

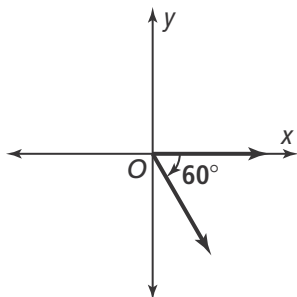


7-2 Additional Practice

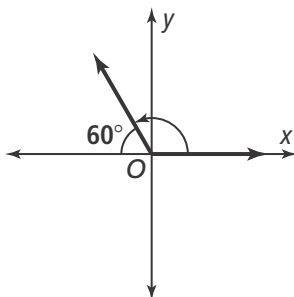
Angles and the Unit Circle

Find the measure of each angle as a positive angle measure, a negative angle measure, and an angle measure that is greater than 360° .

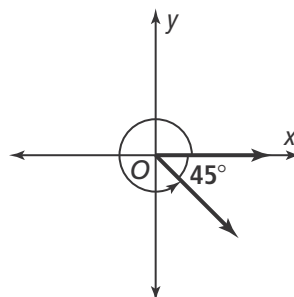
1.

 **$300^\circ, -60^\circ, 660^\circ$**

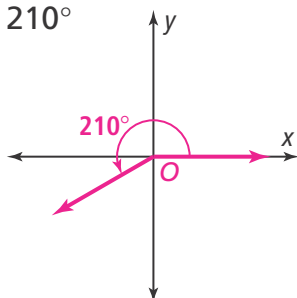
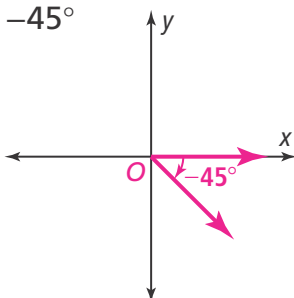
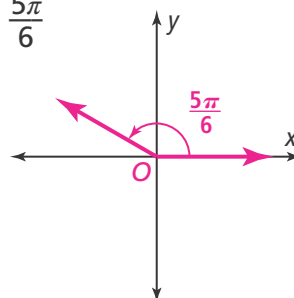
2.

 **$120^\circ, -240^\circ, 480^\circ$**

3.

 **$315^\circ, -45^\circ, 675^\circ$**

Sketch each angle in standard position.

4. 210° 5. -45° 6. $\frac{5\pi}{6}$ 

Find the measure of an angle in standard position for each reference angle.

7. 10° in Quadrant II **170°** 8. 35° in Quadrant IV **325°** 9. 34° in Quadrant III **214°**

Convert each angle to degrees.

10. $\frac{3\pi}{2} = \underline{270^\circ}$ degrees 11. $-\frac{6\pi}{5} = \underline{144^\circ}$ degrees 12. $\frac{7\pi}{4} = \underline{315^\circ}$ degrees

Convert each angle to radians.

13. 140° degrees = $\underline{\frac{7\pi}{9}}$ 14. -160° degrees = $\underline{-\frac{8\pi}{9}}$ 15. 330° degrees = $\underline{\frac{11\pi}{6}}$

16. A Ferris wheel rotates $\frac{9\pi}{8}$ radians prior to making a stop. The total height of the Ferris wheel is 246 ft. How far around did the Ferris wheel travel? Round to the nearest whole foot. **435 ft**

17. How does the formula for the circumference of a circle relate to one rotation around the unit circle?

You multiply the radius of a circle by 2π to find its circumference. One rotation around the unit circle is 2π radians.