

OVERVIEW

Students study topics in each of the five key strands in mathematics: Number, Algebra, Geometry, Ratio & Proportion and Statistics & Probability. Each strand builds on their prior learning from Years 7, 8, 9 and 10. We focus on developing knowledge and skills in each of the five strands which students will then build on to solve problems and reason mathematically.

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Unit 1: Pythagoras – finding the hypotenuse, finding the shorter side, isosceles triangles, Pythagoras in context, multistep problems

Unit 2: Right Angled Trigonometry – labelling sides, finding missing sides, finding missing angles, isosceles triangles, combined triangles and polygons, exact trigonometric values

Unit 3: Bearings & Scale Drawings – measuring and reading, drawing, bearings and angles

Unit 4: Transformations – reflection, rotation, translation, enlargement, combined transformations

Unit 5: Congruence – identifying congruence and missing side lengths, congruent triangles, congruent triangle proof

Assessment:

Students will be informally assessed every lesson using questioning, mini whiteboards and marking of independent work.

Students will sit a Paper 1, 2 and 3 during their Mock 1 exams in November.

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Unit 6: Vectors – writing and drawing vectors, adding and subtracting vectors, multiplying vectors, drawing resultant vectors, parallel vectors

Unit 7: Similar shapes – similarity, finding missing lengths, finding lengths using fractions

Unit 8: Constructions & Loci – perpendicular bisectors, angle bisectors and constructing angles, constructing triangles, loci of a point and a line, regions

Assessment:

Students will be informally assessed every lesson using questioning, mini whiteboards and marking of independent work.

Students will sit a Paper 1, 2 and 3 during their Mock 2 exams in March.

Sum

Revision Programme – students follow a bespoke revision programme based on topics identified from assessment QLAs. Topics studied will be selected from the following:

Manipulate quadratics, Rearrange formulae, trigonometry, $y=mx+c$ (plotting & algebraic), Simultaneous equations, Angles in parallel lines, Construction & Loci, Bearings, Transformations (incl fractional), Volume & SA, Functional Area, Perimeter, Volume, Tree diagrams, Scatter diagrams, Venn diagrams, Algebraic manipulation (incl BIDMAS) and substitution, Linear equations and inequalities, Sequences, Plot linear & quadratic graphs, Prime Factor Trees, Pie Charts, Angles (two step), Construction and Loci, Ratio, Operations with decimals, Best buys, recipes, Area, Surface Area and Volume, Transformations and Vectors, Scatter graphs, Calculator Skills, Standard Form

Assessment:

Students will be informally assessed every lesson using questioning, mini whiteboards and marking of independent work.

GCSE exams will take place in May/June

Useful resources for supporting your child at home:

Videos on MathsWatch ([MathsWatch](#))

Videos on Corbett Maths ([Videos and Worksheets – Corbettmaths](#))

CGP GCSE Maths Edexcel Revision Guide ([link here](#))

REVISE Pearson Edexcel GCSE (9-1) Mathematics ([link here](#))

Homework:

Homework will be set on MathsWatch ([MathsWatch](#)).

Homework will be set once a week and students are expected to achieve over 70% on their homework each week. Homework is bespoke for each class and based on GCSE style exam questions.