**Chemistry** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period: 1 2 3 4 5 6 7

For each of the following equations, identify what kind of reaction it represents: double replacement, single replacement, decomposition, or synthesis (composition).

1) 2Mg + O2  2 MgO

2) CaI2 + Cl2 CaCl2 + I2

3) 3KOH + AlCl3Al(OH)3 + 3KCl

4) C + O2 CO2

\*5) Ca(OH)2 + 2HCl CaCl2 + 2H2O

6) 2KClO3 2KCl + 3O2

7) 3CuSO4 + 2Al Al2(SO4)3 + 3Cu

8) Na2S + 2AgNO3 2NaNO3 + Ag2S

9) 3H2 + N2 2NH3

\*10) 2Na + 2H2O 2NaOH + H2

\*Remember: “H2O“ can also be thought of as “HOH”

Complete each of the following equations as needed to make it the type of reaction indicated. Be sure to write each formula correctly.

11) Double replacement: Na2CrO4 + PbCl2  2Na + \_\_\_\_\_\_\_\_

12) Single replacement: Cl2 + 2NaBr  2Na + \_\_\_\_\_\_\_\_\_

13) Decomposition: Mg(ClO3)2 \_\_\_\_\_\_\_ + 3O2

14) Synthesis: 2H2 + O2  2\_\_\_\_\_\_

15) Double replacement: 3Ca(OH)2 + 2FeCl3  2Fe + 3Ca\_\_\_\_\_\_\_

16) Single replacement: Fe + Cu(NO3)2  +\_\_\_\_\_\_\_\_ [Assume Fe2+]

17) Decomposition: 2Hg2O  4 +\_\_\_\_\_\_\_\_\_

18) Synthesis: S + O2  \_\_\_\_\_\_

19) Double replacement: AgNO3 + KI \_\_\_\_\_\_\_ + \_\_\_\_\_\_\_

20) Single replacement: Cu + 2AgNO3 2Ag + \_\_\_\_\_\_\_ [Copper (II) is used here]