Mathematics Programmes of Study

5



Number, place value and rounding

- I can recognise years written in Roman numerals.
- I can read Roman numerals to 1000 (M).
- I can solve number problems and practical problems.
- I can round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100, 000.
- I can use negative numbers in context and can count forwards and backwards with positive and negative numbers through 0.
- I can count forwards or backwards in steps of powers of 10 for any given Number up to 1,000,000.
- I know what each digit represents in numbers to 1,000,000.
- I can read, write, order and compare numbers to at least 1,000,000.

Addition and Subtraction

- I can solve addition multi-step problems in contexts, deciding which operations and methods to use and why.
- I can solve subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
- I can use rounding to check answers to calculations.
- I can subtract mentally using increasingly large numbers.
- I can add mentally using increasingly large numbers.
- I can subtract numbers with more than 4 digits using a formal written method.
- I can add numbers with more than 4 digits using a formal written method.

Multiplication and Division

- I can solve problems including scaling by simple fractions and simple rates.
- I can recognise and use square numbers and cube numbers.
- I can multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.
- I can divide numbers up to 4 digits by a 1 digit number using a formal written method, including remainders
- I can multiply numbers up to 4 digits by a 1 or 2 digit number using a formal written method, including decimals.
- I can establish whether a number up to 100 is prime and recall prime numbers up to 19.
- I know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.
- I can solve problems using x and ÷, factors, multiples, squares and cubes
- I can identify multiples and factors, including finding all factor pairs.

Fractions and Decimals

- I can write percentages as a fraction.
- I can recognise the % symbol and understand what it means.
- I can solve problems numbers up to 3 decimal places.
- I can read, write, order and compare numbers with up to 3 decimal places.
- I can round decimals with 2 decimal places to the nearest whole number and to one decimal place.
- I can recognise and use 1000ths and relate them to 10ths, 100ths and decimal equivalents.
- I can read and write decimal numbers as fractions and %
- I can multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.
- I can add and subtract fractions with the same denominator and related fractions.
- I can recognise mixed numbers and improper fractions and convert from one form to another.
- I can compare and order fractions whose denominators are all multiples of the same number.

Measures

- I can solve problems involving addition and subtraction of units of measures using decimal notation.
- I can solve problems involving converting between units of time.
- I can recognise and estimate volume and capacity.
- I can estimate the area of irregular shapes.
- I can calculate and compare the area of squares and rectangles.
- I can measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.
- I understand and use basic equivalences between metric and common imperial units.
- I can convert between different units of measure (e.g. Kilometre to metre; metre and centimetre; centimetre and millimetre; kilogram and gram; litre and millilitre).

Geometry

- I can distinguish between regular and irregular polygons.
- I can state and use the properties of a rectangle to deduce related facts.
- I can draw shapes using given dimensions and angles.
- I can compare different angles and identify reflex angles
- I can identify angles at a point and one whole turn.
- I can identify angles at a point on a straight line and 1/2 a turn.
- I can identify multiples of 90 degrees.
- I know angles are measured in degrees and can estimate and measure them and draw a given angle.
- I can describe thee position of a shape after reflection or translation
- I can identify 3-D shapes, including cubes and cuboids, from 2-D presentations.

Statistics

- I can present information using ICT.
- I can read and interpret information in tables including timetables.
- I can complete information in tables including timetables.
- I can solve 'difference' problems using information presented line graphs.
- I can solve 'sum' problems using information presented in line graphs.
- I can solve 'comparison' problems using information presented in line graphs.