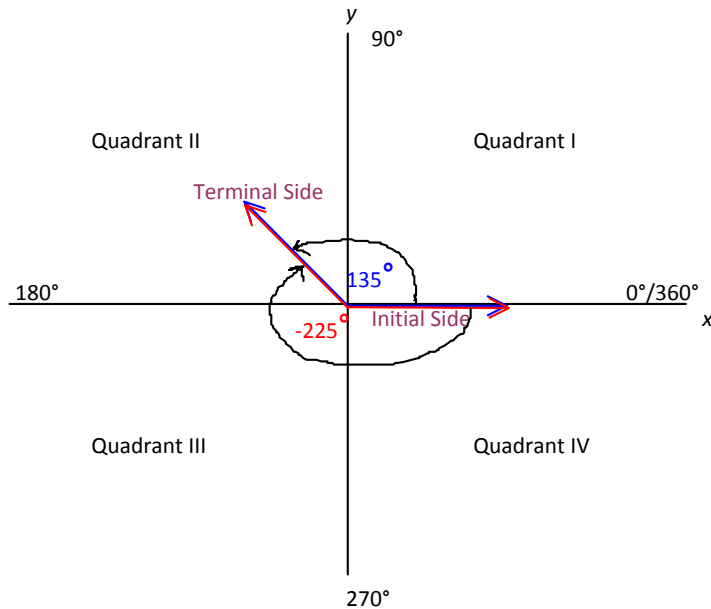


Radian and Degree Measure



Initial Side - The positive x-axis

Terminal Side - The position after rotation

Standard Position - The position of an angle whose initial side coincides with the positive x-axis

Coterminal Angles - Angles that have the same initial and terminal sides

Positive Angle - An angle generated in the counterclockwise direction

Negative Angle - An angle generated in the clockwise direction

To Convert Degrees to Radians, Multiply By:

$$\frac{\pi}{180^\circ}$$

To Convert Radians to Degrees, Multiply By:

$$\frac{180^\circ}{\pi}$$

Directions: Convert the angle measure from degrees to radians.

1. 150°

$$\frac{5}{180} \cdot \frac{\pi}{180}$$

$$\boxed{\frac{5\pi}{6}}$$

2. 315°

$$\frac{7}{315} \cdot \frac{\pi}{180}$$

$$\boxed{\frac{7\pi}{4}}$$

3. -540°

$$\frac{-3}{-540} \cdot \frac{\pi}{180}$$

$$\boxed{-3\pi}$$

4. -115°

$$\frac{-23}{-115} \cdot \frac{\pi}{180}$$

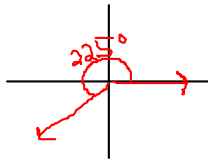
$$\boxed{\frac{-23\pi}{36}}$$

Directions: Determine the quadrant in which the angle lies and sketch the angle in standard position.

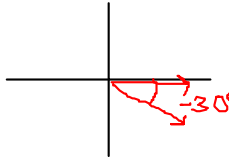
5. $\frac{2}{3} \cdot \frac{180}{\pi} = 60^\circ$



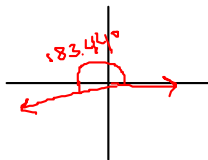
$$6. \quad \frac{5\pi}{4} \cdot \frac{45}{\pi} = 225^\circ$$



$$7. \quad -\frac{\pi}{6} \cdot \frac{180}{\pi} = -30^\circ$$



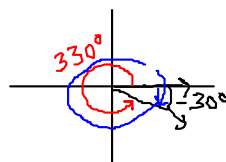
$$8. \quad 3.2 \cdot \frac{180}{\pi}$$



$$\frac{3.2 \times 180}{3.14} = 183.44^\circ$$

Directions: Find two coterminal angles in radian measure (one positive and one negative) for the given angle.

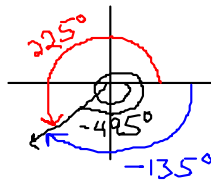
$$9. \quad -30^\circ$$



$$11 \quad \frac{330^\circ \cdot \pi}{180} = \boxed{\frac{11\pi}{6}}$$

$$-13 \quad \frac{-390^\circ \cdot \pi}{180} = \boxed{\frac{-13\pi}{6}}$$

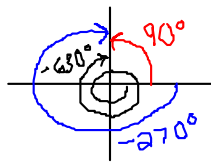
$$10. -\frac{11\cancel{7}}{4} \cdot \frac{\overset{45}{180}}{\cancel{\pi}} = -495^\circ$$



$$\overset{5}{225^\circ} \times \frac{\pi}{\cancel{180}} = \boxed{\frac{5\pi}{4}}$$

$$\overset{-3}{-135^\circ} \times \frac{\pi}{\cancel{180}} = \boxed{\frac{-3\pi}{4}}$$

$$11. -\frac{7\cancel{\pi}}{2} \cdot \frac{\overset{90}{180}}{\cancel{\pi}} = -630^\circ$$



$$\overset{90^\circ}{90^\circ} \times \frac{\pi}{\cancel{180}} = \boxed{\frac{\pi}{2}}$$

$$\overset{-3}{-270^\circ} \times \frac{\pi}{\cancel{180}} = \boxed{\frac{-3\pi}{2}}$$