## Perimeter

The perimeter of a polygon is equal to the sum of the lengths of its sides.

## Circumference of a Circle

$C = \pi d$  or  $C = 2\pi r$

$\pi \approx 3.14$

## Area

Triangle              $A = \frac{1}{2}bh$

Rectangle            $A = bh$  or  $A = lw$

Circle                $A = \pi r^2$

## Surface Area

The total area of the 2-dimensional surfaces that make up a 3-dimensional object.

## Volume

Right Rectangular Prism   $V = lwh$  or  $V = Bh$

Right Prism          $V = Bh$

Cylinder             $V = \pi r^2 h$

Cone                 $V = \frac{1}{3}\pi r^2 h$

Sphere               $V = \frac{4}{3}\pi r^3$

Pyramid              $V = \frac{1}{3}Bh$

## Slope Formula
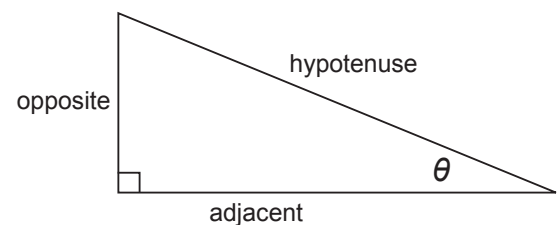
$m = \frac{y_2 - y_1}{x_2 - x_1}$

## Linear Equation

$y = mx + b$

## Pythagorean Theorem

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

## Definition of Trigonometric Functions

For $0° < \theta < 90°$,



$\sin \theta = \dfrac{\text{opposite}}{\text{hypotenuse}}$

$\cos \theta = \dfrac{\text{adjacent}}{\text{hypotenuse}}$

$\tan \theta = \dfrac{\text{opposite}}{\text{adjacent}}$

## Mean

$\overline{x} = \dfrac{x_1 + x_2 + x_3 + ... + x_n}{n}$

## Interquartile Range

$IQR = Q_3 - Q_1$

The difference between the third quartile and first quartile of a set of data.

## Standard Deviation

$\sigma = \sqrt{\dfrac{(x_1 - \overline{x})^2 + (x_2 - \overline{x})^2 + \cdots + (x_n - \overline{x})^2}{n}}$