

TRIGONOMETRY FORMULAS

Use the angle sum identity to find the exact value of each.

1) $\cos 105^\circ$

2) $\sin 195^\circ$

Use the angle difference identity to find the exact value of each.

3) $\cos 75^\circ$

4) $\sin 105^\circ$

5) Show $\sin 4\theta = 4\sin \theta \cos \theta \cos 2\theta$

6) Solve $5 \cos 2\theta = 1$ for $0^\circ \leq \theta < 360^\circ$

7) Solve $\cos^2 \theta = \cos \theta$ for $0^\circ \leq \theta < 360^\circ$.

8) Solve $\cos 2\theta = \cos \theta + 2$ for $0 \leq \theta < 2\pi$

Use a double-angle or half-angle identity to find the exact value of each expression.

9) $\cot \frac{\pi}{3}$

10) $\cot \frac{2\pi}{3}$

11) $\sec \frac{5\pi}{12}$

12) $\cot 60^\circ$

13) $\cot 240^\circ$

14) $\cot \frac{5\pi}{3}$