

Year 7					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Content/ Processes	Content/ Processes	Content/ Processes	Content/ Processes	Content/ Processes	Content/ Processes
Unit 2 Sequences	Unit 5 Place value	Unit 8 Area and Perimeter	Unit 11 Angles	Unit 13 Angle Facts	Unit 15 Averages
<b>Concepts</b>	<b>Concepts</b>	<b>Concepts</b>	<b>Concepts</b>	<b>Concepts</b>	<b>Concepts</b>
Numbers can be linked multiplicatively or additively Recognising patterns	Numbers can be represented in different ways in the base 10 system. Understand measurements are limited by accuracy	Area perimeter	Angle facts	Angle facts	Different averages tell us different properties of a set of data
<b>Essential understanding</b>	<b>Essential understanding</b>	<b>Essential understanding</b>	<b>Essential understanding</b>	<b>Essential understanding</b>	<b>Essential understanding</b>
Recognise the difference between linear and non-linear sequences Continue numerical linear sequences Find missing numbers within linear sequences Continue numerical non-linear sequences	Compare two numbers using =, ≠, <, >, ≤ and ≥ Understand place value for decimals Position decimals on a number line Compare and order any number up to one billion Round a number to 1 significant figure	Solve problems using the area of trapezia Find perimeter of recti-linear shapes Find area of recti-linear shapes	Understand and use letter and labelling conventions including those for geometric figures Draw and measure angles between 180 and 360 degrees Identify parallel and perpendicular lines. Recognise types of triangle Identify polygons up to decagons. Recognise types of quadrilaterals	Know and apply the sum of angles in a triangle Know and apply the sum of angles in a quadrilateral Solve angle problems using properties of triangles and quadrilaterals Solve complex angle problems	Solve problems using the mean Find the range of a set of numbers Find the median of a set of numbers Generate sample spaces for single events

Review/ Revisit	Review/ Revisit	Review/ Revisit	Review/ Revisit	Review/ Revisit	Review/ Revisit
Year 7 - units 3,7 Year 8 - unit 7 Year 10 - unit 3 Year 11 - unit 9	Year 8 unit 10 Year 9 - unit 2 Year 10 unit 12 Year 11 unit 6	Year 8 - unit 12 Year 9 - unit 4, 10 Year 10 - unit 7	Year 7 - unit 13 Year 8 -unit 11 Year 9 - unit 8, 12 Year 10 - unit 5, ,7 10, 14 Year 11 - unit 8	Year 8 -unit 11 Year 9 - unit 8, 12 Year 10 - unit 5 ,7 10, ,14 Year 11 - unit 8	Year 7 - unit 16 Year 8- units 5,14,15 Year 10 - unit 13 Year 11 - unit 11
Content/ Processes	Content/ Processes	Content/ Processes	Content/ Processes	Content/ Processes	Content/ Processes
Unit 3 Algebra	Unit 6 FDP equivalence	Unit 9 Fractions and Percentages	Unit 12 Adding and Subtracting Fractions	Unit 14 Probability	Unit 16 Representing Data
Concepts	Concepts	Concepts	Concepts	Concepts	Concepts
Numbers can be represented by letters and manipulated in the same way. Relationships can be shown in different formats	Numbers can be represented in a number of formats	Numbers can be represented in a number of formats	Numbers can be linked multiplicatively	We can assign a numeric value to the likelihood of something occurring	Numbers can be represented in a number of formats Diagrams show us different features of datasets
Essential understanding	Essential understanding	Essential understanding	Essential understanding	Essential understanding	Essential understanding
Substitute values into single operation expressions Find numerical inputs and outputs for a series of two function machines	Interchange between fractional and decimal number lines Understand the meaning of percentage using a hundred square Identify and use simple equivalent fractions Understand fractions as division Convert fluently between FDP	Use a given fraction to find the whole and/or other fractions Find a percentage of a given amount using a calculator	Add and subtract fractions with any denominator Add and subtract improper fractions and mixed numbers	Interpret and create Venn diagrams Understand and use the intersection of sets Understand and use the union of sets	Solve problems involving tables and timetables Solve problems with frequency trees Solve problems with bar charts and line charts Interpret simple pie charts using proportion Interpret pie charts using a protractor Draw pie charts

<b>Review/ Revisit</b>	<b>Review/ Revisit</b>	<b>Review/ Revisit</b>	<b>Review/ Revisit</b>	<b>Review/ Revisit</b>	<b>Review/ Revisit</b>
Yr 7 units 4,8,10,12  Yr 11 - unit 6	Year 7 - unit 9,14 Year 8 - unit 9, 12 Year 9 - unit 7, 13	Year 8 - unit 9 Year 9 - unit 7 Year 10 - unit 6, 13	Year 7 - unit 14 Year 8 - unit 3,12 Year 9- unit ,13 Year 10 - unit 11 Year 11 - units 2,6,11	Year 8 - unit 3,12 Year 9- unit ,13 Year 10 - unit 11 Year 11 - units 2,6,11	Year 8 - unit 15 Year 10 - unit 13 Year 11 - unit 11
<b>Content/ Processes</b>	<b>Content/ Processes</b>	<b>Content/ Processes</b>			
Unit 4 Equality	Unit 7 Types of number	Unit 10 Directed number			
<b>Concepts</b>	<b>Concepts</b>	<b>Concepts</b>			
Manipulate equivalent terms Numbers can be represented by letters and manipulated in the same way. Numbers can be linked multiplicatively or additively	Numbers can be linked multiplicatively or additively Any number can be expressed as a product of primes	Numbers can be negative or positive			
<b>Essential understanding</b>	<b>Essential understanding</b>	<b>Essential understanding</b>			
Understand the meaning of like and unlike terms Understand the meaning of equivalence Solve two-step linear equations involving the four operations using inverse operations	Recognise and identify prime numbers Recognise square and triangular numbers Find common factors of a set of numbers including the HCF Find common multiples of a set of numbers including the LCM	Add directed numbers Subtract directed numbers Multiplication of directed numbers Multiplication and division of directed numbers Use a calculator for directed number calculations Collecting like terms:			

	Write a number as a product of its prime factors				
<b>Review/ Revisit</b>	<b>Review/ Revisit</b>	<b>Review/ Revisit</b>			
Year 8 - unit 6 Year 9 - unit 2,14 Year 10 - unit 4,12,15 Year 11 - unit 1	Year 8 - unit 8 Year 9 - unit 3, 5 Year 10 - unit 1, 2	Year 8 - units 4,6,7 Year 9 - units 1,2,5,14 Year 10 - units 3,4,12,15 Year 11 - units 1-6 &9			
	<b>Assessment</b>		<b>Assessment</b>		<b>Assessment</b>
	Termly summative assessment covering learning from Autumn term. Question types range from retrieval of core knowledge to problem solving and application.		Termly summative assessment covering learning from Autumn term. Question types range from retrieval of core knowledge to problem solving and application.		Termly summative assessment covering learning from Autumn term. Question types range from retrieval of core knowledge to problem solving and application.

Year 8					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Content/ Processes	Content/ Processes	Content/ Processes	Content/ Processes	Content/ Processes	Content/ Processes
Unit 1 Ratio and Scale	Unit 4 Linear graphs	Unit 7 Sequences	Unit 10 Powers of 10	Unit 12 Area and Perimeter	Unit 14 Representing data
<b>Concepts</b>	<b>Concepts</b>	<b>Concepts</b>	<b>Concepts</b>	<b>Concepts</b>	<b>Concepts</b>
Numbers can be linked multiplicatively	Recognising patterns  Relationships can be shown in different formats	Numbers can be linked multiplicatively or additively  Recognising patterns  Numbers can be represented in a number of formats	Numbers can be represented in different ways in the base 10 system.	Area  perimeter	Numbers can be represented in a number of formats Diagrams show us different features of datasets
<b>Essential understanding</b>	<b>Essential understanding</b>	<b>Essential understanding</b>	<b>Essential understanding</b>	<b>Essential understanding</b>	<b>Essential understanding</b>
Understand and use ratio notation Divide a value into a given ratio Express ratios in their simplest integer form Understanding the meaning and representation of ratio Solve problems involving ratios of the form 1:n or n:1 Solve proportional	Work with coordinates in all four quadrants Identify and draw lines that are parallel to the axes Recognise and use the line $y=x$ Recognise and use lines of the form $y=kx$ Recognise and use lines of the form $y=x+a$ Explore graphs with negative gradients ( $y=-kx$ ,	Generate sequences given a rule in words Generate sequences given a simple algebraic rule Generate sequences given a complex algebraic rule Find the rule for the nth term of a linear sequence	Work with numbers greater than 1 in standard form  Investigate negative powers of 10 Work with numbers between 0 and 1 in standard form Compare and order numbers in standard form Convert metric units of weight and capacity	Calculate the perimeter and area of compound shapes Calculate the circumference of a circle Investigate the area of a circle Calculate the area of a circle and parts of a circle without a calculator Calculate the area of a circle and parts of a circle with a calculator	Set up a statistical enquiry Design and criticise questionnaires Draw and interpret multiple bar charts Draw and interpret pie charts Draw and interpret line graphs Choose the most appropriate diagram for a given set of data

<p>problems involving the ratio <math>m:n</math>                      Compare ratios and related fractions                      Express ratios in the form <math>1:n</math>                      Understand gradient of a line as a ratio</p>	<p><math>y=a-x</math>, <math>x+y=a</math>)                      Link graphs to linear sequences                      Plot graphs of the form <math>y=mx+c</math>                      Link <math>y=kx</math> to direct proportion problems                      Explore the gradient of the line <math>y=kx</math>                      Explore non-linear graphs                      Find the midpoint of a line segment</p>		<p>Mentally calculate with numbers in standard form                      Add and subtract numbers in standard form                      Multiply and divide numbers in standard form                      Use a calculator to work with numbers in standard form                      Convert metric units of area                      Convert metric units of volume</p>	<p>Calculate the perimeter and area of compound shapes</p>	<p>Represent and interpret grouped quantitative data                      Find and interpret the range                      Compare distributions using charts                      Identify misleading graphs</p>
<b>Assessment</b>	<b>Assessment</b>	<b>Assessment</b>	<b>Assessment</b>	<b>Assessment</b>	<b>Assessment</b>
<p>Checkpoint qs used formatively in SOL</p>	<p>Checkpoint qs used formatively in SOL</p>	<p>Termly summative assessment covering learning from Autumn term.                      Question types range from retrieval of core knowledge to problem solving and application.</p>	<p>Checkpoint qs used formatively in SOL</p>	<p>Termly summative assessment covering learning from Autumn term.                      Question types range from retrieval of core knowledge to problem solving and application.</p>	<p>Checkpoint qs used formatively in SOL</p>
<b>Review/ Revisit</b>	<b>Review/ Revisit</b>	<b>Review/ Revisit</b>	<b>Review/ Revisit</b>	<b>Review/ Revisit</b>	<b>Review/ Revisit</b>
<p>Year 8 - unit 2, 3,9</p>	<p>Year 8 - units 4,6,7                      Year 9 - units 1,2,5,14                      Year 10 - units 3,4,12,15                      Year 11 - units 1-6 &amp;9</p>	<p>Year 9 - units 1,2,5,14                      Year 10 - units 3,4,12,15                      Year 11 - units 1-6 &amp;9</p>	<p>Year 10 - unit 1</p>	<p>Year 9 - unit 4, 10                      Year 10 - unit 7</p>	<p>Year 8 - unit 15                      Year 10 - unit 13                      Year 11 - unit 11</p>
<b>Content/ Processes</b>	<b>Content/ Processes</b>	<b>Content/ Processes</b>		<b>Content/ Processes</b>	<b>Content/ Processes</b>
<p>Unit 2 Multiplicative</p>	<p>Unit 5 Representing Data</p>	<p>Unit 8 Indices</p>	<p>Unit 11 Angles</p>	<p>Unit 13 Reflections</p>	<p>Unit 15 Averages</p>

Reasoning					
<b>Concepts</b>	<b>Concepts</b>	<b>Concepts</b>	<b>Concepts</b>	<b>Concepts</b>	<b>Concepts</b>
Numbers can be linked multiplicatively	Numbers can be represented in a number of formats Diagrams show us different features of datasets	Numbers can be represented in a number of formats	Angle facts	Expressing movement	Different averages tell us different properties of a set of data
<b>Essential understanding</b>	<b>Essential understanding</b>	<b>Essential understanding</b>	<b>Essential understanding</b>	<b>Essential understanding</b>	<b>Essential understanding</b>
Solve problems involving direct proportion Explore conversion graphs Convert between currencies Draw and interpret scale diagrams Explore relationships between similar shapes Understand scale factors as multiplicative relationships Explore direct proportion graphs Interpret maps using scale factors and ratio	Draw and interpret scatter graphs Understand and describe linear correlation Draw and use line of best fit Identify non-linear relationships Identify different types of data Read and interpret ungrouped frequency tables Read and interpret grouped frequency tables Represent grouped discrete data Represent continuous data grouped into equal classes Represent data in two-way tables	Simplifying algebraic expressions by multiplying indices Simplifying algebraic expressions by dividing indices Adding and subtracting expressions with indices Using the addition law for indices Using the addition and subtraction laws for indices Exploring powers of powers Explore the zero index	Understand basic angle rules and notation Investigate angles between parallel lines and the transversal Identify and calculate with alternate and corresponding angles Identify and calculate with co-interior, alternate and corresponding angles Construct triangles and special quadrilaterals Solve complex problems with parallel line angles	Reflect a shape in a horizontal or vertical line 1 (shapes touching the line) Reflect a shape in a horizontal or vertical line 2 (shapes not touching the line) Reflect a shape in a diagonal line 1 (shapes touching the line) Reflect a shape in a diagonal line 2 (shapes not touching the line)	Understand and use the mean, median and mode Choose the most appropriate average Find the mean from an ungrouped frequency table Find the mean from a grouped frequency table Identify outliers Compare distributions using averages and the range Construct sample spaces for 1 or more events Use the product rule for finding the total number of possible outcomes

Assessment	Assessment	Assessment	Assessment	Assessment	Assessment
Termly summative assessment covering learning from Autumn term. Question types range from retrieval of core knowledge to problem solving and application.	Checkpoint qs used formatively in SOL	Checkpoint qs used formatively in SOL	Checkpoint qs used formatively in SOL	Checkpoint qs used formatively in SOL	Checkpoint qs used formatively in SOL
Review/ Revisit	Review/ Revisit	Review/ Revisit	Review/ Revisit	Review/ Revisit	Review/ Revisit
Year 8 - unit 3,9	Year 8- 14,15 Year 10 - unit 13 Year 11 - unit 11	Year 9 - unit 3, 5 Year 10 - unit 1, 2	Year 9 - unit 8, 12 Year 10 - unit 5,,7 10, ,14 Year 11 - unit 8	Year 9 - unit 9,10 Year 10 - unit 8 Year 11 - unit 10	Year 10 - unit 13 Year 11 - unit 11
Content/ Processes	Content/ Processes	Content/ Processes			
Unit 3 Fractions	Unit 6 Expanding and Factorising	Unit 9 Percentages			
Concepts	Concepts	Concepts			
Numbers can be linked multiplicatively	Manipulate equivalent terms Numbers can be represented by letters and manipulated in the same way. Numbers can be linked multiplicatively or additively	Numbers can be represented in a number of formats  Numbers can be linked multiplicatively			
Essential understanding	Essential understanding	Essential understanding			



<p>Represent multiplication of fractions                      Multiply a fraction by an integer                      Find the product of a pair of unit fractions                      Divide an integer by a fraction                      Divide a fraction by a unit fraction                      Find the product of a pair of any fractions                      Understand and use the reciprocal-related to MR                      Divide any pair of fractions                      Multiply and divide improper and mixed fractions                      Multiply and divide algebraic fractions</p>	<p>Form algebraic expressions                      Use directed number with algebra                      Multiply out a single bracket                      Factorise into a single bracket                      Expand multiple single brackets and simplify                      Expand a pair of binomials                      Solve equations, including with brackets                      Understand and solve simple inequalities                      Form and solve equations with brackets                      Form and solve inequalities                      Solve equations and inequalities with unknowns on both sides                      Form and solve equations and inequalities with unknowns on both sides                      Identify and use formulae, expressions, identities and equations</p>	<p>Convert between decimals and percentages more than 1/100%                      Express one number as a fraction or a percentage of another without a calculator                      Express one number as a fraction or a percentage of another using calculator methods                      Percentage decrease with a multiplier                      Calculate percentage increase and decrease using a multiplier                      Work with percentage change                      Choose appropriate methods to solve percentage problems                      Find the original amount given the percentage less than 100%                      Find the original amount given the percentage more than 100%                      Choose appropriate methods to solve complex percentage problems</p>	
<p><b>Assessment</b></p>	<p><b>Assessment</b></p>	<p><b>Assessment</b></p>	
<p>Checkpoint qs used formatively in SOL</p>	<p>Checkpoint qs used formatively in SOL</p>	<p>Checkpoint qs used formatively in SOL</p>	

<b>Review/ Revisit</b>	<b>Review/ Revisit</b>	<b>Review/ Revisit</b>			
Year 8 - unit 3,9 12 Year 9- unit ,13 Year 10 - unit 11 Year 11 - units 2,6,11	Year 8 - unit ,7 Year 9 - units 1,2,5,14 Year 10 - units 3,4,12,15 Year 11 - units 1-6 &9	Year 9 - unit 7 Year 10 - unit 6, 13			
<b>Assessment</b>		<b>Assessment</b>		<b>Assessment</b>	
Termly summative assessment covering learning from Autumn term. Question types range from retrieval of core knowledge to problem solving and application.		Termly summative assessment covering learning from Autumn term. Question types range from retrieval of core knowledge to problem solving and application.		Termly summative assessment covering learning from Autumn term. Question types range from retrieval of core knowledge to problem solving and application.	

Year 9					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2

Content/ Processes	Content/ Processes	Content/ Processes	Content/ Processes	Content/ Processes	Content/ Processes
Unit 1 Linear graphs	Unit 4 3D shapes	Unit 6: construction & congruency	Unit 9: Transformations	Unit 11: Proportion	Unit 13: Tree Diagrams
Concepts	Concepts	Concepts	Concepts	Concepts	Concepts
Recognising patterns Relationships can be shown in different formats	Area  Volume	Expressing movement	Expressing movement	Numbers can be linked multiplicatively	We can assign a numeric value to the likelihood of something occurring
Essential understanding	Essential understanding	Essential understanding	Essential understanding	Essential understanding	Essential understanding
Compare gradients & intercepts Understand and use $y=mx+c$ Write an equation in the form $y=mx+c$ Interpret gradient and intercepts of real-life graphs	plans and elevations Surface area of cubes and cuboids, triangular prisms Volume of the above and other 3-D shapes - prisms and cylinders	Locus of distance from a point Locus of distance from a straight line/shape Locus of points equidistant from two points Locus of distance from two lines construct a perpendicular bisector Construct a perpendicular from a point Construct a perpendicular to a point Construct an angle bisector	Rotate a shape about a point on a shape Rotate a shape about a point not on a shape Translate points and shapes by a given vector	Solve problems with inverse proportion Solve 'best-buy' problems	Use tree diagrams Use tree diagrams to solve 'without replacement' problems
Review/ Revisit	Review/ Revisit	Review/ Revisit	Review/ Revisit	Review/ Revisit	Review/ Revisit
Year 9 - units 2,5,14 Year 10 - units 3,4,12,15 Year 11 - units 1-6 &	Year 9 - unit 10 Year 10 - unit 7	Year 11 - unit 10	Year 9 - unit 10 Year 10 - unit 8 Year 11 - unit 10	Year 9- unit ,13 Year 10 - unit 11 Year 11 - units 2,6,11	Year 10 - unit 11 Year 11 - units 2,6,11

Content/ Processes	Content/ Processes	Content/ Processes	Content/ Processes	Content/ Processes	Content/ Processes
Unit 2 Equations and Inequalities	Unit 5: Types of number	Unit 7: Percentages	Unit 10: Similarity	Unit 12: Trigonometry	Unit 14: Simultaneous Equations
Concepts	Concepts	Concepts	Concepts	Concepts	Concepts
Manipulate equivalent terms Numbers can be represented by letters and manipulated in the same way. Numbers can be linked multiplicatively or additively	Numbers can be represented in a number of formats	Numbers can be represented in a number of formats	Numbers can be linked multiplicatively	Numbers can be linked multiplicatively  Unit circle	Manipulate equivalent terms Numbers can be represented by letters and manipulated in the same way. Numbers can be linked multiplicatively or additively
Essential understanding	Essential understanding	Essential understanding	Essential understanding	Essential understanding	Essential understanding
Solve equations with unknowns on both sides Solve inequalities with unknowns on both sides Substituting into formulae and equations Rearranging formulae	Understand and use surds	Solve 'reverse' percentage problems Recognise and solve percentage problems (non-calc) Solve problems with exchange rates Solve unit pricing problems	Enlarge a shape by a positive integer scale factor from a point Enlarge a shape by a positive fractional scale factor Enlarge a shape by a negative scale factor Work out missing sides and angles in a pair of given similar shapes Solve problems with similar triangles	Explore ratio in similar right-angled triangles - unit circle Use the tangent/cos/sine to find missing side lengths Use sine, cosine and tangent to find missing angles	Solve a pair of linear simultaneous equations by substituting a known variable Solve a pair of linear simultaneous equations by adding or subtracting equations Solve a pair of linear simultaneous equations by using graphs Solve a pair of linear simultaneous equations by adjusting both equations Form a pair of linear simultaneous equations

Mathematics Curriculum 2023/24

					from given information
Review/ Revisit	Review/ Revisit	Review/ Revisit	Review/ Revisit	Review/ Revisit	Review/ Revisit
Year 9 - units 5,14 Year 10 - units 3,4,12,15 Year 11 - units 1-6 &9	Year 9 - units 14 Year 10 - units 3,4,12,15 Year 11 - units 1-6 &9	Year 9- unit 11 ,13, 15 Year 10 - unit 11 Year 11 - units 2,6,11	Year 10 - unit 8 Year 11 - unit 10	Year 10 - unit 5,7 10, ,14 Year 11 - unit 8	Year 10 - unit 4,12,15 Year 11 - unit 1
<b>Content/ Processes</b>	<b>Content/ Processes</b>	<b>Content/ Processes</b>	<b>Content/ Processes</b>	<b>Content/ Processes</b>	<b>Content/ Processes</b>
Unit 3 Pythagoras		Unit 8: Angles			Unit 15: Compound measures
Concepts		Concepts			Concepts
Relationships found in right angled triangles		Angle sums			Numbers can be linked multiplicatively
Essential understanding		Essential understanding			Essential understanding
Determine whether a triangle is right angled  Calculate the hypotenuse or shorter side of a right-angled triangle		Understand and use the sum of exterior angles of any polygon Understand and use the sum of interior angles of any polygon Calculate missing interior angles in regular polygons			Understand proportional relationship between S/D/T,M/D/V and F/P/A Solve compound measures problems without a calculator use ratio tables Solve compound measures problems with a calculator use calc and rearrange formula Use distance/time graphs
Review/ Revisit		Review/ Revisit			Review/ Revisit
Year 9 - unit 5		Year 9 - unit, 12			Year 9- unit 15

Year 10 - unit 2		Year 10 - unit 5,7, 10,14 Year 11 - unit 8		Year 10 - unit 11 Year 11 - units 2,6,11
Assessment		Assessment		Assessment
Termly summative assessment covering learning from Autumn term. Question types range from retrieval of core knowledge to problem solving and application.		Termly summative assessment covering learning from Autumn term. Question types range from retrieval of core knowledge to problem solving and application.		Termly summative assessment covering learning from Autumn term. Question types range from retrieval of core knowledge to problem solving and application.

Year 10					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Content/ Processes	Content/ Processes	Content/ Processes	Content/ Processes	Content/ Processes	Content/ Processes
Unit 1: Types of number	Unit 5: trig ratios	Unit 7 circles	Unit 10 Bearings	Unit 11 Probability	Unit 14 review MR (or adv trig)
Concepts	Concepts	Concepts	Concepts	Concepts	Concepts
Numbers can be represented in a number of formats	Numbers can be linked multiplicatively  Unit circle	Angle facts Area Circle theorems	Angle facts	We can assign a numeric value to the likelihood of something occurring	Numbers can be linked multiplicatively

Essential understanding	Essential understanding	Essential understanding	Essential understanding	Essential understanding	Essential understanding
Understand and use the power zero, negative fractional indices USING PRIME FACTORS Find the HCF and LCM of a set of numbers Rational and irrational numbers convert recurring decimals Understand and use surds	Explore ratio in similar right-angled triangles - unit circle Use the tangent/cos/sine to find missing side lengths Use sine, cosine and tangent to find missing angles	Arcs and sectors Circle Theorems: Angles within a circle Circle Theorems: Angles and the tangent	Measure and read bearings Make scale drawings using bearings Calculate bearings using angles rules Solve bearings problems using Pythagoras and trigonometry	Use tree diagrams for independent events Use tree diagrams for dependent events Construct and interpret conditional probabilities (Tree diagrams/venn diagrams/two way tables)	when to use multiplicative reasoning Use the formula $\frac{1}{2}ab\sin C$ to find the area of a triangle Understand and use the sine and cosine to find missing angles and lengths
Review/ Revisit	Review/ Revisit	Review/ Revisit	Review/ Revisit	Review/ Revisit	Review/ Revisit
Year 10 - unit 4, 5	Year 10 - unit 5,7, 14 Year 11 - unit 8	Year 10 - unit ,7 10, 14 Year 11 - unit 8	Year 10 - unit 14 Year 11 - unit 8	Year 11 - units 11	Year 10 - unit 11 Year 11 - units 2,6,11
Content/ Processes	Content/ Processes	Content/ Processes		Content/ Processes	Content/ Processes
Unit 2: Limits of accuracy	Unit 6: Percentage Change	Unit 8 vectors		Unit 12 equations and inequalities	Unit 15 simultaneous equations
Concepts	Concepts	Concepts		Concepts	Concepts
Understand measurements are limited by accuracy	Numbers can be represented in a number of formats  Numbers can be linked multiplicatively	Expressing movement		Manipulate equivalent terms Numbers can be represented by letters and manipulated in the same way.	Manipulate equivalent terms Numbers can be represented by letters and manipulated in the same way.

				Numbers can be linked multiplicatively or additively	Numbers can be linked multiplicatively or additively
Essential understanding	Essential understanding	Essential understanding		Essential understanding	Essential understanding
Estimating answers to calculations Understand and use error interval notation Upper and lower bounds	Calculate simple and compound interest Repeated percentage change Solve problems involving growth and decay Solve problems involving percentages, ratios and fractions	Use and read vector notation Draw and understand vectors Use vectors to construct geometric arguments and proofs		Solve equations with algebraic fractions Form and solve more complex equations Represent solutions to inequalities using set notation Represent solutions to inequalities on a graph Form and solve inequalities with unknowns on both sides	Solve a pair of linear simultaneous equations algebraically or by using graphs Solve a pair of simultaneous equations (one linear, one quadratic) algebraically or using graphs
Review/ Revisit	Review/ Revisit	Review/ Revisit		Review/ Revisit	Review/ Revisit
Year 10 - unit 9	Year 10 - unit 13	Year 11 - unit 10		Year 10 unit,15 Year 11 - unit 1	Year 11 - unit 1
Content/ Processes		Content/ Processes		Content/ Processes	
Unit 3: Sequences		Unit 9 ratio		Unit 13 Representing Data	
Concepts		Concepts		Concepts	
Numbers can be linked multiplicatively or		Numbers can be linked multiplicatively		Numbers can be represented in a number	



additively			of formats
Recognising patterns			Diagrams show us different features of datasets
Numbers can be represented in a number of formats			
Essential understanding	Essential understanding	Essential understanding	Essential understanding
Find the rule for the nth term of a linear sequence Explore different types of sequences Describe and continue sequences involving surds Find the rule for the nth term of quadratic sequence	Solve 'best buy' problems Combine a set of ratios Link ratio and algebra Ratio in area and volume Use ratios and fractions to make comparisons		Construct statistical diagrams for continuous data
Review/ Revisit	Review/ Revisit		Review/ Revisit
Year 11 - unit 9	Year 10 - unit 11 Year 11 - units 2,6,11		Year 11 - unit 11
Content/ Processes			
Unit 4: Solving quadratics			
Concepts			
Manipulate equivalent terms Numbers can be			

<p>represented by letters and manipulated in the same way. Numbers can be linked multiplicatively or additively</p>					
<p>Essential understanding</p>					
<p>Expand single, double, triple brackets and simplify Solve quadratic equations by factorisation - link to roots Solve quadratic equations using the quadratic formula Solve complex quadratic expressions by factorisation Complete the square - link to minimum point Understand iterative processes</p>					
<p>Review/ Revisit</p>					
<p>Year 9 - unit 2,14 Year 10 - unit 4,12,15 Year 11 - unit 1</p>					
	Assessment		Assessment		Assessment
	Termly summative		Termly summative		Termly summative

	assessment covering learning from Autumn term. Question types range from retrieval of core knowledge to problem solving and application.		assessment covering learning from Autumn term. Question types range from retrieval of core knowledge to problem solving and application.		assessment covering learning from Autumn term. Question types range from retrieval of core knowledge to problem solving and application.
--	---	--	---	--	---

Year 11					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	
Content/ Processes	Content/ Processes	Content/ Processes	Content/ Processes	Content/ Processes	Content/ Processes
Unit 1: Solving quadratics	Unit 5: Changing the subject	Unit 7 proportion	Unit 10: translations	BESPOKE CURRICULUM BASED ON GAPS IN KNOWLEDGE FROM PINPOINT & PAST PAPER PRACTICE	
Concepts	Concepts	Concepts	Concepts		
Manipulate equivalent	Manipulate equivalent	Numbers can be linked	Expressing movement		

terms Numbers can be represented by letters and manipulated in the same way. Numbers can be linked multiplicatively or additively	terms Numbers can be represented by letters and manipulated in the same way. Numbers can be linked multiplicatively or additively	multiplicatively	
Essential understanding	Essential understanding	Essential understanding	Essential understanding
Expand up to three brackets Solve quadratic equations by factorisation Solve quadratic equations using the quadratic formula Factorise complex quadratic expressions Complete the square	Form and solve equations and inequalities in the context of shape Change the subject of a known formula Change the subject where the subject appears more than once Solve equations by iteration	Calculate with pressure and density Understand inverse proportion Construct complex direct proportion equations Construct inverse proportion equations	Identify transformations of shapes Perform and describe a series of transformations of shapes Identify invariant points and lines Understand and use trigonometric graphs Sketch and identify translations and reflections of the graph of a given function
Review/ Revisit	Review/ Revisit	Review/ Revisit	Review/ Revisit
Year 11 - units 2,3,4,5,6,9		n/a	n/a
Content/ Processes	Content/ Processes	Content/ Processes	Content/ Processes

Unit 2: Gradients & Lines	Unit 6: Functions	Unit 8 Angles	Unit 11: Data
Concepts	Concepts	Concepts	Concepts
Recognising patterns Relationships can be shown in different formats	Substitute values into single operation expressions Find numerical inputs and outputs for a series of two function machines	Angle facts	Diagrams show us different features of datasets
Essential understanding	Essential understanding	Essential understanding	Essential understanding
Find the equation of a straight line from a graph Equation of a straight-line graph given one point and gradient Equation of a straight-line graph given two points Solve linear simultaneous equations graphically Recognise when straight lines are perpendicular Find the equations of perpendicular lines	Use function notation Work with composite functions Work with inverse functions Solve quadratic inequalities	Exterior and interior angles of polygons	Sample spaces and probability Complete and use Venn diagrams Use data to compare distributions Interpreting scatter diagrams Use the product rule for counting
Assessment		Assessment	Assessment
Checkpoint qs used formatively in SOL		GCSE mock papers 1-3. QLA used for reteaching	Checkpoint qs used formatively in SOL

		and individual improvements for each pupil	
Content/ Processes		Content/ Processes	
Unit 3: Non-linear Graphs		Unit 9: sequences	
Concepts		Concepts	
By changing the format of an equation we can understand more about the nature of the equation		Numbers can be linked multiplicatively or additively Recognising patterns Numbers can be represented in a number of formats	
Essential understanding		Essential understanding	
Plot and read from cubic graphs Plot and read from reciprocal graphs Identify and interpret roots and intercepts of quadratics Understand and use exponential graphs Find and use the equation of a circle centre (0, 0) Find the equation of the tangent to any curve		Find the rule for the nth term of a linear sequence Solve linear simultaneous equations graphically Solve simultaneous equations with one quadratic graphically Find the rule for the nth term of a quadratic sequence Formal algebraic proof Inequalities in two variables	

Content/ Processes		
Unit 4: Using Graphs		
Concepts		
Recognising patterns		
Relationships can be shown in different formats		
Essential understanding		
Construct distance/time graphs Construct and interpret speed/time graphs Recognise and interpret graphs that illustrate direct and inverse proportion Find approximate solutions to equations using graphs Estimate the area under a curve Find rate of change using gradient of tangent to a curve		
	Assessment	Assessment
	GCSE mock papers 1-3. QLA used for reteaching and individual	GCSE mock papers 1-2. QLA used for reteaching and individual

	improvements for each pupil	improvements for each pupil Checkpoint qs used formatively in SOL	
--	-----------------------------	--	--