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**Nombre del profesor:** Arq. Pedro  
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**Nombre del trabajo:** Procedimientos  
de ecuaciones de cortantes y  
momentos.

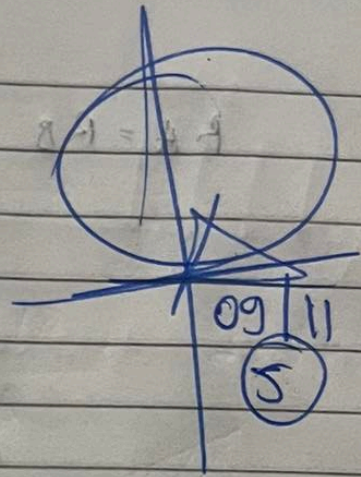
PASIÓN POR EDUCAR

**Materia:** Resistencia de materiales.

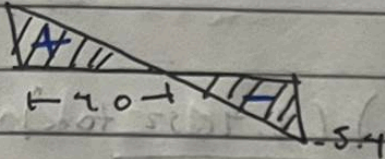
**Grado:** 4to Cuatrimestre.

**Carrera:** Arquitectura

$$R_A = R_B = \frac{1.33 \text{ t/m} (8.0)}{2} = 5.4 \text{ t/m}$$



5.4

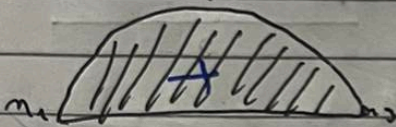


$$m_1 = 0$$

$$m_2 = \frac{0 (4.0) (5.4)}{2} = 10.8 \text{ t/m}$$

$$m_3 = \frac{10.8 (4.0 - 5.4)}{2} =$$

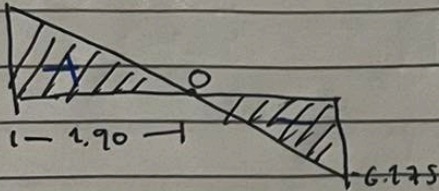
$$10.8 \text{ t/m} - 10.8 \text{ t/m} = 0$$



$$m_{\text{max}} = 10.8 \text{ t/m}$$

$$R_A = R_B = \frac{3.25 \text{ t/m} (3.80)}{2} = 6.175 \text{ t/m}$$

6.175

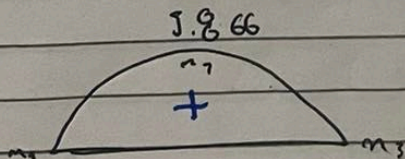


$$m_1 = 0$$

$$m_2 = \frac{0 + (1.9) (6.175 \text{ t})}{2} = 5.866 \text{ t/m}$$

$$m_3 = \frac{5.866 \text{ t/m} (1.9) (-6.175 \text{ t})}{2} =$$

$$5.866 \text{ t/m} - 5.866 \text{ t/m} = 0$$



$$m_{\text{max}} = 5.866 \text{ t/m}$$

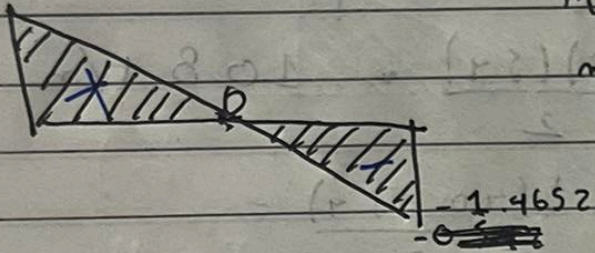
$$R_A = R_B$$

$$\frac{1.98 \text{ t/m} (1.48 \text{ m})}{2} = 1.4652 \text{ ton}$$

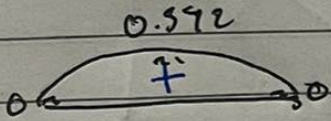
1.4652

$$m_1 = 0$$

$$m_2 = 0 + \frac{(0.74 \text{ m}) (1.4652 \text{ ton})}{2} = 0.542$$



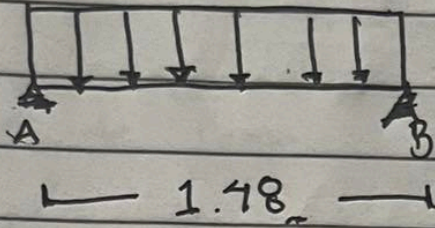
$$m_3 = 0.572 \text{ tm} + \frac{(0.74 \text{ m}) (-1.4652 \text{ t})}{2}$$



$$m_3 = 0.572 \text{ tm} - 0.572 \text{ tm} = 0$$

$$m_{max} = 0.572 \text{ t} \cdot \text{m}$$

1.98

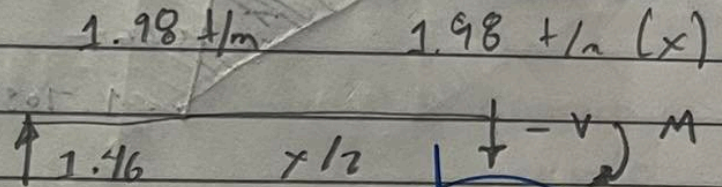


$$R_A = R_B = w \frac{L}{2}$$

$$\frac{1.98 \text{ t/m} \cdot (1.48 \text{ m})}{2} = 1.4652$$

$$(1.48 \text{ m})(1.48 \text{ m}) = 2.1904$$

$$U = \frac{1.48 \text{ m}}{2} = 0.74$$



Ecuación de corte

$$1.4652 + (-1.98)(x) - V = 0$$

$$V = 1.4652 - 1.98 \text{ t/m}(x)$$

Ecuación de momentos

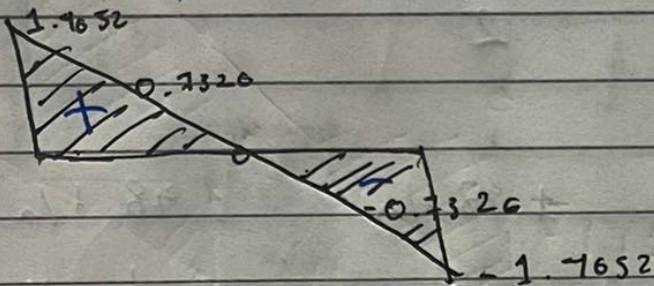
$$[-1.4652 + (x)] [1.98 \text{ t/m}(x)(x/2)] + M = 0$$

$$\frac{1.98 \text{ t/m}^2}{2} = 0.99$$

$$-1.4652(x) + 0.99 + (mx^2) + M = 0$$

$$M = 1.4652(x) - 0.99 \text{ t/m}(x^2)$$

V	>	0	0.37	0.74	1.11	1.48
		1.4652	0.7326	0	-0.7326	-1.4652



$$1.4652 + (-1.48 \text{ +/m}) (0) = 1.4652$$

$$\text{//} \quad (0.37) = 0.7326$$

$$\text{//} \quad (0.74) = 0$$

$$\text{//} \quad (1.11) = 0.7326$$

$$\text{//} \quad (1.48) = -1.4652$$

M	0	0.37	0.74	1.11	1.48
	0	0.4065	0.5421	0.4065	0

$$1.4652 + (0) - 0.99 \text{ +/m} \left(0 \frac{1}{2}\right) = 0$$

$$\text{//} \quad (0.37) \quad \text{//} \quad (0.37^2) = 0.4065$$

$$\text{//} \quad (0.74) \quad \text{//} \quad (0.74^2) = 0.5421$$

$$\text{//} \quad (1.11) \quad \text{//} \quad (1.11^2) = 0.4065$$

$$\text{//} \quad (1.48) \quad \text{//} \quad (1.48^2) = 0$$

