

End of Year 5 Expectations for Maths

All children should use **all** of the criteria below in their maths to be at the expected standard for a Year 5 child.

Year 5	Maths Expectations
Counting	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
Place Value	read, write, order and compare numbers up to 1 000 000 and determine the value of each digit round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000
Representing Number	read Roman numerals to 1000 (M) and recognise years written in Roman numerals recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)
Mental (+/-)	add and subtract numbers mentally with increasingly large numbers
Written (+/-)	add and subtract whole numbers with more than 4 digits, including using formal written methods
Problems (+/-)	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
Number Facts (x/÷)	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
Mental (x/÷)	multiply and divide numbers mentally drawing upon known facts multiply and divide whole numbers and those involving decimals by 10, 100 and 1000

Year 5	Maths Expectations
Written (+/-)	<p>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</p> <p>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</p>
Problems (x/÷)	<p>solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes</p> <p>solve problems involving addition, subtraction, 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>
Recognising Fractions	<p>recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number</p>
Comparing Fractions	<p>compare and order fractions whose denominators are all multiples of the same number</p> <p>identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths</p>
Fraction Calculations	<p>add and subtract fractions with the same denominator and denominators that are multiples of the same number</p> <p>multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams</p>
Decimals as Fractional Amounts	<p>read and write decimal numbers as fractions</p>
Ordering Decimals	<p>recognise and use thousandths and relate them to tenths, hundredths and decimal 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>

Year 5	Maths Expectations
Percentages	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
Fraction Problems	solve problems involving number up to three decimal 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 those fractions with a denominator of a multiple of 10 or 25
Measures	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 estimate volume and capacity
Mensuration Money Time	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 use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling solve problems involving converting between units of time
Properties of 2-d shape	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.
Properties of 3-d shape	identify 3-D shapes, including cubes and other cuboids, from 2-D representations