

To convert radians to degrees or vice versa, use

Ex Convert $\frac{7\pi}{9}$ to degrees.

Ex Convert 50° to radians.

Ex Sketch the following angles in standard position.

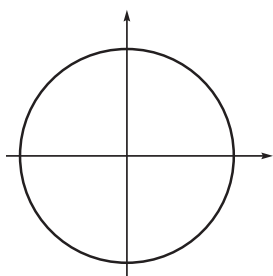
(a). $\theta_1 = \frac{2\pi}{3}$

(b). $\theta_2 = -\frac{4\pi}{3}$

(c). $\theta_2 = \frac{8\pi}{3}$

Ex If $\sec \theta = -3$ and $\pi < \theta < \frac{3\pi}{2}$, find all six trigonometric ratios.

Unit Circle and Common Angles



Ex Find the exact value of $\tan \frac{\pi}{6}$.

Ex Find the exact value of $\cos \left(-\frac{3\pi}{4} \right)$.

Trigonometric Identities

Reciprocal:

Pythagorean:

Half-Angle: $\cos^2 \theta = \frac{1}{2} + \frac{1}{2} \cos 2\theta$

$$\sin^2 \theta = \frac{1}{2} - \frac{1}{2} \cos 2\theta$$

Double-Angle: $\sin 2\theta = 2 \sin \theta \cos \theta$

$$\begin{aligned} \cos 2\theta &= \cos^2 \theta - \sin^2 \theta \\ &= 2 \cos^2 \theta - 1 \\ &= 1 - 2 \sin^2 \theta \end{aligned}$$