

## Unit 2 Review Chemistry

1. Give 5 examples of physical properties
2. How do you know a chemical change has occurred? What are the 5 clues that a chemical change has happened?
3. Identify the following as chemical or physical changes
4. You have learned about the different families (or groups) of the periodic table of elements. List one CHARACTERISTIC for the elements found in the following families and give one EXAMPLE:
  - Alkali metals
  - Alkaline earth metals
  - Halogens
  - Noble gases
5. What is the difference between an atom and a compounds.

6. Complete the following table:

	# electrons	# protons	# neutrons
Lithium			
Phosphorous			
Fluorine			
Beryllium			

7. Fill in the following chart:

Formula	Number of Atoms		Ionic or covalent?	Name
CCl <sub>4</sub>	Carbon			
	Chlorine			
	Total			
	Lithium			lithium sulfide
	Sulfur			
	Total			
	Carbon			carbon dioxide
	Oxygen			
	Total			
MgF <sub>2</sub>	Magnesium			
	Flourine			
	Total			
H <sub>2</sub> O	Hydrogen			
	Oxygen			
	Total			

Formula	Number of Atoms		Ionic or covalent?	Name
	Sodium			sodium chloride
	Chlorine			
	Total			

8. Determine the chemical formula of the following ionic compounds.

Sodium and oxygen \_\_\_\_\_

Aluminum and chlorine \_\_\_\_\_

Potassium and sulfur \_\_\_\_\_

Magnesium and nitrogen \_\_\_\_\_

9. Name the ionic compounds you formed in number 10.

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

d. \_\_\_\_\_

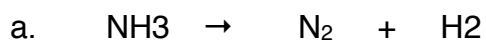
10. Draw the Bohr Rutherford diagram for the following:

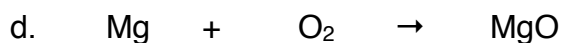
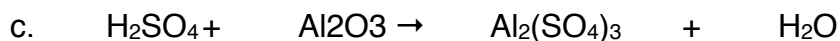
a. oxygen

b. carbon

c. beryllium

11. Balance the following equations:





12. For each of the equations in #13, state if it is synthesis, decomposition, single displacement or double displacement.

a. c.

b. d.

13. Draw the pH scale. On it label “acids”, “bases”, and “neutral”.

14. Where would “strong acids” and “strong bases” go on the pH scale?

15.

a) Define neutralization.

b) How would you neutralize a solution that is basic?

c) How would you neutralize a solution that is acidic?

d) Classify the following as acids or bases

HCl \_\_\_\_\_

LiOH \_\_\_\_\_

$\text{H}_2\text{SO}_4$  \_\_\_\_\_

NaOH \_\_\_\_\_