

KEVICC Key Stage 4 Curriculum Subject: Mathematics		Key Vocabulary and notation.																
Spring Half-Term																		
Term: Year 9 Spring Term – Block Three		Topic: Basic Percentages																
<p>What is the essential knowledge from this unit? What do students need to remember and understand?</p>		Fraction Multiplier Decimal Increase Percentage Growth Equivalent Express Denominator Factor Numerator Multiple Fraction key Round Estimate Integer Profit Rounding Loss Conversion Interest Hundredth Change Tenth Original Reduce Invest Decrease Reverse																
	<table border="1"> <thead> <tr> <th></th> <th>Specification content</th> <th>Specification notes</th> </tr> </thead> <tbody> <tr> <td>R9</td> <td> 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% </td> <td></td> </tr> <tr> <td colspan="3"> 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 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. </td> </tr> <tr> <td>N12</td> <td>Interpret fractions and percentages as operators</td> <td>including interpreting percentage problems using a multiplier</td> </tr> <tr> <td colspan="3"> Students should be able to: <ul style="list-style-type: none"> calculate a fraction of a quantity calculate a percentage of a quantity use fractions, decimals, or percentages to find quantities use fractions, decimals, or percentages to calculate proportions of shapes that are shaded use fractions, decimals, or percentages to calculate lengths, areas or volumes understand and use unit fractions as multiplicative inverses multiply and divide a fraction by an integer, by a unit fraction and by a general fraction interpret a fraction, decimal or percentage as a multiplier when solving problems </td> </tr> </tbody> </table>		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 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. 			N12	Interpret fractions and percentages as operators	including interpreting percentage problems using a multiplier	Students should be able to: <ul style="list-style-type: none"> calculate a fraction of a quantity calculate a percentage of a quantity use fractions, decimals, or percentages to find quantities use fractions, decimals, or percentages to calculate proportions of shapes that are shaded use fractions, decimals, or percentages to calculate lengths, areas or volumes understand and use unit fractions as multiplicative inverses multiply and divide a fraction by an integer, by a unit fraction and by a general fraction interpret a fraction, decimal or percentage as a multiplier when solving problems 			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.	
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<p>What prior learning supports understanding of this content?</p> <ul style="list-style-type: none"> Round numbers to one/two significant figures. Convert between other fractions, decimals, and percentages. Order positive and negative decimals. Order positive and negative fractions. Apply the four operations, including formal written methods, to decimals – both positive and negative and simple fractions (proper and improper) and mixed numbers - both positive and negative. Understand and use place value (e.g. when calculating with decimals). 		<p>How does this content link to future learning?</p> <ul style="list-style-type: none"> Know, use, and understand the term standard form. Write an ordinary number in standard form. Write a number written in standard form as an ordinary number. Order and calculate with numbers written in standard form. Solve simple equations where the numbers are written in standard form. Interpret calculator displays. Use a calculator effectively for standard form calculations. Solve standard form problems with and without a calculator. 																
<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. 																

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.