

## C12 - 6.1 - Ratios $\csc x$ $\sec x$ $\cot x$ HW

**Simplify**

$$\sin x \sec x$$

$$\cos x \cos x$$

$$\tan x \cot x$$

$$\csc x \csc x$$

$$\sin x \sin x$$

$$\cos x \sec x$$

$$\tan x \csc x$$

$$\sec x \sec x$$

$$\sin x \cos x$$

$$\cos x \csc x$$

$$\tan x \tan x$$

$$\cot x \sec x$$

$$\sin x \cot x$$

$$\cos x \tan x$$

$$\cot x \cot x$$

$$\sin x \csc x$$

$$\cos x \sin x$$

$$\tan x \sin x \cot x$$

**Simplify to  $\sin x$  and  $\cos x$**

$$\sin x \tan x$$

$$\cos x \cot x$$

$$\tan x \sec x$$

$$\csc x \cot x$$

$$\csc x \sec x$$

## C12 - 6.1 - Ratios $cscx$ $secx$ $cotx$ Notes

**Simplify**

$$\sin^2 x cscx$$

$$csc^2 x \sin x$$

$$cscx \cos^2 x$$

$$sec^2 x \cos x$$

$$\sin^2 x csc^2 x$$

$$\sin^2 x cot^2 x$$

$$\cos^2 x sec^2 x$$

$$\cos^2 x \tan^2 x$$

$$csc^2 x sec^2 x$$

$$\tan^2 x cot^2 x$$

$$csc^2 x cot^2 x$$

$$sec^2 x \tan^2 x$$

# C12 - 6.1 - Ratios $\csc x$ $\sec x$ $\cot x$ HW

Simplify

$$\frac{\sin x}{\sin x}$$

$$\frac{\sin x}{\cos x}$$

$$\frac{1}{\sin x}$$

$$\frac{\csc x}{\csc x}$$

$$\frac{1}{\tan x}$$

$$\frac{\cot x}{\cot x}$$

$$\frac{1}{\cos x}$$

$$\frac{1}{\cot x}$$

$$\frac{\sin x}{\cot x}$$

$$\frac{\sec x}{\sec x}$$

$$\frac{\cos x}{\cos x}$$

$$\frac{1}{\csc x}$$

$$\frac{\tan x}{\tan x}$$

$$\frac{\cos x}{\sin x}$$

$$\frac{1}{\sec x}$$

$$\frac{\sin x}{\tan x}$$

$$\frac{\cos x}{\cot x}$$

$$\frac{\cos x}{\tan x}$$

$$\frac{\cos x}{\cot x}$$

$$\frac{\tan x}{\sin x}$$

$$\frac{\tan x}{\cos x}$$

$$\frac{\sec x}{\cos x}$$

$$\frac{\csc x}{\cos x}$$

$$\frac{\cot x}{\cos x}$$

Try it in your head!

$$\frac{\cos x}{\sec x}$$

$$\frac{\cos x}{\csc x}$$

$$\frac{\tan x}{\csc x}$$

$$\frac{\sec x}{\tan x}$$

$$\frac{\cot x}{\sec x}$$

$$\frac{\csc x}{\tan x}$$

$$\frac{\sec x}{\cot x}$$

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

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

## C12 - 6.1 - Ratios $\csc x$ $\sec x$ $\cot x$ HW

Simplify

$$\frac{\sin x \cot x}{\sec x}$$

$$\frac{\cos x \tan x}{\sec x}$$

$$\frac{\csc x \tan x}{\csc x}$$

$$\frac{\cot x \sec^2 x}{\csc^2 x}$$

$$\frac{\tan x \csc^2 x}{\sec^2 x}$$

$$\frac{\cos x \sec^2 x}{\sec^2 x}$$

$$\frac{\sin x \csc^2 x}{\csc^2 x}$$