

**Accelerated General Chemistry**  
**Problem Set 8**  
**Due Friday, October 24, 2008 (at 4:00 p.m.)**  
Total Points on This Assignment = 40

Note: You are free to write the units of  $h$  as **J s** or as **J s particle<sup>-1</sup>**. Likewise, for  $k$ , you are free to write the units as **J K<sup>-1</sup>** or as **J K<sup>-1</sup> particle<sup>-1</sup>**.

1. (8 points) Problem 3.6. Report all answers in this problem to two significant figures. If you write  $k$  as  $1.381 \times 10^{-23} \text{ J K}^{-1} \text{ particle}^{-1}$ , then the units of Equation 3.9 need to be changed to  $\text{J particle}^{-1}$
2. (10 points) Problem 3.14. Assume all atomic masses are known to the nearest 0.1 amu.
3. (4 points) Problem 3.19. Note: You should use information from Problem 3.14.
4. (12 points) Problem 3.20
5. (6 points) Problem 3.28