

Name: _____ Date: _____ Period: _____

Find the exact value of each expression, using an appropriate identity.

1. $\cos \frac{\pi}{12}$

2. $\cos(105^\circ)$

3. $\sin \frac{13\pi}{12}$

4. $\sin(15^\circ)$

5. $\sin 40^\circ \cos 20^\circ + \cos 40^\circ \sin 20^\circ$

6. $\cos 100^\circ \cos 80^\circ - \sin 100^\circ \sin 80^\circ$

Solving Trig Equations : Solve each equation for $0 \leq \theta < 2\pi$.

1. $\sin \theta = \frac{\sqrt{3}}{2}$

2. $\cot \theta = \frac{\sqrt{3}}{3}$

3. $\cos \theta = \frac{-1}{2}$

4. $\sin(2\theta) = -\frac{\sqrt{2}}{2}$

5. $2 \tan \theta - 1 = 1$

6. $4 \sin^2 \theta - 3 = 0$

$$7. \cos^2 \theta - \cos \theta = 0$$

$$8. 2 \sin^2 \theta - 3 \sin \theta + 1 = 0$$

$$9. (\cot \theta - 1)(\csc \theta + 1) = 0$$

$$10. 2 \cos^2 \theta = \sin \theta + 1$$

$$11. \sqrt{3} \sin \theta = \cos \theta$$

$$12. \sin 2\theta + \sin \theta = 0$$

$$13. \cos 2\theta = 1 - \sin \theta$$

$$14. \sin \theta \tan \theta = \sqrt{3} \sin \theta$$