

Oxidation-Reduction Worksheet

1. Show the gain or loss of e^- : $\text{MgCO}_3 \rightarrow \text{CO}$
2. Show the gain or loss of e^- : $\text{KClO}_3 \rightarrow \text{Cl}^-$
3. How many e^- are gained when CrCl_3 changes to Cr ?
4. How many electrons are gained when NaClO_4 changes to Cl^- ?
5. What is the oxidation number of N in NH_3 ?
6. What is the oxidation number of U in UF_6 ?
7. $\text{NO}_3^- + \text{H}^+ + \text{Cu} \rightarrow \text{Cu} + \text{H}_2\text{O} + \text{NO}$
Give the name of the reactant that is the reducing agent.
8. $\text{Cr}_2\text{O}_7 + \text{H}^+ + \text{Fe}^{+2} \rightarrow \text{Fe}^{+3} + \text{H}_2\text{O} + \text{Cr}^{+2}$
What is the reducing agent?
9. $\text{O}_2 + \text{H}^+ + \text{I}^- \rightarrow \text{I}_2 + \text{H}_2\text{O}$
What is the oxidizing agent?
10. $\text{MnO}_4^- + \text{H}^+ + \text{Fe}^{+2} \rightarrow \text{Fe}^{+3} + \text{H}_2\text{O} + \text{Mn}^{+2}$
What number goes in front of the permanganate ion when the equation is balanced?
What is the reducing agent? What is the substance that is reduced?
11. $\text{SO}_4^{-2} + \text{H}^+ + \text{Zn} \rightarrow \text{SO}_2 + \text{Zn}^{+2} + \text{H}_2\text{O}$
What number goes in front of the sulfate ion when the equation is balanced?
12. $\text{Sn}^{+2} + \text{SO}_4^{-2} + \text{H}^+ \rightarrow \text{Sn}^{+4} + \text{S} + \text{H}_2\text{O}$
Give the name of the substance that is reduced.
13. $\text{Cl}_2 + \text{Al} \rightarrow \text{Al}^{+3} + \text{Cl}^{-1}$
Give the name of the substance oxidized.
14. How many electrons are gained when MnO_2 changes to Mn^{+2} ?
15. What is the oxidation number of C in MgCO_3 ?
16. Oxidation number of Cl in NaClO_4 _____.
17. Oxidation number of Cl in KClO_3 _____.
18. $\text{NH}_3 \rightarrow \text{NO}_2$ _____ electrons are lost.
19. $\text{H}_2\text{S} \rightarrow \text{SO}_3$ _____ electrons are lost.