

- 1 Which of the following is true about the total entropy change, ΔS_{tot} ?
 - A $\Delta S_{\text{tot}} = \Delta S_{\text{sys}} + \Delta S_{\text{sur}}$
 - B $\Delta S_{\text{tot}} = \Delta S_{\text{sys}} + \Delta H_{\text{sur}}/T$
 - C $\Delta S_{\text{tot}} = \Delta S_{\text{sys}} - \Delta H_{\text{sys}}/T$
 - D All of the above
- 2 For the phase change $s \rightarrow g$ (sublimation), what is true about ΔS_{sys} at the sublimation temperature, T_{sub} ?
 - A ΔS_{sys} is always positive
 - B ΔS_{sys} is always negative
 - C ΔS_{sys} may be either positive or negative
 - D $\Delta S_{\text{sys}} = 0$
- 3 For the phase change $s \rightarrow g$ (sublimation), what is true about ΔS_{sur} at the sublimation temperature, T_{sub} ?
 - A ΔS_{sur} is always positive
 - B ΔS_{sur} is always negative
 - C ΔS_{sur} may be either positive or negative
 - D $\Delta S_{\text{sur}} = 0$
- 4 For the phase change $s \rightarrow g$ (sublimation), what is true about ΔS_{net} at the sublimation temperature, T_{sub} ?
 - A ΔS_{net} is always positive
 - B ΔS_{net} is always negative
 - C ΔS_{net} may be either positive or negative
 - D $\Delta S_{\text{net}} = 0$
- 5 At the sublimation temperature, T_{sub} , the total entropy change, $\Delta S_{\text{tot}} = \Delta S_{\text{sys}} - \Delta H_{\text{sys}}/T = 0$. What is true for ΔS_{net} for the phase change $s \rightarrow g$ (sublimation) when $T < T_{\text{sub}}$?
 - A $\Delta S_{\text{tot}} < 0$
 - B $\Delta S_{\text{tot}} = 0$
 - C $\Delta S_{\text{tot}} > 0$
 - D More information needed
- 6 At the sublimation temperature, T_{sub} , the total entropy change, $\Delta S_{\text{tot}} = \Delta S_{\text{sys}} - \Delta H_{\text{sys}}/T = 0$. What is true ΔS_{net} for the phase change $s \rightarrow g$ (sublimation) when $T > T_{\text{sub}}$?
 - A $\Delta S_{\text{tot}} < 0$
 - B $\Delta S_{\text{tot}} = 0$
 - C $\Delta S_{\text{tot}} > 0$
 - D More information needed