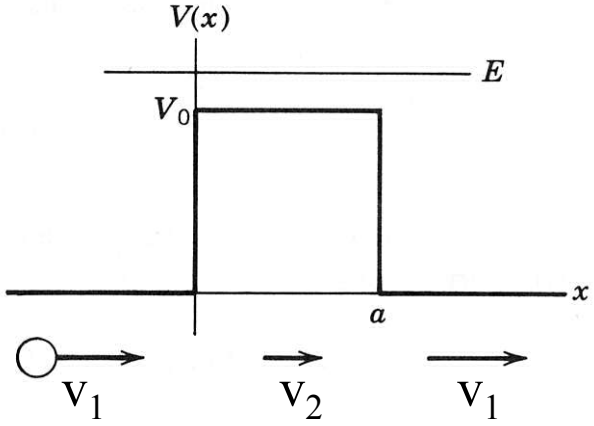
Caso $E > V_0$

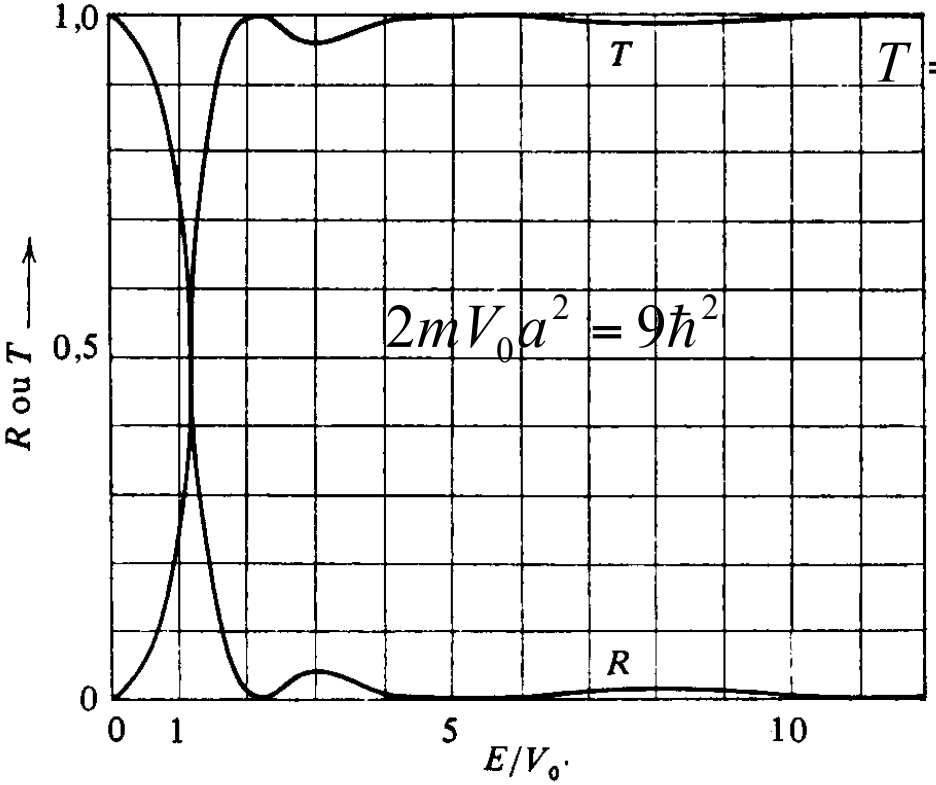


Para $x < 0$: $\psi(x) = Ae^{ik_1 x} + Be^{-ik_1 x}$

Para $x > a$: $\psi(x) = \hat{A}e^{ik_1 x}$

Para $0 < x < a$: $\psi(x) = Ce^{-ik_2 x} + De^{ik_2 x}$

$$k_1 = \frac{\sqrt{2mE}}{\hbar} = \frac{p_1}{\hbar} \quad \text{e} \quad k_2 = \frac{\sqrt{2m(E-V_0)}}{\hbar} = \frac{p_2}{\hbar}$$



$$T = \left|\frac{J_{trans}}{J_{inc}}\right| = \frac{\left|\hat{A}\right|^2}{\left|A\right|^2} = \frac{1}{1 + \frac{1}{4}\left(\frac{k_2}{k_1} + \frac{k_1}{k_2}\right)^2 \operatorname{sen}^2 k_2 a}$$

$$\Rightarrow T = \frac{1}{1 + \frac{\operatorname{sen}^2 k_2 a}{4E(E-V_0)}}$$

$$k_2 a = n\pi \Rightarrow T = 1$$