## Chapters 1-2

## **Multiple Choice**

For Exercises 1-10, choose the correct letter.

1. Which algebraic expression represents 15 less than the product of 7 and a number?

**A.** 15 - 7n

**C.** 15(7n)

**B.** 7n - 15

**D.** 7(n-15)

**2.** Which of the following is the correct simplification of  $7 \cdot 4^2 \div 8 - 12$ ?

**F.** −28

**G.**  $-\frac{17}{2}$ 

**H.** -5

I. 2

**3.** What is the value of  $\frac{3m^2 - mn}{2mn^2}$  when m = -1 and n = 2?

**A.**  $-\frac{5}{8}$ 

**B.**  $-\frac{1}{8}$ 

C.  $\frac{1}{8}$ 

**D.**  $\frac{5}{8}$ 

**4.** What is the solution of -6x + 15 = -3?

**G**. -2

I. 6

**5.** What is the solution of 4x - 6 = -6x - 4?

**B.** −1

C.  $\frac{1}{5}$ 

**D.** 1

**6.** What is the solution of  $\frac{3}{5} = \frac{x}{15}$ ?

**F.** 1

**G**. 6

**H.** 9

I. 25

7. A scale drawing of a building has the scale 0.5 in.: 6 ft. A wall is 30 ft long. How long will the wall be on the drawing?

**A.** 1.5 in.

**B.** 2.5 in.

**C.** 6 in.

**D**. 360 in.

**8.** What is the simplified form of the expression  $\sqrt{225}$ ?

**F.** -25

**G.** 15

I. does not simplify

**9.** Which property is illustrated by 45 + 19 = 19 + 45?

**A.** Commutative Property of Addition

**C.** Associative Property of Addition

**B.** Identity Property of Addition

**D.** Zero Property of Addition

**10.** What percent of 86 is 50 to the nearest whole percent?

**F.** 43%

**G.** 58%

**H.** 59%

I. 172%

## Cumulative Review (continued)

## Chapters 1-2

- 11. A store's cost for a stereo was \$27. The markup was 75%. A customer purchased it on sale at 40% off the marked up price. What was the purchase price of the stereo?
- **12.** Evaluate each expression for x = 3 and y = 2.

**a.** 
$$-4x + 3y$$

**b.** 
$$\frac{x^2 - y}{4x}$$

**13.** Find the percent of decrease for each situation.

**a.** \$250 is discounted to \$212.50

**b.** \$40 is discounted to \$32

**14.** The school choir has 84 members. The ratio of girls to boys in the choir is 3:4. How many members are girls?

Find each answer.

**15.** Solve: 
$$-2(3x + 2) = 2x + 6$$

**16.** Simplify: 
$$-\sqrt{169}$$

**17.** Solve: 
$$\frac{3}{4} = \frac{8}{x-1}$$

**18.** Simplify: 
$$14 + 2 \times 8 - 5^2 + 3^2$$

**19.** Solve: 
$$6n - 7 = 35$$

**20.** Solve: 
$$\frac{x-1}{2} = \frac{x+3}{-1}$$

- 21. The scale of a map is 0.25 cm: 15 mi. Determine the distance between two cities that are 6.8 cm apart on the map.
- 22. The price of the car was marked as \$14,000. The end of the month sale has lowered the price to \$12,500. What is the percent decrease to the nearest percent?
- **23.** Four times the sum of a number and -3 is 4 more than twice the number. Write and solve an equation to find the number.
- 24. Jeremy is putting together a model rocket. The scale is 1 cm: 50 ft. If the height of the actual rocket is 210 feet, how tall is the model?
- 25. Writing Describe four different subsets of real numbers. Explain the differences between the various subsets. Give several examples of each subset.