

Guidelines for Verifying Trigonometric Identities

- Work with one side of the equation at a time.
- Look for opportunities to factor, simplify, etc.
- Look for opportunities to use fundamental identities.
- Try converting all to sines and cosines.
- TRY SOMETHING!!

Example #1	$(1 + \sin x)(1 - \sin x) = \cos^2 x$
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Example #2	$\cos^2 \beta - \sin^2 \beta = 1 - 2 \sin^2 \beta$
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Example #3	$\csc x - \sin x = \cos x \cot x$
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Example #4	$\csc^4 \theta - \cot^4 \theta = 2 \csc^2 \theta - 1$
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Example #5

$$\frac{\cos(-\theta)}{1 + \sin(-\theta)} = \sec \theta + \tan \theta$$

Example #6

$$\frac{\tan x + \cot y}{\tan x \cot y} = \tan y + \cot x$$