

Foudations Pre-Calculus 10

Trigonometry

$$\sin \theta = \frac{\textit{opposite}}{\textit{hypotenuse}} = \frac{O}{H}$$

$$\theta = \sin^{-1}\left(\frac{O}{H}\right)$$

$$\cos \theta = \frac{\textit{adjacent}}{\textit{hypotenuse}} = \frac{A}{H}$$

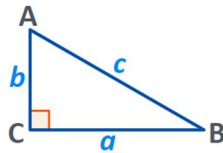
$$\theta = \cos^{-1}\left(\frac{A}{H}\right)$$

$$\tan \theta = \frac{\textit{opposite}}{\textit{adjacent}} = \frac{O}{A}$$

$$\theta = \tan^{-1}\left(\frac{O}{A}\right)$$

Pythagoras Theorem

$$a^2 + b^2 = c^2$$



Slope:

$$m = \frac{\textit{rise}}{\textit{run}} = \frac{y_2 - y_1}{x_2 - x_1}$$

Equation of a Line:

Slope y-intercept: $y = mx + b$

Point slope: $y - y_1 = m(x - x_1)$

General form: $Ax + By + C = 0$

Arithmetic Sequences:

$$t_n = t_1 + (n - 1)d$$