AP Chemistry

Thou Shalt Not Forget Questions

**Thermochemistry**

1. exo/endo reactions: (−)/(+) ΔH; feels (hot/cold); heat is a (product/reactant); temperature goes (up/down)
2. Breaking bonds/Forming Bonds is endo/exo.
3. ΔHrxn = ΔHproducts − ΔHreactants or ΔHreactants − ΔHproducts
4. If a reaction is exo/endo, then the bonds formed in the products are (stronger or weaker) than the reactants?
5. Doubling a reaction?/Reversing a reaction?/Adding reactions? What happens to ΔH?

**Thermodynamics: ΔG and ΔS**

1. Thermodynamically favorable (spontaneous) reactions have a what sign for ΔG?
2. a) Reactions with what signs for ΔH and ΔS are ALWAYS/NEVER thermodynamically favorable?

b) If a reaction is “enthalpy driven & entropy driven”, what are signs of ΔH and ΔS?

1. If a reaction increases/decreases the # of moles of gas, then the sign for ΔS is what?
2. If ΔG is (−)/(+), then Keq is greater than or less than 1?
3. What are the most common units for ΔH and ΔS?
4. At equilibrium, what is the value of ΔG?
5. a) When using ΔGo = −RT lnK, the value w/ units for R is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

b) If you use the value of 8.314 for R in the equation ΔGo = −RT lnK, then what are the units for ΔG?