



## Mathematics: Curriculum Overview

### Year 10

Half Term	Topic studied	What will I learn?	How will I be assessed?
Year 10 Autumn 1	<i>Unit 12 – Quadratics</i>  <i>Unit 13- Circles and Constructions</i>	Solve quadratic equations.  Calculate the area and perimeter of circles and parts of circles. Use compasses to make accurate constructions. Find loci of points and solve problems. Understand and apply circle theorems.	Test in penultimate week before October HT. <i>(plus marking of exercise books throughout the term)</i>
Year 10 Autumn 2	<i>Unit 14 - Formulae and Functions</i>	Write and simplify a formula. Rearrange simple and more complex formulae. Use function notation. Find inverse and composite functions.	Test in the week before Xmas break. <i>(plus marking of exercise books throughout the term)</i>
Year 10 Spring 1	<i>Unit 15 - Ratio and Proportion</i>          <i>Unit 16 – 3D Shapes</i>	Describe proportion using percentages, fractions and decimals. Simplify ratios by cancelling down. Solve ratio problems. Use and interpret maps and scale drawings.  Recognise, sketch and name 3D shapes and their properties and nets. Represent 3D shapes on 2D diagrams, showing plan view, front and side elevation. Calculate volume and surface area of different shapes. Convert between units of volume eg $\text{cm}^3$ to $\text{mm}^3$ Understand and use 3D coordinates.	No formal test this half term. <i>(Marking of exercise books throughout the term)</i>
Year 10 Spring 2	<i>Unit 17 – Factors Powers and Roots</i>	Find HCF and LCM of two or more numbers Calculate and estimate powers and roots Apply the laws of indices including negative and fractional indices	Test in the week before Easter break. <i>(plus marking of exercise books throughout the term)</i>
Year 10 Summer 1	<i>Unit 18 – Handling Data 2</i>          <i>Unit 19 - Calculations 2</i>	interpret and construct line graphs (including time series graphs and frequency polygons) calculate an estimate for the mode, median and mean and range for continuous data. use and interpret a scatter graph and draw an estimated line of best fit. draw and interpret histograms (equal and unequal intervals) by calculating the frequency density, frequency or class width.	No formal test this half term. <i>(plus marking of exercise books throughout the term)</i>

