RAINFORD HIGH

PART OF RAINFORD ACADEMIES TRUST

Mathematics and Further Mathematics- Exam Board: **AQA**

Advanced Information Link:

A Level Maths: **Advanced information June 2022 - A-level Mathematics (7357) (aqa.org.uk)**

A Level Further Maths: **Advanced information June 2022 - A-level Further Mathematics (7367) (aqa.org.uk)**

Subject Overview (coursework/exam split, timings, weightings etc.):

Both Maths and Further Maths at A Level have no coursework element. The final grade at the end of Year 13 is awarded solely from performance in 3×2 hour (equally weighted) calculator papers, each out of 100 marks. The grade is awarded using the grade boundaries depending on your total score out of 300.

If you are taking Further Maths you will have completed your Maths A Level in Year 12.

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Key Topics for Y13 Examinations Summer 2022:

A Level Maths

Pure Mathematics (662/3% of A Level grade)

A: Proof
B: Algebra and functions
C: Coordinate geometry
D: Sequences and series
E: Trigonometry
F: Exponentials and logarithms
G: Differentiation
H: Integration
I: Numerical methods
Assessed in all 3 written papers

Mechanics (162/3% of A Level grade)

J: Vectors
P: Quantities and units in mechanics
Q: Kinematics
R: Forces and Newton's laws
S: Moments
Assessed in paper 2 only

Statistics (162/3% of A Level grade)

K: Statistical sampling
L: Data presentation and Interpretation
M: Probability
N: Statistical distributions
O: Statistical hypothesis testing
Assessed in paper 3 only

A Level Further Maths

Pure Mathematics (66 2/3% of A Level grade)

A: Proof
B: Complex numbers
C: Matrices
D: Further algebra and functions
E: Further calculus
F: Further vectors
G: Polar coordinates
H: Hyperbolic functions
I: Differential equations
J: Numerical methods
Assessed in both papers 1 and 2

Mechanics (16 2/3% of A Level grade)

MA: Dimensional analysis
MB: Momentum and collisions
MC: Work, energy and power
MD: Circular motion
ME: Centres of mass and moments

Assessed in paper 3 only

Statistics (16 2/3% of A Level grade)

SA: Discrete random variables and expectation
SB: Poisson distribution
SC: Type I and Type II errors
SD: Continuous random variables
SE: Chi squared tests for association
SF: Exponential distribution
SG: Inference – one sample t - distribution
SH: Confidence Intervals
Assessed in paper 3 only

Useful websites:

- **Exam board (AQA):**

AQA | Mathematics | AS and A-level | Mathematics

AQA | Mathematics | AS and A-level | Further Mathematics

- **Rainford Connect:**

There is a dedicated 'revision' section with revision notes and links to useful web sites such as Maths Genie and Jack Brown revision videos. There are also topic tests and past papers in their respective sections. Everything mentioned here is uploaded to or linked to on Connect.

Course: A Level Maths (new specification from 2017) (rainford.org.uk)

Course: A Level Further Maths (new specification 2017) (rainford.org.uk)

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Useful revision tips and specific revision and preparation guidance:

- Make your own revision notes / flash cards using the AS Revision Notes on Connect.
- Try answering questions grouped by topic using either Topic Tests or questions on the Maths Genie web site. Start by working on the topics you are least confident with first.
- Use Jack Brown's videos for extra examples.
- Move on to trying whole AS papers and as you get better, remember to also stick to about a mark per minute.
- Use the official mark schemes for papers to check your work and also to become familiar with the detail you need to show, for example on questions that say "fully justify…" or "show that…."
- If you need extra help or support, just ask.

Useful resources:

- A Level Maths Textbook on www.kerboodle.com
- Revision notes on Maths Box (see revision section on Connect).
- AQA and Kerboodle Topic Tests (see topic test section on Connect).
- Past exam papers, practice and specimen papers (see Connect).