

### TRIGONOMETRIC IDENTITIES

Connect the equivalents. Then find the isosceles, right triangle formed.

$$\tan^2 x + 1 \quad \cos^2 x - \sin^2 x$$

$$1 + \cot^2 x \quad \tan^2 x$$

$$1 - \sin^2 x \quad -\sin x$$

$$\frac{\sin^2 x}{\cos^2 x} \quad 4 \csc x$$

$$\cos(2x)$$

$$3 \sec x \quad \frac{4}{\sin x} \quad 2 \sin x \cos x \quad \cos(-x)$$

$$5 \sin x \csc x \quad \frac{\sin(x+y)}{\cos^2 x} \quad \frac{\sin(x-y)}{\sec^2 x}$$

$$\csc^2 x \quad \cos x \cos y - \sin x \sin y$$

$$\tan(-x)$$

$$-\tan x \quad \sin x \cos y - \cos x \sin y$$

$$7 \tan x \cot x \quad 4 \cot x$$

$$\sin(-x) \quad \sin x \cos y + \cos x \sin y$$

$$\frac{4 \cos x}{\sin x}$$

$$\frac{3}{\cos x} \quad \sin(2x)$$

$$\cos x$$

$$5$$

$$7$$