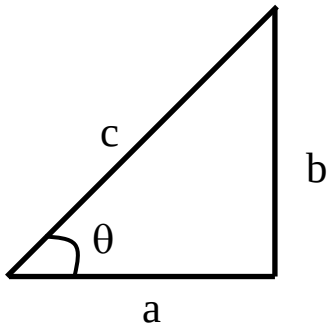
Trigonometry

I. Trigonometry Review

A. Definitions:



cos(θ) =

sin(θ) =

tan(θ) =

In physics, we are constantly using trigonometry to either **determine the length** of the **adjacent side** or the **opposite side** of the triangle

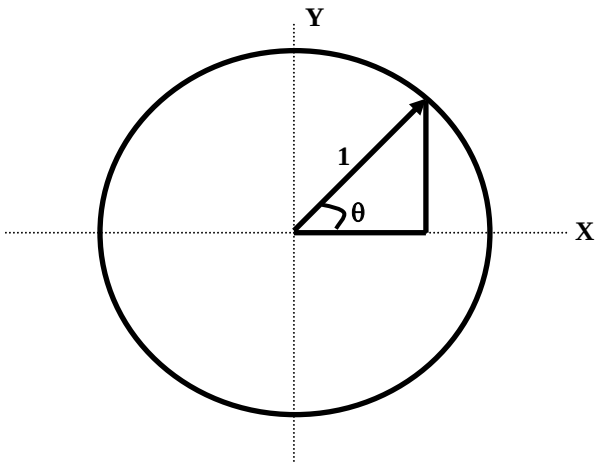
Adjacent side =

Opposite side =

B. Pythagorean Theorem (Right Triangles)

We primarily use the Pythagorean theorem in physics to **find the length** of the **hypotenuse**.

C. The Unit Circle and Facts To Put To Memory



The **adjacent side** of the triangle lies along the _____ _____

so we have that the _____ _____ is given by

The **opposite side** of the triangle lies along the _____ _____

so we have that the _____ _____ is given by

Important: These relations are only true when you measure angles with respect to the horizontal axis! We often find it convenient to measure other angles since it will make the math simpler. You must be able to apply the trigonometry definitions.

θ	cos(θ)	sin(θ)	tan(θ)
0			
30			
45			
60			
90			