

Solving Trig Equations - Mixed Practice

Solve each equation for $0 \leq \theta < 360$.

1) $\frac{-4 + \sqrt{3}}{2} = -2 + \sin \theta$

2) $4 + \cos \theta = 4$

3) $3\sqrt{3} = -6\cos 3\theta$

4) $\frac{2}{5} \cdot \sin 3\theta = \frac{\sqrt{3}}{5}$

Solve each equation for $0 \leq \theta < 2\pi$.

5) $3\sqrt{2} = -6\cos \theta$

6) $-1 + \sin \theta = \frac{-2 + \sqrt{3}}{2}$

7) $-\frac{7}{2} = -4 + \sin 4\theta$

8) $\frac{2 + \sqrt{3}}{2} = 1 + \cos 3\theta$

Find ALL solutions to each equation in degrees.

$$9) \frac{-10 - \sqrt{2}}{2} = -5 + \sin \theta$$

$$10) -2\sqrt{2} = -4\cos \theta$$

$$11) -1 = 2\sin(\theta + 330)$$

$$12) 5 + \cos(\theta + 135) = \frac{9}{2}$$

Find ALL solutions to each equation in radians.

$$13) 2\sqrt{2} = -4\sin \theta$$

$$14) \frac{-6 + \sqrt{3}}{2} = -3 + \cos \theta$$

$$15) -4 + \sin 2\theta = \frac{-8 - \sqrt{2}}{2}$$

$$16) \frac{2}{3} \cdot \cos \frac{\theta}{4} = -\frac{\sqrt{3}}{3}$$