

Entropy Worksheet

Name: _____ Pd: ____

1. Define entropy:
2. How is entropy different from enthalpy?
3. What variables or conditions must be considered when comparing the entropy of two substances?
4. Does entropy increase or decrease with increase in temperature? Explain.
5. Predict the sign (positive or negative) of ΔS_{system} for each of the following changes & explain why.
 - a. $\text{ClF}_{(g)} + \text{F}_{2(g)} \rightarrow \text{ClF}_{3(g)}$ _____
 - b. $\text{NH}_{3(g)} \rightarrow \text{NH}_{3(aq)}$ _____
 - c. $\text{CH}_3\text{OH}_{(l)} \rightarrow \text{CH}_3\text{OH}_{(aq)}$ _____
 - d. $\text{C}_{10}\text{H}_8_{(l)} \rightarrow \text{C}_{10}\text{H}_8_{(s)}$ _____
 - e. $\text{AgCl}_{(s)} \rightarrow \text{AgCl}_{(aq)}$ _____
6. If a system becomes more disordered during a process, how does the system's entropy change?
7. When you dissolve a teaspoonful of sugar in a cup of tea, does the entropy of the system increase or decrease? Define the system and explain your answer.