

Unit 2, Section 3.6

1. If $\sin \theta = -\frac{\sqrt{3}}{3}$, $\frac{3\pi}{2} < \theta < 2\pi$, find the exact value of each of the following.

a) $\sin(2\theta)$ b) $\sin\left(\frac{\theta}{2}\right)$

2. Use the half-angle formulas to find the exact value of each expression.

a) $\cos 22.5^\circ$ b) $\tan \frac{9\pi}{8}$

3. Solve the equation on the interval $0 \leq \theta < 2\pi$.

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

4. Find the exact value of each of the following.

a) $\cos\left(2 \sin^{-1} \frac{3}{5}\right)$ b) $\tan\left(2 \tan^{-1} \frac{3}{4}\right)$