### KS4 Maths / Year 9 Higher / Academic Year 2022- 2023

Year 9 - Higher	Autumn 1	Autumn 2	Spring 1	Spring 2	
	Composite: Number	Composite: Algebra	Composite: Interpreting and Representing data	Composite: Angles and	Composite: 0
			Component 1: Construct statistical diagrams	<u>Trigonometry</u>	
	Component 1: Number	Component 1: Algebraic	Pie charts		Component
	problems and reasoning	Indices	Stem and Leaf diagram (Back to back)	Component 1: Angle properties	Write the eq
	Calculating combinations	Zero, negative and fraction	Frequency Polygons	of triangles and quadrilateral	Rearranging
	Factorials	indices	Component 2: Time series graphs & Scatter Graphs	Component 2: Angles of	Component
	Component 2: Place value	Component 2: Expanding	Component 3: Averages and range Applying suitable	polygons (interior & exterior)	Sketching gra
	and estimating	and factorising	averages and range to justify statements	Component 3: Pythagoras	Gradient of a
	Using rounding to	Understanding identity and	Estimate the mean from grouped data	Theorem	points
	estimate calculations	equation notation	Modal class and class width include the median	Component 4: Right-Angled	Component
	Component 3: HCF and	Component 3: Solve	Component 4: Statistical diagrams 2	Triangle Trigonometry	change
	LCM	Equations	Graphs: Misleading graphs and charts, line graphs &	Trigonometry	SDT graph &
	Prime Factor	Solve equations involving	choosing suitable graphs	Angles of elevation and	Component
	decomposition including	brackets and an unknown		depression	Draw and int
	index form	on both sides.		Component 5: Solve problems	Direct propo
	Calculating Highest	Cross multiplication	Composite: Fractions, Ratio and Percentages	with a combination of Pythagoras	Line of best f
	Common Factor (HCF) and	Form and solve equations	Component 1: Fractions	Theorem and Trigonometry	Component
	Lowest Common Multiple	using geometry facts	4 operations with mixed numbers	Component 6: Exact values of	Midpoint of a
	(LCM) including use of	Component 4: Formulae	Working with reciprocal	Sine, Cosine and Tangent	Interpreting
	Venn Diagrams	Write & substitute into a	Component 2: Ratios		including par
	Solving problems using	given formula	Write a ratio in the form 1:n or n:1		lines
	HCF and LCM	Change the subject of a	Using unit ratios to solve problems		Justifying if p
Curriculum	Component 4: Calculating	formula	Sharing in a given ratio		equation of a
Content	with powers (indices)	Component 5: Linear	Calculating using ratio when given 1 value		Component
	Powers and roots in	sequences	Component 3: Ratio and proportion		Component
	calculations	Write and apply position to	Use proportion to solve problems (e.g. exchange rates)		graphs
	Index Laws (number)	term rules of a linear	Component 4: Percentages		Component
	Component 5: Zero,	sequence (nth term)	Percentage increase / decrease (VAT)		Interpret line
	negative and fraction	Component 6: Other	Simple Interest& real life		Draw the gra
	indices	sequences	Percentage change Percentage Profit / Loss		Compositor
	<b>Component 6: Standard</b> <b>form</b> Writing numbers in	Fibonacci sequences Geometric sequences	Reverse Percentage		Composite: A
	standard form and	-			Component
	calculating with standard	Quadratic sequences Pascal's triangle	<b>Component 5: F, D, P</b> Using a mixture of fractions, decimals and percentages;		Component : Compound sl
	form	Component 7: More	Converting recurring decimals to fraction		Component 2
	Component 7: Working	expanding and factorising	converting recurring decimais to fraction		Converting b
	with surds	Expanding double brackets			(linear, area a
	Simplifying a surd	including difference of two			Component
	Calculating using surds	squares			Error Interva
	Rationalise the	Factorise quadratics			bounds
	denominator	Use expanding and			Component
		factorising to solve			Surface are a
		problems			Component
		Expand three brackets			Area and circ
					of pi)
					Component
					Semicircles a
		I			Jennencies



# THE OLDHAME

#### Summer 1

#### **Graphs**

**t 1: Linear graphs** equation of a line g y = mx + c **t 2: More Linear graphs** graphs f a line and of two given

#### t 3: Graphing rates of

& Velocity time graphs **at 4: Real life graphs** Interpret real life graphs bortion graphs t fit **at 5: Line segments** f a line segment g the gradient of a line arallel and perpendicular

f points are on a given f a line

t 6: Quadratic graphs t 7: Cubic and reciprocal

t 8: More graphs near and non-linear graphs raph of a circle

#### Area and Volume

t 1: Perimeter and area shapes & composite shapes t 2: Area of a trapezium between metric units a and volume) t 3: Units of accuracy vals and upper and lower

t 4: Prisms and volume of prisms t 5: Circles ircumference (also in terms

t 6: Sectors of circles and quarter circles

#### Summer 2

<u>Composite:</u> <u>Transformations and</u> <u>Constructions</u>

**Component 1: 3D Solids** Plans and elevations Component 2: Reflections **Component 3: Rotations** Component 4: Translations Component 5: Enlargement including negative and fractional scale factors Component 6: **Combinations of** transformations **Component 7: Bearings** & scale drawings Apply map scales and scale drawings Component 8: **Constructing triangles** Constructing triangles (SSS, ASA, SAS, RHS) Constructing shapes using triangles **Component 9: Bisectors** Perpendicular bisector of a line including from a point on the line and above or below the line Bisecting an angle Component 10: Loci of a point, a line, two-point, two intersecting lines Shading regions which satisfy a requirement

					Calculate arc lengths, perimeter, angles and area of sectors Component 7: Volume and surface area of a cylinder and a sphere (hemisphere) Component 8: Volume and surface area of pyramids and cones	
Prior knowledge and skills (from previous year / key stage)	Multiples and Factors, Directed Numbers, Venn Diagrams, HCF and LCM, Roots and index notation	Simplify an expression, Simplify fractions, Expand single brackets, Substitution, Position-to- term rules	Reading tables of information, Mean, Mode, Median and Range of a data set, Displaying and Comparing data, Grouped data Fraction of an amount, Operations using fractions, Ratios, Percentage of an amount	Squaring and square roots, Regular shapes, Angles on parallel lines, Substitution, Formula, Properties of shapes	Speed, Solve equations, Equation of a line, Plotting coordinates, Function tables Rounding, Capacity, Surface area, Nets, Volume, Units	Metric conversions, Congruent and similar shapes, Rotation, Reflection, Translations, Enlargements, Plotting straight line graphs, x and y coordinates, Use of a protractor and compass
Assessment Objectives	Confidently apply number skills to solve problems, including giving justifications.	Manipulate expressions and formulae to solve unknown values, including justifications as to methods used.	Interpret and represent data to identify and justify trends including making estimates as to future outcomes and apply Fractions, Percentage and Ratio to solve problems and make justifications	Apply angle facts to calculate missing values including the justification as to why a decision should or should not be made	Use graphs to make comparisons and conversions between different pieces of data, and make justifications as to decisions made. Apply properties of 2D and 3D shapes to solve problems and make justifications as to answers given	Use advanced motor skills to make accurate representations to support judgements made and solutions offered, including justification as to why.
Vocabulary / Key Subject Terminology	Prime factor tree, Venn diagram, Highest common factor, Lowest common multiple, Standard form, Surd, Rationalise a denominator	Identity, Equation, Expression, Formula, Variable, Subject, Sequence, Geometric sequence, Quadratic, Double brackets	Back to Back, Polygon, Frequency, Modal Class, Scatter Graph, Bivariate data, Interpolation, Extrapolation, Outliers Reciprocal, Unit Ratios, Direct Proportion, Simple Interest, VAT, Depreciates	Interior, Exterior, Hypotenuse, Opposite, Adjacent, Sine, Cosine, Tangent, Angle of elevation, Angle of depression, Exact Values	Midpoint, Reciprocal Functions, Parabola, Minimum Point, Maximum Point, Plotting and Drawing, Reading and Interpreting Volume, Capacity, Surface Area, Prism, Circumference, Pyramid	Plan, Elevation, Transformation, Object, Image, Scale Factor, Column Vector, Congruent, Similar, Bearing, Construct, Bisector, Locus, Perpendicular, Resultant Vector
Assessment 1	Prior knowledge assessment at the commencement of each unit of work	Prior knowledge assessment at the commencement of each unit of work	Prior knowledge assessment at the commencement of each unit of work	Prior knowledge assessment at the commencement of each unit of work	Prior knowledge assessment at the commencement of each unit of work	Prior knowledge assessment at the commencement of each unit of work
Assessment 2	End of unit test followed by WCF and self- assessment (Active Teach)	End of unit test followed by WCF and self- assessment (Active Teach)	End of unit test followed by WCF and self- assessment (Active Teach)	End of unit test followed by WCF and self-assessment (Active Teach)	End of unit test followed by WCF and self-assessment (Active Teach)	End of unit test followed by WCF and self-assessment (Active Teach)
Cross Curricular Links with other Faculties	Number Science - 7.3 (Energy stores and transfers) Component 3- Individual Liberty – Gender gap and women in mathematics/STEM	Algebra Business - 9.rotation (becoming an accountant) Science - 8.2 (mixtures and the changing earth) British Values – Individual Liberty –	Interpreting and Representing data English - Throughout Business - 8.rotation (becoming an accountant) <u>Fractions, Ratio and Percentages</u> Business - 10.5 The economy	<u>Angles and Trigonometry</u> Computing - 8.3 (scratch programming)	<u>Graphs</u> Health and Wellbeing - 7.6 (Methods of training) <u>Area and Volume</u> Humanities - 10.1 (Field work) <u>British Values – Individual liberty –</u> <u>Component 3 - Graph work to</u>	<u>Transformations and</u> <u>Constructions</u> Art - 7.1 (unaided and aided drawing)

	British Vales – Black History Month - Mutual Respect & Tolerance - Celebration of cultural contributions and achievements British Values – Component 6- Individual liberty – critical thinking – Putting arguments in standard form	<u>Component 1 - Alan</u> <u>Turing</u> <u>British Values –</u>	British Values – Component 1, 2, 4 & 6- Mutual   Respect & Tolerance - Celebration of contributions   and achievements   https://www.mathscareers.org.uk/article/black-   heroes-mathematics/   British Values – Component 2- Individual liberty –   Use of data to manipulate audience.   British Values – Component 4 - The rule of law –   Economics and business	British Values – Component 3- Mutual Respect & Tolerance - Celebration of contributions and achievements   British Values – Component 4 – Contribution of the Windrush generation to STEM.   British Values – Component 2- Tolerance - component 7 - Use maths to learn about different faiths and cultures around the world. E.g. looking at patterns/shapes within Islam / Hindu religions.	include topics of where individual liberty has been encroached.	British Values – Component 1 - Mutual respect – Maths disabilities (e.g, Dyscalculia and other disabilities)
Knowledge Organiser content	Key vocabulary, formulae and concepts meet within each unit, including Hegarty Maths clip numbers to promote independent learning opportunities	Key vocabulary, formulae and concepts meet within each unit, including Hegarty Maths clip numbers to promote independent learning opportunities	Key vocabulary, formulae and concepts meet within each unit, including Hegarty Maths clip numbers to promote independent learning opportunities	Key vocabulary, formulae and concepts meet within each unit, including Hegarty Maths clip numbers to promote independent learning opportunities	Key vocabulary, formulae and concepts meet within each unit, including Hegarty Maths clip numbers to promote independent learning opportunities	Key vocabulary, formulae and concepts meet within each unit, including Hegarty Maths clip numbers to promote independent learning opportunities
Extra-Curricular Offer	"Problem of the week" Maths booster sessions Chess club Puzzle club Mastermind club Hegarty Maths club	"Problem of the week" Maths booster sessions Chess club Puzzle club Mastermind club Hegarty Maths club	"Problem of the week" Maths booster sessions Chess club Puzzle club Mastermind club Hegarty Maths club	"Problem of the week" Maths booster sessions Chess club Puzzle club Mastermind club Hegarty Maths club	"Problem of the week" Maths booster sessions Chess club Puzzle club Mastermind club Hegarty Maths club	"Problem of the week" Maths booster sessions Chess club Puzzle club Mastermind club Hegarty Maths club

## KS4 Maths / Year 10 Higher / Academic Year 2022 - 2023

Curriculum Coefficient in front of x <sup>2</sup> Repeated percentage change bounds in trignometry Stratified Sample Linear & Quadratic Component 2: Angeins   Gomponent 2: Solve quadratics using the quadratic formula Component 2: Component 3: Solve quadratics using the quadratic Component 2: Component 2: Component 2: Component 2: Component 2: Component 3: Sine rule Component 2: Component 3: Graphs of Sine, Cosine and Tangens triunction Component 3: Graphs of Quadratic Angles subtended at the centre and Intervent 4: Graphs of Component 4: Graphs of Quadratic equations 7: Graphs of Quadratic equations 7: Graphs of Quadratic equations 7: Graphs of Quadratic equadratic equations 7: Graphs of Quadratic equadratic equations 7: Graphs of Quadratic equadratic equadratis equadratic equadr	Year 10 - Higher	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Solve probabilitySolve problems involving congruenceProbability of events not happeningcongruenceProbabilities sum up to 1Component 3: SimilarityRelative frequencyUse scale factor to solve problems involving similar shapesTheoretical probabilityinvolving similar shapesComponent 3: Independent events and tree diagramsUse links between linear scale factor in area and volume scaleFrequency trees probabilityfactorIndependent probabilityfactorTree Diagramsfactor	Curriculum	Composite: Equations and InequalitiesComponent 1: Solving quadraticequations via factorisingCoefficient in front of x²Component 2: Solve more complexquadraticsSolve quadratics using the quadraticformulaSolve quadratics by completing thesquareComponent 3: Forming and solvingsimple simultaneousReal-life simultaneous equationsComponent 4: Linear and quadraticsimultaneous equationsReal-life simultaneous equationsComponent 5: InequalitiesNumber line inequalitiesListing integers which satisfy inequalitiesSolving inequalities (including doublesided)Component 1: Combined eventsCombinationsSample space diagramComponent 2: Mutually exclusive events& experimental probabilityProbabilities sum up to 1Relative frequencyTheoretical probabilityComponent 3: Independent events andtree diagramsFrequency trees probabilityIndependent probability	Composite: Multiplicative ReasoningComponent 1: Growth and decay Repeated percentage change Compound interest Income including overtime Component 2: Compound measures Speed/Distance/Time Kinematics Formulae Component 3: More Compound measures Density/Mass/Volume Pressure/Force/Area Component 4: Ratio & Proportion Use direct / inverse proportion graphs Algebraic proportion notation including using formulaeComposite: Similarity and CongruenceComponent 1: Congruence Apply and know conditions of congruenceComponent 2: Geometric proof and congruence Solve problems involving congruenceComponent 3: Similarity Use scale factor to solve problems involving similar shapes Use links between linear scale factor in area and volume scale	Composite: Trigonometry Component 1: Accuracy Applying upper and lower bounds in trigonometry Component 2: Graphs of Trig functions Graphs of Sine, Cosine and Tangent function Component 3: Sine rule Calculating areas and the sine rule Component 4: The Cosine rule Solve bearing problems (2D) Component 5: Solving problems in 3D Pythagoras Theorem 3D 3D Trigonometry 3D Component 6: Transforming	Composite: Further Statistics Component 1: Sampling Stratified Sample Estimate the size of a population Component 2: Cumulative Frequency graphs Lower/Upper quartiles and interquartile range Component 3: Box plots including comparative box plots Component 4: Histograms Drawing and interpreting histograms Component 5: Comparing and describing populations including consideration of	Composite: Equations and GraphsComponent 1: Solving simultaneous equations graphically Linear & Quadratic Component 2: Representing equations graphically Graphing inequalities including regionsComponent 3: Graphs of quadratic functions including turning points and rootsSolving quadratic equations Find approximate solutions to quadratic equations graphically Component 4: Graphs of cubic functions including roots Component 5: Iteration Iterative process for quadratic and	Composite: Circle Theorems Component 1: Radii and Chords Solve problems involving chord and radii Component 2: Tangents Tangents at a point and from a point Reasoning using tangent facts Component 3: Angles in circles 1 Angles subtended at the centre and the circumference of a circle Angle in a semi-circle is a right angle Component 4: Angles in circles 2 Angle facts about cyclic quadrilaterals Angles is the same segment Alternate segment theorem Component 5: Applying circle theorems Solve angle problems using circle theorems Give reasons for angle sizes using mathematical language Equation of the tangent to a circle at a



### THE OLDHAMĔ ACADEMY ᢓ

Prior knowledge and skills (from previous year / key stage)	Inequality notation, Solving equations, Forming expressions and equations, Expanding and factorising Operations with fractions, Probability language, Probability diagrams, Outcomes	Direct proportion principles, Metric/imperial conversions, Changing the subject of a formula, Substitution Congruent shapes, Similar shapes, Scale factors, Vertically opposite angles, Angles on parallel lines properties	Substitution, Rearranging Formulae, Sine, Cosine and Tangent in right-angled triangles, Inverse function on a calculator, Multi-step problems with geometry, Bounds	Diving into a ratio, Discrete and Continuous data, Averages, Range, Grouped frequency tables, Representing and interpreting data	Simplifying surds, Solve inequalities, Inequality notation, Expanding double brackets, Factorise quadratics, Completing the square, Simultaneous equations, Plotting graphs, Substitution	Factorise, Properties of circles, Angle properties of triangles and quadrilaterals, Pythagoras Theorem, Congruent triangles, Labelling parts of circles, perpendicular lines
Assessment Objectives	Applying and manipulating quadratic expressions and equations to provide solutions to problems, including justifications of methods used Make decisions based on justified probabilities	Use multiplicative reasoning to ensure financial and real world safety and security Apply conditions of congruence and similarity to solve problems, including making justifications as to answers given	Confidently identify and apply correct formulae to solve problems in both 2D and 3D shapes, including justifying methods used.	Representing and Interpreting data to make justified comparisons and their real life application in decision making processes	Manipulate and represent algebraic principles to calculate solutions which satisfy an equation	Apply circle theorems and angle properties of 2D shapes to justify the value of missing angles including giving clear mathematical reasons as to methods used
Vocabulary / Key Subject Terminology	Roots, Quadratic, Perfect square, Completing the square, Simultaneous equations, Inequalities, Set notation Mutually exclusive, Tree diagram, Independent, Conditional, Intersection, Union	Compound interest, Velocity, Initial velocity, Acceleration, Mass, Volume, Force, Area, Density, Pressure Congruence, Similarity, Conditions, Statements, Scale factor, Enlargements, Linear, Area and Volume	Sine Rule, Cosine Rule, Tangent, Plane, Function, Inverse, Formulae, Rearrange, Translation, Diagonal, Trigonometric graphs, Angle notation	Population, Census, Sample, Bias, Random, Strata/Stratum, Stratified sample, Cumulative frequency, Upper class boundary, Upper / lower quartiles, Interquartile range, Box plot (box-and- whisker diagram), Comparative, Class Width, Frequency Density, Histograms	Simultaneous, Satisfy, Inequalities, Regions, Shaded, set notation, Quadratic Function, Roots, Turning point, Completed square, Sketch, Cubic function, Intersects, Maximum / minimum point	Tangent, Chord, Cyclic quadrilateral, Alternate segment, Perpendicular, Subtended, Semicircle, Circumference, Equal, Exterior angle, Interior angle, Radii, Diameter, Midpoint
Assessment 1	Prior knowledge assessment at the commencement of each unit of work	Prior knowledge assessment at the commencement of each unit of work	Prior knowledge assessment at the commencement of each unit of work	Prior knowledge assessment at the commencement of each unit of work	Prior knowledge assessment at the commencement of each unit of work	Prior knowledge assessment at the commencement of each unit of work
Assessment 2	End of unit test followed by WCF and self-assessment (Active Teach)	End of unit test followed by WCF and self-assessment (Active Teach)	End of unit test followed by WCF and self-assessment (Active Teach)	End of unit test followed by WCF and self- assessment (Active Teach)	End of unit test followed by WCF and self-assessment (Active Teach)	End of unit test followed by WCF and self-assessment (Active Teach)
Cross Curricular Links with other Faculties	Probability Computing - 11.3 (data representation)British Vales – Mutual Respect – There is no specific link to components but questions throughout this unit of work can include involve people, include the names of two people with the same gender or names originating from	Multiplicative ReasoningScience - 7.4 (fundamentalforces)Business - 9.rotation (becoming an accountant)British Vales – Mutual Respect – There is no specific link to components but questions throughout this unit of work can include involve people, include the names of two	British Vales –Mutual Respect – There is no specific link to components but questions throughout this unit of work can include involve people, include the names of two people with the same gender or names originating from different countries/cultures around the world.	Further Statistics Science - 11.1 (Sampling techniques) Links to British Values (mutual respect and tolerance): Limits to sampling (Component 1) → Comparing and contrasting societal attitudes in different countries	Equations and graphs Computing - 11.1 (programming techniques) Links to British Values (rule of laws) → (Component 1) → Discussion of historic figures in Algebra and maths, e.g. Blaise Pascal, Albert Einstein, Isaac Newton, etc.	British Values – Component 1 -   Mutual respect – Maths   disabilities (e.g, Dyscalculia and   other disabilities)   Links to British Values (rule of laws)   (Component 1) →   Discussion of historical figures e.g.   Pythagoras, explore story of   Pythagoras in a historic context. Also   use various visual methods of proving   Pythagoras' Theorem

	<u>different countries/cultures around</u> <u>the world.</u>	people with the same gender or names originating from different countries/cultures around the world.				
Knowledge Organiser content	Key vocabulary, formulae and concepts meet within each unit, including Hegarty Maths clip numbers to promote independent learning opportunities	Key vocabulary, formulae and concepts meet within each unit, including Hegarty Maths clip numbers to promote independent learning opportunities	Key vocabulary, formulae and concepts meet within each unit, including Hegarty Maths clip numbers to promote independent learning opportunities	Key vocabulary, formulae and concepts meet within each unit, including Hegarty Maths clip numbers to promote independent learning opportunities	Key vocabulary, formulae and concepts meet within each unit, including Hegarty Maths clip numbers to promote independent learning opportunities	Key vocabulary, formulae and concepts meet within each unit, including Hegarty Maths clip numbers to promote independent learning opportunities
Extra-Curricular Offer	"Problem of the week" Maths booster sessions Chess club Puzzle club Mastermind club Hegarty Maths club	"Problem of the week" Maths booster sessions Chess club Puzzle club Mastermind club Hegarty Maths club	"Problem of the week" Maths booster sessions Chess club Puzzle club Mastermind club Hegarty Maths club	"Problem of the week" Maths booster sessions Chess club Puzzle club Mastermind club Hegarty Maths club	"Problem of the week" Maths booster sessions Chess club Puzzle club Mastermind club Hegarty Maths club	"Problem of the week" Maths booster sessions Chess club Puzzle club Mastermind club Hegarty Maths club

## KS4 Maths / Year 11 Higher / Academic Year 2022-2023

Year 11 - Higher	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Curriculum Content	Composite: Algebra Component 1: Rearrange formula Subject appears once and appears twice Component 2: Algebraic fractions Add and subtract algebraic fractions Factorise and simplify algebraic fractions Multiply and divide Component 3: More complex algebraic fractions Add and subtract complex algebraic fractions Multiply and divide algebraic fractions Component 4: Surds Simplify expressions involving surds Expand expressions involving surds Expand expressions involving surds Rationalise the denominator of a fraction Component 5: Solve algebraic fraction Component 6: Functions Use function notation Find composite functions and inverse functions Component 7: Algebraic proof Prove a result using algebra	Composite: Vectors and Geometric Proof Component 1: Vector notation Understand and use notation Magnitude of a vector Component 2: Vector arithmetic Calculate using vectors including showing solutions graphically and the resultant of two vectors Component 3: Solve problems using vectors Use the resultant of two vectors to solve problems Express points as position vectors Component 4: Parallel vectors and collinear points Prove lines are parallel and points are collinear Component 5: Solve geometric problems in 2D using vector methods Apply vector methods for geometric proofs	Composite: Proportion and Graphs Component 1: Direct proportion Write and use equations to solve problems involving direct proportion Component 2: More direct proportion Solve problems involving square and cubic proportionality Component 3: Inverse proportion Write and use equations to solve problems involving inverse proportion Use and recognise graphs showing inverse proportion Component 4: Exponential functions Graphs of exponential functions (growth / decay) Component 5: Non-linear graphs Calculate the gradient of a tangent at a point Estimate the area under a non-linear graph Component 6: Translating graphs of functions Component 7: Reflecting and stretching graphs of functions	Year 11 Revision and Exam Preparation	Year 11 Revision and Exam Preparation	Year 11 Revision and Exam Preparation
Prior knowledge and skills (from previous year / key stage)	Rearranging formula, Factorising, HCF, Expanding and simplifying, Index Laws, Quadratic formula, Completing the square	Angle and line notation, Ratio to fraction conversions, Collecting like terms, Bearings, Translation, Column vectors	Plotting graphs, Interpreting graphs, Index notation, Reciprocals, Direct and inverse Proportion, Rearranging formulae	Year 11 Revision and Exam Preparation	Year 11 Revision and Exam Preparation	Year 11 Revision and Exam Preparation
Assessment Objectives	Applying algebraic principles to solve equations involving algebraic fractions, and to prove results.	Using vector principles to prove statements including justification of methods used	Justify statements using a variety of graphs and functions.	Year 11 Revision and Exam Preparation	Year 11 Revision and Exam Preparation	Year 11 Revision and Exam Preparation



# THE OLDHAME

Vocabulary / Key Subject Terminology	Isolating, Common denominator, factorise, simplify, rationalise, proof, counter example, consecutive	Vector, Magnitude, Displacement, Bold, Triangle law for vector addition, Resultant vector, Position vector, Collinear	Constant of proportionality, Inversely proportional, Exponential functions, Exponential growth / decay, Chord, Displacement	Year 11 Revision and Exam Preparation	Year 11 Revision and Exam Preparation	Year 11 Revision and Exam Preparation
Assessment 1	Prior knowledge assessment at the commencement of each unit of work	Prior knowledge assessment at the commencement of each unit of work	Prior knowledge assessment at the commencement of each unit of work	Year 11 Revision and Exam Preparation	Year 11 Revision and Exam Preparation	Year 11 Revision and Exam Preparation
Assessment 2	End of unit test followed by WCF and self-assessment (Active Teach)	End of unit test followed by WCF and self-assessment (Active Teach)	End of unit test followed by WCF and self-assessment (Active Teach)	Year 11 Revision and Exam Preparation	Year 11 Revision and Exam Preparation	Year 11 Revision and Exam Preparation
Cross Curricular Links with other Faculties	<u>Algebra</u> Science – 10.3 (Quantitate Chemistry)	<u>Vectors and Geometric Proof</u> Computing – 7.3 (Graphic Design)	Proportion and Graphs Business – 10.3 (Business idea)	Year 11 Revision and Exam Preparation	Year 11 Revision and Exam Preparation	Year 11 Revision and Exam Preparation
Knowledge Organiser content	Key vocabulary, formulae and concepts meet within each unit, including Hegarty Maths clip numbers to promote independent learning opportunities	Key vocabulary, formulae and concepts meet within each unit, including Hegarty Maths clip numbers to promote independent learning opportunities	Key vocabulary, formulae and concepts meet within each unit, including Hegarty Maths clip numbers to promote independent learning opportunities	Year 11 Revision and Exam Preparation	Year 11 Revision and Exam Preparation	Year 11 Revision and Exam Preparation
Extra-Curricular Offer	"Problem of the week" Maths booster sessions Chess club Puzzle club Mastermind club Hegarty Maths club	"Problem of the week" Maths booster sessions Chess club Puzzle club Mastermind club Hegarty Maths club	"Problem of the week" Maths booster sessions Chess club Puzzle club Mastermind club Hegarty Maths club	Year 11 Revision and Exam Preparation	Year 11 Revision and Exam Preparation	Year 11 Revision and Exam Preparation