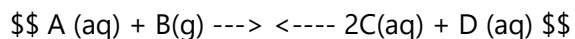


# Reversal

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## Equilibrium Constant

- $K_{eq}$  = ratio between the concentrations products formed at equilibrium to concentrations reactants (g and aq only)



- $K_{eq} = 1$  nothing favored
- $K_{eq} > 1$  products favored
- $K_{eq} < 1$  reactants favored

## Le Chatelier's Principle

- if stress is applied to system in dynamic equilibrium system will change to relieve stress:
  - temperature
  - concentration (affects gases, liquids + aqueous materials no solids)
  - pressure: affects gases

### Concentration + temperature

- what would happen if I add reactant: (shift right) makes more products
- what would happen if I remove product: (shift right) makes more products (more efficient because you don't have to spend anything unlike adding reactant)
- What would happen if I put reactant in freezer if  $\Delta H$  was positive (endo): (shift left) make more reactant

### Pressure

- count number of moles
  - add or take away from the side with more moles
- Increase Pressure:
  - means: add pressure to reactants
    - (shift right)
    - make more product