

**HARCOURT**

# Math

## **Practice Workbook**

**PUPIL EDITION**

**Grade 4**



Orlando • Boston • Dallas • Chicago • San Diego  
[www.harcourtschool.com](http://www.harcourtschool.com)

Copyright © by Harcourt, Inc.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the publisher.

Permission is hereby granted to individual teachers using the corresponding student's textbook or kit as the major vehicle for regular classroom instruction to photocopy complete pages from this publication in classroom quantities for instructional use and not for resale.

Duplication of this work other than by individual classroom teachers under the conditions specified above requires a license. To order a license to duplicate this work in greater than classroom quantities, contact Customer Service, Harcourt, Inc., 6277 Sea Harbor Drive, Orlando, Florida 32887-6777. Telephone: 1-800-225-5425. Fax: 1-800-874-6418 or 407-352-3445.

HARCOURT and the Harcourt Logo are trademarks of Harcourt, Inc.

Printed in the United States of America

ISBN 0-15-320769-8

2 3 4 5 6 7 8 9 10 073 10 09 08 07 06 05 04 03 02 01

# CONTENTS

## ▶ Unit 1: UNDERSTAND NUMBERS AND OPERATIONS

### ▶ Chapter 1: Place Value and Number Sense

- 1.1 Benchmark Numbers ..... 1
- 1.2 Understand Place Value ..... 2
- 1.3 Place Value Through Hundred Thousands ..... 3
- 1.4 Place Value Through Millions ..... 4
- 1.5 Problem Solving Skill: Use a Graph ..... 5

### ▶ Chapter 2: Compare and Round Numbers

- 2.1 Compare Numbers ..... 6
- 2.2 Order Numbers ..... 7
- 2.3 Problem Solving Strategy: Make a Table ..... 8
- 2.4 Round Numbers ..... 9

### ▶ Chapter 3: Add and Subtract Greater Numbers

- 3.1 Estimate Sums and Differences ... 10
- 3.2 Use Mental Math Strategies ..... 11
- 3.3 Add and Subtract 4-Digit Numbers ..... 12
- 3.4 Subtract Across Zeros ..... 13
- 3.5 Choose a Method ..... 14
- 3.6 Problem Solving Skill: Estimate or Find Exact Answer ..... 15

### ▶ Chapter 4: Algebra: Use Addition and Subtraction

- 4.1 Expressions ..... 16
- 4.2 Use Parentheses ..... 17
- 4.3 Match Words and Expressions ... 18

- 4.4 Use Variables ..... 19
- 4.5 Find a Rule ..... 20
- 4.6 Equations ..... 21
- 4.7 Problem Solving Strategy: Make a Model ..... 22

## ▶ Unit 2: DATA, GRAPHING, AND TIME

### ▶ Chapter 5: Collect and Organize Data

- 5.1 Collect and Organize Data ..... 23
- 5.2 Find Median and Mode ..... 24
- 5.3 Line Plot ..... 25
- 5.4 Stem-and-Leaf Plot ..... 26
- 5.5 Compare Graphs ..... 27
- 5.6 Problem Solving Strategy: Make a Graph ..... 28

### ▶ Chapter 6: Analyze and Graph Data

- 6.1 Double-Bar Graphs ..... 29
- 6.2 Read Line Graphs ..... 30
- 6.3 Make Line Graphs ..... 31
- 6.4 Choose an Appropriate Graph. .... 32
- 6.5 Problem Solving Skill: Draw Conclusions ..... 33

### ▶ Chapter 7: Understand Time

- 7.1 Before and After the Hour ..... 34
- 7.2 A.M. and P.M. .... 35
- 7.3 Elapsed Time ..... 36
- 7.4 Problem Solving Skill: Sequence Information ..... 37
- 7.5 Elapsed Time on a Calendar ..... 38

**▶ Unit 3: MULTIPLICATION AND DIVISION FACTS**

**▶ Chapter 8: Practice Multiplication and Division Facts**

8.1 Relate Multiplication and Division . 39  
8.2 Multiply and Divide Facts Through 5 ..... 40  
8.3 Multiply and Divide Facts Through 10 ..... 41  
8.4 Multiplication Table Through 12 ..... 42  
8.5 Multiply 3 Factors ..... 43  
8.6 Problem Solving Skill: Choose the Operation ..... 44

**▶ Chapter 9: Algebra: Use Multiplication and Division Facts**

9.1 Expressions with Parentheses ..... 45  
9.2 Match Words and Expressions .... 46  
9.3 Equations ..... 47  
9.4 Expressions with Variables ..... 48  
9.5 Equations with Variables ..... 49  
9.6 Find a Rule ..... 50  
9.7 Problem Solving Strategy: Work Backward ..... 51

**▶ Unit 4: MULTIPLY BY 1- AND 2-DIGIT NUMBERS**

**▶ Chapter 10: Multiply by 1-Digit Numbers**

10.1 Mental Math: Multiplication Patterns ..... 52  
10.2 Estimate Products ..... 53  
10.3 Multiply 2-Digit Numbers ..... 54  
10.4 Model Multiplication ..... 55  
10.5 Multiply 3-Digit Numbers ..... 56  
10.6 Multiply 4-Digit Numbers ..... 57  
10.7 Problem Solving Strategy: Write an Equation ..... 58

**▶ Chapter 11: Understand Multiplication**

11.1 Mental Math: Patterns with Multiples ..... 59  
11.2 Multiply by Multiples of 10 ..... 60  
11.3 Estimate Products ..... 61  
11.4 Model Multiplication ..... 62  
11.5 Problem Solving Strategy: Solve a Simpler Problem ..... 63

**▶ Chapter 12: Multiply by 2-Digit Numbers**

12.1 Multiply by 2-Digit Numbers ..... 64  
12.2 More About Multiplying by 2-Digit Numbers ..... 65  
12.3 Choose a Method ..... 66  
12.4 Practice Multiplication ..... 67  
12.5 Problem Solving Skill: Multistep Problems ..... 68

**▶ Unit 5: DIVIDE BY 1- AND 2-DIGIT DIVISORS**

**▶ Chapter 13: Understand Division**

13.1 Divide with Remainders ..... 69  
13.2 Model Division ..... 70  
13.3 Division Procedures ..... 71  
13.4 Problem Solving Strategy: Predict and Test ..... 72  
13.5 Mental Math: Division Patterns ..... 73  
13.6 Estimate Quotients ..... 74

**▶ Chapter 14: Divide by 1-Digit Divisors**

14.1 Place the First Digit ..... 75  
14.2 Divide 3-Digit Numbers ..... 76  
14.3 Zeros in Division ..... 77  
14.4 Choose a Method ..... 78  
14.5 Problem Solving Skill: Interpret the Remainder ..... 79  
14.6 Find the Mean ..... 80

<b>▶ Chapter 15: Divide by 2-Digit Divisors</b>	
15.1 Division Patterns to Estimate	81
15.2 Model Division	82
15.3 Division Procedures	83
15.4 Correcting Quotients	84
15.5 Problem Solving Skill: Choose the Operation	85

<b>▶ Chapter 16: Patterns with Factors and Multiples</b>	
16.1 Factors and Multiples	86
16.2 Factor Numbers	87
16.3 Prime and Composite Numbers	88
16.4 Find Prime Factors	89
16.5 Problem Solving Strategy: Find a Pattern	90

**▶ Unit 6: GEOMETRY**

<b>▶ Chapter 17: Plane Figures</b>	
17.1 Lines, Rays, and Angles	91
17.2 Line Relationships	92
17.3 Congruent Figures and Motion	93
17.4 Symmetric Figures	94
17.5 Problems Solving Strategy: Make a Model	95

<b>▶ Chapter 18: Measure and Classify Plane Figures</b>	
18.1 Turns and Degrees	96
18.2 Measure Angles	97
18.3 Circles	98
18.4 Circumference	99
18.5 Classify Triangles	100
18.6 Classify Quadrilaterals	101
18.7 Problem Solving Strategy: Draw a Diagram	102

**▶ Unit 7: FRACTIONS AND DECIMALS**

<b>▶ Chapter 19: Understand Fractions</b>	
19.1 Read and Write Fractions	103
19.2 Equivalent Fractions	104
19.3 Equivalent Fractions	105
19.4 Compare and Order Fractions	106
19.5 Problem Solving Strategy: Make a Model	107
19.6 Mixed Numbers	108

<b>▶ Chapter 20: Add and Subtract Fractions and Mixed Numbers</b>	
20.1 Add Like Fractions	109
20.2 Subtract Like Fractions	110
20.3 Add and Subtract Mixed Numbers	111
20.4 Problem Solving Skill: Choose the Operation	112
20.5 Add Unlike Fractions	113
20.6 Subtract Unlike Fractions	114

<b>▶ Chapter 21: Understand Decimals</b>	
21.1 Relate Fractions and Decimals	115
21.2 Thousandths	116
21.3 Equivalent Decimals	117
21.4 Relate Mixed Numbers and Decimals	118
21.5 Compare and Order Decimals	119
21.6 Problem Solving Strategy: Use Logical Reasoning	120

<b>▶ Chapter 22: Add and Subtract Decimals</b>	
22.1 Round Decimals	121
22.2 Estimate Sums and Differences	122
22.3 Add Decimals	123
22.4 Subtract Decimals	124
22.5 Add and Subtract Decimals	125
22.6 Problem Solving Skill: Evaluate Reasonableness of Answers	126

 **Unit 8: MEASUREMENT AND GEOMETRY**

 **Chapter 23: Customary Measurement**

- 23.1 Choose the Appropriate Unit . . . . .127
- 23.2 Measure Fractional Parts . . . . .128
- 23.3 Algebra: Change Linear Units . . . . .129
- 23.4 Capacity . . . . .130
- 23.5 Weight . . . . .131
- 23.6 Problem Solving Strategy:  
Compare Strategies . . . . .132

 **Chapter 24: Metric Measurement**

- 24.1 Linear Measure . . . . .133
- 24.2 Algebra: Change Linear Units . . . . .134
- 24.3 Capacity . . . . .135
- 24.4 Mass . . . . .136
- 24.5 Problems Solving Strategy: Draw  
a Diagram . . . . .137

 **Chapter 25: Perimeter and Area of Plane Figures**

- 25.1 Perimeter of Polygons . . . . .138
- 25.2 Estimate and Find  
Perimeter . . . . .139
- 25.3 Estimate and Find Area . . . . .140
- 25.4 Relate Area and Perimeter . . . . .141
- 25.5 Relate Formulas and Rules . . . . .142
- 25.6 Problem Solving Strategy:  
Find a Pattern . . . . .143

 **Chapter 26: Solid Figures and Volume**

- 26.1 Faces, Edges, and Vertices . . . . .144
- 26.2 Patterns for Solid Figures . . . . .145
- 26.3 Estimate and Find Volume  
of Prisms . . . . .146
- 26.4 Problem Solving Skill: Too Much/  
Too Little Information . . . . .147

 **Unit 9: PROBABILITY, ALGEBRA, AND GRAPHING**

 **Chapter 27: Outcomes**

- 27.1 Record Outcomes . . . . .148
- 27.2 Tree Diagrams . . . . .149
- 27.3 Problem Solving Strategy:  
Make an Organized List . . . . .150
- 27.4 Predict Outcomes of  
Experiments . . . . .151

 **Chapter 28: Probability**

- 28.1 Probability as a Fraction . . . . .152
- 28.2 More About Probability . . . . .153
- 28.3 Test for Fairness . . . . .154
- 28.4 Problem Solving Skill: Draw  
Conclusions . . . . .155

 **Chapter 29: Algebra: Explore Negative Numbers**

- 29.1 Temperature: Fahrenheit . . . . .156
- 29.2 Temperature: Celsius . . . . .157
- 29.3 Negative Numbers . . . . .158
- 29.4 Problem Solving Skill: Make  
Generalizations . . . . .159

 **Chapter 30: Explore the Coordinate Grid**

- 30.1 Use a Coordinate Grid . . . . .160
- 30.2 Use an Equation . . . . .161
- 30.3 Graph an Equation . . . . .162
- 30.4 Problem Solving Skill: Identify  
Relationships . . . . .163

## Benchmark Numbers

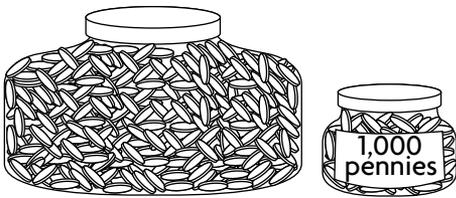
### Vocabulary

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.

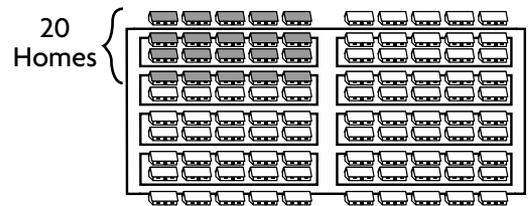
Use the benchmark to decide which is the more reasonable number.

2. Pennies in the jar



500 or 5,000

3. Houses in the neighborhood



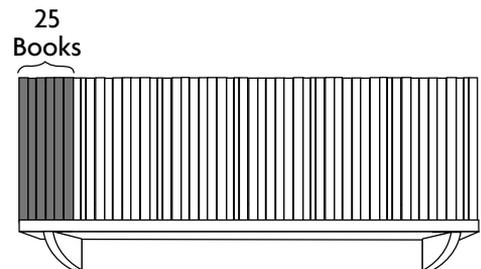
100 or 1,000

4. Height of a shrub



20 inches or 200 inches

5. Books on a shelf



200 or 2,000

### Mixed Review

6. 
$$\begin{array}{r} 3 \\ + 8 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 9 \\ + 5 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 16 \\ + 12 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 24 \\ + 51 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 45 \\ + 22 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 31 \\ + 18 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} 44 \\ + 29 \\ \hline \end{array}$$

13. 
$$\begin{array}{r} 35 \\ - 17 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 35 \\ - 27 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} 59 \\ - 31 \\ \hline \end{array}$$

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.  $56,891 = 50,000 + \underline{\hspace{2cm}}$   
 $+ 800 + 90 + 1$

13.  $\underline{\hspace{2cm}} 6,408 = 80,000 +$   
 $6,000 + 400 + 8$

14.  $42,076 = 40,000 + 2,000 +$   
 $\underline{\hspace{2cm}} + 6$

15.  $37,905 = \underline{\hspace{2cm}} + 7,000 +$   
 $900 + 5$

### Mixed Review

16. 
$$\begin{array}{r} 420 \\ 307 \\ + 21 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} 818 \\ 128 \\ + 66 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 77 \\ 20 \\ + 18 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 213 \\ 501 \\ + 190 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 633 \\ 409 \\ + 7 \\ \hline \end{array}$$

21. 
$$\begin{array}{r} 100 \\ - 22 \\ \hline \end{array}$$

22. 
$$\begin{array}{r} 87 \\ - 24 \\ \hline \end{array}$$

23. 
$$\begin{array}{r} 98 \\ - 69 \\ \hline \end{array}$$

24. 
$$\begin{array}{r} 53 \\ - 8 \\ \hline \end{array}$$

25. 
$$\begin{array}{r} 110 \\ - 56 \\ \hline \end{array}$$



## Place Value Through Hundred Thousands

### Vocabulary

Write the correct letter that describes each number.

1. 340,548 \_\_\_\_\_

2.  $300,000 + 40,000 + 500 + 40 + 8$  \_\_\_\_\_

3. three hundred forty thousand, five hundred forty-eight \_\_\_\_\_

- a. expanded form  
 b. word form  
 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,**5**95,445

3. **3**,502,305

4. **7**35,495,305

\_\_\_\_\_

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.  $690 - \underline{\quad} = 422$

14.  $\underline{\quad} + 222 = 879$

### PW4 Practice

## 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.

Maximum Daily Servings	
dairy	☉ ☉
meat	☉ ☉
vegetables	☉ ☉ ☉
fruit	☉ ☉
bread and cereal	☉ ☉ ☉ ☉ ☉ ☉

For 1–8, use the graph.

Key: Each ☉ stands for 2 servings.

- What is the maximum recommended number of meat servings?  
\_\_\_\_\_
- Which two food groups have the same number of recommended servings?  
\_\_\_\_\_
- Of which food groups can you eat more than four servings per day?  
\_\_\_\_\_
- Of which food group can you eat the most servings?  
\_\_\_\_\_
- Today, Erika ate 5 servings of meat. How would you represent this on the pictograph?  
\_\_\_\_\_
- What is the total number of fruit and vegetable servings recommended?  
\_\_\_\_\_
- Rolanda has eaten 7 servings from the bread and cereal group today. How many more servings should she have?  
\_\_\_\_\_
- 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  $\bigcirc$ .

10. 3,489  $\bigcirc$  3,578

11. 25,899  $\bigcirc$  25,890

12. 75,673  $\bigcirc$  75,673

13. 3,142,355  $\bigcirc$  314,235

14. 33,452,236  $\bigcirc$  35,235,032

Find all of the digits that can replace each  $\square$ .

15.  $6\square 7,348 < 647,348$

\_\_\_\_\_

16.  $35,468,245 < 35,468,\square 45$

\_\_\_\_\_

## 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  $\square$ .

11.  $4,599 < 4,63\square < 4,634$

\_\_\_\_\_

12.  $3,554,684 > 3,\square 69,304 > 3,184,394$

\_\_\_\_\_

## Mixed Review

13. 
$$\begin{array}{r} 25 \\ + 42 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 99 \\ 21 \\ + 86 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} 95\text{¢} \\ - 43\text{¢} \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 78\text{¢} \\ - 24\text{¢} \\ \hline \end{array}$$

17. 
$$\begin{array}{r} 13 \\ 74 \\ + 26 \\ \hline \end{array}$$

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.

The Sahara Desert in Africa has an area of 3,500,000 square miles. The Simpson Desert in Australia has an area of 56,000 square miles.

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.

Desert	Continent	Area (sq mi)

- Which desert has the greatest area?  
\_\_\_\_\_
- Which two deserts are located on the same continent?  
\_\_\_\_\_
- Which deserts have an area of less than 100,000 square miles?  
\_\_\_\_\_
- On which continent is the desert with the least area located?  
\_\_\_\_\_

**Mixed Review**

- Write  $3,000,000 + 20,000 + 5,000 + 300 + 70 + 2$  in standard form.  
\_\_\_\_\_
- Write the numbers in order from *least* to *greatest*: 254,879; 2,254,920; 1,678,305; 353,502.  
\_\_\_\_\_

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

- $354,992 \bigcirc 288,492$
- $394,234 \bigcirc 3,294,394$
- $9,421,720$   
 $- 6,198,135$
- $210,076$   
 $+ 935,811$
- $7,394,398 \bigcirc 7,394,398$
- $6,187,249 \bigcirc 61,872,490$
- $8,176,553$   
 $+ 30,602$
- $172,442$   
 $- 172,435$

15.  $786 - 421 =$  \_\_\_\_\_

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

25. 
$$\begin{array}{r} 8 \\ \times 5 \\ \hline \end{array}$$

26. 
$$\begin{array}{r} 9 \\ \times 8 \\ \hline \end{array}$$

27. 
$$\begin{array}{r} 7 \\ \times 7 \\ \hline \end{array}$$

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. 
$$\begin{array}{r} 7,379 \\ + 5,496 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} \$479,150 \\ - \$371,271 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 612,797 \\ + 811,035 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 638,113 \\ - 415,327 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 5,324 \\ + 2,468 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} \$6,372 \\ - \$4,047 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 721,379 \\ + 15,496 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} \$3,016 \\ - \$2,849 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 8,492 \\ + 1,346 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 846,134 \\ - 794,134 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 461,137 \\ + 91,214 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} \$9,263 \\ - \$ 489 \\ \hline \end{array}$$

Write the missing digit for the estimated sum or difference.

13. 
$$\begin{array}{r} \square 46,164 \\ - 471,467 \\ \hline 100,000 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 23,497 \\ + \square 2,464 \\ \hline 80,000 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} 631,431 \\ - \square 6,497 \\ \hline 520,000 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} \square 79,431 \\ + 231,587 \\ \hline 400,000 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} \square 21,863 \\ - 135,632 \\ \hline 300,000 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 54,961 \\ + \square 5,246 \\ \hline 70,000 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} \square 45,239 \\ - 32,878 \\ \hline 170,000 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 58,138 \\ + \square 3,245 \\ \hline 90,000 \\ \hline \end{array}$$

**Mixed Review**

21. 
$$\begin{array}{r} 27 \\ + 49 \\ \hline \end{array}$$

22. 
$$\begin{array}{r} 31 \\ + 64 \\ \hline \end{array}$$

23. 
$$\begin{array}{r} 92 \\ + 11 \\ \hline \end{array}$$

24. 
$$\begin{array}{r} 87 \\ + 34 \\ \hline \end{array}$$

25. 
$$\begin{array}{r} 16 \\ + 77 \\ \hline \end{array}$$

## 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 \_\_\_\_\_

\_\_\_\_\_

## Add and Subtract 4-Digit Numbers

Find the sum or difference. Estimate to check.

$$\begin{array}{r} 1. \quad 7,503 \\ - 3,598 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 2,178 \\ + 3,703 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 5,527 \\ \quad 2,978 \\ + 1,852 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 3,092 \\ \quad 1,574 \\ + 1,296 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 1,468 \\ + 1,090 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 2,714 \\ - 1,833 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 2,131 \\ \quad 1,574 \\ + 1,078 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 2,858 \\ + 1,670 \\ \hline \end{array}$$

$$9. \quad 4,375 + 5,839$$

$$10. \quad 4,793 + 2,988 + 8,349$$

$$11. \quad 5,707 - 2,596$$

$$12. \quad 3,872 + 2,396 + 7,236$$

For 13–20, find the missing digit.

$$\begin{array}{r} 13. \quad 7,13\Box \\ - 2,467 \\ \hline 4,671 \end{array}$$

$$\begin{array}{r} 14. \quad 4,135 \\ + \Box,252 \\ \hline 5,387 \end{array}$$

$$\begin{array}{r} 15. \quad 5,6\Box7 \\ - 3,684 \\ \hline 1,953 \end{array}$$

$$\begin{array}{r} 16. \quad 6,465 \\ + 1,\Box68 \\ \hline 8,233 \end{array}$$

$$\begin{array}{r} 17. \quad 5,\Box23 \\ + 1,820 \\ \hline 7,043 \end{array}$$

$$\begin{array}{r} 18. \quad 9,465 \\ - 8,4\Box7 \\ \hline 968 \end{array}$$

$$\begin{array}{r} 19. \quad \Box,254 \\ + 2,849 \\ \hline 7,103 \end{array}$$

$$\begin{array}{r} 20. \quad 6,102 \\ - 4,58\Box \\ \hline 1,517 \end{array}$$

### Mixed Review

$$21. \quad 10 + 10 + 10 + 10 = \underline{\hspace{2cm}}$$

$$22. \quad 5 + 5 + 5 + 5 + 5 = \underline{\hspace{2cm}}$$

$$23. \quad 42 - 21 = \underline{\hspace{2cm}}$$

$$24. \quad 63 - 12 = \underline{\hspace{2cm}}$$

## Subtract Across Zeros

Find the difference. Estimate to check.

1. 
$$\begin{array}{r} 3,000 \\ - 2,780 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 4,003 \\ - 2,232 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 8,005 \\ - 5,004 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 6,200 \\ - 4,816 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 5,700 \\ - 1,751 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 9,100 \\ - 3,759 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 20,000 \\ - 13,652 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 10,000 \\ - 2,842 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 90,000 \\ - 66,536 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 50,000 \\ - 13,747 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 20,000 \\ - 15,136 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} 50,075 \\ - 32,097 \\ \hline \end{array}$$

13. 
$$\begin{array}{r} 70,000 \\ - 29,134 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 50,000 \\ - 19,673 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} 70,006 \\ - 43,989 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 20,000 \\ - 9,342 \\ \hline \end{array}$$

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

17.  $2,006 - 1,513 \bigcirc 4,075 - 3,209$

18.  $7,004 - 6,315 \bigcirc 5,075 - 4,897$

19.  $8,003 - 3,695 \bigcirc 7,473 - 2,127$

20.  $9,200 - 5,861 \bigcirc 6,153 - 2,814$

21.  $3,009 - 1,819 \bigcirc 8,006 - 6,952$

22.  $4,284 - 2,651 \bigcirc 9,000 - 7,367$

## Mixed Review

23. 
$$\begin{array}{r} 6,491 \\ + 8,034 \\ \hline \end{array}$$

24. 
$$\begin{array}{r} 9,403 \\ + 199 \\ \hline \end{array}$$

25. 
$$\begin{array}{r} 8,662 \\ + 8,449 \\ \hline \end{array}$$

26. 
$$\begin{array}{r} 7,361 \\ + 9,170 \\ \hline \end{array}$$

27. 
$$\begin{array}{r} 2,649 \\ + 3,427 \\ \hline \end{array}$$

28. 
$$\begin{array}{r} 2,831 \\ + 6,923 \\ \hline \end{array}$$

29. 
$$\begin{array}{r} 1,424 \\ + 3,462 \\ \hline \end{array}$$

30. 
$$\begin{array}{r} \$2,455 \\ + \$3,119 \\ \hline \end{array}$$

**Choose a Method**

Find the sum or difference. Estimate to check.

1. 
$$\begin{array}{r} 213,742 \\ + 170,045 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 408,587 \\ - 345,128 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 248,232 \\ + 236,816 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 684,004 \\ - 195,751 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 661,119 \\ - 423,384 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 358,379 \\ + 264,175 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 568,075 \\ - 372,097 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 468,951 \\ + 236,175 \\ \hline \end{array}$$

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

9.  $561,257 - 346,052 \bigcirc 846,735 - 612,435$

10.  $257,132 + 153,087 \bigcirc 210,735 + 128,307$

11.  $976,034 - 780,347 \bigcirc 461,597 - 265,910$

Find the missing digit.

12. 
$$\begin{array}{r} 4\boxed{6},341 \\ - 275,132 \\ \hline 221,209 \end{array}$$

13. 
$$\begin{array}{r} 682,318 \\ - 248,1\boxed{6} \\ \hline 434,142 \end{array}$$

14. 
$$\begin{array}{r} 945,132 \\ + 153,\boxed{0}2 \\ \hline 1,098,734 \end{array}$$

**Mixed Review**

Estimate the sum or difference.

15. 
$$\begin{array}{r} 6,842 \\ + 2,981 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 1,132 \\ 2,074 \\ + 2,596 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} 4,008 \\ - 2,567 \\ \hline \end{array}$$

18.  $6,921 - 4,071 =$  \_\_\_\_\_

19.  $3,460 - 782 =$  \_\_\_\_\_

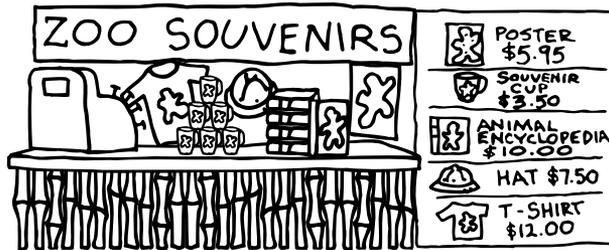
20.  $8,130 - 3,471 =$  \_\_\_\_\_

21.  $1,197 - 238 =$  \_\_\_\_\_

## Problem Solving Skill

### Estimate or Find Exact Answers

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



Item	Price
Poster	\$5.95
Souvenir Cup	\$3.50
Animal Encyclopedia	\$10.00
Hat	\$7.50
T-shirt	\$12.00

- Mitchell bought a hat and a poster. How much change will he get from \$20.00?  
\_\_\_\_\_
- Tracy wants to buy a t-shirt and a souvenir cup. If she has \$15.00, does she have enough? Explain your answer.  
\_\_\_\_\_
- 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?  
\_\_\_\_\_
- About how much money does someone need to buy one of each item?  
\_\_\_\_\_
- Maurice had \$15.00. He bought a hat. About how much money is left? Is it enough to buy a poster?  
\_\_\_\_\_
- 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. $\begin{array}{r} \$1.73 \\ +\$0.14 \\ \hline \end{array}$    | 8. $\begin{array}{r} \$10.00 \\ -\$ 8.59 \\ \hline \end{array}$ | 9. $\begin{array}{r} 6,285 \\ - 3,119 \\ \hline \end{array}$ | 10. $\begin{array}{r} 16,212 \\ + 42,080 \\ \hline \end{array}$  | 11. $\begin{array}{r} \$19.27 \\ +\$11.27 \\ \hline \end{array}$ |
| 12. $\begin{array}{r} \$3,204 \\ -\$2,413 \\ \hline \end{array}$ | 13. $\begin{array}{r} 5,320 \\ +1,375 \\ \hline \end{array}$    | 14. $\begin{array}{r} 9,862 \\ -7,361 \\ \hline \end{array}$ | 15. $\begin{array}{r} \$3,228 \\ +\$4,228 \\ \hline \end{array}$ | 16. $\begin{array}{r} 40,000 \\ - 8,613 \\ \hline \end{array}$   |

## Expressions

### Vocabulary

Complete the sentence.

- \_\_\_\_\_ tell which operation to do first.
  - 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. 
$$\begin{array}{r} 2,112 \\ + 5,899 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 85,584 \\ - 29,920 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} 50,008 \\ - 28,251 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 3,804 \\ + 9,156 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 3,333 \\ - 1,797 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 47,310 \\ - 19,894 \\ \hline \end{array}$$

21. 
$$\begin{array}{r} 62,809 \\ - 59,345 \\ \hline \end{array}$$

22. 
$$\begin{array}{r} 8,637 \\ - 4,737 \\ \hline \end{array}$$

**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.  $(15 - 7) + \blacksquare$

\_\_\_\_\_

11.  $50 - (45 - \blacksquare)$

\_\_\_\_\_

12.  $(31 + \blacksquare) - 11$

\_\_\_\_\_

**Mixed Review**

13.  $19 - 8 =$  \_\_\_\_\_

$11 + 8 =$  \_\_\_\_\_

14.  $6 + 7 =$  \_\_\_\_\_

$13 - 6 =$  \_\_\_\_\_

15.  $12 - 9 =$  \_\_\_\_\_

$3 + 9 =$  \_\_\_\_\_

Find the missing number.

16.  $62 + \blacksquare = 89$

\_\_\_\_\_

17.  $14 + \blacksquare = 33$

\_\_\_\_\_

18.  $72 - \blacksquare = 46$

\_\_\_\_\_

19.  $\blacksquare - 11 = 89$

\_\_\_\_\_

20.  $\blacksquare + 44 = 74$

\_\_\_\_\_

21.  $\blacksquare + 39 = 106$

\_\_\_\_\_

## Match Words and Expressions

Choose the expression that matches the words.

- |   |   |
|---|---|
| <p>1. There were 12 apples in the fruit bowl. Three were eaten and 6 more were added.</p> <p>a. <math>12 - (3 + 6)</math></p> <p>b. <math>(12 - 3) + 6</math></p> | <p>2. Emily had \$22. She spent \$6 at the mall and then earned \$8 more.</p> <p>a. <math>(\\$22 - \\$6) + \\$8</math></p> <p>b. <math>\\$22 - (\\$6 + \\$8)</math></p> |
| <p>3. The library has 86 biographies. Seven are checked out and 4 are thrown away.</p> <p>a. <math>86 - (7 + 4)</math></p> <p>b. <math>(86 - 7) + 4</math></p>    | <p>4. Riley had 50¢. She spent 10¢ at the store and played a video game for 25¢.</p> <p>a. <math>(50¢ - 10¢) + 25¢</math></p> <p>b. <math>50¢ - (10¢ + 25¢)</math></p>  |

Write an expression for each. Solve.

- |   |  |
|---|--|
| <p>5. There are 16 people at the Swim Club meeting. 5 people leave and 7 more people come.</p> <p>_____</p> | <p>6. Rob had 52 baseball cards. He gave 5 to Larry and 8 to Evan.</p> <p>_____</p>        |
| <p>7. Kari had 10 workbook pages for homework. She did 3 after school and 5 after dinner.</p> <p>_____</p>  | <p>8. Lisa earned \$20 doing yard-work. She got a \$3 tip and spent \$12.</p> <p>_____</p> |

### Mixed Review

- |  |  |  |  |
|--|--|--|--|
| <p>9. <math display="block">\begin{array}{r} 63,899 \\ - 47,641 \\ \hline \end{array}</math></p> | <p>10. <math display="block">\begin{array}{r} 389,290 \\ 592,921 \\ + 491,911 \\ \hline \end{array}</math></p> | <p>11. <math display="block">\begin{array}{r} 48,001 \\ - 5,842 \\ \hline \end{array}</math></p> | <p>12. <math display="block">\begin{array}{r} 493,722 \\ 891,836 \\ + 105,069 \\ \hline \end{array}</math></p> |
|--|--|--|--|

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.<br><br>_____ | 4. There were 16 cans on the shelf. Some more cans were placed on the shelf.<br><br>_____ |
| 5. At the assembly, there are 83 students and some teachers.<br><br>_____    | 6. There are 8 campers in the pool. Some campers come out to have a snack.<br><br>_____   |

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.<br><br>_____             | 8. Arturo has 4 posters. He buys some more posters. Now he has 12 posters.<br><br>_____ |
| 9. Mr. Tran has 45 students in gym class. Thirty-two are playing volleyball. The rest are jogging.<br><br>_____ | 10. Christine adds 4 coins to her piggy bank. There are now 83 coins.<br><br>_____      |

### 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.

Input	Output
$x$	$y$
6	12
14	20
9	15
11	17

\_\_\_\_\_

\_\_\_\_\_

2.

Input	Output
$a$	$b$
18	10
9	1
12	4
15	7

\_\_\_\_\_

\_\_\_\_\_

3.

Input	Output
$r$	$k$
45	39
27	21
18	12
21	15

\_\_\_\_\_

\_\_\_\_\_

4.

Input	Output
$t$	$m$
13	25
8	20
17	29
3	15

\_\_\_\_\_

\_\_\_\_\_

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

5. Add 8.  
 $t + 8 = p$

Input	Output

6. Subtract 3.  
 $w - 3 = t$

Input	Output

7. Add 14.  
 $c + 14 = m$

Input	Output

8. Subtract 28.  
 $b - 28 = g$

Input	Output

9. Add 23.  
 $g + 23 = y$

Input	Output

10. Subtract 32.  
 $m - 32 = w$

Input	Output

11. Subtract 9.  
 $x - 9 = b$

Input	Output

12. Add 28.  
 $t + 28 = r$

Input	Output

## 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 quarter = 2 dimes

\_\_\_\_\_

2. 1 dime - 2 pennies =  
1 nickel + 3 pennies

\_\_\_\_\_

3. 3 dimes and 2 nickels =  
40 pennies

\_\_\_\_\_

4. 4 pennies and 1 quarter =  
3 dimes

\_\_\_\_\_

5.   
= 

\_\_\_\_\_

6.   
= 

\_\_\_\_\_

Complete to make the equation true.

7.  $19 + 3 = \underline{\hspace{2cm}} + 19$

\_\_\_\_\_

8.  $12 + 4 = 6 + \underline{\hspace{2cm}}$

\_\_\_\_\_

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

\_\_\_\_\_

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

\_\_\_\_\_

11.  $22 + 8 + 1 = 25 + \underline{\hspace{2cm}}$

\_\_\_\_\_

12.  $\underline{\hspace{2cm}} + 5 = 10 + 3 + 1$

\_\_\_\_\_

## Mixed Review

Find the value of each expression.

13.  $(9 + 11) - (4 + 4) = \underline{\hspace{2cm}}$  14.  $72 - (41 + 6) = \underline{\hspace{2cm}}$  15.  $35 + (16 - 3) = \underline{\hspace{2cm}}$

16.  $(49¢ - 22¢) + 17¢ = \underline{\hspace{2cm}}$  17.  $(15 + 11) - 6 = \underline{\hspace{2cm}}$  18.  $(11 - 6) + 15 = \underline{\hspace{2cm}}$

19.  $(43 - 8) + (7 - 5) = \underline{\hspace{2cm}}$  20.  $(90 - 21) + 17 = \underline{\hspace{2cm}}$  21.  $86 + (33 - 15) = \underline{\hspace{2cm}}$

## 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.

- Students from Grade 2 brought in 4 bags then brought in 7 more bags. How many more bags do they need to win?  
\_\_\_\_\_
- 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?  
\_\_\_\_\_
- 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?  
\_\_\_\_\_
- If Grade 6 collects 9 bags in Week 1 and 8 bags in Week 2, how many more do they have than Grade 2?  
\_\_\_\_\_
- 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?  
\_\_\_\_\_
- 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.

$$x + 6 = z$$

Input	Output

8. Subtract 31.

$$m - 31 = r$$

Input	Output

9. Add 19.

$$p + 19 = s$$

Input	Output

10. Subtract 25.

$$c - 25 = a$$

Input	Output

## Collect and Organize Data

### Vocabulary

Complete the sentence.

- The numbers in the \_\_\_\_\_ column show the sum as each new line of data is entered.

For 2–3, use the frequency table.

FROZEN POPS SOLD		
Day	Frequency (Number of Frozen Pops)	Cumulative Frequency
Monday	15	15
Tuesday	24	39
Wednesday	19	58
Thursday	9	67
Friday	21	88

- The cumulative frequency for Wednesday is \_\_\_\_\_.  
This is the sum of the numbers in the frequency column for which days?  
\_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.
- 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.

- 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.

SWIM TEAM	
Age	Number of Students
8	2
9	5
10	4
11	4

- List all of the ages of all the swim team members, from least to greatest.  
\_\_\_\_\_  
\_\_\_\_\_
- Use your list from problem 1. What is the median age of the swim team members?  
\_\_\_\_\_
- What is the mode of the ages of the swim team members?  
\_\_\_\_\_
- 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.

- 56,298 \_\_\_\_\_
- 355,207 \_\_\_\_\_
- 514,899 \_\_\_\_\_
- 29,909 \_\_\_\_\_
- 17,923 \_\_\_\_\_
- 99,903 \_\_\_\_\_

Find  $n$ .

- $4 \times n = 9 + 3$  \_\_\_\_\_
- $n \times 5 = 20 + 5$  \_\_\_\_\_
- $8 + n = 10 + 6$  \_\_\_\_\_
- $5 \times n = 2 \times 10$  \_\_\_\_\_
- $6 + 5 = 9 + n$  \_\_\_\_\_
- $8 \times 2 = n + 9$  \_\_\_\_\_
- $4 \times n = 11 + 1$  \_\_\_\_\_
- $n + 7 = 19 + 12$  \_\_\_\_\_

# Line Plot

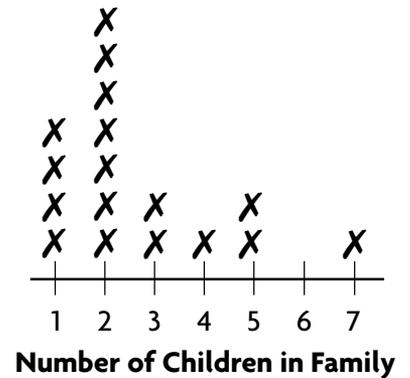
## Vocabulary

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?

Slices of Pizza Eaten at a Party						
Number of Slices	0	1	2	3	4	5
Number of Students	//	###/	###	///	/	//



5. Use the data in the table to complete the line plot. **Slices of Pizza Eaten at a Party**

## 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?

\_\_\_\_\_

**Spelling Scores**

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

$$6|8 = 68$$

### 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

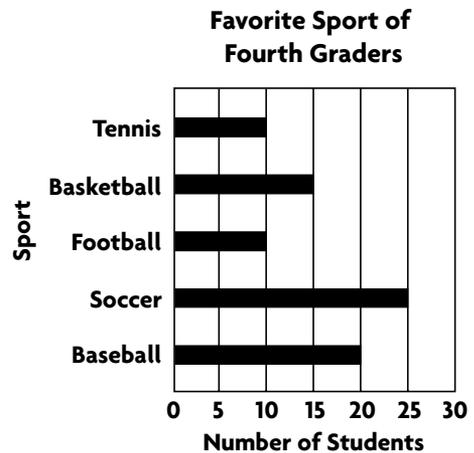
### Vocabulary

Complete the sentence.

- The \_\_\_\_\_ is the series of numbers placed at fixed distances on the side of a graph.
- The \_\_\_\_\_ of a graph is the difference between any two numbers on the scale.

For 3–6, use the graph.

- What is the interval of the scale in the graph?  
\_\_\_\_\_
- How would the bars change in the graph if the interval were 1?  
\_\_\_\_\_
- Describe how the bars in the graph would look if you made a new graph, using a scale interval of 10.  
\_\_\_\_\_



- 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

- $55 + 23$  \_\_\_\_\_
- $44 - 23$  \_\_\_\_\_
- $12 + 34$  \_\_\_\_\_
- $87 + 12$  \_\_\_\_\_
- $5 \times 6$  \_\_\_\_\_
- $72 \div 9$  \_\_\_\_\_
- $12 \times 12$  \_\_\_\_\_
- $45 \div 5$  \_\_\_\_\_
- A baker can make 8 batches of cookies an hour. How many batches of cookies can the baker make in 7 hours?  
\_\_\_\_\_
- 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, 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

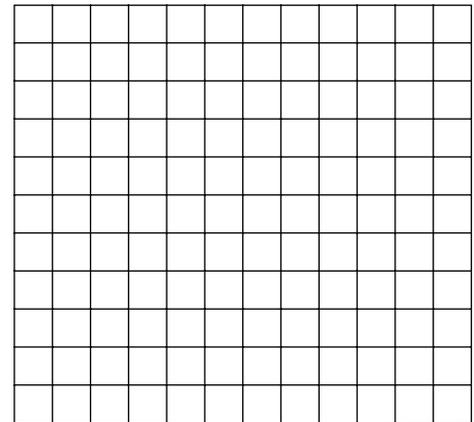
### Vocabulary

Complete the sentence.

1. A \_\_\_\_\_ is used to compare similar kinds of data.

Cost of Bulbs (per package of 25)		
Type of Bulb	Kevin's Flowers	Hillside Nursery
Daffodil	\$18.00	\$14.00
Tulip	\$10.00	\$12.00
Hyacinth	\$21.00	\$12.00
Crocus	\$5.00	\$7.00

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?

\_\_\_\_\_

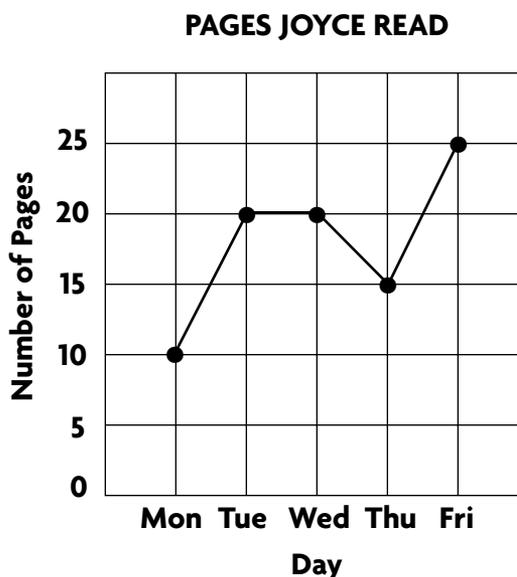
4. On which two days did Joyce read the same number of pages?

\_\_\_\_\_

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

$$\begin{array}{r} 7. \quad 35,859 \\ + 91,847 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 680,005 \\ - 490,948 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 5,940,394 \\ - 2,518,624 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 9,848,664 \\ + 8,842,231 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad 762,063 \\ - 410,978 \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 248,671 \\ + 99,348 \\ \hline \end{array}$$

$$\begin{array}{r} 13. \quad 7,100,003 \\ - 6,471,691 \\ \hline \end{array}$$

$$\begin{array}{r} 14. \quad 8,317,062 \\ + 4,065,594 \\ \hline \end{array}$$

# Make Line Graphs

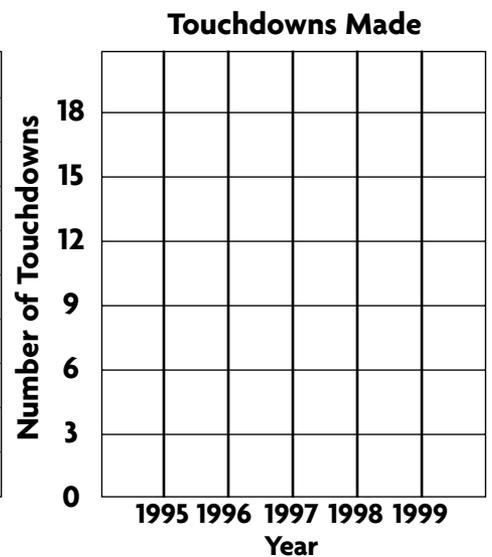
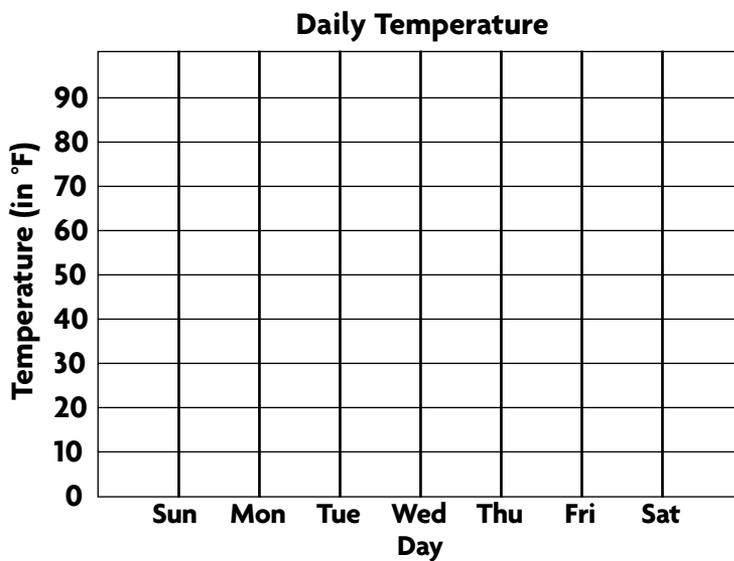
For 1–2, complete the line graph.

1.

Daily Temperature							
Day	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Temperature (in °F)	65	70	85	75	70	80	80

2.

Touchdowns Made					
Year	1995	1996	1997	1998	1999
Number of Touchdowns	10	12	9	15	18



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 ○  $8,125 - 304$

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 |
|---|--|

\_\_\_\_\_

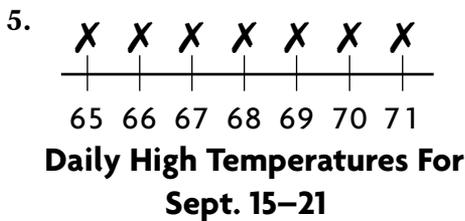
\_\_\_\_\_

- |   |   |
|---|---|
| 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.



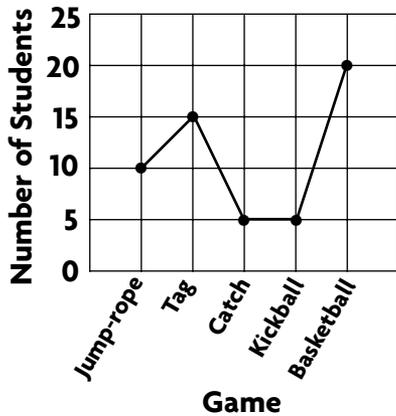
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6. **FAVORITE GAMES AT RECESS**



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### Mixed Review

Complete to make the equation true.

7.  $15 + 4 = \underline{\quad} + 10$       8.  $\underline{\quad} + 8 = 13 + 4$       9.  $11 + \underline{\quad} = 20 + 15$

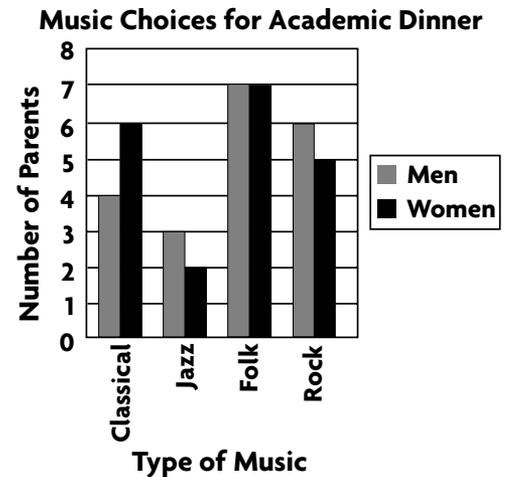
10. Find the value of  $48 - (14 + 7)$ . \_\_\_\_\_

## 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.



- What is the favorite music choice for men?  
\_\_\_\_\_
- What is the favorite music choice for women?  
\_\_\_\_\_
- How many men prefer to have rock music at the banquet?  
\_\_\_\_\_
- How many women prefer classical music?  
\_\_\_\_\_
- Which type of music is preferred equally by the men and women?  
\_\_\_\_\_
- How many men were surveyed altogether? women?  
\_\_\_\_\_
- Is it reasonable to conclude that the parents chose folk music for the Academic Dinner? Explain.  
\_\_\_\_\_  
\_\_\_\_\_

### Mixed Review

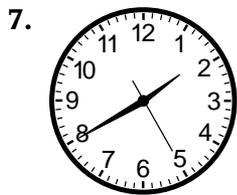
- What number is 100,000 greater than 3,489,234?  
\_\_\_\_\_
- Round 355,790 to the nearest thousand.  
\_\_\_\_\_
- Estimate.  $390,645 + 71,960$   
\_\_\_\_\_
- Estimate.  $495,931 + 889,853$   
\_\_\_\_\_

## 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 |
| _____                 | _____                   | _____                  |

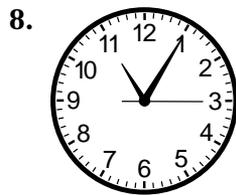
Write the time shown on the clock in 2 different ways.



\_\_\_\_\_

\_\_\_\_\_

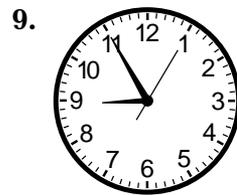
\_\_\_\_\_



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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

- |                                       |       |            |
|---------------------------------------|-------|------------|
| 10. to take a shower                  | _____ | a. days    |
| 11. to drive across the United States | _____ | b. hours   |
| 12. to button a button                | _____ | c. minutes |
| 13. to get a night's sleep            | _____ | d. seconds |

### Mixed Review

- |  |   |
|--|---|
| 14. Find the value of the expression.<br>$59 - (32 + 12)$ _____      | 15. Find the value of the expression.<br>$(28 - 9) - (4 + 8)$ _____ |
| 16. Order from least to greatest:<br>37,623; 37,326; 36,723<br>_____ | 17. Estimate the difference<br>between 47,791 and 35,167.<br>_____  |

## A.M. and P.M.

### Vocabulary

Complete.

- \_\_\_\_\_ means "before noon."
  - \_\_\_\_\_ means "after noon."
- 

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

- |   |                                    |                                 |
|---|------------------------------------|---------------------------------|
| 3. when the sun rises<br>_____          | 4. when you eat dinner<br>_____    | 5. when school starts<br>_____  |
| 6. when the gas station closes<br>_____ | 7. when you eat breakfast<br>_____ | 8. when the mall opens<br>_____ |

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?<br>_____ | 16. Write five million, six hundred thirty thousand, eight hundred ninety-two in standard form.<br>_____ |

## 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.

	Start Time	End Time	Elapsed Time
5.	7:20 A.M.		1 hr 30 min
6.	10:12 A.M.	4:15 P.M.	

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?

\_\_\_\_\_

TOURS OF NEW YORK CITY	
Tours last about 4 hours and 15 minutes.	
Bus	Departure Time
Red Coach	9:45 A.M.
Blue Coach	11:25 A.M.
Green Coach	1:40 P.M.
Yellow Coach	3:05 P.M.

### Mixed Review

Find the sum or difference. Estimate to check.

9. 
$$\begin{array}{r} 455,967 \\ + 396,128 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 320,051 \\ - 198,489 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 4,938,920 \\ + 9,938,593 \\ \hline \end{array}$$

## 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.

Revolutionary Heroes Movie	
running time: 45 min	
9:00 A.M.	1:00 P.M.
10:00 A.M.	2:00 P.M.
11:00 A.M.	3:00 P.M.

Battlegrounds Movie	
running time: 37 min	
9:30 A.M.	1:30 P.M.
10:30 A.M.	2:30 P.M.
11:30 A.M.	5:00 P.M.

- Will the class be able to see both movies before lunch? If so, name a schedule.  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
- 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.  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
- 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?  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
- Make a schedule for the class which includes both movies, a tour of the museum, and a visit to the costume room.

My Museum Tour Schedule	
Lunch	12:15 P.M.–12:45 P.M.

### Mixed Review

- |  |  |  |  |
|--|--|--|--|
| 5. $\begin{array}{r} 370,716 \\ - 192,408 \\ \hline \end{array}$ | 6. $\begin{array}{r} 971,858 \\ - 863,245 \\ \hline \end{array}$ | 7. $\begin{array}{r} 4,330,629 \\ + 6,197,550 \\ \hline \end{array}$ | 8. $\begin{array}{r} 3,606,117 \\ - 3,432,980 \\ \hline \end{array}$ |
|--|--|--|--|

## Elapsed Time on a Calendar

For 1–3, use the calendars.

Camp Windy	
Session 1:	Jul 13–Jul 17
Session 2:	Jul 27–Jul 31
Session 3:	Aug 3–Aug 14

June						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

July						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

August						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

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

$$\begin{array}{r} 21. \quad \$11.21 \\ \quad \$12.15 \\ +\$ \quad 1.61 \\ \hline \end{array}$$

$$\begin{array}{r} 22. \quad 1,242,316 \\ \quad - 164,320 \\ \hline \end{array}$$

$$\begin{array}{r} 23. \quad 6,548,957 \\ \quad 3,847,200 \\ + 9,874,512 \\ \hline \end{array}$$

$$\begin{array}{r} 24. \quad \$15.27 \\ \quad \$ \quad 7.99 \\ +\$ \quad 3.25 \\ \hline \end{array}$$

$$\begin{array}{r} 25. \quad 8 \\ \quad \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 26. \quad 9 \\ \quad \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 27. \quad 6 \\ \quad \times 7 \\ \hline \end{array}$$

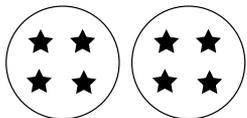
$$\begin{array}{r} 28. \quad 3 \\ \quad \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 29. \quad 7 \\ \quad \times 8 \\ \hline \end{array}$$

# Multiply and Divide Facts Through 5

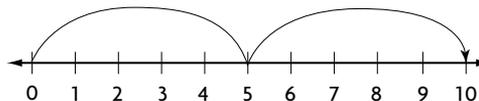
Find a related multiplication or division equation.

1.  $2 \times 4 = 8$



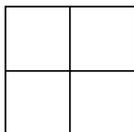
\_\_\_\_\_

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?

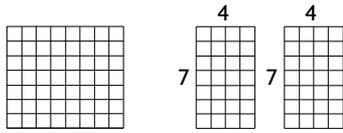
\_\_\_\_\_

\_\_\_\_\_

## Multiply and Divide Facts Through 10

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

1. What is  $7 \times 8$ ?

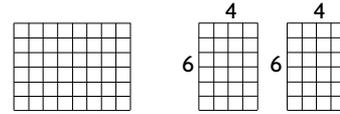


$$7 \times 4 = \underline{\hspace{2cm}}$$

$$7 \times 4 = \underline{\hspace{2cm}}$$

$$\text{So, } 7 \times 8 = \underline{\hspace{2cm}}.$$

2. What is  $6 \times 8$ ?



$$6 \times 4 = \underline{\hspace{2cm}}$$

$$6 \times 4 = \underline{\hspace{2cm}}$$

$$\text{So, } 6 \times 8 = \underline{\hspace{2cm}}.$$

Find the product or quotient. Show the strategy you used.

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.

\_\_\_\_\_

21. Round 362,847,321 to the nearest million.

\_\_\_\_\_

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

×	0	1	2	3	4	5	6	7	8	9	10	11	12
0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10	11	12
2	0	2	4	6	8	10	12	14	16	18	20	22	24
3	0	3	6	9	12	15	18	21	24	27	30	33	36
4	0	4	8	12	16	20	24	28	32	36	40	44	48
5	0	5	10	15	20	25	30	35	40	45	50	55	60
6	0	6	12	18	24	30	36	42	48	54	60	66	72
7	0	7	14	21	28	35	42	49	56	63	70	77	84
8	0	8	16	24	32	40	48	56	64	72	80	88	96
9	0	9	18	27	36	45	54	63	72	81	90	99	108
10	0	10	20	30	40	50	60	70	80	90	100	110	120
11	0	11	22	33	44	55	66	77	88	99	110	121	132
12	0	12	24	36	48	60	72	84	96	108	120	132	144

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.

- |   |   |
|---|---|
| <p>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?</p> <p>_____</p>  | <p>2. Behind home plate there are 5 rows of seats. Each row has 7 seats in it. How many seats are in this section?</p> <p>_____</p>   |
| <p>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?</p> <p>_____</p>                             | <p>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?</p> <p>_____</p> |
| <p>5. Ashley, Suzanne and Liz bought a box of chocolates. There are 36 chocolates in the box. How many do they get each?</p> <p>_____</p>   | <p>6. Clyde sleeps 8 hours each night. How many hours does he sleep each week?</p> <p>_____</p>   |
| <p>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?</p> <p>_____</p> | <p>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?</p> <p>_____</p> |

### Mixed Review

- |   |   |
|---|---|
| <p>9. Find the median.<br/>546, 550, 420, 410, 560, 530, 530</p> <p>_____</p> | <p>10. Find the mode.<br/>546, 550, 420, 410, 560, 530, 530</p> <p>_____</p>      |
| <p>11. In the number 12,482 what digit is in the tens place?</p> <p>_____</p> | <p>12. What is the elapsed time between 9:27 A.M. and 6:32 P.M.?</p> <p>_____</p> |

## 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. 
$$\begin{array}{r} 9 \\ \times 6 \\ \hline \end{array}$$

21. 
$$\begin{array}{r} 5 \\ \times 12 \\ \hline \end{array}$$

22. 
$$\begin{array}{r} 7 \\ \times 8 \\ \hline \end{array}$$

23. 
$$\begin{array}{r} 10 \\ \times 6 \\ \hline \end{array}$$

24. 
$$\begin{array}{r} 5 \\ \times 8 \\ \hline \end{array}$$

25. 
$$\begin{array}{r} 12 \\ \times 7 \\ \hline \end{array}$$

26. 
$$\begin{array}{r} 4 \\ \times 11 \\ \hline \end{array}$$

27. 
$$\begin{array}{r} 9 \\ \times 5 \\ \hline \end{array}$$

28. 
$$\begin{array}{r} 8 \\ \times 8 \\ \hline \end{array}$$

29. 
$$\begin{array}{r} 6 \\ \times 7 \\ \hline \end{array}$$

## Match Words and Expressions

Choose the expression that matches the words.

- |  |   |
|--|---|
| <p>1. Ali had \$9 and then worked 3 hours for \$6 per hour.</p> <p>a. <math>(9 + 3) \times 6</math></p> <p>b. <math>9 + (3 \times 6)</math></p>  | <p>2. Jane had 57¢. She lost 2 dimes.</p> <p>a. <math>(57 - 2) \times 10</math></p> <p>b. <math>57 - (2 \times 10)</math></p>   |
| <p>3. Larry had 12 books. Eleven of the books had 10 pages each. The twelfth book had 15 pages.</p> <p>a. <math>(10 \times 11) + 15</math></p> <p>b. <math>10 \times (11 + 15)</math></p>  | <p>4. Rashid had 16 pens. Nine were broken, then Rashid bought a package that doubled the number of pens he had left.</p> <p>a. <math>(16 - 9) \times 2</math></p> <p>b. <math>16 - (9 \times 2)</math></p> |
| <p>5. Jeff bought 5 models which each cost \$7. He paid \$2 in sales tax.</p> <p>a. <math>(5 \times 2) + 7</math></p> <p>b. <math>(5 \times 7) + 2</math></p>                              | <p>6. Mr. Gibson's band room has 8 rows of 6 chairs each. There are also 3 chairs not in rows.</p> <p>a. <math>(8 \times 6) + 3</math></p> <p>b. <math>(3 \times 6) + 8</math></p>                          |
| <p>7. Eloise planted 6 rows of tulips with 5 plants in each row. She put 3 more plants in another row.</p> <p>a. <math>(6 \times 5) + 3</math></p> <p>b. <math>6 \times (5 + 3)</math></p> | <p>8. Joel built 3 birdhouses each day for a week and then the dog knocked over and broke 2 of the birdhouses.</p> <p>a. <math>(3 \times 2) - 7</math></p> <p>b. <math>(3 \times 7) - 2</math></p>          |

## Mixed Review

Find the value of the expression.

9.  $(5 + 6) - (3 + 4)$

10.  $15 - (27 - 14)$

11.  $(2 \times 6) \div 4$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

12. 
$$\begin{array}{r} 9,002 \\ -8,008 \\ \hline \end{array}$$

13. 
$$\begin{array}{r} 7,958 \\ +1,798 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 4,621 \\ +3,299 \\ \hline \end{array}$$



## Equations

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

1. 4 pennies = 4 pennies; multiply both sides by 7.

\_\_\_\_\_

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

\_\_\_\_\_

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

\_\_\_\_\_

7.  $12 = 6 \times 2$ ; multiply both sides by 6.

\_\_\_\_\_

9.  $10 = 5 \times 2$ ; multiply both sides by 9.

\_\_\_\_\_

11.  $(2 + 3) = (15 \div 3)$ ; multiply both sides by 6.

\_\_\_\_\_

2. 2 dimes = 2 dimes; multiply both sides by 3.

\_\_\_\_\_

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

\_\_\_\_\_

6.  $(6 + 3) = (3 \times 3)$ ; multiply both sides by 8.

\_\_\_\_\_

8.  $(3 + 5) = (64 \div 8)$ ; multiply both sides by 5.

\_\_\_\_\_

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

\_\_\_\_\_

12. 1 dime 2 pennies = 12 pennies; multiply both sides by 3.

\_\_\_\_\_

## Mixed Review

Name the place value of the bold digit.

13. 1,**6**72,439 \_\_\_\_\_

14. 1,672,**4**39 \_\_\_\_\_

15. 1,**6**72,439 \_\_\_\_\_

16. **1**,672,439 \_\_\_\_\_

Solve.

17.  $\begin{array}{r} \$719.20 \\ + 48.44 \\ \hline \end{array}$

18.  $\begin{array}{r} 2,209 \\ - 1,072 \\ \hline \end{array}$

19.  $\begin{array}{r} 4,476 \\ + 4,467 \\ \hline \end{array}$

20.  $\begin{array}{r} \$32.99 \\ - 12.81 \\ \hline \end{array}$

## 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

$$\begin{array}{r} 17. \quad 5,203 \\ -3,999 \\ \hline \end{array}$$

$$\begin{array}{r} 18. \quad 1,364 \\ +5,202 \\ \hline \end{array}$$

$$\begin{array}{r} 19. \quad 8,714 \\ -7,961 \\ \hline \end{array}$$

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.  $32 \times p = 8$

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.

Input	Output
<i>a</i>	<i>b</i>
15	3
20	4
25	5
30	6

\_\_\_\_\_

\_\_\_\_\_

2.

Input	Output
<i>c</i>	<i>d</i>
4	16
5	20
6	24
7	28

\_\_\_\_\_

\_\_\_\_\_

3.

Input	Output
<i>s</i>	<i>t</i>
2	16
3	24
4	32
5	40

\_\_\_\_\_

\_\_\_\_\_

4.

Input	Output
<i>p</i>	<i>r</i>
5	35
6	42
7	49
8	56

\_\_\_\_\_

\_\_\_\_\_

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

5. Multiply by 2.  
 $a \times 2 = c$

Input	Output

6. Divide by 3.  
 $r \div 3 = s$

Input	Output

7. Multiply by 11.  
 $p \times 11 = q$

Input	Output

8. Divide by 4.  
 $y \div 4 = z$

Input	Output

## 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.

- 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?  
\_\_\_\_\_
- 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.

- 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?  
\_\_\_\_\_
- 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?  
\_\_\_\_\_
- 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?  
\_\_\_\_\_
- 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

$$\begin{array}{r} 7. \quad 3 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 9 \\ \times 4 \\ \hline \end{array}$$

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

$$\begin{array}{r} 10. \quad 12 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad 12 \\ \times 10 \\ \hline \end{array}$$

## 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. 
$$\begin{array}{r} 512 \\ \times 5 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 93 \\ \times 8 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 1,401 \\ \times 7 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 257 \\ \times 3 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 981 \\ \times 7 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 82 \\ \times 4 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 127 \\ \times 9 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 741 \\ \times 9 \\ \hline \end{array}$$

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.

309	4	759
193	3	7

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.

$$\begin{array}{r} 1. \ 29 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \ 18 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \ 37 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \ 96 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \ 62 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \ 15 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \ 50 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \ 33 \\ \times 6 \\ \hline \end{array}$$

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  $\bigcirc$ .

$$17. \ 5 \times 15 \bigcirc 6 \times 12 \quad 18. \ 3 \times 42 \bigcirc 6 \times 21 \quad 19. \ 7 \times 22 \bigcirc 8 \times 17$$

$$20. \ 9 \times 21 \bigcirc 6 \times 37 \quad 21. \ 2 \times 79 \bigcirc 3 \times 24 \quad 22. \ 8 \times 23 \bigcirc 4 \times 66$$

### 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. 
$$\begin{array}{r} 12,489 \\ + 1,429 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 1,227 \\ - 828 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 45,123 \\ - 5,124 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 73,711 \\ - 25,609 \\ \hline \end{array}$$

For 21–24, use the following graph.

21. What type of graph is shown here?

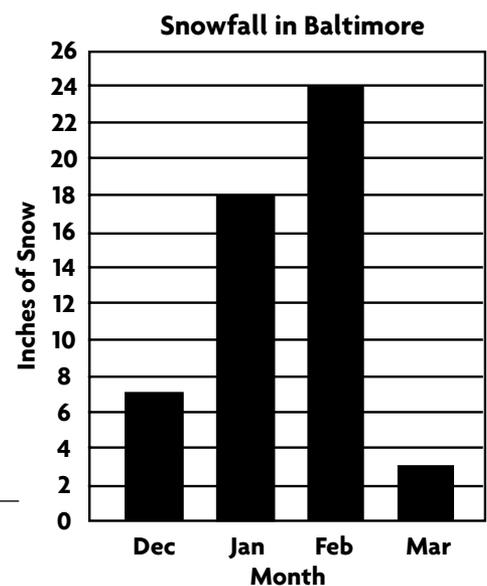
\_\_\_\_\_

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. 
$$\begin{array}{r} 52 \\ \times 5 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 83 \\ \times 8 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 401 \\ \times 7 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 207 \\ \times 3 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 91 \\ \times 7 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 862 \\ \times 4 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 121 \\ \times 9 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 471 \\ \times 9 \\ \hline \end{array}$$

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. 
$$\begin{array}{r} 291 \\ \times 7 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 82 \\ \times 6 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 517 \\ \times 9 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 771 \\ \times 7 \\ \hline \end{array}$$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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

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. 
$$\begin{array}{r} 5,092 \\ \times 5 \\ \hline \end{array}$$

---

3. 
$$\begin{array}{r} 834 \\ \times 5 \\ \hline \end{array}$$

---

4. 
$$\begin{array}{r} 4,801 \\ \times 3 \\ \hline \end{array}$$

---

5. 
$$\begin{array}{r} \$20.72 \\ \times 3 \\ \hline \end{array}$$

---

6. 
$$\begin{array}{r} \$42.91 \\ \times 7 \\ \hline \end{array}$$

---

7. 
$$\begin{array}{r} 6,254 \\ \times 7 \\ \hline \end{array}$$

---

8. 
$$\begin{array}{r} \$12.18 \\ \times 9 \\ \hline \end{array}$$

---

9. 
$$\begin{array}{r} \$7.81 \\ \times 9 \\ \hline \end{array}$$

---

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.

- Theresa's father works 5 days a week for 48 weeks a year. How many days does her father work in 1 year?  
\_\_\_\_\_
- Theresa's father makes \$24.50 per hour. How much does he make if he works 8 hours?  
\_\_\_\_\_
- 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?  
\_\_\_\_\_
- 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?  
\_\_\_\_\_
- 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? | 7. How many windows are there in all? |
| <b>A</b> $9 \times n = 132$                                       | <b>F</b> 188                          |
| <b>C</b> $n \times 132 = 9$                                       | <b>H</b> 1,088                        |
| <b>B</b> $9 \times 132 = n$                                       | <b>G</b> 881                          |
| <b>D</b> $n \times 9 = 132$                                       | <b>J</b> 1,188                        |

### Mixed Review

- |  |  |   |   |   |
|--|--|---|---|---|
| 8. $\begin{array}{r} 14 \\ \times 5 \\ \hline \end{array}$ | 9. $\begin{array}{r} 12 \\ \times 8 \\ \hline \end{array}$ | 10. $\begin{array}{r} 26 \\ \times 3 \\ \hline \end{array}$ | 11. $\begin{array}{r} 42 \\ \times 2 \\ \hline \end{array}$ | 12. $\begin{array}{r} 33 \\ \times 5 \\ \hline \end{array}$ |
|--|--|---|---|---|

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.  $6 \times 5 =$  \_\_\_\_\_

$6 \times 50 =$  \_\_\_\_\_

$6 \times 500 =$  \_\_\_\_\_

3.  $3 \times 6 =$  \_\_\_\_\_

$3 \times 60 =$  \_\_\_\_\_

$3 \times 600 =$  \_\_\_\_\_

$3 \times 6,000 =$  \_\_\_\_\_

5.  $10 \times 3 =$  \_\_\_\_\_

$10 \times 30 =$  \_\_\_\_\_

$10 \times 300 =$  \_\_\_\_\_

$10 \times 3,000 =$  \_\_\_\_\_

7.  $600 \times 30 =$  \_\_\_\_\_

9.  $1,000 \times 30 =$  \_\_\_\_\_

2.  $2 \times 2 =$  \_\_\_\_\_

$2 \times 20 =$  \_\_\_\_\_

$2 \times 200 =$  \_\_\_\_\_

4.  $9 \times 9 =$  \_\_\_\_\_

$9 \times 90 =$  \_\_\_\_\_

$9 \times 900 =$  \_\_\_\_\_

$9 \times 9,000 =$  \_\_\_\_\_

6.  $40 \times 3 =$  \_\_\_\_\_

$40 \times 30 =$  \_\_\_\_\_

$40 \times 300 =$  \_\_\_\_\_

$40 \times 3,000 =$  \_\_\_\_\_

8.  $70 \times 3,000 =$  \_\_\_\_\_

10.  $6,000 \times 6,000 =$  \_\_\_\_\_

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. 
$$\begin{array}{r} 300,010 \\ - 255,492 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} 392,402 \\ 392,402 \\ + 492,148 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 12,498 \\ - 10,816 \\ \hline \end{array}$$

**Multiply by Multiples of 10**

Find the product.

1. 
$$\begin{array}{r} 30 \\ \times 5 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 60 \\ \times 30 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 85 \\ \times 30 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 67 \\ \times 90 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 30 \\ \times 70 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 80 \\ \times 5 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 82 \\ \times 50 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 95 \\ \times 50 \\ \hline \end{array}$$

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.  $30 \times \underline{\quad}0 = 300$

16.  $\underline{\quad}0 \times 20 = 800$

17.  $16 \times \underline{\quad}0 = 640$

18.  $4\underline{\quad} \times 80 = 3,600$

19.  $1\underline{\quad} \times 30 = 540$

20.  $\underline{\quad}4 \times 50 = 3,200$

21.  $8\underline{\quad} \times 20 = 1,700$

22.  $9\underline{\quad} \times 60 = 5,700$

23.  $\underline{\quad}6 \times 80 = 6,080$

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

31. 
$$\begin{array}{r} 21 \\ \times 5 \\ \hline \end{array}$$

32. 
$$\begin{array}{r} 17 \\ \times 2 \\ \hline \end{array}$$

33. 
$$\begin{array}{r} 18 \\ \times 5 \\ \hline \end{array}$$

34. 
$$\begin{array}{r} 19 \\ \times 3 \\ \hline \end{array}$$

35. 
$$\begin{array}{r} 25 \\ \times 4 \\ \hline \end{array}$$

36. 
$$\begin{array}{r} 16 \\ \times 8 \\ \hline \end{array}$$

37. 
$$\begin{array}{r} 14 \\ \times 7 \\ \hline \end{array}$$

## Estimate Products

Round each factor. Estimate the product.

1. 
$$\begin{array}{r} 35 \\ \times 11 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 54 \\ \times 32 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 97 \\ \times 93 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 549 \\ \times 65 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 486 \\ \times 74 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 658 \\ \times 209 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 648 \\ \times 174 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 840 \\ \times 151 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 339 \\ \times 359 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 884 \\ \times 444 \\ \hline \end{array}$$

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  $\bigcirc$ .

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. 
$$\begin{array}{r} 485,492 \\ - 39,492 \\ \hline \end{array}$$

26. 
$$\begin{array}{r} 493,430 \\ 483,582 \\ + 7,302,598 \\ \hline \end{array}$$

27. 
$$\begin{array}{r} 361 \\ \times 42 \\ \hline \end{array}$$

28. 
$$\begin{array}{r} 729 \\ \times 58 \\ \hline \end{array}$$

Multiply.

29. 
$$\begin{array}{r} 4,000 \\ \times 70 \\ \hline \end{array}$$

30. 
$$\begin{array}{r} 900 \\ \times 300 \\ \hline \end{array}$$

31. 
$$\begin{array}{r} 6,000 \\ \times 200 \\ \hline \end{array}$$

32. 
$$\begin{array}{r} 3,200 \\ \times 20 \\ \hline \end{array}$$

## Model Multiplication

Make a model, record, and solve.

$$\begin{array}{r} 1. \quad 16 \\ \times 22 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 24 \\ \times 13 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 19 \\ \times 12 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 25 \\ \times 18 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 15 \\ \times 21 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 20 \\ \times 16 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 14 \\ \times 12 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 25 \\ \times 13 \\ \hline \end{array}$$

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

$9. \quad 13 \times 18$

$10. \quad 23 \times 15$

$11. \quad 62 \times 21$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### Mixed Review

$12. \quad 15 \times 90 = n$

$13. \quad 40 \times n = 160,000$

\_\_\_\_\_

\_\_\_\_\_

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

15. What day is 12 days after  
Wednesday, March 15?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Complete the table.

16.	$\times$	4	12	3	6	5	11	8
	7							
	9							

## Problem Solving Strategy

### Solve a Simpler Problem

Break the problem into simpler parts and solve.

$$\begin{aligned}
 1. \quad 40 \times 28 &= (40 \times 20) + (40 \times 8) \\
 &= \underline{\hspace{2cm}} + \underline{\hspace{2cm}} \\
 &= \underline{\hspace{2cm}}
 \end{aligned}$$

$$\begin{aligned}
 2. \quad 80 \times 49 &= (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) + \\
 &\quad (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) \\
 &= \underline{\hspace{2cm}} + \underline{\hspace{2cm}} \\
 &= \underline{\hspace{2cm}}
 \end{aligned}$$

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. 
$$\begin{array}{r} 62 \\ \times 35 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 55 \\ \times 29 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 73 \\ \times 44 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 48 \\ \times 27 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 81 \\ \times 17 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 67 \\ \times 23 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 26 \\ \times 18 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 32 \\ \times 24 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} \$74 \\ \times 16 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 69 \\ \times 36 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} \$39 \\ \times 35 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} 76 \\ \times 11 \\ \hline \end{array}$$

13.  $14 \times 53 = \underline{\hspace{2cm}}$

14.  $\$26 \times 77 = \underline{\hspace{2cm}}$

15.  $\$26 \times 74 = \underline{\hspace{2cm}}$

16.  $21 \times 79 = \underline{\hspace{2cm}}$

### Mixed Review

Write the missing product.

17.  $30 \times 19 = 570$ , so  $30 \times 18 = \boxed{\hspace{1cm}}$

18.  $65 \times 15 = 975$ , so  $65 \times 16 = \boxed{\hspace{1cm}}$

19.  $40 \times 21 = 840$ , so  $40 \times 22 = \boxed{\hspace{1cm}}$

20. 
$$\begin{array}{r} 29 \\ \times 5 \\ \hline \end{array}$$

21. 
$$\begin{array}{r} 17 \\ \times 4 \\ \hline \end{array}$$

22. 
$$\begin{array}{r} 38 \\ \times 9 \\ \hline \end{array}$$

23. 
$$\begin{array}{r} 52 \\ \times 8 \\ \hline \end{array}$$

24. 
$$\begin{array}{r} 91 \\ \times 3 \\ \hline \end{array}$$

25.  $12 \times 4 = \underline{\hspace{2cm}}$

26.  $8 \times 8 = \underline{\hspace{2cm}}$

## More About Multiplying by 2-Digit Numbers

Find the product. Estimate to check.

$$\begin{array}{r} 1. \quad 221 \\ \times 17 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad \$447 \\ \times 36 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 727 \\ \times 32 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 362 \\ \times 27 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 549 \\ \times 22 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad \$7.29 \\ \times 46 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 636 \\ \times 34 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 659 \\ \times 73 \\ \hline \end{array}$$

$$9. 74 \times 138 = \underline{\hspace{2cm}}$$

$$10. 25 \times 808 = \underline{\hspace{2cm}}$$

$$11. 89 \times \$465 = \underline{\hspace{2cm}}$$

$$12. 19 \times \$517 = \underline{\hspace{2cm}}$$

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

$$16. (25 \div 5) + 10$$

$$17. 40 \div (2 \times 4)$$

$$18. (48 \div 8) \times (3 + 8)$$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

$$19. (36 \div 4) + (12 \times 5)$$

$$20. (15 \times 3) - (56 \div 8)$$

$$21. (19 + 44) \div 7$$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

$$\begin{array}{r} 22. \quad 6,442 \\ + 2,192 \\ \hline \end{array}$$

$$\begin{array}{r} 23. \quad 4,612 \\ - 895 \\ \hline \end{array}$$

$$\begin{array}{r} 24. \quad 3,292 \\ - 2,890 \\ \hline \end{array}$$

$$\begin{array}{r} 25. \quad 6,505 \\ - 398 \\ \hline \end{array}$$

$$\begin{array}{r} 26. \quad 70 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 27. \quad 25 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 28. \quad 35 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 29. \quad 40 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 30. \quad 15 \\ \times 7 \\ \hline \end{array}$$

**Choose a Method**

Find the product. Estimate to check.

1. 
$$\begin{array}{r} 2,001 \\ \times 96 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} \$2,425 \\ \times 24 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 3,478 \\ \times 47 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} \$5,699 \\ \times 26 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 1,527 \\ \times 76 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 3,639 \\ \times 69 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 7,498 \\ \times 55 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 6,643 \\ \times 78 \\ \hline \end{array}$$

9.  $48 \times 2,769 =$  \_\_\_\_\_

10.  $36 \times 4,873 =$  \_\_\_\_\_

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

11. 
$$\begin{array}{r} 1,360 \\ \times 42 \\ \hline 272 \\ 5,440 \\ \hline 5,712 \end{array}$$

12. 
$$\begin{array}{r} 2,966 \\ \times 16 \\ \hline 17,796 \\ 29,660 \\ \hline 36,356 \end{array}$$

---



---



---



---

**Mixed Review**

13.  $(4 \times 7) \times 5$

14.  $(6 \times 10) \times 2$

15.  $(40 \div 8) \times 12$

---



---



---

16. 
$$\begin{array}{r} 19 \\ \times 60 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} 29 \\ \times 11 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 32 \\ \times 28 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 2,511 \\ \times 16 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 787 \\ - 319 \\ \hline \end{array}$$

21. 
$$\begin{array}{r} 4,612 \\ - 895 \\ \hline \end{array}$$

22. 
$$\begin{array}{r} 3,292 \\ - 2,890 \\ \hline \end{array}$$

23. 
$$\begin{array}{r} 6,908 \\ - 5,002 \\ \hline \end{array}$$

## Practice Multiplication

Find the product. Estimate to check.

$$\begin{array}{r} 1. \ 2,091 \\ \times 26 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \ \$5.84 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \ 518 \\ \times 27 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \ \$3.20 \\ \times 84 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \ 3,493 \\ \times 36 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \ \$45.39 \\ \times 31 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \ 2,949 \\ \times 26 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \ 813 \\ \times 63 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \ \$40.30 \\ \times 64 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \ \$5,403 \\ \times 38 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \ 942 \\ \times 81 \\ \hline \end{array}$$

$$\begin{array}{r} 12. \ 3,009 \\ \times 49 \\ \hline \end{array}$$

## 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.

15.

×	5	7	2	8	3	9	12	6
12								

$$\begin{array}{r} 16. \ 10,000 \\ - 5,794 \\ \hline \end{array}$$

$$\begin{array}{r} 17. \ 25,000 \\ - 21,211 \\ \hline \end{array}$$

$$\begin{array}{r} 18. \ 19,000 \\ - 9,655 \\ \hline \end{array}$$

$$\begin{array}{r} 19. \ 31,000 \\ - 28,414 \\ \hline \end{array}$$

## 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.

Food	Number of Students	Price of Each Meal
chicken patties	302	\$1.12
veggie burger	309	\$0.89
cheese sandwich	307	\$0.95
tomato soup	189	\$1.05

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?

\_\_\_\_\_

\_\_\_\_\_

### Mixed Review

$$\begin{array}{r} 5. \ \$12.27 \\ \times \quad 3 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \ \$8.99 \\ \times \quad 4 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \ \$11.15 \\ - \ 7.27 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \ \$19.89 \\ - \ 6.40 \\ \hline \end{array}$$

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

\_\_\_\_\_

10.  $312 \times n = 24,336$

\_\_\_\_\_



## Divide with Remainders

### Vocabulary

1. In a division problem, the \_\_\_\_\_ is the amount left over when a number cannot be divided evenly.
- 

Make a model, record, and solve.

2.  $4\overline{)19}$

3.  $3\overline{)25}$

4.  $6\overline{)38}$

5.  $2\overline{)17}$

Divide. You may wish to use counters.

6.  $7\overline{)61}$

7.  $5\overline{)47}$

8.  $3\overline{)19}$

9.  $8\overline{)43}$

10.  $6\overline{)58}$

11.  $9\overline{)49}$

12.  $2\overline{)13}$

13.  $7\overline{)65}$

### Mixed Review

Complete each table.

×	4	5	9	3	11	7	6	10
6								

×	11	12	5	8	7	4	6	2
12								

**Model Division**

Make or draw a model. Record and solve.

1.  $52 \div 3 = \underline{\hspace{2cm}}$

2.  $68 \div 4 = \underline{\hspace{2cm}}$

3.  $65 \div 5 = \underline{\hspace{2cm}}$

4.  $7 \overline{)91}$

5.  $6 \overline{)100}$

6.  $2 \overline{)58}$

7.  $63 \div 3 = \underline{\hspace{2cm}}$

8.  $78 \div 4 = \underline{\hspace{2cm}}$

9.  $53 \div 4 = \underline{\hspace{2cm}}$

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.

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

Kind of Cookie	Total Number
Chocolate chip	42
Oatmeal	65
Ginger	48

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. 
$$\begin{array}{r} \$17.50 \\ + \$17.50 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} \$248.32 \\ - \$119.55 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} \$49.68 \\ - \$5.11 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} \$22.99 \\ + \$85.98 \\ \hline \end{array}$$



## 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.  $8 \times 9 = 72$

$9 \times 8 = \underline{\hspace{2cm}}$

$72 \div \underline{\hspace{2cm}} = 8$

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

10.  $12 \times 7 = \underline{\hspace{2cm}}$

$7 \times 12 = \underline{\hspace{2cm}}$

$84 \div 7 = \underline{\hspace{2cm}}$

$84 \div 12 = \underline{\hspace{2cm}}$

11.  $7 \times 6 = \underline{\hspace{2cm}}$

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

$42 \div 7 = \underline{\hspace{2cm}}$

$\underline{\hspace{2cm}} \div 6 = \underline{\hspace{2cm}}$

## 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.

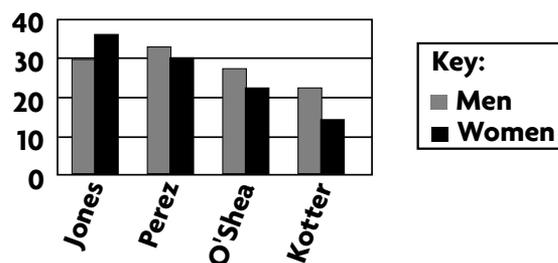
5. For which candidate is the difference between the number of men's and women's votes the greatest?
- 

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? \_\_\_\_\_

Voting Results Polling Station #3



## Mental Math: Division Patterns

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

- |                                     |                                     |                                     |
|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. $240 \div 6 = \underline{\quad}$ | 2. $350 \div 5 = \underline{\quad}$ | 3. $360 \div 4 = \underline{\quad}$ |
| $2,400 \div 6 = \underline{\quad}$  | $3,500 \div 5 = \underline{\quad}$  | $3,600 \div 4 = \underline{\quad}$  |
| $24,000 \div 6 = \underline{\quad}$ | $35,000 \div 5 = \underline{\quad}$ | $36,000 \div 4 = \underline{\quad}$ |

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

- |                             |                            |                            |                              |
|-----------------------------|----------------------------|----------------------------|------------------------------|
| 4. $210 \div 3$<br>_____    | 5. $2,700 \div 3$<br>_____ | 6. $8,000 \div 2$<br>_____ | 7. $450 \div 9$<br>_____     |
| 8. $40,000 \div 8$<br>_____ | 9. $3,200 \div 8$<br>_____ | 10. $120 \div 4$<br>_____  | 11. $36,000 \div 6$<br>_____ |

## 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?
- \_\_\_\_\_

ROAD MILEAGE FROM BOSTON, MA	
City	Number of Miles
Kansas City, MO	1,391
Philadelphia, PA	296
Houston, TX	1,804

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.  $2 \times 7 \times 2 = \underline{\hspace{2cm}}$     17.  $9 \times 5 \times 1 = \underline{\hspace{2cm}}$     18.  $2 \times 4 \times 7 = \underline{\hspace{2cm}}$

19.  $12 - 2 = \underline{\hspace{2cm}} + 5$     20.  $9 \times 9 = \underline{\hspace{2cm}} \div 2$

21.  $20 + \underline{\hspace{2cm}} = 16 + 24$     22.  $11 \times 6 = \underline{\hspace{2cm}} \div 3$

23. $\begin{array}{r} \$15.72 \\ - \$ 8.03 \\ \hline \end{array}$	24. $\begin{array}{r} 62,109 \\ - 45,863 \\ \hline \end{array}$	25. $\begin{array}{r} \$14.38 \\ + \$57.60 \\ \hline \end{array}$	26. $\begin{array}{r} 1,990 \\ + 3,473 \\ \hline \end{array}$
---	---	---	---

## Place the First Digit

Tell where to place the first digit. Then divide.

1.  $5\overline{)36}$

\_\_\_\_\_

2.  $3\overline{)62}$

\_\_\_\_\_

3.  $2\overline{)173}$

\_\_\_\_\_

4.  $6\overline{)72}$

\_\_\_\_\_

5.  $4\overline{)241}$

\_\_\_\_\_

6.  $7\overline{)702}$

\_\_\_\_\_

7.  $9\overline{)381}$

\_\_\_\_\_

8.  $4\overline{)820}$

\_\_\_\_\_

Divide.

9.  $6\overline{)45}$

10.  $3\overline{)84}$

11.  $5\overline{)149}$

12.  $7\overline{)652}$

13.  $2\overline{)157}$

14.  $3\overline{)171}$

15.  $7\overline{)823}$

16.  $8\overline{)799}$

## Mixed Review

17. 
$$\begin{array}{r} 32 \\ \times 12 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 48 \\ \times 11 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 288 \\ \times 5 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 534 \\ \times 8 \\ \hline \end{array}$$

21. 
$$\begin{array}{r} 4,211 \\ + 1,399 \\ \hline \end{array}$$

22. 
$$\begin{array}{r} 2,378 \\ + 2,564 \\ \hline \end{array}$$

23. 
$$\begin{array}{r} 5,913 \\ - 2,708 \\ \hline \end{array}$$

24. 
$$\begin{array}{r} 25,926 \\ - 15,827 \\ \hline \end{array}$$

## Divide 3-Digit Numbers

Divide.

1.  $4 \overline{)137}$

2.  $3 \overline{)325}$

3.  $2 \overline{)198}$

4.  $7 \overline{)924}$

Divide and check.

5.  $3 \overline{)152}$

Check:

6.  $2 \overline{)542}$

Check:

7.  $5 \overline{)627}$

Check:

8.  $324 \div 6 = \underline{\hspace{2cm}}$  Check:

9.  $647 \div 9 = \underline{\hspace{2cm}}$  Check:

### Mixed Review

10. 
$$\begin{array}{r} 14 \\ \times 25 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 348 \\ \times 55 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} 4,542 \\ \times 17 \\ \hline \end{array}$$

13. 
$$\begin{array}{r} 351 \\ \times 84 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 8,421 \\ \times 20 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} 2,621 \\ + 5,892 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 7,457 \\ - 3,329 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} \$29.82 \\ + 49.70 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 4,608 \\ - 3,789 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 4,816 \\ + 5,184 \\ \hline \end{array}$$

## 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.  $8 \times 6 = \underline{\hspace{2cm}}$

18.  $12 \times 2 = \underline{\hspace{2cm}}$

19.  $9 \times 8 = \underline{\hspace{2cm}}$

20.  $4 \times 4 = \underline{\hspace{2cm}}$

21.  $6 \times 5 = \underline{\hspace{2cm}}$

22.  $7 \times 7 = \underline{\hspace{2cm}}$

23.  $7 \times 3 = \underline{\hspace{2cm}}$

24.  $9 \times 6 = \underline{\hspace{2cm}}$

25.  $12 \times 3 = \underline{\hspace{2cm}}$

26.  $11 \times 6 = \underline{\hspace{2cm}}$

27.  $3 \times 8 = \underline{\hspace{2cm}}$

28.  $8 \times 8 = \underline{\hspace{2cm}}$

29.  $9 \times 7 = \underline{\hspace{2cm}}$

30.  $12 \times 10 = \underline{\hspace{2cm}}$

31.  $5 \times 9 = \underline{\hspace{2cm}}$

**Choose a Method**

Divide.

1.  $4\overline{)740}$

2.  $5\overline{)630}$

3.  $6\overline{)828}$

4.  $7\overline{)756}$

5.  $3\overline{)840}$

6.  $9\overline{)945}$

7.  $4\overline{)840}$

8.  $2\overline{)734}$

9.  $8\overline{)400}$

10.  $7\overline{)483}$

11.  $6\overline{)1,680}$

12.  $4\overline{)5,316}$

13.  $5\overline{)6,030}$

14.  $8\overline{)3,208}$

15.  $5\overline{)6,600}$

**Mixed Review**

16. Evaluate:  
 $(25 - 9) + (12 \div 3)$

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.  $36 \times 12 =$  \_\_\_\_\_

20.  $88 \times 11 =$  \_\_\_\_\_

21.  $54 \times 9 =$  \_\_\_\_\_

## 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?

---

SCHOOL STORE PRICE LIST	
Item	Price
Pencil	\$0.10
Eraser	\$0.15
Ruler	\$0.50

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?

---

## 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.  $\begin{array}{r} 7 \\ 7 \\ 10 \\ 12 \\ 14 \end{array}$

3.  $\begin{array}{r} 3 \\ 5 \\ 6 \\ 9 \\ 12 \\ 13 \end{array}$

4.  $\begin{array}{r} 143 \\ 99 \\ 213 \\ 407 \\ 698 \end{array}$

5.  $\begin{array}{r} 2,516 \\ 6,518 \\ 3,215 \\ 4,327 \end{array}$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Find the mean.

6. 2,178; 4,214; 1,291

7. 9,972; 2,755; 1,130

\_\_\_\_\_

\_\_\_\_\_

### Mixed Review

8. \_\_\_\_\_  $\times$  1 = 7

9. \_\_\_\_\_  $\times$  4 = 20

10. 8  $\times$  \_\_\_\_\_ = 56

\_\_\_\_\_  $\times$  10 = 70

5  $\times$  \_\_\_\_\_ = 200

\_\_\_\_\_  $\times$  70 = 560

\_\_\_\_\_  $\times$  100 = 700

5  $\times$  \_\_\_\_\_ = 2,000

8  $\times$  700 = \_\_\_\_\_

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

### PW80 Practice

## Division Patterns to Estimate

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

1.  $58 \div 15$

\_\_\_\_\_

2.  $695 \div 65$

\_\_\_\_\_

3.  $556 \div 68$

\_\_\_\_\_

4.  $273 \div 32$

\_\_\_\_\_

5.  $447 \div 52$

\_\_\_\_\_

6.  $810 \div 42$

\_\_\_\_\_

Estimate.

7.  $45 \div 14$

\_\_\_\_\_

8.  $362 \div 64$

\_\_\_\_\_

9.  $596 \div 34$

\_\_\_\_\_

10.  $79 \div 19$

\_\_\_\_\_

11.  $462 \div 83$

\_\_\_\_\_

12.  $721 \div 78$

\_\_\_\_\_

Complete the tables.

	Dividend	Divisor	Quotient
13.	60	$\div 30$	_____
14.	_____	$\div 30$	20
15.	6,000	$\div 30$	_____
16.	_____	$\div 30$	2,000

	Dividend	Divisor	Quotient
17.	80	$\div 20$	_____
18.	_____	$\div 20$	40
19.	_____	$\div 20$	400
20.	80,000	$\div 20$	_____

## Mixed Review

21. 
$$\begin{array}{r} 39 \\ \times 67 \\ \hline \end{array}$$

22. 
$$\begin{array}{r} 379 \\ \times 46 \\ \hline \end{array}$$

23. 
$$\begin{array}{r} 3,593 \\ \times 4 \\ \hline \end{array}$$

24. 
$$\begin{array}{r} 5,201 \\ \times 82 \\ \hline \end{array}$$

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.  $35 \overline{)176}$

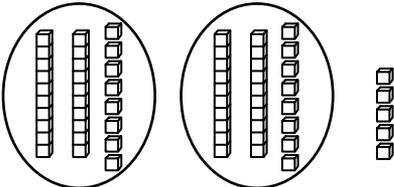
6.  $37 \overline{)115}$

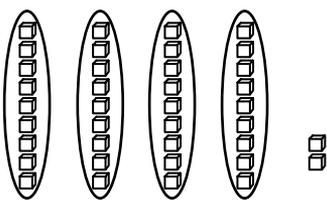
7.  $78 \div 25 = \underline{\hspace{2cm}}$

8.  $97 \div 13 = \underline{\hspace{2cm}}$

9.  $117 \div 22 = \underline{\hspace{2cm}}$

Use the model to complete the number sentence.

10.   $61 \div 28 = \underline{\hspace{2cm}}$

11.   $38 \div 9 = \underline{\hspace{2cm}}$

**Mixed Review**

12. 
$$\begin{array}{r} 100,000 \\ \times 700 \\ \hline \end{array}$$

13. 
$$\begin{array}{r} 495 \\ \times 39 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} \$872.64 \\ - \$41.98 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} \$784.32 \\ + \$32.53 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 200,000 \\ \times 3,100 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} 702 \\ \times 44 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} \$90.89 \\ - \$89.77 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} \$645.30 \\ + \$822.98 \\ \hline \end{array}$$

**Division Procedures**

Divide.

1.  $22 \overline{)598}$

2.  $16 \overline{)239}$

3.  $11 \overline{)346}$

4.  $21 \overline{)369}$

5.  $13 \overline{)461}$

6.  $12 \overline{)293}$

7.  $31 \overline{)862}$

8.  $28 \overline{)981}$

9.  $17 \overline{)206}$

10.  $19 \overline{)81}$

11.  $23 \overline{)485}$

12.  $28 \overline{)150}$

**Mixed Review**

13.  $4 \overline{)532}$

14.  $4 \overline{)626}$

15.  $7 \overline{)921}$

16.  $4 \overline{)5,881}$

17. 
$$\begin{array}{r} 90,008 \\ - 66,849 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 967 \\ \times 56 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 2,111 \\ \times 16 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 72,931 \\ + 30,275 \\ \hline \end{array}$$

## Correcting Quotients

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

1.  $17 \overline{)152}$  <sup>8</sup>  
 \_\_\_\_\_  
 \_\_\_\_\_

2.  $35 \overline{)186}$  <sup>4</sup>  
 \_\_\_\_\_  
 \_\_\_\_\_

3.  $42 \overline{)351}$  <sup>7</sup>  
 \_\_\_\_\_  
 \_\_\_\_\_

4.  $48 \overline{)374}$  <sup>8</sup>  
 \_\_\_\_\_  
 \_\_\_\_\_

5.  $52 \overline{)419}$  <sup>7</sup>  
 \_\_\_\_\_  
 \_\_\_\_\_

6.  $76 \overline{)679}$  <sup>8</sup>  
 \_\_\_\_\_  
 \_\_\_\_\_

7.  $63 \overline{)556}$  <sup>9</sup>  
 \_\_\_\_\_  
 \_\_\_\_\_

8.  $67 \overline{)650}$  <sup>9</sup>  
 \_\_\_\_\_  
 \_\_\_\_\_

## 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.

\_\_\_\_\_  
 \_\_\_\_\_

## Problem Solving Skill

### Choose the Operation

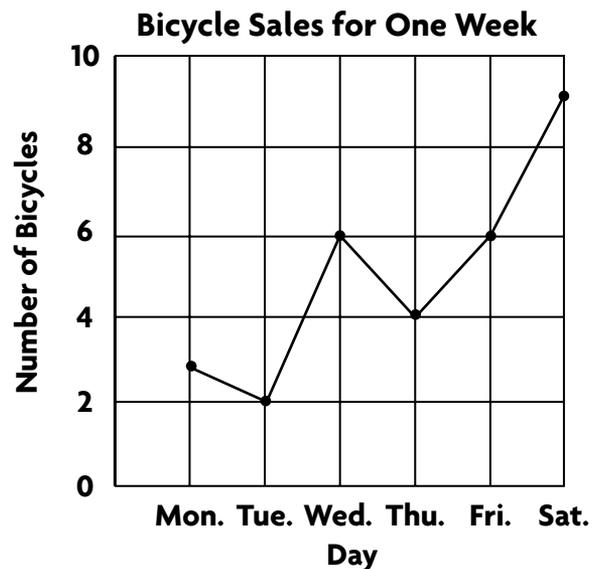
Solve. Name the operation you used.

- Mr. Murphy owns a bakery. On Saturday, he baked 60 blueberry muffins, 48 corn muffins, and 72 cranberry muffins. How many muffins did he bake in all?  
\_\_\_\_\_
- 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?  
\_\_\_\_\_
- Susan bought 4 muffins for \$0.79 each. How much money did she spend?  
\_\_\_\_\_
- Ryan paid \$2.34 for 6 chocolate chip cookies. How much did each cookie cost?  
\_\_\_\_\_

### Mixed Review

For 5–7, use the graph.

- How many bicycles were sold on Wednesday?  
\_\_\_\_\_
- How many bicycles were sold during the week?  
\_\_\_\_\_
- How many more bicycles were sold on Saturday than on Monday?  
\_\_\_\_\_



- 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?  
\_\_\_\_\_
- 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

21. Find  $8 - b$  if  $b = 4$ .

\_\_\_\_\_

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. 
$$\begin{array}{r} 6,511 \\ \times \quad 5 \\ \hline \end{array}$$

\_\_\_\_\_

27.  $810 \div 90 =$

\_\_\_\_\_

28.  $367 \div 21 =$

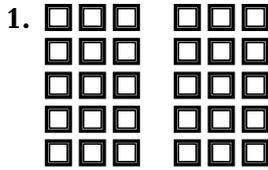
\_\_\_\_\_

29.  $40 \times 600 =$

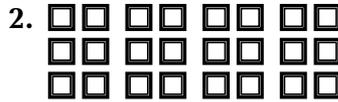
\_\_\_\_\_

## Factor Numbers

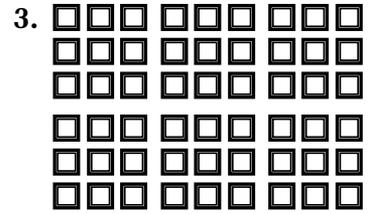
Write an equation for the arrays shown.



\_\_\_\_\_

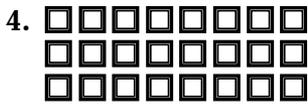


\_\_\_\_\_



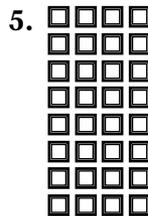
\_\_\_\_\_

Write two ways to break apart the model.



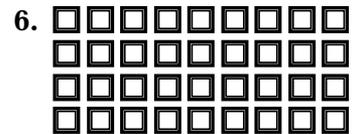
\_\_\_\_\_

\_\_\_\_\_



\_\_\_\_\_

\_\_\_\_\_



\_\_\_\_\_

\_\_\_\_\_

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. 
$$\begin{array}{r} 8,516 \\ 563 \\ + 518 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 648,518 \\ + 315,849 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} 900,002 \\ + 95,518 \\ \hline \end{array}$$

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. 

<b>12 CANS</b>
----------------

18. 

<b>24 CANS</b>
----------------

19. 

<b>18 CANS</b>
----------------


### 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.  $66 = 3 \times \blacksquare$   
\_\_\_\_\_

16.  $98 = 2 \times \blacksquare$   
\_\_\_\_\_

17.  $56 = 2 \times 2 \times 2 \times \blacksquare$   
\_\_\_\_\_

18.  $100 = 2 \times 2 \times \blacksquare \times \blacksquare$   
\_\_\_\_\_

## 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.  $6\overline{)55}$   
\_\_\_\_\_

24. Estimate.  $9\overline{)85}$   
\_\_\_\_\_

## Problem Solving Strategy

### Find a Pattern

1. Continue the pattern.

1, 4, 7, 10, \_\_\_\_

\_\_\_\_\_

3. Describe the pattern in Exercise 1.
- \_\_\_\_\_

5. What are the next two numbers in the following sequence?

1, 3, 7, 13, 21, \_\_\_\_, \_\_\_\_

\_\_\_\_\_

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?
- \_\_\_\_\_

2. Continue the pattern.

3, 9, 27, 81, \_\_\_\_

\_\_\_\_\_

4. Describe the pattern in Exercise 2.
- \_\_\_\_\_

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

○□○□□○□□□○□□ \_ \_

\_\_\_\_\_

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.

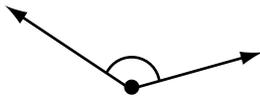
Draw and label an example of each.

6. point  $D$

7. line  $MN$

8. ray  $DE$

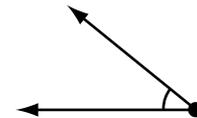
What kind of angle is each? Write *right*, *acute*, or *obtuse*.



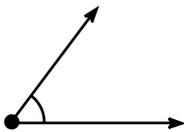
9. \_\_\_\_\_



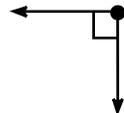
10. \_\_\_\_\_



11. \_\_\_\_\_



12. \_\_\_\_\_



13. \_\_\_\_\_



14. \_\_\_\_\_

### Mixed Review

15. 
$$\begin{array}{r} 9 \\ \times 7 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 8 \\ \times 8 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} 7 \\ \times 4 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 10 \\ \times 6 \\ \hline \end{array}$$

19.  $14 \div 2 = \underline{\quad}$

20.  $36 \div 6 = \underline{\quad}$

21.  $42 \div 6 = \underline{\quad}$

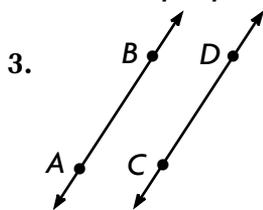
# Line Relationships

## Vocabulary

Fill in the blanks.

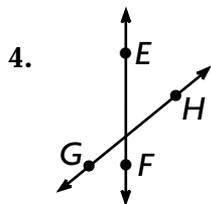
- \_\_\_\_\_ lines are lines that cross each other.
- \_\_\_\_\_ lines intersect to form four right angles.

Name any line relationship you see in each figure. Write *intersecting*, *parallel*, or *perpendicular*.



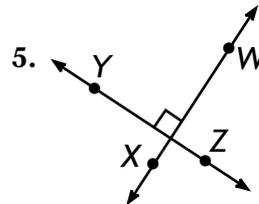
\_\_\_\_\_

\_\_\_\_\_



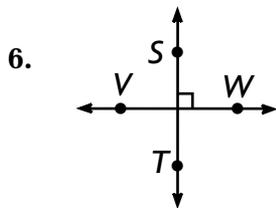
\_\_\_\_\_

\_\_\_\_\_



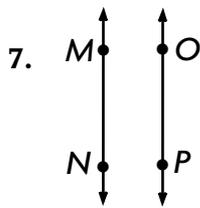
\_\_\_\_\_

\_\_\_\_\_



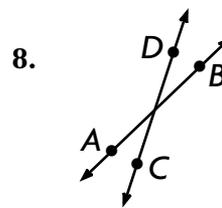
\_\_\_\_\_

\_\_\_\_\_



\_\_\_\_\_

\_\_\_\_\_



\_\_\_\_\_

\_\_\_\_\_

## Mixed Review

9.  $4 \overline{)22}$

10.  $7 \overline{)50}$

11.  $9 \overline{)14}$

12.  $2 \overline{)75}$

13.  $\begin{array}{r} 17 \\ \times 15 \\ \hline \end{array}$

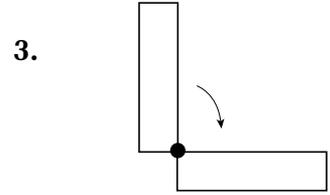
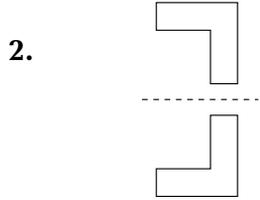
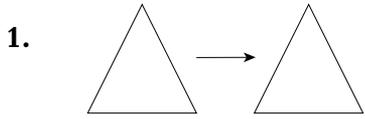
14.  $\begin{array}{r} 259 \\ \times 5 \\ \hline \end{array}$

15.  $\begin{array}{r} 78 \\ \times 9 \\ \hline \end{array}$

16.  $\begin{array}{r} 361 \\ \times 20 \\ \hline \end{array}$

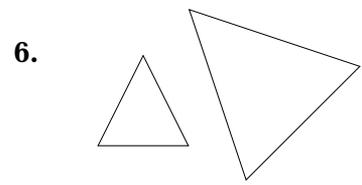
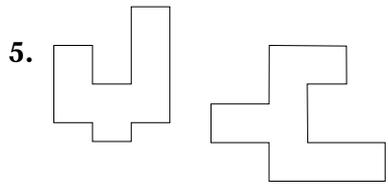
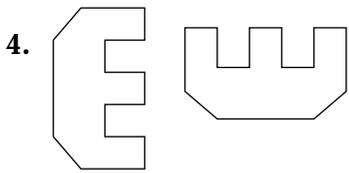
### Congruent Figures and Motion

Tell how each figure was moved. Write *slide*, *flip*, or *turn*.



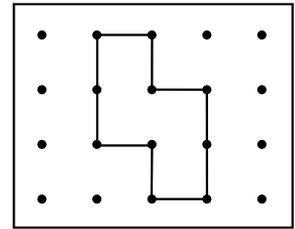
\_\_\_\_\_

Tell whether the two figures are *congruent*, *similar*, or *neither*.



\_\_\_\_\_

7. Copy this figure on dot paper.  
Then draw figures to show a slide,  
a flip, and a turn.



### Mixed Review

8.  $4,729 - 2,418 =$  \_\_\_\_\_

9.  $2,470 - 981 =$  \_\_\_\_\_

10.  $1,897 + 423 =$  \_\_\_\_\_

11.  $6,231 + 4,865 =$  \_\_\_\_\_

12.  $10,078 - 9,021 =$  \_\_\_\_\_

13.  $9,624 - 3,071 =$  \_\_\_\_\_

14. 
$$\begin{array}{r} 738 \\ 389 \\ 388 \\ + 296 \\ \hline \end{array}$$

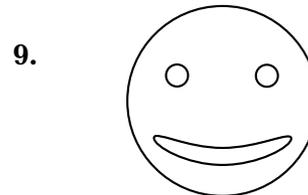
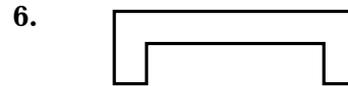
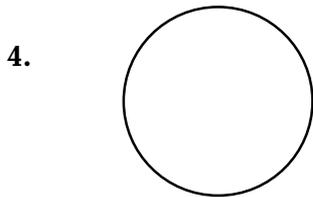
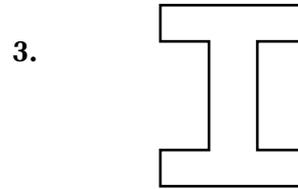
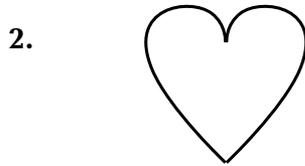
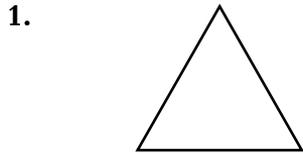
15. 
$$\begin{array}{r} 199 \\ 309 \\ 374 \\ + 902 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 422 \\ 688 \\ 201 \\ + 114 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} 237 \\ 640 \\ 888 \\ + 315 \\ \hline \end{array}$$

## Symmetric Figures

Tell whether the figure has *rotational symmetry*, *line symmetry*, or *both*.



## Mixed Review

Write each number in expanded form.

10.  $5,654 = \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$

11.  $9,232 = \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$

12.  $138,045 = \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$

13.  $87,657 = \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$

Solve.

14.  $(7 \times 6) \div 2 = \underline{\hspace{1cm}}$     15.  $(13 - 8) \times 9 = \underline{\hspace{1cm}}$     16.  $6 + (12 \div 2) = \underline{\hspace{1cm}}$

17. 
$$\begin{array}{r} 7,614 \\ + 8,093 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 21,355 \\ - 9,787 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 3,630 \\ \times 41 \\ \hline \end{array}$$

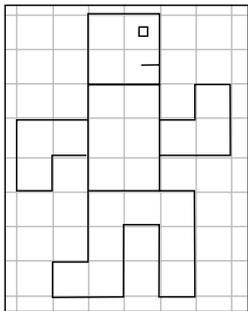
20. 
$$\begin{array}{r} 2,498 \\ \times 15 \\ \hline \end{array}$$

## Problem Solving Strategy

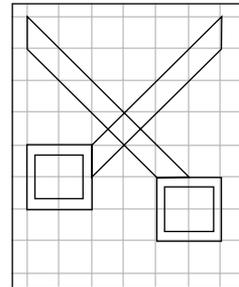
### Make a Model

For 1–4, make a model to solve.

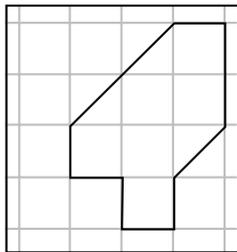
1. Laura wants to make the figure below larger and then put it on her folder. Use 1-inch grid paper to help Laura make a larger picture.



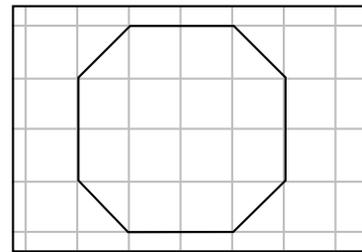
2. Wesley wants to decorate a bulletin board in his school hallway. He wants to make a larger picture of the figure below. Use 1-inch grid paper to help Wesley make the picture larger.



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

$$\begin{array}{r} 5. \quad 589 \\ + 782 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 5468 \\ + 9230 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 10860 \\ - 8701 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 1792 \\ + 4567 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 907 \\ - 488 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 800 \\ + 745 \\ \hline \end{array}$$

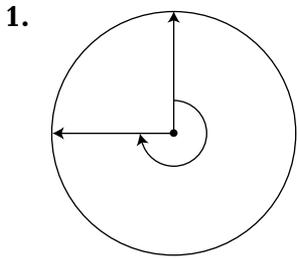
$$\begin{array}{r} 11. \quad 3459 \\ - 2899 \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 6378 \\ + 8719 \\ \hline \end{array}$$

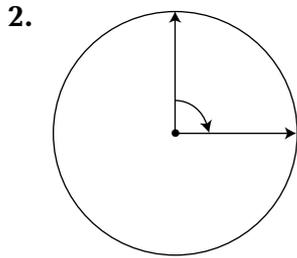
$$\begin{array}{r} 13. \quad 6448 \\ - 1714 \\ \hline \end{array}$$

## Turns and Degrees

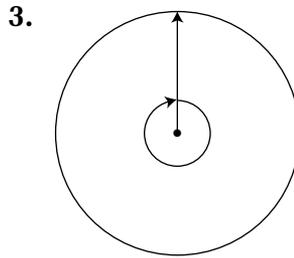
Tell whether the rays on the circle show a  $\frac{1}{4}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$ , or full turn.



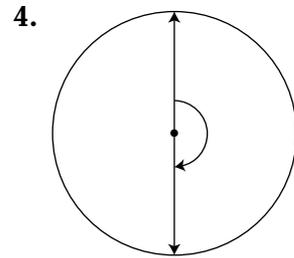
\_\_\_\_\_



\_\_\_\_\_

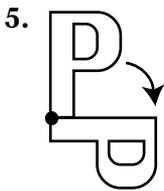


\_\_\_\_\_

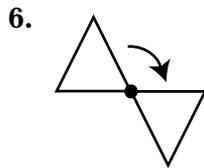


\_\_\_\_\_

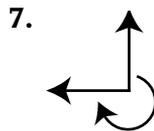
Tell whether the figure has been turned  $90^\circ$ ,  $180^\circ$ ,  $270^\circ$ , or  $360^\circ$ .



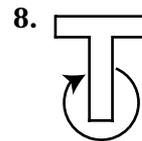
\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

### Mixed Review

9.  $\begin{array}{r} \$2.35 \\ \times 3 \\ \hline \end{array}$

10.  $\begin{array}{r} \$6.56 \\ \times 9 \\ \hline \end{array}$

11.  $\begin{array}{r} \$1.87 \\ \times 5 \\ \hline \end{array}$

12.  $\begin{array}{r} \$13 \\ \times 12 \\ \hline \end{array}$

13.  $\begin{array}{r} \$2.57 \\ \times 2 \\ \hline \end{array}$

14.  $\begin{array}{r} \$12.49 \\ \times 3 \\ \hline \end{array}$

15.  $\begin{array}{r} \$9.15 \\ \times 8 \\ \hline \end{array}$

16.  $\begin{array}{r} \$273 \\ \times 22 \\ \hline \end{array}$

17.  $\begin{array}{r} \$196 \\ \times 18 \\ \hline \end{array}$

18.  $\begin{array}{r} \$626 \\ \times 6 \\ \hline \end{array}$

19.  $\begin{array}{r} \$3.78 \\ \times 9 \\ \hline \end{array}$

20.  $\begin{array}{r} \$10.50 \\ \times 9 \\ \hline \end{array}$

21.  $\begin{array}{r} \$689 \\ \times 15 \\ \hline \end{array}$

22.  $\begin{array}{r} \$187 \\ \times 13 \\ \hline \end{array}$

23.  $\begin{array}{r} \$345 \\ \times 15 \\ \hline \end{array}$

Divide.

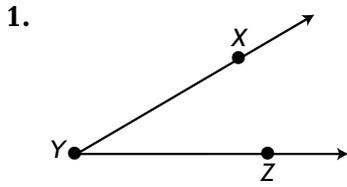
24.  $19 \overline{)86}$

25.  $34 \overline{)139}$

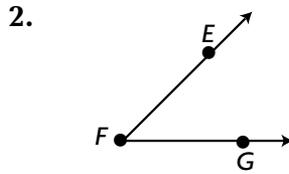
26.  $25 \overline{)406}$

# Measure Angles

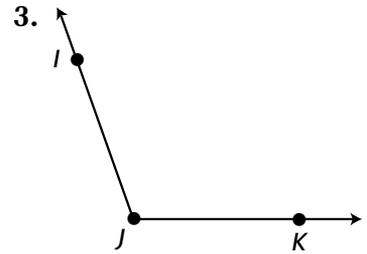
Use a protractor to measure the angle.



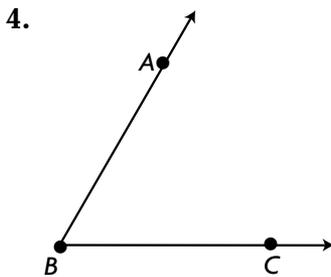
\_\_\_\_\_



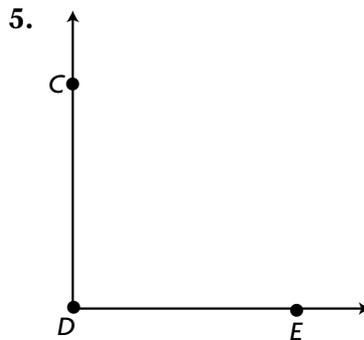
\_\_\_\_\_



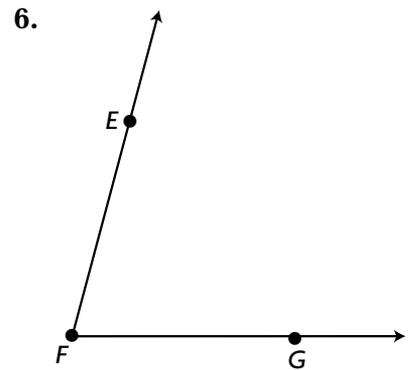
\_\_\_\_\_



\_\_\_\_\_



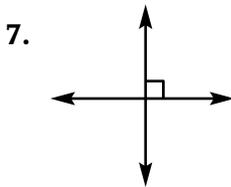
\_\_\_\_\_



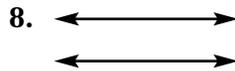
\_\_\_\_\_

## Mixed Review

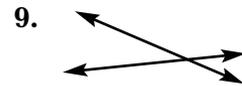
Name any line relationships you see in each figure. Write *intersecting*, *parallel*, or *perpendicular* lines.



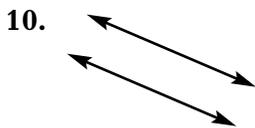
\_\_\_\_\_



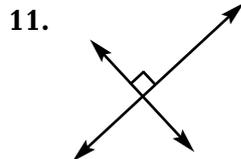
\_\_\_\_\_



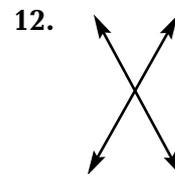
\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

Name \_\_\_\_\_

# Circles

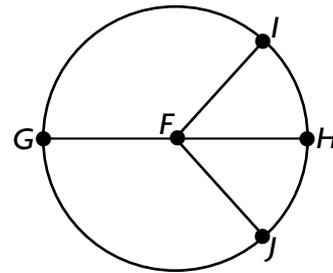
## Vocabulary

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 \_\_\_\_\_

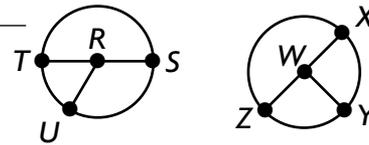
6. Some points on the circle are \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.

7. Draw a circle. Label the center point  $A$ .  
 Draw a radius  $\overline{AB}$ . Draw a diameter  $\overline{CD}$ .

For 8–9, use Circles  $R$  and  $W$ .

8. Name the center of each circle. \_\_\_\_\_

9. Name each radius shown. \_\_\_\_\_  
 \_\_\_\_\_



## Mixed Review

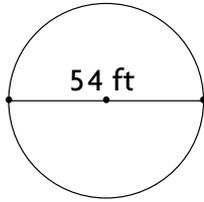
10. A performance began at 7:15 P.M. At 9:10 P.M., the performance ended. How long was the performance?  
 \_\_\_\_\_

11. Rashid's bank has 6 quarters, 9 dimes, 15 nickels, and 26 pennies in it. How much is in his bank?  
 \_\_\_\_\_

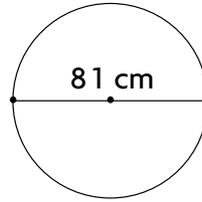
## Circumference

Estimate each circumference.

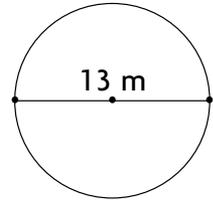
1.



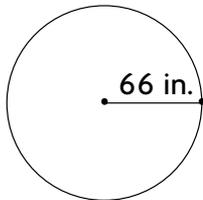
2.



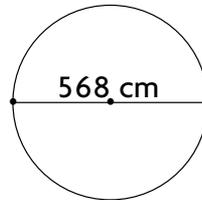
3.



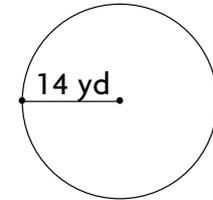
4.



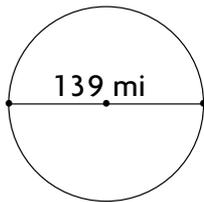
5.



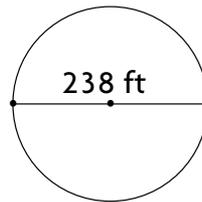
6.



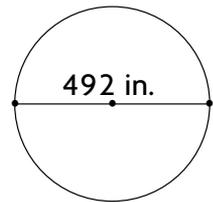
7.



8.



9.



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 \_\_\_\_\_

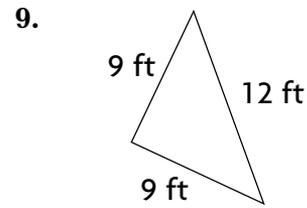
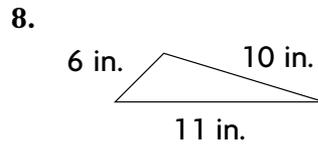
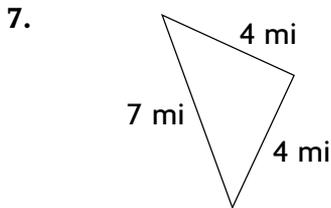
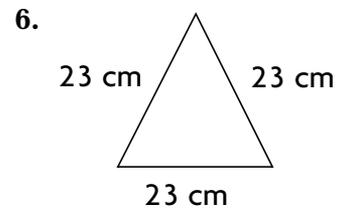
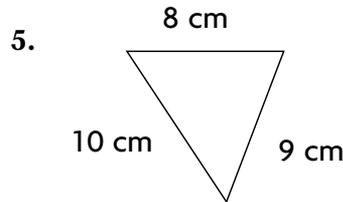
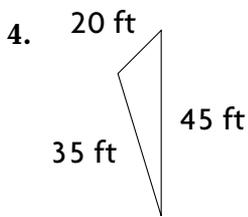
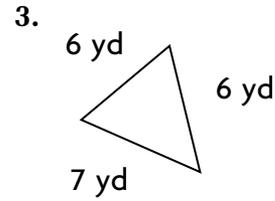
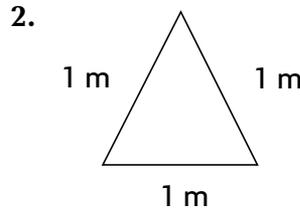
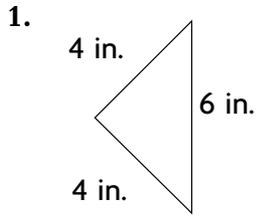
13. 1,283 \_\_\_\_\_

14. 9,634 \_\_\_\_\_

15. 17,334 \_\_\_\_\_

# Classify Triangles

Classify each triangle. Write *isosceles*, *scalene*, or *equilateral*.

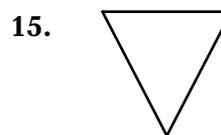
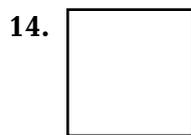
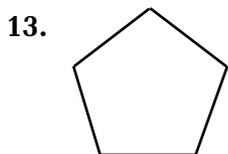


Classify each triangle by the length of its sides. Write *isosceles*, *scalene*, or *equilateral*.

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*.



## Classify Quadrilaterals

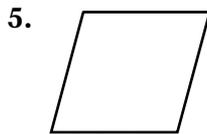
### Vocabulary

Fill in the blanks.

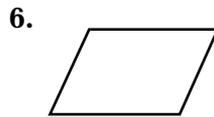
- All \_\_\_\_\_ have 4 sides and 4 angles.
- \_\_\_\_\_ have only 2 sides that are parallel.
- \_\_\_\_\_ have 2 pairs of parallel sides. They have 2 acute angles of the same size and 2 obtuse angles of the same size.
- A \_\_\_\_\_ has 4 congruent sides. Its opposite sides are parallel and its angles may be right angles.

---

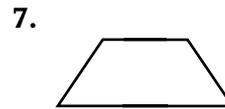
Classify each figure in as many ways as possible. Write *quadrilateral*, *parallelogram*, *square*, *rectangle*, *rhombus*, or *trapezoid*.



\_\_\_\_\_  
\_\_\_\_\_



\_\_\_\_\_  
\_\_\_\_\_



\_\_\_\_\_  
\_\_\_\_\_



\_\_\_\_\_  
\_\_\_\_\_

Draw an example of each quadrilateral.

9. trapezoid

10. square

11. rhombus

12. parallelogram

13. rectangle

14. general quadrilateral

### Mixed Review

15. 
$$\begin{array}{r} 250 \\ \times 7 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 864 \\ \times 5 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} 793 \\ \times 6 \\ \hline \end{array}$$

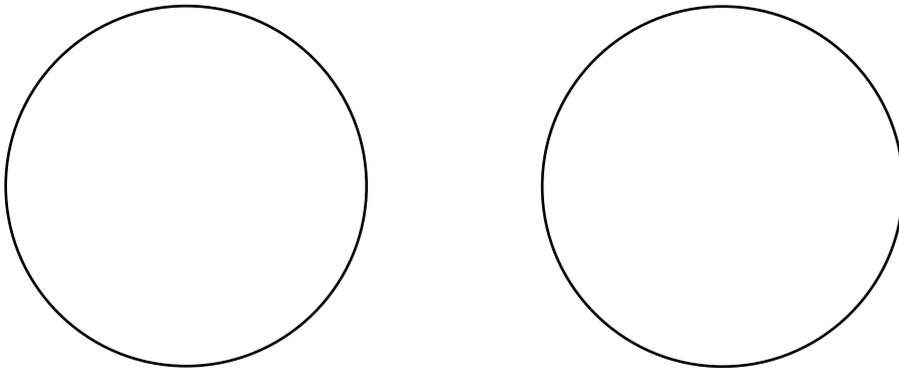
18. 
$$\begin{array}{r} 122 \\ \times 8 \\ \hline \end{array}$$

## Problem Solving Strategy

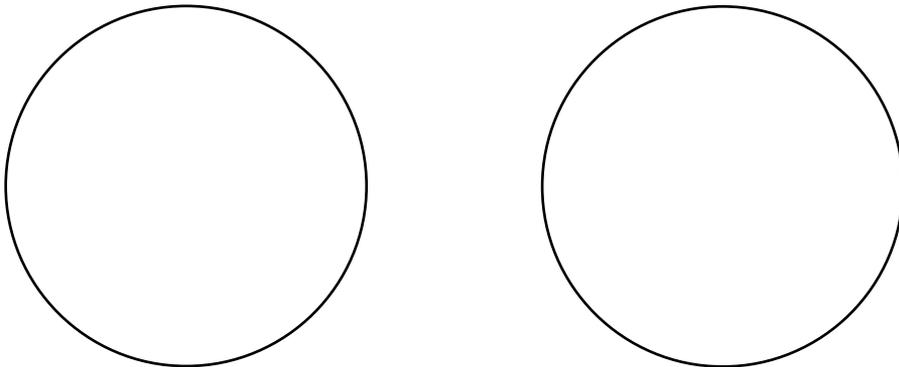
### Draw a Diagram

Follow the directions.

- 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.



- Sort these numbers into a Venn diagram showing *Divisible by 3* and *Not Divisible by 3*: 28, 35, 36, 40, 51, 60.



### Mixed Review

Add or subtract.

$$\begin{array}{r} 3. \quad 6,783 \\ + 3,960 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 8,743 \\ - 586 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 54,732 \\ + 4,694 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 9,275 \\ + 2,392 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 14,821 \\ - 4,812 \\ \hline \end{array}$$

## Read and Write Fractions

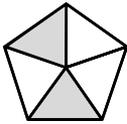
### Vocabulary

Fill in the blank.

1. A number that names a part of a whole is a \_\_\_\_\_.

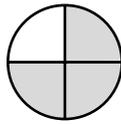
Write a fraction for the shaded part. Write a fraction for the unshaded part.

2.



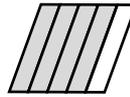
\_\_\_\_\_

3.



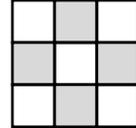
\_\_\_\_\_

4.



\_\_\_\_\_

5.



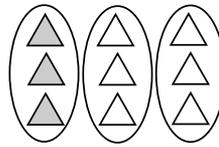
\_\_\_\_\_

6.



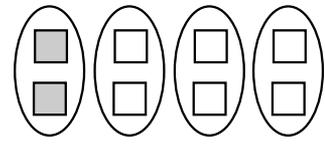
\_\_\_\_\_

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. 
$$\begin{array}{r} 12 \\ \times 5 \\ \hline \end{array}$$

13. 
$$\begin{array}{r} 11 \\ \times 7 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 9 \\ \times 8 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} 6 \\ \times 6 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 12 \\ \times 8 \\ \hline \end{array}$$

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.  $\frac{1}{4} = \underline{\hspace{2cm}}$

3.  $\frac{2}{3} = \underline{\hspace{2cm}}$

4.  $\frac{1}{2} = \underline{\hspace{2cm}}$

5.  $\frac{3}{6} = \underline{\hspace{2cm}}$

6.  $\frac{2}{8} = \underline{\hspace{2cm}}$

7.  $\frac{5}{6} = \underline{\hspace{2cm}}$

8.  $\frac{8}{12} = \underline{\hspace{2cm}}$

9.  $\frac{6}{8} = \underline{\hspace{2cm}}$

10.  $\frac{6}{12} = \underline{\hspace{2cm}}$

11.  $\frac{4}{12} = \underline{\hspace{2cm}}$

12.  $\frac{4}{5} = \underline{\hspace{2cm}}$

13.  $\frac{2}{5} = \underline{\hspace{2cm}}$

### Mixed Review

14.  $13 - 7 = \underline{\hspace{1cm}} \times 3$

15.  $20 \div \underline{\hspace{1cm}} = 14 - 12$

16.  $\underline{\hspace{1cm}} + 49 = 81 - 15$

17.  $4 \times 12 = 48 \div \underline{\hspace{1cm}}$

18.  $63 + \underline{\hspace{1cm}} = 71 + 19$

19.  $55 \div \underline{\hspace{1cm}} = 29 - 24$

20.  $3 \times 3 \times 3 \times \underline{\hspace{1cm}} = 54$

21.  $4 \times \underline{\hspace{1cm}} \times 2 = 32$

22.  $7 \times 2 \times \underline{\hspace{1cm}} = 14$



## 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.  $\frac{5}{10}$

\_\_\_\_\_

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

\_\_\_\_\_

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

\_\_\_\_\_

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

\_\_\_\_\_

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

\_\_\_\_\_

7.  $\frac{10}{20}$

\_\_\_\_\_

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

\_\_\_\_\_

9.  $\frac{9}{36}$

\_\_\_\_\_

Tell whether each fraction is in simplest form. If not, write it in simplest form.

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

\_\_\_\_\_

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

\_\_\_\_\_

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

\_\_\_\_\_

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

\_\_\_\_\_

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

\_\_\_\_\_

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

\_\_\_\_\_

16.  $\frac{16}{32}$

\_\_\_\_\_

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

\_\_\_\_\_

Find the missing numerator or denominator.

18.  $\frac{6}{12} = \frac{\quad}{2}$

19.  $\frac{3}{9} = \frac{1}{\quad}$

20.  $\frac{3}{12} = \frac{1}{\quad}$

21.  $\frac{5}{15} = \frac{\quad}{3}$

22.  $\frac{4}{10} = \frac{2}{\quad}$

23.  $\frac{9}{18} = \frac{\quad}{2}$

24.  $\frac{4}{16} = \frac{1}{\quad}$

25.  $\frac{12}{24} = \frac{\quad}{2}$

### Mixed Review

Estimate.

26.  $6,834 \times 28$  \_\_\_\_\_

27.  $975 \div 11$  \_\_\_\_\_

28.  $3,210 \times 49$  \_\_\_\_\_

29.  $495 \div 52$  \_\_\_\_\_

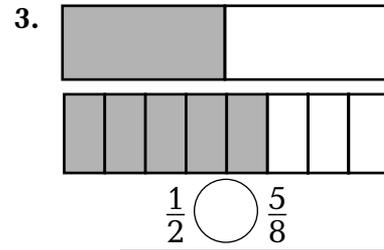
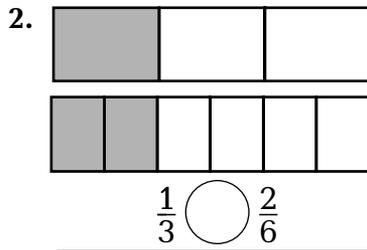
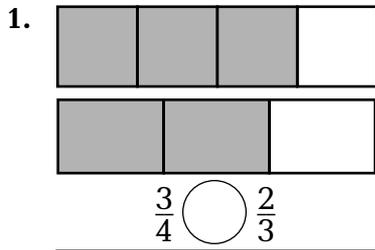
30.  $888 \div 29$  \_\_\_\_\_

31.  $9,011 \times 11$  \_\_\_\_\_

Name \_\_\_\_\_

## Compare and Order Fractions

Write the fraction for each model. Then compare, using  $<$ ,  $>$ , or  $=$ .



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

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

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

6.  $\frac{1}{2} \bigcirc \frac{6}{12}$

7.  $\frac{3}{4} \bigcirc \frac{3}{5}$

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

9.  $\frac{1}{8} \bigcirc \frac{1}{7}$

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

11.  $\frac{4}{8} \bigcirc \frac{4}{10}$

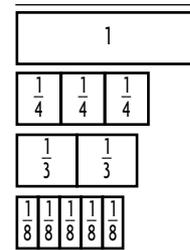
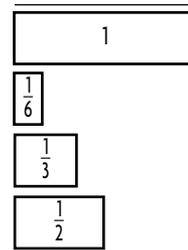
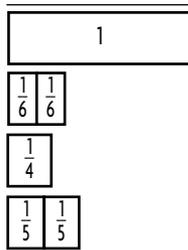
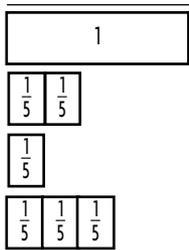
Order the fractions from *greatest* to *least*. Use the models, fraction bars, or a number line to help you.

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

13.  $\frac{2}{6}, \frac{1}{4}, \frac{2}{5}$

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

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



Order the fractions from *least* to *greatest*.

16.  $\frac{3}{12}, \frac{4}{10}, \frac{2}{3}$

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

18.  $\frac{1}{4}, \frac{1}{6}, \frac{1}{5}$

19.  $\frac{4}{6}, \frac{7}{12}, \frac{2}{5}$

### 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. 
$$\begin{array}{r} 7,919 \\ \times 4 \\ \hline \end{array}$$

25. 
$$\begin{array}{r} 4,111 \\ + 16 \\ \hline \end{array}$$

26. 
$$\begin{array}{r} 3,219 \\ + 1,808 \\ \hline \end{array}$$

27. 
$$\begin{array}{r} 6,425 \\ \times 9 \\ \hline \end{array}$$

## 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.  $13 \overline{)6,249}$

6.  $8 \overline{)9,122}$

7.  $12 \overline{)2,424}$

8.  $4 \overline{)3,175}$

Find the value of the expression.

9.  $12 \times (9 - 3) = \underline{\quad}$

10.  $(4 + 4) \times 8 = \underline{\quad}$

11.  $(15 - 4) \times 9 = \underline{\quad}$

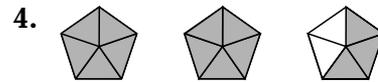
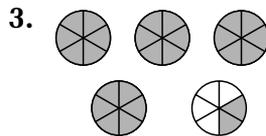
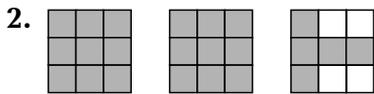
# Mixed Numbers

## Vocabulary

Fill in the blank.

1. A \_\_\_\_\_ is made up of a whole number and a fraction.

Write a mixed number for each picture.



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Rename each fraction as a mixed number. You may wish to draw a picture.

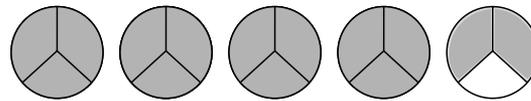
5.  $\frac{16}{3}$  \_\_\_\_\_

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

8. 
$$\begin{array}{r} \frac{5}{9} \\ + \frac{4}{9} \\ \hline \end{array}$$

9. 
$$\begin{array}{r} \frac{2}{11} \\ + \frac{4}{11} \\ \hline \end{array}$$

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

10.  $\frac{2}{9} + \frac{3}{9} \bigcirc \frac{4}{9}$

11.  $\frac{1}{6} + \frac{2}{6} \bigcirc \frac{1}{2}$

12.  $\frac{5}{9} + \frac{8}{9} \bigcirc 1$

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. 
$$\begin{array}{r} 8 \\ \times 7 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 10 \\ \times 5 \\ \hline \end{array}$$

21. 
$$\begin{array}{r} 3 \\ \times 9 \\ \hline \end{array}$$

22. 
$$\begin{array}{r} 7 \\ \times 7 \\ \hline \end{array}$$

23. 
$$\begin{array}{r} 6 \\ \times 9 \\ \hline \end{array}$$

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.  $\frac{3}{5} - \frac{1}{5} =$  \_\_\_\_\_

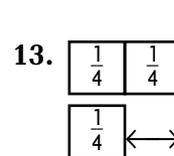
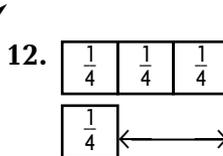
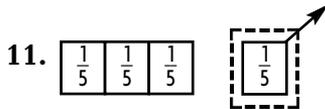
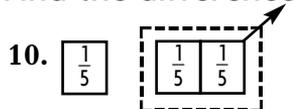
6.  $\frac{6}{8} - \frac{2}{8} =$  \_\_\_\_\_

7.  $\frac{10}{12} - \frac{5}{12} =$  \_\_\_\_\_

8.  $\frac{7}{10} - \frac{3}{10} =$  \_\_\_\_\_

9.  $\frac{5}{6} - \frac{1}{6} =$  \_\_\_\_\_

Find the difference.



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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. 
$$\begin{array}{r} 487 \\ \times 22 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 68 \\ \times 95 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 3,287 \\ \times 17 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 8,061 \\ \times 40 \\ \hline \end{array}$$

21.  $15 \overline{)30}$

22.  $5 \overline{)30}$

23.  $3 \overline{)30}$

24.  $4 \overline{)36}$

## Add and Subtract Mixed Numbers

Find the sum or difference.

$$\begin{array}{r} 1. \quad 5\frac{7}{8} \\ - 2\frac{3}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 6\frac{4}{10} \\ + 4\frac{3}{10} \\ \hline \end{array}$$

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

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

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

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

$$\begin{array}{r} 7. \quad 9\frac{8}{12} \\ + 6\frac{4}{12} \\ \hline \end{array}$$

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

$$\begin{array}{r} 9. \quad 7\frac{8}{9} \\ - 6\frac{1}{9} \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 9\frac{9}{10} \\ + 5\frac{2}{10} \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad 8\frac{2}{4} \\ + 6\frac{1}{4} \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 3\frac{10}{12} \\ - 1\frac{7}{12} \\ \hline \end{array}$$

$$13. \quad 7\frac{4}{5} - 1\frac{3}{5} = \underline{\hspace{2cm}} \quad 14. \quad 9\frac{5}{8} + 4\frac{4}{8} = \underline{\hspace{2cm}} \quad 15. \quad 4\frac{6}{9} - 2\frac{2}{9} = \underline{\hspace{2cm}}$$

$$16. \quad 5\frac{9}{12} + 2\frac{3}{12} = \underline{\hspace{2cm}} \quad 17. \quad 9\frac{2}{5} + 3\frac{1}{5} = \underline{\hspace{2cm}} \quad 18. \quad 6\frac{7}{10} - 2\frac{5}{10} = \underline{\hspace{2cm}}$$

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

$$19. \quad 6\frac{1}{7} + 3\frac{5}{7} \bigcirc 10 \quad 20. \quad 3\frac{1}{4} \bigcirc 1\frac{5}{8} + 1\frac{5}{8} \quad 21. \quad 16\frac{7}{10} - 7\frac{7}{10} \bigcirc 10$$

### Mixed Review

$$\begin{array}{r} 22. \quad 48 \\ + 78 \\ \hline \end{array}$$

$$\begin{array}{r} 23. \quad 63 \\ - 57 \\ \hline \end{array}$$

$$\begin{array}{r} 24. \quad 140 \\ - 79 \\ \hline \end{array}$$

$$\begin{array}{r} 25. \quad 224 \\ + 865 \\ \hline \end{array}$$

$$\begin{array}{r} 26. \quad 370 \\ - 263 \\ \hline \end{array}$$

$$\begin{array}{r} 27. \quad 586 \\ - 139 \\ \hline \end{array}$$

$$\begin{array}{r} 28. \quad 428 \\ + 765 \\ \hline \end{array}$$

$$\begin{array}{r} 29. \quad 831 \\ - 156 \\ \hline \end{array}$$

$$\begin{array}{r} 30. \quad 605 \\ - 384 \\ \hline \end{array}$$

$$\begin{array}{r} 31. \quad 372 \\ - 189 \\ \hline \end{array}$$

## Problem Solving Skill

### Choose the Operation

Write the operation. Then solve each problem.

- Henry and Cyndi each ate  $\frac{1}{3}$  of a small cake. What fraction of the cake did they eat?  
\_\_\_\_\_
- 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?  
\_\_\_\_\_

- 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?  
\_\_\_\_\_
- 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?  
\_\_\_\_\_

### Mixed Review

Solve.

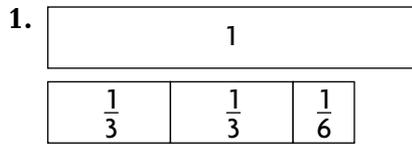
- At the end of five days Joseph had saved \$30. If each day he saved \$2 more than the day before, how much money did Joseph save each day?  
\_\_\_\_\_
- A series of numbers starts with 2. Each number in the series is two times as great as the number before it. What is the sixth number in the series?  
\_\_\_\_\_

7.	\$20.22	8.	\$38.40	9.	2,649	10.	9,028	11.	\$38.20
	<u>+ \$15.24</u>		<u>- \$19.99</u>		<u>- 1,670</u>		<u>+ 3,840</u>		<u>+ \$88.79</u>

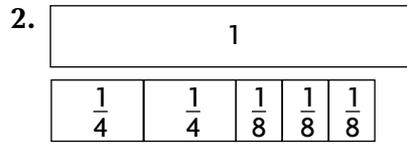


## Add Unlike Fractions

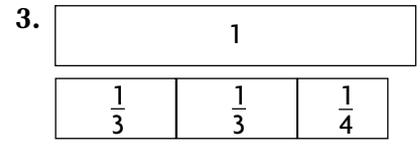
Use fraction bars to find the sum.



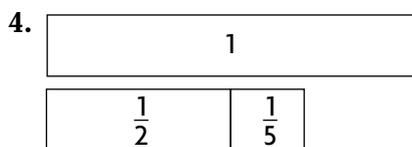
\_\_\_\_\_



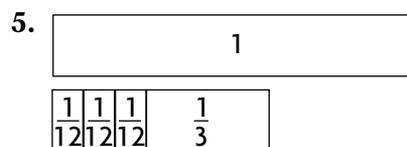
\_\_\_\_\_



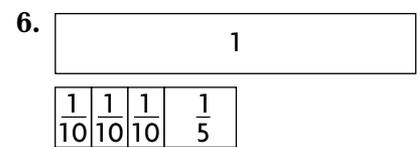
\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

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.  $19 \overline{)4,999}$

14.  $32 \overline{)6,471}$

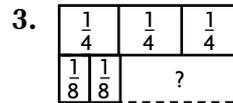
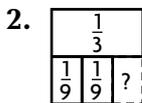
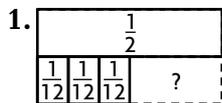
15.  $17 \overline{)219}$

16.  $3 \overline{)8,536}$

17.  $8 \overline{)830}$

## Subtract Unlike Fractions

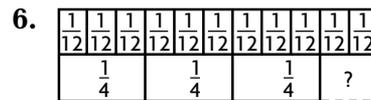
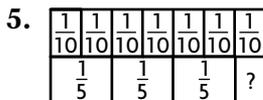
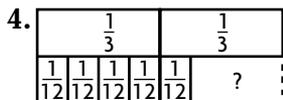
Use fraction bars to find the difference.



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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.  $1, \frac{4}{10}, \frac{8}{10}, \frac{11}{10}$

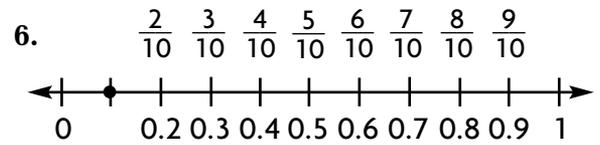
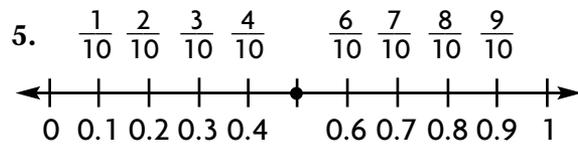
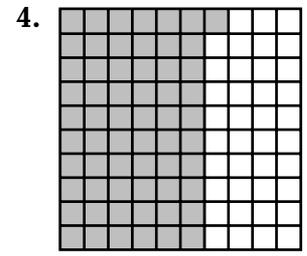
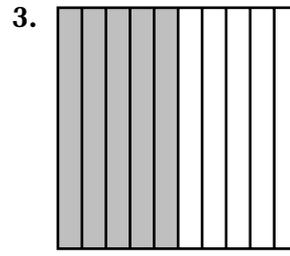
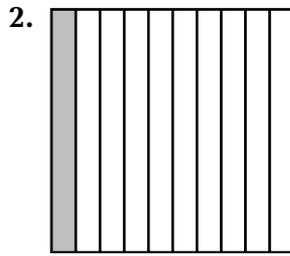
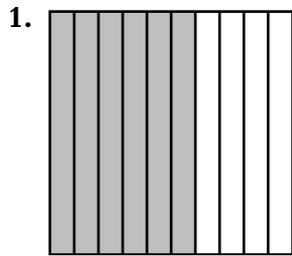
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Tenths and Hundredths

Write the decimal and fraction shown by each model or number line.



Write each fraction as a decimal.

7.  $\frac{6}{10}$  \_\_\_\_\_

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

9.  $\frac{39}{100}$  \_\_\_\_\_

10.  $\frac{64}{100}$  \_\_\_\_\_

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

18. 
$$\begin{array}{r} 11 \\ \times 11 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 100 \\ \times 100 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 18 \\ \times 18 \\ \hline \end{array}$$

21. 
$$\begin{array}{r} 12 \\ \times 12 \\ \hline \end{array}$$

**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  $\bigcirc$ .

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.

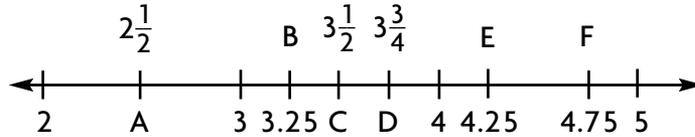
- |                  |                   |                   |                   |                   |
|------------------|-------------------|-------------------|-------------------|-------------------|
| 10. 0.7<br>_____ | 11. 0.1<br>_____  | 12. 0.60<br>_____ | 13. 0.4<br>_____  | 14. 0.20<br>_____ |
| 15. 0.8<br>_____ | 16. 0.30<br>_____ | 17. 0.5<br>_____  | 18. 0.90<br>_____ | 19. 0.3<br>_____  |

### Mixed Review

- |   |   |   |
|---|---|---|
| 20. $\frac{7}{10} + \frac{7}{10} =$ _____ | 21. $1\frac{4}{5} + 1\frac{4}{5} =$ _____ | 22. $3\frac{8}{9} + 3\frac{8}{9} =$ _____ |
| 23. $5\frac{4}{5} - 1\frac{3}{5} =$ _____ | 24. $\frac{10}{9} + 3\frac{5}{9} =$ _____ | 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. $\frac{4}{9} + 7\frac{7}{9} =$ _____  |   |

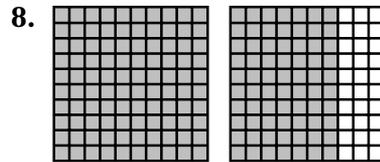
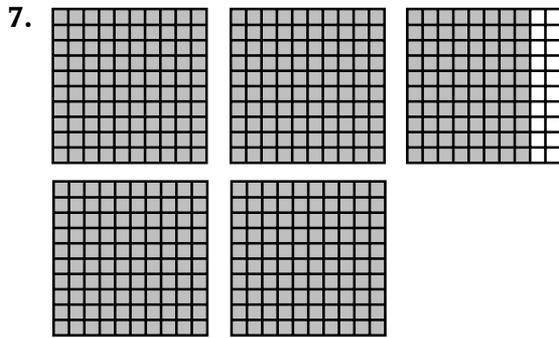
## Relate Mixed Numbers and Decimals

Use the number line to write an equivalent mixed number or decimal for the given letter.



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.



\_\_\_\_\_

\_\_\_\_\_

Write an equivalent mixed number or decimal.

9. 12.75 \_\_\_\_\_                      10. 5.50 \_\_\_\_\_                      11.  $6\frac{1}{5}$  \_\_\_\_\_

### 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  $\bigcirc$ .

1.  $0.45 \bigcirc 0.35$     2.  $0.4 \bigcirc 0.6$     3.  $0.9 \bigcirc 0.91$     4.  $0.6 \bigcirc 0.64$   
 5.  $0.50 \bigcirc 0.55$     6.  $0.7 \bigcirc 0.17$     7.  $0.02 \bigcirc 0.22$     8.  $0.49 \bigcirc 0.4$   
 9.  $0.32 \bigcirc 0.23$     10.  $0.9 \bigcirc 0.99$     11.  $0.25 \bigcirc 0.205$     12.  $0.465 \bigcirc 0.437$

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  
\_\_\_\_\_

6. List the factors of 21.  
\_\_\_\_\_

8.  $128 \div 8$   
\_\_\_\_\_



## Round Decimals

Round each to the place of the underlined digit.

1.  $\underline{6}.9$

\_\_\_\_\_

2.  $\underline{7}.2$

\_\_\_\_\_

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

\_\_\_\_\_

4.  $9.\underline{7}5$

\_\_\_\_\_

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

\_\_\_\_\_

6.  $\underline{5}.964$

\_\_\_\_\_

7.  $\$84.\underline{6}5$

\_\_\_\_\_

8.  $\$\underline{5}.45$

\_\_\_\_\_

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. 
$$\begin{array}{r} \$4.29 \\ + \$7.30 \\ \hline \end{array}$$

22. 
$$\begin{array}{r} \$6.14 \\ + \$0.88 \\ \hline \end{array}$$

23. 
$$\begin{array}{r} \$2.21 \\ + \$2.21 \\ \hline \end{array}$$

24. 
$$\begin{array}{r} \$48.19 \\ + \$27.55 \\ \hline \end{array}$$

25. 
$$\begin{array}{r} \$11.94 \\ + \$36.60 \\ \hline \end{array}$$

26. 
$$\begin{array}{r} \$8.79 \\ - \$0.56 \\ \hline \end{array}$$

27. 
$$\begin{array}{r} \$9.05 \\ - \$5.48 \\ \hline \end{array}$$

28. 
$$\begin{array}{r} \$7.12 \\ - \$6.81 \\ \hline \end{array}$$

29. 
$$\begin{array}{r} \$34.63 \\ - \$27.98 \\ \hline \end{array}$$

30. 
$$\begin{array}{r} \$59.99 \\ - \$ 5.90 \\ \hline \end{array}$$

31. Solve for  $n$ .  
 $540 \div n = 90$

\_\_\_\_\_

32. Solve for  $n$ .  
 $(64 - 5) + (12 \div 4) = n$

\_\_\_\_\_

## Estimate Sums and Differences

Estimate the sum or difference.

1. 
$$\begin{array}{r} 1.5 \\ + 1.2 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 1.8 \\ - 0.6 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 2.3 \\ - 0.7 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 2.94 \\ - 1.13 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 23.94 \\ + 16.98 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 4.25 \\ - 0.86 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 6.45 \\ - 2.63 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} \$5.62 \\ + \$2.81 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 16.95 \\ - 3.29 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 45.41 \\ - 29.18 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 1.62 \\ - 1.34 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} 3.72 \\ - 1.65 \\ \hline \end{array}$$

13. 
$$\begin{array}{r} 2.36 \\ - 1.74 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 3.92 \\ - 1.69 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} 3.45 \\ + 2.07 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 23.41 \\ - 11.20 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} 2.53 \\ + 1.56 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 3.04 \\ - 1.26 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 2.82 \\ + 2.35 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 4.26 \\ - 2.39 \\ \hline \end{array}$$

## Mixed Review

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

21.  $\$8.15 + \$0.37 \bigcirc \$8.50$

22.  $\$19.00 \bigcirc \$10.75 + \$9.00$

23.  $\$6.59 + \$6.59 \bigcirc \$13.20$

24.  $\$7.43 + \$6.43 \bigcirc \$13.90$

For 25–26, use the table.

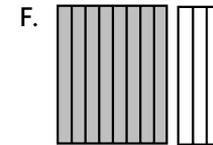
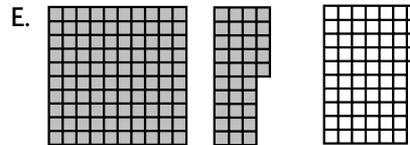
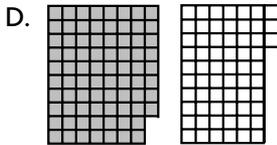
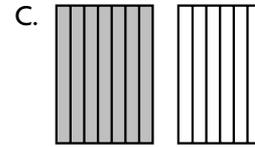
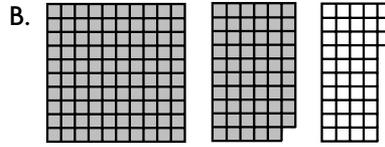
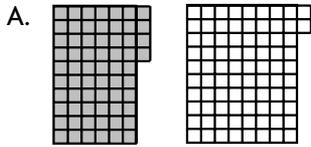
25. If you rounded all of the punt air times to the nearest second, what would be the time that occurred most often?
- \_\_\_\_\_

26. Estimate the difference between Charley's longest time and his shortest time.
- \_\_\_\_\_

Charley's Football Punt Time in Air	
Monday	3.4 seconds
Tuesday	2.5 seconds
Wednesday	1.7 seconds
Thursday	2.8 seconds
Friday	4.2 seconds

## Add Decimals

Write the letter of the model that matches each problem. Solve.



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. 
$$\begin{array}{r} 0.6 \\ + 0.8 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 0.52 \\ + 0.39 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 0.24 \\ + 0.36 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 0.593 \\ + 0.796 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 3.72 \\ + 5.88 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} 0.9 \\ + 0.9 \\ \hline \end{array}$$

13. 
$$\begin{array}{r} 45.91 \\ + 12.57 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 0.88 \\ + 0.43 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} 31.504 \\ + 14.689 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 21.94 \\ + 10.28 \\ \hline \end{array}$$

### 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.  $4 \times 8 =$  \_\_\_\_\_

## Subtract Decimals

Find the difference. Estimate to check.

$$\begin{array}{r} 1. \quad 0.9 \\ - 0.2 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 0.64 \\ - 0.34 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 1.8 \\ - 0.3 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 41.526 \\ - 32.619 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 1.25 \\ - 0.76 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 1.00 \\ - 0.56 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 1.62 \\ - 0.73 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 17.62 \\ - 9.28 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 1.214 \\ - 0.478 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 76.43 \\ - 34.58 \\ \hline \end{array}$$

$$11. \quad 4.80 - 0.62 \quad 12. \quad 5.99 - 1.03 \quad 13. \quad 20.854 - 11.708 \quad 14. \quad 13.392 - 12.365$$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

For 15–18, write the missing digits.

$$15. \quad 4.\underline{\quad} - \underline{\quad}.6 = 2.7$$

$$16. \quad 3.\underline{\quad}.5 - \underline{\quad}2.8 = 18.7$$

$$17. \quad 1.\underline{\quad}.3 - 8.\underline{\quad} = 6.4$$

$$18. \quad \underline{\quad}9.2 - \underline{\quad}.4 = 11.8$$

### 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?

\_\_\_\_\_

$$\begin{array}{r} 21. \quad 2,875 \\ \times 30 \\ \hline \end{array}$$

$$\begin{array}{r} 22. \quad 7,891 \\ + 9,415 \\ \hline \end{array}$$

$$\begin{array}{r} 23. \quad 62,730 \\ - 59,881 \\ \hline \end{array}$$

$$\begin{array}{r} 24. \quad 14,962 \\ + 29,037 \\ \hline \end{array}$$



## Add and Subtract Decimals

Find the sum or difference. Estimate to check.

1. 
$$\begin{array}{r} 4.90 \\ + 3.41 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 5.20 \\ - 3.45 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 5.00 \\ - 2.49 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 3.50 \\ + 4.62 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 35.91 \\ + 4.00 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 6.90 \\ - 3.81 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 10 \\ - 4.632 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 2.60 \\ + 1.75 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 5.428 \\ + 1.735 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 7.18 \\ + 2.49 \\ \hline \end{array}$$

11.  $\$5.98 - \$0.50$   
\_\_\_\_\_

12.  $35.846 - 4.9$   
\_\_\_\_\_

13.  $12 - 5.913$   
\_\_\_\_\_

Find the missing number.

14.  $3.62 - \blacksquare = 1.5$   
\_\_\_\_\_

15.  $4.96 - 1.2 = \blacksquare$   
\_\_\_\_\_

16.  $\blacksquare + 0.29 = 3.81$   
\_\_\_\_\_

### 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

- |   |  |
|---|--|
| <p>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?</p> <p><b>A</b> Heidi hiked 100 miles</p> <p><b>B</b> Heidi hiked 60 miles</p> | <p>2. Merrillyn 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?</p> <p><b>A</b> \$14.00</p> <p><b>B</b> \$32.00</p> |
|---|--|

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.

- |   |   |
|---|---|
| <p>3. Which is the best estimate for the combined length of the two pieces he cuts?</p> <p><b>A</b> 70 cm      <b>C</b> 30 cm</p> <p><b>B</b> 60 cm      <b>D</b> 10 cm</p> | <p>4. Which is the best estimate for the length of the remaining lumber after Peter makes the two cuts?</p> <p><b>F</b> 40 cm      <b>H</b> 15 cm</p> <p><b>G</b> 20 cm      <b>J</b> 10 cm</p> |
|---|---|

### Mixed Review

- |   |  |
|---|--|
| <p>5. Find the prime factors of 12. _____</p>   | <p>6. List 3 multiples of 10. _____</p>  |
| <p>7. Write the fact family for 3, 5, and 15. _____</p>   |  |
| <p>8. <math display="block">\begin{array}{r} 90,005 \\ - 5,842 \\ \hline \end{array}</math></p> | <p>9. <math>\frac{9}{10} - \frac{3}{5} =</math> _____</p>                                      |
|   | <p>10. <math display="block">\begin{array}{r} 52 \\ \times 81 \\ \hline \end{array}</math></p> |



## 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

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### Mixed Review

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.

\_\_\_\_\_

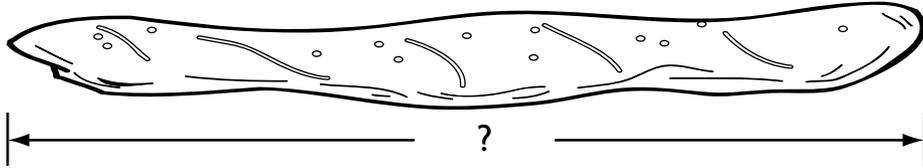
\_\_\_\_\_

\_\_\_\_\_

### Measure Fractional Parts

Estimate to the nearest inch. Then measure to the nearest  $\frac{1}{8}$  inch.

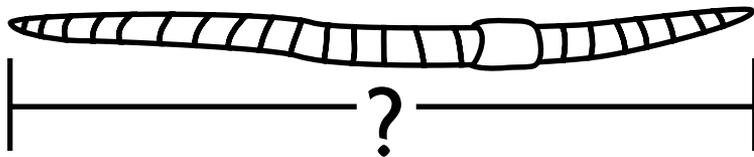
1.



\_\_\_\_\_

Estimate to the nearest inch. Then measure to the nearest  $\frac{1}{4}$  inch.

2.



\_\_\_\_\_

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.

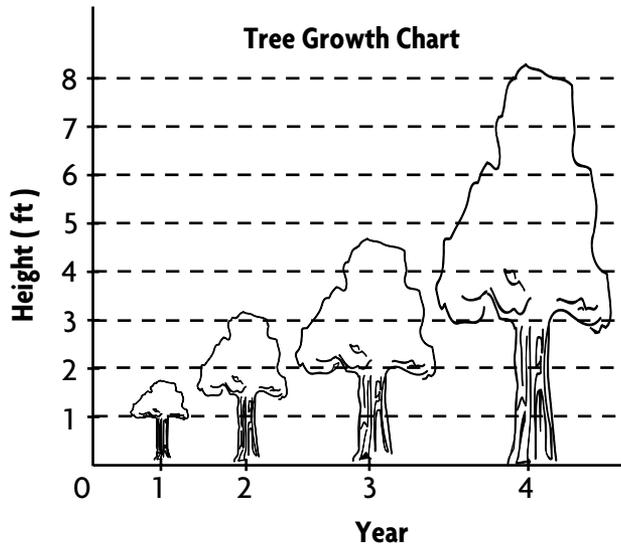
5. To the nearest foot, how tall was the tree in the first year? second year? third year? fourth year?

\_\_\_\_\_

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  $\bigcirc$ .

12. 38 in.  $\bigcirc$  3 ft      13. 10,000 ft  $\bigcirc$  4 mi      14. 100 in.  $\bigcirc$  3 yd

### Mixed Review

Add or subtract.

15. 
$$\begin{array}{r} 5,283 \\ + 467 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 3,512 \\ - 468 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} 7,536 \\ - 207 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 4,106 \\ - 314 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 5,490 \\ - 83 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 6,372 \\ + 891 \\ \hline \end{array}$$

21. 
$$\begin{array}{r} 7,536 \\ + 18 \\ \hline \end{array}$$

22. 
$$\begin{array}{r} 2,013 \\ - 5 \\ \hline \end{array}$$

# Capacity

## Vocabulary

Complete.

- \_\_\_\_\_ is the amount a container can hold when filled.
- Write the word *cup*, *pint*, *quart*, or *gallon* to label each container.



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Complete the tables. Change the units.

3.

Cup	Pint
4	
8	
	8

4.

Pint	Quart
4	
	3
8	

5.

Quart	Gallon
8	
12	
	4

Choose the unit of capacity. Write *cup*, *pint*, *quart*, or *gallon*.



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

## 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.  $6 \times 3 =$  \_\_\_\_\_    18.  $10 \times 3 =$  \_\_\_\_\_    19.  $6 \times 5 =$  \_\_\_\_\_  
 20.  $35 \div 7 =$  \_\_\_\_\_    21.  $7 \times 6 =$  \_\_\_\_\_    22.  $18 \div 3 =$  \_\_\_\_\_  
 23.  $7 \times 8 =$  \_\_\_\_\_    24.  $36 \div 6 =$  \_\_\_\_\_    25.  $8 \times 11 =$  \_\_\_\_\_

## Problem Solving Strategy

### Compare Strategies

Choose a strategy to solve.

- |   |  |
|---|--|
| <p>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?</p> <p>_____</p>  | <p>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?</p> <p>_____</p>  |
| <p>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?</p> <p>_____</p>  | <p>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?</p> <p>_____</p>                           |
| <p>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?</p> <p>_____</p> | <p>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?</p> <p>_____</p> |

### Mixed Review

Write the product or sum.

$$\begin{array}{r} 7. \quad 314 \\ \times \quad 4 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 236 \\ \times \quad 3 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 413 \\ + \quad 37 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 207 \\ \times \quad 4 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad 535 \\ + 493 \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 537 \\ + 395 \\ \hline \end{array}$$

$$\begin{array}{r} 13. \quad 537 \\ \times \quad 5 \\ \hline \end{array}$$

$$\begin{array}{r} 14. \quad 716 \\ + 239 \\ \hline \end{array}$$

$$\begin{array}{r} 15. \quad 716 \\ \times \quad 9 \\ \hline \end{array}$$

$$\begin{array}{r} 16. \quad 375 \\ + 909 \\ \hline \end{array}$$

## 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

$$\begin{array}{r} 12. \quad 15 \\ \times 10 \\ \hline \end{array}$$

$$\begin{array}{r} 13. \quad 1,000 \\ \times 12 \\ \hline \end{array}$$

$$\begin{array}{r} 14. \quad 14.3 \\ - 7.6 \\ \hline \end{array}$$

$$\begin{array}{r} 15. \quad 13.4 \\ + 16.6 \\ \hline \end{array}$$

16.  $350 \times n = 35,000$      $n =$  \_\_\_\_\_

17.  $n \times 36 = 360$      $n =$  \_\_\_\_\_

**Algebra: Change Linear Units**

Complete.

1.  $300 \text{ cm} = \underline{\hspace{2cm}} \text{ m}$     2.  $3 \text{ km} = \underline{\hspace{2cm}} \text{ m}$     3.  $4,000 \text{ m} = \underline{\hspace{2cm}} \text{ km}$

4.  $50 \text{ m} = \underline{\hspace{2cm}} \text{ dm}$     5.  $40 \text{ km} = \underline{\hspace{2cm}} \text{ m}$     6.  $68 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$

Write the correct unit.

7.  $500 \text{ cm} = \underline{\hspace{2cm}} \text{ m}$     8.  $60 \text{ dm} = \underline{\hspace{2cm}} \text{ m}$     9.  $8 \underline{\hspace{2cm}} = 8,000 \text{ m}$

10.  $20 \text{ cm} = \underline{\hspace{2cm}} \text{ dm}$     11.  $3,000 \text{ m} = 3 \underline{\hspace{2cm}}$     12.  $200 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$

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

13.  $12 \text{ m} \underline{\hspace{1cm}} 120 \text{ cm}$     14.  $14 \text{ m} \underline{\hspace{1cm}} 1,400 \text{ cm}$     15.  $3 \text{ km} \underline{\hspace{1cm}} 4,000 \text{ m}$

16.  $4 \text{ m} \underline{\hspace{1cm}} 3 \text{ km}$     17.  $30 \text{ dm} \underline{\hspace{1cm}} 3 \text{ m}$     18.  $300 \text{ m} \underline{\hspace{1cm}} 3,000 \text{ dm}$

Order from least to greatest.

19.  $2\text{m}; 100 \text{ cm}; 4 \text{ dm}; 3 \text{ km}$

20.  $3,000 \text{ m}; 3 \text{ dm}; 300 \text{ km}; 3,000 \text{ cm}$

\_\_\_\_\_

\_\_\_\_\_

**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. 
$$\begin{array}{r} 84 \\ \times 62 \\ \hline \end{array}$$

24. 
$$\begin{array}{r} 48,588 \\ - 40,315 \\ \hline \end{array}$$

25. 
$$\begin{array}{r} 315 \\ \times 27 \\ \hline \end{array}$$

26.  $4 \overline{)3,788}$

27.  $6 \overline{)973}$

28.  $8 \overline{)5,800}$

29.  $12 \overline{)144}$

30.  $4 \overline{)3604}$

## Capacity

### Vocabulary

Complete.

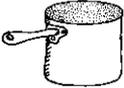
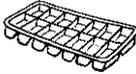
- A \_\_\_\_\_ is about the size of a sports-drink bottle.  
It contains 1,000 milliliters.
- A \_\_\_\_\_ is about the size of a drop of liquid in an eyedropper.

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.  a. 3 mL                      7.  a. 42 mL                      8.  a. 62 mL  
b. 30 mL                      b. 420 mL                      b. 620 mL  
c. 3 L                              c. 42 L                              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. 
$$\begin{array}{r} 187 \\ +435 \\ \hline \end{array}$$
                      16. 
$$\begin{array}{r} 461 \\ \times 34 \\ \hline \end{array}$$
                      17. 
$$4 \overline{)723}$$
                      18.  $5\frac{3}{16} + 7\frac{1}{16}$

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?

\_\_\_\_\_

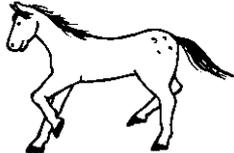
21. 5 km = \_\_\_\_\_ m                      22. 71 m = \_\_\_\_\_ cm                      23. 98 m = \_\_\_\_\_ dm

**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) |
| 2. _____ the amount of matter in an object                            | b. gram (g)      |
| 3. _____ the amount of mass that is about equal to a large paper clip | c. mass          |

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  |
| _____  | _____   | _____   | _____  |

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.  $72 \overline{)4,216}$

14.  $19 \overline{)103}$

15.  $10 \overline{)20,000}$

16.  $24 \overline{)1920}$

## 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

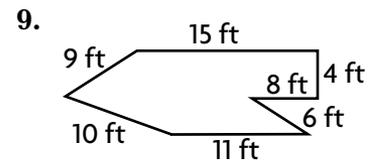
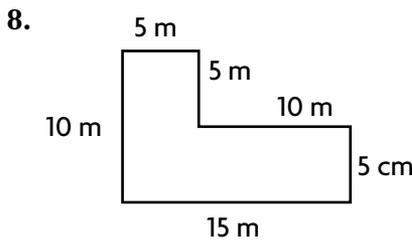
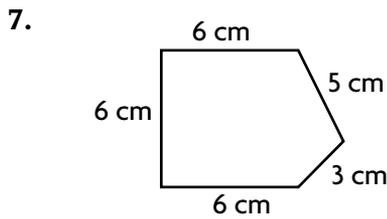
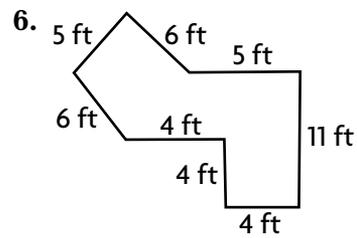
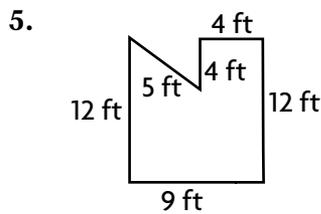
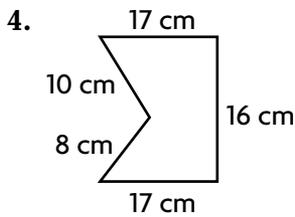
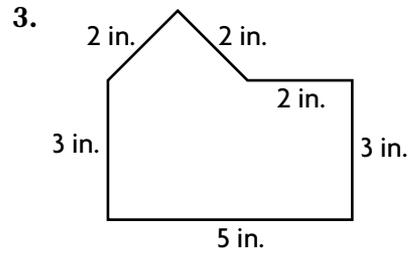
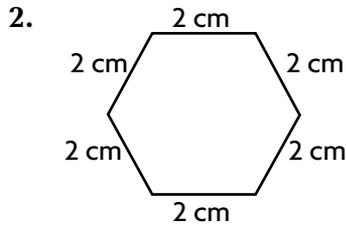
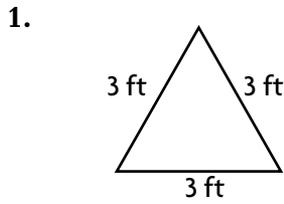
5.  $300 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$       6.  $400 \text{ dm} = \underline{\hspace{2cm}} \text{ m}$       7.  $7,000 \text{ m} = \underline{\hspace{2cm}} \text{ km}$

8.  $20 \text{ ft} = \underline{\hspace{2cm}} \text{ in.}$       9.  $4 \text{ lb} = \underline{\hspace{2cm}} \text{ oz}$       10.  $1 \text{ pt} = \underline{\hspace{2cm}} \text{ c}$

11.  $48 \text{ in.} = \underline{\hspace{2cm}} \text{ ft}$       12.  $6 \text{ c} = \underline{\hspace{2cm}} \text{ pt}$       13.  $20 \text{ qt} = \underline{\hspace{2cm}} \text{ gal}$

### Perimeter of Polygons

Name the polygon. Find the perimeter.



### Mixed Review

10. 
$$\begin{array}{r} 871 \\ - 323 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 165 \\ - 84 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} 3,284 \\ - 189 \\ \hline \end{array}$$

13. 
$$\begin{array}{r} 5,831 \\ - 428 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 2,179 \\ - 871 \\ \hline \end{array}$$

15.  $\frac{4}{5} - \frac{2}{10} = \underline{\hspace{2cm}}$

16.  $\frac{11}{12} - \frac{3}{4} = \underline{\hspace{2cm}}$

17.  $\frac{9}{15} - \frac{1}{5} = \underline{\hspace{2cm}}$

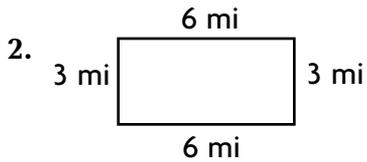
## Estimate and Find Perimeter

### Vocabulary

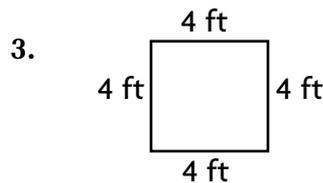
Fill in the blank to complete the sentence.

1. \_\_\_\_\_ is the distance around a polygon.

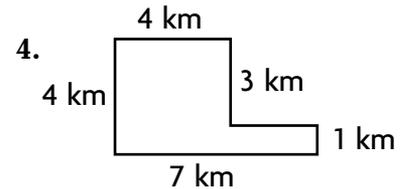
Use a formula to find the perimeter.



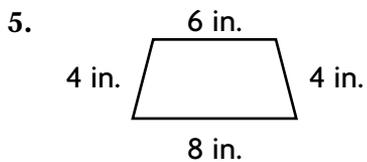
\_\_\_\_\_



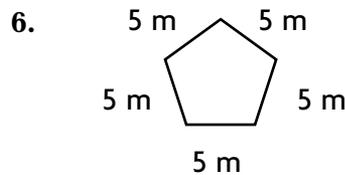
\_\_\_\_\_



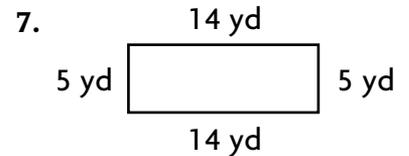
\_\_\_\_\_



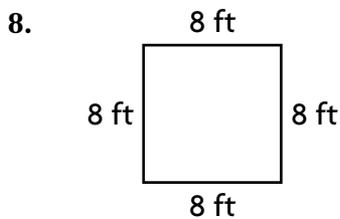
\_\_\_\_\_



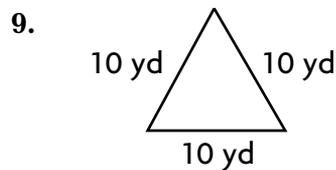
\_\_\_\_\_



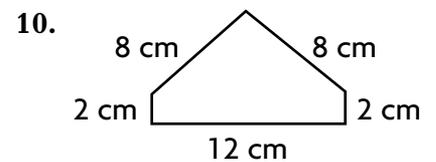
\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

### 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.  $12 \overline{)780}$

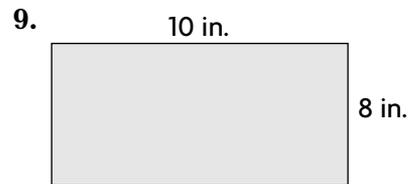
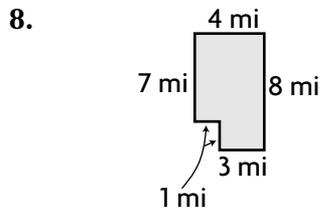
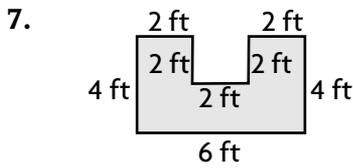
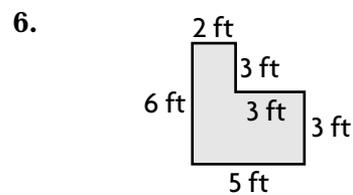
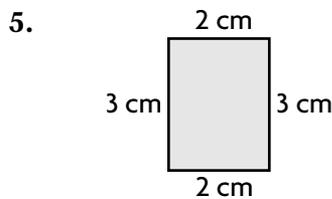
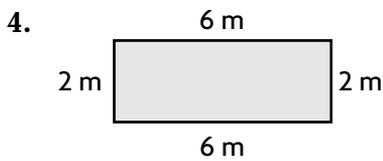
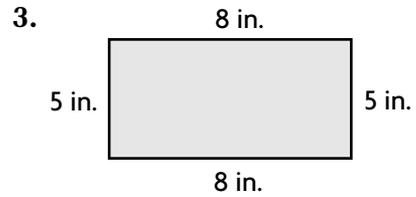
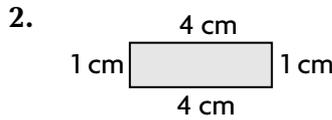
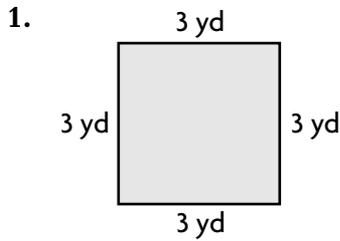
16.  $19 \overline{)1,862}$

17.  $8 \overline{)4,963}$

18.  $17 \overline{)3,727}$

### Estimate and Find Area

Find the area.



### Mixed Review

10. 
$$\begin{array}{r} 67 \\ \times 16 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 627 \\ \times 41 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} 129 \\ \times 76 \\ \hline \end{array}$$

13. 
$$\begin{array}{r} 492 \\ \times 10 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 412 \\ \times 89 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} 871 \\ \times 13 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 165 \\ \times 64 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} 52 \\ \times 37 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 69 \\ \times 28 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 955 \\ \times 31 \\ \hline \end{array}$$

20.  $(7 \times 3) - (4 \times 4) = \underline{\hspace{2cm}}$

21.  $(12 \times 3) - 15 = \underline{\hspace{2cm}}$

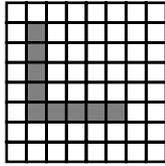
22.  $(19 + 28) - (8 \times 2) = \underline{\hspace{2cm}}$

23.  $(17 - 7) + (5 \times 5) = \underline{\hspace{2cm}}$

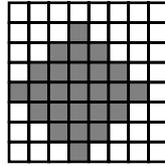
## Relate Area and Perimeter

Write the area and the perimeter.

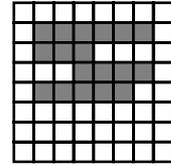
1.



2.



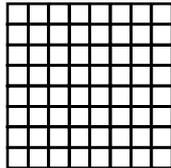
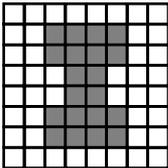
3.



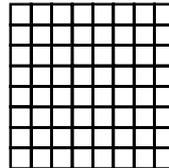
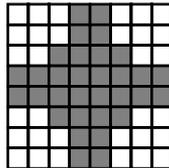
\_\_\_\_\_

For 4–6, find the area and perimeter of each figure. Then draw another figure that has the same area but a different perimeter.

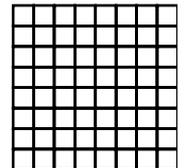
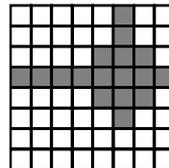
4.



5.



6.



\_\_\_\_\_

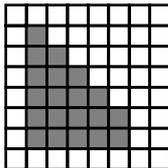
7. Which of the figures a–d below have the same area but different perimeters?

8. Which of the figures a–d below have the same perimeter but different areas?

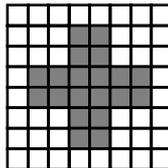
\_\_\_\_\_

\_\_\_\_\_

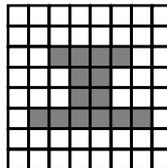
a.



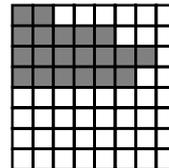
b.



c.



d.



### Mixed Review

9.  $7\frac{1}{2} + 3\frac{9}{12} =$  \_\_\_\_\_

10.  $4\frac{4}{9} - 1\frac{1}{5} =$  \_\_\_\_\_

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

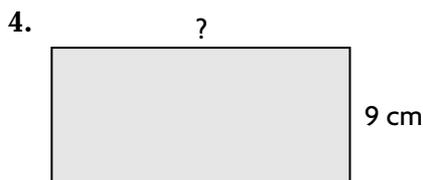
Width = \_\_\_\_\_

3. Area = 100 sq m

Width = 4 m

Length = \_\_\_\_\_

Find the unknown length.



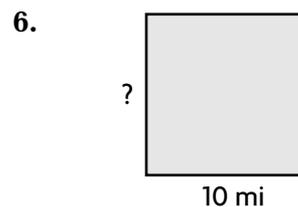
Area = 108 sq cm

\_\_\_\_\_



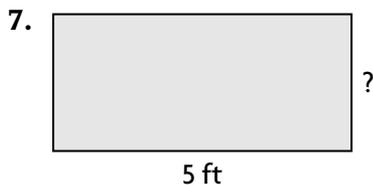
Area = 80 sq yd

\_\_\_\_\_



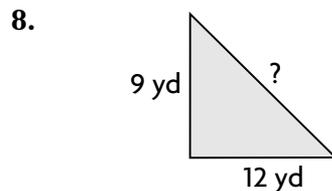
Area = 100 sq mi

\_\_\_\_\_



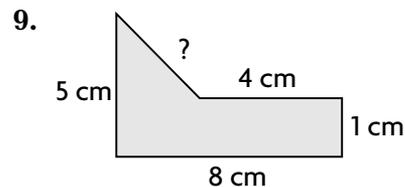
Perimeter = 18 ft

\_\_\_\_\_



Perimeter = 36 yd

\_\_\_\_\_



Perimeter = 24 cm

\_\_\_\_\_

## Mixed Review

10.  $8 \overline{)96}$

11.  $3 \overline{)42}$

12.  $5 \overline{)90}$

13.  $9 \overline{)207}$

14.  $2 \overline{)58}$

15.  $12 \overline{)300}$

16.  $18 \overline{)144}$

17.  $6 \overline{)246}$

18.  $11 \overline{)231}$

19.  $18 \overline{)270}$

## 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:  $l = 4$  yd,  $w = 2$  yd

Room 2:  $l = 8$  yd,  $w = 6$  yd

Room 3:  $l = 16$  yd,  $w = 18$  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.

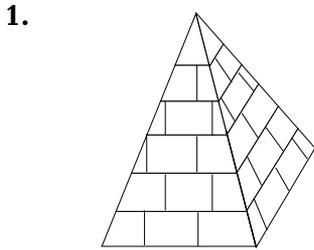
Picture Frame Sizes			
	Length (in.)	Width (in.)	Perimeter (in.)
Frame A	12	10	
Frame B	12	15	
Frame C	12	20	
Frame D	12	25	

### Mixed Review

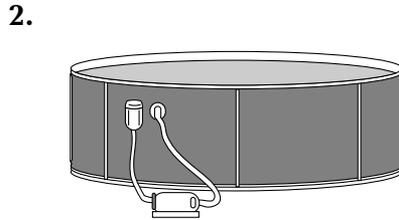
3.  $15 \times 7 =$  \_\_\_\_\_      4.  $121 \div 11 =$  \_\_\_\_\_      5.  $42 \times 8 =$  \_\_\_\_\_

## Faces, Edges, and Vertices

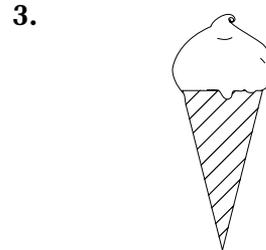
Which solid figure do you see in each?



\_\_\_\_\_

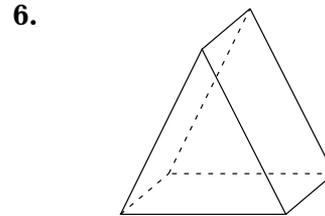
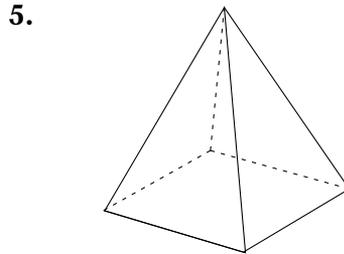
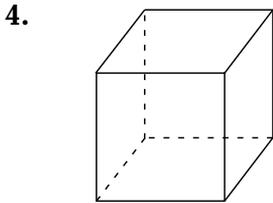


\_\_\_\_\_



\_\_\_\_\_

Copy the drawings. Circle each vertex, outline each edge in red, and shade one face in yellow.



Write the names of the faces and the number of each kind of face of the solid figure.

7. triangular pyramid

\_\_\_\_\_  
\_\_\_\_\_

8. triangular prism

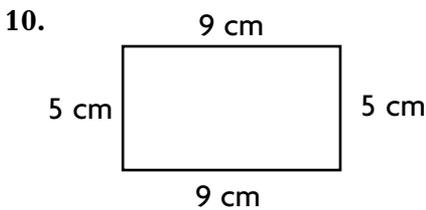
\_\_\_\_\_  
\_\_\_\_\_

9. square pyramid

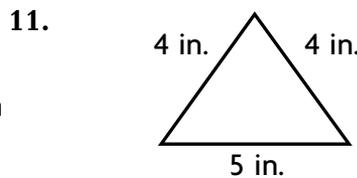
\_\_\_\_\_  
\_\_\_\_\_

### Mixed Review

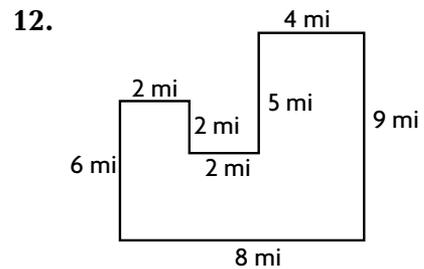
Find the perimeter of each figure.



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

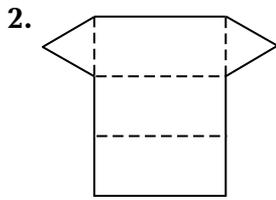
## Patterns for Solid Figures

### Vocabulary

Fill in the blank.

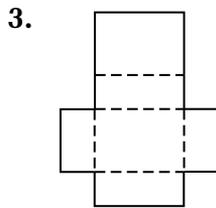
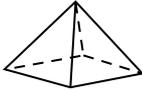
1. A \_\_\_\_\_ is a two-dimensional pattern of a three-dimensional figure.

Write the letter of the figure that is made with each net.



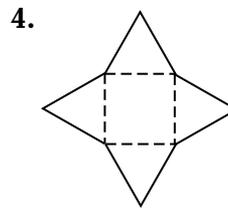
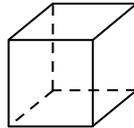
\_\_\_\_\_

a.



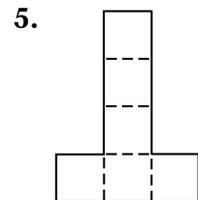
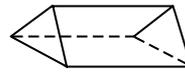
\_\_\_\_\_

b.



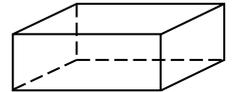
\_\_\_\_\_

c.

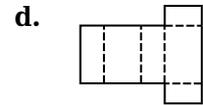
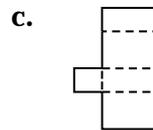
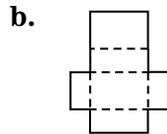
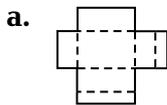


\_\_\_\_\_

d.



6. Which of the following nets would make a rectangular prism?



\_\_\_\_\_

### Mixed Review

7.  $10 \overline{)1,000}$

8.  $14 \overline{)0}$

9.  $25 \overline{)475}$

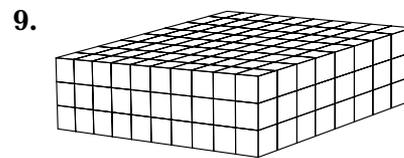
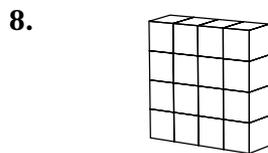
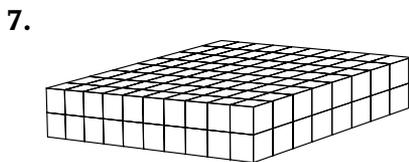
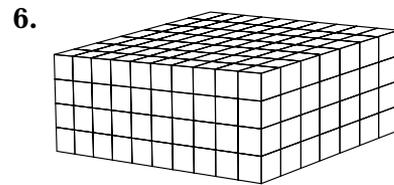
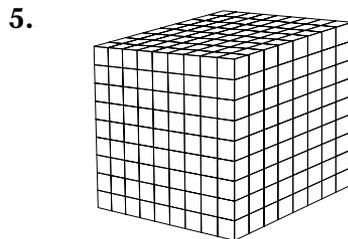
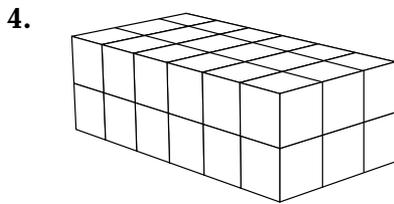
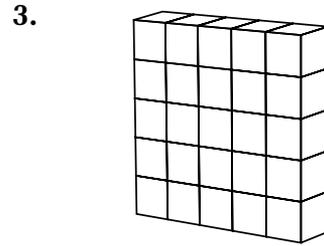
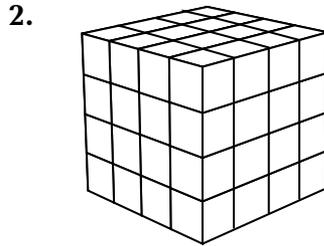
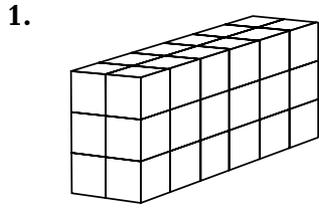
10.  $32 \overline{)256}$

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.



### Mixed Review

10. 
$$\begin{array}{r} 17 \\ \times 6 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 247 \\ \times 48 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} 89 \\ \times 17 \\ \hline \end{array}$$

13. 
$$\begin{array}{r} 478 \\ \times 45 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 112 \\ \times 39 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} 222 \\ \times 31 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 52 \\ \times 44 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} 63 \\ \times 12 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 678 \\ \times 18 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 456 \\ \times 48 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 75 \\ \times 36 \\ \hline \end{array}$$

21. 
$$\begin{array}{r} 67 \\ \times 58 \\ \hline \end{array}$$

22. 
$$\begin{array}{r} 159 \\ \times 43 \\ \hline \end{array}$$

23. 
$$\begin{array}{r} 517 \\ \times 62 \\ \hline \end{array}$$

24. 
$$\begin{array}{r} 802 \\ \times 24 \\ \hline \end{array}$$

## 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?
- 

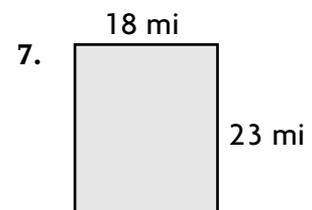
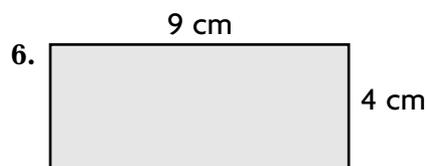
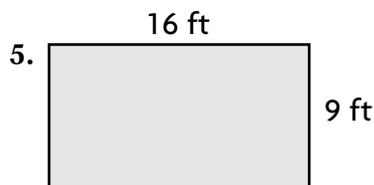
2. Klamo likes to take pictures of animals in her backyard. She has over 100 pictures of animals. She keeps her pictures in a box that is 1 foot high. What is the volume of the box?
- 

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.

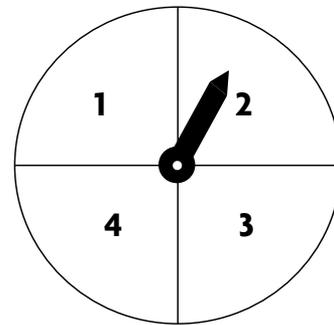
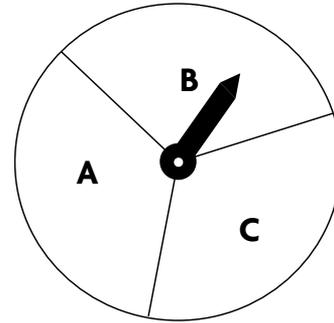


### Record Outcomes

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.

Number	Letter		
	A	B	C
1			
2			
3			
4			



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. 
$$\begin{array}{r} 318,849 \\ + 984,741 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 52,842 \\ \times \quad 6 \\ \hline \end{array}$$

7.  $17 \overline{)893}$

8.  $\frac{5}{12} - \frac{1}{4} = \underline{\hspace{2cm}}$

9.  $\frac{7}{15} - \frac{9}{30} = \underline{\hspace{2cm}}$

10. 
$$\begin{array}{r} 2.875 \\ + 0.789 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 79.32 \\ - 42.98 \\ \hline \end{array}$$

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.  $(2 \times 4) + (2 \times 2) = \blacksquare$

\_\_\_\_\_

8. Round 278,150 to the nearest thousand.
- \_\_\_\_\_

9. Compare. Write  $<$ ,  $>$ , or  $=$ .  
379,560  $\bullet$  379,561
- \_\_\_\_\_

10. Solve for  $n$ .  
 $20 - (12 - 2) = n$
- \_\_\_\_\_

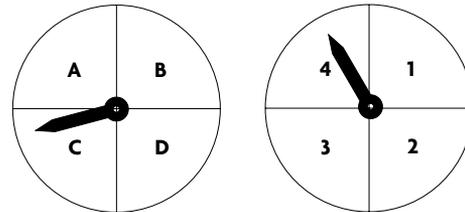
## Problem Solving Strategy

### Make an Organized List

Make an organized list to solve.

- A spinner is labeled 6, 7, and 8. List all of the possible outcomes of spinning the pointer on the spinner 2 times.  
\_\_\_\_\_  
\_\_\_\_\_
- 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.



- How many possible outcomes are there?  
\_\_\_\_\_
- How many possible outcomes would there be if the spinners had 6 numbers?  
\_\_\_\_\_
- List all of the possible outcomes.  
\_\_\_\_\_  
\_\_\_\_\_
- How many of the possible outcomes include the letter F?  
\_\_\_\_\_

### Mixed Review

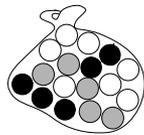
- The race started at 6:53 P.M. and ended at 7:14 P.M. How long did the race take?  
\_\_\_\_\_
- Find the sum of \$15,666.22 and \$14,323.56.  
\_\_\_\_\_
- $(6 \times 4) - (3 \times 2) = \blacksquare$   
\_\_\_\_\_
- Round 4,278,555 to the nearest ten thousand.  
\_\_\_\_\_

## Predict Outcomes of Experiments

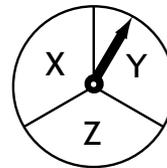
Write *likely*, *unlikely*, or *equally likely* for the events.

- tossing an even number or tossing an odd number using a cube numbered 1–6  
\_\_\_\_\_
- tossing a prime number on a cube labeled 3, 5, 7, 9, 11, and 13  
\_\_\_\_\_
- pulling a yellow marble from a bag with 10 green marbles, 6 red marbles, and 1 yellow marble  
\_\_\_\_\_
- the pointer of a spinner with the numbers 1, 2, 3, 3, 3, 3, 3, 6, 6 stopping on 3  
\_\_\_\_\_

For 5–8, look at the pictures.



- Which 2 types of marbles are equally likely to be pulled from the bag of marbles?  
\_\_\_\_\_
- Which type are you most likely to pull? Why?  
\_\_\_\_\_  
\_\_\_\_\_



- Is it *certain* or *impossible* that the pointer on the spinner will stop on a capital letter?  
\_\_\_\_\_
- Is it *certain* or *impossible* that the pointer on the spinner will stop on an M?  
\_\_\_\_\_

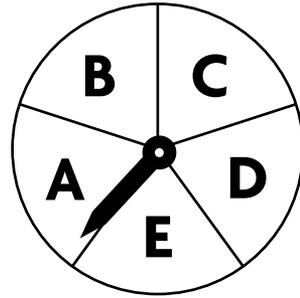
## Mixed Review

- What is the missing number in the pattern?  
2, 3, \_\_, 7, 11
- Estimate the product of 68 and 21.  
\_\_\_\_\_

## Probability as a Fraction

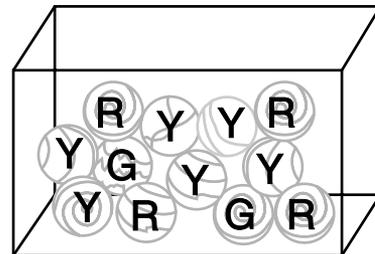
Look at the spinner at the right. Find the probability of each event.

- the letter *C* \_\_\_\_\_
- the letter *E* \_\_\_\_\_
- a vowel \_\_\_\_\_
- a letter in the word *CAB* \_\_\_\_\_
- the letter *F* \_\_\_\_\_
- a consonant \_\_\_\_\_
- 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.

- a marble that is not red \_\_\_\_\_
- an orange marble \_\_\_\_\_
- a green marble \_\_\_\_\_
- a yellow marble \_\_\_\_\_
- 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

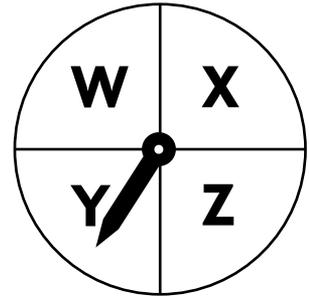
\_\_\_\_\_

## More About Probability

### Use Data

For 1–4, use the spinner and the table.

SPINNER EXPERIMENT—100 SPINS				
Outcome	W	X	Y	Z
Tally				



1. What is the mathematical probability of the pointer stopping on each letter on the spinner?

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?

\_\_\_\_\_

2. Use the data in the table. Find the probability of the pointer stopping on each letter in the experiment.

W \_\_\_\_\_ Y \_\_\_\_\_

X \_\_\_\_\_ Z \_\_\_\_\_

4. Compare the probability in the experiment with the mathematical probability of the pointer stopping on X, Y, and Z.

\_\_\_\_\_

\_\_\_\_\_

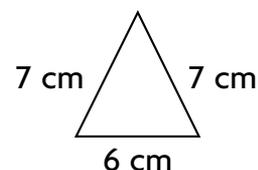
\_\_\_\_\_

### 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?



\_\_\_\_\_

## Test for Fairness

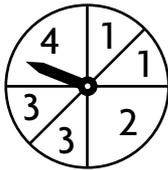
### Vocabulary

Complete the blank.

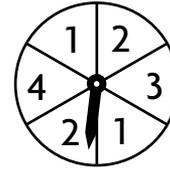
1. \_\_\_\_\_ in a game means that one player is as likely to win as another. Each player has an equal chance of winning.

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.



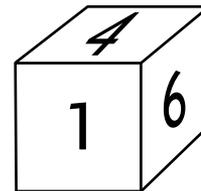
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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. 
$$\begin{array}{r} 951,511 \\ + 314,288 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 65,849 \\ \times \quad 8 \\ \hline \end{array}$$

11.  $2\frac{1}{4} + 4\frac{5}{6} =$  \_\_\_\_\_

## 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.

### BAG OF MARBLES CLUES

- The probability of drawing a red marble is  $\frac{3}{10}$ .
- The probability of drawing Jack's color is  $\frac{2}{10}$ .
- The probability of not drawing Kylie's color is  $\frac{9}{10}$ .

---



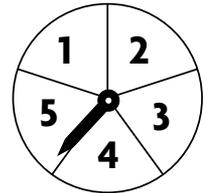
---



---

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.

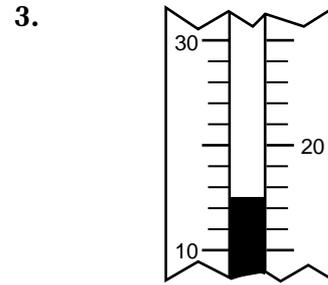
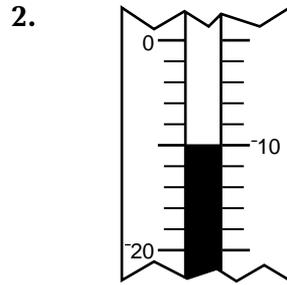
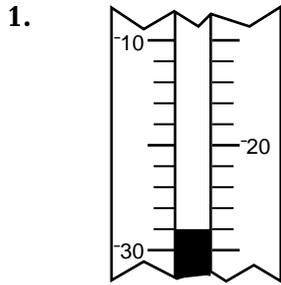
---

7. List 5 multiples of 9.

---

## Temperature: Fahrenheit

Use the thermometer to find the temperature in °F.



\_\_\_\_\_

For 4–7, use a thermometer to find the change in temperature.

4.  $0^{\circ}\text{F}$  and  $35^{\circ}\text{F}$

5.  $-10^{\circ}\text{F}$  and  $10^{\circ}\text{F}$

\_\_\_\_\_

\_\_\_\_\_

6.  $-5^{\circ}\text{F}$  and  $25^{\circ}\text{F}$

7.  $-15^{\circ}\text{F}$  and  $30^{\circ}\text{F}$

\_\_\_\_\_

\_\_\_\_\_

Circle the temperature that is a better estimate.

8. A pot of boiling water

9. A summer day in Florida

10. An air-conditioned office building

$10^{\circ}\text{F}$  or  $212^{\circ}\text{F}$

$30^{\circ}\text{F}$  or  $95^{\circ}\text{F}$

$75^{\circ}\text{F}$  or  $150^{\circ}\text{F}$

### 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. 
$$\begin{array}{r} 37.4 \\ + 12.9 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 72.8 \\ + 15.2 \\ \hline \end{array}$$

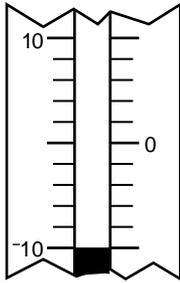
17. 
$$\begin{array}{r} 27.4 \\ - 18.6 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 29.9 \\ - 11.9 \\ \hline \end{array}$$

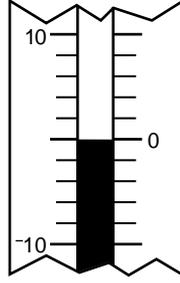
## Temperature: Celsius

Use the thermometer to find the temperature in °C.

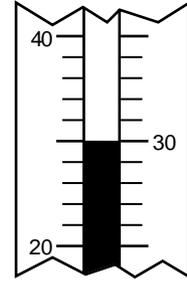
1.



2.



3.



\_\_\_\_\_

For 4–7, use a thermometer to find the change in temperature.

4.  $67^{\circ}\text{C}$  and  $-55^{\circ}\text{C}$ 5.  $48^{\circ}\text{C}$  and  $-10^{\circ}\text{C}$ 

\_\_\_\_\_

\_\_\_\_\_

6.  $-1^{\circ}\text{C}$  and  $50^{\circ}\text{C}$ 7.  $-15^{\circ}\text{C}$  and  $22^{\circ}\text{C}$ 

\_\_\_\_\_

\_\_\_\_\_

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

 $-1^{\circ}\text{C}$  or  $65^{\circ}\text{C}$  $30^{\circ}\text{C}$  or  $100^{\circ}\text{C}$  $15^{\circ}\text{C}$  or  $80^{\circ}\text{C}$ 

### Mixed Review

11. What is the change in temperature, in °F, from the boiling point ( $212^{\circ}\text{F}$ ) to the freezing point ( $32^{\circ}\text{F}$ ) of water?

12. How are these odd numbers alike? 5, 11, 17, 19, 23

\_\_\_\_\_

\_\_\_\_\_

13.  $25 \overline{)17,650}$

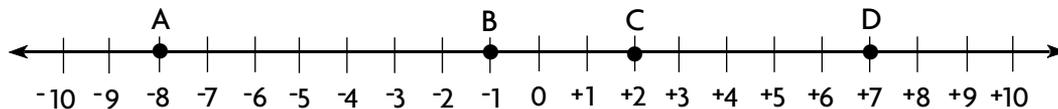
14.  $22 \overline{)12,056}$

15.  $17 \overline{)4,952}$

16.  $29 \overline{)511,607}$

## Negative Numbers

Use the number line to name the number each letter represents.



1. A = \_\_\_\_\_      2. B = \_\_\_\_\_      3. C = \_\_\_\_\_      4. D = \_\_\_\_\_

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

5.  $-8 \bigcirc +2$       6.  $+8 \bigcirc +2$       7.  $0 \bigcirc +2$       8.  $2 \bigcirc +2$   
 9.  $+9 \bigcirc +2$       10.  $+1 \bigcirc +8$       11.  $0 \bigcirc -1$       12.  $-2 \bigcirc +10$

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  $-8^\circ\text{F}$  to  $8^\circ\text{F}$ ?

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.

		Heat Index Table			
		Outside Temperature (°F)			
Relative Humidity		75	80	85	90
	70%	78	86	94	107
	80%	79	87	98	114
	90%	80	89	103	113

- Find the heat index for an outside temperature of  $90^{\circ}\text{F}$  with a relative humidity of 70%.  
\_\_\_\_\_
- What would be the relative humidity if it is  $85^{\circ}\text{F}$  with a heat index of  $98^{\circ}\text{F}$ ?  
\_\_\_\_\_
- What would the outside temperature be when the relative humidity is 90% with a heat index of  $80^{\circ}$ ?  
\_\_\_\_\_
- Joe wants to take a walk. The relative humidity is 60% and the outside temperature is  $32^{\circ}\text{C}$ . Will it feel warmer or cooler than the outside temperature? Explain.  
\_\_\_\_\_  
\_\_\_\_\_
- 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  $\bigcirc$ .

6.  $7 \times 9 \bigcirc 126 \div 2$

7.  $-7 \bigcirc +5$

8.  $3.45 \bigcirc 3.04$

Subtract.

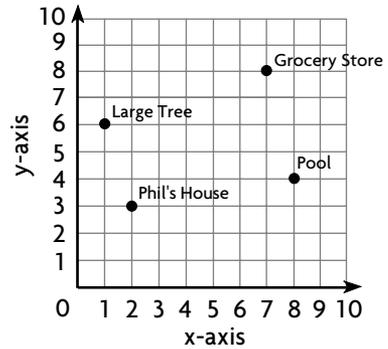
9. 
$$\begin{array}{r} 56,703 \\ - 9,846 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 187,312 \\ - 74,961 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 836,031 \\ - 248,712 \\ \hline \end{array}$$

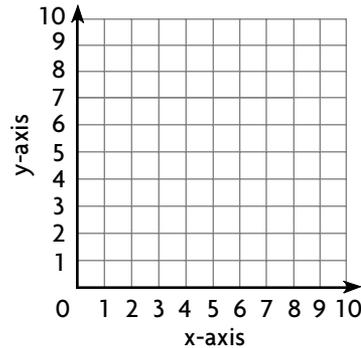
## Use a Coordinate Grid

Write the ordered pair for each object on the map.



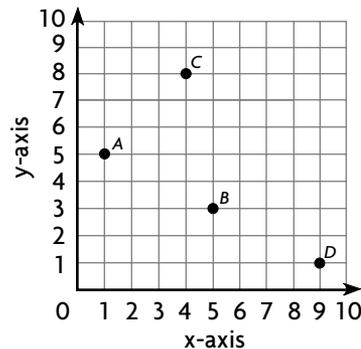
- |                           |                          |
|---------------------------|--------------------------|
| 1. pool<br>_____          | 2. Phil's house<br>_____ |
| 3. grocery store<br>_____ | 4. large tree<br>_____   |

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<br>_____ | 14. point B<br>_____ |
| 15. point C<br>_____ | 16. point D<br>_____ |

### Mixed Review

Round each factor. Estimate the product.

- |                             |                             |
|-----------------------------|-----------------------------|
| 17. $24 \times 81 =$ _____  | 18. $36 \times 52 =$ _____  |
| 19. $88 \times 11 =$ _____  | 20. $45 \times 219 =$ _____ |
| 21. $19 \times 283 =$ _____ | 22. $72 \times 72 =$ _____  |
| 23. $39 \times 158 =$ _____ | 24. $18 \times 18 =$ _____  |



## 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.  $y = 4x + 2$

Input	$x$	2	4	6
Output	$y$			

14.  $y = (x + 1) - 1$

Input	$x$	1	2	3
Output	$y$			

15.  $y = 2x + 5$

Input	$x$	3	6	9
Output	$y$			

16.  $y = 3x + 22$

Input	$x$	1	2	3
Output	$y$			

17.  $y = 9x + 1$

Input	$x$	1	4	7
Output	$y$			

18.  $y = (x + 2) + 2$

Input	$x$	0	6	12
Output	$y$			

19.  $y = (x - 1) + 2$

Input	$x$	1	5	9
Output	$y$			

20.  $y = 3x + 14$

Input	$x$	2	4	6
Output	$y$			

21.  $y = 8x + 6$

Input	$x$	1	2	3
Output	$y$			

## Mixed Review

Add.

22. 
$$\begin{array}{r} 345 \\ + 456 \\ \hline \end{array}$$

23. 
$$\begin{array}{r} 3,657 \\ + 1,737 \\ \hline \end{array}$$

24. 
$$\begin{array}{r} 7,324 \\ + 1,587 \\ \hline \end{array}$$

25. 
$$\begin{array}{r} 3,542 \\ + 8,732 \\ \hline \end{array}$$

26. 
$$\begin{array}{r} 21,347 \\ + 3,547 \\ \hline \end{array}$$

27. 
$$\begin{array}{r} 13,216 \\ + 543 \\ \hline \end{array}$$

28. 
$$\begin{array}{r} 5,542 \\ + 5,842 \\ \hline \end{array}$$

29. 
$$\begin{array}{r} 3,211 \\ + 6,544 \\ \hline \end{array}$$

30. 
$$\begin{array}{r} 7,437 \\ + 8,472 \\ \hline \end{array}$$

31. 
$$\begin{array}{r} 9,813 \\ + 7,134 \\ \hline \end{array}$$

## Graph an Equation

For 1–3, use the equation  $y = x + 4$ .

1. Complete this function table.

Input	$x$	1	2	3	4	5	6	7	8	9	10
Output	$y$										

2. Write the input/output values as ordered pairs  $(x, y)$ .

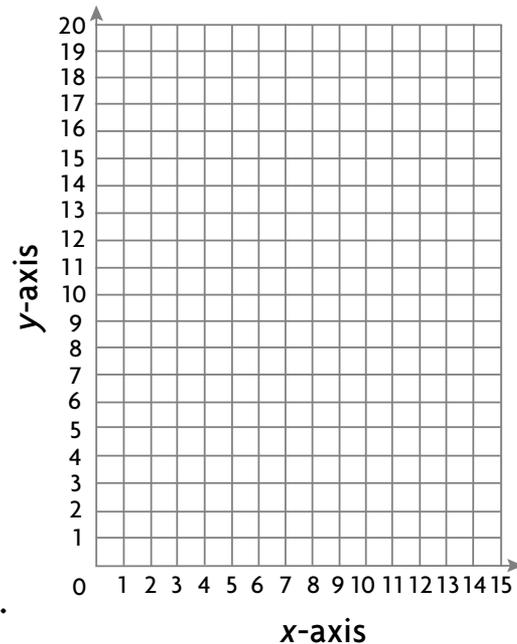
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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.  $y = 2x$

Input	$x$	1	2	3	4	5	6	7	8	9	10
Output	$y$										

\_\_\_\_\_

\_\_\_\_\_

### 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  $y$ .

\_\_\_\_\_  
\_\_\_\_\_

Input	$x$	1	2	3	4	5
Output	$y$	2	4	6	8	10

2. Describe the relationship between  $x$  and  $y$ .

\_\_\_\_\_  
\_\_\_\_\_

Input	$x$	1	2	3	4	5
Output	$y$	2	3	4	5	6

3. Describe the relationship between  $x$  and  $y$ .

\_\_\_\_\_  
\_\_\_\_\_

Input	$x$	1	2	3	4	5
Output	$y$	4	8	12	16	20

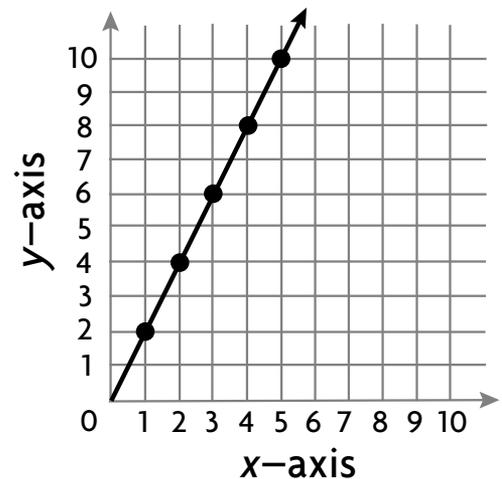
For 4–5, use the graph at the right.

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.  $\frac{7}{9}, \frac{2}{3}, \frac{6}{6}$

\_\_\_\_\_