YEAR 10	Edexcel GCSE (9-1) Mathematics		HIGHER
TERM	**UNIT / LESSON**	**PRIOR KNOWLEDGE**	**LEARNING INTENTIONS**
	Key: Italic specification references are assumed prior knowledge and are covered in the prior knowledge check rather than the main teaching.		
AUTUMN 1	**1 Number**		
Wk 1 04/09/2024	1.1 Number problems and reasoning	Multiply numbers in a similar format to questions later in the section. List possible outcomes from two events.	Work out the total number of ways of performing a series of tasks.
	1.2 Place value and estimating	Estimate the value of a square root. Round numbers to a specified degree of accuracy. Apply the four operations.	Estimate an answer. Use place value to answer questions.
	1.3 HCF and LCM	Multiply prime factors together. List the factors of a number.	Write a number of the product of its prime factors. Find the HCF and LCM of two numbers.
Wk 2 09/09/2024	1.4 Calculating with powers (indices)	Work out simple powers. Apply the four operations.	Use powers and roots in calculations. Multiply and divide using index laws. Work out a power raised to a power.
	indices	Convert between fractions and decimals. Use the laws of indices for positive indices.	Use negative indices. Use fractional indices.
Wk 3 16/09/2024	1.6 Powers of 10 and standard form	Multiply by powers of 10 when the number is written as an ordinary number and not an index. Review different ways to divide by 10. Use negative indices.	Write a number in standard form. Calculate with numbers in standard form.
	1.7 Surds	Review the meaning of the dot in the recurring notation. Identify the missing multiple which practices the skills of searching for a perfect square factor.	Understand the difference between rational and irrational numbers. Simplify a surd. Rationalise a denominator.
	2 Algebra		

Week	Topic	Objectives	Objectives
Wk 4 23/09/2024	2.1 Algebraic indices	Recognise that squaring and taking the square roots, and cubing and taking the cube root, are inverse operations. Calculate with powers.	Use the rules of indices to simplify algebraic expressions.
	2.2 Expanding and factorising	Simplify algebraic terms, including using index notation. Multiply a single term over a bracket. Find highest common factors.	Expand brackets. Factorise algebraic expressions.
	2.3 Equations	Solve a simple equation expressed in words. Solve simple algrebraic equations Find lowest common multiples.	Solve equations involving brackets and numerical fractions. Use equations to solve problems.
	2.4 Formulae	Substitute values into a one-step formula. Write numbers in standard form.	Substitute numbers into formulae. Rearrange formulae. Distinguish between expressions, equations, formulae and identities.
Wk 5 30/09/2024	2.5 Linear sequences	Find the next term of a given arithmetic sequence. Substitute values in a simple linear expression. Write terms in a sequence given the nth term. Use a function machine to find outputs.	Find a general formula for the nth term of an arithmetic sequence. Determine whether a particular number is a term of a given arithmetic sequence.
Wk 6 07/10/2024	2.6 Non-linear sequences	Find the next term of given sequences. Identify arithmetic and geometric sequences. Find the term-to-term rule for a sequence.	Solve problems using geometric sequences. Work out terms in Fibonnaci-like sequences. Find the nth term of a quadratic sequence.
	2.7 More expanding and factorising	Recalling a square root. Finding the factor pairs of small integers.	Expand the product of two brackets. Use the difference of two squares. Factorise quadratics of the form $x^2 + bx + c$.
	4 Fractions, ratio and percentages		
Wk 7 14/10/2024 **Wk 8**	4.1 Fractions	Identify unit fractions, improper fractions and mixed numbers. Multiply a whole number by a fraction. Know the priority of operations.	Add, subtract, multiply and divide fractions and mixed numbers. Find the reciprocal of an integer, decimal or fraction.

21/10/2024	CHECK, STRENGTHEN, EXTEND + REVISION
PAZ 1	HALF-TERM