

CHARGES OF COMMON IONS

(Note: All italicized ions must be memorized for tests and quizzes!!!)

Charges of Some Monatomic Ions			
1+	2+	3+	4+
<p><i>Group 1A metals</i></p> <p>Ag⁺, silver Cu⁺, copper(I) or cuprous</p>	<p><i>Group 2A metals</i></p> <p>Cd²⁺, cadmium Co²⁺, cobalt(II) or cobaltous Cu²⁺, copper(II) or cupric Cr²⁺, chromium(II) or chromous Fe²⁺, iron(II) or ferrous Pb²⁺, lead(II) or plumbous</p>	<p><i>Group 3A metals</i></p> <p>Mn²⁺, manganese(II) or manganous Hg²⁺, mercury(II) or mercuric Ni²⁺, nickel(II) Sn²⁺, tin(II) or stannous Zn²⁺, zinc</p> <p>Cr³⁺, chromium(III) or chromic Fe³⁺, iron(III) or ferric Co³⁺, cobalt(III) or cobaltic Ni³⁺, nickel(III)</p>	<p>Pb⁴⁺, lead(IV) or plumbic Sn⁴⁺, tin(IV) or stannic</p>
1-	2-	3-	4-
<p><i>Group 7A nonmetals</i></p> <p>H⁻, hydride</p>	<p><i>Group 6A nonmetals</i></p>	<p><i>Group 5A nonmetals</i></p>	<p>C⁴⁻, carbide</p>

Charges of Common Polyatomic Ions			
1+	2+		
<p><i>NH₄⁺, ammonium</i></p> <p>*Hg₂²⁺, mercury(I) or mercurous</p>	<p>none</p>		
1-	2-	3-	4-
<p><i>C₂H₃O₂⁻, acetate</i></p> <p>**HCO₃⁻, bicarbonate(or hydrogen carbonate)</p> <p><i>ClO₃⁻, chlorate</i></p> <p><i>ClO₂⁻, chlorite</i></p> <p><i>CN⁻, cyanide</i></p> <p><i>OH⁻, hydroxide</i></p> <p>HSO₄⁻, hydrogen sulfate (or bisulfate)</p> <p>HS⁻, hydrogen sulfide</p> <p>ClO⁻, hypochlorite</p> <p>IO₃⁻, iodate</p> <p><i>NO₃⁻, nitrate</i></p> <p><i>NO₂⁻, nitrite</i></p> <p>ClO₄⁻, perchlorate</p> <p>MnO₄⁻, permanganate</p>	<p><i>CO₃²⁻, carbonate</i></p> <p><i>CrO₄²⁻, chromate</i></p> <p>Cr₂O₇²⁻, dichromate</p> <p>C₂O₄²⁻, oxalate</p> <p>O₂²⁻, peroxide</p> <p>SiO₃²⁻, silicate</p> <p><i>SO₄²⁻, sulfate</i></p> <p><i>SO₃²⁻, sulfite</i></p> <p>C₄H₄O₆²⁻, tartrate</p> <p>B₄O₇²⁻, tetraborate</p> <p>S₂O₃²⁻, thiosulfate</p>	<p>BO₃³⁻, borate</p> <p><i>PO₄³⁻, phosphate</i></p> <p>Fe(CN)₆³⁻, ferricyanide [or hexacyanoferrate(III)]</p>	<p>Fe(CN)₆⁴⁻, ferrocyanide [or hexacyanoferrate(II)]</p>

* 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.