

PreCalc: Trig ID Guidelines:

Name: _____

Guidelines for Verifying Trig Identities:

1. Work with only 1 side of the Equation.
Simplify the more complicated side.
2. Convert all trig functions to sines or cosines.
3. Use the fun. trig ID's. Look for Pythagorean Pairs: Sin/cos, Tan/sec, cot/csc
4. Look for things to: add, multiply or factor. Combine fractions, Square Binomials, complete conjugates
5. Try Something! Even a dead end can tell you something

Extended Pythagorean Identities:

$$\sin^2(u) + \cos^2(u) = 1$$

$$\sin^2(u) = 1 - \cos^2$$

$$\cos^2(u) = 1 - \sin^2$$

$$1 + \tan^2(u) = \sec^2$$

$$\tan^2(u) = \sec^2 - 1$$

$$1 = \sec^2 - \tan^2$$

$$-1 = \tan^2 - \sec^2$$

$$1 + \cot^2(u) = \csc^2$$

$$\cot^2(u) = \csc^2 - 1$$

$$1 = \csc^2 - \cot^2$$

$$-1 = \cot^2 - \csc^2$$