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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 |
| **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 |
| **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 |
| **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 |