



## Curriculum Overview

Department: Maths

Year Group		Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 7 Topic							
Knowledge	Developing	<ul style="list-style-type: none"> <li>Recall and identify prime, square, cube and triangle numbers.</li> <li>Read, write and understand the place value of integers of any size.</li> <li>Order positive and negative integers, use the number line as a model for ordering of the real numbers</li> <li>Count forwards and backwards through zero.</li> <li>Compare and order negative numbers.</li> <li>Add and subtract integers of any size.</li> <li>Know the number of seconds in a minute and the number of days in each month, year and leap year.</li> <li>Multiply and divide integers by 10, 100 and 1000</li> <li>Know BIDMAS.</li> <li>To calculate percentages of amounts for 10%, 20%, 50%, 25%.</li> <li>Form expressions from situations described in words.</li> <li>Understand that a letter represents a variable.</li> <li>Use and interpret algebraic notation.</li> </ul>	<ul style="list-style-type: none"> <li>Simplifying expressions by collecting like terms.</li> <li>Solve linear equations, one-step and two step.</li> <li>Recognise arithmetic and geometric sequences</li> <li>Find the nth term of a linear sequence.</li> <li>Generate any term of a sequence.</li> <li>Look at different sequences (square, cube, triangular, Fibonacci etc)</li> <li>Represent fractions using diagrams and on a number line.</li> <li>Identify and use equivalent fractions.</li> <li>Simplify fractions.</li> <li>Add and subtract fractions with the same denominator.</li> <li>Add and subtract fractions with a denominator that is a multiple of the other.</li> <li>Find equivalent FDP.</li> <li>Read and plot coordinates in all 4 quadrants.</li> <li>Plot multiple coordinates on a graph that follow the same rule/ pattern i.e. linear graphs.</li> </ul>	<ul style="list-style-type: none"> <li>Calculate the mean without a calculator consolidating prior learning.</li> <li>Collect simple data from real life examples E.g. number of pets.</li> <li>Calculate mean, median, mode, range.</li> <li>Recall and use metric conversions.</li> <li>Identify 2D shapes by name.</li> <li>Recognise the properties of 2D shapes.</li> <li>Use the formulae to calculate the perimeter and area of common 2D shapes.</li> </ul>	<ul style="list-style-type: none"> <li>Use basic angle facts</li> <li>Know the names for different types of angle.</li> <li>Use a protractor to draw and measure angles.</li> <li>Recall angle sums in triangles and quadrilaterals and use these facts to calculate missing angles.</li> <li>Define multiples and factors.</li> <li>Round numbers to the nearest 10, 100, 1000.</li> <li>Round to nearest integer.</li> </ul>	<ul style="list-style-type: none"> <li>Record, describe and analyse the frequency of outcomes of simple probability experiments.</li> <li>List outcomes</li> <li>Understand that the probabilities of all possible outcomes sum to 1.</li> <li>Complete sample space diagrams and calculate probabilities.</li> <li>Complete a frequency tree to present information.</li> <li>Use the bar model to represent a ratio.</li> <li>Simplify a ratio.</li> <li>Find a proportion from an amount.</li> </ul>	<ul style="list-style-type: none"> <li>Calculate the volume of a cube and a cuboid.</li> <li>Understand reflection symmetry (identifying lines of symmetry)</li> <li>Understand rotational symmetry (order of rotation)</li> <li>Ordering negative numbers.</li> <li>Four operations with negative numbers</li> <li>Reflect shapes in a mirror line.</li> <li>Rotate shapes about a centre of rotation.</li> <li>Translate a shape.</li> <li>Enlarge a shape by a positive scale factor.</li> <li>Use a pair of compasses accurately.</li> </ul>



## Curriculum Overview

	<p><b>Core</b></p> <ul style="list-style-type: none"> <li>Read, write and understand the place value of numbers with any number of decimal places.</li> <li>Understand negative numbers in context.</li> <li>Add and subtract positive decimals greater than and less than one and with a different number of decimal places.</li> <li>Represent addition and subtraction with a variety of different concrete and pictorial methods e.g. bar models, part-whole diagrams.</li> <li>Read, write and convert time between analogue and digital 12 – and 24-hour clocks.</li> <li>Multiply integers of any size.</li> <li>with integers and decimals with decimals.</li> <li>Multiply decimals</li> <li>Divide integers of any size by a one-digit whole number where the answer is an integer or a decimal.</li> <li>Divide decimals by a one-digit whole number.</li> <li>Multiply and divide decimals by 10, 100 and 1000</li> <li>Understand that for add/subtract and multiply/divide you read left to right.</li> <li>Understand the difference between an expression, equation, formula and term.</li> </ul>	<ul style="list-style-type: none"> <li>Expand and simplify.</li> <li>Solve equations with unknowns on both sides.</li> <li>Find the highest common factor of two numbers.</li> <li>Recognise arithmetic sequences and geometric sequences.</li> <li>Know whether a number will be a term in a sequence.</li> <li>Find the nth term.</li> <li>Express one quantity as a fraction of another.</li> <li>Compare and order fractions; use the symbols <math>=</math>, <math>\neq</math>, <math>&lt;</math>, <math>&gt;</math>, <math>\leq</math>, <math>\geq</math>.</li> <li>Convert between mixed numbers and improper fractions.</li> <li>Convert between fractions and decimals.</li> <li>Find a fraction of an amount.</li> <li>Find equivalent FDP including those <math>&gt;1</math>.</li> <li>To be able to add and subtract any fraction with different denominators.</li> <li>Constructing a table to create co-ordinates to plot a graph from an equation.</li> </ul>	<ul style="list-style-type: none"> <li>Find averages from graphs.</li> <li>Derive and illustrate properties of triangles, quadrilaterals, circles etc.</li> <li>Draw and interpret bar charts, pictograms and line graphs.</li> <li>Use formulae for calculating perimeter and area of common 2D shapes.</li> <li>Calculate perimeter and area with different units for dimensions.</li> </ul>	<ul style="list-style-type: none"> <li>Use angle facts on parallel lines.</li> <li>Derive and use the sum of angles in a triangle and use it to deduce the angle sum in any polygon.</li> <li>List factor and multiples of two numbers to find the LCM/HCF</li> <li>Write any integer as the product of its prime factors in index form.</li> <li>Round to any number of decimal places.</li> </ul>	<ul style="list-style-type: none"> <li>Record, describe and analyse the frequency of outcomes of simple probability experiments involving randomness, fairness, equally and unequally likely outcomes, using appropriate language and the 0-1 probability scale</li> <li>Complete two-way tables.</li> <li>Calculate probability from a frequency tree.</li> <li>Sort information into a Venn Diagram.</li> <li>Interpret and draw pie charts</li> <li>Finding an amount given a part of the ratio.</li> <li>Use the bar model to share an amount into a given ratio.</li> <li>Finding an amount given a part of the ratio</li> <li>Find a proportion from an amount</li> <li>Scale and rate problems.</li> </ul>	<ul style="list-style-type: none"> <li>Recall the formulae to calculate the volume of cubes and cuboids.</li> <li>Identify reflection symmetry (identifying lines of symmetry).</li> <li>Identify rotational symmetry (order of rotation).</li> <li>Negative numbers in context.</li> <li>Describe how a shape has been reflected.</li> <li>Describe how a shape has been rotated.</li> <li>Describe how a shape has been translated in words.</li> <li>Describe how a shape has been enlarged.</li> <li>Construct a triangle with 2 angles and 1 side.</li> <li>Construct a triangle with 3 sides.</li> <li>Construct a triangle with 2 sides and 1 angle.</li> <li>Identify the nets of different shapes.</li> <li>Do draw 3D shaped using isometric paper.</li> </ul>
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## Curriculum Overview

	<b>Advanced</b> <ul style="list-style-type: none"> <li>Represent and partition decimals in a variety of ways E.g. 0.422 could be written as four tenths, two hundredths and two thousandths or four hundred and twenty-two thousandths.</li> <li>Use the symbols =, ≠, &lt;, &gt;, ≤, ≥</li> <li>Solve problems, including missing number problems, using number facts, place value and more complex addition</li> <li>Bank Statements (use of correct language and experience of calculating missing information)</li> <li>Converting from hours to minutes; minutes to seconds; years to months; weeks to days.</li> <li>Solve problems involving the converting between units of time.</li> <li>Show that multiplication can be done in any order (commutative) and division cannot.</li> <li>Coefficients written as fractions rather than decimals.</li> </ul>	<ul style="list-style-type: none"> <li>Expand and simplify with indices.</li> <li>Solve equations containing brackets.</li> <li>Use the correct language for sequences.</li> <li>To be able to manipulate mixed numbers.</li> <li>To be able to solve multi topic problems involving fractions.</li> <li>Associating a fraction with a division to convert any fraction to a decimal.</li> <li>Introduce (appropriately) <math>y=mx+c</math>.</li> <li>Plotting simple graphs of the form <math>y=mx+c</math>.</li> </ul>	<ul style="list-style-type: none"> <li>Find the mean from a frequency table.</li> <li>Solve problems when you are given the mean</li> <li>Calculate reverse mean.</li> <li>Be able to read and complete a grouped frequency table.</li> <li>Do metric conversions for area and volume.</li> <li>Apply knowledge of area and perimeter to calculate that of compound shapes.</li> </ul>	<ul style="list-style-type: none"> <li>Draw and measure bearings.</li> <li>Know the difference between interior and exterior angles.</li> <li>Use angle facts in polygons to derive properties of different polygons including regular polygons.</li> <li>Apply algebra to angle sum problems.</li> <li>Use a Venn Diagram to calculate the HCF/LCM</li> <li>Find the HCF of 3 numbers.</li> <li>Round to any number of significant figures.</li> </ul>	<ul style="list-style-type: none"> <li>Using the bar model to solve problems.</li> <li>Use a Venn diagram to calculate probabilities.</li> <li>Complete a two-way table from worded problems.</li> <li>Find probability from two-way tables</li> <li>Calculate ratio or amounts in worded problems.</li> <li>Calculate amounts when given the proportion.</li> </ul>	<ul style="list-style-type: none"> <li>Calculate the volume of prisms.</li> <li>Combining multiple operations with negative numbers</li> <li>To describe reflection in the form <math>y=mx+c</math></li> <li>Enlarge a shape using fractional scale factors.</li> <li>Identify a 3D shape from 2D drawings.</li> <li>Sketch a 3D shape from different views.</li> </ul>
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## Curriculum Overview

Year Group	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 8 Topic						
<b>Developing</b>	<ul style="list-style-type: none"> <li>Calculate using the four operations with integers (including negatives) and fractions.</li> <li>Calculate missing values in bank statements</li> <li>Write, understand and simplify simple algebraic expressions</li> <li>Substitute numerical values into simple formulae and expressions and finding any variable</li> <li>Solve simple algebraic equations with variables on one side</li> <li>Identify types of angles and use basic angles facts to find missing angles.</li> <li>Find the mean, median, mode and range from sets of data</li> </ul>	<ul style="list-style-type: none"> <li>Be able to read various graphs and charts: pie charts, bar charts, pictograms and line graphs.</li> <li>Identify prime, square, cube and triangular numbers.</li> <li>Identify arithmetic sequences.</li> <li>Recognise term to term rules in a sequence.</li> <li>Define and identify factors and multiples</li> <li>Find the HCF and LCM of a pair of numbers.</li> <li>Find the area and perimeter of square, rectangle, triangle, parallelogram and trapezium.</li> <li>Round any integer to a given number of sig figs.</li> <li>Round any decimal to a given number of decimal places.</li> <li>Convert between basic FDP e.g. <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{10}</math> and convert using a calculator.</li> <li>Finding unit fractions of an amount</li> <li>Use bar method to model a ratio</li> <li>Simplify ratios</li> </ul>	<ul style="list-style-type: none"> <li>Simplifying a ratio [recap]</li> <li>Using ratio and unitary methods.</li> <li>Use the bar model to represent a ratio</li> <li>Using the bar model to find an amount</li> <li>use multiples to scale simple recipes</li> <li>Finding simple best buys using real-life situations.</li> <li>Find basic percentages such as 10%, 50%, 25% without a calculator</li> <li>Understand correct notation for indices.</li> <li>Understand what <math>5^3 \cdot 6^5</math> means and to be able to simplify to index form</li> <li>Interpret simple real-life graphs, including speed/distance/time graphs.</li> </ul>	<ul style="list-style-type: none"> <li>Know probability notation (fraction, decimal, %)</li> <li>Identify independent events.</li> <li>Understand the probability scale and place probabilities on the scale</li> <li>Understand that probabilities sum to 1</li> <li>Write a probability as a fraction, decimal or percentage</li> <li>Complete frequency trees</li> <li>Complete two way tables</li> <li>Apply formulae to calculate volume and surface area of cuboids and cubes.</li> <li>Plot coordinates in all 4 quadrants.</li> </ul>	<ul style="list-style-type: none"> <li>Plot linear graphs given a table of values.</li> <li>Expand a single bracket such as <math>2(x+5)</math>.</li> <li>Factorise simple linear expressions.</li> <li>Plot and interpret scatter graphs, including drawing a line of best fit.</li> <li>Identifying quadrilaterals and 3D shapes based on their properties.</li> <li>Accurately draw and measure angles.</li> <li>Draw a fully labelled simple pie chart.</li> </ul>	<ul style="list-style-type: none"> <li>To describe the order or rotation of a shape.</li> <li>To identify lines of symmetry.</li> <li>Enlarge shapes given a positive scale factor</li> <li>Translate shapes</li> <li>Solve basic equations.</li> <li>Use basic formulae</li> <li>All four operations with decimals.</li> <li>Calculate with powers of 10.</li> <li>Identify congruent shapes</li> <li>Identify similar shapes</li> <li>Understand scale drawings.</li> </ul>



## Curriculum Overview

Year Group		Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 8 Topic							
Knowledge	<b>Core</b>	<ul style="list-style-type: none"> <li>Calculate using the four operations with integers (including negatives) fractions, including adding and subtracting fractions with different denominators</li> <li>Calculate missing values in bank statements, understand the terms credit, debit and balance</li> <li>Write, understand and simplify algebraic expressions, including using more than one variable</li> <li>Substitute numerical values into formulae and expressions, including negatives</li> <li>Set up and solve multi-step algebraic equations with variables on one side, including negative and fraction solutions</li> <li>Find missing values given an average.</li> <li>Identify types of angles and use basic angles facts to find missing angles, including identifying and calculating angles in parallel lines</li> </ul>	<ul style="list-style-type: none"> <li>Calculate averages from frequency tables.</li> <li>Identify arithmetic sequences.</li> <li>Reading various graphs and charts: pie charts, bar charts, pictograms and line graphs</li> <li>Define and identify factors and multiples, including prime factorisation.</li> <li>Find the HCF and LCM of a pair of numbers. Model both methods.</li> <li>In context style questions for area and perimeter. Find the area and circumference of a circle, including in terms of <math>\pi</math>.</li> <li>Use rounding to 1 sig fig to estimate.</li> <li>Convert between any fraction, percentage and terminating decimal</li> <li>Be able to find the fraction of an amount for any number</li> <li>Use bar method to share in a given ratio</li> <li>Use bar method to solve ratio problems where one side of the ratio is given in a question</li> </ul>	<ul style="list-style-type: none"> <li>Using the bar model to share an amount into a given ratio</li> <li>Understand unitary method and apply to problems and recipes use scaling or unitary methods to calculate best buy problems</li> <li>Convert between different currencies.</li> <li>Understand how to find any percentage without a calculator by building up easier %</li> <li>Use multipliers to find percentage of an amount</li> <li>Simplify indices using laws of indices.</li> <li>Know and apply the multiplication, division and bracket rules for indices</li> <li>Draw real-life graphs.</li> </ul>	<ul style="list-style-type: none"> <li>Calculate probabilities from simple outcomes</li> <li>Identify independent events</li> <li>Complete a frequency tree</li> <li>Calculate probability from a frequency tree</li> <li>Create two-way tables</li> <li>Calculate probability from two-way tables Understand the or/and rule of probability.</li> <li>Recall and apply formulae to calculate volume and surface area of cuboids and other prisms.</li> </ul>	<ul style="list-style-type: none"> <li>Plot linear graphs given a table of values.</li> <li>Know That linear graphs are in the form <math>y=mx+c</math></li> <li>Find gradients and y-intercepts of lines.</li> <li>Expand a single bracket, including brackets such as <math>(x+3)</math> and factorise linear expressions.</li> <li>Expand double brackets.</li> <li>Plot and interpret scatter diagrams, including describing correlation.</li> <li>Use a line of best fit and understand that correlation does not imply causation.</li> <li>Construct a triangle with 2 angles and 1 side, construct a triangle with 3 sides, construct a triangle with 2 sides and 1 angle</li> <li>Identify shapes based on their properties 2D and 3D</li> <li>Calculate bearings</li> <li>Draw a fully labelled pie chart.</li> </ul>	<ul style="list-style-type: none"> <li>To rotate a given shape around a centre of rotation.</li> <li>To fully describe a rotation or reflection.</li> <li>Enlarge shapes given a positive scale factor, from a COE. Translate shapes using vector notation.</li> <li>To reflect a given shape in a line.</li> <li>Solving equations containing brackets</li> <li>Solving equations containing fractions.</li> <li>Solve formulae</li> <li>Understand anything to the power 0 is 1</li> <li>Use of standard form with large and small numbers</li> <li>Use scale drawings</li> <li>Understand map ratios</li> </ul>



## Curriculum Overview

Year Group		Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 8 Topic							
	<b>Advanced</b>	<ul style="list-style-type: none"> <li>Calculate for operations with integers and extend to using BIDMAS</li> <li>Understand the terms credit, debit and balance Extend to including the concept of being overdrawn</li> <li>Calculate using the four operations mixed numbers, including adding and subtracting fractions with different denominators</li> <li>Write, understand and simplify algebraic expressions, including forming expressions from worded questions and diagrams</li> <li>Substitute numerical values into complex formulae and expressions, including decimals, negatives and fractions</li> <li>Set up and solve equations with variables on both sides, including negative and fraction solutions. Extend to equations in context and changing the subject</li> <li>Find missing angles, including identifying and calculating angles in parallel lines. Extend to include multi-step problems and bearings</li> </ul>	<ul style="list-style-type: none"> <li>Know when to apply which average</li> <li>Calculate averages from frequency tables and ungrouped frequency tables.</li> <li>To read, draw and interpret dual bar charts and calculating averages from charts.</li> <li>Find the nth term and any given term of an arithmetic sequence.</li> <li>To find if a number is in a sequence and what term number if it is.</li> <li>To find the HCF and LCM of 3 numbers</li> <li>Find missing lengths</li> <li>Calculating area and perimeter of compound shapes</li> <li>Estimating calculations when rounded to a significant figure.</li> <li>Understand error intervals.</li> <li>Be able to turn a fraction into a recurring decimal and percentage.</li> <li>Find fractions of fractions</li> <li>Understand simple algebraic fractions</li> <li>Using fraction of amount in complex problems</li> <li>Finding the original number given the fraction of the number</li> <li>Use bar model to interpret and solve worded ratio questions</li> <li>Be able to write ratios in form 1:n</li> <li>Using the bar model to solve problems</li> <li>Currency conversions</li> </ul>	<ul style="list-style-type: none"> <li>Understand inverse proportion</li> <li>Increase and decrease by a percentage (including using multipliers) Extend to finding the original amount following a % increase or decrease.</li> <li>Finding the original amount given a percentage increase/decrease.</li> <li>Write a change as a percentage.</li> <li>Combine multiple laws.</li> <li>Understand simple fractional and negative indices</li> <li>Interpret real life graphs, including speed/distance/time graphs. Extend to drawing real life graphs.</li> <li>Use real-life graphs to calculate speed.</li> <li>Use relative frequency to calculate probabilities from real events.</li> <li>Understand mutually exclusive events.</li> <li>Complete Venn diagrams when given the probability.</li> </ul>	<ul style="list-style-type: none"> <li>Complete frequency trees and calculate probabilities that have independent events. i.e. 10 counters in a bag one is taken out of the bag and not replaced.</li> <li>Complete two-way tables with missing values.</li> <li>Apply formulae to calculate volume and surface area of prisms (including cylinders).</li> </ul>	<ul style="list-style-type: none"> <li>Find gradients and y-intercepts of lines.</li> <li>Extend to plotting without a table and plotting lines such as <math>2x+3y=6</math>.</li> <li>Expand a single bracket, including brackets such as <math>x(x+3)</math> and factorise linear expressions.</li> <li>Expand and then factorise into double brackets.</li> <li>Plot and interpret scatter diagrams, including describing correlation.</li> <li>Use a line of best fit to estimate.</li> <li>Accurately draw and measure bearings and be able to apply this to real-life situations</li> <li>Accurately interpret a pie chart by measuring angles.</li> </ul>	<ul style="list-style-type: none"> <li>To fully describe a rotation and reflection</li> <li>Finding COR. Reflect in lines such as <math>x=3</math>, <math>y=2</math>.</li> <li>Reflecting in diagonal lines.</li> <li>Describe fully a translation.</li> <li>Describe fully an enlargement.</li> <li>Extend to fractional enlargements.</li> <li>Solve equations containing fractions.</li> <li>Rearrange formulae to change the subject.</li> <li>Four operations with decimals and Real-life problems involving decimal calculations.</li> <li>Solve equations with indices e.g. <math>3^{4x+5} = 81</math></li> <li>Calculate with standard form.</li> <li>Understand different types of congruency.</li> <li>Calculate lengths of similar shapes</li> <li>Compare lengths, areas and volumes with ratios</li> </ul>



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Department: Maths

Year Group		Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 9							
Knowledge	Developing	<ul style="list-style-type: none"> <li>Four operations with integers.</li> <li>Calculate using the four operations with integers (including negatives) and fractions.</li> <li>Write, understand and simplify simple algebraic expressions.</li> <li>Substitute numerical values into simple formulae and expressions and finding any variable.</li> <li>Read, write and convert time between analogue and digital 12 – and 24-hour clocks.</li> <li>Calculate a fraction of an amount.</li> <li>Solve linear equations, one-step and two step.</li> <li>Draw and interpret bar charts, pictograms and line graphs.</li> </ul>	<ul style="list-style-type: none"> <li>To calculate percentages of amounts for 10%, 20%, 50%, 25% without a calculator.</li> <li>To calculate percentages with a calculator.</li> <li>Read and plot coordinates in all 4 quadrants.</li> <li>Use formulae for calculating perimeter and area of common 2D shapes.</li> <li>Round numbers to the nearest 10, 100, 1000.</li> <li>Round to nearest integer.</li> <li>Use basic angle facts Know the names for different types of angle.</li> <li>Use a protractor to draw and measure angles.</li> <li>Recall angle sums in triangles and quadrilaterals and use these facts to calculate missing angles.</li> <li>Simplify a ratio.</li> <li>Find a proportion from an amount.</li> <li>Use the bar model to share an amount into a given ratio.</li> <li>Record, describe and analyse the frequency of outcomes of simple probability experiments.</li> <li>List outcomes.</li> </ul>	<ul style="list-style-type: none"> <li>Define and identify factors and multiples, including prime factorisation.</li> <li>Use the correct language for sequences.</li> <li>Recognise arithmetic and geometric sequences.</li> <li>Add and subtract positive decimals greater than and less than one and with a different number of decimal places.</li> <li>Calculate the volume of a cube and a cuboid.</li> <li>Add and subtract with negative numbers.</li> <li>Convert between basic FDP e.g. <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{10}</math> and convert using a calculator.</li> </ul>	<ul style="list-style-type: none"> <li>Complete a frequency tree to present information.</li> <li>Interpret a frequency tree.</li> <li>Calculate probabilities from a frequency tree.</li> <li>Converting from hours to minutes; minutes to seconds; years to months; weeks to days.</li> <li>Solve time and money problems.</li> <li>Calculate mean, median, mode, range.</li> <li>Classify polygons and identify key elements of 3D shapes.</li> </ul>	<ul style="list-style-type: none"> <li>Understand reflection symmetry (identifying lines of symmetry).</li> <li>Understand rotational symmetry (order of rotation).</li> <li>Reflect shapes in a mirror line.</li> <li>Enlarge a shape by a positive scale factor.</li> <li>Bank Statements (use of correct language and experience of calculating missing information).</li> <li>Read and interpret bus timetables.</li> <li>Complete and interpret two-way tables.</li> <li>Calculate probabilities from two-way tables.</li> <li>Calculate area of 2D shapes.</li> </ul>	<ul style="list-style-type: none"> <li>Sort information into a Venn Diagram.</li> <li>Accurately use a calculator.</li> <li>Recap rounding to the nearest 1, 10, 100, 1000.</li> <li>Round to decimal places.</li> <li>Apply BIDMAS rules in different contexts.</li> </ul>
	Core	<ul style="list-style-type: none"> <li>Four operations with fractions; incl. mixed numbers and improper fractions.</li> <li>Form and solve algebraic equations and inequalities.</li> <li>Represent inequalities on a number line.</li> <li>Draw and interpret pie charts and scatter graphs.</li> <li>Plot and interpret scatter graphs,</li> </ul>	<ul style="list-style-type: none"> <li>Plot multiple coordinates on a graph that follow the same rule/ pattern i.e. linear graphs.</li> <li>Use formulae for calculating area and perimeter of all 2D shapes.</li> <li>Find the area and circumference of a circle, including in terms of pi.</li> <li>Substitute numerical values, including negative values, into simple formulae and expressions and finding any variable.</li> <li>Round any decimal to a given number of decimal places.</li> <li>Estimating calculations when rounded to a significant figure.</li> </ul>	<ul style="list-style-type: none"> <li>Calculate HCF and LCM using multiple methods, including Venn diagrams.</li> <li>Construct angle and perpendicular bisectors.</li> <li>Construct triangles.</li> <li>Solve loci problems.</li> <li>Use scale drawings.</li> <li>Find the nth term of a linear sequence.</li> <li>Know whether a number will be a term in a sequence.</li> </ul>	<ul style="list-style-type: none"> <li>Convert between fractions, decimals and percentages.</li> <li>Finding probabilities from a frequency tree containing fractions, ratios, percentages etc...</li> <li>Find probabilities from Venn diagrams.</li> <li>Reflect shapes in a mirror line.</li> <li>Rotate shapes about a centre of rotation.</li> <li>Translate a shape.</li> </ul>	<ul style="list-style-type: none"> <li>Recall and identify prime, square, cube and triangle numbers.</li> <li>Prime factorisation.</li> <li>Introduce (appropriately) <math>y=mx+c</math>.</li> <li>Plotting simple graphs of the form <math>y=mx+c</math>.</li> <li>Calculating the gradient (from 2 points) and y-intercept.</li> </ul>	<ul style="list-style-type: none"> <li>Know and apply laws of indices.</li> <li>Understand correct notation for indices.</li> <li>Understand what <math>5^3</math>, <math>6^5</math> means and to be able to simplify to index form.</li> <li>Enlarge a shape with a negative scale factor.</li> <li>Describe all 4 types of transformation.</li> <li>Combine transformations.</li> </ul>





## Curriculum Overview

		including drawing a line of best fit. <ul style="list-style-type: none"> <li>Use multipliers to find percentage of an amount</li> <li>Increase and decrease by a percentage (including using multipliers) Extend to finding the original amount following a % increase or decrease.</li> <li>Finding the original amount given a percentage increase/decrease.</li> </ul>	<ul style="list-style-type: none"> <li>Truncate decimals.</li> <li>Calculate angles in parallel lines.</li> <li>Forming and solving equations from angles.</li> <li>Calculate bearings.</li> <li>Finding an amount given a part of the ratio.</li> <li>Find a proportion from an amount.</li> <li>Complete sample space diagrams and calculate probabilities.</li> </ul>	<ul style="list-style-type: none"> <li>4 operations with decimals.</li> <li>Calculate the volume of prisms.</li> <li>Calculate the surface area of prisms.</li> <li>4 operations with negative numbers.</li> </ul>	<ul style="list-style-type: none"> <li>Enlarge a shape by a positive scale factor, including fractions.</li> <li>Identify properties of triangles and quadrilaterals.</li> </ul>	<ul style="list-style-type: none"> <li>Solve problems involving the converting between units of time.</li> <li>Solve quadratic equations by factorising.</li> <li>Calculate averages from grouped and ungrouped frequency tables.</li> </ul>	<ul style="list-style-type: none"> <li>Expand single and double brackets.</li> <li>Factorise into single and brackets.</li> </ul>
	<b>Advanced</b>	<ul style="list-style-type: none"> <li>4 operations with fractions, including algebraic terms.</li> <li>Scatter graphs incl. language of correlation and drawing and using line of best fit.</li> <li>Form and solve equations linked to area and perimeter.</li> <li>Calculate the long or short side using Pythagoras' theorem.</li> <li>Calculate compound interest and simple interest problems.</li> <li>Calculate reverse percentages.</li> </ul>	<ul style="list-style-type: none"> <li>Solve simultaneous equations by elimination or substitution.</li> <li>Form and solve simultaneous equations.</li> <li>Understand error intervals.</li> <li>Quadratic sequences.</li> <li>Find missing angles, including identifying and calculating angles in parallel lines. Extend to include multi-step problems and bearings.</li> <li>Calculate angles in polygons.</li> <li>Complete and interpret probability trees.</li> <li>Calculate direct and inverse proportion, using the formulae.</li> <li>HCF and LCM, including terms containing algebra.</li> </ul>	<ul style="list-style-type: none"> <li>Expand and factorise double brackets.</li> <li>Extend to expanding triple brackets.</li> <li>Factorise including difference of two squares.</li> <li>Set notation for Venn diagrams.</li> <li>Plot and interpret Cumulative Frequency diagrams and Box Plots.</li> <li>Understand LQ, UQ and IQR.</li> <li>Similarity and congruency.</li> </ul>	<ul style="list-style-type: none"> <li>Negative and fractional indices.</li> <li>Interpreting straight line graphs.</li> <li>Standard form calculations.</li> </ul>	<ul style="list-style-type: none"> <li>Finding side lengths and angles using trigonometry.</li> <li>Combined Pythagoras and trigonometry problems.</li> <li>Solve bearings problems using angle rules.</li> <li>Solve harder quadratic equations by factorising.</li> <li>Sketching quadratics after factorising.</li> <li>Conditional probability.</li> </ul>	<ul style="list-style-type: none"> <li>Understand iteration notation and solve by iteration.</li> <li>Plotting quadratic graphs accurately, identifying points of interception.</li> <li>Write identities using the distributive law.</li> </ul>