

Tender Heart High School, Sec.-33B Chd.

Class: - VIII

Subject: Mathematics

Topic: Co-ordinate Geometry
Chapter - 22

Teacher's:

Ms. Deepa

In this assignment, we will cover chapter - 22:

Co-ordinate Geometry and we will understand the following topics

- Ordered pairs, Co-ordinates of points
- Cartesian plane
- Solution of simultaneous linear equations graphically.

ordered pair: An ordered pair is a pair of objects taken in a specific order. It is written by listing its two members in a specific order, separating them by a comma and enclosing by parentheses

For example: (a, b)

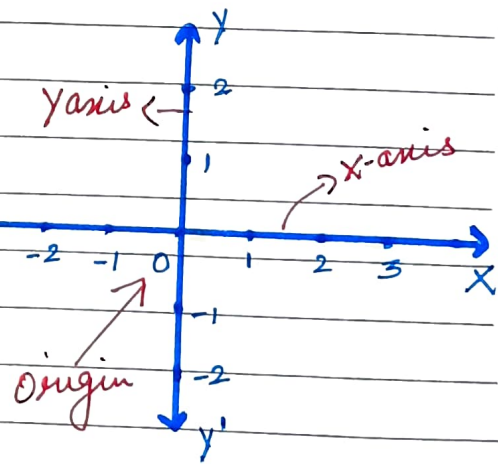
Co-ordinate System: When two numbered lines perpendicular to each other

(usually horizontal and vertical) are placed together so that the two origins (the points corresponding to zero) coincide, then the resulting configuration

is called a Cartesian Co-ordinate System or Co-ordinate System

$X'OX$ and $Y'OY$ are two $\perp$

(perpendicular) lines.



- $X'OX$ is called X-axis

- $Y'OY$ is called Y-axis

- 'O' is called origin

- $X'OX$ and $Y'OY$ are called coordinate axes.

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Coordinate Geometry

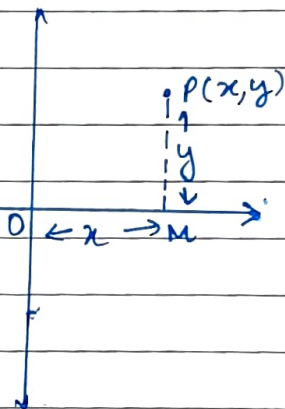
Ms. Jyoti

Co-ordinate of a point: Let P be any point in the Co-ordinate plane. From P , draw PM perpendicular to $X'OX$, then

(i) OM is called x -Coordinate or abscissa of P and is usually denoted by x .

(ii) PM is called y -Coordinate or ordinate of P

(iii) x and y taken together are called co-ordinates of P

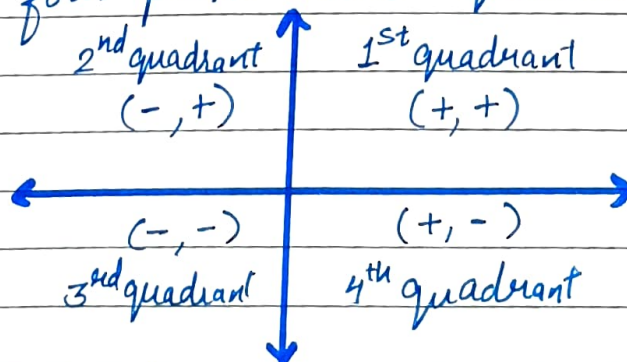


Note: • Co-ordinates of 'O' are $(0, 0)$

• Any point of x -axis is always represented as $(x, 0)$, means ordinate is always 0

• Any point of y -axis, is always represented as $(0, y)$, means abscissa is always 0

Quadrants: $X'OX$ and $Y'OY$ divide the plane into four parts called quadrants



(i) In 1st quadrant: x and y co-ordinates are +ve

(ii) In 2nd quadrant: x co-ordinate is -ve and y co-ordinate is +ve

(iii) In 3rd quadrant: Both x and y co-ordinates are -ve

(iv) In 4th quadrant: x co-ordinate is +ve and y co-ordinate is -ve

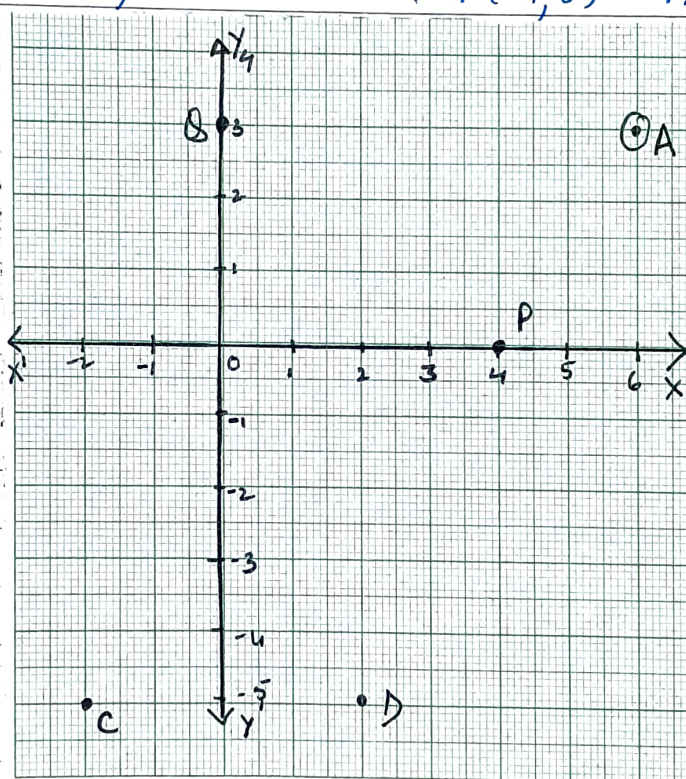
Now, let us start with questions:

Extra questions

Quest. 2: Plot the following points

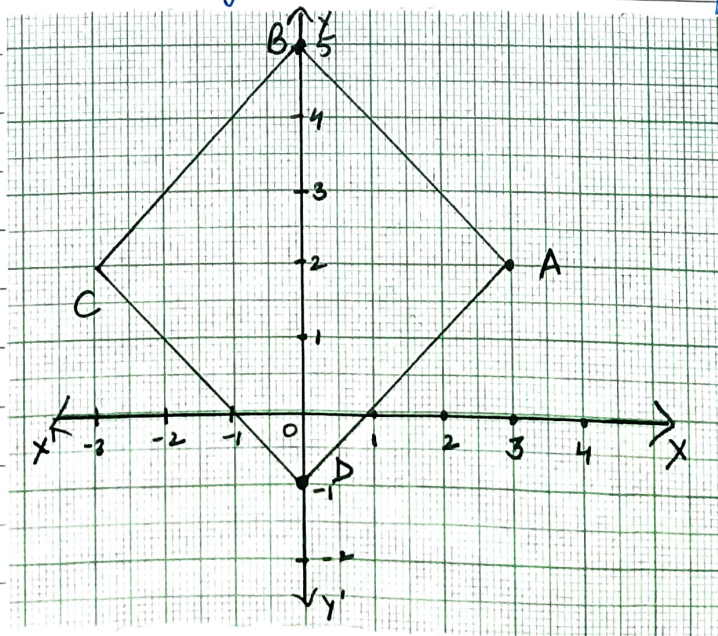
(i) A (6, 3) (ii) B (-4, 1) (iii) C (-2, -5)

(iv) D (2, -5) V) P(4, 0) Vi) Q(0, 3)



Quest 6: The points A(3, 2) B(0, 5) and D(0, -1) are vertices of a square ABCD, find the co-ordinates of the vertex C

Sol'n



So,

C = (-3, 2)

— X —