



The Ridgeway School & Sixth Form College

...Inspiring Learners For Their Future

*'Our shared vision is that our students, colleagues and families will be part of a **FAIR** community.'*

*We will support our school **Family** to **Achieve** their potential, and **Inspire** students to **Reach** the very best destinations.'*



# Maths

# Curriculum Overview

RESPECT | HONESTY | ENDEAVOUR | CREATIVITY | COMMUNITY

## Year 7 Maths Curriculum Overview

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 7	Place Value and 4 Operations	<u>Algebraic Manipulation</u>	<u>Fractions</u> Decimals	<u>Solving Equations</u>	<u>Sequences</u> <u>Co-ordinates &amp; Graphs</u>	<u>Angles</u> Bearings
	<u>Factors, Multiples &amp; Primes</u>	<u>Units of Measure</u> Perimeter Area	<u>Presentation of data</u> <u>Averages</u>	<u>Percentages</u>	<u>Ratio &amp; Proportion</u>	<u>Polygons &amp; Circles</u> Symmetry Congruency <u>Transformations</u>

## Year 8 Maths Curriculum Overview

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 8	<u>Fractions</u> Decimals Percentages	<u>Factors, Multiples, Primes</u> <u>Indices</u> Standard Form	<u>Probability</u>	<u>Ratio &amp; Proportion</u>	<u>Polygons &amp; Angles</u>	<u>Time &amp; Speed</u>
	<u>Rounding &amp; Estimating</u> Data <u>Presentation</u> <u>Averages</u>	<u>Algebraic Manipulation</u>	<u>Solving Equations</u> Solving Inequalities	<u>Perimeter</u> Area Volume	<u>Sequences</u> <u>Graphs</u>	<u>Constructions</u> Similar Shapes Enlargement

## Year 9 Maths Curriculum Overview

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 9	<u>Fractions</u> Decimals Percentages	<u>Factors, Multiples and Primes</u>  <u>Indices</u> Standard Form	<u>Probability</u>	<u>Perimeter</u>  Area  Volume  Pythagoras	<u>Angles &amp; Polygons</u>  Bearings	<u>Distance Time Graphs</u>  Real-Life Graphs
	<u>Rounding &amp; Estimating</u>  Data <u>Presentation</u>  <u>Averages</u>	<u>Algebraic Manipulation</u>	<u>Solving Equations</u>  Solving Inequalities	<u>Ratio &amp; Proportion</u>	<u>Sequences</u>  <u>Graphs</u>	<u>Loci</u>  Similar Shapes  Enlargement

## Year 10 Maths Curriculum Overview

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 10	<ul style="list-style-type: none"> <li>Primes, Factors and multiples</li> <li>Fractions and Decimals</li> <li>Algebraic Manipulation</li> </ul>	<ul style="list-style-type: none"> <li>Accuracy and Rounding</li> <li>Indices and Standard Form</li> <li>Mensuration</li> </ul>	<ul style="list-style-type: none"> <li>Geometric constructions and calculations</li> <li>Ratio and Proportion</li> </ul>	<ul style="list-style-type: none"> <li>Percentages</li> <li>Solving of Equations</li> </ul>	<ul style="list-style-type: none"> <li>Bivariate Data</li> <li>Exact Calculations</li> <li>Compound Units</li> </ul>	<ul style="list-style-type: none"> <li>Collecting, Organising, Presenting and Analysing Data</li> <li>2D and 3D Representations</li> </ul>

## Year 11 Maths Curriculum Overview

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 11	<ul style="list-style-type: none"><li>• Geometric Review and Circle Theorems</li><li>• Probability and Set Theory</li></ul>	<ul style="list-style-type: none"><li>• Graphs of Equations &amp; Functions</li><li>• Iterative Methods</li></ul>	<ul style="list-style-type: none"><li>• Transformations</li><li>• Sequences</li></ul>	<ul style="list-style-type: none"><li>• Similar Shapes</li><li>• Vectors</li></ul>	<b>Content and skills revision</b>	

# Sixth Form Maths Curriculum Overview

## Maths A level

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 12	<ul style="list-style-type: none"> <li>• Quadratic Functions</li> <li>• Equations &amp; inequalities</li> <li>• Co-ordinate geometry</li> <li>• Kinematics</li> <li>• Polynomials</li> <li>• Vectors</li> </ul>		<ul style="list-style-type: none"> <li>• Forces &amp; Newton's laws</li> <li>• Differentiation</li> <li>• Integration</li> <li>• Variable Acceleration</li> </ul>		<ul style="list-style-type: none"> <li>• Trigonometry</li> <li>• Algebra review 2</li> <li>• Kinematics</li> <li>• Differentiation</li> </ul>	
	<ul style="list-style-type: none"> <li>• Surds &amp; Indices</li> <li>• Data collection, processing, presentation &amp; interpretation</li> <li>• Probability</li> <li>• Trigonometry</li> <li>• The Binomial expansion</li> <li>• The Binomial distribution</li> </ul>		<ul style="list-style-type: none"> <li>• Statistical hypothesis testing using the Binomial distribution</li> <li>• Graphs &amp; transformations</li> <li>• Exponentials &amp; logarithms</li> <li>• Problem solving</li> </ul>		<ul style="list-style-type: none"> <li>• Sequences &amp; series</li> <li>• Algebra review 1</li> <li>• Functions</li> <li>• Trigonometric functions</li> </ul>	
Year 13	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
	<ul style="list-style-type: none"> <li>• Sine &amp; cosine rules review</li> <li>• Proof</li> <li>• Further differentiation</li> <li>• Force &amp; motion</li> <li>• Integration</li> <li>• Moments of forces</li> </ul>		<ul style="list-style-type: none"> <li>• Parametric equations</li> <li>• Projectiles</li> <li>• A model for friction</li> </ul>			
<ul style="list-style-type: none"> <li>• Working with data review</li> <li>• Probability</li> <li>• Further Algebra</li> <li>• Trigonometric identities</li> <li>• Co-ordinate geometry review</li> <li>• Statistical distributions</li> </ul>		<ul style="list-style-type: none"> <li>• Statistical hypothesis testing</li> <li>• Differential equations</li> <li>• Vectors</li> <li>• Numerical methods</li> </ul>				

## Further Maths A level

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 12	<ul style="list-style-type: none"> <li>• Matrices &amp; transformations</li> <li>• Sequences &amp; series</li> <li>• Matrices &amp; their inverses</li> <li>• Vectors &amp; 3D space</li> </ul>		<ul style="list-style-type: none"> <li>• Discrete Random Variables</li> <li>• Discrete probability distributions</li> <li>• Bivariate data – correlation coefficients</li> <li>• Bivariate data – regression lines</li> <li>• Chi-squared tests</li> </ul>		Post AS Exams <ul style="list-style-type: none"> <li>• Kinematics</li> <li>• Forces &amp; motion</li> <li>• A model for friction</li> <li>• Moments of forces</li> <li>• Work, energy &amp; power</li> <li>• Impulse &amp; momentum</li> <li>• Centre of mass</li> <li>• Dimensional analysis</li> </ul>	
	<ul style="list-style-type: none"> <li>• Algorithms</li> <li>• Modelling with graphs &amp; networks</li> <li>• Network Algorithms</li> <li>• Further Network problems</li> <li>• Linear Programming</li> <li>• Simplex method</li> <li>• Reformulating networks as LP</li> </ul>		<ul style="list-style-type: none"> <li>• Introduction to complex numbers</li> <li>• Roots of polynomials</li> <li>• Complex numbers &amp; geometry</li> </ul>			
Year 13	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
	<ul style="list-style-type: none"> <li>• Vectors 1</li> <li>• Review: Matrices</li> <li>• Matrices</li> <li>• Revision of Statistics minor</li> <li>• Revision of Mechanics minor</li> </ul>		<ul style="list-style-type: none"> <li>• Further calculus</li> <li>• Maclaurin series</li> <li>• Hyperbolic functions</li> <li>• Applications of Integration</li> <li>• Vectors 2</li> </ul>		Revision and exam preparation	
<ul style="list-style-type: none"> <li>• Series &amp; Induction</li> <li>• Polar co-ordinates</li> <li>• Review: Complex numbers</li> <li>• Revision of MWA</li> </ul>		<ul style="list-style-type: none"> <li>• Review: Roots of polynomials</li> <li>• First order differential equations</li> <li>• Complex numbers</li> <li>• Second order differential equations</li> </ul>				

### Level 3 Certificate in Mathematical Studies (Core Maths : One year course)

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 12	<ul style="list-style-type: none"> <li>• Maths for personal finance</li> <li>• Assumed subject content</li> </ul>		<ul style="list-style-type: none"> <li>• Estimation</li> <li>• Critical analysis of given data and models</li> </ul>		Exam preparation	
	<ul style="list-style-type: none"> <li>• Analysis of data</li> <li>• The Normal distribution</li> </ul>		<ul style="list-style-type: none"> <li>• Probabilities and estimation</li> <li>• Correlation and regression</li> </ul>			