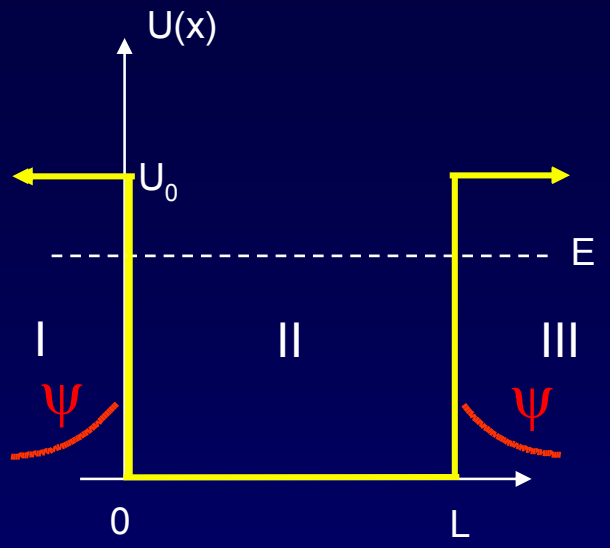
Act 2

In region III, the wave function has the form

$$\psi_{III}(x) = D_1 e^{Kx} + D_2 e^{-Kx}$$



1. As x → ∞, the wave function must vanish. (why?) What does this imply for D_1 and D_2?

   a. $D_1 = 0$ b. $D_2 = 0$ c. D_1 and D_2 are both nonzero.

2. What can we say about the coefficients C_1 and C_2 for the wave function in region I?

$$\psi_I(x) = C_1 e^{Kx} + C_2 e^{-Kx}$$

   a. $C_1 = 0$ b. $C_2 = 0$ c. C_1 and C_2 are both nonzero.