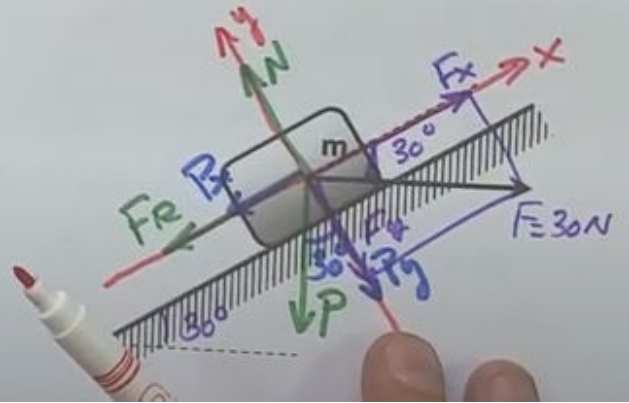


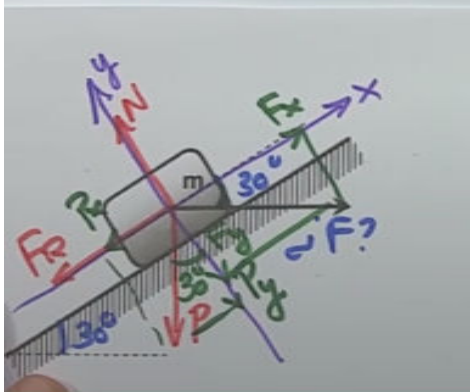
Ex: $\Sigma F_x = m \cdot a_x$
 $F_x - P_x - F_R = m \cdot a$
 $F \cos 30 - mg \cdot \sin 30 - \mu \cdot N = m \cdot a$
 $25,98 - 14,7 - 0,1 \cdot 40,46 = m \cdot a$
 $7,23 = 3 \cdot a$
 $\frac{7,23}{3} = a$
 $a = 2,41 \text{ m/s}^2$

$m = 3 \text{ kg}$
 $\mu = 0,1$
 $F = 30 \text{ N}$
 $F_x = F \cdot \cos 30$ / $P_x = P \cdot \sin 30$
 $F_y = F \cdot \sin 30$ / $P_y = P \cdot \cos 30$



$\Sigma F_y = 0 \Rightarrow N - F_y - P_y = 0$
 $N = F_y + P_y =$
 $N = F \sin 30 + mg \cdot \cos 30$
 $N = 30 \cdot \sin 30 + 3 \cdot 9,8 \cdot \cos 30 =$
 $= 15 + 25,46 = 40,46 \text{ N}$

$\Sigma F_y = 0$
 $N - P_y - F_y = 0$
 $N = F_y + P_y$
 $N = F \sin 30 + mg \cos 30$
 $N = 0,5F + 25,46$



$m = 3 \text{ kg}$
 $\mu = 0,1$
MRU $\Rightarrow v = \text{cte}$
 $a = 0$

$F_x = F \cos \alpha$ / $P_x = P \sin \alpha$
 $F_y = F \sin \alpha$ / $P_y = P \cos \alpha$

$\Sigma \vec{F} = m \cdot \vec{a}$
 $\Sigma F_x = m \cdot a \Rightarrow \Sigma F_x = 0$

$F_x - P_x - F_R = 0$
 $F \cos 30 - mg \sin 30 - \mu \cdot N = 0$
 $0,87 \cdot F - 14,7 - 0,1(0,5F + 25,46) = 0$
 $0,87F - 14,7 - 0,05F - 2,55 = 0$
 $0,87F - 0,05F = 14,7 + 2,55$
 $0,82F = 17,25$
 $F = \frac{17,25}{0,82} = 21,04 \text{ N}$