§ 5.1

14. \( x^2 + (-1/3)^2 = \) \( x^2 + \frac{1}{9} = 1 \)

\( x = \frac{\sqrt{2}}{3}, -\frac{1}{3} \)

\( x = \frac{2\sqrt{2}}{3} \)

16. \( x^2 + (-\frac{\sqrt{5}}{2})^2 = 1 \)

\( x^2 + \frac{1}{2} = 1 \)

\( x = \pm \frac{\sqrt{3}}{2}, \frac{\sqrt{5}}{2} \)

§ 5.2

4. (a) \( \frac{\sqrt{2}}{2} \)
(b) \( -\frac{\sqrt{2}}{2} \)
(c) \( -\frac{3}{3} \)

\( \frac{\pi}{6} \)

6. (a) \( \frac{\sqrt{3}}{2} \)
(b) \( \frac{\sqrt{3}}{2} \)
(c) \( \frac{1}{2} \)

24. \( \sin(\pi/2) = 1 \)
\( \cos(\pi/2) = 0 \)
\( \tan(\pi/2) = \text{undefined} \)
\( \csc(\pi/2) = 1 \)
\( \sec(\pi/2) = \text{undefined} \)
\( \cot(\pi/2) = 0 \)

26. \( \sin(3\pi/2) = -1 \)
\( \cos(3\pi/2) = 0 \)
\( \tan(3\pi/2) = \text{undefined} \)
\( \csc(3\pi/2) = -1 \)
\( \sec(3\pi/2) = \text{undefined} \)
\( \cot(3\pi/2) = 0 \)

§ 6.1

2. \( 54^\circ \frac{\pi}{180} = \frac{3\pi}{10} \)

4. \( -\frac{5\pi}{12} \)

6. \( -\frac{5\pi}{3} \)

8. \( 3960^\circ = 0^\circ = 0 \text{ radians} \)

10. \( \frac{\pi}{12} \)

12. \( \frac{9\pi}{8} \)

14. \( \frac{11\pi}{3} \cdot \frac{180^\circ}{\pi} = 660^\circ = 300^\circ \)

16. \( -\frac{3\pi}{2} = -270^\circ \)

18. \( -2 \cdot \frac{180^\circ}{\pi} = -(\frac{360^\circ}{\pi}) \)

20. \( (\frac{612^\circ}{\pi}) \)

22. \( \frac{5\pi}{18} \cdot \frac{180^\circ}{\pi} = 50^\circ \)

24. \( -\frac{13\pi}{12} \cdot \frac{180^\circ}{\pi} = -195^\circ \)

50. \( 10 = 5 \cdot \theta, \theta = 2 \)

52. \( 5 = 10 \cdot (45^\circ \cdot \frac{\pi}{180}) = \frac{5\pi}{2} \)

54. \( 6 = 5 \cdot \theta, \theta = \frac{6}{5} \text{ rad}, (\frac{216^\circ}{\pi}) \)
Total area = \( A_1 + A_2 + A_3 + A_4 \)
\[
= \frac{\pi r_1^2}{4} + \frac{\pi r_2^2}{4} + \frac{\pi r_3^2}{4} + \frac{\pi r_4^2}{4}
\]
\[
= \frac{\pi}{4} (r_1^2 + r_2^2 + r_3^2 + r_4^2)
\]
\[
= \frac{\pi}{4} (100^2 + 50^2 + 40^2 + 30^2) = 3750 \pi \text{ ft}^2
\]