

KEVICC Key Stage 4 Curriculum Subject: Mathematics			Key Vocabulary and notation.	
Autumn Half-Term				
Term: Year 11 Autumn Term – Block Four		Topic: Algebra and Graphs		
What is the essential knowledge from this unit? What do students need to remember and understand?				
	Specification content	Specification notes		
A17	Solve linear equations in one unknown algebraically <ul style="list-style-type: none">Including those with the unknown on both sides of the equation	<ul style="list-style-type: none">including use of brackets		
Students should be able to: <ul style="list-style-type: none">solve simple linear equations by using inverse operations or by transforming both sides in the same waysolve simple linear equations with integer coefficients where the unknown appears on one or both sides of the equation or where the equation involves brackets.				
A21	<u>Translate simple situations or procedures into algebraic expressions or formulae; derive an equation, solve the equation and interpret the solution</u>	including solution of geometrical problems and problems set in context		
Students should be able to: <ul style="list-style-type: none">set up simple linear equationsrearrange simple linear equationsset up simple linear equations to solve problemsset up a pair of simultaneous linear equations to solve problemsinterpret solutions of equations in context.				
			Parallel Above	
			Horizontal Simultaneous	
			Vertical Equations	
			Straight line Interception	
			Axis Solutions	
			Equation Perpendicular	
			Graph Product	
			Intercept Reciprocal	
			Linear Negative	
			Table of Reciprocal	
			values Positive	
			Gradient Negative	
			y-intercept Cube	
			Parallel Cubic	
			Gradient Estimate	
			Scale Curve	
			Slope Asymptote	
			Steep Infinity	
			Interpret Reciprocal	
			Line Tends towards	
			Point Quadratic	
			Coordinates Roots	
			Substitute Solution	
			Satisfies Meets	
			Below	
			Mathematical questioning should be designed to unpick the structure of the maths and deepen the student's understanding. When students talk about mathematical concepts, they should develop the vital mathematical language that helps them explain their ideas fully.	
			Students are expected and encouraged to use terminology during all discussions, verbal feedback and in written content.	
What prior learning supports understanding of this content? <ul style="list-style-type: none">Recognise that equations of the form $y = mx + c$ correspond to straight-line graphs in the coordinate planeDraw graphs of functions in which y is given explicitly or implicitly in terms of xComplete tables of values for straight-line graphsCalculate the gradient of a given straight-line given two points or from an equationManipulate the equations of straight lines so that it is possible to tell whether lines are parallel or notWork out the equation of a line, given two points on the line or given one point and the gradient.		How does this content link to future learning? <ul style="list-style-type: none">Draw, sketch, recognise and interpret linear functions.Calculate values for a quadratic and draw the graph.Draw, sketch, recognise and interpret quadratic graphs.Draw, sketch, recognise and interpret graphs of the form $y = x^3 + k$ where k is an integer.Draw, sketch, recognise and interpret the graph $y = \frac{1}{x}$ with $x \neq 0$Find an approximate value of y for a given value of x, or the approximate values of x for a given value of y.		
Reading: Where in the unit are students supported to read complex academic text? <ul style="list-style-type: none">Reading and understanding mathematical questions and problems' – teacher input.Decoding complex examination questions - explain what they are asking the student to do' – teacher input.Following instructions to solve problems - break down the tasks – teacher input.Recoanising terminology, numbers, and symbols.		Writing: Independent writing tasks and how they are structured <ul style="list-style-type: none">Using the correct subject specific terminology for numbers and symbols – examination papers, class books.Responding to questions that ask for an explanation or a reason – examination papers, class books.Self-evaluation, reviewing, reflecting and analysis of own work – class books, personalised learning checklists and analysis.Creating notes that can be used later for revision purposes - class books, revision cards, mind maps etc.		

Key assessments:

How will do students review the information learned?

End of block assessments.

AQA end of block assessments provide a quick progress check at the end of each block of learning to make sure students have understood the content being covered. These are available for both foundation and higher tiers.

End of term/year assessments and mock examinations.

End of term assessments assessing the students' progress towards targets and provide diagnostic information to modify future teaching.

End of year 9 and 10 examinations assessing the students' progress towards targets and provide diagnostic information to modify future teaching.

Two mock examinations seasons take place during year 11 using previous years AQA 8300 examination papers. Students to experience the full suite of papers at both Foundation and higher tiers using Non-calculator and Calculator requirements.

All examinations will explore the three examination papers at both foundation and higher tiers using non-calculator and calculator requirements.

How will feedback be seen?

Marked end of block, term assessments and mock examinations.

Personalised learning checklists for all assessments identifying strengths and areas of development.

Written teacher feedback and marking in compliance with faculty and College Marking Policies. Student responses to marking. Students self-mark using purple pen. Verbal feedback given every lesson from teacher and peers as appropriate. Teacher and student self-assessment of presentation of class books will be completed to ensure written work is of high standard and students are achieving their potential.