

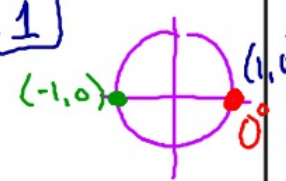
Find the exact value without a calculator.

A) $\sin(\cos^{-1}(1/2))$

$\sin(\cos^{-1}(1/2))$
 $\sin(60^\circ) = \frac{\sqrt{3}}{2}$

B) $\cos(\tan^{-1}(0))$

$\cos(\tan^{-1}(0))$
 what angle $\frac{y}{x} = \frac{0}{1}$
 $\cos(0^\circ) = 1$



C) $\tan(\sin^{-1}(\frac{\sqrt{2}}{2}))$

$\tan(45^\circ) = 1$

D) $\sin(\tan^{-1}(-\sqrt{3}))$

$\frac{\sqrt{3}}{1} = \frac{\sqrt{3}/2}{1/2} = \frac{y}{x}$
 $\sin(-60^\circ) = -\frac{\sqrt{3}}{2}$

E) $\cos^{-1}(\sin(\frac{\pi}{4}))$

$\cos^{-1}(\frac{\sqrt{2}}{2}) = 45^\circ = \frac{\pi}{4} \text{ rad}$

F) $\sin^{-1}(\cos(\frac{\pi}{6}))$

$\sin^{-1}(\cos 30^\circ)$
 $\sin^{-1}(\frac{\sqrt{3}}{2}) = 60^\circ$

1. $\cos\left(\sin^{-1}\frac{1}{\sqrt{2}}\right) =$

2. $\sin\left(\tan^{-1}\left(\frac{\sqrt{2}}{2}\right)\right) =$

3. $\cot\left(\cos^{-1}\frac{-1}{4}\right) =$

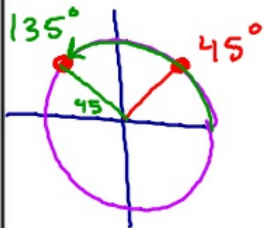
4. $\csc\left(\sin^{-1}\frac{-2}{3}\right) =$

PRE-CALCULUS: by Finney, Demana, Watts and Kennedy
Solving Trigonometric Equations

What you'll Learn About

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$[0, 360^\circ]$

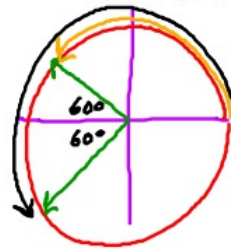


A) $\sin \theta = \frac{\sqrt{2}}{2}$

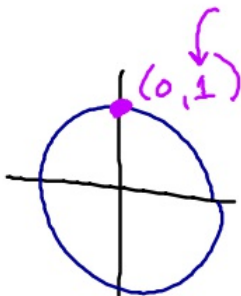
Find the angle(s) when $y = \frac{\sqrt{2}}{2}$

$\theta = 45^\circ$
 $\theta = 180^\circ - 45 = 135^\circ$

B) $\cos \theta = -\frac{1}{2}$

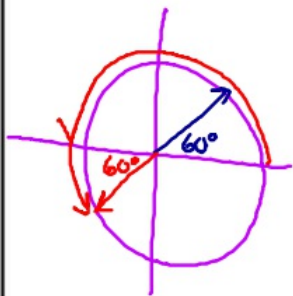
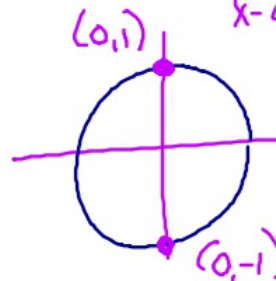


$\theta = 180 - 60 = 120^\circ$
 $\theta = 180 + 60 = 240^\circ$



C) $\sin \theta = 1$
y coord = 1
 $\theta = 90^\circ$

D) $\cos \theta = 0$
x coord = 0
 $\theta = 90^\circ$
 $\theta = 270^\circ$



E) $\tan \theta = \sqrt{3}$
 $\theta = 60^\circ$
Where else is tangent pos
 $\theta = 180 + 60 = 240^\circ$

F) $\tan \theta = -1$ where is $\tan \theta < 0$
 $\theta = 180 - 45 = 135^\circ$
 $\theta = 360 - 45 = 315^\circ$

