

Marks
5

- A galvanic cell is made of a Zn^{2+}/Zn half cell with $[\text{Zn}^{2+}] = 2.0 \text{ M}$ and an Ag^+/Ag half cell with $[\text{Ag}^+] = 0.050 \text{ M}$. Calculate the electromotive force of the cell at $25 \text{ }^\circ\text{C}$.

Answer:

Calculate the equilibrium constant of the reaction at $25 \text{ }^\circ\text{C}$.

Answer:

Calculate the standard Gibbs free energy of the reaction at $25 \text{ }^\circ\text{C}$.

Answer:

Indicate whether the reaction is spontaneous or not. Give a reason for your answer.

Express the overall reaction in the shorthand voltaic cell notation.