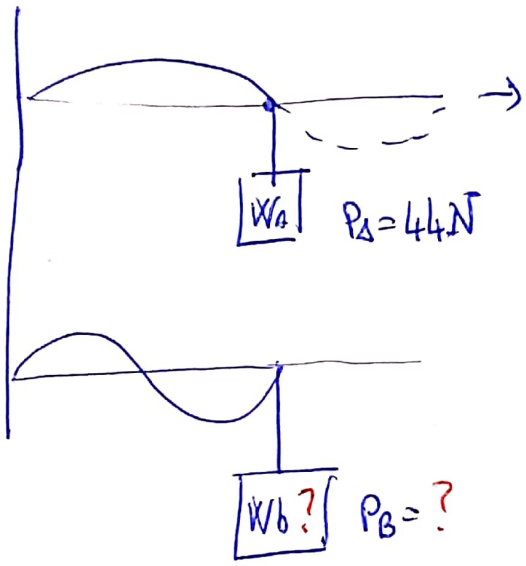
ESERCITAZIONE N°4 — ONDE STAZIONARIE



$\rightarrow \lambda_A = 2\lambda_B$ (A)

$v_{corda} = \sqrt{\frac{F}{\mu/L}}$

TENSIONE DELLA CORDA IN QUESTO CASO E' IL PESO W_A e W_B

le frequenze è la stessa $f_A = f_B$

essendo $v = \lambda f$

si ha: $f = \frac{v}{\lambda}$

$$\frac{v_A}{\lambda_A} = \frac{v_B}{\lambda_B}$$

(A) $$\frac{\sqrt{\frac{W_A}{\mu/L}}}{2\lambda_B} = \frac{\sqrt{\frac{W_B}{\mu/L}}}{\lambda_B}$$

$$\sqrt{\frac{W_A}{\mu/L}} = 2\sqrt{\frac{W_B}{\mu/L}}$$

$$\frac{W_A}{\mu/L} = 4\frac{W_B}{\mu/L}$$

$$W_B = \frac{W_A}{4} = \frac{44\,N}{4} = 11\,N$$