



Wallington High School for Girls

Sixth Form

Subject: Mathematics

Exam board: Edexcel

Course information:

The Mathematics A-level is a demanding but exciting course, covering a wide range of elements from pure mathematics, statistics and mechanics. There is a focus on proof, problem-solving and modelling designed to develop mathematical thinking, understanding and skills in working scientifically. It is a linear two-year course, which will be examined at the end of year 13.

You will sit three equally weighted examination papers as follows:

Paper 1 Pure Mathematics	2 hours
Paper 2 Pure Mathematics	2 hours
Paper 3 Statistics and Mechanics	2 hours

You will need the following calculator throughout the course:

FX-991CW or Casio FX-991EX (older version) or Casio fx-CG100 (graphical calculator)

We use the following text books:

Year 12: AS

Edexcel Pure Mathematics Year 1/AS Textbook – Pearson (ISBN: 9781292183398)

Edexcel Statistics & Mechanics Year 1/AS Textbook – Pearson (ISBN: 9781292232539)

Year 13: A2

Edexcel A Level Mathematics Pure Mathematics Year 2 Textbook – Pearson (ISBN: 9781292183404)

Edexcel A Level Mathematics Statistics & Mechanics Year 2 Textbook – Pearson (ISBN: 9781446944073)

Summer Transition Work:

To be ready to tackle the new A-level material you will need a sound grasp of all the grade 7-9 GCSE content in Algebra and Trigonometry. At the very start of your Maths A-level course you will be given a Maths Skills Test to complete. This will enable us to see where students may need additional support. To enable you to make the best possible start we have arranged the following tasks for you to complete as part of your summer transition work:

1. Use the maths transition booklet to revise your GCSE knowledge and complete and mark the diagnostic assessment at the end of the booklet, bringing the diagnostic assessment to your first mathematics lesson, together with your corrections. We would expect that completing the diagnostic assessment and reviewing it carefully should take 2.5 hours.
2. There is an emphasis on problem solving in the new Maths A-level. To help develop your mathematical thinking skills we would like you to complete the 2020 SMC Paper, which can be found at: [Senior Mathematical Challenge archive | UK Mathematics Trust \(ukmt.org.uk\)](#). You should then mark the paper and attempt corrections. We would expect that completing the 2020 SMC Paper and reviewing it carefully should take 2.5 hours.

If you would like help to work through this and really understand the solutions you can enrol on this free course: [Get ready for the Senior Maths Challenge \(mathsaurus.com\)](#)



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Topics that will be tested in the Maths Skills Test:

Number	Fractions	
	Indices and Surds	
Algebra	Rearranging formulae	
	Expanding brackets and factorising	
	Quadratics (factorise, complete the square, formula)	
	Simultaneous equations (including one non-linear)	
	Straight line graphs and equations including parallel and perpendicular lines	
	Algebraic fractions (simplify and solve equations)	
Trigonometry	Pythagoras and SOHCAHTOA	
	Graphs	
	Sine and Cosine rule and area of a triangle	

Materials to support this - the transition booklet(sharepoint link), one of the following websites

<https://amsp.org.uk/resource/gcse-alevel-transition-resources>

<http://www.cimt.org.uk/projects/mepres/step-up/index.htm>

Approximate completion time:

4-5 hours unless further revision is needed prior to completing diagnostic assessment

Suggested Summer Wider Reading:

We would recommend a few summer reads. Either: –

Select a book (14+) from the nrich reading list: [Recommended Books \(nrich.maths.org/books\)](http://rich.maths.org/books) such as “Mathematics: A very short introduction”, Timothy Gowers or “Fermat's Last Theorem”, Simon Singh **ISBN number:** 978-0192853615 or 978-1841157917

- Read maths articles from <https://plus.maths.org/>