



## New Document 1

Name: \_\_\_\_\_

Class: \_\_\_\_\_

Date: \_\_\_\_\_

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Time: **6 minutes**

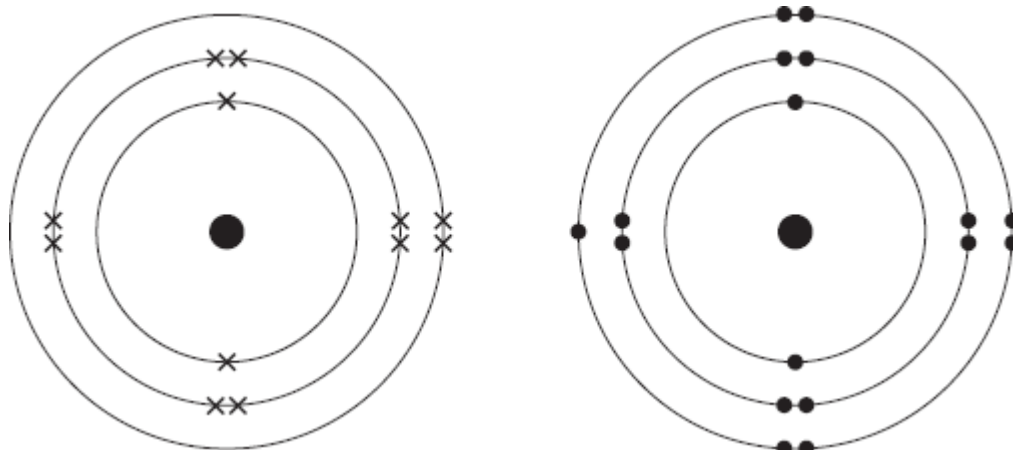
Marks: **6 marks**

Comments:

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**Q1.**

(a) The diagram shows an atom of magnesium and an atom of chlorine.



**Magnesium**

**Chlorine**

Describe, in terms of electrons, how magnesium atoms and chlorine atoms change into ions to produce magnesium chloride ( $\text{MgCl}_2$ ).

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**(4)**

(b) Calculate the relative formula mass ( $M_r$ ) of magnesium chloride ( $\text{MgCl}_2$ ).

Relative atomic masses ( $A_r$ ): magnesium = 24; chlorine = 35.5

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Relative formula mass ( $M_r$ ) = \_\_\_\_\_

**(2)**

**(Total 6 marks)**

## Mark schemes

### Q1.

(a) magnesium loses electrons

*there are four ideas here that need to be linked in two pairs.*

1

two electrons

1

chlorine gains electrons

*magnesium loses electrons and chlorine gains electrons  
scores **2** marks.*

1

two atoms of chlorine

*magnesium loses two electrons and two chlorines each gain  
one electron will score full marks.*

1

(b) 95

*correct answer with or without working gains **2** marks  
if answer incorrect, allow  $24 + 35.5 + 35.5$  for **1** mark*

2

[6]