

Laws of Thermodynamics and Changes in Matter — Answer Key

1. Needs the reaction energy info (table/diagram) to compute ΔH
2. A
3. Depends on signs of ΔH and ΔS given in the prompt figure; likely “favored at high T” if $\Delta H > 0$, $\Delta S > 0$; “favored at low T” if $\Delta H < 0$, $\Delta S < 0$
4. Needs the stated ΔH per mole for reaction 4 to choose 65 vs 130 kJ and sign
5. D
6. A
7. D
8. D
9. Choose the diagram with products above reactants (endothermic, $\Delta H > 0$)
10. D