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| **Number: Place Value** |
| **Counting*** use negative numbers in context, and calculate intervals across zero

**Comparing Numbers*** read, write, order and compare numbers up to 10 000 000 and determine the value of each digit

**Reading and Writing Numbers (including Roman Numerals)*** read, write, order and compare numbers up to 10 000 000 and determine the value of each digit

**Understanding Place Value*** read, write, order and compare numbers up to 10 000 000 and determine the value of each digit

**Rounding*** round any whole number to a required degree of accuracy
* *Solve problems which require answers to be rounded to specified degrees of accuracy – (copied from fractions)*

**Problem Solving*** solve number problems and practical problems that involve all of the above.
 |
| **Number: Addition and Subtraction** |
| **Mental Calculation*** perform mental calculations, including with mixed operations and large numbers
* use their knowledge of the order of operations to carry out calculations involving the four operations

**Inverse Operations, Estimating and Checking Answers*** use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

**Problem Solving*** 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
 |
| **Number: Multiplication and Division** |
| **Mental Calculation** * perform mental calculations, including with mixed operations and large numbers
* *associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3⁄8] – (copied from Fractions)*

**Written Calculation*** 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
* *use written division methods in cases where the answer has up to two decimal places – (copied from Fractions)*

**Properties of numbers: Multiples. Fatprs, Primes, Square and Cube Numbers*** identify common factors, common multiples and prime numbers
* *use common factors to simplify fractions; use common multiples to express fractions in the same denomination – (copied from Fractions)*

**Order of Operations*** use their knowledge of the order of operations to carry out calculations involving the four operations

**Inverse Operations, Estimating and Checking Answers** * use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

**Problem Solving*** solve problems involving addition, subtraction, multiplication and division
* solve problems involving unequal sharing and grouping using knowledge of fractions and multiples – (copied from Ratio and Proportion)
 |
| **Number - Fractions** |
| **Recognising Fractions*** compare and order fractions, including fractions >1

**Comparing Decimals** * 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

**Rounding Including Decimals** * solve problems which require answers to be rounded to specified degrees of accuracy

**Equivalence (Including Fractions, Decimals and Percentages)*** use common factors to simplify fractions; use common multiples to express fractions in the same denomination
* associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3⁄8]
* recall and use equivalences between simple fractions, decimals and percentages including in different contexts.

**Addition and Subtraction of Fractions*** add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions

**Multiplication and Division of Fractions*** multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, ¼ × ½ = 1⁄8]
* multiply one-digit numbers with up to two decimal places by whole numbers
* divide proper fractions by whole numbers [for example, 1⁄3 ÷ 2 = 1⁄6]

**Multiplication and Division of Decimals*** multiply one-digit numbers with up to two decimal places by whole numbers
* multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places
* identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100
* and 1000 where the answers are up to three decimal places
* associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction
* (e.g. 3/8)
* use written division methods in cases where the answer has up to two decimal places
 |
| **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 use 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** |
| **Equations*** express missing number problems algebraically
* find pairs of numbers that satisfy number sentences involving two unknowns
* enumerate possibilities of combinations of two variables

**Formulae*** use simple formulae

**Sequences*** generate and describe linear number sequences
 |
| **Measurement** |
| **Comparing and Estimating** * 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]

**Measuring and Calculating*** solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate
* recognise that shapes with the same areas can have different perimeters and vice versa
* 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 [e.g. mm3 and km3].
* recognise when it is possible to use the formulae for area and volume of shapes

**Converting*** 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
* solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate
* convert between miles and kilometres
 |
| **Geometry: Properties of Shapes** |
| **Identifying shapes and their properties** * recognise, describe and build simple 3-D shapes including making nets
* illustrate and name parts of circle, including radius, diameter and circumference and know that the diameter is twice the radius
* **Drawing and Contructing**
* draw 2-D shapes using given dimensions and angles
* recognise, describe and build simple 3-D shapes including making nets

**Comparing and classifying*** compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons

**Angles*** 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** |
| **Position, direction and movement*** 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** |
| **Interpreting, constructing and presenting data*** interpret and construct pie charts and line graphs and use these to solve problems

**Solving Problems*** calculate and interpret the mean as an average
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