Tracking Electrons Between Two Ion Reductions

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

Tracking Electrons Between Two Ion Reductions

Question 1

Choice (1)

The copper route makes solid Cu. The iron route leaves Fe^{2+} dissolved.

Question 2

P uses 3 × 2 = 6 electrons for copper, leaving two for two Fe^{3+} ions. Q uses 2 × 2 = 4 for copper, leaving four for four Fe^{3+} ions.

Question 3

P and Q both use eight electrons, but a different number goes to iron reduction. The deposit counts are three and two because the electron supply is split differently.

Question 4

All eight electrons go to copper reduction. At two electrons per ion, four copper atoms deposit.