| Wk | Maths Aspect | Y5 Non-Negotiable | Y6 Non- Negotiable | Resources | Y5 NC obj | Y6 NC obj |
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| 1 | Number and place value: negative numbers Roman numerals | Knows how to read and interpret negative numbers and find differences between negative and positive numbers.Knows the Roman numerals up to M = 1000.Knows the rules of reading Roman numerals including years. | Knows how to calculate with negative and positive numbers. |  | * To interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero.

To read numerals to 1000 (M) and recognise years written in Roman numerals. | ● To use negative numbers in context and calculate intervals across zero.  |
| 2 | Number and place value: rounding Measurement:solving problems, including temperature | Knows how to round a number up to 1 million to the given accuracy Knows how to use all four operations in problems involving time and money, including conversions. | Knows how to round any number to the required degree of accuracyKnows how to connect conversion to a graphical representation as preparation for understanding linear/proportional graphs. Knows how to use a number line to add and subtract positive and negative integers for measures such as temperature. |  | ● To round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000. ● To solve number problems and practical problems that involve all of the above. To use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling ● To solve problems involving converting between units of time. | ● To round any whole number to a required degree of accuracy. ● To solve number problems and practical problems that involve all of the above.To solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.● To 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 |
| 3 | Statistics:reading tables | Knows which representations of data are most appropriate and why. Knows how to read a timetable and complete missing information. | Knows which representations of data are most appropriate and why.  |  | ● To complete, read and interpret information in tables, including timetables. | ● To complete, read and interpret information in tables, including timetables. |
| 4 | Y5 Addition and subtraction:written methods Y6 All four operations:order of operations. | Knows the formal written methods of columnar addition and subtraction with increasingly large numbers and decimals. | Knows the rules of BIDMAS. |  | ●To add and subtract whole numbers with more than 4 digits, including using efficient written methods (columnar addition and subtraction). ● To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. ● To use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. ● To solve problems involving numbers up to three decimal places. | ● To perform mental calculations, including with mixed operations and large numbers. ● To use their knowledge of the order of operations to carry out calculations involving the four operations● To use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy. |
| 5 | Multiplication and division:Y5 square and cube numbersY6 Multiples, factors and primes | Knows the definition of square and cube numbers and the correct notation. Knows the terms factor, multiple and prime, square and cube numbers.  |  |  | ● To 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 | ● To identify common factors, common multiples and prime numbers● To use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy. |
| 6 | All four operations:written methods | Knows compact notation for long multiplication.Knows the compact algorithm for short division including remainders. | Knows the compact algorithms for all four operations. Knows how to multiply and divide numbers with up to two decimal places by one-digit and two-digit whole numbers. |  | ● To multiply numbers up to 4 digits by a one- or two-digit number using an efficient written method, including long multiplication for two-digit numbers. ● To divide numbers up to 4 digits by a one-digit number using the efficient written method of short division and interpret remainders appropriately for the context.  | ● To solve problems involving addition, subtraction, multiplication and division.● To use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy. ● To multiply one-digit numbers with up to two decimal places by whole numbers. ● To use written division methods in cases where the answer has up to two decimal places. ● To solve problems which require answers to be rounded to specified degrees of accuracy. ● To recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. |
| 7 | Measurement:volume | Knows the three dimensions for finding the volume. | Knows the formula for volume *l x b x h* |  | ● To estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water] | To calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm3) and cubic metres (m3) and extending to other units such as mm3 and km3.  |
| 8-9 | Fractions: calculating | Knows how to convert fractions to a common denominator for addition and subtraction.Knows how to find LCM and HCF for simplifying. | Knows how to calculate with fractions.Knows that dividing by 2 is the same as multiplying by $\frac{1}{2}.$ |  | ● To recognise mixed numbers and improper fractions and convert from one form to the other; write mathematical statements > 1 as a mixed number. ● To add and subtract fractions with the same denominator and multiples of the same number | ● To add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.● To multiply simple pairs of proper fractions, writing the answer in its simplest form.● To divide proper fractions by whole numbers. |
| 10-11 | Fractions:decimals and percentages | Knows that percentages, decimals and fractions are different ways of expressing proportions.Knows how to find 10% and 1% of an amount using division by 10 and 100. | Knows how to calculate given percentages of amounts |  | ● To 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.● To solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2},\frac{1}{4},\frac{1}{5},\frac{2}{5},\frac{4}{5} $and those fractions with a denominator of a multiple of 10 or 25. | To recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. |
| 12 | Geometry:position and direction | Knows how to describe a translation or reflection of a shape, including reference to the axes in the first quadrant. | Knows how to draw and label a pair of axes in all four quadrants with equal scaling, including the use of negative numbers. |  | ● To 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.  | ● To describe positions on the full co-ordinate grid (all four quadrants). ● To draw and translate simple shapes on the co-ordinate plane and reflect them in the axes. |