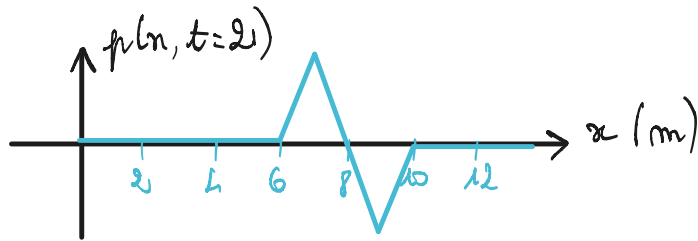


Chapitre 3

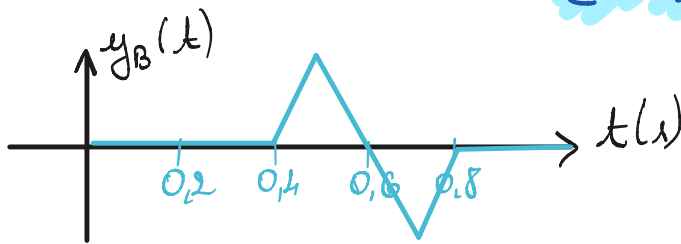
Application 1

Au bout de 2s, l'onde s'est déplacée de $\Delta x = c \Delta t = 2\text{m}$



Application 2:

L'onde arrive en B au bout de $\Delta t = \frac{AB}{c} = \frac{10}{50} = 0,2\text{s}$



Application 3:

$$y(x, 0) = \frac{2,5}{0,5 + x^2}$$

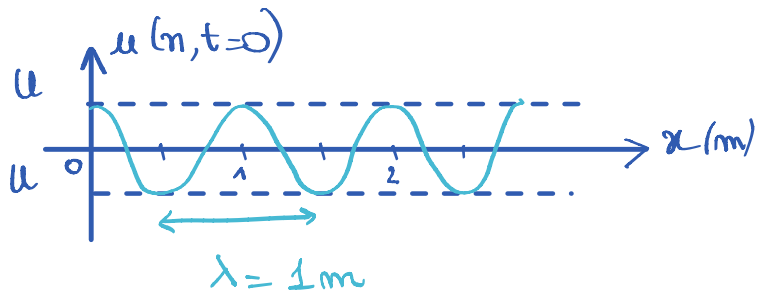
$$y(x, t) = \frac{2,5}{0,5 + (x - ct)^2}$$

$$(c = 3\text{m} \cdot \text{s}^{-1})$$

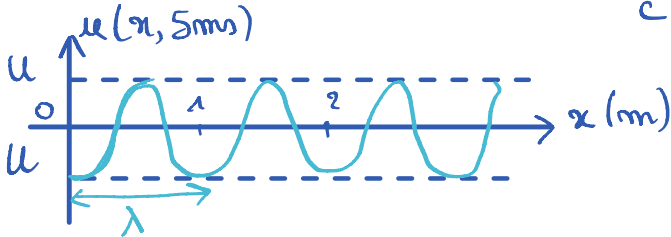
cor propagation dans le sens des x $\nearrow$.

Application 4:

$$u(x, t=0) = u \cos\left(-\omega \frac{x}{c}\right)$$



$$u(x, t=5 \text{ ms}) = u \cos\left(\omega(5 \times 10^{-3}) - \frac{x}{c}\right)$$



on décale la courbe précédente vers

la droite (signe -) de $ct = 0,5 \text{ m} = \frac{\lambda}{2}$

$$u(0,125 \text{ m}, t) \quad 0,125 = \frac{1}{8} \lambda \quad u(0,125 \text{ m}, t) = u \cos\left(\omega t - \frac{\pi}{4}\right)$$

