SUMMER WORK FURTHER MATHEMATICS – YEAR 12

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Exam Board
Edexcel

Specification
A Level 9FM0

COURSE DETAILS

Examination
The A Level Further Mathematics course is examined as a whole at end of Year 13.

A Level Further Mathematics:
Students will study the compulsory elements of Further Pure Mathematics (proof, complex numbers, matrices, further algebra and functions, further calculus, further vectors, polar co-ordinates, hyperbolic functions and differential equations). In addition to this, students will study units on Further Mechanics (momentum and impulse, collisions in one and two dimensions, work, energy and power, elastic strings and springs and elastic energy) and Decision Mathematics (algorithms, graph theory, algorithms on graphs, critical path analysis and linear programming).

Students will study this course alongside the A Level in Mathematics – please refer to the separate document for course details.

SUMMER WORK FOR INTRODUCTION TO YEAR 12

	Task	Description
1.	Essential work prior to starting the A Level Mathematics course	**Complete the 'Essential Work prior to A Level Further Mathematics' booklet over the summer holidays.** **Guidance:** 1. Read each question carefully. 2. Attempt every question. 3. Check and mark your answers. 4. Always show your workings.
2.	Further Revision / Useful Websites	**Use the following websites to consolidate any areas you struggled with when completing the summer work, or to further your understanding:** https://www.mymaths.co.uk/ (username: gordons password: angle) https://www.bbc.com/education/examspecs/z9p3mnb https://www.examsolutions.net/gcse-maths/ https://corbettmaths.com http://furthermaths.org.uk/gcse https://mei.org.uk/students

SUGGESTED READING:

- A Mathematician's Apology by G.H. Hardy (CUP,1992)
- Fermat's Last Theorem by Simon Singh
- The Music of the Primes by Marcus du Sautoy (Harper-Collins, 2003)
- Mathematics: a very short introduction by Timothy Gowers (CUP, 2002)
- Archimedes' Revenge by P. Hoffman (Penguin, 1991)
- Surely You're Joking, Mr. Feynman by R.P. Feynman (Arrow Books, 1992)
- Solving Mathematical Problems by Terence Tao (OUP, 2006)
- The Pleasures of Counting by T.W. Körner (CUP, 1996)
- Advanced Problems in Mathematics by S.T.C. Siklos (1996 and 2003)