

Trigonometric Equations

General Solutions to Trigonometric Equations 2

Solve each equation below for $0^\circ \leq x \leq 360^\circ$ or $0 \leq x \leq 2\pi$.

1) $-0.91 = \cos \theta$

2) $\cos \theta = \frac{\sqrt{2}}{2}$

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

4) $3 - \frac{1}{3} \cdot \tan \theta = \frac{9 - \sqrt{3}}{3}$

5) $4 + 4\tan \theta = 4$

6) $4 - 4\cos \theta = 4$

7) $-5 + 6\sin \theta = -2$

8) $-4 - \frac{1}{5} \cdot \tan \theta = -\frac{19}{5}$

9) $5 = 2 - 3\tan \theta$

10) $-2 + \frac{7}{3} \cdot \csc \left(2\theta + \frac{4\pi}{3} \right) = -\frac{8}{3} + 2\csc \left(2\theta + \frac{4\pi}{3} \right)$

11) $3 - 2\csc \left(\frac{\theta}{3} + \frac{2\pi}{3} \right) = -1 - 4\csc \left(\frac{\theta}{3} + \frac{2\pi}{3} \right)$

12) $-\sqrt{3} - 7 = -7 - \frac{3}{2} \cdot \csc \left(4\theta + \frac{5\pi}{4} \right)$