

# Chapter 6 Review

Write the correct answer in the blank at the right of each question.

- Write  $\left(\frac{1}{6}\right)^3$  as a product of the same factor. Then find the value. 1. \_\_\_\_\_
- Write  $9 \times 9 \times 9 \times 9 \times 9$  using an exponent. 2. \_\_\_\_\_

Find the value of each expression.

- $5 + 4 \times 5 - 7$  3. \_\_\_\_\_
- $8 \times (3^3 + 2) - 11$  4. \_\_\_\_\_
- $30 \times 4 - 2^2 \times 5$  5. \_\_\_\_\_
- $55 \div 5 \times 2^3 \div 4$  6. \_\_\_\_\_
- Tanya purchased 4 hammers for \$11.79 each and 7 screwdrivers for \$6.65 each. Write an expression for the total cost of the tools. Then find the total cost. 7. \_\_\_\_\_

Evaluate each expression if  $a = 3$ ,  $b = \frac{2}{3}$ , and  $c = 6$ .

- $2a + 5$  8. \_\_\_\_\_
- $2c + 3a$  9. \_\_\_\_\_
- $c^2 + 3a \times b$  10. \_\_\_\_\_
- Koby took \$43 to the movie theater. If he paid for 3 tickets that each cost  $d$  dollars, he will have  $43 - 3d$  left. How much does he have left if the tickets cost \$9.75 each? 11. \_\_\_\_\_

Write each phrase as an algebraic expression.

- 16 seconds faster than Najib's time 12. \_\_\_\_\_
- one piece more than twice the number of pieces 13. \_\_\_\_\_
- one third of Danielle's height 14. \_\_\_\_\_
- six meters less than four times the width 15. \_\_\_\_\_
- Devante made and sold 8 pitchers of lemonade at his lemonade stand. He used the same number of lemons in each pitcher. He had 3 lemons left over. Write an expression to represent the total number of lemons Devante had in all. 16. \_\_\_\_\_
- Helen divided her colored pencils evenly among herself and three friends. Write an expression to represent the number of pencils each person received. 17. \_\_\_\_\_

# Chapter 6 Review

NAME \_\_\_\_\_ DATE \_\_\_\_\_ PERIOD \_\_\_\_\_

SCORE \_\_\_\_\_

(continued)

Determine whether the two expressions are equivalent. If so, tell what property is applied. If not, explain why.

18.  $(8 \times 2) \times 5 = 8 \times (2 \times 5)$  18. \_\_\_\_\_

19.  $13 + 0 = 13$  19. \_\_\_\_\_

20.  $12 - (5 - 3) = (12 - 5) - 3$  20. \_\_\_\_\_

21. Niko worked out for 45 minutes, 22 minutes, and 25 minutes last week. Use the Commutative Property to find the total number of minutes he worked out. 21. \_\_\_\_\_

Find each product mentally. Show the steps you used.

22.  $6 \times 52$  22. \_\_\_\_\_

23.  $4 \times 7.1$  23. \_\_\_\_\_

Use the Distributive Property to rewrite each algebraic expression.

24.  $5(x + 9)$  24. \_\_\_\_\_

25.  $11(12 + r)$  25. \_\_\_\_\_

26.  $9(v + 2)$  26. \_\_\_\_\_

27.  $7(b + 3.5)$  27. \_\_\_\_\_

28. Mrs. Sosa bought a T-shirt and a pair of socks for each of her 14 grandchildren. The table lists the cost of each item. Use the Distributive Property to find the total amount of money she spent on her grandchildren.

Item	Cost(\$)
Pants	19.00
Socks	4.95
T-shirt	12.00

28. \_\_\_\_\_

Simplify each expression.

29.  $7x + 3x + 4x$  29. \_\_\_\_\_

30.  $5(2x + 4y)$  30. \_\_\_\_\_

31.  $6x + 2y + 9x$  31. \_\_\_\_\_

Factor each expression.

32.  $9x + 36y$  32. \_\_\_\_\_

33.  $12x + 18y$  33. \_\_\_\_\_