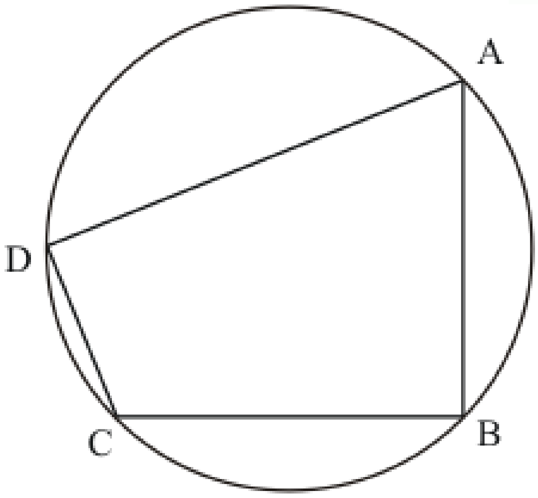
Circles Ex 16.5 Q10

Answer :

It is given that

ABCD is cyclic quadrilateral and $m\angle A = 3(m\angle C)$



We have to find $m\angle A$

Since $ABCD$ is cyclic quadrilateral

So $\angle A + \angle C = 180^0$

And

$$3\angle C + \angle C = 180^0$$
$$4\angle C = 180^0$$
$$\angle C = \frac{180^0}{4} \quad \text{(Given that } \angle A = 3\angle C\text{)}$$
$$= 45^0$$

Therefore

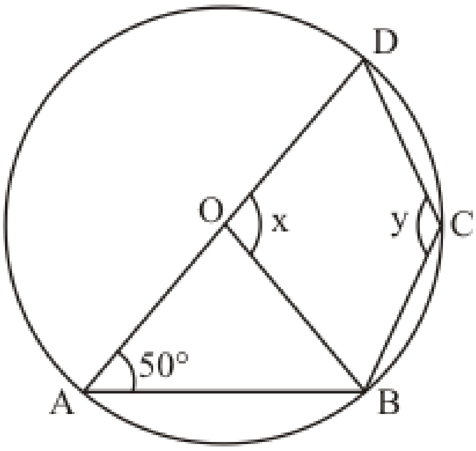
$$\angle A = 3 \times 45^0$$
$$= 135^0$$

Hence $\boxed{\angle A = 135^0}$

Circles Ex 16.5 Q11

Answer :

It is given that, O is the center of circle and $\angle A = 50^0$



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

ABCD is cyclic quadrilateral and $\angle A + \angle C = 180^0$

So

$$50^0 + y^0 = 180^0$$
$$y^0 = 180^0 - 50^0$$
$$= 130^0$$

Clearly ΔOAB is isosceles triangle with $OA = OB$ and $\angle OBA = \angle OAB$

Then $\angle OBA + \angle OAB + \angle AOB = 180^0$

$\angle AOB = 180^0 - (50^0 + 50^0)$ (Since $\angle OBA = \angle OAB = 50^0$)

So $\angle AOB = 80^0$

Therefore, $x = 180 - 80 = 100$

Hence

$\boxed{x = 100^0}$

And $\boxed{y = 130^0}$

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