



# Learning Journey Map

## Further Maths - Year 10

### Quadratic functions

- Completing the square
- Sketching and interpreting graphs
- Solving linear & quadratic equations

### Linear Algebra

- Algebraic and graphical solutions of simultaneous equations.

Moving to  
Year 11

### Functions of real numbers

- Definition domain and range
- Composite and invers functions

### Permutations and combinations

- The product rule for counting.

### Functions of real numbers

- Definition domain and range
- Composite and invers functions

### Algebraic manipulation of brackets

- Expanding brackets and collecting like terms.

### Irrational numbers - Surds

- Manipulation of surds including rationalising the denominator.

### Coordinate geometry of lines 2

- Use ratio to calculate coordinates.
- Equations of straight lines

### Coordinate geometry of lines 1

- Gradient
- Parallel and perpendicular lines
- Use Pythagoras Theorem to calculate distances between two points.

### Differentiation calculus 2

- Differentiation of  $kx^n$  where  $n$  is an integer, and the sum of such functions.
- Increasing and decreasing functions

### Differentiation calculus 3

- Understand and use the notation.
- Max and Min points
- Curve sketching
- Use calculus to solve problems.

### Differentiation calculus 1

- Gradients of curves & tangents
- The equation of a tangent and normal at any point of a curve
- Rates of change

### Matrices

- Addition and subtraction of matrices
- Transformation of the unit square

Curriculum  
Overview

Welcome  
Curriculum Overview