

# Mathematics

$$\int_1^{\infty} \frac{\ln x}{x^2} dx = 1$$

**Exam Board**

OCR

**Qualification**

AS or A-Level in Mathematics

**Entry Requirements**

Minimum grade 7 at GCSE

**Content (Outline of Course)**

All of the content in the AS/A-Level Mathematics qualification is compulsory and is the same for all examination boards. Two-thirds of the course content is Pure Mathematics (methods and techniques which underpin the study of all other areas of mathematics, such as proof, algebra, trigonometry, calculus and vectors). The remaining one-third of the content is applied mathematics and is split equally between Statistics and Mechanics. All topics are taught across both the AS and A-Level qualification. AS content is taught during Year 12 and then built on in Year 13.

**Assessment**

AS qualification: Paper 1 (50%) – Pure maths and statistics; 1½ hours  
Paper 2 (50%) – Pure maths and mechanics; 1½ hours

A-Level: Paper 1 (33⅓%) – Pure maths; 2 hours  
Paper 2 (33⅓%) – Pure maths and statistics; 2 hours  
Paper 3 (33⅓%) – Pure maths and mechanics; 2 hours

**Careers Guidance**

Taking Mathematics will help you with other subjects; all the sciences use mathematical techniques so doing maths will give you a head-start. A lot of other subjects use statistics so, again, doing Maths will give you an advantage. Even in essay-based subjects like History, maths can be useful. It teaches you to think in a logical way, something which is vital when putting across a coherent logical argument.

Careers which lead on from Mathematics are often well paid and they are also often very interesting. People who have studied Mathematics are in a fortunate position because they will have a good choice of career opportunities. Finance, computing, engineering, statistics, business and teaching are only a sample of possible careers. The main message is that you can do anything with Maths.