

Year 7	Topic/Unit Algebraic Thinking	Topic/Unit Place Value and Proportion	Topic/Unit Applications of Number	Topic/Unit Directed Number/Fractional Thinking	Topic/Unit Lines and Angles	Topic/Unit Reasoning with Number
Subject Content	<ul style="list-style-type: none"> Sequences <ul style="list-style-type: none"> - Describe and continue a sequence given diagrammatically - Predict and check the next term(s) of a sequence - Represent sequences in tabular and graphical forms - Recognise the difference between linear and non-linear sequences - Continue numerical linear sequences - Continue numerical non-linear sequences - Explain the term-to-term rule of numerical sequences in words Understand and use algebraic notation <ul style="list-style-type: none"> - Given a numerical input, find the output of a single function machine - Use inverse operations to find the input given the output - Use diagrams and letters to generalise number operations - Use diagrams and letters with single function machines - Find the function machine given a simple expression - Substitute values into single operation expressions - Find numerical inputs and outputs for a series of two function machines - Use diagrams and letters with a series of two function machines - Find the function machines given a two-step expression - Substitute values into two-step expressions - Generate sequences given an algebraic rule - Represent one- and two-step functions graphically 	<ul style="list-style-type: none"> Place value and ordering integers and decimals <ul style="list-style-type: none"> - Recognise the place value of any number in an integer up to one billion - Understand and write integers up to one billion in words and figures - Work out intervals on a number line - Position integers on a number line - Round integers to the nearest power of ten - Compare two numbers using $=$, \neq, \leq, \geq - Order a list of integers - Find the range of a set of numbers - Find the median of a set of numbers - Understand place value for decimals - Position decimals on a number line - Compare and order any number up to one billion - Round a number to 1 significant figure Fraction, decimal and percentage equivalence <ul style="list-style-type: none"> - Represent tenths and hundredths as diagrams - Represent tenths and hundredths on number lines - Interchange between fractional and decimal number lines - Convert between fractions and decimals – tenths and hundredths - Convert between fractions and decimals – fifths and quarters - Understand the meaning of percentage using a hundred square - Convert fluently between simple fractions, decimals and percentages - Use and interpret pie charts - Represent any fraction as a diagram 	<ul style="list-style-type: none"> Solving problems with addition and subtraction <ul style="list-style-type: none"> - Properties of addition and subtraction - Mental strategies for addition and subtraction - Use formal methods for addition of integers - Use formal methods for addition of decimals - Use formal methods for subtraction of integers - Use formal methods for subtraction of decimals - Choose the most appropriate method: mental strategies, formal written or calculator - Solve problems in the context of perimeter - Solve financial maths problems - Solve problems involving tables and timetables - Solve problems with frequency trees - Solve problems with bar charts and line charts Solving problems with multiplication and division <ul style="list-style-type: none"> - Properties of multiplication and division - Understand and use factors - Understand and use multiples - Multiply and divide integers and decimals by powers of 10 - Convert metric units - Use formal methods to multiply integers - Use formal methods to multiply decimals - Use formal methods to divide integers - Use formal methods to divide decimals - Understand and use order of operations - Solve problems using the area of rectangles and parallelograms 	<ul style="list-style-type: none"> Operations and equations with directed number <ul style="list-style-type: none"> - Understand and use representations of directed numbers - Order directed numbers using lines and appropriate symbols - Perform calculations that cross zero - Add directed numbers - Subtract directed numbers - Multiplication of directed numbers - Multiplication and division of directed numbers - Use a calculator for directed number calculations - Evaluate algebraic expressions with directed number - Introduction to two-step equations - Solve two-step equations - Use order of operations with directed numbers Addition and subtraction of fractions <ul style="list-style-type: none"> - Understand representations of fractions - Convert between mixed numbers and fractions - Add and subtract unit fractions with the same denominator - Add and subtract fractions with the same denominator - Add and subtract fractions from integers expressing the answer as a single fraction - Understand and use equivalent fractions - Add and subtract fractions where denominators share a simple common multiple - Add and subtract fractions with any denominator - Use equivalence to add and subtract decimals and fractions - Use fractions in algebraic contexts - Use equivalence to add and subtract decimals and fractions 	<ul style="list-style-type: none"> Constructing, measuring and using geometric notation <ul style="list-style-type: none"> - Understand and use letter and labelling conventions including those for geometric figures - Draw and measure line segments including geometric figures - Understand angles as a measure of turn - Classify angles - Measure angles up to 180° - Draw angles up to 180° - Draw and measure angles between 180° and 360° - Identify perpendicular and parallel lines - Recognise types of triangle - Recognise types of quadrilateral - Identify polygons up to a decagon - Construct triangles using SSS - Construct triangles using SSS, SAS and ASA - Construct more complex polygons - Interpret simple pie charts using proportion - Interpret pie charts using a protractor - Draw pie charts Geometric Reasoning <ul style="list-style-type: none"> - Understand and use the sum of angles at a point - Understand and use the sum of angles on a straight line - Understand and use the equality of vertically opposite angles - Know and apply the sum of angles in a triangle - Know and apply the sum of angles in a quadrilateral - Solve angle problems using properties of triangles and quadrilaterals - Solve complex angle problems 	<ul style="list-style-type: none"> Developing Number Sense <ul style="list-style-type: none"> - Know and use mental addition and subtraction strategies for integers - Know and use mental multiplication and division strategies for integers - Know and use mental arithmetic strategies for decimals - Know and use mental arithmetic strategies for fractions - Use factors to simplify calculations - Use estimation as a method for checking mental calculations - Use known number facts to derive other facts - Use known algebraic facts to derive other facts - Know when to use a mental strategy, formal written method or a calculator Sets and Probability <ul style="list-style-type: none"> - Identify and represent sets - Interpret and create Venn diagrams - Understand and use the intersection of sets - Understand and use the union of sets - Generate sample spaces for single events - Calculate the probability of a single event - Understand and use the probability scale - Know that the sum of probabilities of all possible outcomes is 1 Prime Numbers and Proof <ul style="list-style-type: none"> - Find and use multiples - Identify factors of numbers and expressions

	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit
	<ul style="list-style-type: none"> Equality and Equivalence <ul style="list-style-type: none"> - Understand the meaning of equality - Understand and use fact families, numerically and algebraically - Solve one-step linear equations involving $+/−$ using inverse operations - Solve one-step linear equations involving $×/÷$ using inverse operations - Understand the meaning of like and unlike terms Understand the meaning of equivalence Simplify algebraic expressions by collecting like terms, using the $≡$ symbol 	<ul style="list-style-type: none"> - Represent fractions on number lines Identify and use simple equivalent fractions - Understand fractions as division - Convert fluently between fractions, decimals and percentages 	<ul style="list-style-type: none"> - Solve problems using the area of triangles - Solve problems using the mean <ul style="list-style-type: none"> Fractions and percentages of amounts - Find a fraction of a given amount - Use a given fraction to find the whole and/or other fractions - Find a percentage of a given amount using mental methods - Find a percentage of a given amount using a calculator 			<ul style="list-style-type: none"> - Recognise and identify prime numbers - Recognise square and triangular numbers - Find common factors of a set of numbers including the HCF - Find common multiples of a set of numbers including the LCM - Write a number as a product of its prime factors - Make and test conjectures - Use counterexamples to disprove a conjecture
Year 8	Proportional Reasoning	Representations	Algebraic techniques	Developing Number	Developing Geometry	Reasoning with Data
Subject Content	<ul style="list-style-type: none"> Ratio and scale <ul style="list-style-type: none"> - Understand the meaning and representation of ratio - Understand and use ratio notation - Solve problems involving ratios of the form $1 : n$ (or $n : 1$) - Solve proportional problems involving the ratio $m : n$ - Divide a value into a given ratio - Express ratios in their simplest integer form - Compare ratios and related fractions <ul style="list-style-type: none"> Multiplicative change - Solve problems involving direct proportion - Explore conversion graphs - Convert between currencies - Explore direct proportion graphs - Draw and interpret scale diagrams - Interpret maps using scale factors and ratios 	<ul style="list-style-type: none"> Working in the Cartesian plane <ul style="list-style-type: none"> - Work with coordinates in all four quadrants - Identify and draw lines that are parallel to the axes - Recognise and use the line $y = x$ - Recognise and use lines of the form $y = kx$ - Link $y = kx$ to direct proportion problems - Recognise and use lines of the form $y = x + a$ - Explore graphs with negative gradient ($y = -kx, y = a - x, x + y = a$) - Link graphs to linear sequences - Plot graphs of the form $y = mx + c$ <ul style="list-style-type: none"> Representing Data - Draw and interpret scatter graphs - Understand and describe linear correlation - Draw and use line of best fit - Identify non-linear relationships - Identify different types of data 	<ul style="list-style-type: none"> Brackets, equations and inequalities <ul style="list-style-type: none"> - Form algebraic expressions - Use directed number with algebra - Multiply out a single bracket - Factorise into a single bracket - Expand multiple single brackets and simplify - Solve equations, including with brackets - Form and solve equations with brackets - Understand and solve simple inequalities - Form and solve inequalities - Identify and use formulae, expressions, identities and equations <ul style="list-style-type: none"> Sequences - Generate sequences given a rule in words - Generate sequences given a simple algebraic rule - Generate sequences given a complex algebraic rule <ul style="list-style-type: none"> Indices 	<ul style="list-style-type: none"> Fractions and percentages <ul style="list-style-type: none"> - Convert fluently between key fractions, decimals and percentages - Calculate key fractions, decimals and percentages of an amount without a calculator - Calculate fractions, decimals and percentages of an amount using calculator methods - Convert between decimals and percentages greater than 100% - Percentage decrease with a multiplier - Calculate percentage increase and decrease using a multiplier - Express one number as a fraction or a percentage of another without a calculator - Express one number as a fraction or a percentage of another using calculator methods - Work with percentage change - Choose appropriate methods to solve percentage problems <ul style="list-style-type: none"> Number sense 	<ul style="list-style-type: none"> Angles in parallel lines and polygons <ul style="list-style-type: none"> - Understand and use basic angles rules and notation - Investigate angles between parallel lines and the transversal - Identify and calculate with alternate and corresponding angles - Identify and calculate with co-interior, alternate and corresponding angles - Solve complex problems with parallel line angles - Construct triangles and special quadrilaterals - Investigate the properties of special quadrilaterals - Identify and calculate with sides and angles in special quadrilaterals - Understand and use the sum of exterior angles of any polygon 	<ul style="list-style-type: none"> Line symmetry and reflection <ul style="list-style-type: none"> - Recognise line symmetry - Reflect a shape in a horizontal or vertical line 1 (shapes touching the line) - Reflect a shape in a horizontal or vertical line 2 (shapes not touching the line) - Reflect a shape in a diagonal line 1 (shapes touching the line) - Reflect a shape in a diagonal line 2 (shapes not touching the line) <ul style="list-style-type: none"> The data handling cycle - Set up a statistical enquiry - Design and criticise questionnaires - Draw and interpret pictograms, bar charts and vertical line charts - Draw and interpret multiple bar charts - Draw and interpret pie charts - Draw and interpret line graphs - Choose the most appropriate diagram for given set of data

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	<ul style="list-style-type: none"> Multiplying and dividing fractions <ul style="list-style-type: none"> Represent multiplication of fractions Multiply a fraction by an integer Find the product of a pair of unit fractions Find the product of a pair of any fractions Divide an integer by a fraction Divide a fraction by a unit fraction Understand and use the reciprocal Divide any pair of fractions 	<ul style="list-style-type: none"> Read and interpret ungrouped frequency tables Read and interpret grouped frequency tables Represent grouped discrete data Represent continuous data grouped into equal classes Represent data in two-way tables <ul style="list-style-type: none"> Tables & Probability Construct sample spaces for 1 or more events Find probabilities from a sample space Find probabilities from two-way tables Find probabilities from Venn diagrams 	<ul style="list-style-type: none"> Adding and subtracting expressions with indices Simplifying algebraic expressions by multiplying indices Simplifying algebraic expressions by dividing indices Using the addition law for indices Using the addition and subtraction law for indices 	(Starter activities) <ul style="list-style-type: none"> Round numbers to powers of 10, and 1 significant figure Round numbers to a given number of decimal places Estimate the answer to a calculation Calculate using the order of operations Calculate with money Convert metric measures of length Convert metric units of weight and capacity Solve problems involving time and the calendar 	<ul style="list-style-type: none"> Calculate and use the sum of the interior angles in any polygon Calculate missing interior angles in regular polygons <ul style="list-style-type: none"> Area of trapezia and circles Calculate the area of triangles, rectangles and parallelograms Calculate the area of a trapezium Calculate the perimeter and area of compound shapes (1) Investigate the area of a circle Calculate the area of a circle and parts of a circle without a calculator Calculate the area of a circle and parts of a circle with a calculator Calculate the perimeter and area of compound shapes (2) 	<ul style="list-style-type: none"> Represent and interpret grouped quantitative data Find and interpret the range Compare distributions using charts - Identify misleading graphs <ul style="list-style-type: none"> Measures of location Understand and use the mean, median and mode Choose the most appropriate average Identify outliers Compare distributions using averages and the range
Year 9	Reasoning with Algebra	Constructing in 2 and 3 Dimensions	Reasoning with Number	Reasoning with Geometry	Reasoning with Proportion	Representations and Revision
Subject Content	<ul style="list-style-type: none"> Straight line graphs <ul style="list-style-type: none"> Lines parallel to the axes, $y = x$ and $y = -x$ Using tables of values Compare gradients Compare intercepts Understand and use $y = mx + c$ Find the equation of a line from a graph Interpret gradient and intercepts of real-life graphs <ul style="list-style-type: none"> Forming and solving equations Solve one- and two-step equations and inequalities	<ul style="list-style-type: none"> Three-dimensional shapes <ul style="list-style-type: none"> Know names of 2-D and 3-D shapes Recognise prisms Accurate nets of cuboids and other 3-D shapes Sketch and recognise nets of cuboids and other 3-D shapes Plans and elevations Find area of 2-D shapes Surface area of cubes and cuboids Surface area of triangular prisms Surface area of a cylinder Volume of cubes and cuboids 	<ul style="list-style-type: none"> Numbers <ul style="list-style-type: none"> Integers, real and rational numbers Work with directed number Solve problems with integers Solve problems with decimals HCF and LCM Adding and subtracting fractions Multiplying and dividing fractions Solving problems with fractions Numbers in standard form <ul style="list-style-type: none"> Using percentages Use the equivalence of fractions, decimals and percentages Calculate percentage increase and decrease 	<ul style="list-style-type: none"> Deduction <ul style="list-style-type: none"> Angles in parallel lines Solving angles problems (using chains of reasoning) Angles problems with algebra Conjectures with angles Conjectures with shapes <ul style="list-style-type: none"> Rotation and translation Identify the order of rotational symmetry of a shape Compare and contrast rotational symmetry with line symmetry Rotate a shape about a point on a shape Rotate a shape about a point not on a shape 	<ul style="list-style-type: none"> Enlargement and similarity <ul style="list-style-type: none"> Recognise enlargement and similarity Enlarge a shape by a positive integer scale factor Enlarge a shape by a positive integer scale factor from a point Enlarge a shape by a positive fractional scale factor Work out missing sides and angles in a pair of given similar shapes <ul style="list-style-type: none"> Solving ratio & proportion problems 	<ul style="list-style-type: none"> Probability <ul style="list-style-type: none"> Single event probability Relative frequency – include convergence Expected outcomes Independent events Use diagrams to work out probabilities <ul style="list-style-type: none"> Algebraic representation Draw and interpret quadratic graphs Interpret graphs, including reciprocal and piece-wise Represent inequalities

Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit	Topic/Unit
<ul style="list-style-type: none"> - Solve one- and two-step equations and inequalities with brackets - Inequalities with negative numbers - Solve equations with unknowns on both sides - Solve inequalities with unknowns on both sides - Solving equations and inequalities in context - Substituting into formulae and equations - Rearrange formulae (one-step) - Rearrange formulae (two-step) <ul style="list-style-type: none"> • Testing conjectures Factors, Multiples and Primes - True or False? - Always, Sometimes, Never true - Show that Conjectures about number - Expand a pair of binomials - Conjectures with algebra - Explore the 100 grid 	<ul style="list-style-type: none"> - Volume of other 3-D shapes – prisms and cylinders <ul style="list-style-type: none"> • Constructions and congruency - Draw and measure angles - Construct and interpret scale drawings - Locus of distance from a point Locus of distance from a straight line/shape - Locus equidistant from two points - Construct a perpendicular bisector - Construct a perpendicular from a point - Construct a perpendicular to a point - Locus of distance from two lines - Construct an angle bisector - Construct triangles from given information Identify congruent figures - Explore congruent triangles Identify congruent triangles 	<ul style="list-style-type: none"> - Express a change as a percentage - Solve 'reverse' percentage problems - Recognise and solve percentage problems (non-calculator) - Recognise and solve percentage problems (calculator) <ul style="list-style-type: none"> • Maths and money - Solve problems with bills and bank statements - Calculate simple interest - Calculate compound interest - Solve problems with Value Added Tax Calculate wages and taxes - Solve problems with exchange rates - Solve unit pricing problems 	<ul style="list-style-type: none"> - Translate points and shapes by a given vector - Compare rotation and reflection of shapes <ul style="list-style-type: none"> • Pythagoras' Theorem - Squares and square roots - Identify the hypotenuse of a right-angled triangle - Determine whether a triangle is right-angled - Calculate the hypotenuse of a right-angled triangle - Calculate missing sides in right-angled triangles - Use Pythagoras theorem on coordinate axes - Explore proofs of Pythagoras' theorem 	<ul style="list-style-type: none"> - Solve problems with direct proportion - Direct proportion and conversion graphs - Solve problems with inverse proportion - Solve ratio problems given the whole or a part - Solve 'best buy' problems <ul style="list-style-type: none"> • Rates - Solve speed, distance and time problems without a calculator - Solve speed, distance and time problems with a calculator - Use distance/time graphs - Solve problems with density, mass and volume - Solve flow problems and their graphs - Rates of change and their units 	<ul style="list-style-type: none"> • Revision (Identify any key areas that need to be addressed and focus on these before embarking on KS4). <p>Examples –</p> <p>Representing Number:</p> <ul style="list-style-type: none"> - Standard form - Product of primes - Error intervals <p>Representing Data</p> <ul style="list-style-type: none"> - Scatter graphs - Statistical graphs - Measures - Tables and timetables - Data handling project <p>Algebraic Representations</p> <ul style="list-style-type: none"> - Find the rule for the n th term of a sequence - Investigating algebraic proof <p>Representing Problems</p> <ul style="list-style-type: none"> - Using graphs, equations, tables etc. to solve complex word problems 	

Year 10	Topic/Unit Using number	Topic/Unit Developing Algebra/ Expressions	Topic/Unit Developing data/ Proportions and Proportional Change	Topic/Unit Proportions and Proportional Change/Geometry	Topic/Unit Geometry	Topic/Unit Similarity
Subject Content *ELC Students will be given the opportunity to complete ELC Maths at some point near the beginning of year 10 if appropriate. Papers to be completed before end of Autumn term in year 11	<ul style="list-style-type: none"> • Non-calculator methods <ul style="list-style-type: none"> - Mental/written methods of integer/decimal addition and subtraction - Mental/written methods of integer/decimal multiplication and division - The four rules of fraction arithmetic - Rounding to decimal places and significant figures - Estimating answers to calculations Understand and use limits of accuracy • Types of number and sequences <ul style="list-style-type: none"> - Understand the difference between factors and multiples - Understand primes and express a number as a product of its prime factors - Find the HCF and LCM of a set of numbers - Describe and continue arithmetic and geometric sequences - Find the rule for the n the term of a linear sequence • Indices and Roots <ul style="list-style-type: none"> - Square and Cube numbers - Calculate higher powers and roots - Powers of ten and standard form - - The addition and subtraction rules for indices - Understand and use the power zero and negative indices - Work with powers of powers 	<ul style="list-style-type: none"> • Representing solutions of equations and inequalities <ul style="list-style-type: none"> - Understand the meaning of a solution - Form and solve one-step and two-step equations - Draw straight line graphs - Find solutions to equations using straight line graphs • Manipulating expressions <ul style="list-style-type: none"> - Simplify algebraic expressions - Form and solve equations and inequalities with fractions • Functions <ul style="list-style-type: none"> - Use function machines - Substitute into expressions and formulae - Use function notation - Work with composite functions - Work with inverse functions - Graphs of quadratic functions • Expanding & factorising <ul style="list-style-type: none"> - Expand and factorise with a single bracket - Expand binomials - Factorise quadratic expressions - Solve equations equal to 0 - Solve quadratic equations by factorisation • Algebraic Reasoning <ul style="list-style-type: none"> - Simplify complex expressions - Find the rule for the n th term of a linear sequence - Use rules for sequences - Solve linear simultaneous equations 	<ul style="list-style-type: none"> • Collecting, representing and interpreting data <ul style="list-style-type: none"> - Understand populations and samples - Primary and secondary data - Construct and interpret frequency tables and frequency polygons - Construct and interpret two-way tables - Construct and interpret line and bar charts (including composite bar charts) - Construct and interpret pie charts - Criticise charts and graphs - Find and interpret averages from a list/ table - Construct and interpret time series graphs - Construct and interpret stem-and-leaf diagrams - Compare distributions using charts and measures - Construct and interpret scatter graphs - Draw and use a line of best fit • Ratios & fractions <ul style="list-style-type: none"> - Compare quantities using a ratio Link ratios and fractions - Share in a ratio (given total or one part) - Use ratios and fractions to make comparisons Link ratios and graphs - Solve problems with currency conversion Link ratios and scales - Use and interpret ratios of the form $1 : n$ and $n : 1$ - Solve 'best buy' problems - Combine a set of ratios • Percentages and Interest <ul style="list-style-type: none"> - Convert and compare fractions, decimals and percentages - Work out percentages of amounts (with and without a calculator) - Increase and decrease by a given percentage 	<ul style="list-style-type: none"> • Probability <ul style="list-style-type: none"> - Find probabilities using equally likely outcomes - Use the property that probabilities sum to 1 - Using experimental data to estimate probabilities - Find probabilities from tables, Venn diagrams and frequency trees - Construct and interpret sample spaces for more than one event - Calculate probability with independent events - Use tree diagrams for dependant/independent events • Angles & bearings <ul style="list-style-type: none"> - Use cardinal directions and related angles - Draw and interpret scale diagrams - Understand and represent bearings - Measure and read bearings - Make scale drawings using bearings - Calculate bearings using angles rules - Understand and use the angle properties of parallel lines - Find missing angles using corresponding and alternate angles - Solve angle problems in triangles including between parallel lines and isosceles triangles (complex diagrams) - Understand angles proofs about triangles - Calculate the exterior and interior angles of regular polygons - Calculate the interior and exterior angles of polygons - Explain why some polygons fit together and others do not - Solve angle problems using equations - Solve geometric problems showing reasoning 	<ul style="list-style-type: none"> • Working with circles <ul style="list-style-type: none"> - Recognise and label parts of a circle • Transforming & constructing <ul style="list-style-type: none"> - Perform and describe line symmetry and reflection - Perform and describe rotation/rotational symmetry - Perform and describe translations of shapes - Perform and describe enlargements of shapes - Identify transformations of shapes - Perform and describe a series of transformations of shapes - <i>Perform standard constructions using ruler and protractor or ruler and compasses</i> - <i>Solve loci problems</i> 	<ul style="list-style-type: none"> • Congruence, similarity and enlargement <ul style="list-style-type: none"> - Identify similar shapes - Use parallel line rules to work out missing angles • Trigonometry <ul style="list-style-type: none"> - Explore ratio in similar right-angled triangles - Work fluently with the hypotenuse, opposite and adjacent sides - Use the tangent ratio to find missing side lengths - Use the sine and cosine ratio to find missing side lengths - Use sine, cosine and tangent to find missing side lengths - Use sine, cosine and tangent to find missing angles - Calculate sides in right-angled triangles using Pythagoras' Theorem - Select the appropriate method to solve right-angled triangle problems - Work with key angles in right-angled triangles • Vectors <ul style="list-style-type: none"> - Understand and represent vectors - Use and read vector notation - Draw and understand vectors multiplied by a scalar - Draw and understand addition of vectors - Draw and understand addition and subtraction of vectors

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			<ul style="list-style-type: none"> - Express one number as a percentage of another - Calculate simple and compound interest - Repeated percentage change Find the original value after a percentage change - Solve problems involving growth and decay 			
Year 11	Graphs	Algebra 2	Reasoning January - Mocks	Revision	Revision	Examinations
Subject Content	<ul style="list-style-type: none"> • Using graphs <ul style="list-style-type: none"> - Construct and interpret conversion graphs - Construct and interpret other real-life straight-line graphs - Interpret distance/time graphs - Construct distance/time graphs <ul style="list-style-type: none"> • - Construct and interpret speed/time graphs • Non-linear graphs - Plot and read from quadratic graphs - Plot and read from cubic graphs - Plot and read from reciprocal graphs - Recognise graph shapes Identify and interpret roots and intercepts of quadratics <ul style="list-style-type: none"> • Gradients & lines - Equations of lines parallel to the axis -Plot straight line graphs - Interpret $y = mx + c$ - Find the equation of a straight line from a graph - Equation of a straight-line graph given one point and gradient - Equation of a straight-line graph given two points - Determine whether a point is on a line Reflect shapes in given lines 	<ul style="list-style-type: none"> • Expanding & factorising <ul style="list-style-type: none"> - Expand and factorise with a single bracket - Expand binomials - Factorise quadratic expressions - Solve equations equal to 0 - Solve quadratic equations by factorisation <ul style="list-style-type: none"> • Changing the subject - Solve linear equations - Solve inequalities - Form and solve equations and inequalities in the context of shape - Change the subject of a simple formula - Change the subject of a known formula - Change the subject of a complex formula <ul style="list-style-type: none"> • Simultaneous equations - Solve a pair of linear simultaneous equations by adjusting one/both equation - Form and solve pair of linear simultaneous equations from given information 	<ul style="list-style-type: none"> • Multiplicative Reasoning <ul style="list-style-type: none"> - Use scale factors - Understand direct proportion - Calculate with pressure and density - Understand inverse proportion - Construct inverse proportion equations - Ratio problems <ul style="list-style-type: none"> • Mock review 	<ul style="list-style-type: none"> • Show that... <ul style="list-style-type: none"> - "Show that" with number - "Show that" with algebra - "Show that" with shape - "Show that" with angles - "Show that" with data - "Show that" with congruent triangles <ul style="list-style-type: none"> • Exam technique/prep 	<ul style="list-style-type: none"> • Revision 	<ul style="list-style-type: none"> • Examinations



Mathematics Curriculum Overview

ELC

Students will be given the opportunity to complete ELC Maths at some point near the beginning Year 10 if appropriate.

Papers to be completed before end of Autumn term in Year 11