Supporting students of A-level Mathematics at Toot Hill College

The study of mathematics has been developed over centuries and has challenged the minds of some of history’s greatest thinkers. It is a highly inter-connected subject that empowers us to shape the future developments in Science, Technology, Engineering and Business. We are determined that our students enjoy the study of maths and gain a sense of fulfilment as their confidence grows through the acquisition of more knowledge, practising new skills and using both to successfully solve problems. Students will develop strong academic skills, such as those of analysis, evaluation and communication, that will benefit them in a range of Post 18 pathways. The Mathematics department will support all students to achieve their full potential and teachers value the support of parents and carers as students’ progress towards the external examinations. Below is some important information and frequently asked questions designed to inform parents and carers. Please contact teaching staff or the KS5 Lead teacher if you have further questions.

**Department staff:**

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Lead teacher for KS5 Maths – Mrs D Clarke – dclarke@toothillschool.co.uk

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| Subject  | Exam board | Course title and code | Structure  | Key dates | Final exams |
| Mathematics | AQA | 7357 A Level Mathematics | Year 121. Proof
2. Algebra and functions
3. Coordinate geometry
4. Binomial expansion
5. Trigonometry
6. Exponentials and Logarithms
7. Differentiation
8. Integration
9. Vectors
10. Kinematics
11. Forces and Newton’s Laws
12. Statistical Sampling
13. Data presentation and interpretation
14. Probability
15. Statistical distributions
16. Statistical hypothesis testing

Year 13:1. Proof
2. Algebra and Functions
3. Sequences and series
4. Parametric equations
5. Further trigonometry
6. Further Differentiation
7. Further Integration
8. Numerical methods
9. Vectors
10. Kinematics
11. Forces and Newton’s Laws
12. Moments
13. Statistical Sampling
14. Probability
15. Statistical Hypothesis testing
16. Revision for paper 1, 2 and 3 exams.
 | **Internal assessments:**Year 12 - November – Pure Year 12 June – Paper 1 – Pure and mechanicsPaper 2 – Pure and StatisticsYear 13 – November – Paper 1: Pure and Mechanics– Paper 2: Pure and StatisticsYear 13 – March – Paper 1 – PurePaper 2 – Pure and MechanicsPaper 3: Pure and Statistics  | Year 13 May/June examsConfirmed (2024):7357/1 Pure **2 hours 4th June 2024 pm** 7357/2 Pure and mechanics **2 hours** **11th June 2024 pm** 7357/3 Pure and statistics **2 hours** **20th June 2024 pm** |

**Frequently asked questions**

1. Where can I find past papers and mark schemes?
* You can find all past paper questions, mark schemes and examiners reports here: AQA | AS and A-level | Mathematics | Assessment resources <https://www.aqa.org.uk/subjects/mathematics/as-and-a-level>
1. Does my student know where to access guidance when answering exam questions?
* The AQA website also has examiner reports that students will find useful in understanding common misconceptions: [AQA | AS and A-level | Mathematics | Assessment resources](https://www.aqa.org.uk/subjects/mathematics/as-and-a-level/mathematics-7357/assessment-resources)
* In class, we complete regular assessments and exam questions. Students have guidance on how to answer these exam questions in their exercise books which they can use as part of their revision in the atrium.
1. What happens if my student has gaps in their knowledge due to absence?
* Ask the member of staff what has been missed and use the textbook to read the appropriate section, follow the worked examples and do the associated exercise.
* All resources are often uploaded on to Teams regularly. Students can catch up with any work if they are absent using these resources.
* All students also have an UPLEARN account where they can watch summary videos, read key content and practice exam questions for all the topics in mathematics.
* If students are unsure, they can also ask their classroom teacher.
1. What resources are recommended to support my student?
* Textbooks and revision guides for mathematics which can be bought new or second hand online. Students have been signposted to the books they are recommended to buy. They do have access to an online copy but we recommend a physical copy for ease of use and access.
* Revision lists and power points on the general channel of Teams
* All students also have an UPLEARN account where they can watch summary videos, read key content and practice exam questions for all the topics in mathematics.
* Exam practice questions should be completed at home regularly to develop key exam skills.
1. What else can I do to support my student at home?
* Parents/carers could direct students to use their revision lists, or download exam practice questions from the AQA website. You could also time students when doing questions (we recommend a mark a minute!).
* Parents/carers could also test their knowledge of key concepts by using flash cards.
* Parents/carers could encourage students to complete a number of hours of UPLEARN a week.
1. How can I help with revision?
* Encourage your student to access the revision homework tasks mentioned above. If you are able to take part in quizzing your student (if they have made flashcards or are using online quizzes), this will give them some variation to their revision and works well as a revision technique.
* Encouraging your student to focus on the areas of the courses that they feel less confident with will also be beneficial.
* Encourage students to complete a number of hours of UPLEARN a week.
1. What can I do if I need more support or my student is needing more support?
* Please contact classroom teacher or the KS5 Lead teacher to arrange a meeting and devise a structured revision plan.