

usual

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Q1. $x + x = 90 = 180$ (angle sum property)

$$2x = 90 = x = 45^\circ$$

Hence, both acute angles are 45° each.

Q2. $70^\circ = x + 30^\circ$

[Exterior angle property]

$$x = 70^\circ - 30^\circ$$

$$x = 40^\circ$$

$$\text{Now } x + 70^\circ = 180^\circ \quad (\text{L.O.P})$$

↓
y

$$y = 180^\circ - 70^\circ$$

$$y = 110^\circ$$

Hence, $x = 40^\circ$ and $y = 110^\circ$

Q3. Let ABCD be a rhombus and AC, BD be its two diagonals.

where $AC = 30\text{ cm}$, $BD = 16\text{ cm}$

Let two diagonals intersect at E. $\angle BEC = 90^\circ$, $EC = 15$,

$$EB = 8\text{ cm} \quad BC^2 = BE^2 + EC^2$$

$$BC^2 = (8^2 + 15^2)\text{ cm}^2$$

$$BC^2 = (64 + 225)\text{ cm}^2$$

$$BC^2 = 289\text{ cm}^2$$

$$BC = 17\text{ cm}$$

$$BC^2 = (17)^2\text{ cm}^2$$

Perimeter of rhombus = $4 \times$ side of rhombus
 $4 \times 17 \text{ cm}$
 68 cm

Hence the perimeter of rhombus is 68 cm .

Q4. In triangle ABC $\angle C = 90^\circ$

By Pythagoras theorem.

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

$$25^2 = 7^2 + BC^2$$

$$BC^2 = 25^2 - 7^2 \text{ cm}^2$$

$$BC^2 = 576 \text{ cm}^2$$

$$BC = \sqrt{576} \text{ cm}$$

$$BC = 24 \text{ cm}$$

Q5. $PQ = 90 - (5 + 5) = 80 \text{ m}$

Area of the square $ABCD$ $90 \times 90 = 8100 \text{ m}^2$

Area of the square $PQRS$ $8 \times 80 = 6400 \text{ m}^2$

Area of path $8100 - 6400 = 1700 \text{ m}^2$

1 sq m of cementing costs $1700 \times 150 = ₹ 255000$

Area of path is 1700 sq. m. and cementing wall for cost $₹ 255000$.

Q5. Let the length and breadth of a rectangular park be $4x$ and $3x$. The area of rectangular park $4x \times 3x$

$$2028 = 4x \times 3x$$

$$12x^2 = 2028$$

$$x^2 = \frac{2028}{12} = 169$$

$$x = 13$$

$$x^2 = (13)^2 = 169$$

Length of rectangular park $4 \times 13 \text{ m} = 52 \text{ m}$

Breadth of rectangular park $3 \times 13 \text{ m} = 39 \text{ m}$

$$\text{Perimeter} = 2 \times (L + B)$$

$$= 2 \times (52 + 39) \text{ m} = 2 \times 91 \text{ m} = 182 \text{ m}$$

$$₹ 3 \times 182 = ₹ 546$$

Hence the total cost for fencing rectangular park is $₹ 546$.