

Hints: These suggestions may be helpful when tackling more difficult identities.

1. There is often more than one right way to do a problem. If you use true relationships for each step and have matching sides at the end, the proof is valid.
2. It may be helpful to go through the instruction manual and put all the trig identities you have learned so far on a note card. This will remind you of all the tools you have available.
3. There is no set formula. Approach these as puzzles to solve. You will become more skillful with practice.
4. It is usually best to put everything in terms of sin and cos, as suggested in the lesson. However, if you see an obvious way to get from one step to another without doing that, you may use it.

Practice Problems 1

Prove the validity of the statements.

1. $\frac{1 + \sin \beta}{\tan \beta} = \cot \beta + \frac{1}{\sec \beta}$

2. $\sec \theta - \cos \theta = \sin \theta \tan \theta$

3. $1 + \cot^2 \alpha = \csc^2 \alpha$