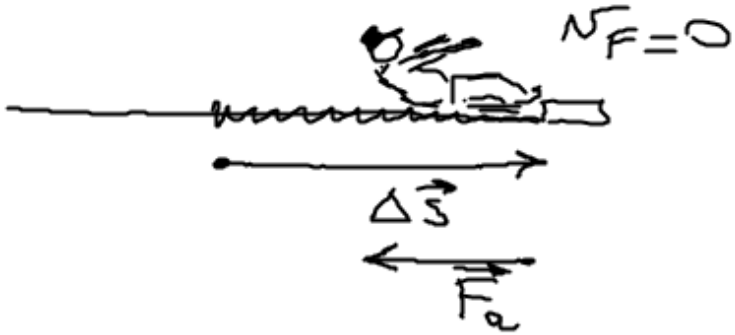
PAG. 464 VOL. 2 N 8

$m = 80\ kg$

$v_0 = 4{,}0\ \frac{m}{s}$

$\mu_d = 0{,}70$



1) QUANTI METRI PERCORRE IN SCIVOLATA?

$$\Delta s = \frac{v_{FIN.}^2 - v_{IN.}^2}{2a} = \qquad a = -g\mu_d \qquad ma = mg\mu_d$$

$$= \frac{\left(4{,}0\ \frac{m}{s}\right)^2}{2 \cdot 9{,}8\ \frac{m}{s^2} \cdot 0{,}70} = 1{,}16\ldots\ m \simeq 1{,}2\ m$$

2) CALCOLA IL LAVORO DELLA FORZA D'ATTRITO

$$W = -F_a \cdot \Delta s = -mg \cdot \mu_d \cdot \Delta s =$$

$$= -(80\,kg) \cdot \left(9{,}8\,\frac{m}{s^2}\right) \cdot (0{,}70) \cdot (1{,}166\ldots\,m) =$$

$$= -640\,J = -6{,}4 \times 10^2\,J$$

MODO ALTERNATIVO

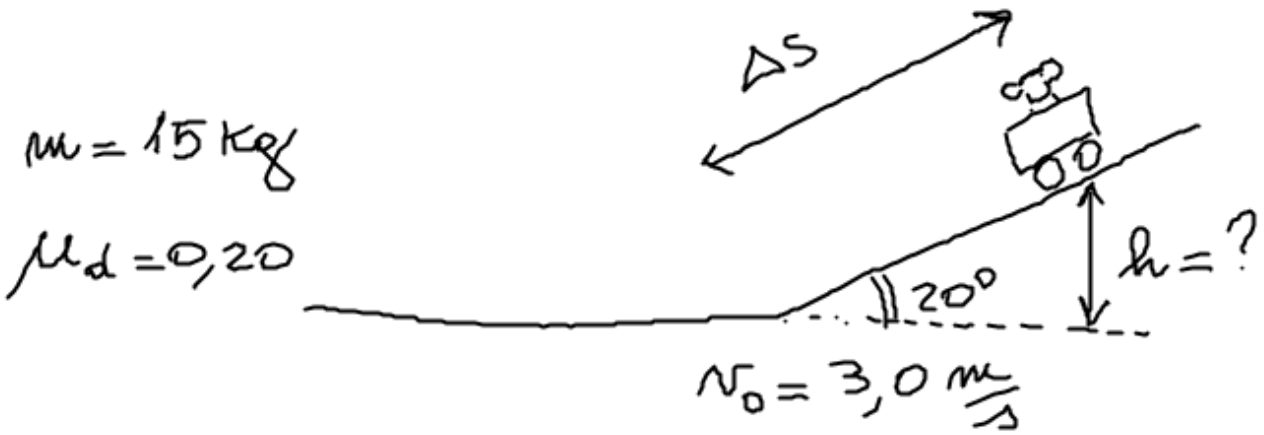
$$W_{NC} = E_F - E_I = 0 - \frac{1}{2} m v_0^2 = -\frac{1}{2}(80\,kg)\left(4{,}0\,\frac{m}{s}\right)^2 =$$

$$= -640\,J$$

SOLO CINETICA

	ARROTONDATO A		
3725,38	2 c.s.	3700	$3,7 \times 10^3$
	3 c.s.	3730	$3,73 \times 10^3$
	4 c.s.	3725	$3,725 \times 10^3$
	5 c.s.	3725,4	$3,7254 \times 10^3$
	6 c.s.	3725,38	$3,72538 \times 10^3$

PAG. 466 N 27



$$h = \Delta s \cdot \sin 20°$$

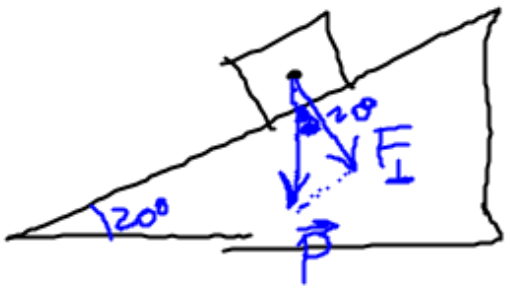
$$\Downarrow$$

$$\Delta s = \frac{h}{\sin 20°}$$

$$W_{NC} = E_F - E_{IN}$$

$$-F_a \cdot \Delta s = mgh - \frac{1}{2} m v_0^2$$

LAVORO DELL'ATTRITO



$$F_a = F_\perp \mu_d = mg \cos 20° \mu_d$$

$$-F_a \cdot \Delta s = mgh - \frac{1}{2} m v_0^2$$

$$-mg\cos 20° \cdot 0{,}20 \cdot \frac{h}{\sin 20°} = mgh - \frac{1}{2} m v_0^2$$

$$-5{,}385055742\,h = 9{,}8h - 4{,}5$$

$$15{,}185055741\,h = 4{,}5$$

$$h = \frac{4{,}5}{15{,}185\ldots}\ m =$$

$$= 0{,}2963\ldots m \simeq 0{,}30\,m$$

$$\simeq 30\ cm$$