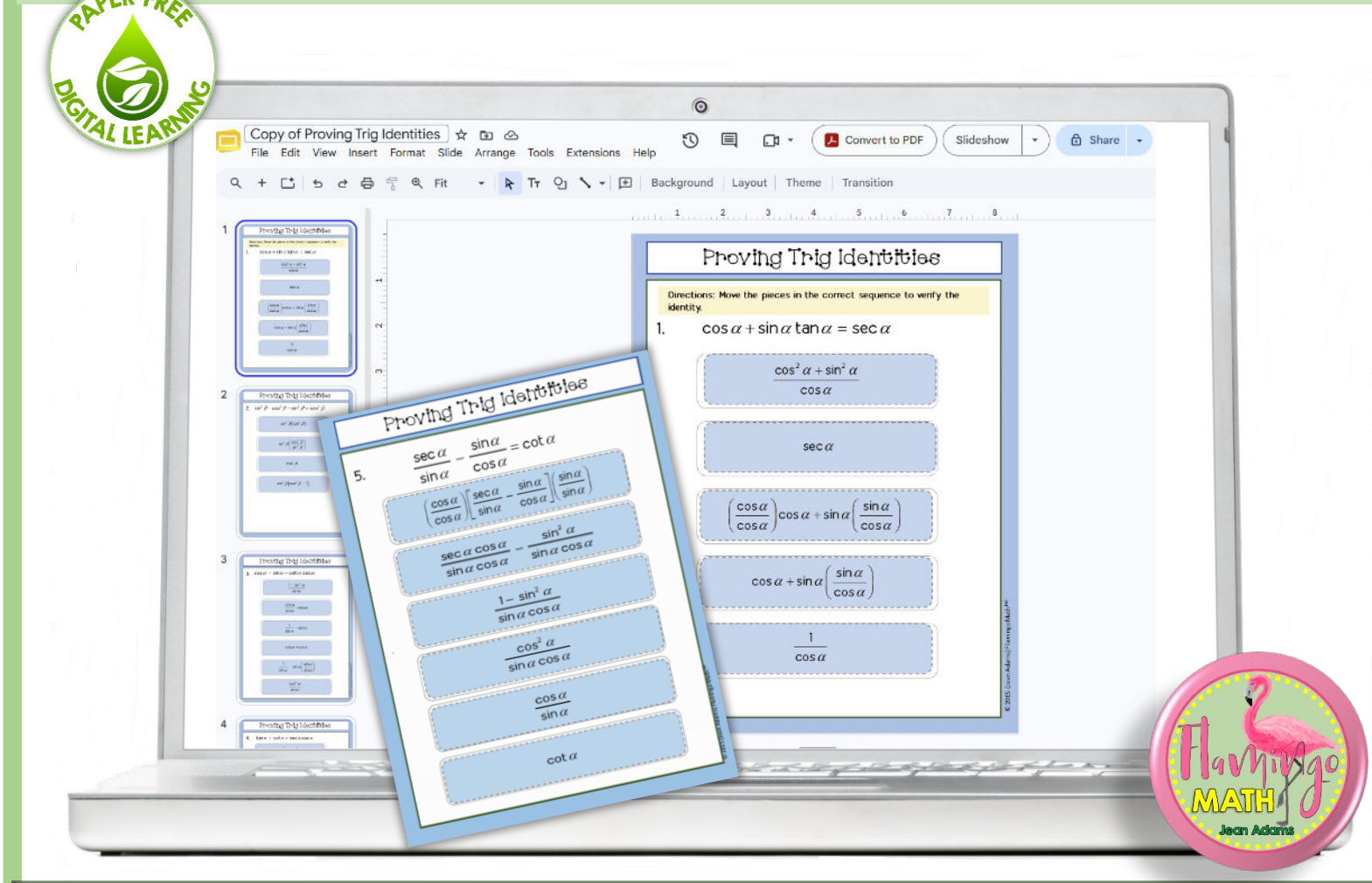
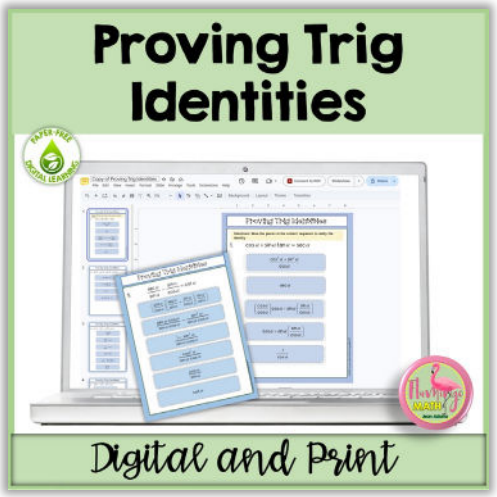
Proving Trig Identities



Digital and Print



Proving Identities in Trigonometry with Google Slides

Your Precalculus students will have 8 trigonometric identities to prove in this digital drag and drop activity.

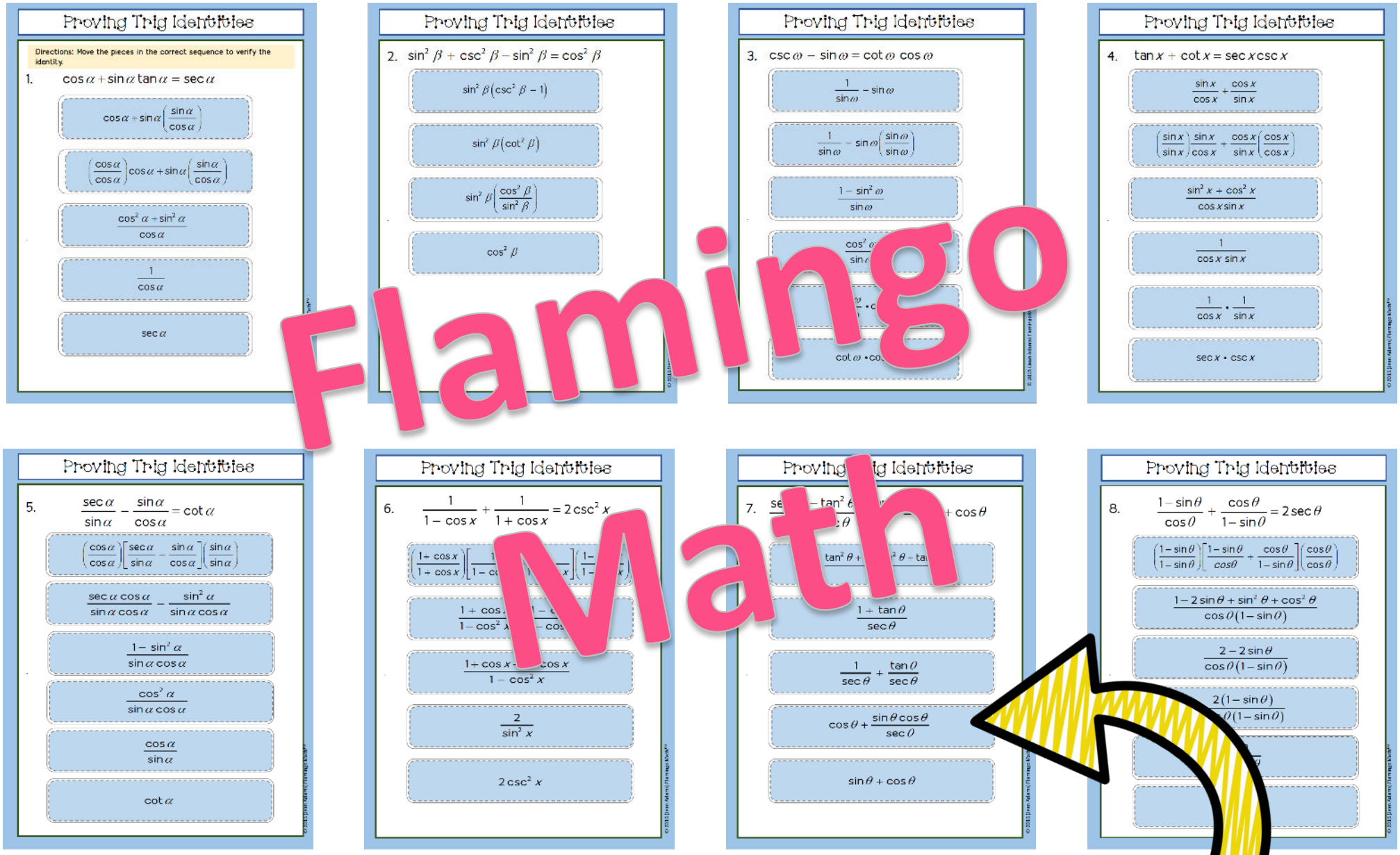
Proving Trigonometric Identities

This is a DIGITAL ACTIVITY for students enrolled in Precalculus or Trigonometry. The lesson includes 8 GOOGLE SLIDES each containing a single trigonometric identity. Students interact with the slides on their one-to-one devices to move the pieces in the correct progression to verify the identity.

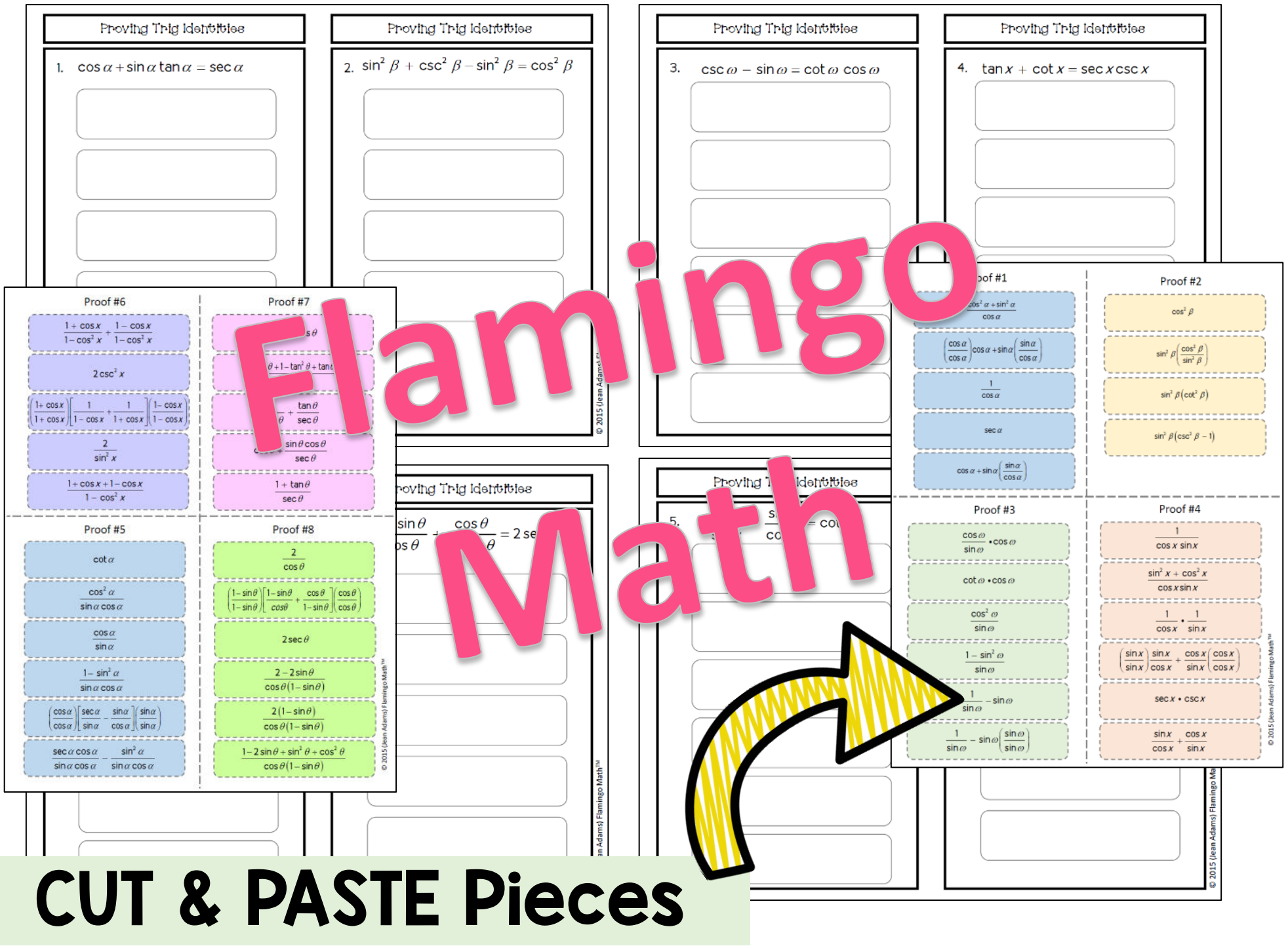
A separate cut and paste activity is also included.

***NOTE: YOU AND YOUR STUDENTS MUST HAVE ACCESS TO THE INTERNET TO BEGIN TO INTERACT WITH THE LESSON! THIS FILE IS NOT EDITABLE.**

Flamingo MATH
Jean Adams



MOVABLE PIECES


Proving Trig Identities
1. $\cos\alpha + \sin\alpha\tan\alpha = \sec\alpha$
Proving Trig Identities
2. $\sin^2\beta + \csc^2\beta - \sin^2\beta = \cos^2\beta$
Proving Trig Identities
3. $\csc\omega - \sin\omega = \cot\omega\cos\omega$
Proving Trig Identities
4. $\tan x + \cot x = \sec x\csc x$
Proving Trig Identities
5.
Proof #1
Proof #2
$\cos^2\beta$
$\sin^2\beta\left(\frac{\cos^2\beta}{\sin^2\beta}\right)$
$\sin^2\beta(\cot^2\beta)$
$\sin^2\beta(\csc^2\beta - 1)$
Proof #3
$\frac{\cos\omega}{\sin\omega}\cdot\cos\omega$
$\cot\omega\cdot\cos\omega$
$\frac{\cos^2\omega}{\sin\omega}$
$\frac{1-\sin^2\omega}{\sin\omega}$
$\frac{1}{\sin\omega} - \sin\omega$
$\frac{1}{\sin\omega} - \sin\omega\left(\frac{\sin\omega}{\sin\omega}\right)$
Proof #4
$\frac{1}{\cos x\sin x}$
$\frac{\sin^2 x + \cos^2 x}{\cos x\sin x}$
$\frac{1}{\cos x}\cdot\frac{1}{\sin x}$
$\left(\frac{\sin x}{\sin x}\right)\left(\frac{\sin x}{\cos x}\right) + \frac{\cos x}{\sin x}\left(\frac{\cos x}{\cos x}\right)$
$\sec x\cdot\csc x$
$\frac{\sin x}{\cos x} + \frac{\cos x}{\sin x}$
Proof #6
$\frac{1+\cos x}{1-\cos^2 x} + \frac{1-\cos x}{1-\cos^2 x}$
$2\csc^2 x$
$\left(\frac{1+\cos x}{1+\cos x}\right)\left[\frac{1}{1-\cos x} + \frac{1}{1+\cos x}\right]\left(\frac{1-\cos x}{1-\cos x}\right)$
$\frac{2}{\sin^2 x}$
$\frac{1+\cos x+1-\cos x}{1-\cos^2 x}$
Proof #7
$\frac{1+\tan\theta}{\sec\theta}$
Proof #5
$\cot\alpha$
$\frac{\cos^2\alpha}{\sin\alpha\cos\alpha}$
$\frac{\cos\alpha}{\sin\alpha}$
$\frac{1-\sin^2\alpha}{\sin\alpha\cos\alpha}$
$\left(\frac{\cos\alpha}{\cos\alpha}\right)\left[\frac{\sec\alpha}{\sin\alpha} - \frac{\sin\alpha}{\cos\alpha}\right]\left(\frac{\sin\alpha}{\sin\alpha}\right)$
$\frac{\sec\alpha\cos\alpha}{\sin\alpha\cos\alpha} - \frac{\sin^2\alpha}{\sin\alpha\cos\alpha}$
Proof #8
$\frac{2}{\cos\theta}$
$\left(\frac{1-\sin\theta}{1-\sin\theta}\right)\left[\frac{1-\sin\theta}{\cos\theta} + \frac{\cos\theta}{1-\sin\theta}\right]\left(\frac{\cos\theta}{\cos\theta}\right)$
$2\sec\theta$
$\frac{2-2\sin\theta}{\cos\theta(1-\sin\theta)}$
$\frac{2(1-\sin\theta)}{\cos\theta(1-\sin\theta)}$
$\frac{1-2\sin\theta+\sin^2\theta+\cos^2\theta}{\cos\theta(1-\sin\theta)}$
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CUT & PASTE Pieces