Progression of Skills: Fractions (including decimals and percentages)

Nursery	Reception	Y1	Y2	Y3	Y4	Y5	Y6
Fractions Pupils should be taught to: Shows curiosity about numbers by offering comments or asking questions. Shows an interest in number problems.	**Fractions** Pupils should be taught to: Begins to identify own mathematical problems based on own interests and fascinations. **ELG** They solve problems, including doubling, halving and sharing	**Fractions** Pupils should be taught to: Recognise, find and name a half as one of two equal parts of an object, shape or quantity Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity	**Fractions** Pupils should be taught to: Recognise, find, name and write fractions $^1/_3$, $^1/_4$, $^2/_4$ and $^3/_4$ of a length, shape, set of objects or quantity Write simple fractions for example, $^1/_2$ of 6 = 3 and recognise the equivalence of $^2/_4$ and $^1/_2$	**Fractions** Pupils should be taught to: 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 and subtract fractions with the same denominator within one whole (for example, $^5/_7 + ^1/_7 = ^6/_7$) Compare and order unit fractions, and fractions with the same denominators Solve problems that involve all of the	**Fractions (including decimals)** Pupils should be taught to: 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 a 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 ¼, ½, $^3/_4$ 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 Round decimals with one decimal place to the nearest whole number Compare numbers with the	**Fractions (including decimals and percentages)** Pupils should be taught to: Compare and order fractions whose denominators are all multiples of the same number Identify, name and 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 (for example, $^2/_5 + ^4/_5 = ^6/_5 = 1^1/_5$) 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 (for example, 0.71 = $^{71}/_{100}$) Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	**Fractions (including decimals and percentages)** Pupils should be taught to: Use common factors to simplify fractions; use common multiples to express fractions in the same denomination Compare and order fractions, including fractions >1 Add and 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 (for example, $^1/_4 \times ^1/_2 = ^1/_8$) Divide proper fractions by whole numbers (for example, $^1/_3 \div 2 = ^1/_6$) Associate a fraction with division and calculate decimal fraction equivalents (for example, 0.375) for a simple fraction (for example, $^3/_8$) Identify the value of each digit in numbers given to three decimal

				above	same number of decimal places up to two decimal places Solve simple measure and money problems involving fractions and decimals to two decimal places	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 a fraction with denominator 100, and as a decimal Solve problems which require knowing percentage and decimal equivalents of $^{1}/_{2}$, $^{1}/_{4}$, $^{1}/_{5}$, $^{2}/_{5}$, $^{4}/_{5}$ and those with a denominator of a multiple of 10 or 25	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