Quotient Identities	$\frac{\sin\theta}{\cos\theta} = \tan\theta$	$\frac{\cos\theta}{\sin\theta} = \cot\theta$

Pythagorean Identities	$\sin^2\theta + \cos^2\theta = 1$
	$\tan^2\theta + 1 = \sec^2\theta$
	$1 + \cot^2\theta = \csc^2\theta$

Reciprocal Identities	$\sin\theta = \frac{1}{\csc\theta}$	$\cos\theta = \frac{1}{\sec\theta}$	$\tan\theta = \frac{1}{\cot\theta}$
	$\csc\theta = \frac{1}{\sin\theta}$	$\sec\theta = \frac{1}{\cos\theta}$	$\cot\theta = \frac{1}{\tan\theta}$

Using identities to find values of trigonometric functions

Find the sinx if $\cos x = -\frac{1}{2}$ and $90 < x < 180$

Is there an identity that can relates sinx & cosx?

Find the tanx if secx = -2 and $90 < x < 180$

Is there an identity that can relates tanx & secx?

Find cscx if cosx = $\frac{1}{3}$ and 270 < x < 360

Is there an identity that can relates cscx & cosx?

Expressing One Function in Terms of Another

Example: Express cosx in terms of tanx

look at identities for a connection

Using identities to simplify trig expressions

Simplifying means that the expression is written as a numerical value or in terms of a single trig function.

Simplify: $\sin\theta(\csc\theta - \sin\theta)$

Simplify: $\dfrac{\tan\theta}{\cos\theta}$

Simplify: $\sin\theta(1+\cot^2\theta)$