

General Chemistry II
Problem Set 9
Due Tuesday, November 30, 2004

1. (12 points) Atkins and Jones Exercise 9.48
2. (8 points) Atkins and Jones Exercise 9.52
3. (12 points) Atkins and Jones Exercise 9.66. Assume that the pressure of the 4.00 L of HCl(g) is 1.00 atm, not 1.00 bar. Also, a simple calculation (which is not required) will verify that some I₂(s) is present when the reaction reaches equilibrium. This is important, because while I₂(s) does not appear in the equilibrium constant expression, the chemical equilibrium in the problem will not be established unless there is some I₂(s) present. We will deal with so-called “heterogeneous” equilibria (that is, equilibria with species in more than one phase) in greater detail towards the end of the semester.
4. (5 points) Atkins and Jones Exercise 9.76
5. (3 points) Atkins and Jones Exercise 9.80
6. (8 points) Atkins and Jones Exercise 9.86—Part (a) only.