YEAR 11 Higher GCSE

The vast majority of this course has been covered and this year is to be revisiting topics (particularly newer content) and looking in greater detail at the problem solving questions.

Assessments for Year 11 – Grades to be entered on GO

Autumn Term 1 – (September)

Students complete Paper 1 & 2

Autumn Term 2 Mocks – (Nov/Dec)

1. Students complete all three papers in Mock exam conditions
2. Enter paper 1 & 2 & 3 and overall full grade.

Spring Term 2 – (March)

Students complete paper 1, 2 & 3

You will not have to teach topics already taught in year 10. Please pass this information to a teacher taking over your class.

Date	Main heading	Outcomes	Grade	MathsWatch clip number
Autumn Term 1 (7 weeks)				
	Direct and inverse proportion	• Solve problems using direct proportion • Solve problems using inverse proportion	7	199
	Non-linear graphs	• Graphs of cubic and reciprocal functions • Equations of circles • Exponential functions (growth and decay)	5 7 7	161 197 194
	Distance/Velocity Time Graphs	• Distance Time Graphs • Velocity Time Graphs/Rate of change	4 8/9	143 216
	Transformation of functions	• Transform graphs of functions	7	196
	Graphs of trigonometric functions	• Recognise the graphs of trigonometric functions • Identify the sine/cosine of different angles including obtuse • Transformation of trigonometric functions	7	195
	Using a data table to find the mean, median and mode	• Calculate the mean, mode and median from a table of discrete data • Estimate the mean, modal class and median from a table of grouped continuous data	2/3	62,63,130
	Cumulative frequency graphs and box plots	• Complete cumulative frequency table and draw graph	6	186,187

		• Use the CF graph to estimate median, quartiles and calculate interquartile range • Draw box plots and compare two box plots		
	Histograms	• Draw a histogram from given information • Use a histogram to complete a frequency table • Answer questions from the histogram	7	205
	Surds	• Use surds in calculations • Simplify surds • Rationalise surds • Expand brackets with surds • Use surds in problems	7	207
Year 11 Assessment				
Autumn Term 2 (7 weeks)				
	Percentages	• Calculate percentages of amounts with and without a calculator	3 3	86-89

		• Calculate percentage increase/decrease, profit/loss • Calculate simple and compound interest, depreciation • Work out the original quantity given the final value after a percentage increase or a percentage decrease	5 5	107-109 111/164 110
	Venn Diagrams	• Draw, interpret Venn diagrams • Set notation	5	
	Using y=mx+c	• Use y=mx+c to write down the equations of lines parallel to a given line • Find the gradient of lines • Find the equations of straight lines perpendicular to a given line	3 8/9	97 208
	Solving simultaneous linear and quadratic equations	• Solve simultaneous linear equations with and without graphs • Solve a linear and a quadratic using graphs to find approximate solutions and also without graphs	4/5 8/9	140/162 211
	Standard form	• Write an ordinary number as a number in standard form • Write a number in standard form as an ordinary number	3	83

	Volume and surface area of 3D shapes	• Find the volume and surface area of a variety of complex shapes	3/5	114,115,119 169,170,171 172
	Sequences	• Nth term of linear sequences • Special sequences & Fibonacci • Geometric progression • Quadratic sequences	3 3/4 5 8/9	102,103 104,141 163 213
	Similar triangles	• Compare corresponding sides in similar triangles to calculate unknown lengths	4	144
	Area and Volume of similar shapes	• Use ratio of length = a:b, ratio of area = $a^2 : b^2$ and ratio of volume = $a^3 : b^3$	7	200
	Ratio and proportion	• Teach all of 'new style' ratio/proportion questions	4-9	Examples/resources to be provided
YEAR 11 MOCKS				
Spring Term 1 (6 weeks)				
	Using vectors to solve 2D geometric problems	• Use vectors to solve geometric problems in 2 dimensions	5/8/9	174,219

	Circle Theorem Proofs	• Describe all circle theorem proofs	8/9	
	Pythagoras' Theorem and trigonometry in 2D	• Use Pythagoras' Theorem and trigonometry to solve complex problems in two dimensions • Exact trigonometric values • Sine and cosine Rule • 1/2abSinC	4 5 5 7	150b/c 168 173 201 202 203
	Pythagoras' and trigonometry in 3D	• Use Pythagoras' theorem and trigonometry in problems in three dimensions	8/9	217,218
	Index notation	• Use index laws • Fractional and negative indices	2/3/4 5/7	29,82,131 154,188
	Capture Recapture	• Capture recapture		Video 391 Corbett maths
	Product rule for counting	•		Video 383 Corbett maths
	Compound Units	• Pressure, Density, Speed calculations		
Spring term 2 (5 weeks)				

ALGEBRA REVISION And Papers	Solving equations	• Solve equations with x on one side • Solve equations with x on both sides • Solve equations with fractions • Form equations from problems Trial and improvement and iteration (new)	4 6	135 137 179,180
	Factorising quadratic expressions	• Factorise quadratics with the coefficient of x^2 as 1 • Factorise quadratics with the coefficient of x^2 greater than 1 • Factorise the difference of two squares • Product of three binomials (new)	4/5 6	157 158 178
	Solving problems using quadratic equations	• Solve quadratic equations using a variety of methods, including the formula • Interpret solutions of quadratic equations in the context of a problem	7	191
	Changing the subject of a formula	• Change the subject of a formula, including where the letter appears more than once	4 7	136 190
	Simplifying algebraic fractions	• Simplifying rational expressions • Adding and subtracting rational expressions	8/9	210
	Addition and subtraction of algebraic fractions	• Add and subtract algebraic fractions • Solve equations involving the addition or subtraction of algebraic fractions	8/9	

	Algebraic proofs	• Use algebra to perform proofs	7	193
	Solving inequalities graphically	• Represent inequalities on lines and solve inequalities • Solve inequalities by shading regions on graphs • Solving quadratic inequalities (new)	4 7 8/9	138,139 198 212
	Completing the square	• Complete the square for a quadratic expression • Use quadratic expressions in completed square form to solve equations • Find the minimum value of a quadratic function • Find the maximum value of a quadratic function • Roots and turning points of Quadratics (new)	8/9 5	209 160
Space and measures REVISION	Transformations	• Perform and describe transformations using: • Rotation • Reflection • Translation • Enlargement using positive scale factor • Enlargement using a negative scale factor • Combinations of transformations		
	Angles	• Angles in parallel lines • Angles in Polygons		

	Circle geometry	• Use angle properties of a circle to solve problems	6	183,184
	Geometric proof	• Congruent triangles	5	166
Handling data REVISION	Probability tree diagrams	• Frequency trees (new) • Draw tree diagrams to represent independent and conditional probability problems • Use multiplication of probabilities for P(A and B) • Use addition of probabilities for P(A or B) • Venn Diagrams (new) • Time series (new?)	2 4 5 7	57 151 175 204 127,185 153
	Stratified sampling	• Identify different sampling methods • Use stratified sampling in problems	5	176
NUMBER REVISION	Bounds	• Use bounds in calculations • Error Intervals (new)	4 & 8/9 5	132/206 155
	Recurring decimals	• Write recurring decimals to fractions	6/7	177/189
	HCF LCM	• Prime factor trees, HCF LCM		