## Ch. 3 Chemical Reactions & Balancing Equations

Chemical equations are used	to represent chemical reaction	ons on paper.

The left side of the equation is for the \_\_\_\_\_.

The right side of the equation is for the \_\_\_\_\_\_.

\_\_\_\_\_ represent the number of molecules or moles of that compound.

\_\_\_\_\_ indicate how many atoms of that element are in a single molecule.

Identify what type of chemical reactions are the following:

$$2Mg + O_2 \rightarrow 2MgO$$

$$2H_2O_2 \rightarrow 2H_2O + O_2$$

$$CH_4 + 2O_2 \rightarrow CO_2 + 2H_2O$$

$$CO_2 + H_2O \rightarrow H_2CO_3$$

$$2C_3H_8 + 7O_2 \rightarrow 6CO + 8H_2O$$

Identify the reactants and products in this reaction and balance the equation: When solid aluminum reacts with aqueous hydrochloric acid, it produces aqueous aluminum chloride and hydrogen gas.

\_\_\_\_ Fe + \_\_\_ 
$$O_2 \rightarrow$$
 \_\_\_ Fe<sub>2</sub> $O_3$ 

$$C_2H_4 + O_2 \rightarrow CO_2 + H_2O$$

$$\underline{\hspace{1cm}} \mathsf{KOH} + \underline{\hspace{1cm}} \mathsf{H_3PO_4} \to \underline{\hspace{1cm}} \mathsf{K_3PO_4} + \underline{\hspace{1cm}} \mathsf{H_2O}$$

$$N_2(g) + O_2(g) + H_2O \rightarrow HNO_3(aq)$$

Calculate the molecular weight of the following compounds:

Ammonia (NH<sub>3</sub>) Glucose ( $C_6H_{12}O_6$ )

Ethanol	$(C_2H_5OH)$
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Sulfuric Acid (H<sub>2</sub>SO<sub>4</sub>)

What's the formula for percent composition?

Calculate the percent composition of Calcium, Carbon, and Oxygen:

Calcium Carbonate (CaCO<sub>3</sub>)