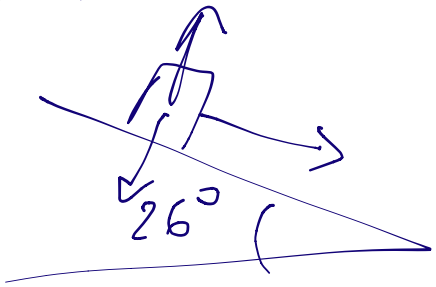
Esercitazione

n. 3 $m = 33\,kg$ $\mu = 0{,}05$

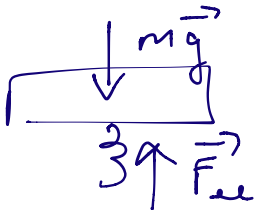


$F_a = \mu F_N =$

$= \mu mg\cos\alpha$

n. 4 $h = 0{,}55\,m$ $\Delta x = 3\,cm = 0{,}03\,m$

$m = 20\,kg$



$P = mg = 196\,N$

n. 14 libro

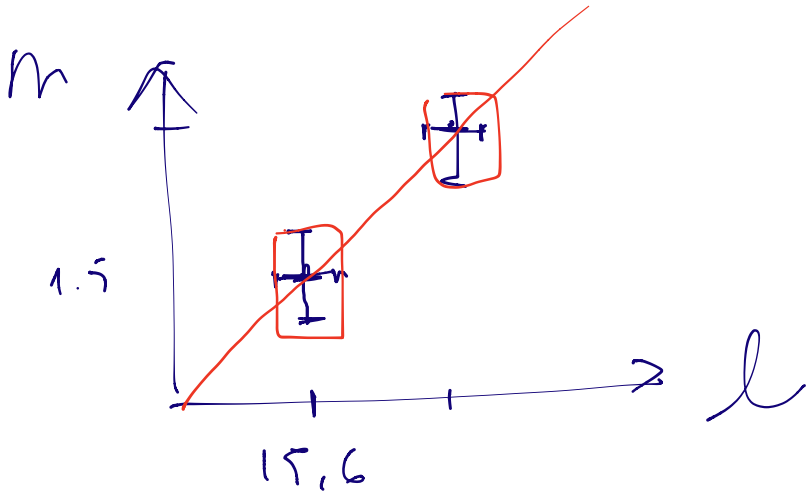
$l_0 = (15{,}0 \pm 0{,}1)\,cm$ $F_{max} = 25\,N$

$m\,(g)$	$l\,(cm)$
$(1{,}5 \pm 0{,}3)\cdot 10^2$	$15{,}6 \pm 0{,}2$
$(8{,}6 \pm 0{,}5)\cdot 10^2$	$18{,}4 \pm 0{,}2$
$(1{,}5 \pm 0{,}1)\cdot 10^3$	$21{,}3 \pm 0{,}2$
$(4.6 \pm 0{,}1)\cdot 10^3$	$33{,}4 \pm 0{,}2$

$F = kx$

$mg = kx$

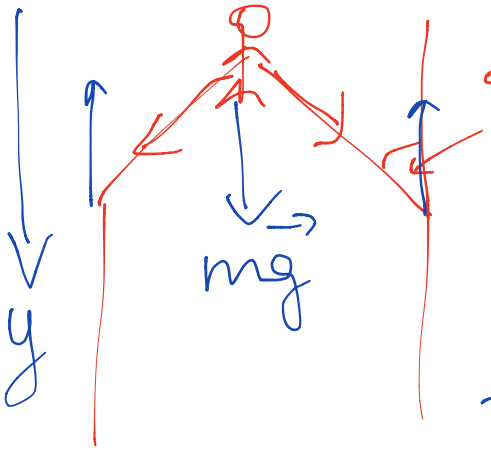
$m = \frac{kx}{g}$



n. 13 libro

$K = 700\ N/m$ $h = 8,0\ m$

$m = 47\ kg$ $\Delta x = 50\ cm$ $\alpha = 55°$



$F_{or} = F_{el} \cos 55° =$

$= 201\ N$

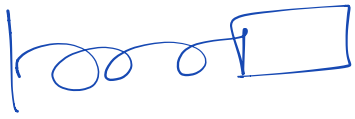
$F_{TOT} = mg - 2F_{or} =$

$= 460,6 - 402 \simeq 61\ N$

n. 17 libro

$k = 2{,}3 \cdot 10^2 \ N/m$

$\Delta x = 14 \ cm = 0{,}14 \ m$



$\mu_s = 0{,}45$

$P_v = ?$

$f_{el} = k\Delta x = 32{,}2 \ N$

$f_a = f_{el}$

$F_{el} = \mu mg$, $P_v = \frac{f_{el}}{\mu} = 71{,}5 \ N$

n. 15 libro

$m = 7 \ kg$ $\alpha = 15^\circ$ $\Delta x = 0{,}25 \ m$

$k = ?$

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

$k = \frac{mg \sin\alpha}{\Delta x}$

n. 7 libro

$K = 3000\ N/m$ $\quad \Delta x = 1,8\ cm$

$F_t = 20\ N$ $\quad m = 4,5\ kg$

$F_{el} = 3000 \cdot 0,018 = 54\ N$

$P = 4,5 \cdot 9,81 = 44,1\ N$

$$m = \frac{F_{el}}{g} = 5,5\ kg$$