BEING STUCK ON MATHS PROBLEMS

*So, you can't get to the end of (or perhaps even start) a maths question or assignment. You can't see your lecturer/tutor/classmates for a while. What can **you** do?*

Here are four reasons why you might be stuck and what you can do about it.

1. You haven't read through the material properly yet

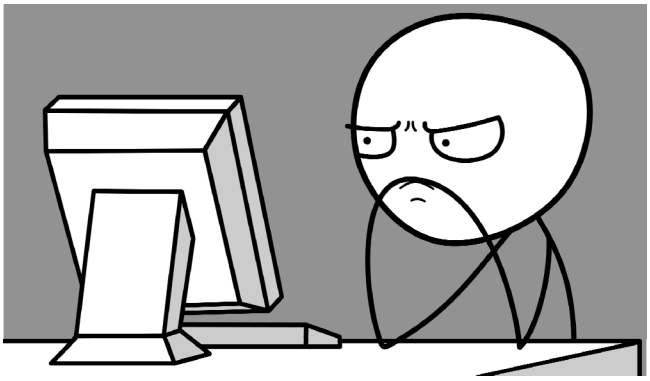
"Well, I attended the lecture on this topic and looked through the notes but couldn't find anything useful."

Attending lectures is only part of the learning process and maths problems at school often asked you to apply a method or formula that appeared in an obvious place, probably with a box around it. At Uni, lecturers often expect you to have a wider grasp of more complex topics so you have to dig a bit deeper.

WHAT TO DO: Get your lecture notes and text book, find a nice quiet place and do some reading. Start where you think the right information will be. Go backwards if they use concepts or definitions you don't understand to find out what they mean. Write out a summary of the topic as you go and you'll see how concepts link together to create a logical flow of ideas.

TIP

For electronic copies of lecture notes or unit readers, use the "find" function of your pdf reader to locate key words and definitions quickly.



2. You aren't using all of the information in a question

Many problems in maths are solved by simply piecing together the puzzle! If a piece is missing the puzzle can not be completed. The missing piece could be a number or word you missed in the text of the question, or maybe a formula or result from a lecture which has slipped your mind.

WHAT TO DO: Read through the question carefully, highlighting any keywords or numeric information. If that doesn't help, then scan through your lecture notes to see if there are any formulae or theorems which will combine your current information into a new piece of information.

3. You have made a mistake earlier on

In maths, a single error can spread through your work, creating more errors as you move through your solution.

WHAT TO DO: Examine your first line of working closely. If you are convinced it's accurate, move to the next line. As soon as you aren't convinced by a line of working, try the problem again from that point on.

If you can't find an error, see if your friends can!

TIP

In algebraic manipulation, try replacing variables with simple numbers to see if two lines actually give the same numerical answer.

4. You are not engaging with the topic

Don't think

"What formula am I supposed to use?"

Think instead

"What does this question mean?"

If there is a formula, answering the second question will find it.

Here is a simple example of a problem which is best solved by *thinking about what it means.*

$$\text{What is } \frac{1}{2}+\frac{1}{4}\ ?$$

Instead of straining to remember the formula to add fractions, it is much easier to realise that one half is also two quarters.

So this question is really saying

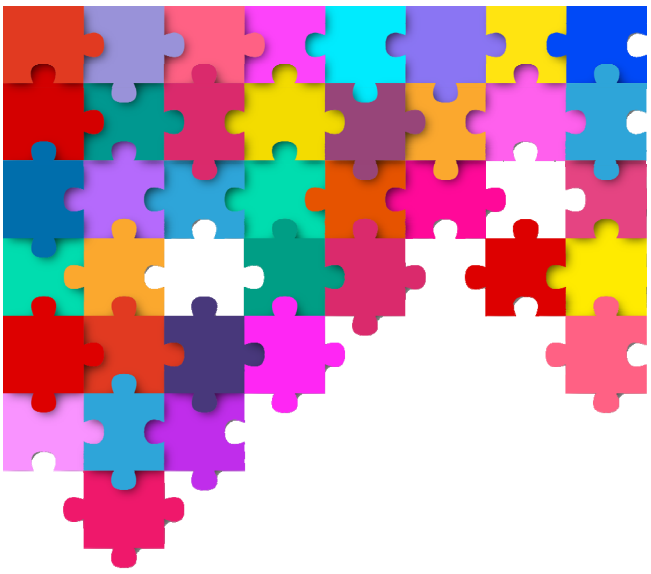
$$\text{What is } \frac{2}{4}+\frac{1}{4}\ ?$$

Well, two quarters plus one quarter gives a total of three quarters, so you not only have the answer but have probably remembered the rule too!

WHAT TO DO: Think about the context of the question. There is a picture behind every maths problem. Being able to see it is the most important skill a maths student can have.

TIP

Trying to work around blockages yourself before looking at the solutions or asking for help is a very useful skill. (However, don't try for too long. After about 10 minutes you are probably better off seeking assistance.)



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