UDS

ISAAC GABRIEL AGUILAR CANO

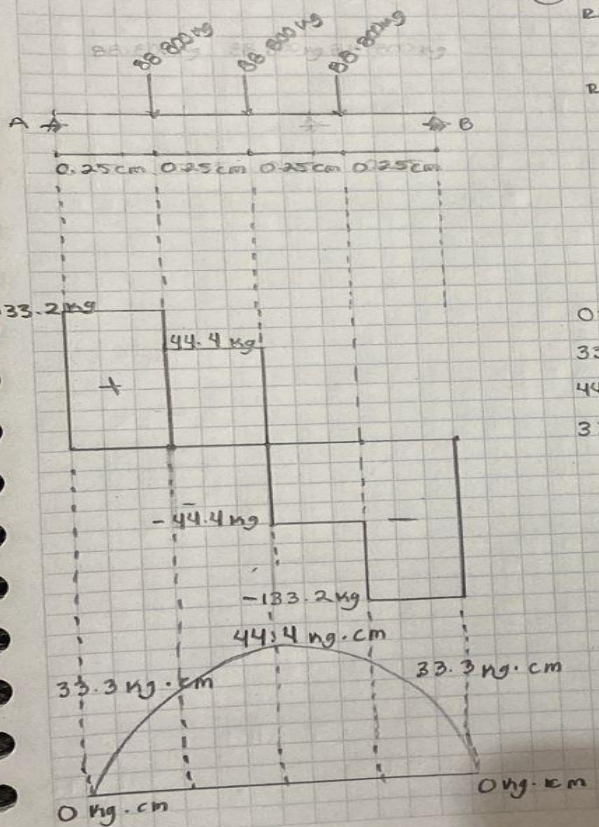
RESISTENCIA DE LOS MATERIALES

ARQUITECTO: PEDRO ALBERTO GARCIA LOPEZ

EJERCICIOS

4TO CUATRIMESTRE

FECHA DE ENTREGA: 03/12/23



① Reacciones:

$R_A = R_B = \frac{3F}{2}$

$\frac{3(BB\ 800\ kg)}{2}$

$R_A = R_B = 133.2\ kg$ /

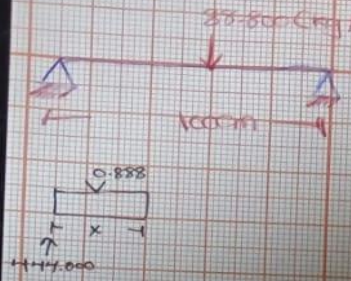
$0 + (0.25cm \times 133.2\ kg) = 33.3\ kg \cdot cm$

$33.3\ kg \cdot cm + (0.25cm \times 44.4\ kg) = 44.4\ kg \cdot cm$

$44.4\ kg \cdot cm + (0.25cm \times -44.4\ kg) = 33.3\ kg \cdot cm$

$33.3\ kg \cdot cm + (0.25cm \times -133.2\ kg) = 0\ kg \cdot cm$

Resistencia de los Mat.



$q \cdot L = 88.800 \cdot 100 = 8,880$ kg/cm

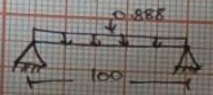
$RA = AB = q \cdot L/2 = (88,800/2) = 444.4$

$\sum F_y = 0 \quad 444.000 - [0.888 \cdot (x)] - V = 0$

$V = 444.000 - [0.888 \cdot x]$

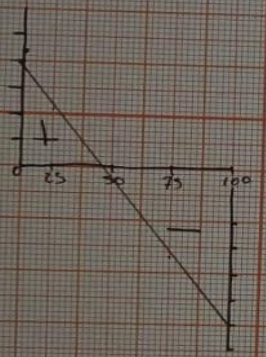
$\sum m = 0 \quad 444.000 \cdot x - [0.888 \cdot (x) \cdot (x/2)] = x_0 = 0$

$M = (444 \cdot x) - (0.444 \cdot x^2)$



Grafica de cortantes

X	0	25	50	75	100
V	444.4	22.2	0	-22.2	-444.4
M	0	832.5	1,110	832.5	0



$V = 444.4 - [0.888 \cdot 25] = 22.2$

$V = 444.4 - [0.888 \cdot 50] = 0$

$V = 444.4 - [0.888 \cdot 75] = -22.2$

$V = 444.4 - [0.888 \cdot 100] = -444.4$

Grafica de Momento

$M = (444.4 \cdot 25)(-0.444 \cdot 25)^2 = 832.5$

$M = (444.4 \cdot 50)(-0.444 \cdot 50)^2 = 1,110$

$M = (444.4 \cdot 75)(-0.444 \cdot 75)^2 = 832.5$

$M = (444.4 \cdot 100)(-0.444 \cdot 100)^2 = 0$