Name _____

It's all about Sine and Cosine

For #'s 1 – 6, write the trigonometric expression in terms of sine and cosine, and then simplify.

1. $\cos x \tan x$

2. $\sin x \cos x \csc x$

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

4. $\dfrac{\tan x + \cot x}{\sec x \csc x}$

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

6. $\cos^2 x (1 + \tan^2 x)$

For #'s 7 – 19, simplify the trigonometric expression.

7. $\dfrac{\cos x \sec x}{\cot x}$

8. $\cos^3 x + \sin^2 x \cos x$

9. $\dfrac{1+\sin x}{1+\csc x}$

10. $\dfrac{\tan x}{\sec x}$

11. $\dfrac{sec^2 x - 1}{sec^2 x}$

12. $\dfrac{\sec x - \cos x}{\tan x}$

13. $\dfrac{1+\csc x}{\cos x + \cot x}$

14. $\dfrac{1+\sin x}{\cos x} + \dfrac{\cos x}{1+\sin x}$

15. $\tan x \cos x \csc x$

16. $\dfrac{2 + \tan^2 x}{\sec^2 x} - 1$

17. $\dfrac{1 + \cot x}{\csc x}$

18. $\tan x + \cos x - \tan x$

19. $\dfrac{\cos x}{\sec x + \tan x}$