



SpeedLabs

MATHS

CBSE 9<sup>th</sup>

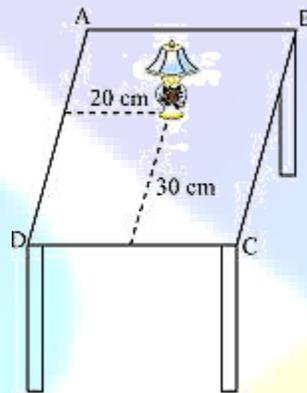
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# COORDINATE GEOMETRY

## Exercise-3.1

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

**Ans -** Consider that the lamp is placed on the table. Choose two adjacent edges, DC and AD. Then, draw perpendiculars on the edges DC and AD from the position of lamp and measure the lengths of these perpendiculars. Let the length of these perpendiculars be 30 cm and 20 cm respectively. Now, the position of the lamp from the left edge (AD) is 20 cm and from the lower edge (DC) is 30 cm. This can also be written as (20, 30), where 20 represents the perpendicular distance of the lamp from edge AD and 30 represents the perpendicular distance of the lamp from edge DC.



**Q 2.** (Street Plan): A city has two main roads which cross each other at the center 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 = 100 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:

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

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

**Ans -** We need to draw two perpendicular lines as the two main roads of the city that cross each other at the center and let us mark it as N-S and E-W. Let us take the scale as 1 cm = 200m. We need to draw five streets that are parallel to both the main roads, to get the given below figure.

(i) From the figure, we can conclude that only one point has the coordinates as (4, 3). Therefore, we can conclude that only one cross - street can be referred to as (4, 3).

(ii) From the figure, we can conclude that only one point have the coordinates as. Therefore, we can conclude that only one cross - street can be referred to as  $(3, 4)$ .

