Circles Ex 16.2 Q5

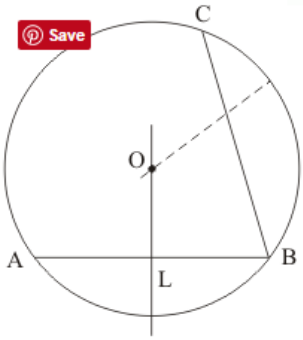
Answer :

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 $C(O,r)$.



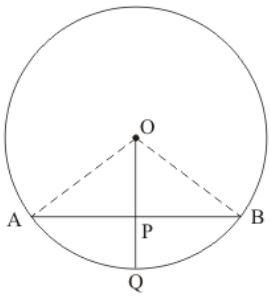
Circles Ex 16.2 Q6

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, $\Delta AOP \cong \Delta BOP$

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

Thus

Arc *AQ* = arc *BQ*

Therefore, OQ bisect the arc AB

Hence Proved.

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