

Subject: Maths

Curriculum content covered in Year 7

Autumn term

- Four operations with numbers and decimals
- Understanding BIDMAS
- Using a scientific calculator
- Calculating with negative numbers
- Simplifying fractions
- Calculating with fractions
- Calculating the perimeter of shapes
- Understand how to round numbers differently
- Use approximations to estimate calculations
- Accurately draw and measure lengths and angles
- Convert between metric lengths and metric to imperial
- Introduction to algebra

Spring term

- Simplifying algebraic expressions
- Symmetry
- Classifying 2D and 3D shapes by their properties
- Reading and plotting coordinates
- Plotting lines from given equations using coordinates
- Calculating with percentages
- Understanding a digital and analogue clock
- Calculating time differences and journey times
- Forming expressions
- Substitute into algebraic expression

Summer term

- Substituting into more complex formula
- Calculating the area of different shapes, applying known formulas
- Calculating surface area of 3D shapes
- Converting between fractions, decimals and percentages
- Sharing in a given ratio
- Understanding proportion
- Solving equations
- Understanding square cube and prime numbers
- Using and applying index laws

Curriculum content covered in Year 8

Autumn term

- 4 operations with numbers and decimals, solving real life problems involving number, using a calculator.
- 4 operations with negative numbers including in real life context, BIDMAS, substituting negative numbers.
- Collecting and recording data, calculating averages and range, using averages to compare

data.

- Rounding numbers and decimals, estimation, exploring recurring decimals.
- Substitution into algebraic and worded formulae, forming expressions, rearranging basic formulae.
- Simplifying algebraic expressions, expanding brackets, factorising expressions, applying to worded problems and diagrams.
- Equivalent fractions, finding a fraction of an amount, 4 operations with fractions and mixed numbers, converting between fractions, decimals and percentages, simplifying fractions.
- Recognising shapes, nets, understand shape vocabulary, identify properties of shapes, plans and elevations.
- Area and perimeter of rectangle, parallelogram, triangle, trapezium, circle, part circle, compound shape.

Spring term

- Percentages of amounts, percentage increase and decrease, solving real life problems involving percentages.
- Calculating simple probability, two way tables, sample space diagrams, venn diagrams, theoretical probability and relative frequency.
- Square numbers, cube numbers, prime numbers, highest common factor, lowest common multiple, index notation, laws of indices.
- Solving linear equations, forming and solving an equation from a worded problem, solving simple quadratic equations, understanding and solving basic inequalities.
- Generating sequences from a rule, generating linear and quadratic sequences from the n th term, finding the n th term, describe a sequence in words.
- Plot and read coordinates, plot linear graphs, plot quadratic and basic cubic graphs, find the equation of a straight line.

Summer term

- Bar graphs, tally charts, scatter graphs (including line of best fit), pie charts, box plots, cumulative frequency graphs.
- Share into a given ratio, worded proportion problems in real life context, currency conversions, scale drawings, solve best buy problems, similar shapes.
- Measure and construct angles, angle rules, interior and exterior angles, angles in parallel lines, solve angle problems using algebra, Pythagoras.
- Recognise and construct nets, calculate the volume of prisms including cylinders, surface area of prisms, more complex volume using formulae, plans and elevations.
- Perform and describe all four transformations (rotation, reflection, translation, enlargement), combinations of transformations, more complex enlargements using fractions and negatives.

Curriculum content covered in Year 9

Autumn term

- Primes including product of primes.
- Highest common factor & least common multiple.
- Indices (calculating and laws).
- Simplifying expressions including expanding brackets and factorising.
- Averages and range.

- Mean from frequency tables.
- BIDMAS.
- Changing the subject of formulae.
- Rounding to decimal places and significant figures
- Ordering & calculating with decimals.
- Ordering & calculating with fractions.
- Find the area of 2d shapes including compound shapes.
- Percentages.

Spring term

- Generating sequences.
- Finding the 'nth' term of a sequence.
- Solving equations
- Inequalities
- Ratio
- Exchange rates
- Direct and inverse proportion
- Probability
- Relative frequency
- Volume
- Surface area

Summer term

- Plotting straight line and quadratic graphs
- Finding the equation of a straight line
- Angle rules on a straight line, around a point and interior & exterior angles
- Angle rules on parallel lines.
- Transformations
- Convert between fractions, decimals and percentages
- Metric conversions
- Time and timetables
- Speed, distance, time
- Distance-time graphs
- Bart charts, two way tables, pie charts, scatter graphs (box plots and cumulative frequency for higher)
- Constructing triangles
- Perpendicular and angle bisectors
- Bearings
- Standard form
- Similarity