Solving for Angle θ Given a Trig Ratio

Solve for θ :

Example 1

$\cos\theta = \frac{-1}{\sqrt{2}}$, given that the terminal arm of θ is in quadrant III

Example 2

$\sin\theta = \frac{\sqrt{3}}{2}$, given that the terminal arm of θ is in quadrant II

Example 3

$\tan\theta = \frac{1}{\sqrt{3}}$, given that the terminal arm of θ is in quadrant III

Example 4

$\sin\theta = \frac{1}{3}$, given that the terminal arm of θ is in quadrant I

Example 5

$\tan\theta = \frac{-4}{5}$, find both answers for θ, where $0 \le \theta \le 2\pi$

Example 6

$\cos\theta = \frac{-7}{8}$, find both answers for θ, where $0 \le \theta \le 2\pi$

Example 7

$\csc\theta = -2$, find both answers for θ, where $0 \le \theta \le 2\pi$

Example 8

$\cot\theta = \frac{3}{4}$, find both answers for θ, where $0 \le \theta \le 2\pi$