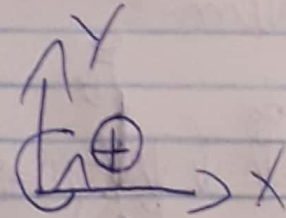
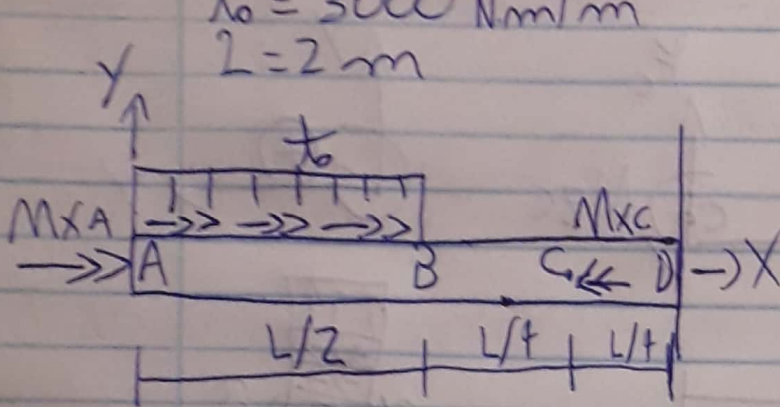


Dados: $M_{xA} = 1500 \text{ N.m.}$
 $M_{xC} = 4500 \text{ N.m}$
 $t_0 = 3000 \text{ Nm/m}$
 $L = 2 \text{ m}$

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Eq. Singularidade:

$$t(x) = t_0 \langle x-0 \rangle^0 - t_0 \langle x-L/2 \rangle^0 - M_{xC} \langle x-3L/4 \rangle^{-1}$$

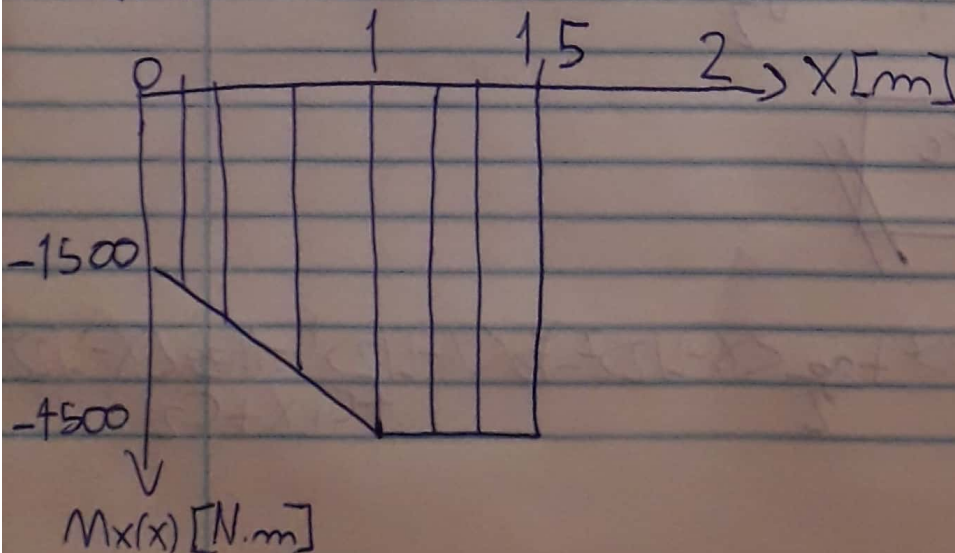
EDO, condições de contorno: $\frac{dM_x(x)}{dx} = -t(x)$ $M_x(0) = M_{xA}$

$$M_x(x) = -t_0 \langle x-0 \rangle^1 + t_0 \langle x-L/2 \rangle^1 + M_{xC} \langle x-3L/4 \rangle^0 + C_1$$

$$M_x(0) = C_1 = -M_{xA} \rightarrow \boxed{C_1 = -M_{xA}}$$

$$M_x(x) = -t_0 \langle x-0 \rangle^1 + t_0 \langle x-L/2 \rangle^1 + M_{xC} \langle x-3L/4 \rangle^0 - M_{xA}$$

$$M_x(x) = -3000 \langle x-0 \rangle^1 + 3000 \langle x-L/2 \rangle^1 + 4500 \langle x-3L/4 \rangle^0 - 1500$$



$$M_z(L) = -\frac{q_0 L^2}{2} + \frac{q_0 L^2}{8} - \frac{F_B L}{2} - M_{zB} + (F_B - F_c) \left(\frac{q_0 L}{2} \right) + C_2$$

$$-\frac{q_0 L^2}{8} - \frac{F_B L}{2} + F_c L + M_{zB} - M_{zC} = M_z(L)$$

$$-M_{zC} = \frac{q_0 L^2}{2} + \frac{F_B L}{2} - M_{zB} + \frac{F_c L}{2} \rightarrow C_2 = -\frac{q_0 L^2}{2} - \frac{F_B L}{2} + F_c L + M_{zB} - M_{zC}$$

$$V_y(x) = -800 \langle x-0 \rangle^1 + 800 \langle x-1 \rangle^1 - 1000 \langle x-1 \rangle^0 + 500 \langle x-1 \rangle^{-1} + 800$$

$$M_z(x) = -400 \langle x-0 \rangle^2 + 400 \langle x-1 \rangle^2 - 1000 \langle x-1 \rangle^1 + 500 \langle x-1 \rangle^0 + 800x + 600$$

