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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 |
| **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 | |
| **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] | |
| **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 |
| **Statistics** | |
| * Interpret and construct pie charts and line graphs and use these to solve problems * Calculate and interpret the mean as an average | |
| **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 | |
| **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 | |