Mensuration I Ex 20.1 Q7

Answer :

We have,

Perimeter the of rectangle = 2(Length + Breadth)

= 2(40 cm + 22 cm) = 124 cm

It is given that the wire which was in the shape of a rectangle is now bent into a square.

Therefore, the perimeter of the square = Perimeter of the rectangle

=> Perimeter of the square = 124 cm

⇒ 4 x side = 124 cm

∴ Side = $\frac{124}{4} = 31$ **cm**

Now,

Area of the rectangle = 40 cm x 22 cm = 880 cm^2

Area of the square = (Side)^2 = (31 cm)^2 = 961 cm^2

Therefore, the square-shaped wire encloses more area.

Mensuration I Ex 20.1 Q8

Answer :

We have,

Length of the glass pane = 25 cm

Breadth of the glass pane = 16 cm

Area of one glass pane = 25 cm x 16 cm = 400 cm^2 = 0.04 m^2 [Since 1 m^2 = 10000 cm^2]

Thus,

Area of 12 such panes = 12 x 0.04 = 0.48 m^2

Mensuration I Ex 20.1 Q9

Answer :

We have,

Area of the wall = 3 m x 4 m = 12 m^2

Area of one marble tile = 10 cm x 12 cm = 120 cm^2 = 0.012 m^2 [Since 1 m^2 = 10000 cm^2]

Thus,

Number of tiles = $\frac{\text{Area of wall}}{\text{Area of one tile}} = \frac{12\,\text{m}^2}{0.012\,\text{m}^2} = 1000$

Cost of one tile = Rs. 2

Total cost = Number of tiles x Cost of one tile

= Rs. (1000 x 2) = Rs. 2000

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