|  |  |
| --- | --- |
| **Year 5 Maths Statements** | |
| **Number** | |
| **Number and Place Value**   * Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit * Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 * Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero * Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 * Solve number problems and practical problems that involve all of the above * Read Roman numerals to 1000 (M) and recognise years written in Roman numerals | **Addition and Subtraction**   * Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) * Add and subtract numbers mentally with increasingly large numbers * Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy * Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why |
| **Multiplication and Division**   * Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers * Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers * Establish whether a number up to 100 is prime and recall prime numbers up to 19 * Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers * Multiply and divide numbers mentally drawing upon known facts * Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context * Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 * Recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³) * Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes * Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign * Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates | **Fractions**   * Compare and order fractions whose denominators are all multiples of the same number * Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths * Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example 2/5 + 4/5 = 6/5= 11/5] * Add and subtract fractions with the same denominator and denominators that are multiples of the same number * Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams * Read and write decimal numbers as fractions [for example, 0.71 = 71/100] * Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents * Round decimals with two decimal places to the nearest whole number and to one decimal place * Read, write, order and compare numbers with up to three decimal places * Solve problems involving number up to three decimal places * Recognise the per cent symbol (%) and understand that per cent relates to ‘number of parts per hundred’, and write percentages as a fraction with denominator 100, and as a decimal * Solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25 |
| **Measurement** | |
| * Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) * Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints * Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres * Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes * Estimate volume [for example, using 1 cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water] * Solve problems involving converting between units of time * Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling | |
| **Geometry** | |
| **Properties of Shapes**   * Identify 3-D shapes, including cubes and other cuboids, from 2-D representations * Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles * Draw given angles, and measure them in degrees (°) * Identify: * angles at a point and one whole turn (total 360°): * angles at a point on a straight line and 1/2 a turn (total 180°): * other multiples of 90&Deg * Use the properties of rectangles to deduce related facts and find missing lengths and angles * Distinguish between regular and irregular polygons based on reasoning about equal sides and angles | **Position and Direction**   * Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed |
| **Statistics** | |
| * Solve comparison, sum and difference problems using information presented in a line graph * Complete, read and interpret information in tables, including timetables | |