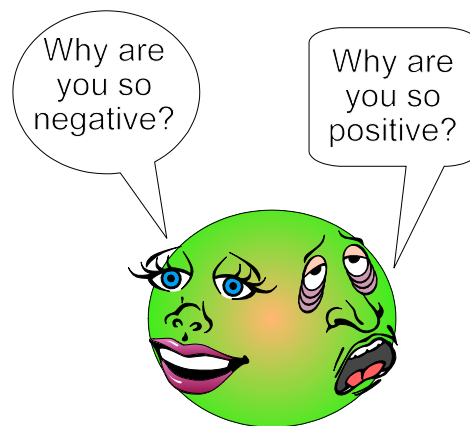


Naming Binary Covalent Compounds

Nonmetals are two-faced elements! Although they normally have negative oxidation states, nonmetals can behave like metals and have positive oxidation states. As a result, two nonmetals can combine to form compounds. When two nonmetals combine, they form covalent bonds. The nonmetal with the lower electronegativity behaves like a metal and has a positive oxidation state. In carbon dioxide (CO_2), the carbon behaves like a metal while the oxygen behaves like a nonmetal. The metal is written first in the name and the formula. The name of the metal is the same as the name of the element ($\text{C} = \text{carbon}$, $\text{C}^{+4} = \text{carbon}$). If there is more than one atom of the metal, the number of atoms is indicated with a prefix. (See the list of prefixes below.) The nonmetal is written last in the name and formula. The name of the nonmetal is the same as the name of the element minus the final syllable or two, plus IDE ($\text{O} = \text{oxygen}$, $\text{O}^{-2} = \text{oxide}$). The number of nonmetal atoms is indicated with a prefix (even when there is only one). Writing formulas for these compounds is easy, because the prefix tells the subscript.



Examples

$\text{Cl}_2\text{O}_3 = \text{dichlorine trioxide}$
 $\text{silicon tetrafluoride} = \text{SiF}_4$

Number of Atoms	Prefix
1	mono
2	di
3	tri
4	tetra
5	penta
6	hexa
7	hepta
8	octa
9	nona
10	deca

Name the following binary covalent compounds.

- BrCl_5 _____
- SO_3 _____
- P_2O_3 _____
- As_3P_5 _____
- IF_7 _____
- SeS_3 _____
- SO_2 _____
- CO _____
- SBr_6 _____
- N_2O_5 _____