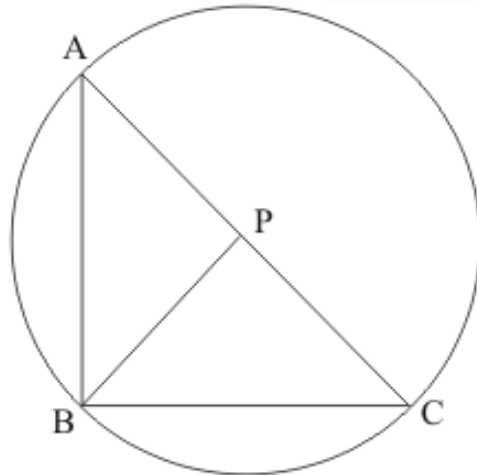




Circles Ex 16.5 Q28

**Answer :**

We have to prove that  $BP = \frac{1}{2} AC$



Let  $\triangle ABC$  be a right angle at B and P be midpoint of AC

Draw a circle with center at P and AC diameter

Since  $\angle ABC = 90^\circ$  therefore circle passing through B

So  $BP = CP = \text{radius}$

$\Rightarrow AP = BP = CP$

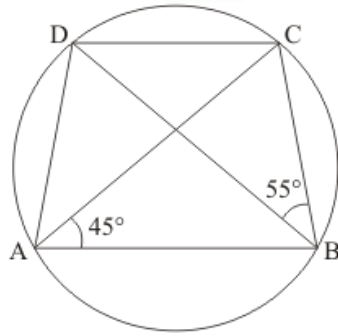
Hence

$$\boxed{BP = \frac{1}{2} AC} \text{ Proved.}$$

Circles Ex 16.5 Q29

**Answer :**

It is given that  $ABCD$  is a cyclic quadrilateral with  $AC$  and  $DB$  are diagonal



We have to find  $\angle BCD$

Since angles in the same segment of a circle are equal

So  $\angle CAD = \angle DBC = 55^\circ$

$\angle DAB = \angle CAD + \angle BAC$

$$= 55^\circ + 45^\circ$$

$$= 100^\circ$$

Since  $\angle DAB + \angle BCD = 180^\circ$  (opposite angle of cyclic quadrilateral)

$$\angle BCD = 180^\circ - 100^\circ$$

$$= 80^\circ$$

Hence  $\boxed{\angle BCD = 80^\circ}$

\*\*\*\*\* END \*\*\*\*\*