

4. let each equal side =  $3x$  cm  
 base =  $2x$  cm

Perimeter of  $\triangle$  =  $32$  cm

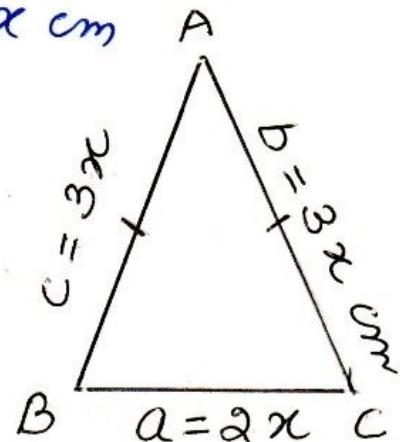
$$2x + 3x + 3x = 32$$

$$\Rightarrow 8x = 32$$

$$\Rightarrow x = \frac{32}{8}^4$$

$$\therefore \text{base} = 2x^4 = 8 \text{ cm}$$

$$\begin{aligned}\text{each equal side} &= 3x^4 \\ &= 12 \text{ cm}\end{aligned}$$



$$\begin{aligned}s &= \frac{\text{Perimeter}}{2} \\ &= \frac{32}{2} \\ &= 16 \text{ cm}\end{aligned}$$

$$\begin{aligned}\text{area of } \triangle &= \sqrt{16(16-8)(16-12)(16-12)} \\ &= \sqrt{16 \times 8 \times 4 \times 4} \\ &= 4 \sqrt{2^2 \times 2^2 \times 2^2 \times 2} \\ &= 4 \times 2 \times 2 \times 2 \sqrt{2} \\ &= 32\sqrt{2} \text{ cm}^2\end{aligned}$$