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

\[2\tan x + 6 = 5 + \tan x\]

\[\tan x + 6 = 5\]

\[\tan x = -1\]

\[\frac{3\pi}{4}, \quad \frac{7\pi}{4}\]
Use a calculator to solve the equation $\sin \theta = 0.8$, where $\theta$ is in radians.

\[
\sin \theta = \frac{4}{5}
\]

\[
\sin^{-1}(0.8) = 0.927
\]

\[
\approx 2.214
\]
Use a calculator to solve the equation $\sec \theta = -4$, where $\theta$ is in radians.

$\theta - \pi = 1.318$

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

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

4.459
Solve \( \cos \theta = -0.2 \)

\[
\cos^{-1}(-0.2) \approx 1.77
\]

\[\pi - 1.77 = 1.349\]

\[\pi + 1.369 = 4.51\]

\[\theta \in [0, 2\pi)\]

\[
\sin \theta = -0.75
\]

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

\[2\pi + (-0.848) = 5.435\]

\[3.989\]