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Balancing Redox Reactions

Chemistry

Balance each reaction with half-reactions. Balance atoms other than O and H first. In acidic solution, add H_2O to balance O, then H^+ to balance H, then e^- to the more positive side. Make electrons lost equal electrons gained, then check atoms and charge.

1. $Ag^+ + Cu \rightarrow Ag + Cu^{2+}$

2. $Al + Cu^{2+} \rightarrow Al^{3+} + Cu$

3. In acidic solution: $MnO_4^- + Fe^{2+} \rightarrow Mn^{2+} + Fe^{3+}$

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4. In acidic solution: $Ag + NO_3^- \rightarrow Ag^+ + NO$

5. In acidic solution: $Cu + SO_4^{2-} \rightarrow Cu^{2+} + SO_2$

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