

Chemistry 342
Spring, 2001
Problem Set 7

Due Friday, October 19

Finish Chapter 4.

Do problems 4, 8, 10, 11, 13.

Also answer the following questions:

1. Three identical pieces of metal initially at temperatures T_1 , T_2 , and T_3 are brought to thermal equilibrium by a reversible process. How much work can be extracted from the process? Assume a constant heat capacity C for each piece.
2. Calculate the molar heat capacity at constant volume, $C_{v,m}$ for liquid water and solid copper, using data found in the tables in your book. Also calculate the heat capacity ratio, $\gamma = C_{p,m}/C_{v,m}$, using the given values of $C_{p,m}$.