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| **Number – number and place value** | **Number – addition and subtraction** | **Number – multiplication and division** |
| * Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.
* *Count forwards and backwards in decimal steps.*
* Read, write, order and compare numbers to at least1 000 000 and determine the value of each digit.
* Read, write, order and compare numbers with up to 3 decimal places.
* *Identify the value of each digit to three decimal places.*
* *Identify represent and estimate numbers using the number line.*
* *Find 0.01, 0.1, 1, 10, 100, 100 and other powers of 10 more or less than a given number.*
* Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.
* Round decimals with two decimal places to the nearest whole number and to one decimal place.
* Multiply/divide whole numbers and decimals by 10, 100 and 1000.
* Interpret negative numbers in context, count on and back with positive and negative whole numbers, including through zero.
* *Describe and extend number sequences including those with multiplication/division steps and where the step size is a decimal.*
* Read Roman numerals to 1000 (M); recognise years written as such.
* Solve number and practical problems that involve all of the above.
 | * *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).*
* *Select a mental strategy appropriate for the numbers involved in the calculation.*
* *Recall and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place).*
* *Derive and use addition and subtraction facts for 1 (with decimal numbers to two decimal places).*
* Add and subtract numbers mentally with increasingly large numbers *and decimals to two decimal places.*
* Add and subtract whole numbers with more than 4 digits *and decimals with two decimal places,* including using formal written methods (columnar addition and subtraction).
* 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.
* *Solve addition and subtraction problems involving missing numbers.*
 | * *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).*
* 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.
* Recognise and use square (2) and cube (3) numbers, and notation.
* *Use partitioning to double or halve any number, including decimals to two decimal places.*
* Multiply and divide numbers mentally drawing upon known facts.
* Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.
* 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.
* *Use estimation/inverse to check answers to calculations; determine, in the context of a problem, an appropriate degree of accuracy.*
* 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.
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| **Number – fractions, decimals and percentages** | **Geometry – properties of shapes** | **Measurement** |
| * Recognise mixed numbers and improper fractions and convert from one form to the other.
* Read and write decimal numbers as fractions (e.g.0.71=$\frac{71}{100})$.
* *Count on and back in mixed number steps such as 1*$\frac{1}{2}$*.*
* Compare and order fractions whose denominators are all multiples of the same number *(including on a number line).*
* Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.
* Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.
* Add and subtract fractions with denominators that are the same and that are multiples of the same number *(using diagrams).*
* Write statements > 1 as a mixed number (e.g. $\frac{2}{5}$ + $\frac{4}{5}$ = $\frac{6}{5}$ =1 $\frac{1}{5}$).
* Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.
* 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 involving fractions and decimals to three places.*
* Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and fractions with a denominator of a multiple of 10 or 25.
 | * Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.
* Use the properties of rectangles to deduce related facts and find missing lengths and angles.
* Identify 3-D shapes 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 (°).
* Identify:

- angles at a point and one whole turn (total  360°).- angles at a point on a straight line and half  a turn (total 180°).- other multiples of 90°. | * *Use, read and write standard units of length and mass.*
* Estimate *(and calculate)* volume ((e.g., using 1 cm3 blocks to build cuboids (including cubes)) and capacity (e.g. using water).
* *Understand the difference between liquid volume and solid volume.*
* *Continue to order temperatures including those below 0°C.*
* Convert between different units of metric measure.
* Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.
* Measure/calculate the perimeter of composite rectilinear shapes.
* Calculate and compare the area of rectangle, use standard units square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes.
* *Continue to read, write and convert time between analogue and digital 12 and 24-hour clocks.*
* Solve problems involving converting between units of time.
* Use all four operations to solve problems involving measure using decimal notation, including scaling.
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| **Geometry – position and direction** |
| * *Describe positions on the first quadrant of a coordinate grid.*
* *Plot specified points and complete shapes.*
* Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.
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|  |  | **Statistics** |
|  |  | * *Complete and interpret information in a variety of sorting diagrams (including those used to sort properties of numbers and shapes).*
* Complete, read and interpret information in tables and timetables.
* Solve comparison, sum and difference problems using information presented in *all types of graph including* a line graph.
* *Calculate and interpret the mode, median and range.*
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