

1. Read the question and the student's answer carefully.
2. Use the mark scheme to award the student a number of marks and annotate their answer with suggestions to improve.

Stretch: Rewrite the answer to show how it should be done!

Question:

Magnesium chloride can be electrolysed. This can take place when magnesium chloride is molten or when it is dissolved in solution.

- a) Explain why magnesium chloride must be molten or dissolved in solution to be electrolysed. (2)
- b) Explain how magnesium is produced at the negative electrode when molten magnesium chloride is electrolysed. (3)

Student answer:

a) So the ions can move to the electrodes

b) Magnesium is positive because it is a metal so it goes to the negative electrode and gains electrons.

Marks awarded= _____

Mark scheme:

a)

Answer	Mark
Ions (need to be) free to move (to electrodes)	1
(in order to) carry charge	1

b)

Answer	Mark
Magnesium <u>ions</u> (Mg^{2+}) are attracted to the negative electrode/cathode	1
(where) they gain electrons/are reduced	1
2 electrons gained	1
<i>For marking points 2 and 3 allow:</i> $Mg^{2+} + 2e^- \rightarrow Mg$	