

Formulae and names of ionic compounds

Task 1

Pair up positive ions with negative ions to make correct chemical formulae.

Two formulae have been done for you.

		Negative ions		
		chloride Cl ⁻	oxide O ²⁻	hydroxide OH ⁻
Positive ions	sodium Na ⁺			
	magnesium Mg ²⁺			
	aluminium Al ³⁺		Al ₂ O ₃	
	iron(III) Fe ³⁺			Fe(OH) ₃

Task 2

Correctly name the following ionic compounds. Your Table of Common Ions may help.

1. NaCl
2. MgO
3. CaCl₂
4. AgBr
5. (NH₄)SO₄
6. Cu(NO₃)₂

Task 3

The names of binary ionic compounds (made of two elements) end in **ide**.

If oxygen is also present, the name ends in **ate**.

For example, KI is potassium iodide but KIO₃ is potassium iodate.

Name these six compounds. Your Table of Common Ions may help.

7. FeS
- FeSO₄
8. NaCl
- NaClO₃
9. Mg₃N₂
- Mg(NO₃)₂

Formulae and names of ionic compounds – ANSWERS

Task 1

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Two formulae have been done for you.

		Negative ions		
		chloride Cl ⁻	oxide O ²⁻	hydroxide OH ⁻
Positive ions	sodium Na ⁺	NaCl	Na ₂ O	NaOH
	magnesium Mg ²⁺	MgCl ₂	MgO	Mg(OH) ₂
	aluminium Al ³⁺	AlCl ₃	Al ₂ O ₃	Al(OH) ₃
	iron(III) Fe ³⁺	FeCl ₃	Fe ₂ O ₃	Fe(OH) ₃

Task 2

Correctly name the following ionic compounds. Your Table of Common Ions may help.

1. NaCl sodium chloride
2. MgO magnesium oxide
3. CaCl₂ calcium chloride
4. AgBr silver bromide
5. (NH₄)SO₄ ammonium sulfate
6. Cu(NO₃)₂ copper(II) nitrate

Task 3

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If oxygen is also present, the name ends in **ate**.

For example, KI is potassium iodide but KIO₃ is potassium iodate.

Name these six compounds. Your Table of Common Ions may help.

7. FeS iron(II) sulfide
FeSO₄ iron(II) sulfate
8. NaCl sodium chloride
NaClO₃ sodium chlorate
9. Mg₃N₂ magnesium nitride
Mg(NO₃)₂ magnesium nitrate