Mensuration Ex 20.2 Q13

Answer:

Length of the garden = 70 m
Breadth of the garden = 50 m
Perimeter of the garden = 2 ×(Length + Breadth)
= 2 × (70 + 50)
= 2 × 120 = 240 m

On the perimeter of the garden, it is given that Arvind fixes a post every 5 metres apart.

So, the number of posts required = $\frac{240}{5}$ = 48
∵ Length of each post = 2 m
∴ Total length of the pipe required = 48 ×2 = 96 m

Mensuration Ex 20.2 Q14

Answer:

Length of the park = 175 m

Breadth of the park = 125 m

Perimeter of the park = 2×(Length + Breadth)
= 2 ×(175 + 125)
= 2 × 300 = 600 m

Rate of fencing = Rs. 12 per meter

Cost of fencing = Rs. 12 × 600 = Rs. 7,200

Mensuration Ex 20.2 Q15

Answer:

A regular pentagon is a closed polygon having five sides of equal length.
Perimeter of the regular pentagon = 100 cm
Perimeter of the regular pentagon = 5 × Side of the regular pentagon
Therefore, side of the regular pentagon = $\frac{Perimeter}{5}$ = $\frac{100}{5}$ = 20 cm

Mensuration Ex 20.2 Q16

Answer:

A regular hexagon is a closed polygon having six sides of equal lengths.
Side of the hexagon = 8 m
Perimeter of the hexagon = 6× Side of the hexagon
= 6 ×8 = 48 m

Mensuration Ex 20.2 Q17

Answer :

Dimensions of the rectangular land = 0.7 km × 0.5 km

Perimeter of the rectangular land = 2 (Length + Breadth)

$$= 2 (0.7 + 0.5) \text{ km} = 2 \times 1.2 \text{ km} = 2.4 \text{ km}$$

This perimeter is equal to one row of wire required to fence the land.

Therefore, length of wire required to fence the land with four rows of wire = 4 × 2.4 km

$$= 9.6 \text{ km}$$

Mensuration Ex 20.2 Q18

Answer :

(i) Length of the side of one slab = 1/2 m

In the square arrangement, one side of the square is formed by three slabs.

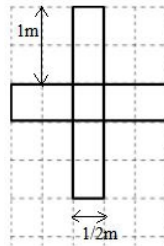So, length of the side of the square = 3 ×12= 3/2 m

The perimeter of the square arrangement = 4 ×32 = 6 m

(ii) The cross arrangement consists of 8 sides. These sides form the periphery of the arrangement and measure 1 m each.

Also, this arrangement consists of other 4 sides that measure 1/2 m each.

So, the perimeter of the cross arrangement = (1 + 1/2 + 1 + 1 + 1/2 + 1 + 1 + 1/2 + 1 + 1 + 1/2 + 1)

$$= (8 + 2) = 10 \text{ m}$$

(iii) Perimeter of the cross arrangement = 10 m

Perimeter of the square arrangement = 6 m

Thus, the perimeter of the the cross arrangement is more than that of the square arrangement.

(iv) No, there is no way of arranging these slabs where the perimeter is more than 10 m.

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