Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**\*\* Make sure you balance everything\*\***

**Predict the product for the following decomposition reactions.**

1. ZnCl2🡪 7. NaOH 🡪

2. MnCO3🡪 8. Ir(ClO3)2🡪

3. Yttrium (II) hydroxide 9. CdCO3🡪

4. KI🡪 10. Lithium hydroxide

5. AgOH🡪 11. CrCO3🡪

6. Gold (I) chlorate 12. NaCl 🡪

**Balance and predict the products for the following reactions.**

1. BaCO3🡪 11. MgO🡪

2. Iron(II) hydroxide 🡪 12. Calcium chloride 🡪

3. Al + F2🡪 13. Be + N2🡪

4. NaClO3🡪 14. potassium carbonate 🡪

5. Calcium reacts with sulfur 🡪 15. Radium reacts with fluorine 🡪

6. nickel(II) chlorate 🡪 16. LiBr🡪

7. Li + I2🡪 17. Mg(ClO3)2🡪

8. K2CO3 🡪 18. Copper (II) carbonate 🡪

9. magnesium hydroxide 🡪 19. Sodium plus iodine 🡪

10. K + O2🡪 20. Mn(OH)2🡪

**Predict the products for the following reactions. If no reaction occurs write “no reaction”**

1. Zn + HBr🡪 6. Na + HCl🡪

2.Aluminum bromide + chlorine 🡪 7. Mg + NaOH🡪

3. Au + H2O 🡪 8. Calcium + hydrochloric acid (HCl) 🡪

4. Sodium iodide + bromine 🡪 9. Li + HgNO3 🡪

5. Fe(IV) + Sn(NO3)4🡪 10. Silver + sulfuric acid (H2SO4)🡪

**Classify the following as soluble or insoluble**

1. Cu(NO3)2  6. Li2S

2. NaOH 7. Pb(NO3)2

3. HgCl 8. CuCl2

4. MgO 9. CaF2

5. Na2O 10. Ba(OH)2

**Predict the products of the following:**

1. Na2SO4 (aq) + BaCl2 (aq) 🡪

2. Fe(NO3)3 (aq)  + Na2O(aq) 🡪

3. KCl (aq) + AgNO3 (aq) 🡪

4. H2SO­4(aq) + CaCl2(aq) 🡪

5. LiOH (aq) + Pb(NO3)3(aq) 🡪

6. LiCl(aq)  + HgNO3 (aq) 🡪

7. CaS (aq) + NaCl(aq) 🡪

8. CaCl2(aq) + NaBr (aq) 🡪

9. AgNO3(aq)  + NaCl(aq) 🡪

10. Cu(NO3)2(aq) + KOH (aq) 🡪

**Write the net ionic equation for the following reactions :**

1. KI(aq)  + PbNO3(aq) 🡪PbI (s) + KNO3 (aq)

2. NaCl (aq) + AgNO3 (aq) 🡪 AgCl (s)+ NaNO3 (aq)

3. KI(aq)  + AgNO3 (aq) 🡪 AgI + KNO3