

Mathematics

Year 10 GCSE Year 1

Content in written text is Foundation Tier

Content which is underlined in Intermediate Tier, along with the Foundation Tier work

Content in bold is Higher Tier only, alongside all other content

Note: some topics will appear in written text only, but are covered in greater detail as the tier of study increases.

Term	Topic	Content/Assessments	Home learning opportunities
1a	Number skills	<ul style="list-style-type: none"> Work with fractions, decimals, percentages and integers <u>Determine upper and lower bounds of numbers and use these in calculations</u> 	<p>Weekly homework activity to further develop and secure knowledge of topics covered</p> <p>Corbett Maths contains a range of videos to support students</p>
	Geometry	<ul style="list-style-type: none"> Use mathematical terminology with shapes correctly Draw nets of shapes and use isometric paper <u>Complete dimensional analysis on a formula</u> Construct 2D and 3D shapes Calculate perimeter, area, volume and surface area for a range of shapes 	
	Algebra	<ul style="list-style-type: none"> Use coordinates in all 4 quadrants Draw and interpret linear graphs, <u>including an understanding of gradient</u> 	
1b	Shape	<ul style="list-style-type: none"> Use mathematical terminology with shapes correctly <u>Classify shapes by their geometrical properties</u> Calculate missing angles in a variety of situations <u>Know and use circle theorems</u> 	
	Probability	<ul style="list-style-type: none"> Understand and use the sum of probabilities is 1 Express probabilities as fractions and decimals Work with scenarios with two outcomes that are not equally likely Understand mutually exclusive events Record all outcomes from an experiment Estimate outcomes based on theoretical probabilities Work with relatively frequency 	
Christmas Holidays			
2a	Further probability	<ul style="list-style-type: none"> Identify outcomes from experiments and use Venn diagrams and <u>tree diagrams</u> <u>Use the laws of probability to complete calculations</u> Conditional probability 	<p>Weekly homework activity to further develop and secure knowledge of topics covered</p>

	Money	<ul style="list-style-type: none"> • Sampling without replacement • Use mathematical knowledge when applied to money situations • Solve problems which include the use of different types of interest • Use exchange rates • Use interest rates, including the use of AER and APR 	<p>Corbett Maths contains a range of videos to support students</p>
2b	Algebra	<ul style="list-style-type: none"> • Understand the basics of algebra • Form and simplify algebraic expressions • Expand simple brackets • <u>Factorisation of simple expressions</u> • <u>Form and solve linear inequalities</u> • <u>Expansion of double brackets</u> 	
	Data	<ul style="list-style-type: none"> • Solve statistical problems and test hypotheses • Create a sample from a population using different methods, including stratified sampling • Critique questionnaires • <u>Determine factors which affect the reliability of data</u> • <u>Sort and tabulate discrete and continuous data</u> 	
Easter Holidays			
3a	Number skills	<ul style="list-style-type: none"> • Use ratio in a range of situations • <u>Direct and inverse proportion</u> • Use the correct terminology related to number • <u>Find the lowest common multiple and highest common factor of a pair of numbers</u> • Know and use the laws of indices • Understand standard form • <u>Use standard form in a range of calculations</u> 	<p>Weekly homework activity to further develop and secure knowledge of topics covered</p> <p>Corbett Maths contains a range of videos to support students</p>
3b	Algebra	<ul style="list-style-type: none"> • Find patterns in numbers and describe them accurately • Find the nth term of a linear sequence <u>and a quadratic sequence</u> • Substitute into expressions • <u>Transpose a formula</u> • <u>Factorisation of quadratic expressions</u> • <u>Simplify algebraic fractions</u> 	
	Further number skills	<ul style="list-style-type: none"> • Define rational and irrational numbers • Work with surds and rationalise the denominator of a fraction 	

Mathematics

Year 11 GCSE Year 2

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Term	Topic	Content/Assessments	Home learning opportunities
1a	Shape	<ul style="list-style-type: none"> Identify <u>congruent shapes</u> Understand different conditions to prove congruence in triangles Describe symmetry of shapes, including rotational symmetry Complete transformations of shapes 	<p>Weekly homework activity to further develop and secure knowledge of topics covered</p> <p>Corbett Maths contains a range of videos to support students</p>
	Data	<ul style="list-style-type: none"> Construct a range of graphs to represent data <u>Construct and interpret frequency diagrams and frequency polygons</u> <u>Construct and interpret cumulative frequency tables</u> Create and interpret histograms 	
1b	Algebra	<ul style="list-style-type: none"> Use graphs that describe real life situations <u>Understand and use $y = mx + c$</u> Sketch and interpret a range of inverse graphs Use tangents to estimate rates of change Calculate the area of a graph and interpret in the context of a question Use the trapezium rule to estimate the area under a graph <u>Use Pythagoras' theorem</u> <u>Use trigonometry to find missing angles and sides within triangles</u> 	
	Number (foundation tier only)	<ul style="list-style-type: none"> Work with fractions, decimals and percentages in a variety of situations 	
Christmas Holidays			
2a	Geometry	<ul style="list-style-type: none"> Accurately draw angles, triangles, quadrilaterals and circles using suitable mathematical equipment Read and write bearings correctly and describe a location using them <u>Construct the locus of a point</u> Trigonometry applied to non-right angled triangles 	<p>Weekly homework activity to further develop and secure knowledge of topics covered</p> <p>Corbett Maths contains a range of videos to support students</p>
2b		<ul style="list-style-type: none"> Calculate mean, mode, median and range Construct a range of graphs to display data 	

	Data	<ul style="list-style-type: none"> • <u>Use box and whisker plots to compare distributions</u> • Sketching trigonometric graphs • Graph transformations 	
Easter Holidays			
3a	Revision	Revision in preparation for exams	Revision for external exams
3b			