

Perform the indicated operations and simplify.

62) $\sqrt{3} - 2\sqrt{27} - 7\sqrt{192}$

Simplify the expression.

63) $3\sqrt{14} + 16\sqrt{14}$

Rationalize the denominator.

64) $\sqrt{\frac{6}{5}}$

65) $\frac{7}{\sqrt{5}}$

66) $\frac{19}{\sqrt{18}}$

Simplify the square root.

67) $\sqrt{252}$

68) $2\sqrt{300}$

Complete the statement to illustrate the associative property.

69) $(2 + 6) + 4 = \underline{\hspace{1cm}} + (6 + \underline{\hspace{1cm}})$

Complete the statement to illustrate the commutative property.

70) $4 + (3 + 5) = 4 + (5 + \underline{\hspace{1cm}})$

Use the distributive property to simplify the radical expressions.

71) $4(9 + \sqrt{5})$

72) $\sqrt{2}(\sqrt{10} + \sqrt{2})$

List all numbers from the set that are whole numbers.

73) $\{-5, -\frac{1}{5}, 0, 0.14, \sqrt{15}, 9.8, \sqrt{25}\}$

Provide a proper response.

74) Give an example of an integer that is not a whole number.

Express the number in scientific notation.

75) 0.0038

76) 0.000683

77) 620,000,000

Express the number in decimal notation.

78) 8.99×10^7

79) 3.656×10^{-6}

Perform the indicated operation and express the answer in decimal notation.

80) $(9.3 \times 10^7)(3 \times 10^{-4})$

81) $\frac{4 \times 10^4}{20 \times 10^{-2}}$

Perform the indicated operation by first expressing each number in scientific notation. Write answer in scientific notation.

82) $(210,000,000)(2,000,000,000)$

83) $\frac{3,100,000}{100}$

Solve the problem.

84) The mass of one oxygen molecule is 5.3×10^{-23} gram. Find the mass of 7000 molecules of oxygen. Express the answer in scientific notation.

Use properties of exponents to simplify the expression. Express answer in exponential form.

85) $9^3 \cdot 9^{-5}$

86) $\frac{5^{10}}{5^8}$

Use properties of exponents to simplify the expression. First, express the answer in exponential form. Then, evaluate the expression.

87) $3^8 \cdot 3^2$

88) $(7^2)^3$

89) $8^{-3} \cdot 8$

Use the zero and negative exponent rules to simplify the expression.

90) $(-6)^0$

91) 4^{-2}

Find the indicated term for the geometric sequence with first term, a_1 , and common ratio, r .

92) Find a_6 , when $a_1 = 12$, $r = \frac{1}{2}$.