Chapter 2 Practice Test: 14. Answer can also be written in the form \( F = \frac{9}{5} C + 32 \). 26. 68.25 in.²

Section 3.2: 23. 83.3% 25. 66.7%

Section 4.4: 75c. = 5.52

Section 4.6: 23.

Section 4.6: 25. 5x – 2y < 10

Chapter 4 Review Exercises: 26. Label on graph should read \( y = x \). 76. Horizontal axis should be labeled \( n \) and vertical axis should be labeled \( v \).

Section 6.3: 73. Mistake: Using FOIL to check, we see that the first and last terms check but the inner and outer terms combine to give 31x instead of 13x. Correct: \((2x + 1)(3x + 5)\)

Chapter 6 Review Exercises: 6. 2) \( \text{given polynomial} \div \text{GCF} \)

Section 7.2: 49. \( \frac{8x^7g^3}{15x^5g^2} \cdot \frac{4x^2g^3}{3xg^2} = \frac{32x^9g^6}{45x^5g^6} = \frac{32x^4}{45} \)

Section 7.3: 9. \( \frac{9}{a} \)

Section 7.6: 49. \( (r - 2)(r - 3) \left( \frac{2r}{r - 2} - \frac{4r}{r - 3} \right) \)

\[ = (r - 2)(r - 3) \left( -\frac{7r}{r^2 - 5r + 6} \right) \]

\[ 2r(r - 3) - 4r(r - 2) = -7r \]
\[ 2r^2 - 6r - 4r^2 + 8r = -7r \]
\[ -2r^2 + 2r = -7r \]
\[ -2r^2 + 9r = 0 \]
\[ -r(2r - 9) = 0 \]
51. \((u + 2)(u - 1)\left(\frac{4u^2 + 3u + 4}{u + 2}\right)(u - 1) - \frac{3u}{u + 2}\) 
\(= (u + 2)(u - 1)\left(\frac{-2u - 1}{u - 1}\right)\) 
\(= (4u^2 + 3u + 1) - 3u(u - 1) = (-2u - 1)(u + 2)\) 
\(4u^2 + 3u + 4 - 3u = -2u^2 - 4u - u - 2\) 
\(u^2 + 6u + 4 = -2u^2 - 5u - 2\) 
\(3u^2 + 11u + 6 = 0\) 
\((3u + 2)(u + 3) = 0\) 
\(u = -\frac{2}{3}, -3\) 

57. \((x - 5)(x + 3)(x + 2)\left(\frac{x + 1}{(x - 5)(x + 3)}\right) - \frac{6}{(x - 5)(x + 2)}\) 
\(= (x - 5)(x + 3)\left(\frac{2}{x + 3}\right)\) 
\((x + 2)(x + 1) - 6(x + 3) = 2(x - 5)\) 
\(x^2 + 3x + 2 - 6x - 18 = 2x - 10\) 
\(x^2 - 3x - 16 = 2x - 10\) 
\(x^2 - 5x - 6 = 0\) 
\((x - 6)(x + 1) = 0\) 
\(x = 6, -1\) 

Chapter 7 Review Exercises: 
26. \(-\frac{48m^3p^7}{80m^2n^2p^3} = -\frac{3}{5mnp^4}\) 
43. \(\frac{8m + 5 + \left(-10m - 5\right)}{6m^2} = \frac{-2m}{6m^2} = -\frac{1}{3m}\) 

44. \(\frac{4x + 5 + (x - 4)}{x + 1} = \frac{3x + 1}{x + 1}\) 

75. \(x(x - 1) = 6(x - 2)\) 
\(x^2 - x = 6x - 12\) 
\(x^2 - 7x + 12 = 0\) 
\((x - 4)(x - 3) = 0\) 
\(x = 4, 3\) 

77. \(4(p + 4)(p - 4)\left(\frac{1}{p - 4}\right) + 1\) 
\(= 4(p + 4)(p - 4)\left(\frac{8}{(p + 4)(p - 4)}\right)\) 
\(4(p + 4)(1) + (p + 4)(p - 4)(1) = 4(8)\) 
\(4p + 16 + p^2 - 16 = 32\) 
\(p^2 + 4p = 32\) 
\(p^2 + 4p - 32 = 0\) 
\((p + 8)(p - 4) = 0\) 
\(p = -8, 4\) 
\(p = -8\) (4 is extraneous) 

Chapter 7 Practice Test: 
8. \(\frac{9x^5y^4}{16a^2b^8} = \frac{14a^7b^8}{45x^5y^2} = -\frac{126a^7b^8x^3y^4}{720a^2b^4x^2y^3} = \frac{-7a^6b^7y^2}{40x^2}\) 

Section 8.1: 
99. \(\{1990 \leq x \leq 2002\}\); [1990, 2002] 

Section 8.4: 
52. Graph should be labeled \(f(x) = -\frac{2}{5}x + 1\). 

Chapters 1-9 Cumulative Review: 
47. 3.2 cm/sec. 

Section 10.7: 
35. \(14 + 9i\) 

132. is currently labeled as 122.
Section 11.1: 39. \(5n - 3 = \pm \sqrt{16}\)
\(5n - 3 = \pm 4\)
\(5n = 3 \pm 4\)
\(n = \frac{3 \pm 4}{5}\)
\(n = \frac{3 + 4}{5} = \frac{7}{5}\)
\(n = \frac{3 - 4}{5} = -\frac{1}{5}\)

Section 11.2: 11. Alternate solution
\(-1.5x^2 + x - 0.2 = 0\)  \(a = -1.5, b = 1, c = -0.2\)

69. quadratic formula
89. 2 sides missing in diagram. Shorter side is 10' and longer side is 18'.
\[x = \frac{6 \pm \sqrt{36 - 52}}{2}\]
\[x = \frac{6 \pm \sqrt{-16}}{2}\]
\[x = 3 \pm 2i\]

Section 11.4: 57.b. \(\approx 4.62\) ft.

Chapter 11 Review Exercises: \(h\) should be \(u\)

Chapter 11 Practice Test: 13. \(x = 4\)
17. change \(x = a\) to \(a = \)

Section 12.4: 91. \(\frac{3}{2} \log_4 x - \frac{1}{2} \log_4 y\)

Chapter 12 Review Exercises: 114. a. \(y = 87,419 - 24,647.9 \ln x\)
\(y = 36,165\)  \(b.\)  \(43,256 = 87,419 - 24,647.9 \ln x\)
\(\ln x = 1.7918\)
\(e^{1.7918} = x\)
\(x = 6\)

In 6 years: 1998