Mathematics - Pathway 1 (sets 1 and 2)

Key Stage 2 Curriculum includes

Number: negative numbers, rounding, fractions, percentages, multiples, factors and primes, basic ratio, conversions

Algebra: Use simple formula, generate a linear number sequence, simple equations

Shape: Area of triangles, rectangles and parallelograms, volume of cubes and cuboids, 2d and 3d shapes, name parts of circles, angles (triangle, on a straight line, around a

point, vertically opposite).

Data	ata: Averages from a list, bar charts, line graphs, pie charts, plotting coordinates				
	Year 7	Year 8	Year 9	Year 10	Year 11
A u t u m n	Ratio and Proportion Find equivalent ratios Divide amounts in a ratio Solve problems involving the unitary method Fractions, Decimals and Percentages Convert between fractions, decimals and percentages including improper fractions and percentages over 100% Directed Numbers Carry out all 4 operations with directed numbers. Use a calculator to do calculations involving negative numbers.	 Revise previous year Indices Multiply and divide integer powers of 10 Understand power 0 Prime factor decomposition LCM using PFD Word problems involving HCF and LCM Write numbers in standard form Convert from standard form to ordinary Angles and Constructions Revise previous year Bearings Pythagoras' Theorem Constructions: perpendicular bisector, angle bisector, perpendicular from a point to a line Construct Loci and definite regions 	 Revise previous year Calculating with standard form Order numbers in standard form Apply standard form in context Related calculations Product rule for counting Angles and Constructions Revise previous year Use Pythagoras' Theorem to find area Understand pythagorean triples Trigonometry: use sine, cosine and tangent functions to find missing side lengths and angles Solve problems involving pythagoras and trigonometry including those with bearings Know the exact trig values of θ = 0°, 30°, 45°, 60° and 90° 	The Number System Revise previous year Indices (negative) Surds simplifying arithmetic using in exact calculations Angles and Constructions Revise previous year Circle Theorems angle in a semicircle angle at the centre twice the angle at the circumference angles in same arc cyclic quadrilateral Pythagoras in 3D Trigonometry in 3D Loci - constructions Manipulation and Substitution Revise previous year Expand 3 brackets Factorise quadratics of the form ax²+bx+c Factorise difference of two squares Algebraic proof	Prepare for mock exam - revision of key areas which may include any of the previously covered work from Years 7-10 Would expect coverage of

Fractions Decimals and Percentages

- Order fractions decimals and percentages
- Problem solving with fractions decimals and percentages
- Add, subtract, multiply and divide fractions with mixed numbers

Angles and Constructions

- Draw and measure angles
- Complex problems with angle sums
- Form and solve equations with angles
- Parallel lines (alternate angles, allied, corresponding)
- Interior and exterior angles of polygons
- Properties of triangles and quadrilaterals
- Parts of a circle
- Plans and Elevations
- Constructing triangles

Manipulation and Substitution

- Substitution involving fractions and decimals
- Collect like terms
- Multiply out a single bracket
- Factorise expressions involving multiple letters and powers
 - Write algebraic expressions
 - Basic Proof

Manipulation and Substitution

- Revise previous year
- Simply an expression with multiple single brackets
- Factorise by identifying all common factors either numerical or algebraic
- Multiply out a pair of linear brackets
- Write algebraic expressions
- Proof by counterexample
- Write algebraic expressions involving powers
- Substitution involving small integer powers

Comparing and displaying data

- Revise previous year
- Scatter Graphs
- Correlation
- Line of best fit
- Estimate the mean of grouped data
- Median class of grouped data
- Modal class interval of grouped data

Manipulation and Substitution

- Revise previous year
- Simplify expressions with index notation
- Introduction to formal methods of proof including identify symbol
- Multiply out a pair of linear brackets to find areas algebraically
- Factorise quadratics where the coefficient of x is 1

Comparing and displaying data

- Revise previous year
- Represent grouped data using frequency diagrams
- Appreciate the difference between a bar chart and frequency diagram
- Interpret data set given a frequency diagram
- Tables and line graphs for time series data

Comparing and displaying data

- Revise previous year
- Cumulative frequency
- Drawing Box Plots from CF and raw data
- Calculate IQR
- Compare two sets of data from box plots

FDP, Ratio and Proportion

- Revise previous year
- Direct proportion
- Inverse proportion
- Exponential growth and decay
- Complex ratio problems and connections with fractions

Length, Area and Volume

- Revise previous year
- Volume of a pyramid
- Volume of a frustum
- Problems involving volume
- Problems involving area and algebra

Time to reflect on mock exams and continue with scheme

FDP, Ratio and Proportion

- Revise previous year
- Converting recurring decimals
- Know when fractions convert to terminating decimals
- Recognise proportional graphs
- Solve problems involving direct and inverse proportion

Length, Area and Volume

- Revise previous year
- Area of a segment

Equations and Inequalities

- Revise previous year
- Quadratic inequalities
- Iteration
- Equation of a circle
- Find equation of a tangent to a circle

Comparing and displaying data FDP, Ratio and Proportion FDP, Ratio and Proportion **Equations and Inequalities** Calculations Revise previous year Pie charts Revise previous year Revise previous year Revise previous year Multiply fractions Compare sets of data Reverse percentages Non-linear simultaneous Calculations with upper using average and range Cancel fractions including Compound percentage equations and lower bounds Average and range of cross cancelling change Solving equations with **Transformations** ungrouped data Simple and fractions (numerical Revise previous year Reciprocals Frequency diagrams and Divide fractions compound interest denominators) Vector geometry polygons - Discrete and Depreciation Solving quadratic Percentage increase and sum and difference equations of the form continuous data decrease Direct proportion parallel Percentage change **The Number System** Inverse proportion $ax^2+bx+c=0$ by collinear Use proportion as equality solve geometric S Decimals Length, Area and Volume factoring Order of operations of ratio Revise previous year formula problems in 2D **Metric Units** Application of ratio completing the square Area of sector **Sequences and Graphs** Revise previous year Factors and multiples Length, Area and Volume Arc length and perimeter Set up and solve LCM and HCF quadratics from a physical Revise previous year of sectors Sketch and recognise n Find radius of a circle Volume of cone or problem Squares, cubes and roots exponential and trigonometric graphs given area and pyramid **Probability** Volume of sphere Revise previous year Transformations of graphs circumference Solve problems involving Surface area of spheres, Conditional probability circles pyramids and cones from a Write answers in terms of Composite shapes two way table 0 constructed from cubes, Venn diagram Volume of prisms cuboid, cones, pyramids, tree diagram including a cylinder cylinders, spheres and Convert between units of hemispheres volume Surface area of prisms Length, Area and Volume **Equations and Inequalities** Time to reflect on second **Equations and Inequalities Calculations** Perimeters Revise previous year Revise previous year Revise previous year mock exam and continue with S Areas rectangles, Solve linear equations Solve quadratic equations **Exact answers** scheme by factorisation where the triangles, parallelogram with x on both sides Round answers to an р and trapeziums including those with coefficient of x is 1 appropriate degree of **Manipulation and Substitution** Compound areas brackets and where x is Solve simultaneous Revise previous year accuracy Area unit conversion equations graphically and **Functions** negative n Solve linear equations Volume- cuboid by elimination g inverse Rearrange formulae by **Transformations** 2 Parts of a circle with fractions composite

balancing

Probability

Estimate gradient of a

curve

Revise previous year

Circumference and area of

a circle including semi

Represent inequalities on

a number line

	circles and physical problems Equations Solve linear equations with x on one side including those with brackets and where x is negative Solve linear equations including those with x on both sides and negative constant terms	 List integer solutions of an inequality Solve inequalities including those in context Probability Revise previous year Relative frequency Combine probabilities Tree Diagrams AND rule when events are independent 	 Revise previous year Further sets and venn diagrams Understand and use subset and the complement More tree diagrams including non- standard OR rule when events are mutually exclusive 	 Enlargements by a negative scale factor Invariance Understand the effect of enlargements on area and volume Sequences and Graphs Revise previous year Finding the equation of perpendicular line Plot non-standard functions Graph inequalities Find nth term of a quadratic sequence Recognise and use a geometric progression 	 Interpret the gradient as a rate of change Find area under a quadratic Prepare for GCSE exams
S u m e r 1	 Probability Probability Scale Theoretical and experimental probabilities Sample space diagrams Sets and Venn diagrams Calculations Rounding to decimal places Estimating calculations Timetables, bills and bank statements Best value 	 Calculations Revise previous year Rounding to significant figures Estimating calculations Compound measures: Speed, density and pressure Transformations Revise previous year Enlargement (negative and fractional scale factors) Scale drawing 	Calculations Revise previous year Convert metric units of speed Calculate average speed Kinematics formulae Truncation Bounds of accuracy Error intervals Transformations Revise previous year Congruency and similarity Vectors	 The Number System Revise previous year Fractional indices Expanding brackets with surds Rationalising the denominator Use exact trig values in an expression Angles and Constructions Revise previous year Circle Theorems Tangent to a circle Alternate Segment Theorem Including proofs Non right angled trigonometry including the ambiguous case 	Prepare for GCSE exams

	Transformations	Sequences and Graphs	Sequences and Graphs	Manipulation and Substitution	
	 Reflection 	Revise previous year	Revise previous year	Revise previous year	
	Rotation	 Linear sequences in 	Parallel lines	Algebraic Fractions	
	Translation	context	Equation of a line from	Simplify	
	 Enlargement (positive 	 Quadratic sequences 	two points or point and a	Add/subtract	
	scale factors)	 Geometric progressions 	gradient	o multiply/divide	
S	 Combined 	 Triangular numbers 	Sketch cubic and	 Solve equations 	
u	Transformations	 Fibonacci type sequences 	reciprocal function	Rearranging Formulae	
l m	Sequences and Graphs	 Real life linear graphs 	Coordinates in 3	Algebraic proof	
m	 Generate sequence from a 	Distance time and velocity	dimensions	Comparing and displaying data	
e	position to term rule	time graphs	Midpoint of a line	Revise previous year	
r	 Identify term to term rule 	Interpret non linear real	segment given coordinates	Histograms	
2	for a sequence	life graphs	in 2D or 3D		
_	 Drawing straight line 	Recognise graphs of	Draw quadratic graphs		
	graphs from a table of	quadratics, cubics and	Solve quadratics		
	values	reciprocals	graphically		
	Parallel lines				
	Understand gradient and				
	y-intercept				
	 Draw lines in form ax+by=c 				

Mathematics - Pathway 2 (set 3)

Key Stage 2 Curriculum includes

Number: negative numbers, rounding, fractions, percentages, multiples, factors and primes, basic ratio, conversions

Algebra: Use simple formula, generate a linear number sequence, simple equations

Shape: Area of triangles, rectangles and parallelograms, volume of cubes and cuboids, 2d and 3d shapes, name parts of circles, angles (triangle, on a straight line, around a point, vertically opposite).

Pata: Averages from a list, har sharts, line graphs, nie sharts, plotting coordinates

		Constructing triangles		 Introduction to formal methods of proof including identify symbol Multiply out a pair of linear brackets to find areas algebraically Factorise quadratics where the coefficient of x is 1 	
	 Percentages Equivalent fractions simplify a fraction 	 Revise previous year Substitution involving fractions and decimals 	 Revise previous year Simply an expression with multiple single brackets 	 Revise previous year Represent grouped data using frequency diagrams 	FDP, Ratio and Proportion
	 Write simple fractions as decimals Order fractions with different denominator Add and subtract fractions with different 	 Collect like terms Multiply out a single bracket Factorise expressions involving multiple letters and powers 	 Factorise by identifying all common factors either numerical or algebraic Multiply out a pair of linear brackets Write algebraic 	 Appreciate the difference between a bar chart and frequency diagram Interpret data set given a frequency diagram Tables and line graphs for 	 Revise previous year Direct proportion Inverse proportion Exponential growth and decay Complex ratio problems
	denominators	Write algebraic	expressions	time series data	and connections with
A u	Angles and ConstructionsDraw and measure angles	expressions Basic Proof	Proof by counterexampleWrite algebraic	FDP, Ratio and ProportionRevise previous year	fractions Length, Area and Volume
t	 Angles in a triangle and 	Comparing and displaying	expressions involving	Reverse percentages	Revise previous year
u	quadrilateral	data	powers	Compound percentage	Volume of a pyramid
m	Nets3D shapes	Revise previous yearPie charts	Substitution involving	change	Volume of a frustumProblems involving volume
n 2	Constructing triangles	Compare sets of data	small integer powers Comparing and displaying data	 Simple and compound interest 	Problems involving volume Problems involving area
	Manipulating Algebra	using average and range	Revise previous year	 Depreciation 	and algebra
	 Write algebraic expressions 	 Average and range of ungrouped data 	Scatter GraphsCorrelation	Direct proportionInverse proportion	Equations and Inequalities ■ Revise previous year
	Substitution (positive	 Frequency diagrams and 	Line of best fit	Length, Area and Volume	Non-linear
	integers)	polygons - Discrete and	Estimate the mean of	Revise previous year	simultaneous
	Collect like termsMultiply out a single	continuous data	grouped dataMedian class of grouped	Area of sectorArc length and perimeter	equations • Solving equations with
	bracket		data	of sectors	fractions (numerical
	Factorise simple		Modal class interval of	Volume of cone or	denominators)
	expressions		grouped data	pyramidVolume of sphere	

				 Surface area of spheres, pyramids and cones Composite shapes constructed from cubes, cuboid, cones, pyramids, cylinders, spheres and hemispheres 	 Solving quadratic equations of the form ax²+bx+c=0 by factoring formula completing the square Set up and solve quadratics from a physical problem
S p r i n g 1	 Comparing and displaying data Line Graphs Bar charts including composite and dual Mean, median, mode and range for a small set of data The Number System Decimals Factors and multiples LCM and HCF Order of operations 	 FDP, Ratio and Proportion Revise previous year Equivalent fractions simplify a fraction Write simple fractions as decimals Order fractions with different denominator Add and subtract fractions with different denominators Convert between fractions, decimals and percentages including improper fractions and percentages over 100% Find equivalent ratios Divide amounts in a ratio Solve problems involving the unitary method Length, Area and Volume Revise previous year Perimeters Areas rectangles, triangles, parallelogram and trapeziums Compound areas 	 FDP, Ratio and Proportion Revise previous year Multiply fractions Cancel fractions including cross cancelling Reciprocals Divide fractions Percentage increase and decrease Percentage change Use proportion as equality of ratio Application of ratio Length, Area and Volume Revise previous year Find radius of a circle given area and circumference Solve problems involving circles Write answers in terms of pi Volume of prisms including a cylinder Convert between units of volume Surface area of prisms 	 Equations and Inequalities Revise previous year Solve quadratic equations by factorisation where the coefficient of x is 1 Solve simultaneous equations graphically and by elimination Rearrange formulae by balancing Probability Revise previous year Further sets and venn diagrams Understand and use subset and the complement More tree diagrams including non- standard OR rule when events are mutually exclusive 	Probability Revise previous year Conditional probability from a two way table Venn diagram tree diagram Revise previous year Exact answers Round answers to an appropriate degree of accuracy Transformations Revise previous year Enlargements by a negative scale factor Invariance Understand the effect of enlargements on area and volume

	 Area unit conversion Volume- cuboid Parts of a circle Circumference and area of a circle including semi circles and physical problems 			
Area and Perimeter Perimeter of compound shapes Compound areas Areas rectangles, triangles and parallelogram Units for length and area Equations Form equations for physical problems Solve linear equations including those with brackets and x on both sides Form formulae from word problems or physical contexts Rearrange a formula where the subject appears twice	 Revise previous year Solve linear equations with x on one side including those with brackets and where x is negative Solve linear equations including those with x on both sides and negative constant terms Probability Revise previous year Theoretical and experimental probabilities Sample space diagrams Sets and Venn diagrams 	 Equations and Inequalities Revise previous year Solve linear equations with x on both sides including those with brackets and where x is negative Solve linear equations with fractions Represent inequalities on a number line List integer solutions of an inequality Solve inequalities including those in context Probability Revise previous year Relative frequency Combine probabilities Tree Diagrams AND rule when events are independent 	Calculations Revise previous year Convert metric units of speed Calculate average speed Kinematics formulae Truncation Bounds of accuracy Error intervals Transformations Revise previous year Congruence and similarity Vectors Sequences and Graphs Revise previous year Parallel lines Equation of a line from two points or point and a gradient Sketch cubic and reciprocal function Coordinates in 3 dimensions Midpoint of a line segment given coordinates in 2D or 3D Draw quadratic graphs Solve quadratics graphically	Time to reflect on second mock exam and continue with scheme Sequences and Graphs Revise previous year Finding the equation of perpendicular line Plot non-standard functions Graph inequalities Find nth term of a quadratic sequence Recognise and use a geometric progression Prepare for GCSE exams

	Probability	Calculations	Calculations	The Number System	Prepare for GCSE exams
S u m e r 1	 Probability Scale Probability in words Theoretical probabilities Experimental probabilities Mutually exclusive outcomes Calculations Rounding to powers of 10 Formal methods of multiplication and division Multiply and divide a decimal by an integer Money problems 	 Revise previous year Rounding to decimal places Estimating calculations Timetables, bills and bank statements Best value Transformations Revise previous year Reflection Rotation Translation Enlargement (positive scale factors) Combined Transformations 	 Revise previous year Rounding to significant figures Estimating calculations Compound measures: Speed, density and pressure Transformations Revise previous year Enlargement (negative and fractional scale factors) Scale drawing	 Revise previous year Indices (negative) Surds simplifying arithmetic using in exact calculations Angles and Constructions Revise previous year Circle Theorems angle in a semicircle angle at the centre twice the angle at the circumference angles in same arc cyclic quadrilateral Pythagoras in 3D Trigonometry in 3D Loci - constructions 	Prepare for GCSE exams
S u m e r 2	Transformations Reflection Rotation Sequences and Graphs Know what a linear sequence is Generate sequence from a position to term rule Identify term to term rule for a sequence Understand a linear sequence as a shifted times table Determine whether a term will appear in a sequence Find rules for sequences and coordinate patterns	 Sequences and Graphs Revise previous year Generate sequence from a position to term rule Identify term to term rule for a sequence Drawing straight line graphs from a table of values Parallel lines Understand gradient and y-intercept Draw lines in form ax+by=c 	 Sequences and Graphs Revise previous year Linear sequences in context Quadratic sequences Geometric progressions Triangular numbers Fibonacci type sequences Real life linear graphs Distance time and velocity time graphs Interpret non linear real life graphs Recognise graphs of quadratics, cubics and reciprocals 	 Manipulation and Substitution Revise previous year Expand 3 brackets Factorise quadratics of the form ax²+bx+c Factorise difference of two squares Algebraic proof Comparing and displaying data Revise previous year Cumulative frequency Drawing Box Plots from CF and raw data Calculate IQR Compare two sets of data from box plots 	

and express these rules in	
words	
Plot and read coordinates	
Drawing straight line	
graphs from a table of	
values	
Draw horizontal and	
vertical lines (x=, y=)	

Mathematics - Pathway 3 (sets 4 and 5)

Key Stage 2 Curriculum includes

Number: negative numbers, rounding, fractions, percentages, multiples, factors and primes, basic ratio, conversions

Algebra: Use simple formula, generate a linear number sequence, simple equations

Shape: Area of triangles, rectangles and parallelograms, volume of cubes and cuboids, 2d and 3d shapes, name parts of circles, angles (triangle, on a straight line, around a point, vertically opposite).

Data	Data: Averages from a list, bar charts, line graphs, pie charts, plotting coordinates				
	Year 7	Year 8	Year 9	Year 10	Year 11
A u t u m n 1	Ratio and Proportion Use the language of Ratio Calculate using simple simple ratios Fractions, Decimals and Percentages Recognise and use visual representations of fractions and percentages Represent fractions and decimals on a number line Directed Numbers Understand what directed numbers are Solve problems involving directed numbers	 Revise previous year Decimals Factors and multiples LCM and HCF Order of operations Order positive and negative integers Add and subtract directed integers Calculate with directed integers in context Angles and Constructions Revise previous year Draw and measure angles Angles in a triangle and quadrilateral Nets 3D shapes Constructing triangles 	The Number System Revise previous year Decimals Order of operations Metric Units Factors and multiples LCM and HCF Squares, cubes and roots Carry out all 4 operations with directed numbers. Use a calculator to do calculations involving negative numbers. Angles and Constructions Revise previous year Draw and measure angles Complex problems with angle sums Form and solve equations with angles Parallel lines (alternate angles, allied, corresponding Interior and exterior angles of polygons Properties of triangles and quadrilaterals Parts of a circle Plans and Elevations	The Number System Revise previous year Indices Multiply and divide integer powers of 10 Understand power 0 Prime factor decomposition LCM using PFD Word problems involving HCF and LCM Write numbers in standard form Convert from standard form to ordinary Angles and Constructions Revise previous year Bearings Pythagoras' Theorem Constructions: perpendicular bisector, angle bisector, perpendicular from a point to a line Construct Loci and definite regions Manipulation and Substitution Revise previous year Simply an expression with multiple single brackets	Prepare for mock exam - revision of key areas which may include any of the previously covered work from Years 7-10 Would expect coverage of

			Constructing triangles	 Factorise by identifying all common factors either numerical or algebraic Multiply out a pair of linear brackets Write algebraic expressions Proof by counterexample Write algebraic expressions involving powers Substitution involving small integer powers 	
	Fractions, Decimals and Percentages	Manipulating Algebra ● Revise previous year	Manipulation and Substitution ● Revise previous year	Comparing and displaying dataRevise previous year	Time to reflect on mock exams and continue with scheme
	 Understand percentages 	Write algebraic	Substitution involving	Scatter Graphs	and continue with scheme
	Shading fractions	expressions	fractions and decimals	Correlation	FDP, Ratio and Proportion
	Adding fractions with	Substitution (positive	Collect like terms	Line of best fit	Revise previous year
	same denominator	integers)	Multiply out a single	Estimate the mean of	Reverse percentages
	 Calculate unit fraction 	Collect like terms	bracket	grouped data	Compound percentage
	Angles and Constructions	Multiply out a single	Factorise expressions	Median class of grouped	change
	 Revise angle facts 	bracket	involving multiple letters	data	Simple and
Α	 Name angles 	Factorise simple	and powers	 Modal class interval of 	compound interest
u	 Draw and measure angles 	expressions	Write algebraic	grouped data	 Depreciation
t	 Estimate angles 	Comparing and displaying data	expressions	FDP, Ratio and Proportion	Direct proportion
u	 Angles on a straight line 	Revise previous year	Basic Proof	Revise previous year	Inverse proportion
m	Nets	Line Graphs	Comparing and displaying data	 Multiply fractions 	Length, Area and Volume
n	 Draw a circle 	Bar charts including	Revise previous year	Cancel fractions including	Revise previous year
2	Manipulating Algebra	composite and dual	Pie charts	cross cancelling	Area of sector
	 Substitution (no 	 Mean, median, mode and 	Compare sets of data	Reciprocals	Arc length and perimeter
	negatives)	range for a small set of	using average and range	Divide fractions	of sectors
	 Write simple algebraic 	data	Average and range of	Percentage increase and	Volume of cone or
	expressions		ungrouped data	decrease	pyramid
	 Collect like terms 		Frequency diagrams and	Percentage change	Volume of sphere
			polygons - Discrete and	Use proportion as equality	Surface area of spheres,
			continuous data	of ratio	pyramids and cones
				Application of ratio Longth Area and Volume	Composite shapes
				Length, Area and Volume	constructed from cubes,

				 Revise previous year Find radius of a circle given area and circumference Solve problems involving circles Write answers in terms of pi Volume of prisms including a cylinder Convert between units of volume Surface area of prisms 	cuboid, cones, pyramids, cylinders, spheres and hemispheres Equations and Inequalities Revise previous year Solve quadratic equations by factorisation where the coefficient of x is 1 Solve simultaneous equations graphically and by elimination Rearrange formulae by balancing
	Comparing and displaying dataTally charts	FDP, ratio and proportionRevise previous year	FDP, Ratio and Proportion ■ Revise previous year	Equations and InequalitiesRevise previous year	Probability ■ Revise previous year
	Construct a frequency	Equivalent fractions	Equivalent fractions	Solve linear equations	Further sets and venn
	table and draw	simplify a fraction	simplify a fraction	with x on both sides	diagrams
	appropriate chart from this	 Write simple fractions as decimals 	Write simple fractions as decimals	including those with brackets and where x is	 Understand and use subset and the
	Bar charts	Order fractions with	Order fractions with	negative	complement
	Mean median mode and	different denominator	different denominator	Solve linear equations	More tree diagrams
	range of a small set of	Add and subtract fractions	Add and subtract fractions	with fractions	including non- standard
S	data	with different	with different	Represent inequalities on	OR rule when events are
р	Begin to interpret data in	denominators	denominators	a number line	mutually exclusive
r	context	Convert between simple	Convert between	List integer solutions of an	Calculations
i	The Number System	fractions, decimals and	fractions, decimals and	inequality	Revise previous year
n	• Timetables up to 12 x 12	percentages	percentages including	Solve inequalities	Convert metric units of
g	Order decimals	Find equivalent ratios	improper fractions and	including those in context	speed
1	 Factors and multiples 	Simplify ratios	percentages over 100%	Probability	Calculate average speed
	 Multiply by 10, 100 and 	Share an amount in a ratio	Find equivalent ratios	Revise previous year	Kinematics formulae
	1000	 Understand difference 	Divide amounts in a ratio	Relative frequency	Truncation
	 Solve problems involving 	between ratio (part to	Solve problems involving	 Combine probabilities 	Bounds of accuracy
	money, time and	part) and proportion (part	the unitary method	Tree Diagrams	Error intervals
	temperature	to whole)	Length, Area and Volume	AND rule when events are	Transformations
		Length and Area	Revise previous year	independent	Revise previous year
		Revise previous year	Perimeters		Congruence and similarity
					Vectors

		 Perimeter of compound shapes Compound areas Areas rectangles, triangles and parallelogram Units for length and area 	 Areas rectangles, triangles, parallelogram and trapeziums Compound areas Area unit conversion Volume- cuboid Parts of a circle Circumference and area of a circle including semi circles and physical problems 		
S p r i n g 2	 Area and Perimeter Perimeters including compound shapes Areas of rectangles and triangles Units for area and length Equations Number machines Use inverse to undo two step worded scenarios Solving 1 and two 2 step equations Writing algebraic expressions and equations for simple physical situations 	 Revise previous year Form equations for physical problems Solve linear equations including those with brackets and x on both sides Form formulae from word problems or physical contexts Rearrange a formula where the subject appears twice Probability Revise previous year Probability Scale Probability in words Theoretical probabilities Experimental probabilities Mutually exclusive outcomes 	 Revise previous year Solve linear equations with x on one side including those with brackets and where x is negative Solve linear equations including those with x on both sides and negative constant terms Probability Revise previous year Theoretical and experimental probabilities Sample space diagrams Sets and Venn diagrams 	 Revise previous year Rounding to significant figures Estimating calculations Compound measures: Speed, density and pressure Transformations Revise previous year Enlargement (negative and fractional scale factors) Scale drawing Sequences and Graphs Revise previous year Linear sequences in context Quadratic sequences Geometric progressions Triangular numbers Fibonacci type sequences Real life linear graphs Distance time and velocity time graphs Interpret non linear real life graphs 	Time to reflect on second mock exam and continue with scheme Sequences and Graphs Revise previous year Parallel lines Equation of a line from two points or point and a gradient Sketch cubic and reciprocal function Coordinates in 3 dimensions Midpoint of a line segment given coordinates in 2D or 3D Draw quadratic graphs Solve quadratics graphically

S u m e r 1	Probability Probability Scale Probability in words Numerical Probabilities Calculations Formal methods of addition and subtraction Add and subtract decimals Timetables up to 12 x 12 Round to powers of 10 Money problems	Calculations Revise previous year Rounding to powers of 10 Formal methods of multiplication and division Multiply and divide a decimal by an integer Money problems Transformations Revise previous year Reflection Rotation	Calculations Revise previous year Rounding to decimal places Estimating calculations Timetables, bills and bank statements Best value Transformations Revise previous year Reflection Rotation Translation Enlargement (positive scale factors) Combined Transformations	 Recognise graphs of quadratics, cubics and reciprocals The Number System Revise previous year Calculating with standard form Order numbers in standard form Apply standard form in context Related calculations including those involving decimals Product rule for counting Angles and Constructions Revise previous year Pythagoras' Theorem Understand pythagorean triples Trigonometry: to find missing side lengths and angles Solve problems involving pythagoras and trigonometry Know exact trig values of θ = 0°, 30°, 45°, 60° and 90° 	
S u m e r 2	 Transformations Reflect in the y axis and x axis Reflect in a given diagonal line Lines of symmetry Rotational symmetry Sequences and Graphs 	 Revise previous year Know what a linear sequence is Generate sequence from a position to term rule Identify term to term rule for a sequence 	 Revise previous year Generate sequence from a position to term rule Identify term to term rule for a sequence Drawing straight line graphs from a table of values Parallel lines 	 Manipulation and Substitution Revise previous year Simplify expressions with index notation Introduction to formal methods of proof including identify symbol Multiply out a pair of linear brackets to find areas algebraically 	Prepare for GCSE exams

 Continue a sequence or 	 Understand a linear 	 Understand gradient and 	Factorise quadratics where	
pattern and describe the	sequence as a shifted	y-intercept	the coefficient of x is 1	
rule	times table	• Draw lines in form ax+by=c	Comparing and displaying data	
 Determine whether a 	 Determine whether a 		 Revise previous year 	
term will appear in a	term will appear in a		 Represent grouped data 	
sequence	sequence		using frequency diagrams	
 Find rules for sequences 	 Find rules for sequences 		Appreciate the difference	
and coordinate patterns	and coordinate patterns		between a bar chart and	
and express these rules in	and express these rules in		frequency diagram	
words	words		 Interpret data set given a 	
 Plot and read coordinates 	 Plot and read coordinates 		frequency diagram	
	 Drawing straight line 		 Tables and line graphs for 	
	graphs from a table of		time series data	
	values			
	Draw horizontal and			
	pattern and describe the rule Determine whether a term will appear in a sequence Find rules for sequences and coordinate patterns and express these rules in words	pattern and describe the rule Determine whether a term will appear in a sequence Find rules for sequences and coordinate patterns and express these rules in words Plot and read coordinates sequence as a shifted times table Determine whether a term will appear in a sequence Find rules for sequences and coordinate patterns and express these rules in words Plot and read coordinates Plot and read coordinates Drawing straight line graphs from a table of	pattern and describe the rule Determine whether a term will appear in a sequence Find rules for sequences and coordinate patterns and express these rules in words Plot and read coordinates sequence as a shifted times table Determine whether a term will appear in a sequence Find rules for sequences and coordinate patterns and express these rules in words Plot and read coordinates Drawing straight line graphs from a table of values Draw horizontal and	pattern and describe the rule Determine whether a term will appear in a sequence as a shifted times table Determine whether a term will appear in a sequence Find rules for sequences and coordinate patterns and express these rules in words Plot and read coordinates Plot and read coordinates sequence as a shifted times table Determine whether a term will appear in a sequence Find rules for sequences and coordinate patterns and express these rules in words Plot and read coordinates Draw lines in form ax+by=c Draw lines in form ax+by=c Tomparing and displaying data Revise previous year Represent grouped data using frequency diagrams Appreciate the difference between a bar chart and frequency diagram Interpret data set given a frequency diagram Tables and line graphs for time series data