## 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 ${ }^{1} / 3^{\prime}{ }^{1} / 4^{\prime}{ }^{2} / 4$ 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. <br> recognise and use fractions as numbers: unit fractions and non-unit 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 fractions, and fractions with the same denominators |  | compare and order fractions whose denominators are all multiples of the same number | compare and order fractions, including fractions $>1$ |

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## Number: Fractions (including Decimals and Percentages)

| COMPARING DECIMALS |  |  |  |  |  |
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| 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 hundredths | read and write decimal numbers as fractions (e.g. 0.71 $={ }^{71} /{ }_{100}$ ) <br> recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents | associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375 ) for a simple fraction (e.g. ${ }^{3} /{ }_{8}$ ) |
|  |  |  | recognise and write decimal equivalents to ${ }^{1} / 4^{i} /{ }_{2} ;^{3} / 4$ | 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 as a decimal fraction | recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. |

## TRIBAL

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| ADDITION AND SUBTRACTION OF FRACTIONS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 <br> add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions |
|  |  | add and subtract fractions with the same denominator within one whole (e.g. ${ }^{5} / 7+{ }_{7}^{1} /={ }_{7}^{6} /$ ) | add and subtract fractions with the same denominator | add and subtract fractions with the same denominator and multiples of the same number | add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions |
|  |  |  |  | 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. ${ }^{2} / 5+{ }_{5}^{4} /{ }_{5}=6$ $=1^{1} /{ }_{5}$ ) |  |
|  |  | MULTIPLICATION AND | IVISION OF FRACTIONS |  |  |
|  |  |  |  | multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams | multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. ${ }^{1} / x_{4}^{1} /{ }_{2}=1 /{ }_{8}$ ) |
|  |  |  |  |  | multiply one-digit numbers with up to two decimal places by whole numbers |
|  |  |  |  |  | divide proper fractions by whole numbers (e.g. ${ }^{1} / 3 \div$ $2=1 /{ }_{6}$ ) |

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## Number: Fractions (including Decimals and Percentages)

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| MULTIPLICATION AND DIVISION OF DECIMALS |  |  |  |  |  |
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| 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 two-digit 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 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 |

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Number: Fractions (including Decimals and Percentages)

| PROBLEM SOLVING |  |  |  |  |  |
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| 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 |  |
|  |  |  | solve simple measure and money problems involving fractions and decimals to two decimal places. | solve problems which require knowing percentage and decimal equivalents of ${ }^{1} / 2^{\prime}{ }^{1} / 4^{\prime}{ }^{1} / 5^{\prime}$ ${ }^{2} / 5_{5},{ }^{4} / 5$ and those with a denominator of a multiple of 10 or 25 . |  |

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