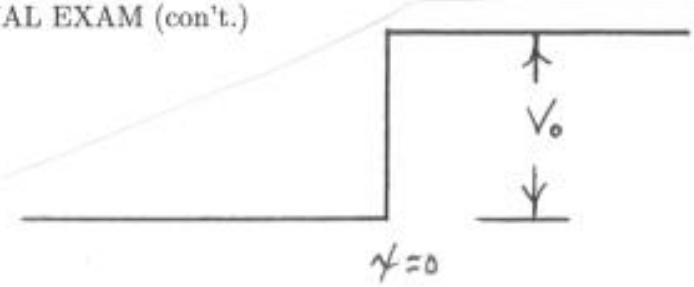
UNIVERSITY OF CALIFORNIA, SANTA BARBARA
Department of Physics

Physics 115A
Prof. Rollin J. Morrison

Winter 1996

FINAL EXAM (con't.)

1. A particle of mass m and energy E approaches the potential step of height V_0 from the left.



(a) For $E < V_0$ write an expression for the wave function of the particle in the region $x > 0$.

(b) For $E > V_0$ what is the wavelength of the particle in the region $x > 0$?

(c) For $E > V_0$ what is the probability that the particle is reflected?