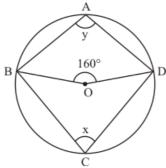


Circles Ex 16.5 Q3 Answer:

It is given that *O* is center of circle and $\angle BOD = 160^{\circ}$



We have to find $\angle x$ and $\angle y$

From given figure

Clearly arc DB makes angle 160° at the center therefore $\angle x$ will be half of $\angle BOD$. So

$$x = \frac{1}{2} \left(160^{\circ} \right)$$
$$= 80^{\circ}$$

Since ABCD is cyclic quadrilateral

So

 $x + y = 180^{\circ}$ (Each opposite pair angle is 180°)

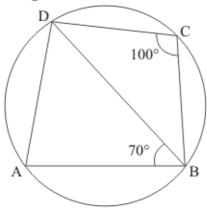
$$y = 180^{\circ} - x$$

= $180^{\circ} - 80^{\circ}$
= 100°
Hence $\angle y = 100^{\circ}$ and $\angle x = 80^{\circ}$

Circles Ex 16.5 Q4

Answer:

It is given that $\angle BCD = 100^{\circ}$ and $\angle ABD = 70^{\circ}$



We have to find the ∠ADB

We have

 $\angle A + \angle C = 180^{\circ}$ (Opposite pair of angle of cyclic quadrilateral)

So

$$\angle A = 180^{\circ} - 100^{\circ}$$

= 80°

Now in $\triangle ADB$ is $\angle A = 80^{\circ}$ and $\angle ABD = 70^{\circ}$

Therefore

$$\angle A + \angle ADB + \angle ABD = 180^{\circ}$$

 $80^{\circ} + \angle ADB + 70^{\circ} = 180^{\circ}$
 $\angle ADB = 180^{\circ} - 150^{\circ}$
 $= 30^{\circ}$

Hence $\angle ADB = 30^{\circ}$

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