Homework #2 (due date: Thursday, March 28)

1. Solve the following exercises in Shankar.

   Exercises 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6

(You may refer to Section 4.5 and 4.6 of Gasiorowicz to get some help in solving Exercise 5.2.6 and 5.2.3, respectively.)

2. Find $<X>$, $<P>$, ΔX and ΔP for all eigenstates of a particle of mass m inside an (infinite) box of width L. Discuss $\Delta X \cdot \Delta P$ in terms of the quantum number n.