

Chapter Test

Form A

Chapter 1

Write an equation to model the relationship in each table.

1.

Number of Months	Amount Saved
1	\$150
2	\$300
3	\$450
4	\$600

2.

Distance Traveled	Distance Remaining
10 mi	90 mi
25 mi	75 mi
40 mi	60 mi
88 mi	12 mi

Simplify.

3. $4 + 8 \div 2 + 6 \times 2$

4. $12 - (-3)$

5. $-6(-3) + -2$

6. $(-8)^2 \div (-2)$

Evaluate each expression.

7. $5x + 4$ for $x = 5$

8. $y^2 \div z$ for $y = -12$ and $z = -9$

9. $|6 - 2m|$ for $m = 7$

10. $-2(2s - 3t)$ for $s = -5.2$ and $t = 1.9$

11. $\frac{a}{b}$ for $a = \frac{2}{3}$ and $b = -\frac{5}{6}$

12. $\frac{2d - 3}{-5}$ for $d = 9$

Find the sum or difference.

13. $\begin{bmatrix} -2 & 13 \\ 8 & -6 \end{bmatrix} + \begin{bmatrix} 8 & -17 \\ -8 & -4 \end{bmatrix}$

14. $\begin{bmatrix} 1.2 & -6.8 \\ 0.4 & 0 \\ 2.3 & -8 \end{bmatrix} - \begin{bmatrix} 2.5 & 3.6 \\ -2.7 & -0.1 \\ 2.4 & -7.3 \end{bmatrix}$

Is each statement *true* or *false*? If the statement is false, give a counterexample.

15. All real numbers are rational numbers.

16. The absolute value of a negative number is always positive.

Simplify each expression.

17. $-\frac{1}{2}(4 - 6a)$

18. $-2(-3 + 2a)$

Write an expression for each phrase.

19. 4 minus the sum of a number and 6

20. 1 more than the quotient of n and 2

Simplify each expression. Justify each step.

21. $\frac{1}{4}(4x - 8) + 3x$

22. $(4^2 - 2^3)(1^3 - 3^2)$

Chapter Test (continued)**Form A****Chapter 1****Simplify each expression.**

23. $-4\frac{3}{5} - 2\frac{1}{2}$

24. $6.2 - 9.7 + (-3.1)$

25. **Critical Thinking** Explain the error in the work shown below. Compute the correct answer.

$$9 + 12 \div 3 = 21 \div 3$$

$$= 7$$

26. **Open-Ended** Write an expression containing three integers that has a value of zero. One integer should be inside absolute value symbols.

In which quadrant or on which axis would you find each point?

27. $(-1, -3)$

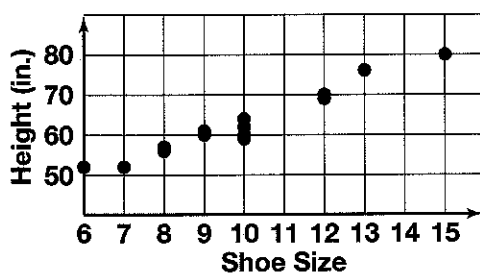
28. $(-2, 0)$

29. **Geometry** Find the area of a triangle whose vertices have coordinates $(3, 1)$, $(-4, 1)$, and $(3, 5)$.

30. On a diving exercise, a submarine rose 20 ft, dove 40 ft, rose 7 ft, and rose 13 ft. What was the change in depth after the exercise?

31. At 9:00 A.M., the temperature was -7°F . By noon, the temperature was 19°F . What was the change in temperature?

32. A bicycle cost \$359.99 plus sales tax at the rate of 6.2%. Find the total cost of the bicycle.

Use the scatter plot below for Exercises 33–34.

33. Is there a positive correlation, negative correlation, or no correlation between height and shoe size?
34. What is the approximate height of a person with a shoe size of 11?
35. **Writing** Determine which is greater and explain why.

$$\frac{2}{9}, 0.23$$