Radnor House Sevenoaks - Curriculum Overview Maths year 11 (Higher GCSE)

Our students follow a two-year GCSE course which allows them to develop an understanding of mathematics and mathematical processes, develop the ability to reason and apply their skills and knowledge to problem solving.

The GCSE 9-1 specification and sample resources can be found at http://qualifications.pearson.com/en/qualifications/edexcel-gcses/mathematics-2015.coursematerials.html#filterQuery=category:Pearson-UK:Category%2FSpecification-and-sample-assessments

Other useful websites for Maths include:

Online resources:

Sparx - Radnor House Sevenoaks (sparxmaths.uk)
http://www.emaths.co.uk
http://www.counton.org/
http://www.what2learn.com/home/examgames/maths/
http://www.bbc.co.uk/education/levels/z4kw2hv

Maths Careers:

http://www.mathscareers.org.uk/
http://www.ima.org.uk/quiz/
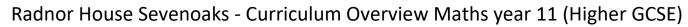http://www.topuniversities.com/student-info/careers-advice/what-can-you-do-mathematics-degree
http://www.futuremorph.org/14-16/next-steps/follow-your-favourite-subject/careers-from-maths/
https://plus.maths.org/content/Career

September 2023

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	Autumn Term 12 WEEKS	Spring Term 12 WEEKS	Summer Term 10 WEEKS
Year 11 **5 hours per week** **Any excess weeks allow for assessment and regular revision.**	**Quadratics** • Sketch quadratic graphs. • Expand triple brackets. • Solve simultaneous equations graphically. • Solve quadratic inequalities and give answers using set notation. **Circle geometry** • Apply and use the circle theorems. • Understand and use the equation of a circle. **Revision and November exams** **Algebra and quadratics** • Rationalise the denominator involving surds. • Simplify algebraic fractions. • Multiply and divide algebraic fractions. • Solve quadratic equations arising from algebraic fraction equations. • Change the subject of a formula • Functions.	**Reciprocal and exponential graphs** • Recognise and sketch reciprocal and exponential graphs. • Exponential growth and decay. • Transformation of graphs. • Estimation of area under a curve. **Revision and Mock exams** **Direct and inverse proportion** • Recognise and interpret graphs showing direct and inverse proportion. • Identify direct proportion from a table of values, by comparing ratios of values, for • Use $y = kx$ to solve direct proportion problems. • Solve problems involving inverse proportionality. • Set up and use equations to solve word and other problems involving direct proportion or inverse proportion.	**This time will be used for revision of the entire course. There will be regular in class assessments during this time.**

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Vectors and Geometric proof

- Solve geometric problems involving vectors.
- Carry out calculations with vectors.
- Rationalise the denominator involving surds.
- Simplify algebraic fractions.
- Multiply and divide algebraic fractions.
- Solve quadratic equations arising from algebraic fraction equations.
- Change the subject of a formula.
- Functions