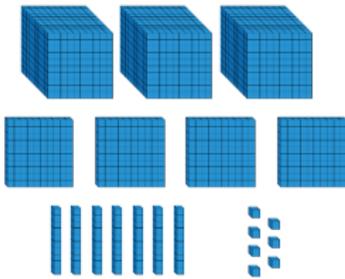
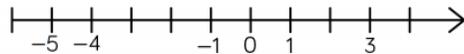


Mathematics Curriculum Progression for Year 4

Term	Topic	Knowledge and Skills	Methods and Visual Representations	Vocabulary								
1 & 2	Place Value	<p>Count in multiples of 6, 7, 9, 25 and 1000</p> <p>Find 1000 more or less than a given number</p> <p>Count backwards through zero to include negative numbers</p> <p>Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)</p> <p>Order and compare numbers beyond 1000</p> <p>Identify, represent and estimate numbers using different representations including measures</p> <p>Round any number to the nearest 10, 100 or 1000</p> <p>Solve number and practical problems that involve all of the above and with increasingly large positive numbers</p> <p>Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value</p>	<div style="text-align: center;">  </div> <div style="text-align: center; margin-top: 10px;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="background-color: #d9ead3;">Start number</td></tr> <tr><td style="text-align: center;">  </td></tr> <tr><td style="text-align: center;">851</td></tr> <tr><td style="text-align: center;">XCVIII</td></tr> </table> </div> <div style="text-align: center; margin-top: 10px;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="background-color: #d9ead3;">Start number</td></tr> <tr><td style="text-align: center;">  </td></tr> <tr><td style="text-align: center;">994</td></tr> <tr><td style="text-align: center;">XLV</td></tr> </table> </div> <div style="text-align: center; margin-top: 10px;">  </div> <div style="text-align: center; margin-top: 10px;">  </div> <div style="text-align: center; margin-top: 10px;">  </div>	Start number		851	XCVIII	Start number		994	XLV	<p>ten thousand, hundred thousand, million, twenty-fives, sixes, sevens, nines, next, consecutive, integer, positive, negative, above zero, below zero, minus, negative numbers</p> <p style="text-align: center;">nearest thousand</p>
Start number												
												
851												
XCVIII												
Start number												
												
994												
XLV												

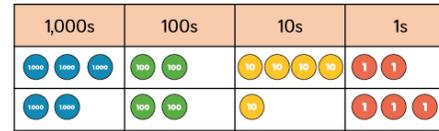
1 & 2 Addition and Subtraction

Add numbers with up to four digits using the formal method of columnar addition

Estimate and use inverse operations to check answers to a calculation

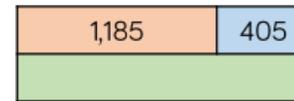
Subtract numbers with up to four digits using the formal method of columnar subtraction

Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why

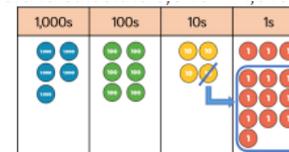


6	3	7	4	
+	2	8	2	3
			7	
		9	0	
1	1	0	0	
8	0	0	0	
9	1	9	7	

	Th	H	T	O
	3	3	5	6
+	2	4	3	5
	5	7	9	1

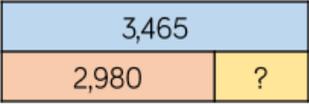
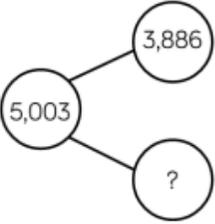
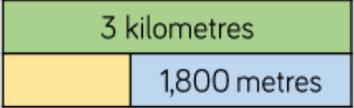
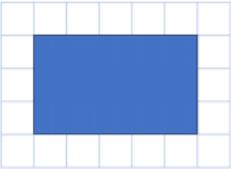
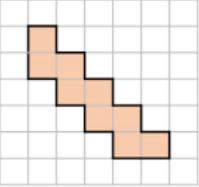
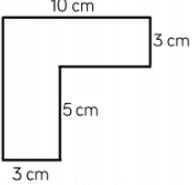


	Th	H	T	O
	3	4	5	4
-	1	2	2	4
	2	2	3	0



	Th	H	T	O
	5	6	3	1
-	4	3	1	6
	1	3	2	7

inverse

			 	
1 & 2	Measure: Length and Perimeter	<p>Convert between different units of measure e.g. kilometre to metre; hour to minute</p> <p>Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres</p>	    	<p>unit, standard unit, metric unit</p> <p>breadth, edge, area, covers, square centimetre</p>

1 & 2 Multiplication and Division

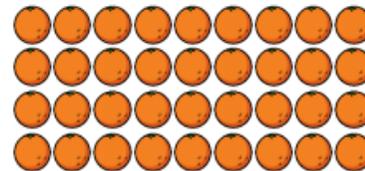
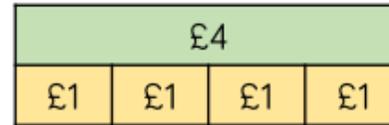
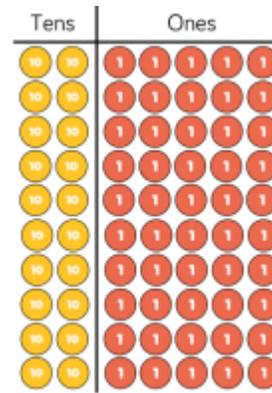
Recall multiplication and division facts for multiplication tables up to 12×12

Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers

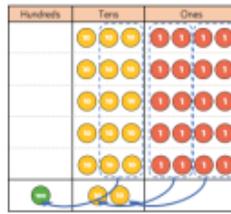
Recognise and use factor pairs and commutativity in mental calculations

Multiply two-digit and three-digit numbers by a one-digit number using formal written layout

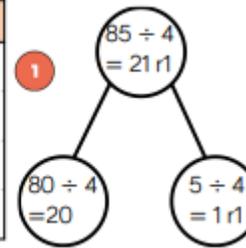
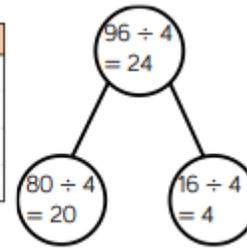
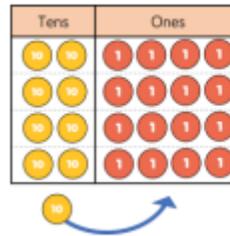
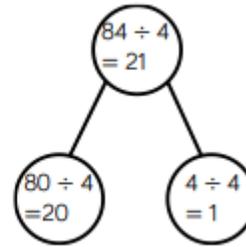
Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects



inverse, square, squared, cube, cubed



	H	T	O	
		3	4	
x			5	
	1	7	0	
	1	2		



			<p>Place value chart showing 97 (9 tens, 7 ones) and a division tree for $97 \div 4 = 24 \text{ r}1$. The tree branches into $80 \div 4 = 20$ and $17 \div 4 = 4 \text{ r}1$.</p>	
3 & 4	Measure: Area	Find the area of rectilinear shapes by counting squares	<p>Two identical L-shaped figures on a grid, each composed of 10 squares. Below them is a more complex rectilinear shape labeled 'A' on a grid, composed of 18 squares.</p>	<p>unit, standard unit, metric unit</p> <p>breadth, edge, area, covers, square centimetre</p>

3 & 4 Fractions

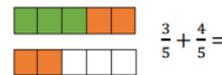
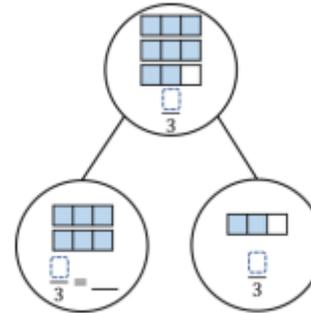
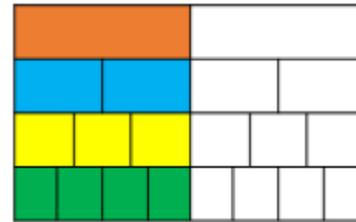
Recognise and show, using diagrams, families of common equivalent fractions

Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten

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

Add and subtract fractions with the same denominator

Solve simple measure and money problems involving fractions and decimals to two decimal places



hundredths, decimal equivalent, proportion

3 & 4 Decimals

Recognise and write decimal equivalents of any number of tenths or hundredths

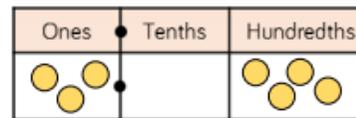
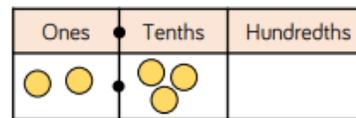
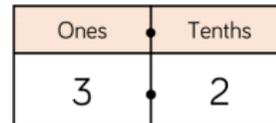
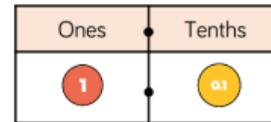
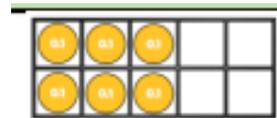
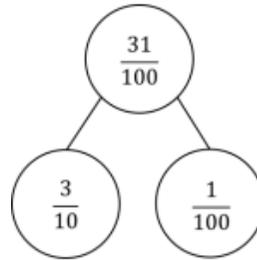
Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$

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

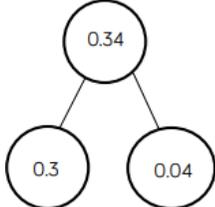
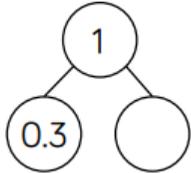
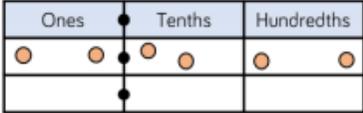
Round decimals with one decimal place to the nearest whole number

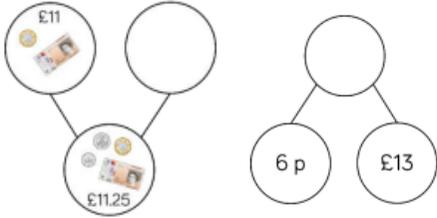
Compare numbers with the same number of decimal places up to two decimal places

Solve simple measure and money problems involving fractions and decimals to two decimal places



hundredths, decimal, decimal fraction, decimal point, decimal place, decimal equivalent, proportion

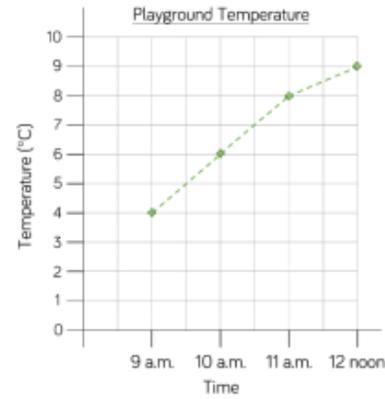
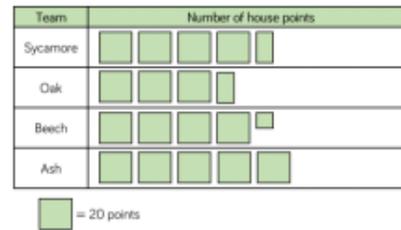
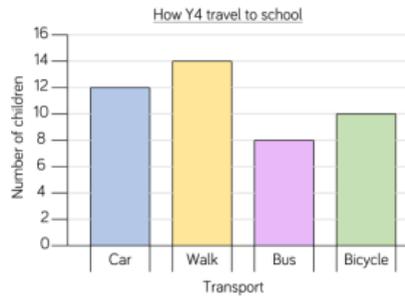
				
5 & 6	Decimals	<p>Recognise and write decimal equivalents of any number of tenths or hundredths</p> <p>Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$</p> <p>Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths</p> <p>Round decimals with one decimal place to the nearest whole number</p> <p>Compare numbers with the same number of decimal places up to two decimal places</p> <p>Solve simple measure and money problems involving fractions and decimals to two decimal places</p>	 	<p>hundredths, decimal, decimal fraction, decimal point, decimal place, decimal equivalent, proportion</p>

5 & 6	Measure: Money	Estimate, compare and calculate different measures, including money in pounds and pence		estimate
5 & 6	Measure: Time	<p>Convert between different units of measure e.g. hour to minute</p> <p>Read, write and convert time between analogue and digital 12- and 24-hour clocks</p> <p>Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days</p>	<p>Write each of these times in the digital format.</p> 	<p>leap year, millennium, noon, date of birth, timetable, arrive, depart</p>

5 & 6 Statistics

Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs

Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs



survey, questionnaire, data

5 & 6

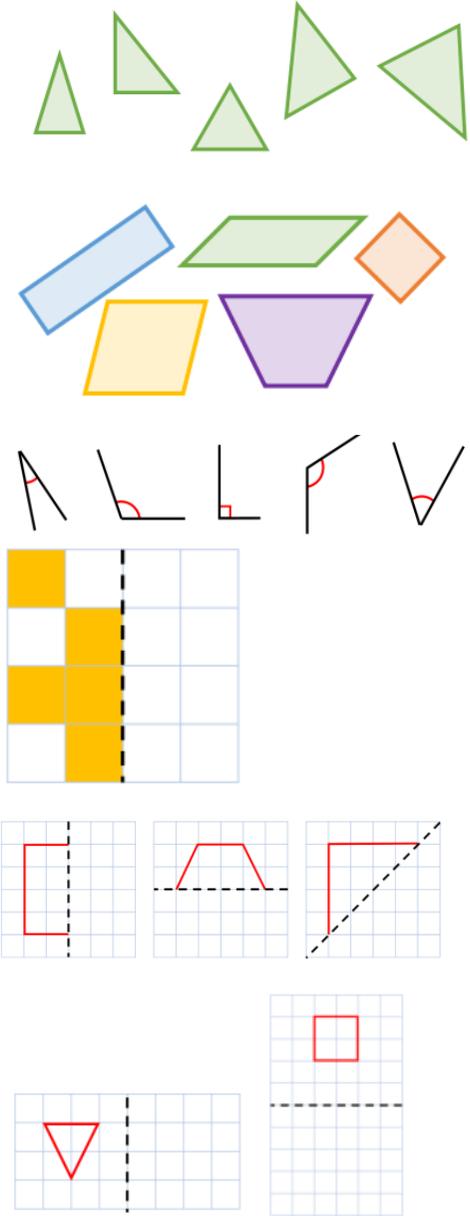
Properties of Shape

Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes

Identify acute and obtuse angles and compare and order angles up to two right angles by size

Identify lines of symmetry in 2-D shapes presented in different orientations

Complete a simple symmetric figure with respect to a specific line of symmetry



line, construct, sketch, centre, angle, right-angled, base, square-based, reflect, reflection, regular, irregular

two-dimensional, oblong, rectilinear, equilateral triangle, isosceles triangle, scalene triangle, heptagon, parallelogram, rhombus, trapezium, polygon

three-dimensional, spherical, cylindrical, tetrahedron, polyhedron

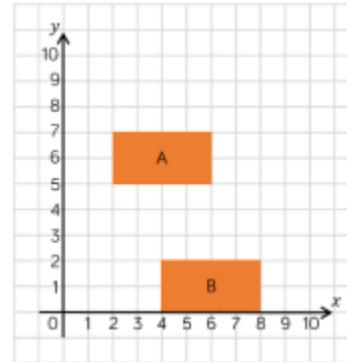
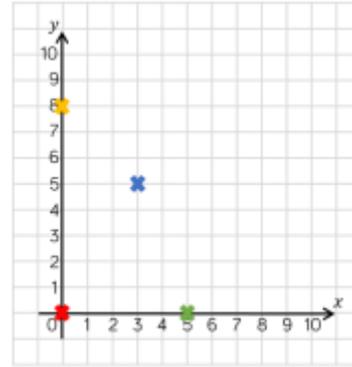
5 & 6

Position and Direction

Describe positions on a 2-D grid as coordinates in the first quadrant

Describe movements between positions as translations of a given unit to the left/right and up/down

Plot specified points and draw sides to complete a given polygon



north-east, north-west, south-east, south-west, translate, translation, rotate, rotation, degree, reflection, ruler, set square, angle measurer, compass