

Topic 4: Covalent Compounds



Covalent Bond:

Single Bond:

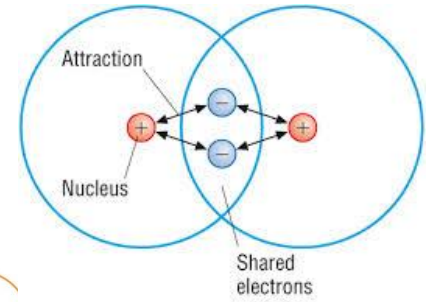
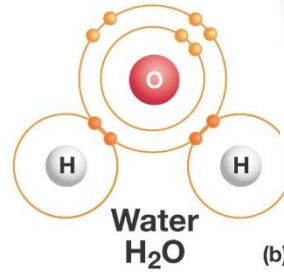
Double Bond:

Triple Bond:

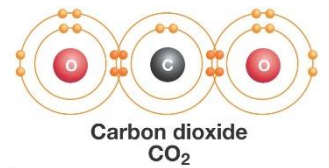
Diatomic Molecule:

Drawing Bonds:

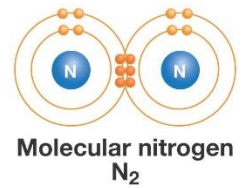
(a) Single bonds



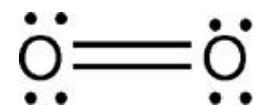
(b) Double bonds



(c) Triple bonds



1																18	
1																2	
H Hydrogen 1.0																He Helium 4.0	
14				15				16				17				18	
6		7		8		9		10		11		12		13		14	
C Carbon 12.0		N Nitrogen 14.0		O Oxygen 16.0		F Fluorine 19.0		Ne Neon 20.2		Na		Mg		Al		Si	
14		15		16		17		18		19		20		21		22	
Si Silicon 28.1		P Phosphorus 31.0		S Sulphur 32.1		Cl Chlorine 35.5		Ar Argon 39.9		K		Ca		Sc		Ti	
32		33		34		35		36		37		38		39		40	
Ge Germanium 72.6		As Arsenic 74.9		Se Selenium 79.0		Br Bromine 79.9		Kr Krypton 83.8		Rb		Sr		Y		Zr	
50		51		52		53		54		55		56		57		58	
Sn Tin 118.7		Sb Antimony 121.8		Te Tellurium 127.6		I Iodine 126.9		Xe Xenon 131.3		Ba		La		Ce		Pr	
82		83		84		85		86		87		88		89		90	
Pb Lead 207.2		Bi Bismuth 209.0		Po Polonium (209)		At Astatine (210)		Rn Radon (222)		Fr		Ra		Ac		Th	



Naming Molecular Compounds: Greek Prefix Systems



- 1.
- 2.
- 3.

Remember:

Practice

- a) P_2O_5 -
- b) SF_4 -
- c) CO_2 -

Writing Formulas for Molecular Compounds:

Prefix	Number of atoms
Mon(o) -	1
Di-	2
Tri-	3
Tetra -	4
Penta -	5
Hexa -	6
Hepta-	7
Octa -	8
Nona-	9
Deca-	10

Combining Capacity:

If the molecule name is not given:

- 1.
- 2.
- 3.
- 4.

4	3	2	1
			H
C	N	O	F
Si	P	S	Cl
	As	Se	Br
			I

Practice

- b) Nitrogen & sulfur -
- c) Oxygen & fluorine -
- d) Silicon and oxygen -