

Using Trig Formulas

Name _____

Can you get there from here?

Directions: With a little poking and prodding, all of the expressions on the left can become the expressions to their right. Your task is to show how this change is accomplished. Show all work.

1. $\frac{\sin x - 1}{\cos x} \rightarrow \rightarrow \tan x - \sec x$

2. $\frac{\cot x - \tan x}{\sin x \cos x} \rightarrow \rightarrow \csc^2 x - \sec^2 x$

3. $\sec^2 x - \sec^2 x \sin^2 x \rightarrow \rightarrow 1$

4. $\frac{\sec^2 x - 1}{\sin x} \rightarrow \rightarrow \frac{\sin x}{\cos^2 x}$

5. $(\sec x + \tan x)(\sin x - 1) \rightarrow \rightarrow -\cos x$

6. $\frac{\cos x}{\sin x + 1} + \frac{\sin x + 1}{\cos x} \rightarrow \rightarrow 2\sec x$

7. $\tan x - \cot x \rightarrow \rightarrow \frac{2\sin^2 x - 1}{\sin x \cos x}$

8. $\cos^2 x + \tan x \cos x \sin x + 1 \rightarrow \rightarrow 2$

9. $\frac{1 + \cot x}{\csc x} \rightarrow \rightarrow \sin x + \cos x$

10. $\cot x \cos x + \sin x \rightarrow \rightarrow \csc x$

