

SECTION 4.4

1. 7, 5, 2 3. $\frac{1}{25}$ 5. 64 7. $\frac{1}{27}$ 9. 2 11. $\frac{1}{x^2}$ 13. a^6 15. $\frac{4}{x^7}$ 17. $\frac{2}{3z^2}$ 19. $5b^8$ 21. $\frac{x^2}{3}$ 23. 1

25. -1 27. y^4 29. a^3 31. p^4 33. $2x^3$ 35. $2k$ 37. m^5n^2 39. $\frac{3r^2}{2}$ 41. $-\frac{2a}{3}$ 43. $\frac{1}{y^5}$ 45. $\frac{1}{a^6}$

47. $\frac{1}{3x^3}$ 49. $\frac{2}{3x^5}$ 51. $\frac{y^4}{x^2}$ 53. $\frac{2}{5m^3n^8}$ 55. $\frac{1}{p^3q}$ 57. $\frac{1}{2y^3}$ 59. $\frac{7xz}{8y^3}$ 61. $\frac{p^2}{2m^3}$ 63. $-\frac{8x^3}{y^6}$ 65. $\frac{9}{x^2y^4}$

67. $\frac{2}{x^4}$ 69. $-\frac{5}{a^8}$ 71. $-\frac{a^5}{8b^4}$ 73. $\frac{10y^3}{x^4}$ 75. $\frac{1}{2x^3}$ 77. $\frac{3}{x^3}$ 79. $\frac{1}{2x^2y^6}$ 81. $\frac{1}{x^6y}$ 83. $\frac{a^4}{y^{10}}$ 85. $-\frac{1}{6x^3}$

87. $-\frac{a^2b}{6c^2}$ 89. $-\frac{7b^6}{a^2}$ 91. $\frac{s^8t^4}{4r^{12}}$ 93. $\frac{125p^3}{27m^{15}n^6}$ 97. 3.24×10^{-9} 99. 3×10^{-18} 101. 3.2×10^{16}

103. 1.22×10^{-19} 105. 5.47×10^8 107. 0.000167 109. 68,000,000 111. 0.0000305 113. 0.00000000102

115. 6.023×10^{23} **117.** 3.7×10^{-6} **119.** 1×10^{-9} **121.** 1.6×10^{-19} **123.** $\frac{1}{4}, \frac{1}{2}, 1, 2, 4$ **125.** $4, 2, 1, \frac{1}{2}, \frac{1}{4}$

127. False. $(2a)^{-3} = \frac{1}{(2a)^3} = \frac{1}{8a^3}$ **129.** False. $(2 + 3)^{-1} = (5)^{-1} = \frac{1}{5}$