Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Chemical Equations**

**Instructions:** For the chemical reactions below, you must do the following:

* Circle the reactants
* Underline the products
* Draw and label a picture of the elements and compounds in the reaction
* Identify how many of each element are on the product side
* Identify how many of each element are on the reactant side

**Example:**

****

O

O

O

O

O

1. $Na+Cl\rightarrow NaCl$
2. $HCl+NaOH\rightarrow NaCl+H\_{2}O$
3. $2Na+2H\_{2}O\rightarrow 2NaOH+H\_{2}$
4. $CH\_{4}+2O\_{2}\rightarrow CO\_{2}+2H\_{2}O$
5. $8Fe+S\_{8}\rightarrow 8FeS$
6. $Mg+2H\_{2}O\rightarrow Mg(OH)\_{2}+H\_{2}$
7. $Pb(NO\_{3})\_{2}+2KI\rightarrow PbI\_{2}+2KNO\_{3}$

**Analysis:**

1. How do chemical equations support the law of conservation of mass?
2. What differentiates chemical changes from physical changes?