

Year 5 Maths Curriculum

Year 5 should be taught to:

Number Sense	Additive Reasoning	Multiplicative Reasoning	Geometric Reasoning
<ul style="list-style-type: none"> • read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit 5.1, 5.5, 5.10 • count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 5.1, 5.5, 5.10 • interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero 5.5, 5.10 • round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 5.1, 5.5, 5.10 • solve number problems and practical problems that involve all of the above 5.1, 5.5, 5.10 • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 5.1, 5.3, 5.5, 5.7, 5.8, 5.10, 5.12, 5.13 • read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$] 5.1, 5.5, 5.7, 5.10, 5.12 • recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents 5.1, 5.5, 5.7, 5.10, 5.12 • round decimals with two decimal places to the nearest whole number and to one decimal place 5.1, 5.5, 5.10 • read, write, order and compare numbers with up to three decimal places 5.1, 5.5, 5.10 • solve problems involving number up to three decimal places 5.1, 5.5, 5.6, 5.10, 5.11 • convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) 5.1, 5.5, 5.10, 5.12 • solve problems involving converting between units of time 5.1, 5.5, 5.10, 5.11, 5.13 • read Roman numerals to 1000 (M) and recognise years written in Roman numerals 5.5 • compare and order fractions whose denominators are all multiples of the same number 5.7, 5.10, 5.12 • recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number [for example, $\frac{3}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$] 5.7, 5.10, 5.11, 5.12 • 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 5.7, 5.12 	<ul style="list-style-type: none"> • solve problems involving number up to three decimal places 5.1, 5.5, 5.6, 5.10, 5.11 • add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) 5.2, 5.6, 5.11 • add and subtract numbers mentally with increasingly large numbers 5.2, 5.6, 5.11 • use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy 5.2, 5.6, 5.11 • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why 5.2, 5.6, 5.11 • use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation • including scaling 5.2, 5.3, 5.6, 5.8, 5.11, 5.13 • solve comparison, sum and difference problems using information presented in a line graph 5.2, 5.6, 5.11 • complete, read and interpret information in tables, including timetables 5.2, 5.6, 5.11 • recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number [for example, $\frac{3}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$] 5.7, 5.10, 5.11, 5.12 • add and subtract fractions with the same denominator and denominators that are multiples of the same number 5.11 • measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres 5.6, 5.14 	<ul style="list-style-type: none"> • use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling 5.2, 5.3, 5.6, 5.8, 5.11, 5.13 • identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers 5.3, 5.8, 5.13 • 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 5.3, 5.8, 5.13 • multiply and divide numbers mentally drawing upon known facts 5.3, 5.8, 5.13 • 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 5.3, 5.8, 5.13 • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 5.1, 5.3, 5.5, 5.7, 5.8, 5.10, 5.12, 5.13 • recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) 5.8, 5.13 • solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes 5.3, 5.8, 5.13 • solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign 5.3, 5.8, 5.13 • know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers 5.8, 5.13 • establish whether a number up to 100 is prime and recall prime numbers up to 19 5.8, 5.13 • solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates 5.8, 5.13 • solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{3}{5}$ and those with a denominator of a multiple of 10 or 25 5.8, 5.13 • identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths 5.7, 5.13 • multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams 5.13 • understand and use approximate equivalences between metric units and common imperial 	<ul style="list-style-type: none"> • identify 3-D shapes, including cubes and other cuboids, from 2-D representations 5.4, 5.9 • know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles 5.4, 5.9 • draw given angles, and measure them in degrees ($^{\circ}$) 5.4, 5.9 • identify: <ul style="list-style-type: none"> • angles at a point and one whole turn (total 360°) 5.4, 5.9 • angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) 5.4, 5.9 • other multiples of 90° 5.4, 5.9 • use the properties of rectangles to deduce related facts and find missing lengths and angles 5.4, 5.9, 5.14 • distinguish between regular and irregular polygons based on reasoning about equal sides and angles 5.4, 5.9, 5.14 • 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 5.9, 5.14 • measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres 5.6, 5.14 • 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 5.14 • estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water] 5.14

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