

MATERIA:

ESTATICA PARA LA ARQUITECTURA

TRABAJO:

EQUILIBRIO DE UN CUERPO RIGIDO

ALUMNO:

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ASESOR:

PEDRO ALBERTO GARCIA LOPEZ

GRADO DE ESCOLARIDAD:

TERCER CUATRIMESTRE

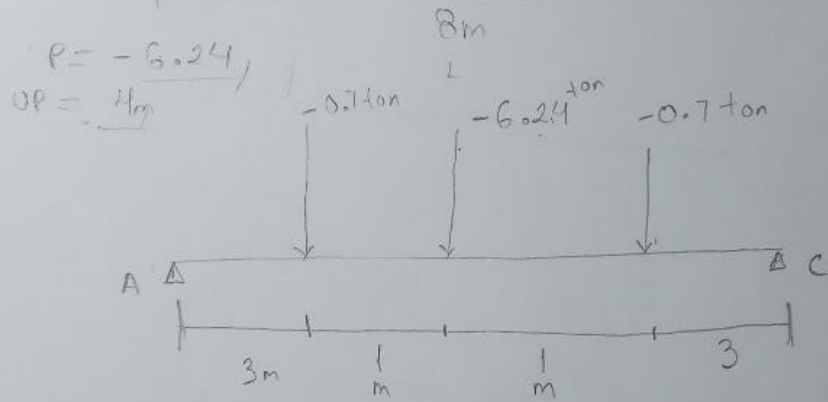
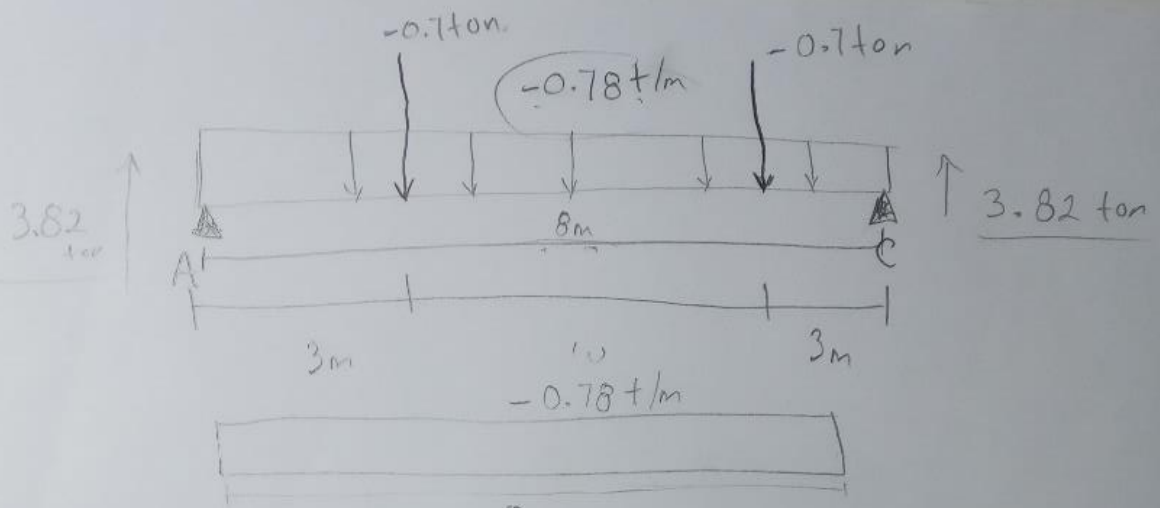
FECHA:

09 DE JULIO DEL 2022



$$P = \frac{w \cdot L}{2}$$

$$OP = \frac{L}{2}$$



$$[-0.7(3m)] + [-6.24(4m)] + [-0.7(5m)] + [C(8m)] = 0$$

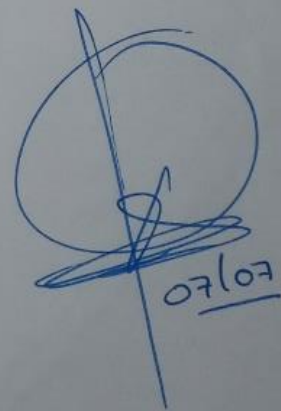
$$-2.1 + -24.96 + -3.5 + C(8) = 0$$

$$-30.56 + C(8) = 0$$

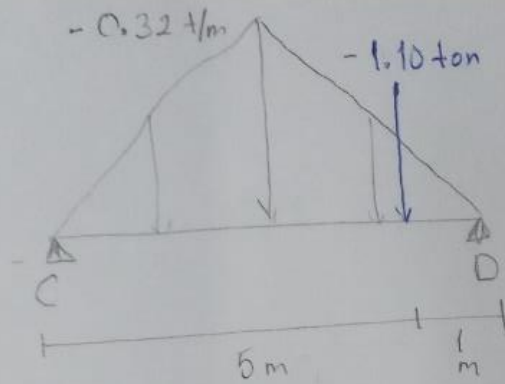
$$C = \frac{30.56}{8} = 3.82 \text{ ton}$$

$$A = -0.7 \text{ ton} + -6.24 \text{ ton} + -0.7 \text{ ton} + 3.82 \text{ ton}$$

$$A = 3.82$$

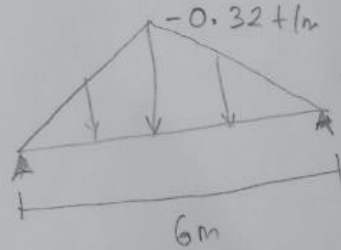


$$A = 4.3 \text{ ton} \quad B = 0.48 \text{ ton} \quad C = 5.2166 \text{ ton} \quad D = 1.3966 \text{ ton}$$



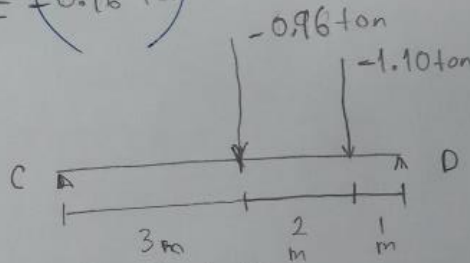
$$P = (w \cdot L / 2)$$

$$UP = L/2$$



$$P = \frac{-0.32 \text{ ton/m} (6 \text{ m})}{2} = -0.96 \text{ ton}$$

$$UP = \frac{6 \text{ m}}{2} = 3$$



$$[-0.96 \cdot 3] + [-1.10 \cdot 5] + [D(6)] = 0$$

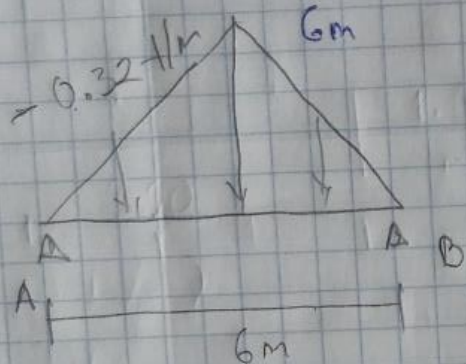
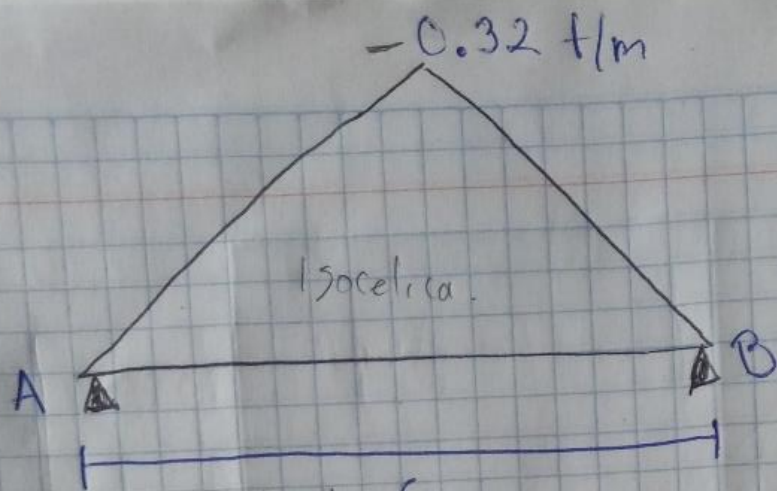
$$-2.88 + -5.5 + D(6) = 0$$

$$+8.38 + D(6) = 0$$

$$D = \frac{8.38}{6} = 1.3966 \text{ ton}$$

$$A = -0.96 + 1.10 + 1.3966 \text{ ton}$$

$$A = 0.6634 \text{ ton}$$

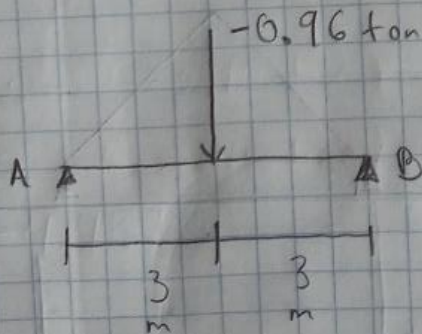


$$P = (w \cdot L / 2)$$

$$UP = L/2$$

$$P = \frac{-0.32 \text{ t/m} (6 \text{ m})}{2} = -0.96 \text{ ton}$$

$$UP = \frac{6 \text{ m}}{2} = 3 \text{ m}$$



$$[-0.96 \text{ ton} (3 \text{ m}) + [B (6 \text{ m})] = 0$$

$$-2.88 + B (6 \text{ m}) = 0$$

$$B = \frac{2.88 \text{ ton}}{6 \text{ m}} = 0.48 \text{ ton/m}$$

$$A - 0.96 \text{ ton} + 0.48 = 0$$

$$\sum F_y = 0$$

$$\sum Z_A = 0.48$$

$$A = +0.48 \neq 0 \rightarrow$$