

## Solutions for Class 9 Maths Chapter 17 Construction

### Exercise 17.1

**Question 1:** Draw a line segment of length 8.6 cm. Bisect it and measure the length of each part.

**Solution:**

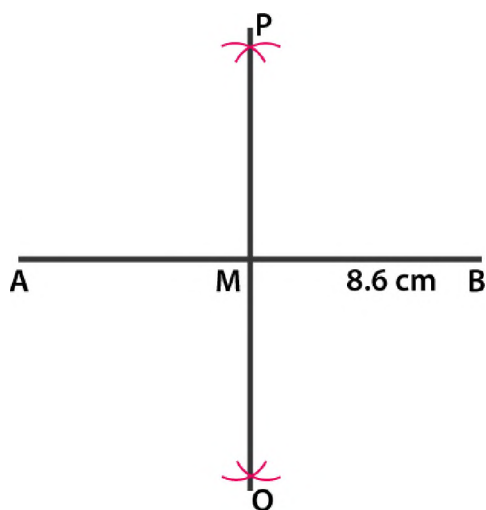
Step 1: Draw a line segment  $AB = 8.6$  cm.

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 intersect  $AB$  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:**

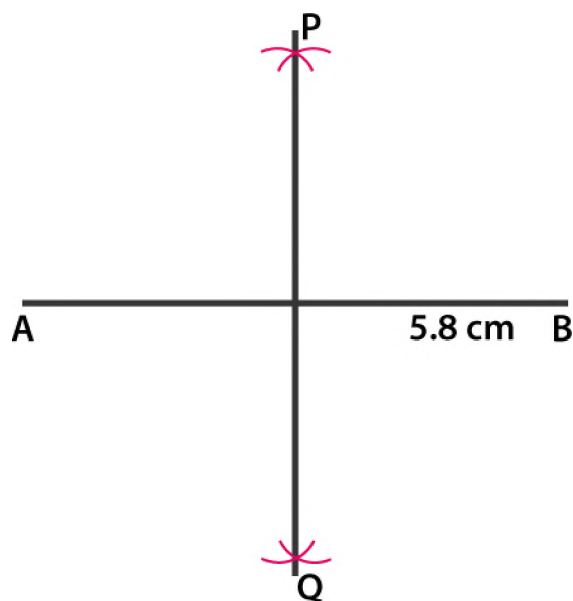
Step 1: Draw a line segment  $AB = 5.8$  cm.

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  $Q$ .

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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:**

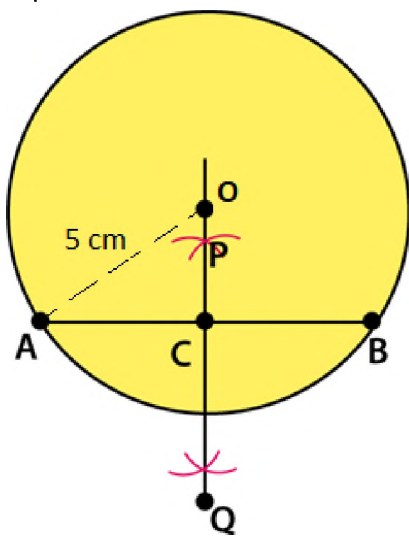
Step 1: Draw a circle choosing radius 5 cm and point O as center.

Step 2: Draw a chord AB using scale.

Step 3: Draw arcs one on each side of chord choosing 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.