

Year 7 Maths Overview

Unit	Duration (weeks)	Learning Objectives/Outcomes
Algebra 1	3	<ul style="list-style-type: none"> • BIDMAS – order of operations • Substitution into expressions and formulae • Forming Expressions & Equations • Simplifying expressions by collecting like terms • Simplifying expressions by using index notation • Expanding brackets • Solving Equations • <i>Code breaking with Enigma</i>
Place Value and Rounding	1	<ul style="list-style-type: none"> • Place value, numbers in words, rounding to the nearest 10, 100, 1000 (incl. in context) • Multiply and divide by powers of 10 • Place value with decimals, ordering numbers incl. decimals • Rounding to decimal places • Rounding to significant figures
Calculations with Decimals	1	<ul style="list-style-type: none"> • Addition and subtraction of whole numbers and decimals. (vocab: sum, difference) • Problems in context. (Money, etc.) • Multiplication and Division of decimals • Dealing with money (use different currencies)
Graphs and Charts	3	<ul style="list-style-type: none"> • Recognise different types of data – Quant, Qual, Disc, Continuous etc. • Classification of data – Run-around game • Plan/construct a database – Car park survey • Construct and analyse pictorial representations of data, including Pie Charts • Design a questionnaire and criticise poor questions • Interpreting scatter graphs and line of best fit • Co-ordinates (4 quadrants), Using co-ordinates

Sequences	1	<ul style="list-style-type: none"> • Calculating missing terms • Nth term of linear sequences • Generating sequences using nth term • Sequences involving patterns • Nth term of sequences with fractional terms
Area and Perimeter	3	<ul style="list-style-type: none"> • Find and estimate area by counting squares • Be able to calculate areas of rectangles, triangles, parallelograms and trapezium • Be able to find missing lengths when given areas of shapes • Be able to investigate areas and draw conclusions (rich task lesson) • Be able to calculate circumference of circles • Be able to calculate area of circles • Be able to calculate compound areas involving circles • Functional compound area problems • Unit conversions
Fractions, Decimals and Percentages	4	<ul style="list-style-type: none"> • Percentages to fractions then decimals • Converting between FDP • Ordering basic FDP • Simple % of amounts calculations • Fractions of Quantities • Fractions of amounts • Ordering fractions • Mixed numbers to improper fractions and vice versa • Adding and subtracting fractions • Multiplying and Dividing Fractions
Angles	2	<ul style="list-style-type: none"> • Measuring Angles • Constructing Angles • Calculating missing angles (straight line/ triangle, on a point) • Classifying angles • Angles in Quadrilaterals • Angle in special Triangles • Vertically opposite angles • Scale Drawings • Plans and elevations
Time and Timetables	1	<ul style="list-style-type: none"> • Time – Convert between 12/24 notation • Difference between analogue and digital time • Manipulating time calculations • Reading timetables • Planning a journey

Negative Numbers	1	<ul style="list-style-type: none"> • Ordering negative numbers, • negative numbers in context • calculations with negative numbers
Algebra 2 (with Negatives)	2	<ul style="list-style-type: none"> • Substitution into expressions and formulae • Forming Expressions & Equations • Simplifying expressions by collecting like terms • Simplifying expressions by using index notation • Expanding brackets • Solving Equations
Averages	2	<ul style="list-style-type: none"> • Averages & Measures of Spread– Calculate MMR • Choose an appropriate average • Compare averages and measures of spread • Frequency Tables and MMR
Probability	2	<ul style="list-style-type: none"> • Use of words on a probability scale (likely, unlikely, even chance, certain, impossible) • Calculating probability for independent events • Probability space diagrams (two dice problem, coin and dice, etc.) • Listing outcomes (e.g. food menu) • Fraction decimal percentage equivalence. • Relative Frequency (higher ability) • Estimations from probability (higher ability) • Intro to probability tree diagrams (higher ability) • Independent and dependent events – what is the difference (higher ability)
Types of Number	1	<ul style="list-style-type: none"> • Recognise square numbers up to 15 x15 • Understands Multiples and Factors • Write down factor pairs