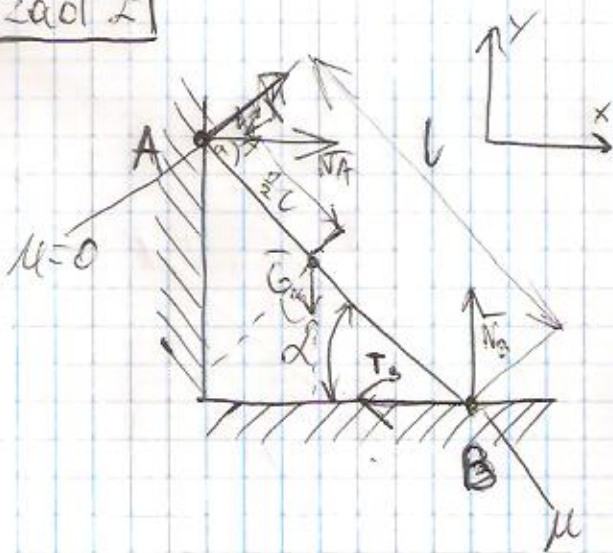


# Tarcie śliskowe

## zad 2f



Dane:  $m, l, \mu$

Znaleźć:

$\alpha = \alpha_{\max}$  w położeniu równowagi.

Plan doady ulozel sil

$$\sum F_{ix} = 0$$

$$\sum F_{iy} = 0$$

$$\sum M_{iB} = 0$$

①  $\sum F_{ix} = 0$

$$N_A - T_B = 0 \rightarrow T_B = N_A$$

②  $\sum F_{iy} = 0$

$$-G + N_B = 0 \rightarrow N_B = G$$

③  $M_{iB} = 0$

$$-N_A \cdot \sin \alpha \cdot L + G \cdot \cos \alpha \cdot \frac{1}{2}L = 0 \rightarrow N_A = \frac{1}{2} G \cdot \operatorname{ctg} \alpha$$

④  $T_B = \mu \cdot N_B$

$$\frac{1}{2} G \cdot \operatorname{ctg} \alpha = \mu \cdot G \leq G$$

$$\frac{1}{2} \operatorname{ctg} \alpha = \mu \quad | \cdot 2$$

$$\operatorname{ctg} \alpha = 2\mu$$

~~$\alpha = \arccos$~~

$$\alpha = \arccos \operatorname{ctg} (2\mu)$$