Name _____ Class _____ Date _____

Cumulative Review

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 $-6x + 15 = -3$?

F. -3 **G.** -2 **H.** 3 **I.** 6

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

A. $-\frac{3}{2}$ **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 **H.** 20 **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%

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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.

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