



MATHS CURRICULUM-FRACTIONS INCLUDING % AND DECIMALS

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Understanding Fractions		Understand that a fraction can describe part of a whole Understand that a unit fraction represents one equal part of a whole	Understand and use the terms numerator and denominator Understand that a fraction can describe part of a set Understand that the larger the denominator is, the more pieces it is split into and therefore the smaller each part will be	Show practically or pictorially that a fraction is one whole number divided by another (for example, $\frac{3}{4}$ can be interpreted as $3 \div 4$) Understand that finding a fraction of an amount relates to division	Understand that a fraction is one whole number divided by another (for example, $\frac{3}{4}$ can be interpreted as $3 \div 4$)			Interpret fractions and percentages as operators
Fractions of objects, shapes and quantities		Recognise, find and name a half as one of two equal parts of an object, shape or quantity (including measure) Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity (including measure)	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 <i>Begin to find $\frac{1}{3}$ and $\frac{1}{4}$ of a quantity with support</i> <i>Shade $\frac{1}{2}$ of a shape divided into 8 equal parts</i>	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 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 including those with a range of numerators and denominators Recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten	Recognise mixed numbers and improper fractions and convert from one form to the other Read and write decimal numbers as fractions (e.g. $0.71 = \frac{71}{100}$)		
Counting, comparing and ordering fractions			Count on and back in steps of $\frac{1}{2}$ and $\frac{1}{4}$.	Count on and back in steps of $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{3}$. Compare and order unit fractions and fractions with the same denominators (including on a number line)	Count on and back in steps of unit fractions Compare and order unit fractions and fractions with the same denominators (including on a number line) (continued from Year 3)	Count on and back in mixed number steps such as $1 \frac{1}{2}$ Compare and order fractions whose denominators are all multiples of the same number (including on a number line)	Compare and order fractions, including fractions >1 (including on a number line)	
Equivalence			Write simple fractions for example, $\frac{1}{2}$ 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 Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$.	Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$)	Work interchangeably with terminating decimals and their corresponding fractions (such as 3.5 and 0.375 and $\frac{7}{2}$)
Calculating with fractions				Add and subtract fractions with the same denominator within one whole (using diagrams) (for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$)	Add and subtract fractions with the same denominator	Add and subtract fractions with the same denominator and denominators that are multiples of the same number (using diagrams) Write mathematical statements >1 as a mixed number ($\frac{2}{5} + \frac{4}{5} = \frac{6}{5}$ or $1 \frac{1}{5}$) Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	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 (using diagrams) (e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$) Divide proper fractions by whole numbers (using diagrams) (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$)	
Percentages						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	Find simple percentages of amounts	Define percentage as 'number of parts per hundred', interpret percentages and percentage changes as a fraction or a decimal, interpret these multiplicatively, express one quantity as a percentage of another, compare two quantities using percentages, and work with percentages greater than 100%
Solving problems involving fractions, decimals and				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 Fractions Solve problems involving number up to three decimal places	Solve problems involving Fractions Solve problems which require answers to be rounded to specified degrees of accuracy	



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percentages				Solve simple measure and money problems involving fractions and decimals to two decimal places	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	Solve problems involving the calculation of percentages (for example, of measures, and such as 15% of 360) and the use of percentages for comparison	