

Probability and Random Variables Assignment

Maharshi Kadeval

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Q8c)

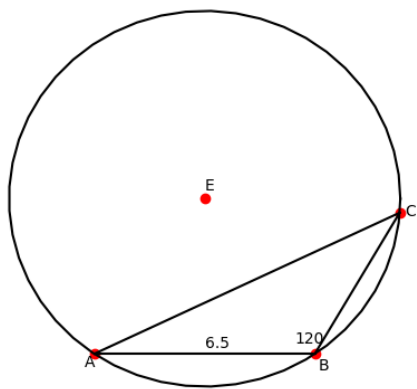
Using ruler and compass only, construct a $\triangle ABC$ such that $BC = 5$ cm and $AB = 6.5$ cm and $\angle ABC = 120^\circ$

(i) Construct a circum-circle of $\triangle ABC$

(ii) Construct a cyclic quadrilateral $ABCD$, such that D is equidistant from AB and BC .

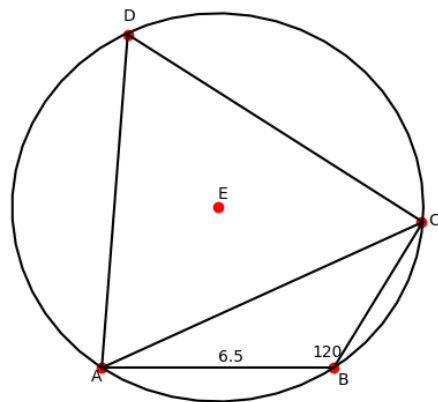
SOLUTION:

(i)



center of the circumcircle is the point of intersection of the perpendicular bisectors of AB and BC .

(ii)



the point D of the cyclic quadrilateral $ABCD$ is the point of intersection of the angle bisectors of AB and BC and the circumcircle.