

Heron's Formula Ex 12.4

NCERT Exemplar Solutions by Dev Anoop (Bathinda)

(8)

in ΔABC

$$s = \frac{a+b+c}{2} = \frac{17+25+26}{2}$$

$$= 34 \text{ cm}$$

$$\text{area of } \Delta = \sqrt{s(s-a)(s-b)(s-c)}$$

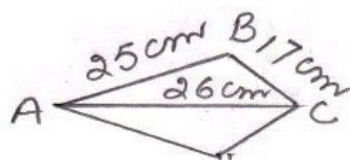
$$= \sqrt{34(34-17)(34-25)(34-26)}$$

$$= \sqrt{34 \times 17 \times 9 \times 8}$$

$$= \sqrt{2 \times 17 \times 17 \times 3 \times 3 \times 2 \times 2 \times 2}$$

$$= 2 \times 2 \times 3 \times 17$$

$$= 204 \text{ cm}^2$$



$$\begin{aligned} \text{area of design} &= 8 \times 204 \\ &= 1632 \text{ cm}^2 \end{aligned}$$

area of remaining portion

$$= 16 - 1632$$

$$= 70 \times 50 - 1632$$

$$= 3500 - 1632$$

$$= 1868 \text{ cm}^2$$