



Year 10 Maths Learning Journey

Summer Term 3

Using Number: Types of number & sequences

Core knowledge	Reference number
Understand the difference between factors and multiples (R) “Can negative numbers be multiples/factors?”	WORKSHEET
Understand primes and express a number as a product of its prime factors (R) “Is there more than one way to factorise 300?”	WORKSHEET
Find the HCF and LCM of a set of numbers (R) “What’s the first step in completing a Venn diagram to find the HCF and LCM?”	WORKSHEET
Describe and continue arithmetic and geometric sequences “What is an arithmetic sequence? Why is a geometric sequence different?”	WORKSHEET
Explore other sequences “How can you represent the sequence using multi-link cubes? How does this help you justify your answer?”	WORKSHEET
Describe and continue sequences involving surds (H) “Does the method for finding the n th term of a sequence change if it involves surds?”	WORKSHEET
Find the rule for the nth term of a linear sequence (R) “How does the constant difference relate to the coefficient of n ?”	WORKSHEET
Find the rule for the nth term of a quadratic sequence (H) “What’s the relationship between the second difference and the coefficient of n^2 ?”	WORKSHEET

Learning Checkpoints

LC Title	Completed	Dirt
Types of number & sequences		

Key Vocabulary

Cube: In geometry, a three-dimensional figure with six identical, square faces. Adjoining edges and faces are at right angles.

Factor: When a number, or polynomial in algebra, can be expressed as the product of two numbers or polynomials, these are factors of the first.

Factorise: To express a number or a polynomial as the product of its factors

Fibonacci: a sequence in which each number is the sum of the two preceding numbers.

Geometric sequence: A sequence made by multiplying by the same value each time. For example 2, 4, 8, 16, 32, 64, 128, 256, ... (each number is 2 times the number before it)

Highest Common Factor (HCF): The common factor of two or more numbers which has the highest value.

Index form: The exponent, or index, of an exponential expression tells us how many times to multiply the base by itself to evaluate the expression. We can use this fact to write a number in index form

Integer: Any of the positive or negative whole numbers and zero. Example: 2, -1,

Intersection: The elements that are common to two or more sets

Linear: In algebra, describing an expression or equation of degree one.

Lowest Common Multiple (LCM): the common multiple of two or more numbers which has the least value

Multiple: For any integers a and b , a is a multiple of b if a third integer c exists so that $a = bc$

Non-linear: sequences that do not increase by a constant amount.

n th term: a formula that enables us to find any term in a sequence. The ' n ' stands for the term number.

Prime factor: a natural number, other than 1, whose only factors are 1 and itself.

Quadratic: Describing an expression of the form $ax^2 + bx + c$ where a , b and c are real numbers

Rule: Generally a procedure for carrying out a process.

Simplest form: A fraction that has been reduced fully.

Square number: the product of a number multiplied by itself.

Surd: an irrational number expressed as the root of a natural number

Term to term rule: used for a sequence in which the next term is obtained from the previous term.

Triangular number: a sequence of numbers that are represented through a series of dots formed into equilateral triangles.