

Even/Odd

$$\sin(-x) = -\sin x$$

$$\sin(-30^\circ) = -\sin(30^\circ)$$

$$-1/2 = -1/2$$

Pythagorean

$$\sin^2 x + \cos^2 x = 1 \qquad \sin\left(\frac{\pi}{4}\right)^2 + \cos\left(\frac{\pi}{4}\right)^2 = 1$$

$$\text{if } x = \frac{\pi}{4}$$

$$\left(\frac{\sqrt{2}}{2}\right)^2 + \left(\frac{\sqrt{2}}{2}\right)^2 = 1$$

$$\frac{2}{4} + \frac{2}{4} = 1$$

$$\frac{1}{2} + \frac{1}{2} = 1$$

$$1 = 1$$

Cofunctions

$$\sin x = \cos\left(\frac{\pi}{2} - x\right)$$

$$\sin x = \cos(90^\circ - x)$$

$$\sin 30^\circ = \cos(90^\circ - 30^\circ)$$

$$\sin 30^\circ = \cos 60^\circ$$

$$\frac{1}{2} = \frac{1}{2}$$

