

CHAPTER  
5**Cumulative Review**

For use after Chapter 5

**Evaluate the expression.** (Lessons 1.2, 2.2–2.6)

1.  $21 \div (5 - 2)$

2.  $\frac{1}{2}[(5 + 6)^2 - 85]$

3.  $\frac{2x}{36 - x^2}$  when  $x = -3$

4.  $4y + 8 - 3y^2$  when  $y = 4$

5.  $|z|$  when  $z = -3$

6.  $7 - (m - p)$  when  $m = -8$  and  $p = -9$

7. **Building Materials** A contractor is putting wood baseboards around a room that is 31 feet long by 17 feet wide. The baseboards come in 8-foot long pieces. How many pieces of baseboards should the contractor buy to go around the room? (Lesson 1.5)

**Find the sum, difference, product, or quotient.** (Lessons 2.1–2.6)

8.  $-11 + 18$

9.  $-1.1 - 7.3$

10.  $\frac{3}{10} - \left(-\frac{1}{5}\right)$

11.  $15(-4)$

12.  $-\frac{1}{5}(20)(-3)$

13.  $-21 \div \left(-\frac{3}{7}\right)$

**Simplify the expression.** (Lessons 2.5, 2.6)

14.  $-3(x + 4)$

15.  $5(b - 9) - 7b$

16.  $\frac{-24a - 8}{4}$

**Solve the equation. Check your solution.** (Lessons 3.1–3.4)

17.  $m - 8 = -17$

18.  $-12p = 60$

19.  $5q + 11 = 26$

20.  $3r - 17 + 7r = 83$

21.  $-5.1x + 4.1 = 6.7x - 1.8$

22.  $\frac{2}{3}(6k - 9) = 3k + 8$

23. **Discount Cards** A bookstore sells frequent buyer discount cards for \$12 each. The cost of each book with the discount card is \$7. The cost of a book without the card is \$9. After how many book purchases does a cardholder and a non-cardholder spend the same amount of money, if you include the cost of the card? (Lesson 3.2)

**Solve the proportion.** (Lesson 3.5)

24.  $\frac{w}{6} = \frac{11}{15}$

25.  $\frac{40}{x} = \frac{15}{21}$

26.  $\frac{4}{18} = \frac{y + 3}{54}$

27.  $\frac{3}{7} = \frac{z}{z + 16}$

28. **Retirement Savings** A company's 401K-retirement program allows an employee to invest up to 15% of their gross earnings in a retirement account. If an employee invests the full 15% and earns \$2500 a month, how much is the employee investing each month? (Lesson 3.7)

**CHAPTER**  
**5**
**Cumulative Review** *continued*
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**Solve the literal equation. (Lesson 3.8)**

29.  $ax + by = 1$  for  $y$

30.  $y - \left(\frac{x}{2}\right)3z = 0$  for  $x$

**Find the slope of the line that passes through the points. (Lesson 4.4)**

31.  $(7, 2)$  and  $(1, -1)$

32.  $(0, 4)$  and  $(-2, -2)$

33.  $(5, -2)$  and  $(-3, -1)$

**Identify the slope and  $y$ -intercept of the line with the given equation.**
*(Lesson 4.3–4.5)*

34.  $y = -2x + 7$

35.  $3x + \frac{1}{2}y = 5$

36.  $5x - 4y = 0$

**Tell whether the equation represents direct variation. If so, identify the constant of variation. (Lesson 4.6)**

37.  $x + 7y = 0$

38.  $2x + 3y = 1$

39.  $3x + 5 = 4y + 5$

**Graph the equation. (Lesson 4.2–4.5)**

40.  $y = -3$

41.  $y = \frac{2}{3}x - 3$

42.  $6x + 3y = 3$

**Evaluate the function for the given value. (Lesson 4.7)**

43.  $f(x) = 3x - 5$  when  $x = 7$

44.  $g(x) = \frac{2}{7}x + 8$  when  $x = 14$

**Write an equation in slope-intercept form of the line with the given characteristics. (Lesson 5.1–5.4)**

45. slope: 8;  $y$ -intercept:  $-3$

46. slope:  $\frac{1}{2}$ ; passes through  $(2, 8)$

47. passes through  $(-2, 5)$  and  $(3, -5)$

48. horizontal line; passes through  $(4, 3)$

**Make a scatter plot of the data. Draw a line of fit. Write an equation of the line. (Lesson 5.6, 5.7)**

49.

$x$	0	2	3	4	5
$y$	6	8	12	14	15

50.

$x$	1	2	3	4	5
$y$	3	3	4	4	5