

Radnor House Sevenoaks - Curriculum Overview Further Maths year 12.

Students of our Edexcel A level in Maths will develop an understanding of mathematics and mathematical processes, develop the ability to reason logically and construct mathematical proofs, and understand coherence and progression in mathematics and how different areas of mathematics can be connected. - See more at: <http://qualifications.pearson.com/en/qualifications/edexcel-a-levels/mathematics-2008.html#sthash.ekFkRtlu.dpuf>

Our Edexcel A level Mathematics specification enables students to follow a flexible course in maths (including Pure Mathematics, Further Mathematics and Additional Further Mathematics) to suit their individual needs and goals. - See more at: <http://qualifications.pearson.com/en/qualifications/edexcel-a-levels/mathematics-2008.html#sthash.ekFkRtlu.dpuf>

The specification can be found at - <http://qualifications.pearson.com/en/qualifications/edexcel-a-levels/mathematics-2008.html>

Other useful websites for A Level Maths include:

Online resources:

<http://www.mathsnetalevel.com/>

<http://www.examsolutions.co.uk>

<http://www.revisionmaths.co.uk>

<http://www.physicsandmathstutor.com/>

http://www.themathsteacher.com/a_level_maths.php

<http://www.mrbartonmaths.com/alevelnotes.htm>

<http://www.angelfire.com/folk/mcook/p1-p3.pdf>

<http://www.mathcentre.ac.uk/>

<http://thematshfaculty.org/category/pure/algebra/>

<https://nrich.maths.org/discus/messages/27/27.html?1196027299>

<http://www.furthermaths.org.uk/>

Maths Careers:

<http://www.mathscareers.org.uk/>

<http://www.ima.org.uk/quiz/>

<http://www.topuniversities.com/student-info/careers-advice/what-can-you-do-mathematics-degree>

<http://www.futuremorph.org/14-16/next-steps/follow-your-favourite-subject/careers-from-maths/>

<https://plus.maths.org/content/Career>

| | Autumn Term 13 WEEKS | Spring Term 10 WEEKS | Summer Term 12 WEEKS |
|--|---|---|---|
| <p>Year 12FM</p> <p>5 hours per week</p> <p>No of weeks in brackets</p> | <p>FP1 – Complex numbers, numerical solutions, coordinate systems, matrix algebra, Series.</p> <ol style="list-style-type: none"> 1) Complex numbers (2 week) <ul style="list-style-type: none"> • Multiplying complex numbers, complex conjugate, argand diagrams, modulus of a complex number, polynomial equations. . 2) Numerical solutions of equations.(1 week) <ul style="list-style-type: none"> • Solving equations using interval bisection, linear interpolation and Newton-Raphson process. 3) Coordinate systems. (1 weeks) <ul style="list-style-type: none"> • Parametric equations, parabola and hyperbola. 4) Matrix algebra. (2 weeks) <ul style="list-style-type: none"> • Adding, subtracting and multiplying matrices, matrices and linear transformations, matrix inverse, matrix determinant, using matrices to solve simultaneous equations. 5) Series (1 week) <ul style="list-style-type: none"> • Using Σ notation, formula for sum of first n natural numbers, sum of squares, and sum of cubes. 6) Proof (1 week) <ul style="list-style-type: none"> • Proof by mathematical induction. • Differentiation and integration. | <p>S2– Probability models, discrete and continuous data, populations and samples, hypothesis testing.</p> <p>S2 –</p> <ol style="list-style-type: none"> 1) Binomial distribution (1 week) 2) Poisson distribution (1 week) 3) Normal approximations (1 weeks) 4) Continuous random variable. (1 weeks) 5) Uniform Distributions (1 weeks) 6) Populations and samples (1 week) 7) Hypothesis Testing. (2weeks) | <p>The Summer Term is spent preparing for the AS examination and then delivering A2 content when the students return.</p> <p>Revision will include:</p> <ul style="list-style-type: none"> • Content • Exam Style • Past Paper Preparation • Study Skills |