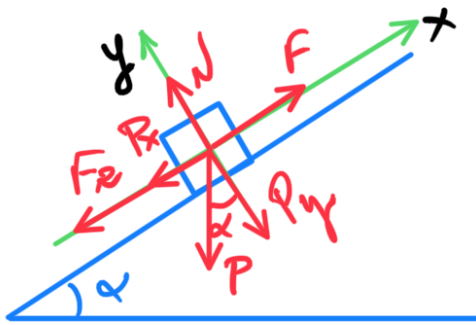


## EJERCICIO FQ1BE2326:

$$a = ? ; m = 3,5 \text{ kg} ; \alpha = 30^\circ ; F = 135 \text{ N} ; \mu = 0,15$$



$$\underline{\Sigma F_x}: \Sigma F_x = m \cdot a$$

$$F - P_x - F_e = m \cdot a$$

$$F - mg \sin \alpha - \mu \cdot N = m \cdot a$$

$$P_x = P \cdot \sin \alpha = mg \sin \alpha$$

$$P_y = P \cdot \cos \alpha = mg \cos \alpha$$

$$\underline{\Sigma F_y}: \Sigma F_y = 0$$

$$N - P_y = 0$$

$$N = mg \cos \alpha$$

$$F - mg \sin \alpha - \mu \cdot mg \cos \alpha = m \cdot a$$

$$135 - 3,5 \cdot 9,8 \cdot \sin 30 - 0,15 \cdot 3,5 \cdot 9,8 \cdot \cos 30 = 3,5 \cdot a$$

$$135 - 17,15 - 4,46 = 3,5 a$$

$$113,39 = 3,5 a$$

$$a = \frac{113,39}{3,5} = 32,4 \text{ m/s}^2$$