

Year 7 Algebra 2 – Sequences, Co-ordinates, Function Machines & Linear Graphs

	Knowledge, Skills, Understanding
Higher	<p>Pupils/I:</p> <ul style="list-style-type: none"> • Find a specific term in a sequence using position-to-term rules • Begin to use formal algebra to describe the nth term in an arithmetic sequence • Find the co-ordinates of the midpoint of a line joining two points • Plot the graphs of simple linear functions in the form $y=mx+c$ in four quadrants
Intermediate	<p>Pupils/I:</p> <ul style="list-style-type: none"> • Use a term-to-term rule to generate a non-linear sequence • Find the term-to-term rule for a non-linear sequence • Solve problems involving the term-to-term rule for a sequence • Solve problems involving the term-to-term rule for a non-numerical sequence • Generate terms of a linear sequence using position-to-term with positive integers. • Sketch/recognise a line parallel to the x-axis or the y-axis given its equation • Identify the lines $y = x$ and $y = -x$ • Sketch the lines $y = x$ and $y = -x$ • Plot basic linear graphs in the first quadrant • Use an expression to represent a function • Use the order of operations correctly in algebraic situations
Foundation	<p>Pupils/I:</p> <ul style="list-style-type: none"> • Use a term-to-term rule to generate a linear sequence • Find the next term in a linear sequence, including negative numbers • Find the term-to-term rule for a linear sequence • Describe a number sequence • Write the equation of a line parallel to the x-axis or the y-axis • Plot a line parallel to the x-axis or the y-axis given its equation • Identify the lines $y = x$ and $y = -x$ • Plot the lines $y = x$ and $y = -x$ • Plot Coordinates in all 4 quadrants • Given a function, establish outputs from given inputs • Given a function, establish inputs from given outputs • Use a mapping diagram (function machine) to represent a function

NB: direct command = knowledge, 'can'= understanding, 'able to'=skills