Subject	A-Level Further Mathematics

Exam Board	AQA	Course Code	7357

Overview

April Assessment

One 45-minute paper – Calculator Allowed
One A4 sheet of paper (double sided) to be taken into it
Full mathematics equipment required

Topics to be covered

The paper will cover the Applied Modules to AS-Level and students have covered the following material

Statistics

- ☐ Sampling
- ☐ Data presentation and interpretation
- ☐ Probability
- ☐ Binomial Hypothesis Testing

Mechanics

Kinematics

- ☐ Be able to use and work with displacement-time, velocity-time and acceleration-time graphs in kinematics
- ☐ Kinematics in 1D – constant acceleration (suvat), variable acceleration (calculus)

Forces and Motion

- ☐ Understand the concept of a force; understand and use Newton's first law
- ☐ Newton's Second law in straight line incl weight and motion in a straight line under gravity;
- ☐ Newton's Third Law - equilibrium of forces on a particle and motion in a straight line; application to problems involving smooth pulleys and connected particles

In mechanics, some concepts used at A-Level, in particular calculus with exponential and trigonometric functions could be applied to AS Mechanics problems

May Assessment

Two 75-minute papers – both Calculator Allowed

Full mathematics equipment will be required for both assessments

Topics to be covered

Paper 1

- ☐ Improper Integrals
- ☐ Roots of equations and polynomials
- ☐ Complex Numbers including nth roots of unity
- ☐ Matrices – Solving 3 × 3 simultaneous equations and interpretation of solution
- ☐ Rational functions and its graphs
- ☐ Hyperbolics

Paper 2

- ☐ Vector Products
- ☐ Further vectors work including Cartesian equation of plane
- ☐ Cartesian equation of a plane
- ☐ Complex Numbers – Understanding modulus-argument
- ☐ Calculus of inverse trigonometric functions
- ☐ l'Hôpital's Rule

- ☐ Matrices including Factorising determinants
- ☐ Maclaurin Series
- ☐ Proof by Induction
- ☐ Solving inequalities with rational functions
- ☐ Sum of Series

Useful revision resources

Websites

Integral Maths – integralmaths.org (Check with Mr Newns for the login details)
TL Maths – https://sites.google.com/view/tlmaths/home/a-level-maths

There are a large number of videos for Applied Modules in Google Classrooms if needed

Recommended Revision Guides

CGP – AQA Further Mathematics Revision

Recommended Calculators

Casio Classwiz EX-991

Revision Tips

Revision for Mathematics is based upon practice (and more practice). You need to be confident at the skills and concepts that make up the course in order to be able to work through the more challenging problems. Revision should be interactive, not just reading notes

Work through question booklets that you have been given, alongside the topic tests and use the problems in the TL Maths Videos.

A potential plan of action would be

- Work through the plans below watching the relevant videos
- Work through maths problems and past papers.
- Do not just read your notes/revision guides as you need to practice your Maths skills.

Any additional information will be placed into Google Classrooms and the GSHS Maths Revision Area
http://bit.ly/GSHSMathsRevision