

Nomenclature WS 1 (Ionic Compounds)

Name: _____ Date: _____ Per: _____

Write the name for each of the following compounds.

- | | |
|--|--------------------------------------|
| 1. CaCO_3 _____ | 11. BaSO_4 _____ |
| 2. FeO _____ | 12. $\text{Zn}(\text{NO}_3)_2$ _____ |
| 3. K_2SO_3 _____ | 13. CuSO_4 _____ |
| 4. AgCl _____ | 14. AlCl_3 _____ |
| 5. $\text{Ca}_3(\text{PO}_4)_2$ _____ | 15. NaOH _____ |
| 6. $\text{Ba}(\text{OH})_2$ _____ | 16. PbCl_2 _____ |
| 7. Na_2S _____ | 17. KNO_3 _____ |
| 8. FeCl_2 _____ | 18. $\text{Mg}(\text{OH})_2$ _____ |
| 9. Na_2CrO_4 _____ | 19. LiClO_3 _____ |
| 10. $(\text{NH}_4)_2\text{SO}_4$ _____ | 20. NiS _____ |

Write the chemical formula for each of the following compounds.

- | | |
|------------------------------|---------------------------------|
| 21. sodium nitrite _____ | 31. potassium carbonate _____ |
| 22. iron (III) oxide _____ | 32. silver sulfide _____ |
| 23. aluminum hydroxide _____ | 33. nickel (II) carbonate _____ |
| 24. ammonium hydroxide _____ | 34. calcium phosphate _____ |
| 25. magnesium chloride _____ | 35. copper (II) nitrite _____ |
| 26. calcium chloride _____ | 36. magnesium sulfide _____ |
| 27. copper (I) oxide _____ | 37. aluminum oxide _____ |
| 28. potassium sulfate _____ | 38. barium nitride _____ |
| 29. zinc oxide _____ | 39. lead (II) sulfate _____ |
| 30. barium sulfite _____ | 40. tin (II) carbonate _____ |

Write the name for each of the following compounds.

- | | |
|--|---|
| 41. NH_4NO_2 _____ | 51. K_2SO_3 _____ |
| 42. MgF_2 _____ | 52. Cu_2S _____ |
| 43. $\text{Ba}(\text{ClO}_3)_2$ _____ | 53. $\text{Mn}(\text{ClO}_4)_4$ _____ |
| 44. Al_2S_3 _____ | 54. ZnBr_2 _____ |
| 45. $\text{Sn}(\text{SO}_4)_2$ _____ | 55. $\text{Fe}_2(\text{CrO}_4)_3$ _____ |
| 46. PbO_2 _____ | 56. NaClO_4 _____ |
| 47. Hg_2Cl_2 _____ | 57. KClO _____ |
| 48. $\text{Zn}(\text{CH}_3\text{COO})_2$ _____ | 58. Mg_3N_2 _____ |
| 49. K_2SO_4 _____ | 59. NaMnO_4 _____ |
| 50. $\text{Co}_2(\text{SO}_4)_3$ _____ | 60. KMnO_4 _____ |

Write the chemical formula for each of the following ionic compounds.

- | | |
|------------------------------------|---------------------------------|
| 61. barium sulfide _____ | 72. potassium bromide _____ |
| 62. manganese (II) carbonate _____ | 73. sodium peroxide _____ |
| 63. iron (II) acetate _____ | 74. copper (II) bromide _____ |
| 64. potassium chlorate _____ | 75. ammonium sulfide _____ |
| 65. lead (II) fluoride _____ | 76. calcium nitrate _____ |
| 66. chromium (III) sulfate _____ | 77. zinc hydroxide _____ |
| 67. ammonium chlorate _____ | 78. sodium carbonate _____ |
| 68. mercury (II) chromate _____ | 79. lead (IV) oxide _____ |
| 69. silver phosphate _____ | 80. potassium perchlorate _____ |
| 70. potassium dichromate _____ | 81. silver nitride _____ |
| 71. hydrogen peroxide _____ | 82. sodium bicarbonate _____ |

NOMENCLATURE WS 2 - Mixed Practice

Molecular Compounds, Ionic Compounds, & Acids

NAME THE FOLLOWING COMPOUNDS:

1. BaSO_3
2. $(\text{NH}_4)_3\text{PO}_4$
3. PBr_5
4. MgSO_4
5. CaO
6. H_3PO_4
7. $\text{Na}_2\text{Cr}_2\text{O}_7$
8. MgO
9. SO_3
10. $\text{Cu}(\text{NO}_3)_2$
11. HI
12. N_2O
13. MnO
14. AgNO_3
15. As_2O_5
16. Fe_2O_3
17. HClO
18. N_2O_3
19. HF
20. $\text{H}_2\text{C}_2\text{O}_4$
21. NaHCO_3
22. SiBr_4
23. CuCl_2
24. HNO_2
25. SnO_2
26. BaCrO_4

WRITE FORMULAS FOR THE FOLLOWING COMPOUNDS:

27. hydrobromic acid
28. chromium(III) carbonate
29. magnesium sulfide
30. iodine trichloride
31. lithium hydride
32. ammonium hydroxide
33. calcium chloride
34. hydroselenic acid
35. iron(II) nitride
36. aluminum hydroxide
37. tin(II) fluoride
38. sulfur tetrachloride
39. mercury(II) iodide
40. diphosphorus pentoxide
41. sulfurous acid
42. lead(II) nitrate
43. dihydrogen monoxide
44. sodium oxalate
45. perchloric acid
46. chlorous acid
47. silicon dioxide
48. carbonic acid
49. sodium chlorate
50. xenon hexafluoride
51. nickel nitrate
52. potassium perchlorate

Worksheet #1: Writing and Balancing Formula Equations

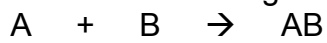
Step 1: Write each formula and balance each formula using SUBSCRIPTS.

Step 2: Balance the overall equation using coefficients.

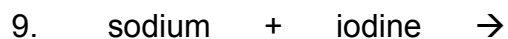
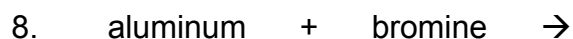
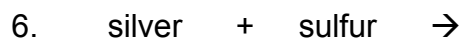
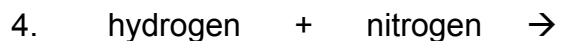
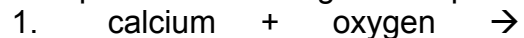
1. sulfur + oxygen → sulfur dioxide
2. zinc + sulfuric acid → zinc sulfate + hydrogen
3. hydrogen + nitrogen → ammonia
4. hydrogen + chlorine → hydrogen chloride
5. carbon + water → carbon monoxide + hydrogen
6. calcium oxide + water → calcium hydroxide
7. phosphorus + oxygen → diphosphorus pentoxide
8. hydrochloric acid + sodium hydroxide → sodium chloride + water
9. barium chloride + sulfuric acid → barium sulfate + hydrochloric acid
10. aluminum sulfate + calcium hydroxide → aluminum hydroxide + calcium sulfate
11. ethane (C₂H₆) + oxygen → carbon dioxide + water
12. aluminum oxide → aluminum + oxygen

Worksheet #2: Synthesis Reactions

In synthesis reactions, two or more reactants come together to form one compound.



Complete the following word equations, and write and balance the formula equation.



Worksheet #3: Decomposition Reactions

In decomposition reactions, one compound will break down into two or more parts.

1. barium carbonate →

2. magnesium carbonate →

3. potassium carbonate →

4. zinc hydroxide →

5. Iron(II) hydroxide →

6. nickel(II) chlorate →

7. sodium chlorate →

8. potassium chlorate →

9. sulfuric acid →

10. carbonic acid →

11. aluminum oxide →

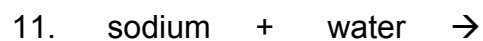
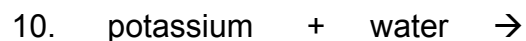
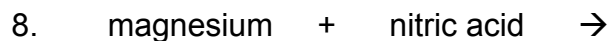
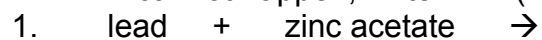
12. silver oxide →

Worksheet #4: Single-Replacement Reactions

Step 1 - Write the formulas of the reactants on the left of the yield sign

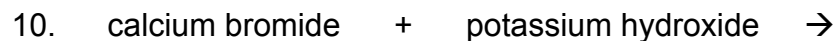
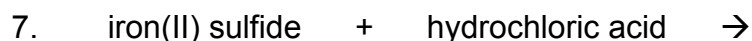
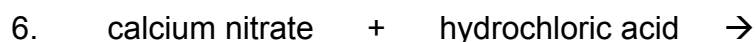
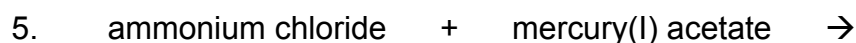
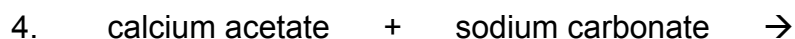
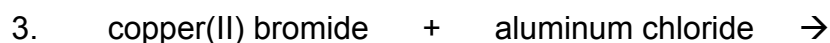
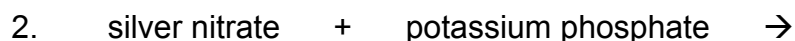
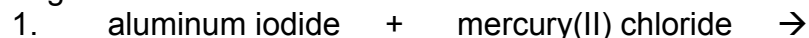
Step 2 - Look at the Activity Series to determine if the replacement can happen

Step 3 - If the replacement can occur, complete the reaction and balance it. If the reaction cannot happen, write N.R. (no rxn) on the product side.



Worksheet #5: Double-Replacement Reactions

In these reactions, all you do is look at the names of the reactants, and "switch partners". Just be sure that the new pairs come out with the positive ion named first, and paired with a negative ion.



Examine the products of the reactions on this page, and determine in each whether a gas, water, or a precipitate is formed. Use solubility rules from your notes or at the back of your textbook to determine the solubilities of the reaction products. If there is no gas, water, or precipitate produced, put an "X" through the yield sign, because no reaction occurs.

Worksheet #6: Combustion Reactions

We will focus on the combustion of hydrocarbons. Hydrocarbons react with oxygen to form carbon dioxide and water.

