CHAPTER 4

Practical Geometry

To construct a rectangle when a side and a diagonal are given:

To construct the given rectangle, we use the property that the diagonals of a rectangle are equal.

Example:

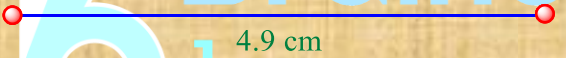
Construct a rectangle LORD given LO = 4.9 cm and LR = 6.8 cm.

Sol.

Draw a rough figure and label it with the given measurements as shown. Follow the given steps to construct the quadrilateral.

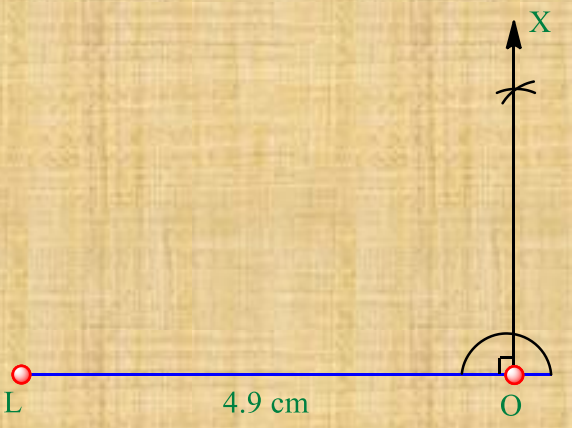
Step I:

Draw a line segment LO = 4.9 cm



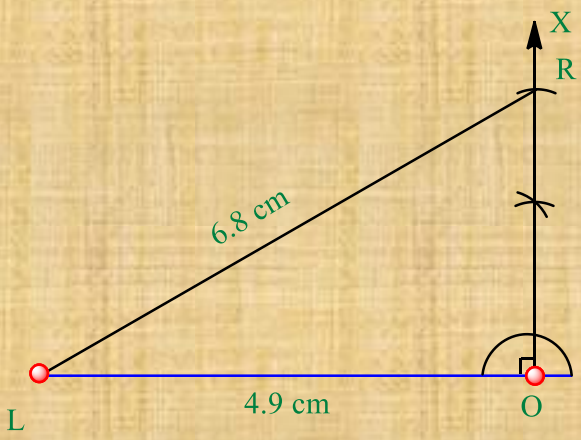
Step II:

At ‘O’, draw a ray $\overrightarrow{OX}$ such that $\angle O = 90^{o}$ using a compass and a ruler.



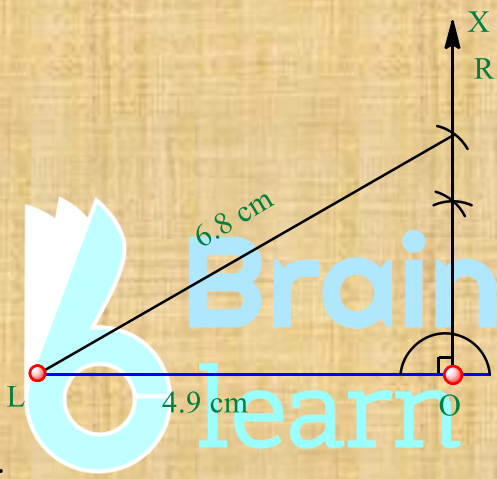
Step III:

With ‘L’ as centre and radius 6.8 cm, draw an arc to cut OX at ‘R’. Join LR to get the diagonal.



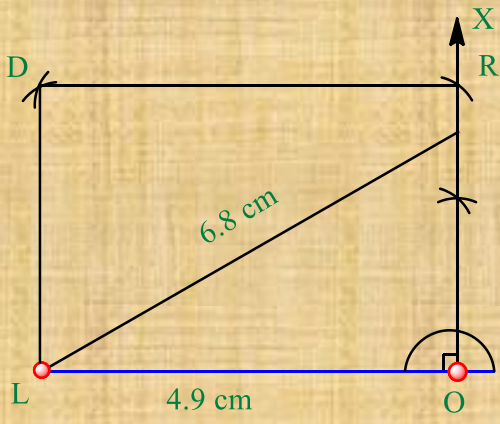
Step IV:

With ‘R’ as centre and radius 4.9 cm, draw an arc and take radius ‘OR’ with ‘L’ as centre an arc to cut the previous arc at ‘D’.



Step V:

Join RD and LD.



Thus formed LORD is the required a rectangle.