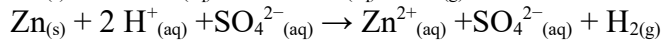
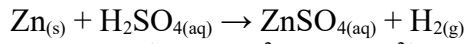
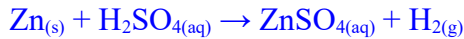


Problema 465: Axusta a reacción seguinte e di se será espontánea, utilizando as ΔG°_f



$$\Delta G^{\circ}_R = \sum n_p \cdot \Delta G^{\circ}_{f \text{ prod}} - \sum n_r \cdot \Delta G^{\circ}_{f \text{ react}}$$

$$\Delta G^{\circ}_R = 1 \text{ mol} \cdot \Delta G^{\circ}_f [\text{Zn}^{2+}_{(aq)}] + 1 \text{ mol} \cdot \Delta G^{\circ}_f [\text{SO}_4^{2-}_{(aq)}] + 1 \text{ mol} \cdot \Delta G^{\circ}_f [\text{H}_{2(g)}] -$$

$$- 1 \text{ mol} \cdot \Delta G^{\circ}_f [\text{Zn}_{(s)}] - 2 \text{ mol} \cdot \Delta G^{\circ}_f [\text{H}^+_{(aq)}] - 1 \text{ mol} \cdot \Delta G^{\circ}_f [\text{SO}_4^{2-}_{(aq)}]$$

$$\Delta G^{\circ}_R = 1 \text{ mol} \cdot \Delta G^{\circ}_f [\text{Zn}^{2+}_{(aq)}] = 1 \text{ mol} \cdot \left(-147,1 \frac{\text{kJ}}{\text{mol}} \right) = \underline{\underline{-147,1 \text{ kJ}}}$$

Se a variación de enerxía libre é negativa indica que **a reacción é espontánea** a temperatura ambiente