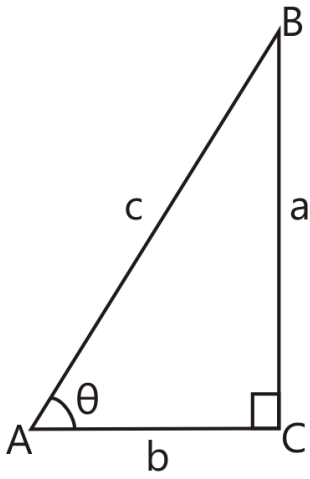
TRIGONOMETRIC RATIOS

The basic trigonometry ratios are defined in terms of the sides of a right-angled triangle.



In the right angled triangle, the side opposite the $\angle 90^{o}$ is the hypotenuse. Consider the acute angle Θ in the above triangle (Δ). The line AC is referred to as the adjacent side to the angle Θ, while the line BC is called the opposite side to the angle Θ.

The basic trigonometric ratios are sine Θ, cosine Θ, and tangent Θ are defined as follows:

(i) Sine Θ (sinΘ) is the ratio of BC to AB.

$$sin\Theta = \frac{\text{BC}}{\text{AB}} = \frac{\text{opposite side}}{hypotenuse} = \frac{a}{c}$$

(ii) Cosine Θ (cosΘ) is the ratio of AC to AB.

$$cos\Theta = \frac{\text{AC}}{\text{AB}} = \frac{\text{adjacent side}}{hypotenuse} = \frac{b}{c}$$

(iii) Tangent Θ (tanΘ) is the ratio of BC to AC.

$$tan\Theta = \frac{\text{BC}}{\text{AC}} = \frac{\text{opposite side}}{adjacent\ side} = \frac{a}{b}$$