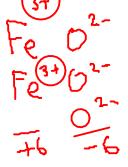
NAMING IONIC COMPOUNDS

- The name of the compound is based on the name of the ions in the compound

- Cation first, anion second (drop the word "ion") Examples:

$$Mg(OH)_2$$

magnesium hydroxide



 $(+))^{2-}$

iron(III) oxide





copper(II) oxide

 Cu_2O



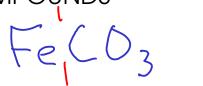
beryllium bromide

Remember to include the Roman numeral for CHARGE in the name of transition metal compounds!

 $\left(NH_{4}\right)_{2}^{1}S$

ammonium sulfide

NAMING IONIC COMPOUNDS





iron(II) carbonate

TiSz Tits

titanium(IV) sulfide

 $\left(\left(N 0_3 \right)_2 \right)$

calcium nitrate

Baz (PD4)2

barium phosphate Spelling matters!

sodium phosphide

DETERMINING THE FORMULA OF AN IONIC COMPOUND FROM THE NAME

- The name of an ionic compound is made of the names of the CATION and ANION in the compound.

- To get the FORMULA, you must figure out the SMALLEST RATIO of cation to anion that makes the charges balance out

Examples:

iron(III) carbonate $Fe^{3+} Co_{3}^{2-}$ $Fe^{3+} Co_{3}^{2-}$ Co_{3}^{2-} Co_{3}^{2-} $Fe_{2} (10_{3})_{2}$

potassium sulfide $K^{+} S^{2^{-}}$ K^{+} $K_{2}S$ Calcium bromide Ca²⁴ Br Br CaBr sodium sulfate

tin(II) phosphate

$$S_{n}^{2+}$$
 P_{04}^{3-}
 S_{n}^{2+} P_{04}^{3-}
 S_{n}^{2+}
 S_{n3}^{2+} $(P_{04})_{2}$

barium hydroxide Ba²⁺ OH OH

If your formula contains more than one polyatomic ion, you NEED to use parenthesis!

DETERMINING IONIC FORMULAS strontium oxide Sr²⁺ O²⁻

Sro

chromium(III) nitrate $Cr^{3+} N0_{3}^{-}$ $N0_{3}^{-}$ $N0_{3}^{-}$ $Cr(N0_{3})_{3}$

titanium(IV) chloride

$$\frac{T_{i}^{4+} C_{i}^{-}}{C_{i}^{-}}$$