

Subject Area:**Mathematics**

Year	Term 1A Knowledge, skills and key concepts	Term 1B Knowledge, skills and key concepts	Terms 2A Knowledge, skills and key concepts	Term 2B Knowledge, skills and key concepts	Term 3A Knowledge, skills and key concepts	Term 3B Knowledge, skills and key concepts
7	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Use number lines Integer place value Decimal place value Order negative numbers Round integers Round decimals Add integers Add decimals Subtract integers Subtract decimals Multiply and divide by 10, 100, and 1000 Multiply using place value Use written method to multiply integers Use written method to multiply decimals Divide numbers into equal groups Use written method to divide integers Divide with remainders Use written method to divide by integer to get a decimal answer Use written method to divide by decimals Add and subtract with negative numbers Multiply and divide with negative numbers Calculate roots and powers Use correct order of operations Use the commutative laws Use the associative laws 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Use algebraic notation and terminology Simplify expressions containing a single variable Simplify expressions containing multiple variables Simplify expressions containing non-linear terms Substituting into expressions with one operation Substituting into expressions with multiple operations Substituting into algebraic formulae Substituting into real-life formulae Solving equations with one step Solving equations of the form $ax+b=c$ $ax+b=c$ Solving equations of the form $x/a+b=c$ $x/a+b=c$ Converting units of time Using clocks Calculating with time Using timetables Using calendars Estimating and measuring length, mass and capacity Converting units of length, mass and capacity Using appropriate units 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Line properties Shape properties Symmetry Finding perimeters using grids Finding the perimeter of rectangles and simple shapes Finding the perimeter of compound shapes Finding areas using grids Finding the area of rectangles Finding the area of compound shapes Finding the area of triangles Finding the area of compound shapes containing triangles Reading and plotting coordinates Solving shape problems involving coordinates 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Finding the lowest common multiple Finding factors and using divisibility tests Finding the highest common factor Finding prime numbers Prime factor decomposition Finding fractions of shapes Constructing fractions Finding equivalent fractions Simplifying fractions Ordering fractions Converting between mixed numbers and improper fractions Adding and subtracting fractions Adding and subtracting mixed numbers Using the distributive law Expanding single brackets Expanding single brackets and simplifying expressions Factorising into one bracket 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Types of angles Estimating angles Measuring angles Drawing angles Angles on a line and about a point Vertically opposite angles Angles in triangles Calculating the range Calculating the median Finding the mode Calculating the mean Interpreting frequency tables and two-way tables Drawing and interpreting tally charts Drawing and interpreting pictograms Drawing bar charts Interpreting bar charts Collecting and recording data using tables Finding averages from frequency tables Choosing suitable averages and solving problems Solving proportion problems 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Reciprocals Multiplying fractions Dividing fractions Multiplying with mixed numbers Dividing with mixed numbers Fractions of amounts without a calculator Fractions of amounts with a calculator Converting between fractions and decimals Converting between fractions, decimals and percentages Ordering fractions, decimals and percentages Writing numbers as percentages of other numbers Using probability phrases Writing probabilities as fractions Writing probabilities as fractions, decimals and percentages Probabilities of mutually exclusive events Sample space diagrams

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8	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Finding percentages of amounts without a calculator Finding percentages of amounts with a calculator Percentage change without a calculator Percentage change with a calculator Value for money Index rules with positive indices Index rules with negative indices Simplifying expressions using index laws Simplifying algebraic fractions by cancelling common factors Solving equations of the form $(x+a)/b=c(x+a)/b=c$ Solving linear equations involving brackets Solving equations with the unknown in the denominator Solving equations with the unknown on both sides Constructing and solving equations Solving equations of the form $(x+a)/b=c(x+a)/b=c$ Solving linear equations involving brackets Solving equations with the unknown in the denominator Solving equations with the unknown on both sides Constructing and solving equations 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Term-to-term rules for numerical sequences Term-to-term rules for sequences of patterns Substituting into position-to-term rules Position-to-term rules for arithmetic sequences Position-to-term rules for sequences of patterns Writing and simplifying ratios Writing ratios in the form $1:n1:n$ Converting between ratios, fractions and percentages Using equivalent ratios to find unknown amounts Sharing amounts in a given ratio Drawing and interpreting scale diagrams 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Rounding integers using significant figures Rounding decimals using significant figures Estimating calculations Calculating midpoints Mixed problems: Coordinates and midpoints Finding the area of parallelograms Finding the area of trapeziums Converting units of area Identifying parts of circles Finding the circumference of circles Finding the area of circles Using standard form with positive indices Using standard form with negative indices 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Venn diagrams Probabilities from Venn diagrams Finding the HCF and LCM using prime factor decomposition Properties of 3D shapes Nets of 3D shapes Finding the surface area from a net Finding the surface area of cubes and cuboids Finding the surface area of prisms Finding the volume of cubes and cuboids Finding the volume of prisms Converting units of volume 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Plotting horizontal, vertical and diagonal lines Plotting straight line graphs Finding equations of straight line graphs Translation Reflection Angles in quadrilaterals Combining angle facts Angles on parallel lines Using quadrilateral properties to find angles Angles in polygons Drawing pie charts Interpreting pie charts Drawing line graphs Interpreting line graphs Drawing stem-and-leaf diagrams Interpreting stem-and-leaf diagrams Finding averages from diagrams 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Reading and drawing linear inequalities on number lines Solving single inequalities Expanding double brackets Calculating with fractions Calculating with mixed numbers Simplifying algebraic fractions by factorising Adding and subtracting algebraic fractions Using recurring decimal notation Converting fractions to recurring decimals

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9	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> • Converting between fractions, decimals and percentages • Ordering fractions, decimals and percentages • Finding fractions of amounts without a calculator • Finding fractions of amounts with a calculator • Finding percentages of amounts without a calculator • Finding percentages of amounts with a calculator • Percentage change without a calculator • Percentage change with a calculator • Finding original values in percentage calculations • Finding the percentage an amount has been changed by • Simple interest calculations • Expected results from repeated experiment • Calculating experimental probabilities • Frequency trees • Multiplying and dividing numbers in standard form • Adding and subtracting numbers in standard form • Standard form with a calculator • Solving inequalities with the unknown on both sides • Solving double inequalities • Constructing and solving inequalities 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> • Factorising quadratic equations of the form x^2+bx+c • Factorising the difference of two squares • Factorising to solve quadratic equations of the form $x^2+bx+c=0$ • Constructing bisectors of angles • Constructing perpendicular bisectors and lines • Finding the arc length of sectors • Finding the area of sectors • Finding the surface area of cylinders • Finding the volume of cylinders 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> • Finding error intervals • Truncating decimals • Finding error intervals for truncated numbers • Plans and elevations • Using Pythagoras' theorem in 2D • Applying Pythagoras' theorem in 2D • Writing and simplifying ratios • Sharing amounts in a given ratio • Solving direct proportion word problems • Solving inverse proportion word problems • Currency conversion 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> • Plotting straight line graphs • Finding equations of straight-line graphs • Interpreting equations of straight-line graphs • Calculating with speed • Calculating with rates • Plotting distance-time graphs • Interpreting distance-time graphs • Calculating speed from distance-time graphs • Plotting distance-time graphs using speeds 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> • Plotting graphs of quadratic functions • Interpreting graphs of quadratic functions • Solving quadratic equations graphically • Combining angle facts • Angles on parallel lines • Using quadrilateral properties to find angles • Angles in polygons • Measuring and drawing bearings • Calculating bearings • Translation • Reflection • Rotation • Enlargement by a positive scale facto • Mixed transformations • Understanding similarity • Finding unknown sides in similar shapes • Understanding congruence • Congruent triangle • Constructing triangles 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> • Types of data • Presenting data and making conclusions • Comparing populations using diagrams • Choosing suitable averages and solving problems • Plotting scatter graph • Interpreting scatter graphs • Using lines of best fi • Interpreting frequency tables with grouped data • Finding averages from grouped data • Drawing and interpreting frequency polygons • Understanding column vectors • Adding and subtracting column vectors • Multiplying column vectors by a scalar • Identifying parallel vectors

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10	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Compound interest calculations Growth and decay Finding the surface area of pyramids Finding the surface area of cones Finding the surface area of spheres Finding the surface area of frustums Finding the surface area of composite shapes Finding the volume of pyramids Finding the volume of cones Finding the volume of spheres Finding the volume of frustums Solving simultaneous equations using elimination Solving simultaneous equations using substitution Solving simultaneous equations graphically Constructing and solving simultaneous equations. 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Changing the subjects of formulae with two or more steps Changing the subject when the subject appears more than once Understanding sin, cos and tan Finding unknown sides in right-angled triangles Finding unknown angles in right-angled triangles Using the exact values of trigonometric ratios Angles of elevation and depression Calculating with trigonometry and bearings Constructing loci 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Finding the equation of a straight line from its gradient and a point Finding the equation of a straight line from two points on the line Equations of parallel lines Equations of parallel and perpendicular lines Plotting linear real-life graphs Using and interpreting linear real-life graphs Finding equations of linear real-life graphs Sketch graphs of water flows Venn diagrams with set notation Using set notation Tree diagrams for independent events Tree diagrams for dependent events 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Calculating with density Calculating with pressure Combining ratios Calculating with ratios and algebra Changing ratios Plotting velocity-time graphs Calculating acceleration from velocity-time graphs Plotting velocity-time graphs Calculating acceleration from velocity-time graphs Graphs of cubic functions Graphs of reciprocal functions Graphs of exponential functions 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Position-to-term rules for arithmetic sequences Position-to-term rules for sequences of patterns Position-to-term rules for geometric sequences Sampling and bias Capture-recapture Interpreting direct proportion equations Interpreting inverse proportion equations Graphs of direct and inverse proportion Constructing direct proportion equations Constructing inverse proportion equation Enlargement by a positive or negative scale factor Combining transformations Finding error intervals Finding error intervals for truncated numbers Finding bounds for calculations Index rules with positive indices Index rules with negative indices Simplifying expressions using index laws Estimating roots and powers Indices of the form $1/a$ $1/a$ Indices of the form a/b a/b 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Converting fractions to recurring decimals Converting recurring decimals to fractions Expanding double brackets Factorising quadratic expressions of the form x^2+bx+c x^2+bx+c Factorising the difference of two squares Factorising to solve quadratic equations of the form $x^2+bx+c=0$ $x^2+bx+c=0$ Interpreting frequency tables with grouped data Finding averages from grouped data Drawing stem-and-leaf diagrams Interpreting stem-and-leaf diagram Drawing line graphs Interpreting line graphs Drawing and interpreting frequency polygons Drawing cumulative frequency graph Interpreting cumulative frequency graphs Drawing box plots Interpreting box plots Comparing populations using box plots and cumulative frequency graphs

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11 F	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Finding the lowest common multiple Finding the highest common factor Prime factor decomposition Finding the HCF and LCM using prime factor decomposition Ordering fractions and mixed numbers Adding and subtracting mixed numbers Multiplying with mixed numbers Dividing with mixed numbers Simplifying expressions using index laws Simplifying algebraic fractions by cancelling common factors Solving equations with two or more steps Solving equations with the unknown on both sides Solving equations with the unknown in the denominator Constructing and solving equations Factorising to solve quadratic equations of the form $x^2+bx+c=0$ Solving quadratic equations graphically Solving simultaneous equations using elimination Solving simultaneous equations using substitution Solving simultaneous equations graphically 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Using Pythagoras' theorem in 2D Applying Pythagoras' theorem in 2D Finding unknown sides in right-angled triangles Finding unknown angles in right-angled triangles Using the exact values of trigonometric ratios Angles of elevation and depression Calculating bearings Calculating with trigonometry and bearings Finding the surface area of cones and spheres Finding the surface area of frustums Finding the surface area of composite shapes Finding the volume of cones and spheres Finding the volume of frustums Finding the volume of composite shapes Drawing pie charts Interpreting pie charts Plotting scatter graphs Interpreting scatter graphs Using lines of best fit 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Probabilities of mutually exclusive events Sample space diagrams Expected results from repeated experiments Venn diagrams with set notation Using set notation Tree diagrams for independent events Tree diagrams for dependent events Experimental probabilities Solving inequalities with the unknown on both sides Solving double inequalities Constructing and solving inequalities Adding and subtracting column vectors Multiplying column vectors by a scalar Identifying parallel vectors Solving geometric problems using vectors Percentage change with a calculator Finding original values in percentage calculations Finding the percentage an amount has been changed by Compound interest calculations Growth and decay 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Solving direct proportion word problems Solving inverse proportion word problems Currency conversion Multiplying and dividing numbers in standard form Adding and subtracting numbers in standard form Standard form with a calculator Position-to-term rules for arithmetic sequences Position-to-term rules for sequences of patterns Position-to-term rules for geometric sequences Special sequences Plotting straight line graphs Finding equations of straight line graphs Interpreting equations of straight line graphs Equations of parallel lines Finding the equation of a straight line from its gradient and a point Finding the equation of a straight line from two points on the line 		

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	<ul style="list-style-type: none"> Constructing and solving simultaneous equations Combining angle facts Angles on parallel lines Using quadrilateral properties to find angles Angles in polygons 		<ul style="list-style-type: none"> Calculating with speed Calculating with rates Calculating with density Calculating with pressure Combining ratios Calculating with ratios and algebra Changing ratios 			
11 H	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Multiplying and dividing surds Simplifying surds Adding and subtracting surds Expanding brackets with surds Rationalising denominators containing a single term Rationalising denominators containing two terms Simplifying algebraic fractions by factorising into one bracket Simplifying algebraic fractions by factorising into two brackets Adding and subtracting algebraic fractions Multiplying algebraic fractions Dividing algebraic fractions Factorising to solve quadratic equations of the form $ax^2+bx+c=0$ Solving quadratic equations by completing the square Solving quadratic equations using the quadratic formula 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> The sine rule The cosine rule The area rule Using Pythagoras' theorem in 3D Trigonometry in 3D shapes Angles subtended at the centre or circumference of a circle Angles in segments and cyclic quadrilaterals Circle theorems for chords and tangents Alternate segment theorem Drawing histograms with equal class widths Drawing histograms with unequal class widths Interpreting histograms Calculating averages from histograms 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Conditional probabilities from tables Conditional probabilities from Venn diagrams Using the conditional probability formula Conditional probabilities from tree diagrams Using the product rule for counting Graphs of linear inequalities Solving quadratic inequalities Substituting into functions Substituting into composite functions Finding composite functions Finding inverse functions Translating graphs Reflecting graphs Transforming graphs Using recurrence relations Substituting into iterative formulae 	<p>At the end of this scheme of learning, students will know / understand / be able to:</p> <ul style="list-style-type: none"> Writing algebraic proofs Finding the perimeter and area of similar shapes Finding the surface area and volume of similar shapes Solving geometric problems using vectors Geometric proofs with vectors Geometric proofs with angle facts Geometric proofs with congruence and similarity Proving the circle theorems Estimating gradients of non-linear graphs using tangents Calculating distances from velocity-time graphs Estimating areas under non-linear graphs Equations of circles and tangents 		

End Points Document 2025-2026

Year	Term 1A Knowledge, skills and key concepts	Term 1B Knowledge, skills and key concepts	Terms 2A Knowledge, skills and key concepts	Term 2B Knowledge, skills and key concepts	Term 3A Knowledge, skills and key concepts	Term 3B Knowledge, skills and key concepts
	<ul style="list-style-type: none"> • Constructing and solving quadratic equations • Solving quadratic equations graphically • Solving simultaneous equations involving quadratics • Solving simultaneous equations involving quadratics graphically • Using the exact values of trigonometric ratios - Higher • Using trigonometric graphs 		<ul style="list-style-type: none"> • Finding approximate solutions to equations using iteration 			