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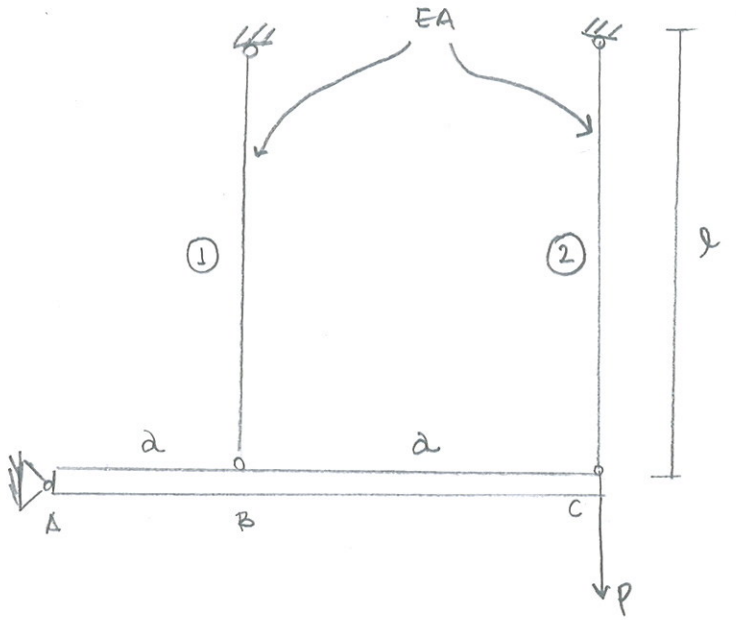
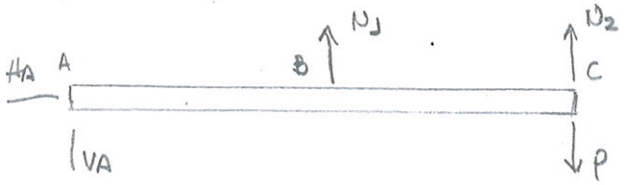
## Exercício 5




isolando a barra AC



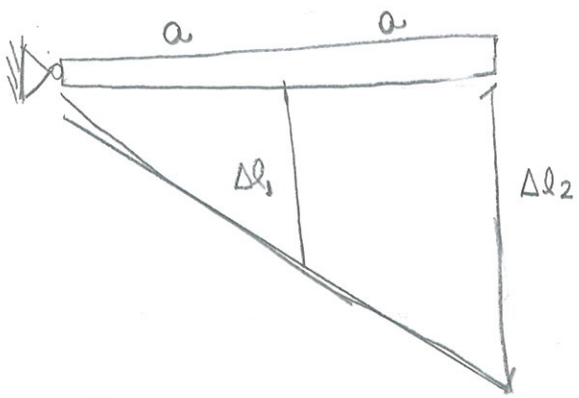

(HA, VA, N1, N2)
4 incognitas
3 eq. equilíbrio
∴ GH = 1

Equilíbrio:

$$\Sigma M_A = 0 \Rightarrow N_1 \cdot a + N_2 \cdot 2a = 2Pa$$

$$N_1 + 2N_2 = 2P \quad (I)$$

Equação de compatibilidade:




$$\frac{\Delta \ell_2}{\Delta \ell_1} = \frac{2a}{a} \Rightarrow \Delta \ell_2 = 2\Delta \ell_1$$

onde $\Delta \ell_1 = \frac{N_1 \ell}{EA}$ e $\Delta \ell_2 = \frac{2N_1 \ell}{EA}$

$$\frac{N_2 \ell}{EA} = \frac{2N_2 \ell}{EA} \Rightarrow N_2 = 2N_1 \quad (II)$$

$$\begin{cases} N_1 + 2N_2 = 2P \\ N_2 = 2N_1 \end{cases} \Rightarrow N_1 + 2(2N_1) = 2P \Rightarrow 5N_1 = 2P$$

$$N_1 = 2/5\,P \text{ e } N_2 = \frac{4}{5}P$$