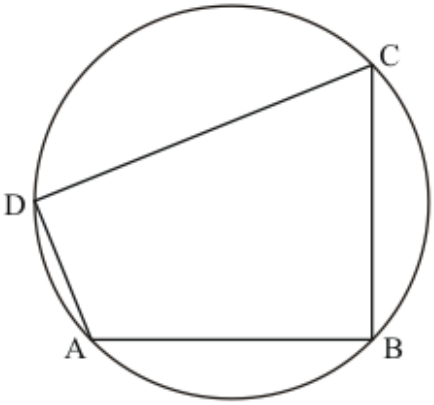
Circles Ex 16.5 Q16

Answer :

It is given that $\angle A - \angle C = 60°$ and $ABCD$ is cyclic quadrilateral



We have to prove that smaller of two is 60°

Since $ABCD$ is cyclic quadrilateral

So $\angle A + \angle C = 180°$ (by cyclic quadrilateral property) ..... (1)

And

$\angle A - \angle C = 60°$ (Given) ..... (2)

Adding equation (1) and (2) we have

$$2\angle A = 240^0$$

$$\angle A = \frac{240^0}{2}$$

$$= 120^0$$

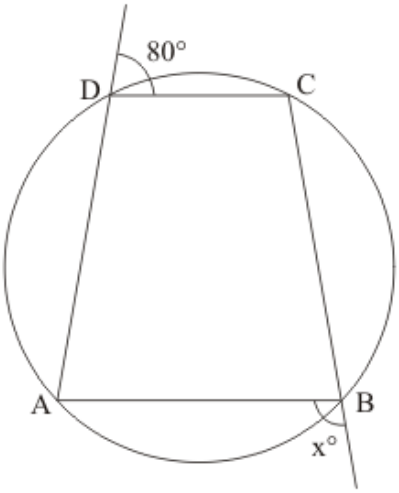
So $\angle C = 60°$

Hence smaller of two is 60° proved.

Circles Ex 16.5 Q17

Answer :

Here, ABCD is a cyclic quadrilateral, we need to find x.



In cyclic quadrilateral the sum of opposite angles is equal to 180°.

Therefore,

$$\angle ADC + \angle ABC = 180$$

$$\Rightarrow 180 - 80 + 180 - x = 180$$

$$\Rightarrow x = 100^0$$

Hence, the value of x is 100°.

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