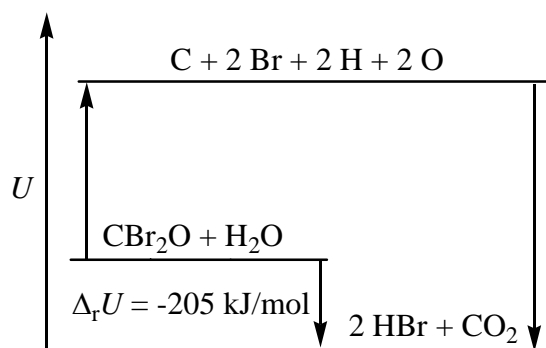


Accelerated General Chemistry
Problem Set 9--Revised
Now Due Monday, November 12, 2007 (at 4:00 p.m.)
Total Points on This Assignment = 76

Note that the first four problems (from Chapter 4) are identical to what I handed out last week.

- (13 points) Problem 4.6. In part (b), assume that the volume of the sample is decreased until its pressure equals that of the surroundings, namely 4 bar.
- (7 points) Problem 4.10. Compute all specific heats to two significant figures.
- (6 points) Problem 4.11. Compute all energies to two significant figures.
- (8 points) Problem 4.17. Note that $\Delta_r U$, that is, the internal energy change per mole of reaction, is virtually identical to what we have referred to as ΔU_c in class and lab. The only difference is that $\Delta_r U$ refers to a chemical equation balanced with a specific set of coefficients. So, for example, "the reaction as written" in part (b) involves (exactly) 2 mol of $C_8H_{18}(l)$, etc.
- (4 points) Problem 5.6 parts (a) and (b). When Hanson says, "No need to do any calculations here; just focus on relative ground states," he means that the following diagram will suffice:

e.g. Problem 5.6(c)



- (4 points) Problem 5.9
- (6 points) Problem 5.11
- (12 points) Problem 5.14. You must draw Lewis structures for all reactants and products.
- (16 points) Problem 5.18. You must draw Lewis structures for all reactants and products.