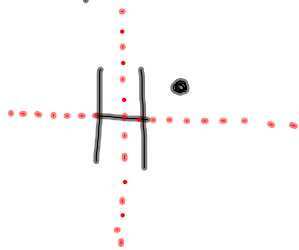


We use dot diagrams to show how many valence electrons an atom of an element has.

→ electrons on an atom's outermost energy level

H - 1 valence electron



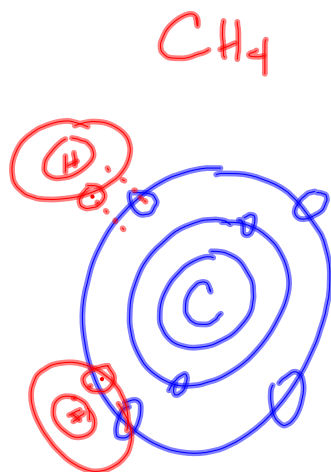
Helium 2 v.e. - 1st energy level - so on this energy level 2 = full

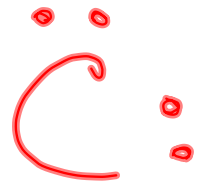
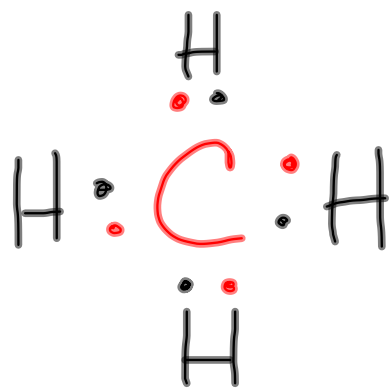


Lithium 1 v.e.



Beryllium 2 v.e.

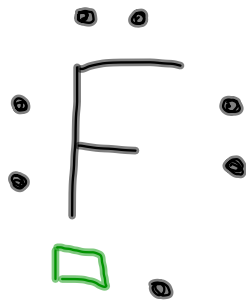


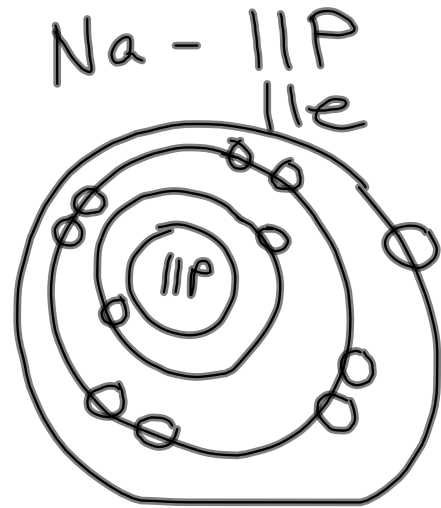
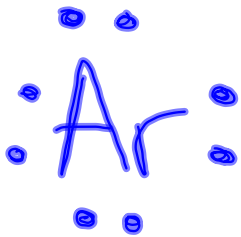


4VB.

F

$\exists v \in E$ .





\* Atoms want 8 valence electrons.

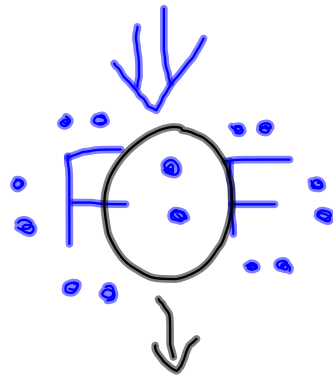
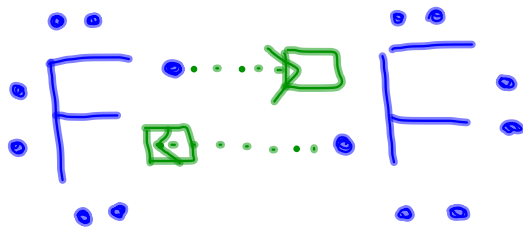
(except the really little guys - who only use the first level they are happy with 2!!)

They will give, take, and/or share <sup>valence</sup> electrons with other atoms to get this number of valence electrons!

When atoms give, take, and/or share electrons it is called a BOND because it results in an attraction between the atoms that are involved. . . . which <sup>often</sup> results in a molecule of a compound

# 2 kinds of bonds

- ① Covalent Bond - occurs when atoms share valence electrons.



\* Strong bond - electrons are being shared

because

both atoms need the other's electrons.

"tug of war"

