

Trigonometric Identities

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Complete the identity.

1) $\cot x \cdot \tan x = ?$ 1) _____
 A) 1 B) 0 C) -1 D) $\sin x$

2) $\sec^2 x \csc^2 x = ?$ 2) _____
 A) $\csc^2 x - \sec^2 x$ B) $\sec^2 x + \csc^2 x$
 C) $\sec^2 x - \csc^2 x$ D) $\sec x + \csc x$

3) $\sin^2 x + \sin^2 x \cot^2 x = ?$ 3) _____
 A) $\cot^2 x + 1$ B) 1 C) $\sin^2 x + 1$ D) $\cot^2 x - 1$

4) $\sin^2 x + \tan^2 x + \cos^2 x = ?$ 4) _____
 A) $\tan^2 x$ B) $\sin x$ C) $\cot^3 x$ D) $\sec^2 x$

5) $\frac{\csc x \cot x}{\sec x} = ?$ 5) _____
 A) $\sec^2 x$ B) $\cot^2 x$ C) 1 D) $\csc^2 x$

6) $\frac{1 - \cos x}{\sin x} = ?$ 6) _____
 A) $\csc x - \cot x + 1$ B) $\csc x + \cot x$
 C) $-\csc x - \cot x$ D) $\csc x - \cot x$

7) The expression $\frac{1 + \tan^2 x}{\tan^2 x}$ is to be the left hand side of an equation that is an identity. Which one 7) _____
 of the following four expressions can be used as the right hand side of the equation to complete the identity?
 A) $\sec^2 x$ B) $-\cos^2 x$ C) $\tan^2 x$ D) $\csc^2 x$

Complete the sentence so the result is an identity. Let x be any real number.

8) $\frac{\sin x}{\tan x} = \underline{\hspace{1cm}}$ 8) _____
 A) $\cot x$ B) $\cos x$ C) $\csc x$ D) $\sec x$

Which answer choice is equivalent to the given expression?

9) $\cos x \tan x \csc x$ 9) _____
 A) 2 B) 1 C) $\sin x$ D) $\cot x$

10) $\sec v - \tan v \sin v$ 10) _____
 A) $\csc v$ B) $\cos v$ C) $\cot v$ D) $1 - \csc v$

Answer Key

Testname: TRIGONOMETRIC IDENTITIES

- 1) A
- 2) B
- 3) B
- 4) D
- 5) B
- 6) D
- 7) D
- 8) B
- 9) B
- 10) B