

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Verify the identity.

1)  $\tan x(\csc x - \sin x) = \cos x$  1) \_\_\_\_\_

2)  $1 + \sec^2 x \sin^2 x = \sec^2 x$  2) \_\_\_\_\_

3)  $(1 - \cos x)(1 + \cos x) = \sin^2 x$  3) \_\_\_\_\_

4)  $\csc^2 x - \cos x \sec x = \cot^2 x$  4) \_\_\_\_\_

5)  $(\sec x - \tan x)(\sec x + \tan x) = 1$  5) \_\_\_\_\_

6)  $\sec x + \tan x = \frac{\cos x}{1 - \sin x}$  6) \_\_\_\_\_

7)  $\frac{\sec x - 1}{\tan x} = \frac{\tan x}{\sec x + 1}$  7) \_\_\_\_\_

8)  $\frac{1 - \sec x}{\tan x} + \frac{\tan x}{1 - \sec x} = -2 \csc x$  8) \_\_\_\_\_

9)  $(\sec x + \tan x)^2 = \frac{1 + \sin x}{1 - \sin x}$  9) \_\_\_\_\_

10)  $\frac{\tan x + \cot x}{\tan x - \cot x} = \frac{1}{\sin^2 x - \cos^2 x}$  10) \_\_\_\_\_

11)  $\frac{\sin x}{1 - \cos x} + \frac{\sin x}{1 + \cos x} = 2 \csc x$  11) \_\_\_\_\_