Tracking Bridge Ions as a Cell Runs

Scoring guide · one credit per question · review written work against each rubric

Tracking Bridge Ions as a Cell Runs

Question 1

Choice (4)

The zinc reaction adds three ions of charge +2 to that liquid, for a total of +6 charge units.

Question 2

The zinc liquid gains +6 charge units and needs negative ions. The copper liquid loses +6 charge units when three Cu^{2+} ions plate out, so positive ions must enter there to offset the change.

Question 3

The first bridge needs six ions of charge −1 to supply −6. The second needs three ions of charge −2 to supply the same total.

Question 4

The negative ion count falls from six to three but the total bridge charge stays −6. The same three zinc ions form in each run, releasing six electrons through the wire in both cases.