Problem Set 5

Phy 211 - Fall 2002

Assigned: Thursday, Oct. 10; Due: Friday, Oct. 18

NOTE SPECIAL DUE DATE

Must be handed to me or put in my mail box by 5 pm.

Problem 1: Particle in an Expanding Box

Shankar, Problem 5.2.1

Problem 2: δ-function Bound State

Shankar, Problem 5.2.3

Problem 3: Square Well Potential

Shankar, Problem 5.2.6

Problem 4: 1-D scattering

Shankar, Problem 5.4.2.

For part b) calculate T, the transmission coefficient, for both a repulsive and attractive potential, i.e. V_0 either positive or negative. For the attractive case, assume $E > 0$. At what energies is $T = 1$?.