

Quiz 17.4 Trig Proofs

For # 1 – 5, prove that each of the following equations is an identity.

1. $\sin y + \sin y \cot^2 y = \csc y$

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

3. $\csc^2 x \tan^2 x - 1 = \tan^2 x$

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

5. $(\sin \theta + \cos \theta)^2 + (\sin \theta - \cos \theta)^2 = 2$