ESERCIZI SULLE ONDE ACUSTICHE

SUONO

Es..

$$f'_{ass} = \frac{3}{4} f'_{oss.}$$

$$v_{SOR} = 0$$

$$v_{RIC} \neq 0$$

$$f'_{avv} = f_0 \frac{v_{RIC} + v_0}{v_0}$$

$$f'_{all.} = f_0 \frac{-v_{RIC} + v_0}{v_0}$$

$$\frac{f'_{all.}}{f'_{avv.}} = \frac{f_0 \frac{-v_{RIC} + v_0}{v_0}}{f_0 \frac{v_{RIC} + v_0}{v_0}}$$

$$k = \frac{f'_{ott}}{f'_{ott}} = \frac{-v_{RIC} + v_0}{v_0} \cdot \frac{v_0}{v_0 + v_{RIC}}$$

$$= \frac{v_0 - v_{RIC}}{v_0 + v_{RIC}}$$

$$k(v_0 + v_{RIC}) = v_0 - v_{RIC}$$

$$k v_0 + k v_{RIC} = v_0 - v_{RIC}$$

$$k v_{R1C} + v_{R1C} = v_0 - k v_0$$

$$v_{R1C}(1+k) = v_0(1-k)$$

$$\boxed{v_{R1C} = v_0 \frac{1-k}{1+k}}$$

$k = \frac{3}{4} = \frac{\text{durée}}{\text{jour}}$ $\quad v_{R1C} = v_0 \dfrac{1-3/4}{1+3/4}$

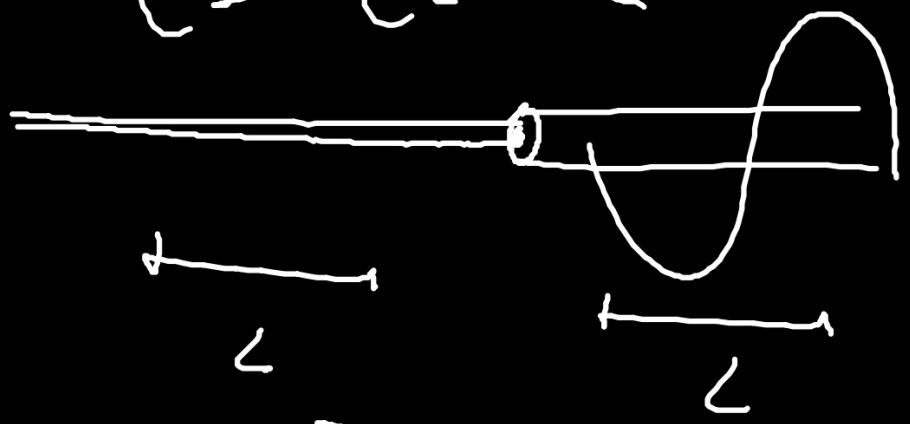
$$v_{Ric} = v_0 \cdot \frac{1/4}{7/4}$$

$$= v_0 / 7$$

$$= 340 \frac{m}{s} / 7 = 48.6 \, m/s$$

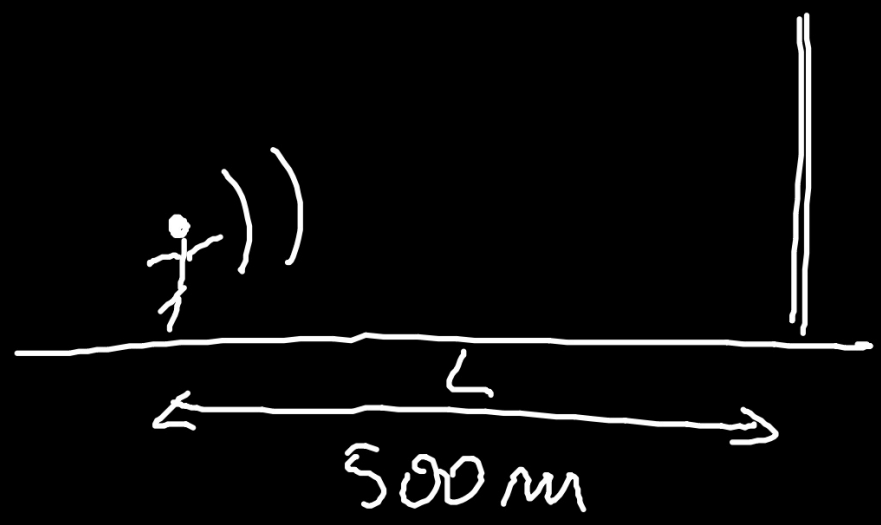
$$\hat{=} 49 \, m/s$$

Ex. $C_1 = C_2$ ←



$$v = \sqrt{\frac{F}{\mu}}$$

Es. $v_0 = 340\,m/s$



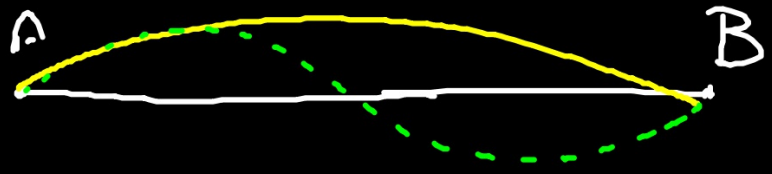
$$\Delta t = \frac{2L}{v_0} = \frac{1000m}{340m/s} = 2.94\,s$$

In 10 righe

- ONDA ELASTICA ?
  PROPAGAZIONE ?

- ONDA SONORA ?

Es.



$\overline{AB} = 75\ cm$

$f_1 = 410\ Hz$ $\qquad v = f_1 \cdot \lambda_1$

$\lambda_1 = 2\ \overline{AB} = 1.5\ m$ $\qquad = 615\ \frac{m}{s}$