



Exercise 4B

Question 8:

Since $\angle COE$ and $\angle EOD$ form a linear pair of angles.

$$\Rightarrow \angle COE + \angle EOD = 180^\circ$$

$$\Rightarrow \angle COE + \angle EOA + \angle AOD = 180^\circ$$

$$\Rightarrow 5x + \angle EOA + 2x = 180$$

$$\Rightarrow 5x + \angle BOF + 2x = 180$$

[$\therefore \angle EOA$ and $\angle BOF$ are vertically opposite angles so, $\angle EOA = \angle BOF$]

$$\Rightarrow 5x + 3x + 2x = 180$$

$$\Rightarrow 10x = 180$$

$$\Rightarrow x = 18$$

$$\text{Now } \angle AOD = 2x^\circ = 2 \times 18^\circ = 36^\circ$$

$$\angle COE = 5x^\circ = 5 \times 18^\circ = 90^\circ$$

$$\text{and, } \angle EOA = \angle BOF = 3x^\circ = 3 \times 18^\circ = 54^\circ$$

Question 9:

Let the two adjacent angles be $5x$ and $4x$.

Now, since these angles form a linear pair.

$$\text{So, } 5x + 4x = 180^\circ$$

$$\Rightarrow 9x = 180^\circ$$

$$\Rightarrow x = 180/9 = 20$$

$$\therefore \text{The required angles are } 5x = 5 \times 20^\circ = 100^\circ$$

$$\text{and } 4x = 4 \times 20^\circ = 80^\circ$$

***** END *****