**Assignment:\_\_\_\_**

**Balancing Equations III** Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**A. Directions:** Fill in the blanks with the proper chemicals to complete the following chemical

equations.

1. 2O2  + 3 \_\_\_\_\_\_\_\_ Fe3O4

2. 4\_\_\_\_\_\_ + 3O2 2Al2O3

3. 2S\_\_\_\_\_ + O2 2SO3

4. \_\_\_\_\_\_\_\_ + 2LiOH Li2CO3 + H2O

5. 3Na\_\_\_\_\_ + H3PO4 3HBr + Na3PO4

**B. Directions:** Balance each of the following equations. You may wish to use a separate piece of paper as a worksheet. Write each balanced equation in the space provided.

6. Sc + HBr ScBr3  + H2

7. NH3 + O2 NO + H2O

8. HClO HCl + HClO3

9. KMnO4 + HCl MnCl2 + Cl2 + KCl + H2O

10. Fe2O3 + S Fe + SO2

**C.** **Directions**: In the space provided, answer the following questions.

11. Which of the equations in parts A and B show synthesis reactions?

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12. Which of the equations in parts A and B show single replacement reactions?

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13. Which of the equations in parts A and B show double replacement reactions?

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14. Which of the equations in parts A and B show decomposition reactions?

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