Assignment:\_\_\_\_\_\_ Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**PS: 9B Unit Test Review Sheet**

**Objective: Types/Parts of Reactions**

1. Define the following and then label them on the equation below:
   1. Reactant –
   2. Product –
   3. Label….

HCl + NaOH  → NaCl  + HOH

1. Classify the following reactions as synthesis, decomposition, single replacement or double replacement:
2. HCl + NaOH  → NaCl  + HOH
3. Ca(OH)2 → CaO + H2O
4. 2H2 + O2 → 2H2O
5. H2SO4 + 2NaOH → Na2SO4 + 2H2O
6. Zn + 2HCl → H2 + ZnCl2
7. H2SO3 → SO2 + H2O

g. H2 + 2 AgNO3 → 2 Ag  + 2 HNO3

1. Sort the following things that would affect the speed of a reaction into the T chart below:

Increase the concentration of reactants

Decrease the concentration of reactants

Small reactant particles

Large reactant particles

Increasing the temperature

Decreasing the temperature

**Speed Up Reactions Slow Down Reactions**

**Objective: Exothermic vs. Endothermic**

1. What is the difference between an exothermic and endothermic reaction?
2. Draw graphs below of both exothermic AND endothermic reactions, label the reactants and products in each and describe which bonds (reactants or products) have the most energy in each.

**Objective: Balancing Equations**

1. Fill in the blanks with **what is missing** in the equation:
   1. 2S2 + 3 \_\_\_\_ 🡪Ni3S4
   2. 4 \_\_\_\_ + 3O2 🡪 2Ga2O3
   3. 2S\_\_\_\_\_ + O2 🡪 2SO3
   4. HCl + \_\_\_\_ 🡪 CaCl + \_\_\_\_
   5. MgCl2 + K2SO4 🡪 \_\_\_SO4 + 2KCl
2. Fill in the blanks with **coefficients** to balance the equation:
   1. \_\_\_ CO2 🡪 \_\_\_ CO + O2
   2. \_\_\_ Li2 + \_\_\_ P2 🡪 \_\_\_ LiP3
   3. \_\_\_ N + \_\_\_ S2  🡪 \_\_\_ N2S5
   4. \_\_\_ ZnS + \_\_\_ AlP 🡪 \_\_\_Zn3P2 + \_\_\_ Al2S3

**Objective: Stoichiometery**

1. Who discovered the mole?
2. Define what a mole is:
3. How many moles are there in 50 grams of H2O?
4. How many moles are there in 4.25 x 1023 molecules of CH4?
5. How many grams are there in 7.5 x 1023 molecules of Cu(NO3)2?
6. What is the molar mass of KF2?
7. What is the molar mass of H2O2?
8. What is the molar mass of Cu(OH)2?
9. How many moles are there in 100 grams of Nitrogen?
10. How many grams are there in 2 moles of Silicon?
11. How many grams are there in 5 moles of H2SO4?
12. How many moles are the in 25 grams of AuSO2?
13. How many grams are there in 3.4 x1024 molecules of CH4?