

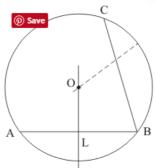
Circles Ex 16.2 Q5

Answer:

Let A, B and C are three distinct points on a circle C(O,r).

Now join AB and BC and draw their perpendicular bisectors.

The point of intersection of the perpendicular bisectors is the centre of given circle. Hence O is the centre of circle C(O,r).



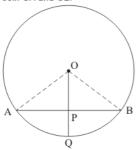
Circles Ex 16.2 Q6

Answer:

Let P is the mid point of chord AB of circle C(O, r) then according to question, line OQ passes through the point P:

Then prove that OQ bisect the arc AB.

Join OA and OB.



In △AOP and △BOP

OA = OB (Radii of the same circle)

AP = BP (P is the mid point of chord AB)

OP = OP (Common)

Therefore, $\triangle AOP \cong \triangle BOP$

 $\Rightarrow \angle AOP = \angle BOP$ (by cpct)

Thus

 $Arc\ AQ = arc\ BQ$

Therefore, OQ bisect the arc AB

Hence Proved.