**Chemistry Unit 6 Reactions Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Predicting Products Worksheet**

**a) Predict the products, and b) balance each reaction.  Use the reaction type as a hint.   For reactions with a transition metal, use the charge indicated by a roman numeral.**

**Synthesis**

1. \_\_\_\_Zn + \_\_\_\_O2  🡪
2. \_\_\_\_Na2O + \_\_\_\_H2O 🡪
3. (II)\_\_\_\_Pb + \_\_\_\_N2 🡪
4. (II)\_\_\_\_Mn + \_\_\_\_I2 🡪
5. \_\_\_\_Mg + \_\_\_\_F2 🡪
6. \_\_\_\_SO3 + \_\_\_\_H2O 🡪
7. \_\_\_\_Ba + \_\_\_\_O2 🡪
8. \_\_\_\_NH3+ \_\_\_\_HBr 🡪

**Decomposition**

1. \_\_\_\_CaO
2. \_\_\_\_HgO
3. \_\_\_\_CaCO3
4. \_\_\_\_HClO3
5. \_\_\_\_Mg(HCO3)2
6. \_\_\_\_Al(OH)3
7. (II)\_\_\_\_CuSO4
8. \_\_\_\_AlCl3

**Single Replacement**

1. (II)\_\_\_\_Cu + \_\_\_\_AgNO3
2. \_\_\_\_Zn + \_\_\_\_H2SO4
3. \_\_\_\_Mg + \_\_\_\_Co(ClO3)2
4. (III)\_\_\_\_Fe + \_\_\_\_H3PO4
5. \_\_\_\_Al  + \_\_\_\_Ag2SO4
6. \_\_\_\_Ba + \_\_\_\_Au2SO4
7. \_\_\_\_Na + \_\_\_\_MgCl2
8. (II)\_\_\_\_Mn + \_\_\_\_Al(C2H3O2)3

**Double Replacement**

1. \_\_\_\_BaCl2 + \_\_\_\_Na2CO3
2. \_\_\_\_Al2(SO4)3 + \_\_\_\_H3PO4
3. \_\_\_\_HNO3 + \_\_\_\_NaCl
4. \_\_\_\_NH4Cl + \_\_\_\_Ba(OH)2
5. (II)\_\_\_\_AgClO3 + \_\_\_\_Ni(NO3)2
6. (IV)\_\_\_\_PbCl4 + \_\_\_\_H3PO4
7. \_\_\_\_K2SO4 + \_\_\_\_MgF2
8. \_\_\_\_MgCO3 + \_\_\_\_CaCl2

**Combustion**

1. \_\_\_\_CH4 + \_\_\_\_O2
2. \_\_\_\_NH3 + \_\_\_\_O2
3. (III)\_\_\_\_FeS + \_\_\_\_O2
4. \_\_\_\_S8 + \_\_\_\_O2
5. \_\_\_\_C10H22 + \_\_\_\_O2
6. \_\_\_\_Al + \_\_\_\_O2
7. (IV)\_\_\_\_SiH4 + \_\_\_\_O2