**Year Eight – Mathematics Curriculum**

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| **Autumn One** | **Spring One** | **Summer One** |
| **Percentages:** finding 12% of a quantity by × 0.12, then increasing and decreasing by × 1.12 etc.  **Sequences:** finding the *n*th term of a sequence.  **Pythagoras’s Theorem:** harder cases, with two triangles or context (Ex 1 done in Year 7)  **Volumes:** volumes of prisms and cylinders  **Scale Drawings:** including with bearings  **Angle Facts:** review of basic angle facts followed by *proofs* of them  **Averages and Range:** mean, mode, median and range for simple data and for frequency tables  **Pie Charts:** recap drawing and interpreting, and drawing charts using Excel (see sheet later) | **Algebraic Fractions:** simplifying, adding, subtracting, multiplying and dividing (simple cases only)  **Rearranging Formulae:** simple cases for one *x*  **Simultaneous Equations:** solving simple cases algebraically where no multiplying is necessary  **Inequalities:** review of solving inequalities/displaying on a number line from Year 7, including reversing the direction when multiplying or dividing by a negative number (new)  **Graphical Simultaneous Equations:** solving linear simultaneous equations graphically  **Travel Graphs:** interpreting and drawing  **Properties of Quadrilaterals:** of square, rectangle, rhombus, parallelogram, trapezium and kite  **Polygons:** interior and exterior angles in *irregular* polygons (regular seen in Year 7) | **Preparation for End Of Year Exams.** |
| **Autumn Two** | **Spring Two** | **Summer Two** |
| **Basic Algebra:** review of simplifying terms, multiplying out brackets  **Equations:** simple equations, equations involving fractions, from contexts  **Factorisation:** extracting common factors  **Expanding brackets:** expanding two brackets, e.g. (*x* + 1)(*x* – 2)  **Equations:** solving harder equations with brackets, e.g. (2*x* + 1)(*x* + 3) = *x*(2*x* –5)  **Standard Form:** converting from and to normal numbers, calculations with and without a calculator  **Compound Measures:** including distance, speed, time, converting currencies and density  **Plotting Graphs:** for straight line and curved graphs  **Gradient and *y*-intercept:** calculating gradients and *y*-intercept and use in *y* = *mx* + *c*  **Investigation/Project work (dependent on remaining time)** | **Loci:** locus from a point, from a line and from two points, i.e. perpendicular and angle bisectors  **Enlargements:** review transformations, introducing fractional scale factors for enlargements  **Translations:** using vector notation  **Combining Transformations:** combine rotations, reflections, enlargements and translations  **Arc Length and Sector Area:** basic formula then harder questions  **Areas and Volumes:** review simple areas, then harder questions inc. finding a radius/diameter  **Probability:** review finding the probability of a single event and sample spaces | **End of Year Exam.**  **Review of End of Year Exam.**  **Project and Investigation work.** |