



Year 11

- Express an integer as a product of prime factors and use to find HCF and LCMs
- Use the four operations with mixed numbers applied to a variety of contexts
- Solve ratio and proportion problems in a variety of contexts
- Calculate a percentage change using a multiplier
- Construct and solve equations where the unknown appears on both sides of the equation
- Rearrange the subject of a formula, including those with division
- Use the form $y = mx + c$ to draw linear graphs and determine values of m and c from a graph
- Use Pythagoras' Theorem to find lengths in 2d shapes
- Calculate volume and surface area of cylinders

Year 10

- Use positive integer powers and roots, recognise powers of 2, 3, 4 and 5
- Apply the four operations to fractions and mixed numbers
- Identify and work with fractions in ratio problems
- Find a percentage of an amount including using multipliers
- Understand proportion and ratio in real life contexts
- Solve linear equations including those with unknowns on both sides
- Expand double brackets
- Factorise algebraic expressions into a single bracket
- Calculate area of compound shapes made from circles
- Calculate volume and surface area of prisms

Year 9

- Understand and use highest common factors and lowest common multiples
- Add and subtract fractions with different denominators
- Express one quantity as a percentage of another and as a fraction/decimal
- Find missing values in worded ratio questions
- Substitute positive and negative values into simple formulae and expressions
- Find the n th term of linear sequences and generate terms
- Simplify algebraic expressions including by expanding single brackets
- Calculate the volume and surface area of cuboids
- Identify and use alternate, corresponding and co-interior angles on parallel lines
- Find probabilities of two events using two way tables and Venn Diagrams



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Pathway 4

Year 8

- Express one quantity as a fraction of another and find a fraction of an amount
- Find simple percentages of an amount
- Divide a quantity into a given ratio and apply ratio to real contexts
- Plot coordinates in all 4 quadrants
- Simplify expressions with more than one unknown
- Expand a single bracket
- Solve 2 step equations
- Calculate area and perimeter of compound shapes made from rectangles and triangles
- Use the sum of angles in triangles and quadrilaterals
- Find probabilities of two events using listing

Year 7

- Find/define prime numbers, factors, multiples, common factors and common multiples
- Multiply and divide 2 and 3 digit numbers
- Simplify fractions and find equivalent fractions
- Convert between simple fractions, decimals and percentage
- Relate fractions to ratios and simplify ratios
- Find simple percentages of an amount
- Plot coordinates in the positive quadrant
- Translate between worded descriptions and algebraic expressions
- Simplify expressions with one unknown
- Solve 1 step equations