

Answers.

Naming and Writing Formulas for Monovalent Ionic Compounds

- Metals lose electrons and become positive ions. If a metal loses 2 electrons its charge becomes +2.
- Non-metals gain electrons and become negative ions. If a non-metal gains 3 electrons its charge becomes -3.
- Metals ions and non-metals ions join together to form ionic compounds.
- To make a formula for an ionic compound, the total positive charges of the metal ion must equal the total negative charges of the non-metal.
- The charge of the aluminum ion is +3. If a formula has two aluminum ions, the total positive charge is +6.
- Complete the following chart.

Symbol and charge of the metal ion		Symbol and charge of the non-metal ion		Formula of compound formed between the metal and non-metal ions	Name of compound
Li	+1	F	-1	LiF	Lithium fluoride
Ca	+2	Br	-1	CaBr ₂	Calcium bromide
Na	+1	N	-3	Na ₃ N	Sodium nitride
Al	+3	Cl	-1	AlCl ₃	aluminum chloride
Mg	+2	O	-2	MgO	magnesium oxide
Na	+1	I	-1	NaI	Sodium iodide
Be	+2	F	-1	BeF ₂	Beryllium fluoride
Zn	+2	S	-2	ZnS	zinc sulfide
Al	+3	P	-3	Al ₃ P ₃ AlP	Aluminum phosphide
Cu					Copper nitride
K	+1	Cl	-1	KCl	Potassium chloride
Na	+1	O	-2	Na ₂ O	Sodium oxide

Symbol and charge of the metal ion		Symbol and charge of the non-metal ion		Formula of compound formed between the metal and non-metal ions	Name of compound
Ag	+1	Cl	-1	AgCl	Silver chloride
K	+1	S	-2	K ₂ S	Potassium sulfide
Ca	+2	F	-1	CaF ₂	Calcium fluoride
Al	+3	N	-3	AlN	Aluminium nitride
Be	+2	O	-2	BeO	Beryllium oxide
Li	+1	P	-3	Li ₃ P	Lithium phosphide
Zn	+2	O	-2	ZnO	Zinc oxide