



KS3

# Mathematics Key Stage 3 Curriculum Overview

## Autumn Term

## Spring Term

## Summer Term

<b>Year 7</b>	Directed number Sequences Algebraic Notation Equality and equivalence Place value, integers and decimals Fractions, decimals and percentages	Problem solving with addition and subtraction Problem solving with multiplication and division Fractions and percentages More directed number Fractions	Construction, measuring and angles Angle rules and polygons Number sense Sets and probability Prime numbers and proof
<b>Year 8</b>	Ratio and scale Multiplicative change Multiplying and dividing fractions The cartesian plane Collecting and representing data Tables and probability	Brackets, equations and inequalities Sequences Indices Fractions and percentages Standard index form Number sense	Angles in parallel lines and polygons Area of trapezium and circles Symmetry Data Measures of location
<b>Year 9</b>	Straight line graphs Forming and solving equations Testing Conjecture Three dimensional shapes Construction and congruency	Numbers Using percentages Maths and money Angles and deduction Rotation and translation Pythagoras' Theorem	Enlargement and similarity Ratio and proportion Rates Probability Algebraic representation



**KS4**

# Mathematics Key Stage 4 Curriculum Overview

## Autumn Term

## Spring Term

## Summer Term

<b>Year 10</b>	Congruency, similarity and enlargement Trigonometry Equations and inequalities Simultaneous equations	Angles and bearings Circles Vectors Ratio and fractions Percentages and interest Probability	Collecting and representing data Non calculator methods with number Sequences Indices and roots Manipulating algebra
<b>Year 11</b>	Gradients and lines Non-linear graphs Using graphs Expanding and factorising Changing the subject Functions	Multiplicative reasoning Algebraic reasoning Geometric reasoning Transforming and constructing Listing and describing	Consolidation and revision



KS5

# Mathematics Key Stage 5 Curriculum Overview

	Autumn Term	Spring Term	Summer Term
<b>Year 12</b>	Algebraic expressions Quadratics Equations and inequalities Graphs and transformations Straight line graphs Circles Algebraic methods Binomial expansion Data collection Measures of location and spread Representation of data Correlation Probability Statistical diagrams	Trigonometric ratios Trigonometric identities and equations Vectors Differentiation Hypothesis testing Modelling in mechanics Constant acceleration Forces and motion	Differentiation Integration Exponentials and logarithms Forces and motion Variable acceleration
<b>Year 13</b>	Algebraic methods Functions and graphs Radians Trigonometric functions and identities Trigonometric formulae and modelling Parametric equations Regression, correlation and hypothesis testing Conditional probability The Normal Distribution	Binomial expansion Differentiation Integration Sequences and series Moments Forces and friction Projectiles Application of forces Further kinematics	Numerical methods Vectors REVISION



KS5

# Further Mathematics Key Stage 5 Curriculum Overview

	Autumn Term	Spring Term	Summer Term
<b>Year 12</b>	Complex numbers Argand diagrams Series Roots Proof by induction Matrices Transformations Vectors	Discrete random variables Poisson distribution Hypothesis testing Chi squared Volumes of revolution Algorithms Graphs and networks Algorithms on graphs Root inspection Linear programming Critical path analysis	Geometric distribution Negative binomial distribution Travelling salesman
<b>Year 13</b>	Complex numbers Series Polar coordinates Review vectors Methods in calculus Volumes of revolution Simplex algorithm	Hyperbolic functions Methods in differential equations Modelling with differential equations Central limit theorem Probability generating functions Quality of tests	REVISION