

Exam Success for all A-level Mathematics courses



Post-16 Mathematics Options



**A-level Further
Mathematics**

A-level Mathematics

Professional Maths
AS Maths + Core Maths
(Maths Enhancement)

Core Maths
(Enrichment Course)

Post-16 Further Mathematics

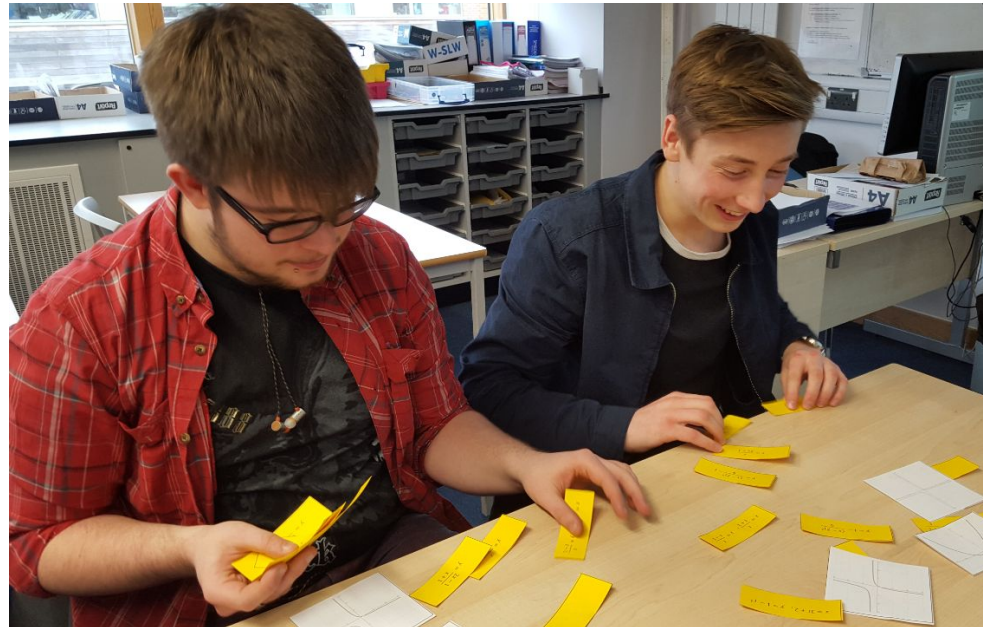
FM Examination – Edexcel Board

- **End of Yr12**
- Internal Yr13 entrance examination (End of year Assessment – in-line with the external AS examination)
 - Paper 1 – FM Core (120min)
 - Paper 2 – Applied – Decision and Further Stats (75min)
- **End of Yr13**
- External Summer examinations
 - Paper 1 – FM Core (120min)
 - Paper 2 – FM Core (120min)
 - Paper 3 – Applied – Decision and Further Stats (120min)

Post-16 Mathematics

Examination – Edexcel Board

- **End of Yr12**
- Internal Yr13 entrance examination (End of year Assessment – in-line with the external AS examination)
 - Paper 1 – Pure (120min)
 - Paper 2 – Applied (75min)
- **End of Yr13**
- External Summer examinations
 - Paper 1 – Pure (120min)
 - Paper 2 – Pure (120min)
 - Paper 3 – Applied (120min)



Post-16 Professional Mathematics

Examinations

End of Yr12

- Internal Yr13 entrance examination (End of year Assessment)
 - *Paper 1 – AS Maths Pure (90 min)*
 - *Paper 2 – AS Maths Applied (60min)*
- Students have the option to sit the external Core Maths examination at the end of Year 12 (otherwise they will complete an internal assessment of the same length).
 - *OCR CORE Maths Paper 1 – Quantitative Reasoning (120min)*
 - *OCR CORE Maths Paper 2 – Critical Thinking (120min)*

End of Yr13

- External Summer examinations
 - *Edexcel AS Maths Paper 1 – Pure (120min)*
 - *Edexcel AS Maths Paper 2 – Applied (75min)*
- External CORE Maths examination (unless completed in Year 12)
 - *OCR CORE Maths Paper 1 – Quantitative Reasoning (120min)*
 - *OCR CORE Maths Paper 2 – Critical Thinking (120min)*

Post-16 CORE Maths (Enrichment)

Examinations

- **End of Yr12**
- Students have the option to enter the External examination and complete the course at the end of Year 12 (otherwise they will complete an internal assessment of the same length).
 - OCR CORE Maths Paper 1 – Quantitative Reasoning (120min)
 - OCR CORE Maths Paper 2 – Critical Thinking (120min)

- **End of Yr13**
- If students have not sat the external examination at the end of Year 12, they will sit the external examination at the end of Year 13.
 - OCR CORE Maths Paper 1 – Quantitative Reasoning (120min)
 - OCR CORE Maths Paper 2 – Critical Thinking (120min)

A-level Calculators

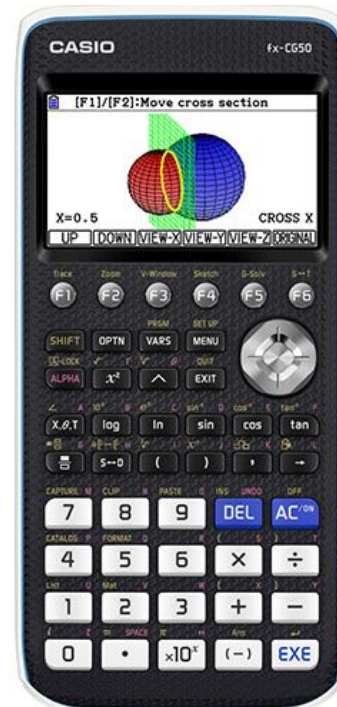
Having the correct equipment is a key component to success. For the A level Maths and Further Maths courses a new course specific calculator will be needed. CG-50 highly recommended. (Not needed for CORE maths)



Casio fx-83GT
(Does NOT have the required functions for new A-level)



Casio fx-991EX
Classwiz
£23-30
(min. required)

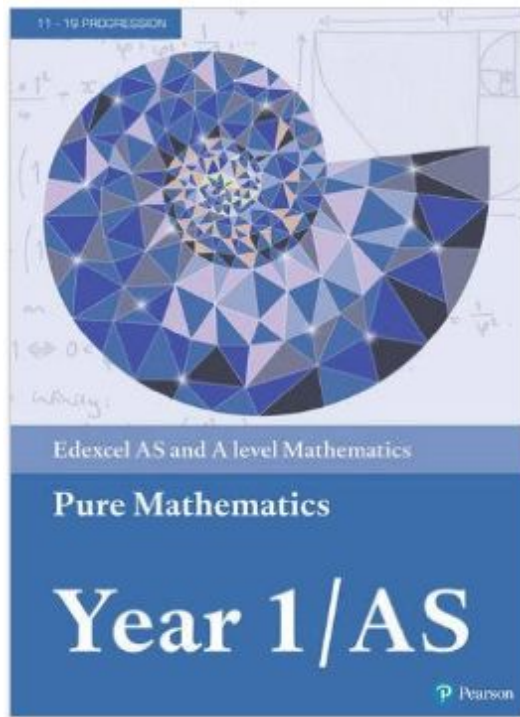


Casio fx-CG50 or
CG20
£72.50-120
(recommended)

A-level books

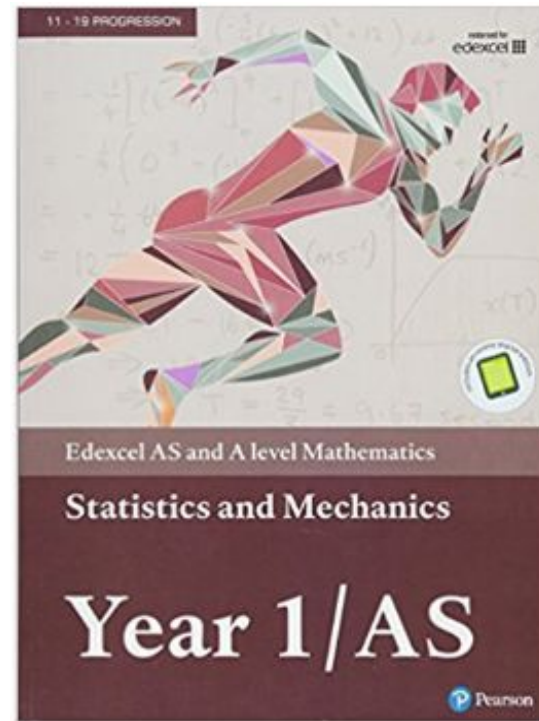
Having the course books will be essential for independent and assigned work. Limited number available to be loaned from the library.

Purchasing course books, recommended, can be done through on-line sites (like amazon).



ISBN-13: 978-1292183398

ISBN-10: 129218339X



ISBN-13: 978-1292232539

ISBN-10: 1292232536

Post-16 Mathematics

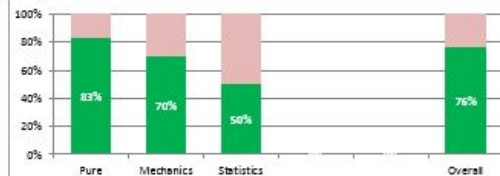
Diagnosis – Identifying areas to improve

After each assessment a QLA (question level analysis) form will be created, this will highlight the specific areas of improvement needed.

Year 12 - End of Yr12 Exam

Student	Pure		Mechanics		Statistics		Overall	
Q1	Integration	4	100%	79%	0	0	0	0
Q2(i)	Sketching graphs/Completing the square	3	100%	54%	0	0	0	0
Q2(ii)	Proof	2	100%	55%	0	0	0	0
Q3(a)	Vectors - distance between 2 points	2	100%	70%	0	0	0	0
Q3(b)	Vectors - magnitude	2	100%	83%	0	0	0	0
Q4	Coordinate geometry - gradient	4	100%	82%	0	0	0	0
Q5(a)	Solving log equations - setting equal	2	100%	53%	0	0	0	0
Q5(b)	Solving log equations	3	100%	55%	0	0	0	0
Q6(a)	Using formulae - substitution	2	100%	85%	0	0	0	0
Q6(b)	Using formulae - inequalities	3	100%	55%	0	0	0	0
Q6(c)	Using formulae - max. point	2	100%	70%	0	0	0	0
Q7(a)	Solving Trig equations	4	100%	40%	0	0	0	0
Q7(b)	Circle Rule	2	100%	26%	0	0	0	0
Q8(a)	Differentiation - min. point	6	100%	55%	0	0	0	0
Q8(b)	2nd Derivative	2	100%	38%	0	0	0	0
Q8(c)	Modelling	1	100%	61%	0	0	0	0
Q9(a)	Factor Theorem	2	100%	82%	0	0	0	0
Q9(b)	Factoring cubic	4	100%	81%	0	0	0	0
Q9(c)	Transforming graphs	3	87%	48%	0	0	0	0
Q10	Differentiation from first principles	4	100%	50%	0	0	0	0
Q11(a)	Binomial expansion	4	100%	81%	0	0	0	0
Q11(b)	Binomial expansion - solving value	2	100%	39%	0	0	0	0
Q11(c)	Binomial expansion - solving value	2	100%	11%	0	0	0	0
Q12(a)	Trig identities	4	100%	52%	0	0	0	0
Q12(b)	Solving Trig equations	4	50%	31%	0	0	0	0
Q13(a)	Log graphs - finding value	4	100%	27%	0	0	0	0
Q13(b)	Log graphs - Interpretation	2	100%	30%	0	0	0	0
Q13(c)	Log graphs - using	2	20%	20%	0	0	0	0
Q14(a)	Circle Geometry - centre & radius	3	100%	64%	0	0	0	0
Q14(b)	Circle Geometry - intersecting points	6	50%	3%	0	0	0	0
Q15	Integration - area under graph	10	20%	34%	0	0	0	0
Q1(a)	Regression line - correlation	1	100%	85%	0	0	0	0
Q1(b)	Regression line - interpretation	1	100%	24%	0	0	0	0
Q1(c)	Regression line - modelling	1	100%	64%	0	0	0	0
Q2(a)	Tree diagrams	3	100%	60%	0	0	0	0
Q2(b)	Independence - proof	1	100%	36%	0	0	0	0
Q3(a)	Binomial distribution	3	33%	48%	0	0	0	0
Q4(a)	Calculating mean	1	100%	27%	0	0	0	0
Q4(b)	Calculating standard deviation	2	100%	42%	0	0	0	0
Q4(c)	Interpretation of data	2	50%	23%	0	0	0	0
Q4(d)	Interpretation of data	3	33%	40%	0	0	0	0
Q5(a)	Probability distribution table	2	100%	32%	0	0	0	0
Q5(b)	Binomial distribution	3	100%	11%	0	0	0	0
Q5(c)	Probability distribution	3	33%	3%	0	0	0	0
Q6	Vertical Kinematics	4	100%	53%	0	0	0	0
Q7(a)	Velocity-Time graph	3	100%	80%	0	0	0	0
Q7(b)	Distance under graph	3	100%	60%	0	0	0	0
Q7(c)	Modelling	1	100%	48%	0	0	0	0
Q8(a)	Diff. kinematics - time at rest	5	100%	48%	0	0	0	0
Q8(b)	Diff. kinematics - total distance	3	100%	12%	0	0	0	0
Q8(c)	Diff. kinematics - interpretation	2	100%	11%	0	0	0	0
Q9(a)	Pulley - finding Tension	3	33%	37%	0	0	0	0
Q9(b)	Pulley - finding acceleration	1	100%	45%	0	0	0	0
Q9(c)	Pulley - finding mass	4	100%	32%	0	0	0	0
Q9(d)	Pulley - modelling	1	100%	39%	0	0	0	0

Overall Grade: B



Success:	Target:	Reflection:

Post-16 Mathematics

Therapy – Working & developing on the areas to improve

Throughout the course there is **high** expectation of independent work. Alongside assigned homework, students will need to ensure they attempt extra work to stretch and solidify understanding.

Resources to use for independent work:

-Course Book

-MathsGenie.com

<https://www.mathsgenie.co.uk/newalevel.html>

Worksheets and video tutorials on each topic of Yr12 and Yr13 Mathematics.

-hegartymaths.com

<https://hegartymaths.com/>

-examsolutions.net

<https://www.examsolutions.net/a-level-maths/edexcel/>

-physicsandmathstutor.com

<http://www.physicsandmathstutor.com/maths-revision/a>

The screenshot shows the ExamSolutions website interface. The main navigation bar includes links for HOME, MATHS CONTENTS, GCSE, AS MATHS, A LEVEL, INTERNATIONAL EXAMS, PAPERS, FORUM, TUTORIAL, and HELP. The current page is titled 'A Level Maths / Edexcel' and features a search bar with the text 'Google Pixel 2. Out Now - Ask More Of Your Phone'. Below the search bar, there is a section for 'Edexcel - A Level Maths' with a 'New Specification - from Sept 2017' banner. The page lists various resources for A Level Mathematics, including Pure Mathematics Papers 1 and 2, Statistics Paper 3 - Section A, Mechanics Paper 3 - Section B, and Resources like A Level Mathematics Specification, Sample Assessment Materials, and AS and A Level Data Resources.

The screenshot shows a video player interface for a tutorial titled 'Coordinate Geometry of the Line 1'. The video content displays an example problem: 'Example 4: A line is parallel to $6x + 3y - 2 = 0$ and passes through $(0,3)$. Find the equation of this line.' The video shows the handwritten equation $6x + 3y - 2 = 0$ and a play button icon. The video player includes a 'Rate this video' section with a star rating, a 'Share this video with your friends' section with social media sharing options, and a 'Tutorials' button.

The screenshot shows the Physics and Maths Tutor website. The main navigation bar includes links for Home, Courses, Past Papers, and Maths. The current page is titled 'PHYSICS' and features a 'Maths Paper' section with a link to 'A-level past and practice papers'. Below this, there is a 'Courses' section with a link to 'Courses for A-level Maths and Sciences Revision'. The page also includes a 'Past Papers' section with a link to 'Past GCSE/GCSE and A-level papers'.

Mathematics

Post-16 Mathematics

Testing – Topic specific testing to show improvement

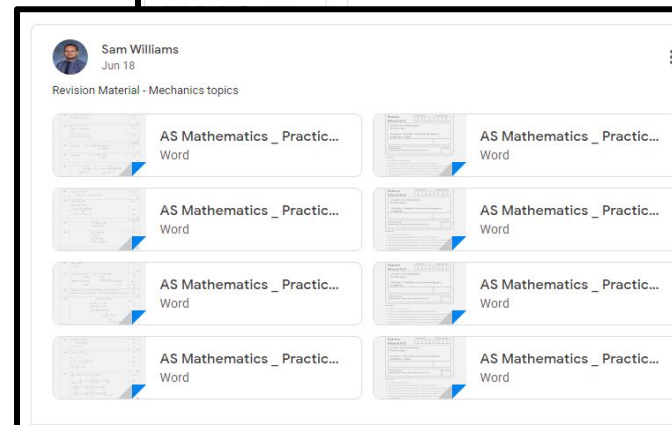
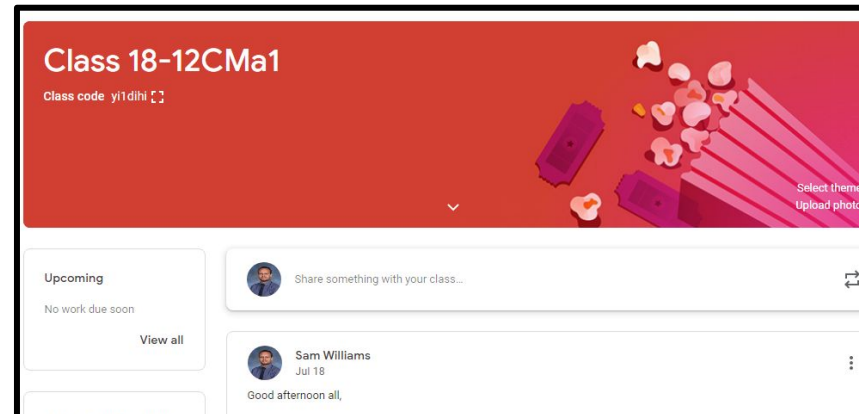
After areas of improvement are revised, then attempting exam quality questions are key to success. These exam questions are all available on the school VLE.

QE Google Classrooms:

- Exam questions by Topic
- Past Papers & Mark-schemes
- Practice Papers

Shared Folder – Sixth Form Student Resources

- Past Papers and Mark schemes
- Exam Revision booklets (10hr exam packs)



Revision choices available:

Throughout the year there will be additional revision and support available.



**Joining other classes –
during study periods**

Small group Intervention
sessions

Weekly Past Paper HW
schedule

Mini-MOCK's and QLA

Afterschool Exam Prep Hour

The impact into Yr13

Students need to maximise Yr12, as this gives a very clear likelihood of the outcome at the end of Yr13. Leaving the hard work until Yr13 is not an option.

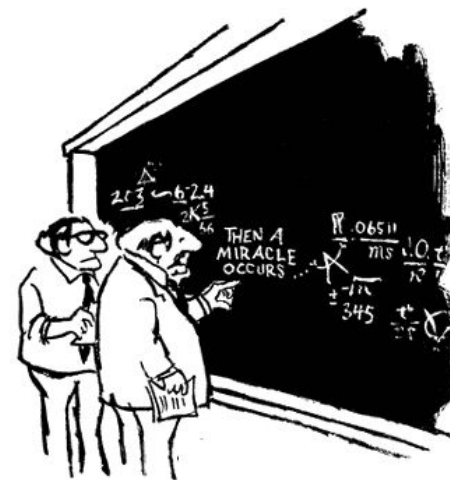
- **End of Yr12 is a strong indicator of your end of Yr13 result.**
- **In the past, QE students on average stay the same or deviate by 1 grade.**
- **Yr13 topics are the advancement of Yr12 topics.**
- **Yr12 topics are used as expected knowledge throughout Yr13.**

End of Yr12 Grade	Likely End of Yr13 Grade
	A*
A	A
B	B
C	C
D	D
E	E
U	U

***For any further information,
please contact:***

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I THINK YOU NEED TO BE
MORE EXPLICIT IN THIS
PARTICULAR STEP