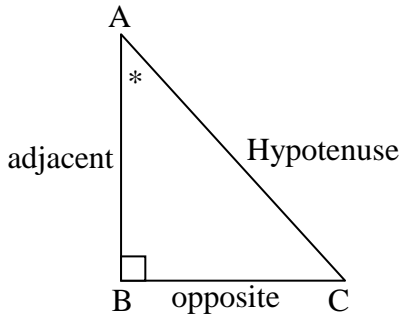


(1.1) Lengths of Sides in Right Triangles

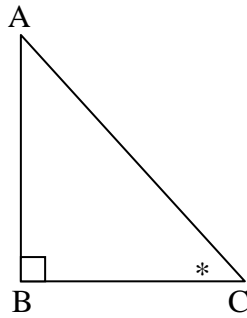
TRI GONO METRY
Three angle measurement

In any right angled triangle, there is a 90° angle and 2 acute angles.



$\angle B = 90^\circ \quad \therefore AC = \text{Hypotenuse}$

From $\angle A$, BC is _____
AB is _____



$\angle B = 90^\circ \quad \therefore AC = \text{Hypotenuse}$

From $\angle C$, AB is _____
BC is _____

Primary Trigonometric Ratios

Sine of $\angle A \longrightarrow \sin A = \frac{\text{opposite}}{\text{hypotenuse}} \longrightarrow \sin A = \frac{O}{H}$

Cosine of $\angle A \longrightarrow \cos A = \frac{\text{adjacent}}{\text{hypotenuse}} \longrightarrow \cos A = \frac{A}{H}$

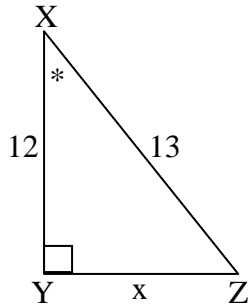
Tangent of $\angle A \longrightarrow \tan A = \frac{\text{opposite}}{\text{adjacent}} \longrightarrow \tan A = \frac{O}{A}$

The easiest way to MEMORIZE these ratios is to use:

SOH, CAH, TOA

Finding trig ratios:

Ex. What are the trig ratios of $\angle X$?



1. Find the missing side

$$\sin X = \frac{O}{H}$$

$$=$$

$$\cos X = \frac{A}{H}$$

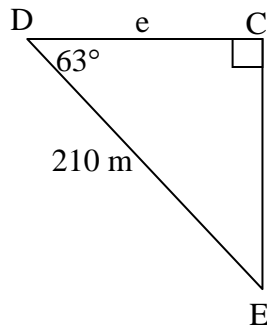
$$=$$

$$\tan X = \frac{O}{A}$$

$$=$$

Using trig ratios to find missing measures in a triangle.

Ex. Find the length of $CD = e$.



1. Make a decision, using what you already know in the triangle and what you are trying to find.

From the 63° , we know the hypotenuse and we are looking for the adjacent.

$$\frac{A}{H} \longrightarrow$$