Problem Set #8

Due Thursday, May 22 by 10am SHARP! to Dickinson 104

Unless otherwise indicated, all problems come from "Quantum Physics: A Fundamental Approach to Modern Physics"

1. Problem 6.1
2. Fill in the gaps (with math) that lead to the derivation of Equation 6.56. The basic logic is already there, but I want you to actually carry out the algebra to show that $\left[\hat{L}_x, \hat{L}_y\right] = i\hbar\hat{L}_z$. (*Notation note: the "hat" over the L's is one way to notate them as operators.)*
3. Problem 6.6
4. Problem 6.18
5. Problem 6.19
6. Problem 6.20