

CHAPTER 7

Quadratic Equations and Graphs

7.1 Solving Quadratic Equations

1)

- a) See Figure 1
- b) No
- c) No

3) Let s be the side length of the square. $s = 8$ in

5)

- a) $x = \pm 3$
- b) $s = \pm 5$
- c) $s = \pm\sqrt{26} \approx \pm 5.1$

The solutions for (a) and (b) are exact. Those for (c) are approximate.

7) $d \approx \pm 17.84$

9) Points of intersection are approximately $(-4.08, 5)$ and $(4.08, 5)$.

11) Linear Quadratic

$$x = \frac{3}{2} = 1.5 \qquad x = \pm\sqrt{\frac{3}{2}}$$

13)

- a) $x = -3$ or $x = -1$
- b) $x = 2$ or $x = 1$
- c) $y = -7$ or $y = 2$
- d) $x = 2$ or $x = 9$
- e) $x = -2$ or $x = -3$

15)

- a) 2
- b) 4
- c) $x = -2 + \sqrt{17}$ or $x = -2 - \sqrt{17}$

17) 4

19) $z = \frac{15}{8} = 1.875$