

Checking Concepts

- (a) How many parts are there in the name of an ionic compound?
(b) What does each part describe?
- Name each of the ions in the list below and indicate which of the following words describe it: positive ion, negative ion, multivalent metal, polyatomic ion.
(a) Li^+
(b) NO_3^-
(c) Fe^{3+}
(d) CH_3COO^-
(e) Cr^{2+}
(f) Cl^-
(g) ClO_4^-
(h) NH_4^+
- For each polyatomic ion, list the name, the number of each kind of atom, the total number of atoms, and the electric charge on the ion.
(a) CrO_4^{2-}
(b) $\text{Cr}_2\text{O}_7^{2-}$
(c) NH_4^+
(d) CH_3COO^-
(e) HSO_4^-
(f) SO_4^{2-}
(g) SO_3^{2-}
(h) S^{2-}

Understanding Key Ideas

- Write the name or formula of the following compounds.
(a) sodium chloride
(b) magnesium fluoride
(c) aluminum bromide
(d) potassium iodide
(e) lithium sulphide
(f) aluminum oxide
(g) LiBr
(h) NaI
(i) K_2S
(j) MgF_2
(k) Al_2O_3
(l) Ca_3N_2

- Write the name or formula of the following compounds.

- iron(III) bromide
- iron(II) bromide
- nickel(II) fluoride
- nickel(II) sulphide
- tin(IV) nitride
- manganese(II) phosphide
- CrF_2
- CuI
- MnS
- PbO_2
- SnS_2
- Cr_3N_2

- Write the name or formula of the following compounds.

- $\text{Mg}(\text{OH})_2$
- K_2SO_4
- $\text{Al}(\text{HCO}_3)_3$
- Cu_2CO_3
- $\text{Fe}(\text{MnO}_4)_2$
- $(\text{NH}_4)_2\text{SO}_4$
- sodium sulphate
- calcium phosphate
- aluminum nitrate
- ammonium hydrogen sulphate
- lead(IV) chlorate
- iron(III) carbonate

Pause and Reflect

All ionic compounds have a chemical name and a chemical formula in accordance with rules of the IUPAC. It may be tempting to think that the formula is simply a shorter way of writing the chemical name. However, the two do not give exactly the same information about a compound. What information does the formula give about a compound that is not present in the name?