

Number: Fractions (including Decimals and Percentages)

COUNTING IN FRACTIONAL STEPS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<i>Pupils should count in fractions up to 10, starting from any number and using the 1/2 and 2/4 equivalence on the number line (Non Statutory Guidance)</i> Spring 4	count up and down in tenths Spring 5	count up and down in hundredths Spring 3		
RECOGNISING FRACTIONS					
recognise, find and name a half as one of two equal parts of an object, shape or quantity Summer 2	recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity Spring 4	recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators Spring 5 recognise that tenths arise from dividing an object into 10 equal parts and in dividing one – digit numbers or quantities by 10. Spring 5	recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten Spring 3	recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents (appears also in Equivalence) Spring 3	
recognise, find and name a quarter as one of four equal parts of an object, shape or quantity Summer 2		recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators Spring 5			
COMPARING FRACTIONS					
		compare and order unit fractions, and fractions with the same denominators Summer 1		compare and order fractions whose denominators are all multiples of the same number Spring 2	compare and order fractions, including fractions >1 Autumn 3

COMPARING DECIMALS

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			compare numbers with the same number of decimal places up to two decimal places <i>Summer 1</i>	read, write, order and compare numbers with up to three decimal places <i>Spring 3</i>	identify the value of each digit in numbers given to three decimal places <i>Spring 1</i>

ROUNDING INCLUDING DECIMALS

			round decimals with one decimal place to the nearest whole number <i>Summer 1</i>	round decimals with two decimal places to the nearest whole number and to one decimal place <i>Spring 3</i>	solve problems which require answers to be rounded to specified degrees of accuracy <i>Spring 1</i>
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EQUIVALENCE (INCLUDING FRACTIONS, DECIMALS AND PERCENTAGES)

	write simple fractions e.g. $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$. <i>Spring 4</i>	recognise and show, using diagrams, equivalent fractions with small denominators <i>Summer 1</i>	recognise and show, using diagrams, families of common equivalent fractions <i>Spring 3</i>	identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths <i>Spring 2</i>	use common factors to simplify fractions; use common multiples to express fractions in the same denomination <i>Autumn 3</i>
			recognise and write decimal equivalents of any number of tenths or hundredths <i>Spring 4</i> <i>Summer 1</i>	read and write decimal numbers as fractions (e.g. $0.71 = \frac{71}{100}$) <i>Spring 3</i> recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents <i>Spring 3</i>	associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$) <i>Spring 1 & 2</i>
			recognise and write decimal equivalents to $\frac{1}{4}$; $\frac{1}{2}$; $\frac{3}{4}$ <i>Spring 4</i> <i>Summer 1</i>	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 <i>Spring 3</i>	recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. <i>Spring 1 & 2</i>

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. $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$) Summer 1	add and subtract fractions with the same denominator Spring 3	add and subtract fractions with the same denominator and multiples of the same number Spring 3 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. $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$) Spring 2	add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions Autumn 3

MULTIPLICATION AND DIVISION OF FRACTIONS

				multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams Spring 3	multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$) Autumn 3 multiply one-digit numbers with up to two decimal places by whole numbers Spring 1
					divide proper fractions by whole numbers (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$) Autumn 3



MULTIPLICATION AND DIVISION OF DECIMALS

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
					multiply one-digit numbers with up to two decimal places by whole numbers <i>Spring 1</i>
			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 <i>Spring 4</i>		multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places <i>Spring 1</i>
					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 <i>Spring 1</i>
					associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$) <i>Spring 1 & 2</i>
					use written division methods in cases where the answer has up to two decimal places <i>Spring 1</i>

PROBLEM SOLVING

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		solve problems that involve all of the above <i>Spring 3 & 4</i> <i>Summer 1</i>	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 <i>Spring 3</i>	solve problems involving numbers up to three decimal places <i>Summer 1</i>	
			solve simple measure and money problems involving fractions and decimals to two decimal places. <i>Spring 3 & 4</i> <i>Summer 1</i>	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 with a denominator of a multiple of 10 or 25. <i>Spring 3</i>	