Exercise 14A

(ii)

$\text{Each exterior angle} = 36^o$

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

(iii)

$\text{Each exterior angle} = 72^o$

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

(iv)

$\text{Each exterior angle} = 30^o$

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

Q8.

Answer :

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

$m\angle ADC = 180 - 50 = 130^o$
$m\angle DAB = 180 - 115 = 65^o$
$m\angle BCD = 180 - 90 = 90^o$
$m\angle ADC + m\angle DAB + m\angle BCD + m\angle ABC = (n-2) \times 180^\circ = (4-2) \times 180^\circ = 2 \times 180^\circ = 360^\circ$
$\Rightarrow m\angle ADC + m\angle DAB + m\angle BCD + m\angle ABC = 360^\circ$
$\Rightarrow 130^o + 65^o + 90^o + m\angle ABC = 360^\circ$
$\Rightarrow 285^o + m\angle ABC = 360^o$
$\Rightarrow m\angle ABC = 75^o$
$\Rightarrow m\angle CBF = 180 - 75 = 105^o$
∴ x = 105

Q9.

Answer :

For a regular n-sided polygon:

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

In the given figure:

$n = 5$
$x^\circ = 180 - \frac{360}{5}$
$= 180 - 72$
$= 108^o$
∴ x = 108

********** END **********