

Worksheet 3.4

Writing chemical formulae

1 Complete the following tables on the formulae of ionic compounds.

a

Compound	Positive ion	Negative ion	Relative number of ions		Formula of ionic compound
sodium chloride	Na ⁺	Cl ⁻	1 × Na ⁺	1 × Cl ⁻	NaCl
magnesium bromide	Mg ²⁺	Br ⁻	1 × Mg ²⁺	2 × Br ⁻	
aluminium fluoride	Al ³⁺	F ⁻ × Al ³⁺ × F ⁻	AlF ₃
potassium oxide	K ⁺	O ²⁻			
iron(III) oxide	Fe ³⁺	O ²⁻	2 × Fe ³⁺	3 × O ²⁻	

b

Compound	Positive ion	Negative ion	Relative number of ions		Formula of ionic compound
sodium hydroxide	Na ⁺	OH ⁻	1 × Na ⁺	1 × OH ⁻	NaOH
magnesium nitrate	Mg ²⁺	NO ₃ ⁻	1 × Mg ²⁺	2 × NO ₃ ⁻	
aluminium hydroxide	Al ³⁺	 × Al ³⁺	3 ×	Al(OH) ₃
potassium carbonate	K ⁺	CO ₃ ²⁻			
iron(II) sulfate	Fe ²⁺	SO ₄ ²⁻			

2 What are the formulae of the following compounds?

- a ammonia
- b methane
- c hydrogen peroxide
- d nitric acid
- e sulfuric acid