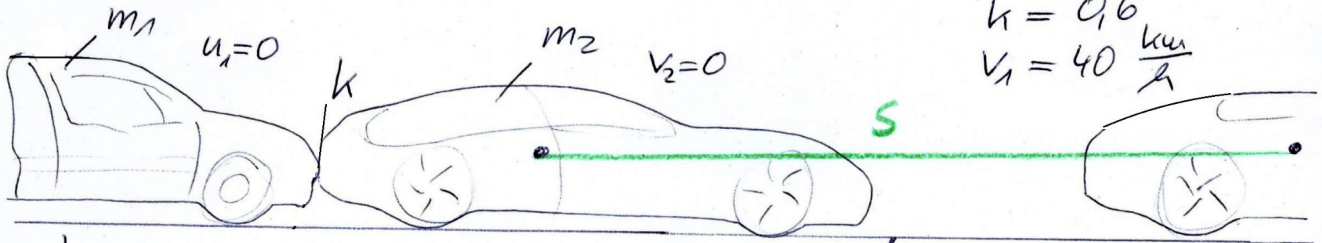


Stoßaufgabe Panamera

$$\begin{aligned} m_1 &= 1200 \text{ kg} \\ m_2 &= 2000 \text{ kg} \\ k &= 0,6 \\ v_1 &= 40 \frac{\text{km}}{\text{h}} \end{aligned}$$



a)

$$k = \frac{u_1 - u_2}{v_2 - v_1} = \frac{-u_2}{-v_1} = \frac{u_2}{v_1} \Rightarrow u_2 = v_1 \cdot k = 24 \frac{\text{km}}{\text{h}} \quad \mu' = 0,5$$

b)

$$\begin{aligned} \frac{1}{2} m_2 u_2^2 - m_2 \cdot g \cdot \mu \cdot s &= 0 \\ \frac{u_2^2}{2} &= g \cdot \mu \cdot s \Rightarrow s = \frac{u_2^2}{2 \mu \cdot g} = \frac{\left(\frac{24}{3,6}\right)^2 \frac{\text{m}^2}{\text{s}^2}}{2 \cdot 0,5 \cdot 9,81 \frac{\text{m}}{\text{s}^2}} = \underline{\underline{4,53 \text{ m}}} \end{aligned}$$