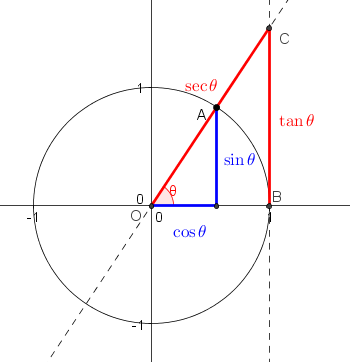
**Module 3 Lesson 7: The Tangent Function**



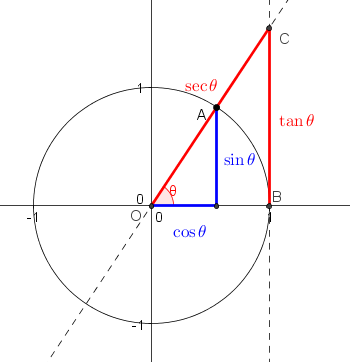
**Learning Targets**

I can recognize the relationship between sine, cosine and tangent on the unit circle and use this to find the values of the tangent of various angles.

I can draw one cycle of the parent tangent function, and know it has a period of and amplitude of 1.

I can draw one cycle of a transformed tangent function and identify the period as and state the equations of the asymptotes. I can recognize when the graph is reflected over the x-axis and understand why.

I can determine the number of cycles that will occur in radians.

**Before we graph the Tangent Function …**

**Let’s review Trigonometric**

**Functions on a unit circle.**

Given the point on the unit circle:

Find the following

**Graphing the Tangent Function**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 0o | 90o | 180o | 270o | 360o |
|  |  |  |  |  |  |

Sketch the graph of in the interval

***frequency =***

***Example 1:*** Graph one cycle of in the interval

Write the equations of the asymptotes.

***Example 2:*** Graph one cycle of

***Example 3:*** Graph one cycle of

***Example 4:*** Identify the period and where two asymptotes occur for the following.