

$$\sum x: H_A = 0$$

$\sum y:$

$$V_A + V_B + V_C = \frac{5}{2} + 0.3 \cdot 20 + \frac{(2 - 0.3) \cdot 20}{2}$$

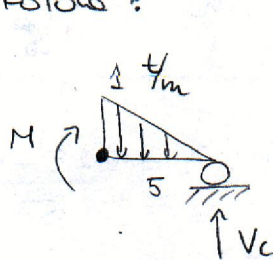
$$1) \quad V_A + V_B + V_C = 25.5$$

$\sum M_A:$

$$10V_B + 25V_C = \underbrace{0.3 \cdot 20}_{F} \cdot \underbrace{10}_{d} + \underbrace{\frac{(2 - 0.3) \cdot 20}{2}}_{F} \cdot \underbrace{\frac{20 \cdot 2}{3}}_{d} + \underbrace{\frac{5}{2}}_{F} \cdot \underbrace{\left(20 + \frac{1}{3} \cdot 5\right)}_{d}$$

$$2) \quad 10V_B + 25V_C = 340.833$$

condición de Rotulo:



$$M + \frac{5}{2} \cdot \frac{5}{3} - V_C \cdot 5 = 0 \quad 3)$$

$$\Rightarrow V_C = \frac{5}{6} = 0.833 \text{ [ton]}$$

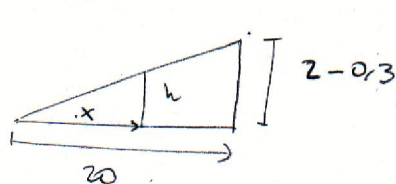
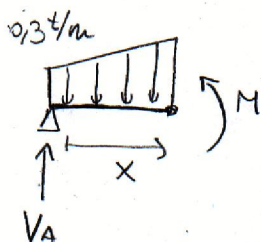
Reemplazando en 2):

$$V_B = 32 \text{ [ton]}$$

Reemplazando en 1):

$$V_A = -\frac{22}{3} = -7.333 \text{ [ton]}$$

Corte I



$$\left. \begin{array}{l} h \\ 2 - 0.3 \end{array} \right\} \begin{array}{l} x \\ 20 \end{array}$$

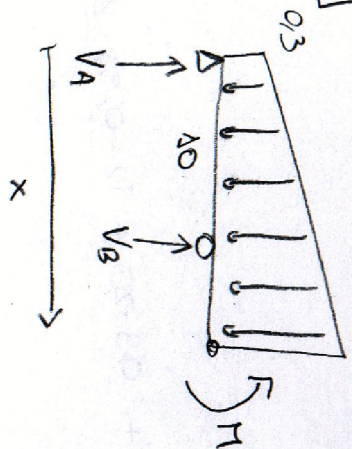
$$h(x) = \frac{(2 - 0.3)x}{20} = 0.085x$$

$$M(x) + \underbrace{\frac{22}{3}x}_{\text{Reacción rectangular}} + \underbrace{\frac{0.3 \cdot x^2}{2}}_{\text{rectangular}} + \underbrace{\frac{x \cdot 0.085x \cdot \frac{1}{2}x}{2}}_{\text{triangulo}} = 0$$

$$M(x) = -0.014167x^3 - 0.15x^2 - 7.3333x$$



Corte III



$$M(x) = 0,085x$$

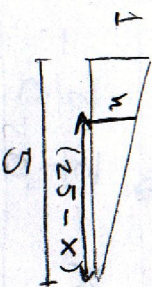
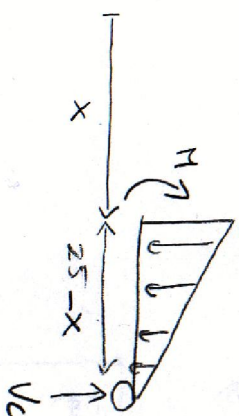
$$V_B = 32 \text{ ton}$$

$$V_A = -7,333 \text{ ton}$$

$$M(x) + \underbrace{\frac{V_A}{3}x}_{\text{rectangulo}} + \underbrace{\frac{0,3x^2}{2}}_{\text{triangulo}} + \frac{0,085x^3}{6} - 32(x-10) = 0$$

$$M(x) = -0,014167x^3 - 0,15x^2 + 24,6667x - 320$$

Corte III



$$V(x) = \frac{(25-x)}{5}$$

$$M(x) - \frac{5}{6} \cdot (25-x) + \frac{(25-x)}{2} \cdot \frac{(25-x)}{5} \cdot \frac{1}{3} (25-x) = 0$$

$$M(x) = \frac{5}{6} (25-x) - \frac{(25-x)^3}{30}$$

