

Name: _____

Name _____

Period: _____

Balancing Reactions Worksheet
Synthesis and Decomposition

Part A (Review): Balance the following reactions and indicate whether they are *synthesis (S)* or *decomposition (D)* reactions.

1. $\text{SO}_3 + \text{H}_2\text{O} \rightarrow \text{H}_2\text{SO}_4$ Type: _____
2. $\text{H}_2\text{O} \rightarrow \text{H}_2 + \text{O}_2$ Type: _____
3. $\text{HgO} \rightarrow \text{Hg} + \text{O}_2$ Type: _____
4. $\text{Al}_2\text{O}_3(\text{s}) \rightarrow \text{Al}(\text{s}) + \text{O}_2(\text{g})$ Type: _____
5. $\text{P} + \text{O}_2 \rightarrow \text{P}_2\text{O}_5$ Type: _____

Part B: Predict the products and balance the equation:

1. $\text{KBr} \rightarrow$ Type: _____
2. $\text{Li} + \text{Cl}_2 \rightarrow$ Type: _____
3. $\text{Rb}_2\text{O} \rightarrow$ Type: _____
4. $\text{NiO} \rightarrow$ Type: _____
5. $\text{CO}_2 + \text{H}_2\text{O} \rightarrow$ carbonic acid Type: _____

Part C: Predict the products, balance, and indicate type.

1. Potassium chloride is heated vigorously Type: _____
2. Molten sodium is reacted with chlorine gas Type: _____
3. Calcium combined with iodine Type: _____
4. Zinc oxide ore is refined to separate the ore's elements Type: _____
5. Aluminum chloride decomposes Type: _____
6. Cesium oxide is heated Type: _____
7. Sulfur trioxide decomposes Type: _____
8. Potassium and bromine are reacted Type: _____
9. Potassium and selenium form a compound Type: _____
10. Calcium iodide is heated Type: _____
11. Sodium fluoride is heated Type: _____
12. Iodine reacts with hydrogen to form an acid Type: _____

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.

