

CAMINHADA

gato de 2657/s



$L =$ comprimento da perna

$H =$ altura do centro de massa

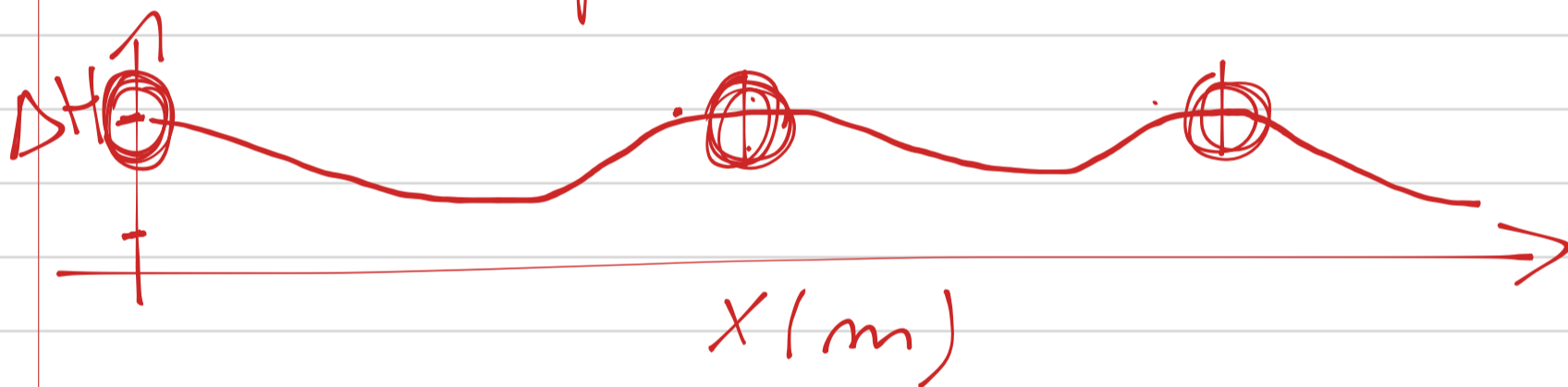
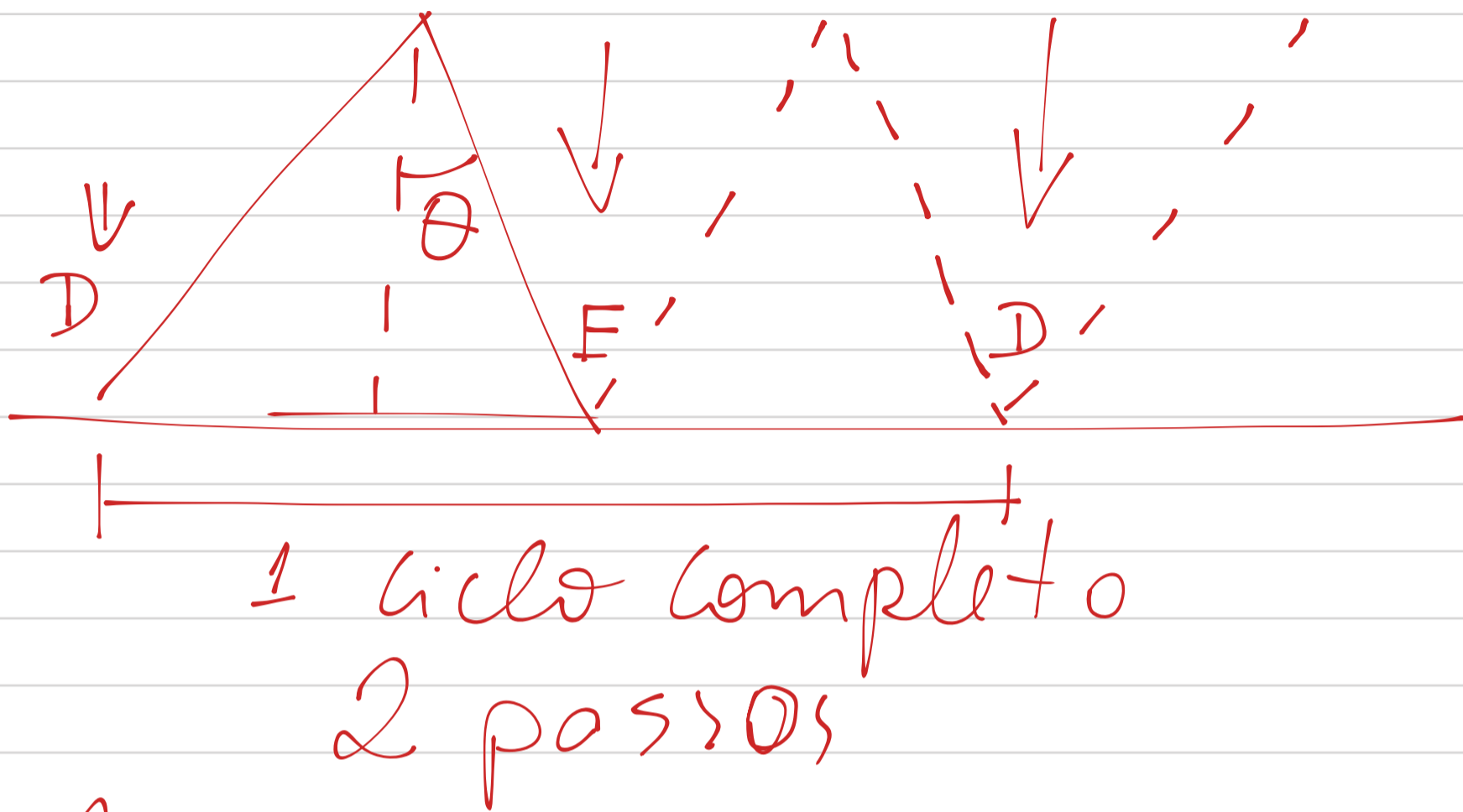
$$\text{pé} \Rightarrow H = L$$

$$\text{caminhando} \Rightarrow H = L \cos \theta$$

$$\Delta H = L - L \cos \theta$$



$$\Delta U = m g \Delta H$$



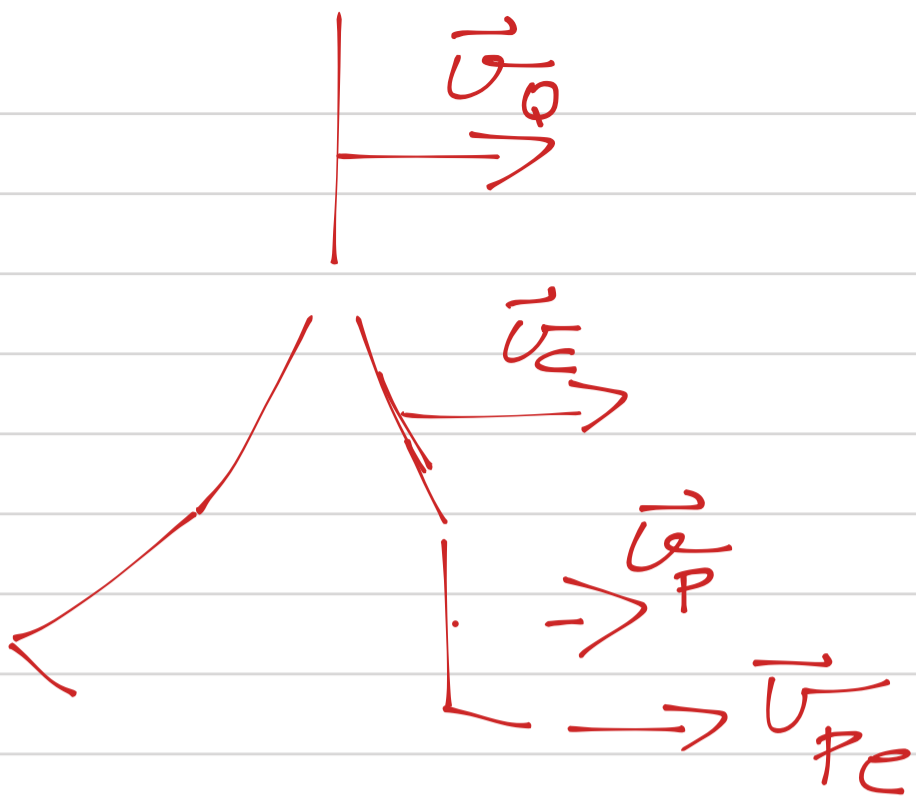
$$\Delta U = m g \Delta H$$

$$m = \text{pessoa}$$

$$\Delta H = L(1 - \cos \theta)$$

1 ciclo

$$\Delta U = 2m g L(1 - \cos \theta)$$



$$m_Q = 50 \text{ Kg}$$

$$m_C = 20 \text{ Kg}$$

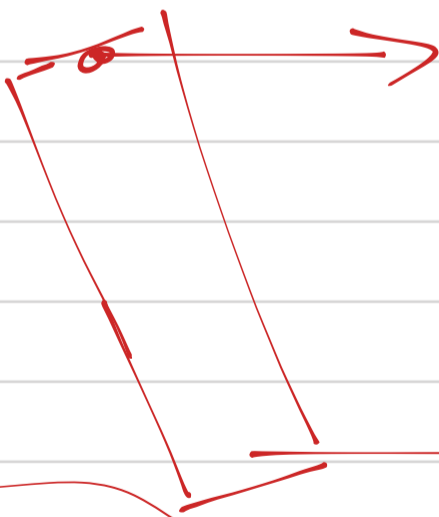
$$m_P = 10 \text{ Kg}$$

$$m_{Pe} = 3 \text{ Kg}$$

$$\Delta K_{total} = \Delta K_Q + \Delta K_C + \Delta K_P + \Delta K_{Pe}$$

$$\Delta K_i = \frac{1}{2} m v_f^2 - \frac{1}{2} m v_0^2$$

P/ a coxa



quadril

Joelho

$$\Delta W = \Delta U + \Delta K$$

$$\Delta U = 2 \cdot 90 \cdot 9,8 \cdot 0,93 (1 - \cos 26,2)$$

$9,6 \text{ m}$

$$\Delta U = 171 \text{ J} \rightarrow 1 \text{ lido}$$

$$\Delta U = 156 \text{ J/s}$$

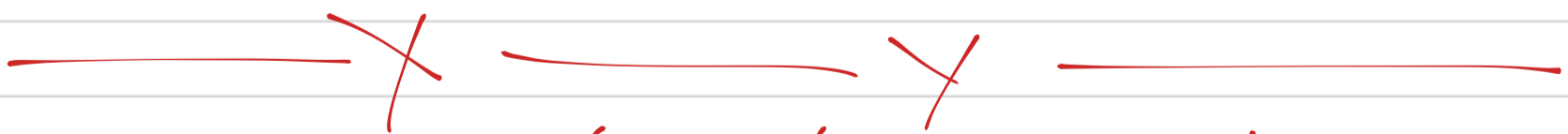
$(1,2 \text{ s})$



$$\gamma = 0,25$$

$$\gamma = \frac{\Delta W}{\Delta E}$$

$$\Delta E = 624 \text{ J/s}$$



$$\Delta H = L (1 - \cos 26,2)$$

$$= 0,93 (1 - \cos 26,2) = 9,6 \text{ m}$$

Referência

$$\Delta H = 3,5 \text{ cm}$$

$$\Delta U = 2 \cdot 90 \cdot 10^{-3} = 0,035 =$$

$$= 637 \text{ J/ ciclo}$$

$$\div 1,2 \text{ s}$$

$$\Delta U = 577 \text{ J/s}$$

$$\gamma = 0,25 = 57$$

$$\Delta E = 2297 \text{ J/s}$$

$$\Delta W = 229 + \Delta K$$

numero maior que

$$265 \text{ J/s}$$

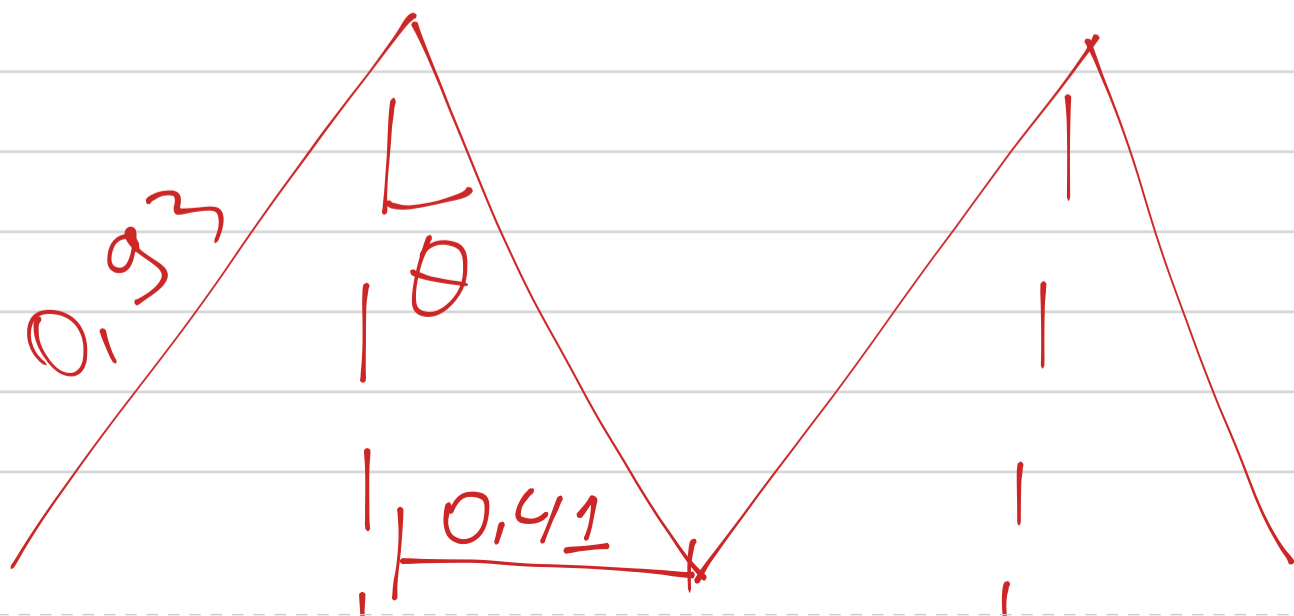
Com imbueta 400m
gastei 269s
e com 4000 passos

$$\frac{400}{4000} = 0,02m \text{ para cada passo}$$

$$\left(\frac{4000 \text{ passos}}{269s} \right) = 0,55s$$

↓
1 passo

$$1 \text{ ciclo} = 4,1s$$



$$\frac{0,22}{1,02m}$$

$$\sin \theta = \frac{0,41}{0,93} = 0,44$$

$$\theta = 26,2^\circ \leftarrow$$

— x — x — x —

$$26,14 = 26,1 \quad \checkmark$$

$$26,15 = 26,2$$

$$26,16 =$$

$$26,149 =$$

$$26,151 =$$

$$26,25 = 26,2$$

$$26,250001 = 26,3$$

$$26,24 = 26,2$$

$$26,24999 = 26,2$$

$$26,35 = 26,4$$

$$26,35000\underline{1} = 26,4$$

$$26,34999 = 26,3$$

$$26,350000 = 26,4$$

