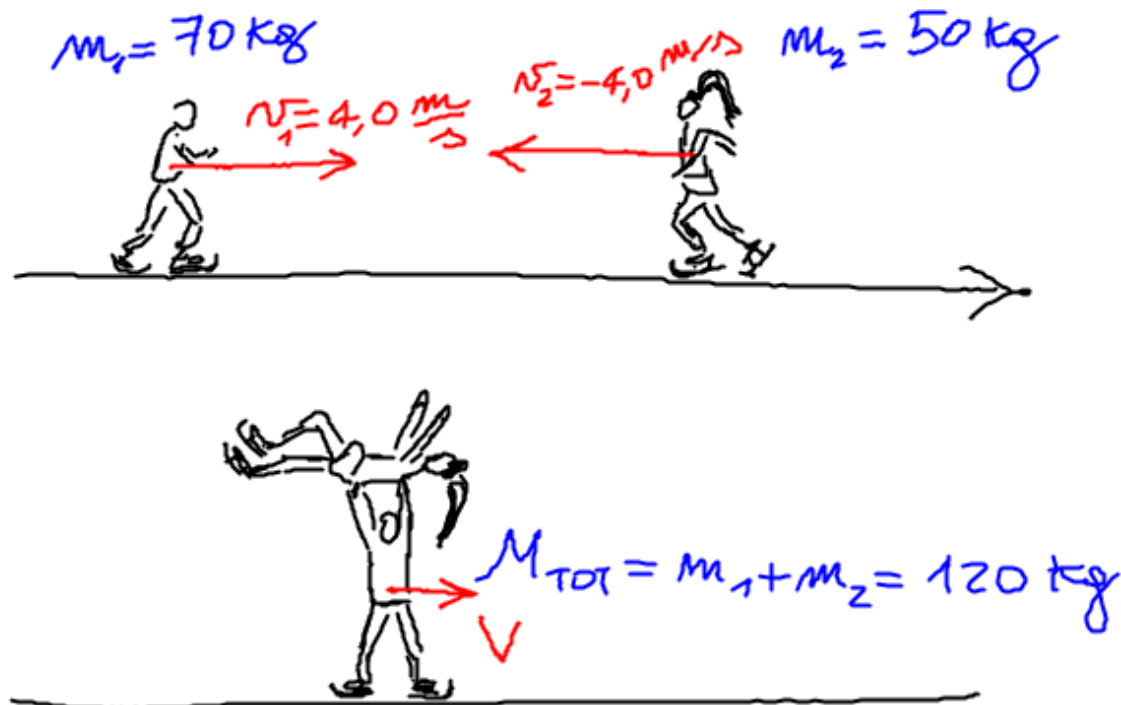


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$$m_1 v_1 + m_2 v_2 = M_{\text{TOT}} V \Rightarrow V = \frac{m_1 v_1 + m_2 v_2}{M_{\text{TOT}}} =$$
$$= \frac{70 \cdot 4,0 + 50 \cdot (-4,0)}{120} \frac{\text{m}}{\text{s}} = 0,67 \frac{\text{m}}{\text{s}}$$

45)

1] $m_1 = 24 \text{ g}$ v_1

2] $m_2 = 12 \text{ g}$ $v_2 = 0$
PRIMA

$v_2 \rightarrow$ DOPO 3° PAUSA $v_3 = 0$

$m_3 = ?$

$v_3 = v_1$

$$v_2 = \frac{2m_1}{m_1 + m_2} v_1 = \frac{48}{36} v_1 = \frac{4}{3} v_1$$

$$v_3 = \frac{2m_2}{m_2 + m_3} v_2 \Rightarrow \left[v_3 = \frac{24 \text{ g}}{12 \text{ g} + m_3} \cdot \frac{4}{3} v_1 = v_1 \right]$$

$$\frac{8}{12 + m_3} \cdot \frac{4}{3} = 1$$

$$32 = 12 + m_3 \Rightarrow m_3 = 20 \rightarrow m_3 = 20 \text{ g}$$

POVIAMO

49

$$m_{FR} = 250 \text{ g} = 0,250 \text{ kg}$$

$$m_B = 2,5 \text{ kg}$$

$$\Delta S = \frac{V_{FIN}^2 - V_{IN}^2}{2a}$$

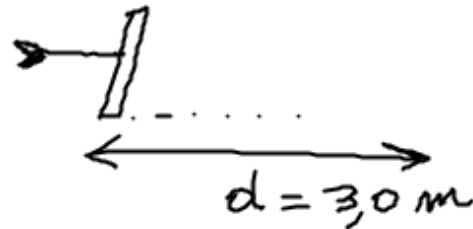
$$d = \frac{0^2 - V^2}{2(-3,92 \frac{\text{m}}{\text{s}^2})}$$

$$V = \sqrt{6,0 \cdot (3,92)} \frac{\text{m}}{\text{s}}$$

$$= 4,8 \frac{\text{m}}{\text{s}}$$

VEL. DEL SISTEMA
FRECCIA + BERS.
DOPO L'URTO

①



$$\mu_d = 0,40$$

$$F_a = F_{\perp} \mu_d$$

$$(m_{FR} + m_B) a = (m_{FR} + m_B) g \mu_d$$

$$a = g \mu_d =$$

$$= (9,8 \frac{\text{m}}{\text{s}^2}) \cdot 0,40 =$$

$$= 3,9 \frac{\text{m}}{\text{s}^2}$$

$$m_{FR} v_{FR} + m_B v_B = (m_{FR} + m_B) V$$

$$= 0$$

$$v_{FR} = \frac{(m_{FR} + m_B) V}{m_{FR}} = 53 \frac{\text{m}}{\text{s}}$$