

Double and Half-Angle Formula

Double angle formula

$$\sin(2\theta) =$$

$$\cos(2\theta) =$$

$$\tan(2\theta) =$$

Power reducing formula

$$\cos^2 \theta =$$

$$\sin^2 \theta =$$

$$\tan^2 \theta =$$

Half-Angle Formula

$$\cos\left(\frac{\alpha}{2}\right) =$$

$$\sin\left(\frac{\alpha}{2}\right) =$$

$$\tan\left(\frac{\alpha}{2}\right) =$$

Use the info given about the angle θ , $0 < \theta < 2\pi$, to find the exact value of:

- $\cos \theta = \frac{3}{5}, 0 < \theta < \frac{\pi}{2}$

- $\sin \theta = -\frac{\sqrt{3}}{3}, \frac{3\pi}{2} < \theta < 2\pi$

- $\tan \theta = -3, \sin \theta < 0$

- $\sec \theta = 3, \sin \theta > 0$

Use the half angle formula to find the exact value

- $\cos 22.5^\circ$

- $\csc \frac{7\pi}{8}$

- $\tan \frac{9\pi}{8}$

- $\sin -\frac{\pi}{8}$