| Subject | A-Level 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

- Displacement-time, velocity-time and acceleration-time graphs and their properties 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
- D 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 | Paper 2 |
|--------------------------------------|---|
| Arc Length and Sector Area | Binomial Coefficients and Expansion |
| Arithmetic Progressions and Series | Coordinate Geometry - Circles and Tangent |
| Binomial Expansion | Factor Theorem |
| Differentiation and its applications | Geometric Progressions and Series |
| Trigonometry | Integration |
| Functions | Logarithms |
| Integration | Solutions of equations |
| Numerical Methods | Transformations of Graphs |
| Partial Fractions | Trigonometry |
| Proof | |
| Sequences | |
| | |

| Useful revision resources | | |
|---|--|--|
| Websites | | |
| Integral Maths – <u>integralmaths.org</u> (Check with Mr Newns for the login details) TL Maths – <u>https://sites.google.com/view/tlmaths/home/a-level-maths</u> | | |
| There are a large number of videos for Applied Modules in Google Classrooms if needed | | |
| Recommended Revision Guides | | |
| CGP – AQA 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 <u>http://bit.ly/GSHSMathsRevision</u>