

Gabarito Lista 7 - Ondas

Prof. Elvis Soares

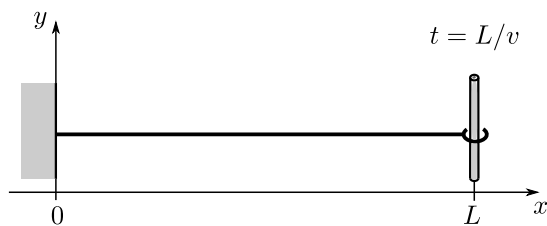
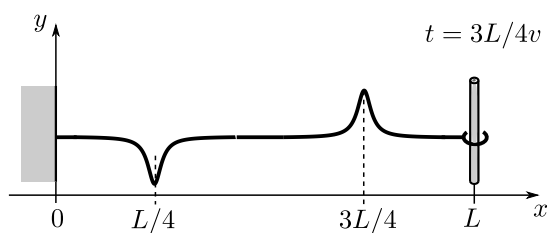
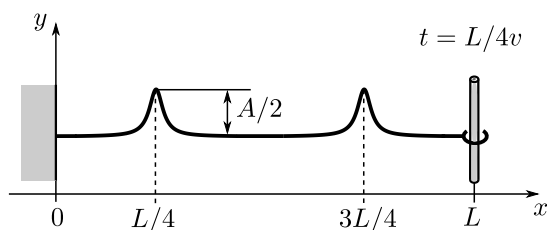
1. (a) Mostre!

(b) f se propaga para a direita e g se propaga para a esquerda.

2. (a) $v = \sqrt{T/\mu}$

(b) $f(x - vt) = \frac{1}{2}y_0(x - vt)$ e $g(x + vt) = \frac{1}{2}y_0(x + vt)$.

(c)



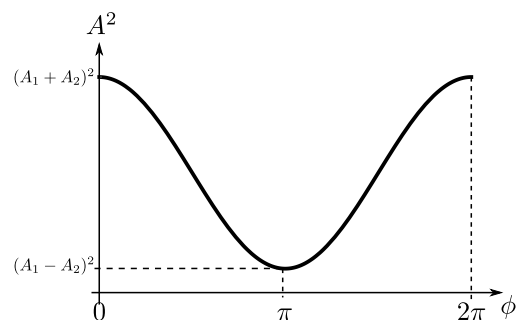
3. (a) $\lambda = x_0$ e $k = \frac{2\pi}{x_0}$.

(b) $\omega = \frac{2\pi v}{x_0}$.

(c) $y(x, t) = y_0 \cos \left[\frac{2\pi}{x_0}(x + vt) + \frac{\pi}{3} \right]$.

4. (a) $A^2 = A_1^2 + A_2^2 + 2A_1A_2 \cos \phi$.

(b)



(c) $\phi = 0$.

(d) $\phi = \pi$.

5. (a) Mostre!

(b) $y(0, t) = y(L, t) = 0$.

6. (a) $\mu = m/L$.

(b) $v = \sqrt{TL/m}$.

(c) $\lambda_n = 2L/n$.

(d) $f_n = nv/2L$.