NOTTINGHAM BRITISH SCHOOL – CURRICULUM DEVELOPMENT 2019

Year 7 Maths

	October Assessment	December Assessment	March Assessment	June Assessment	Age Related Expectation By the end of the year every student will be able to ….
	Using Numbers Understand and use place value for decimals, measures and integers of any size Order positive and negative integers, decimals and fractions; use the number line as a model for ordering of the real numbers. **Decimal Numbers** Round numbers and measures to an appropriate degree of accuracy [for example, to a number of decimal places or significant figures] Use standard units of mass, length, time, money and other measures, including with decimal quantities	**Perimeter, area and volume** Derive and apply formulae to calculate and solve problems involving: perimeter and area of square, rectangle and triangles Calculate and solve problems involving: perimeters of 2-D shapes **Angles** Derive and illustrate properties of triangles, quadrilaterals, circles, and other plane figures [for example, equal lengths and angles] using appropriate language and technologies	**Fractions** Use the four operations, including formal written methods, applied to integers, decimals, proper and improper fractions, and mixed numbers, all both positive and negative Working with numbers **Ratio** Divide a given quantity into two parts in a given part: part or part: whole ratio; express the division of a quantity into two parts as a ratio Understand that a multiplicative relationship between two quantities can be	**Coordinates and graphs** Model situations or procedures by translating them into algebraic expressions or formulae and by using graphs Work with coordinates in all four quadrants Interpret mathematical relationships both algebraically and graphically **Symmetry** Identify properties of, and describe the results of, rotations and reflections applied to given figures **3D Shapes** Describe, sketch and draw 3D shapes. use the properties of faces, surfaces, edges and vertices of cubes, cuboids, prisms, cylinders,	**Fractions and Coordinates** Move freely between different numerical, algebraic, graphical and diagrammatic representations [for example, equivalent fractions, fractions and decimals, and equations and graphs] **3D Shapes** Use language and properties precisely to analyse numbers, algebraic expressions, 2-D and 3-D shapes, probability and statistics. **Numbers and Decimal Numbers** Consolidate their numerical and mathematical capability from key stage 2 and extend their understanding of the number system and place value to include decimals, fractions, powers and roots **Other Skills** Develop their mathematical knowledge, in part through solving problems and evaluating the

	Probability Record, describe and analyse the frequency of outcomes of simple probability experiments involving randomness, fairness, equally and unequally likely outcomes, using appropriate language and the 0-1 probability scale Understand that the probabilities of all possible outcomes sum to 1 **Percentages** Define percentage as 'number of parts per hundred', interpret percentages and percentage changes as a fraction or a decimal, interpret these multiplicatively, express one quantity as a percentage of another, compare two quantities using percentages, and	apply the properties of angles at a point, angles at a point on a straight line, vertically opposite angles □ understand and use the relationship between parallel lines and alternate and corresponding angles **Algebra and Equations** Substitute numerical values into formulae and expressions Understand and use the concepts and vocabulary of expressions, equations and terms Understand and use standard mathematical formulae; rearrange formulae to change the subject	expressed as a ratio or a fraction **Statistics and Interpreting data** Describe, interpret and compare observed distributions of a single variable through: appropriate graphical representation involving discrete, continuous and grouped data; and appropriate measures of central tendency (mean, mode, median) and spread (range, consideration of outliers) Construct and interpret appropriate tables, charts, and diagrams, including frequency tables, bar charts, pie charts, and pictograms for categorical data, and vertical line (or bar) charts for ungrouped	pyramids, cones and spheres to solve problems in 3-D.	outcomes, including multi-step problems Develop their use of formal mathematical knowledge to interpret and solve problems, including in financial mathematics Begin to model situations mathematically and express the results using a range of formal mathematical representations Select appropriate concepts, methods and techniques to apply to unfamiliar and non-routine problems.

	work with percentages greater than 100% Use a calculator and other technologies to calculate results accurately and then interpret them appropriately Solve problems involving percentage change, including: percentage increase, decrease and original value problems and simple increases and decreases in financial mathematics	**Sequences** Generate terms of a sequence from either a term-to-term or a position-to-term rule Recognise arithmetic sequences and find the nth term	and grouped numerical data		