

Identify all exact solutions to the equation $2(\tan x + 3) = 5 + \tan x$, $0 \leq x < 2\pi$

$$2\tan x + 6 = 5 + \tan x$$

$$\tan x + 6 = 5$$

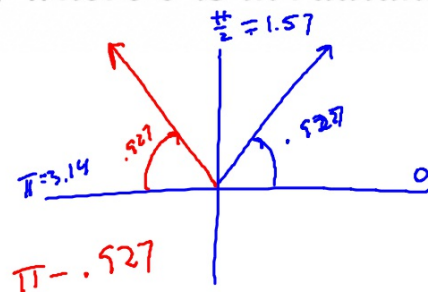
$$\tan x = -1$$

$$\frac{3\pi}{4}, \frac{7\pi}{4}$$

Use a calculator to solve the equation $\sin \theta = 0.8$, where θ is in radians.

$$\sin \theta = \frac{4}{5}$$

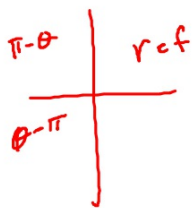
$$\begin{aligned}\sin^{-1}(0.8) &= .927 \\ &= 2.214\end{aligned}$$



1.318

Use a calculator to solve the equation $\sec \theta = -4$, where θ is in radians.

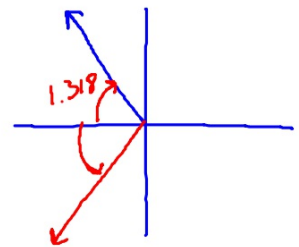
$$\theta - \pi = \text{ref}$$



$$\cos \theta = -\frac{1}{4}$$

$$\cos^{-1}\left(-\frac{1}{4}\right) = 1.82$$

4.459



Solve $\cos \theta = -0.2$

$$\cos^{-1}(-0.2) = 1.77$$

$$\pi - 1.77 = 1.369$$

$$\pi + 1.369$$

$$4.51$$

$[0, 2\pi)$

$$\sin \theta = -0.75$$

$$\sin^{-1}(-0.75) = -0.848$$

$$2\pi + (-0.848) = \underline{5.435}$$

$$3.989$$

