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Valence electrons and charge on ions. (Worksheet)

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Valence electrons and charge on ions.

Valence electrons are electrons in the last filled energy level or outermost energy level (shell)
Valence electrons are the electrons which take part in chemical bonding.

Table 1

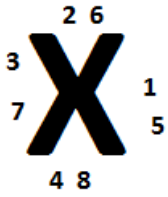
Name of element	Electron configuration	# of valence electrons	Group number
Li	2,1		
Na	2,8,1		
Mg	2,8,2		
Ca	2,8,8,2		
S	2,8, 6		
O	2,6		
Cl	2,8,7		
Ne	2,8		
Ar	2,8,8		

1. Circle the valence electrons for each element provided in the table 1 and fill the missing information in the table provided above.

2. From the data provided in the table answer the question is there any correlation between the group number and number of valence electrons for representative elements?

Lewis-dot structures are symbolic representation of valence electrons

Lewis -dots diagram



2. Draw the Lewis-dot structures for the representative elements in the periodic table provided below

Periodic Table noble gases

I A							VIII A
1	II A	III A	IV A	V A	VI A	VII A	2
3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18
19	20	31	32	33	34	35	36

3. How many valence electrons are in Neon and Argon atoms? _____
   What do you know about these elements? Have you ever heard of chemical compounds of these elements? _____
   Are the eight valence electrons the most stable configuration? _____