

Tips to Verify Trig Identities

Example 6:
Separate into two fractions

$$\frac{\sec^2 \beta - 1}{\sec^2 \beta} = \sin^2 \beta$$

Example 5: Combine fractions
with a common denominator

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

Example 1: Convert to sine and cosine

$$\sec y = \frac{\tan y}{\sin y}$$

Example 2: Factor out a common term

$$\sin y + \sin y \cdot \cot^2 y = \csc y$$

Example 4: Multiply by a conjugate

$$\frac{1 - \sin y}{\cos y} = \sec y + \tan y$$