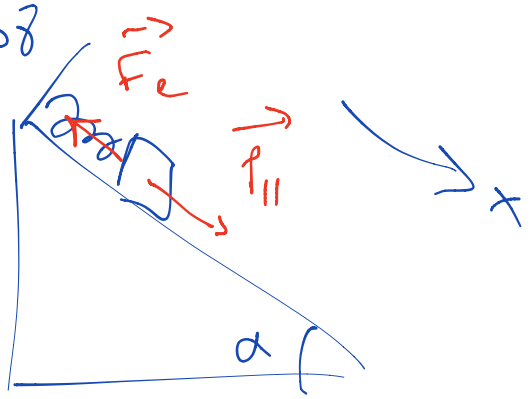
n. 38



$l = 3\ m$

$h = 2,6\ m$

$m = 3,5\ kg$

$k = 320\ N/m$

$mg \sin\alpha - k\Delta x = 0$

$\Delta x = ?$

$\mu_s = 0,25$

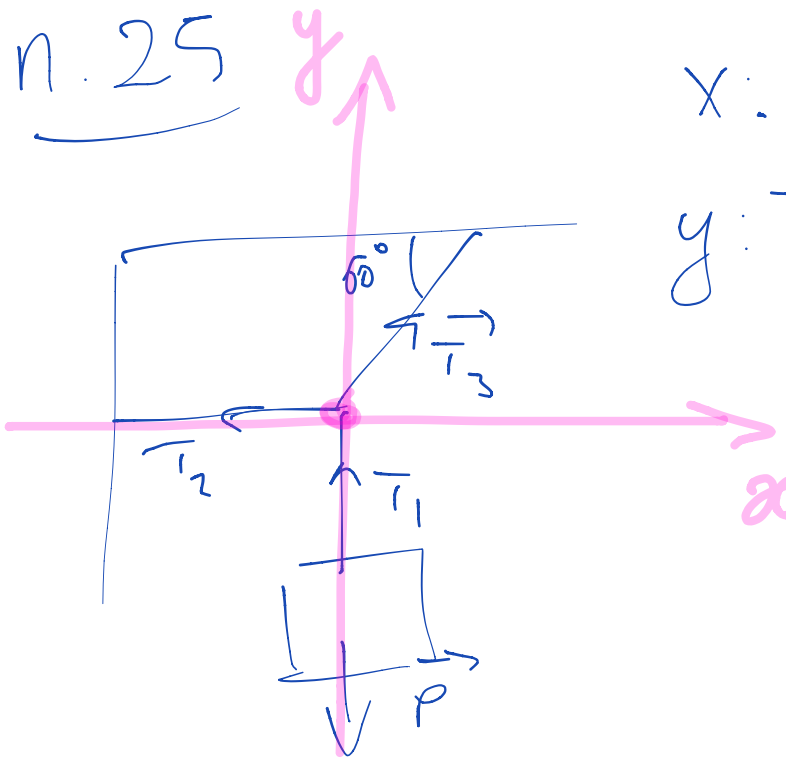
$mg \frac{h}{l} = k\Delta x$

$\Delta x = \frac{mg\frac{h}{l}}{k} = 9,3 \cdot 10^{-2}\ m$

$mg \sin\alpha - k\Delta x - \mu mg \frac{b}{l} = 0$

$\Delta x = \frac{mg\frac{h}{l} - \mu mg\frac{b}{l}}{k}$

n. 25



$x: T_3 \cos 60° - T_2 = 0$

$y: T_1 - mg + T_3 \sin 60° = 0$

$T_1 - mg = 0$

$T_1 = mg$

esp 1 : $T_1 - mg = 0$

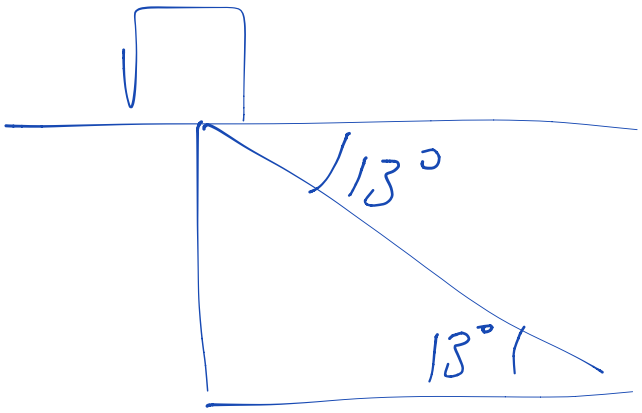
esp 2 :

n.12

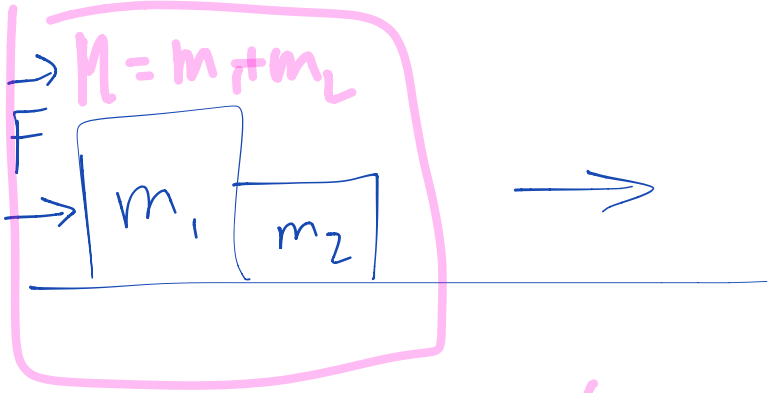
$v = 1{,}2\ m/s$

$\alpha = 13^\circ$

$\Delta t = 2{,}3\ s$



Scheda 2 n. 5



$m_1 = 20\ kg$

$m_2 = 10\ kg$

$F = 120\ N$

$a = ?$

$F_c = ?$

$$F = Ma = (m_1 + m_2)a$$

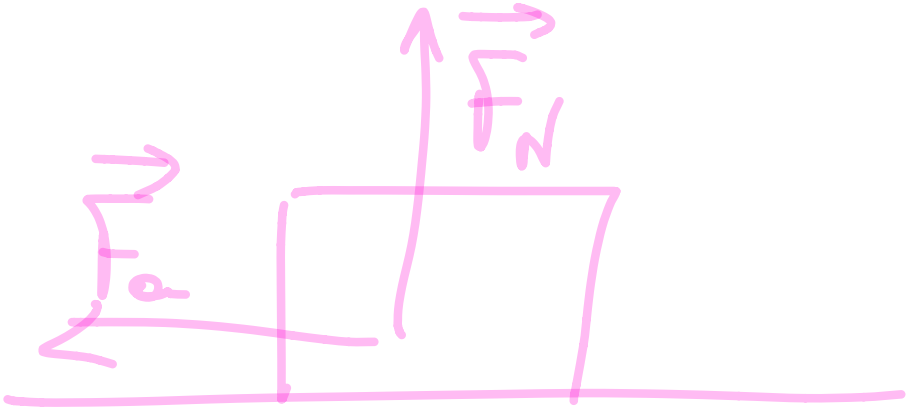
corpo 1: $F - F_c = m_1 a$

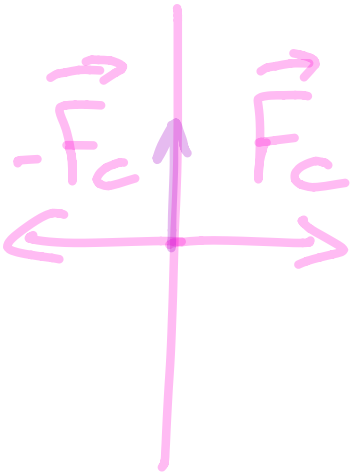
corpo 2: $F_c = m_2 a$

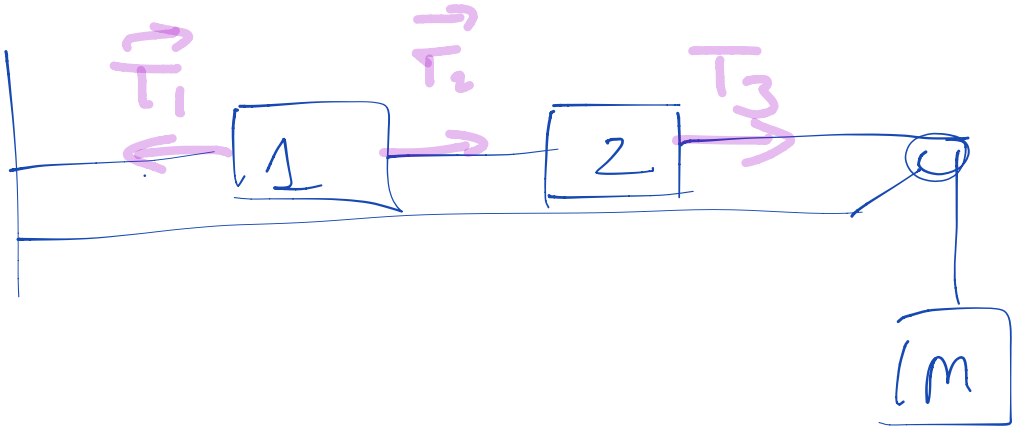
$$\begin{cases} F_c = F - m_1 a \\ F_c = m_2 a \end{cases} \qquad \begin{cases} F = (m_1 + m_2)a \end{cases}$$

$$F - m_1 a = m_2 a$$

$$a = \frac{F}{m_1 + m_2}$$


$\vec{F}_N$
$\vec{F}_a$


$-\vec{F}_c$
$\vec{F}_c$



corpo 1: $-\vec{T}_1 + \vec{T}_2 = 0$

corpo 2: $-\vec{T}_2 + \vec{T}_3 = 0$

corpo 3: $-\vec{T}_3 + mg = 0$

n. 39

$m = 1{,}7\ kg$

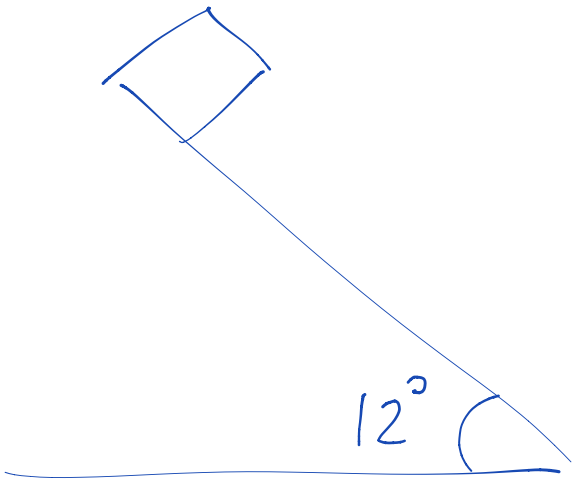
$\Delta s = 3{,}1\ m$

$\alpha = 12°$

$\mu_s = ?$

$\mu_d = ?$

$\Delta t = 2{,}45$



$$mg\sin\alpha - \mu_s mg\cos\alpha = 0$$

$$\Delta s = \frac{1}{2} a \Delta t^2$$

$$a = \frac{2\Delta s}{\Delta t^2}$$

x: $F_1 + F_2 \cos 60° = ma_x$

y: $F_2 \sin 60° = ma_y$

$$a = \sqrt{a_x^2 + a_y^2}$$

$$\tan\alpha = \frac{a_y}{a_x}$$