Chapter 6 Review Answers

1. expanded **2.** reciprocal **3.** coefficient **4.** constant

5. degree **6.** lead term (or leading term)

7. 6 **8.** conjugates

9. 64 **10.** 16 **11.** -3 **12.** 1

13. v^9 **14.** k^5 **15.** x^5 **16.** y^9

17. w^6 **18.** k^6 **19.** y^7 **20.** w^5

21. a^5b^5 **22.** 1 **23.** $\frac{h^6}{k^6}$ **24.** $\frac{81x^2}{4y^2}$

25. y^{10} **26.** $8w^{12}v^6$ **27.** $\frac{x^6}{y^{24}}$ **28.** $\frac{49}{y^{10}}$

29. $\frac{1}{10{,}000}$ **30.** $\frac{1}{p^7}$ **31.** $\frac{81}{64}$ **32.** $\frac{y^3}{8x^3}$

33. x^6 **34.** $\frac{1}{y}$ **35.** $\frac{1}{x^4}$ **36.** r^5

37. $\frac{1}{y^3}$ **38.** $\frac{1}{x^8}$ **39.** $\frac{1}{m^{10}}$ **40.** p^3

41. 5.3×10^4 **42.** 2.09×10^7 **43.** 3.8×10^{-4} **44.** 4.06×10^{-6}

45. 8,270 **46.** 230,500 **47.** 0.0926 **48.** 0.001014

49. 7.8×10^{11} **50.** 2.88×10^{-3} **51.** 2.0×10^5 **52.** 2.5×10^{-4}

53. -4 **54.** 2 **55.** 5 **56.** 1 **57.** 7 **58.** 2

59. $-8w^3$ **60.** $9p^7 - 4p^2$ **61.** $-7x^3 + 5x$ **62.** $5c^2 - c$

63. At the 1-second mark, the rock was 432 feet above the ocean.

64. At the 2-second mark, the rock was 468 feet above the ocean.

65. $-4v^2 + 5v + 1$ **66.** $7n^3 - 3n^2 + 9n$

67. $7m - 7$ **68.** $6x^2 - 5$

69. $-6v - 1$ **70.** $11y^2 + 11y - 12$

71. $27n^5$ **72.** $-2x^4$ **73.** $64a^8$ **74.** $9x^{16}$

75. $12n^4 + 28n$ **76.** $-c^5 + 7c^3$

77. $2m^5 + 8m^4 + 16m^2$ **78.** $x^4 + x^3 - 10x^2$

79. $6m^2 - 33m + 45$ **80.** $-10x^2 + 23x - 12$

81. $x^3 + 8$ **82.** $5m^4 - 16m^3 - 16m^2 + m - 4$

83. $m^2 + 8m + 15$ **84.** $x^2 - x - 30$

85. $16w^2 - 4w - 2$ **86.** $3x^2 + 17x + 10$

87. $x^2 - 1$ **88.** $16x^2 - 81$

89. $w^6 - 25$ **90.** $10x^4 - 13x^2 + 4$

91. $m^2 + 12m + 36$ **92.** $w^2 - 14w + 49$

93. $9c^2 + 24c + 16$ **94.** $4w^6 - 4w^3 + 1$

95. $(x + 8(x - 8)$
The binomials can be in either order.

96. $(m + 11(m - 11)$

97. $(4m + 3(4m - 3)$

98. $(5u + v)(5u - v)$

99. $7q^4$ **100.** $-3v^6$ **101.** $-4w^2$ **102.** 2

103. $8w^2 - w$ **104.** $-2y^3 + 3y - 1$

105. $3y^2 - 2y + 1$ **106.** $x^6y^5 - 2x^4 + 4y$

107. $y + 7$ **109.** $x^2 - 2x - 2 + \frac{3}{x + 5}$

109. $4x^2 - 2x + 3 - \frac{2}{x - 6}$ **110.** $4y^2 + y + 1$

111. $6w - 4 + \frac{3}{w + 2}$ **112.** $x^2 - 5x + 7 + \frac{11}{x - 1}$

113. $2y^2 - y - 4 - \frac{7}{y - 4}$ **114.** $w^2 + 2w + 4$