Constructions Ex 17.4 Q1

Answer :

Steps of construction:

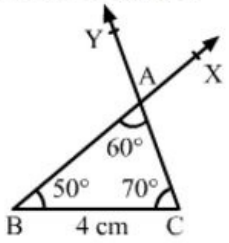
Draw a line segment BC of length 4 cm.

Draw $\angle CBX \text{ such that } \angle CBX = 50^\circ$.

Draw $\angle BCY$ with Y on the same side of BC as X such that ∠BCY = 70°.

Let CY and BX intersect at A.

ABC is the required triangle.



Constructions Ex 17.4 Q2

Answer :

$$\angle ABC + \angle BCA + \angle CAB = 180^\circ$$
$$\angle BCA = 180^\circ - \angle ABC - \angle CAB$$
$$\angle BCA = 180^\circ - 100^\circ = 80^\circ$$

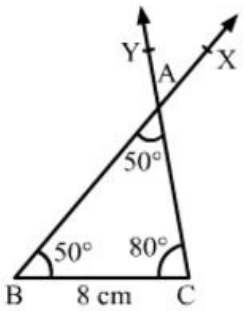
Steps of construction:

Draw a line segment BC of length 8 cm.

Draw $\angle CBX \text{ such that } \angle CBX = 50^\circ$.

Draw ∠BCY with Y on the same side of BC as X such that ∠BCY = 80°.

Let CY and BX intersect at A.



Constructions Ex 17.4 Q3

Answer :

Steps of construction:

Draw a line segment QR = 4.5 cm.

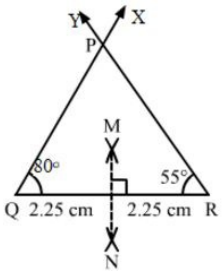
Draw $\angle RQX = 80^\circ$ *and* $\angle QRY = 55^\circ$.

Let QX and RY intersect at P so that PQR is the required triangle.

With Q as centre and radius more that 2.25 cm, draw arcs on either sides of QR.

With R as centre and radius more than 2.25 cm, draw arcs intersecting the previous arcs at M and N.

Join MN; MN is the required perpendicular bisector of QR.



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