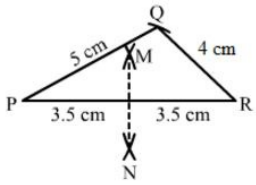
Constructions Ex 17.2 Q4

Answer :

Steps of construction:
Draw a line segment PR of length 7 cm.
With centre P, draw an arc of radius 5 cm.
With centre R, draw an arc of radius 4 cm intersecting the previously drawn arc at Q.
Join PQ and QR to obtain the required triangle.
From P, draw arcs with radius more than half of PR on either sides.
With the same radius as in the previous step, draw arcs from R on either sides of PR intersecting the arcs drawn in the previous step at M and N.
MN is the required perpendicular bisector of the largest side.



Constructions Ex 17.2 Q5

Answer :

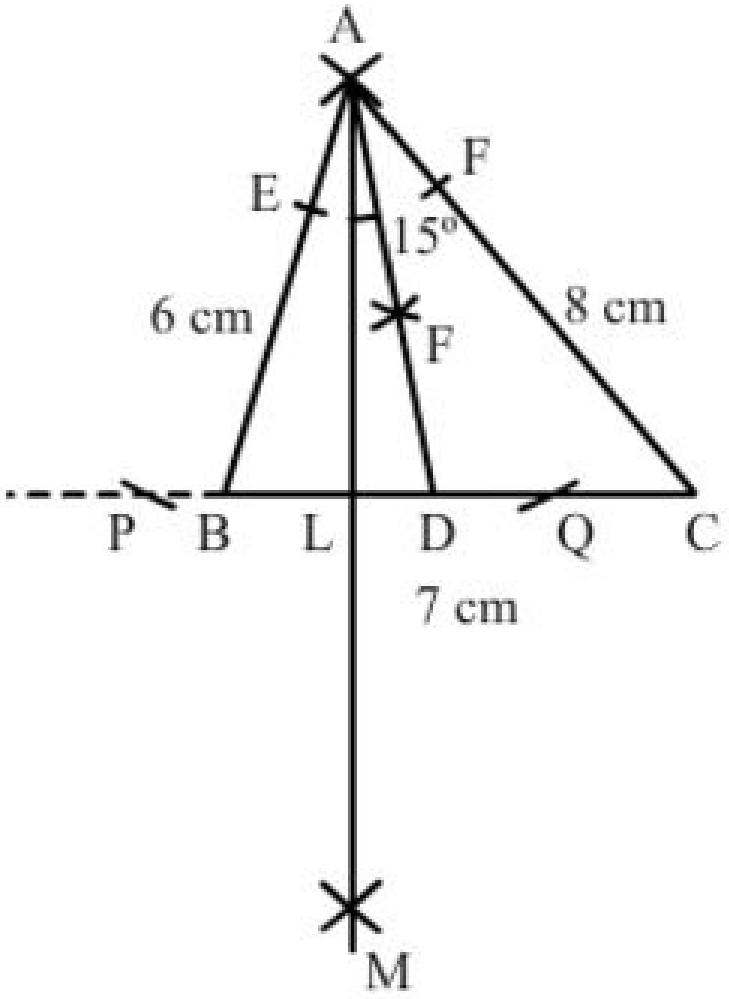
Steps of construction:
Draw a line segment BC of length 7 cm.
With centre B, draw an arc of radius 6 cm.
With centre C, draw an arc of radius 8 cm intersecting the previously drawn arc at A.
Join AC and BC to get the required triangle.

Angle bisector steps:

1. From A, cut arcs of equal radius intersecting AB and AC at E and F, respectively.
2. From E and F, cut arcs of equal radius intersecting at point H.
3. Join AH and extend to produce the angle bisector of angle A, meeting line BC at D.

Perpendicular from Point A to line BC steps:

1. From A, cut arcs of equal radius intersecting BC at P and Q, respectively (Extend BC to draw these arcs).
2. From P and Q, cut arcs of equal radius intersecting at M.
3. Join AM cutting BC at L.
4. AL is the perpendicular to the line BC.
5. Angle LAD is 15^{o}.



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