

Mathematics Scheme of Work

Unit	Hours	Learning	Essential knowledge
Autumn 1		•	•
Numbers and the number system	9	• Apply the four operations with negative numbers	• Know how to write a number as a product of its prime factors
Calculating	9	• Convert numbers into standard form and vice versa	• Know how to round to significant figures
Presentation of data	4	• Apply the multiplication, division and power laws of indices	• Know the order of operations including powers
End of term test		• Convert between terminating decimals and fractions	• Know how to enter negative numbers into a calculator
Autumn 2		• Find a relevant multiplier when solving problems involving proportion	• Know that $a^0 = 1$
Measuring data	6	• Solve problems involving percentage change, including original value problems	• Know percentage and decimal equivalents for fractions with a denominator of 3, 5, 8 and 10
Visualising and constructing	8	• Factorise an expression by taking out common factors	• Know the characteristic shape of a graph of a quadratic function
Understanding risk I	6	• Change the subject of a formula when two steps are required	• Know how to measure and write bearings
End of term test		• Find and use the nth term for a linear sequence	• Know how to identify alternate angles
Spring 1		• Solve linear equations with unknowns on both sides	• Know how to identify corresponding angles
Algebraic proficiency: tinkering	10	• Plot and interpret graphs of linear functions	• Know how to find the angle sum of any polygon
Exploring fractions, decimals and percentages	3	• Apply the formulae for circumference and area of a circle	• Know that circumference = $2\pi r = \pi d$
Proportional reasoning	8	• Calculate theoretical probabilities for single events	• Know that area of a circle = πr^2
End of term test			• Know that volume of prism = area of cross-section \times length
Spring 2			• Know to use the midpoints of groups to estimate the mean of a set of grouped data
Patterns	4		• Know that probability is measured on a 0-1 scale
Investigating angles	5		• Know that the sum of all probabilities for a single event is 1
Calculating fractions, decimals and percentages	6		
End of term test			
Summer			
Solving equations and inequalities	4		
Calculating space	9		
Algebraic proficiency: visualising	9		
Understanding risk II	5		
End of year test			