

Mathematics Revision Tips

Learning Mathematics

- Many mathematics textbooks have tests for each chapter. Try one problem from each section. Write down the **first step** for each problem – this is usually the hardest thing to remember.
 - Go back to the section in the textbook where you are having difficulty. Use a piece of paper to cover up the solution to the worked example. Try to solve it yourself, and then uncover the answer to see how you did. You learn maths by *doing* maths.
 - Swap phone numbers with someone in your class who won't mind if you call with questions. A small group of students in your class could periodically discuss the work.
 - Maths is a cumulative subject. Understanding today's material is key to understanding tomorrow's lesson. Ask questions in class as soon as you are aware that you don't understand something.
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Revision Hints

For your revision notes:

- Only write on **one side** of the page – that way you can put more examples on the back if you need to
- Make sure they are clearly and neatly written – ensure that they are **well spaced out** to leave room for any annotations
- Use **colour** – it is a very useful highlighter of key points

Follow these steps:

1. Make revision notes and include one worked example of a difficult question
2. Do a couple of past papers, with access to revision notes and take your time.
3. Do a couple of past papers, without access to revision notes
4. Do as many past papers as possible under timed conditions, do not look at the solutions until you have completed the paper!

Night / Evening before the exam

Instead of doing more questions, just read through specimen questions and decide what **methods** you would use to solve them – this way you will get through a lot more questions in a short space of time.

When sitting an exam

- In the examination, above all, stay cool – if it is hard for you, it is probably hard for everyone.
- Don't rush into a question – read the **whole paper** carefully and start with the question you feel most confident about.
- Analyse exactly **what you are being asked to do**; try to understand the hints, remember to distinguish between terms such as explain/prove/define/etc.
- Remember that different parts of a question are often **linked** (it is usually obvious from the notation) and choice of variables.
- Set out your answer legibly and logically (don't scribble down the first thought that comes into your head) – this not only helps you to avoid silly mistakes but also signals to the examiner that you know what you are doing (which can be effective even if you haven't the foggiest idea what you are doing).

Finally: make sure you know **how long you have for each question** – the most common problem is people running out of time.

Note

Meanings of common words and phrases used in problems.

Write down. . . What is. . .	An answer is all that is required. However, if you show some working, you may get some marks even if your answer is wrong.
Determine. . . Find. . . Calculate. . . Derive. . .	Justification for your answer is required so you will need to explain your working step by step.
Using. . .	You are told which method to use – using a different approach will lose marks.
Show. . . Verify. . .	The answer is given to you. All marks are awarded for a convincing argument.
Hence. . . Hence, or otherwise. . . Deduce. . .	Use the result you have just established to solve the next part of the problem. Note that 'or otherwise' means that you can use an alternative method if you wish, but it's often easier to try using your previous work first!
Prove	This requires rigorous treatment from first principles