# Multiplying by Multiples of 10, 100, or 1,000

Find each product. Use mental math.

**13. Number Sense** How many zeros will the product of  $7 \times 5,000$  have?

Mr. Young has 30 times as many pencils as Jack. The whole school has 2,000 times as many pencils as Jack. If Jack has 2 pencils, how many pencils does

14. Mr. Young have?

15. the whole school have?

### **Test Prep**

**16.** Find  $3 \times 1,000$ .

**A.** 30

**B.** 300

**C.** 3,000

**D.** 30,000

17. Writing in Math Wendi says that the product of  $5 \times 400$  will have 2 zeros. Is she correct? Explain.

## **Estimating Products**

Estimate each product.

**1.** 7 × 42 is close to 7 × \_\_\_\_\_

**2.** 9 × 511 is close to 9 × \_\_\_\_\_

**3.** 5 × 79 \_\_\_\_\_

**4.** 6 × 32 \_\_\_\_\_

**5.** 4 × 63

**6.** 8 × 102 \_\_\_\_\_

**7.** 9 × 354 \_\_\_\_\_

**8.** 3 × 428 \_\_\_\_\_

**9.** 7 × 493 \_\_\_\_\_

**10.** 5 × 814 \_\_\_\_\_

**11.** 2 × 3,541 \_\_\_\_\_

**12.** 8 × 783 \_\_\_\_\_

13. A dog weighs 27 lb. A football player weighs 9 times as much as the dog. About how many pounds does the football player weigh? 14. Nyesha has 872 stamps in her stamp collection. Her mother has 8 times as many stamps. About how many stamps does Nyesha's mother have?

### **Test Prep**

**15.** Alma traveled 324 mi to visit her grandmother. Kevin traveled 5 times as far to see his uncle. About how many miles did Kevin travel?

**A.** 150 mi

- **B.** 1,500 mi
- **C.** 6,000 mi
- **D.** 15,000 mi
- **16.** Writing in Math Lana found the exact answer to  $6 \times 623$ . Her exact answer was less than her estimate of 3,600.

Is Lana's exact answer correct? Explain.

© Pearson Education, Inc.

## **Mental Math**

Use mental math to find each product.

**1.** 
$$50 \times 3 =$$
 \_\_\_\_\_

- **13.** Suppose an office building is 4 times as tall as a tree that measures 52 ft. How tall is the office building?
- **14.** Suppose a baseball stadium is 6 times as wide as an equipment trailer that measures 73 feet. How wide is the baseball stadium?
- **15.** Algebra  $\ln n \times p = 185$ , n is a two-digit number and p is a one-digit number. What numbers do n and p represent?

#### Test Prep

**16.** Which of the following has a greater product than  $29 \times 8$ ?

A.  $34 \times 5$ 

**B.**  $27 \times 9$ 

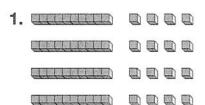
 $\mathbf{C.}\ 38 \times 4$ 

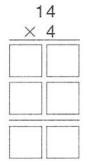
**D.**  $25 \times 9$ 

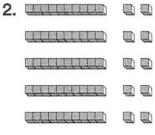
17. Writing in Math Explain how you would find the product of  $3 \times 75$  by using the break apart method.

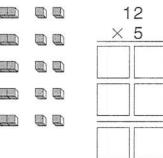
## **Using Arrays to Multiply**

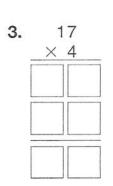
Use the array to find the partial products and the product. Complete the calculation.

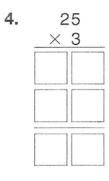


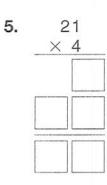












**9.** 
$$5 \times 29 =$$
 \_\_\_\_\_ **10.**  $23 \times 3 =$  \_\_\_\_\_ **11.**  $21 \times 6 =$  \_\_\_\_\_

12. Clyde planted 4 rows of tomato seeds. Each row has 12 seeds. How many tomato seeds did Clyde plant?

### **Test Prep**

- **13.** Find  $7 \times 22$ .
  - **A.** 54
- **B.** 144
- **C**. 152
- **D.** 154
- **14.** Writing in Math Write a description of an array of stickers using the product of  $3 \times 15$ .

#### PROBLEM-SOLVING STRATEGY

# Try, Check, and Revise

Use the first try to help you make a second try. Finish solving the problem.

1. Anton put 35 marbles equally into 5 jars. Each jar holds either 5 large marbles or 7 small marbles. What size of marbles did Anton put into the jars?

5 jars x 5 large marbles

That's not enough.

Try, check, and revise to solve each problem. Write the answer in a complete sentence.

- 2. Lenore earned \$6 per hour and Dora earned \$8 per hour. Lenore and Dora worked the same number of hours. Lenore earned \$54. How much did Dora earn?
- 3. Thomas read 3 of the books. He read a total of 272 pages. Which of the books did he read?

Book	Pages
Dark Mysteries	87
History of France	146
Superhero Stories	72
Artists to Know	113

4. Heather read 2 of the books. She also read a music book with 211 pages. She read a total of 429 pages. Which of the books did she read?

Find each product. Tell what computation method you used.

- **9.** Mervin's Market sells about 1,250 lb of apples in 1 year. How many pounds of apples will Mervin's Market sell in 4 years?
- 10. The airline flies 8,112 mi in 1 day. How many miles does the airline fly in 6 days?

## Test Prep

**11.** A theme park has 6 parking lots. If each of the parking lots holds 1,100 cars, how many total cars can park?

**A.** 6,000 cars

**B.** 6,100 cars

**C.** 6,500 cars

**D.** 6,600 cars

**12. Writing in Math** Which method would you use to find  $4,202 \times 8$ ? Explain.

#### P 5-9

## **Multiplying Money**

Find each product.

Find each cost.

#### **Test Prep**

- 13. Nemo wants to buy calendars for his family. Each calendar costs \$5.62. How much money do 5 calendars cost?
  - **A.** \$25.10
- **B.** \$28.00
- **C.** \$28.10
- **D.** \$30.10
- 14. Writing in Math At a local restaurant, a turkey sandwich costs \$6.50. An apple juice costs \$1.25. Would \$15.00 be enough to buy 2 sandwiches and 2 juices? Explain.

## Multiplying Three Factors P 5-10

1.  $2 \times 4 \times 9$ 

2.  $9 \times 8 \times 3$ 

3.  $4 \times 4 \times 10$ 

**4.**  $6 \times 50 \times 2$ 

**5.**  $8 \times 60 \times 5$ 

6.  $20 \times 7 \times 3$ 

**7.**  $2 \times 600 \times 5$ 

**8.**  $80 \times 6 \times 2$ 

**9.**  $4 \times 70 \times 4$ 

**10.** Show three ways to find  $40 \times 2 \times 5$ .

**11.** How many building blocks did Travis use to build his city?

Travis' Building Blocks

1 toy city = 4 buildings

1 building = 4 sides 1 side = 20 blocks

#### **Test Prep**

**12.** How many apples would you have altogether if you have 5 apples in each of 3 bowls on each of 4 tables?

A. 60 apples

B. 72 apples

C. 81 apples

D. 100 apples

13. Writing in Math What is the cost of a truckload of sand if there are 25 bags per truckload, 10 lb of sand per bag, and each pound of sand costs \$2? Show two different ways to solve the problem.

#### PROBLEM-SOLVING SKILL

## **Choose an Operation**

Draw a picture to show the main idea. Then choose an operation and solve the problem.

1. A sack of potatoes weighs 20 lb and holds 200 potatoes. A sack of apples weighs 20 lb and holds 325 apples. How many more apples are there in a 20 lb sack?

2. Shawna has 35 football cards and 5 times as many baseball cards in her sports-card collection. How many baseball cards does she have?

- 3. A pound of peaches costs \$1.29. How much does 4 lb of peaches cost?
- 4. The first modern electronic computer, called ENIAC, was introduced in 1946. Personal home computers were not available until 28 years later. In what year were personal home computers introduced?

#### PROBLEM-SOLVING APPLICATIONS

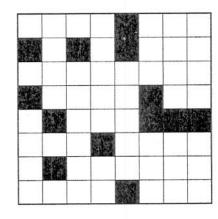
# **Paper Problems**

The business section of Caitlin's newspaper lists the performances of many stocks. There are 14 stocks listed in every 1 in. of the stock report.

- 1. How many stocks are listed in 6 in. of the stock report?
- 2. In 1 ft of the stock report, there are 168 stocks listed. How many stocks are listed in 5 ft of stock reports?

The lifestyle section of Caitlin's newspaper has a daily crossword puzzle. The puzzle has 8 rows and 8 columns.

3. How many total spaces are in the crossword puzzle?



- 4. There are 13 blocked (or black) spaces where you cannot write a letter. In how many spaces can you write a letter?
- 5. Suppose in 1 day you bought 3 copies of the newspaper for \$0.50 each. How much would it cost to do this for 6 days?