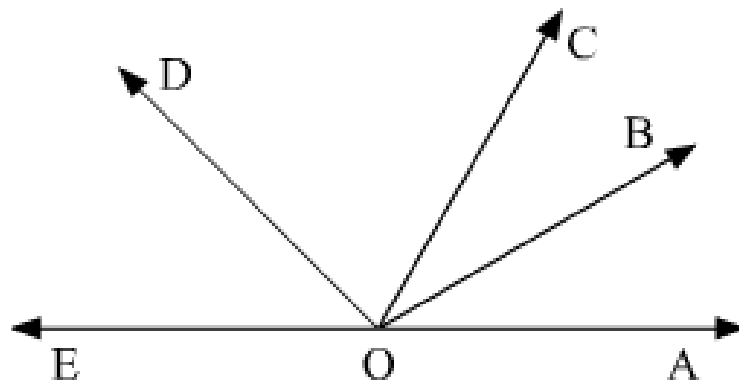




Lines and Angles Ex 8.2 Q7

Answer :

In the given figure,



We have 10 adjacent angle pairs, namely:

$\angle AOB$ and $\angle BOC$

$\angle AOB$ and $\angle BOD$

$\angle AOB$ and $\angle BOE$

$\angle BOC$ and $\angle COD$

$\angle BOC$ and $\angle COE$

$\angle COD$ and $\angle DOE$

$\angle COD$ and $\angle AOC$

$\angle COD$ and $\angle BOC$

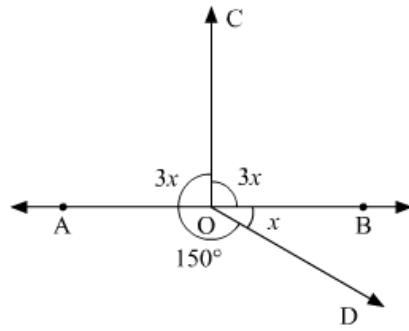
$\angle AOC$ and $\angle COE$

$\angle AOD$ and $\angle DOE$

Lines and Angles Ex 8.2 Q8

Answer :

In the given figure:



AOB is a straight line. Thus, $\angle AOD$ and $\angle BOD$ form a linear pair.
Therefore their sum must be equal to 180° .

We can say that

$$\angle AOD + \angle BOD = 180^\circ$$

It is given that $\angle AOD = 150^\circ$, substituting this value in equation above, we get:

$$150^\circ + x = 180^\circ$$

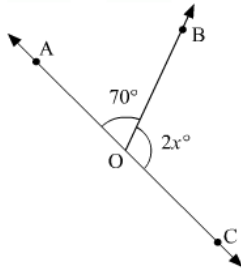
$$x = 180^\circ - 150^\circ$$

$$x = \boxed{30^\circ}$$

Lines and Angles Ex 8.2 Q9

Answer :

It is given that AOC is a line. Therefore, $\angle AOB$ and $\angle BOC$ form a linear pair. Thus, the sum of $\angle AOB$ and $\angle BOC$ must be equal to 180° .



Or, we can say that

$$\angle AOB + \angle BOC = 180^\circ$$

Also, $\angle AOB = 70^\circ$ and $\angle BOC = (2x)^\circ$. On putting these values in the equation above we have:

$$70 + 2x = 180$$

$$2x = 180 - 70$$

$$2x = 110$$

$$x = \frac{110}{2}$$

$$x = \boxed{55}$$

Hence, the required value of x is $\boxed{55}$.

***** END *****