Chapter 6 (for Exam 3)

- Sign conventions for $\Delta E$, $\Delta H$, $q$, $w$
- $\Delta E = q + w$
- State function
- Calorimetry: bomb and "coffee cup"
  
  \[
  \Delta V = 0 \quad \Delta H = \Delta P = 0
  \]
  
  Heat involved = heat gained by water or solution + heat gained by calorimeter

- Hess' Law: 2 ways to calculate
  
  1. Manipulating 2 or 3 equations
  2. Using $\Delta H_f$'s
  
  $\Delta H_{\text{rxn}} = \sum n \Delta H_f^\circ \text{products} - \sum n \Delta H_f^\circ \text{reactants}$

- Meaning of $\Delta H_f^\circ$
- Using heat involved or amount of material involved