Physics 404   **HOMEWORK ASSIGNMENT #1**   **Fall 2013**

Due date: Thursday, Sept. 12   **Deadline:** Tuesday, Sept. 17

These dates are one lecture later than anticipated since I will be out on Thursday. Homework Assignment #2 will follow quickly.

All problems are from Schroeder's text.

Each problem is worth the number of points in parentheses. To get partial credit for the wrong final answer, you must show your work!

1. (5) 1.5 Be sure to specify which kind of thermometer you are considering.

2. (10) 1.8 a,c (b done in class)

3. (10) 1.14 (First look at 1.13, including the footnote)

4. (15) 1.17 a and c. In part a, you should first show that $V/n \approx (RT/p) + B$ for $B \ll RT/p$. In the solutions, I will use the full solution for V/n and this approximation to verify that it is an excellent approximation. I will also supply the answer to part b.

5. (10) 1.24

For chap. 2, review probability theory, especially permutations and combinations!