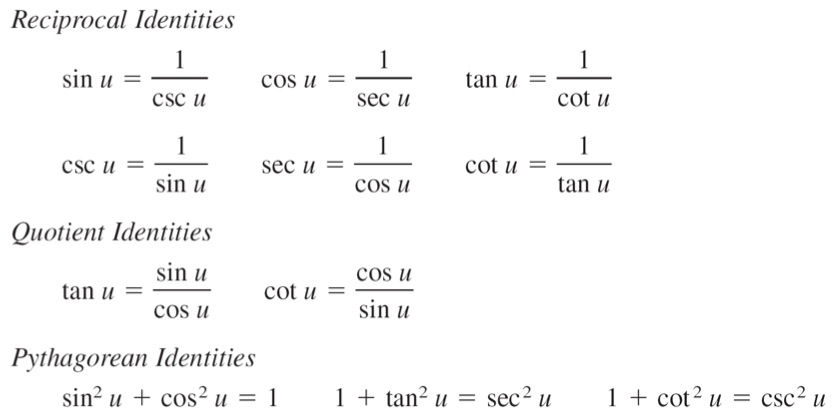
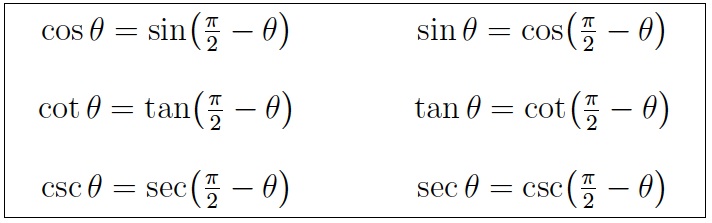
**5.1 Using Fundamental Trig Identities**

**Objective: Use fundamental trig identities to evaluate, simplify, and rewrite trig expressions**

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*Cofunction Identities*

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**Example 1**

Use the values of and to find the values of all six trigonometric functions.

*Note: since secant is < 0 and tangent is > 0 we know the value is in Quadrant III. Therefore sine is also negative.*

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**Example 2**

Simplify:

🡨 Factor out sin x

🡨 Factor out -1 (combine with 1st step)

🡨 Pythagorean Identity

🡨 Simplify

**Example 3**

Factor:

🡨 Difference of Squares

**Example 4**

Factor:

🡨 Factor

**Example 5**

Simplify:

🡨 Quotient Property

🡨 Common Denom. & Add

🡨 Pythagorean Identity

🡨 Reciprocal Identity

**Example 6**

Perform the addition and simplify:

🡨 Common Denominator

🡨 Distribute and Combine

🡨 Pythagorean Identity

🡨 Divide by Common Factor

🡨 Reciprocal Identity

**Example 7**

Rewrite so that the following is *not* a fraction:

🡨 Multiply (Difference of Squares)

🡨 Pythagorean Identity

🡨 Write as separate fractions

🡨 Product of fractions

🡨 Reciprocal & quotient identities

**Homework**

Day 1: Pg 377 #1-10, 13-14, 25-35 (odd)

Day 2: Pg 377 #16, 37-49 (odd), 75, 81, 123