



| Number, place value, approximation and estimation | Addition and subtraction | Multiplication and division | Fractions, Decimals and Percentages | Measures | Geometry: properties of shapes | Geometry: position, direction, motion | Data |
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| Pupils will be taught to: | Pupils will be taught to: | Pupils will be taught to: | Pupils will be taught to: | Pupils will be taught to: | Pupils will be taught to: | Pupils will be taught to: | Pupils will be taught to: |
| <p>read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit</p> <p>count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000</p> <p>interpret negative numbers in context, count forwards and backwards with</p> | <p>add and subtract whole numbers with more than 4 digits, including using efficient written methods (columnar addition and subtraction)</p> <p>add and subtract numbers mentally with increasingly large numbers</p> <p>use rounding to check answers to calculations and determine, in the context of</p> | <p>identify multiples and factors, including finding all factor pairs</p> <p>solve problems involving multiplication and division where larger numbers are used by decomposing them into their factors</p> <p>know and use the vocabulary of prime numbers, prime factors and</p> | <p>compare and order fractions whose denominators are all multiples of the same number</p> <p>recognise mixed numbers and improper fractions and convert from one form to the other</p> <p>add and subtract fractions with the same denominator and</p> | <p>convert between different units of measure (e.g. kilometre and metre; metre and centimetre; centimetre and millimetre; kilogram and gram; litre and millilitre)</p> <p>understand and use basic equivalences between metric and common imperial units and express them in approximate</p> | <p>identify 3-D shapes, including cubes and cuboids, from 2-D representations</p> <p>know angles are measured in degrees; estimate and measure them and draw a given angle, writing its size in degrees (o)</p> <p>identify: multiples of 90o, angles at a point on a straight line</p> | <p>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.</p> | <p>solve comparison, sum and difference problems using information presented in line graphs</p> <p>complete, read and interpret information in tables, including timetables.</p> |



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| <p>positive and negative whole numbers through zero</p> <p>round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000</p> <p>solve number problems and practical problems that involve all of the above</p> <p>read Roman numerals to 1000 (M) and recognise years written in Roman numerals.</p> | <p>a problem, levels of accuracy</p> <p>solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</p> | <p>composite (non-prime) numbers</p> <p>establish whether a number up to 100 is prime and recall prime numbers up to 19</p> <p>multiply numbers up to 4 digits by a one- or two-digit number using an efficient written method, including long multiplication for two-digit numbers</p> <p>multiply and divide numbers mentally drawing upon known facts</p> <p>divide numbers</p> | <p>related fractions; write mathematical statements >1 as a mixed number (e.g. $2/5 + 4/5 = 6/5 = 11/5$)</p> <p>multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.</p> <p>read and write decimal numbers as fractions (e.g. $0.71 = 71/100$)</p> <p>recognise and use thousandths and relate them to tenths, hundredths and decimal</p> | <p>terms</p> <p>measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres</p> <p>calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes</p> <p>recognise and estimate volume (e.g. using 1 cm³ blocks to build</p> | <p>and 1/2 a turn (total 180o), angles at a point and one whole turn (total 360o), reflex angles, and compare different angles</p> <p>draw shapes using given dimensions and angles</p> <p>state and use the properties of a rectangle (including squares) to deduce related facts</p> <p>distinguish between regular and irregular polygons based on reasoning about equal</p> | | |
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| | | <p>up to 4 digits by a one-digit number using the efficient written method of short division and interpret remainders appropriately for the context</p> <p>multiply and divide whole numbers and those involving decimals by 10, 100 and 1000</p> <p>recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)</p> <p>solve problems involving addition, subtraction,</p> | <p>equivalents</p> <p>round decimals with two decimal places to the nearest whole number and to one decimal place</p> <p>read, write, order and compare numbers with up to three decimal places</p> <p>solve problems involving number up to three decimal places.</p> <p>recognise the per cent symbol (%) and understand that per cent relates to "number of parts per</p> | <p>cubes and cuboids) and capacity (e.g. using water)</p> <p>solve problems involving converting between units of time</p> <p>solve problems involving addition and subtraction of units of measure (e.g. length, mass, volume, money) using decimal notation.</p> | sides and angles. | | |
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| | | <p>multiplication and division and a combination of these, including understanding the meaning of the equals sign</p> <p>solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.</p> | <p>hundred”, and write percentages as a fraction with denominator hundred, and as a decimal fraction</p> <p>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 those with a denominator of a multiple of 10 or 25.</p> | | | | |
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