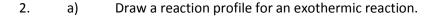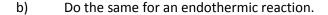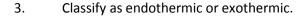**Chemistry Pretest 1.3**

1. a) Draw two H_2O_2 molecules. Label all *intermolecular* and *intramolecular* bonds. How many intramolecular bonds are there for each molecule?

   b) What kind of bond is formed when straightened-out egg protein molecules turn white during cooking?

2. a) Draw a reaction profile for an exothermic reaction.

   b) Do the same for an endothermic reaction.

3. Classify as endothermic or exothermic.

"What kind of Bond" does not refer to the different Bond actors that've played the role.

   a) If a yellow straw turns blue when placed in ice but reverts to yellow when placed in warm water, then yellow → blue is ___
   b) A reaction where $\Delta H_{bb} > \Delta H_{BF}$ ___
   c) A reaction with kJ among the reactants ___
   d) The electrolysis of water : $2H_2O \rightarrow 2H_2 + O_2$ ___
   e) The condensation of alcohol on a cold glass
   f) A reaction in which $\Delta H = (-)$ ___

4. a) What is the partial pressure of CO_2 if its concentration in a 100.0 kPa atmosphere is 396 ppm ? Few people realize that when ppm is expressed for gases, it's not mg/L, as it is for aqueous solutions. Instead it's *a mole fraction*: $\frac{n_A}{n_T}$

   The reason for this is that although there are a million mg of water in a 1 L of *liquid* water, 1 L of air does not weigh 1 million mg. So for air 396 ppm = **396 moles of CO2 per 1 000 000 moles of air**

   b) How many grams of CO_2 would there be in 2.0 L of air with a 396 ppm CO_2 concentration at 30.0 C?

   NO Flashback on this mini theory/ lab pretest.