#### Number: Fractions (including Decimals and Percentages) National Centre Teaching of Mathematics

COUNTING IN FRACTIONAL STEPS							
Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
		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)	count up and down in tenths	count up and down in hundredths			
			RECOGNISIN	G FRACTIONS			
	recognise, find and name a half as one of two equal parts of an object, shape or quantity	recognise, find, name and write fractions $1/3$ , 1/4, $2/4$ and $3/4$ 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 tenths arise from dividing an object into 10 equal parts and in dividing one – digit numbers or quantities by 10.	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, find and		recognise and use	-			
	name a quarter as one		fractions as numbers:				
	of four equal parts of an object, shape or		unit fractions and non- unit fractions with				
	quantity		small denominators				
	COMPARING FRACTIONS						
			compare and order		compare and order	compare and order	
			unit fractions, and		fractions whose	fractions, including	
			fractions with the		denominators are all	fractions >1	







#### National Centre Number: Fractions (including Decimals and Percentages) for Excellence in the **Teaching of Mathematics**

same denominators	multiples of the same	
	number	









## Number: Fractions (including Decimals and Percentages)

COMPARING DECIMALS						
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
			compare numbers with the	read, write, order and compare	identify the value of each digit	
			same number of decimal	numbers with up to three decimal	in numbers given to three	
			places up to two decimal	places	decimal places	
			places			
		T	ROUNDING INCLUDING DE			
			round decimals with one	round decimals with two decimal places	solve problems which require	
			decimal place to the nearest	to the nearest whole number and to	answers to be rounded to	
			whole number	one decimal place	specified degrees of accuracy	
			(INCLUDING FRACTIONS, DECIN			
	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 recognise and write decimal equivalents of any number of tenths or hundredths	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. $0.71 = \frac{71}{100}$ )	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	
			recognise and write decimal equivalents to $\frac{1}{4}$ ; $\frac{1}{2}$ ; $\frac{3}{4}$	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	(e.g. <sup>3</sup> / <sub>8</sub> ) recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	







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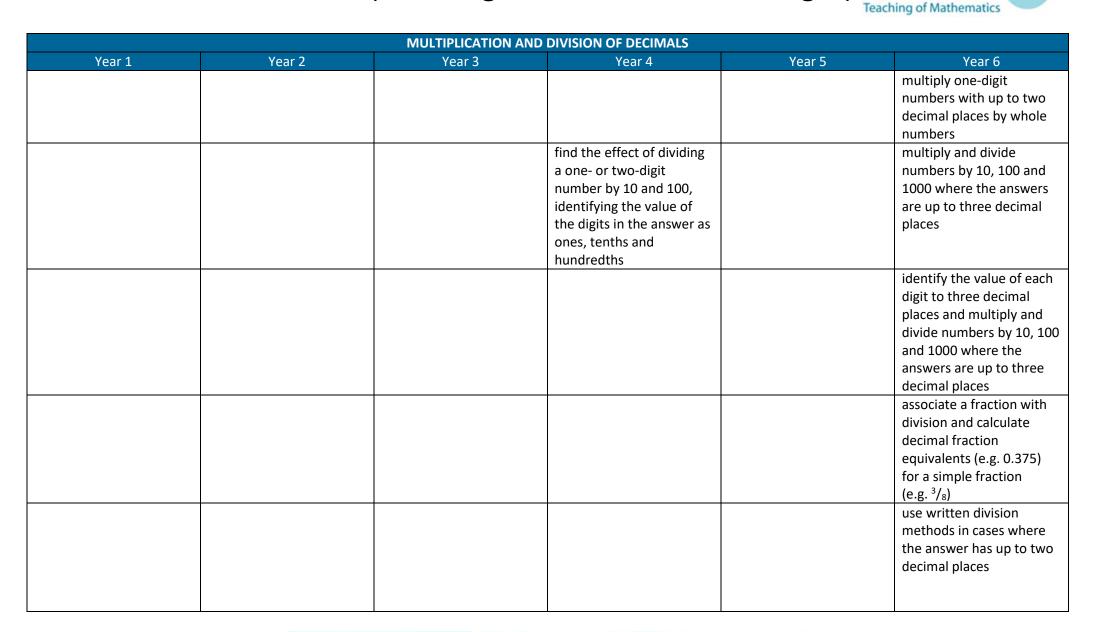
ADDITION AND SUBTRACTION OF FRACTIONS						
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
		add and subtract fractions with the same denominator within one whole (e.g. $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$ )	add and subtract fractions with the same denominator	add and subtract fractions with the same denominator and multiples of the same number 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. $\frac{2}{5} + \frac{4}{5} = \frac{6}{5}$ = $1^{1}/{5}$ )	add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	
		MULTIPLICATION AND I	DIVISION OF FRACTIONS	5		
				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. $1/4 \times 1/2 = 1/8$ ) multiply one-digit numbers with up to two decimal places by whole numbers	
					divide proper fractions by whole numbers (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$ )	







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## Number: Fractions (including Decimals and Percentages)



PROBLEM SOLVING						
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 ${}^{1}/{}_{2}$ , ${}^{1}/{}_{4}$ , ${}^{1}/{}_{5}$ , ${}^{2}/{}_{5}$ , ${}^{4}/{}_{5}$ and those with a denominator of a multiple of 10 or 25.		



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