MATHS

YEAR 7 LEARNING JOURNEY INFORMATION
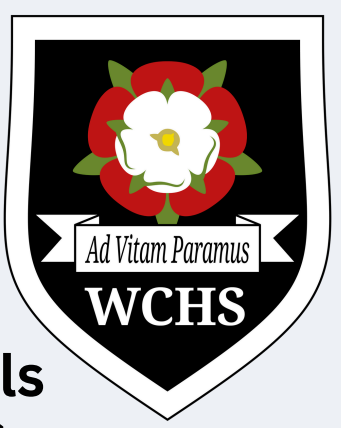
Sequences
Algebraic notation and substitution
Expressions and equations

Autumn Term 1
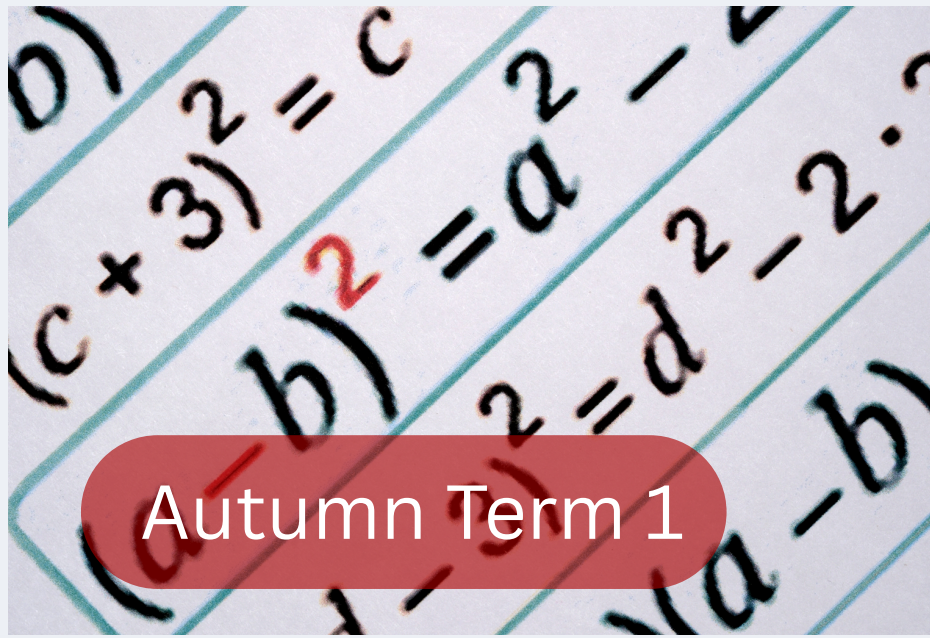
This half term introduces sequences, focusing on describing, continuing, and finding missing terms in linear and non-linear patterns. Students learn term-to-term rules and practice clear explanations. The block then moves to algebraic notation and substitution, starting with function machines, distinguishing expressions like 2x+5 and 2(x+5). Substitution skills develop alongside equality, equivalence, and collecting like terms, leading to solving one- and two-step equations.

Place value, ordering and rounding
Four operations
Averages and range
Rounding and estimation

Autumn Term 2

This term consolidates number skills, starting with place value for integers and decimals, ordering numbers, and interpreting number lines. Students practice rounding, significant figures, and standard form. The four operations are revisited with integers and decimals, including powers of 10 and order of operations. Learners calculate averages and range, apply them in problem-solving, and finish with estimation strategies and error intervals.

Graphing data
Fractions, decimals and percentages

Spring Term 1

Students begin by representing and interpreting data using pictograms, bar charts, composite charts, scatter graphs, and time-series graphs, introducing correlation and lines of best fit. Coordinates in the first quadrant are reinforced as a foundation for graph work. Later, the focus shifts to fractions, decimals, and percentages (FDP), including tenths and hundredths, converting between forms, and understanding equivalence. Learners work with fractions on number lines and diagrams, building confidence in comparing and converting FDP values greater than one.

Directed number
Fractions and percentages of amounts
### Perimeter and area

Spring Term 2

This half term begins with directed numbers, teaching students to compare, order, and calculate across zero, including addition, subtraction, multiplication, and division with negatives. Order of operations and calculator use are emphasized. The block then revisits fractions and percentages of amounts, including finding parts and wholes, percentage increase/decrease, and solving problems involving values greater than one. Finally, students tackle perimeter and area, converting metric units, calculating perimeters of polygons and compound shapes, and finding areas of rectangles, triangles, parallelograms, and trapezia, linking these to algebraic expressions.

Speed, distance and time
Properties of number

Summer Term 1

This half term begins with directed numbers, comparing, ordering, and calculating across zero, including all four operations with negatives, alongside order of operations and calculator use. Students then revisit fractions and percentages of amounts, covering parts and wholes, percentage change, and problems with values greater than one. Finally, they tackle perimeter and area, converting metric units, finding perimeters of polygons and compound shapes, and calculating areas of rectangles, triangles, parallelograms, and trapezia, linking these to algebraic expressions.

Add and subtract fractions
Angles and polygons

Summer Term 2
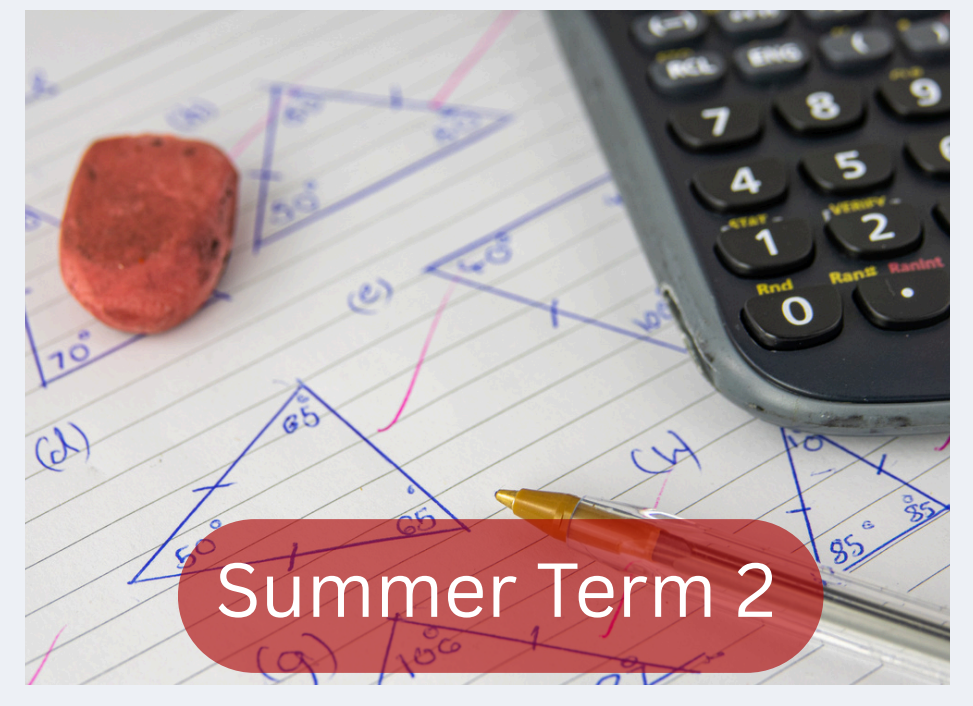
The final half term builds fluency in adding and subtracting fractions, progressing from common denominators to mixed numbers, improper fractions, and algebraic fractions. Students also practice substitution and solving equations with fractions. Geometry topics include drawing and measuring angles, applying angle rules for points, lines, triangles, and quadrilaterals, and identifying polygons. Learners work with parallel and perpendicular lines, extend to angles in parallel lines and polygons, and conclude with simple proofs and an end-of-year assessment.