## Number: Fractions (including Decimals and Percentages)

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

## Number: Fractions (including Decimals and Percentages)

| COMPARING DECIMALS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|  |  |  | I know how to compare numbers with the same number of decimal places up to two decimal places | I know how to read, write, order and compare numbers with up to three decimal places | I know how to identify the value of each digit in numbers given to three decimal places |
| ROUNDING INCLUDING DECIMALS |  |  |  |  |  |
|  |  |  | I know how to round decimals with one decimal place to the nearest whole number | I know how to round decimals with two decimal places to the nearest whole number and to one decimal place | I know how to solve problems which require answers to be rounded to specified degrees of accuracy |
| EQUIVALENCE (INCLUDING FRACTIONS, DECIMALS AND PERCENTAGES) |  |  |  |  |  |
|  | I know how to write simple fractions e.g. $1_{2}$ of $6=3$ and recognise the equivalence of $/$ and $1 / 2$ | I know how to show, using diagrams, equivalent fractions with small denominators | I know how to show, using diagrams, families of common equivalent fractions | I know how to identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths | I know how to use common factors to simplify fractions; use common multiples to express fractions in the same denomination |
|  |  |  | I know how to write decimal equivalents of any number of tenths or hundredths | I know how to read and write decimal numbers as fractions (e.g. $0.71=/ 100$ ) <br> I know how to use thousandths and relate them to tenths, hundredths and decimal equivalents | I know how to calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. ${ }^{3} / 8$ |
|  |  |  | I know how to write decimal equivalents to $/:_{4}^{1} 1_{2}^{1}{ }_{4}$ | I know the per cent symbol (\%) and know that per cent relates to "number of parts per hundred", and write percentages as a fraction with denominator 100 as a decimal fraction | I know how to use equivalences between simple fractions, decimals and percentages, including in different contexts. |

## Number: Fractions (including Decimals and Percentages)

| ADDITION AND SUBTRACTION OF FRACTIONS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|  |  | I know how to add and subtract fractions with the same denominator within one whole (e.g. $/{ }^{5}+{ }_{7}^{1}=$ 6 /7 | I know how to add and subtract fractions with the same denominator | I know how to add and subtract fractions with the same denominator and multiples of the same number | I know how to add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions |
|  |  |  |  | I know what mixed numbers and improper fractions are. I know how to convert from one form to the other and write mathematical statements <br> $>1$ as a mixed number 1 (e.g. $/ 5+/ / 5 / 5=1 / \frac{1}{5}$ |  |
| MULTIPLICATION AND DIVISION OF FRACTIONS |  |  |  |  |  |
|  |  |  |  | I know how to multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams | I know how to multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $/_{4}^{1} \times{ }^{1} \overline{2}_{8}^{1}$ |
|  |  |  |  |  | I know how to multiply onedigit numbers with up to two decimal places by whole numbers |
|  |  |  |  |  | I know how to divide proper fractions by whole numbers (e.g. $\left./ \frac{1}{3} 2=I^{1}\right)_{6}$ |

## Number: Fractions (including Decimals and Percentages)

| MULTIPLICATION AND DIVISION OF DECIMALS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|  |  |  |  |  | I know how to multiply onedigit numbers with up to two decimal places by whole numbers |
|  |  |  | I know how to divide a oneor two-digit number by 10 and 100 , identifying the value of the digits in the answer as ones, tenths and hundredths |  | I know how to multiply and divide numbers by 10,100 and 1000 where the answers are up to three decimal places |
|  |  |  |  |  | I know the value of each digit to three decimal places. I know how to multiply and divide numbers by 10,100 and 1000 where the answers are up to three decimal places |
|  |  |  |  |  | I know how to calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. ${ }^{3} / 8$ ) |
|  |  |  |  |  | I know how to use written division methods in cases where the answer has up to two decimal places |

## Number: Fractions (including Decimals and Percentages)

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

