

**OBJWS CHEMICAL EQUATIONS AND REACTIONS**  
CHEMISRY 1 HON

1. What is a skeleton chemical equation?
2. What is a chemical equation?
3. What does (aq) mean in a chemical equation?
4. What does  $\text{----->}$  mean in a chemical equation?
5. What is a catalyst? Give an example of one.
6. Below are word equations. Write the chemical equations using formulas and equation symbols.
  - a. When zinc reacts with hydrochloric acid, it forms hydrogen gas and zinc chloride.
  - b. Sulfur dioxide is formed when sulfur and oxygen react with the addition of heat.
  - c. Rust, iron (III) oxide, is formed when iron and \_\_\_\_\_ react together.
7. List the five types of chemical equations.

**8. BALANCE THESE EQUATIONS**

- a.  $\text{H}_2\text{SO}_4 + \text{KOH} \text{---}\rightarrow \text{HOH} + \text{K}_2\text{SO}_4$
- b.  $\text{Zn}(\text{MnO}_4)_2 + \text{Cr}_2(\text{SO}_4)_3 \text{---}\rightarrow \text{ZnSO}_4 + \text{Cr}(\text{MnO}_4)_3$
- c.  $\text{Li} + \text{CuCO}_3 \text{---}\rightarrow \text{Cu} + \text{Li}_2\text{CO}_3$
- d.  $\text{C}_8\text{H}_{18} + \text{O}_2 \text{---}\rightarrow \text{CO}_2 + \text{H}_2\text{O}$
- e.  $\text{Sr} + \text{O}_2 \text{---}\rightarrow \text{SrO}$
- f.  $\text{AgCl} \text{---}\rightarrow \text{Ag} + \text{Cl}_2$
- g.  $\text{NaCl} + \text{H}_2\text{S} \text{---}\rightarrow \text{Na}_2\text{S} + \text{HCl}$
- h.  $\text{C}_6\text{H}_{10} + \text{O}_2 \text{---}\rightarrow \text{CO}_2 + \text{H}_2\text{O}$

**9. PREDICT PRODUCTS AND BALANCE**

- a.  $\text{Ca} + \text{H}_3\text{PO}_4 \text{---}\rightarrow$
- b.  $\text{Fe} + \text{Zn}(\text{OH})_2 \text{---}\rightarrow$
- d.  $\text{MgCO}_3 \text{---}\rightarrow$
- e.  $\text{C}_2\text{H}_5 + \text{O}_2 \text{---}\rightarrow$
- f.  $\text{K} + \text{S} \text{---}\rightarrow$
- g.  $\text{K} + \text{Cl}_2 \text{---}\rightarrow$
- h.  $\text{C} + \text{O}_2 \text{---}\rightarrow$
- i.  $\text{Mg} + \text{H}_3\text{PO}_4 \text{---}\rightarrow$
- j.  $\text{FeS} + \text{Co}(\text{C}_2\text{H}_3\text{O}_2)_3 \text{---}\rightarrow$
- k.  $\text{NaCl} + \text{H}_2\text{SO}_4 \text{---}\rightarrow$
- l.  $\text{Fe}_2\text{O}_3 \text{---}\rightarrow$