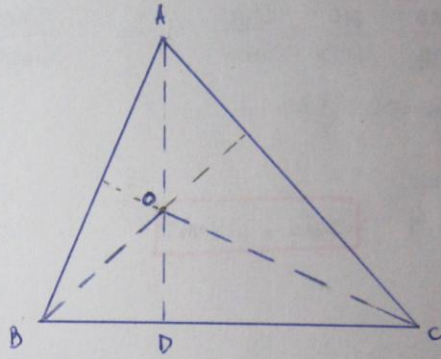


3) Sea ABC un triángulo:

- $BD = 1/4 BC$
- $DO = 1/4 AD$
- $S_{ABC} = 96 m^2$
- $AD \perp BC$

Hallar áreas $\triangle AOB$, $\triangle AOC$ y $\triangle BOC$



$$S_{ABC} = \frac{1}{2} BC \times AD = 96$$

$$BC = \frac{96 \times 2}{AD}$$

$$S_{BOC} = \frac{1}{2} BC \times OD = \frac{1}{2} BC \times \frac{1}{4} AD$$

$$\rightarrow S_{BOC} = \frac{1}{2} \left(\frac{96 \times 2}{AD} \right) \times \frac{1}{4} AD = 24 m^2$$

$$S_{BDO} = \frac{1}{2} BD \times OD = \frac{1}{2} \times \frac{1}{4} BC \times \frac{1}{4} AD = \frac{1}{2} \times \frac{96 \times 2}{4 \times AD} \times \frac{1}{4} AD = 6 m^2$$

$$S_{BDA} = \frac{1}{2} BD \times AD = \frac{1}{2} \times \frac{1}{4} BC \times AD = \frac{1}{2} \times \frac{1}{4} \frac{96 \times 2}{AD} \times AD = 24 m^2$$

$$S_{AOB} = 24 - 6 = 18 m^2$$

$$S_{AOC} = 96 - 24 - 18 = 54 m^2$$