

KEVICC Key Stage 4 Curriculum Subject: Mathematics		Key Vocabulary and notation.																																								
Autumn Half-Term																																										
Term: Year 10 Autumn Term – Block Two		Topic: Calculating with Percentages																																								
<p>What is the essential knowledge from this unit? What do students need to remember and understand?</p> <table border="1"> <thead> <tr> <th></th> <th>Specification content</th> <th>Specification notes</th> </tr> </thead> <tbody> <tr> <td>R9</td> <td>Solve problems involving percentage change, including: <ul style="list-style-type: none"> percentage increase / decrease problems original value problems simple interest, including in financial mathematics problems set in context using a multiplier </td> <td></td> </tr> </tbody> </table> <p>Students should be able to:</p> <ul style="list-style-type: none"> convert values between percentages, fractions, and decimals in order to compare them, for example with probabilities use percentages in real-life situations interpret percentage as the operator 'so many hundredths of' work out the percentage of a shape that is shaded shade a given percentage of a shape calculate a percentage increase or decrease solve 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 Q work out one quantity as a percentage of another quantity use percentages, decimals, or fractions to calculate proportions calculate reverse percentages solve simple interest problems. 			Specification content	Specification notes	R9	Solve problems involving percentage change, including: <ul style="list-style-type: none"> percentage increase / decrease problems original value problems simple interest, including in financial mathematics problems set in context using a multiplier 		<table> <tbody> <tr><td>Fraction</td><td>Increase</td></tr> <tr><td>Decimal</td><td>Growth</td></tr> <tr><td>Percentage</td><td>Express</td></tr> <tr><td>Equivalent</td><td>Factor</td></tr> <tr><td>Denominator</td><td>Multiple</td></tr> <tr><td>Numerator</td><td>Round</td></tr> <tr><td>Fraction key</td><td>Integer Profit</td></tr> <tr><td>Estimate</td><td>Loss</td></tr> <tr><td>Rounding</td><td>Interest</td></tr> <tr><td>Conversion</td><td>Change</td></tr> <tr><td>Hundredth</td><td>Original</td></tr> <tr><td>Tenth</td><td>Invest</td></tr> <tr><td>Reduce</td><td>Reverse</td></tr> <tr><td>Decrease</td><td>Simple</td></tr> <tr><td>Reverse</td><td>interest</td></tr> <tr><td>Percentage</td><td>Compound</td></tr> <tr><td>Multiplier</td><td>interest</td></tr> </tbody> </table> <p>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.</p> <p>Students are expected and encouraged to use terminology during all discussions, verbal feedback and in written content.</p>	Fraction	Increase	Decimal	Growth	Percentage	Express	Equivalent	Factor	Denominator	Multiple	Numerator	Round	Fraction key	Integer Profit	Estimate	Loss	Rounding	Interest	Conversion	Change	Hundredth	Original	Tenth	Invest	Reduce	Reverse	Decrease	Simple	Reverse	interest	Percentage	Compound	Multiplier	interest
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<p>What prior learning supports understanding of this content?</p> <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. 	<p>How does this content link to future learning?</p> <ul style="list-style-type: none"> Use index laws for multiplication and division of integer powers Calculate with positive integer indices. Use index laws for multiplication and division of positive, negative and fractional indices. 																																									
<p>Reading: <i>Where in the unit are students supported to read complex academic text?</i></p> <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. 	<p>Writing: <i>Independent writing tasks and how they are structured</i></p> <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. 																																									
<p>Key assessments:</p> <p>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.</p>																																										