Year 9 Maths

Our mathematic course covers the National Curriculum Course for Year 9 in the United Kingdom

As well as learning mathematics skills on this course, you will also learn how to use these skills. One of the most important mathematical skills you will learn is how to solve problems.

During this course, you will learn lots of facts, information and techniques. You will start to think like a mathematician. You will discuss ideas and methods with your teacher and your peers. These discussions are an important part of developing your mathematical skills and understanding.

Term 1

Lesson 1	Integers, powers and roots	• Directed numbers • Square roots and cube roots
Lesson 2	Integers, powers and roots	• Indices • Working with indices
Lesson 3	Sequences and functions	• Generating sequences • Finding the nth term • Finding the inverse of a function
Lesson 4	Place value, ordering and rounding	• Multiplying and dividing decimals mentally • Multiplying and dividing by powers of 10 • Order of operation
Lesson 5	Length, mass, capacity and time	• Solving problems involving measurement • Solving problems involving average speed • Using compound measures
Lesson 6	Shapes	• Regular polygons • More polygons • Solving angle problems
Lesson 7	Shapes	• Isometric drawings • Plans and elevations • Symmetry in three-dimensional shapes
Lesson 8	Planning and collecting data	• Identifying data • Types of data • Designing data-collection sheets • Collecting data

Lesson 9	Fractions	• Writing a fraction in its simplest form • Adding and subtracting fractions
Lesson 10	Fractions	• Multiplying fractions • Dividing fractions • Working with fractions mentally
Lesson 11	Constructions and Pythagoras' theorem	• Constructing perpendicular lines • Inscribing shapes in circles
Lesson 12	Constructions and Pythagoras' theorem	• Using Pythagoras' theorem
Lesson 13	Expressions and formulae	• Simplifying algebraic expressions • Constructing algebraic expressions • Substituting into expressions
Lesson 14	Expressions and formulae	• Deriving and using formulae • Factorising
Lesson 15	Expressions and formulae	• Adding and subtracting algebraic fractions • Expanding the product of two linear expressions
Lesson 16	Processing and presenting data	• End of term test • Calculating statistics • Using statistics

Term 2

Lesson 1	Percentages	• Using mental methods • Comparing different quantities • Percentage changes • Practical examples
Lesson 2	Tessellations, transformations and loci	• Tessellating shapes • Solving transformation problems • Transforming shapes
Lesson 3	Tessellations, transformations and loci	• Enlarging shapes • Drawing a locus
Lesson 4	Equations and inequalities	• Solving linear equations

		• Solving problems
Lesson 5	Equations and inequalities	• Simultaneous equations • Trial and improvement • Inequalities
Lesson 6	Ratio and Proportion	• Comparing and using ratios • Solving problems
Lesson 7	Area, perimeter and volume	• Converting units of area and volume • Using hectares
Lesson 8	Area, perimeter and volume	• Solving circle problems • Calculating with prisms and cylinders
Lesson 9	Probability	• Calculating probabilities • Sample space diagrams • Using relative frequency
Lesson 10	Bearing and scale drawings	• Using bearings • Making scale drawings
Lesson 11	Graphs	• Gradients of a graph • The graph of y=mx + c • Drawing graphs
Lesson 12	Graphs	• Simultaneous equations • Direct proportions • Practical graphs
Lesson 13	Interpreting and discussing data	• Interpreting and drawing frequency diagrams • Interpreting and drawing line graphs • Interpreting and drawing scatter graphs
Lesson 14	Interpreting and discussing data	• Interpreting and drawing stem-and-leaf diagrams • Comparing distributions and drawing conclusions
Lesson 15	End of course review	• End of course review
Lesson 16	End of course test	• End of course test