



$$m = 1 \text{ kg}$$

$$\mu_s = 0,1$$

$$\alpha = 45^\circ$$

$$F_a = \mu_s \cdot mg \cdot \cos \alpha$$

$$\mu_s = 0,3$$

$$F_a^s = \mu_s \cdot mg \cdot \cos \alpha > mg \sin \alpha ?$$

$$1,94 \text{ N} > 6,94 \text{ N} \quad \text{NO} \Rightarrow \text{it moves}$$

$$F = m \cdot a = mg \sin \alpha - \mu mg \cos \alpha$$

$$\begin{aligned} & \downarrow \\ & = mg (\sin \alpha - \mu \cos \alpha) \Rightarrow a = g (\sin \alpha - \mu \cos \alpha) \\ & \qquad \qquad \qquad = 6,243 \frac{\text{m}}{\text{s}^2} \end{aligned}$$

$$s = \frac{1}{2} a t^2 + v_0 \cdot t + s_0$$

$$\downarrow = 312,15 \text{ m} \quad (\Rightarrow h = s \cdot \sin \alpha = 220,7 \text{ m})$$

$$v = a \cdot t = 62,43 \frac{\text{m}}{\text{s}}$$

$$L = \bar{F} \cdot \bar{s} = F \cdot s \cdot \cos \varphi = 1948,8 \text{ J}$$

$$P_0 = 0$$

$$P_{10''} = F \cdot v = 389,8 \text{ W}$$

$$P_{\text{media}} = \frac{P_0 + P_{10''}}{2} = 194,9 \text{ W}$$

$$P_{\text{media}} = \frac{L}{t}$$

$$\downarrow = \frac{1948,8 \text{ J}}{10 \text{ s}}$$

$$\downarrow = 194,9 \text{ W}$$

$$mgh = \frac{1}{2} m v_1^2 + L_{\text{dissipativa}}$$