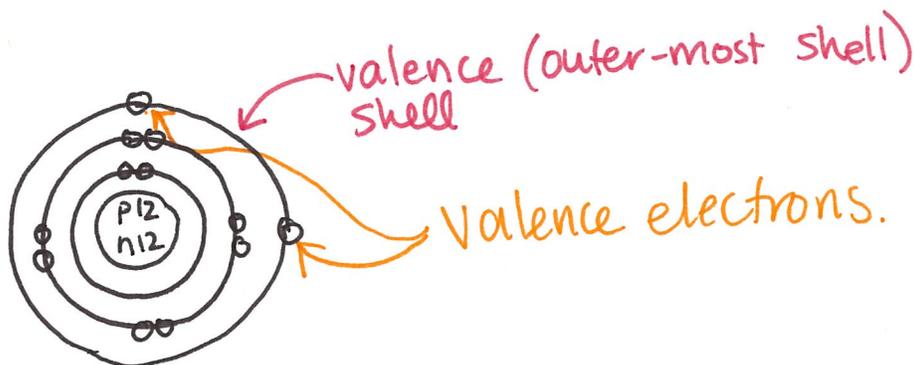


Lewis Structures & Electron dot diagrams

Mg
(Bohr)
protons: 12
neutrons: 12
(mass - protons)
(24 - 12 = 12)
electrons: 12
(same as protons)



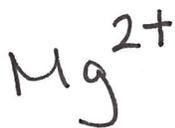
atoms like to have a "full" valence shell. either by

- ① gaining electrons to have a full 8 (stable octet)

OR

- ② losing electrons to lose the outer shell altogether.

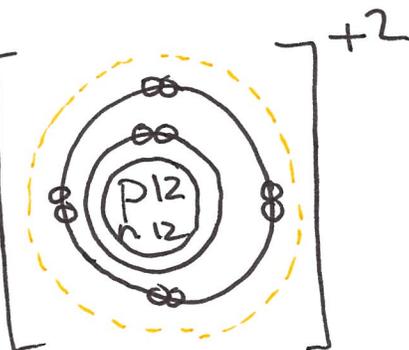
They will do what is easier.
metals will lose electrons
non-metals will gain electrons.



loses 2 electrons to lose its outer shell.

protons: 12⁺
electrons: 10⁻

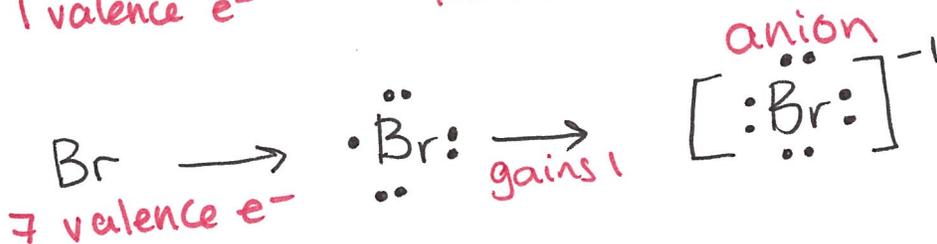
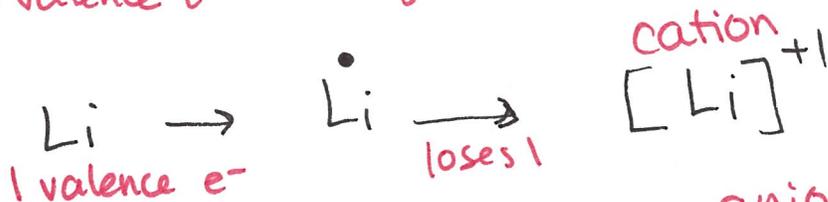
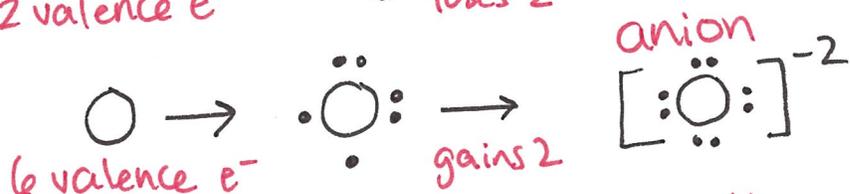
balance charge: +2



Electron dot diagrams

(2)

shows the valence electrons only.



ion \rightarrow charged atom

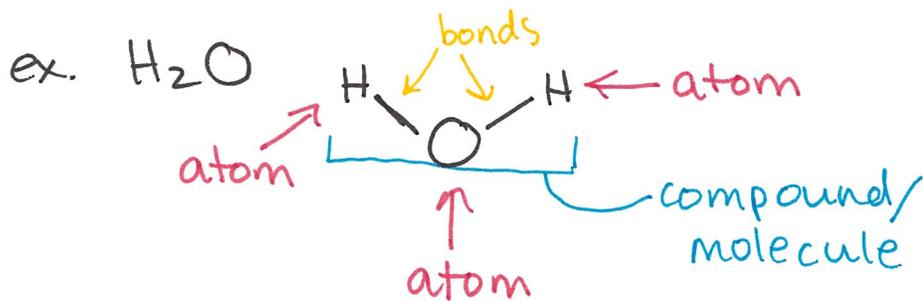
cation \rightarrow positive charge

anion \rightarrow negative charge

Ionic & covalent bonds

③

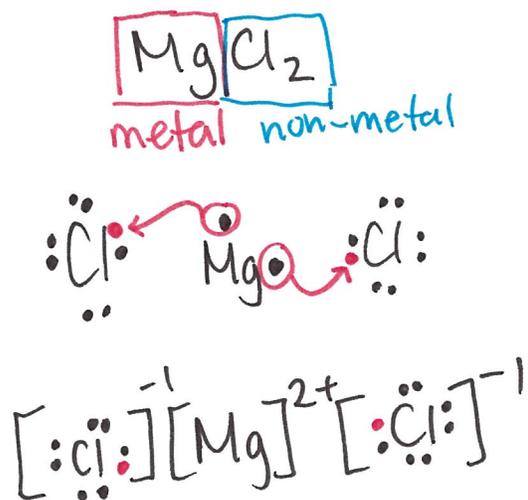
Bonds connect atoms to form compounds



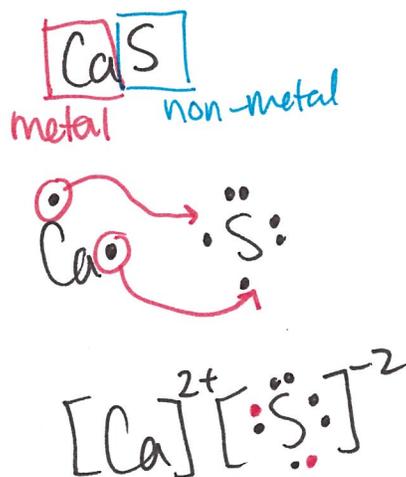
Ionic bonds

- bonds between metal and non-metal
bonds between +ion (cation) and -ion (anion)
- there is a TRANSFER of electrons from the metal to the non-metal.
↳ the resulting ions will attract due to them having positive and negative charges.

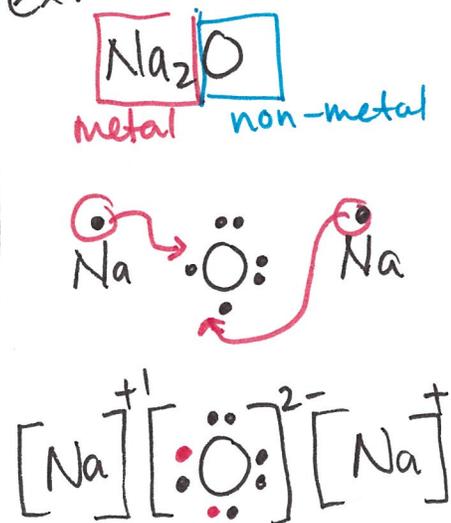
ex.



ex.



ex.

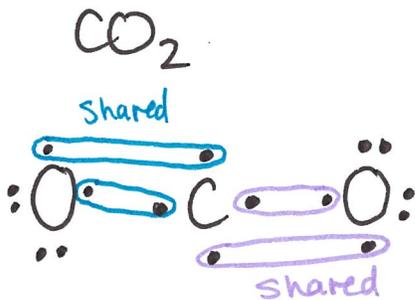


Covalent bonds

④

- bonds between non-metal + non-metal
anion(-) + anion(-)
- Since non-metals don't want to lose electrons, they will SHARE electrons to complete their stable octet (8 electrons in valence shell)

ex.



Carbon has 8
4 from itself
2 from each
oxygen

Oxygen has 8
6 from itself
and 2 from
the carbon



ex. P_2S_3

