v

Coordinate pair

The ordered pair (a,b) is assigned to the point P

Coordinate axes divide into four regions is called quadrant

Quadrant

Origin

The coordinate system is the point in the plane where x and y are both zero

Two Perpendicular Coordinate lines that interest at the **O- point** these lines are called coordinate axes in the plane.

Coordinate axes

Increment and straight lines

When particles move from one point to another point, the net changes is called increment

**Example: 01**

In going from the point A(4,-3) to the point B(2,5) the increments in the x and y coordinate are?

**Example: 02**

The coordinate increments from C (5,6) to D (5,1) ?

The distance between the points P($x\_{1}, y\_{1}$) and Q( $x\_{2}, y\_{2}$)

$$d= \sqrt{(∆x)^{2}+ (∆y)^{2}}$$

Distance formula for a point in the plane

Example: 03

 The distance between P ( -1 , 2 ) and Q (3, 4) is

Example: 04

The distance from origin to P (x , y ) is

Graph

Involving the variable x and y is the set of the all point P(x,y) whose coordinate satisfy the equation and inequality.

Example: 05

$$x^{2}+y^{2}= a^{2}$$

$$x^{2}+y^{2}\leq a^{2}$$

Example: 06

The equation y = $x^{2}$

SYMMETRY

 There are three type of symmetry

* Symmetry about x – axis
* Symmetry about y - axis
* Symmetry about origin

Even and odd function: