

Wednesday - October 29, 2014

$$\textcircled{4^2} \quad \begin{array}{r} \cos^2 \beta - \sin^2 \beta = 2 \cos^2 \beta - 1 \\ - \cos^2 \beta \quad - \cos^2 \beta \end{array}$$

$$\begin{array}{r} - \sin^2 \beta = \cos^2 \beta - 1 \\ + 1 + \sin^2 \beta \quad + \sin^2 \beta + 1 \end{array}$$

$$1 = \sin^2 \beta + \cos^2 \beta \quad \checkmark$$

$$1 = 1 \quad \checkmark$$

$\textcircled{3.5}$

$\textcircled{17}$

$$\textcircled{2^5} \quad \begin{array}{l} \frac{\tan x - \cot x}{\tan x + \cot x} \quad \begin{array}{l} \frac{\sin x}{\cos x} - \frac{\cos x}{\sin x} \\ \frac{\sin x}{\cos x} + \frac{\cos x}{\sin x} \end{array} \\ \frac{\sin^2 x - \cos^2 x}{\sin x \cos x} = \frac{(\sin^2 x) - \cos^2 x}{\sin x \cos x} \end{array}$$

$$= \frac{\sin^2 x - \cos^2 x}{\sin x \cos x} = \frac{(\sin^2 x) - \cos^2 x}{\sin x \cos x}$$

$$\frac{\frac{1}{2}}{\frac{3}{4}} = \frac{1}{2} \cdot \frac{4}{3}$$

$$= \frac{(1 - \cos^2 x) - \cos^2 x}{\sin x \cos x}$$

$$= 1 - 2 \cos^2 x$$

~~$\textcircled{2.11}$~~

$$\textcircled{3.17} \quad \csc \theta \tan \theta = \sec \theta$$

$$\frac{1}{\sin \theta} \cdot \frac{\sin \theta}{\cos \theta} = \frac{1}{\cos \theta}$$

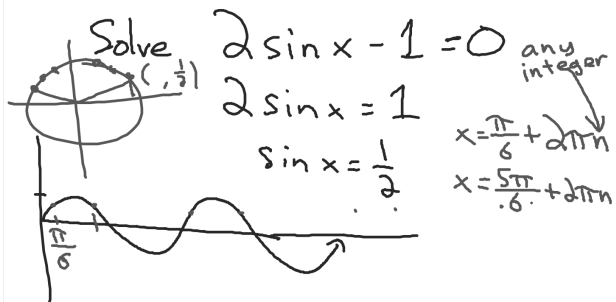
$$\frac{1}{\cos \theta} = \frac{1}{\cos \theta} \quad \checkmark$$

$$\textcircled{18} \quad \begin{array}{r} 2 - \csc^2 z = 1 - \cot^2 z \\ -1 \quad -1 \end{array}$$

$$\begin{array}{r} 1 - \csc^2 z = -\cot^2 z \\ + \csc^2 z \quad + \csc^2 z \\ + \cot^2 z \quad + \cot^2 z \end{array}$$

$$1 + \cot^2 z = \csc^2 z \quad \checkmark$$

U7 D3 - Solving
Trig Eq

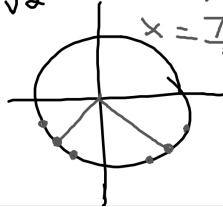


Solve

$$\begin{array}{l} \sin x + \sqrt{2} = -\sin x \\ + \sin x \qquad \qquad + \sin x \end{array}$$

$$\begin{array}{l} 2\sin x + \sqrt{2} = 0 \\ \qquad \qquad \qquad -\sqrt{2} \end{array} \quad \begin{array}{l} x = \frac{5\pi}{4} + 2\pi n \\ x = \frac{7\pi}{4} + 2\pi n \end{array}$$

$$\begin{array}{l} \sin x = -\frac{\sqrt{2}}{2} \\ \sin x = -\frac{\sqrt{2}}{2} \end{array}$$



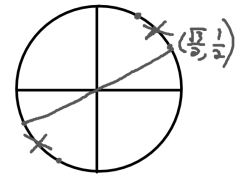
Solve

$$3\tan^2 x - 1 = 0 \quad \begin{array}{l} x = \frac{\pi}{6} + \pi n \\ x = \frac{7\pi}{6} + \pi n \end{array}$$

$$\tan^2 x = \frac{1}{3}$$

$$\tan x = \frac{1}{\sqrt{3}}$$

$$\tan x = \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$$



$\frac{1}{\sqrt{3}}$ \oplus