

**General Chemistry II****Problem Set 1**

(on the first half of Chapter 1 of Atkins and Jones)

**Due Wednesday, September 15, 2004 (at 5 p.m.)**

For the math problems, remember to show in writing the process by which you have obtained your answers. (Also do so for the short answer problems when you are told to.) Your explanations should be clear and concise. Final numerical answers must contain the correct number of significant figures (see pp. A6-A7 of Atkins and Jones for rules) and have the right physical units attached to receive full credit.

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1. Exercise 1.8 (10 points). Answer part (a) in J, and parts (b) and (c) in kJ.
2. Exercise 1.12 (10 points). Explain briefly why each statement is true or false.
3. Exercise 1.14 (10 points). Report the wavelength in nm.
4. Exercise 1.18 (5 points). Report the wavelength in nm.
5. Exercise 1.22 (10 points)
6. Exercise 1.42 (5 points)
7. Exercises 1.46 and 1.48 (5 points)
8. Exercise 1.54 (10 points)
9. Exercise 1.56 (10 points). Briefly explain why you reject particular subshell labels.