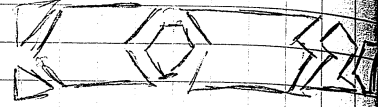
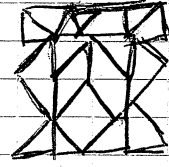
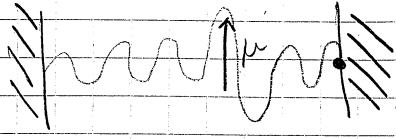


# Clise en situation

~~Clise en situation~~

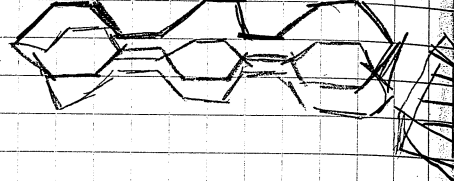
② Corde fixée aux extrémités



$$\psi(x, t) = A \sin(\omega t + kx) - B \sin(\omega t - kx)$$

$$\psi(0, t) = 0$$

$$\psi(L, t) = 0$$



(\*)

$$\begin{cases} A \sin(\omega t) - B \sin(\omega t) = 0 \\ A \sin(\omega t + kL) - B \sin(\omega t - kL) = 0 \end{cases}$$

$$= A(\sin(\omega t) + \cos kL + \sin kL \cos(\omega t)) - B(\sin(\omega t) \cos kL - \sin kL \cos(\omega t))$$
$$\sin kL (A \cos \omega t - B \cos \omega t) = 0$$

$$\sin kL (A - B) = 0$$

$$\sin kL = 0 \Rightarrow kL = m\pi$$

$$kL = \frac{m\pi}{L}$$

$$\frac{2\pi x}{\lambda} = \frac{m\pi}{L}$$

$$L = m \times \frac{\lambda}{2}$$

$$f = \frac{m}{2L}$$

