



Exercise 17B

Question 24:

Rs. 14 is the cost of fencing a length = 1m

Rs. 28000 is the cost of fencing the length = $\frac{28000}{14} \text{ m} = 2000 \text{ m}$

Perimeter = 4 \times side = 2000

\Rightarrow side = 500 m

Area of a square = $(\text{side})^2 = (500)^2 \text{ m}$

= 250000 m^2

Cost of mowing the lawn = Rs $\left(250000 \times \frac{54}{100} \right)$ = Rs. 135000

Question 25:

Largest possible size of square tile = HCF of 525 cm and 378 cm
= 21 cm

Number of tiles = $\frac{\text{Area of rectangle}}{\text{Area of square tiles}}$

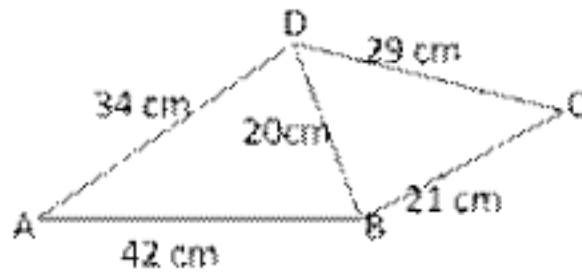
$$= \frac{(525 \times 378)}{(21 \times 21)} \text{ cm}^2$$

Question 26:

Area of quad. ABCD = Area of $\triangle ABD$ + Area of $\triangle DBC$

For area of $\triangle ABD$

Let a = 42 cm, b = 34 cm, and c = 20 cm



$$s = \frac{a+b+c}{2} = \frac{(42+34+20)}{2} \text{ cm} = 48$$

$$\text{Then, } (s-a) = 6, (s-b) = 14 \text{ and } (s-c) = 28$$

$$\begin{aligned} \text{Area of } \triangle ABC &= \sqrt{s \times (s-a)(s-b)(s-c)} \\ &= \sqrt{48 \times 6 \times 14 \times 28} \text{ cm}^2 \\ &= (6 \times 7 \times 8) \text{ cm}^2 = 336 \text{ cm}^2 \end{aligned}$$

For area of $\triangle DBC$

$$a = 29 \text{ cm, } b = 21 \text{ cm, } c = 20 \text{ cm}$$

$$s = \frac{a+b+c}{2} = \frac{(29+21+20)}{2} \text{ cm} = 35 \text{ cm}$$

$$(s-a) = 6 \text{ cm, } (s-b) = 14 \text{ cm and } (s-c) = 15 \text{ cm}$$

$$\begin{aligned} \text{Area of } \triangle DBC &= \sqrt{s \times (s-a)(s-b)(s-c)} \text{ sq.units} \\ &= \sqrt{35 \times 6 \times 14 \times 15} \text{ cm}^2 \\ &= (5 \times 7 \times 2 \times 3) \text{ cm}^2 = 210 \text{ cm}^2 \end{aligned}$$

$$\begin{aligned} \text{Area of quad. ABCD} &= \text{Area of } \triangle ABC + \text{Area of } \triangle DBC \\ &= (336 + 210) \text{ cm}^2 = 546 \text{ cm}^2 \end{aligned}$$

***** END *****