Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hour\_\_\_\_\_\_\_\_\_\_\_\_

# Balance the following equations. Classify type of reaction

# 

1. \_\_\_\_\_ N2 + \_\_\_\_\_ H2 **🡪** \_\_\_\_\_ NH3 \_\_\_\_\_\_\_\_\_\_\_
2. \_\_\_\_\_ Mg (OH) 2 + \_\_\_\_\_ H3PO4 **🡪** \_\_\_\_\_ Mg3(PO4) 2 + \_\_\_\_\_ H2O (H-OH) \_\_\_\_\_\_\_\_\_\_\_
3. \_\_\_\_\_ NaF + \_\_\_\_\_ Th (NO3)4 **🡪** \_\_\_\_\_ NaNO3 + \_\_\_\_\_ ThF4 \_\_\_\_\_\_\_\_\_\_\_
4. \_\_\_\_\_ C2H4 + \_\_\_\_\_ O2 **🡪** \_\_\_\_\_ CO2 + \_\_\_\_\_ H2O \_\_\_\_\_\_\_\_\_\_\_
5. \_\_\_\_\_ LiClO3 **🡪** \_\_\_\_\_ LiCl + \_\_\_\_\_ O2  \_\_\_\_\_\_\_\_\_\_\_
6. \_\_\_\_\_ Fe + \_\_\_\_\_ O2 **🡪** \_\_\_\_\_Fe2O3 \_\_\_\_\_\_\_\_\_\_\_
7. \_\_\_\_\_ C2H8 + \_\_\_\_\_ O2 **🡪** \_\_\_\_\_ CO2 + \_\_\_\_\_ H2O \_\_\_\_\_\_\_\_\_\_\_
8. \_\_\_\_\_ Al + \_\_\_\_\_ HCl **🡪** \_\_\_\_\_AlCl3 + \_\_\_\_\_H2 \_\_\_\_\_\_\_\_\_\_\_
9. \_\_\_\_\_ NiCl2 + \_\_\_\_\_ Na3PO4 **🡪** \_\_\_\_\_ Ni3(PO4)2 + \_\_\_\_\_ NaCl \_\_\_\_\_\_\_\_\_\_\_
10. \_\_\_\_\_ NaCl + \_\_\_\_\_ Pb (NO3)2 **🡪** \_\_\_\_\_ NaNO3 + \_\_\_\_\_ PbCl2 \_\_\_\_\_\_\_\_\_\_\_
11. \_\_\_\_\_\_ C7H16  + \_\_\_\_\_\_ O2 🡪 \_\_\_\_\_ CO2 + \_\_\_\_\_ H2O \_\_\_\_\_\_\_\_\_\_\_
12. \_\_\_\_\_\_ Ca (NO3)2 + \_\_\_\_\_\_ Li2O 🡪 \_\_\_\_\_\_ CaO + \_\_\_\_\_\_ LiNO3 \_\_\_\_\_\_\_\_\_\_\_
13. \_\_\_\_\_\_ AgNO3 + \_\_\_\_\_\_ Zn 🡪 \_\_\_\_\_\_ Ag + \_\_\_\_\_\_ Zn (NO3)2 \_\_\_\_\_\_\_\_\_\_\_
14. \_\_\_\_\_\_ LiBr 🡪 \_\_\_\_\_\_ Li + \_\_\_\_\_\_ Br2 \_\_\_\_\_\_\_\_\_\_\_
15. \_\_\_\_\_ Na + \_\_\_\_\_ Cl2 **🡪** \_\_\_\_\_NaCl\_\_\_\_\_\_\_\_\_\_\_

# Write, balance, and identify the type each chemical reaction below.

1. Hydrogen and oxygen yields dihydrogen monoxide
2. iron + copper (II) nitrate yields Iron (III) nitrate + copper
3. potassium carbonate + zinc chloride yields potassium chloride + zinc carbonate
4. carbon tetrahydride and oxygen yields carbon dioxide and water
5. aluminum oxide yield aluminum and oxygen

Key on next page…….

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hour\_\_\_\_\_\_\_\_\_\_\_\_

# Balance the following equations. Classify type of reaction

# 

1. \_\_\_\_\_ N2 + \_\_\_\_\_ H2 **🡪** \_\_\_\_\_ NH3 Synthesis



1. \_\_\_\_\_ Mg (OH) 2 + \_\_\_\_\_ H3PO4 **🡪** \_\_\_\_\_ Mg3(PO4) 2 + \_\_\_\_\_ H2O (H-OH) Double Replacement



1. \_\_\_\_\_ NaF + \_\_\_\_\_ Th (NO3)4 **🡪** \_\_\_\_\_ NaNO3 + \_\_\_\_\_ ThF4 Double Replacement



1. \_\_\_\_\_ C2H4 + \_\_\_\_\_ O2 **🡪** \_\_\_\_\_ CO2 + \_\_\_\_\_ H2O Combustion



1. \_\_\_\_\_ LiClO3 **🡪** \_\_\_\_\_ LiCl + \_\_\_\_\_ O2  Decomposition



1. \_\_\_\_\_ Fe + \_\_\_\_\_ O2 **🡪** \_\_\_\_\_Fe2O3 Synthesis



1. \_\_\_\_\_ C2H8 + \_\_\_\_\_ O2 **🡪** \_\_\_\_\_ CO2 + \_\_\_\_\_ H2O Combustion



1. \_\_\_\_\_ Al + \_\_\_\_\_ HCl **🡪** \_\_\_\_\_AlCl3 + \_\_\_\_\_H2 H & Cl need to go together 2 & 3 so 6 Single Replacement



1. \_\_\_\_\_ NiCl2 + \_\_\_\_\_ Na3PO4 **🡪** \_\_\_\_\_ Ni3(PO4)2 + \_\_\_\_\_ NaCl Double Replacement



1. \_\_\_\_\_ NaCl + \_\_\_\_\_ Pb (NO3)2 **🡪** \_\_\_\_\_ NaNO3 + \_\_\_\_\_ PbCl2 Double Replacement



1. \_\_\_\_\_\_ C7H16  + \_\_\_\_\_\_ O2 🡪 \_\_\_\_\_ CO2 + \_\_\_\_\_ H2O Combustion



1. \_\_\_\_\_\_ Ca (NO3)2 + \_\_\_\_\_\_ Li2O 🡪 \_\_\_\_\_\_ CaO + \_\_\_\_\_\_ LiNO3 Double Replacement



1. \_\_\_\_\_\_ AgNO3 + \_\_\_\_\_\_ Zn 🡪 \_\_\_\_\_\_ Ag + \_\_\_\_\_\_ Zn (NO3)2 Single Replacement



1. \_\_\_\_\_\_ LiBr 🡪 \_\_\_\_\_\_ Li + \_\_\_\_\_\_ Br2 Decomposition



1. \_\_\_\_\_ Na + \_\_\_\_\_ Cl2 **🡪** \_\_\_\_\_NaClSynthesis



# Write, balance, and identify the type each chemical reaction below.

1. Hydrogen and oxygen yield dihydrogen monoxide

DiatomDiatomcovalent

2H2 + O2 🡪 2H2O

1. iron + copper (II) nitrate yields Iron (III) nitrate + copper

Cu+2 NO3-1  Fe+3 NO3-1

2Fe + 3Cu(NO3)2 🡪 2Fe(NO3)3 + 3Cu

1. potassium carbonate + zinc chloride yields potassium chloride + zinc carbonate

K+1 CO3-2  Zn+2 Cl-1  K+1 Cl-1  Zn+2 CO3-2

K2CO3 + ZnCl2 🡪 2KCl + ZnCO3

1. carbon tetrahydride and oxygen yields carbon dioxide and water

covalent Diatomcovalent

CH4 + 2O2 🡪 CO2 + 2H2O

1. aluminum oxide yields aluminum and oxygen

Al+3 O-2 Diatom

2Al2O3 🡪 4Al + 3O2