

Mathematics in the Fourth Form at Bruern Abbey Senior School

The Fourth Form sees the boys continue following their iGCSE curriculum. (We feel the iGCSE, which allows the use of a calculator on both papers and has a slightly more accessible language base, is the best GCSE option for Bruern boys.)

Some boys will continue with the Higher Tier curriculum whilst other will focus on the Foundation Tier. There might be a number of boys on the cusp of both tiers; we will be monitoring them carefully.

(On the Higher Tier papers scores from Grade 3 to Grade 9 can be obtained, whilst on the Foundation Tier the range is from Grade 1 to Grade 5.)

We follow the Pearson/Edexcel curriculum.

Boys will have seven lessons a week and in addition homework will be set twice during the week. Homework will usually be of a revision nature as our boys need to have core skills being reinforced on a regular basis.

The plan overleaf gives the topic schedule for the year. You can see that some of the major GCSE topics will be covered in this period at both levels.

Jed McCarthy and Steve Phillips.

Fourth Form Maths (Higher) 2023/24

Michaelmas	Lent	Summer
<p><u>Unit 9 – Equations and Inequalities</u></p> <ul style="list-style-type: none"> • Solving linear inequalities • Solving quadratic equations • Solving quadratic equations by completing the square • Solving simultaneous equations using the elimination method <p><u>Unit 10 – Probability</u></p> <ul style="list-style-type: none"> • Combined events • Mutually exclusive events • Experimental probability • Independent events and tree diagrams • Conditional Probability • Venn diagrams and set notation. <p><u>Unit 11 – Multiplicative Reasoning</u></p> <ul style="list-style-type: none"> • Growth and decay including compound interest. • Compound measures • Ratio and Proportion 	<p><u>Unit 12 – Similarity and Congruence</u></p> <ul style="list-style-type: none"> • Congruence and similarity • Geometric proof and congruence • Similarity • Similarity in 3D Objects <p>Unit 13 – Further Trigonometry</p> <ul style="list-style-type: none"> • Accuracy by using upper and lower bounds • Graphs of the Sine, Cosine and Tangents functions • Using the sine rule to calculate area • Using the cosine rule • 2D and 3D trigonometry problems • Transforming 'trig' graphs <p>Unit 14 – Further Statistics</p> <ul style="list-style-type: none"> • Sampling • Cumulative Frequency • Box Plots • Histograms • Comparing and describing distributions 	<p>Unit 15 – Equations and Graphs</p> <ul style="list-style-type: none"> • Simultaneous equations and graphs • Representing inequalities on a graph • Graphing quadratic equations • Graphing cubic equations • Using iteration to solve problems. <p>Unit 16 – Circle Theorems</p> <ul style="list-style-type: none"> • Radii and chords • Tangents • Angles in Circles • Applying circle theorems <p>Unit 17 – More Algebra</p> <ul style="list-style-type: none"> • Rearranging Formulae • Algebraic Fractions • Proofs • Surds • Solving algebraic fraction equations