

## Periodic Table Worksheet 2

- A. On the line to the left classify each of the following elements as : metal, nonmetal or metalloid  
 B. On the line to the right identify the element's family if it belongs to one of the families listed below, otherwise leave the line blank.

1<sup>st</sup> line

M - Metals  
 NM - Nonmetals  
 MTO - Metalloids

2<sup>nd</sup> line

AM - Alkali Metal  
 G2M - Group 2 Metal  
 TM - Transition Metal

H - Halogen  
 NG - Noble gas

- |                                 |                                  |
|---------------------------------|----------------------------------|
| 1. <u>M</u> <u>AM</u> Potassium | 7. <u>M</u> <u>G2M</u> Magnesium |
| 2. <u>M</u> <u>TM</u> Gold      | 8. <u>MTO</u> _____    Germanium |
| 3. <u>NM</u> _____    Sulfur    | 9. <u>NM</u> <u>H</u> Fluorine   |
| 4. <u>MTO</u> _____    Antimony | 10. <u>M</u> <u>AM</u> Cesium    |
| 5. <u>NM</u> <u>H</u> Iodine    | 11. <u>NM</u> <u>NG</u> Krypton  |
| 6. <u>M</u> <u>TM</u> Titanium  | 12. <u>NM</u> <u>H</u> Bromine   |

- B. Which one of the following pairs of elements is the most metallic?

- |             |              |             |
|-------------|--------------|-------------|
| 1. <u>A</u> | a) potassium | b) bromine  |
| 2. <u>B</u> | a) cesium    | b) sodium   |
| 3. <u>B</u> | a) silicon   | b) aluminum |
| 4. <u>A</u> | a) gold      | b) bismuth  |

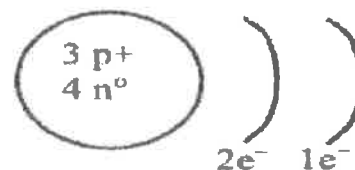
- C. Two elements X and Y have the following properties.

Element X	Element Y
Metallic luster	Without metallic luster
Two valence electrons	Four valence electrons
Located in the 4 <sup>th</sup> period	6 protons

1. Which symbols from the periodic table correspond to elements X and Y respectively?  
 (A) Ca and C                      B) K and B                      C) K and C                      D) Ca and B
2. Which of the following statements about the properties of metals is correct?  
 A) They are ductile but are not shiny.  
 B) They conduct electricity but are not ductile.  
 C) They do not conduct electricity and are not shiny.  
 (D) They conduct electricity and heat and are opaque.

The following diagram represents the Bohr model of an element.

3. Which of the following is true?  
 A) The element is located in period 1 and is a Group II Metal  
 B) The element is located in period 1 and is an alkali metal.  
 (C) The element is located in period 2 and is an alkali metal.  
 D) The element is located in period 2 and is a halogen



Four elements from the periodic table are described below.

**Element A:** This metal reacts vigorously with water and its electrons are distributed among three energy levels.

**Element B:** This nonmetal is located in Period 3 and used to disinfect or to kill bacteria in pools.

**Element C:** Its electron configuration is pictured in the Bohr model to the right

**Element D:** Its outermost energy level is full and it could have 22 neutrons.



4. Complete the table by indicating the symbol and the name of the chemical family for each of these elements.

Element	Chemical	Symbol	Chemical	Family Name
Element A		Na		ALKALI METALS
Element B		Cl		HALOGEN
Element C		Mg		GROUP II METALS
Element D		Ar		NOBEL GAS

5. Which of the following states two properties of the elements in the halogen family?

- A) They are soft metals and highly reactive.
- B) They do not conduct electricity and are not shiny.
- C) They conduct electricity but are less reactive than alkali metals.
- D) They are colorless in their natural state and are not chemically reactive

An element has the following characteristics:

- It has a metallic luster.
- It conducts electricity.
- It has 3 valence electrons.
- It is a metal.

6. What is this element?

- A) Aluminum
- B) Lithium
- C) Silicon
- D) Sodium

The following diagram represents the Bohr atomic model for an element in the periodic table.



7. Which of the following is a correct statement about this element?

- A) It is an alkali metal that has 19 protons and is located in Period 4.
- B) It is a nonmetal that is not very reactive and that has 19 protons and 1 valence electron.
- C) It is a halogen that has 19 electrons and is located in Period 1.
- D) It is a highly reactive metal that has 20 protons.