

SCIENCE (CHEMISTRY)
Worksheet – Atomic Structure

Name: _____ () Class: _____ Date: _____

1. Complete the following table.

Element	Symbol	Electronic configuration	No of valence electrons	Valencies	Group No.	Metal or non-metal
Lithium	Li	2,1			I	Metal
Potassium			1	1		
Beryllium	Be		2	2		
Calcium	Ca	2,8,8,2			II	
	Al	2,8,3			III	
Carbon			4			Non-metal
	Si	2,8,4			IV	
Phosphorus				3	V	
Oxygen	O		6	2		
	S	2,8,6			VI	
Chlorine				1		
*Helium	He	2	2		VIII	
	Ne	2,8			VIII	
Argon	Ar		8	0		

* Helium is special because although it has only 2 valence electrons, it is found under group VIII (noble gas). This is because the electrons are in the first shell and the first shell can hold only two electrons. Hence it is a noble gas.

2. Fill in the blanks.

- a) The electronic configuration shows the total number of e_____ in the element.
- b) The valence electrons show the number of electrons on the o_____ shell of the element.
- c) If an element has 3 valence electrons, it is in group number _____ of the periodic table.
- d) Metals are found in groups _____, _____ and _____ of the periodic table.
- e) Non-metals are found in groups _____, _____, _____, _____ and _____ of the periodic table.