**Module 3 Lesson 2:**

**Evaluating Trigonometric Functions and**

**The Unit Circle**





Learning Targets:

I can find the exact value of the three basic trigonometric functions (sine, cosine, tangent) using the special right triangles.

I can use the unit circle to find trigonometric values of quadrantal angles.

**How do we find the EXACT values of sine, cosine, and tangent of Angles?**

Steps:

Things to think about: All Students Take Calculus





Example: Find the exact value of each of the following.

1. 4.
2. 5.
3. 6.

Additional Examples:

1. Angle is an angle in standard position and is a point on the terminal side of the angle. Find the value of .
2. Angle is an angle in standard position and is a point on the terminal side of the angle. Find the value of , , and .
3. In which quadrant does the terminal side of an angle lie if and ?
4. Given and , find

**How do we find the EXACT values of sine, cosine, and tangent of Quadrantal (90, 180, 270, 360) Angles?**

**Unit Circle**

A unit circle is shown to the left. Angle θ is a The unit circle has a center at (0,0) and a radius equal to 1.

 ***cosine*** of angle θ is ALWAYS equal to:

***sine*** of angle θ is ALWAYS equal to:

***tangent*** of angle θ is ALWAYS:

Use the unit circle to find the following trigonometric values.

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