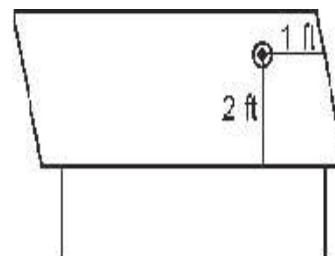


3 COORDINATE GEOMETRY

EXERCISE 3.1

Q.1. How will you describe the position of a table lamp on your study table to another person?

Sol. The table lamp is 2 feet from the seating side of the desk and 1 feet from its right edge. so, we can write the position of lamp as (2, 1). **Ans.**

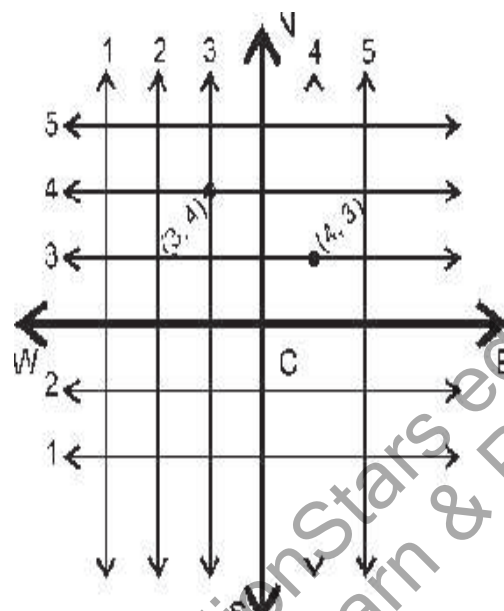


Q.2. (Street Plan) : A city has two main roads which cross each other at the centre of the city. These two roads are along the North-South direction and East-West direction. All the other streets of the city run parallel to these roads and are 200 m apart. There are about 5 streets in each direction. Using 1 cm = 200 m, draw a model of the city on your notebook. Represent the roads/streets by single lines.

There are many cross-streets in your model. A particular cross-street is made by two streets, one running in the North-South direction and another in the East-West direction. Each cross street is referred to in the following manner : If the 2nd street running in the North-South direction and 5th in the East-West direction meet at some crossing, then we will call this cross-street (2, 5). Using this convention, find:

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

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





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COORDINATE GEOMETRY

EXERCISE 3.2

Q.1. Write the answer of each of the following questions :

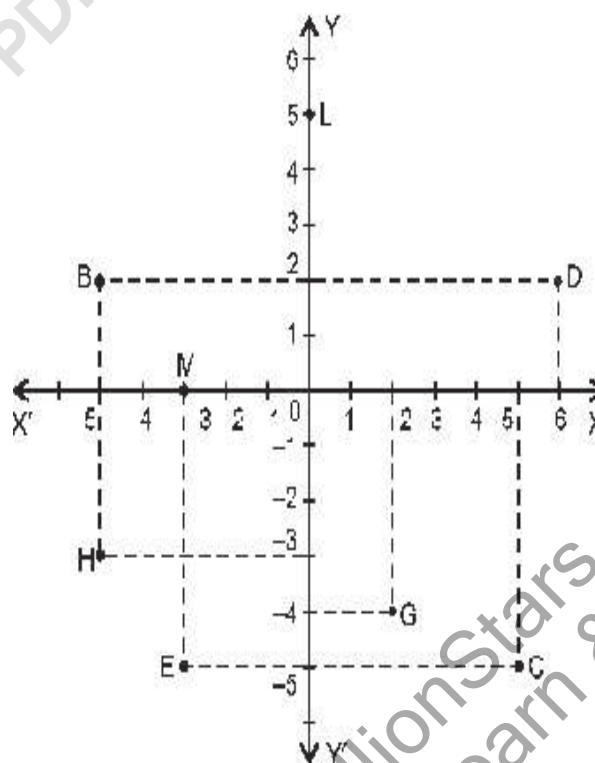
- (i) What is the name of horizontal and the vertical lines drawn to determine the position of any point in the Cartesian plane?
- (ii) What is the name of each part of the plane formed by these two lines?
- (iii) Write the name of the point where these two lines intersect.

Sol. (i) x-axis and y-axis (ii) Quadrants (iii) Origin

Q.2. See Fig. and write the following :

- (i) The coordinates of B.
- (ii) The coordinates of C.
- (iii) The point identified by the coordinates $(-3, -5)$.
- (iv) The point identified by the coordinates $(2, -4)$.
- (v) The abscissa of the point D.
- (vi) The ordinate of the point H.
- (vii) The coordinates of the point L.
- (viii) The coordinates of the point M.

Sol. (i) $(-5, 2)$ (ii) $(5, -5)$
(iii) E (iv) G
(v) 6 (vi) -3
(vii) $(0, 5)$ (viii) $(-3, 0)$





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COORDINATE GEOMETRY

EXERCISE 3.3

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

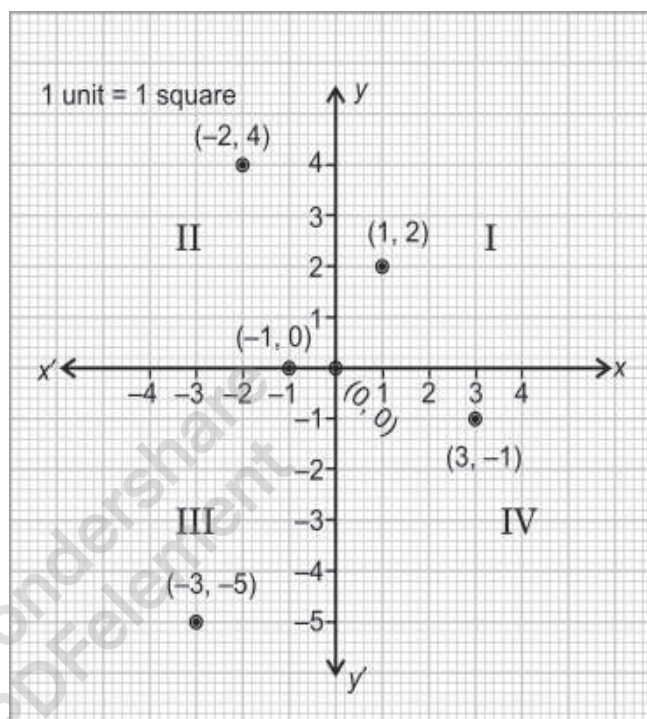
Sol. $(-2, 4)$: 2nd quadrant

$(3, -1)$: 4th quadrant

$(-1, 0)$: x -axis

$(1, 2)$: 1st quadrant

$(-3, -5)$: 3rd quadrant



Q.2. Plot the points (x, y) given in the following table on the plane, choosing suitable units of distance on the axes.

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

Sol.

