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| **Gartree High School Mathematics Curriculum** |
| **Subject aim:** Students understand a wide range of mathematical concepts, become fluent in mathematical procedures, develop their reasoning skills and apply their learning to solve problems. |
| **KS3 (years 7, 8 & 9) curriculum content** (following the National Curriculum) |
| **Year 7*** Calculations
* Fractions, decimals and percentages
* Measures, area and perimeter
* Angles and 2D shapes
* Constructions
 | * Algebraic expressions and equations
* Factors, multiples and primes
* Square and cube numbers
* Powers
* Rounding
 | * Bar charts and pictograms
* Averages
* Probability
* Function machines
* Expand brackets
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| **Year 8*** Calculations (including fractions)
* Fractions, decimals and percentages
* Area and perimeter
* Sequences
* Estimation
 | * Ratio and proportion
* Co-ordinates
* Plot linear graphs
* Constructions
* Graphs and tables
* Angle rules
* Writing and using formula
 | * Transformations
* 3D shapes
* Factorise expressions
* Volume and surface area
* Probability
* Highest common factors
* Lowest common multiples
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| **Year 9*** Fractions, decimals and percentages
* Factors, multiples and primes
* Collecting like terms
* Brackets
* Substitution
* Angle rules and polygons
 | * Approximation and estimation
* Ratio
* Direct and inverse proportion
* Interpret and represent data
* Equations & inequalities
* Formula
* Sequences
* 2D Shapes & 3D shapes
 | * Area and perimeter
* Volume and surface area
* Standard form
* Graphs of functions
* Transformations
* Congruency and similarity
* Units of measure
* Probability
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| **KS4 (years 10 and 11) GCSE curriculum content** |
| **Algebra** • Equations, expressions &  formulae • Inequalities • Functions • Iteration (Higher only) • Sequences | **Mensuration** • Area & perimeter• Circles • Pythagoras and trigonometry • Units of measure • Volume and surface area | **Basic Geometry** • 3D shapes • Angles • Circle theorems (Higher only) • Properties of 2D shapes • Ruler and compass constructions |
| **Congruency and Similarity**• Congruency & similarity• Transformations • Vector geometry | **Approximation and Estimation** • Rounding and truncation • Estimation • Error intervals | **Graphs of Equations and Functions** • Interpreting graphs • Straight line graphs • Transformations of curves and  their equations (Higher only) |
| **Indices and Surds** • Exact calculations • Powers and roots• Standard form | **Fractions, Decimals and Percentages** • Ordering • Repeat and inverse operations  | **Number Operations and Integers** • Calculations with integers • Whole number theory |
| **Probability** • Basic probability and experiments • Combined events and probability  diagrams | **Ratio, Proportion & Rates of Change** • Calculations with ratio • Direct and inverse proportion • Growth and decay | **Statistics** • Analysing data • Interpreting and representing data • Sampling |