

Name \_\_\_\_\_

### Chemical Reactions Review

1. What is the law of conservation of mass?

Matter cannot be created or destroyed

2. Why do we need to balance equations?

To obey the law of conservation of mass

3. What do each of these symbols mean:

a) Aq aqueous, substance is dissolved in water

b) S solid

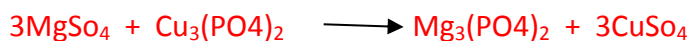
c) l liquid

d) G gas

Remember that Hydrogen (H<sub>2</sub>), Nitrogen (N<sub>2</sub>), Oxygen (O<sub>2</sub>), Fluorine (F<sub>2</sub>), Chlorine (Cl<sub>2</sub>), Bromine (Br<sub>2</sub>), and Iodine (I<sub>2</sub>) are diatomic.

Write the reaction from these word equations and balance these equations as well.

Magnesium Sulfate plus Copper II Phosphate makes Magnesium Phosphate and Copper II Sulfate.

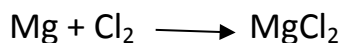
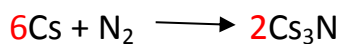
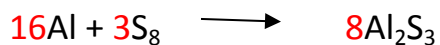
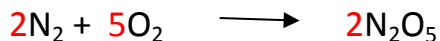


Calcium plus Sodium Nitrate makes Calcium Nitrate and Sodium.

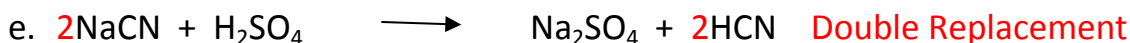
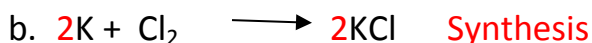


What is a skeleton equation?

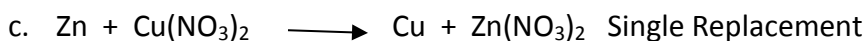
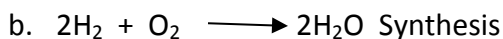
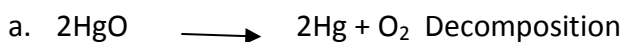
Balance these equations



4. What is a coefficient? **A number placed in front of a molecule used to balance an equation**
5. Why can't you change the subscript when balancing equations?  
**Because it would change the identity of the molecule**
6. Know how to identify types of reactions and how to predict products.  
**Questions 7 and 8 go over this topic**
7. Identify these types of reactions and balance them.



8. Identify the type of reaction and predict the products, balance the equation as well.



9. Know how to read an activity series

10. Here is the activity series

Mg  
Al  
Zn  
Fe  
Pb  
Cu  
Ag

Tell me if these reactions will occur:

- a.  $\text{Zn} + \text{PbSO}_4$  **Yes**
- b.  $\text{Cu} + \text{Mg}(\text{NO}_3)_2$  **No**
- c.  $\text{Fe} + \text{AlPO}_4$  **No**
- d.  $\text{Cu} + \text{AgNO}_3$  **Yes**
- e.  $\text{Zn} + \text{AlPO}_4$  **No**