Review and What to know for Thermodynamics Test

Definitions: Specific heat, Joule, enthalpy, entropy, heat, calorimeter, collision theory, equilibrium

The difference between an exothermic and endothermic reaction: in terms of heat/q value, ΔH value

\*Endothermic = +q, + ΔH Exothermic = -q, -ΔH

On an energy diagram:

\*Exothermic: reactants have more energy (higher) than products🡪 energy is released.

\*Endothermic: reactants have less energy (lower) than products🡪 energy is absorbed.

\*Locate Activation energy, Enthalpy, Energy of Products, Energy of Reactants, Activated complex

Should be able to identify what is happening during a phase change:

\*s🡪l and l🡪g = endothermic (gaining energy)

\*g🡪l and l🡪s = exothermic (losing energy)

Should be able to read a heating curve and determine which appropriate equations to use:

 q=mCΔT , q=mHf, q=mHv

\*Also, when to add them together when passing the 0 degree or 100 degree mark

\*Stop at Hf or Hv when changing phases at 0 or 100 ̊C.

\*q is positive when going up heating curve, negative when going down heating curve.

How to set up an equilibrium constant equation (only using (aq) and (g) designations).

Keq= $\frac{[products]^{coefficient}}{[reactants]^{coefficient}}$

\* when K > 1 shift toward products, and K < 1 shift toward reactants.

\*Temperature only affects K.