

# Maths Curriculum Map

Maths Careers	
Engineer	Software engineer
Accountant	Statistician
Economist	Astronomer
Pharmacist	Investment analyst
Actuary	Meteorologist
Data analyst	Financial trader



$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

- Direct and inverse proportion
- Scale



Revision

Final Exam Preparation

Reasoning with Geometry

Algebraic Reasoning

Reasoning with Data

Reasoning with Proportion

- Plans and elevations
- Constructions, loci and bearings
- Volume and surface area
- Similarity and congruence
- Vectors
- Circle theorems
- Further trigonometry
- Geometric proof

- Quadratic and other graphs
- Quadratic equations
- Simultaneous equations
- Proof
- Area under graphs

- Tree diagrams
- And/Or rules

- Simplify ratios
- Divide into a ratio
- Use direct and inverse proportion

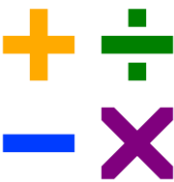
$f(x)$

Reasoning with Proportion

Reasoning with Geometry

YEAR 11

Reasoning with Number



- Manipulating expressions
- Sequences
- Forming and solving equations and inequalities
- Linear graphs

- Angle rules
- Pythagoras' theorem and trigonometry
- Perimeter and area
- Circles
- 3-D shapes
- Transformations

- Reciprocals
- Indices and standard form
- Surds
- Accuracy and bounds

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Algebraic Techniques

Reasoning with Number

YEAR 10

Revision

Representations and Revision

- Construct and interpret graphs and charts
- Calculate averages and range
- Compare data sets
- Begin to use probability

- Straight line graphs
- Forming and solving equations
- Testing conjectures

- Three-dimensional shapes
- Constructions and congruency

- Operations including with directed number
- Multiples, factors and primes
- Laws of indices
- Fractions, decimals and percentages

- Probability
- Algebraic representation
- Deduction
- Rotation and translation
- Pythagoras' Theorem

Constructing in 2 and 3 Dimensions

Reasoning with Number

Reasoning with Geometry

Reasoning with Proportion

Reasoning with Algebra

- Numbers
- Using percentages
- Maths and money

- The data handling cycle
- Measures of location

- Angles in parallel lines and polygons
- Area of trapezia and circles
- Line symmetry and reflection

- Fractions and percentages
- Standard index form
- Number sense

- Enlargement and similarity
- Solving ratio & proportion problems
- Rates

- Working in the Cartesian plane
- Representing data Tables &
- Probability

Reasoning with Data

Developing Geometry

Developing Number

Algebraic techniques

Representations

Proportional Reasoning

- Constructing, measuring and using geometric notation
- Developing geometric reasoning

- Developing number sense
- Sets and probability
- Prime numbers and proof

- Brackets, equations and inequalities
- Sequences
- Indices

- Operations and equations with directed number

- Addition and subtraction of fractions

Directed Number

Fractional thinking

Lines and Angles

Reasoning with Number

YEAR 8

$f(x)$

- Place value and ordering integers and decimals
- Fraction, decimal and percentage equivalence

- Sequences
- Understand and use algebraic notation
- Equality and equivalence

- Working in the Cartesian plane
- Representing data
- Tables & Probability

Place Value and Proportion

Algebraic Thinking

YEAR 7



- Solving problems with addition & subtraction
- Solving problems with multiplication and division
- Fractions & percentages of amounts

The first term of year 7 focusses on developing understanding of the axioms and structures of number that are fundamental to mathematics. This underpins understanding of the algebraic notation developed in this term and in subsequent years.

“Mathematics has beauty and romance. It’s not a boring place to be, the mathematical world. It’s an extraordinary place; it’s worth spending time there.” — Marcus du Sautoy, British mathematician