錯誤原因:	第二類錯誤: 題目理解錯誤	題目分數:	< > / < >

原題目:

Pauline has prepared 150 cm^3 aqueous solution of 1 M $MgSO_4$. She left the flask unstoppered and noticed that there was a weight loss in the flask [158.3g → 135.4g]

- What was the molarity of the solution after two days? (Given: Density of water = 1 gcm^{-3})

錯誤答案 與 錯誤思路:	正確答案:
[The mol no. / The Voulme of the Water] 1. Find out the original volume of water < 158.3g – The mass of 1M of $MgSO_4$> = V_w 2. Find out the final volume of the water < V_w – [The loss of water: 158.3g – 135.4g] > = V_w' 3. The final molarity is: < The mole no. of the $MgSO_4$ / V_w'> ### Important: The Molarity is only mean the [mol. No / total volume] ***The Total Volume <> Total Volume of water.***	**Let *X* be the new molarity,** Volume of water evaporated = $\frac{(158.3-135.4)}{1}$ = 22.9 cm^3 **Since the number of moles of $MgSO_4$ remained the same before and after evaporation of water,** $1 \times \frac{150}{1000} = X \times \frac{(150-22.9)}{1000}$ X = 1.18 The molarity of the solution after two days is 1.18 M.

知識點 與 正確思路:

The Meaning of **Concentration** is only talking about:

The Ratio of <The mol no. of the sub> to <The total Volume>

錯題總結:

It is necessary to remember the concept of the concentration when dealing with new type of the question.

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原題目:

Alvin is helping his father to prepare a fertilizer solution for a large potted plant. He is given a bottle of 0.5 M NH4NO3 and a bottle of 0.5 M KCl. His father reminds him that the fertilizer solution should have the following composition:

	Amount needed
Nitrogen	2 g
Potassium	1 g
Volume	250 cm^3

How many moles of nitrogen are needed in the fertilizer solution?

錯誤答案 與 錯誤思路:	正確答案:
Nitrogen May present in Diatomic Structure The no. of Mole is: 2 / [The Molar Mass of the Nitrogen] ➝ 2/(2 * 14) mol	Recall our Biological Knowledge **{Plant need Nitrogen ion but not Nitrogen}** ➝ The "Nitrogen" in the question is **NOT** present in **Diatomic Structure**. ➝The no. of Mole is: [2] / [14]

知識點 與 正確思路:

1. Think about what we HAVE to use Nitrogen or Nitrogen Ion or Nitrogen Atom
2. Get the correct Molar mass

錯題總結:

This is necessary to make our mind clear what we HAVE to use **Nitrogen** or **Nitrogen Ion** or **Nitrogen Atom**