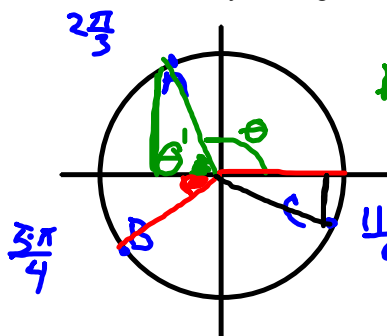What is a reference angle?

* It is positive

* It is acute
Every acute angle is its own reference angle.
The quadrant angles have no reference angle (90°, 180°, 270°, 360°)

* It is the acute angle your terminal side makes with the x-axis.

If your angle is in radians, the reference angle is in radians.
Radians: If your angle is in degrees, the reference angle is in degrees.
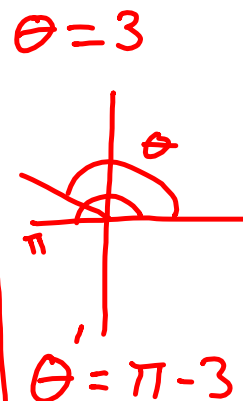
$\frac{2\pi}{3}$

$\frac{3\pi}{4}$

$A: \theta' \quad \pi - \frac{2\pi}{3} = \frac{\pi}{3}$ ✓

$\frac{11\pi}{6}$

$B: \theta' = \frac{5\pi}{4} - \pi = \frac{\pi}{4}$ ✓

$C: \theta' = 2\pi - \frac{11\pi}{6} = \frac{\pi}{6}$ ✓

$\theta = 3$

$\theta' = \pi - 3$

$P: \theta' = 180° - 146° = 34°$

$Q: \theta' = 235° - 180° = 45°$

Degrees:

$146°$

$235°$

$320°$

$R: \theta' = 360° - 320° = 40°$