

Trigonometric Identities Homework  
Module 3, Unit 7, Lesson 11

Simplify the following trigonometric expressions.

1.  $\frac{\tan x + \cot x}{\cot x}$

2.  $\sec x \cot x - \cot x \cos x$

3.  $\frac{\tan^2 \theta \csc^2 \theta}{\sec \theta}$

4.  $\frac{\sec \theta \cot \theta}{\csc \theta \tan \theta}$

5.  $\sec^2 \theta \cos^2 \theta$

6.  $\sin t \tan t - \csc t \tan t$

7.  $\frac{\cos^2 t - 1}{\sin^2 t - 1}$

8.  $\sec \theta \cot \theta$

$$9. \frac{\cot x + \tan x}{\sec x}$$

$$10. \frac{\sec^2 t - 1}{\tan t}$$

$$11. \frac{\cos^2 t}{1 - \cos^2 t}$$

$$12. \sin^2 t \cot t \csc t$$

$$13. \frac{\cos^2 t - 1}{\cos^2 t \tan^2 t}$$

$$14. \frac{\cos x}{1 + \sin x} + \frac{\cos x}{1 - \sin x}$$

1.  $\sec^2 x$
2.  $\sin x$
3.  $\sec \theta$
4.  $\cot \theta$
5. 1
6.  $-\cos t$

7.  $\tan^2 t$
8.  $\csc \theta$
9.  $\csc x$
10.  $\tan t$
11.  $\cot^2 t$
12.  $\cos t$

13. -1
14.  $2\sec x$