Mathematics Department

Years 12-13
The Latymer School

Why study maths in the sixth form?

Maths can lead to many fantastic careers…

Engineering

Accountancy

Project Management

Psychology

Actuary

Pilot   Analyst

Medical Research

Teaching

Game Designer

Banking

Football Analytics

Medicine

Corporate Law

Architect

IT Consultancy

Lecturing

Programmer

Air Traffic Control   Statistician

What maths do you study in the sixth form?

Pure
Beautiful maths that is abstract but can have applications to the real world or problem solving

Mechanics
Maths relating to motion and forces, good for those doing A level Physics

Statistics
Maths relating to data, good for those studying A levels in Humanities/Biology/Economics

Summer holiday algebra work after GCSEs

Practise your algebra skills over the summer holiday by working through the Edexcel Level 3 Algebra papers which are available via the link below:

https://qualifications.pearson.com/en/qualifications/edexcel-awards-in-mathematics/algebra.coursematerials.html#filterQuery=category:Pearson-UK:Category%2FExam-materials&filterQuery=category:Pearson-UK:Unit%2FAAL30

You can download all papers and mark schemes apart from the latest ones which are password protected.

If the link doesn't work, you can access via internet search:
- search 'edexcel level 3 algebra'
- click on the first search result
- select 'Course materials'
- select 'Exam materials'
- select 'Unit AAL30'

What are the options?

Single maths

A level Maths

Double maths

A level Maths

A level Further Maths

Exam board is Edexcel

What is expected for single maths?

Grade 7 in GCSE Maths
The data suggests a minimum of grade 8 is needed to give you the best chance of A*AB in A level Maths

Summer holiday algebra work after GCSEs
Edexcel level 3 algebra papers

Competence in GCSE algebra
Summer holiday + first two weeks = algebra revision
third week = algebra test

Hard work
A level is a big step up from GCSE

How does single maths work?

<u>Content</u>

⅔ Pure + ⅓ Mech/Stats

<u>Exams</u>

Three 2 hour exams taken at end of Year 13

2 x Pure   1 x Mech/Stats

<u>Teaching</u>

4 hours 40 minutes of maths each week

2 teachers (1 Pure/Stats, 1 Pure/Mech)

What is expected for double maths?

Grade 8 in GCSE Maths
Places given to students with grade 9
Remaining places offered to those with grade 8

Summer holiday algebra work after GCSEs
Edexcel level 3 algebra papers

Expertise in GCSE algebra
Summer holiday + first two weeks = algebra revision
third week = algebra test

Hard work
Double maths is a big step up from single maths

How does double maths work?

Year 12 complete A level Maths (single maths)

Content in Year 12

⅔ Pure + ⅓ Mech/Stats

Exams in Year 12

Three 2 hour exams taken at end of Year 12

2 x Pure   1 x Mech/Stats

How does double maths work?

Year 13 complete A level Further Maths

<u>Content in Year 13</u>
½ Core Pure + ½ Further Mech/Stats

<u>Exams in Year 13</u>
Four 1½ hour exams taken at end of Year 13
2 x Core Pure   1 x F. Mech   1 x F. Stats

<u>Teaching</u>
9 hours 20 minutes of maths each week
4 teachers (2 Pure, 1 Mech, 1 Stats)

If you choose double maths

You will have 4 A levels by the end of Year 13

You cannot pick double maths with the intention of not taking A level Further Maths in Year 13 as you are depriving someone else of a place on a heavily over-subscribed course

If you achieve grade C - U in A level Maths in Year 12 you may not progress to Further Maths in Year 13 but will instead repeat A level Maths

How is maths taught?

In a typical 1 hour 20 minute lesson students are taught something new in the first half and practise what they've learnt in the second half

Homework is based on the class work, and at least one hour of independent study per day is essential

There are regular assessments and revision for these is done online using Dr Frost Maths

How are the classes arranged?

Majority of Year 12 students study maths

Students are split into 10 groups:

7 single maths ($\approx$18 per class average)

3 double maths ($\approx$ 23 per class average)

Classes are arranged similarly in Year 13

Maths or maths related degrees

Double maths is expected at many universities eg. Oxford, Cambridge, Warwick, Imperial, UCL, KCL, Bath, Bristol, Durham

Maths entrance papers may also be required eg. MAT (Oxford) or STEP (Cambridge)

Single maths is sufficient at some universities but TMUA/MAT/STEP may then be required

Double maths is **not** required for medicine

For further information see

https://www.latymer.co.uk/national-curriculum/stem/mathematics