

8.4 Practice WS #1 Simplifying Trig Expressions

Ringbloom

Pre-Calc

Name: _____ Hour: _____ Date: _____

Simplify the following trig expressions completely. You will need a separate sheet of paper to show your work. *If you are really stuck on one, skip it and try another.* Don't get frustrated, you can do this!! ☺

1. $\frac{\tan^2 x + 1}{1 + \cot^2 x}$

2. $\frac{1}{\sec x - \tan x} - \frac{1}{\sec x + \tan x}$

3. $\sec x \tan x \cos x$

4. $\sin^2 x \cot x \csc x$

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

6. $\frac{\tan^2 x}{1 - \sec^2 x}$

7. $\tan^2 x (\csc^2 x - 1)$

8. $\frac{\cos^2 x}{1 - \cos^2 x}$

9. $\frac{\sec^2 x - 1}{\tan x}$

10. $\frac{\cos^2 x - 1}{\sin^2 x - 1}$

11. $\cos x (\sec x - \cos x)$

12. $\cot x (\tan x + \cot x)$

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

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

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

16. $\sin x \tan x - \csc x \tan x$

17. $\frac{\cot^2 x \cos^2 x}{\cot^2 x - \cos^2 x}$

18. $\frac{\sin^2 x - \tan^2 x}{\tan^2 x \sin^2 x}$

19. $\frac{(\sin x + \tan x)^2 + \cos^2 x - \sec^2 x}{\tan x}$

20. $\frac{2 \sin x \cos x + (\sin x - \cos x)^2}{\sec x}$