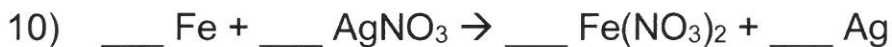
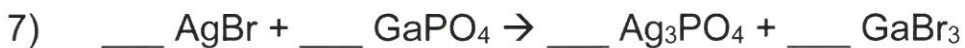
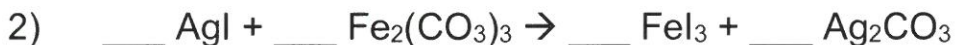
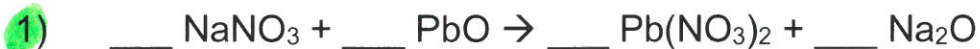


Balancing Equations Practice Worksheet

Balance the following equations:



Types of Reactions Worksheet

Balance the following equations and indicate the type of reaction taking place:



Type of reaction: _____



Type of reaction: _____



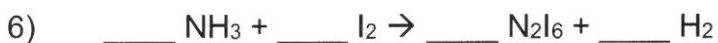
Type of reaction: _____



Type of reaction: _____



Type of reaction: _____



Type of reaction: _____



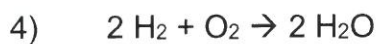
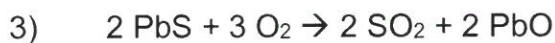
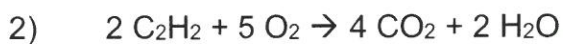
Type of reaction: _____



Type of reaction: _____

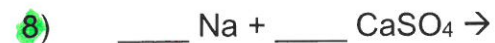
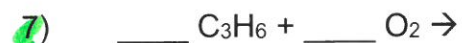
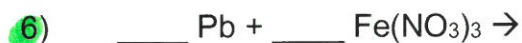
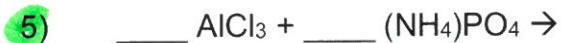
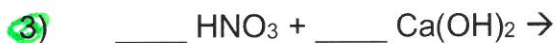
Oxidation and Reduction Practice

In each of the following equations, indicate the element that has been oxidized and the one that has been reduced. You should also label the oxidation state of each before and after the process:



Fun With Predicting Reaction Products

Predict the products of each of the following chemical reactions. If a reaction will not occur, explain why not:



Balancing Chemical Equations Worksheet

1. $\underline{\quad} \text{H}_2 + \underline{\quad} \text{O}_2 \rightarrow \underline{\quad} \text{H}_2\text{O}$
2. $\underline{\quad} \text{N}_2 + \underline{\quad} \text{H}_2 \rightarrow \underline{\quad} \text{NH}_3$
3. $\underline{\quad} \text{S}_8 + \underline{\quad} \text{O}_2 \rightarrow \underline{\quad} \text{SO}_3$
4. $\underline{\quad} \text{N}_2 + \underline{\quad} \text{O}_2 \rightarrow \underline{\quad} \text{N}_2\text{O}$
5. $\underline{\quad} \text{HgO} \rightarrow \underline{\quad} \text{Hg} + \underline{\quad} \text{O}_2$
6. $\underline{\quad} \text{CO}_2 + \underline{\quad} \text{H}_2\text{O} \rightarrow \underline{\quad} \text{C}_6\text{H}_{12}\text{O}_6 + \underline{\quad} \text{O}_2$
7. $\underline{\quad} \text{Zn} + \underline{\quad} \text{HCl} \rightarrow \underline{\quad} \text{ZnCl}_2 + \underline{\quad} \text{H}_2$
8. $\underline{\quad} \text{SiCl}_4 + \underline{\quad} \text{H}_2\text{O} \rightarrow \underline{\quad} \text{H}_4\text{SiO}_4 + \underline{\quad} \text{HCl}$
9. $\underline{\quad} \text{Na} + \underline{\quad} \text{H}_2\text{O} \rightarrow \underline{\quad} \text{NaOH} + \underline{\quad} \text{H}_2$
10. $\underline{\quad} \text{H}_3\text{PO}_4 \rightarrow \underline{\quad} \text{H}_4\text{P}_2\text{O}_7 + \underline{\quad} \text{H}_2\text{O}$
11. $\underline{\quad} \text{C}_{10}\text{H}_{16} + \underline{\quad} \text{Cl}_2 \rightarrow \underline{\quad} \text{C} + \underline{\quad} \text{HCl}$
12. $\underline{\quad} \text{CO}_2 + \underline{\quad} \text{NH}_3 \rightarrow \underline{\quad} \text{OC}(\text{NH}_2)_2 + \underline{\quad} \text{H}_2\text{O}$
13. $\underline{\quad} \text{Si}_2\text{H}_3 + \underline{\quad} \text{O}_2 \rightarrow \underline{\quad} \text{SiO}_2 + \underline{\quad} \text{H}_2\text{O}_3$
14. $\underline{\quad} \text{Al}(\text{OH})_3 + \underline{\quad} \text{H}_2\text{SO}_4 \rightarrow \underline{\quad} \text{Al}_2(\text{SO}_4)_3 + \underline{\quad} \text{H}_2\text{O}$
15. $\underline{\quad} \text{Fe} + \underline{\quad} \text{O}_2 \rightarrow \underline{\quad} \text{Fe}_2\text{O}_3$
16. $\underline{\quad} \text{Fe}_2(\text{SO}_4)_3 + \underline{\quad} \text{KOH} \rightarrow \underline{\quad} \text{K}_2\text{SO}_4 + \underline{\quad} \text{Fe}(\text{OH})_3$
17. $\underline{\quad} \text{C}_7\text{H}_6\text{O}_2 + \underline{\quad} \text{O}_2 \rightarrow \underline{\quad} \text{CO}_2 + \underline{\quad} \text{H}_2\text{O}$
18. $\underline{\quad} \text{H}_2\text{SO}_4 + \underline{\quad} \text{HI} \rightarrow \underline{\quad} \text{H}_2\text{S} + \underline{\quad} \text{I}_2 + \underline{\quad} \text{H}_2\text{O}$
19. $\underline{\quad} \text{FeS}_2 + \underline{\quad} \text{O}_2 \rightarrow \underline{\quad} \text{Fe}_2\text{O}_3 + \underline{\quad} \text{SO}_2$
20. $\underline{\quad} \text{Al} + \underline{\quad} \text{FeO} \rightarrow \underline{\quad} \text{Al}_2\text{O}_3 + \underline{\quad} \text{Fe}$
21. $\underline{\quad} \text{Fe}_2\text{O}_3 + \underline{\quad} \text{H}_2 \rightarrow \underline{\quad} \text{Fe} + \underline{\quad} \text{H}_2\text{O}$
22. $\underline{\quad} \text{Na}_2\text{CO}_3 + \underline{\quad} \text{HCl} \rightarrow \underline{\quad} \text{NaCl} + \underline{\quad} \text{H}_2\text{O} + \underline{\quad} \text{CO}_2$
23. $\underline{\quad} \text{K} + \underline{\quad} \text{Br}_2 \rightarrow \underline{\quad} \text{KBr}$
24. $\underline{\quad} \text{C}_7\text{H}_{16} + \underline{\quad} \text{O}_2 \rightarrow \underline{\quad} \text{CO}_2 + \underline{\quad} \text{H}_2\text{O}$
25. $\underline{\quad} \text{P}_4 + \underline{\quad} \text{O}_2 \rightarrow \underline{\quad} \text{P}_2\text{O}_5$

26. Dicarbon dihydride + Oxygen \rightarrow Carbon dioxide + Water
27. Potassium oxide + Water \rightarrow Potassium hydroxide
28. Hydrogen peroxide \rightarrow Water + Oxygen
29. Aluminum + Oxygen \rightarrow Aluminum oxide
30. Sodium peroxide + Water \rightarrow Sodium hydroxide + oxygen
31. Silicon dioxide + Hydrogen fluoride \rightarrow Silicon tetrafluoride + Water
32. Carbon + water \rightarrow Carbon monoxide + Hydrogen
33. Potassium chlorate \rightarrow Potassium chloride + Oxygen
34. Potassium chlorate \rightarrow Potassium perchlorate + Potassium chloride
35. Aluminum sulfate + Calcium hydroxide \rightarrow Aluminum hydroxide + Calcium sulfate
36. Tetraphosphorus decoxide + Water \rightarrow Hydrogen phosphate
37. Iron III chloride + Ammonium hydroxide \rightarrow Iron III hydroxide + Ammonium chloride
38. Antimony + Oxygen \rightarrow Tetrantimony Hexoxide
39. Tricarbon octahydride + Oxygen \rightarrow Carbon dioxide + water
40. Dinitrogen pentoxide + Water \rightarrow Hydrogen nitrate
41. Nitrogen trihydride + Nitrogen monoxide \rightarrow Nitrogen + Water
42. Aluminum + Hydrogen chloride \rightarrow Aluminum chloride + Hydrogen
43. Phosphorus pentachloride + water \rightarrow Hydrogen chloride + Hydrogen phosphate
44. Magnesium + Nitrogen \rightarrow Magnesium nitride
45. Iron + Water \rightarrow Iron III oxide + Hydrogen
46. Sodium hydroxide + Chlorine \rightarrow Sodium chloride + Sodium hypochlorite + water
47. Lithium oxide + Water \rightarrow Lithium hydroxide
48. Ammonium nitrate \rightarrow Dinitrogen monoxide + water
49. Lead II nitrate \rightarrow Lead II oxide + Nitrogen dioxide + Oxygen
50. Calcium chlorate \rightarrow Calcium chloride + Oxygen

Name _____
Teacher _____
Class _____ Block ____
Date _____

Word Equations Worksheet

Write the balanced chemical equations for each of the following chemical reactions. If there is a solid formed in a double replacement reaction, give the **complete ionic equation** and the **net ionic equation**.

- 1) When dissolved beryllium chloride reacts with dissolved silver nitrate in water, aqueous beryllium nitrate and silver chloride powder are made.
- 2) When isopropanol (C_3H_8O) burns in oxygen, carbon dioxide, water, and heat are produced.
- 3) When dissolved sodium hydroxide reacts with sulfuric acid (H_2SO_4), aqueous sodium sulfate, water, and heat are formed.
- 4) When fluorine gas is put into contact with calcium metal at high temperatures, calcium fluoride powder is created in an exothermic reaction.
- 5) When sodium metal reacts with iron (II) chloride, iron metal and sodium chloride are formed.