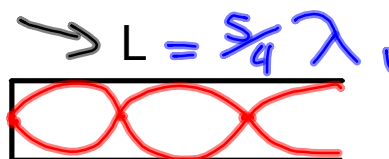


Download: "Signal Generator"

Warm Up Problem:

$$v = 200 \text{ m/s}$$

$$f = 225 \text{ Hz}$$



Find the frequency of the fundamental mode of vibration (there is more than one step):

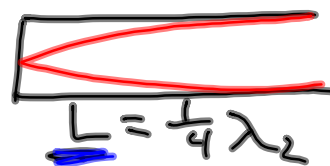
$$v = f; \lambda_1$$

$$\lambda_1 = \frac{v}{f} = \frac{200 \text{ m/s}}{225 \text{ Hz}} = 0.88 \text{ m}$$

$$L = \frac{5}{4} \lambda_1$$

$$L = 1.11 \text{ m}$$

$$4L = \lambda_2$$



$$v = 200 \text{ m/s}$$

$$f_2 = \frac{v}{\lambda_2}$$

$$f_2 = \frac{200 \text{ m/s}}{4(1.11)}$$

$$f_2 = 45 \text{ Hz}$$