



Analyzing the periodic table – Correction

1. H : 1 valence shell electron
Li : 1 valence shell electron
F : 7 valence shell electrons
Ne : 8 électrons de valence
 - Na : 1 valence shell electron
Cl : 7 valence shell electrons
Ar : 8 valence shell electrons
2. H, Li and Na are in the same column, and all have 1 valence electron. F and Cl are in the same column, and all have 7 valence electrons. Ne and Ar are in the same column, and all have 8 valence electrons.
⇒ **Atoms of elements in the same column of blocs s and p have the same number of valence electrons.**
 3. H, Li and Na have 1 valence shell electron, and are on column 1.
F and Cl have 7 valence shell electrons, and are on column 14.
Ne and Ar have 8 valence shell electrons, and are on column 18.
⇒ **The number of valence electrons in the atom of an element in the s and p blocks can be obtained from the number of units in the column in which it is located.**
 4. Li and Na belong to the alkali family. F and Cl belong to the halogen family. Ne and Ar belong to the noble gas family.
 5. Li and Na belong to the same family, have similar chemical properties and are on the same column (and therefore have the same number of valence electrons).
F and Cl belong to the same family, have similar chemical properties and are on the same column (and therefore have the same number of valence electrons).
Ne and Ar belong to the same family, have similar chemical properties and are on the same column (and therefore have the same number of valence electrons).
⇒ **Elements in a chemical family have similar chemical properties and the same number of valence electrons.**
 6. With rare exceptions, noble gases do not associate with other atoms.
 7. Noble gases other than helium all have 8 valence electrons.
 8. If noble gases do not associate with other atoms, we can assume that they are stable in the monoatomic state. Moreover, they are the only elements in the periodic table that do not associate with any other atoms. What's more, all of them (with the exception of helium) have 8 valence electrons.
⇒ **An atom in the s and p blocks is stable if it has 8 valence electrons.**