

Periodic Table Worksheets 1

1. Which family is described? Give the name.

- A- I have 1 electron on my outer shell _____
- B- One of the elements has 35 as the atomic number _____
- C- I have 2 electrons on my outer orbital _____
- D- We are un-reactive _____
- E- I will produce a salt when I mix with a metal _____
- F- My shells are all full _____
- G- The most reactive family _____
- H- Never found as a compound always as an element _____
- I- One of my elements has a mass number of 23 _____
- J. I have 7 electrons on my outer shell _____
- K. One of my elements has an atomic number is 18 _____
- L. I have the element that has 17 electrons _____

2. What element am I? (Use symbol)

- A- I am found in period 2 and have 3 valence electrons _____
- B- I am found in family III A and use 3 orbitals _____
- C- I have 20 protons _____
- D- I have 2 energy shells and each are full _____
- E- I am an alkaline earth metal and in period 2 _____
- F- I am a halogen with 3 orbitals _____
- G- I am a metalloid with three energy levels _____
- H- I have 1 valence electron with 4 energy levels _____
- I- I am an inert gas with 1 energy level _____
- J- I have 2 orbitals and 5 valence electrons _____
- K- I am the least reactive element is the alkali family? _____

3. State whether the following are metals, metalloids or non-metals.

Elements	Characteristic 1	Characteristic 2	Characteristic 3	Metal, nonmetal or metalloid
Element A	Malleable	conducts electricity	not ductile	
Element B	Conducts heat	Reacts with acids	Shiny	
Element C	Solids, liquids and gases	Accepts electrons	No conduction	

- 4. Explain what a valence electron is _____

- 5. What do valence electrons group together? _____
- 6. Which elements go under the alkali metal family? _____

7. Give 3 characteristics of the alkali metal groups. _____

8. Why are elements from the alkaline earth family grouped together? _____

9. Why are the elements from period 2 grouped together? _____

10. Why are elements from the alkali family grouped together? _____

11. When halogens are combined with metals what is produced? _____

12. Why is hydrogen placed where family 1 is even though it does not belong to that family?

13. How can you identify an element that is a metalloid? _____

14. Name 3 metalloids _____

Periodic Table Worksheets 2

1. Two elements X and Y have the following properties.

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

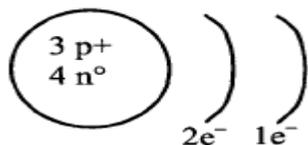
Which symbols from the periodic table correspond to elements X and Y respectively?

- 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 malleable but are not shiny.
 B) They conduct electricity but are not malleable.
 C) They do not conduct electricity and are not shiny.
 D) They react with acids and conduct heat.

3. The following diagram represents the Bohr-Rutherford model of an element.



Which of the following is true?

- A) The element is located in period 1 and is an alkaline earth 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 an alkaline earth metal.

4. Four elements from the periodic table are described below.

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

Element B: It is located in Period 3 and used to disinfect or to kill bacteria.

Element C: Its electron configuration is



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

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

Element	Chemical	Symbol	Chemical	Family Name
Element A				
Element B				
Element C				
Element D				

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 colourless in their natural state and are not chemically reactive

6. An element has the following characteristics:

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

What is this element?

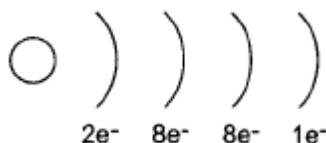
- A) Aluminum B) Lithium C) Silicon D) Sodium

7. The table below gives the chemical symbols of four elements and provides space to indicate the following characteristics: the number of valence electrons, the number of energy levels, chemical reactivity (none, low or high) and the family number. **Using the periodic table, fill in the blank boxes in the table.**

ELEMENT SYMBOL	NUMBER OF VALENCE ELECTRONS	NUMBER OF ENERGY LEVELS	CHEMICAL REACTIVITY	FAMILY NUMBER
Li				
C				
Cl				
Ne				

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

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.

9. The table below provides certain information about the symbol, the electron configuration, the name of the chemical family and the period number of four elements in the periodic table.

SYMBOL	ELECTRON CONFIGURATION	NAME OF THE CHEMICAL FAMILY	PERIOD NUMBER
Mg			
		Alkali metals	2
	•)2e ⁻)3e ⁻		
	•)2e ⁻		

Using the above information and the periodic table, fill in the empty boxes in the table.

10. The following table gives the description of four chemical elements.

Element Description

1- It is located in Period 1, has two electrons in its outermost energy level and may be used to inflate balloons.

2- It is located in Period 2, has one valence electron and reacts vigorously with water to form a base.

3- It is located in Period 2, has two completely filled energy levels and is chemically stable.

4- It is located in Period 3, has one less electron than the closest inert gas and may be used as a disinfectant.

Which of these elements belong to the same chemical family?

A) 1 and 2

B) 1 and 3

C) 2 and 3

D) 2 and 4