Extra Practice

Chapter 1 ■ Skills Practice

Lesson 1-1

Give two ways to write each algebraic expression in words.

1. $x + 8$ **2.** $6(y)$ **3.** $g - 4$ **4.** $\frac{12}{h}$

Evaluate each expression for $a = 4$, $b = 2$, and $c = 5$.

5. $b + c$ **6.** $\frac{a}{b}$ **7.** $c - a$ **8.** ab

Write an algebraic expression for each verbal expression. Then evaluate the algebraic expression for the given values of y.

	Verbal	Algebraic	$y = 9$	$y = 6$
9.	y reduced by 4			
10.	the quotient of y and 3			
11.	5 more than y			
12.	the sum of y and 2			

Lesson 1-2

Add or subtract using a number line.

13. $-7 - 9$ **14.** $-2.2 + 4.3$ **15.** $-5\frac{1}{2} - 2\frac{1}{2}$ **16.** $3.4 - 6.5$

Subtract.

17. $12 - 47$ **18.** $1.3 - 9.2$ **19.** $y - 4\frac{2}{3}$ for $y = 1\frac{1}{3}$

Compare. Write $<$, $>$, or $=$.

20. $-5 - (-8) \square -4 - 9$ **21.** $|-6 - (-2)| \square 7 - 4$ **22.** $-2 - 5 \square 7 - 14$

Evaluate the expression $g - (-7)$ for each value of g.

23. $g = 121$ **24.** $g = 1.25$ **25.** $g = -\frac{2}{5}$ **26.** $g = -8\frac{1}{3}$

Lesson 1-3

Find the value of each expression.

27. $-24 \div (-8)$ **28.** $5(-9)$ **29.** $-5.2 \div y$ for $y = -1.3$

30. $\frac{2}{7} \div \left(-\frac{6}{7}\right)$ **31.** $0 \div \left(-\frac{4}{5}\right)$ **32.** $\frac{9}{10} \div 0$

Evaluate each expression for $x = -8$, $y = 6$, and $z = -4$.

33. xy **34.** yz **35.** $\frac{y}{z}$ **36.** $\frac{z}{x}$

Let a represent a positive number, b represent a negative number, and z represent zero. Tell whether each expression is positive, negative, zero, or undefined.

37. ab **38.** $-bz$ **39.** $-\frac{a}{b}$ **40.** $\frac{ab}{z}$

Lesson 1-4

Write each expression as repeated multiplication. Then simplify the expression.

41. 3^3 **42.** -2^4 **43.** $(-5)^3$ **44.** $(-1)^5$

Write each expression using a base and an exponent.

45. $5 \cdot 5 \cdot 5 \cdot 5 \cdot 5$ **46.** $4 \cdot 4 \cdot 4$ **47.** $2 \cdot 2 \cdot 2 \cdot 2$

Write the exponent that makes each equation true.

48. $2^{\square} = 16$ **49.** $4^{\square} = 256$ **50.** $(-3)^{\square} = 81$ **51.** $-5^{\square} = -125$

Lesson 1-5

Find each square root.

52. $-\sqrt{64}$ **53.** $\sqrt{144}$ **54.** $\sqrt{25}$

Compare. Write <, >, or =.

55. $\sqrt{118}$ ▢ 11 **56.** 6 ▢ $\sqrt{35}$ **57.** 14 ▢ $\sqrt{196}$ **58.** $\sqrt{50}$ ▢ 7

Write all classifications that apply to each number.

59. -44 **60.** $\sqrt{49}$ **61.** 15.982 **62.** $\frac{1}{9}$

Lesson 1-6

Evaluate each expression for the given value of the variable.

63. $22 - 3g + 5$ for $g = 4$ **64.** $12 - 30 \div h$ for $h = 6$ **65.** $\sqrt{(11j + j)} + 6$ for $j = 3$

Simplify each expression.

66. $4 + 12 \div |3 - 9|$ **67.** $-36 - \sqrt{4 + 15 \div 3}$ **68.** $\dfrac{5 - \sqrt{12(3)}}{-4 + \sqrt{2(8)}}$

Translate each word phrase into an algebraic expression.

69. the quotient of 8 and the difference of a and 5

70. the sum of -9 and the square root of the product of 7 and c

Lesson 1-7

Simplify each expression.

71. $-5 + 38 + 5 + 62$ **72.** $2\frac{1}{3} - 42 + 7\frac{2}{3}$ **73.** $\frac{1}{5} \cdot 4 \cdot 25$

Write each product using the Distributive Property. Then simplify.

74. $12(108)$ **75.** $7(89)$ **76.** $11(33)$

Simplify each expression by combining like terms.

77. $7a - 3a$ **78.** $-2b - 12b$ **79.** $4c + 5c^2 - c$

Simplify each expression. Justify each step with an operation or property.

80. $6(p - 2) + 3p$ **81.** $8q - 3 + 5q(2 + q)$ **82.** $-4 + 3r - 7(2s - r)$

Lesson 1-8

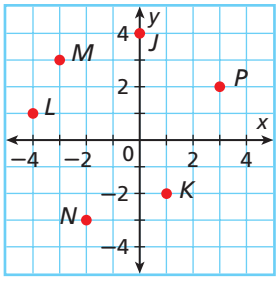
Graph each point.

83. $A(2, 3)$ **84.** $B(-4, 1)$ **85.** $C(0, -2)$ **86.** $D(-4, -1)$

Name the quadrant in which each point lies.

87. J **88.** K **89.** L

90. M **91.** N **92.** P



Generate ordered pairs for each function for $x = -2, -1, 0, 1$, and 2. Graph the ordered pairs and describe the pattern.

93. $y = x - 3$ **94.** $y = -2x$ **95.** $y = -x^2$ **96.** $y = |3x|$

Write an equation for each rule. Use the given values for x to generate ordered pairs. Graph the ordered pairs and describe the pattern.

97. y is equal to the sum of one-third of x and -2; $x = -6, -3, 0, 3$, and 6.

98. y is equal to 4 less than x squared; $x = -2, -1, 0, 1$, and 2.

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