

Section A:

1. Complete the table to show the salts that would be produced in a reaction between each acid and each alkali/base.

Name of acid	Name of alkali/base	
	Sodium hydroxide	Copper oxide
Hydrochloric Acid		
Nitric Acid		
Sulfuric Acid		

2. Complete the following word equations:

- a. nitric acid + _____ → potassium nitrate + water
- b. _____ + sodium hydroxide → sodium sulfate + water
- c. Calcium hydroxide + _____ → calcium nitrate + _____
- d. Magnesium oxide + _____ → _____ sulfate + _____

3. Complete the table to show the chemical names and their chemical formulae.

Chemical name	Chemical Formula
Hydrochloric Acid	
Nitric Acid	
	H ₂ SO ₄
	H ₂
Calcium chloride	CaCl ₂
Sodium Hydroxide	NaOH
	NaCl
Copper carbonate	CuCO ₃
Copper sulfate	CuSO ₄
	CuO
Potassium carbonate	K ₂ CO ₃
Potassium nitrate	KNO ₃

Section B



4. Use the chemical formulae in the table above to complete the word equation for each reaction and write a balanced symbol equation.

a. Calcium + hydrochloric acid →

b. Hydrochloric acid + sodium hydroxide →

c. Sulfuric acid + copper carbonate →

d. Hydrochloric acid + copper oxide →

e. Nitric acid + potassium carbonate →

Higher Tier only

5. Copper reacts with hydrochloric acid.

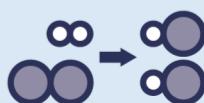
a. Write the word equation for this reaction.

b. Write the **balanced** chemical symbol equation for this reaction.

c. Cross out any spectator ions in the equation in part (b)

d. Write the ionic equation for this reaction.

e. Identify the species that has been oxidised and the species that has been reduced.



6. Magnesium reacts with sulfuric acid.

a. Write the word equation for this reaction.

b. Write the **balanced** chemical symbol equation for this reaction.

c. Cross out any spectator ions in the equation in part (b)

d. Write the ionic equation for this reaction.

e. Identify the species that has been oxidised and the species that has been reduced.

7. Iron reacts with hydrochloric acid.

a. Write the word equation for this reaction.

b. Write the **balanced** chemical symbol equation for this reaction.

c. Cross out any spectator ions in the equation in part (b)

d. Write the ionic equation for this reaction.

e. Identify the species that has been oxidised and the species that has been reduced.

