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| **Curriculum Plan for Parents – Year 8** |

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| **Subject** | Mathematics | **Contact Person** | Mrs Shaw / Miss Riley |

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| **Half term and topic** | **Your child will learn....** | **Key Homework** | **Assessment** |
| **Autumn 1**Calculation MethodsPlace Value & OrderNumber PropertiesConstructions | Formal written methods for adding, subtracting, multiplying and dividing; how to use BODMAS; rounding to decimal places; calculations involving negative values; multiples and factors; LCM & HCF; cube numbers and cube roots; prime numbers; prime factor decomposition; Roman Numerals; use index notation and simple instances of the Index Laws; introduction to surds; use mathematical equipment accurately; use isometric paper to draw 3D shapes;  | Homework will be set once each week to consolidate learning and provide challenge to promote independent thought. (Homework may be revision in the run-up to a test). |  |
| **Autumn 2**LociFDPAlgebra | Solve simple loci problems; mixed numbers; finding a fraction or a percentage of an amount; order fractions, decimals and percentages; calculating with fractions including different denominators; calculating with decimals; percentage increase and decrease; percentages greater than 100%; solve harder equations; substitution; | Homework will be set once each week to consolidate learning and provide challenge to promote independent thought. (Homework may be revision in the run-up to a test). | November – formal assessment on all work covered so far (non-calculator and calculator tests) |
| **Spring 1**AlgebraMeasuresSequences | Algebra (continued); use formulae to solve problems; rearrange formulae; expand brackets; solve inequalities and represent on a number line; use the correct units for length, mass, capacity and time; 12 and 24 hour clocks; change between different units; solve money problems; perimeter; area; volume; simple surface area; identify patterns in sequences; nth term rule for linear sequences;  | Homework will be set once each week to consolidate learning and provide challenge to promote independent thought. (Homework may be revision in the run-up to a test). | February – formal mid-year exams (non-calculator and calculator tests) |
| **Spring 2**Functions & GraphsRatio & ProportionTransformations | Plot coordinates on a graph; use function machines; plot graphs of linear functions using y = mx + c; solve simple problems involving ratio and proportion; divide a quantity into two or more parts using ratio; translate a shape using a column vector; reflections given the equation of a mirror line; rotations using a centre of rotation; enlargements using a centre of enlargement and/or fractional scale factors; describe a given transformation using correct terms; | Homework will be set once each week to consolidate learning and provide challenge to promote independent thought. (Homework may be revision in the run-up to a test). |  |
| **Summer 1**GeometryProbabilityHandling Data | Calculate missing angles in triangles and quadrilaterals; angles on a straight line, around a point and vertically opposite; nets of 3D shapes; regular and irregular polygons; angles on parallel lines; know that probabilities add up to 1; experimental probability; complete and use sample space diagrams to list all outcomes and calculate probabilities; stem & leaf diagrams; pie charts; two-way tables;  | Homework will be set once each week to consolidate learning and provide challenge to promote independent thought. (Homework may be revision in the run-up to a test). |  |
| **Summer 2**Handling DataRevision of all topics | Handling data (continued); calculate the averages and range for data in a frequency table; recognise discrete and continuous data; interpret information presented in a variety of different diagrams; | Homework will be set once each week to consolidate learning and provide challenge to promote independent thought. (Homework may be revision in the run-up to a test). | June – formal end-of-year exams on all topics covered during the year (calculator and non-calculator assessments) |