

PS 121 Naming Compounds (ionic)

+1	+2						(-4)	-3	-2	-1	0
H											He
Li	Be						C	N	O	F	Ne
Na	Mg						Si	P	S	Cl	Ar
K	Ca						Ge	As	Se	Br	Kr

1. identify the cation ... positive metal (or NH_4^+ or H_3O^+) ion
... and the anion ... negative nonmetal (or polyatomic) ion
2. determine the positive ion's charge ... use the element's name (or ammonium or hydronium)
... remove ambiguity with the metal's charge (Roman Numerals), if not Group 1 or 2
3. if negative ion is monatomic: drop element ending and add *-ide*
... if polyatomic anion, its name might have prefix (*per-* or *hypo-*) and suffix (*-ate* or *-ite*)

Common Polyatomic ions

S^{+4} , S^{+6}	sulfurous , sulfuric
Fe^{+2} , Fe^{+3}	ferrous , ferric
Sn^{+2} , Sn^{+4}	stannous , stannic
NH_4^+	ammonium

Cu^{+1} , Cu^{+2}	cuprous , cupric
Pb^{+2} , Pb^{+4}	plumbous , plumbic
H_3O^+	hydronium

OH^-	hydroxide
CO_3^{-2}	carbonate
HCO_3^-	hydrogen (bi-) carbonate
CH_3COO^-	acetate
$\text{C}_2\text{O}_4^{-2}$	oxalate
CN^-	cyanide
SCN^-	thiocyanate
$\text{Fe}(\text{CN})_6^{-3}$	ferricyanide
NO_3^-	nitrate
NO_2^-	nitrite
PO_3^{-2}	phosphite
HPO_3^{-2}	hydrogen phosphite
H_2PO_2^-	hypophosphite
PO_4^{-3}	phosphate
HPO_4^{-2}	hydrogen phosphate
H_2PO_4^-	dihydrogen phosphate

SO_4^{-2}	sulfate
SO_3^{-2}	sulfite
HSO_4^-	hydrogen (bi-)sulfate
HSO_3^-	hydrogen (bi-)sulfite
$\text{S}_2\text{O}_3^{-2}$	thiosulfate
ClO_4^-	perchlorate
ClO_3^-	chlorate
ClO_2^-	chlorite
ClO^-	hypochlorite
CrO_4^{-2}	chromate
$\text{Cr}_2\text{O}_7^{-2}$	dichromate
MnO_4^-	permanganate
MnO_4^{-2}	manganate
SeO_4^{-2}	selenate
BrO^-	hypobromite
BrO_3^-	bromate
IO_3^-	iodate

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