

A level chemistry transition



Ions, Ionic compounds and ionic equations

Section 1 – Ions

1. Very simply can you write out the formula of each of the following ions:

Chloride	Calcium	Sulphide	Sulphate	Nitride
Nitrate	Manganese(IV)	Chromium(VI)	Chromium(III)	Ammonium

(10)

Section 2 – Ionic compounds

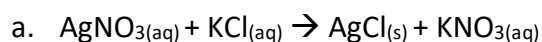
2. Again very simply write the full ionic formula for each of the following ionic compounds.

Sodium Bromide		Copper(II) Oxide	
Potassium Iodide		Sodium Sulphate	
Calcium Fluoride		Ammonium Hydroxide	
Sodium Oxide		Magnesium Hydroxide	
Aluminium Chloride		Potassium Nitrate	
Iron(II)Oxide		Iron(III) Sulphate	
Magnesium Sulphide		Copper(I) Carbonate	
Lithium Oxide		Ammonium Sulphate	
Aluminium Oxide		Aluminium Nitrate	
Copper(I) Oxide		Aluminium Carbonate	
Sodium Sulphide		Iron(II) Nitrate	
Aluminium Nitride		Lithium Sulphate	
Ammonium Nitrate		Zinc(II) Nitrate	
Calcium Carbonate		Silver(I) Chloride	
Magnesium Nitrate		Lead(II) Nitrate	

(30)

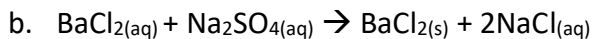
Section 3 – Ionic equations

3. Convert the following symbol equations into their ionic equation.

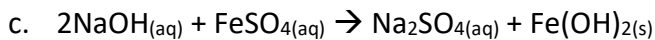


(2)

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(2)



(2)

d. What is the name for a solid formed from solution as has happened in each of the previous questions?

.....(1)

4. Write fully balanced symbol equations, with state symbols for each of the following and then write out their ionic equation.

a. Calcium hydroxide reacting with hydrochloric acid. (4)

Equation:

Ionic equation:

b. Sulphuric acid reacting with sodium hydroxide (4)

Equation:

Ionic equation:

c. Nitric acid reacting with potassium hydroxide (4)

Equation:

Ionic equation:

d. What do you notice about the ionic equations for each of the previous reactions?
.....(1)

e. What type of reaction is it?
.....(1)

f. Now see how this reaction differs, again write out both a fully balanced symbol equation and the ionic equation.

Calcium carbonate reacting with sulphuric acid (4)

Equation:

Ionic equation:

Total: / 65