

Precalc Trig Identities Practice Part 1

$$\tan^2 \theta = \csc^2 \theta \tan^2 \theta - 1$$

$$\frac{1}{\tan x} + \tan x = \frac{1}{\sin x \cos x}$$

$$(\sin x + \cos x)(\tan x + \cot x) = \sec x + \csc x$$

$$(\sin x - \cos x)^2 + (\sin x + \cos x)^2 = 2$$

$$\frac{1 + \sin x}{1 - \sin x} - \frac{1 - \sin x}{1 + \sin x} = 4 \tan x \sec x$$

$$\sin x - \sin x \cos^2 x = \sin^3 x$$

$$\tan^2 x - \sin^2 x = \tan^2 x \sin^2 x$$

$$\frac{\csc \beta}{\sin \beta} - \frac{\cot \beta}{\tan \beta} = 1$$

$$\frac{\sin^2 x}{\cos^2 x + 3 \cos x + 2} = \frac{1 - \cos x}{2 + \cos x}$$

$$\cos^2 x = \frac{\csc x \cos x}{\tan x + \cot x}$$

$$\frac{\sin^4 x - \cos^4 x}{\sin^2 x - \cos^2 x} = 1$$

$$\frac{\cos x + 1}{\sin^3 x} = \frac{\csc x}{1 - \cos x}$$

$$\frac{1 - \sin x}{\cos x} = \frac{\cos x}{1 + \sin x}$$

$$\sin^4 x - \cos^4 x = 1 - 2 \cos^2 x$$

$$\frac{\cos \alpha}{1 + \sin \alpha} + \frac{1 + \sin \alpha}{\cos \alpha} = 2 \sec \alpha$$

$$\tan x \sin x + \cos x = \sec x$$