



ASHLAWN SCHOOL

# MATHEMATICS CURRICULUM MAP

## A-Level Mathematics

### FURTHER STUDY

- Mathematics Degree
- Related Degree Subjects

### CAREER PATHS

- STEM subjects
- Finance
- Insurance and Risk
- Data Science
- Computing
- Natural and Life Sciences
- Business and Operations

### SKILLS

- Reasoning
- Evaluation
- Analysis
- Problem Solving

**Summative Mock Examinations 2:** Entire specification coverage due to concluding the course.

### Examination Preparation

- Integration Part 2
- Applications of Forces
- Normal Distribution
- Further Kinematics

**Summative Mock Examinations 1:** Entire specification coverage due to concluding the course.

- Trigonometry and Modelling
- Integration Part 1
- Parametric Equations

- Representing Data
- Statistical Distributions
- Trigonometry Identities
- Integration
- Proof
- Exponentials and Logarithms

- Hypothesis Testing
- Variable Acceleration
- Correlation
- Forces and Friction
- Binomial Expansion

- Revision
- Moments
- Radians
- Projectiles

**YEAR 13**

- Sequences and Series
- Trigonometric Functions
- Differentiation
- Vectors
- Numerical Methods

**Assessment: End of Year 12 Examinations – Set of AS papers**

**Assessment 1:** Pure content up to and including Trigonometric Functions

**Assessment 3:** up to and including vectors

- Trigonometry Ratios
- Vectors
- Measures of Location and Spread
- Forces and Motion

- Straight Line Graphs
- Modulus Functions
- Circles
- Constant Acceleration
- Probability
- Differentiation

- Algebraic Expressions
- Quadratics
- Equations and Inequalities
- Functions
- Algebraic Methods
- Graphs and Functions
- Binomial Expansion
- Data Collection

**YEAR 12**

**Assessment 2:** up to and including modulus functions

**Assessment 1:** up to and including Equations and Inequalities

**MATHEMATICAL ARGUMENT, LANGUAGE AND PROOF**



**MATHEMATICAL PROBLEM SOLVING**



**MATHEMATICAL MODELLING**



# MATHEMATICS CURRICULUM MAP

## Level 3 Core

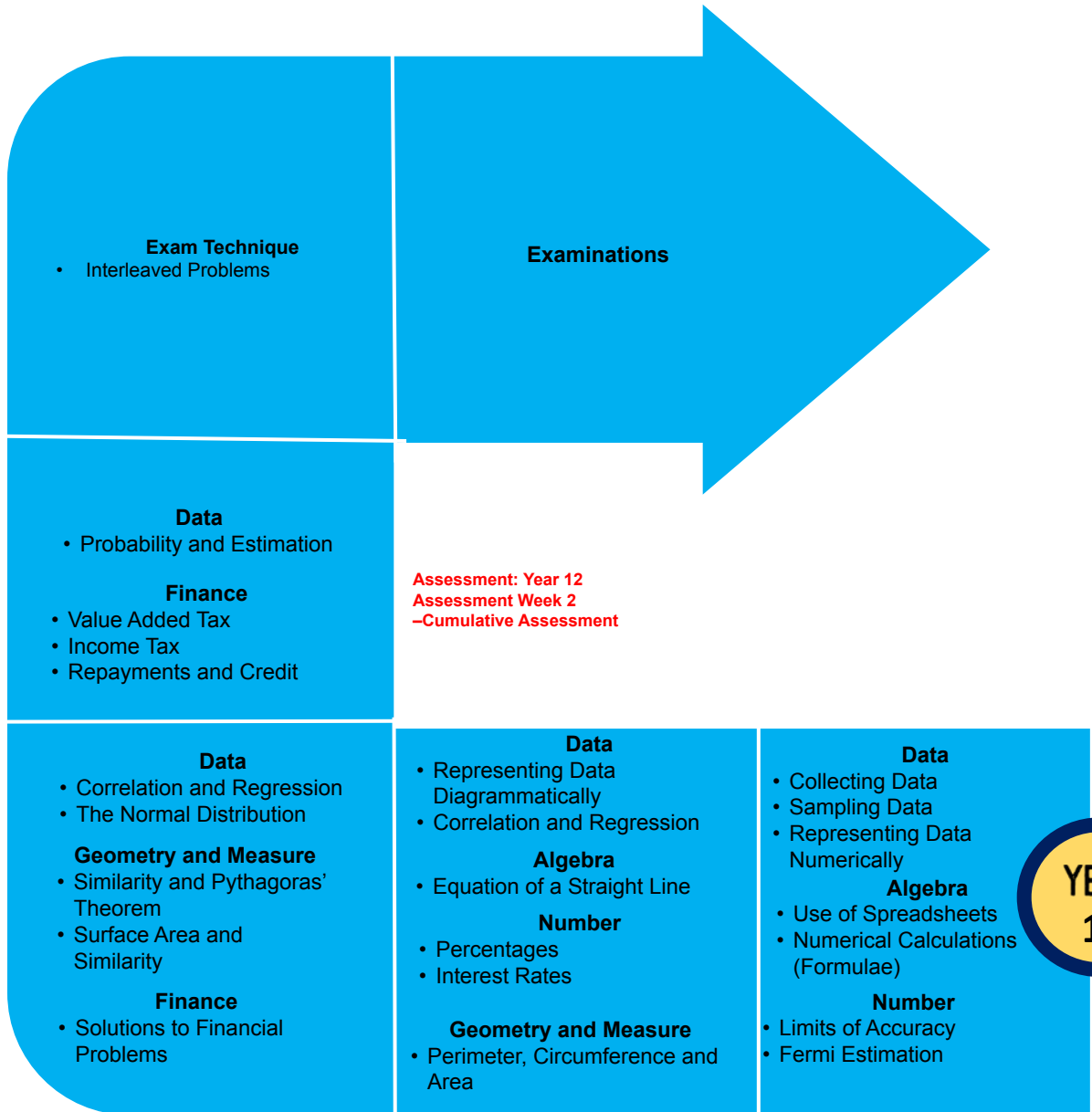
### FURTHER STUDY

### CAREER PATHS

### SKILLS

- Humanities
- Banking/Finance
- Journalism
- Business Operations
- Insurance/Risk

- Reasoning
- Evaluation
- Analysis
- Problem Solving



**YEAR 12**

**MATHEMATICAL ARGUMENT, LANGUAGE AND PROOF**



**MATHEMATICAL PROBLEM SOLVING**



**MATHEMATICAL MODELLING**



ASHLAWN SCHOOL

# MATHEMATICS CURRICULUM MAP

## A-Level Further CAREER PATHS

### FURTHER STUDY

Mathematics Degree

- STEM subjects
- Finance
- Insurance and Risk
- Data Science
- Computing
- Natural and Life Sciences
- Business and Operations

### SKILLS

- Reasoning
- Evaluation
- Analysis
- Problem Solving

Summative Mock Examinations 2: A Level Mathematics and Further Maths

### Examination Preparation

Momentum and Impulse  
Work, Energy and Power  
Elastic Springs and Strings  
Elastic Collisions in one dimension.  
Elastic Collisions in two dimensions

Summative Mock Examinations 1: A Level Mathematics and Further Maths

Hyperbolic Functions  
Methods in Differential Equations  
Modelling with Differential Equations

Further Linear Programming (Simplex Algorithm)  
Critical Path Analysis  
Complex Numbers  
Series  
Methods in Calculus  
Volumes of Revolution  
Polar Coordinates

YEAR 13

Matrices  
Linear Transformations  
Proof by Induction  
Vectors

Algorithms  
Graphs and Networks  
Algorithms on Graphs  
Route Inspection Algorithm  
Travelling Salesman Algorithm  
Linear Programming

Normal Distribution  
Further Kinematics  
Complex Numbers  
Argand Diagrams  
Series  
Roots of Polynomials  
Volumes of Revolution

End of Year Exams  
Set of A2 Maths Papers

Assessment 3: up to and including Numerical Methods

Yr13 Summative Assessment 1: A2 Maths  
Pure Maths Paper + Core Pure 1 Paper

Sequences and Series  
Trigonometric Functions  
Differentiation  
Vectors  
Numerical Methods  
Trigonometry and Modelling  
Integration Part 1  
Parametric Equations  
Integration Part 2  
Applications of Forces

Measures of Location and Spread  
Forces and Motion  
Representing Data  
Statistical Distributions  
Trigonometry Identities  
Integration  
Proof  
Exponentials and Logarithms  
Hypothesis Testing  
Variable Acceleration  
Correlation  
Forces and Friction  
Binomial Expansion  
Moments  
Radians  
Projectiles

Algebraic Expressions  
Quadratics  
Equations and Inequalities  
Functions  
Algebraic Methods  
Graphs and Functions  
Binomial Expansion  
Data Collection  
Straight Line Graphs  
Modulus Functions  
Circles  
Constant Acceleration  
Probability  
Differentiation  
Trigonometry Ratios  
Vectors

YEAR 12

Assessment 2: up to and including Statistical Distributions

Assessment 1: up to and including Equations and Inequalities

MATHEMATICAL ARGUMENT, LANGUAGE AND PROOF



MATHEMATICAL PROBLEM SOLVING



MATHEMATICAL MODELLING