RESISTENCIA DE MATERIALES DE CONSTRUCCION
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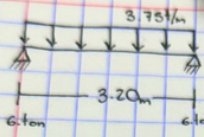


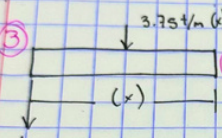
① q(L)

$3.75^t/_m (3.20m) = 12ton$

② $RA - RB = \frac{qL}{2}$

$\frac{3.75^t/_m (3.20m)}{2} = 6$

③



④ Ecuación de cortante

$\Sigma f_y = 0$

$6\,ton - [3.75^t/_m (x)] - V = 0$

$V = 6\,ton - [3.75^t/_m (x)]$

⑤ Ecuacion de momentos

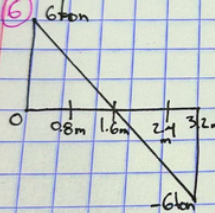
$-6\,ton(x) [3.75^t/_m (x)(x/2)] + M = 0$

$-6\,ton (x) + 3.75^t/_m (x^2) + M = 0$

$-6\,ton (x) + 1.875x^2 + M = 0$

$M = 6\,ton (x) - 1.875^t/_m (x^2)$

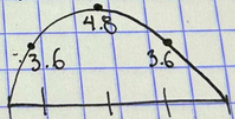
⑥



6.1

x	0	0.8	1.6m	2.4m	3.2
V	6 ton	3 ton	0	-3 ton	-6 ton

⑦



$V = 6\,ton - [3.75^t/_m (0)] = 6$

$V = 6\,ton - [3.75^t/_m (0.8)] = 3$

$V = 6\,ton - [3.75^t/_m (1.6m)] = 0$

$V = 6\,ton - [3.75^t/_m (2.4m)] = -3$

$V = 6\,ton - [3.75^t/_m (3.2)] = -6$

7.1

x	0	0.8m	1.6m	2.4m	3.2
m	0	3.6	4.8	3.6	0

$M = 6\,ton (0) - 1.875^t/_m (0)^2 = 0$

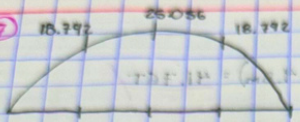
$M = 6\,ton (0.8m) - 1.875^t/_m (0.8m)^2 = 3.6$

$M = 6\,ton (1.6m) - 1.875^t/_m (1.6m)^2 = 4.8$

$M = 6\,ton (2.4m) - 1.875^t/_m (2.4)^2 = 3.6$

$M = 6\,ton (3.2m) - 1.875^t/_m (3.20m) = 0$

7



7.1

$M = 20.88\,ton\,(0) - 4.35\,t/m\,(0)^2 = 0$

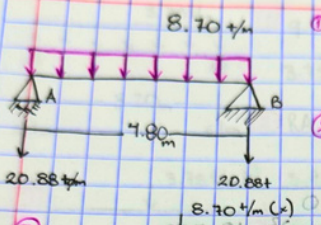
$M = 20.88\,ton\,(1.20m) - 4.35\,t/m\,(1.2)^2 = 18.792$

$M = 20.88\,ton\,(2.40m) - 4.35\,t/m\,(2.40)^2 = 25.056$

$M = 20.88\,ton\,(3.6m) - 4.35\,t/m\,(3.6m)^2 = 18.792$

$M = 20.88\,ton\,(4.8m) - 4.35\,t/m\,(4.8)^2 = 0$

x	0	1.2m	2.4m	3.6m	4.8m
M	0	18.792	25.056	18.792	0



① $q(L)$

$8.7\ t/m\ (4.8m) = 41.76T$

② $RA = RB = \frac{qL}{2}$

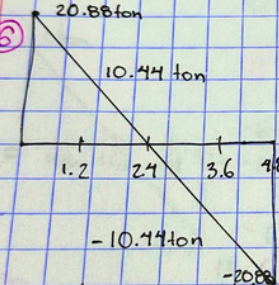
$\frac{8.70\ t/m\ (4.80m)}{2} = 20.88\ ton$

④ Ecuación de cortante

$\Sigma F_y = 0$

$20.88\ ton - [8.70\ ton/m\ (x)] - V = 0$

$V = 20.88\ ton - [8.70\ t/m\ (x)]$



⑤ Ecuación de momentos

$-20.88\ ton - [8.70\ t/m\ (x)\ (x/2)] + m = 0$

$-20.88\ ton\ (x) + \frac{8.70\ t/m\ (x^2)}{2} = 0$

$-20.88\ ton + 4.35x^2 + m = 0$

$M = 20.88\ ton\ (x) - 4.35\ t/m\ (x^2)$

⑥.1

x	0	1.2 m	2.4m	3.6 m	4.8m
V	20.88 ton	10.44 ton	0	-10.44 ton	-20.88 ton

$V = 20.88\ ton - [8.70\ t/m\ (0)] = 20.88\ ton$

$V = 20.88\ ton - [8.70\ t/m\ (1.20m) = 10.44\ ton$

$V = 20.88\ ton - [8.70\ t/m\ (2.4m) = 0$

$V = 20.88\ ton - [8.70\ t/m\ (3.60m) = -10.44\ ton$