

Year 10 Maths			
1 Number, Ratio and Proportion	<ul style="list-style-type: none"> To apply the four operations to positive and negative integers To add and subtract fractions with the same denominators To recognise and use BIDMAS To divide a quantity into a give ratio 	<ul style="list-style-type: none"> To determine the prime factorisation of a number To convert between mixed numbers and improper fractions To estimate answers, check calculations, including answers obtained using technology To use compound units such as speed, rates of pay and unit pricing 	<ul style="list-style-type: none"> To estimate powers and roots of any give positive integer To multiply and divide by a fraction To use compound units such as density and pressure To use inequality notation to specify simple error intervals Apply multiplication and division to fractions and decimals Calculate proportional change using multiplication Find the outcome of a given percentage increase or decrease
2 Probability	<ul style="list-style-type: none"> To record the outcomes of an event To describe and analyse the frequency of outcomes using tables and frequency tables To use appropriate language and the 0 to 1 probability scale 	<ul style="list-style-type: none"> To list of results and sets systematically using tables, grids and Venn diagrams To construct and use theoretical possibility spaces for single and combined experiments To apply the property that an exhaustive set of outcomes sum to 1 	<ul style="list-style-type: none"> To apply and interpret tree diagrams To understand the effect sample size has on distributions To apply the property that an exhaustive set of mutually exclusive events sum to 1 To calculate and interpret conditional probabilities through representation using expected frequencies
3 Statistics	<ul style="list-style-type: none"> To interpret and construct bar charts, pie charts and pictograms To interpret and construct vertical line graphs To use and interpret scatter graphs 	<ul style="list-style-type: none"> To recognise correlations To draw estimated lines of best fit To infer properties of populations or distributions form a sample 	<ul style="list-style-type: none"> To interpret and construct tables and line graphs for time series data To use scatter graphs to make predictions To extrapolate data
4 Geometry and Measures	<ul style="list-style-type: none"> To apply the properties of angles at a point, on a straight line and vertically opposite angles To calculate area and perimeter for composite shapes To know and apply formulae to calculate areas To identify, describe and construct transformations, including on a coordinate axes 	<ul style="list-style-type: none"> To use a ruler and compass to construct To know and use the formulae for Pythagoras' theorem To construct and interpret plans and elevations of 3D shapes To know and use the formulae for area and circumference of a circle 	<ul style="list-style-type: none"> To construct and interpret plans and elevations of 3D shapes To calculate surface area and volumes of spheres, pyramids, cones and composite solids To know and use the trigonometric ratios To enlarge a shape by a negative amount
5 Algebra	<ul style="list-style-type: none"> To substitute numerical values into formulae and expressions To plot graphs of equations that correspond to straight-line graphs in the coordinate plane To solve linear equations in one unknown algebraically To generate terms of a sequence from either a term-to-term or a position-to-term rule 	<ul style="list-style-type: none"> To be able to expand products of two binomials To use the form $y=mx+c$ to identify parallel lines To solve linear equations with the unknown on both sides of the equation To solve quadratic equations algebraically by factorising 	<ul style="list-style-type: none"> To be able to expand products of more than two binomials To use the form $y=mx+c$ to identify perpendicular lines To solve quadratic equations that require rearrangement To interpret the reverse process as the 'inverse function'