

6.5: Basic Trig Identities

“I WILL...

Convert basic trigonometric identities”

I. Reciprocal Identities Theorem

A. Functions

1. $\text{SIN } \theta = \underline{\hspace{2cm}}$

2. $\text{COS } \theta = \underline{\hspace{2cm}}$

3. $\text{TAN } \theta = \underline{\hspace{2cm}}$

4. $\text{CSC } \theta = \underline{\hspace{2cm}}$

5. $\text{SEC } \theta = \underline{\hspace{2cm}}$

6. $\text{COT } \theta = \underline{\hspace{2cm}}$

II. Model Problems

Ex 1: Simplify $\tan t \cos t$	Ex 2: Simplify $\cos t \sec t$	Your Turn: Simplify $\csc t \tan t$
--------------------------------	--------------------------------	-------------------------------------

III. Pythagorean Identities:

A. $a^2 + b^2 = c^2$ converts to _____

B. _____ is also known as “I Taste Salt”

C. _____ is also known as “I Cut Cheese”

Ex 3: Simplify, $\tan^2 t \cdot \cos^2 t + \cos^2 t$	Ex 4: Simplify, $\frac{\sin \theta}{\cos \theta} + \frac{\cos \theta}{1 + \sin \theta}$
Ex 5: Simplify, $\frac{\sec^2 t - \tan^2 t}{\tan^2 t}$	Ex 6: Simplify, $\frac{\tan t + \cot t}{\tan t}$

Assignment: Worksheet