HW 4.2.0: Angles

1. Indicate each angle on a circle: 60°, 280°, -225°, 10°, $\frac{7\pi}{6}$, $\frac{9\pi}{4}$

2. Indicate each angle on a circle: 120°, 345°, -45°, 220°, $\frac{4\pi}{3}$, $\frac{5\pi}{4}$

3. Convert the angle 90° to radians.

4. Convert the angle 60° to radians.

5. Convert the angle $\frac{2\pi}{3}$ from radians to degrees.

6. Convert the angle $\frac{7\pi}{6}$ from radians to degrees.

7. Convert the angle $\frac{11\pi}{12}$ from radians to degrees.

8. Convert the angle $-\frac{3\pi}{15}$ from radians to degrees.

9. Convert the angle 280° from degrees to radians.

10. Convert the angle -288° from degrees to radians.

11. Find the angle between 0° and 360° that is coterminal with a 645° angle.

12. Find the angle between 0° and 360° that is coterminal with a 443° angle.

13. Find the angle between 0° and 360° that is coterminal with a -1682° angle.

14. Find the angle between 0° and 360° that is coterminal with a -1300° angle.

15. Find the angle between 0 and 2π in radians that is coterminal with the angle $\frac{23\pi}{9}$.

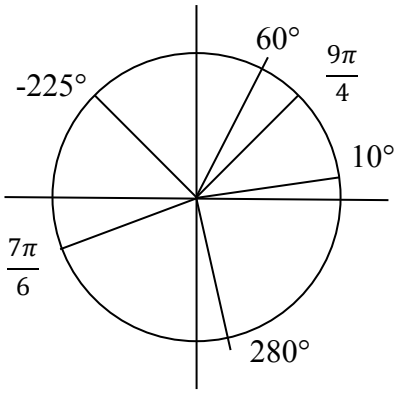
16. Find the angle between 0 and 2π in radians that is coterminal with the angle $\frac{23\pi}{3}$.

17. Find the angle between 0 and 2π in radians that is coterminal with the angle $-\frac{7\pi}{2}$.

18. Find the angle between 0 and 2π in radians that is coterminal with the angle $-\frac{25\pi}{6}$.

Solutions to Exercises

1.



3. $(90°)\left(\frac{\pi}{180°}\right) = \frac{\pi}{2}$

5. $\left(\frac{2\pi}{3}\right)\left(\frac{180°}{\pi}\right) = 120°$

7. 165°

9. $\frac{14\pi}{9}$

11. $645° - 360° = 285°$

13. $-1682° + 5(360°) = 118°$

15. $\left(\frac{23\pi}{9} - 2\pi\right) = \left(\frac{23\pi}{9} - \frac{18\pi}{9}\right) = \frac{5\pi}{9}$

17. $\left(\frac{-7\pi}{2} + 2(2\pi)\right) = \left(\frac{-7\pi}{2} + \frac{8\pi}{2}\right) = \frac{\pi}{2}$