Maths Skills Progression: Fractions, Decimals and Percentages

Please note that this progression framework has been taken from NCETM to support understanding of progression of the different maths strands. Skills may appear more than once as some skills support more than one area of progression.

	Recognising Fractions		Counting in Fractional Steps	Comparing Fractions	Adding and Subtracting Fractions	
EYFS						
Year 1	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				
Year 2	Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity					
Year 3	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	Count up and down in tenths	Compare and order unit fractions, and fractions with the same denominators		Add and subtract fractions with the same denominator within one whole (e.g. 5/7 + 1/7 = 6/7)
Year 4	Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten		Count up and down in hundredths			Add and subtract fractions with the same denominator
Year 5	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents			Compare and order fractions whose denominators are all multiples of the same number		Add and subtract fractions with the same denominator and multiples of the same number

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						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)
Year 6				Compare and order fractions, including fractions >1		Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions

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	Multiplying and Dividing Fractions	Equivalence (FDP)		Problem Solving	
EYFS					
Year 1					
Year 2		Write simple fractions e.g. 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2			
Year 3		Recognise and show, using diagrams, equivalent fractions with small denominators		Solve problems that involve all of the above	
Year 4		Recognise and show, using diagrams, families of common equivalent fractions Recognise and write decimal equivalents to 1/4; 1/2; 3/4	Recognise and write decimal equivalents of any number of tenths or 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.
Year 5	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths 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	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	Solve problems involving numbers up to three decimal places	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.
Year 6	Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. 1/4 × 1/2 = 1/8)	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)	**Ratio and Proportion**	
				Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts	

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	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)	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.		Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison Solve problems involving similar shapes where the scale factor is known or can be found Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples

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