# Lesson 5.2 Practice: The Pythagorean Identities

School Launch · Trigonometry · Unit 5: Trigonometric Identities · Worksheet A

Scientific calculator

Name _____ Date _____ Score _____ / 10

Show your work under each problem, one step per line, and check your answer. Word problems: name the unknown, write the equation, solve, and answer in a sentence with units.

**1.** Simplify to a single trigonometric function or a constant: $\sin x \cot x$. EASY

**2.** Simplify to a single trigonometric function or a constant: $\sin^2 x \sec^2 x$. EASY

**3.** Simplify to a single trigonometric function or a constant: $\tan x \cos x$. EASY

**4.** Simplify to a single trigonometric function or a constant: $\frac{1-\cos^2 x}{\sin x}$. MEDIUM

**5.** Simplify to a single trigonometric function or a constant: $\cot x \sec x \sin x$. MEDIUM

**6.** Simplify to a single trigonometric function or a constant: $\sec x - \sin x \tan x$. MEDIUM

**7.** Simplify to a single trigonometric function or a constant: $\cot^2 x \sin^2 x$. MEDIUM

**8.** Simplify to a single trigonometric function or a constant: $\frac{\sec x}{\csc x}$. HARD

**9.** Simplify to a single trigonometric function or a constant: $\frac{1-\sin^2 x}{\cos x}$. HARD

**10.** Simplify to a single trigonometric function or a constant: $\sec^2 x - \tan^2 x$. HARD