

Solutions

Each answer shows the steps, then the **result**.

2.1

- $E_{\text{cell}}^{\circ} = E_{\text{cathode}}^{\circ} - E_{\text{anode}}^{\circ}$

2.2

- $0.80 - (-0.44) = +1.24 \text{ V}$

2.3

- Galvanic

3.1 A

- positive

3.2

(a)

- $E_{\text{cell}}^{\circ} = 0.34 - (-0.76) = +1.10 \text{ V}$

(b)

- $\Delta G^{\circ} = -(2)(96\,500)(1.10) = -2.12 \times 10^5 \text{ J} = -212 \text{ kJ}$

3.3

- $\Delta G^{\circ} = -nFE^{\circ}$; with n and F positive, a positive E° makes ΔG° negative — a favorable reaction