



Exercise 14A

(ii)

Each exterior angle = 36°

Number of sides of the regular polygon = $\frac{360}{36} = 10$

(iii)

Each exterior angle = 72°

Number of sides of the regular polygon = $\frac{360}{72} = 5$

(iv)

Each exterior angle = 30°

Number of sides of the regular polygon = $\frac{360}{30} = 12$

Q8.

Answer :

Sum of all the interior angles of an n-sided polygon = $(n - 2) \times 180^\circ$

$$m\angle ADC = 180 - 50 = 130^\circ$$

$$m\angle DAB = 180 - 115 = 65^\circ$$

$$m\angle BCD = 180 - 90 = 90^\circ$$

$$m\angle ADC + m\angle DAB + m\angle BCD + m\angle ABC = (n - 2) \times 180^\circ = (4 - 2) \times 180^\circ = 2 \times 180^\circ = 360^\circ$$

$$\Rightarrow m\angle ADC + m\angle DAB + m\angle BCD + m\angle ABC = 360^\circ$$

$$\Rightarrow 130^\circ + 65^\circ + 90^\circ + m\angle ABC = 360^\circ$$

$$\Rightarrow 285^\circ + m\angle ABC = 360^\circ$$

$$\Rightarrow m\angle ABC = 75^\circ$$

$$\Rightarrow m\angle CBF = 180 - 75 = 105^\circ$$

$$\therefore x = 105$$

Q9.

Answer :

For a regular n-sided polygon:

$$\text{Each interior angle} = 180 - \left(\frac{360}{n} \right)$$

In the given figure:

$$n = 5$$

$$x^\circ = 180 - \frac{360}{5}$$

$$= 180 - 72$$

$$= 108^\circ$$

$$\therefore x = 108$$

***** END *****

