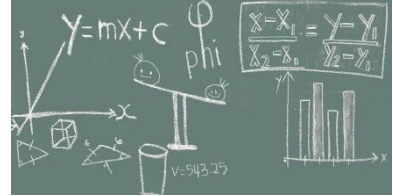


# Mathematics Higher

## Award Received

Successful completion of your Higher Mathematics Units and exam will allow you to attain a Higher Mathematics qualification.

Higher is currently Graded A – D.



## Entry Level: What do I need to do it?

For pupils wishing to complete this course you will need to have gained a grade A-C at National 5 as well as a recommendation from your Mathematics teacher.

## Course Content: What will I learn?

Course structure

You will acquire and apply operational skills necessary for developing mathematical ideas through symbolic representation and diagrams. You will select and apply mathematical techniques and will develop your understanding of the interdependencies within mathematics. You will develop mathematical reasoning skills and will gain experience in making informed decisions.

(For more information go to: <http://www.sqa.org.uk/sqa/47910.html>)

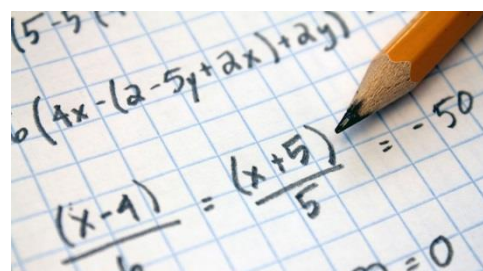
Block 1 covers the topics of Recurrence relations, the Straight Line, Functions and graphs as well as the Calculus topic of Differentiation (extending into trig functions and the chain rule).

Block 2 covers the topics of Polynomials and Quadratic theory, Integration, Trig formulae and equations, the Wave function and the circle.

Block 3 covers Vectors, logs and exponential functions as well as the Applications of differentiation and Integration.

## Teaching Methods: What will I do?

- Class Discussion
- Problem Solving tasks
- Group work
- Presentations



- Practise exercises
- Computer based tasks

## **Assessment: How will I be assessed?**

There are several different types of assessments throughout the course. A mini-test is given at the end of each topic. This is to check on your progress on a particular topic and to help you prepare for the Assessment Task.

An Assessment Task is given at the end of each block. This is at minimum competency, is completed in class and will take approximately 45 minutes.

An A/B Assessment is given in the week following the Assessment Task. This is to test your ability to do more difficult problems. The A/B Assessment is completed in class and will take approximately 45 minutes.

A prelim exam in February will model the final exam and the result will be used to gather evidence to estimate your final grade.

The final exam in May will cover all Assessment Standards and will determine your final overall grade. The exam consists of two papers, non-calculator and calculator. Both question papers will consist of short and extended response questions.

## **Homework.**

Homework is given to help you practice and improve your mathematical skills, as well as to prepare you for the assessment tasks and final exam. It is important that you complete each homework exercise to the best of your ability so that your teacher can see where your strengths and weaknesses lie. Your teacher can then help you make further progress. You will be given the following types of homework tasks:

- A homework assignment for each assessment standard which will cover all levels of difficulty.
- Work from the textbook to complete in order to meet the deadline of the course.
- Revision homework to help you prepare for the assessment tasks.

## **Progression in the Senior Phase.**

Gaining a Pass at Higher Mathematics will allow you to progress onto Advanced Higher Mathematics and is often a specific entry requirement to Higher Education courses particularly those related to Sciences and Engineering.