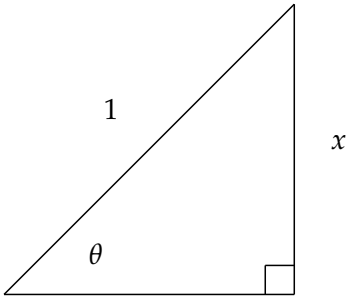
Right Angle Trigonometry

Suppose $x = \sin\theta$

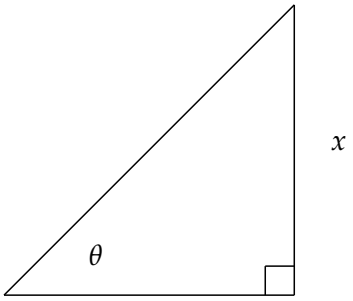


$\sin\theta = \dfrac{x}{1}$ $\qquad$ $\cos\theta =$

$\tan\theta =$ $\qquad$ $\cot\theta =$

$\sec\theta =$ $\qquad$ $\csc\theta =$

Suppose $x = \tan\theta$

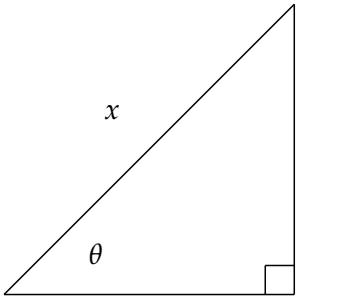


$\sin\theta =$ $\qquad$ $\cos\theta =$

$\tan\theta = \dfrac{x}{1}$ $\qquad$ $\cot\theta =$

$\sec\theta =$ $\qquad$ $\csc\theta =$

Suppose $x = \sec\theta$



$\sin\theta =$ $\qquad$ $\cos\theta =$

$\tan\theta =$ $\qquad$ $\cot\theta =$

$\sec\theta = \dfrac{x}{1}$ $\qquad$ $\csc\theta =$

To complete the missing side of the triangles use the Pythagorean Theorem $a^2 + b^2 = c^2$

Identities:

$\sin^2\theta + \cos^2\theta = 1$, $\quad 1 + \tan^2\theta = \sec^2\theta$, $\quad 1 + \cot^2\theta = \csc^2\theta$.

$\sin 2\theta = 2\sin\theta\cos\theta$, $\quad \cos 2\theta = \cos^2\theta - \sin^2\theta = 2\cos^2\theta - 1 = 1 - 2\sin^2\theta$.

$\sin^2\theta = \frac{1}{2}(1 - \cos 2\theta)$, $\quad \cos^2\theta = \frac{1}{2}(1 + \cos 2\theta)$.