**Practice Problems**

Fill in the table below based on the information above.

|  |  |  |
| --- | --- | --- |
| **Reaction Type** | **Reactants & Products** | **Notes on Reactants** |
| Synthesis |  |  |
|  | AB -> A + B |  |
|  |  | One element & one compound |
| Double Replacement |  |  |
|  |  | Acid & Base |
|  |  | Organic Compound with oxygen |

Classify each of the following reactions as synthesis, decomposition, single replacement, double replacement, neutralization, or combustion. Then balance the chemical equation.

1. N2 + F2 -> NF3
2. KCIO3 -> KCl + O2
3. CuSO4 + Fe -> Fe2(SO4)3+ Cu
4. MgF2 + Li2CO3 -> Mg CO3 + LiF
5. NaF + Br2 -> NaBr + F2
6. CH3OH + O2 -> CO2 + H2O

Classify each of the following reactions as synthesis, decomposition, single replacement, double replacement, neutralization, or combustion. Then write a skeleton and a balanced chemical equation for each of the following.

1. magnesium + sulphur -> magnesium sulphide
2. potassium hydroxide + sulphuric acid -> water + potassium sulphate
3. chlorine + potassium iodide -> potassium chlorine + iodide
4. lead (II) oxide -> lead + oxygen
5. cadmium (II) nitrate + ammonium sulphide -> cadmium (II) sulphide + ammonium nitrate
6. tin (IV) hydroxide + hydrogen bromide -> water + tine (IV) bromide.

For each of the following, a. predict the products, b. classify the reactions, and c. balance the equation.

1. H2O ->
2. H2 + Cl2 ->
3. NaI + F2 ->
4. AgNO3 + Na3PO4 ->
5. Ba(OH)2+ H2SO4 ->
6. CH3OH + O2 ->

For each of the following, a. predict the products, b. classify the reactions, and c. write a skeleton & balance the equation.

1. sodium + chlorine ->
2. gallium fluoride + cesium ->
3. calcium hydroxide + nitric acide ->
4. barium chloride + silver nitrate ->
5. cobalt (II) bromide ->
6. iron (III) sulphate + calcium hydroxide ->