Subject Specific-Skills: Age-related expectations in maths – Fractions

Year	Counting in Fractional Steps	Recognising Fractions	Comparing fractions and Decimals	Rounding including decimals	Equivalence (including fractions, decimals and percentages)	Addition, Subtraction, Multiplication and Division of fractions and Decimals	Problem solving
N							
R		• Using concrete resources, begin to find and name half of an object, shape or quantity up to 10					
1		• recognise, find and name a half as one of two equal parts of an object, shape or quantity					
2	• *Pupils should count in fractions up to 10, starting from any number and using the1/2 and 2/4 equivalence on the number line (Non Statutory Guidance)*	• 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 e.g. ½ of 6 = 3 and recognise the equivalence of $^2/_4$ and ½.		
3	• count up and down in tenths	• recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators • 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	• compare and order unit fractions, and fractions with the same denominators		• recognise and show, using diagrams, equivalent fractions with small denominators	• add and subtract fractions with the same denominator within one whole (e.g. 5/7 + 1/7 = 6/7) •	• solve problems that involve all of the above •
4	• count up and down in hundredths	• recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten	• compare numbers with the same number of decimal places up to two decimal places	• round decimals with one decimal place to the nearest whole number	• recognise and show, using diagrams, families of common equivalent fractions • recognise and write decimal equivalents of any number of tenths or hundredths • recognise and write decimal equivalents to ¼,; ½ and ¾	• add and subtract fractions with the same denominator • 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	• 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 simple measure and money problems involving fractions and decimals to two decimal places.
5	•	• recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • (appears also in Equivalence)	• compare and order fractions whose denominators are all multiples of the same number • read, write, order and compare numbers with up to three decimal places	• round decimals with two decimal places to the nearest whole number and to one decimal place	• identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths • read and write decimal numbers as fractions (e.g. 0.71 = $^{71}/_{100}$) • recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • 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	• add and subtract fractions with the same denominator and multiples of the same number • 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 + 4/5 = 6/5 = 11/5) • multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	• solve problems involving numbers up to three decimal places •
6	•	•	• compare and order fractions, including fractions >1 • identify the value of each digit in numbers given to three decimal places •	• solve problems which require answers to be rounded to specified degrees of accuracy	• use common factors to simplify fractions; use common multiples to express fractions in the same denomination • associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3/8) • recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	• 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 (e.g. 1/4 × 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 ÷ 2 = 1/6) • multiply one-digit numbers with up to two decimal places by whole numbers • 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	