



Redox Problem Set

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Balance by the oxidation number method.

- 1) $\text{MnO}_4^- + \text{SO}_3^{2-} \rightarrow \text{Mn}^{2+} + \text{SO}_4^{2-}$... in acid.
- 2) $\text{Ag(s)} + \text{NO}_3^- \rightarrow \text{Ag}^+ + \text{NO}$... in acid.
- 3) $\text{Fe}^{+2} + \text{CrO}_4^{2-} \rightarrow \text{Fe}^{+3} + \text{Cr(OH)}_3(\text{s})$... in base.
- 4) $\text{MnO}_4^- + \text{NH}_3 \rightarrow \text{MnO}_2(\text{s}) + \text{NO}_3^-$... in base.
- 5) $\text{ClO}_2(\text{g}) + \text{SbO}_2^- \rightarrow \text{ClO}_2^- + \text{Sb(OH)}_6^-$... in base.
- 6) $\text{Mg(s)} + \text{ReO}_4^- \rightarrow \text{Mg}^{+2} + \text{Re}^-$... in acid.
- 7) $\text{Cr}_2\text{O}_7^{2-} + \text{Fe}^{2+} \rightarrow \text{Cr}^{3+} + \text{Fe}^{3+}$... in acid.
- 8) $\text{HSO}_3^- + \text{IO}_3^- \rightarrow \text{SO}_4^{2-} + \text{I}_2$... in acid.