

23 In the figure ,

$$\begin{aligned}
 & 5X + X + 80^\circ + 123^\circ + 85^\circ = \\
 & 360^\circ \quad (\text{Angles at a Point}) \\
 = & 6X + 80^\circ + 123^\circ + 85^\circ = 360^\circ \\
 = & 6X + 288^\circ = 360^\circ \\
 = & 6X = 360^\circ - 288^\circ = 72^\circ \\
 = & X = \frac{72^\circ}{6} = 12^\circ
 \end{aligned}$$

Now , $\angle AOB = 5X = 5 \times 12^\circ = 60^\circ$

and $\angle BOC = X = 12^\circ$

24 In the figure ,

$$\begin{aligned}
 & 3\frac{1}{2}y^\circ + 2y^\circ + 2y^\circ + 2\frac{1}{2}y^\circ \\
 & = 360^\circ \\
 = & \frac{7}{2}y^\circ + 2y^\circ + 2y^\circ + \frac{5}{2}y^\circ \\
 & = 360^\circ
 \end{aligned}$$

$$= \frac{7}{2} y^\circ + \frac{5}{2} y^\circ + 4y^\circ = 360^\circ$$

$$= \frac{12}{2} y^\circ + 4y^\circ = 360^\circ$$

$$= 6y^\circ + 4y^\circ = 360^\circ$$

$$= 10y^\circ = 360^\circ$$

$$= y = \frac{360^\circ}{10} = 36^\circ$$

$$\therefore \angle AOB = 3 \frac{1}{2} y^\circ = \frac{7}{2} y^\circ =$$

$$\frac{7}{2} \times 36^\circ = 126^\circ$$

$$\angle BOC = 2y^\circ = 2 \times 36 = 72^\circ$$

$$\angle COD = 2y^\circ = 72^\circ$$

$$\angle DOA = 2 \frac{1}{2} y^\circ = \frac{5}{2} y^\circ$$

$$= \frac{5}{2} \times 36^\circ = 90^\circ$$