

## Honors Chemistry Problem Set - Unit 8

Name:

Part 1 – Match the type of reaction with its description.

- \_\_\_ 1. Double replacement            (A) a single reactant  
\_\_\_ 2. Combustion                    (B) two ionic compounds  
\_\_\_ 3. Decomposition                (C) oxygen and a hydrocarbon are reactants  
\_\_\_ 4. Single replacement           (D) a single product  
\_\_\_ 5. Synthesis                      (E) an element & a compound

Part 2 – Balance the following equations and identify the type of reaction.

- \_\_\_ 6. \_\_\_  $\text{Al}(\text{NO}_3)_3$  + \_\_\_  $\text{NaOH}$   $\rightarrow$  \_\_\_  $\text{Al}(\text{OH})_3$  + \_\_\_  $\text{NaNO}_3$   
\_\_\_ 7. \_\_\_  $\text{KNO}_3$   $\rightarrow$  \_\_\_  $\text{KNO}_2$  + \_\_\_  $\text{O}_2$   
\_\_\_ 8. \_\_\_  $\text{O}_2$  + \_\_\_  $\text{CS}_2$   $\rightarrow$  \_\_\_  $\text{CO}_2$  + \_\_\_  $\text{SO}_2$   
\_\_\_ 9. \_\_\_  $\text{BaF}_2$  + \_\_\_  $\text{K}_3\text{PO}_4$   $\rightarrow$  \_\_\_  $\text{Ba}_3(\text{PO}_4)_2$  + \_\_\_  $\text{KF}$   
\_\_\_ 10. \_\_\_  $\text{H}_2\text{SO}_4$  + \_\_\_  $\text{Mg}(\text{NO}_3)_2$   $\rightarrow$  \_\_\_  $\text{MgSO}_4$  + \_\_\_  $\text{HNO}_3$   
\_\_\_ 11. \_\_\_  $\text{Al}$  + \_\_\_  $\text{H}_2\text{SO}_4$   $\rightarrow$  \_\_\_  $\text{Al}_2(\text{SO}_4)_3$  + \_\_\_  $\text{H}_2$   
\_\_\_ 12. \_\_\_  $\text{WO}_3$  + \_\_\_  $\text{H}_2$   $\rightarrow$  \_\_\_  $\text{W}$  + \_\_\_  $\text{H}_2\text{O}$

Part 3 – Determine if the following reactions will happen or not. If the reaction happens, write the formulas for the products and balance the equation.

