

# Home Assignment

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23. Ans.  $\angle EOD + \angle DOC + \angle COB + \angle BOA + \angle EOA = 360^\circ$

$$\Rightarrow 123^\circ + 20^\circ + x^\circ + 5x^\circ + 85^\circ = 360^\circ$$

$$\Rightarrow 228^\circ + 6x = 360^\circ$$

$$\Rightarrow 6x = 360 - 228$$

$$\Rightarrow x = \frac{360 - 228}{6} = 12$$

$$\therefore \angle AOB = 5x = 5 \times 12 = 60^\circ$$

$$\angle BOC = x = 12^\circ$$

24. Ans  $\Rightarrow 3\frac{1}{2}y + 2\frac{1}{2}y + 2y + 2y = 360^\circ$   
 $\Rightarrow \frac{7}{2}y + \frac{5}{2}y + 2y + 2y = 360^\circ$

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

$\Rightarrow \frac{20y}{2} = 360^\circ$

$\Rightarrow 20y = 360 \times 2$

$\Rightarrow y = \frac{360 \times 2}{20} = 36^\circ$

$\therefore 3\frac{1}{2}y = \frac{7}{2}y = \frac{7}{2} \times 36^\circ = 126^\circ$

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

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

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25. Ans. ~~1)  $\angle A = 90^\circ$  (LROB)~~

i)  ~~$\angle AOF = 90^\circ$  (LEOB)~~

$\Rightarrow x^\circ + y^\circ + z^\circ = 180^\circ$

$\Rightarrow x^\circ + 45^\circ + 90^\circ = 180^\circ$

$\Rightarrow x^\circ + 135^\circ = 180^\circ$

$\Rightarrow x^\circ = 180^\circ - 135^\circ = 45^\circ$

$\therefore x = 45^\circ$

ii)  $3a + 5x + 6x = 180^\circ$

$x + 5x + 6x = 180^\circ$

$12x = 180^\circ$

$x = \frac{180^\circ}{12} = 15^\circ$

$\therefore x = 3a = 15^\circ$

$a = \frac{15^\circ}{3} = 5^\circ$