

KEVICC Key Stage 4 Curriculum Subject: Mathematics			Key Vocabulary and notation.	
Autumn Half-Term				
Term: Year 10 Autumn Term – Block One		Topic: Calculating Percentages		
What is the essential knowledge from this unit? What do students need to remember and understand?				
	Specification content	Specification notes		
R9	Define percentage as 'number of parts per hundred' Interpret percentages and percentage changes as a fraction or decimal and interpret these multiplicatively Express one quantity as a percentage of another Compare two quantities using percentages Work with percentages greater than 100%			
Students should be able to: <ul style="list-style-type: none">convert values between percentages, fractions, and decimals in order to compare them, for example with probabilitiesuse percentages in real-life situationsinterpret percentage as the operator 'so many hundredths of'work out the percentage of a shape that is shadedshade a given percentage of a shapecalculate a percentage increase or decreasesolve percentage increase and decrease problems, for example, use $1.12 \times Q$ to calculate a 12% increase in the value of Q and $0.88 \times Q$ to calculate a 12% decrease in the value of Qwork out one quantity as a percentage of another quantityuse percentages, decimals, or fractions to calculate proportionscalculate reverse percentagessolve simple interest problems.				
R16	<u>Set up, solve, and interpret the answers in growth and decay problems, including compound interest</u> and work with general iterative processes			
Students should be able to: <ul style="list-style-type: none">solve problems involving repeated proportional changeuse calculators to explore exponential growth and decay using a multiplier and the powersolve compound interest problems.				
What prior learning supports understanding of this content? <ul style="list-style-type: none">Fluency of the four operations of number.Workout simple fractions, decimals, and percentages of amounts with and without a calculator.Convert between other fractions, decimals, and percentages.Evaluate percentage increases and decreases.Make use of multipliers to solve percentage problems.Express one number as a percentage of another.				
How does this content link to future learning? <ul style="list-style-type: none">Calculate exactly with fractions, surds, and multiples of π; simplify surd expressions involving squares. (e.g. $\sqrt{12} = \sqrt{4 \times 3} = \sqrt{4} \times \sqrt{3} = 2\sqrt{3}$) and rationalise denominators.Simplify surds.Rationalise a denominator.Simplify expressions using the rules of surds.Expand brackets where the terms may be written in surd form.Solve equations which may be written in surd form.				
Reading: <i>Where in the unit are students supported to read complex academic text?</i> <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.Recognising terminology, numbers, and symbols.				
Writing: <i>Independent writing tasks and how they are structured</i> <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.