

## Trig -- Pre - Study Guide to Chapter 7

Use the Pythagorean Theorem with Trig Functions:  $a^2 + b^2 = c^2$

$$\sin^2 \theta + \cos^2 \theta = 1$$

Now take the above equation  $\sin^2 \theta + \cos^2 \theta = 1$

1) divide all terms by  $\sin^2 \theta$

---

2) divide all terms by  $\cos^2 \theta$

---

Fill-in the blanks of the following with ( sin , cos , tan , cot , csc , sec )

$$\sin \theta = \frac{1}{\text{---}}$$

$$\csc \theta = \frac{1}{\text{---}}$$

$$\tan \theta = \frac{\text{---}}{\text{---}}$$

$$\cos \theta = \frac{1}{\text{---}}$$

$$\sec \theta = \frac{1}{\text{---}}$$

$$\cot \theta = \frac{\text{---}}{\text{---}}$$

$$\tan \theta = \frac{\text{---}}{\text{---}}$$

$$\cot \theta = \frac{\text{---}}{\text{---}}$$

### Practice Problems

1) Simplify  $\tan x \cot x = \text{---}$

2)  $\sec^2 x = \text{---}$

3)  $\csc^2 A = \text{---}$

4)  $\frac{\sin A}{\csc A} = \text{---}$

5)  $\frac{\cos A}{\sec A} = \text{---}$

6)  $\frac{\cot x}{\cos x} = \text{---}$