Name: _____ Chemistry 11 Block: _____

Unit 1: Naming Review 1 (1.1 – 1.5)

Write the chemical name for the given formula.
Classify the compound as an **Acid, Base, Hydrate, Ionic**, or **Covalent** Compound

FORMULA	TYPE	NAME
1) $Fe(CN)_3$	I	**iron (III) cyanide**
2) K_4C	I	**potassium carbide**
3) AuF_3	I	**gold (III) fluoride**
4) N_2O	C	**dinitrogen monoxide**
5) Ag_3N	I	**Silver (I) nitride**
6) CF_4	C	**carbon tetrafluoride**
7) MgI_2	I	**magnesium iodide**
8) NiO_2	I	**nickel (IV) oxide**
9) P_2S_5	C	**diphosphorus pentasulfide**
10) $SnSe_2$	I	**tin (IV) selenide**
11) RbBr	I	**rubidium bromide**
12) $Ca_3(PO_4)_2$	I	**calcium phosphate**
13) NiF_3	I	**Nickle (III) fluoride**
14) $Sn(NO_3)_4$	I	**tin (IV) nitrate**
15) $Fe(C_2H_3O_2)_3$	I	**iron (III) acetate**
16) K_3P	I	**potassium phosphide**
17) N_2O_3	C	**dinitrogen trioxide**
18) $Cu(NO_2)_2$	I	**copper (II) nitrite**
19) H_3PO_4 (aq)	A	**phosphoric acid**
20) HBr (aq)	A	**Hydrobromic Acid**

Name: _____ Chemistry 11 Block: _____

Unit 1: Naming Review 2 (1.1 – 1.5)

Write the chemical formula for the given name.
Classify the compound as an **Acid, Base, Hydrate, Ionic**, or **Covalent** Compound

NAME	TYPE	FORMULA
1) tricarbon octafluoride	**C**	**C_3F_8**
2) Lithium acetate	**I**	**$LiC_2H_3O_2$**
3) iron (II) arsenide	**I**	**Fe_3As_2**
4) titanium (IV) acetate	**I**	**$Ti(C_2H_3O_2)_4$**
5) gallium sulfide	**I**	**Ga_2S_3**
6) ammonium carbide	**I**	**$(NH_4)_4C$**
7) ruthenium (II) nitrate	**I**	**$Ru(NO_3)_2$**
8) copper (I) oxide	**I**	**Cu_2O**
9) potassium hydroxide	**B**	**KOH**
10) sodium phosphate	**I**	**Na_3PO_4**
11) lithium bromide	**I**	**LiBr**
12) beryllium nitride	**I**	**Be_3N_2**
13) carbon tetrachloride	**C**	**CCl_4**
14) dihydrogen monoxide	**C**	**H_2O**
15) copper (I) phosphate	**I**	**Cu_3PO_4**
16) magnesium sulfate heptahydrate	**H**	**$Mg_SO_4 \cdot 7H_2O$**
17) lead (II) phosphate	**I**	**$Pb_3(PO_4)_2$**
18) diselenium diiodide	**C**	**Se_2I_2**
19) Hydrosulphuric Acid	**A**	**H_2S**
20) Chlorous Acid	**A**	**$HCLO_2$**

Name: _____ Chemistry 11 Block: _____

Unit 1: Balancing Reactions Review (1.6)

1) **1** Na_3PO_4 + **3** KOH → **3** NaOH + **1** K_3PO_4

2) **1** MgF_2 + **1** Li_2CO_3 → **1** $MgCO_3$ + **2** LiF

3) **1** P_4 + **3** O_2 → **2** P_2O_3

4) **2** $RbNO_3$ + **1** BeF_2 → **1** $Be(NO_3)_2$ + **2** RbF

5) **2** $AgNO_3$ + **1** Cu → **1** $Cu(NO_3)_2$ + **2** Ag

6) **1** CF_4 + **2** Br_2 → **1** CBr_4 + **2** F_2

7) **2** HCN + **1** $CuSO_4$ → **1** H_2SO_4 + **1** $Cu(CN)_2$

8) **1** GaF_3 + **3** Cs → **3** CsF + **1** Ga

9) **1** BaS + **1** PtF_2 → **1** BaF_2 + **1** PtS

10) **1** N_2 + **3** H_2 → **2** NH_3

11) **2** NaF + **1** Br_2 → **2** NaBr + **1** F_2

12) **1** $Pb(OH)_2$ + **2** HCl → **2** H_2O + **1** $PbCl_2$

13) **2** $AlBr_3$ + **3** K_2SO_4 → **6** KBr + **1** $Al_2(SO_4)_3$

14) **1** CH_4 + **2** O_2 → **1** CO_2 + **2** H_2O

15) **2** Na_3PO_4 + **3** $CaCl_2$ → **6** NaCl + **1** $Ca_3(PO_4)_2$

16) **2** K + **1** Cl_2 → **2** KCl

17) **2** Al + **6** HCl → **3** H_2 + **2** $AlCl_3$

18) **1** N_2 + **3** F_2 → **2** NF_3

19) **1** SO_2 + **2** Li_2Se → **1** SSe_2 + **2** Li_2O

20) **2** NH_3 + **1** H_2SO_4 → **1** $(NH_4)_2SO_4$

Name: _____ Chemistry 11 Block: _____

Unit 1: Reaction Types Review (1.7)

Balance the following reactions and list the **type of reaction** taking place: **Synthesis, Decomposition, Single Replacement, Double Replacement, Neutralization,** or **Combustion**

1) $C_5H_{12} + \mathbf{8}\ O_2 \rightarrow \mathbf{5}\ CO_2 + \mathbf{6}\ H_2O$ + heat

Reaction type: combustion

2) $\mathbf{2}\ K_3PO_4 + \mathbf{3}\ BaCl_2 \rightarrow Ba_3(PO_4)_2 + \mathbf{6}\ KCl$

Reaction type: double replacement

3) $\mathbf{2}\ Al(OH)_3 + \mathbf{3}\ H_2SO_4 \rightarrow Al_2(SO_4)_3 + \mathbf{3}\ H_2O$

Reaction type: neutralization (acid – base)

4) $\mathbf{2}\ HCl + K_2CO_3 \rightarrow CO_2 + H_2O + \mathbf{2}\ KCl$

Reaction type: neutralization (acid – base)

5) $\mathbf{2}\ AgNO_3 + Na_2CO_3 \rightarrow Ag_2CO_3 + \mathbf{2}\ NaNO_3$

Reaction type: double replacement

6) $\mathbf{2}\ Al_2O_3$ + heat $\rightarrow \mathbf{4}\ Al + \mathbf{3}\ O_2$

Reaction type: decomposition

7) $\mathbf{2}\ Al + \mathbf{6}\ HCl \rightarrow \mathbf{3}\ H_2 + \mathbf{2}\ AlCl_3$

Reaction type: Single replacement

8) $Cu(OH)_2 \rightarrow H_2O + CuO$

Reaction type: decomposition

Name: _____ Chemistry 11 Block: _____

Unit 1: Reaction Types Review (1.7) – Predicating Products

Using the different types of reactions (**Synthesis, Decomposition, Single Replacement, Double Replacement, Neutralization,** and **Combustion**) predict the products and balance the equation

1) **_1_** H_3PO_4 + **_3_** KOH → **_1_** K_3PO_4 + **_3_** H_2O

Type of Reaction: Neutralization

2) **_6_** K + **_1_** B_2O_3 → **_3_** K_2O + **_2_** B

Type of Reaction: Single Replacement

3) **_1_** HCl + **_1_** NaOH → **_1_** NaCl + **_1_** H_2O

Type of Reaction: Neutralization

4) **_4_** C + **_1_** S_8 → **_4_** CS_2

Type of Reaction: Synthesis

5) **_4_** Na + **_1_** O_2 → **_2_** Na_2O

Type of Reaction: Synthesis

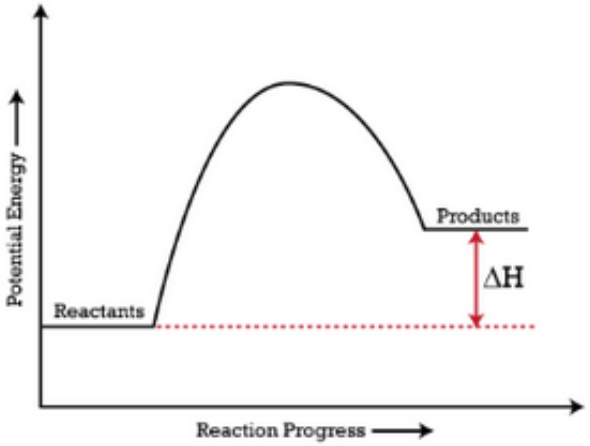
6) **_2_** H_3PO_4 + **_3_** $Mg(OH)_2$ → **_1_** $Mg_3(PO_4)_2$ + **_6_** H_2O

Type of Reaction: Neutrilization

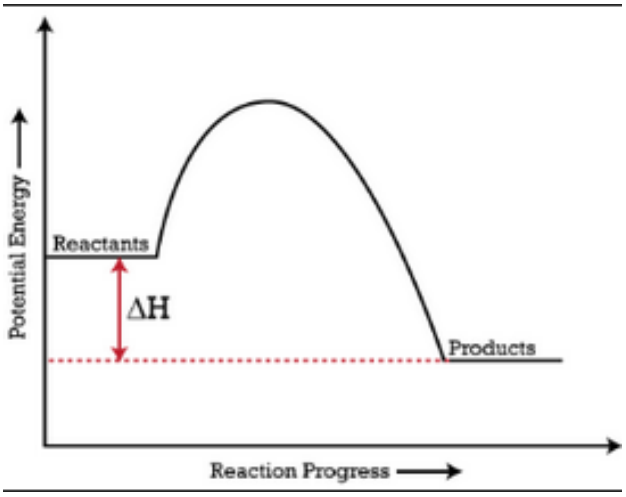
Name: _____ Chemistry 11 Block: _____

Unit 1: Energy Changes Review (1.8)

1. Draw a diagram of an **endothermic** reaction. Label the Reactant, Products, Enthalpy Change (ΔH), and Activation Energy (Ea)



2. Draw a diagram of an **exothermic** reaction. Label the Reactant, Products, Enthalpy Change (ΔH), and Activation Energy (Ea)



3. Is ΔH positive or negative in an exothermic reaction? Answer: **NEGATIVE**

4. Is ΔH positive or negative in an endothermic reaction? Answer: **POSITIVE**

5. List the following Reactions as Exothermic or Endothermic:

   a. $2H_2O_2(l) \rightarrow 2H_2O(l) + O_2(g) + 200kJ$ Answer: **Exothermic**

   b. $Mn(s) + 2\ HCl(aq) \rightarrow MnCl_2(aq) + H_2(g) + 221\ kJ$ Answer: **Exothermic**

   c. $2\ N_2O_5\ (g) + 110\ kJ \rightarrow 4NO_2(g) + O_2(g)$ Answer: **Endothermic**

   d. $P_4O_{10}(g) + 6H_2O(l) \rightarrow 4\ H_3PO_4(aq) + 424\ kJ$ Answer: **Exothermic**