Cations (Positive Ions)

Monoatomic

Only One Ion Possible

Rule: Name of element + "ion"
Examples:
- Na⁺ sodium ion
- Mg²⁺ magnesium ion
- H⁺ hydrogen ion
- K⁺ potassium ion
- Sr²⁺ strontium ion
- Cs⁺ cesium ion
- Ca²⁺ calcium ion

Comment: The number of positive charges is NOT indicated in the name because it is not necessary. These ions NEVER take on two possible positive charges.

Comment: Hydrogen will take on a negative one charge (see monoatomic anions for naming).

More Than One Ion Possible

Rule: (a) newer rule - positive charges indicated by a Roman numeral
Examples:
- Fe²⁺ iron(II) ion
- Fe³⁺ iron(III) ion
- Cu⁺ copper(I) ion
- Cu²⁺ copper(II) ion

(b) older rule (but still used) - Latin stem + "ous" for the lesser charge. Latin stem + "ic" for the greater charge.
Examples:
- Fe²⁺ ferrous ion
- Fe³⁺ ferric ion
- Cu⁺ cuprous ion
- Cu²⁺ cupric ion
- Sn²⁺ stannous ion
- Sn⁴⁺ stannic ion

Polyatomic

Rule: ??
Examples:
- NH₄⁺ ammonium
- Hg₂²⁺ mercury(I) ion or mercurous ion

Comment: Hg₂²⁺ is two Hg⁺ ions bonded together, like this: Hg⁺—Hg⁺
However, Hg⁺ by itself does not exist, therefore mercury(I) ion is Hg₂²⁺
(Also, Hg²⁺ is mercury(II), but that is a monoatomic ion.)