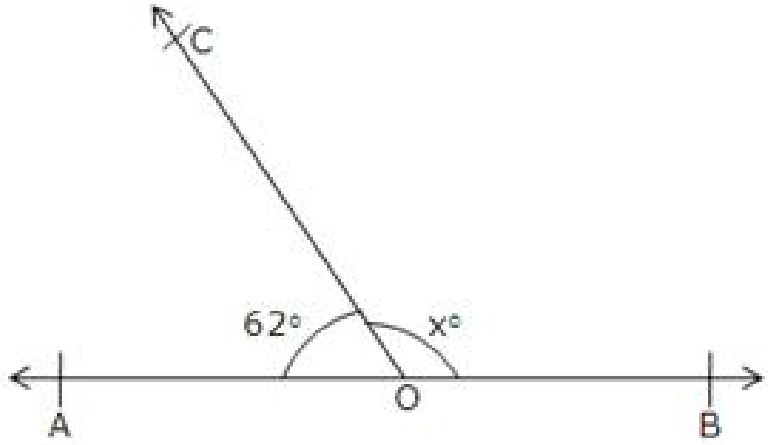
Exercise 4B

Question 1:



Since ∠BOC and ∠COA form a linear pair of angles, we have
$\angle BOC + \angle COA = 180^{\circ}$
$\Rightarrow x^{\circ} + 62^{\circ} = 180^{\circ}$
$\Rightarrow x = 180 - 62$
$\therefore x = 118^{\circ}$

Question 2:
Since, ∠BOD and ∠DOA form a linear pair.
$\angle BOD + \angle DOA = 180^{\circ}$
$\therefore \angle BOD + \angle DOC + \angle COA = 180^{\circ}$
$\Rightarrow (x + 20)^{\circ} + 55^{\circ} + (3x - 5)^{\circ} = 180^{\circ}$
$\Rightarrow x + 20 + 55 + 3x - 5 = 180$
$\Rightarrow 4x + 70 = 180$
$\Rightarrow 4x = 180 - 70 = 110$
$\Rightarrow x = 110/4 = 27.5$
$\therefore \angle AOC = (3 \times 27.5 - 5)^{\circ} = 82.5\text{-}5 = 77.5^{\circ}$
And, $\angle BOD = (x + 20)^{\circ} = 27.5^{\circ} + 20^{\circ} = 47.5^{\circ}$.

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