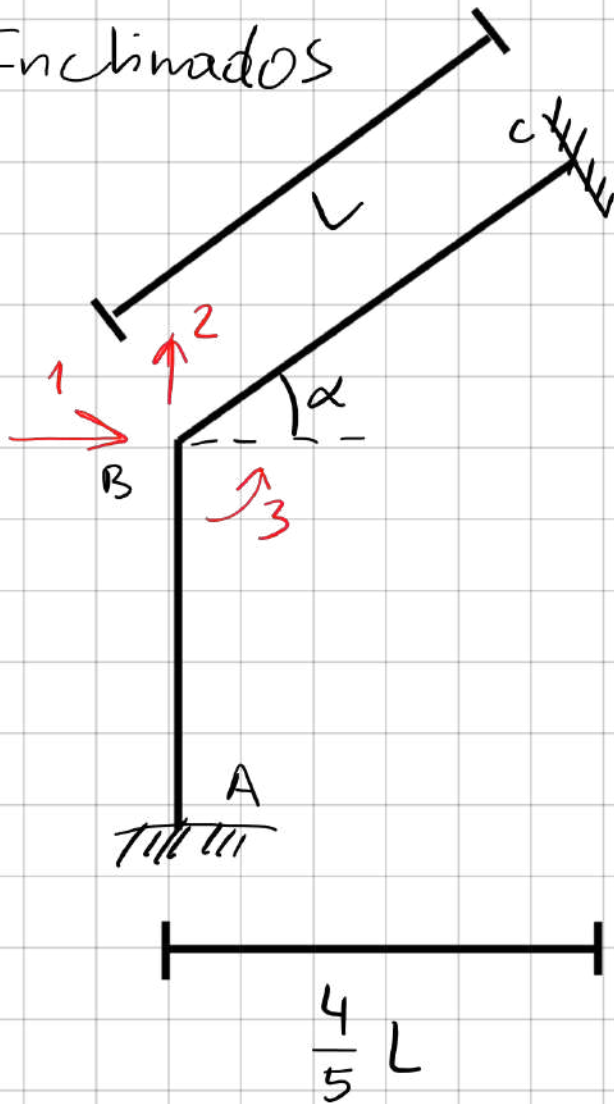


- Deformadas Elementales - Elementos

Inclinados

1)

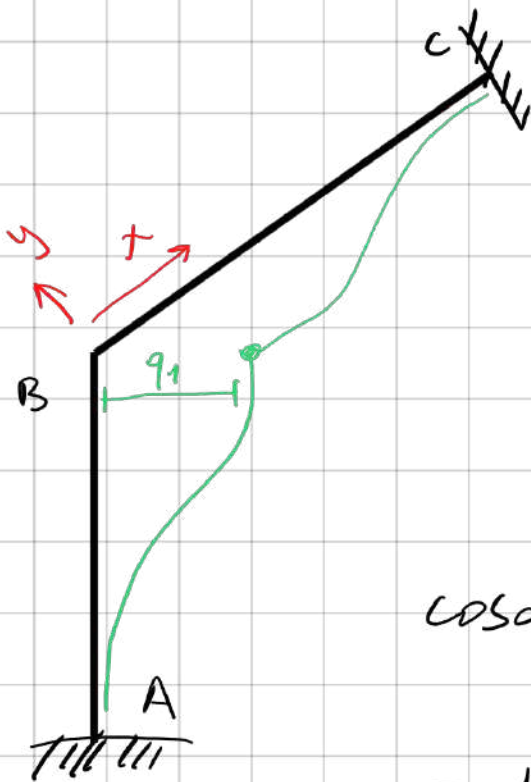


Todo flexible

$$GDL = 3$$

$$\sin \alpha = \frac{\frac{3}{5}L}{L} = \frac{3}{5} \quad ; \quad \cos \alpha = \frac{\frac{4}{5}L}{L} = \frac{4}{5}$$

$$q_1 = 1; q_2 = q_3 = 0$$

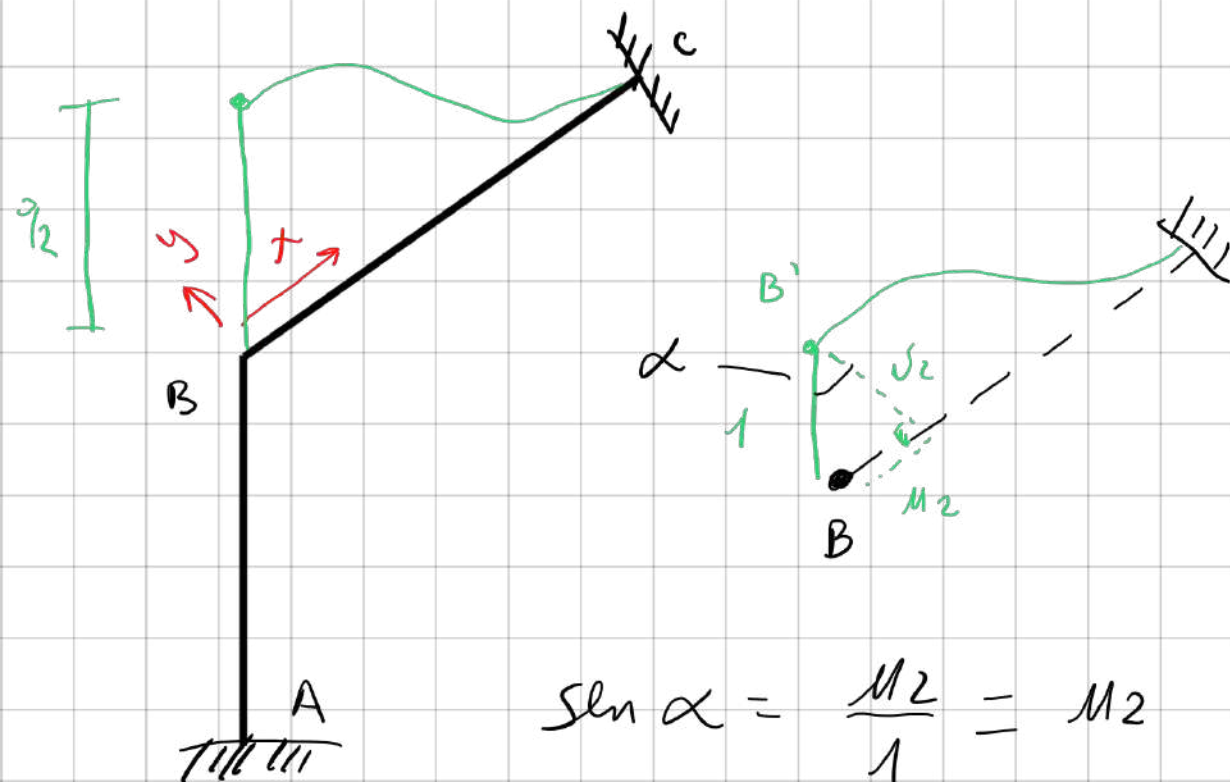


$$\cos \alpha = \frac{M_1}{1} = M_1$$

$$\Rightarrow M_1 = 4/5 //$$

$$\sin \alpha = \frac{N_1}{1} = N_1$$

$$\Rightarrow N_1 = -3/5 //$$



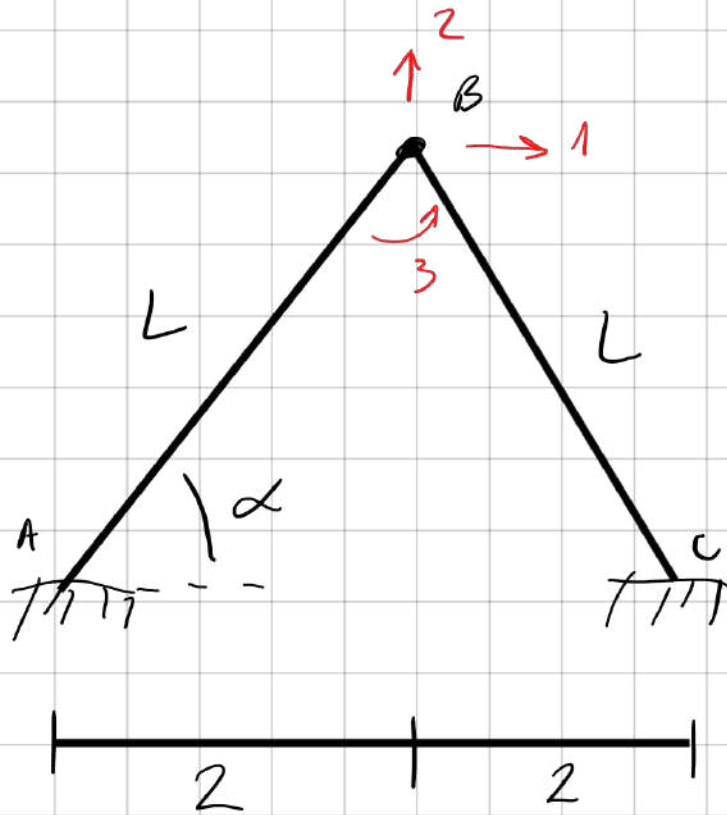
$$\sin \alpha = \frac{M_2}{1} = M_2$$

$$\Rightarrow M_2 = \frac{3}{5} //$$

$$\cos \alpha = \frac{N_2}{1} = N_2$$

$$\Rightarrow N_2 = \frac{4}{5} //$$

2)



Todo
flexible

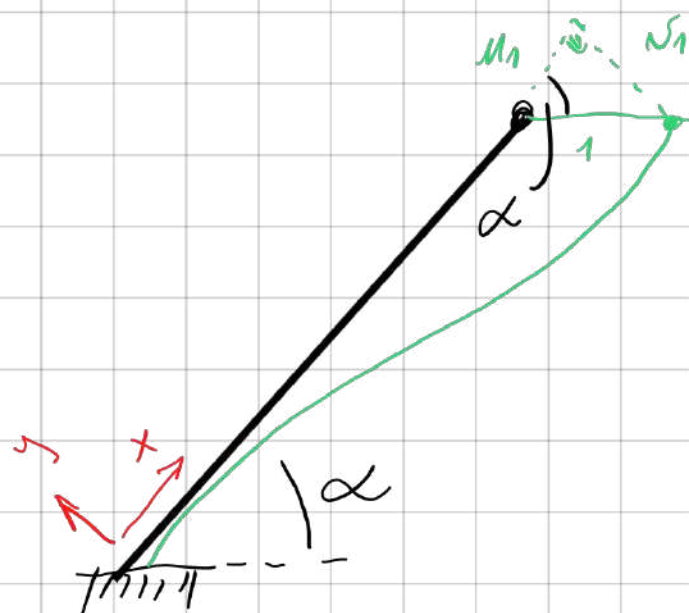
$$L = \sqrt{2^2 + 5^2}$$

$$L = \sqrt{29} //$$

$$\alpha = 68^\circ //$$

$$GDL = 3$$

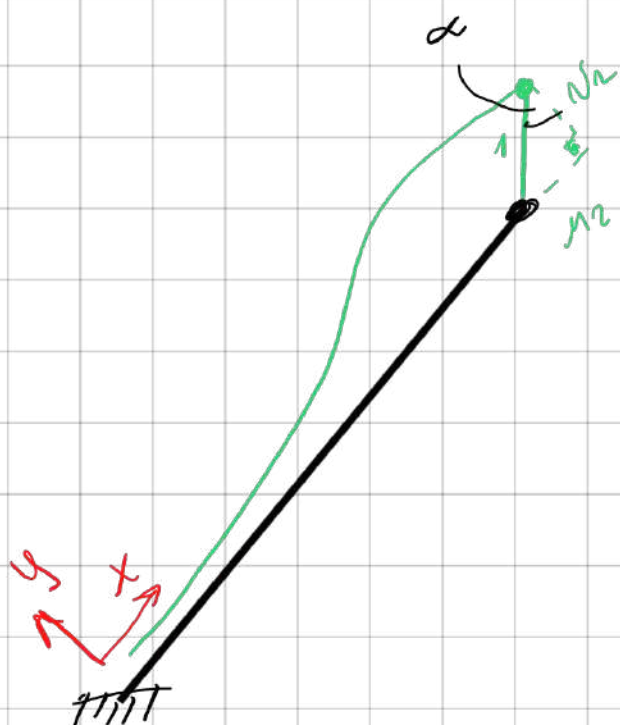
$$q_1 = 1 ; q_2 = q_3 = 0$$



$$u_1 = \cos 68^\circ$$

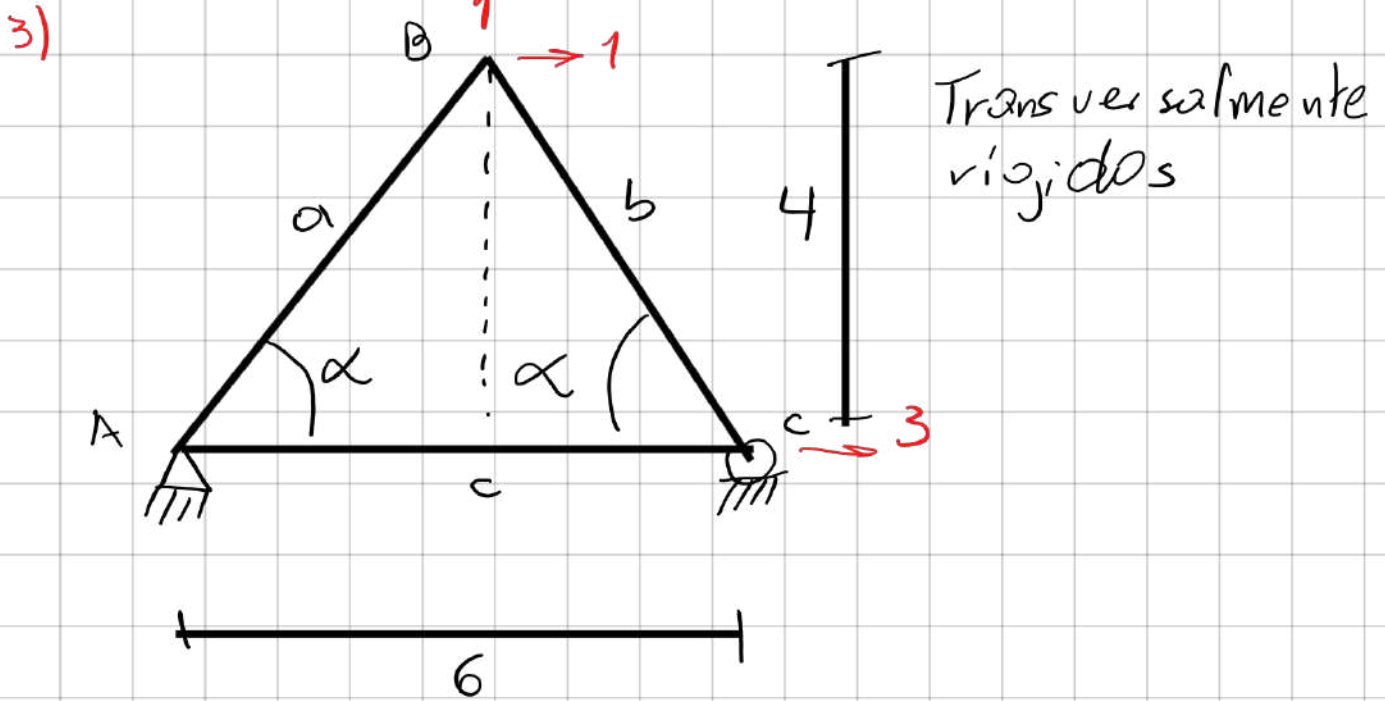
$$v_1 = \sin 68^\circ$$

$$q_2 = 1 ; q_1 = q_3 = 0$$



$$u_2 = \sin 68^\circ$$

$$v_2 = \cos 68^\circ$$

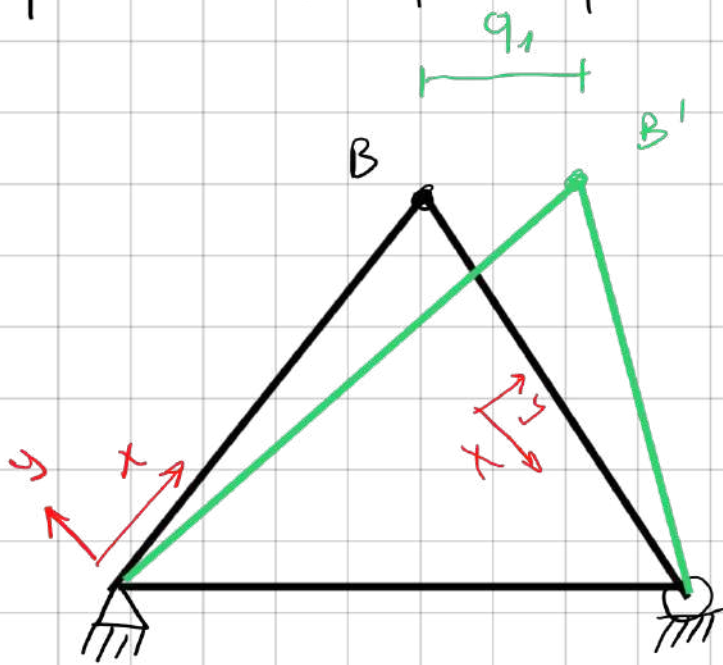


$$AB = BC = 5$$

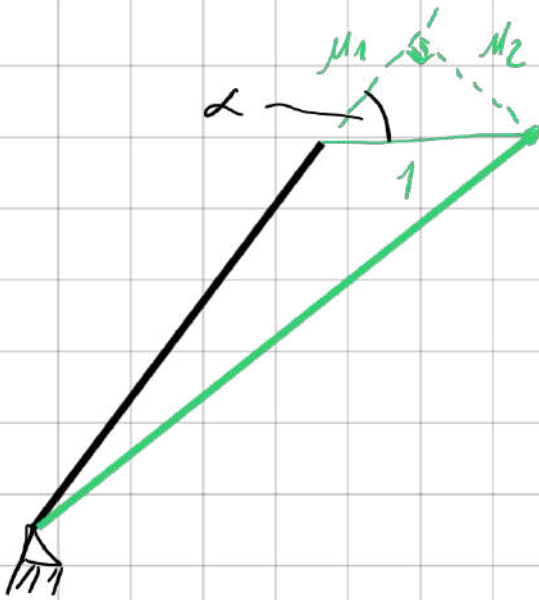
$$\alpha = \tan^{-1} \frac{4}{3} = 53,13$$

$$GDL = 3$$

$$q_1 = 1 \quad ; \quad q_2 = q_3 = 0$$



Elemento a



$$u_1 = \cos 53,13^\circ //$$

$$v_1 = -\sin 53,13^\circ //$$

Elemento b



$$M_1 = \cos 53,13 //$$

$$N_1 = \sin 53,13 //$$