

Year 5 Curriculum Expectations - Maths

Number

Numbers and Place Value

I can read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit.

I can count forwards or backwards in steps of powers of 10 for any number up to 1 000 000.

I can interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.

I can round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.

I can solve number problems and practical problems that involve all of the above.

I can read Roman numerals to 1000 (M) and recognise years written in Roman numerals.

Addition and Subtraction

I can add and subtract whole numbers with more than 4 digits, including using formal methods (columnar addition & subtraction).

I can add and subtract numbers mentally with increasingly large numbers.

I can use rounding to check answers and determine, in the context of a problem, levels of accuracy.

I can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use & why.

Multiplication and Division

I can identify multiples & factors; find all factor pairs of a number & common factors of 2 numbers.

I know and use the vocabulary of prime numbers, prime factors & composite (non-prime) numbers.

I can establish whether a number up to 100 is prime; recall primes up to 19.

I can multiply numbers up to 4 digits by a one or two-digit number using a formal method, including long multiplication for two-digit numbers.

I can multiply and divide numbers mentally drawing upon known facts.

Number (continued)

I can divide numbers up to 4 digits by a one-digit number using the formal written method of short division; interpret remainders appropriately for the context.

I can multiply and divide whole numbers and those involving decimals by 10, 100 & 1000.

I can recognise and use square numbers & cube numbers and notation for squared (2), cubed(3).

I can solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.

I can solve problems involving $+$ $-$ \times \div and a combination of these, including understanding meaning of $=$ sign.

I can solve problems involving \times and \div including scaling by simple fractions & problems involving simple rates.

Fractions, Decimals and Percentages

I can compare & order fractions whose denominators are all multiples of the same number.

I can identify, name & write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.

I can recognise mixed numbers & improper fractions; convert from one form to the other; write mathematical statements > 1 as a mixed number [e.g. $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$].

I can add & subtract fractions with the same denominator and denominators that are multiples of the same number.

I can multiply proper fractions & mixed numbers by whole numbers, supported by materials & diagrams.

I can read and write decimal numbers as fractions [e.g. $0.71 = \frac{71}{100}$].

I can recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.

I can round decimals with two decimal places to the nearest whole number and to one decimal place.

I can read, write, order and compare numbers with up to three decimal places.

Number (continued)

I can solve problems involving number up to three decimal places.

I can recognise the percent symbol (%) and understand that per cent relates to 'the number of parts per hundred' and write percentages as a fraction with denominator 100; and as a decimal fraction.

I can 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.

Measurement

I can convert between different units of metric measure [e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre].

I can understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.

I can measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.

I can calculate and compare the area of rectangles (including squares) and including using standard units, square centimetres (cm²) & square metres (m²) and estimate the area of irregular shapes.

I can estimate volume [eg. using 1 cm³ blocks to build cuboids including cubes] and capacity [e.g. using water].

I can solve problems involving converting between units of time.

I can use all four operations to solve problems involving measure [for example length, mass, volume, money] using decimal notation including scaling.

Geometry

Properties of Shape

I can identify 3-D shapes, including cubes and other cuboids, from 2-D representations.

I know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.

I can draw given angles, and measure them in degrees (°).

I can identify: angles at a point and one whole turn (total 360°); angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°); other multiples of 90°

I can use the properties of rectangles to deduce related facts and find missing lengths and angles.

Geometry (Cont)

I can distinguish between regular and irregular polygons based on reasoning about equal sides and angles.

Position and Direction

I can 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.

Statistics

I can solve comparison sum and difference problems using information presented in a line graph.

I can complete, read and interpret information in tables, including timetables.