Chemical Reactions and Conservation of Mass

1.) What is the main difference between a physical change and a chemical change?

2.) Use words to describe the following chemical equations.

a.)
$$S + O_2 \rightarrow SO_2$$

b.) 2
$$SO_2 + O_2 \rightarrow 2 SO_3$$

c.)
$$N_2 + 3 H_2 \rightarrow 2 NH_3$$

- 3.) Identify which chemicals are the reactants and which are the products below:
 - a.) magnesium + oxygen → magnesium oxide
 - b.) water → hydrogen + oxygen
 - c.) methanol + oxygen → carbon dioxide + water
 - d.) aluminum + copper (II) chloride → aluminum chloride + copper
- 4.) State the law of conservation of mass in your own words.

5.) Use the law of conservation of mass to write in the missing amounts				
a.) calcium + chlorine → calcium chloride				
40.1 g 71.0	g	9		
b.) ammonia → nitrogen + hydrogen				
34 g	_ g 6	ó g		
c.) ethanol + oxygen → carbon dioxide + water				
46 g g	3 8	38 g	54 g	
d.) magnesium + copper(II) chloride \rightarrow aluminum chloride + copper				
24.3 g	134.5 g		9	63.5 g