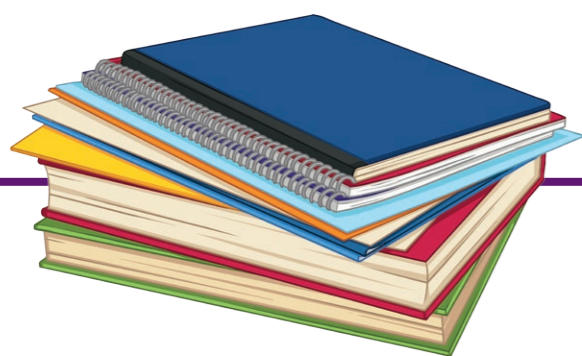


New Topics at Foundation Tier

(previously taught at Higher tier)

- Solve linear simultaneous equations algebraically and graphically
- Calculate density, mass and volume
- Solve problems involve percentage change and reverse percentages
- Use direct and inverse proportion graphically and algebraically
- Find corresponding lengths in similar shapes.
- Use the congruence criteria for triangles (SSS, SAS, ASA, RHS)
- Enlarge shapes with fractional scale factors
- Find the areas and perimeters of compound shapes involving circles, and calculate arc lengths and areas of sectors
- Use the sin, cos and tan trigonometric ratios for right angled triangles
- Use tree diagrams to solve probability questions
- Infer properties of a population from a sample, while knowing the limitations of sample
- Calculate with and interpret standard form ($A10^n$), where $1 \leq A < 10$ and n is an integer
- Apply addition and subtraction of vectors, multiplication of vectors by a scalar and diagrammatic and column representations of vectors
- Factorise quadratic expressions of the form $x^2 + bx + c$, including the difference of two squares
- Use $y = mx + c$ to work with straight lines on graphs



New Topics at KS3

(previously taught at Foundation GCSE)

- Standard form
- Calculate the exact representation of roots as well as their decimal approximations
- Calculate possible rounding or estimating errors
- Venn diagrams in probability
- Direct and indirect proportion including graphical and algebraic representations

New Topics at KS2

(previously taught at KS3)

- Long division
- Four operations with fractions
- Calculate the decimal equivalent of fractions
- Compare and order fractions greater than 1
- BIDMAS
- Plot points in all four quadrants
- Convert between miles and kilometres
- Calculate volume of 3D shapes
- Use letters to represent unknowns
- Generate and describe linear sequences

New Topics at Higher Tier

(previously taught at A Level)

- Recognise and use the equation of a circle centred at the origin
- Find the equation of a tangent to a circle at a given point
- Find approximate solutions to equations using iteration
- Solve quadratic inequalities
- Find the n th term of a quadratic sequence.
- Recognise and use geometric sequences where the common ratio may be a surd
- Apply the concepts of instantaneous and average rates of change by looking at the gradients of tangents and chords to a curve
- Prove the circle theorems.
- Use the probability 'AND' and 'OR' rules
- Change recurring decimals into their corresponding fractions and vice versa
- Find inverse and composite functions
- Locate turning points of quadratic functions by completing the square
- Sketch $y = \tan x$ (in addition to sin and cos).
- Interpret areas under graphs and gradients of graphs in real-life contexts

