KEVICC Key Stage 4 Curriculum Subject: Mathematics

Spring Half-Term

Term: Year 10 Spring Term – Block One | **Topic: Recurring Decimals to Fractions**

What is the essential knowledge from this unit?
What do students need to remember and understand?

	Specification content	Specification notes
N10	**Change recurring decimals into their corresponding fractions and vice versa** (such as 3.5 and $\frac{7}{2}$ or 0.375 and $\frac{3}{8}$)	
Students should be able to: • convert between fractions and decimals using place value • compare the value of fractions and decimals.		
N10h	Work interchangeably with terminating decimals and their corresponding fractions (such as 3.5 and $\frac{7}{2}$ or 0.375 and $\frac{3}{8}$); change recurring decimals into their corresponding fractions and vice versa	
Students should be able to: • convert recurring decimals into fractions • convert fractions into recurring decimals • use formal algebraic proofs to convert recurring decimals into fractions.		

Key Vocabulary and notation.

Decimal	Total
Recurring	Sum
Decimals	Difference
Place value	Add
Digit	Subtract
Placeholder	Multiply
Numerator	Divide
Denominator	Carrying
Terminating	Decimal
decimal	Point
Lowest terms	Subtraction
Recurring	Decimal
Dot	place
Fraction	Negative
Recurs	Simplify fully
Sequence	Order
Recurring	Convert
dots	Greatest
Exact	Least
fraction	Difference
Prime factors	Equal

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?
- Order positive and negative decimals.
- Apply the four operations, including formal written methods, to decimals – both positive and negative.
- Understand and use place value (e.g. when calculating with decimals).
- Work interchangeably with terminating decimals and their corresponding fractions (such as 3.5 and 72 or 0.375 and 38) including ordering.

How does this content link to future learning?
- Set up, solve, and interpret the answers in growth and decay problems, including compound interest and work with general iterative processes.
- Find approximate solutions to equations numerically using iteration including the use of suffix notation in recursive formulae.

Reading: *Where in the unit are students supported to read complex academic text?*
- 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: *Independent writing tasks and how they are structured*
- 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.