



KS3 Curriculum: Mathematics

At the start of Year 7, students are set by prior attainment, based on KS2 levels. Regular assessments are used to monitor progress and identify areas for development, both for individual students and for the class as a whole. Sets are reviewed on a regular basis and students are moved when appropriate to ensure that the level and pace of the work matches their needs.

Homework is set weekly according to the whole-school homework timetable. The tasks are set at different levels and are used to practice key mathematical skills and to help teachers to identify any gaps in students' understanding. Over time, students should see their performance in homework tasks improve as they reinforce and extend their knowledge and skills.

Students study a range of topics based on the key content areas of Number, Algebra, Geometry and Measures, and Statistics. The level of work is based on students' prior attainment and their targets, this allows teachers to plan activities to address any gaps in understanding, build on previous knowledge and reinforce and deepen students' skills and mathematical knowledge. Problem solving tasks are used to develop students' ability to use their skills to solve problems in unfamiliar contexts.

Key topics studied across Years 7, 8 and 9:

- o Calculations – using written methods and efficient use of a calculator.
- o Properties of numbers – building on times tables to understand factors, multiples and prime numbers.
- o Proportional reasoning – fractions, decimals, percentages and ratios.
- o Sequences and patterns – exploring and describing a range of number and shape patterns.
- o Algebra – using equations and formulas to solve more complex problems.
- o Graphs – using coordinates and graphs to explore mathematical functions.
- o Angles and Polygons – describing the properties of 2D and 3D shapes.
- o Area, perimeter and volume – using a range of formulas with different shapes.
- o Symmetry and Transformation – Using reflection, rotation, translation and enlargement to transform shapes.
- o Statistics – using diagrams and averages and to analyse and compare data.
- o Probability – understanding chance and calculating the probability of events.

