

Recovery Curriculum Overview for Year 7

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>Curriculum Content:</p> <p>Priority Essential knowledge and skills that will be taught.</p>	<p>Unit 1: Working with Integers (BODMAS)</p> <ul style="list-style-type: none"> Becoming fluid with the four basic operations (+, -, ÷, x) and using consistent methods. Understand the order in which a sum should be attempted and be able to use brackets and indices within calculations. <p>Functional Project</p>	<p>Unit 2: Basic Algebra and Coordinates</p> <ul style="list-style-type: none"> Be able to collect like terms and understand how terms are written in algebra. Be able to expand brackets and substitute into expressions. Confidently plot coordinates to calculate the midpoint of line segments. <p>Unit 3: Ratio and Proportion</p> <ul style="list-style-type: none"> Simplify ratios and find equivalent ratios. Divide amounts into ratios. Be able to solve proportional problems with ratios. <p>Functional Project</p>	<p>Unit 4: Rounding and Multiplying by Powers of 10</p> <ul style="list-style-type: none"> To be able to round to whole numbers, nearest 10, 100, 1000, 1 decimal place and significant figures. Be confident with dealing with multiplication and division with powers of 10. <p>Unit 5: Fractions, Decimals and Percentages</p> <ul style="list-style-type: none"> Find fractions and percentages of amounts. Convert between fractions, decimals and percentages and illustrate these on diagrams. <p>Functional Project</p>	<p>Unit 6: Equations and Formulae</p> <ul style="list-style-type: none"> Understand language used in algebra questions. Be able to solve simple equations and rearrange simple formulae. Be able to solve and understand inequalities. 	<p>Unit 7: 2D Shapes and Angle Rules</p> <ul style="list-style-type: none"> Understand and be able to apply all properties of 2D shapes. Know and be able to apply angle rules to find missing angles. <p>Unit 8: Area and Volume</p> <ul style="list-style-type: none"> Understand how to calculate area and perimeter of 2D shapes. Be able to find the volume of prisms <p>Functional Project</p>	<p>Unit 9: Statistics</p> <ul style="list-style-type: none"> Find all averages from lists of data and tables. Construct and interpret statistical diagrams. Understand methods for collecting accurate data. <p>Functional Project – Investigating the fitness of year 7 students on Maths sports day.</p>
<p>*Recovery: Essential Knowledge from KS2 previous term that needs revisiting.</p>	<p>The first 5 lessons of the year will focus on using the 4 operations. Students will sit a baseline assessment, which will be marked in the first week of term, allowing students to be reset in week 2.</p> <p>During the first 2 weeks of term, all students will be given an introductory lesson to Hegarty maths.</p> <p>All maths lessons throughout the year, will start with fluency starters covering topics taught from the KS2 curriculum.</p>					
<p>Assessment:</p>	<p>A tiered unit assessment (appropriate tier selected by teacher on a topic by topic basis) which will be peer marked, teacher assessed and then reflected and improved upon by students.</p>	<p>Tiered unit assessments (appropriate tier selected by teacher on a topic by topic basis) which will be peer marked, teacher assessed and then reflected and improved upon by students.</p> <p>Unit 2: Indices and BODMAS.</p> <p>Unit 3: Identifying 2D shapes.</p>	<p>Skills gained in Unit 4 are also tested in the tiered Unit 5 assessment (appropriate tier selected by teacher on a topic by topic basis) which will be peer marked, teacher assessed and then reflected and improved upon by students.</p> <p>Place value, rounding, and calculations with decimals.</p>	<p>A tiered unit assessment (appropriate tier selected by teacher on a topic by topic basis) which will be peer marked, teacher assessed and then reflected and improved upon by students.</p> <p>Negative integers and BODMAS.</p> <p>Use of formulas for areas of triangle and perimeter are introduced to support later learning and revisit KS2.</p>	<p>Tiered unit assessments (appropriate tier selected by teacher on a topic by topic basis) which will be peer marked, teacher assessed and then reflected and improved upon by students.</p> <p>Unit 7: Substituting into formulae and rearranging of expressions.</p> <p>Unit 8: Multiplying and dividing by powers of 10, converting metric units.</p>	<p>A tiered unit assessment (appropriate tier selected by teacher on a topic by topic basis) which will be peer marked, teacher assessed and then reflected and improved upon by students.</p> <p>Decimal integers, rounding, and reading inequalities.</p>

Recovery Curriculum Overview for Year 8

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>Curriculum Content:</p> <p>Priority Essential knowledge and skills that will be taught.</p>	<p>Unit 1: Working with Integers (BODMAS)</p> <ul style="list-style-type: none"> • Manipulation of the four operations including brackets and indices. <p>Unit 2: Fractions, Decimals and Percentages.</p> <ul style="list-style-type: none"> • Be able to convert between and perform the four operations with fractions, decimals and percentages. 	<p>Unit 3: Probability</p> <ul style="list-style-type: none"> • Be able to represent probability on scales and with fractions, decimals and percentages. • Calculate the probability of an outcome occurring. <p>Functional Project - Probability investigation.</p> <p>Unit 4: Basic Algebra</p> <ul style="list-style-type: none"> • Be able to write and manipulate basic expressions. <p>Unit 5: Sequences</p> <ul style="list-style-type: none"> • Understand and use the language to describe sequences. 	<p>Unit 6: Graphs</p> <ul style="list-style-type: none"> • Be able to draw and interpret graphs. <p>Functional Project – Mobile phones.</p> <p>Unit 7: Transformations</p> <ul style="list-style-type: none"> • Describe and accurately carry out rotations, reflections, translations and enlargements. 	<p>Unit 8: Equations and Formulae</p> <ul style="list-style-type: none"> • Be able to solve equations. • Substitute and manipulate formulae including brackets and indices. <p>Functional Project – T-totals</p>	<p>Unit 9: Shapes, lines and Angle rules</p> <ul style="list-style-type: none"> • Know and use the properties of 2D and 3D shapes. • Know and be able to reason with rules of angles. • Be able to draw and interpret plans and elevations of 3D shapes. <p>Unit 10: Area and Volume</p> <ul style="list-style-type: none"> • Be able to calculate the area of 2D shapes and the volume of 3D shapes. 	<p>Unit 11: Ratio and Proportion</p> <ul style="list-style-type: none"> • Be able to simplify and divide amounts into given ratios. • Solve real-life proportion problems. <p>Functional Project – Plan a party.</p> <p>Unit 12: Statistics</p> <ul style="list-style-type: none"> • Draw and interpret statistical diagrams. • Calculate basic averages.
<p>Recovery: Essential Knowledge from previous term that needs revisiting.</p>	<p>The first 5 lessons of the year will focus on using negative numbers and basic numeracy skills in various contexts. Hegarty maths will be used for homework and computer-based lessons to support retention of topics. All maths lessons throughout the year will start with fluency starters covering topics taught from the KS2 and year 7 curriculum. All students have voluntary access to, or may be requested by a teacher to attend, extra provision called SUM Club which is a weekly intervention session. Identified students will have compulsory weekly form time intervention targeting key prior knowledge and learning gaps from KS2. This will make use of computer-based programmes that especially support times tables and number bond fluency.</p>					
<p>Assessment:</p>	<p>Tiered unit assessments (appropriate tier selected by teacher on a topic by topic basis) which will be peer marked, teacher assessed and then reflected and improved upon by students.</p> <p>Unit 1: Rearranging calculations, multiplying by powers of 10, and collecting algebraic like terms.</p> <p>Unit 2: Multiplying and dividing by powers of 10, and converting metric units.</p>	<p>Tiered unit assessments (appropriate tier selected by teacher on a topic by topic basis) which will be peer marked, teacher assessed and then reflected and improved upon by students.</p> <p>Unit 3: Addition and multiplication of fractions, recognising 2D shapes, interpreting statistical diagrams and understanding statistical language.</p> <p>Unit 4: Indices laws, area of 2D shapes and BODMAS.</p> <p>Unit 5: Multiply and divide by powers of 10, negative and decimal integers, and substitution into a formula.</p>	<p>Tiered unit assessments (appropriate tier selected by teacher on a topic by topic basis) which will be peer marked, teacher assessed and then reflected and improved upon by students.</p> <p>Unit 6: Properties of 2D shapes, and rearranging formulae.</p> <p>Unit 7: Properties of 2D shapes and using coordinates.</p>	<p>A tiered unit assessment (appropriate tier selected by teacher on a topic by topic basis) which will be peer marked, teacher assessed and then reflected and improved upon by students.</p> <p>Unit 8: Inequalities and triangle properties .</p>	<p>Tiered unit assessments (appropriate tier selected by teacher on a topic by topic basis) which will be peer marked, teacher assessed and then reflected and improved upon by students.</p> <p>Unit 9: Forming and solving equations.</p> <p>Unit 10: Accurately measuring line segments, and converting metric units.</p>	<p>Tiered unit assessments (appropriate tier selected by teacher on a topic by topic basis) which will be peer marked, teacher assessed and then reflected and improved upon by students.</p> <p>Unit 11: Converting metric units and creating fractions.</p> <p>Unit 12: Forming and solving equations and rounding.</p>

Recovery Curriculum Overview for Year 9 LAL tier – Year 9

All units in this tier allow for continuing to develop key numeracy skills and teachers are expected to teach and/or support these in all lessons until they are secure. The students accessing this tier need a smaller amount of units and concentrate on a smaller amount of content to enable them more time to move towards mastering the 'foundations' of maths. This allows us to remove the idea of any 'assumed knowledge' and regularly revisit the number skills that are involved in every unit to aid long term uptake and retention. Some units also explicitly repeat additional objectives from other units, with assessments also purposely containing repeats of question types, to prepare students for recalling higher level prior learning also.

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7
Curriculum Content: The key knowledge and skills that will be taught.	Integers <ul style="list-style-type: none"> Be able to read, write, count and order numbers including negative numbers. Identify and use place value and number bonds. Use mental and written methods for all four operations. 	Coordinates <ul style="list-style-type: none"> Be able to find and use coordinates in 4 quadrants. Find midpoints of lines. 	FDP Conversions <ul style="list-style-type: none"> Use and complete diagrams of fractions. Find equivalents and simplest form. Convert between fractions, decimals and percentages. 	Algebra <ul style="list-style-type: none"> Be able to write and manipulate linear expressions, including collecting like terms, and using positive integer powers. Substitute positive integers into expressions. 	3D shapes <ul style="list-style-type: none"> Name 3D shapes and draw some on isometric paper or as nets. Identify properties of 3D shapes. Count cubes to calculate volume. 	Algebra revision and linear equations <ul style="list-style-type: none"> Identify and use inverse operations. Set up and solve one step equations involving any of the 4 operations. 	Collecting data <ul style="list-style-type: none"> Design and complete frequency tables. Read frequency, grouped frequency and two way tables. Select key information to ask for to investigate something.
Recovery: Essential Knowledge from previous term that needs revisiting.	The first 5 lessons of the year will focus on using negative numbers in various contexts. Hegarty maths will be used for homework and computer-based lessons to support retention of topics. All maths lessons throughout the year will start with fluency starters covering topics taught from the KS2 and KS3 curriculum. All students have voluntary access to, or may be requested by a teacher to attend, extra provision called SUMClub which is a weekly intervention session.						
Assessment: ALL units revisit and reassess number skills.						<ul style="list-style-type: none"> Be able to write and manipulate linear expressions, including collecting like terms, and using positive integer powers. Substitute positive integers into expressions. 	

	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13
Curriculum Content: The key knowledge and skills that will be taught.	2D shapes and angles <ul style="list-style-type: none"> Name and classify 2D shapes and angle types. Use a protractor Find missing angles in shapes using angle facts. 	Fractions and percentages <ul style="list-style-type: none"> Find fractions of amounts, add fractions with the same denominator, and multiply fractions. Find simple percentages of amounts (25%, 50%, 10%) including functional problems. 	Ratio and proportion <ul style="list-style-type: none"> Read and write ratios, simplify them and use equivalents. Use diagrams to share in a ratio. Solve simple proportion problems using multiplication. 	Perimeter and area <ul style="list-style-type: none"> Be able to find the perimeter and area of shapes by counting squares and by adding or multiplying values. Area formulae discussed and encouraged for squares, rectangles and triangles. 	Averages and range <ul style="list-style-type: none"> Identify and calculate averages and range from lists. Complete a stem and leaf diagram. 	Displaying data <ul style="list-style-type: none"> Be able to draw and interpret pictograms and bar charts. Be able to make simple interpretations of pie charts and scatter graphs.
Recovery: Essential Knowledge from previous term that needs revisiting.	The first 5 lessons of the year will focus on using negative numbers in various contexts. Hegarty maths will be used for homework and computer-based lessons to support retention of topics. All maths lessons throughout the year will start with fluency starters covering topics taught from the KS2 and KS3 curriculum. All students have voluntary access to, or may be requested by a teacher to attend, extra provision called SUMClub which is a weekly intervention session.					
Assessment: ALL units revisit and reassess number skills.		<ul style="list-style-type: none"> Use and complete diagrams of fractions. Find equivalents and simplest form. Convert between fractions, decimals and percentages including in functional problems. 				<ul style="list-style-type: none"> Complete a stem and leaf diagram. Design, complete and read frequency tables.

Foundation tier – Year 9

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8
<p>Curriculum Content: The key knowledge and skills that will be taught.</p>	<p>Integers & decimals</p> <ul style="list-style-type: none"> Be able to manipulate all operations and calculations with integers and decimals including the order of operations. 	<p>Coordinates</p> <ul style="list-style-type: none"> Be able to find and use coordinates in 4 quadrants and 3D finding midpoints and endpoints. 	<p>Fractions, decimals & percentages</p> <ul style="list-style-type: none"> Convert confidently between fractions, decimals and percentages including in functional problems. Find fractions and percentages of amounts including increasing and decreasing by them. 	<p>Algebra</p> <ul style="list-style-type: none"> Be able to write and manipulate linear expressions including the expanding of brackets and factorising. 	<p>2D & 3D shapes</p> <ul style="list-style-type: none"> Understand properties of 3D shapes and be able to draw nets of these 	<p>Linear equations & formulae</p> <ul style="list-style-type: none"> Be able to solve equations including those with unknowns on both sides and brackets. Substitute into and manipulate formulae. 	<p>Inequalities</p> <ul style="list-style-type: none"> Understand the inequalities symbols and be able to use them to find integers, solve and represent on a number line. 	<p>Data</p> <ul style="list-style-type: none"> Know and comment on sampling techniques, two-way tables, bias and critique questionnaires. Be able to draw and interpret statistical diagrams.
<p>Recovery: Essential Knowledge from previous term that needs revisiting.</p>	<p>The first 5 lessons of the year will focus on using negative numbers in various contexts. Hegarty maths will be used for homework and computer-based lessons to support retention of topics. All maths lessons throughout the year will start with fluency starters covering topics taught from the KS2 and KS3 curriculum. All students have voluntary access to, or may be requested by a teacher to attend, extra provision called SUMClub which is a weekly intervention session.</p>							
<p>Assessment:</p>		<p>Properties of a parallelogram and cuboid, solving ratio problems and forming and solving equations.</p>	<p>Calculating with time, rounding, using a calculator efficiently, and forming and solving equations.</p>	<p>Area of a rectangle.</p>	<p>Using a scale and converting metric units</p>	<p>Perimeter and angles in a quadrilateral.</p>	<p>Forming and solving.</p>	<p>Mode, time calculations, fractions of amounts, and percentages of amounts.</p>

Foundation tier – Year 9

	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
Curriculum Content: The key knowledge and skills that will be taught.	Shape & angle <ul style="list-style-type: none"> Know properties of common shapes and use these to solve problems. Understand the basic rules of angles including those in parallel lines and in polygons. 	Fractions <ul style="list-style-type: none"> Confidently use the four operations with fractions and mixed numbers. 	Ratio <ul style="list-style-type: none"> Be able to simplify and divide given amounts into ratios. Be able to solve functional ratio and proportion problems. 	Perimeter & area <ul style="list-style-type: none"> Be able to find the perimeter and area of regular polygons and know the formulas to use. 	Circles <ul style="list-style-type: none"> Be able to calculate the area and circumference of a circle. 	Averages & range <ul style="list-style-type: none"> Be able to calculate averages and range from lists, tables and diagrams. Be able to compare data sets. 	Pythagoras' Theorem <ul style="list-style-type: none"> Know and apply Pythagoras' theorem to find missing sides in right-angled triangles. 	Trigonometry <ul style="list-style-type: none"> Know and apply the rules of trigonometry to find missing sides and angles in right angled triangles.
Recovery: Essential Knowledge from previous term that needs revisiting.	The first 5 lessons of the year will focus on using negative numbers in various contexts. Hegarty maths will be used for homework and computer-based lessons to support retention of topics. All maths lessons throughout the year will start with fluency starters covering topics taught from the KS2 and KS3 curriculum. All students have voluntary access to, or may be requested by a teacher to attend, extra provision called SUMClub which is a weekly intervention session.							
Assessment:	Forming and solving equations, and fractions of amounts.	Pie charts.	Fractions, time calculations, forming and solving equations, lowest common multiple, and percentages of amounts.	Converting metric units, forming and solving equations, fractions of amounts and equivalent fractions.	Forming and simplifying/solving expressions/equations, estimating using significant figures, and converting metric units.	Forming expressions, forming and solving equations, bar charts and stem and leaf diagrams and reading inequalities.	Rounding, perimeter, understanding coordinates, and using surds.	Efficient use of calculators, rounding, and area of a triangle.

Higher tier – Year 9

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7
<p>Curriculum Content: The key knowledge and skills that will be taught.</p>	<p>Integers & decimals</p> <ul style="list-style-type: none"> Be able to manipulate all operations and calculations with integers and decimals including the order of operations. 	<p>Coordinates</p> <ul style="list-style-type: none"> Be able to find and use coordinates in 4 quadrants and 3D finding midpoints and endpoints. 	<p>Fractions, decimals & percentages</p> <ul style="list-style-type: none"> Convert confidently between fractions, decimals and percentages including in functional problems. Find fractions and percentages of amounts including increasing and decreasing. Convert recurring decimals to fractions. Solve problems with reverse percentage and compound interest. 	<p>Algebra</p> <ul style="list-style-type: none"> Be able to write and manipulate linear expressions including the expanding of brackets and factorizing. Factorise quadratics including those with an x^2 coefficient greater than 1. 	<p>2D & 3D shapes</p> <ul style="list-style-type: none"> Understand properties of 3D shapes and be able to draw nets of these. Use and draw plans and elevations of 3D shapes. 	<p>Formulae & equations</p> <ul style="list-style-type: none"> Be able to solve equations including those with unknowns on both sides and brackets. Understand the inequalities symbols and be able to use them to find integers, solve and represent on a number line. Rearrange linear and quadratic equations. 	<p>Data</p> <ul style="list-style-type: none"> Design and use data-collection sheets for grouped, discrete and continuous data. Collect data using various methods. Sort, classify and tabulate data and discrete or continuous quantitative data.
<p>Recovery: Essential Knowledge from previous term that needs revisiting.</p>	<p>The first 5 lessons of the year will focus on using negative numbers in various contexts. Hegarty maths will be used for homework and computer-based lessons to support retention of topics. All maths lessons throughout the year will start with fluency starters covering topics taught from the KS2 and KS3 curriculum. All students have voluntary access to, or may be requested by a teacher to attend, extra provision called SUMClub which is a weekly intervention session.</p>						
<p>Assessment:</p>		<p>Properties of a parallelogram and cuboid, solving ratio problems and forming and solving equations.</p>	<p>Calculating with time, rounding, using a calculator efficiently, and forming and solving equations.</p>	<p>Basic surds, and area of rectangles.</p>	<p>Using a scale and converting metric units.</p>	<p>Perimeter, area of a rectangle and trapezium, angles in a quadrilateral, rounding, calculating with fractions, positive and negative square roots.</p>	<p>Mode, time calculations, fractions of amounts, and percentages of amounts.</p>

Higher tier – Year 9

	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14
Curriculum Content: The key knowledge and skills that will be taught.	Shape & angle <ul style="list-style-type: none"> Know properties of common shapes and use these to solve problems. Understand the basic rules of angles including those in parallel lines and interior and exterior angles. 	Fractions <ul style="list-style-type: none"> Confidently use the four operations with fractions and mixed fractions. Solve functional exam style problems with fractions. 	Ratio <ul style="list-style-type: none"> Be able to simplify and divide given amounts into ratios. Be able to solve functional ratio and proportion problems. Use volume and area scale factors to calculate missing values. 	Perimeter & area <ul style="list-style-type: none"> Be able to find the perimeter and area of regular polygons and know the formulas to use. 	Averages & range <ul style="list-style-type: none"> Be able to calculate averages and range from lists, tables and diagrams. Be able to compare data sets. 	Pythagoras & trigonometry <ul style="list-style-type: none"> Know and apply Pythagoras' theorem to find missing sides in right-angled triangles. Know and apply the rules of trigonometry to find missing sides and angles in right angled triangles. 	Graphs <ul style="list-style-type: none"> Be able to draw and use graphs of equations, including linear, quadratic, cubic, reciprocal and exponential graphs.
Recovery: Essential Knowledge from previous term that needs revisiting.	The first 5 lessons of the year will focus on recapping negative numbers, basic algebra skills and using the 4 operations. During the first 2 weeks of term, all students will be given an introductory lesson to Hegarty maths. All maths lessons throughout the year, will start with fluency starters covering topics taught from the previous year.						
Assessment:	Forming and solving equations, and fractions of amounts.	Forming and solving equations, and prime factor decomposition.	Finding fractions, multiplying fractions, time calculations, forming and solving equations, lowest common multiple, percentages of amounts and area of a rectangle.	Converting metric units, forming and solving equations, rounding, fractions of amounts and equivalent fractions, nets of 3D shapes, dividing in a ratio, set up formulae, simplify expressions.	Forming expressions, forming and solving equations, bar charts and stem and leaf diagrams, and reading inequalities.	Efficient use of calculators, rounding, perimeter, area of squares, triangles and circles, understanding coordinates, and using surds.	Calculating with negative numbers, fractions and indices, and reading inequalities.

Recovery Curriculum Overview for Year 10
LAL tier – Year 10

	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18
Curriculum Content: The key knowledge and skills that will be taught.	Integers revision and types of number <ul style="list-style-type: none"> • Be able to round numbers to different degrees of accuracy. • Calculate with negative numbers. • Calculate multiples, factors, square and cube numbers, and square and cube roots. 	Ratio and proportion revision <ul style="list-style-type: none"> • Use unitary method to solve proportion problems. 	Patterns and sequences <ul style="list-style-type: none"> • Describe and continue a sequence (shape, number and pattern). • Use a rule to generate a sequence. 	Symmetry and transformations <ul style="list-style-type: none"> • Recognise and work with lines of symmetry and rotational symmetry. • Be able to carry out simple examples of rotation, reflection, enlargement and translation. 	Area and volume revision <ul style="list-style-type: none"> • Calculate the area of a parallelogram and the volume of cubes and cuboids.
Recovery: Essential Knowledge from previous term that needs revisiting.	The first 5 lessons of the year will focus on using negative numbers in various contexts. Hegarty maths will be used for homework and computer-based lessons to support retention of topics. All maths lessons throughout the year will start with fluency starters covering topics taught from the KS2 and KS3 curriculum. All students have voluntary access to, or may be requested by a teacher to attend, extra provision called SUMClub which is a weekly intervention session.				
Assessment:	<ul style="list-style-type: none"> • Be able to read, write, count and order numbers including negative numbers. • Identify and use place value and number bonds. • Use mental and written methods for all four operations. 	<ul style="list-style-type: none"> • Read and write ratios, simplify them and use equivalents. • Use diagrams to share in a ratio. • Solve simple proportion problems using multiplication. 			<ul style="list-style-type: none"> • Name 3D shapes. • Count cubes to calculate volume. • Be able to find the perimeter and area of shapes by counting squares and by adding or multiplying values. • Area formulae discussed and encouraged for squares, rectangles and triangles.

	Unit 19	Unit 20	Unit 21	Unit 22
Curriculum Content: The key knowledge and skills that will be taught.	Probability <ul style="list-style-type: none"> Recognise and use simple probability scales. Calculate single event probabilities as fractions, and use the idea of probabilities adding to 1. 	Symmetry, similarity and congruence <ul style="list-style-type: none"> Use symmetry to complete diagrams. Know properties of quadrilaterals. Identify congruent shapes and consider the effect meant by similarity. 	Substitution and formulae <ul style="list-style-type: none"> Substitute into algebraic and worded formulae. Manipulate single step formulae. 	Real life Maths <ul style="list-style-type: none"> Using a calendar and working with time, money, scale and maps.
Recovery: Essential Knowledge from previous term that needs revisiting.	The first 5 lessons of the year will focus on using negative numbers in various contexts. Hegarty maths will be used for homework and computer-based lessons to support retention of topics. All maths lessons throughout the year will start with fluency starters covering topics taught from the KS2 and KS3 curriculum. All students have voluntary access to, or may be requested by a teacher to attend, extra provision called SUMClub which is a weekly intervention session.			
Assessment: ALL units revisit and reassess number skills.		<ul style="list-style-type: none"> Recognise and work with lines of symmetry and rotational symmetry. 	<ul style="list-style-type: none"> Identify and use inverse operations. Set up and solve one step equations involving any of the 4 operations. Substitute positive integers into expressions. 	<ul style="list-style-type: none"> Find fractions of amounts. Find simple percentages of amounts (25%, 50%, 10%) including functional problems.

Foundation tier – Year 10

	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21	Unit 22
Curriculum Content: The key knowledge and skills that will be taught.	Graphs <ul style="list-style-type: none"> Be able to draw and interpret graphs. 	Types of number <ul style="list-style-type: none"> Be confident in calculating highest common factor, lowest common multiple and prime factor decomposition. 	Proportion <ul style="list-style-type: none"> Be able to solve problems with direct and inverse proportionality. 	Sequences <ul style="list-style-type: none"> Continue a sequence, (number and pattern) state the rule and find nth terms of sequences. 	Transformations <ul style="list-style-type: none"> Be able to accurately carry out and describe rotation, reflection, enlargement and translation. 	Surface area & volume <ul style="list-style-type: none"> Be able to find the volume and surface area of 3D shapes, including cylinders.
Recovery: Essential Knowledge from previous term that needs revisiting.	The first 5 lessons of the year will focus on using negative numbers in various contexts. Hegarty maths will be used for homework and computer-based lessons to support retention of topics. All maths lessons throughout the year will start with fluency starters covering topics taught from the KS2 and KS3 curriculum. All students have voluntary access to, or may be requested by a teacher to attend, extra provision called SUMClub which is a weekly intervention session.					
Assessment:	Calculating with negative numbers, fractions and indices, and reading inequalities.	Calculating with time and order of operations.	Conversion between metric units, reading from a graph, and percentages of amounts.	Difference between expressions and formulae.		Identifying 3D shapes and properties (faces, edges, vertices), rounding, converting between metric units, and best value for money.

Foundation tier – Year 10

	Unit 23	Unit 24	Unit 25	Unit 26	Unit 27	Unit 28
Curriculum Content: The key knowledge and skills that will be taught.	Probability <ul style="list-style-type: none"> Calculate the probability of events and answer functional questions relating to probability. 	Set theory <ul style="list-style-type: none"> Recognise and use set theory notation and venn diagrams. 	Compound measures <ul style="list-style-type: none"> Be able to convert measures of length, area and volume. Solve problems about speed, density and pressure. 	Similarity & congruence <ul style="list-style-type: none"> Understand what similarity and congruence are and be able to apply the concepts to problems. 	Formulae <ul style="list-style-type: none"> Rearrange and manipulate formulae. 	Real life maths <ul style="list-style-type: none"> Apply maths to real life situations such as utility bills etc.
Recovery: Essential Knowledge from previous term that needs revisiting.	The first 5 lessons of the year will focus on using negative numbers in various contexts. Hegarty maths will be used for homework and computer-based lessons to support retention of topics. All maths lessons throughout the year will start with fluency starters covering topics taught from the KS2 and KS3 curriculum. All students have voluntary access to, or may be requested by a teacher to attend, extra provision called SUMClub which is a weekly intervention session.					
Assessment: -	Percentages of amounts, addition and multiplication of fractions, and conversions between fractions, decimals and percentages.	Completing 2 way tables, total percentage, and prime numbers.	Reading scales, decimal place value, rounding, inequalities, reading and plotting graphs.	Perimeter, angle properties, forming and solving equations, using scale factors, and writing and simplifying ratios.		Reading scales, decimal place value, negative numbers, using two way tables, time and money calculations, reading and drawing graphs, and solving fractions, percentages and ratio problems.

Higher tier – Year 10

	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21	Unit 22
Curriculum Content: The key knowledge and skills that will be taught.	Construction & loci <ul style="list-style-type: none"> Be able to accurately construct bisectors, triangles and loci with mathematical instruments. 	Types of number <ul style="list-style-type: none"> Be confident in calculating highest common factor, lowest common multiple and prime factor decomposition. 	Algebraic fractions <ul style="list-style-type: none"> Add, subtract, multiply and divide algebraic fractions. Simplify algebraic fractions. 	Proportion <ul style="list-style-type: none"> Be able to solve problems with direct and inverse proportionality. 	Coordinate geometry <ul style="list-style-type: none"> Find and use equations of lines. 	Histograms <ul style="list-style-type: none"> Construct and interpret histograms. 	Sequences <ul style="list-style-type: none"> Continue a sequence, (number and pattern) state the rule and find nth terms of sequences including quadratic sequences. 	Inequalities <ul style="list-style-type: none"> Solve two linear inequalities in x, find the solution sets and compare them to see which value of x satisfies both. Solve linear inequalities in two variables algebraically. Represent the solution set for inequalities using set notation, i.e. curly brackets and 'is an element of' notation. Solve quadratic inequalities.
Recovery: Essential Knowledge from previous term that needs revisiting.	The first 5 lessons of the year will focus on using negative numbers in various contexts. Hegarty maths will be used for homework and computer-based lessons to support retention of topics. All maths lessons throughout the year will start with fluency starters covering topics taught from the KS2 and KS3 curriculum. All students have voluntary access to, or may be requested by a teacher to attend, extra provision called SUMClub which is a weekly intervention session.							
Assessment: tested.	Bearings, area of rectangles and triangles, and rotation.	Order of operations, calculating with time, using speed formula, converting metric units, and simplifying surds.	Use laws and indices, expand and factorise, solve probability problems, set up and solve inequalities, area of rectangles, solve quadratic equations, and solve similar triangles problems.	Conversion between metric units, calculations with time, rounding, using speed formula.	Rearrange equations, and circle properties.	Reading inequalities, median, estimated mean, proportion as a fraction or decimal, write expressions.	Difference between expressions and formulae.	Factorise quadratics, draw lines from equations.

Higher tier – Year 10

	Unit 23	Unit 24	Unit 25	Unit 26	Unit 27	Unit 28	Unit 29
Curriculum Content: The key knowledge and skills that will be taught.	Transformations <ul style="list-style-type: none"> Be able to accurately carry out and describe rotation, reflection, enlargement and translation including negative enlargements. 	Probability <ul style="list-style-type: none"> Calculate the probability of events and answer functional questions relating to probability. Be able to draw tree diagrams and find the probability of independent and dependent events. 	Set theory <ul style="list-style-type: none"> Use set theory notation and solve probability problems involving venn diagrams. 	Surface area & volume <ul style="list-style-type: none"> Be able to find the volume and surface area of 3D shapes including cones and spheres. 	Compound measures <ul style="list-style-type: none"> Be able to convert measures of length, area and volume. Use formulae involving speed, density and pressure. 	Similarity & congruence <ul style="list-style-type: none"> Understand what similarity and congruence are and be able to apply the concepts to problems. Be able to prove that two shapes are similar or congruent to one another. 	Rearranging formulae <ul style="list-style-type: none"> Be able to change the subject of a formula including the use of factorizing.
Recovery: Essential Knowledge from previous term that needs revisiting.	The first 5 lessons of the year will focus on using negative numbers in various contexts. Hegarty maths will be used for homework and computer-based lessons to support retention of topics. All maths lessons throughout the year will start with fluency starters covering topics taught from the KS2 and KS3 curriculum. All students have voluntary access to, or may be requested by a teacher to attend, extra provision called SUMClub which is a weekly intervention session.						
Assessment:		Addition and multiplication of fractions, and conversions between fractions, decimals and percentages, forming and solving equations, solve quadratic equations.	Completing 2 way tables, total percentage, multiples, properties of 2D shapes, and prime numbers.	Rounding, converting between metric units, best value for money, calculating rates of change, percentage change, and writing and simplifying expressions.	Reading and plotting graphs, using inequalities, percentages of amounts, area of a rectangle and trapezium, volume of a cuboid.	Forming and solving equations, using scale factors, angle and 2D shape properties, and using pythagoras.	Subtract fractions.

Recovery Curriculum Overview for Year 11

LAL tier – Year 11

	Unit 23	Unit 24
Curriculum Content: The key knowledge and skills that will be taught.	Constructing triangles and circles and measuring <ul style="list-style-type: none"> • Be able to accurately use a ruler, protractor and compasses. • Construct squares, rectangles, circles, and triangles. 	Coordinates revision and straight line graphs <ul style="list-style-type: none"> • Use equations for horizontal and vertical lines. • Read and plot tables of coordinates. • Identify y-intercepts of other straight lines.
Recovery: Essential Knowledge from previous term that needs revisiting.	The first 5 lessons of the year will focus on using negative numbers in various contexts. Hegarty maths will be used for homework and computer-based lessons to support retention of topics. All maths lessons throughout the year will start with fluency starters covering topics taught from the KS2 and KS3 curriculum. All students have voluntary access to, or may be requested by a teacher to attend, extra provision called SUM Club, which is a weekly intervention session. Identified students will have compulsory weekly form time intervention targeting key prior knowledge. All students are expected to attend weekly session 7's which will be targeted revision appropriate to their maths class.	
Assessment: .	<ul style="list-style-type: none"> • Name and classify 2D shapes. • Use a protractor 	<ul style="list-style-type: none"> • Be able to find and use coordinates in 4 quadrants. • Find midpoints of lines.

Foundation tier – Year 11

	Unit 29	Unit 30	Unit 31	Unit 32	Unit 33
Curriculum Content: The key knowledge and skills that will be taught.	Constructions & loci <ul style="list-style-type: none"> Be able to accurately construct bisectors, triangles and loci with mathematical instruments. 	Standard form <ul style="list-style-type: none"> Convert large and small numbers into standard form and vice versa. Add and subtract numbers in standard form. Multiply and divide numbers in standard form. 	Coordinate geometry <ul style="list-style-type: none"> Find and use equations of lines. 	Simultaneous equations <ul style="list-style-type: none"> Be able to solve linear simultaneous equations by elimination. 	Further percentages <ul style="list-style-type: none"> Be able to use successive percentages and solve reverse percentage problems.
Recovery: Essential Knowledge from previous term that needs revisiting.	The first 5 lessons of the year will focus on using negative numbers in various contexts. Hegarty maths will be used for homework and computer-based lessons to support retention of topics. All maths lessons throughout the year will start with fluency starters covering topics taught from the KS2 and KS3 curriculum. All students have voluntary access to, or may be requested by a teacher to attend, extra provision called SUM Club, which is a weekly intervention session. Identified students will have compulsory weekly form time intervention targeting key prior knowledge. All students are expected to attend weekly session 7's which will be targeted revision appropriate to their maths class.				
Assessment:	Plans and elevations and bearings.	Forming and using direct proportion formulae.		Calculating with fractions.	Rounding.

Foundation tier – Year 11

	Unit 34	Unit 35	Unit 36	Unit 37
Curriculum Content: The key knowledge and skills that will be taught.	Quadratics <ul style="list-style-type: none"> Factorise, expand and draw quadratics to be able to solve quadratics problems. 	Vectors <ul style="list-style-type: none"> Use vector notation and find missing vectors from diagrams. 	Algebraic proof <ul style="list-style-type: none"> Use algebra to prove a statement or equation is always true. 	Trial & improvement <ul style="list-style-type: none"> Use trial and improvement to solve equations to a given degree of accuracy.
Recovery: Essential Knowledge from previous term that needs revisiting.	The first 5 lessons of the year will focus on using negative numbers in various contexts. Hegarty maths will be used for homework and computer-based lessons to support retention of topics. All maths lessons throughout the year will start with fluency starters covering topics taught from the KS2 and KS3 curriculum. All students have voluntary access to, or may be requested by a teacher to attend, extra provision called SUM Club, which is a weekly intervention session. Identified students will have compulsory weekly form time intervention targeting key prior knowledge. All students are expected to attend weekly session 7's which will be targeted revision appropriate to their maths class.			
Assessment:	Rounding, drawing a graph from an equation and solving equations from graphs.	Plotting coordinates and properties of a parallelogram.		

Higher tier – Year 11

	Unit 30	Unit 31	Unit 32	Unit 33	Unit 34
<p>Curriculum Content: The key knowledge and skills that will be taught.</p>	<p>Simultaneous equations</p> <ul style="list-style-type: none"> To be able to solve linear and quadratic simultaneous equations. 	<p>Functions</p> <ul style="list-style-type: none"> Use function notation. Find $f(x) + g(x)$ and $f(x) - g(x)$, $2f(x)$, $f(3x)$ etc algebraically. Find the inverse of a linear function. 	<p>Circle theorems</p> <ul style="list-style-type: none"> Know circle theorems and use these to find missing angles. Be able to prove circle theorems using angle rules. 	<p>Index notation & surds</p> <ul style="list-style-type: none"> Know and apply laws of indices (including fractional and negative) and know and apply rules of surds. 	<p>Quadratics</p> <ul style="list-style-type: none"> Generate points and plot graphs of simple quadratic functions, then more general quadratic function. Find approximate solutions of a quadratic equation from the graph of the corresponding quadratic function. Find the intersection points of the graphs of a linear and quadratic function.
<p>Recovery: Essential Knowledge from previous term that needs revisiting.</p>	<p>The first 5 lessons of the year will focus on using negative numbers in various contexts. Hegarty maths will be used for homework and computer-based lessons to support retention of topics. All maths lessons throughout the year will start with fluency starters covering topics taught from the KS2 and KS3 curriculum. All students have voluntary access to, or may be requested by a teacher to attend, extra provision called SUM Club, which is a weekly intervention session. Identified students will have compulsory weekly form time intervention targeting key prior knowledge. All students are expected to attend weekly session 7's which will be targeted revision appropriate to their maths class.</p>				
<p>Assessment:</p>	<p>Forming equations, draw lines from equations, calculating with fractions, exponential graphs.</p>	<p>Use quadratic graphs.</p>	<p>Identify circle parts, use trigonometry and calculate arc length.</p>	<p>Area of squares, triangles and compound shapes, expand brackets, use Pythagoras, and solve percentage problems.</p>	<p>Rounding, calculating with fractions, forming and solving equations, compound area, use venn diagrams and calculate probability, and solve simultaneous equations.</p>

Higher tier – Year 11

	Unit 35	Unit 36	Unit 37	Unit 38	Unit 39
<p>Curriculum Content: The key knowledge and skills that will be taught.</p>	<p>Iterative processes</p> <ul style="list-style-type: none"> Be able to use iterative techniques to find a more accurate solution to a problem. 	<p>Sine & cosine rules</p> <ul style="list-style-type: none"> Know and apply the sine rule and cosine rule to find unknown lengths and angles. Know and apply to calculate the area, sides or angles of any triangle. 	<p>Algebraic proof</p> <ul style="list-style-type: none"> Solve 'Show that' and proof questions using consecutive integers ($n, n+1$), squares (a^2, b^2), even numbers ($2n$) and odd numbers ($2n+1$). 	<p>Vectors</p> <ul style="list-style-type: none"> Use vectors to describe translations. Use and interpret vectors as displacements in the plane (with an associated direction). 	<p>Further graphs & functions</p> <ul style="list-style-type: none"> Plot and recognise linear, quadratic, cubic, reciprocal, exponential and circular functions, $y = \sin x$ and $y = \cos x$ within the range -360° to $+360^\circ$. Use the graphs of these functions to find approximate solutions to equations, eg. given x find y (and vice versa). Interpret graphs of quadratic functions from real-life problems. Sketch translations and reflections of a given function.
<p>Recovery: Essential Knowledge from previous term that needs revisiting.</p>	<p>The first 5 lessons of the year will focus on using negative numbers in various contexts. Hegarty maths will be used for homework and computer-based lessons to support retention of topics. All maths lessons throughout the year will start with fluency starters covering topics taught from the KS2 and KS3 curriculum. All students have voluntary access to, or may be requested by a teacher to attend, extra provision called SUM Club, which is a weekly intervention session. Identified students will have compulsory weekly form time intervention targeting key prior knowledge. All students are expected to attend weekly session 7's which will be targeted revision appropriate to their maths class.</p>				
<p>Assessment:</p>	<p>Compound interest, sequences, reading inequalities.</p>	<p>Rounding, area of a segment, perimeter, and use surds.</p>		<p>Plotting coordinates and properties of a parallelogram.</p>	<p>Translation by vectors, forming and solving equations, know exact values of trigonometric functions, solve algebraic fraction problems, and use surds.</p>