

## Fractions progression of skills

| COUNTING IN FRACTIONAL STEPS                                                                                                                  |                                                                                               |                                                                                                                                                                                                        |                                                                                                                                  |                                                                                                   |                                                                                                                           |                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| EYFS                                                                                                                                          | Year 1                                                                                        | Year 2                                                                                                                                                                                                 | Year 3                                                                                                                           | Year 4                                                                                            | Year 5                                                                                                                    | Year 6                                                |
|                                                                                                                                               |                                                                                               | <i>Pupils should count in fractions up to 10, starting from any number and using the <math>\frac{1}{2}</math> and <math>\frac{2}{4}</math> equivalence on the number line (Non Statutory Guidance)</i> | count up and down in tenths                                                                                                      | count up and down in hundredths                                                                   |                                                                                                                           |                                                       |
|                                                                                                                                               | RECOGNISING FRACTIONS                                                                         |                                                                                                                                                                                                        |                                                                                                                                  |                                                                                                   |                                                                                                                           |                                                       |
| Explore and represent patterns within numbers up to 10, including odds and evens, double facts and how quantities can be distributed equally. | recognise, find and name a half as one of two equal parts of an object, shape or quantity     | recognise, find, name and write fractions $\frac{1}{3}$ , $\frac{1}{4}$ , $\frac{2}{4}$ and $\frac{3}{4}$ 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  | 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) |                                                       |
|                                                                                                                                               |                                                                                               |                                                                                                                                                                                                        | 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 non-unit fractions with small denominators                            |                                                                                                   |                                                                                                                           |                                                       |
|                                                                                                                                               | recognise, find and name a quarter as one of four equal parts of an object, shape or quantity |                                                                                                                                                                                                        |                                                                                                                                  |                                                                                                   |                                                                                                                           |                                                       |
| COMPARING FRACTIONS                                                                                                                           |                                                                                               |                                                                                                                                                                                                        |                                                                                                                                  |                                                                                                   |                                                                                                                           |                                                       |
|                                                                                                                                               |                                                                                               |                                                                                                                                                                                                        | compare and order unit fractions, and fractions with the                                                                         |                                                                                                   | compare and order fractions whose denominators are all                                                                    | compare and order fractions, including fractions $>1$ |



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|  |  |  | same denominators |  | multiples of the same number |  |
|--|--|--|-------------------|--|------------------------------|--|

## Fractions progression of skills

| COMPARING DECIMALS                                          |        |                                                                                                                       |                                                                                  |                                                                                          |                                                                                                                                                                                |                                                                                                                                        |
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| EYFS                                                        | 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. $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ . | 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. $0.71 = \frac{71}{100}$ )                                                                                                    | associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$ ) |
|                                                             |        |                                                                                                                       |                                                                                  |                                                                                          | recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents                                                                                    |                                                                                                                                        |
|                                                             |        |                                                                                                                       |                                                                                  | recognise and write decimal equivalents to $\frac{1}{4}$ ; $\frac{1}{2}$ ; $\frac{3}{4}$ | 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 | recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.                       |

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|                                          |        |        |                                                                                                                         |                                                      | fraction                                                                                                                                                                                                         |                                                                                                                                           |
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| ADDITION AND SUBTRACTION OF FRACTIONS    |        |        |                                                                                                                         |                                                      |                                                                                                                                                                                                                  |                                                                                                                                           |
| EYFS                                     | 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. $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$ ) | 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. $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$ ) |                                                                                                                                           |
| MULTIPLICATION AND DIVISION 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. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$ ) |
|                                          |        |        |                                                                                                                         |                                                      |                                                                                                                                                                                                                  | multiply one-digit numbers with up to two decimal places by whole numbers                                                                 |
|                                          |        |        |                                                                                                                         |                                                      |                                                                                                                                                                                                                  | divide proper fractions by whole numbers (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$ )                                                       |

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| MULTIPLICATION AND DIVISION OF DECIMALS |        |        |        |                                                                                                                                                        |        |                                                                                                                                                               |
|-----------------------------------------|--------|--------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EYFS                                    | 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. $\frac{3}{8}$ )                        |
|                                         |        |        |        |                                                                                                                                                        |        | use written division methods in cases where the answer has up to                                                                                              |

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|                 |        |        |                                              |                                                                                                                                                                                     |                                                                                                                                                                                                                  | two decimal places |
|-----------------|--------|--------|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| PROBLEM SOLVING |        |        |                                              |                                                                                                                                                                                     |                                                                                                                                                                                                                  |                    |
| EYFS            | 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 $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{1}{5}$ , $\frac{2}{5}$ , $\frac{4}{5}$ and those with a denominator of a multiple of 10 or 25. |                    |