

Algebra 2H Notes Section 10-3

The Unit Circle

A **reference angle** is an acute angle formed between the terminal side of an angle and the x-axis.

Example 1: Find the reference angle for each angle.

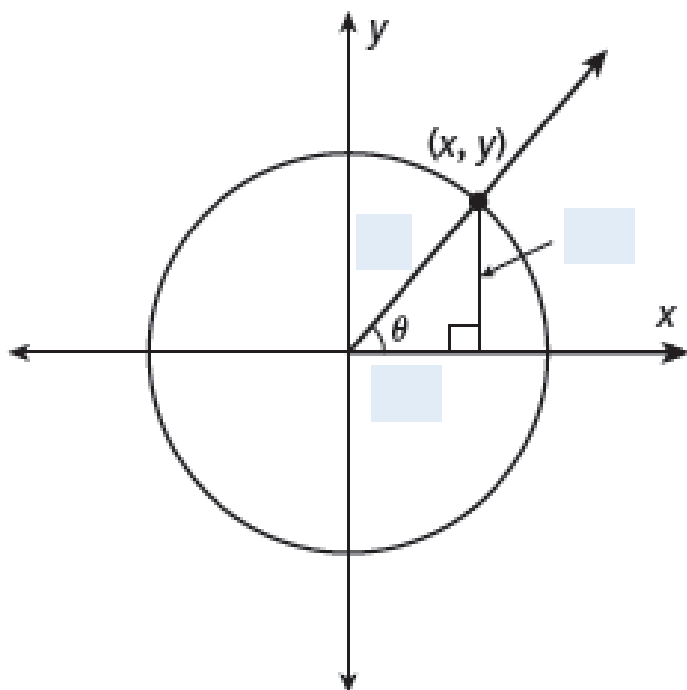
100°

-50°

$\frac{9\pi}{8}$

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

To evaluate the trigonometric function of an angle, you need to know the reference angle θ' and whether the value of the trig function is positive or negative in that quadrant.



Example 2: The terminal side of angle θ passes through the point $(-3, -2)$. Find the values of the 6 trig functions of θ in simplest form.

Example 3: Use a unit circle and special triangles to find exact values in simplest form.

$$\cos 135^\circ$$

$$\csc 660^\circ$$

$$\cot \left(\frac{-8\pi}{3} \right)$$

A **quadrantal angle** is an angle whose terminal side lies on an axis.

Example 4: Evaluate all 6 trig functions of 270° .