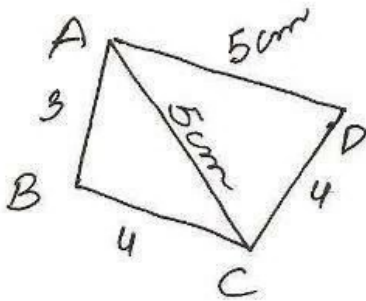


ex 12.2 herons formula 1x

②



ΔABC

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

$$= \frac{3+4+5}{2}$$

$$= 6 \text{ cm}$$

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

$$= \sqrt{6(6-3)(6-4)(6-5)}$$

$$= \sqrt{6 \times 3 \times 2 \times 1}$$

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

$$= 2 \times 3$$

$$= 6 \text{ cm}^2$$

ΔADC

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

$$= \frac{4+5+5}{2}$$

$$= 7 \text{ cm}$$

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

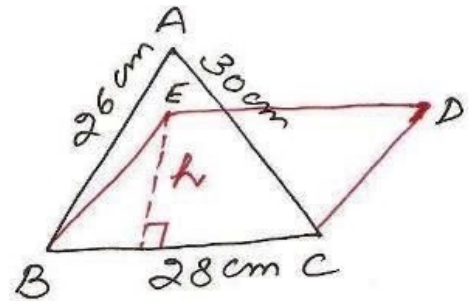
$$= \sqrt{7(7-4)(7-5)(7-5)}$$

$$= \sqrt{7 \times 3 \times 2 \times 2}$$

$$= 2\sqrt{21} \text{ cm}$$

$$\text{ar}(\square ABCD) = (6 + 2\sqrt{21}) \text{ cm}^2$$

④



ΔABC

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

$$= \frac{26+28+30}{2}$$

$$= \frac{84}{2}$$

$$= 42 \text{ cm}$$

area of ΔABC

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

$$= \sqrt{42(42-26)(42-28)(42-30)}$$

$$= \sqrt{42 \times 16 \times 14 \times 12}$$

$$= \sqrt{7 \times 3 \times 2 \times 4 \times 4 \times 2 \times 7 \times 2 \times 2 \times 3}$$

$$= 2 \times 2 \times 3 \times 4 \times 7$$

$$= 336 \text{ cm}^2$$

area of $\square gm = 336$

base \times al. = 336

$28 \times h = 336$

$\Rightarrow h = \frac{336}{28} = 12$

$\Rightarrow h = 12$

\therefore height = 12 cm