Number: Fractions (including Decimals and Percentages)

| COUNTING IN FRACTIONAL STEPS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|  | Pupils should count in fractions up to 10, starting from any number and using the $1 / 2$ and $2 / 4$ equivalence on the number line (Non Statutory Guidance) | count up and down in tenths | count up and down in hundredths |  |  |
| RECOGNISING FRACTIONS |  |  |  |  |  |
| recognise, find and name a half as one of two equal parts of an object, shape or quantity <br> recognise, find and name a quarter as one of four equal parts of an object, shape or quantity | recognise, find, name and write fractions $1 / 3^{\prime}$ $1 / 4^{\prime} / 4$ and $3 / 4$ of a length, shape, set of objects or quantity | recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators <br> recognise that tenths arise from dividing an object into 10 equal parts and in dividing one - digit numbers or quantities by 10 . recognise and use fractions as numbers: unit fractions and nonunit fractions with small denominators | recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten | recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents (appears also in Equivalence) |  |
| COMPARING FRACTIONS |  |  |  |  |  |
|  |  | compare and order unit |  | compare and order | compare and order |

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|  |  | fractions, and fractions <br> with the same <br> denominators | fractions whose <br> denominators are all <br> multiples of the same <br> number |
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| COMPARING DECIMALS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|  |  |  | compare numbers with the same number of decimal places up to two decimal places | read, write, order and compare numbers with up to three decimal places | identify the value of each digit in numbers given to three decimal places |
| ROUNDING INCLUDING DECIMALS |  |  |  |  |  |
|  |  |  | round decimals with one decimal place to the nearest whole number | round decimals with two decimal places to the nearest whole number and to one decimal place | solve problems which require answers to be rounded to specified degrees of accuracy |
| EQUIVALENCE (INCLUDING FRACTIONS, DECIMALS AND PERCENTAGES) |  |  |  |  |  |
|  | write simple fractions e.g. $1 / 2$ of $6=3$ and recognise the equivalence of $2 / 4$ and $1 / 2$. | recognise and show, using diagrams, equivalent fractions with small denominators | recognise and show, using diagrams, families of common equivalent fractions | identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths | use common factors to simplify fractions; use common multiples to express fractions in the same denomination |
|  |  |  | recognise and write decimal equivalents of any number of tenths or | read and write decimal numbers as fractions (e.g. $0.71={ }^{71} /{ }_{100}$ ) | associate a fraction with division and calculate decimal fraction equivalents |

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|  |  | hundredths |  | recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents |  | 0.375) for a simple tion (e.g. $3 / 8$ ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | recognise and write decimal equivalents to $1 / 4$;$1 / 2 i^{3} / 4$ |  | recognise the and understan to "number of and write perc with denomin fraction | r cent symbol (\%) that per cent relates arts per hundred", tages as a fraction r 100 as a decimal | all and use equivalences ween simple fractions, imals and percentages, uding in different texts. |
| ADDITION AND SUBTRACTION OF FRACTIONS |  |  |  |  |  |  |
| Year 1 | Year 2 | Year 3 |  | Year 4 | Year 5 | Year 6 |
|  |  | add and subtract fractions with the same denominator within one whole (e.g. $5 / 7+1 / 7=6 / 7$ ) | add and subtract fractions with the same denominator |  | recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (e.g. $2 / 5+$ $4 / 5=6 / 5=11 / 5)$ | add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions |
| MULTIPLICATION AND DIVISION OF FRACTIONS |  |  |  |  |  |  |
|  |  |  |  |  | multiply proper fractions and mixed | multiply simple pairs of proper fractions, writing |

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|  |  |  |  | numbers by whole numbers, supported by materials and diagrams | the answer in its simplest form (e.g. $1 / 4 \times$ $1 / 2=1 / 8)$ <br> multiply one-digit numbers with up to two decimal places by whole numbers |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | divide proper fractions by whole numbers (e.g. $1 / 3 \div 2=1 / 6 \text { ) }$ |
| MULTIPLICATION AND DIVISION OF DECIMALS |  |  |  |  |  |
| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|  |  |  |  |  | multiply one-digit numbers with up to two decimal places by whole numbers |
|  |  |  | find the effect of dividing a one- or twodigit number by 10 and 100 , identifying the value of the digits in the answer as ones, tenths and hundredths |  | 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 |

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|  |  |  |  |  | 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 |
| PROBLEM SOLVING |  |  |  |  |  |
| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|  |  | solve problems that involve all of the above | solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number | solve problems involving numbers up to three decimal places |  |

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