

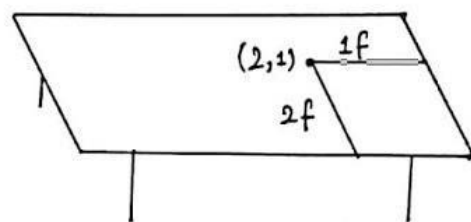
Coordinate Geometry is the study of algebraic equations on graphs. An example of coordinate geometry is plotting points, lines and curves on x and y -axis

Cartesian Coordinate System A system in which the location of a point is given by coordinates that represent its distance from perpendicular lines that intersect at a point called the origin

Exercise 3.1

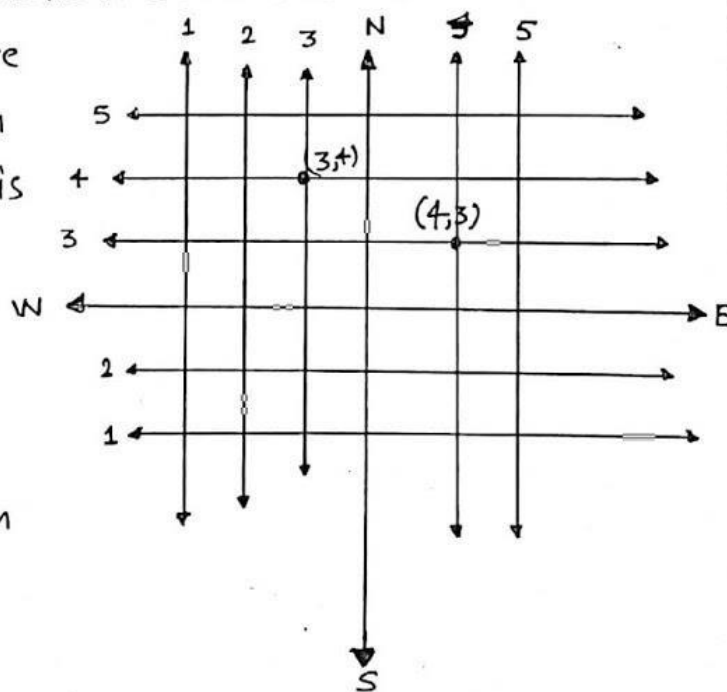
Q1 How will you describe the position of a table lamp on your study table to another person?

Ans: → The table lamp is 2 feet from the seating side of the desk and 1 foot from its right edge, so, we can write the position of lamp as $(2,1)$



Q2 A city has two main roads which cross each other at the centre of the city these two roads are along the north-south direction and — — — — then we call this cross street $(2,5)$ Using this convention, find

- how many cross streets can be referred to as $(4,3)$
- how many cross-street can be referred to as $(3,4)$



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Ans: → Only one cross-street can be referred to as (4,3). A different cross-street can be referred to (3,4). There is only one such cross-street

Exercise 3.2

Q1 Write the answer of each of the following questions:

i) What is the name of horizontal and the vertical lines drawn to determine the position of any point in the Cartesian plane?

Ans: → x-axis and y-axis

ii) What is the name of each part of the plane formed by these two lines?

Ans: → Quadrants.

iii) Write the name of the point where these two lines intersect

Ans: → Origin

Q2 See fig and write the following

i) The coordinate of B

Ans: → (-5,2)

ii) The coordinate of C.

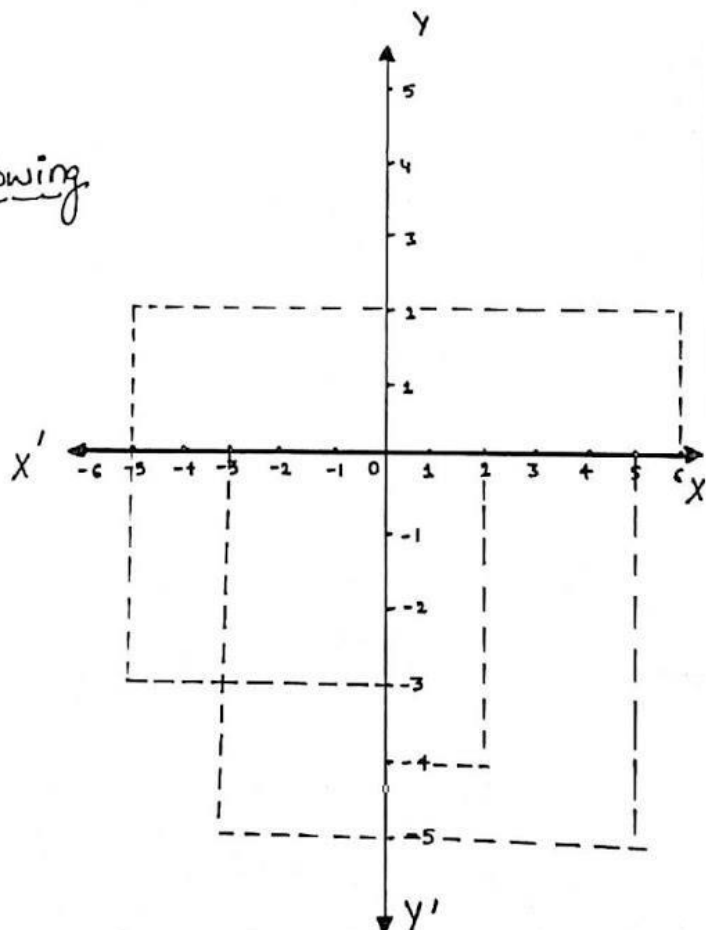
Ans: → (5,-5)

iii) The point identified by the coordinates (-3,5)

Ans: → E

iv) The point identified by the coordinates (2,-4)

Ans: → G



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v) The abscissa of the point D

Ans: $\rightarrow 6$

vi) The ordinate of the point H

Ans: $\rightarrow -3$

vii) The coordinates of the point L

Ans: $\rightarrow (0, 5)$

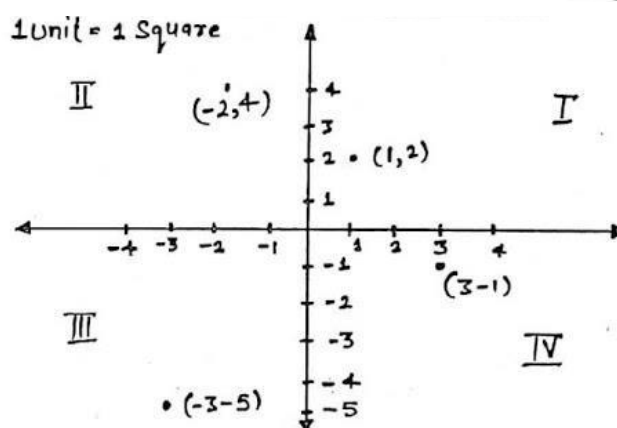
viii) The coordinates of the point M

Ans: $\rightarrow (-3, 0)$

Exercise 3.3

Q1 In which quadrant or on which axis do each of the point $(-2, 4)$, $(3, -1)$, $(-1, 0)$, $(1, 2)$ and $(-3, -5)$ lie? Verify your answer by locating them on the Cartesian plane.

Sol: $\rightarrow$ $(-2, 4)$: 2nd quadrant
 $(3, -1)$: 4th quadrant
 $(-1, 0)$: x-axis
 $(1, 2)$: 1st quadrant
 $(-3, -5)$: 3rd quadrant



Q2 Plot the point (x, y) given in the following table on the plane choosing suitable units of distance on the axes.

x	-2	-1	1	3	0
y	8	7	3	-1	-1.25

Sol

