

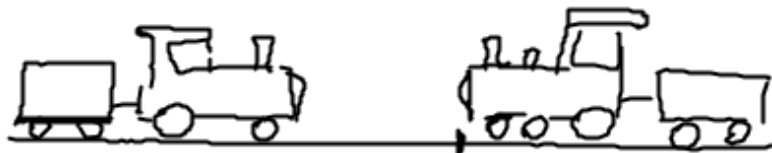
PAG. 520 N 62

$$v_1 = 3,0 \text{ m/s}$$

$$m_1 = 0,2 \text{ kg}$$

$$v_2 = 0$$

$$m_2 = 0,2 \text{ kg}$$



$$x = 0$$

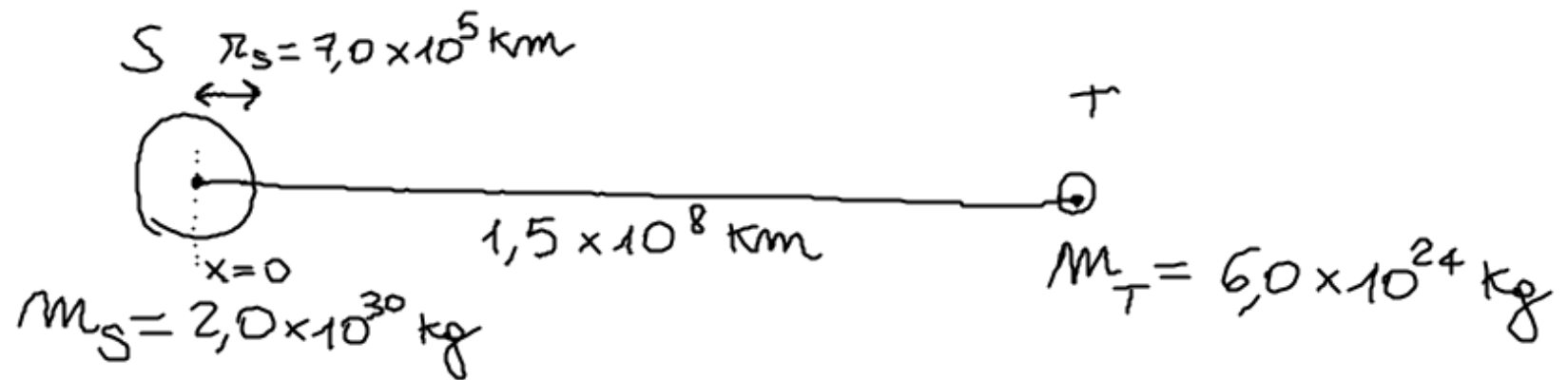
$$t = 0$$

$$\vec{v}_{CM} = \frac{\vec{p}_{TOT}}{M_{TOT}}$$

$$v_{CM} = \frac{m_1 v_1 + m_2 v_2}{m_1 + m_2} =$$

$$= \frac{0,2 \cdot 3,0 \frac{\text{m}}{\text{s}}}{0,4} = 1,5 \frac{\text{m}}{\text{s}}$$

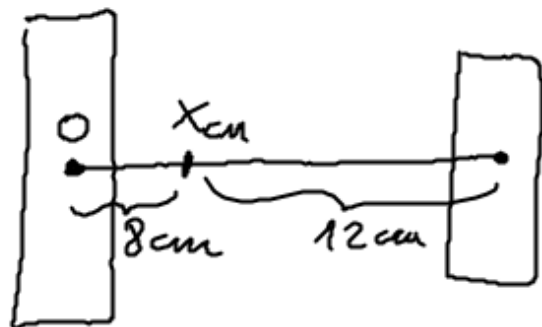
N 63



$$\begin{aligned}
 x_{CM} &= \frac{m_s x_s + m_T x_T}{m_s + m_T} = \frac{2,0 \times 10^{30} \cdot 0 + 6,0 \times 10^{24} \cdot 1,5 \times 10^8 \text{ km}}{2,0 \times 10^{30} + 6,0 \times 10^{24}} = \\
 &= \frac{9,0 \times 10^{32} \text{ km}}{2,0000060 \times 10^{30}} = \\
 &= 4,5 \times 10^2 \text{ km}
 \end{aligned}$$

$6,0 \times 10^{-6} \times 10^{30}$
 $0,000006 \times 10^{30}$

64)



6,0 kg

4,0 kg

$d = 20 \text{ cm}$

$$X_{cm} = \frac{\cancel{6,0} \cdot 0 + 4,0 \cdot 20 \text{ cm}}{6,0 + 4,0} = 8,0 \text{ cm} = 0,080 \text{ m dal più pesante}$$