

mg

$$E = 2500 \text{ J calórico}$$

$$F_A = 80 \text{ N}$$

$$\Delta S_A = 10 \text{ m}$$

$$\Delta t_A = 10 \text{ s}$$

$$\Delta S_B = 20 \text{ m}$$

$$m = 3 \text{ kg}$$

$$\Delta t_B = 5 \text{ s}$$

$$P_A = ?$$

$$P_B = ?$$

$$\eta_A = ?$$

$$\eta_B = ?$$

$$P = \frac{L}{\Delta t}$$

$$F = mg = (3 \text{ kg})(9,8 \frac{\text{m}}{\text{s}^2}) = 29,4 \text{ N}$$

$$L_A = F_A S_A = (80 \text{ N})(10 \text{ m}) = 800 \text{ J}$$

$$L_B = F_B S_B = (29,4)(20 \text{ m}) = 588 \text{ J}$$

$$P_1 = \frac{L_A}{\Delta t_A} = \frac{800 \text{ J}}{10 \text{ s}} = 80 \text{ W}$$

$$P_2 = \frac{L_B}{\Delta t_B} = \frac{588}{5 \text{ s}} = 117,6 \text{ W}$$

$$\eta_A = \frac{|L_A|}{|Q_c|} = \frac{800}{2500} = 0,32 = 32\%$$

$$\eta_B = \frac{|L_B|}{|Q_c|} = \frac{588 \text{ J}}{2500} = 0,23 = 23\%$$

$$Q_{F_A} = Q_c - L_A = 2500 - 800 = 1700 \text{ J}$$

$$Q_{F_B} = Q_c - L_B = 2500 - 588 = 1912 \text{ J}$$

