CW

29/9/21

Lines & Angles

Ex 14A

23) In the given figure,

$5x + x + 80^\circ + 123^\circ + 85^\circ = 360$

Angles at a point

$\rightarrow 6x + 80^\circ + 123^\circ + 85^\circ = 360$

$\rightarrow 6x + 288^\circ = 360$

$\rightarrow 6x = 360 - 288$

$\rightarrow$ ~~$x = 72^\circ$~~ $6x = 72$

$\rightarrow x = 72^\circ / 6 = 12^\circ$

Now, $\angle AOB = 5x = 5 \times 12 = 60^\circ$
And $\angle BOC = x = 12^\circ$

24) $3\frac{1}{2}y^\circ + 2y^\circ + 2y^\circ + 2\frac{1}{2}y^\circ = 360^\circ$ (Angles at a point)

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

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

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

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

$\rightarrow 10y^\circ = 360$

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

Therefore, $\angle AOB = 3\frac{1}{2}y^\circ = \frac{7}{2}y^\circ = \frac{7}{2} \times 36^{18}$

$= 126^\circ$

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

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

$\angle DOA = 2\frac{1}{2}y^\circ = \frac{5}{2}y^\circ = \frac{5}{2} \times 36^{18} = 90^\circ$