**Gibb’s Free Energy Video Study Guide**

*To accompany the khan academy video on youtube.com at* [*https://www.youtube.com/watch?feature=player\_embedded&v=ViAmQivKif0#*](https://www.youtube.com/watch?feature=player_embedded&v=ViAmQivKif0#)*!*

1. If ΔHrxn = ΔHproducts – ΔHreactants, then explain why if ΔHrxn­ is negative then the reaction will be exothermic.
2. If a reaction is endothermic, describe the direction of heat transfer.
3. Describe a situation where the entropy of a system increases. Give one chemistry-related system and one non-chemistry system.
4. If the temperature is high, then why is the entropy large?
5. What is the equation to determine spontaneity?
   1. At low temperatures, which term of the equation above will not affect the Free Energy as much as it would at high temperatures?
   2. Why can’t the temperature be negative in this equation?
   3. If enthalpy is negative and entropy is positive, then explain why the reaction will spontaneous.