

Simplifying Trigonometric Expressions

Simplify the following trigonometric expressions.

1. $\sec x \cos x$

7. $\cot x \sec x$

2. $\cot^2 x - \csc^2 x$

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

3. $\tan x \csc x$

9. $\sin x (\csc x - \sin x)$

4. $(1 - \cos^2 x)(\csc x)$

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

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

11. $\sin x \sec x$

6. $\frac{\csc x}{\sec x}$

12. $\csc x \tan x + \sec x$

Answer Choices

$\sec x$	-1	1	$\sin x$	$\csc x$	$\tan x$
$\sin^2 x$	$\sec^2 x$	$\cos^2 x$	$\cos x$	$\cot x$	$2\sec x$

22. $\csc x \sec x - \tan x$

24. $\sec x \cot x - \sin x$

26. $\frac{1 - \sin^2 x}{\csc^2 x - 1}$

28. $\frac{\sec x \csc x - \tan x}{\sec x \csc x}$

30. $\cot x - \csc^2 x \cot x$

23. $\csc x - \cos x \cot x$

25. $\frac{\tan x + \sin x \sec x}{\csc x \tan x}$

27. $\frac{\csc x \cos x + \cot x}{\sec x \cot x}$

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

31. $\cot x - \cos^3 x \csc x$

Bank for Back

$-\cot^3 x, \cot x, \cos x \cot x,$
 $2 \cos x, \tan^2 x, \cos x \sin x,$
 $\sin^2 x, 2 \sin x, \cos^2 x, \sin x$