

Review Exercises (Ch. 7)

3) $x = -0.83$ or $x = 1.2$

5) $x = \sqrt{\frac{3}{7}}$ 0.65 or $x = -\sqrt{\frac{3}{7}}$ -0.65

7) $x = -\frac{3}{2}$ or $x = 5$

9)

a) Approximately 13.1 inches.

b) $d = \sqrt{\frac{540}{\pi}}$ in

11) The width of the rectangle is 2 meters and its length is 5 meters.

13) Vertex: Minimum at $(-1, 7)$

Roots: $-3.65, 1.65$

Y-intercept: $(0, -6)$

15) Vertex: Minimum at $(-2.5, 2.5)$

Roots: None

Y-intercept: $(0, 15)$

17) $x = -\frac{5}{2} + \sqrt{\frac{33}{4}}$ 0.37 or $x = -\frac{5}{2} - \sqrt{\frac{33}{4}}$ -5.37

19)

b) $x = -1 \pm \sqrt{7}$

c) Answers may vary.

21) $x = \frac{1}{6}$ or $x = -\frac{1}{2}$

23)

a) Vertex: $(3, 14)$

b) Since the discriminant $= 56 > 0$, the quadratic has two real roots.

c) $x = 3 \pm \frac{\sqrt{56}}{2}$

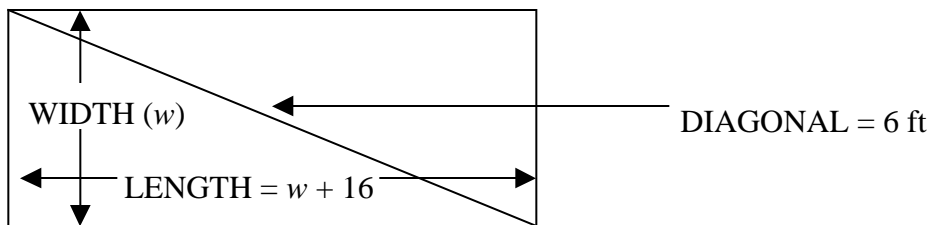
25)

a) $(6.1, 34.5)$

c) $(12.6, 0)$ —approximately

27)

a)



- b) Let w denote the width of the rectangular tabletop *in inches*.
 $w^2 + (w + 16)^2 = (72 \text{ in})^2$
- c) $w \approx 42.3 \text{ in}$.
- d) The table's width is approximately 42.3 in.
The table's length is approximately 58.3 in.
- 29) The vehicle was traveling at a speed of approximately 60 miles per hour.