

Oxidation – Reduction Reactions

ANSWERS

- $16 \text{H}^+ + 2\text{MnO}_4^- + 10\text{Cl}^- \rightarrow 2\text{Mn}^{2+} + 5\text{Cl}_2 + 8 \text{H}_2\text{O}$
- $34\text{H}^+ + 5\text{Cr}_2\text{O}_7^{2-} + 3\text{I}_2 \rightarrow 6\text{IO}_3^- + 10\text{Cr}^{3+} + 17 \text{H}_2\text{O}$
- $4 \text{H}_2\text{O} + 4\text{SO}_2 + \text{ClO}_4^- \rightarrow 4\text{SO}_4^{2-} + \text{Cl}^- + 8 \text{H}^+$
- $22 \text{H}^+ + 2 \text{Cr}_2\text{O}_7^{2-} + 3\text{C}_2\text{O}_3^{2-} \rightarrow 4\text{Cr}^{3+} + 6 \text{CO}_2 + 11 \text{H}_2\text{O}$
- $5\text{CO} + \text{I}_2\text{O}_5 \rightarrow \text{I}_2 + 5 \text{CO}_2$
- $8 \text{HNO}_3 + 6 \text{KBr} \rightarrow 2 \text{NO} + 3 \text{Br}_2 + 6 \text{KNO}_3 + 4 \text{H}_2\text{O}$
- $2 \text{Mn}^{2+}_{(\text{aq})} + 5 \text{NaBiO}_3_{(\text{s})} + 14 \text{H}^+ \rightarrow 5 \text{Bi}^{3+}_{(\text{aq})} + 2 \text{MnO}_4^{-}_{(\text{aq})} + 7 \text{H}_2\text{O} + 5 \text{Na}^+$
- $\text{Br}_{2(\text{aq})} + \text{SO}_{2(\text{aq})} + 2 \text{H}_2\text{O} \rightarrow 2 \text{Br}^{-}_{(\text{aq})} + \text{SO}_4^{2-}_{(\text{aq})} + 4 \text{H}^+$
- $3 \text{CH}_3\text{OH}_{(\text{aq})} + 8 \text{H}^+ + \text{Cr}_2\text{O}_7^{2-}_{(\text{aq})} \rightarrow 3 \text{CH}_2\text{O}_{(\text{aq})} + 2 \text{Cr}^{3+}_{(\text{aq})} + 7 \text{H}_2\text{O}$
- $\text{S}^{2-}_{(\text{aq})} + 4 \text{I}_{2(\text{aq})} + 8 \text{OH}^- \rightarrow \text{SO}_4^{2-}_{(\text{aq})} + 8 \text{I}^{-}_{(\text{aq})} + 4 \text{H}_2\text{O}$
- $\text{S}_{8(\text{s})} + 16 \text{H}_2\text{SO}_{4(\text{aq})} \rightarrow 24 \text{SO}_{2(\text{g})} + 16 \text{H}_2\text{O} \quad \textit{ACIDIC}$
- $2 \text{CrI}_{3(\text{s})} + 27 \text{Cl}_{2(\text{g})} + 32 \text{H}_2\text{O} \rightarrow 2 \text{CrO}_4^{2-}_{(\text{aq})} + 6 \text{IO}_4^{-}_{(\text{aq})} + 54 \text{Cl}^{-}_{(\text{aq})} + 64 \text{H}^+$