

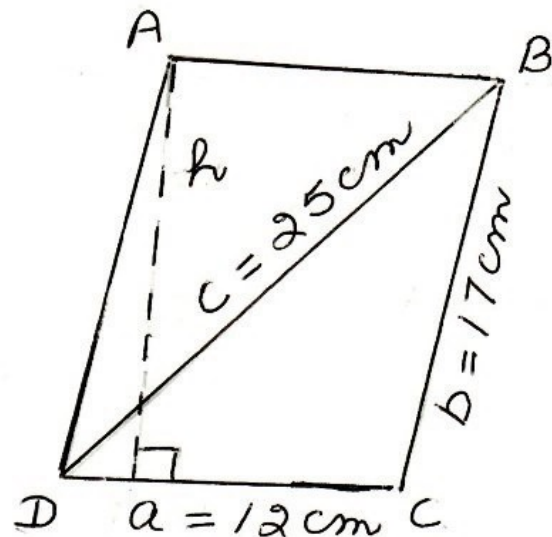
5. ΔBCD

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

$$= \frac{12+17+25}{2}$$

$$= \frac{54}{2}$$

$$= 27 \text{ cm}$$



$$\text{area of } \Delta BCD = \sqrt{27(27-12)(27-15)(27-25)}$$

$$= \sqrt{27 \times 15 \times 12 \times 2}$$

$$= \sqrt{3^2 \times 3 \times 3 \times 5 \times 2^2 \times 3 \times 2}$$

$$= 2 \times 3 \times 3 \sqrt{2 \times 3 \times 5}$$

$$= 18 \sqrt{30} \text{ cm}^2$$

$$\text{area of } \parallel \text{gm} = 2 \text{ ar}(\Delta BCD) \quad (*)$$

$$DC \times h = 2 \times 18 \sqrt{30}$$

$$12 \times h = 16 \sqrt{30}$$

$$\Rightarrow h = \frac{16 \sqrt{30}}{12}$$

$$= \frac{4 \sqrt{30}}{3} \text{ cm}$$

[ar(\parallel gm)
= base \times corr.
al.]

* diagonal divides a \parallel gm into 2 Δ s equal in area.