

COORDINATE GEOMETRY





HELLO!

I am Mohammed yusuf

I am here because I love to give presentations.





Objectives

To know some basic concepts of coordinate geometry.

To locate the position of an object or a point in a plane.

To know what is a cartesian plane, ordinate, abscissa.

To understand what is meant by a quadrant.

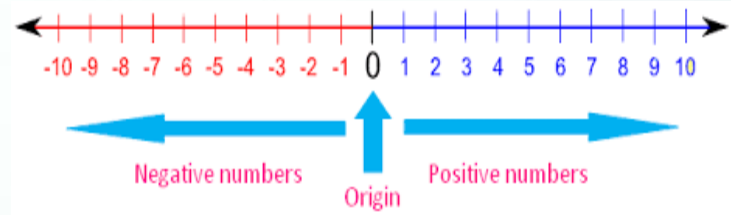
Using knowledge and understanding solves a problem in a new situation.

Solves problems with interest.



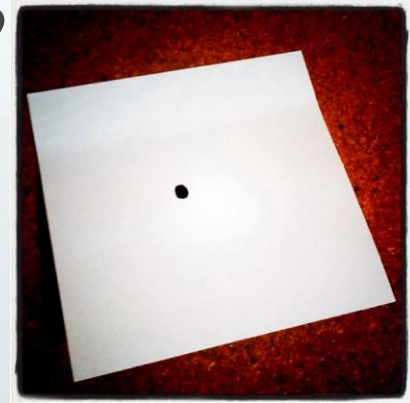
RECAP

You have studied the number line in the chapter Number System. On the number line, distances from a fixed point are marked in equal units positively in one direction and negatively in the other. The point from which the distances are marked is called the origin.



HOW TO LOCATE ?

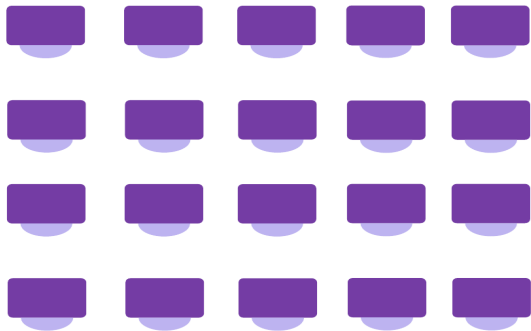
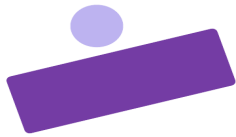
- + Suppose you put a dot on a sheet of paper. If I ask you to tell me the exact position of the dot on the paper, how will you do this?



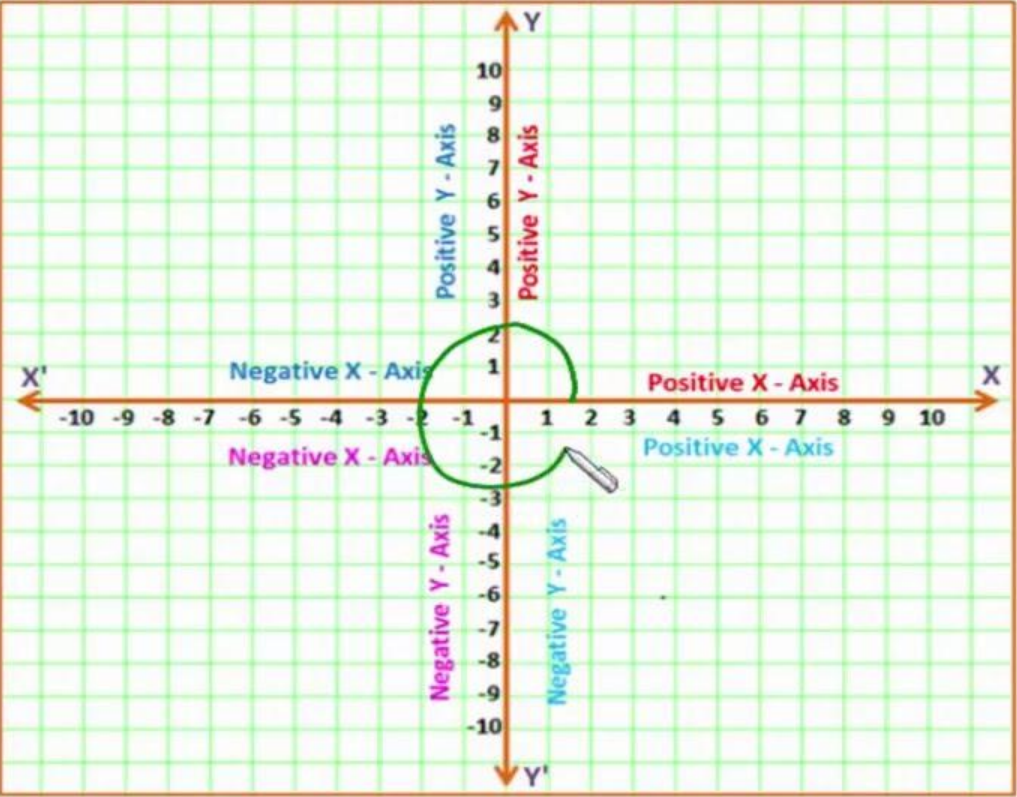
YOUR POSITION IN THE CLASSROOM ?

- + If you are sitting on the desk lying in the 5th column and 3rd row, your position could be written as (5,3) first writing the column number and then the row number. Is this same as (3,5)?

SEATING PLAN



Coordinate Geometry – Coordinate System – Quadrants



- + The horizontal line $X'X$ is called x-axis.
- + The vertical line $Y'Y$ is called y-axis.
- + The point where $X'X$ and $Y'Y$ cross is called the origin and denoted by O .
- + OX and OY are positive directions of x-axis and y-axis respectively.
- + Similarly OX' and OY' are called the negative directions of the x-axis and y-axis respectively.

QUADRANT

- + You observe that the axes (plural form of axis) divide the plane into four parts. These parts are called the quadrants (One fourth part) numbered I, II, III and IV anticlockwise direction from OX.
- + We call the plane Cartesian plane or coordinate plane or xy – plane.

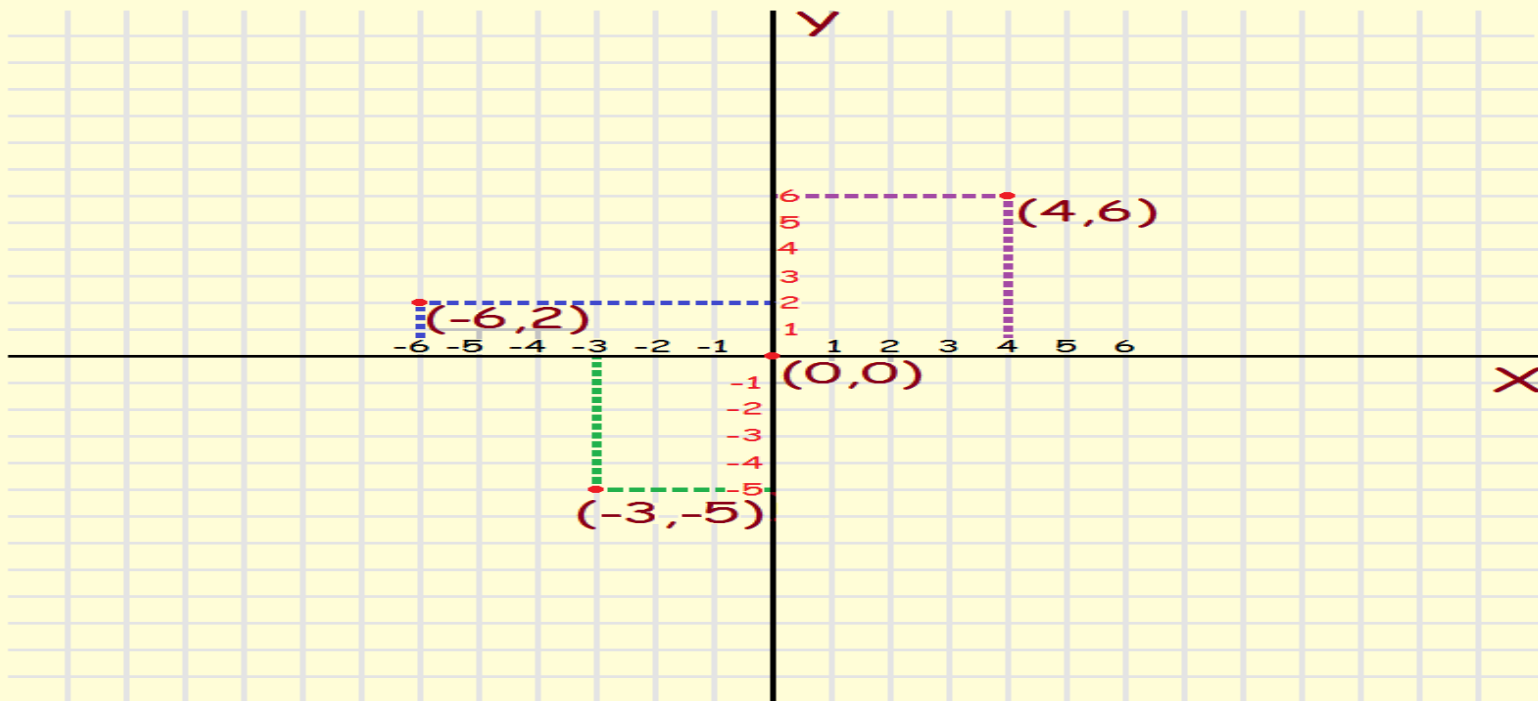
X-COORDINATE

- + The x-coordinate of a point is its perpendicular distance from the y-axis measured along the x-axis (positive along the positive direction of the x-axis and negative along the negative direction of the x-axis).



Y- COORDINATE

- + The y -coordinate of a point is its perpendicular distance from the x -axis measured along the y -axis (positive along the positive direction of the y -axis and negative along the negative direction of the y -axis).



2-D Cartesian Coordinate System
(x,y)

ABSCISSA AND ORDINATE

- + The x -coordinate is also called the abscissa.
- + The y -coordinate is also called the ordinate.
- + In stating the coordinate of a point in the coordinate plane, the x -coordinate comes first, and then the y -coordinate. We place the coordinates in brackets. Ex. $P(3, 2)$, $Q(4, 6)$ etc.



THANKS!

Any questions?

