CHAPTER 4

# Practical Geometry

**To construct a square when its side is given**:

We know that all the four sides of a square are equal and it's angles are each $90^o$. Therefore, the measurement of the side is enough to construct it.

**Example**:

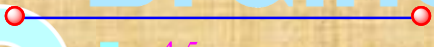
Construct a square PQRS of side 4.5 cm.

**Sol**.

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

**Step I**:

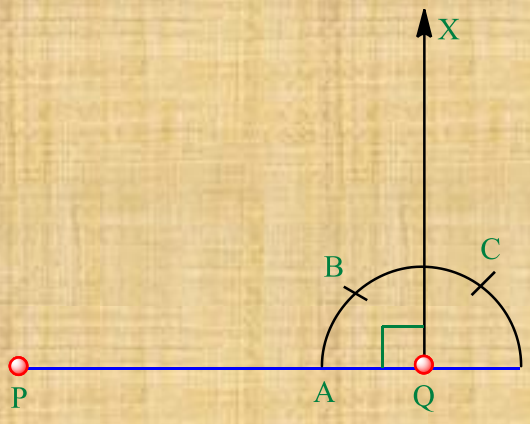
Draw a line segment PQ = 4.5 cm





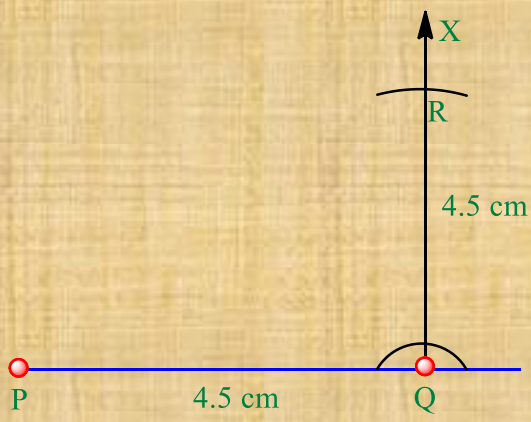

**Step II**:

At Q, draw a ray $\overrightarrow{QX}$, such that $\angle Q = 90^o$ using compass and a ruler.



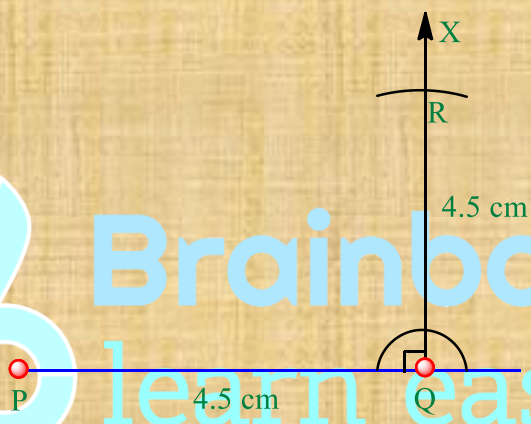

**Step III**:

With ‘Q’ as centre and radius 4.5 cm, draw an arc to cut ray $\overrightarrow{BX}$ at ‘R’.




**Step IV**:

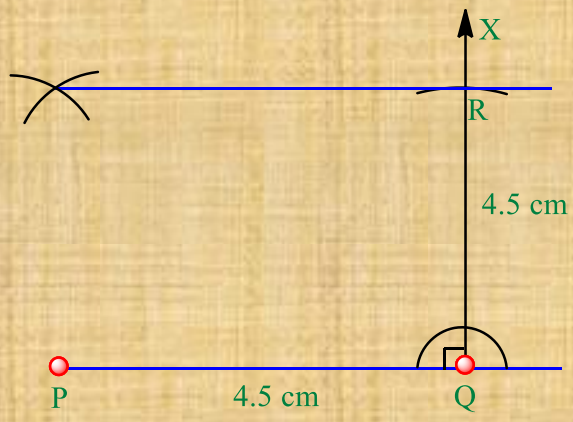
With ‘R’ as centre and the same radius, draw an arc.





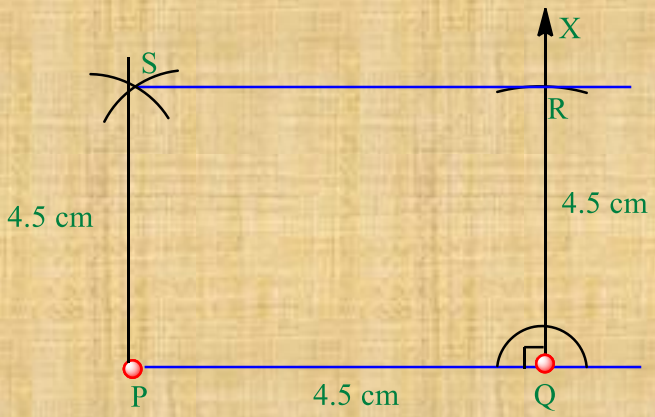

**Step V**:

With ‘P’ as centre and the same radius, draw another arc to cut the previous arc at ‘S’.




**Step VI**:

Join RS and PS.




Thus PQRS formed is the required square.