

Simplify using the fundamental identities.

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|---|---|---|---|
| 1. $1 - \cos^2 \theta$ | 2. $\csc^2 \theta - 1$ | 3. $\sin^2 \theta - 1$ | 4. $1 - \sec^2 \theta$ |
| 5. $\tan \alpha \cos \alpha$ | 6. $\cot \alpha \sin \alpha$ | 7. $\frac{\cos \alpha}{\sec \alpha}$ | 8. $\frac{\csc \alpha}{\sin \alpha}$ |
| 9. $\frac{\cot \alpha}{\tan \alpha}$ | 10. $\sin \alpha \sec \alpha$ | 11. $\cos \alpha \csc \alpha$ | 12. $\frac{\tan \alpha}{\sin \alpha}$ |
| 13. $\frac{\cos \alpha}{\cot \alpha}$ | 14. $(1 - \sin \theta)(1 + \sin \theta)$ | 15. $(\sec \theta - 1)(\sec \theta + 1)$ | |
| 16. $\cos \theta \csc \theta \tan \theta$ | 17. $\cot \theta \sec \theta \sin \theta$ | 18. $\frac{\sin \theta + \cos \theta}{\csc \theta \sec \theta}$ | 19. $\frac{\csc \theta - \cot \theta}{\sin \theta \tan \theta}$ |
| 20. $\frac{\sec \theta}{\cos \theta} - 1$ | 21. $\frac{\sec \theta}{\cos \theta} - \sec \theta \cos \theta$ | 22. $\frac{1 + \tan^2 \alpha}{\tan^2 \alpha}$ | 23. $\frac{1 + \tan^2 \alpha}{1 + \cot^2 \alpha}$ |
| 24. $\cos^2 50^\circ + \sin^2 50^\circ$ | 25. $1 + \tan^2 50^\circ$ | 26. $\csc^2 \alpha - \cot^2 \alpha$ | 27. $\sec^2 350^\circ - \tan^2 350^\circ$ |

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| 5. $\tan \alpha \cos \alpha$ | 6. $\cot \alpha \sin \alpha$ | 7. $\frac{\cos \alpha}{\sec \alpha}$ | 8. $\frac{\csc \alpha}{\sin \alpha}$ |
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| 13. $\frac{\cos \alpha}{\cot \alpha}$ | 14. $(1 - \sin \theta)(1 + \sin \theta)$ | 15. $(\sec \theta - 1)(\sec \theta + 1)$ | |
| 16. $\cos \theta \csc \theta \tan \theta$ | 17. $\cot \theta \sec \theta \sin \theta$ | 18. $\frac{\sin \theta + \cos \theta}{\csc \theta \sec \theta}$ | 19. $\frac{\csc \theta - \cot \theta}{\sin \theta \tan \theta}$ |
| 20. $\frac{\sec \theta}{\cos \theta} - 1$ | 21. $\frac{\sec \theta}{\cos \theta} - \sec \theta \cos \theta$ | 22. $\frac{1 + \tan^2 \alpha}{\tan^2 \alpha}$ | 23. $\frac{1 + \tan^2 \alpha}{1 + \cot^2 \alpha}$ |
| 24. $\cos^2 50^\circ + \sin^2 50^\circ$ | 25. $1 + \tan^2 50^\circ$ | 26. $\csc^2 \alpha - \cot^2 \alpha$ | 27. $\sec^2 350^\circ - \tan^2 350^\circ$ |