$$\sum_i \bar{F}_i = m\bar{a}$$

liscio

$$m\bar{g} + \bar{N} = m\bar{a}$$

$x:$ $\cancel{m}g \sin\theta = \cancel{m}a_x$ $\Rightarrow$ $\boxed{a = a_x = g\sin\theta}$

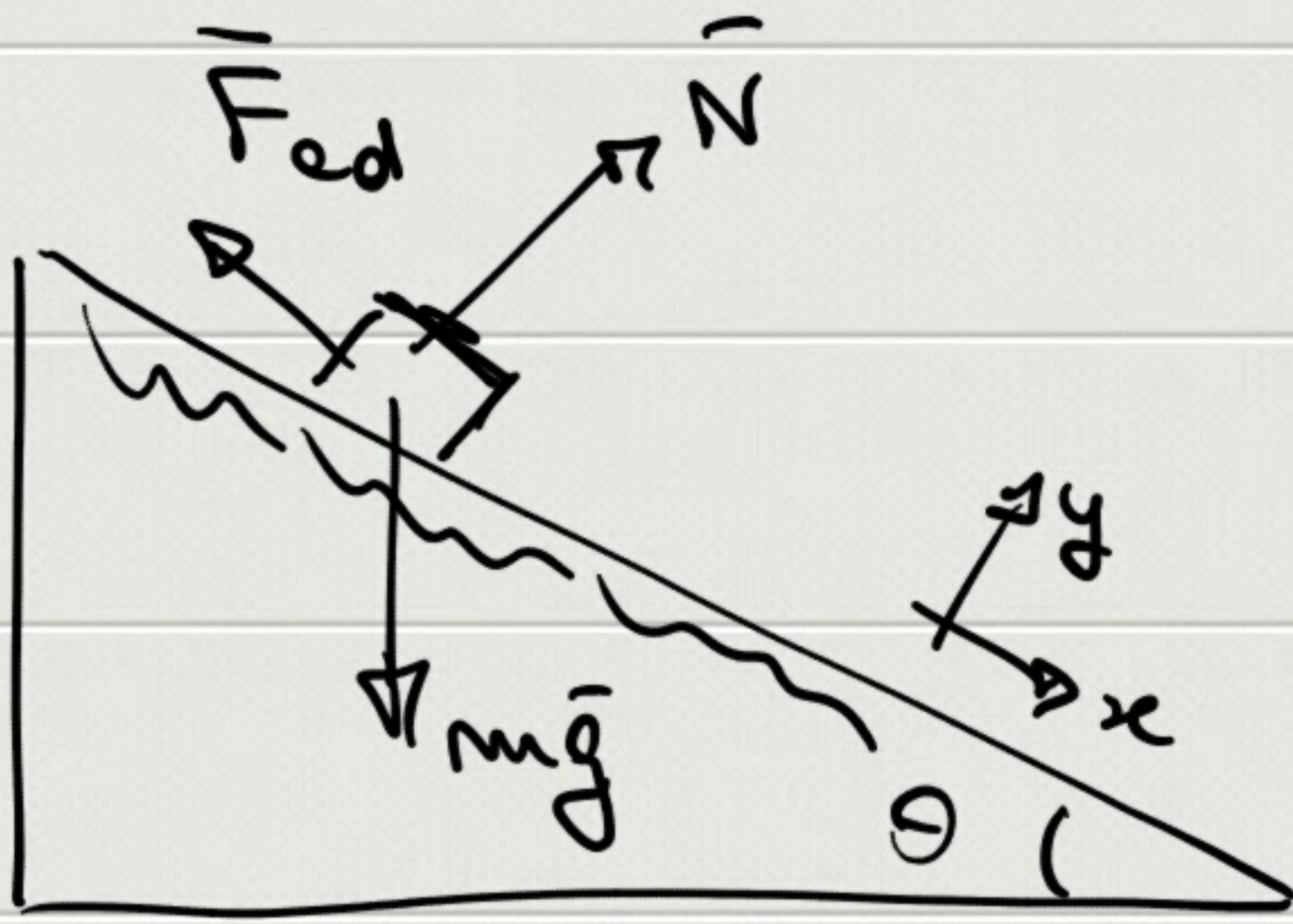$y:$ $-mg\cos\theta + N = ma_y = 0$ $\Rightarrow N = mg\cos\theta$
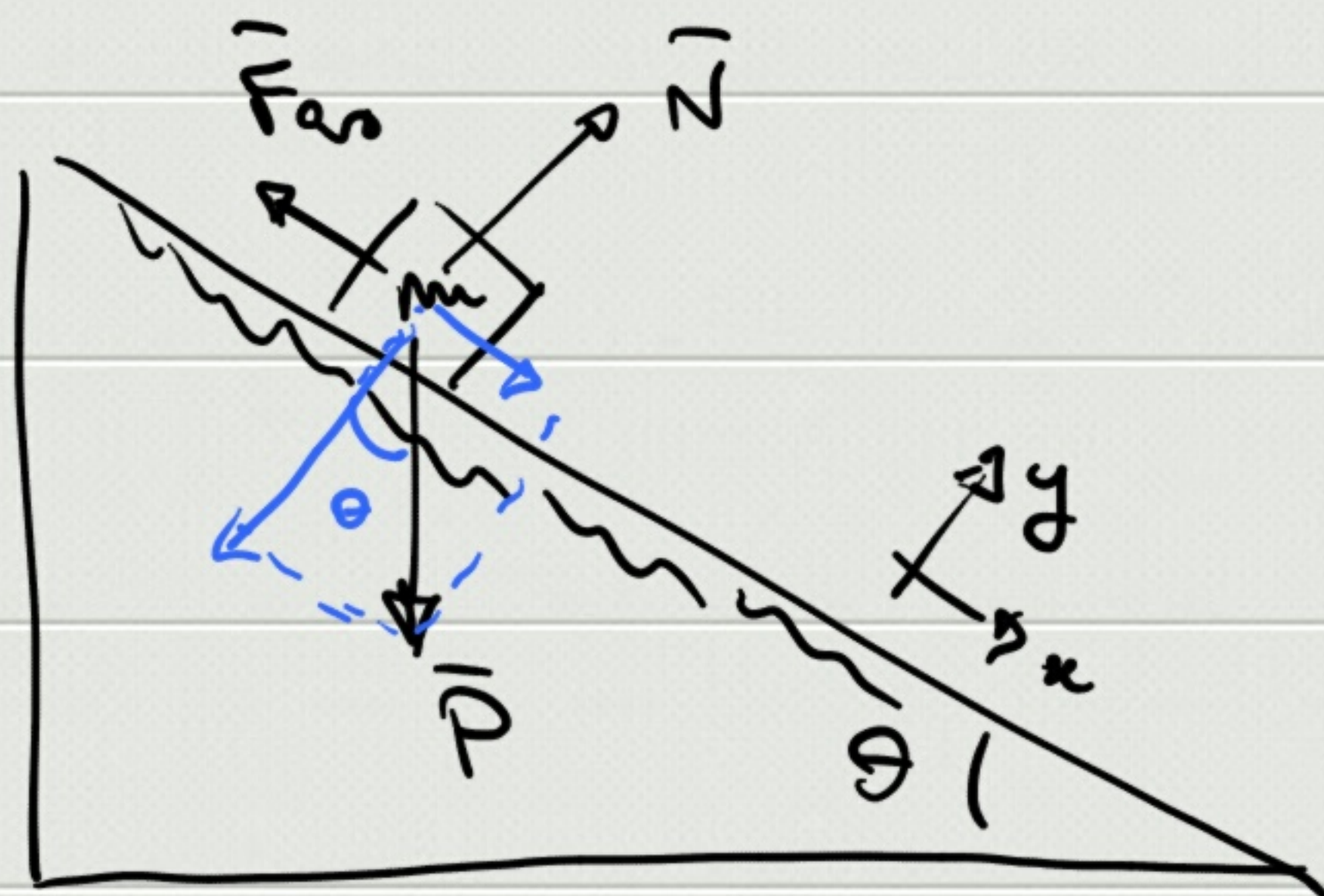
Statica

$$\bar{F}_{as} + \bar{N} + \bar{P} = 0$$

$x:$ $-F_{as} + mg\sin\theta = 0$ $\Rightarrow$ $F_{as} = mg\sin\theta$

$y:$ $N - mg\cos\theta = 0$ $\Rightarrow$ $N = mg\cos\theta$

$$F_{as} \leq F_{as,max} = \mu_s N = \mu_s mg\cos\theta$$
$$\left. \overset{!}{=} mg\sin\theta \right\} \Rightarrow$$

$$\boxed{\mu_s \geq tg\,\theta}$$

Dinamica

$$\bar{F}_{ad} + \bar{N} + \bar{P} = m\bar{a}$$

$x:$ $-\mu_d N + mg\sin\theta = ma$

$y:$ $N - mg\cos\theta = 0 \quad \Rightarrow \quad N = mg\cos\theta$

$mg(\sin\theta - \mu_d\cos\theta) = ma$

$$\Rightarrow \boxed{a = g(\sin\theta - \mu_d\cos\theta)}$$