

Fractions

Year 2

- Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, and set of objects or quantity and demonstrate understanding that all parts must be equal parts of the whole.
- Write simple fractions for example, $\frac{1}{2}$ of $6 = 3$ and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.

Year 3

- Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10.
- Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.
- Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.
- Recognise and show, using diagrams, equivalent fractions with small denominators.
- Add fractions with the same denominator within one whole e.g. $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$.
- Subtract fractions with the same denominator within one whole e.g. $\frac{6}{7} - \frac{1}{7} = \frac{5}{7}$.
- Compare and order unit fractions, and fractions with the same denominators.
- Solve fraction problems.
- Record $\frac{1}{10}$ as 0.1, $\frac{3}{10}$ as 0.3 etc.

Year 4

- Recognise and show, using diagrams, families of common equivalent fractions.
 - Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.
 - 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.
 - Add and subtract fractions with the same denominator.
 - Recognise and write decimal equivalents of any number of tenths or hundredths.
 - Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.
 - 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. (Fractions)
 - Round decimals with one decimal place to the nearest whole number. (Fractions)
 - Compare numbers with the same number of decimal places up to two decimal places. (Fractions)
- Solve simple measure and money problems involving fractions and decimals to two decimal places. (Fractions)

Year 6

- Use common factors to simplify fractions; use common multiples to express fractions in the same denomination
 - Compare and order fractions, including > 1 .
- Add subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
- Multiply simple pairs of proper fractions, writing the answer in its simplest form e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$
 - Divide proper fractions by whole numbers e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$
- Associate a fraction with division and calculate decimal fraction equivalents e.g. know that 7 divided by 21 is the same as $\frac{7}{21}$ and that this is equal to $\frac{1}{3}$ and e.g. 0.275 is equivalent to $\frac{3}{8}$
- Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places
 - Multiply one digit numbers with up to two decimal places by whole numbers
- Use written division methods in cases where the answer has up to two decimal places
 - Solve problems which require answers to be rounded to specified degrees of accuracy
- Recall and use equivalences between simple fractions, decimals and percentages including in different contexts e.g. one piece of cake that has been cut into 5 equal slices can be expressed as $\frac{1}{5}$ or 0.2 or 20% of the whole cake

Year 5

- Compare and order fractions whose denominators are all multiples of the same number
- Identify and name equivalent fractions of a given fraction, represented visually, including tenths and hundredths.
- Write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.
- 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. $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1 \frac{1}{5}$
- Add and subtract fractions with the same denominator and denominators that are multiples of the same number
- Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
- Read and write decimal numbers as fractions e.g. $0.71 = \frac{71}{100}$, $8.09 = 8 + \frac{9}{100}$
- Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalent
- Round decimals with two decimal places to the nearest whole number and to one decimal place
- Read, write, order and compare numbers with up to three decimal places
- Solve problems involving number up to three decimal places
- Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred' . and write percentages as fraction with denominator 100, and as a decimal
- 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