

Further Mathematics (OCR A) A Level Preparation Work

Welcome to A Level Further Maths! The tasks below are designed to support and prepare you to start the course.

Folder Preparation

So that you are ready for September, please get yourself a folder for further maths. Please bring the folder to the first lesson.



Set up a folder for Further Maths

It needs to have dividers for 10 areas – you will be told what to label these in September.

All the work you do needs to be marked and in your folder on the first day so your teacher can see what you have done.

Print off the table on the next page, complete it as you do the tasks and place it at the front of your folder.

Algebraic Manipulation

Complete the following questions from the linked document below.

For each one you should write your answers on file paper, showing clear working out and then, after each section, mark your work using green pen to complete any corrections.

Remember to put all your work in your folder as you go.

Questions:
Ex 1.1. q. 6
Ex 1.2 q. 3 and 5
Ex 1.3 q. 3, 4 and 5
Ex 1.4 q. 3, 4 and 5

[This is the link to just the exercises](#)

[This is the link to the exercises with explanation](#)

[This is the link to the answers](#)

If you are finding the questions difficult, read the worked examples in the ‘exercises with explanation’ (see the document above) and then, if this does not help some of the questions have links to videos below.

[Ex 1.1 q. 6](#)

[Ex 1.2 q. 5](#) [ex 1.2 q. 3](#)

[Ex 1.3 q. 5](#)

[Ex 1.4 q. 4](#)

Problem Solving

This is the link to the [AMSP website](#) where there are transition materials for year 11 to 12.

There are 6 different topic areas and each one has several presentations on a topic.

Do NOT answer the exercises on these presentations.

Pick 2 different topics (preferably all from a different section) and look at the problem solving tasks at the end of the presentation.

You should complete 2 problem solving tasks in total – many have hints, tips and solutions.

Write your working out clearly for each one – making it clear which topic area it was and what the problem was.

If there are solutions make sure you have marked your work and done any green pen corrections.

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Research

What is a radian? How and why do we use it in maths and how is it connected to a degree?
 Prepare a short powerpoint presentation about what you find out.
 Print off the slides and place a copy in your folder.

Self Evaluation of all tasks

Please complete this table, fill it in as you go and place at the front of your folder.

Activity				Date completed
1. Getting Organised				
2. Algebraic manipulation	Exercise	My Mark	RAG rate	
	1.1	out of 2		
	1.2	out of 6		
	1.3	out of 6		
	1.4	out of 10		
3. Problem solving	Topic area	Title of task completed	RAG rate	
4. Research				

Wider Reading

The following books are good for wider reading over the next two years especially if you are interested in pursuing maths in higher education but why not start reading one over the summer?

- Fermat's Last Theorem (Simon Singh)
- Does God Play Dice and Nature's Numbers (Stewart)
- Easy as Pi (Ivanov)
- The music of the Primes (du Sautoy)