

Solving “Linear” Trigonometric Equations

Solve each of the following equations for the interval provided:

Example 1

$$\cos \theta = \frac{\sqrt{3}}{2} , \quad 0 \leq \theta \leq 2\pi$$

Example 2

$$\sin \theta = \frac{\sqrt{2}}{5} , \quad 0 \leq \theta \leq 2\pi$$

Example 3

$$3\tan \theta - 2 = 0 , \quad 0 \leq \theta \leq 2\pi$$

Example 4

$$\sin 2\theta = \frac{\sqrt{3}}{2} , \quad 0 \leq \theta \leq 2\pi$$

Example 5

$$\tan 3\theta + 1 = 0 , \quad 0 \leq \theta \leq 2\pi$$

Example 6

$$\sin(3\theta + \frac{\pi}{4}) = 1 , \quad 0 \leq \theta \leq 2\pi$$