

Section 2.1

6. $y = -\frac{11}{3}$

12. $x = \frac{51}{5}$

22. $x = \frac{3}{17}$

30. All Reals, $x \neq -\frac{2}{5}$

40. All Reals, $x \neq \pm\frac{5}{2}$

44. No Solution

66. $r = \frac{A-P}{Pt}$

70. $h = \frac{S-2lw}{2(w+l)}$

Section 2.2

4. \$57.42

6. 13 hr.

8. Sell \$10 million in bonds and borrow \$40 million.

10. engineer = 8.5 hours; assistant = 3.5 hours

12. Use $\frac{40}{3}$ ml of 1% solutionand $\frac{5}{3}$ ml of 10% solution

14. Use 40 ml of elixir and 60 ml of syrup.

18. After 1:21 PM

24. $h = 13$ ft.30. $\frac{40}{13}$ hr.**Section 2.3**

2. $x = -2, \frac{7}{4}$

14. $x = -\frac{1}{3}, (x \neq -2)$

16. a) No

b) Yes

20. $x = \pm\frac{7}{4}$

26. a) $d = \frac{169}{4}$ b) $d = 9$

c) $d = \pm 10$ d) $d = \pm 9$

28. $x = 4 \pm \sqrt{5}$

36. $x = -\frac{5}{6} \pm \frac{1}{6}\sqrt{13}$

48. $d = \sqrt{\frac{gmM}{F}}$, since $d > 0$

50. $t = \frac{-v_o + \sqrt{v_o^2 + 2gs}}{g}$

54. 8 in. by 16 in.

56. a. 206.25 ft. b. $v = 40$ mi/hr

60. 1.5 in. for sides and top; 3 in. for bottom

62. 32 feet of fencing

66. in range until 9:24 a.m.

72. \$175

Sections 2.44. $-5 + 5i$ 18. -1

22. $-\frac{3}{2} - \frac{5}{2}i$

42. $-4 \pm i$ **Section 2.5**

4. $x = \frac{1}{5}$, or $x = -1$

24. $x = 9$ ($x = 2$ is extraneous)

38. $y = \pm \frac{1}{6}\sqrt{30 \pm 6\sqrt{13}}$

52. a) $x = -243$ b) $x = \pm 125$

c) No real solutions

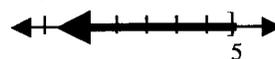
d) $x = 9$

e) No real solutions

56. $t = \frac{TA^2}{k^2}$

62. Change in diameter ≈ 1.37 ft. ($\frac{2}{\sqrt{\pi}}$ ft.)

64. $r = \sqrt{3}$ in.

Section 2.62. a) $11 > 2$ b) $9 > 0$ c) $\frac{2}{3} > -\frac{5}{6}$ d) $-\frac{2}{3} < \frac{5}{6}$ 4. $(-\infty, 5]$ 14. $0 \leq x < 4$ 22. $(-\infty, 1]$ 54. $(-\infty, 2.6) \cup (3.4, \infty)$ 78. $\frac{20}{9} \leq x \leq 4$ **Section 2.7**

2. $\left[\frac{2}{3}, \frac{7}{4}\right]$

10. $\left[-1, \frac{4}{3}\right]$

44. $8 < t < 12$