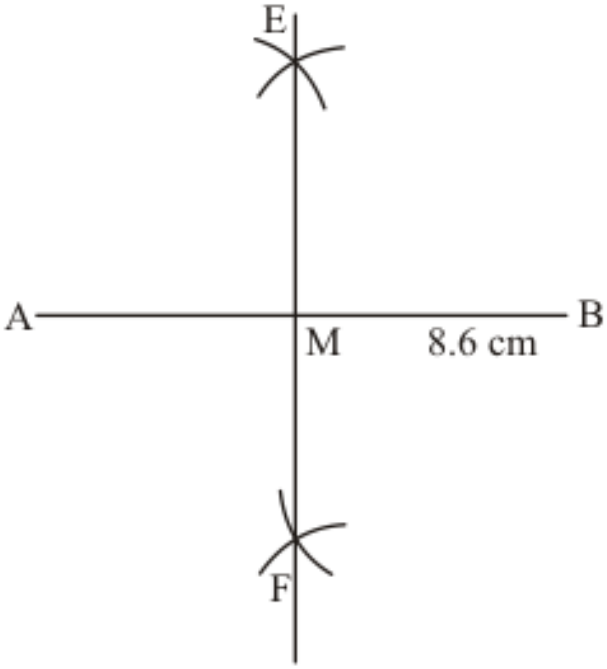
Constructions Ex 17.1 Q1

Answer :

We are given a line segment of length 8.6 cm

We have to bisect it and measure each part.



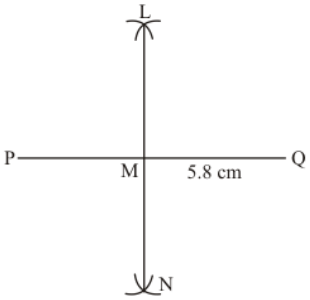
We follow the following steps of construction

STEP1: Draw a line segment AB = 8.6 cm by using a graduated ruler.
STEP 2: With A as centre and radius more than half of AB, draw arcs, one on each side of AB.
STEP3: With B as centre and the same radius as in step II, draw arcs cutting the arcs drawn in step II at E and F respectively.
STEP 4: Draw the line segment with E and F as end-points. Suppose it meets AB at M. Then M bisects the line segment AB.
By measuring AM and MB, we find that
AM = MB = 4.3cm

Constructions Ex 17.1 Q2

Answer :

We are given the line segment of length 5.8 cm
We are asked to draw the perpendicular bisector of the line segment
We will follow the following algorithm for the construction



We follow the following steps for constructing the perpendicular bisector of PQ.
STEP1: Draw a line segment PQ=5.8 cm by using a graduated ruler.
STEP2: With P as centre and radius more than half of PQ, draw two arcs, one on each side of PQ.
STEP3: With Q as centre and the same radius as in step II, draw arcs cutting the arcs drawn in the previous step at Land N respectively.
STEP4: Draw the line segment with L and N end-points.
The line segment LN is the required perpendicular bisector of Q.

********** END **********