

CG Maths Progression Map – Fractions, Decimals & Percentages

	<u>EYFS</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
<u>Recognising fractions</u>		<ul style="list-style-type: none"> •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. 	<ul style="list-style-type: none"> •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 	<ul style="list-style-type: none"> •count up and down in tenths; •recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 	<ul style="list-style-type: none"> •count up and down in hundredths; •recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. 	<ul style="list-style-type: none"> •recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number 	
<u>Comparing fractions</u>				<ul style="list-style-type: none"> •compare and order unit fractions, and fractions with the same denominators •recognise and show, using diagrams, equivalent fractions with small denominators 	<ul style="list-style-type: none"> •recognise and show, using diagrams, families of common equivalent fractions 	<ul style="list-style-type: none"> •compare and order fractions whose denominators are all multiples of the same number •identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths 	<ul style="list-style-type: none"> •use common factors to simplify fractions •use common multiples to express fractions in the same denomination •compare and order fractions, including fractions > 1
<u>Finding fractions of quantities</u>				<ul style="list-style-type: none"> •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 	<ul style="list-style-type: none"> •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 		
<u>Fraction calculations</u>			<ul style="list-style-type: none"> •write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$. 	<ul style="list-style-type: none"> •add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$] 	<ul style="list-style-type: none"> •add and subtract fractions with the same denominator 	<ul style="list-style-type: none"> •add and subtract fractions with the same denominator and denominators that are multiples of the same number •multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams 	<ul style="list-style-type: none"> •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 •divide proper fractions by whole numbers
<u>Decimals as fractional amounts</u>					<ul style="list-style-type: none"> •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 $\frac{3}{4}$ •find the effect of dividing a one- or two-digit 	<ul style="list-style-type: none"> •read and write decimal numbers as fractions 	<ul style="list-style-type: none"> •associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction •identify the value of each digit in numbers given to three decimal places

					number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths		
<u>Ordering decimals</u>					<ul style="list-style-type: none"> •round decimals with one decimal place to the nearest whole number •compare numbers with the same number of decimal places up to two decimal places 	<ul style="list-style-type: none"> •recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents •round decimals with two decimal places to the nearest whole number and to one decimal place •read, write, order and compare numbers with up to three decimal places 	
<u>Calculating with decimal</u>							<ul style="list-style-type: none"> •multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places •multiply one-digit number with up to two decimal places by whole numbers use written division methods in cases where the answer has up to two decimal places
<u>Percentages</u>						<ul style="list-style-type: none"> •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 	<ul style="list-style-type: none"> •solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison
<u>Fraction problems</u>				<ul style="list-style-type: none"> •solve problems using all fraction knowledge 	<ul style="list-style-type: none"> •solve simple measure and money problems involving fractions and decimals to two decimal places 	<ul style="list-style-type: none"> •solve problems involving number up to three 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 fractions with a denominator of a multiple of 10 or 25 	<ul style="list-style-type: none"> •solve problems which require answers to be rounded to specified degrees of accuracy •recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.