

	Number and Place Value	Addition and Subtraction	Multiplication and Division	Fractions, Decimals, Ratio and Percentages	Measures	Geometry	Statistics
Y5 Autumn	Read and write numbers to at least 100 000.	Sustain a line of enquiry; make and test a hypothesis.	Use mental strategies to multiply and divide by 4, 9, 20 and 25.	Add and subtract 0.1 to/from a number with 1 or 2 decimal places.	Convert between different units of metric measure (length: mm/cm/ m/km).	Use a ruler to measure lines in centimetres and millimetres.	Complete, read and interpret information in timetables using 24-hour times.
	Determine the value of each digit in numbers to at least 100 000 and use to solve place-value additions and subtractions.	Add whole numbers with 4-digits, including using the formal written method of columnar addition (answers > 10 000).	Solve problems involving multiplication and division using knowledge of factors, doubles and halves, and times-tables.	Compare and order fractions with the same denominator.	Understand the 24-hour clock, convert times, calculate time intervals and use timetables.	Know angles are measured in degrees.	
	Order and compare numbers to at least 100 000.	Use place value and number facts to add and subtract 2-, 3- and 4-digit numbers.	Choose a mental or a written method to solve problems, including word problems, involving multiplication (including 2-/3-digit × 1-digit; 2-digit × 2-digit).	Identify, name and write equivalent fractions, including simplest forms, of a given fraction, represented visually, including tenths and hundredths.	Begin to calculate the perimeter of rectilinear shapes in cm.	Estimate and compare acute, obtuse and reflex angles.	
	Count forward or backwards in steps of powers of 10 for any number up to 100 000.	Use inverse operations to create new calculations or check answers.	Choose a mental or written method to solve problems, including word problems, involving division (including 2-/3-digit ÷ 1-digit), and spot and explain patterns and relationships.	Recognise and use tenths and hundredths and relate them to decimal equivalents.		Draw given angles, and measure them in degrees (°) using a protractor.	
	Round any number up to 100 000 to the nearest 10, 100 and 1000.	Subtract whole numbers with 4 digits, including using the formal written method of columnar subtraction.	Recognise which numbers are divisible by 2, 3, 4, 5, 9 and 10.	Read, write, order and compare numbers with up to 2 decimal places.		Identify angles at a point on a straight line and half a turn (total 180°); use mathematical reasoning to explain findings	
		Begin to add and subtract numbers mentally with increasingly large numbers.	Use mathematical reasoning to work out a function; use the inverse operation to find answers.			Identify 90° and other multiples of 90°.	
		Use mathematical reasoning to work out a function (single operation +/–).	Use multiplication facts and place value to multiply and divide multiples of 10 and 100, including answers with 1 and 2 decimal places.				
Y5 Spring	Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000	Add whole numbers and 1-place decimals using appropriate mental strategies.	Identify multiples and factors, including finding all factor pairs of a	Add and subtract 0.1 or 0.01 to/from numbers with up to 2 decimal places.	Convert between different units of metric measure (km / m; cm / m; cm / mm; g	Know that the angles in a triangle add up to 180° and devise and test rules to find a missing angle.	Sort using a Venn diagram or a table.

		number, and common factors of 2 numbers.		/ kg; L / ml).		
Read and write numbers to at least 1 000 000.	Add 1- and 2-place decimal numbers (including money) choosing and using an appropriate method (including columnar addition and mental methods).	Multiply and divide numbers mentally drawing upon known facts.	Round decimals with 2 decimal places to the nearest whole number and to 1 decimal place.	Add 2-digit numbers with 2-place decimals, including money, using column addition.	Describe the properties of triangles (including scalene, right-angled, isosceles and equilateral).	Begin to read and interpret line graphs, including reading intermediate values.
Order and compare numbers to at least 1 000 000.	Count up to solve 4-digit minus 4-digit subtractions from near multiples of 1000, where column subtraction is awkward; use column subtraction where appropriate.	Use a written method to multiply pairs of 2-digit numbers.	Solve problems involving numbers with up to 3 decimal places, including in the context of measures.	Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.	Use mathematical reasoning to identify properties of different polygons, including equal sides and angles and explain findings.	
Determine the value of each digit in numbers to at least 1 000 000 and use to solve place value additions and subtractions.	Add and subtract numbers mentally with increasingly large numbers.	Multiply and divide numbers by 10 and 100, including decimal numbers and those leading to decimal answers.	Find unit and non-unit fractions of 2 and 3 digit numbers.		Identify and define a polygon; distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	
Order and compare 6-digit numbers and place on a number line.	Solve addition 1- step and multi-step problems using mental addition.	Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers; establish whether a number up to 100 is prime and recall prime numbers up to 19.	Compare and order fractions, including mixed numbers, whose denominators are all multiples of the same number.		Identify and define a polygon; distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	
Find square numbers and square roots; find a pattern; write and test a rule.	Use counting on and bonds to 100 to add to any 2-place decimal to find the next whole number.	Recognise and use square numbers and their notation ( $^2$ ).	Place fractions on a number line and count in steps of a given fraction, using equivalence.			
	Subtract amounts of money and other 1- and 2-place decimal numbers in the context of measures.	Choose an appropriate method to divide one number by another, including for larger numbers requiring a written procedure.	Recognise mixed numbers and improper fractions and convert from one form to the other; look for patterns and write rules.			

		Investigate patterns in addition using knowledge of bonds and a systematic approach.	Choose an appropriate method to multiply numbers, including for those larger numbers requiring written procedure.	Multiply proper fractions by whole numbers in a practical or real-life context.			
		Use columnar addition to add more than 2 numbers with up to 4 digits.	Use short division to divide 3-digit numbers by 1-digit numbers (including those that leave a remainder).				
		Identify patterns and make predictions.	Use short multiplication to multiply 3-digit numbers by 1-digit numbers, rounding to estimate answers.				
Y5 Summer	Interpret negative numbers in context; count forwards and backwards with positive and negative whole numbers, including through 0; solve problems in the context of temperature.	Use rounding to check answers to calculations and determine, in the context of a problem, level of accuracy; use addition to check subtraction.	Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.	Add and subtract 0.1, 0.01 or 0.001 to/from numbers with up to three decimal places.	Measure and calculate the perimeter of composite rectilinear shapes in cm and m.	Draw given angles and straight lines to given lengths to create a triangle.	Draw line graphs; solve comparison, sum and difference problems using information presented in a line graph.
	Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.	Subtract 2-place decimal numbers (including money) using counting up or mental methods.	Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.	Write equivalent fractions and use equivalence to reduce fractions to their simplest form, including writing improper fractions as mixed numbers.	Solve problems involving time, telling the time using 12- and 24-hour clocks, and converting between units of time.	Identify 3D shapes, including cubes and other cuboids, from 2D representations.	Estimate intermediate values on line graphs.
	Solve number problems and practical problems that involve all of the above.	Solve addition and subtraction problems, including multi-step and word problems; decide which operations and methods to use and why.	Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.	Compare and order fractions whose denominators are all multiples of the same number.	Calculate and compare the area of rectangles (including squares), including using standard units, $\text{cm}^2$ and $\text{m}^2$ , and pursue a line of enquiry.	Recognise and use the properties of rectangles to deduce related facts and find missing lengths and angles.	
	Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	Add whole numbers with more than 4 digits, including using formal written methods such as columnar addition.	Divide numbers up to 4-digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context.	Read, write, order and compare numbers with up to 3 decimal places.	Estimate the area of irregular shapes.	Identify, describe and represent the position of a shape following a reflection or translation using the appropriate language; know that the shape has not changed; describe the relationship between the shapes' co-ordinates.	
		Subtract whole numbers with more than 4 digits, including using formal	Use short multiplication to multiply 4-digit numbers by	Read and write decimal numbers as fractions.	Estimate and begin to find volume and capacity.	Read and mark coordinates in the first two quadrants and plot and join	

	written methods such as columnar subtraction.	1-digit numbers, rounding to estimate answers.			coordinates to create a polygon.	
		Multiply numbers up to 4-digits by a 1- or 2-digit number using a formal written method, including long multiplication for 2-digit numbers.	Solve problems involving numbers with up to 3 decimal places.	Use all 4 operations to solve problems involving measure using decimal notation, including scaling.		
		Identify factors of 2-digit numbers, pursue a line of enquiry and solve problems involving multiplication using their knowledge of factors.	Multiply proper fractions by whole numbers, supported by materials and diagrams, spot patterns and make generalisations.			
		Recognise and use cube numbers and their notation ( <sup>3</sup> ).	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.			
		Solve problems (including word problems and problems about measure) involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	Add and subtract fractions with the same denominator and denominators that are multiples of the same whole number, including answers > 1.			
		Multiply numbers up to 4-digits by a 1- or 2-digit number using a formal written method, including long multiplication for 2-digit numbers	Recognise the per cent symbol (%) and understand that it relates to 'number of parts per hundred'; write percentages as a fraction with denominator 100 and as a decimal.			
		Use multiplication to check division.	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.			