

THE FACTORS DETERMINING EQUILIBRIUM (CONT'D)

- 1) b, c, e, f, g entropy increases.
a, d, h, i entropy decreases.

- 2) a) $\Delta G = +242.4 \text{ kJ}$ not spontaneous.
b) $\Delta G = +10.87 \text{ kJ}$ not spontaneous
c) $\Delta G = -0.5 \text{ kJ}$ spontaneous
d) $\Delta G = -35.9 \text{ kJ}$ spontaneous

- 3) a) $\Delta G = -32.90 \text{ kJ}$ Predominantly products (50-90%)
b) $\Delta G = -123 \text{ kJ}$ Predominantly products (>90%)
c) $\Delta G = -166 \text{ kJ}$ " " (50-90%)
d) $\Delta G = +542 \text{ kJ}$ " reactants (>90%)
e) $\Delta G = +26 \text{ kJ}$ " " (50-90%)
f) $\Delta G = +47\frac{1}{2} \text{ kJ}$ " " (50-90%)