2. let Smallest side $= x$ cm

second side $= (x+4)$ cm

third side $= (2x-6)$ cm

Perimeter of $\Delta = 50$ cm

$$x + x + 4 + 2x - 6 = 50$$

$$\Rightarrow \quad 4x = 50 + 2$$

$$\Rightarrow \quad x = \frac{52}{4} \; 13$$

$$\Rightarrow \quad x = 13$$

$\therefore$ Sides are $x = 13$ cm

$x + 4 = 17$ cm

$2x - 6 = 20$ cm

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

$$= \sqrt{25(25-13)(25-17)(25-20)}$$

$$= \sqrt{25 \times 12 \times 8 \times 5}$$

$$= \sqrt{5^2 \times 3 \times 2^4 \times 2 \times 2^4 \times 5}$$

$$= 2 \times 2 \times 5 \sqrt{30}$$

$$= 20\sqrt{30} \text{ cm}^2$$