

CHARGES OF COMMON IONS (AP Chemistry)

Charges of Some Monatomic Ions			
1+	2+	3+	4+
Group 1A metals Ag ⁺ , silver Cu ⁺ , copper(I) or cuprous	Group 2A metals Cd ²⁺ , cadmium Co ²⁺ , cobalt(II) or cobaltous Cu ²⁺ , copper(II) or cupric Cr ²⁺ , chromium(II) or chromous Fe ²⁺ , iron(II) or ferrous Pb ²⁺ , lead(II) or plumbous	Group 3A metals Mn ²⁺ , manganese(II) or manganous Hg ²⁺ , mercury(II) or mercuric Ni ²⁺ , nickel(II) Sn ²⁺ , tin(II) or stannous Zn ²⁺ , zinc	Group 4A metals Cr ³⁺ , chromium(III) or chromic Fe ³⁺ , iron(III) or ferric Co ³⁺ , cobalt(III) or cobaltic Ni ³⁺ , nickel(III)
Group 7A nonmetals H ⁻ , hydride	Group 6A nonmetals	Group 5A nonmetals	C ⁴⁻ , carbide

Charges of Common Polyatomic Ions			
1+	2+	3-	4-
NH ₄ ⁺ , ammonium *Hg ₂ ²⁺ , mercury(I) or mercurous		none	
C ₂ H ₃ O ₂ ⁻ , acetate **HCO ₃ ⁻ , bicarbonate(or hydrogen carbonate) BrO ₃ ⁻ , bromate ClO ₃ ⁻ , chlorate ClO ₂ ⁻ , chlorite CN ⁻ , cyanide H ₂ PO ₄ ⁻ , dihydrogen phosphate OH ⁻ , hydroxide HSO ₄ ⁻ , hydrogen sulfate (or bisulfate) HS ⁻ , hydrogen sulfide ClO ⁻ , hypochlorite IO ₃ ⁻ , iodate NO ₃ ⁻ , nitrate NO ₂ ⁻ , nitrite ClO ₄ ⁻ , perchlorate MnO ₄ ⁻ , permanganate SCN ⁻ , thiocyanate	CO ₃ ²⁻ , carbonate CrO ₄ ²⁻ , chromate Cr ₂ O ₇ ²⁻ , dichromate HPO ₄ ²⁻ , hydrogen phosphate C ₂ O ₄ ²⁻ , oxalate O ₂ ²⁻ , peroxide SeO ₃ ²⁻ , selenate SiO ₃ ²⁻ , silicate SO ₄ ²⁻ , sulfate SO ₃ ²⁻ , sulfite C ₄ H ₄ O ₆ ²⁻ , tartrate B ₄ O ₇ ²⁻ , tetraborate S ₂ O ₃ ²⁻ , thiosulfate	AsO ₄ ³⁻ , arsenate BO ₃ ³⁻ , borate PO ₄ ³⁻ , phosphate Fe(CN) ₆ ³⁻ , ferricyanide [or hexacyanoferate(III)]	Fe(CN) ₆ ⁴⁻ , ferrocyanide [or hexacyanoferrate(II)]

* The Hg₂²⁺ ion's "effective" charge on each atom is 1+.

** The prefix "bi-" generally means that a hydrogen atom has been added to the root ion. eg. CO₃²⁻ is a carbonate while HCO₃⁻ is a bicarbonate.