

## Number and place value

I can read, write, order and compare numbers up to 10 000 000 and determine the value of each digit.

I can round any whole number to a required degree of accuracy.

I can use negative numbers in context and calculate intervals across zero.

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

## Addition and subtraction

I can use my knowledge of the order of operations to carry out calculations involving the four operations (e.g. bodmas).

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

I can use estimation to check answers to calculations and determine, an appropriate degree of accuracy.

I can calculate mentally, including with mixed operations and numbers up to 1000. (all 4 operations).

## Multiplication and division

I can identify common factors and common multiples.

I can estimate to check answers to calculations and determine, an appropriate degree of accuracy.

I can multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places.

I can multiply one-digit numbers with up to two decimal places by whole numbers.

I can use written division methods in cases where the answer has up to two decimal places.

I can multiply multi-digit numbers up to 4 digits by a two-digit whole number using a range of written methods.

I can use the formal written method for multiplication.

I can divide numbers up to 4 digits by a two-digit whole number using a range of written methods.

I can interpret remainders as whole number remainders, fractions and decimals, or by rounding, as appropriate.

I can use the formal written method for long division and short division.

I can identify any prime number.

I can solve multiplication and division multi-step problems in context, deciding which operations and methods to use and why.

## Fractions, decimals and percentages

I can use common factors to simplify fractions.

I can use common multiples to express fractions in the same denomination.

I can compare and order fractions, including fractions  $> 1$ .

I can multiply simple pairs of proper fractions, writing the answer in its simplest form.

I can divide proper fractions by whole numbers.

I can associate a fraction with division and calculate decimal fraction equivalents .

I can recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

I can add and subtract fractions with different denominators, using the knowledge of equivalent fractions.

I can add and subtract mixed number fractions, using knowledge of equivalent fractions .

## Measures

I can solve problems involving the calculation of units of measure, using up to three decimal places where appropriate.

I can use, read, write and convert between standard units (eg a smaller unit to a larger unit and vice versa to 3 decimal places).

I am able to convert between miles and kilometres.

I can recognise that shapes with the same areas can have different perimeters and vice versa.

I can calculate the area of parallelograms and triangles.

I can calculate, estimate and compare volume of cubes and cuboids using standard units, including  $\text{cm}^3$ ,  $\text{m}^3$ , and  $\text{km}^3$

I can recognise when it is possible to use formulae for area and volume of shapes and use the formulae to solve problems

## Ratio and Proportion

I can solve ratio problems involving finding missing numbers or quantities.

I can solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison.

I can solve problems involving similar shapes where the scale factor is known or can be found (eg enlarge or reduce a shape).

I can solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

## Geometry

I can draw and translate simple shapes on a coordinate grid and reflect them in the axes.

I can recognise, describe and build simple 3-D shapes, including making nets.

I can illustrate and name parts of a circle, including the radius, diameter and circumference and know that the diameter is twice the radius.

I can recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.

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

I can draw 2-D shapes using given dimensions and angles.

I can compare and classify geometric shapes based on their properties and size.

I can find unknown angles in any triangle, quadrilateral and regular polygon.

## Algebra

I can use simple formulae.

I can generate and describe linear number sequences.

I can express missing number problems algebraically.

I can find pairs of numbers that satisfy an equation with two unknowns.

I can work out all possibilities of combinations of two variables.

## Statistics

I can calculate and interpret the mean as an average.

I can interpret and construct pie charts and use these to solve problems.

I can interpret and construct line graphs and use these to solve problems.