

Chem. 1410 – HW #2  
Assigned Jan. 17, due Jan, 26.

1. P 2.10

2. P 2.27

3. P 4.9. Also, explain why the energy for the given wavefunction is above the true ground state energy.

4. What are the energies of the first six energy levels for the 2D particle-in-the-box (of equal sides) problem, and indicate the degeneracies.

5. For the 2D particle-in-the-box (of equal sides) problem, what is the probability of the particle being found in the region  $0 \leq x \leq a/3$ ;  $2a/3 \leq y \leq a$ ?