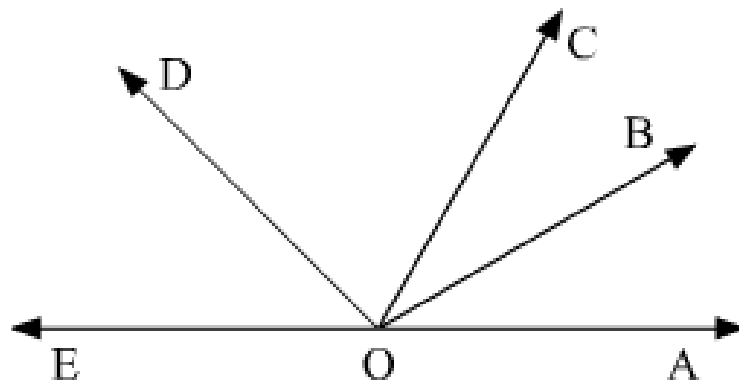Lines and Angles Ex 8.2 Q7

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 $\angle AOC$

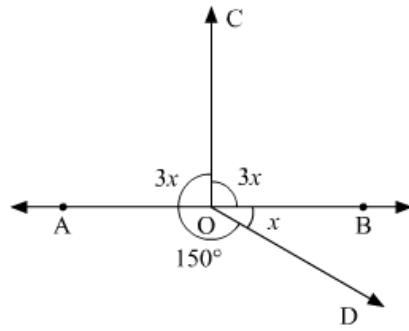$\angle COD$ and $\angle BOC$

$\angle AOC$ 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 180^0.
We can say that

$\angle AOD + \angle BOD = 180^0$

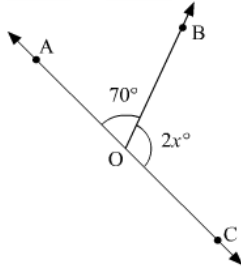It is given that $\angle AOD = 150^0$, substituting this value in equation above, we get:

$150^0 + x = 180^0$

$x = 180^0 - 150^0$

$x = \boxed{30^0}$

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 180^0.

Or, we can say that

$\angle AOB + \angle BOC = 180^0$

Also, $\angle AOB = 70^0$ and $\angle BOC = (2x)^0$. On putting these values in the equation above we have:

$70 + 2x = 180$

$2x = 180 - 70$

$2x = 110$

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

$x = \boxed{55}$

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

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