QUANTUM PHYSICS II
PROBLEM SET 5
due October 3, before class

A. Born rule for momentum probabilities

A spin lees particle moves in one dimension and, at some instant, is described by the wave function $\psi(x) = \langle x|\psi\rangle$. At that instant the momentum of the particle is measured. What are the possible outcomes of this measurement and with which probabilities (probability densities, to be more precise) ?

B. Born rule until we learned it

Solve Griffiths 4.49

C. Center-of-mass coordinate, reduced mass and all that

Solve Griffiths 5.1.