Periodic Table Notes Part 1

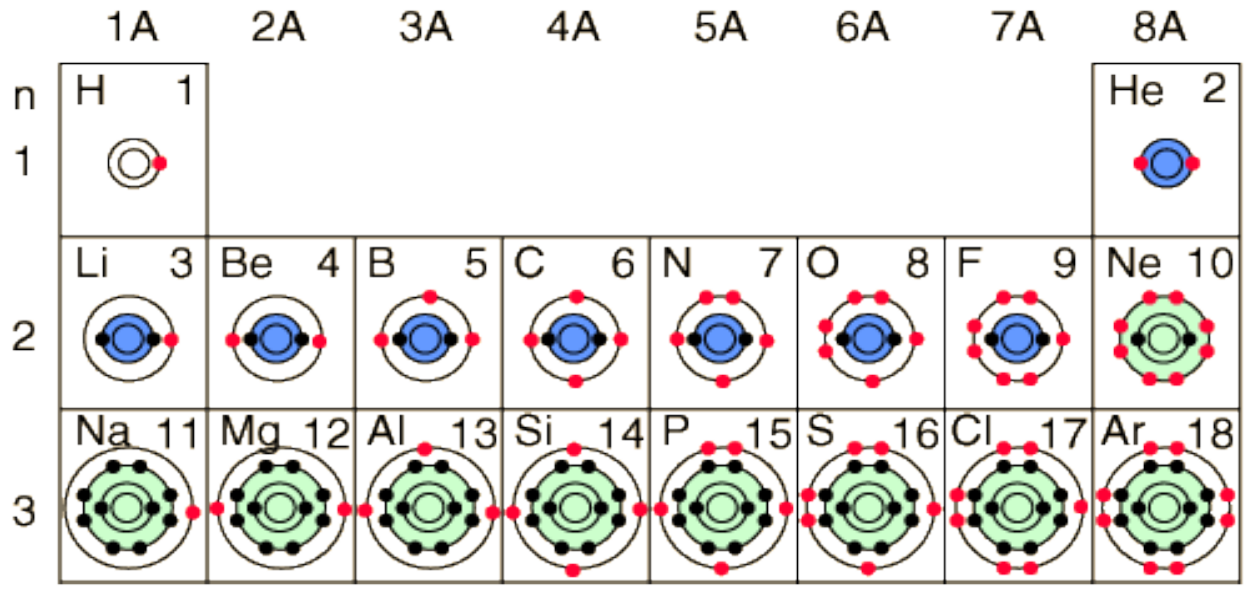
Def: Is a visual representation which organizes the elements by chemical and physical properties.

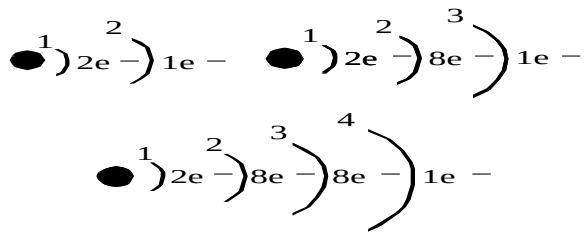
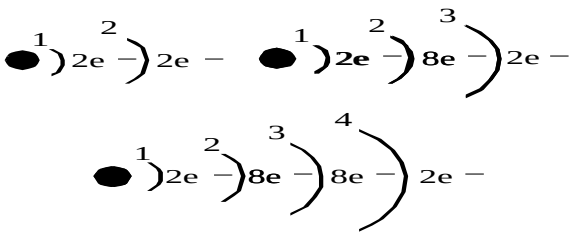
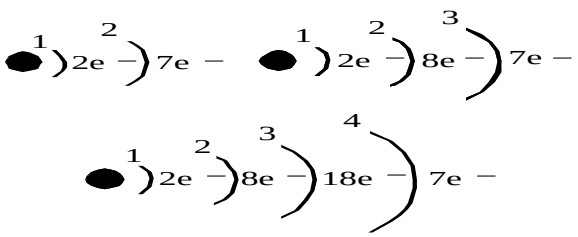
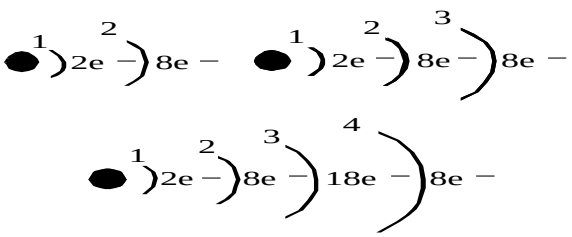
Group or Family: _____

_____

_____

Valence electrons: _____



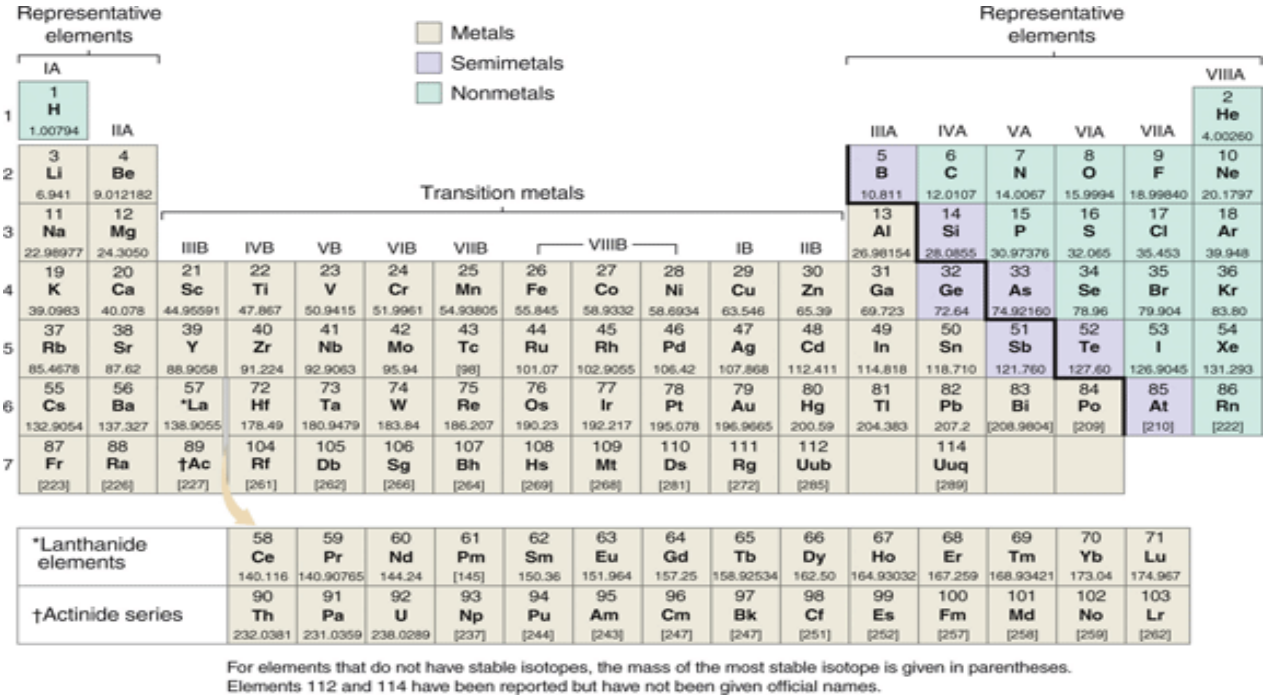
Alkall metals 	Alkaline-earth metals 
Halogens 	Inert or noble gases 

Periods, orbits, energy shells and energy levels: _____

_____

_____

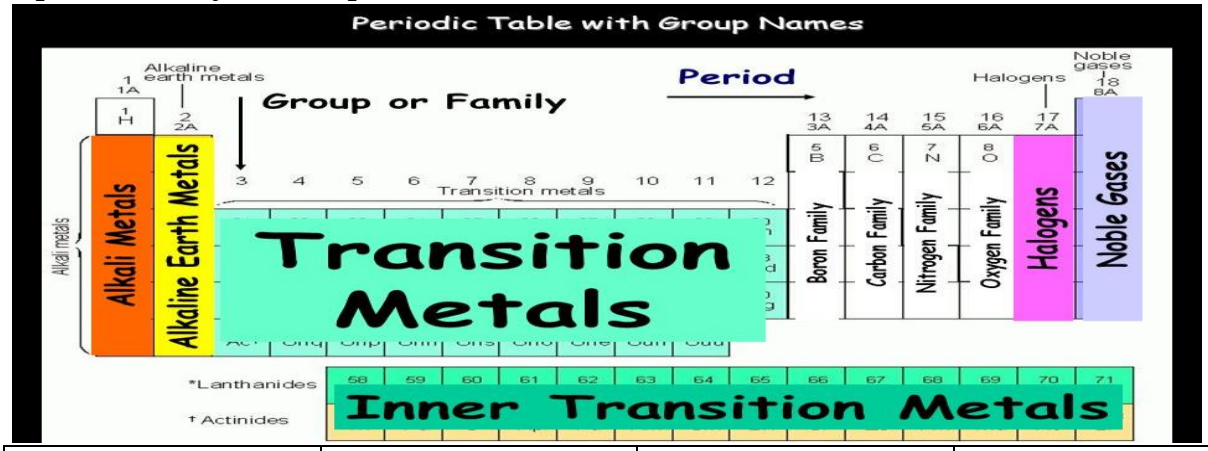
Metals, non-metals and metalloids: Elements are also divided by a staircase on the periodic table.



For elements that do not have stable isotopes, the mass of the most stable isotope is given in parentheses.
Elements 112 and 114 have been reported but have not been given official names.

Metals	Non-metals	Metalloids
-left of the stair case - metallic luster - conducts heat - conducts electricity - malleable - ductile - soft - very reactive when placed in water and acid - high melting point - all solids except for mercury	- Right of stair case - Found in 3 states of matter - Opposite properties of metals	- almost surrounds the stair case - characteristics of both metals and non-metals - ex: might be malleable, but does not conduct

Specific Family or Group Names



Alkali metals	Alkaline earth metals	Halogen	Noble or inert gas
- has all characteristics of metals - most reactive family because has only 1 ve - as you go down the family element becomes more reactive - **H, is not part of the family, put there because has 1 ve**	- same as alkali metals - less reactive than alkali metals because has 2 ve	- same characteristics as non-metals - becomes more reactive as you go up the family - accepts 1 ve from metals -halogen + metal = salt - used as antiseptics	-if electricity is passed through them a bright light is produced - He, placed there even though does not have 8 ve because its orbit is full at 2 ve - Has full and stable orbits and therefore completely stable

Families 3-6 group names are named after the first element in the group. Ex: Group 3 is called the boron group.

Elements vs compounds

_____

_____

_____

_____

_____

_____

Past Exam Questions

1. Fill in the table below.

Element	Number of Valence Electrons	Chemical Family Name
Br		
Ca		
Na		
Ne		

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

Element 1	This element from Period 2 has two more electrons than helium.
Element 2	This soft metal from Period 3 has one valence electron.
Element 3	This element from Period 4 is found in bones and teeth.
Element 4	This element from Period 3 has some of the properties of metals and non-metals.

Which of these elements belong to the same group or chemical family?

A) 1 and 2 B) 1 and 3 C) 2 and 4 D) 3 and 4

3. 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-		

Fill in the table above.