Exercise 17.1   Page No: 17.3

Question 1: Draw a line segment of length 8.6 cm. Bisect it and measure the length of each part.
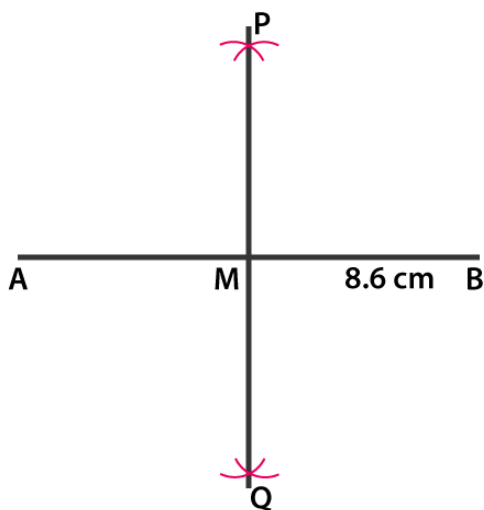
Solution:
Step 1: Draw a line segment AB = 8.6 cm.
Step 2: Draw arcs on each side of AB using A as a center at any radius more than half of 8.6.
Step 3: Repeat Step 2 using B as a center and make sure these arcs cut the previous arcs.
Step 4: Join the points P and Q which intersects AB at M.
Therefore AM= MB = 4.3 cm

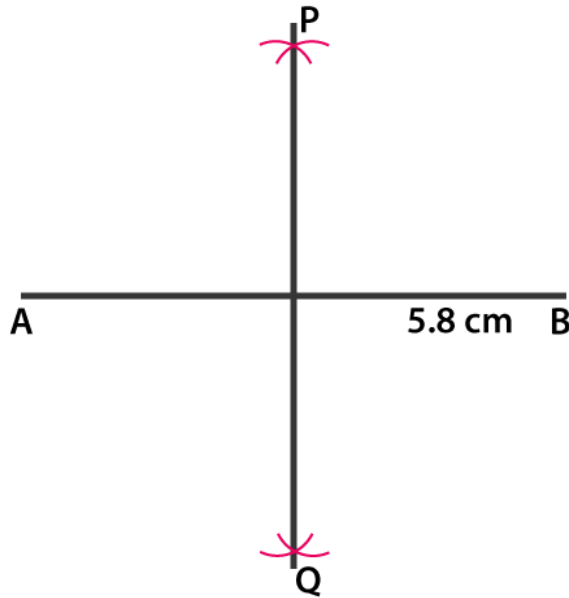**Question 2: Draw a line segment AB of length 5.8cm. Draw the perpendicular bisector of this line segment.**

Solution:
Step 1: Draw a line segment AB = 5.8 cm.
Step 2: Draw arcs on each side of AB using A as a center at any radius more than half of 5.8.
Step 3: Repeat Step 2 using B as a center and make sure these arcs cut the previous arcs.
Step 4: Join the points P and Q.

Here, PQ is the perpendicular bisector of AB.

Question 3: Draw a circle with center at point O and radius 5cm. Draw its chord AB, the perpendicular bisector of line segment AB. Does it pass through the center of the circle?
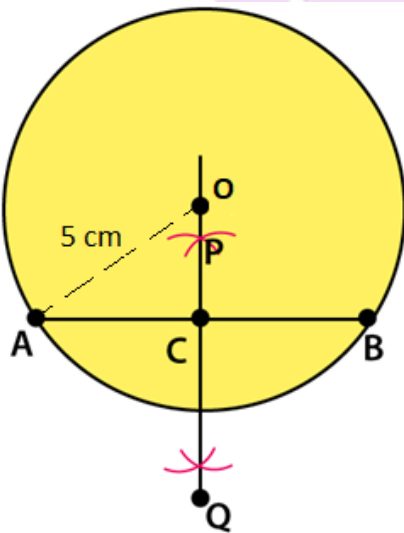
Solution:
Step 1: Draw a circle choosing radius 5 cm and point O as center.
Step 2: Draw a chord AB using scale.
Step 3: Draw arcs one on each side of chord chossing A as center and radius more than half of 5 cm.
Step 4: Repeat step 3 using B as a centre and make sure these arcs cut the previous arcs.
Step 5: Join P and Q.

Therefore PQ is a perpendicular bisector of chord AB passes through the center of the circle.