Mathematics Programmes of Study

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Number and Algebra

- I can find pairs of numbers that satisfy numbers sentences involving two unknowns.
- I can generate and describe linear number sequences.
- I can use simple formulae.
- I can express missing number problems algebraically.
- I can enumerate all possibilities of combinations of 2 variables
- I can solve number problems and practical problems.
- I can calculate interval across '0' when using negative numbers.
- I can use negative numbers in context.
- I can round any whole number.
- I can read, write, order and compare numbers up to 10,000,000.

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- I can use estimation to check answers to calculations.
- I can solve problems involving any operation.
- I can solve addition and subtraction multi-step problems.
- I use knowledge of the order of operations to carry out calculations involving the four operations.
- I can identify common factors, common multiples and prime numbers.
- I can calculate mentally, including with mixed operations and large numbers.
- I can interpret remainders as whole number remainders, fractions, or by rounding.
- I an divide numbers up to 4 digits by a 2-digit whole number using a formal written method.
- I can multiply multi-digit numbers up to 4 digits by a 2 digit whole number using a formal written method.

Fractions Ratio and Proportion

- I can solve ratio and proportion problems involving unequal sharing and grouping.
- I can solve ratio and proportion problems involving the relative sizes of two quantities, including similarity.
- I can divide proper fractions by whole numbers (e.g. 1/3 ÷ 2=1/6).
- I can multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. 1/4 x 1/2 = 1/8).
- I can add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.
- 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 compare and order fractions, including fractions >1.
- I can use common factors to simplify fractions and use common multiples to express fractions in the same denomination.

Fractions, Decimals and Percentages

- I can recall and use equivalences between simple fractions, decimals and percentages.
- I can solve problems involving the calculation of percentages of whole numbers or measures such as 15% of 360.
- I can solve problems which require answers to be rounded to specified degrees of accuracy.
- I can use written division methods in cases where the answer has up to 2 decimal places.
- I can multiply one-digit numbers with up to 2 decimal places by whole numbers.
- I can multiply and divide numbers by 10, 100 and 1000 where the answers are up to 3 decimal places.
- I can identify the value of each digit to three decimal places.

Measures

- I can calculate, estimate and compare the volume of cubes and cuboids using standard units, including centimetre cubed and cubic metres.
- I recognise when it is necessary to use the formulae for area and volume of shapes.
- I can calculate the area of parallelograms and triangles.
- I can recognise that shapes with the same areas can have different perimeters and vice versa.
- I can convert between miles and kilometres.
- I can use, read, write and convert between standard units of measure, using 3 decimal places.
- I can solve problems involving the calculation and conversion of units of measure, using decimal notation to 3 decimal places where appropriate.

Geometry

- I can draw 2D shapes using given dimensions and angles and translate and reflect them in the axes.
- I can describe positions on the full co-ordinate grid (all four quadrants).
- I can find unknown angles where they meet at a point, are on a straight line, and are vertically opposite.
- I can illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is 2x radius.
- I can find unknown angles in any triangles, quadrilaterals and regular polygons.
- I can compare and classify geometric shapes based on their properties and sizes.
- I can recognise, describe and build simple 3-D shapes, including making nets.

Statistics

- I can convert kilometres to miles using a graphical representation.
- I can draw graphs relating two variables.
- I can calculate and interpret the mean as an average.
- I can construct line graphs.
- I can interpret line graphs.
- I can construct pie charts.
- I can interpret pie charts.