Maths: Year 6 National Curriculum Programme of Study Statements

Number -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
Number – Addition and subtraction Multiplication and division
I can multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of multiplication
I can divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context
I can divide numbers up to 4 digits by a two-digit number using the formal written method of short division with remainders where appropriate
I can perform mental calculations, with mixed operations and large numbers
I can identify common factors, common multiples and prime numbers
I can use my knowledge of the order of operations to carry out calculations
I can solve addition and subtraction multi-step problems in contexts, deciding which methods to use and why
I can solve problems involving addition, subtraction, multiplication and division
I can use estimation to check answers to calculations and determine an appropriate degree of accuracy
Number – fractions (including decimals and percentages)
I can use common factors to simplify fractions; use common multiples to express fractions in the same denomination
I can compare and order fractions
I can add and subtract fractions with different denominators and mixed numbers
I can multiply simple pairs of proper fractions, writing the answer in its simplest form for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$
I can divide proper fractions by whole numbers for example, 1/3 ÷ 2 = 1/6
I can associate a fraction with division and calculate decimal fraction equivalents
I can identify the value of each digit in numbers given to three decimal places and 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 solve problems which require answers to be rounded to specified degrees of accuracy
I can recall and use equivalences between simple fractions, decimals and percentages
Ratio and proportion
I can solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts
I can solve problems involving the calculation of percentages, for example 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
I can solve problems involving unequal sharing and grouping using knowledge of fractions and multiples

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 enumerate possibilities of combinations of two variables
Measurement
I can solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate
I can use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places
I can convert between miles and kilometres
I can recognise that shapes with the same areas can have different perimeters and vice versa
I can recognise when it is possible to use formulae for area and volume of shapes
I can calculate the area of parallelograms and triangles
I can calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres cm^3 and cubic metres m^3, mm^3 and kilometres km^3
Geometry – properties of shapes
I can draw 2-D shapes using given dimensions and angles
I can recognise, describe and build simple 3-D shapes, including making nets
I can compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
I can illustrate and name parts of circles, including 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
Geometry – position and direction
I can describe positions on the full coordinate grid (all four quadrants)
I can draw and translate simple shapes on the coordinate plane, and reflect them in the axes
Statistics
I can interpret and construct pie charts and line graphs and use these to solve problems
I can calculate and interpret the mean as an average