

Solutions

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

2.1

- The anode

2.2

- A galvanic (voltaic) cell

2.3

- From the anode to the cathode

3.1 B

- the cathode

3.2

(a)

- Anode: Zn (oxidized); cathode: Cu (where Cu^{2+} is reduced)

(b)

- From the Zn electrode to the Cu electrode

3.3

- A galvanic cell runs a favorable reaction ($\Delta G < 0$) and **releases** electrical energy; an electrolytic cell uses an external power source to drive an unfavorable reaction ($\Delta G > 0$)