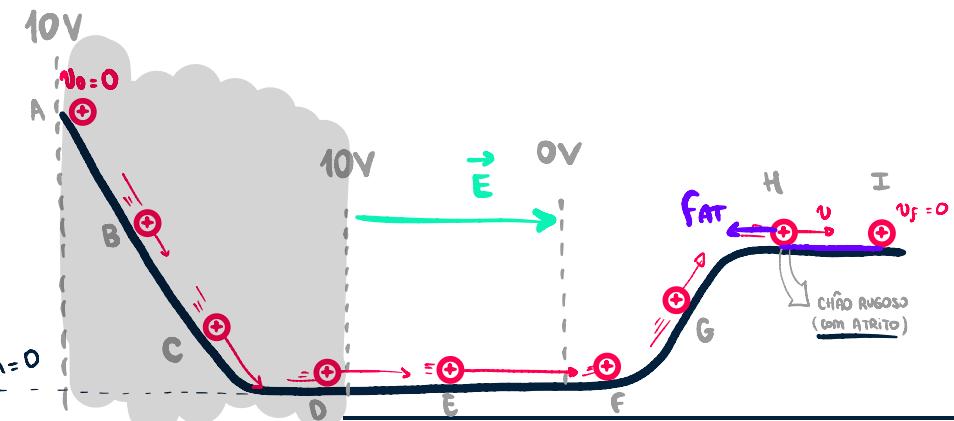


TRABALHO e ENERGIA

ENERGIA MECÂNICA

	E_c	E_{pg}	E_{pe}	E_m
A	0	80	20	100J
B	10	70	20	100J
C	65	15	20	100J
D	80	0	20	100J
E	92	0	8	100J
F	100	0	0	100J
G	90	10	0	100J
H	75	25	0	100J
I	0	25	0	25J



FORÇAS CONSERVATIVAS

GRAVITACIONAL

$$E_{pg} = m \cdot g \cdot h$$

ELÁSTICA

$$E_{p_{elás}} = \frac{kx^2}{2}$$



ELETRÍCA

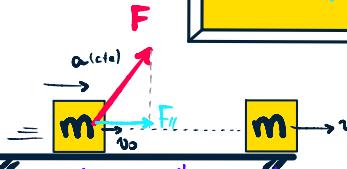
$$E_{pot_{elétr}} = q \cdot U$$

10V
+q=2C

$$E_p = 2C \cdot 10V = 20J$$

TRABALHO

$$W = F_{\parallel} \cdot d$$



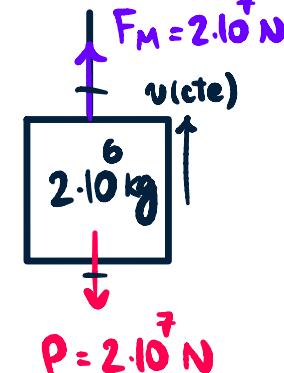
$$\begin{aligned} v_f^2 &= v_0^2 + 2 \cdot a \cdot d \\ m v_f^2 &= m v_0^2 + 2 m a d \end{aligned}$$

ENERGIA CINÉTICA

$$E_c = \frac{1}{2} m v^2$$



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$$P_T = 15 \cdot P = 45.000 \text{ kW}$$

$$P_T = F \cdot v \therefore 45 \cdot 10^3 \cdot 10^3 \text{ W} = 2 \cdot 10^7 \cdot v$$

$$v = 2,25 \text{ m/s}$$

MEDE A VELOCIDADE COM QUE A ENERGIA É TRANSFERIDA

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

UNIDADE: J/seg = Watt

$$P = \frac{E}{\Delta t} = \frac{F \cdot d}{\Delta t}$$

$$P = F \cdot v$$

