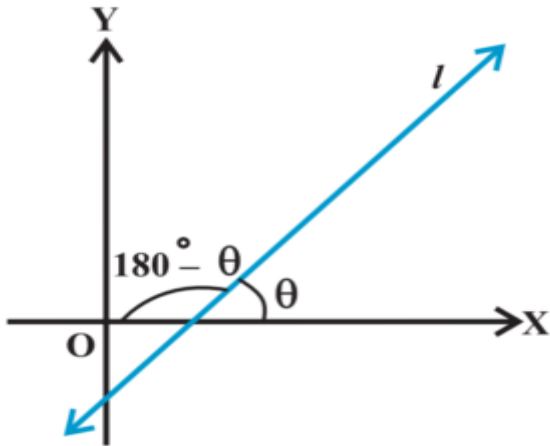


# Cartesian Plane

## POINT SLOPE FORM AND SLOPE INTERCEPT FORM

- **Slope of a line Segment**

If  $\phi$  is the inclination of a line  $l$  then  $\tan \phi$  is called the slope or gradient of the line  $l$ .

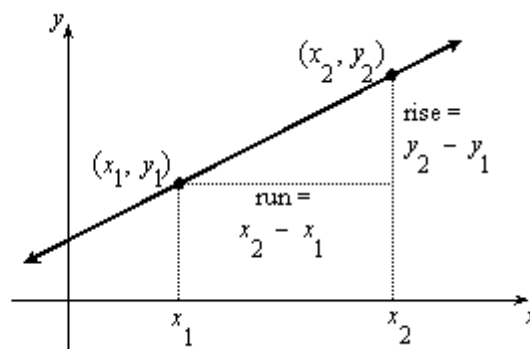


- Slope of a line when co-ordinates of any two point on the line are given.

Slope of line  $l = \tan \phi$

$\frac{\text{rise}}{\text{run}}$

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



- **Point Slope Form**

If a line  $A$  has slope  $m$  and if  $(x_0, y_0)$

Is any point on  $A$  then  $A$  has the equation.

$$\Rightarrow y - y_0 = m(x - x_0)$$

- **Slope Intercept Form**

If A has slope  $m$  and A hits the  $y$  axis at  $(0, b)$  then

$Y = mx + b$  is an equation for A where  $m$  is the slope and  $b$  is the  $y$  intercept.

