

Mensuration I Ex 20.1 Q16

Answer:

We have.

Length of the lane = 180 m

Breadth of the lane = 5 m

Area of a lane = Length x Breadth = 180 m x 5 m = 900 m²

Length of the brick = 20 cm

Breadth of the brick = 15 cm

Area of a brick = Length x Breadth = $20 \text{ cm x } 15 \text{ cm} = 300 \text{ cm}^2 = 0.03 \text{ m}^2$ [Since $1 \text{ m}^2 = 10000 \text{ cm}^2$]

Required number of bricks = $\frac{900 \text{ m}^2}{0.03 \text{ m}^2} = 30000$

Cost of 1000 bricks = Rs. 750

$$\therefore$$
 Total cost of 30,000 bricks = Rs. $\left(\frac{750\times30,000}{1000}\right)=$ $Rs. \ 22,500$

Mensuration I Ex 20.1 Q17

Answer:

We have,

Length of the sheet of paper = 125 cm

Breadth of the sheet of paper = 85 cm

Area of a sheet of paper = Length x Breadth = 125 cm x 85 cm = 10,625 cm²

Length of sheet required for an envelope = 17 cm

Breadth of sheet required for an envelope = 5 cm

Area of the sheet required for one envelope = Length x Breadth = $17 \text{ cm x } 5 \text{ cm} = 85 \text{ cm}^2$ Thus,

Required number of envelopes = $\frac{10,625~\mathrm{cm^2}}{85~\mathrm{cm^2}} = 125$

Mensuration I Ex 20.1 Q18

Answer:

We have,

Length of the diaper = 50 cm

Breadth of the diaper = 17 cm

Area of cloth to make 1 diaper = Length x Breadth = 50 cm x 17 cm = 850 cm²

Area of 25 such diapers = (25×850) cm² = 21,250 cm²

Area of total cloth = Area of 25 diapers

$$= 21,250 \text{ cm}^2$$

It is given that width of a cloth = 170 cm $\text{$:$ Length of the cloth = } \frac{\text{Area of cloth}}{\text{Width of a cloth}} = \frac{21,250 \text{ cm}^2}{170 \text{ cm}} = 125 \text{ cm}$

Hence, length of the cloth will be 125 cm.

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