



Year 6

Aspect			
Number and Place Value	I read, write, order and compare numbers up to 10,000,000 and determine the value of each digit.	I use negative numbers in context and calculate intervals across zero.	- I round any whole number to the required degree of accuracy. - I solve number and practical problems that involve all other number and place value objectives.
Addition and Subtraction	- I perform mental calculations, including with mixed operations and large numbers. - I use knowledge of the order of operations to carry our calculations involving the four operations. - I use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.	I use knowledge of the order of operations to carry our calculations involving the four operations.	- I solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. - I solve problems involving addition, subtraction, multiplication and division.
Multiplication and Division	- I identify common factors, common multiples and prime numbers. - I perform mental calculations, including with mixed numbers and large numbers.	- I multiply multi-digit numbers up to 4-digits by a 2-digit whole number using the formal written method of long multiplication. - I divide numbers up to 4-digits by a 2-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context. - I divide numbers up to 4-digits by a 2-digit number using the formal written method of short division, where appropriate, interpreting remainders according to the context.	I solve multiplication and division multi-step problems in contexts, deciding which operations and methods to use and why.



Year 6 (continued)

Aspect			
Fraction	- I compare and order fractions, including fractions. - I use common factors to simplify fractions; use common multiples to express fractions in the same denomination. - I recall and use equivalences between simple fractions, decimals and percentages, including different contexts.	I add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.	- I multiply simple pairs of proper fractions, writing the answer in the simplest form. - I divide proper fractions by whole numbers. - I associate a fraction with division to calculate decimal fraction equivalents, for simple fractions.
Measures	- I calculate, estimate and compare volume of cubes and cuboids using standard units, including cm^3 and m^3, and extending to other units such as mm^3 and km^3. - I convert between miles and km. - I use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to three decimal places.	- I solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate. - I recognise when it is possible to use formulae for area and volume of shapes.	- I recognise that shapes with the same areas can have different perimeters and vice versa. - I calculate the area of parallelograms and triangles.
Geometry	- I compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons. - I draw 2D shapes using given dimensions and angles.	- I describe positions on the full coordinate grid, (all four quadrants). - I draw and translate simple shapes on the coordinate plane, and reflect them in the axes. - I recognise, describe and build simple 3D shapes, including making nets.	- I recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. - I illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.



Year 6 (continued)

Aspect			
Statistics		I interpret and construct: pie charts and line graphs and use these to solve problems.	I calculate and interpret the mean as an average
Ratio and Proportion		- I solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts. - I solve problems involving the calculation of percentages of whole numbers or measures such as 15% of 360 and the use of percentages for comparison.	
Algebra			- I express missing number problems algebraically and use simple formulae. - I find pairs of numbers that satisfy number sentences with two unknowns.