

Place Value	read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	identify the value of each digit in numbers given to 3 decimal places	round any whole number to a required degree of accuracy	round decimal numbers to the nearest whole, tenth and hundredth	multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places	use, read, write and convert between metric 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 up to 3 decimal places	use negative numbers in context, and calculate intervals across 0	solve number and practical problems that involve all of the above								
	Perform addition and subtraction calculations mentally (Y6)	Add and subtract whole numbers with more than 4 digits.	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	use the inverse to check calculations (Y6)	Add and subtract decimal numbers.	use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy										
Addition and Subtraction																
	recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³) [Y5]	Multiply and divide mentally using known timetables facts (7 x 0.5) (630 ÷ 7)	identify common factors, common multiples (relate to finding equivalent fractions) and prime numbers .	perform mental calculations, including with mixed operations and large numbers	solve problems involving addition, subtraction, multiplication and division	Multiply up to a 4-digit number by 2-digits using the formal written method of long division.	divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context	divide numbers up to 4 digits by a two-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	use written division methods in cases where the answer has up to 2 decimal places	Understand the order of operations, using brackets eg: 2 + 1 x 3 = 5 and (2 + 1) x 3 = 9.	use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	multiply one-digit numbers with up to 2 decimal places by whole numbers				
Multiplication and Division																
Fractions	multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places (PV)	multiply one-digit numbers with up to 2 decimal places by whole numbers (M&D)	recall and use equivalences between simple fractions, decimals and percentages, including in different contexts	use common factors to simplify fractions; use common multiples to express fractions in the same denomination	compare and order fractions, including fractions >1 and order on a number line	Identify equivalent fractions	Change mixed numbers into improper fractions and vice versa	be able to find fractions of an amount [eg: 3/4 of 560]	be able to find the whole [eg: 3/8 of ? = 210]	add and subtract fractions with different denominators, using the concept of equivalent fractions	add and subtract mixed numbers with different denominators, using the concept of equivalent fractions	multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, 1/4 x 1/2 = 1/8]	divide proper fractions by whole numbers [for example, 1/3 ÷ 2 = 1/6]	divide fractions by fractions [eg: 2/3 ÷ 3/4 = 8/9' (not in NC)	associate a fraction with division and calculate decimal fraction equivalents [for example, 3/8]	solve problems which require answers to be rounded to specified degrees of accuracy
Algebra	use simple formulae	generate and describe linear number sequences	express missing number problems algebraically	find pairs of numbers that satisfy an equation with two unknowns	enumerate possibilities of combinations of two variables.	Use of symbols and letters to represent variables and unknowns in mathematical situations that they already understand, such as: missing numbers, lengths, coordinates and angles formulae in mathematics and science.										
Measurement	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 up to three decimal places (PV)	recognise that shapes with the same areas can have different perimeters and vice versa	recognise when it is possible to use formulae for area and volume of shapes	calculate the area of parallelograms	calculate the area of triangles	convert between miles and kilometres	**To tell the time and solve problems involving time including digital (12 & 24 hour) and analogue (Y4/5 objectives) ** Ongoing; not a Y6 objective but need to check									
Ratio and Proportion	solve problems involving the relative sizes of two quantities where missing values can be found by using multiplication and division facts.(for example, similar shapes and recipes)	solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison	solve problems involving similar shapes where the scale factor is known or can be found	solve problems involving unequal sharing and grouping using knowledge of fractions and multiples (solve problems involving unequal quantities, for example, 'for every egg you need three spoonsful of flour', ' 83 of the class are boys').												

Geometry	draw 2-D shapes using given dimensions and angles	recognise, describe and build simple 3-D shapes, including making nets	compare and classify geometric shapes based on their properties and sizes	find unknown angles in any triangles, quadrilaterals, and regular polygons	illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius	recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.	describe positions on the full coordinate grid (all four quadrants)	draw and translate simple shapes on the coordinate plane, and reflect them in the axes.
Statistics	read, interpret and construct line graphs and use these to solve problems	read and interpret pie charts and use these to solve problems	construct pie charts	calculate and interpret the mean as an average				