

## SDCC Mathematics Year 13 A-level

### Course Information

Students are following the new MEI A-level course. Three A Level Examinations will take place this year:

Pure Mathematics and Mechanics: 2 hours 100 marks (36.4%)  
Pure Mathematics and Statistics: 2 hours 100 marks (36.4%)  
Pure Mathematics and Comprehension 2hours 75 marks (27.3%)

Grades available: A\*, A, B, C, D, E

Assessments will take place at the end of every chapter.  
A mock exam will take place towards the end of November.

### **Term One - What will we be learning?**

#### **Pure Mathematics**

Vectors  
Algebra (General Binomial Expansion)  
Sequences and Series  
Functions  
Differentiation  
Trigonometric Identities

#### **Applied Mathematics (Statistics and Mechanics)**

Kinematics  
Projectiles  
Probability  
Probability Distributions

### **Term Two - What will we be learning?**

#### **Pure Mathematics**

Trigonometric Functions  
Integration  
Parametric equations  
Differential equations  
Numerical Methods

#### **Applied Mathematics (Statistics and Mechanics)**

Force and motion  
Moments  
Friction  
Hypothesis Testing


### **Term Three - What will we be learning?**

Revision + Exams

### **How will we be learning?**

Our aim is that teaching is student led using inquiry and investigation to foster independent learners with a passion for maths. We endeavour to develop the intellectual maturity of our students to enable them to take risks and overcome the challenges that they encounter. Home learning is set weekly to consolidate and extend the learning in class. Students must also consolidate their learning by writing up their notes, completing class work and reading further into a topic.

### **Try this at home**

- **Textbook** Students will be required to purchase course textbooks. These are available as either hard copies or e-books.
- **Integral:** Make sure you know your username and password to access additional resources, revision aids and practice tests and exam papers.
-  **MyMaths:** Some of the topics in year 13 are covered in MyMaths, particularly in Mechanics 1
- **Practise basic skills** regularly. It's important that your calculus skills are solid as is your use of surds and powers, logarithms and algebraic fractions.
- **Research** real life applications of topics taught e.g. Who uses Calculus? Force calculations? Projectiles?
- **Visit** [www.examsolutions.net](http://www.examsolutions.net) for videos explaining certain topics