



Number and Place Value

Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit					
Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000					
Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero					
Round any number up to 1,000,000 to the nearest 10					
Round any number up to 1,000,000 to the nearest 100					
Round any number up to 1,000,000 to the nearest 1000					
Round any number up to 1,000,000 to the nearest 10,000					
Round any number up to 1,000,000 to the nearest 100,000					
Solve number problems and practical problems that involve all of the above					
Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.					

Addition and Subtraction

Add whole numbers with more than 4 digits, including using formal written methods					
Subtract whole numbers with more than 4 digits, including using formal written methods					
Add numbers mentally with increasingly large numbers					
Subtract numbers mentally with increasingly large numbers					
Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy					
Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.					

Multiplication and Division

Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers					
Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers					
Establish whether a number up to 100 is prime and recall prime numbers up to 19					
Multiply numbers mentally drawing upon known facts					
Divide numbers mentally drawing upon known facts					
Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers					
Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context					
Multiply whole numbers and those involving decimals by 10, 100 and 1,000					
Divide whole numbers and those involving decimals by 10, 100 and 1,000					
Recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³)					
Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes					
Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign					
Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.					

Fractions (including decimals and percentages)

Compare and order fractions whose denominators are all multiples of the same number					
Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths					
Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number					
Add fractions with the same denominator and denominators that are multiples of the same number					
Subtract fractions with the same denominator and denominators that are multiples of the same number					
Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams					
Read and write decimal numbers as fractions [for example, $0.71 = 71/100$]					
Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents					
Round decimals with two decimal places to the nearest whole number and to one decimal place					
Read, write, order and compare numbers with up to three decimal places					
Solve problems involving number up to three decimal places					
Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal					
Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $1/5$, $2/5$, $4/5$ and those fractions with a denominator of a multiple of 10 or 25.					
Measures					
Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)					
Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints					
Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres					
Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes					
Estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]					
Solve problems involving converting between units of time					
Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.					
Geometry (Properties of Shape)					
Identify 3-D shapes, including cubes and other cuboids, from 2-D representations					
Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles					
Draw given angles, and measure them in degrees ($^\circ$)					
Identify: angles at a point and one whole turn (total 360°) angles at a point on a straight line and $1/2$ a turn (total 180°) other multiples of 90°					
Use the properties of rectangles to deduce related facts and find missing lengths and angles					
Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.					
Geometry (Position and Direction)					
Identify, describe and represent the position of a shape following a reflection, using the appropriate language, and know that the shape has not changed.					
Identify, describe and represent the position of a shape following a translation, using the appropriate language, and know that the shape has not changed.					
Statistics					
Solve comparison, sum and difference problems using information presented in a line graph					
Complete, read and interpret information in tables, including timetables.					