

Year 7

Year 7	Autumn (1)	Autumn (2)	Spring (1)	Spring (2)	Summer (1)	Summer (2)
Topic	<u>Algebraic Thinking</u> Sequences Algebraic Notation <u>Place Value and Proportion</u> Place Value and Ordering Integers and Decimals Fraction, Decimal and Percentage Equivalence	<u>Algebraic Thinking</u> Algebraic Notation Equality and Equivalence <u>Applications of Number</u> Addition and Subtraction <u>Place Value and Proportion</u> Fraction, Decimal and Percentage Equivalence <u>Directed Number</u> Directed Number	<u>Applications of Number</u> Addition and Subtraction Multiplication and Division <u>Directed Number</u> Directed Number	<u>Applications of Number</u> Multiplication and Division <u>Fractional Thinking</u> Addition and Subtraction of Fractions	<u>Applications of Number</u> Fractions and Percentages of Amounts <u>Lines and Angles</u> Constructing, Measuring and Using Geometric Notation <u>Reasoning with Number</u> Developing Number Sense Sets and Probability	<u>Lines and Angles</u> Constructing, Measuring and Using Geometric Notation Developing Geometric Reasoning <u>Reasoning with Number</u> Sets and Probability Prime Numbers and Proof
Assessment	<u>End of Topic Tests</u> Sequences Place Value and Ordering Integers and Decimals	<u>End of Topic Tests</u> Algebraic Notation Fraction, Decimal and Percentage Equivalence	<u>End of Topic Tests</u> Addition and Subtraction Operations and Equations with Directed Number	<u>Exam Week</u> <u>End of Topic Tests</u> Fraction Operations	<u>End of Topic Tests</u> Fractions and Percentages of Amounts Developing Number Sense	<u>End of Topic Tests</u> Constructing, Measuring and Using Geometric Notation Sets and Probability
Link with Year 7 skills and AO	AO1: Use and apply standard techniques AO2: Reason, interpret and communicate mathematically AO3: Solve problems within mathematics and in other contexts					

Year 8

Year 8	Autumn (1)	Autumn (2)	Spring (1)	Spring (2)	Summer (1)	Summer (2)
Topic	<u>Proportional Reasoning</u> Ratio & Scale Ratio notation, simplifying ratio Dividing in a given ratio Multiplying & Dividing Fractions Multiplying fractions & mixed numbers Dividing fractions & mixed numbers <u>Representations</u> Tables & Probability Sample space diagrams Venn diagrams & Two - way tables Product rule Representing Data Scatter graphs & correlation Lines of best fit Grouped & ungrouped frequency tables	<u>Proportional Reasoning</u> Multiplicative Change Direct proportion Convert between currencies Similar shapes & scale factors <u>Exam Week & Revision</u> <u>Representations</u> Working in the Cartesian Plane Coordinates Straight line graphs Non-linear graphs Midpoint of a line segment	<u>Algebraic Techniques</u> Sequences Generate sequences given a rule Generate sequences given an algebraic rule Find the nth term Brackets, equations & inequalities Simplifying algebraic terms Forming and solving equations Forming and solving inequalities <u>Developing Number</u> Fractions & Percentages Convert between fractions, decimals and percentages Percentages & fractions of amount Percentage increase & decrease Percentage change Reverse percentages	<u>Algebraic Techniques</u> Indices Add & subtract expressions with indices Index laws - multiplication & division Brackets, equations & inequalities Forming and solving inequalities <u>Developing Number</u> Number Sense Rounding Converting metric measures Standard Index Form Standard form for small & large numbers Calculating with standard form Negative and fractional indices	<u>Developing Geometry</u> Area of trapezia & circles Area of triangles, rectangles, parallelograms & trapezium Area of a circle Area and perimeter of compound shapes <u>Reasoning with Data</u> Measures of Location Mean, median, mode & range Finding mean from ungrouped table Estimating mean from grouped table Identify outliers Compare distributions using range and averages	<u>Developing Geometry</u> Angles in parallel line & polygons Angle rules & notation Alternate, corresponding & co-interior Interior & Exterior Angles Construction Line Symmetry & Reflection Recognise line symmetry Reflect shapes in a line <u>Reasoning with Data</u> The Data Handling Cycle Statistical enquiries & questionnaires Draw and interpret pictograms, bar charts, line graphs & pie charts Grouped quantitative data Compare data using graphs
	<u>End of Topic Tests</u> Ratio & Scale Ratio notation, simplifying ratio Dividing in a given ratio Multiplying & Dividing Fractions Multiplying and dividing fractions and mixed numbers Multiplying fractions & integers Dividing fractions & integers	<u>End of Topic Tests</u> Working in the Cartesian Plane Coordinates Straight line graphs Non-linear graphs Midpoint of a line segment <u>Exam Week</u>	<u>End of Topic Tests</u> Sequences Continuing sequences Nth term Linear & Non-linear sequences Fractions & Percentages Percentage multipliers Percentage of amounts Percentage increase & decrease Percentage Change Reverse Percentages	<u>End of Topic Tests</u> Number Sense Rounding Converting metric measures <u>End of Term Assessment</u> Covering all topics up to this point	<u>End of Topic Tests</u> Area of trapezia & circles Area of triangles, rectangles, parallelograms & trapezium Area of a circle Area and perimeter of compound shapes Measures of Location Mean, median, mode & range Finding mean from ungrouped table Estimating mean from grouped table Identify outliers Compare distributions using range and averages	<u>End of Topic Tests</u> The Data Handling Cycle Statistical enquiries & questionnaires Draw and interpret pictograms, bar charts, line graphs & pie charts Compare data using graphs <u>End of Year Assessment</u> Covering all topics up to this point
Link with National Curriculum	1. Become fluent in the fundamentals of mathematics. 2. Reason mathematically by following a line of enquiry. 3. Solving problems by applying mathematic skills.					

Year 9

Year 9	Autumn (1)	Autumn (2)	Spring (1)	Spring (2)	Summer (1)	Summer (2)
Topics	Straight Line Graphs <i>Using Table of Values</i> <i>Finding and generating equations of straight lines (including parallel and perpendicular)</i> <i>Interpreting real life graphs</i> Forming & Solving Equations <i>One and two step equations and inequalities</i> <i>Solving equations and inequalities with brackets and variables on both sides</i> <i>Rearranging formulae (one, two and multi-step)</i> Testing Conjectures <i>True or False, Always, Sometimes and Never True and Show That Problems</i> <i>Conjectures with number and algebra</i>	Three Dimensional Shapes <i>Prisms - drawing and interpreting nets and properties of shapes</i> <i>Plans and elevation</i> <i>Surface Area of 3D Shapes</i> <i>Volume of 3D Shapes - including cylinder and spheres</i> Constructions and Congruency <i>Drawing and measuring angles with scale drawings</i> <i>Locus of distance from a point, straight line and equidistant from two points</i> <i>Constructing perpendicular and angle bisectors</i> <i>Constructing triangles and exploring congruent triangles</i>	Numbers <i>Integers, real and rational numbers including surds</i> <i>Problem solving with integers and decimals</i> <i>Fractional arithmetic</i> Using Percentages <i>Percentage increase, decrease, percentage change and reverse percentages</i> <i>Solving percentage problems (calculator and non calculator methods)</i> Maths and Money <i>Solving problems with bills and bank statements</i> <i>Calculating with Simple and Compound Interest</i> <i>VAT, Wages and Taxes</i> <i>Exchange Rates and Unit Pricing</i>	Deduction <i>Angles in Parallel Lines and Chains of Angle Reasonings</i> <i>Angle Problems with Algebra</i> <i>Conjectures with angles and shapes</i> Rotation and Translation <i>Rotating Shapes on and around a point</i> <i>Translating Shapes by Vectors</i> <i>Finding the result of a series of transformations</i> Pythagoras' Theorem <i>Calculating the hypotenuse and missing sides of right angled triangles</i> <i>Proof of Pythagoras</i> <i>Using Pythagoras in 3D Shapes</i>	Revision and Exam Week <i>SDT with and without calculator</i> <i>Density, mass and volume</i> <i>Rates of Change (including graphs) and Compound Units</i> Enlargement and Similarity <i>Enlarging by positive, fractional and negative scale factors</i> <i>Finding missing sides and angles in similar shapes</i> Ratio and Proportion Problems <i>Working with Direct and Inverse Proportion and their graphs</i> <i>Problem solving with best buys, ratio and algebra</i>	Rates <i>SDT with and without calculator</i> <i>Density, mass and volume</i> <i>Rates of Change (including graphs) and Compound Units</i> Probability <i>Single event probability and relative frequency</i> <i>Expected outcomes and independent events</i> <i>Probability representation through diagrams (tree)</i> Algebraic Representation <i>Draw and Interpret Quadratic Graphs</i> <i>Interpret Reciprocal Graphs</i> <i>Investigate Graphs of Simultaneous Equations</i> <i>Representing Inequalities on Graphs</i>
Assessment	Topic Assessments Straight Line Graphs Assessment Forming and Solving Equations Assessment	Topic Assessment Testing Conjectures Assessment End of Term Test Covering all topics up to this point	Topic Assessments Numbers Assessment Using Percentages Assessment	Topic Assessments Maths and Money Assessment Rotation Assessment	Exam Week Assessment Covering all topics up to this point Topic Assessments Enlargement and Similarity Assessment	Topic Assessments Probability Assessment Rates Assessment
Link with A level skills and AO	1. AO1 Use and apply standard techniques 2. AO2 Reason, interpret and communicate mathematically 3. AO3 Solve problems within mathematics and in other contexts					
Enrichment	1. UK Mathematical Trust: Mathematical Challenges 2. Scholars Programme 3. After-school intervention					

Year 10

Year 9	Autumn (1)	Autumn (2)	Spring (1)	Spring (2)	Summer (1)	Summer (2)
Topics	Straight Line Graphs <i>Using Table of Values</i> <i>Finding and generating equations of straight lines (including parallel and perpendicular)</i> <i>Interpreting real life graphs</i> Forming & Solving Equations <i>One and two step equations and inequalities</i> <i>Solving equations and inequalities with brackets and variables on both sides</i> <i>Rearranging formulae (one, two and multi-step)</i> Testing Conjectures <i>True or False, Always, Sometimes and Never True and Show That Problems</i> <i>Conjectures with number and algebra</i>	Three Dimensional Shapes <i>Prisms - drawing and interpreting nets and properties of shapes</i> <i>Plans and elevation</i> <i>Surface Area of 3D Shapes</i> <i>Volume of 3D Shapes - including cylinder and spheres</i> Constructions and Congruency <i>Drawing and measuring angles with scale drawings</i> <i>Locus of distance from a point, straight line and equidistant from two points</i> <i>Constructing perpendicular and angle bisectors</i> <i>Constructing triangles and exploring congruent triangles</i>	Numbers <i>Integers, real and rational numbers including surds</i> <i>Problem solving with integers and decimals</i> <i>Fractional arithmetic</i> Using Percentages <i>Percentage increase, decrease, percentage change and reverse percentages</i> <i>Solving percentage problems (calculator and non calculator methods)</i> Maths and Money <i>Solving problems with bills and bank statements</i> <i>Calculating with Simple and Compound Interest</i> <i>VAT, Wages and Taxes</i> <i>Exchange Rates and Unit Pricing</i>	Deduction <i>Angles in Parallel Lines and Chains of Angle Reasonings</i> <i>Angle Problems with Algebra</i> <i>Conjectures with angles and shapes</i> Rotation and Translation <i>Rotating Shapes on and around a point</i> <i>Translating Shapes by Vectors</i> <i>Finding the result of a series of transformations</i> Pythagoras' Theorem <i>Calculating the hypotenuse and missing sides of right angled triangles</i> <i>Proof of Pythagoras</i> <i>Using Pythagoras in 3D Shapes</i>	Revision and Exam Week Enlargement and Similarity <i>Enlarging by positive, fractional and negative scale factors</i> <i>Finding missing sides and angles in similar shapes</i> Ratio and Proportion Problems <i>Working with Direct and Inverse Proportion and their graphs</i> <i>Problem solving with best buys, ratio and algebra</i>	Rates <i>SDT with and without calculator</i> <i>Density, mass and volume</i> <i>Rates of Change (including graphs) and Compound Units</i> Probability <i>Single event probability and relative frequency</i> <i>Expected outcomes and independent events</i> <i>Probability representation through diagrams (tree)</i> Algebraic Representation <i>Draw and Interpret Quadratic Graphs</i> <i>Interpret Reciprocal Graphs</i> <i>Investigate Graphs of Simultaneous Equations</i> <i>Representing Inequalities on Graphs</i>
Assessment	Topic Assessments Straight Line Graphs Assessment Forming and Solving Equations Assessment	Topic Assessment Testing Conjectures Assessment End of Term Test Covering all topics up to this point	Topic Assessments Numbers Assessment Using Percentages Assessment	Topic Assessments Maths and Money Assessment Rotation Assessment	Exam Week Assessment Covering all topics up to this point Topic Assessments Enlargement and Similarity Assessment	Topic Assessments Probability Assessment Rates Assessment
Link with A level skills and AO	1. AO1 Use and apply standard techniques 2. AO2 Reason, interpret and communicate mathematically 3. AO3 Solve problems within mathematics and in other contexts					
Enrichment	1. UK Mathematical Trust: Mathematical Challenges 2. Scholars Programme 3. After-school intervention					

Year 11

Year 11	Autumn (1)	Autumn (2)	Spring (1)	Spring (2)	Summer (1)	Summer (2)
Topic	Graphs Gradients & lines Non-linear graphs Algebra Expanding & factorising Changing the subject	Graphs Using graphs Algebra Functions Multiplicative reasoning Use scale factors (R) Ratio Proportion Pressure and density Geometric reasoning Angles Proving geometric facts Vectors Circle theorem	Algebraic reasoning Simplifying expressions Linear sequence Quadratic sequences Simultaneous equations Proof Inequalities Revision Number Algebra Ratio and proportion Rates of change Geometry and measures Probability Statistics	Revision Number Algebra Ratio and proportion Rates of change Geometry and measures Probability Statistics	Revision Number Algebra Ratio and proportion Rates of change Geometry and measures Probability Statistics	Revision Number Algebra Ratio and proportion Rates of change Geometry and measures Probability Statistics
Assessment	Topic assessment Gradients & lines Equation of a straight-line g Point(s) is on a line Linear simultaneous equations Equations of perpendicular lines	Autumn Mock Exam Number Algebra Ratio and proportion Rates of change Geometry and measures Probability Statistics	In class assesement Number Algebra Ratio and proportion Rates of change Geometry and measures Probability Statistics	Spring Mock Exam Number Algebra Ratio and proportion Rates of change Geometry and measures Probability Statistics	GCSE Exam Number Algebra Ratio and proportion Rates of change Geometry and measures Probability Statistics	GCSE Exam Number Algebra Ratio and proportion Rates of change Geometry and measures Probability Statistics
Link with GCSE skills and AO	1. AO1 Use and apply standard techniques 2. AO2 Reason, interpret and communicate mathematically 3. AO3 Solve problems within mathematics and in other contexts					
Enrichment	1. UK Mathematical Trust: Mathematical Challenges 2. Wednesday and Saturday enrichment programme 3. Reading list					