

Heron's Formula - Ex 12.1

NCERT Exemplar Solutions by Dev Anoop (Bathinda)

2. side of equilateral $\Delta = \frac{\text{Perimeter}}{3}$

$$= \frac{60}{3}$$
$$= 20 \text{ cm}$$

area of equilateral $\Delta = \frac{\sqrt{3}}{4} s^2$

$$= \frac{\sqrt{3}}{4} \times 20 \times 20$$
$$= 100\sqrt{3} \text{ cm}^2$$

(D)

3. let $a = 56 \text{ cm}$, $b = 60 \text{ cm}$, $c = 52 \text{ cm}$

$$s = \frac{a+b+c}{2}$$
$$= \frac{56+60+52}{2}$$
$$= \frac{168}{2}$$
$$= 84 \text{ cm}$$

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

$$= \sqrt{84(84-56)(84-60)(84-52)}$$
$$= \sqrt{84 \times 28 \times 24 \times 32}$$
$$= \sqrt{3 \times 28 \times 28 \times 3 \times 8 \times 8 \times 2 \times 2}$$
$$= 2 \times 3 \times 8 \times 28$$
$$= 1344 \text{ cm}^2$$

(C)

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