

Simplifying Trig Expressions WS 1

NAME _____

Simplify each of the following.

1. $(\tan \theta)(\cos \theta)$

2. $(\cot A)(\sec A)(\sin A)$

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

4. $(\cos x)(\csc x)(\tan x)$

5. $(\cos y)(\sec y)$

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

7. $\sin^2 x - 1$

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

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

10. $\frac{\sin^4 \theta - \cos^4 \theta}{\sin^2 \theta - \cos^2 \theta}$

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

12. $(1 + \sin x)(1 - \sin x)$

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

14. $\sin \theta(\csc \theta - \sin \theta)$

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

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

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

18. $\cot^2 x(\sec^2 x - 1)$

19. $(1 - \cos^2 x)\csc x$

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

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

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

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

24. $\frac{\tan \theta \csc \theta}{\sec \theta}$

25. $\frac{\sin^2 \theta - \cot \theta \tan \theta}{\cot \theta \sin \theta}$

26. $\sec x - \tan x \sin x$

Simplifying Trig Expressions WS 1 - Answers

1. $\sin \theta$

2. 1

3. $\sin x$

4. 1

5. 1

6. 1

7. $-\cos^2 x$

8. $\cos y$

9. -1

10. 1

11. $\tan^2 \theta$

12. $\cos^2 x$

13. $\tan^2 x$

14. $\cos^2 \theta$

15. $\sec x$

16. $\tan x$

17. $\sec x$

18. 1

19. $\sin x$

20. $\sin^2 x$

21. $\cos^2 x$

22. $\sec^4 x$

23. $-\cot x$

24. 1

25. $-\cos \theta$

26. $\cos x$