BOURNEMOUTH SCHOOL
FOR GIRLS

Assessment area	Developing	Secure	Excellent
NUMBER SKILLS	• Some success in applying the four operations including BIDMAS and rounding and estimation. • Have an understanding of the units of mass, length, volume, time etc. • Know basic integer powers and associated real roots of smaller numbers. • Understand the concepts and vocabulary of prime numbers, multiples, HCF and LCM.	• Ordering correctly positive and negative numbers and applying the four operations with some success including BIDMAS. Understanding and applying estimation and rounding. • Use consistently in context the units of mass, length, volume, time etc. • Use positive powers of 2 to 10 and roots of numbers up to 100. • Show confidence in finding factors and multiples, HCF and LCM (not necessarily using a formal method).	• Apply the four operations confidently to both positive and negative numbers, including BIDMAS. Also estimate and round accurately. • Deal confidently with units of mass, length, volume, time etc. • Understand fully positive integer powers and associated real roots (square, cube and higher). • Understand fully prime factorisation, and linking this with HCF and LCM.
FRACTION, DECIMALS AND PERCENTAGES	• Some success in applying the four operations to both proper and improper fractions and decimals. • Understand the relationship between percentages, fractions and decimals. Calculate basic percentage change. • Express one quantity as a percentage of another.	• Show confidence in applying the four operations to both proper and improper fractions and decimals. • Solve problems involving percentage change and interpret these using a multiplier. • Compare two quantities using percentages.	• Apply the four operations confidently to both proper and improper fractions and decimals. • Confidently solve problems involving percentage change including original value problems and simple interest. • Compare two or more quantities given as percentages, fractions or decimals.
RATIO	☐ Use ratio notation including reduction to simplest form. ☐ Understand a scale in terms of a multiplication between two numbers	☐ Divide a given quantity into two parts in a given ratio. ☐ Use scale factors, scale diagrams and maps	☐ Express the division of a quantity into two parts as a ratio. Apply ratio to real contexts and problems. ☐ Solve a range of problems that involve scale factors, scale diagrams and maps.

ALGEBRA	• Use numeric sequences. • Use a worded formulae. • Understand the use of letters to represent numbers and simplify basic expressions. • Solve simple two stage equations • Work with coordinates in all four quadrants.	• Use nth term to generate a sequence. • Use a simple algebraic formula. • Simplify expressions with simple indices and brackets. • Solve two stage equations using a structured balancing method. • Draw a straight line graph from an equation using a table. • Understand and use lines parallel to the axes, $y = x$ and $y = -x$.	• Find the nth term. • Use a complex algebraic formulae. • Simplify and expand more complex. • Expressions with indices and brackets. • Use balancing method to solve more complex equations, brackets or unknown both sides. • Draw a straight line graph from an equation using a table. • Begin to show an understanding of gradient.
SHAPE AND SPACE	• Derive and apply the properties and definitions of: special types of quadrilaterals, including square, rectangle, parallelogram, trapezium, kite and rhombus; and triangles and other plane figures using appropriate language. • Know and apply formulae to calculate area of triangles, parallelograms, trapezia and calculate their perimeter.	• Apply the properties of angles at a point, angles at a point on a straight line, vertically opposite angles • Use standard units of measure and related concepts and calculations (length, area, volume/capacity, mass, time, money, etc.) • Calculate perimeter and areas of other quadrilaterals and composite shapes and find volume and surface area of cuboids.	• Understand and use alternate and corresponding angles on parallel lines, and derive and use the sum of angles in a triangle. • Understand and use Pythagoras' theorem.

HANDLING DATA AND PROBABILITY	• Understand and calculate probabilities for a single event. • Interpret and construct tables, bar charts and pictograms. • Calculate the median, mean, mode and spread (range) for a list of data values.	• Understand and use probability for when two or more events happen at the same time. • Interpret and construct pie charts and stem and leaf diagrams and Venn diagrams. • Interpret, analyse and compare the distributions of data sets through appropriate measures of average (median, mean and mode) and spread (range). • Take account of extreme data points.	• Compare experimental and theoretical probability in a range of contexts. • Use and interpret scatter graphs and understand correlation. • Calculate the mean and range for grouped data. • Identify the modal class and identify the class in which the median lies for grouped data.
REASONING, INTERPRETING AND COMMUNICATING MATHEMATICALLY	☐ Uses minimal levels of communication.	☐ Uses appropriate levels of communication.	☐ Uses advanced levels of communication.