



Exercise 17C

Q32

Answer :

(a) 25°

Given :

$$\angle A + \angle B = 65^\circ$$

$$\angle A = 65^\circ - \angle B \quad \dots (i)$$

$$\angle B + \angle C = 140^\circ$$

$$\angle C = 140^\circ - \angle B \quad \dots (ii)$$

In $\triangle ABC$:

$$\angle A + \angle B + \angle C = 180^\circ$$

Putting the value of $\angle B$ and $\angle C$:

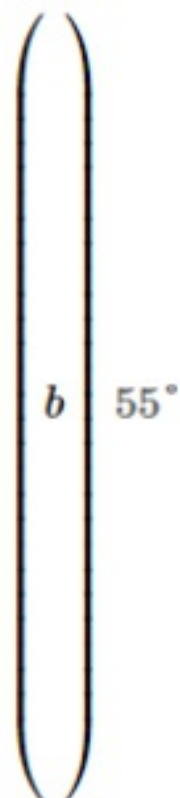
$$\Rightarrow 65^\circ - \angle B + \angle B + 140^\circ - \angle B = 180^\circ$$

$$\Rightarrow -\angle B = 180^\circ - 205^\circ$$

$$\Rightarrow \angle B = 25^\circ$$

Q33

Answer :



In $\triangle ABC$:

$$\angle A + \angle B + \angle C = 180^\circ \quad \dots (i)$$

Given:

$$\angle A - \angle B = 33^\circ \Rightarrow \angle A = \angle B + 33^\circ \quad \dots (ii)$$

$$\angle B - \angle C = 18^\circ \Rightarrow \angle C = \angle B - 18^\circ \quad \dots (iii)$$

Using (ii) and (iii) in equation (i) :

$$\Rightarrow \angle B + 33^\circ + \angle B + \angle B - 18^\circ = 180^\circ$$

$$\Rightarrow 3\angle B + 15^\circ = 180^\circ$$

$$\Rightarrow 3\angle B = 165^\circ$$

$$\Rightarrow \angle B = \frac{165^\circ}{3} = 55^\circ$$

Q34

Answer :

$$\left(\begin{array}{c} c \\ 22 \end{array} \right)$$

Sum of the angles of a triangle is 180° .

$$(3x)^\circ + (2x - 7)^\circ + (4x - 11)^\circ = 180^\circ$$

$$\Rightarrow 9x^\circ - 18^\circ = 180^\circ$$

$$\Rightarrow 9x^\circ = 198^\circ$$

$$\Rightarrow x^\circ = 22^\circ$$

$$\Rightarrow x = 22$$

Q35

Answer :

$$\left(\begin{array}{c} c \\ 25 \text{ cm} \end{array} \right)$$

In a right angle triangle ABC:

$$AC^2 = BC^2 + AB^2$$

$$\Rightarrow BC^2 = 24^2 + 7^2$$

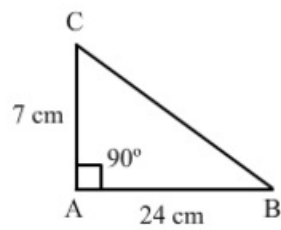
$$\Rightarrow BC^2 = 576 + 49$$

$$\Rightarrow BC^2 = 625$$

$$\Rightarrow BC = \pm 25 \text{ cm}$$

Since the length cannot be negative, we will neglect -25 .

$\therefore BC = 25 \text{ cm}$



Q36

Answer :

$$\left(b \right) 25 \text{ m}$$

In right triangle ABC:

$$AC^2 = AB^2 + BC^2$$

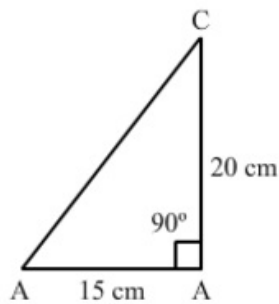
$$= 15^2 + 20^2$$

$$\Rightarrow AC^2 = 625$$

$$\Rightarrow AC = \pm 25$$

Since the length cannot be negative, we will neglect -25 .

\therefore Length of the ladder = 25 m



Q37

Answer :

$$(a) 13 \text{ m}$$

Suppose there are two poles AE and BD.

$$EC = AB = 12 \text{ m} \quad (\text{ABCE is a rectangle})$$

***** END *****