9.1 Reciprocal, Quotient and Pythagorean Identities **Name:_____**

Transform the expression on the left to the expression on the right. Use a separate sheet of paper.

1. $\cos x \tan x$ to $\sin x$
2. $\csc x \tan x$ to $\sec x$
3. $\sec x \cot x \sin x$ to 1
4. $\csc x \tan x \cos x$ to 1
5. $\sin^2 x \sec x \csc x$ to $\tan x$
6. $\cos^2 x \csc x \sec x$ to $\cot x$
7. $\tan x + \cot x$ to $\csc x \sec x$
8. $\sin x + \cot x \cos x$ to $\csc x$
9. $\csc x - \sin x$ to $\cot x \cos x$
10. $\sec x - \cos x$ to $\sin x \tan x$
11. $\tan x(\sin x + \cot x \cos x)$ to $\sec x$
12. $\cos x(\sec x + \cos x \csc^2 x)$ to $\csc^2 x$
13. $(1+\sin x)(1-\sin x)$ to $\cos^2 x$
14. $(\sec x - 1)(\sec x + 1)$ to $\tan^2 x$
15. $(\cos x - \sin x)^2$ to $1 - 2\cos x \sin x$
16. $(1-\tan x)^2$ to $\sec^2 x - 2\tan x$
17. $(\tan x + \cot x)^2$ to $\sec^2 x + \csc^2 x$
18. $(\cos x - \sec x)^2$ to $\tan^2 x - \sin^2 x$
19. $\dfrac{\csc^2 x - 1}{\cos x}$ to $\cot x \csc x$
20. $\dfrac{1-\cos^2 x}{\tan x}$ to $\sin x \cos x$
21. $\dfrac{\sec^2 x - 1}{\sin x}$ to $\tan x \sec x$
22. $\dfrac{1+\cot^2 x}{\sec^2 x}$ to $\cot^2 x$
23. $\dfrac{\sec x}{\sin x} - \dfrac{\sin x}{\cos x}$ to $\cot x$
24. $\dfrac{\csc x}{\cos x} - \dfrac{\cos x}{\sin x}$ to $\tan x$
25. $\dfrac{1}{1-\cos x} + \dfrac{1}{1+\cos x}$ to $2\csc^2 x$
26. $\dfrac{1}{\sec x - \tan x} + \dfrac{1}{\sec x + \tan x}$ to $2\sec x$

Monday – ODDS
Tuesday - EVENS