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| **Year 6 Maths Statements** |
| **Number** |
| **Number and Place Value*** Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit
* Round any whole number to a required degree of accuracy
* Use negative numbers in context, and calculate intervals across zero
* Solve number and practical problems that involve all of the above
 | **Addition, Subtraction, Multiplication and Division*** Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
* 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
* Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context
* Perform mental calculations, including with mixed operations and large numbers
* Identify common factors, common multiples and prime numbers
* Use their knowledge of the order of operations to carry out calculations involving the four operations
* Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
* Solve problems involving addition, subtraction, multiplication and division
* Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
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| **Fractions*** Use common factors to simplify fractions; use common multiples to express fractions in the same denomination
* Compare and order fractions, including fractions > 1
* Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
* Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, 1/4 × 1/2 = 1/8]
* Divide proper fractions by whole numbers [for example, 1/3 ÷ 2 = 1/6]
* Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8]
* 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
* Multiply one-digit numbers with up to two decimal places by whole numbers
* Use written division methods in cases where the answer has up to two decimal places
* Solve problems which require answers to be rounded to specified degrees of accuracy
* Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts
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| **Measurement** |
| * Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate
* 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
* Convert between miles and kilometres
* Recognise that shapes with the same areas can have different perimeters and vice versa
* Recognise when it is possible to use formulae for area and volume of shapes
* Calculate the area of parallelograms and triangles
* Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm³) and cubic metres (m³), and extending to other units [for example, mm³ and km³]
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| **Geometry** |
| **Properties of Shapes*** Draw 2-D shapes using given dimensions and angles
* Recognise, describe and build simple 3-D shapes, including making nets
* Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
* Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
* Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles
 | **Position and Direction*** Describe positions on the full coordinate grid (all four quadrants)
* Draw and translate simple shapes on the coordinate plane, and reflect them in the axes
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| **Statistics** |
| * Interpret and construct pie charts and line graphs and use these to solve problems
* Calculate and interpret the mean as an average
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| **Ratio and Proportion** |
| * Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts
* Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison
* Solve problems involving similar shapes where the scale factor is known or can be found
* Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples
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| **Algebra** |
| * Use simple formulae
* Generate and describe linear number sequences
* Express missing number problems algebraically
* Find pairs of numbers that satisfy an equation with two unknowns
* Enumerate possibilities of combinations of two variables
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