

## Mathematics Programmes of Study

# 6



I can find pairs of numbers that satisfy numbers sentences involving two unknowns.	I can use estimation to check answers to calculations.	I can solve ratio and proportion problems involving unequal sharing and grouping.	I can recall and use equivalences between simple fractions, decimals and percentages.	I can calculate, estimate and compare the volume of cubes and cuboids using standard units, including centimetre cubed and cubic metres.	I can draw and translate simple shapes and reflect them in the axes.	
I can generate and describe linear number sequences.	I can solve problems involving any operation.	I can solve ratio and proportion problems involving the relative sizes of two quantities, including similarity.	I can solve problems involving the calculation of percentages of whole numbers or measures such as 15% of 360.	I recognise when it is necessary to use the formulae for area and volume of shapes.	I can describe positions on the full co-ordinate grid (all four quadrants).	
I can use simple formulae expressed in words.	I can solve addition and subtraction multi-step problems.	I can divide proper fractions by whole numbers (e.g. $1/3 \div 2 = 1/6$ ).	I can solve problems which require answers to be rounded to specified degrees of accuracy.	I can calculate the area of parallelograms and triangles.	I can find unknown angles where they meet at a point, are on a straight line, and are vertically opposite.	I can convert kilometres to miles using a graphical representation.
I can express missing number problems algebraically.	I use knowledge of the order of operations to carry out calculations involving the four operations.	I can multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $1/4 \times 1/2 = 1/8$ ).	I can use written division methods in cases where the answer has up to 2 decimal places.	I can recognise that shapes with the same areas can have different perimeters and vice versa.	I can illustrate and name parts of circles, including radius, diameter and circumference.	I can draw graphs relating two variables.
I can recognise years written in Roman numerals.	I can identify common factors, common multiples and prime numbers.	I can add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.	I can multiply one-digit numbers with up to 2 decimal places by whole numbers.	I can convert between miles and kilometres.	I can find unknown angles in any triangles, quadrilaterals and regular polygons.	I can calculate and interpret the mean as an average.
I can read Roman numerals to 1000 (M).	I can calculate mentally, including with mixed operations and large numbers.	I can associate a fraction with division to calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $3/8$ ).	I can multiply and divide numbers by 10, 100 and 1000 where the answers are up to 3 decimal places.	I can use, read, write and convert between standard units of measure.	I can compare and classify geometric shapes based on their properties and sizes.	I can construct line graphs.
I can solve number problems and practical problems.	I can interpret remainders as whole number remainders, fractions, or by rounding.	I can compare and order fractions, including fractions $>1$ .	I can identify the value of each digit to three decimal places.	I can solve problems involving the calculation and conversion of units of measure, using decimal notation to 3 decimal places where appropriate.	I can recognise, describe and build simple 3-D shapes, including making nets.	I can interpret line graphs.
I can calculate interval across '0' when using negative numbers.	I can divide numbers up to 4 digits by a 2-digit whole number using an efficient written method.	I can use common factors to simplify fractions and use common multiples to express fractions in the same denomination.				I can construct pie charts.
I can use negative numbers in context.	I can multiply multi-digit numbers up to 4 digits by a 2 digit whole number using a written method.					I can interpret pie charts.
I can round any whole number.						
I can read, write, order and compare numbers up to 10,000,000.						
<b>Number and Algebra</b>	<b>+, -, x and ÷</b>	<b>Fractions Ratio and Proportion</b>	<b>Fractions, Decimals and Percentages</b>	<b>Measures</b>	<b>Geometry</b>	<b>Statistics</b>