Chapter R answers

R.1
1. {-4}
3. {-10/3}
5. {0}
7. {-3}
9. {-1}
11. {17/11}
13. {39/8}
15. {-6/5}
17. {27/17}
19. {0}
21. {0}
23. {1}
25. {-5/7}
27. {-6}
29. {5/24}
31. {15/8}
33. {12}
35. {-64/15}
37. {24/7}
39. {0}
41. {14/19}
43. {-8/31}
45. {7/5}
47. {23/19}
49. {14}
51. {55}
53. 160 hours
55. 35 min.
57. $100,000
59. 3.5 sec.
61. -40^0
63. 5 ft X 10 ft
65. 4 ft X 5 ft
67. 20 cm
69. 5 m, 15 m, 2 m

R.2 Graphs omitted
1. $[4, \infty)$
3. $(-\infty, -4)$
5. $(0, \frac{3}{2}]$
7. $[-2, \infty)$
9. $(-10, -5)$
11. $(-\infty, -3] \cup (2, \infty)$
13. $(-\infty, -2)$
15. $(-9, \infty)$
17. $[-\frac{1}{2}, \infty)$
19. $(0, \infty)$
21. $(-3, \infty)$
23. $(-\infty, 3]$
25. $(-\infty, 12)$
27. $(-\frac{64}{15}, \infty)$
29. $[0, \infty)$
31. $[-3, 3)$
33. $(-1, \frac{3}{4})$
35. $(\frac{17}{7}, \frac{45}{7})$
37. $[-3, 4)$
39. $[3, 5]$
41. $(\frac{5}{2}, 7)$
43. $(-5, 0)$
45. $[2, 10)$
47. $[-21, 1)$
49. $(-\infty, -\frac{11}{3}) \cup (-3, \infty)$
51. $[4, \infty)$
53. $[3, \infty)$
55. $(-\infty, -\frac{5}{2}] \cup (3, \infty)$
57. $(-\infty, \infty)$
59. $(-\infty, \infty)$
61. $(-\infty, 1)$
63. $(-\infty, -3] \cup (3, \infty)$
65. $[-4, 1)$
67. $(4, \infty)$
69. $(-\infty, -\frac{5}{2}) \cup (3, \infty)$

R.3 Graphs omitted
1. {-2, 2}
3. {-7, 7}
5. {-5, 1}
7. {-2, 8}
9. {-2, 0}
11. {1/2}
13. No Solution
15. {-1, -1/3}
17. {-2/5, 8/5}
19. {0, 2/5}
21. {-3, 11}
23. {1/2, 5/2}
25. {-1}
27. No solution
29. {-1/3, 5/3}
31. $(-\infty, -3) \cup (3, \infty)$
33. $[-4, 4]$
35. $(-\infty, -3] \cup [1, \infty)$
37. $(4, 6)$
39. $(-\infty, -4] \cup [8, \infty)$
41. $(-4, 3)$
43. $(-\infty, -2] \cup [\frac{14}{5}, \infty)$
45. No Solution
47. $(-\infty, 0) \cup (1, \infty)$
49. $(-\frac{1}{2}, \frac{3}{2})$
51. $(-\infty, -3] \cup [9, \infty)$
53. $(-\infty, \infty)$
55. No Solution
57. $(-\infty, \frac{1}{2}) \cup (\frac{1}{2}, \infty)$
59. {-1/3}
61. $(\frac{3}{2}, \frac{5}{2})$
63. $(-\infty, -5) \cup (12, \infty)$
65. $(-2, \frac{20}{7})$
67. $(-\infty, -\frac{5}{4}] \cup [\frac{1}{4}, \infty)$
69. $[2, 6]$
71. $(0, 2)$
73. $(-\infty, \frac{1}{5}] \cup [\frac{3}{5}, \infty)$
75. $(-\infty, 2) \cup (3, \infty)$
77. $[1, 3]$

R.4
1. $5x - 4$
3. $5x - 7$
5. $x + 13$
7. $6x^2 - 4x - 6$
9. $6x$
11. $-x^4 + x^3 + 4x^2 - 4x - 13$
13. $6x^4 + 6x^3 + 6x^2 - 12x - 11$
15. $3x^3 - 6x^2 + 3x$
17. $x^2 + 7x + 12$
19. $4x^2 + 12x + 9$
21. $x^2 - 100$
23. $16x^6 - 24x^3 + 9$
25. $x^4 - x^3 + 5x^2 - 9x - 36$
27. $x^4 + x^2 + 1$
29. $x^4 - y^4$
31. $27x^3 - 54x^2 y + 36xy^2 - 8y^3$
33. $x^3 - 1$
35. $x^5 - 1$
37. $3x(x + 5)(x + 2)$
39. $u^2(u + 8)(u - 7)$
41. $(x + 5)(x + y)$
43. $4x(3x - 4)(3x + 4)$
45. $(x - d)(x + 7)$
47. $5(7x + 1)(x - 3)$
49. $(y + 8)(x - y)$
51. $(x + 2y)(x^2 - 2xy + 4y^2)$
53. $2a(x - 5)(x - 6)$
55. $(x + y)(x - y)(x^2 + y^2)$
57. $(x + 2)(x - 2)(x + 5)(x - 5)$
59. $2x^2(2x + 7)(2x + 7)$
61. $(x - 2)^3$

63. $\{-2, 9\}$ 65. $\{-7\}$ 67. $\{0, 7\}$ 69. $\left\{0, \dfrac{4}{3}\right\}$ 71. $\{-1, 6\}$

73. $W = 4\,m,\ L = 6\,m$ 75. $W = 3\,in,\ L = 11\,in$ 77. $b = 6\,m,\ h = 13\,m$

79. 2 sec   81. $4\dfrac{3}{4}$ sec   83. 5 sec   85. 4 sec

R.5

1. $\dfrac{2x}{3y^2}$ 3. $\dfrac{x+8}{x+7}$ 5. $\dfrac{-1}{x+9}$ 7. $\dfrac{-10}{x}$ 9. $\dfrac{2}{9}$ 11. $\dfrac{1}{5x}$

13. $5x - 2$ 15. $\dfrac{-3x+8}{x+7}$ 17. $\dfrac{1}{x-6}$ 19. $\dfrac{7}{36}$ 21. $\dfrac{3x-17}{(x-8)(x+5)}$

23. $\dfrac{3x+1}{(x-9)(x+2)(x-2)}$ 25. $\dfrac{x-4}{x-6}$ 27. $\dfrac{3x}{x+3}$ 29. $\dfrac{x-3}{x+5}$ 31. $\dfrac{x+2}{x-4}$

33. $\dfrac{x-7}{x-2}$ 35. $\{12\}$ 37. $\{32\}$ 39. $\{5\}$ 41. $\{-2, 4\}$ 43. $\{-1, 6\}$

45. $\{-8\}$ 47. $W = \dfrac{P-2L}{2}$ 49. $c = \dfrac{2A-hb}{h}$ 51. $R = \dfrac{E-KL}{L}$

53. $d = \dfrac{s-a}{n-1}$ 55. $a = \dfrac{3L}{ct+1}$ 57. $7\dfrac{1}{2}$ hrs   59. 27 min

61. 450 mph   63. 8 mph   65. 7 mph