



Maths KS3 Learning Journey

Name:

KS3 Skills

AO1 Use and apply standard techniques

- accurately recall facts, terminology and definitions
- use and interpret notation correctly
- accurately carry out routine procedures or set tasks requiring multi-step solutions.

AO2 Reason, interpret and communicate mathematically

- make deductions, inferences and draw conclusions from mathematical information
- construct chains of reasoning to achieve a given result
- interpret and communicate information accurately
- present arguments and proofs
- assess the validity of an argument and critically evaluate a given way of presenting information

AO3 Solve problems within mathematics and in other contexts

- translate problems in mathematical or nonmathematical contexts into a process or a series of mathematical processes
- make and use connections between different parts of mathematics
- interpret results in the context of the given problem
- evaluate methods used and results obtained
- evaluate solutions to identify how they may have been affected by assumptions made

Year 7 Foundation Knowledge

- Unit 1 Analysing and displaying data including bar charts, mode median, mean and range
- Unit 2 Calculating four operations
- Unit 3 Function machines, simplifying expressions and writing expressions
- Unit 4: Graphs and coordinates
- Unit 5 Factors, multiples and primes
- Unit 6 Decimal arithmetic
- Unit 7 Right angles and lines and measuring angles
- Unit 8 Symmetry in shapes, regular polygons and area and perimeter
- Unit 9 Fractions arithmetic and finding percentages
- Unit 10: Transformations

Year 8 Foundation Knowledge

- Unit 1 Number properties and calculations
- Unit 2 Shapes and measures in 3D including nets, surface area and volume
- Unit 3 Statistics data collection, bar and pie charts
- Unit 4 Simplifying expressions and solving equations
- Unit 5 Decimals arithmetic
- Unit 6 Angles drawing and measuring in triangles and around points
- Unit 7 Number properties squares, cubes, roots, prime decomposition
- Unit 8 Sequences
- Unit 9 Fractions and percentages
- Unit 10 Probability outcomes and experimental

Year 7 Higher Knowledge

- Unit 1 Analysing and displaying data
- Unit 2 Number skills including factors, multiples, primes, powers, roots
- Unit 3 Writing expressions, expanding and simplifying, factorising
- Unit 4 Fraction arithmetic
- Unit 5 Angles and shapes including parallel lines, triangles and quadrilaterals
- Unit 6 Decimal arithmetic
- Unit 7 Solving equations
- Unit 8 Multiplicative reasoning with ratios and proportion
- Unit 9 Perimeter, area and volume
- Unit 10 Sequences and graphs

Year 8 Higher Knowledge

- Unit 1 Factors and powers including prime factor decomposition and Powers of 10
- Unit 2 Working with powers in algebra including simplifying, factorising, substituting and solving
- Unit 3 2D shapes and 3D solids including plans and elevations, volume of prisms, circles area and circumference
- Unit 4 Real life graphs
- Unit 5 Transformations
- Unit 6 Fractions, decimals and percentages including recurring decimals and percentage changes
- Unit 7 Constructions and loci
- Unit 8 Probability
- Unit 9 Scale drawings and measures
- Unit 10 Graphs including $y=mx+c$ and parallel and perpendicular lines



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