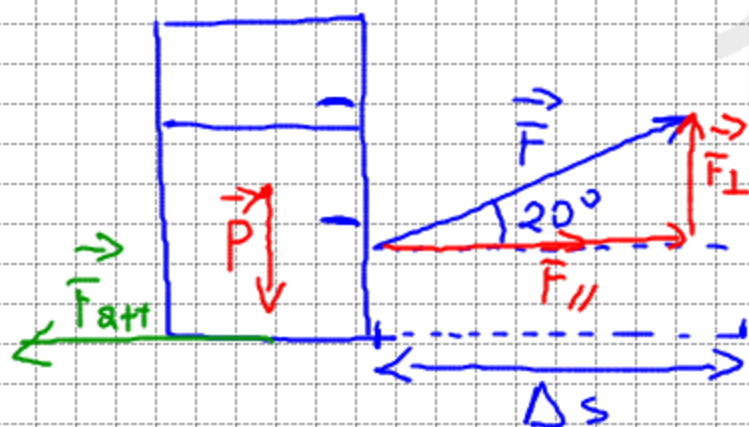


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$$m_p = 85,0 \text{ kg}$$

$$\Delta s = 8,00 \text{ m}$$

$$\vec{F} = 2,40 \times 10^2 \text{ N}$$

$$\alpha = 20,0^\circ$$

$$\mu_d = 0,200$$

$$\bullet L_F = \vec{F}_{\parallel} \cdot \vec{\Delta s}$$

$$\text{com } F_{\parallel} = F \cos 20,0^\circ =$$

$$= 2,40 \times 10^2 \text{ N} \cdot 0,94 = 2,26 \times 10^2 \text{ N}$$

$$L_F = 2,26 \times 10^2 \text{ N} \cdot 8,00 \text{ m} = 1,808 \times 10^3 \text{ J} =$$

$$1,80 \times 10^3 \text{ J}$$

$$\bullet F_{\text{att}_d} = F_N \cdot \mu_d = (P - \bar{F}_{\perp}) \mu_d =$$

$$= (mg - \bar{F} \sin 20,0^\circ) \mu_d =$$

$$= \left( 85,0 \text{ kg} \cdot 9,81 \frac{\text{m}}{\text{s}^2} - 2,40 \times 10^2 \text{ N} \cdot 0,34 \right) 0,200 =$$

$$= 1,50 \times 10^2 \text{ N}$$

$$L_{F_{\text{att}_d}} = F_{\text{att}_d} \cdot \Delta s \cos 180^\circ = -1,20 \times 10^3 \text{ J}$$