

## Year 11 Maths Curriculum Overview 2015-16

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Geometry:	Algebra:	Algebra:	Geometry:	<b>Topic Revision:</b>	Working on Past
Volume	Quadratic equations	Algebraic methods	Vectors	Number	papers and revision
<ul> <li>Volume of a pyramid</li> <li>Cones</li> <li>Spheres</li> <li>Pythagoras theorem</li> <li>Pythagoras theorem</li> <li>Applying Pythagoras' theorem in real-life situations</li> <li>Pythagoras' theorem in three dimensions</li> <li>Trigonometry 1</li> <li>Trigonometry 1</li> <li>Trigonometric ratios</li> <li>Using the sine, cosine and tangent functions</li> <li>Solving problems with trigonometry</li> <li>2D and 3D problems</li> <li>Trigonometric ratios of angles between 90° and 360°</li> <li>Using sine rule and cosine rule</li> <li>Trigonometric ratios</li> </ul>	<ul> <li>Solving quadratic equations by:         <ul> <li>Factorisation</li> <li>Quadratic Formula</li> <li>Completing the square</li> </ul> </li> <li>Problems involving quadratic equations</li> <li>Graphs and their equations</li> <li>Graphs and their equations</li> <li>Drawing linear graphs</li> <li>Finding an equation of a line</li> <li>Quadratic graphs</li> <li>Significant points of a quadratic graphs</li> <li>Significant points of a quadratic graph</li> <li>Signilar triangles</li> <li>Areas and volumes of similar shapes</li> <li>Statistics: Data Handling</li> <li>Averages</li> </ul>	<ul> <li>Rearranging formulae</li> <li>Changing the subject of a formula</li> <li>Simultaneous equations</li> <li>Linear and non- linear simultaneous equations</li> <li>Mumber: Variation:         <ul> <li>Direct variation</li> <li>Inverse variation</li> </ul> </li> <li>Limits of accuracy:         <ul> <li>Limits of accuracy</li> <li>Problems involving limits of accuracy</li> </ul> </li> <li>Statistics: Completion of Statistics coursework</li> </ul>	<ul> <li>Properties of vectors</li> <li>Vectors in geometry</li> <li>Geometric proof</li> </ul> Algebra: <ul> <li>Transformation of graphs</li> <li>Transformations of the graph y = f(x)</li> </ul> Recap Quadratic and equations Geometry: <ul> <li>Recap on Pythagoras and Trigonometry</li> </ul>	<ul> <li>Geometry</li> <li>Statistics</li> <li>Algebra</li> <li>Working on Past papers and revision</li> </ul>	GCSE Statistics revision
	Autumn 1 Geometry: Volume • Volume of a pyramid • Cones • Spheres Pythagoras theorem • Pythagoras theorem • Applying Pythagoras' theorem in real-life situations • Pythagoras' theorem in three dimensions Trigonometry 1 • Trigonometry 1 • Trigonometric ratios • Using the sine, cosine and tangent functions • Solving problems with trigonometry Trigonometry 2 • 2D and 3D problems • Trigonometric ratios of angles between 90° and 360° • Using sine rule and cosine rule • Trigonometric ratios in surd form	Autumn 1Autumn 2Geometry: VolumeAlgebra: Quadratic equations• Volume of a pyramid • Cones• Solving quadratic equations by: • Factorisation • Quadratic Formula • Completing the square • Problems involving quadratic equations• Pythagoras theorem • Applying Pythagoras' theorem in real-life situations • Pythagoras' theorem in three dimensions• Solving quadratic equations by: • Factorisation • Quadratic Formula • Completing the square • Problems involving quadratic equations• Pythagoras' theorem in real-life situations • Pythagoras' theorem in three dimensionsGraphs and their equations • Drawing linear graphs • Finding an equation of a line • Quadratic graphs • Significant points of a quadratic graph• Solving problems with trigonometry• Significant points of a quadratic graphs • Significant points of a quadratic graphs• Solving problems of angles between 90° and 360° • Using sine rule and cosine rule • Trigonometric ratios in surd formStatistics: Data Handling • Averages	Autumn 1Autumn 2Spring 1Geometry: VolumeAlgebra: Quadratic equationsAlgebra: Algebra: ConesAlgebra: Algebra: Cones• Volume of a pyramid • Cones• Solving quadratic equations by: • Factorisation • Quadratic Formula • Completing the square • Problems involving quadratic equations• Rearranging formulae • Rearranging formulaePythagoras theorem • Pythagoras' theorem in real-life situations • Pythagoras' theorem in tree dimensions• Changing the subject of a formula • Completing the square • Problems involving quadratic equations• Changing the subject of a formula • Changing the subject of a formula • Completing the square • Problems involving quadratic equations• Changing the subject of a formula • Changing the subject of a formula • Simultaneous equations • Drawing linear graphs • Finding an equation of a line • Quadratic graphs • Significant points of 	Autumn 1Autumn 2Spring 1Spring 2Geometry: VolumeAlgebra: Quadratic equationsAlgebra: Quadratic equationsAlgebra: Algebraic methodsSecometry: Vectors• Volume of a pyramid • Cones• Solving quadratic equations by: • Factorisation • Quadratic Formula • Completing the square • Problems involving quadratic equationsAlgebra: Algebra: Algebraic methods• Properties of vectors • Vectors in geometry • Vectors in geometry • Vectors in geometry • Vectors in geometry • Changing the subject of a formula • Simultaneous equations• Properties of vectors • Vectors in geometry • Vectors in geometry • Vectors in geometry • Vectors in geometry • Changing the subject of a formula • Simultaneous equations• Completing the subject of a formula • Simultaneous equations• Completing the subject of a formula • Simultaneous equations• Changing the subject of a formula • Simultaneous equations• Rearanging formulae• Rearanging formulae• Vectors in geometry • Vectors in geometry • Changing the subject of a formula • Simultaneous equations• Imeer equations• Imeer equations• Imeer equations• Imeer equations• Transformation of the graph y = f(x)• Trigonometry 2 • Solving problems	Autumn 1Autumn 2Spring 1Spring 2Summer 1Geometry: VolumeAlgebra: Quadratic equationsAlgebra: Quadratic equationsAlgebra: Algebra: Algebra: Algebra: Algebra: Algebra: Algebra: ConesAlgebra: Algebra: Algebra: Algebra: Algebra: Algebra: Algebra: Algebra: Algebra: Algebra: Completing the square equationsSpring 2Summer 1• Volume of a pyranid • Coundatic Formula • Completing the square • Problems involving quadratic equationsAlgebra: Algebra: • Changing the subject of a formula • Changing the subject of a formula • Completing the square • Problems involving quadratic equationsGeometry: • Changing the subject of a formula • Singificant points of a quadratic graphs • Singificant points of a quadratic graphs • Singificant points of a quadratic graphs • Similar triangles • Areas and volumes of similar shapesMumber • Number • Diatistics • Diatistics courseworkSpring 2Summer 1Trigonometry 2 • Subjing onometry rigonometric ratios of similar shapesStatistics: • Drawing linear graphs • Significant points of a quadratic graphs • Significant shapesStatistics • Changing the • Dirawing linear graphs • Significant points of • Areas a

	Using the sine rule	<ul> <li>Frequency tables</li> </ul>						
	to find area of a	and diagrams						
	thange	<ul> <li>Grouped data</li> </ul>						
	<ul> <li>Properties of circles</li> <li>Circle theorems</li> <li>Cyclic quadrilaterals</li> <li>Tangents and chords</li> <li>Alternate segment theorem</li> </ul> <b>Number:</b> <ul> <li>Powers (indices)</li> <li>Standard form</li> <li>Rational numbers and reciprocals</li> <li>Surds</li> </ul> <b>Algebra:</b> Linear and Quadratic equations <ul> <li>Basic algebra</li> <li>Factorisation</li> <li>Solving Linear Equations</li> <li>Setting up equations</li> </ul>	<ul> <li>Data Distributions</li> <li>Cumulative frequency diagrams</li> <li>Box plots</li> <li>Histograms with bars of unequal width</li> <li>Statistics: Probability of events:</li> <li>Experimental probability</li> <li>Mutually exclusive and exhaustive events</li> <li>Addition rule for events</li> <li>Combined events</li> <li>Calculating Probabilities:</li> <li>Tree diagrams</li> <li>Independent events</li> <li>Conditional</li> </ul>						
	<ul> <li>Expanding brackets</li> </ul>	Conditional     probability						
	Quadratic     factorisation	ρισσασιικγ						
	Short Topic Tests	• Short Topic Tests	• Short Topic Tests	Short Topic Tests	Short Topic Tests	• End of Chapter tests		
Assessment	Mock Exam		• PPE exams		• Exam Booklets	• End of Term Test		
Cross Curricular	Science and Design	Science, Art and	Business studies	Design and				
Opportunities	and Technology	Media		Technology				
Social, Moral,	There is always a focus on group work to facilitate learning in maths.							
Spiritual, Cultural	Lessons are designed to give students the opportunity to express their ideas and communicate with others.							
Homework	Homework will be set twice a week. This may be related to work students have covered and also work they have yet to start in class.							