Physics 4610, Quantum Mechanics Name ____________________
Prof. Schroeder
Spring 2020

Problem Set 8

(due Monday, March 16, 4:00 pm)

1. Problem 5.4, page 138 (commutators of position and momentum in three dimensions).
2. Problem 5.5, page 138 (commutators of sums and products).
3. Problem 5.8, page 142 (oscillator excited states via the raising operator).
4. Problem 5.9, pages 143 (normalization of raised and lowered states).
5. Problem 5.10, page 143 (matrices for the harmonic oscillator).
6. Problem 5.11, page 145 (a toy system with compatible observables).