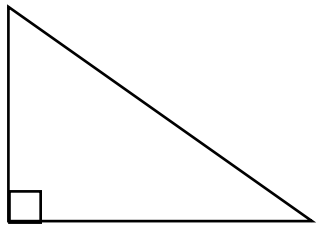
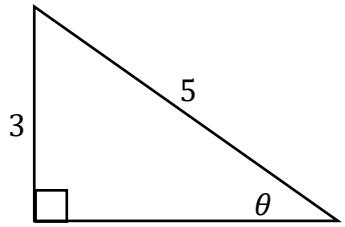
Entry #: _____

Lesson 6.2 & 6.3: Right Triangle Trig & Trigonometric Functions of Angles

Trigonometric Ratios of Right Triangles



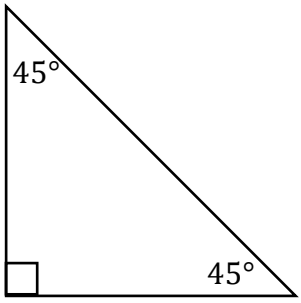
Example: Complete the following table using the triangle below.



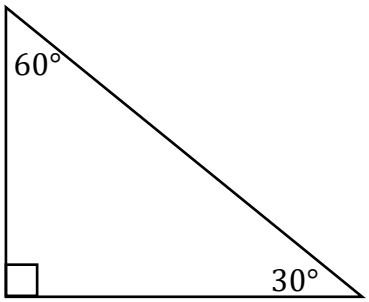
$\sin(\theta) =$	$\csc(\theta) =$
$\cos(\theta) =$	$\sec(\theta) =$
$\tan(\theta) =$	$\cot(\theta) =$

Special Right Triangles

1. Isosceles Right Triangle
   $45° - 45° - 90°$

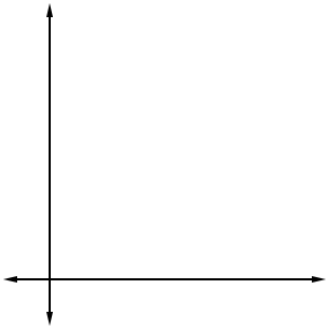


2. $30° - 60° - 90°$



Trigonometric Functions of Angles

Let POQ be a right triangle with an acute angle θ.



Reference Angles

Let θ be an angle in standard position. The _____ angle $\bar{\theta}$ associated with θ is the acute angle formed by the terminal side of θ and the *x*-axis.

Example: Find the reference angle for the following angles.

1. $\theta = \frac{5\pi}{3}$
2. 870°

Evaluating Trigonometric Functions for Any Angle

1.

2.

3.

Example: Use the reference angle to evaluate the following trigonometric functions.

1. $\sin(240°)$

2. $\cot(495°)$

3. $\sin\left(\frac{16\pi}{3}\right)$

4. $\sec\left(\frac{-\pi}{4}\right)$

Area of a Triangle Using Trigonometry

Example: Find the area of the triangle ABC shown below.