

# MATHEMATICS

## Edexcel AS level specifications 8371

*"Mathematics is, in its way, the poetry of logical ideas." - Einstein*

Unit	Unit Title	Duration	Mode of Assessment	Weighting at AS
C1	Core 1	1 hour 30 minutes	Written examination	1/3
C2	Core 2	1 hour 30 minutes	Written examination	1/3
S1 or M1 or D1	Either Statistics or Mechanics or Discrete Mathematics	1 hour 30 minutes	Written examination	1/3

Students wishing to study AS Mathematics will take 3 modules.

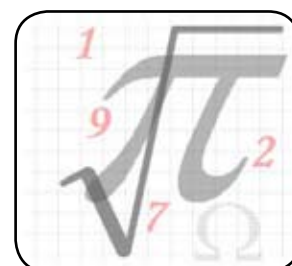
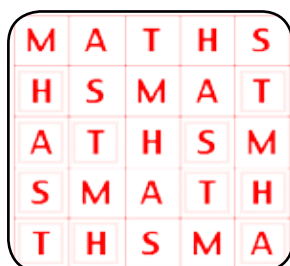
Mathematics at AS level is a stimulating and enjoyable subject to study in its own right. In addition, it is valued by universities and employers both as an essential component of many degree courses and careers and also as training in clear and logical thinking.

C1 and C2 are Pure Mathematics modules. They develop your knowledge in areas such as algebra, and also contain new concepts such as calculus, which have wide applications in real life. They provide a foundation for the study of Mechanics and Statistics, which again have important applications in the real world.

In addition, you will study one Applied Mathematics module chosen from Statistics 1, Mechanics 1 and Decision Mathematics 1. This choice is made on the recommendation of the Mathematics Department.

### Course Prerequisites:

A minimum of grade A in GCSE Mathematics is advisable.



# MATHEMATICS

## Edexcel A2 level specifications 9371

*"Mathematics is, in its way, the poetry of logical ideas." - Einstein*

Unit	Unit Title	Duration	Mode of Assessment	Weighting at AS
C3	Core 1	1 hour 30 minutes	Written examination	1/3
C4	Core 2	1 hour 30 minutes	Written examination	1/3
S1, S2, M1, M2, D1 or D3	One of the following: Statistics 1,2 or Mathematics 1, 2 or Discrete Mathematics 1, 2	1 hour 30 minutes	Written examination	1/3

Students studying A2 Mathematics will take a further 3 modules.

Mathematics at A level is a stimulating and enjoyable subject to study in its own right. In addition, it is valued by universities and employers both as an essential component of many degree courses and careers, and also as training in clear and logical thinking.

You will have completed three modules in the Lower Sixth: Core 1, Core 2, and an Applied Mathematics module. In the Upper Sixth you will study three more modules: Core 3 and Core 4 are Pure Mathematics modules, extending your knowledge acquired in AS Mathematics. You will also study another Applied Mathematics module, chosen from Mechanics, Statistics and Decision Mathematics. This choice is made on the recommendation of the Mathematics Department.



# MATHEMATICS & FURTHER MATHEMATICS

## Two separate A levels 8372

Edexcel A level specification 9371 1st Year

"Mathematics is, in its way, the poetry of logical ideas." - Einstein

Unit	Unit Title	Duration	Mode of Assessment	Weighting at AS
C1	Core 1	1 hour 30 minutes	Written examination	1/6
C2	Core 2	1 hour 30 minutes	Written examination	1/6
C3	Core 3	1 hour 30 minutes	Written examination	1/6
C4	Core 4	1 hour 30 minutes	Written examination	1/6
S1, M1, or D3	Either Statistics or Mathematics or Discrete Mathematics	1 hour 30 minutes	Written examination	1/6
S1, S2, M1, M2, D1 or D3	One of the following: Statistics 1, 2 or Mechanics 1, 2 or Discrete Mathematics 1, 2	1 hour 30 minutes	Written examination	1/6

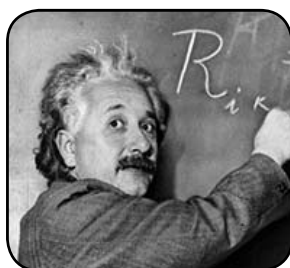
This course is suitable for able students who particularly enjoy Mathematics. By taking Mathematics and Further Mathematics you will be studying Pure Mathematics and some Applied Mathematics to greater depth.

Mathematics is a stimulating and enjoyable subject to study in its own right. In addition, it is valued by universities and employers both as an essential component of many degree courses and careers, and also as training in clear and logical thinking. Further Mathematics is a good basis for studying Mathematics, Engineering or Physics at university.

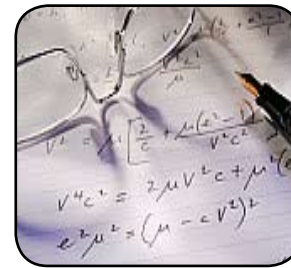
Students taking Further Mathematics will complete six modules in the Lower Sixth, studying four Pure Mathematics modules (Core 1, 2, 3 and 4), plus two Applied Mathematics modules chosen from Statistics 1 and 2, Mechanics 1 and 2 and Decision Mathematics 1 and 2. This choice is made on the recommendation of the Mathematics Department.

### Course prerequisite:

A minimum of grade A in GCSE Mathematics is advisable.



$$\begin{aligned}
 x > 5 &\Rightarrow x^2 > 16 \\
 x^2 \geq 9 &\Leftrightarrow (x \geq 3 \vee x \leq -3) \\
 S \cap T &= \{x \mid x \in S \wedge x \in T\} \\
 S \cup T &= \{x \mid x \in S \vee x \in T\} \\
 S \times T &= \{(x, y) \mid x \in S \wedge y \in T\} \\
 x \in S &\Rightarrow x \in S \cup T \\
 n \in \mathbb{N} &\Rightarrow n+1 \in \mathbb{N} \\
 (x+1)^5 &= 6
 \end{aligned}$$



# MATHEMATICS & FURTHER MATHEMATICS

## Two separate A levels

### Edexcel A level specification 9372 2nd Year

*"Mathematics is, in its way, the poetry of logical ideas." - Einstein*

Unit	Unit Title	Duration	Mode of Assessment	Weighting at AS
FP 1	Further Pure Mathematics 1	1 hour 30 minutes	Written examination	1/6
FP 2	Further Pure Mathematics 2	1 hour 30 minutes	Written examination	1/6
FP 3	Further Pure Mathematics 3	1 hour 30 minutes	Written examination	1/6
S1-3 M1-5 D1-2	Plus 3 more applied modules Statistics or Mechanics or Discrete Mathematics	1 hour 30 minutes	Written examination	1/6

This course is suitable for able students who particularly enjoy Mathematics. By taking Mathematics and Further Mathematics you will be studying Pure Mathematics and some Applied Mathematics to greater depth.

Mathematics is a stimulating and enjoyable subject to study in its own right. In addition, it is valued by universities and employers both as an essential component of many degree courses and careers, and also as training in clear and logical thinking. Further Mathematics is a good basis for studying Mathematics, Engineering or Physics at university.

Students taking Further Mathematics in the Upper Sixth will already have completed an A level in Mathematics in the Lower sixth, comprising the Pure Mathematics modules Core 1 to 4, plus two Applied modules chosen from Statistics, Mechanics or Decision Mathematics.

In the Upper Sixth, six more modules will be studied, including Further Pure Mathematics 1, 2 and 3 (FP1, FP2 and FP3), plus three extra Applied modules again chosen from Statistics, Mechanics or Decision Mathematics. There is flexibility within the course to follow individual interest, but the actual choice of modules is made on the recommendation of the Mathematics Department.

The six modules taken in the Upper Sixth together make up an A level in Further Mathematics.

