Name KEY 2011 Date _____ Pd. ____

EQUATION PRACTICE

Directions: Write the equation (using formulas), balance the equation, list type of EOC equation.

1. hydrogen gas + nitrogen gas → ammonia

   unbalanced equation $H_2(g) + N_2(g) \rightarrow NH_3(g)$

   Balanced equation: $3H_2(g) + N_2(g) \rightarrow 2NH_3(g)$

   Type of equation: Synthesis EOC #, letter and description 1A: Binary Compd

2. copper + chlorine gas → copper (II) chloride

   unbalanced equation $Cu_{(s)} + Cl_2(g) \rightarrow CuCl_2(s)$

   Balanced equation: $Cu(s) + Cl_2(g) \rightarrow CuCl_2(s)$

   Type of equation: Synth. EOC #, letter and description 1A

3. potassium chlorate → potassium chloride + oxygen gas

   unbalanced equation $KClO_3(s) \rightarrow KCl(s) + O_2(g)$

   Balanced equation: $2KClO_3(s) \rightarrow 2KCl(s) + 3O_2(g)$

   Type of equation: Decomp EOC #, letter and description 2E

4. potassium chlorate → potassium chloride + oxygen gas

   unbalanced equation same as #3

   Balanced equation: _____

   Type of equation: _____ EOC #, letter and description _____

5. sodium + water → sodium hydroxide + hydrogen gas

   unbalanced equation $Na + H_2O_{(l)} \rightarrow NaOH_{(s)} + H_2(g)$

   Balanced equation: $2Na_{(s)} + 2H_2O_{(l)} \rightarrow 2NaOH_{(s)} + H_2(g)$

   Type of equation: SR EOC #, letter and description 3B

6. potassium chloride + lead (II) nitrate → potassium nitrate + lead (II) chloride

   unbalanced equation $KCl_{(aq)} + Pb(NO_3)_2(aq) \rightarrow KNO_{3(aq)} + PbCl_2(s)$

   Balanced equation: $2KCl_{(aq)} + Pb(NO_3)_2(aq) \rightarrow 2KNO_{3(aq)} + PbCl_2(s)$

   Type of equation: DR EOC #, letter and description 4A

7. sodium hydroxide + iron (III) chloride → sodium chloride + iron (III) hydroxide

   unbalanced equation $NaOH_{(aq)} + FeCl_3(aq) \rightarrow NaCl_{(aq)} + Fe(OH)_3(s)$

   Balanced equation: $3NaOH_{(aq)} + FeCl_3(aq) \rightarrow 3NaCl_{(aq)} + Fe(OH)_3(s)$

   Type of equation: DR EOC #, letter and description 4A

8. silver nitrate + copper → silver + copper (II) nitrate

   unbalanced equation $AgNO_3 + Cu_{(s)} \rightarrow Ag_{(s)} + Cu(NO_3)_2(aq)$

   Balanced equation: $2AgNO_{3(aq)} + Cu(s) \rightarrow 2Ag(s) + Cu(NO_3)_2(aq)$

   Type of equation: SR EOC #, letter and description 3A

9. magnesium + fluorine gas → magnesium fluoride

   unbalanced equation $Mg_{(s)} + F_2(g) \rightarrow MgF_2(s)$

   Balanced equation: $Mg(s) + F_2(g) \rightarrow MgF_2(s)$

   Type of equation: Synth EOC #, letter and description 1A

10. calcium bromide → calcium + bromine gas

    unbalanced equation $CaBr_{2(s)} \rightarrow Ca_{(s)} + Br_2(g)$

    Balanced equation: Balanced

    Type of equation: Decomp EOC #, letter and description 2A

11. zinc iodide + silver carbonate → silver iodide + zinc carbonate

    unbalanced equation $ZnI_2(aq) + Ag_2CO_3(aq) \rightarrow AgI(s) + ZnCO_3$

    Balanced equation: $ZnI_{2(aq)} + Ag_2CO_{3(aq)} \rightarrow 2AgI(s) + ZnCO_{3(aq)}$

    Type of equation: DR EOC #, letter and description 4A

12. nickel nitrite + copper (I) acetate → copper (I) nitrite + nickel acetate

    unbalanced equation $NiNO_{2(aq)} + CuC_2H_3O \rightarrow CuNO_2 + NiC_2O_3H_2$

    Balanced equation: NO Rxn

    Type of equation: _____ EOC #, letter and description _____