

Simplifying Trig Expressions WS 2

NAME _____

Simplify each of the following.

1. $\tan^2 x - \sec^2 x$

2. $\sec^2 x(1 - \cos^2 x)$

3. $\cos x + \tan x \sin x$

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

5. $\frac{\sin(-x)}{\cos(-x)}$

6. $\cos x \csc x$

7. $\sec^4 x - \tan^4 x$

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

9. $\cot x \sin x$

10. $\sin \beta (\csc \beta - \sin \beta)$

11. $\frac{\cot x}{\csc x}$

12. $\sec \beta \cdot \frac{\sin \beta}{\tan \beta}$

13. $\cot^2 x - \cot^2 x \cos^2 x$

14. $\sin^2 x \sec^2 x - \sin^2 x$

15. $\tan^4 x + 2 \tan^2 x + 1$

16. $\sin^4 x - \cos^4 x$

17. $\sin^4 x + 2 \sin^2 x \cos^2 x + \cos^4 x$

18. $\tan^2 x - \tan^2 x \sin^2 x$

19. $(\sin x + \cos x)^2$

20. $(\cot x + \csc x)(\cot x - \csc x)$