



# Three Types of Compounds



## 1) Main Group metal + nonmetal (*no variable charge or numeric prefixes*)

$\text{Al}_2\text{O}_3$	aluminum oxide
$\text{Na}_2\text{SO}_4$	sodium sulfate
$\text{NaCl}$	sodium chloride

## 2) Transition metal + nonmetal (*watch for variable charge*)

$\text{Fe}_2\text{O}_3$	iron(III) oxide
$\text{FeO}$	iron(II) oxide
$\text{Fe}_2\text{O}_5$	iron(V) oxide
$\text{CuNO}_3$	copper(I) nitrate

## 3) Nonmetal + nonmetal (*covalent*).

Use numeric prefixes, name the least electronegative element first; least electronegative does not need the prefix 'mono.'

$\text{P}_2\text{O}_3$	diphosphorous trioxide
$\text{P}_2\text{O}_5$	diphosphorous pentoxide
$\text{S}_2\text{Cl}_{10}$	disulfur decachloride
$\text{OF}_2$	oxygen difluoride
$\text{NO}$	nitrogen monoxide
$\text{NO}_2$	nitrogen dioxide
$\text{N}_2\text{O}$	dinitrogen monoxide

Some numeric prefixes:

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