Curriculum Plans: Year 10 ACC (Mathematics)

	Topic	Knowledge: By the end of the unit students will know:	Skills: What skills will students have developed by the end of this unit?	Key terms: What new key terms and vocabulary will be learnt in this unit?	Summative Assessment: How will pupils be assessed in this unit?
AUTUMN TERM 1	Pythagoras Similar Triangles Trigonometry 3D Pythagoras and Trigonometry Fractions, Decimals, and Percentages Converting Recurring	The Pythagorean Theorem and its application in right-angled triangles. How to identify and work with similar triangles. Using trigonometric ratios (sine, cosine, tangent) to solve problems. Applying Pythagoras and trigonometry in three-dimensional contexts.	Applying Pythagoras' Theorem to solve various problems. Using properties of similar triangles to solve geometry problems. Using trigonometric ratios to solve problems in different contexts. Solving complex problems involving three-dimensional shapes. Converting between different	Hypotenuse, right-angled triangle, theorem Similarity, scale factor, corresponding sides Sine, cosine, tangent, adjacent, opposite 3D geometry, Pythagoras, trigonometry Fraction, decimal, percentage	Weekly homework set via Sparx Maths. Half-term and end-of-term assessments covering all content taught.

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	Decimals to Fractions Ratios and the Unitary Method Proportionality Upper and Lower Bounds	How to convert between fractions, decimals, and percentages. How to convert recurring decimals into fractions. Understanding ratios and using the unitary method to solve problems. Writing and using equations for direct and inverse proportionality. Finding and calculating with upper and lower bounds.	numerical forms fluently. Changing recurring decimals into fractions. Applying the unitary method to a variety of ratio problems. Setting up and solving proportionality problems. Estimating values using bounds.	Recurring decimal, convert Ratio, unitary method Proportionality, direct, inverse Upper bound, lower bound	
AUTUMN TERM 2	Topic Transformations (Reflection,	How to perform and describe reflections,	Performing and describing		Weekly homework set via Sparx Maths. Half-term and end-of-term

	Rotation, Translation) Enlargement Transformations Calculating Averages from Grouped Data Calculating Moving Averages Cumulative Frequency Tables and Graphs Calculating the Median and Interquartile Range	rotations, and translations. How to perform enlargements with different scale factors. How to calculate averages from grouped frequency tables. Understanding and calculating moving averages in time series data. How to construct and interpret cumulative frequency tables and graphs. How to calculate the median and interquartile	transformations accurately. Understanding and applying enlargement transformations. Calculating statistical measures from grouped data. Using moving averages to analyse data. Constructing and interpreting cumulative frequency graphs. Calculating and interpreting	Transformation, reflection, rotation Enlargement, scale factor Mean, mode, median, range Moving average, trend Cumulative frequency Interquartile range, median	assessments covering all content taught.

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	Box and Whisker Plots Scatter Graphs and Correlation Distance-Time and Velocity-Time Graphs Arcs and Sectors	range from cumulative data. How to construct and interpret box and whisker plots. How to draw scatter graphs and identify the type of correlation. Drawing and interpreting distance-time and velocity-time graphs. How to calculate lengths of arcs and areas of sectors in circles.	measures of spread. Drawing and interpreting box plots. Identifying correlations and trends in scatter graphs. Interpreting and drawing graphs for motion problems. Applying formulae to find lengths and areas in circles.	Box plot, whisker Correlation, scatter graph Velocity, acceleration Arc, sector, segment	
LENT TERM	Volume and Surface Area of Prisms	How to calculate the volume and surface area of different prisms.	Calculating volumes and surface areas of prisms.	Volume, surface area	Weekly homework set via Sparx Maths. End-of-term assessments

	Density and Pressure Volume & Surface Area of Cones, Pyramids, & Spheres Scale Factors and Similar Shapes Quadratic Graphs Equations of Straight Lines	How to calculate density and pressure in different contexts. Calculating volume and surface area for cones, pyramids, and spheres, including rates of flow. Using scale factors to enlarge shapes and calculate volume and surface area. How to draw and use quadratic graphs to solve equations. Finding and understanding the equations of straight-line graphs.	Calculating density and pressure in various applications. Calculating complex volumes and surface areas. Using scale factors for enlargement in 3D contexts. Using quadratic graphs to solve equations. Finding equations of straight lines in	Density, pressure Cones, pyramids, spheres Scale factor, similarity Quadratic, parabola Straight line, gradient Parallel, perpendicular	covering all content taught.

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	Parallel and Perpendicular Lines Angle Rules Circle Theorems Expanding Triple Brackets	Identifying and finding equations of parallel and perpendicular lines. Using angle rules to find missing angles in various shapes. Understanding and applying circle theorems. Expanding expressions involving triple brackets.	different contexts. Identifying and working with parallel and perpendicular lines. Applying angle rules to solve geometry problems. Applying circle theorems to solve problems. Expanding complex algebraic expressions.	Interior angles, exterior angles Circle theorem, chord Expand, bracket	
SUMMER TERM	Factorising Quadratics	How to factorise quadratics and solve quadratic equations using different methods. Simplifying and manipulating	Factorising and solving quadratic equations.	Quadratic, factorise Surd, irrational	Weekly homework set via Sparx Maths. End of Year exams in June, covering all content taught.

	Simplifying and Manipulating Surds Rationalising the Denominator Handling Data Cycle Histograms and Frequency Density Inequalities Algebraic Proof	expressions involving surds. How to rationalise the denominator of a surd. Understanding the handling data cycle and data collection methods. Drawing and interpreting histograms and calculating frequency density. Understanding and solving linear and quadratic inequalities. Using algebra to prove number statements and disprove them	Simplifying expressions involving surds. Rationalising denominators accurately. Collecting and handling data efficiently. Drawing accurate histograms and calculating frequency densities. Solving and representing inequalities graphically and algebraically. Using algebraic proof to verify	Rationalise Data cycle, sampling Histogram, frequency density Inequality, solution Algebraic proof, counterexample	

		using counterexamples.	or disprove statements.		
	Algebraic Fractions	Adding, subtracting, multiplying, and dividing algebraic fractions.	Manipulating algebraic fractions effectively.	Algebraic fraction	
	Re-arranging Equations	Re-arranging equations where the subject appears once or more than once.	Re-arranging complex equations to make a variable the subject.	Re-arranging, subject	
	Index Notation Negative and Fractional Indices	Understanding index notation and working with powers. Working with negative and fractional indices.	Applying index rules confidently. Working with indices, including negative and fractional forms.	Index notation Negative index, fractional index	