

Welcome to A level
Mathematics Induction
29th June 2023
Haileybury Turnford School



Learning objectives:

- A level Maths Induction

Explanation

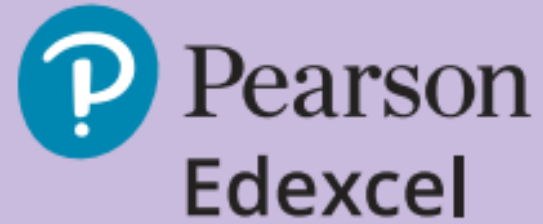
Core Expectations for **Every Lesson**

1. Attend lessons on time and in professional attire
2. Be prepared for each lesson by ensuring you bring the appropriate equipment
3. Ensure all work is organised in the appropriate section of your subject folder
4. All deadlines must be met to avoid a 6 week “Risk of Failure” program
5. Respect the classroom, Replace chairs, Rubbish in bins
6. Speak to **ALL** members of the HT community with respect
7. No mobile phones/ear pods to be used in lessons or around the school
8. Starters are to be completed in silence
9. Be proactive and not reactive
10. Expect to work harder than you ever have before



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A Level Mathematics

Specification

Pearson Edexcel Level 3 Advanced GCE in Mathematics (9MA0)



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Qualification at a glance

Content and assessment overview

The Pearson Edexcel Level 3 Advanced GCE in Mathematics consists of three externally-examined papers.

Students must complete all assessment in May/June in any single year.

Paper 1: Pure Mathematics 1 (*Paper code: 9MA0/01)

Paper 2: Pure Mathematics 2 (*Paper code: 9MA0/02)

Each paper is:

2-hour written examination

33.33% of the qualification

100 marks

Paper 3: Statistics and Mechanics (*Paper code: 9MA0/03)

2-hour written examination

33.33% of the qualification

100 marks



□ A level Maths Induction

Pearson Edexcel Level 3 GCE

Time 2 hours

Paper
reference

9MA0/01

Mathematics

Advanced

PAPER 1: Pure Mathematics 1

You must have:

Mathematical Formulae and Statistical Tables (Green), calculator

Total Marks

Candidates may use any calculator allowed by Pearson regulations. Calculators must not have the facility for symbolic algebra manipulation, differentiation and integration, or have retrievable mathematical formulae stored in them.

Instructions

- Use **black** ink or ball-point pen.
- If pencil is used for diagrams/sketches/graphs it must be dark (HB or B).
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions and ensure that your answers to parts of questions are clearly labelled.
- Answer the questions in the spaces provided
– *there may be more space than you need.*
- You should show sufficient working to make your methods clear. Answers without working may not gain full credit.
- Inexact answers should be given to three significant figures unless otherwise stated.

Information

- A booklet 'Mathematical Formulae and Statistical Tables' is provided.
- There are 16 questions in this question paper. The total mark for this paper is 100.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.



Learning of

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Pearson Edexcel
Level 3 GCE

Centre Number

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Candidate Number

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Mathematics

Advanced

Paper 2: Pure Mathematics 2

Wednesday 13 June 2018 – Morning

Time: 2 hours

Paper Reference

9MA0/02

You must have:

Mathematical Formulae and Statistical Tables, calculator

Total Marks

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Candidates may use any calculator allowed by the regulations of the Joint Council for Qualifications. Calculators must not have the facility for symbolic algebra manipulation, differentiation and integration, or have retrievable mathematical formulae stored in them.

Instructions

- Use black ink or ball-point pen.
- If pencil is used for diagrams/sketches/graphs it must be dark (HB or B).
- Fill in the boxes at the top of this page with your name, centre number and candidate number.
- Answer all questions and ensure that your answers to parts of questions are clearly labelled.
- You should show sufficient working to make your methods clear. Answers without working may not gain full credit.
- Answers should be given to three significant figures unless otherwise stated.

Information

- A booklet 'Mathematical Formulae and Statistical Tables' is provided.
- There are 14 questions. The total mark for this part of the examination is 100.
- The marks for each question are shown in brackets
 - use this as a guide as to how much time to spend on each question.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.



Learning objectives

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Pearson Edexcel Level 3 GCE

Paper reference **9MA0/31**

Mathematics

Advanced

PAPER 31: Statistics

You must have:
Mathematical Formulae and Statistical Tables (Green), calculator

Total Marks

Candidates may use any calculator allowed by Pearson regulations. Calculators must not have the facility for symbolic algebra manipulation, differentiation and integration, or have retrievable mathematical formulae stored in them.

Instructions

- Use **black** ink or ball-point pen.
- If pencil is used for diagrams/sketches/graphs it must be dark (HB or B).
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions and ensure that your answers to parts of questions are clearly labelled.
- Answer the questions in the spaces provided
– *there may be more space than you need.*
- You should show sufficient working to make your methods clear. Answers without working may not gain full credit.
- Values from statistical tables should be quoted in full. If a calculator is used instead of tables the value should be given to an equivalent degree of accuracy.
- Inexact answers should be given to three significant figures unless otherwise stated.

Information

- A booklet 'Mathematical Formulae and Statistical Tables' is provided.
- The total mark for this part of the examination is 50. There are 6 questions.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*



Learning objectives

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Pearson Edexcel Level 3 GCE

Paper
reference

9MA0/32

Mathematics

Advanced

PAPER 32: Mechanics

You must have:

Mathematical Formulae and Statistical Tables (Green), calculator

Total Marks

Candidates may use any calculator allowed by Pearson regulations. Calculators must not have the facility for symbolic algebra manipulation, differentiation and integration, or have retrievable mathematical formulae stored in them.

Instructions

- Use **black** ink or ball-point pen.
- If pencil is used for diagrams/sketches/graphs it must be dark (HB or B).
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions and ensure that your answers to parts of questions are clearly labelled.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- You should show sufficient working to make your methods clear. Answers without working may not gain full credit.
- Unless otherwise indicated, whenever a value of g is required, take $g = 9.8 \text{ m s}^{-2}$ and give your answer to either 2 significant figures or 3 significant figures.

Information

- A booklet 'Mathematical Formulae and Statistical Tables' is provided.
- The total mark for this part of the examination is 50. There are 5 questions.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.



Learning objectives

□ A level

Assessment information

- First assessment: May/June 2018.
- The assessment is 2 hours.
- The assessment is out of 100 marks.
- Students must answer all questions.
- Calculators can be used in the assessment.
- The booklet '*Mathematical Formulae and Statistical Tables*' will be provided for use in the assessment.



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Assessment Objectives

Students must:		% in GCE A Level
AO1	Use and apply standard techniques Students should be able to: <ul style="list-style-type: none">• select and correctly carry out routine procedures; and• accurately recall facts, terminology and definitions	48–52
AO2	Reason, interpret and communicate mathematically Students should be able to: <ul style="list-style-type: none">• construct rigorous mathematical arguments (including proofs)• make deductions and inferences• assess the validity of mathematical arguments• explain their reasoning; and	23–27
AO3	Solve problems within mathematics and in other contexts Students should be able to: <ul style="list-style-type: none">• translate problems in mathematical and non-mathematical contexts into mathematical processes• interpret solutions to problems in their original context, and, where appropriate, evaluate their accuracy and limitations• translate situations in context into mathematical models• use mathematical models; and• evaluate the outcomes of modelling in context, recognise the limitations of models and, where appropriate, explain how to refine them.	23–27



Breakdown of Assessment Objectives

Paper	Assessment Objectives			Total for all Assessment Objectives
	AO1 %	AO2 %	AO3 %	
Paper 1: Pure Mathematics 1	16.00–17.33	8.66–10	6.33–7.67	33.33%
Paper 2: Pure Mathematics 2	16.00–17.33	8.66–10	6.33–7.67	33.33%
Paper 3: Statistics and Mechanics	16.00–17.33	5.66–7.00	10.33–11.67	33.33%
Total for GCE A Level	48-52	23-27	23-27	100%







NB: Totals have been rounded either up or down.



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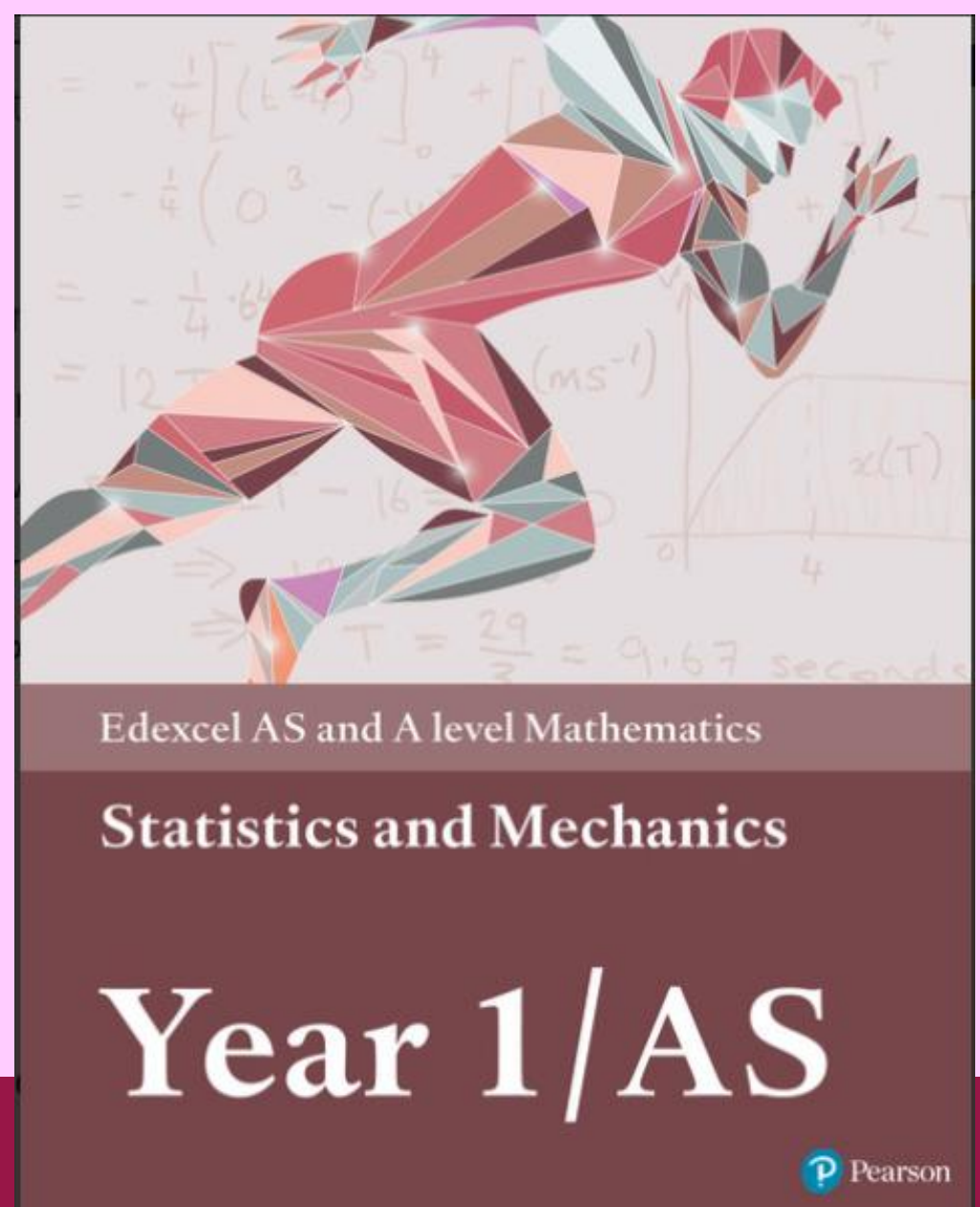
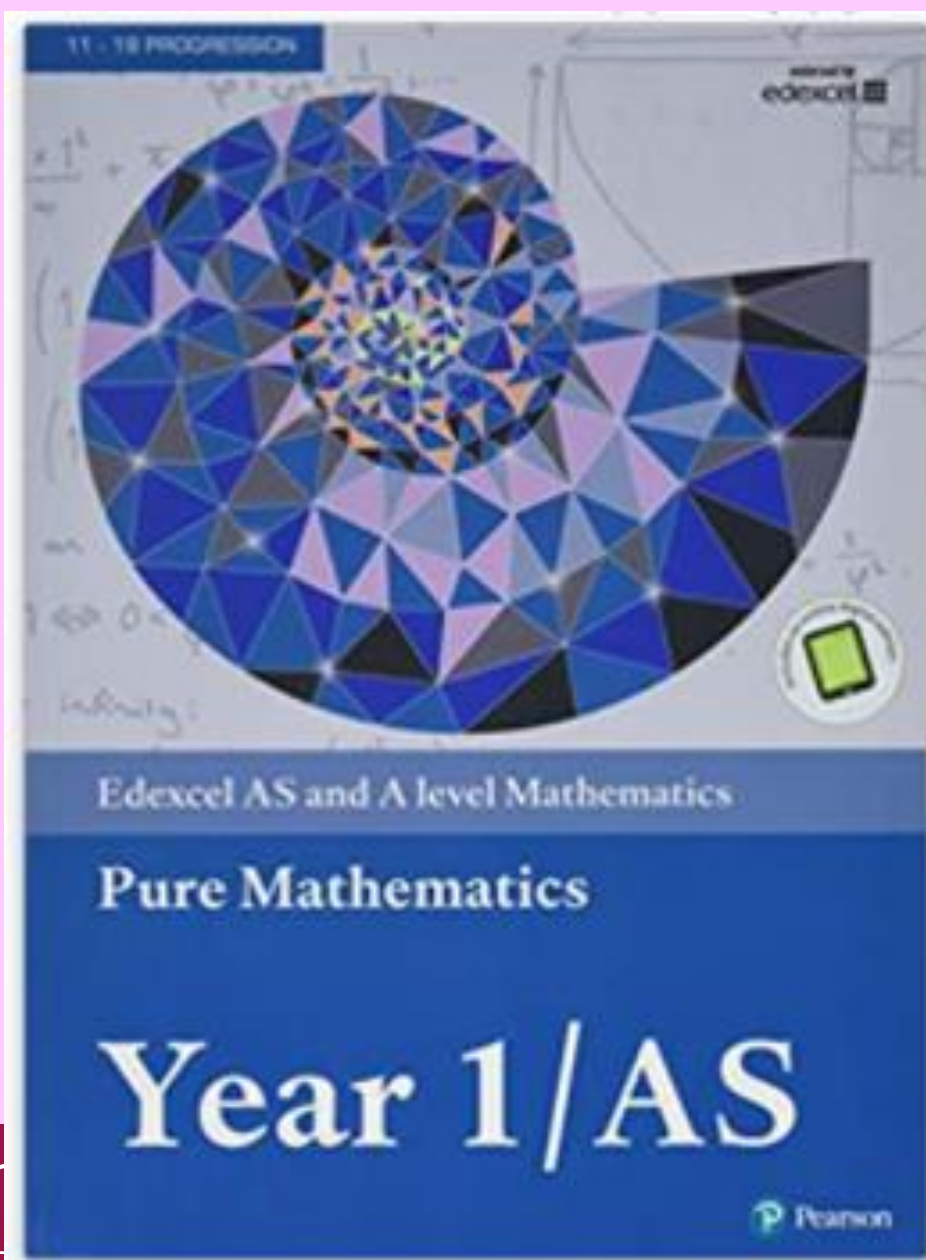
AS and A level Mathematics

Qualification	Component	Overview	Assessment
A level Mathematics	Paper 1: Pure Mathematics 33.3% weighting	Any Pure Mathematics content can be assessed on either paper	 2 hours  100 marks
	Paper 2: Pure Mathematics 33.3% weighting		 2 hours  100 marks
	Paper 3: Statistics and Mechanics 33.3% weighting	Section A: Statistics (50 marks) Section B: Mechanics (50 marks)	 2 hours  100 marks



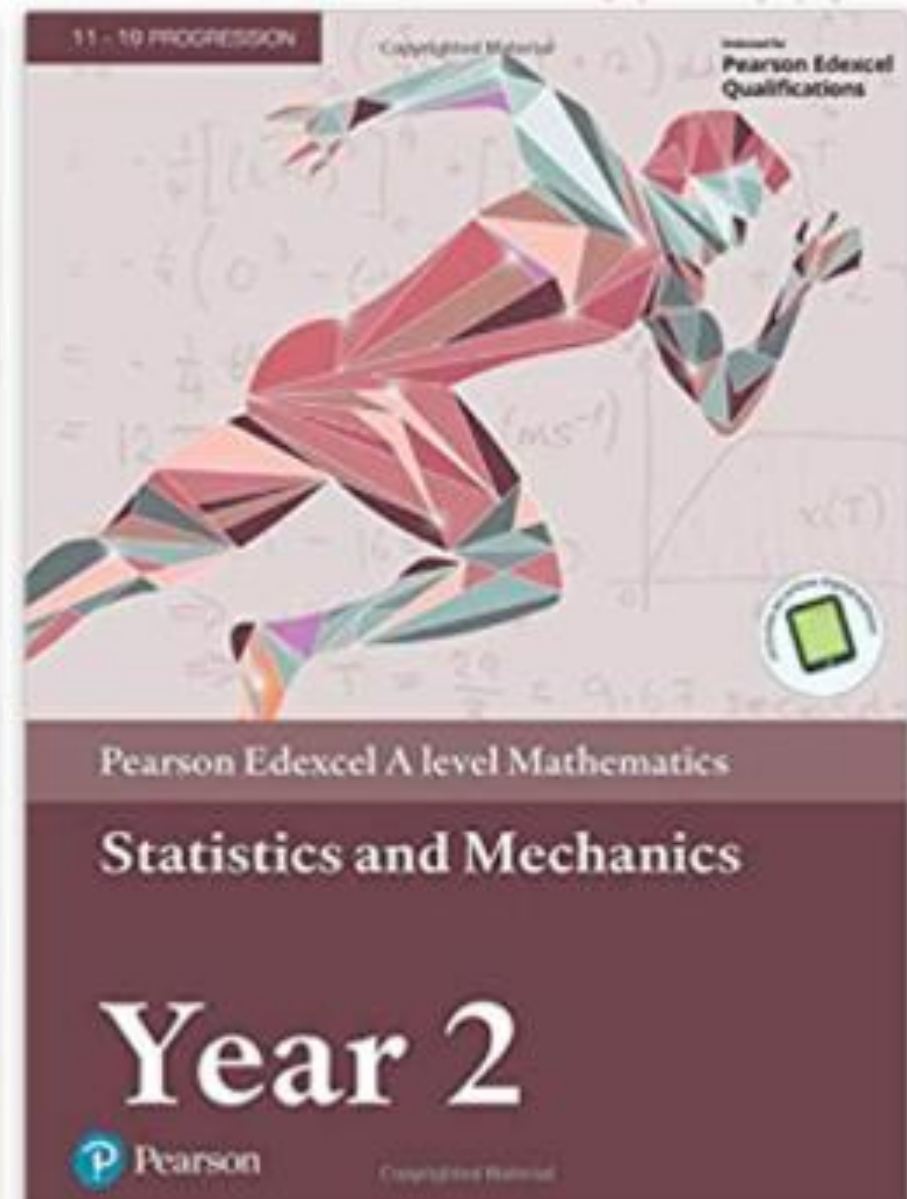
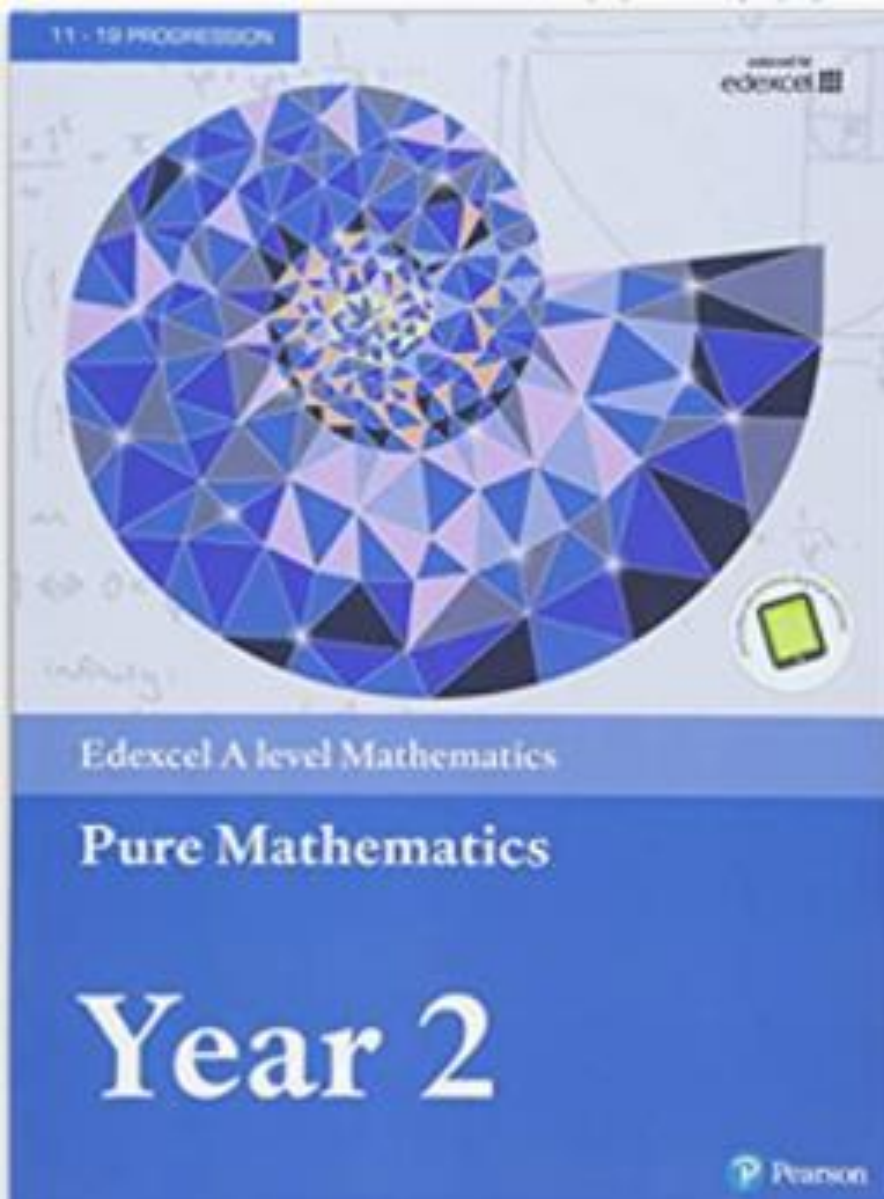
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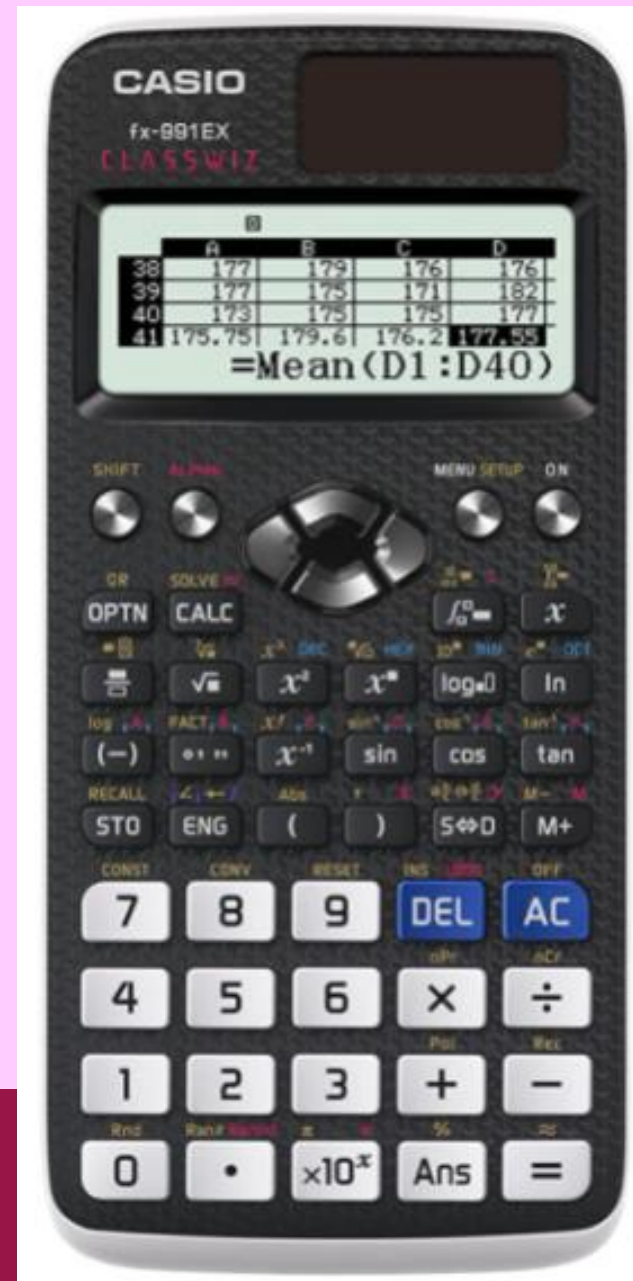
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Learn

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CASIO FX-991EX Advanced
Engineering/Scientific
Calculator (UK VERSION),



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Useful A-Level Maths Revision Websites

- [Physicsandmathstutor.com](https://www.physicsandmathstutor.com)
- [Mathsgenie.co.uk](https://www.mathsgenie.co.uk)
- [Examsolutions.net](https://www.examsolutions.net)
- [TLMaths.com](https://www.tlmaths.com)
- [DrFrostmaths.com](https://www.dr-frost-maths.com)
- [Alevelmathsrevision.com](https://www.alevelmathsrevision.com)
- [Naikermaths.com](https://www.naikermaths.com)



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