace{2cm}}$  
   $6 \times 500 = \underline{\hspace{2cm}}$

2. $2 \times 2 = \underline{\hspace{2cm}}$  
   $2 \times 20 = \underline{\hspace{2cm}}$  
   $2 \times 200 = \underline{\hspace{2cm}}$

3. $3 \times 6 = \underline{\hspace{2cm}}$  
   $3 \times 60 = \underline{\hspace{2cm}}$  
   $3 \times 600 = \underline{\hspace{2cm}}$

4. $9 \times 9 = \underline{\hspace{2cm}}$  
   $9 \times 90 = \underline{\hspace{2cm}}$  
   $9 \times 900 = \underline{\hspace{2cm}}$

5. $10 \times 3 = \underline{\hspace{2cm}}$  
   $10 \times 30 = \underline{\hspace{2cm}}$  
   $10 \times 300 = \underline{\hspace{2cm}}$

6. $40 \times 3 = \underline{\hspace{2cm}}$  
   $40 \times 30 = \underline{\hspace{2cm}}$  
   $40 \times 300 = \underline{\hspace{2cm}}$

7. $600 \times 30 = \underline{\hspace{2cm}}$  
   $600 \times 30 = \underline{\hspace{2cm}}$  
   $600 \times 30 = \underline{\hspace{2cm}}$

8. $70 \times 3,000 = \underline{\hspace{2cm}}$  
   $70 \times 3,000 = \underline{\hspace{2cm}}$

9. $1,000 \times 30 = \underline{\hspace{2cm}}$

10. $6,000 \times 6,000 = \underline{\hspace{2cm}}$

Find the value of $n$.

11. $n \times 40 = 8,000$

12. $900 \times 300 = n$

Mixed Review

Round to the place value of the bold digit.

13. $57,403,294$

14. $983,204,448$

15. $982,404$

Solve.

16. $300,010$

17. $392,402$

18. $12,498$

$- 255,492$

$392,402$

$- 10,816$

$+ 492,148$
Multiply by Multiples of 10

Find the product.

1. \(30 \times 5\)  
2. \(60 \times 30\)  
3. \(85 \times 30\)  
4. \(67 \times 90\)

5. \(30 \times 70\)  
6. \(80 \times 5\)  
7. \(82 \times 50\)  
8. \(95 \times 50\)

9. \(74 \times 20\)  
10. \(50 \times 48\)  
11. \(60 \times 29\)

12. \(93 \times 40\)  
13. \(28 \times 50\)  
14. \(72 \times 90\)

Find the missing digits.

15. \(30 \times \_\_0 = 300\)  
16. \(\_\_0 \times 20 = 800\)  
17. \(16 \times \_\_0 = 640\)

18. \(4\_\_ \times 80 = 3{,}600\)  
19. \(1\_\_ \times 30 = 540\)  
20. \(\_\_4 \times 50 = 3{,}200\)

21. \(8\_\_ \times 20 = 1{,}700\)  
22. \(9\_\_ \times 60 = 5{,}700\)  
23. \(\_\_6 \times 80 = 6{,}080\)

Mixed Review

Solve.

24. \(n \times 4 = 28\)  
25. \(81 \div b = 9\)  
26. \(t \times (3 \times 2) = 18\)

27. \(y \times 60 = 420\)  
28. \(300 \times w = 36{,}000\)  
29. \(p \times 500 = 6{,}000\)

30. \(13 \times 4\)  
31. \(21 \times 5\)  
32. \(17 \times 2\)  
33. \(18 \times 5\)

34. \(19 \times 3\)  
35. \(25 \times 4\)  
36. \(16 \times 8\)  
37. \(14 \times 7\)
Estimate Products

Round each factor. Estimate the product.

1. 35 \times 11  
2. 54 \times 32  
3. 97 \times 93  
4. 549 \times 65  
5. 486 \times 74  
6. 658 \times 209  
7. 648 \times 174  
8. 840 \times 151  
9. 339 \times 359  
10. 884 \times 444  
11. 312 \times 45  
12. 951 \times 84  
13. 503 \times 49  
14. 320 \times 40  
15. 39 \times 503  
16. 85 \times 81  
17. 814 \times 242  
18. 957 \times 84  
19. 584 \times 394  
20. 84 \times 315  

Use estimation to compare. Write <, >, or = in each circle.

21. 609 \times 43 \bigcirc 20,000  
22. 15,000 \bigcirc 459 \times 35  
23. 872 \times 254 \bigcirc 300,000  
24. 965 \times 19 \bigcirc 40,000  

Mixed Review

Estimate by rounding to the greatest place value.

25. 485,492 \quad 26. 493,430 \quad 27. 361 \quad 28. 729 
   - 39,492 \quad \quad \quad 483,582 \quad \quad \quad \times 42 \quad \quad \quad \times 58 
   + 7,302,598

Multiply.

29. 4,000 \times 70  
30. 900 \times 300  
31. 6,000 \times 200  
32. 3,200 \times 20
Model Multiplication

Make a model, record, and solve.

1. \[16 \times 22\]  
   \[= 352\]

2. \[24 \times 13\]  
   \[= 312\]

3. \[19 \times 12\]  
   \[= 228\]

4. \[25 \times 18\]  
   \[= 450\]

5. \[15 \times 21\]  
   \[= 315\]

6. \[20 \times 16\]  
   \[= 320\]

7. \[14 \times 12\]  
   \[= 168\]

Make a model to find the product. You may use grid paper and markers.

9. \[13 \times 18\]  
   \[= 234\]

10. \[23 \times 15\]  
    \[= 345\]

11. \[62 \times 21\]  
    \[= 1302\]

Mixed Review

12. \[15 \times 90 = n\]  
    \[n = 1350\]

13. \[40 \times n = 160,000\]  
    \[n = 4000\]

14. Order from greatest to least:  
    \[87,433; 86,999; 86,302; 87,593; 87,309\]  
    \[87,593; 87,433; 86,999; 86,302; 87,309\]

15. What day is 12 days after Wednesday, March 15?  
    \[April 6\]

Complete the table.

16. \[
\begin{array}{cccccccc}
\times & 4 & 12 & 3 & 6 & 5 & 11 & 8 \\
7 &   &   &   &   &   &   &   \\
9 &   &   &   &   &   &   &   \\
\end{array}
\]
Problem Solving Strategy

Solve a Simpler Problem

Break the problem into simpler parts and solve.

1. \(40 \times 28 = (40 \times 20) + (40 \times 8)\)
   \[= \boxed{880} + \boxed{320} = \boxed{1200}\]

2. \(80 \times 49 = (\boxed{80} \times \boxed{50}) + (\boxed{80} \times \boxed{-1})\)
   \[= \boxed{4000} + \boxed{-80} = \boxed{3920}\]

A warehouse has many pieces of wood in stock.
It is going to sell 312 bundles of wood with
20 pieces of wood in each bundle. How many
pieces of wood will be sold?

3. Write an expression to help you solve the problem.

4. Find the total number of pieces of wood sold.

During a bad storm, Benny is using candles for light.
He has 30 candles and each one burns for about 115
minutes. About how many minutes of light will the
 candles give Benny?

5. Write an expression to help you solve the problem.

6. Find the number of minutes of light in 30 candles.

Mixed Review

7. Mr. Rawlins has 57 fifth graders in his classes. He gives them a test with 30 questions on it. How many answers will he have to read to grade papers?

8. Antoin has $12.50. He wants to buy 20 pens that cost 80¢ each. Does he have enough money?

9. \((13 + 2) \times n = 60\)

10. \(12 - (3 \times 3) = y\)

11. \((42 - 22) + x = 31\)
Multiply by 2-Digit Numbers

Use regrouping or partial products to find the product. Estimate to check.

1. $62 \times 35$
2. $55 \times 29$
3. $73 \times 44$
4. $48 \times 27$

5. $81 \times 17$
6. $67 \times 23$
7. $26 \times 18$
8. $32 \times 24$

9. $74 \times 16$
10. $69 \times 36$
11. $39 \times 35$
12. $76 \times 11$

13. $14 \times 53 = \underline{______________}$
14. $26 \times 77 = \underline{______________}$
15. $26 \times 74 = \underline{______________}$
16. $21 \times 79 = \underline{______________}$

Mixed Review

Write the missing product.

17. $30 \times 19 = 570$, so $30 \times 18 = \underline{______________}$

18. $65 \times 15 = 975$, so $65 \times 16 = \underline{______________}$

19. $40 \times 21 = 840$, so $40 \times 22 = \underline{______________}$

20. $29 \times 5$
21. $17 \times 4$
22. $38 \times 9$
23. $52 \times 8$
24. $91 \times 3$

25. $12 \times 4 = \underline{______________}$
26. $8 \times 8 = \underline{______________}$
More About Multiplying by 2-Digit Numbers

Find the product. Estimate to check.

1. \(221 \times 17\)  
2. \(\$447 \times 36\)  
3. \(727 \times 32\)  
4. \(362 \times 27\)  
5. \(549 \times 22\)  
6. \(\$7.29 \times 46\)  
7. \(636 \times 34\)  
8. \(659 \times 73\)  
9. \(74 \times 138 = \)  
10. \(25 \times 808 = \)  
11. \(89 \times 465 = \)  
12. \(19 \times 517 = \)  

Find the value for \(n\) that makes the equation true.

13. \(n \times 720 = 10,800\)  
14. \(491 \times n = 8,838\)  
15. \(n \times 679 = 5,432\)  

Mixed Review

16. \((25 \div 5) + 10\)  
17. \(40 \div (2 \times 4)\)  
18. \((48 \div 8) \times (3 + 8)\)  
19. \((36 \div 4) + (12 \times 5)\)  
20. \((15 \times 3) - (56 \div 8)\)  
21. \((19 + 44) \div 7\)  
22. \(6,442 + 2,192\)  
23. \(4,612 - 895\)  
24. \(3,292 - 2,890\)  
25. \(6,505 - 398\)  
26. \(70 \times 5\)  
27. \(25 \times 6\)  
28. \(35 \times 8\)  
29. \(40 \times 5\)  
30. \(15 \times 7\)
Choose a Method

Find the product. Estimate to check.

1. 2,001 × 96
2. $2,425 × 24
3. 3,478 × 47
4. $5,699 × 26

5. 1,527 × 76
6. 3,639 × 69
7. 7,498 × 55
8. 6,643 × 78

9. 48 × 2,769 = ____________
10. 36 × 4,873 = ____________

Exercises 11–12 show 2 common errors. Describe each error and correct it.

11. 1,360
   × 42
   272
   5,440
   5,712

12. 2,966
   × 16
   17,796
   29,660
   36,356

Mixed Review

13. (4 × 7) × 5
14. (6 × 10) × 2
15. (40 ÷ 8) × 12

16. 19 × 60
17. 29 × 11
18. 32 × 28
19. 2,511 × 16

20. 787 − 319
21. 4,612 − 895
22. 3,292 − 2,890
23. 6,908 − 5,002
Practice Multiplication

Find the product. Estimate to check.

1. \(2,091 \times 26\)

2. \(5.84 \times 6\)

3. \(518 \times 27\)

4. \(3.20 \times 84\)

5. \(3,493 \times 36\)

6. \(45.39 \times 31\)

7. \(2,949 \times 26\)

8. \(813 \times 63\)

9. \(40.30 \times 64\)

10. \(5,403 \times 38\)

11. \(942 \times 81\)

12. \(3,009 \times 49\)

Mixed Review

13. School ended at 3:20 P.M. Ida walked to Sam’s house, which took 20 minutes. She stayed there for 1 hour. Then she had to walk home. The walk from Sam’s house to her home took 40 minutes. At what time did she get home?

14. Marilu’s dad has some weights in the basement. Marilu is trying to lift a box with three 5-lb weights, seven 1-lb weights, and two 7-lb weights. How much weight is in the box?

Complete the table.

<table>
<thead>
<tr>
<th>×</th>
<th>5</th>
<th>7</th>
<th>2</th>
<th>8</th>
<th>3</th>
<th>9</th>
<th>12</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. \(10,000 - 5,794\)

17. \(25,000 - 21,211\)

18. \(19,000 - 9,655\)

19. \(31,000 - 28,414\)
Problem Solving Skill

Multistep Problems

For 1–4, use the table.

The school cafeteria can add two new meals to the menu. They have been testing four meals and will choose the one that is most popular and the one that made the most money. The table shows the number of students who ate each meal and the price of the meal.

1. Write an expression to find the amount of money brought in by veggie burgers.

2. How much money is brought in by sales of tomato soup?

3. How much more money is brought in by chicken patties than by cheese sandwiches?

4. Which two new meals will the cafeteria staff choose?

<table>
<thead>
<tr>
<th>Food</th>
<th>Number of Students</th>
<th>Price of Each Meal</th>
</tr>
</thead>
<tbody>
<tr>
<td>chicken patties</td>
<td>302</td>
<td>$1.12</td>
</tr>
<tr>
<td>veggie burger</td>
<td>309</td>
<td>$0.89</td>
</tr>
<tr>
<td>cheese sandwich</td>
<td>307</td>
<td>$0.95</td>
</tr>
<tr>
<td>tomato soup</td>
<td>189</td>
<td>$1.05</td>
</tr>
</tbody>
</table>

Mixed Review

5. $12.27 \times 3$

6. $8.99 \times 4$

7. $11.15 - 7.27$

8. $19.89 - 6.40$

9. $65 \times (437 - 81) = n$

10. $312 \times n = 24,336$
Divide with Remainders

Vocabulary

1. In a division problem, the \underline{remainder} is the amount left over when a number cannot be divided evenly.

Make a model, record, and solve.

2. \(4 \div 19\)  
3. \(3 \div 25\)  
4. \(6 \div 38\)  
5. \(2 \div 17\)

Divide. You may wish to use counters.

6. \(7 \div 61\)  
7. \(5 \div 47\)  
8. \(3 \div 19\)  
9. \(8 \div 43\)

10. \(6 \div 58\)  
11. \(9 \div 49\)  
12. \(2 \div 13\)  
13. \(7 \div 65\)

Mixed Review

Complete each table.

<table>
<thead>
<tr>
<th>×</th>
<th>4</th>
<th>5</th>
<th>9</th>
<th>3</th>
<th>11</th>
<th>7</th>
<th>6</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>×</th>
<th>11</th>
<th>12</th>
<th>5</th>
<th>8</th>
<th>7</th>
<th>4</th>
<th>6</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Model Division

Make or draw a model. Record and solve.

1. \(52 \div 3 = \)  
2. \(68 \div 4 = \)  
3. \(65 \div 5 = \)  

4. \(7\overline{91}\)  
5. \(6\overline{100}\)  
6. \(2\overline{58}\)  

7. \(63 \div 3 = \)  
8. \(78 \div 4 = \)  
9. \(53 \div 4 = \)  

10. \(2\overline{38}\)  
11. \(3\overline{48}\)  
12. \(6\overline{72}\)  

Mixed Review

For 13–15, use the table. The students in Mr. Jackson’s class are holding a bake sale.

<table>
<thead>
<tr>
<th>Kind of Cookie</th>
<th>Total Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chocolate chip</td>
<td>42</td>
</tr>
<tr>
<td>Oatmeal</td>
<td>65</td>
</tr>
<tr>
<td>Ginger</td>
<td>48</td>
</tr>
</tbody>
</table>

13. If Sara divides the chocolate chip cookies evenly into 3 bags, how many cookies does she put into each bag?

14. If Tim divides the oatmeal cookies evenly into 5 bags, how many cookies does he put into each bag?

15. Mr. Brown bought one bag of cookies for $1.75. What change should he receive from $10.00?

Find the sum or difference.

16. \(\$17.50 + \$17.50 = \$35.00\)  
17. \(\$248.32 - \$119.55 = \$128.77\)  
18. \(\$49.68 - \$5.11 = \$44.57\)  
19. \(\$22.99 + \$85.98 = \$108.97\)
Division Procedures

Divide and check.

1. \(2\overline{)64}\) Check: 
2. \(3\overline{)96}\) Check: 
3. \(4\overline{)51}\) Check: 

4. \(3\overline{)94}\) Check: 
5. \(7\overline{)93}\) Check: 
6. \(8\overline{)89}\) Check: 

Mixed Review

7. Shari sold 114 boxes of cookies with 14 cookies in each box. How many cookies did she sell?

8. A football stadium can seat 50,013 people. If 24,394 seats are empty, how many people are attending the game?

9. \(8 \times 9 = 72\) 
   \(9 \times 8 = \) 
   \(72 \div \) = 8 
   \(\) \(\div 8 = 9\)

10. \(12 \times 7 = \) 
    \(7 \times 12 = \)

11. \(7 \times 6 = \)
    \(\) \(\times 7 = 42\)
    \(42 \div 7 = \)
    \(\) \(\div 6 = \)
Problem Solving Strategy

Predict and Test

Predict and test to solve.

1. There were 93 students going to a nature camp. After equal groups of fewer than 10 students, were formed for hiking, 2 students were left over. How many equal groups were formed?

2. During a hike, Sally and Dave collected 160 acorns. Sally collected 3 times as many acorns as Dave. How many acorns did Dave collect?

3. The 93 nature camp students ate lunch at the lodge. They sat at an even number of tables. There were 5 students sitting at one table, and an equal number of students sitting at each of the other tables. How many students were sitting at each of the other tables?

4. At one table, some of the students shared 3 pizzas. Each pizza was cut into 8 slices. After the students shared the pizza equally, there were 3 slices left over. How many students shared the pizza? How many slices of pizza did each student eat?

Mixed Review

For 5–8, use the graph.

5. For which candidate is the difference between the number of men’s and women’s votes the greatest?

6. About how many women voted for Jones?

7. About how many men voted for O’Shea?

8. About how many people voted at Polling Station #3?
Mental Math: Division Patterns

Use a basic division fact and patterns to write each quotient.

1. \(240 \div 6 = \) \(40\) \(2,400 \div 6 = \) \(400\) \(24,000 \div 6 = \) \(4,000\)
2. \(350 \div 5 = \) \(70\) \(3,500 \div 5 = \) \(700\) \(35,000 \div 5 = \) \(7,000\)
3. \(360 \div 4 = \) \(90\) \(3,600 \div 4 = \) \(900\) \(36,000 \div 4 = \) \(9,000\)

Divide mentally. Write the basic division fact and the quotient.

4. \(210 \div 3 = \) \(70\)
5. \(2,700 \div 3 = \) \(900\)
6. \(8,000 \div 2 = \) \(4,000\)
7. \(450 \div 9 = \) \(50\)
8. \(40,000 \div 8 = \) \(5,000\)
9. \(3,200 \div 8 = \) \(400\)
10. \(120 \div 4 = \) \(30\)
11. \(36,000 \div 6 = \) \(6,000\)

Mixed Review

For Problems 12–14, use the table at the right.

12. The Shaw family drove from Boston to Houston in 6 days. If they drove about the same distance each day, about how many miles did they drive each day?

<table>
<thead>
<tr>
<th>ROAD MILEAGE FROM BOSTON, MA</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>Kansas City, MO</td>
</tr>
<tr>
<td>Philadelphia, PA</td>
</tr>
<tr>
<td>Houston, TX</td>
</tr>
</tbody>
</table>

13. The Peters family drove from Boston to Philadelphia in about 6 hours. About how many miles did they travel in one hour, if they traveled about the same distance each hour?

14. Tom and his family leave Boston on Monday morning to drive to Kansas City. If they drive about 200 miles each day, what day should they arrive in Kansas City?
Estimate Quotients

Choose the letter of the best estimate.

1. $359 \div 5$   a. 70 or 80   b. 7 or 8   c. 15 or 20
2. $715 \div 7$   a. 17 or 18   b. 10 or 11   c. 100 or 110
3. $156 \div 4$   a. 12 or 13   b. 40 or 50   c. 4 or 5

Estimate by using compatible numbers.

4. $2\overline{)175}$   5. $4\overline{)231}$   6. $6\overline{)375}$   7. $8\overline{)255}$
8. $5\overline{)2,681}$   9. $4\overline{)3,289}$   10. $8\overline{)4,007}$   11. $3\overline{)1,811}$
12. $3\overline{)241}$   13. $5\overline{)4,787}$   14. $5\overline{)388}$   15. $7\overline{)3,594}$

Mixed Review

16. $2 \times 7 \times 2 = \underline{\phantom{000}}$   17. $9 \times 5 \times 1 = \underline{\phantom{000}}$   18. $2 \times 4 \times 7 = \underline{\phantom{000}}$
19. $12 - 2 = \underline{\phantom{000}} + 5$   20. $9 \times 9 = \underline{\phantom{000}} \div 2$
21. $20 + \underline{\phantom{000}} = 16 + 24$   22. $11 \times 6 = \underline{\phantom{000}} \div 3$
23. $\$15.72 - $8.03 = \underline{\phantom{000}}$   24. $62,109 - 45,863 = \underline{\phantom{000}}$   25. $\$14.38 + $57.60 = \underline{\phantom{000}}$   26. $1,990 + 3,473 = \underline{\phantom{000}}$
**Place the First Digit**

Tell where to place the first digit. Then divide.

1. \(5\overline{)36}\) \hspace{1cm} 2. \(3\overline{)62}\) \hspace{1cm} 3. \(2\overline{)173}\) \hspace{1cm} 4. \(6\overline{)72}\)

5. \(4\overline{)241}\) \hspace{1cm} 6. \(7\overline{702}\) \hspace{1cm} 7. \(9\overline{381}\) \hspace{1cm} 8. \(4\overline{820}\)

Divide.

9. \(6\overline{)45}\) \hspace{1cm} 10. \(3\overline{)84}\) \hspace{1cm} 11. \(5\overline{149}\) \hspace{1cm} 12. \(7\overline{652}\)

13. \(2\overline{157}\) \hspace{1cm} 14. \(3\overline{171}\) \hspace{1cm} 15. \(7\overline{823}\) \hspace{1cm} 16. \(8\overline{799}\)

**Mixed Review**

17. \(32 \times 12\) \hspace{1cm} 18. \(48 \times 11\) \hspace{1cm} 19. \(288 \times 5\) \hspace{1cm} 20. \(534 \times 8\)

21. \(4,211 + 1,399\) \hspace{1cm} 22. \(2,378 + 2,564\) \hspace{1cm} 23. \(5,913 - 2,708\) \hspace{1cm} 24. \(25,926 - 15,827\)
Divide 3-Digit Numbers

Divide.

1. 4)137  
2. 3)325  
3. 2)198  
4. 7)924

Divide and check.

5. 3)152  Check:  
6. 2)542  Check:  
7. 5)627  Check:

8. 324 ÷ 6 = ________  Check:  
9. 647 ÷ 9 = ________  Check:

Mixed Review

10. 14  
11. 348  
12. 4,542  
13. 351  
14. 8,421
  × 25  
  × 55  
  × 17  
  × 84  
  × 20

15. 2,621  
16. 7,457  
17. $29.82  
18. 4,608  
19. 4,816
  + 5,892  
  − 3,329  
  + 49.70  
  − 3,789  
  + 5,184
**Zeros in Division**

Write the number of digits in each quotient.

1. \(4)\overline{364}\)  
2. \(6)\overline{612}\)  
3. \(3)\overline{411}\)  
4. \(7)\overline{105}\)

5. \(5)\overline{545}\)  
6. \(8)\overline{432}\)  
7. \(7)\overline{905}\)  
8. \(2)\overline{123}\)

Divide.

9. \(3)\overline{312}\)  
10. \(4)\overline{429}\)  
11. \(6)\overline{526}\)  
12. \(4)\overline{436}\)

13. \(6)\overline{724}\)  
14. \(5)\overline{531}\)  
15. \(9)\overline{250}\)  
16. \(7)\overline{903}\)

**Mixed Review**

17. \(8 \times 6 = \) _____  
18. \(12 \times 2 = \) _____  
19. \(9 \times 8 = \) _____

20. \(4 \times 4 = \) _____  
21. \(6 \times 5 = \) _____  
22. \(7 \times 7 = \) _____

23. \(7 \times 3 = \) _____  
24. \(9 \times 6 = \) _____  
25. \(12 \times 3 = \) _____

26. \(11 \times 6 = \) _____  
27. \(3 \times 8 = \) _____  
28. \(8 \times 8 = \) _____

29. \(9 \times 7 = \) _____  
30. \(12 \times 10 = \) _____  
31. \(5 \times 9 = \) _____
Choose a Method

Divide.

1. 4)740  2. 5)630  3. 6)828  4. 7)756  5. 3)840

6. 9)945  7. 4)840  8. 2)734  9. 8)400  10. 7)483

11. 6)1,680  12. 4)5,316  13. 5)6,030  14. 8)3,208  15. 5)6,600

Mixed Review

16. Evaluate:  
(25 − 9) + (12 ÷ 3)

17. Find the median:  
3, 6, 4, 6, 3, 4, 6, 7, 2

18. Find the elapsed time.  
Start time: 8:03 A.M.  
End time: 2:51 P.M.

19. 36 × 12 = _____  
20. 88 × 11 = _____  
21. 54 × 9 = _____
Problem Solving Skill

Interpret the Remainder

Solve. Tell how you interpret the remainder.

1. The 158 fourth graders from the Glenwood School are going on a picnic. If there are 8 hot dogs in a package, how many packages are needed for each student to have 2 hot dogs?

2. Some of the students baked cookies for the picnic. Jeff baked 50 cookies. How many packages of 3 cookies each could he make?

3. The 158 students divide up into teams of 8 for a scavenger hunt. The students who are left over form a smaller team. How many teams are there?

4. Mrs. Jackson bought 7 dozen eggs for an egg-tossing contest. If each student in the contest is given the same number of eggs, how many eggs are left over?

Mixed Review

For 5–7, use the price list.

5. Kito bought 4 pencils, 2 erasers, and a ruler. How much money did he spend?

6. On Monday, the store sold 20 pencils, 10 erasers, and 3 rulers. On Tuesday, the store sold 15 pencils, 13 erasers, and 3 rulers. On which day did the store take in more money?

7. On Friday, the store received a new supply of 72 pencils. Bill arranged the new pencils in groups of 5. How many groups could he make? How many pencils were left over?

SCHOOL STORE PRICE LIST

<table>
<thead>
<tr>
<th>Item</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pencil</td>
<td>$0.10</td>
</tr>
<tr>
<td>Eraser</td>
<td>$0.15</td>
</tr>
<tr>
<td>Ruler</td>
<td>$0.50</td>
</tr>
</tbody>
</table>
Find the Mean

Vocabulary

Complete.

1. A(n) ______________ is the number found by dividing the sum of a set of numbers by the number of addends.

Write the division problem for finding the mean. Then find the mean.

2. 7
3. 3
4. 143
5. 2,516

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>5</td>
<td>99</td>
<td>6,518</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>213</td>
<td>3,215</td>
</tr>
<tr>
<td>12</td>
<td>9</td>
<td>407</td>
<td>4,327</td>
</tr>
<tr>
<td>14</td>
<td>12</td>
<td>698</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Find the mean.

6. 2,178; 4,214; 1,291
7. 9,972; 2,755; 1,130

Find the mean.

Mixed Review

8. _____ × 1 = 7
9. _____ × 4 = 20
10. 8 × _____ = 56

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10 = 70</td>
<td>5 × _____ = 200</td>
<td>_____ × 70 = 560</td>
</tr>
<tr>
<td></td>
<td>100 = 700</td>
<td>5 × _____ = 2,000</td>
<td>8 × 700 = _____</td>
</tr>
</tbody>
</table>

11. 10 tens 5 ones = _____ tens 15 ones

12. 8 tens 17 ones = 9 tens _____ ones

13. 3 hundreds 14 tens = _____ hundreds 4 tens

14. 6 hundreds 2 tens = _____ hundreds 12 tens
Division Patterns to Estimate

Write the numbers you would use to estimate the quotient. Then estimate.

1. \(58 \div 15\) \hspace{2cm} 2. \(695 \div 65\) \hspace{2cm} 3. \(556 \div 68\)

4. \(273 \div 32\) \hspace{2cm} 5. \(447 \div 52\) \hspace{2cm} 6. \(810 \div 42\)

Estimate.

7. \(45 \div 14\) \hspace{2cm} 8. \(362 \div 64\) \hspace{2cm} 9. \(596 \div 34\)

10. \(79 \div 19\) \hspace{2cm} 11. \(462 \div 83\) \hspace{2cm} 12. \(721 \div 78\)

Complete the tables.

<table>
<thead>
<tr>
<th>Dividend</th>
<th>Divisor</th>
<th>Quotient</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. (60)</td>
<td>(\div 30)</td>
<td>__________</td>
</tr>
<tr>
<td>14. __________</td>
<td>(\div 30)</td>
<td>20</td>
</tr>
<tr>
<td>15. (6,000)</td>
<td>(\div 30)</td>
<td>__________</td>
</tr>
<tr>
<td>16. __________</td>
<td>(\div 30)</td>
<td>2,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dividend</th>
<th>Divisor</th>
<th>Quotient</th>
</tr>
</thead>
<tbody>
<tr>
<td>17. (80)</td>
<td>(\div 20)</td>
<td>__________</td>
</tr>
<tr>
<td>18. __________</td>
<td>(\div 20)</td>
<td>40</td>
</tr>
<tr>
<td>19. __________</td>
<td>(\div 20)</td>
<td>400</td>
</tr>
<tr>
<td>20. (80,000)</td>
<td>(\div 20)</td>
<td>__________</td>
</tr>
</tbody>
</table>

Mixed Review

21. \(39 \times 67\)
22. \(379 \times 46\)
23. \(3,593 \times 4\)
24. \(5,201 \times 82\)

25. \(81 \div 9 = \) __________
26. \(140 \div 5 = \) __________
27. \(320 \div 8 = \) __________
28. \(72 \div 8 = \) __________
29. \(660 \div 6 = \) __________
30. \(490 \div 7 = \) __________
Model Division

Make a model to divide.

1. 15\(\overline{)67}\) 2. 28\(\overline{)118}\) 3. 21\(\overline{)85}\)

4. 32\(\overline{)100}\) 5. 35\(\overline{)176}\) 6. 37\(\overline{)115}\)

7. 78 ÷ 25 = ____ 8. 97 ÷ 13 = ____ 9. 117 ÷ 22 = ____

Use the model to complete the number sentence.

10. 61 ÷ 28 = ______

11. 38 ÷ 9 = ______

Mixed Review

12. 100,000 \times 700 13. 495 \times 39 14. $872.64 - $41.98 15. $784.32 + $32.53

16. 200,000 \times 3,100 17. 702 \times 44 18. $90.89 - $89.77 19. $645.30 + $822.98
Division Procedures

Divide.

1. 22)598   2. 16)239   3. 11)346   4. 21)369
5. 13)461   6. 12)293   7. 31)862   8. 28)981
9. 17)206   10. 19)81   11. 23)485   12. 28)150

Mixed Review

13. 4)532   14. 4)626   15. 7)921   16. 4)5,881
17. 90,008  18. 967  19. 2,111  20. 72,931
- 66,849 \times 56 \times 16 + 30,275
Correcting Quotients

Write too high, too low, or just right for each estimate. Then divide.

1. \( \frac{8}{17} \) 152
   - 
2. \( \frac{4}{35} \) 186
   - 
3. \( \frac{7}{42} \) 351
   - 
4. \( \frac{8}{48} \) 374
   - 
5. \( \frac{7}{52} \) 419
   - 
6. \( \frac{8}{76} \) 679
   - 
7. \( \frac{9}{63} \) 556
   - 
8. \( \frac{9}{67} \) 650
   - 

Mixed Review

9. Sue is packing 116 spools of thread into shoe boxes. Each box can hold 42 spools of thread. Will Sue be able to pack all the spools into 2 boxes? Explain.

   

10. Tony is estimating the time he needs to complete his math homework. He can complete about 3 problems per minute. If he allows 20 minutes, will he finish his 42 math problems? Explain.

   

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Problem Solving Skill

Choose the Operation

Solve. Name the operation you used.

1. Mr. Murphy owns a bakery. On Saturday, he baked 60 blue-berry muffins, 48 corn muffins, and 72 cranberry muffins. How many muffins did he bake in all?

2. Mr. Murphy sold 498 cookies on Saturday. At the beginning of the day, there were 512 cookies. How many cookies were left at the end of the day?

3. Susan bought 4 muffins for $0.79 each. How much money did she spend?

4. Ryan paid $2.34 for 6 chocolate chip cookies. How much did each cookie cost?

Mixed Review

For 5–7, use the graph.

5. How many bicycles were sold on Wednesday?

6. How many bicycles were sold during the week?

7. How many more bicycles were sold on Saturday than on Monday?

8. Will wants to buy a bicycle that costs $109. He has already saved $45. If Will earns $8 each week, how many weeks will it take him to save enough money to buy the bicycle?

9. Some days, Mary rides her bicycle to and from school. The distance is 2 miles each way. In October, Mary rode her bicycle to and from school 14 times. How many miles did she ride to and from school in October?
Factors and Multiples

List the factors you can find in a multiplication table for each product.

1. 16
2. 36
3. 81
4. 20

5. 48
6. 72
7. 32
8. 63

Use a multiplication table to find four multiples for each number.

9. 4
10. 9
11. 6
12. 3

Use what you know about multiplication. Find as many factors as you can for each product.

13. 20
14. 14
15. 6
16. 23

17. 24
18. 28
19. 19
20. 64

Mixed Review

22. Find $80 \div m$ if $m = 8$.
23. Find $t \times 7$ if $t = 9$.

24. 4 weeks = ___ days
25. $8 + n = 2 \times 9$
26. $6,511 \times 5$

27. $810 \div 90 =$
28. $367 \div 21 =$
29. $40 \times 600 =$
Factor Numbers

Write an equation for the arrays shown.

1.  
2.  
3.  

Write two ways to break apart the model.

4.  
5.  
6.  

Write at least two ways to break down the number.

7. 56  
8. 12  
9. 42  

10. 36  
11. 24  
12. 60  

Mixed Review

13.  \( \frac{8,516}{563} + 518 \)  
14.  \( 648,518 + 315,849 \)  
15.  \( 900,002 + 95,518 \)  
16.  \( 789 \div 33 \)  

17.  \( 462 \div 15 \)  
18.  \( 929 \div 31 \)  
19.  \( 5,017 \div 6 \)
Prime and Composite Numbers

Make arrays to find the factors. Write *prime* or *composite* for each number.

1. 19
2. 32
3. 81
4. 36
5. 27
6. 56
7. 29
8. 18

Write *prime* or *composite* for each number.

9. 42
10. 64
11. 100
12. 72
13. 22
14. 15
15. 91
16. 47

Frances has to put cans on a shelf. Each shelf must have an equal number of cans. How many ways can she put the cans on the shelf? List the ways.

17. 12 CANS
18. 24 CANS
19. 18 CANS

Mixed Review

20. Train A traveled the 29 miles between Dell City and Mesabi 18 times. Train B traveled the 21 miles between Mesabi and Dodge 24 times. Which train traveled the greatest number of miles?

21. Joanna left school at 3:30 P.M. She went to volleyball practice for 90 minutes. She stopped at her aunt’s house for 75 minutes, and then spent 15 minutes walking home. What time did she get home?
Find Prime Factors

Write each as a product of prime factors.

1. 36
2. 81
3. 18
4. 27

5. 34
6. 55
7. 38
8. 40

9. 32
10. 56
11. 72

12. 88
13. 20
14. 144

Write the missing factor.

15. $66 = 3 \times \_ \times \_ \times \_ \times \_ $  
16. $98 = 2 \times \_ \times \_ \times \_ \times \_ $

17. $56 = 2 \times 2 \times 2 \times \_ \times \_ \times \_ \times \_ $
18. $100 = 2 \times 2 \times \_ \times \_ \times \_ \times \_ $

Mixed Review

19. Order from greatest to least:
   7,077; 7,707; 7,070; 7,700; 7,770; 7,777

20. Order from least to greatest:
   4,106; 416; 4,601; 601; 4,001

21. Estimate. $9,083 \times 59$

22. Estimate. $4,593 - $2,279

23. Estimate. $6 \sqrt{55}$

24. Estimate. $9 \sqrt{85}$
Problem Solving Strategy

Find a Pattern

1. Continue the pattern.
   1, 4, 7, 10, ___

2. Continue the pattern.
   3, 9, 27, 81, ___

3. Describe the pattern in Exercise 1.

4. Describe the pattern in Exercise 2.

5. What are the next two numbers in the following sequence?
   1, 3, 7, 13, 21, ___, ___

6. What are the next two shapes in the following sequence?
   □ □□ □□□ □□□ □□□

7. Monica is playing a guessing game with her friends. When they say 5, she says 20. When they say 9, she says 36. When they say 2, she says 8. What is the pattern?

8. Ruthie is writing a pattern where she gets a number by multiplying the last number by 2 and adding 3. Write the next two numbers.
   1, 5, 13, 29, ___, ___

Mixed Review

9. Melanie’s family took a trip. The first day they drove 140 miles. The second day they drove 210 miles. The third day they drove 120 miles. The last day they drove 190 miles. What was their average mileage per day?

10. Melanie’s mother bought 30 gallons of gasoline during their trip. If they drove a total of 660 miles, how many miles did they drive per gallon of gasoline?

11. If gasoline cost $1.45 per gallon, how much did Melanie’s mother spend on gasoline for their trip?

12. How much less would the total cost for gasoline have been if it had cost $1.25 per gallon?
Lines, Rays, and Angles

Vocabulary

Fill in the blanks.

1. A _______ is part of a line and has one endpoint.

2. When two rays have the same endpoint, they form an ________.

3. A ________ angle forms a square corner.

4. An________ angle is less than the measure of a right angle.

5. An ________ angle is greater than the measure of a right angle.

Draw and label an example of each.

6. point $D$
7. line $MN$
8. ray $DE$

What kind of angle is each? Write right, acute, or obtuse.

9. ________
10. ________
11. ________

12. ________
13. ________
14. ________

Mixed Review

15. $\frac{9}{7}$
16. $\frac{8}{8}$
17. $\frac{7}{4}$
18. $\frac{10}{6}$

19. $14 \div 2 = _____$
20. $36 \div 6 = _____$
21. $42 \div 6 = _____$
Line Relationships

Vocabulary

Fill in the blanks.

1. _________________ lines are lines that cross each other.

2. _________________ lines intersect to form four right angles.

Name any line relationship you see in each figure. Write intersecting, parallel, or perpendicular.

3. 

4. 

5. 

6. 

7. 

8. 

Mixed Review

9. $4\overline{)}22$

10. $7\overline{)}50$

11. $9\overline{)}14$

12. $2\overline{)}75$

13. \[ \frac{17}{15} \]

14. \[ \frac{259}{5} \]

15. \[ \frac{78}{9} \]

16. \[ \frac{361}{20} \]
Congruent Figures and Motion

Tell how each figure was moved. Write slide, flip, or turn.

1. Slide
2. Flip
3. Turn

Tell whether the two figures are congruent, similar, or neither.

4. Congruent
5. Similar
6. Neither

7. Copy this figure on dot paper. Then draw figures to show a slide, a flip, and a turn.

Mixed Review

8. $4,729 - 2,418 = \underline{2311}$
9. $2,470 - 981 = \underline{1489}$
10. $1,897 + 423 = \underline{2320}$
11. $6,231 + 4,865 = \underline{11096}$
12. $10,078 - 9,021 = \underline{1057}$
13. $9,624 - 3,071 = \underline{6553}$
14. $738$ $389$ $339$
15. $199$ $309$ $408$
16. $422$ $688$ $640$
17. $237$ $888$ $815$
Symmetric Figures

Tell whether the figure has rotational symmetry, line symmetry, or both.

1.

2.

3.

4.

5.

6.

7.

8.

9.

Mixed Review

Write each number in expanded form.

10. $5,654 = \underline{\phantom{0}} + \underline{\phantom{0}} + \underline{\phantom{0}} + \underline{\phantom{0}}$

11. $9,232 = \underline{\phantom{0}} + \underline{\phantom{0}} + \underline{\phantom{0}} + \underline{\phantom{0}}$

12. $138,045 = \underline{\phantom{0}} + \underline{\phantom{0}} + \underline{\phantom{0}} + \underline{\phantom{0}} + \underline{\phantom{0}}$

13. $87,657 = \underline{\phantom{0}} + \underline{\phantom{0}} + \underline{\phantom{0}} + \underline{\phantom{0}} + \underline{\phantom{0}} + \underline{\phantom{0}}$

Solve.

14. $(7 \times 6) \div 2 = \underline{\phantom{0}}$

15. $(13 - 8) \times 9 = \underline{\phantom{0}}$

16. $6 + (12 \div 2) = \underline{\phantom{0}}$

17. $7,614 + 8,093$

18. $21,355 - 9,787$

19. $3,630 \times 41$

20. $2,498 \times 15$

Name ____________________________

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Problem Solving Strategy

Make a Model

For 1–4, make a model to solve.

1. Laura wants to make the figure below larger and then put it on her folder. Use 1-inch grid paper to help Laura make a larger picture.

2. Wesley wants to decorate a bulletin board in his school hallway. He wants to make a larger picture of the figure below. Use 1-inch grid paper to help Wesley make the picture larger.

3. Make a smaller picture of the figure below. Use 0.5-cm grid paper to help you make a smaller picture.

4. Make a larger picture of the figure below. Use 1-inch grid paper to help you.

Mixed Review

5.  
   \[ \begin{array}{c} 589 \\ +782 \end{array} \]
   
   6.  
   \[ \begin{array}{c} 5468 \\ +9230 \end{array} \]
   
   7.  
   \[ \begin{array}{c} 10860 \\ -8701 \end{array} \]

8.  
   \[ \begin{array}{c} 1792 \\ +4567 \end{array} \]
   
   9.  
   \[ \begin{array}{c} 907 \\ -488 \end{array} \]
   
   10.  
   \[ \begin{array}{c} 800 \\ +745 \end{array} \]

11.  
    \[ \begin{array}{c} 3459 \\ -2899 \end{array} \]
    
    12.  
    \[ \begin{array}{c} 6378 \\ +8719 \end{array} \]
    
    13.  
    \[ \begin{array}{c} 6448 \\ -1714 \end{array} \]
Turns and Degrees

Tell whether the rays on the circle show a $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, or full turn.

1. $\cdots$  
2. $\cdots$  
3. $\cdots$  
4. $\cdots$

Tell whether the figure has been turned 90°, 180°, 270°, or 360°.

5. $\cdots$  
6. $\cdots$  
7. $\cdots$  
8. $\cdots$

Mixed Review

9. $\$2.35 \times 3$
10. $\$6.56 \times 9$
11. $\$1.87 \times 5$
12. $\$13 \times 12$
13. $\$2.57 \times 2$

14. $\$12.49 \times 3$
15. $\$9.15 \times 8$
16. $\$273 \times 22$
17. $\$196 \times 18$
18. $\$626 \times 6$

19. $\$3.78 \times 9$
20. $\$10.50 \times 9$
21. $\$689 \times 15$
22. $\$187 \times 13$
23. $\$345 \times 15$

Divide.

24. $19 \div 86$
25. $34 \div 139$
26. $25 \div 406$
Measure Angles

Use a protractor to measure the angle.

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

Mixed Review

Name any line relationships you see in each figure. Write intersecting, parallel, or perpendicular lines.

7.  
8.  
9.  
10.  
11.  
12.  
Circles

Vocabulary

Define the following words.

1. radius: ____________________________
    ____________________________

2. diameter: ____________________________
    ____________________________

For 3–6, use the drawing.

3. The center of the circle is point _____.
4. A diameter of the circle is line segment _____.
5. Name each radius of the circle that is shown.
   _____, _____, _____, and _____
6. Some points on the circle are _____, _____, _____, and _____.
7. Draw a circle. Label the center point A.
   Draw a radius AB. Draw a diameter CD.

For 8–9, use Circles R and W.

8. Name the center of each circle. _________
9. Name each radius shown. _______________________
   _______________________

Mixed Review

10. A performance began at 7:15 P.M. At 9:10 P.M., the performance ended. How long was the performance?

11. Rashid’s bank has 6 quarters, 9 dimes, 15 nickels, and 26 pennies in it. How much is in his bank?
Circumference

Estimate each circumference.

1. 54 ft
2. 81 cm
3. 13 m
4. 66 in.
5. 568 cm
6. 14 yd.
7. 139 mi
8. 238 ft
9. 492 in.
10. A wheel has a circumference of 8 inches. It rolls 72 inches. How many complete turns did the wheel make?

Mixed Review

Write the number in word form.

11. 7,849
12. 182
13. 1,283
14. 9,634
15. 17,334
Classify Triangles

Classify each triangle. Write *isosceles, scalene, or equilateral*.

1. 4 in., 6 in., 4 in.
2. 1 m, 1 m, 1 m
3. 6 yd, 6 yd, 7 yd
4. 20 ft, 45 ft, 35 ft
5. 8 cm, 10 cm, 9 cm
6. 23 cm, 23 cm, 23 cm
7. 4 mi, 7 mi, 4 mi
8. 6 in., 10 in., 11 in.
9. 9 ft, 12 ft, 9 ft

Classify each triangle by the length of its sides. Write *isosceles, scalene, or equilateral*.

10. 12 in., 12 in., 12 in.
11. 65 yd, 43 yd, 65 yd
12. 45 mi, 23 mi, 56 mi

**Mixed Review**

Tell whether the figure has *rotational symmetry, line symmetry,* or *both*.

13. 
14. 
15. 

**PW100 Practice**
Classify Quadrilaterals

Vocabulary

Fill in the blanks.

1. All ________________ have 4 sides and 4 angles.

2. ________________ have only 2 sides that are parallel.

3. ________________ have 2 pairs of parallel sides. They have 2 acute angles of the same size and 2 obtuse angles of the same size.

4. A ________________ has 4 congruent sides. Its opposite sides are parallel and its angles may be right angles.

Classify each figure in as many ways as possible. Write quadrilateral, parallelogram, square, rectangle, rhombus, or trapezoid.

5. __________ 6. __________ 7. __________ 8. __________

Draw an example of each quadrilateral.

9. trapezoid 10. square 11. rhombus

12. parallelogram 13. rectangle 14. general quadrilateral

Mixed Review

15. \( 250 \times 7 \) 16. \( 864 \times 5 \) 17. \( 793 \times 6 \) 18. \( 122 \times 8 \)
Problem Solving Strategy

Draw a Diagram

Follow the directions.

1. Sort these figures into a Venn diagram showing *Figures with 4 Sides* and *Figures with More Than 4 Sides*: square, rectangle, pentagon, trapezoid, octagon, hexagon.

   [Diagrams of two circles for sorting figures]

2. Sort these numbers into a Venn diagram showing *Divisible by 3* and *Not Divisible by 3*: 28, 35, 36, 40, 51, 60.

   [Diagrams of two circles for sorting numbers]

Mixed Review

Add or subtract.

3. $6,783 + 3,960 = 10,743$
4. $8,743 - 586 = 8,157$
5. $54,732 + 4,694 = 59,426$
6. $9,275 + 2,392 = 11,667$
7. $14,821 - 4,812 = 10,009$

PW102 Practice
Read and Write Fractions

Vocabulary

Fill in the blank.

1. A number that names a part of a whole is a ______________.

Write a fraction for the shaded part. Write a fraction for the unshaded part.

2. 3. 4. 5.

6. 7. 8.

Draw a picture and shade part of it to show the fraction. Write a fraction for the unshaded part.

9. \(\frac{2}{6}\) 10. \(\frac{7}{8}\) 11. \(\frac{4}{5}\)

Mixed Review

12. \(\frac{12}{5}\) 13. \(\frac{11}{7}\) 14. \(\frac{9}{8}\) 15. \(\frac{6}{6}\) 16. \(\frac{12}{8}\)

17. \(5\overline{85}\) 18. \(9\overline{81}\) 19. \(4\overline{88}\) 20. \(12\overline{144}\) 21. \(7\overline{56}\)
Equivalent Fractions

Vocabulary

Fill in the blank.

1. Fractions that name the same amount are called ____________________________.

Use fraction bars or number lines to find at least one equivalent fraction for each.

2. \( \frac{1}{4} = \) ______
3. \( \frac{2}{3} = \) ______
4. \( \frac{1}{2} = \) ______

5. \( \frac{3}{6} = \) ______
6. \( \frac{2}{8} = \) ______
7. \( \frac{5}{6} = \) ______

8. \( \frac{8}{12} = \) ______
9. \( \frac{6}{8} = \) ______
10. \( \frac{6}{12} = \) ______

11. \( \frac{4}{12} = \) ______
12. \( \frac{4}{5} = \) ______
13. \( \frac{2}{5} = \) ______

Mixed Review

14. \( 13 - 7 = \_ \times 3 \)
15. \( 20 \div \_ = 14 - 12 \)
16. \( \_ + 49 = 81 - 15 \)

17. \( 4 \times 12 = 48 \div \_ \)
18. \( 63 + \_ = 71 + 19 \)
19. \( 55 \div \_ = 29 - 24 \)

20. \( 3 \times 3 \times 3 \times \_ = 54 \)
21. \( 4 \times \_ \times 2 = 32 \)
22. \( 7 \times 2 \times \_ = 14 \)
Equivalent Fractions

Vocabulary

Fill in the blank.

1. A fraction whose numerator and denominator can both be divided evenly only by 1 is in ________________.

Write two equivalent fractions for each.

2. \( \frac{5}{10} \)  
   \( \frac{1}{2} \)  
3. \( \frac{6}{18} \)  
   \( \frac{1}{3} \)  
4. \( \frac{3}{6} \)  
   \( \frac{1}{2} \)  
5. \( \frac{8}{20} \)  
   \( \frac{2}{5} \)  
6. \( \frac{4}{12} \)  
   \( \frac{1}{3} \)  
7. \( \frac{10}{20} \)  
   \( \frac{1}{2} \)  
8. \( \frac{1}{4} \)  
   \( \frac{1}{4} \)  
9. \( \frac{9}{36} \)  
   \( \frac{3}{12} \)  

Tell whether each fraction is in simplest form. If not, write it in simplest form.

10. \( \frac{3}{4} \)  
   \( \frac{3}{4} \)  
11. \( \frac{3}{6} \)  
   \( \frac{1}{2} \)  
12. \( \frac{4}{5} \)  
   \( \frac{4}{5} \)  
13. \( \frac{3}{7} \)  
   \( \frac{3}{7} \)  
14. \( \frac{9}{12} \)  
   \( \frac{3}{4} \)  
15. \( \frac{2}{8} \)  
   \( \frac{1}{4} \)  
16. \( \frac{16}{32} \)  
   \( \frac{1}{2} \)  
17. \( \frac{3}{5} \)  
   \( \frac{3}{5} \)  

Find the missing numerator or denominator.

18. \( \frac{6}{12} = \frac{2}{2} \)  
19. \( \frac{3}{9} = \frac{1}{3} \)  
20. \( \frac{3}{12} = \frac{1}{4} \)  
21. \( \frac{5}{15} = \frac{1}{3} \)  
22. \( \frac{4}{10} = \frac{2}{5} \)  
23. \( \frac{9}{18} = \frac{1}{2} \)  
24. \( \frac{4}{16} = \frac{1}{4} \)  
25. \( \frac{12}{24} = \frac{1}{2} \)  

Mixed Review

Estimate.

26. \( 6,834 \times 28 \)  
27. \( 975 \div 11 \)  
28. \( 3,210 \times 49 \)  
29. \( 495 \div 52 \)  
30. \( 888 \div 29 \)  
31. \( 9,011 \times 11 \)  

Practice PW105
LESSON 19.4

Name

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Compare and Order Fractions

Write the fraction for each model. Then compare, using <, >, or =.

1. \[
\begin{array}{c}
\text{3}\ \text{4} \\
\text{2}\ \text{3}
\end{array}
\]

2. \[
\begin{array}{c}
\text{1}\ \text{3} \\
\text{2}\ \text{6}
\end{array}
\]

3. \[
\begin{array}{c}
\text{1}\ \text{2} \\
\text{5}\ \text{8}
\end{array}
\]

Write <, >, or = in \(\bigcirc\).

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

5. \[
\begin{array}{c}
5\ \text{6} \\
4\ \text{6}
\end{array}
\]

6. \[
\begin{array}{c}
1\ \text{2} \\
6\ \text{12}
\end{array}
\]

7. \[
\begin{array}{c}
3\ \text{4} \\
3\ \text{5}
\end{array}
\]

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

9. \[
\begin{array}{c}
1\ \text{8} \\
1\ \text{7}
\end{array}
\]

10. \[
\begin{array}{c}
2\ \text{4} \\
1\ \text{2}
\end{array}
\]

Order the fractions from greatest to least. Use the models, fraction bars, or a number line to help you.

12. \[
\begin{array}{c}
2\ \text{5'} \\
1\ \text{5'} \\
3\ \text{5'}
\end{array}
\]

13. \[
\begin{array}{c}
2\ \text{6'} \\
1\ \text{4'} \\
2\ \text{5'}
\end{array}
\]

14. \[
\begin{array}{c}
1\ \text{6'} \\
1\ \text{3'} \\
1\ \text{2'} \\
1\ \text{5'}
\end{array}
\]

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

Order the fractions from least to greatest.

16. \[
\begin{array}{c}
3\ \text{12'} \\
4\ \text{10'} \\
2\ \text{3'}
\end{array}
\]

17. \[
\begin{array}{c}
5\ \text{8'} \\
1\ \text{2'} \\
2\ \text{3'}
\end{array}
\]

18. \[
\begin{array}{c}
1\ \text{4'} \\
1\ \text{6'} \\
1\ \text{5'}
\end{array}
\]

19. \[
\begin{array}{c}
4\ \text{6'} \\
7\ \text{12'} \\
2\ \text{5'}
\end{array}
\]

Mixed Review

Write each fraction in simplest form.

20. \[
\frac{3}{12}
\]

21. \[
\frac{5}{25}
\]

22. \[
\frac{6}{18}
\]

23. \[
\frac{7}{49}
\]

Add or multiply.

24. \[
7,919 \times 4
\]

25. \[
4,111 + 16
\]

26. \[
3,219 + 1,808
\]

27. \[
6,425 \times 9
\]
Problem Solving Strategy

Make a Model

Make a model to solve.

1. The cafeteria made a punch using $\frac{1}{2}$ gallon of apple juice, $\frac{5}{8}$ gallon of orange juice, and $\frac{2}{3}$ gallon of raspberry juice. List the juices in order from greatest to least amount used.

2. A school had 3 music groups, each with 24 students. The choir was made up of $\frac{1}{3}$ boys, the band was $\frac{3}{4}$ boys, and the orchestra was $\frac{5}{8}$ boys. Which music group had the greatest fraction of girls?

3. Matt bought cookies at a bakery. He bought $\frac{1}{2}$ dozen oatmeal cookies, $\frac{2}{3}$ dozen cinnamon cookies, and $\frac{3}{4}$ dozen chocolate cookies. List each kind of cookie in order from greatest to least amount bought.

4. Katrina made a square design with 25 tiles. She used 9 red tiles for the diagonals, 12 yellow tiles to complete the outside border, and 4 blue tiles to complete the center. Show what Katrina’s design looked like.

Mixed Review

5. $13)6,249$

6. $8)9,122$

7. $12)2,424$

8. $4)3,175$

Find the value of the expression.

9. $12 \times (9 - 3) = ___$

10. $(4 + 4) \times 8 = ___$

11. $(15 - 4) \times 9 = ___$
Mixed Numbers

Vocabulary

Fill in the blank.

1. A ______________________________ is made up of a whole number and a fraction.

Write a mixed number for each picture.

2. 3. 4.

Rename each fraction as a mixed number. You may wish to draw a picture.

5. \( \frac{16}{3} \) 6. \( \frac{9}{2} \) 7. \( \frac{17}{6} \) 8. \( \frac{13}{4} \)

For Exercises 9–11, use the figures at the right.

9. How many whole figures are shaded? Write an expression for the shaded part in the last figure.

10. How can you change the model to show 5 wholes?

11. What fraction and mixed number can you write for the shaded parts of the figures?

Mixed Review

12. \( 4 \times 4 = \) 13. \( 9 \times 5 = \) 14. \( 8 \times 7 = \) 15. \( 24 \times 1 = \)

16. \( 48 \div 12 = \) 17. \( 66 \div 11 = \) 18. \( 72 \div 9 = \) 19. \( 121 \div 11 = \)
Add Like Fractions

Find the sum.

1. \(\frac{3}{6} + \frac{1}{6} = \)  
2. \(\frac{1}{8} + \frac{6}{8} = \)  
3. \(\frac{3}{5} + \frac{4}{5} = \)

4. \(\frac{5}{12} + \frac{2}{12} = \)  
5. \(\frac{6}{10} + \frac{7}{10} = \)  
6. \(\frac{3}{4} + \frac{2}{4} = \)

7. \(\frac{2}{5} + \frac{1}{5} = \)  
8. \(\frac{5}{9} + \frac{4}{9} = \)  
9. \(\frac{2}{11} + \frac{4}{11} = \)

Compare. Write <, >, or = in each □.

10. \(\frac{2}{9} + \frac{3}{9} □ \frac{4}{9} \)  
11. \(\frac{1}{6} + \frac{2}{6} □ \frac{1}{2} \)  
12. \(\frac{5}{9} + \frac{8}{9} □ 1 \)

Find the value of \(n\).

13. \(\frac{2}{7} + \frac{4}{n} = \frac{6}{7} \)  
14. \(\frac{3}{13} + \frac{n}{13} = \frac{9}{13} \)

15. \(\frac{6}{9} + \frac{1}{n} = \frac{7}{9} \)  
16. \(\frac{9}{n} + \frac{1}{4} = 1 \)

Mixed Review

17. \(7 + 7 + 7 + 7 = \)  
18. \(12 + 12 + 12 + 12 + 12 = \)

19. \(\frac{8}{7} \times 7 = \)  
20. \(\frac{10}{5} \times 5 = \)  
21. \(\frac{3}{9} \times 9 = \)  
22. \(\frac{7}{7} \times 7 = \)  
23. \(\frac{6}{9} \times 9 = \)

Write an equivalent fraction for each.

24. \(\frac{7}{14} = \)  
25. \(\frac{16}{40} = \)  
26. \(\frac{12}{36} = \)  
27. \(\frac{9}{90} = \)  
28. \(\frac{6}{18} = \)
Subtract Like Fractions

Use fraction bars to find the difference.

1. \( \frac{3}{4} - \frac{2}{4} = \) ________  
2. \( \frac{4}{6} - \frac{3}{6} = \) ________  
3. \( \frac{7}{8} - \frac{3}{8} = \) ________  

4. \( \frac{5}{10} - \frac{3}{10} = \) ________  
5. \( \frac{3}{5} - \frac{1}{5} = \) ________  
6. \( \frac{6}{8} - \frac{2}{8} = \) ________  

7. \( \frac{10}{12} - \frac{5}{12} = \) ________  
8. \( \frac{7}{10} - \frac{3}{10} = \) ________  
9. \( \frac{5}{6} - \frac{1}{6} = \) ________  

Find the difference.

10. \( \frac{1}{5} \)  
11. \( \frac{1}{5} \)  
12. \( \frac{1}{4} \)  
13. \( \frac{1}{4} \)

Find the sum.

14. \( \frac{1}{12} + \frac{5}{12} = \) ________  
15. \( \frac{3}{8} + \frac{3}{8} = \) ________  
16. \( \frac{4}{7} + \frac{5}{7} = \) ________  

Mixed Review

17. \( 487 \times 22 \)  
18. \( 68 \times 95 \)  
19. \( 3,287 \times 17 \)  
20. \( 8,061 \times 40 \)

21. \( 15 \div 30 \)  
22. \( 5 \div 30 \)  
23. \( 3 \div 30 \)  
24. \( 4 \div 36 \)
Add and Subtract Mixed Numbers

Find the sum or difference.

1. \( \frac{57}{8} \)  
2. \( \frac{64}{10} \)  
3. \( \frac{93}{4} \)  
4. \( \frac{32}{3} \)  
   \[ \begin{array}{c}
   -2\frac{3}{8} \\
   +4\frac{3}{10} \\
   +2\frac{2}{4} \\
   -2\frac{1}{3}
   \end{array} \]

5. \( \frac{54}{5} \)  
6. \( \frac{86}{8} \)  
7. \( \frac{98}{12} \)  
8. \( \frac{45}{6} \)  
   \[ \begin{array}{c}
   +1\frac{2}{5} \\
   -3\frac{2}{8} \\
   +6\frac{4}{12} \\
   -3\frac{3}{6}
   \end{array} \]

9. \( \frac{78}{9} \)  
10. \( \frac{99}{10} \)  
11. \( \frac{82}{4} \)  
12. \( \frac{310}{12} \)  
   \[ \begin{array}{c}
   -6\frac{1}{9} \\
   +5\frac{2}{10} \\
   +6\frac{1}{4} \\
   -1\frac{7}{12}
   \end{array} \]

13. \( \frac{74}{5} - 1\frac{3}{5} = \) ________  
14. \( \frac{95}{8} + 4\frac{4}{8} = \) ________  
15. \( \frac{46}{9} - 2\frac{2}{9} = \) ________  

16. \( \frac{59}{12} + 2\frac{3}{12} = \) ________  
17. \( \frac{92}{5} + 3\frac{1}{5} = \) ________  
18. \( \frac{67}{10} - 2\frac{5}{10} = \) ________  

Compare. Write <, >, or = in each circle.

19. \( \frac{61}{7} + 3\frac{5}{7} \)  \( \circ \) 10  
20. \( \frac{31}{4} \)  \( \circ \) 1\frac{5}{8} + 1\frac{5}{8}  
21. \( \frac{167}{10} - 7\frac{7}{10} \)  \( \circ \) 10

Mixed Review

22. \( 48 + 78 \)  
23. \( 63 - 57 \)  
24. \( 140 - 79 \)  
25. \( 224 + 865 \)  
26. \( 370 - 263 \)  

27. \( 586 - 139 \)  
28. \( 428 + 765 \)  
29. \( 831 - 156 \)  
30. \( 605 - 384 \)  
31. \( 372 - 189 \)
Problem Solving Skill

Choose the Operation

Write the operation. Then solve each problem.

1. Henry and Cyndi each ate $\frac{1}{3}$ of a small cake. What fraction of the cake did they eat?

2. Linda baked a huge cookie for her friends. Sue ate $\frac{5}{8}$ of the cookie and Mary ate $\frac{3}{8}$. How much more of the cookie did Sue eat?

3. Phillip likes to ride his bike, skateboard, and read in his spare time. He spends $\frac{2}{8}$ of his time riding his bike and $\frac{5}{8}$ of his time skateboarding. How much of his spare time does he have left to spend reading?

4. Mr. Jones baked 12 cupcakes for the class party. Before lunch $\frac{3}{12}$ of the cupcakes were eaten. After lunch $\frac{5}{12}$ of the cupcakes were eaten. What fraction of the cupcakes were left for a snack after school?

5. At the end of five days Joseph had saved $30. If each day he saved $2$ more than the day before, how much money did Joseph save each day?

6. A series of numbers starts with 2. Each number in the series is two times as great as the number before it. What is the sixth number in the series?

7. $20.22 + 15.24 = 35.46$

8. $38.40 - 19.99 = 18.41$

9. $2,649 - 1,670 = 979$

10. $9,028 + 3,840 = 12,868$

11. $38.20 + 88.79 = 127.99$

Mixed Review

Solve.

5. At the end of five days Joseph had saved $30. If each day he saved $2$ more than the day before, how much money did Joseph save each day?

6. A series of numbers starts with 2. Each number in the series is two times as great as the number before it. What is the sixth number in the series?
Add Unlike Fractions

Use fraction bars to find the sum.

1. \( \frac{1}{3} + \frac{1}{3} + \frac{1}{6} \)

2. \( \frac{1}{4} + \frac{1}{4} + \frac{1}{8} + \frac{1}{8} \)

3. \( \frac{1}{3} + \frac{1}{3} + \frac{1}{4} \)

4. \( \frac{1}{2} + \frac{1}{5} \)

5. \( \frac{1}{12} + \frac{1}{12} + \frac{1}{3} \)

6. \( \frac{1}{10} + \frac{1}{10} + \frac{1}{5} \)

7. \( \frac{1}{3} + \frac{1}{6} \)

8. \( \frac{5}{8} + \frac{3}{4} \)

9. \( \frac{3}{4} + \frac{1}{6} \)

10. \( \frac{7}{10} + \frac{2}{5} \)

11. \( \frac{4}{10} + \frac{3}{5} \)

12. \( \frac{4}{5} + \frac{7}{10} \)

Mixed Review

13. \( 19 \div 4,999 \)

14. \( 32 \div 6,471 \)

15. \( 17 \div 219 \)

16. \( 3 \div 8,536 \)

17. \( 8 \div 830 \)
Subtract Unlike Fractions

Use fraction bars to find the difference.

1. \[ \frac{1}{2} \quad \frac{1}{2} \]
2. \[ \frac{1}{3} \quad \frac{1}{3} \]
3. \[ \frac{1}{4} \quad \frac{1}{4} \quad \frac{1}{4} \]

4. \[ \frac{1}{3} \quad \frac{1}{3} \]
5. \[ \frac{1}{5} \quad \frac{1}{5} \quad \frac{1}{5} \]
6. \[ \frac{1}{4} \quad \frac{1}{4} \quad \frac{1}{4} \]

7. \[ \frac{4}{5} - \frac{3}{10} \]
8. \[ \frac{4}{6} - \frac{5}{12} \]
9. \[ \frac{5}{6} - \frac{5}{12} \]

10. \[ \frac{1}{2} - \frac{4}{10} \]
11. \[ \frac{6}{8} - \frac{1}{2} \]
12. \[ \frac{2}{3} - \frac{3}{6} \]

13. \[ \frac{1}{2} - \frac{1}{8} \]
14. \[ \frac{9}{12} - \frac{2}{3} \]
15. \[ \frac{4}{6} - \frac{1}{12} \]

16. \[ \frac{7}{8} - \frac{1}{4} \]
17. \[ \frac{11}{12} - \frac{1}{3} \]
18. \[ \frac{4}{6} - \frac{1}{2} \]

Mixed Review

Order from least to greatest.

19. \[ \frac{7}{10}, \frac{5}{10}, \frac{2}{5}, \frac{8}{10} \]
20. \[ 1\frac{1}{3}, \frac{6}{3}, \frac{1}{6}, \frac{5}{6} \]
21. \[ 1, \frac{4}{10}, \frac{8}{10}, \frac{11}{10} \]
Tenths and Hundredths

Write the decimal and fraction shown by each model or number line.

1. 2. 3. 4.

Write each fraction as a decimal.

7. \( \frac{6}{10} \) 8. \( \frac{8}{10} \)

Write the decimal two other ways.

11. 0.2 12. 0.4 13. 0.12 14. 0.66

Mixed Review

15. During his vacation, Brian used 7 rolls of 24-photo film. How many photos did Brian take?

16. If 8 students can sit at one table, how many tables are needed to seat 134 students?

17. \( \times 17 \) 18. \( \times 11 \) 19. \( \times 100 \) 20. \( \times 18 \) 21. \( \times 12 \)
Thousandths

Write each decimal as a fraction.

1. 0.089
2. 0.001
3. 0.234
4. 0.090
5. 0.025

6. 0.988
7. 0.543
8. 0.087
9. 0.751
10. 0.009

Use a place value chart to write the value of the digit 9 in each decimal.

11. 0.912
12. 0.194
13. 0.957
14. 0.009
15. 0.059

Write each decimal in expanded form.

16. 0.029
17. 0.163
18. 0.018

Write each decimal in standard or word form.

19. four hundred ninety-seven thousandths
20. 0.034
21. five hundred sixty-one thousandths

Mixed Review

Compare. Write <, >, or = in each circle.

22. 2,431 \(\bigcirc\) 2,043
23. 70,450 \(\bigcirc\) 70,450
24. 1,382 \(\bigcirc\) 1,823

Solve.

25. 11 \(\times\) 15
26. 98 + 165,424
27. 12,089 – 10,078
Equivalent Decimals

**Vocabulary**

Complete.

1. ______________________ are decimals that name the same number.

Are the two decimals equivalent? Write yes or no.

2. 0.4 and 0.40 ______
3. 0.1 and 0.01 ______
4. 0.50 and 0.5 ______
5. 0.20 and 0.02 ______
6. 0.3 and 0.30 ______
7. 0.80 and 0.8 ______
8. 0.9 and 0.90 ______
9. 0.18 and 0.81 ______

Write an equivalent decimal for each. You may use decimal models.

10. 0.7 ______
11. 0.1 ______
12. 0.60 ______
13. 0.4 ______
14. 0.20 ______
15. 0.8 ______
16. 0.30 ______
17. 0.5 ______
18. 0.90 ______
19. 0.3 ______

**Mixed Review**

20. \( \frac{7}{10} + \frac{7}{10} = \) ______
21. \( \frac{4}{5} + \frac{4}{5} = \) ______
22. \( \frac{8}{9} + \frac{8}{9} = \) ______
23. \( 5\frac{4}{5} - 1\frac{3}{5} = \) ______
24. \( \frac{10}{9} + \frac{5}{9} = \) ______
25. \( \frac{7}{6} - \frac{2}{3} = \) ______
26. \( \frac{4}{7} + \frac{2}{7} = \) ______
27. \( 1\frac{3}{4} + 2\frac{3}{4} = \) ______
28. \( 7\frac{2}{3} + 6\frac{1}{3} = \) ______
29. \( \frac{3}{4} - \frac{1}{2} = \) ______
30. \( 6\frac{5}{6} - 1\frac{1}{6} = \) ______
31. \( \frac{4}{9} + 7\frac{7}{9} = \) ______
Relate Mixed Numbers and Decimals

Use the number line to write an equivalent mixed number or decimal for the given letter.

\[
\begin{array}{cccccccc}
& & 2 & & & & \frac{1}{2} & & \\
& & 2 & & 3 & & 3.25 & & 4 & & 4.25 & & 4.75 & & 5 \\
A & B & C & D & E & F
\end{array}
\]

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

Write a decimal and a mixed number that are equivalent to each decimal model below.

7. [Decimal Model]
8. [Decimal Model]

Write an equivalent mixed number or decimal.

9. 12.75 _____
10. 5.50 _____
11. \(6\frac{1}{2}_____\)

Mixed Review

12. What digit is in the ten thousands place in the number 24,639?

13. These are Anna’s spelling scores for 1 week: 86, 90, 85, 94, and 80. What is the median?

14. List the first 5 multiples of 3.

15. List the factors of 50.
**Compare and Order Decimals**

Compare. Write <, >, or = in each circle.

1. 0.45 〇 0.35  
2. 0.4 〇 0.6  
3. 0.9 〇 0.91  
4. 0.6 〇 0.64  
5. 0.50 〇 0.55  
6. 0.7 〇 0.17  
7. 0.02 〇 0.22  
8. 0.49 〇 0.4  
9. 0.32 〇 0.23  
10. 0.9 〇 0.99  
11. 0.25 〇 0.205  
12. 0.465 〇 0.437

Use the number line to order the decimals from greatest to least.

13. 0.45, 0.54, 0.40, 0.04  
14. 0.4, 0.5, 0.04, 0.05, 0.45  
15. 0.13, 0.31, 0.3, 0.01, 0.03  
16. 0.67, 0.7, 0.76, 0.07, 0.6  
17. 0.147, 0.243, 0.202, 0.215, 0.041  
18. 0.196, 0.204, 0.13, 0.092, 0.297

**Mixed Review**

19. Rosie’s Umbrella Shop is selling umbrellas for $4.00 off the usual price of $15.00. What is the cost of buying 3 sale umbrellas?

20. To prepare for a presentation, Pete colored \( \frac{1}{2} \) of a poster. Rebecca colored \( \frac{1}{3} \) of the poster. What fraction still needs to be colored?

Write an equivalent decimal for each.

21. 0.4  
22. 0.60  
23. 0.8  
24. 0.7  

Problem Solving Strategy

Use Logical Reasoning

Use logical reasoning to solve.

1. Mr. Berg’s science class grew tomato plants. The recorded heights of the plants were 13 cm, 15 cm, 17 cm, and 20 cm. Jim’s plant was the tallest. Steve’s plant was 2 cm taller than Mark’s. Eric’s plant was the smallest. How tall was Mark’s plant?

2. Four students ran a race in gym class. Erica had the fastest time of 10.5 seconds. The other recorded times were 13 seconds, 15 seconds and 20 seconds. Janie was slower than Erica, but faster than Mike. Joe was the slowest. What were Janie and Mike’s times?

3. Stephanie’s class took a spelling test. The scores were 90, 86, 89, 94, and 100. Stephanie got a higher grade than Mike. Sue scored 3 points higher than Joe. Ellen received the highest score. What was Stephanie’s spelling grade?

4. The Nature Club recorded the number of birds at the bird feeder each day for a week. On Monday the club saw 15 birds. The numbers of birds at the feeder on the other days were 12, 13, 19, and 20. On Tuesday, the club saw the fewest birds. On Wednesday, the club saw fewer birds than on Monday. On Friday, the club saw the most birds. How many birds did the club see on Thursday?

Mixed Review

5. \( \frac{1}{5} + \frac{2}{5} = \)


7. Order from least to greatest.
   0.1, 3.00, 0.97, 0.08

8. 128 ÷ 8
Round Decimals

Round each to the place of the underlined digit.

1. 6.9  
   __________  
2. 7.2  
   _________  
3. $8.32  
   __________  
4. 9.75  
   _________  
5. 51.2  
   _________  
6. 5.964  
   _________  
7. $84.65  
   _________  
8. $5.45  
   _________  

Round to the nearest whole number.

9. thirteen and eleven hundredths  
   ____________________________  
10. six and ninety-five hundredths  
    ____________________________  
11. ten and ninety-one hundredths  
    ____________________________  
12. nine and forty-five hundredths  
    ____________________________  

Round to the nearest hundredth.

13. 16.549  
    __________  
14. 31.258  
    __________  
15. 46.953  
    __________  
16. 21.854  
    __________  
17. 25.641  
    __________  
18. 49.397  
    __________  
19. 64.918  
    __________  
20. 87.395  
    __________  

Mixed Review

21. $4.29  
    + $7.30  
    __________  
22. $6.14  
    + $0.88  
    __________  
23. $2.21  
    + $2.21  
    __________  
24. $48.19  
    + $27.55  
    __________  
25. $11.94  
    + $36.60  
    __________  
26. $8.79  
    − $0.56  
    __________  
27. $9.05  
    − $5.48  
    __________  
28. $7.12  
    − $6.81  
    __________  
29. $34.63  
    − $27.98  
    __________  
30. $59.99  
    − $ 5.90  
    __________  

31. Solve for $n$.
    $540 ÷ n = 90$

32. Solve for $n$.
    $(64 − 5) + (12 ÷ 4) = n$
Estimate Sums and Differences

Estimate the sum or difference.

1. \( \frac{1.5}{+} 1.2 \)  
   \( \frac{2.3}{-} 0.6 \)  
   \( \frac{2.94}{-} 0.7 \)  
   \( \frac{23.94}{+} 1.13 \)  
   \( \frac{+16.98}{1.2} \)

6. \( \frac{4.25}{-} 0.86 \)  
   \( \frac{6.45}{-} 2.63 \)  
   \( \frac{+5.62}{+} 2.81 \)  
   \( \frac{16.95}{-} 3.29 \)  
   \( -29.18 \)

11. \( \frac{1.62}{-} 1.34 \)  
   \( \frac{3.72}{-} 1.65 \)  
   \( \frac{2.36}{-} 1.74 \)  
   \( \frac{3.92}{-} 1.69 \)  
   \( +2.07 \)

16. \( \frac{23.41}{-} 11.20 \)  
   \( \frac{2.53}{+} 1.56 \)  
   \( \frac{3.04}{-} 1.26 \)  
   \( \frac{2.82}{+} 2.35 \)  
   \( -2.39 \)

Mixed Review

Write < or > in each \( \text{□} \).

21. \( $8.15 +$0.37 \text{□} $8.50 \)
22. \( $19.00 \text{□} $10.75 + $9.00 \)
23. \( $6.59 +$6.59 \text{□} $13.20 \)
24. \( $7.43 +$6.43 \text{□} $13.90 \)

For 25–26, use the table.

25. If you rounded all of the punt air times to the nearest second, what would be the time that occurred most often?

26. Estimate the difference between Charley’s longest time and his shortest time.

<table>
<thead>
<tr>
<th>Charley’s Football Punt Time in Air</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
</tr>
<tr>
<td>Tuesday</td>
</tr>
<tr>
<td>Wednesday</td>
</tr>
<tr>
<td>Thursday</td>
</tr>
<tr>
<td>Friday</td>
</tr>
</tbody>
</table>
Add Decimals

Write the letter of the model that matches each problem. Solve.

A.  
B.  
C.  
D.  
E.  
F.  

1. $1.35 + 0.64 = n$
2. $0.7 + 0.6 = n$
3. $0.64 + 0.82 = n$
4. $1.59 + 0.43 = n$
5. $0.8 + 0.3 = n$
6. $0.78 + 0.63 = n$

Find the sum. Estimate to check.

7. $0.6 + 0.8 = \_\_\_\_\_
8. $0.52 + 0.39 = \_\_\_\_
9. $0.24 + 0.36 = \_\_\_\_
10. $0.593 + 0.796 = \_\_\_\_\_
11. $3.72 + 5.88 = \_\_\_\_

12. $0.9 + 0.9 = \_\_\_\_
13. $45.91 + 12.57 = \_\_\_\_
14. $0.88 + 0.43 = \_\_\_\_
15. $31.504 + 14.689 = \_\_\_\_\_
16. $21.94 + 10.28 = \_\_\_\_

Mixed Review

17. Sally bought two packages of hamburger. One package was 2.45 pounds and the other was 3.16 pounds. How many pounds of hamburger did she buy?

18. Henry wanted to buy his friend a treat. He had $3.87. If the treat cost $2.65, about how much money did he have left?

19. $7 \times 7 = \_\_\_\_
20. $9 \times 2 = \_\_\_\_
21. $4 \times 8 = \_\_\_

Practice  PW123
Subtract Decimals

Find the difference. Estimate to check.

1. 0.9
   \[ \begin{array}{c}
   \hline
   0.2 \\
   \hline
   \end{array} \]
2. 0.64
   \[ \begin{array}{c}
   \hline
   0.34 \\
   \hline
   \end{array} \]
3. 1.8
   \[ \begin{array}{c}
   \hline
   0.3 \\
   \hline
   \end{array} \]
4. 41.526
   \[ \begin{array}{c}
   \hline
   -32.619 \\
   \hline
   \end{array} \]
5. 1.25
   \[ \begin{array}{c}
   \hline
   -0.76 \\
   \hline
   \end{array} \]

6. 1.00
   \[ \begin{array}{c}
   \hline
   -0.56 \\
   \hline
   \end{array} \]
7. 1.62
   \[ \begin{array}{c}
   \hline
   -0.73 \\
   \hline
   \end{array} \]
8. 17.62
   \[ \begin{array}{c}
   \hline
   -9.28 \\
   \hline
   \end{array} \]
9. 1.214
   \[ \begin{array}{c}
   \hline
   -0.478 \\
   \hline
   \end{array} \]
10. 76.43
    \[ \begin{array}{c}
    \hline
    -34.58 \\
    \hline
    \end{array} \]

11. 4.80 - 0.62
    \[ \begin{array}{c}
    \hline
    \text{________} \\
    \hline
    \end{array} \]
12. 5.99 - 1.03
    \[ \begin{array}{c}
    \hline
    \text{________} \\
    \hline
    \end{array} \]
13. 20.854 - 11.708
    \[ \begin{array}{c}
    \hline
    \text{________} \\
    \hline
    \end{array} \]
14. 13.392 - 12.365
    \[ \begin{array}{c}
    \hline
    \text{________} \\
    \hline
    \end{array} \]

For 15–18, write the missing digits.

15. 4. \_ \_ \_ - \_ \_ \_ \_ .6 = 2.7
16. 3 \_ \_ \_ \_ .5 - \_ \_ \_ \_ \_ 2.8 = 18.7
17. 1 \_ \_ \_ \_ .3 - 8. \_ \_ \_ \_ \_ = 6.4
18. \_ \_ \_ \_ \_ 9.2 - \_ \_ \_ \_ \_ \_ 4 = 11.8

Mixed Review

19. What fraction is equivalent to 9.40?

20. Joan’s older sister is 1.65 meters tall. Joan is 1.26 meters tall. How much taller is her sister?

21. 2,875
   \[ \times \ 30 \]
22. 7,891
   \[ + \ 9,415 \]
23. 62,730
   \[ - \ 59,881 \]
24. 14,962
   \[ + \ 29,037 \]
Add and Subtract Decimals

Find the sum or difference. Estimate to check.

1. 4.90  
   + 3.41 

2. 5.20  
   − 3.45 

3. 5.00  
   − 2.49 

4. 3.50  
   + 4.62 

5. 35.91  
   + 4.00 

6. 6.90  
   − 3.81 

7. 10  
   − 4.632 

8. 2.60  
   + 1.75 

9. 5.428  
   + 1.735 

10. 7.18  
    + 2.49 

11. $5.98 − $0.50 

12. 35.846 − 4.9 

13. 12 − 5.913 

Find the missing number.

14. 3.62 − □ = 1.5 

15. 4.96 − 1.2 = □ 

16. □ + 0.29 = 3.81 

Mixed Review

17. Sylvia ran 50 meters in 9.62 seconds. Linda finished 0.35 seconds later. Ramie’s time was 0.09 seconds more than Linda’s. What was Linda’s time? Ramie’s?

18. Henry bought radish, tomato, and pumpkin seed packages. The radish and tomato seed packages were $0.89 each. The pumpkin seed packages were $1.25 each. How many packages of each kind of seed did he buy if he spent $4.28 in all?

Multiply each number by 72.

19. 4

20. 64

21. 349
Problem Solving Skill

Evaluate Reasonableness of Answers

1. Heidi works as a park ranger giving hiking tours. The trail is 4.3 miles long. If Heidi walks the trail 15 times each week, which is a reasonable estimate of the total number of miles she hikes?

   A Heidi hiked 100 miles
   B Heidi hiked 60 miles

2. Merrilyn is going to the market to buy produce. She needs 5 pounds of apples at $0.99 per pound and 9 pounds of green beans at $1.29 per pound. Which is a more reasonable estimate of how much money she should bring to the market?

   A $14.00
   B $32.00

For 3–4, use this information.

Peter is reading the instructions on how to build a birdhouse. He needs to cut some pieces of wood from a piece of lumber 100 cm long. The first piece should be 38.9 cm long; the second should be 22.5 cm long.

3. Which is the best estimate for the combined length of the two pieces he cuts?

   A 70 cm
   B 60 cm
   C 30 cm
   D 10 cm

4. Which is the best estimate for the length of the remaining lumber after Peter makes the two cuts?

   F 40 cm
   G 20 cm
   H 15 cm
   J 10 cm

Mixed Review

5. Find the prime factors of 12.


7. Write the fact family for 3, 5, and 15.

8. \(90,005 - 5,842\)

9. \(\frac{9}{10} - \frac{3}{5}\) =

10. \(52 \times 81\)
Choose the Appropriate Unit

Vocabulary

Complete.

1. Measuring length, width, height, and distance are all forms of __________ measurement.

2. A(n) ___________ is about the length of a baseball bat.

3. A(n) ___________ is about the distance you can walk in 20 minutes.

4. A(n) ___________ is about the height of a cat.

5. A(n) ___________ is about the length of your thumb from the first knuckle to the tip.

Choose the most reasonable unit of measure. Write in, ft, yd, or mi.

6. The length of a calculator is about 4 ________.

7. The height of a flagpole is about 25 ________.

8. The height of a refrigerator is about 2 ________.

9. The distance along the walkathon is 12 ________.

Write the greater measurement.

10. 50 ft or 50 yd

11. 17 mi or 17 yd

12. 243 in. or 243 yd

13. $\frac{1}{6} + \frac{2}{3}$

14. $\frac{5}{6} + \frac{2}{3}$

15. Write $\frac{10}{15}$ as a fraction in simplest form.
Measure Fractional Parts

Estimate to the nearest inch. Then measure to the nearest $\frac{1}{8}$ inch.

1. Estimate to the nearest inch. Then measure to the nearest $\frac{1}{4}$ inch.

Order the measurements from least to greatest.

3. $4\frac{1}{8}$ in.; $3\frac{1}{2}$ in.; $4\frac{1}{4}$ in.; $4\frac{3}{8}$ in.

4. $\frac{1}{8}$ in.; $\frac{1}{2}$ in.; $\frac{3}{4}$ in.; $\frac{5}{8}$ in.

Mixed Review

For 5–6, use the Tree Growth Chart.

5. To the nearest foot, how tall was the tree in the first year? second year? third year? fourth year?

6. Between which two years did the tree grow the most?
Algebra: Change Linear Units

Complete. Tell whether you multiply or divide.

1. 48 in. = ______ ft
2. 36 ft = ______ yd
3. 4 yd = ______ in.

4. 3 mi = ______ ft
5. 3,520 yd = ______ mi
6. 5 mi = ______ ft

7. 7 ft = ______ in.
8. 300 ft = ______ yd
9. 432 in. = ______ yd

Write an equation that can be used to complete each table.

Complete the table.

10. Feet, f | 3 | 6 | 12 | 15
    Yards, y | 1 | 3 | 5

11. Yards, y | 1,760 |  |
    Miles, m | 1 | 3 | 4

Compare. Write <, >, or = in the ○.

12. 38 in. ○ 3 ft
13. 10,000 ft ○ 4 mi
14. 100 in. ○ 3 yd

Mixed Review

Add or subtract.

15. 5,283 + 467
16. 3,512 - 468
17. 7,536 - 207
18. 4,106 - 314

19. 5,490 - 83
20. 6,372 + 891
21. 7,536 + 18
22. 2,013 - 5
Capacity

Vocabulary

Complete.

1. ________________ is the amount a container can hold when filled.

2. Write the word cup, pint, quart, or gallon to label each container.

   ![Container Images]

   ___________  ___________  ___________  ___________

Complete the tables. Change the units.

3.  

<table>
<thead>
<tr>
<th>Cup</th>
<th>Pint</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>

4.  

<table>
<thead>
<tr>
<th>Pint</th>
<th>Quart</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

5.  

<table>
<thead>
<tr>
<th>Quart</th>
<th>Gallon</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

Choose the unit of capacity. Write cup, pint, quart, or gallon.

6.  

   ___________

7.  

   ___________

8.  

   ___________

Mixed Review

Round the number to the greatest place value.

9. 3,654 __________
10. 4,399 __________
11. 2,543 __________
12. 17,536 __________
13. 213,502 __________
14. 109,563 __________
Weight

Vocabulary

Complete.
1. A bread truck weighs about 1 ________.
2. A slice of bread weighs about 1 ________.
3. A loaf of bread weighs about 1 ________.

Circle the more reasonable measurement.
4. 1,200 lb or 1,200 oz  5. 10 T or 10 lb  6. 68 oz or 68 lb

Complete.
7. 2 lb = ______ oz  8. 4 T = ______ lb  9. 60,000 lb = ______ T
10. 64 oz = ______ lb  11. 1 T = ______ oz  12. 208 oz = ______ lb

Write 3 lb, 5,000 lb, 1,000 lb, or 35 oz to make each of the following true.
13. 3 lb > _________________  14. 2T < _________________
15. 5 lb < _________________  16. 17 lb > _________________

Mixed Review

Write the product or quotient.
17. 6 × 3 = ______  18. 10 × 3 = ______  19. 6 × 5 = ______
20. 35 ÷ 7 = ______  21. 7 × 6 = ______  22. 18 ÷ 3 = ______
23. 7 × 8 = ______  24. 36 ÷ 6 = ______  25. 8 × 11 = ______
Problem Solving Strategy

Compare Strategies

Choose a strategy to solve.

1. Sarah is making a large pot of soup. She adds 7 quarts of water and 3 pints of tomato juice. How many one-pint servings can she make?

2. Along the 30-foot wall, there is a plant every 6 feet. The plants start at one end of the wall. How many plants are there?

3. Roland is buying sod for some patches on his lawn. Each patch needs 4 feet of sod. He buys 5 yards of sod. How many patches can he cover?

4. Karla is making tea for some friends. Each cup of tea uses 1 cup of water. Karla fills a 3-quart pitcher with water. How many teacups can she fill?

5. Cherie’s town is bagging aluminum cans for recycling. Each bag holds 5 pounds of cans. They need to collect 2 tons of cans before their donation will be accepted. How many bags of cans will they need?

6. Henry collected 10 cans in the first hour, 15 cans the second hour, and 20 cans the third hour. If this pattern continues, how many cans will he collect in all in six hours?

Mixed Review

Write the product or sum.

7. \[314 \times 4\]
8. \[236 \times 3\]
9. \[413 + 37\]
10. \[207 \times 4\]
11. \[535 + 493\]
12. \[537 + 395\]
13. \[537 \times 5\]
14. \[716 + 239\]
15. \[716 \times 9\]
16. \[375 + 909\]
Linear Measure

Vocabulary

Complete.

1. A ________________ is about the width of your index finger.

2. A ________________ is equal to 10 centimeters and is about the width of an adult’s hand.

3. A ________________ is about the distance from one hand to the other when you stretch out your arms.

4. A ________________ is about the length of 10 football fields.

Use a centimeter ruler or a meterstick to measure each item. Write the measurement and unit of measure used.

5. length of your desk
6. width of a piece of chalk
7. height of a tree

Choose the most reasonable unit of measure. Write a, b, or c.

8. _____ width of a head
   a. 2 km
   b. 2 dm
   c. 2 m

9. _____ distance around the school
   a. 1,000 cm
   b. 1,000 km
   c. 1,000 m

10. _____ height of a tree
    a. 5 km
    b. 5 dm
    c. 5 m

11. _____ distance between two towns
    a. 22 km
    b. 22 dm
    c. 22 m

Mixed Review

12. 15
    × 10
13. 1,000
    × 12
14. 14.3
    − 7.6
15. 13.4
    + 16.6

16. 350 × n = 35,000  n = _____
17. n × 36 = 360  n = _____
Algebra: Change Linear Units

Complete.
1. 300 cm = _______ m
2. 3 km = _______ m
3. 4,000 m = _______ km
4. 50 m = _______ dm
5. 40 km = _______ m
6. 68 m = _______ cm

Write the correct unit.
7. 500 cm = _______ m
8. 60 dm = _______ m
9. 8 _______ = 8,000 m
10. 20 cm = _______ dm
11. 3,000 m = 3 _______
12. 200 m = _______ cm

Compare. Write >, <, or =.
13. 12 m _______ 120 cm
14. 14 m _______ 1,400 cm
15. 3 km _______ 4,000 m
16. 4 m _______ 3 km
17. 30 dm _______ 3 m
18. 300 m _______ 3,000 dm

Order from least to greatest.
19. 2m; 100 cm; 4 dm; 3 km
20. 3,000 m; 3 dm; 300 km; 3,000 cm

Mixed Review

21. Which customary unit of length would be best to give the distance across a soccer field?

22. Write an expression for 3 times the number of people, \( p \), at the county fair.

23. \( \frac{48,588}{62} \)
24. \( \frac{315}{27} \)
25. \( \frac{3,788}{4} \)
26. \( \frac{973}{6} \)
27. \( \frac{5,800}{8} \)
28. \( \frac{144}{12} \)
29. \( \frac{3604}{4} \)
Capacity

Vocabulary

Complete.

1. A ____________ is about the size of a sports-drink bottle.
   It contains 1,000 milliliters.

2. A ____________ is about the size of a drop of liquid in an eyedropper.

Choose the more reasonable unit of measure. Write mL or L.

3. wading pool  4. a soda can  5. a baby bottle

Choose the best estimate. Circle a, b, or c.

6. 7. 8.  
   a. 3 mL  b. 30 mL  c. 3 L
   a. 42 mL  b. 420 mL  c. 42 L
   a. 62 mL  b. 620 mL  c. 62 L

Change to milliliters or liters.

9. 5 L = ______ mL  10. 70 L = ______ mL  11. 4 L = ______ mL
12. 6,000 mL = ______ L  13. 12,000 mL = ______ L  14. 26,000 mL = ______ L

Mixed Review

15. \[
\begin{array}{c}
187 \\
+435 \\
\hline 
\end{array}
\]
16. \[
\begin{array}{c}
461 \\
\times 34 \\
\hline 
\end{array}
\]
17. \[
\frac{4723}{4}
\]
18. \[
\frac{53}{16} + \frac{71}{16}
\]

19. Ron's car has a 12-gallon gas tank. If gas costs $1.45 per gallon, how much will it cost to fill the tank?

20. A 5-lb bag of flour costs $1.10. A 20-oz bag of flour costs $0.40. Which is the better buy?

21. 5 km = ______ m  22. 71 m = ______ cm  23. 98 m = ______ dm
Mass

Vocabulary

Write the letter of the word that is best described.

1. _____ the amount of mass that is about equal to a baseball bat  
   a. kilogram (kg)  
   b. gram (g)  
   c. mass

2. _____ the amount of matter in an object

3. _____ the amount of mass that is about equal to a large paper clip

Choose the more reasonable measurement.

4. 5. 6. 7.  
   1 g or 1 kg  
   5 g or 5 kg  
   200 g or 20 kg  
   600 g or 600 kg

Choose the more reasonable measurement.

Change to grams.

8. 3 kg = _____ g  
9. 14 kg = _____ g  
10. 20 kg = _____ g

Mixed Review

11. One serving of macaroni and cheese is 70 g. How many kilograms are needed to serve 200 people?

12. If 3 servings of macaroni and cheese cost $0.99, how much will it cost to serve 200 people?

13. $\frac{4216}{72}$  
14. $\frac{103}{19}$  
15. $\frac{20000}{10}$  
16. $\frac{1920}{24}$
Problem Solving Strategy

Draw a Diagram

Draw a diagram to solve.

1. Steve and Sara bought a total of 14 items at the grocery store. Sara bought two more than twice the number of items that Steve bought. How many items did each buy?

2. Mike, Thea, and Emily were reading library books. Mike read 4 books. Thea read 2 more than twice the number of books that Emily read. Emily read 1 book less than Mike. How many books did each person read?

3. Tina, Kevin, and Amy flew their kites. Kevin's kite flew 2 meters higher than Amy's. Tina's flew 1 meter lower than half as high as Amy's. Amy's kite flew 300 decimeters high. How high did Tina's and Kevin's kites fly?

4. Jim's family went hiking. Jim was able to hike 5 miles. His mother and father each hiked 1 mile more than three times the distance that Jim hiked. Jim's brother Tim hiked 1 mile less than Jim did. How far did each person hike?

Mixed Review

5. 300 m = ________ cm
6. 400 dm = ________ m
7. 7,000 m = ________ km

8. 20 ft = ________ in.
9. 4 lb = ________ oz
10. 1 pt = ________ c

11. 48 in. = ________ ft
12. 6 c = ________ pt
13. 20 qt = ________ gal
Perimeter of Polygons

Name the polygon. Find the perimeter.

1. 
   \[ \text{Triangle with sides 3 ft, 3 ft, 3 ft} \]

2. 
   \[ \text{Hexagon with sides 2 cm, 2 cm, 2 cm, 2 cm, 2 cm, 2 cm} \]

3. 
   \[ \text{Irregular polygon with sides 2 in., 2 in., 3 in., 5 in.} \]

4. 
   \[ \text{Rectangle with sides 17 cm, 10 cm, 8 cm, 17 cm} \]

5. 
   \[ \text{Rectangular prism with sides 12 ft, 5 ft, 4 ft, 4 ft, 12 ft} \]

6. 
   \[ \text{Irregular polygon with sides 5 ft, 6 ft, 6 ft, 4 ft, 4 ft, 11 ft} \]

7. 
   \[ \text{Pentagon with sides 6 cm, 5 cm, 6 cm, 3 cm, 6 cm} \]

8. 
   \[ \text{L-shaped figure with sides 10 m, 5 m, 10 m, 5 m, 15 m, 10 m, 5 cm} \]

9. 
   \[ \text{Irregular polygon with sides 9 ft, 15 ft, 8 ft, 6 ft, 4 ft, 11 ft} \]

Mixed Review

10. \[ \frac{871}{323} - \frac{84}{189} = \]

11. \[ \frac{165}{-84} - \frac{428}{-871} = \]

12. \[ \frac{3,284}{-189} - \frac{5,831}{-428} = \]

13. \[ \frac{2,179}{-871} = \]

14. \[ \frac{4}{5} - \frac{2}{10} = \]

15. \[ \frac{11}{12} - \frac{3}{4} = \]

16. \[ \frac{9}{15} - \frac{1}{5} = \]
Estimate and Find Perimeter

**Vocabulary**

Fill in the blank to complete the sentence.

1. _____________ is the distance around a polygon.

Use a formula to find the perimeter.

2. 
   - 3 mi
   - 6 mi
   - 3 mi

3. 
   - 4 ft
   - 4 ft
   - 4 ft

4. 
   - 4 km
   - 3 km
   - 1 km

5. 
   - 6 in.
   - 4 in.
   - 4 in.
   - 8 in.

6. 
   - 5 m
   - 5 m
   - 5 m
   - 5 m

7. 
   - 14 yd
   - 14 yd
   - 5 yd
   - 5 yd

8. 
   - 8 ft
   - 8 ft
   - 8 ft

9. 
   - 10 yd
   - 10 yd
   - 10 yd

10. 
    - 8 cm
    - 8 cm
    - 8 cm
    - 2 cm

**Mixed Review**

11. \( \frac{3}{9} + \frac{2}{9} = \) ____
12. \( \frac{1}{8} + \frac{5}{8} = \) ____
13. \( \frac{9}{10} - \frac{5}{10} = \) ____
14. \( \frac{5}{7} - \frac{3}{7} = \) ____

15. \( 12 \sqrt{780} \)
16. \( 19 \sqrt{1,862} \)
17. \( 8 \sqrt{4,963} \)
18. \( 17 \sqrt{3,727} \)
Estimate and Find Area

Find the area.

1. \(3 \text{ yard} \times 3 \text{ yard}\)

2. \(1 \text{ cm} \times 4 \text{ cm} \times 1 \text{ cm}\)

3. \(8 \text{ in.} \times 5 \text{ in.} \times 5 \text{ in.}\)

4. \(2 \text{ m} \times 6 \text{ m} \times 2 \text{ m} \times 6 \text{ m}\)

5. \(2 \text{ cm} \times 3 \text{ cm} \times 3 \text{ cm} \times 2 \text{ cm}\)

6. \(2 \text{ ft} \times 3 \text{ ft} \times 3 \text{ ft} \times 5 \text{ ft}\)

7. \(4 \text{ ft} \times 2 \text{ ft} \times 2 \text{ ft} \times 2 \text{ ft} \times 6 \text{ ft} \times 4 \text{ ft}\)

8. \(4 \text{ mi} \times 8 \text{ mi} \times 3 \text{ mi} \times 1 \text{ mi}\)

9. \(10 \text{ in.} \times 8 \text{ in.}\)

Mixed Review

10. \(67 \times 16\)

11. \(627 \times 41\)

12. \(129 \times 76\)

13. \(492 \times 10\)

14. \(412 \times 89\)

15. \(871 \times 13\)

16. \(165 \times 64\)

17. \(52 \times 37\)

18. \(69 \times 28\)

19. \(955 \times 31\)

20. \((7 \times 3) - (4 \times 4) = \)_____

21. \((12 \times 3) - 15 = \)_____

22. \((19 + 28) - (8 \times 2) = \)_____

23. \((17 - 7) + (5 \times 5) = \)_____
LESSON 25.4

Relate Area and Perimeter

Write the area and the perimeter.

1. 2. 3.

For 4–6, find the area and perimeter of each figure. Then draw another figure that has the same area but a different perimeter.

4. 5. 6.

7. Which of the figures a–d below have the same area but different perimeters?

8. Which of the figures a–d below have the same perimeter but different areas?

a. b. c. d.

Mixed Review

9. \(\frac{7}{2} + 3\frac{9}{12} = \)  
10. \(\frac{4}{9} - 1\frac{1}{5} = \)  
11. \(10\frac{6}{7} - 5\frac{2}{14} = \)

Circle the prime numbers.

12. 17  33  39  5  142  29  47  30  111  13  52  56  11
Relate Formulas and Rules

Complete for each rectangle.

1. Area = 20 sq in.
   Length = 4 in.
   Width = ______

2. Area = 64 sq mi
   Length = 4 mi
   Width = ______

3. Area = 100 sq m
   Length = ______
   Width = ______

Find the unknown length.

4. Area = 108 sq cm
   ?

5. Area = 80 sq yd
   16 yd
   ?

6. Area = 100 sq mi
   ?

7. Perimeter = 18 ft
   5 ft
   ?

8. Perimeter = 36 yd
   9 yd
   ?

9. Perimeter = 24 cm
   5 cm
   4 cm
   1 cm

Mixed Review

10. \( \frac{8}{9} \frac{96}{2} \)
11. \( \frac{3}{4} \frac{42}{2} \)
12. \( \frac{5}{9} \frac{90}{2} \)
13. \( \frac{9}{2} \frac{207}{2} \)
14. \( \frac{2}{5} \frac{58}{2} \)

15. \( \frac{12}{3} \frac{300}{2} \)
16. \( \frac{18}{144} \frac{144}{2} \)
17. \( \frac{6}{2} \frac{246}{2} \)
18. \( \frac{11}{231} \frac{231}{2} \)
19. \( \frac{18}{270} \frac{270}{2} \)
Problem Solving Strategy

Find a Pattern

Use *find a pattern* to solve.

1. Alexis is going to put carpet in three rectangular rooms in her house. How do the areas of the rooms change if each room is two times as long and three times as wide as the one before it? Make a table to show how the areas change. Then solve.

   - Room 1: \( l = 4 \text{ yd}, \ w = 2 \text{ yd} \)
   - Room 2: \( l = 8 \text{ yd}, \ w = 6 \text{ yd} \)
   - Room 3: \( l = 16 \text{ yd}, \ w = 18 \text{ yd} \)

2. Douglas has different sizes of rectangular picture frames. How does the perimeter change for each of his picture frames when the width increases by 5 inches? Complete the table and solve.

<table>
<thead>
<tr>
<th>Picture Frame Sizes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Length (in.)</td>
</tr>
<tr>
<td>Frame A</td>
</tr>
<tr>
<td>Frame B</td>
</tr>
<tr>
<td>Frame C</td>
</tr>
<tr>
<td>Frame D</td>
</tr>
</tbody>
</table>

Mixed Review

3. \( 15 \times 7 = \) _____
4. \( 121 \div 11 = \) _____
5. \( 42 \times 8 = \) _____
Faces, Edges, and Vertices

Which solid figure do you see in each?

1.

2.

3.

Copy the drawings. Circle each vertex, outline each edge in red, and shade one face in yellow.

4.

5.

6.

Write the names of the faces and the number of each kind of face of the solid figure.

7. triangular pyramid
8. triangular prism
9. square pyramid

Mixed Review

Find the perimeter of each figure.

10.

11.

12.
Patterns for Solid Figures

Vocabulary

Fill in the blank.

1. A ________ is a two-dimensional pattern of a three-dimensional figure.

Write the letter of the figure that is made with each net.

2. 3. 4. 5.
   a. b. c. d.

6. Which of the following nets would make a rectangular prism?
   a. b. c. d.

Mixed Review

7. $10 \div 1,000$  
8. $14 \div 0$  
9. $25 \div 475$  
10. $32 \div 256$

11. Franz ate $1\frac{3}{8}$ granola bars. Aimee ate $2\frac{1}{8}$ snack bars. How many granola bars did Franz and Aimee eat in all?
Estimate and Find Volume of Prisms

Find the volume.

1.

2.

3.

4.

5.

6.

7.

8.

9.

Mixed Review

10. $17 \times 6$

11. $247 \times 48$

12. $89 \times 17$

13. $478 \times 45$

14. $112 \times 39$

15. $222 \times 31$

16. $52 \times 44$

17. $63 \times 12$

18. $678 \times 18$

19. $456 \times 48$

20. $75 \times 36$

21. $67 \times 58$

22. $159 \times 43$

23. $517 \times 62$

24. $802 \times 24$
Problem Solving Skill: Too Much/Too Little Information

Decide if the problem has too much or too little information. Then solve the problem if possible.

1. There are 90 rocks in Joe’s box. He has 45 different kinds of rocks in his box. The box is 12 inches long, 6 inches wide, and 4 inches high. What is the volume of the box of rocks?

2. Klamo likes to take pictures of animals in her backyard. She has over 100 pictures of animals. She keeps her pictures in a box that is 1 foot high. What is the volume of the box?

3. Spencer puts corn from his garden into wooden boxes. Each box contains 30 ears of corn. Each box is 2 meters long and 1 meter wide. What is the volume of the wooden box?

4. A cereal box weighs 1 pound. It is 12 inches high, 6 inches long, and 2 inches wide. What is the volume of the cereal box?

Mixed Review

Find the area and perimeter of each.

5. 16 ft 9 ft

6. 9 cm 4 cm

7. 18 mi 23 mi
Record Outcomes

For 1–4, use the table.

Don and Carol organized their outcomes in this table. They used the 3-letter spinner and the 4-number spinner shown.

<table>
<thead>
<tr>
<th>Number</th>
<th>Letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>II</td>
</tr>
<tr>
<td>2</td>
<td>III</td>
</tr>
<tr>
<td>3</td>
<td>I</td>
</tr>
<tr>
<td>4</td>
<td>IIII</td>
</tr>
</tbody>
</table>

1. Name all the possible outcomes for this experiment.

2. How many possible outcomes are there?

3. How many outcomes would there be if they had used a 4-letter spinner?

4. In Don and Carol’s experiment which outcome occurred most often?

Mixed Review

5. \[318,849 + 984,741 = \]

6. \[52,842 \times 6 = \]

7. \[17 \overline{893} = \]

8. \[\frac{5}{12} - \frac{1}{4} = \]

9. \[\frac{7}{15} - \frac{9}{30} = \]

10. \[2.875 + 0.789 = \]

11. \[79.32 - 42.98 = \]

12. \[14\overline{493} = \]
Tree Diagrams
Find the number of possible outcomes by making a tree diagram.

1. Higgins the clown has 3 hats (red, yellow, or blue) to choose from to match his 6 suits (gold, orange, blue, green, purple, and yellow). How many choices does he have?

2. Kathy has 6 different sweaters to wear with her 4 pairs of slacks. How many possible choices does she have?

3. Julia has a choice of using iceberg lettuce or red leaf lettuce for her birthday dinner. In addition, she can choose Italian, Russian, or French salad dressing. How many different outcomes are possible?

4. Thomas had 8 different choices of hats and coats. How many hats does he have? How many coats does he have?

For 5–6, you are choosing one of each.

5. Footwear choices:
   - Shoes: navy, black, or brown
   - Socks: white, black, or tan

6. Event choices:
   - Events: sports, play, or movie
   - Day: Saturday or Sunday

Mixed Review

7. \((2 \times 4) + (2 \times 2) = \phantom{0}\)

8. Round 278,150 to the nearest thousand.

9. Compare. Write <, >, or =.
   \[379,560 \phantom{0} 379,561\]

10. Solve for \(n\).
    \[20 - (12 - 2) = n\]
Problem Solving Strategy

Make an Organized List

Make an organized list to solve.

1. A spinner is labeled 6, 7, and 8. List all of the possible outcomes of spinning the pointer on the spinner 2 times.

2. Jeanne is writing a report on the computer. She has a choice of 5 different designs for the cover, and 3 different fonts for the report. How many possible ways of writing this report are there?

For 3–6, find the possible outcomes of spinning both pointers one time.

3. How many possible outcomes are there?

4. List all of the possible outcomes.

5. How many possible outcomes would there be if the spinners had 6 numbers?

6. How many of the possible outcomes include the letter F?

Mixed Review

7. The race started at 6:53 P.M. and ended at 7:14 P.M. How long did the race take?

8. Find the sum of $15,666.22 and $14,323.56.

9. \((6 \times 4) - (3 \times 2) = \)

10. Round 4,278,555 to the nearest ten thousand.
Predict Outcomes of Experiments

Write likely, unlikely, or equally likely for the events.

1. tossing an even number or tossing an odd number using a cube numbered 1–6

2. tossing a prime number on a cube labeled 3, 5, 7, 9, 11, and 13

3. pulling a yellow marble from a bag with 10 green marbles, 6 red marbles, and 1 yellow marble

4. the pointer of a spinner with the numbers 1, 2, 3, 3, 3, 3, 3, 3, 6, 6 stopping on 3

For 5–8, look at the pictures.

5. Which 2 types of marbles are equally likely to be pulled from the bag of marbles?

6. Which type are you most likely to pull? Why?

7. Is it certain or impossible that the pointer on the spinner will stop on a capital letter?

8. Is it certain or impossible that the pointer on the spinner will stop on an M?

Mixed Review

9. What is the missing number in the pattern?
   2, 3, __, 7, 11

Probability as a Fraction

Look at the spinner at the right. Find the probability of each event.

1. the letter $C$ ________________

2. the letter $E$ ________________

3. a vowel ________________

4. a letter in the word $CAB$ ________________

5. the letter $F$ ________________

6. a consonant ________________

7. the letter $A$ ________________

Look at the box of marbles. Write impossible, less likely, more likely, equally likely, or certain for each event, and find the probability.

8. a marble that is not red ________________

9. an orange marble ________________

10. a green marble ________________

11. a yellow marble ________________

12. a marble that is not green ________________

Mixed Review

13. Amanda bought an oil painting for $45.95 at the fair. How much change will she get from $50? ________________

14. Add $3\frac{1}{2} + 4\frac{2}{3}$ ________________

15. Write $<$, $>$, or $=$ in the $\bigcirc$.

$$(42 + 7) - 33 \bigcirc (64 \div 8) + 7$$

16. Order from least to greatest.

$1.34, 1.32, 0.134, 13.2, 1$ ________________
More About Probability

Use Data

For 1–4, use the spinner and the table.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>W</th>
<th>X</th>
<th>Y</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tally</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. What is the mathematical probability of the pointer stopping on each letter on the spinner?
   - W _____ Y _____
   - X _____ Z _____

2. Use the data in the table. Find the probability of the pointer stopping on each letter in the experiment.
   - W _____ Y _____
   - X _____ Z _____

3. Use the table to find the probability of the pointer stopping on W in the experiment. How does this compare to the mathematical probability?

4. Compare the probability in the experiment with the mathematical probability of the pointer stopping on X, Y, and Z.

Mixed Review

5. James is buying a new computer. He is choosing among 3 different hard drives, 4 different printers, and 5 modems. How many possible computer packages could he make?

6. What kind of triangle is shown below?

   - 7 cm
   - 7 cm
   - 6 cm
Test for Fairness

Vocabulary

Complete the blank.

1. ____________ in a game means that one player is as likely to win as another. Each player has an equal chance of winning.

Look at the spinner. Each of the four players in a game chooses a number from 1, 2, 3, or 4 and scores 1 point when the pointer stops on his or her choice. Write yes or no to tell if each game is fair. Explain.

2. 3.

In Victor’s game, players choose either 2 or 3. Players take turns tossing a number cube labeled 1–6. If a player chose 2 and rolls a 2, 4, or 6, he or she scores a point. If a player chose 3 and rolls a 3 or a 6, he or she scores a point.

4. What is the probability of the player who chose 2 scoring a point? the player who chose 3?

5. Why is this game not fair?

6. How could you change the game to make it fair?

Mixed Review

7. 156 inches = ___?__ feet
8. 156 yards = ___?__ feet

9. \[
\begin{align*}
951,511 + 314,288 &= 1,265,809
\end{align*}
\]

10. \[
\begin{align*}
65,849 \times 8 &= 526,792
\end{align*}
\]

11. \[
\begin{align*}
2\frac{1}{4} + \frac{5}{6} &= \frac{13}{4} + \frac{5}{6} = \frac{39}{12} + \frac{10}{12} = \frac{49}{12}
\end{align*}
\]
Problem Solving Skill: Draw Conclusions

1. Jack and Kylie are playing a game with a bag of 10 marbles that are either yellow, green, black, or red. Jack earns 1 point when he pulls a yellow marble; Kylie earns 1 point when she pulls a green marble. Use the clues to find how many of each color of marbles are in the bag. Tell whether the game is fair. Explain.

For 2–3, use the spinner.

Tom and Harry made up rules for a 2-player game using the spinner. Tell if the game is fair or not fair by using probability.

2. Tom’s game:
   Player 1 scores 1 point for an odd number.
   Player 2 scores 1 point for a prime number.

3. Harry’s game:
   Player 1 scores 3 points for a composite number.
   Player 2 scores 3 points for a factor of 6.

Mixed Review

4. What are the factors of 21?

5. Rename $\frac{9}{2}$ as a mixed number.

6. Write 0.9 as a fraction.

Temperature: Fahrenheit

Use the thermometer to find the temperature in °F.

1. 
2. 
3. 

For 4–7, use a thermometer to find the change in temperature.

4. 0°F and 35°F
5. −10°F and 10°F
6. −5°F and 25°F
7. −15°F and 30°F

Circle the temperature that is a better estimate.

8. A pot of boiling water
10°F or 212°F
9. A summer day in Florida
30°F or 95°F
10. An air-conditioned office building
75°F or 150°F

Mixed Review

Find the value of n.

11. \( n \div 30 = 20 \)
12. \( (25 + 5) - (10 \div 2) = n \)
13. \( n \times 6 = 72 \)
14. \( 88 \div n = 8 \)

15. \( 37.4 + 12.9 \)
16. \( 72.8 + 15.2 \)
17. \( 27.4 - 18.6 \)
18. \( 29.9 - 11.9 \)
Temperature: Celsius

Use the thermometer to find the temperature in °C.

1. 

2. 

3. 

For 4–7, use a thermometer to find the change in temperature.

4. 67°C and 55°C

5. 48°C and 10°C

6. 1°C and 50°C

7. −15°C and 22°C

Circle the temperature that is a better estimate.

8. the ice at the ice rink

9. hot water in the tea kettle

10. a nice day for a picnic

   −1°C or 65°C

   30°C or 100°C

   15°C or 80°C

Mixed Review

11. What is the change in temperature, in °F, from the boiling point (212°F) to the freezing point (32°F) of water?

12. How are these odd numbers alike? 5, 11, 17, 19, 23

13. \(25 \div 17,650\)

14. \(22 \div 12,056\)

15. \(17 \div 4,952\)

16. \(29 \div 511,607\)
Negative Numbers

Use the number line to name the number each letter represents.

![Number Line]


Compare. Write <, >, or = in each circle.

5. $-8$ _______ +2
6. $+8$ _______ +2
7. $0$ _______ +2
8. $2$ _______ +2
9. $+9$ _______ +2
10. $+1$ _______ +8
11. $0$ _______ $-1$
12. $-2$ _______ +10

Order the numbers from least to greatest.

13. $0, -2, -10, -5$
14. $0, -2, +10, +5$
15. $-2, -8, -10, -7$
16. $-1, +2, +3, +6$

Order the numbers from greatest to least.

17. $-3, 4, -5, 3$
18. $9, -7, 2, -3$

Mixed Review

19. List the factors of 18.
20. $36 \times 100$

21. What is the change in temperature from $-8^\circ F$ to $8^\circ F$?
22. Which of these are composite numbers? 25, 31, 54, 79
Problem Solving Skill

Make Generalizations

Use the heat index table to answer the following questions. The heat index is the temperature it feels like, not the actual temperature.

1. Find the heat index for an outside temperature of 90°F with a relative humidity of 70%.

2. What would be the relative humidity if it is 85°F with a heat index of 98°F?

3. What would the outside temperature be when the relative humidity is 90% with a heat index of 80°?

4. Joe wants to take a walk. The relative humidity is 60% and the outside temperature is 32°C. Will it feel warmer or cooler than the outside temperature? Explain.

5. What generalizations can you make about the temperature that is read on the thermometer and the heat index?

Mixed Review

Compare. Write <, >, or = in each circle.

6. $7 \times 9 \bigcirc 126 \div 2$

7. $-7 \bigcirc +5$

8. $3.45 \bigcirc 3.04$

Subtract.

9. $56,703 - 9,846$

10. $187,312 - 74,961$

11. $836,031 - 248,712$
Use a Coordinate Grid

Write the ordered pair for each object on the map.

1. pool  
   __________

2. Phil’s house  
   __________

3. grocery store  
   __________

4. large tree  
   __________

Plot each ordered pair on the coordinate grid.

5. (1, 1)

6. (5, 4)

7. (8, 3)

8. (9, 9)

9. (8, 7)

10. (4, 6)

11. (3, 5)

12. (2, 7)

Write the ordered pair for each point on the coordinate grid.

13. point A  
   __________

14. point B  
   __________

15. point C  
   __________

16. point D  
   __________

Mixed Review
Round each factor. Estimate the product.

17. 24 × 81 = __________

18. 36 × 52 = __________

19. 88 × 11 = __________

20. 45 × 219 = __________

21. 19 × 283 = __________

22. 72 × 72 = __________

23. 39 × 158 = __________

24. 18 × 18 = __________
Use an Equation

Do the values given make \( y = 2x + 18 \) true? Write yes or no.

1. \((1,20)\) _____ 2. \((2,22)\) _____ 3. \((3,24)\) _____ 4. \((7,24)\) _____
5. \((6,28)\) _____ 6. \((4,26)\) _____ 7. \((9,36)\) _____ 8. \((11,30)\) _____
9. \((5,28)\) _____ 10. \((3,22)\) _____ 11. \((8,32)\) _____ 12. \((10,38)\) ____

Use the equation to complete each function table.

13. \(y = 4x + 2\)

<table>
<thead>
<tr>
<th>Input</th>
<th>(x)</th>
<th>2</th>
<th>4</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>(y)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14. \(y = (x + 1) - 1\)

<table>
<thead>
<tr>
<th>Input</th>
<th>(x)</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>(y)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15. \(y = 2x + 5\)

<table>
<thead>
<tr>
<th>Input</th>
<th>(x)</th>
<th>3</th>
<th>6</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>(y)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. \(y = 3x + 22\)

<table>
<thead>
<tr>
<th>Input</th>
<th>(x)</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>(y)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

17. \(y = 9x + 1\)

<table>
<thead>
<tr>
<th>Input</th>
<th>(x)</th>
<th>1</th>
<th>4</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>(y)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

18. \(y = (x + 2) + 2\)

<table>
<thead>
<tr>
<th>Input</th>
<th>(x)</th>
<th>0</th>
<th>6</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>(y)</td>
<td></td>
<td></td>
<td></td>
</tr>
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</table>

19. \(y = (x - 1) + 2\)

<table>
<thead>
<tr>
<th>Input</th>
<th>(x)</th>
<th>1</th>
<th>5</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>(y)</td>
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</table>

20. \(y = 3x + 14\)

<table>
<thead>
<tr>
<th>Input</th>
<th>(x)</th>
<th>2</th>
<th>4</th>
<th>6</th>
</tr>
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<tbody>
<tr>
<td>Output</td>
<td>(y)</td>
<td></td>
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</table>

21. \(y = 8x + 6\)

<table>
<thead>
<tr>
<th>Input</th>
<th>(x)</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>(y)</td>
<td></td>
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</tbody>
</table>

Mixed Review

Add.

22. \(345 + 456\) 23. \(3,657 + 1,737\) 24. \(7,324 + 1,587\) 25. \(3,542 + 8,732\) 26. \(21,347 + 3,547\)

27. \(13,216 + 543\) 28. \(5,542 + 5,842\) 29. \(3,211 + 6,544\) 30. \(7,437 + 8,472\) 31. \(9,813 + 7,134\)
Graph an Equation

For 1–3, use the equation $y = x + 4$.

1. Complete this function table.

<table>
<thead>
<tr>
<th>Input</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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<th>10</th>
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</tbody>
</table>

2. Write the input/output values as ordered pairs $(x, y)$.

   
   
   

3. Graph the ordered pairs on the coordinate grid.

Make a function table. Write the input/output values as ordered pairs using the values 1 through 10 for $x$. Then graph the ordered pairs on the coordinate grid above.

4. $y = 2x$

<table>
<thead>
<tr>
<th>Input</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
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<tbody>
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</tr>
</tbody>
</table>

Mixed Review

Solve.

5. $9\overline{3,663}$

6. $25\overline{10,150}$

7. $76\overline{6,764}$
Problem Solving Skill

Identify Relationships

For 1–3, use the function tables.

1. Describe the relationship between \( x \) and \( y \).

\[
\begin{array}{c|cccccc}
\text{Input} & x & 1 & 2 & 3 & 4 & 5 \\
\hline
\text{Output} & y & 2 & 4 & 6 & 8 & 10
\end{array}
\]

2. Describe the relationship between \( x \) and \( y \).

\[
\begin{array}{c|cccccc}
\text{Input} & x & 1 & 2 & 3 & 4 & 5 \\
\hline
\text{Output} & y & 2 & 3 & 4 & 5 & 6
\end{array}
\]

3. Describe the relationship between \( x \) and \( y \).

\[
\begin{array}{c|cccccc}
\text{Input} & x & 1 & 2 & 3 & 4 & 5 \\
\hline
\text{Output} & y & 4 & 8 & 12 & 16 & 20
\end{array}
\]

For 4–5, use the graph at the right.

4. What is the relationship between the \( x \) and \( y \) values?

5. What is the value of \( y \) for \( x = 16 \)?

Mixed Review

Order from least to greatest.

6. \( \frac{1}{2}, \frac{2}{3}, \frac{1}{6} \)

7. \( \frac{3}{8}, \frac{3}{4}, \frac{3}{10} \)

8. \( \frac{7}{9}, \frac{2}{3}, \frac{6}{6} \)