1. Find the property that each equation shows. Write the equation in the correct box.

$$15 \times (7 \times 9) = (15 \times 7) \times 9$$

$$23 + 4 + 109 = 4 + 23 + 109$$

$$13 + (3 + 7) = (13 + 3) + 7$$

$$87 \times 3 = 3 \times 87$$

$$1 \times 9 = 9$$

$$0 + 16 = 16$$

Identity Property of Addition

Commutative Property of Multiplication

Identity Property of Multiplication

Associative Property of Multiplication Commutative Property of Addition

Associative Property of Addition

2. For 2a-2d, select True or False for each statement.

2a.
$$170 \text{ is } \frac{1}{10} \text{ of } 17$$

True

False

2b. 660 is 10 times as much as 600

True

False

2c. 900 is $\frac{1}{10}$ of 9,000

True

False

- 2d. 4,400 is 10 times as much as 440
- True
- False

- **3.** Select other ways to write 700,562. Mark all that apply.
 - (A) $(7 \times 100,000) + (5 \times 1,000) + (6 \times 10) + (2 \times 1)$
 - **B** seven hundred thousand, five hundred sixty-two
 - \bigcirc 700,000 + 500 + 60 + 2
 - \bigcirc 7 hundred thousands + 5 hundreds + 62 tens
- **4.** Carrie has 140 coins. She has 10 times as many coins as she had last month. How many coins did Carrie have last month?

coins

- **5.** Valerie earns \$24 per hour. Which expression can be used to show how much money she earns in 7 hours?
 - (7+20)+(7+4)
 - $(\mathbf{B}) \quad (7 \times 20) + (7 \times 4)$
 - $(7+20)\times(7+4)$
 - $(7 \times 20) \times (7 \times 4)$
- **6.** The table shows the equations Ms. Valez discussed in math class today.

$$6 \times 10^{0} = 6$$

$$6 \times 10^{1} = 60$$

$$6\times10^2=600\,$$

$$6\times10^3=6{,}000$$

Explain the pattern of zeros in the product when multiplying by powers of 10.

O Houghton Mifflin Harcourt Publishing Company

7. It is 3,452 miles round trip to Craig's aunt's house. If he travels to her house 3 times this year, how many miles did he travel in all?

miles

8. Lindsey earns \$33 per day at her part-time job. Complete the table to show the total amount Lindsey earns.

Lindsey's Earnings	
Number of Days	Total Amount
3	
8	
14	

Personal Math Trainer

9. HINK SMARTER + Jackie followed these steps to evaluate the expression $15 - (37 + 8) \div 3$.

$$37 + 8 = 45$$

$$45 - 15 = 30$$

$$30 \div 3 = 10$$

Mark looks at Jackie's work and says she made a mistake. He says she should have divided by 3 before she subtracted.

Part A

Which student is correct? Explain how you know.

Part B

Evaluate the expression.

- **10.** Carmine buys 8 plates for \$1 each. He also buys 4 bowls. Each bowl costs twice as much as each plate. The store is having a sale that gives Carmine \$3 off the bowls. Which numerical expression shows how much he spent?
 - (8 × 1) + [(4 × 16) 3]
 - **B** $(8 \times 1) + [4 \times (16 3)]$
 - $(8 \times 1) + [(4 \times 2) 3]$
 - (\mathbf{D}) $(8 \times 4) + [(4 \times 2) 3]$
- **11.** Evaluate the numerical expression.

$$2 + (65 + 7) \times 3 =$$

12. An adult elephant eats about 300 pounds of food each day. Write an expression to represent the number of pounds of food a herd of 12 elephants eat in 5 days.

13. Jason is solving a homework problem.

Arianna buys 5 boxes of granola bars. Each box contains 12 granola bars. Arianna eats 4 bars.

Jason writes a numerical expression to represent the situation. His expression, $(12-4)\times 5$, has a mistake.

Part A

Explain Jason's mistake.

Part B

Write an expression to show how many granola bars are left, and then solve it.

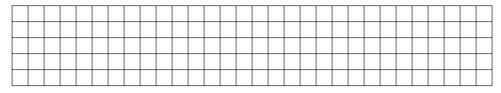
Com
Publishing
Harcourt
Mifflin
Houghton
0

pany

14. Paula collected 75 stickers. She shares her stickers with 5 of her friends equally. How many stickers will each friend get?

Part A

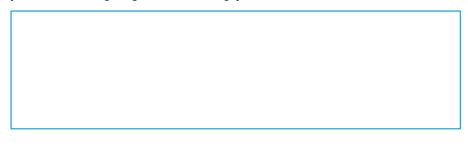
Use the array to show your answer.



Part B

Use the multiplication sentence to complete the division sentence.

15. Goderfer Mario is making dinner for 9 people. Mario buys 6 containers of soup. Each container is 18 ounces. If everyone gets the same amount of soup, how much soup will each person get? How can you solve a simpler problem to help you find the solution?



16. Jill wants to find the quotient. Use multiplication and the Distributive Property to help Jill find the quotient.

Multiplication

Distributive Property

17. If Jeannie eats 1,840 calories a day, how many calories will she have eaten after 182 days?

____calories

18. There are 8 teachers going to the science museum. If each teacher pays \$15 to get inside, how much did the teachers pay?

\$ _____

- **19.** Select other ways to write 50,897. Mark all that apply.
 - $(5 \times 10,000) + (8 \times 100) + (9 \times 10) + (7 \times 1)$
 - (B) 50,000 + 800 + 90 + 7
 - \bigcirc 5,000 + 800 + 90 + 7
 - **D** fifty thousand, eight hundred ninety-seven
- **20.** For numbers 20a–20b, select True or False.
 - 20a. 55 (12 + 2), value: 41
- True
- False

- 20b. $25 + (14 4) \div 5$, value: 27
- True
- False
- **21.** Tara bought 2 bottles of juice a day for 15 days. On the 16th day, Tara bought 7 bottles of juice.

Write an expression that matches the words.

- **22.** Select other ways to express 10^2 . Mark all that apply.
 - **A** 20
 - **B** 100
 - \bigcirc 10 + 2
 - \bigcirc 10 × 2
 - (E) 10 + 10
 - (\mathbf{F}) 10×10