





Area	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number, Place Value and Rounding.	count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens given a number, identify one more and one less identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least read and write numbers from 1 to 20 in numerals and words.	count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward recognise the place value of each digit in a two-digit number (tens, ones) identify, represent and estimate numbers using different representations, including the number line compare and order numbers from 0 up to 100; use and = signs read and write numbers to at least 100 in numerals and in words use place value and number facts to solve problems.	count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number recognise the place value of each digit in a three-digit number (hundreds, tens, ones) compare and order numbers up to 1000 identify, represent and estimate numbers using different representations read and write numbers up to 1000 in numerals and in words solve number problems and practical problems involving these ideas.	count in multiples of 6, 7, 9, 25 and 1000 find 1000 more or less than a given number count backwards through zero to include negative numbers recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) order and compare numbers beyond 1000 identify, represent and estimate numbers using different representations round any number to the nearest 10, 100 or 1000 solve number and practical problems that involve all of the above and with increasingly large positive numbers 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.	read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 solve number problems and practical problems that involve all of the above read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	read, write, order and compare numbers up to 10 000 000 and determine the value of each digit round any whole number to a required degree of accuracy use negative numbers in context, and calculate intervals across zero solve number and practical problems that involve all of the above. read, write, order and compare numbers up to 10 000 000 and determine the value of each digit round any whole number to a required degree of accuracy use negative numbers in context, and calculate intervals across zero solve number and practical problems that involve all of the above.







Area	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition and Subtraction	read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs represent and use number bonds and related subtraction facts within 20 add and subtract one-digit and two-digit numbers to 20, including zero solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = 9.	solve problems with addition and subtraction: - using concrete objects and pictorial representations, including those involving numbers, quantities and measures - applying their increasing knowledge of mental and written methods recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 add and subtract numbers using concrete objects, pictorial representations, and mentally, including: - a two-digit number and ones - a two-digit number and tens - two two-digit numbers - adding three one-digit numbers	add and subtract numbers mentally, including: - a three-digit number and ones - a three-digit number and tens - a three-digit number and hundreds add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction estimate the answer to a calculation and use inverse operations to check answers solve problems, including missing number facts, place value, and more complex addition and subtraction.	add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate estimate and use inverse operations to check answers to a calculation solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 solve number problems and practical problems that involve all of the above read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why perform mental calculations, including with mixed operations and large numbers use their knowledge of the order of operations to carry out calculations involving the four operations solve problems involving addition, subtraction. use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.







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	show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot			
	recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.			







Multiplication and and Divisionmultiplication and division facts for the 2, 5 division facts for the 2, 5 division facts for the 2, 5 answer using concrete objects, pictorial arrays with the support of the teacher.multiplication and division facts for the 2, 5 tables, including even numbersmultiplication tables, including tables, including tables, including tables, including even numbersmultiplication tables, including tables, including tables, including tables, including tables, including even numbersmultiplication and division facts for the 2, 5 tables, including tables, including tables, including even numbersmultiplication and division insign the multiplication tables and division (4), divide numbers, and derived facts to multiplication and division using the multiplication tables and formal written method, including to the 3, division (4), and equals (e) signsmultiplication tables and tables, and multiplication tables and progressing to formal write them using the multiplication tables and division (4), division (4), division (4), and equals (e) signsmultiplication tables and progressing to formal write methodsdivision facts for the 3, division (4), division (Area	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
arrays, repeated correspondence numbers by one digit, and those involving decimals by 10, operations to carry out calculation addition, mental problems in which n integer scaling problems 100 and 1000recognise and use involving the four operations multiplication and to m objects. correspondence and harder square numbers and cube numbers, solve problems involving problems in contexts. to m objects. problems such as n cubed (3) multiplication and division objects are connected mojects. objects are connected to moltiplication and use estimation to check answers to	Multiplication	solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the	recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including	recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one- digit numbers, using mental and progressing to formal written methods solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected	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 number s 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	identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers establish whether a number up to 100 is prime and recall prime numbers up to 19 multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiply and divide numbers mentally drawing upon known facts divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context multiply and divide whole numbers and those involving decimals by 10, 100 and 1000recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) solve problems involving multiplication and division including using their knowledge of factors and	multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders, fractions, or by rounding, as appropriate for the context divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context perform mental calculations, including with mixed operations and large numbers use their knowledge of the order of operations to carry out calculations involving the four operations solve problems involving multiplication and division use estimation to check answers to calculations and determine, in the context of a problem, an







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			division and a combination of these, including understanding the meaning of the equals sign	
			solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	







Area	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Fractions	recognise, find	recognise, find,	count up and down in	recognise and show, using	compare and order fractions whose	use common factors to simplify
	and name a half	name and write	tenths; recognise that	diagrams, families of common	denominators are all multiples of	fractions; use common multiples
(Including	as one of two equal parts of an	fractions 1/3, 1/4, 2/4, and 3/4 of a	tenths arise from dividing an object into 10 equal	equivalent fractions	the same number	to express fractions in the same denomination
decimals,	object, shape or	length, shape, set of	parts and in dividing one-	count up and down in	identify, name and write equivalent	
percentages,	quantity	objects or quantity	digit numbers or quantities by 10	hundredths; recognise that hundredths arise when dividing	fractions of a given fraction, represented visually, including	compare and order fractions, including fractions > 1
ratio,	recognise, find and name a	write simple fractions for	recognise, find and write	an object by one hundred and dividing tenths by ten.	tenths and hundredths	add and subtract fractions with
proportion and	quarter as one of	example, 1/2, of 6 =	fractions of a discrete set		recognise mixed numbers and	different denominators and
	four equal parts	3 and recognise the	of objects: unit fractions	solve problems involving	improper fractions and convert	mixed numbers, using the
probability in	of an object,	equivalence of 2/4	and non-unit fractions	increasingly harder fractions to	from one form to the other and	concept of equivalent fractions
Years 4, 5 and	shape or quantity.	and 1/2 .	with small denominators	calculate quantities, and fractions to divide quantities,	write mathematical statements > 1 as a mixed number [for example,	multiply simple pairs of proper
	quantity.		recognise and use	including non-unit fractions	2/5 + 4/5 = 6/5 = 1 1/5	fractions, writing the answer in
6)			fractions as numbers: unit	where the answer is a whole	2/3 • 4/3 = 0/3 = 1 1/3]	its simplest form [for example,
			fractions and non-unit	number	add and subtract fractions with the	1/4 × 1/2= 1/8]
			fractions with small		same denominator and	
			denominators	add and subtract fractions with	denominators that are multiples of	divide proper fractions by whole
			and the second shares and the	the same denominator	the same number	numbers [for example, $1/3 \div 2 =$
			recognise and show, using diagrams, equivalent	recognise and write decimal	multiply proper fractions and mixed	1/6]
			fractions with small	equivalents of any number of	numbers by whole numbers,	associate a fraction with division
			denominators	tenths or hundredths	supported by materials and	and calculate decimal fraction
				recognise and write decimal	diagrams	equivalents [for example, 0.375]
			add and subtract fractions	equivalents to 1/4 , 1/2 , 3/4		for a simple fraction [for
			with the same		read and write decimal numbers as	example, 3/8]
			denominator within one	find the effect of dividing a one-	fractions [for example, 0.71 =	identify the velue of each digit in
			whole [for example, 5/7 + 1/7= 6/7	or two-digit number by 10 and 100, identifying the value of the	71/100]	identify the value of each digit in numbers given to three decimal
			1/7-0/7	digits in the answer as ones,	recognise and use thousandths and	places and multiply and divide
			compare and order unit	tenths and hundredths	relate them to tenths, hundredths	numbers by 10, 100 and 1000
			fractions, and fractions		and decimal equivalents	giving answers up to three
			with the same	round decimals with one decimal		decimal places
			denominators	place to the nearest whole	round decimals with two decimal	
				number	places to the nearest whole	multiply one-digit numbers with
			solve problems that involve all of the above.	compare numbers with the same	number and to one decimal place	up to two decimal places by whole numbers
				number of decimal places up to	read, write, order and compare	whole humbers
				two decimal places	numbers with up to three decimal	
					places	







			solve simple measure and money		use written division methods in
			problems involving fractions and	solve problems involving number	cases where the answer has up
			decimals to two decimal places.	up to three decimal places	to two decimal places
				recognise the per cent symbol (%)	
				and understand that per cent	solve problems which require
				relates to 'number of parts per	answers to be rounded to
				hundred', and write percentages as	specified degrees of accuracy
				a fraction with denominator 100,	
				and as a decimal	recall and use equivalences
					between simple fractions,
				solve problems which require	decimals and percentages,
				knowing percentage and decimal	including in different contexts.
				equivalents of 1/2, 1/4, 1/5, 2/5,	
				4/5 and those fractions with a	
				denominator of a multiple of 10 or	Ratio and Proportion:
				25.	
					solve problems involving the
					relative sizes of two quantities
					where missing values can be
					found by using integer
					multiplication and division facts
					solve problems involving the
					calculation of percentages [for
					example, of measures, and such
					as 15% of 360] and the use of
					percentages for comparison
					solve problems involving similar
					shapes where the scale factor is
					known or can be found
					known of can be found
					solve problems involving unequal
					sharing and grouping using
					knowledge of fractions and
					multiples.
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Area	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Area	Year 1 compare, describe and solve practical problems for: - lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] - mass/weight [for example, heavy/light, heavier than, lighter than] - capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] - time [for example, quicker, slower, earlier, later] measure and begin to record the following: - lengths and heights - mass/weight - capacity and volume - time (hours, minutes, seconds) - recognise and know the value of different denominations of coins and notes sequence events in chronological order using language [for example, before and after, next, first, today,	Year 2 choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels compare and order lengths, mass, volume/capacity and record the results using >, < and = recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value find different combinations of coins that equal the same amounts of money solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change compare and sequence intervals of time	Year 3 measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) measure the perimeter of simple 2-D shapes add and subtract amounts of money to give change, using both £ and p in practical contexts tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight know the number of seconds in a minute and the number of days in each month, year and leap year compare durations of events [for example to calculate the time taken by particular events or tasks].	Year 4 Convert between different units of measure [for example, kilometre to metre; hour to minute] measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres find the area of rectilinear shapes by counting squares estimate, compare and calculate different measures, including money in pounds and pence read, write and convert time between analogue and digital 12- and 24-hour clocks solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	Year 5 convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (m2) and estimate the area of irregular shapes estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water] solve problems involving converting between units of time	Year 6 solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places convert between miles and kilometres recognise that shapes with the same areas can have different perimeters and vice versa recognise when it is possible to use formulae for area and volume of shapes calculate the area of parallelograms and triangles calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm 3) and







yesterday, tomorrow, morning,	tell and write the time		use all four operations to	cubic metres (m3), and
afternoon and evening]	to five minutes,		solve problems involving	extending to other units
	including quarter		measure [for example,	
recognise and use language	past/to the hour and		length, mass, volume,	
relating to dates, including days	draw the hands on a		money] using decimal	
of the week, weeks, months and	clock face to show these		notation, including scaling.	
years	times			
tell the time to the hour and half	know the number of			
past the hour and draw the	minutes in an hour and			
hands on a clock face to show	the number of hours in a			
these times.	day.			







Area	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Geometry- Properties of Shapes	recognise and name common 2-D and 3-D shapes, including: - 2-D shapes [for example, rectangles (including squares), circles and triangles - 3-D shapes [for example, cuboids (including cubes), pyramids and spheres].	identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] compare and sort common 2-D and 3-D shapes and everyday objects.	draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them recognise angles as a property of shape or a description of a turn identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	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.	 identify 3-D shapes, including cubes and other cuboids, from 2-D representations know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles draw given angles, and measure them in degrees (o) identify: angles at a point and one whole turn (total 3600) angles at a point on a straight line and 1/2 a turn (total 1800) other multiples of 900 use the properties of rectangles to deduce related facts and find missing lengths and angles 	draw 2-D shapes using given dimensions and angles recognise, describe and build simple 3-D shapes, including making nets compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.







		Year 2	Year 3	Year 4	Year 5	Year 6
Position and	escribe position, direction nd movement, including hole, half, quarter and aree quarter turns.	order and arrange combinations of mathematical objects in patterns and sequences use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three- quarter turns (clockwise	Year 3	Year 4 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	Year 5 identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.	Year 6 describe positions on the full coordinate grid (all four quadrants) draw and translate simple shapes on the coordinate plane, and reflect them in the axes.







Area	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Statistics		interpret and construct simple pictograms, tally charts, block diagrams and simple tables ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity ask and answer questions about totalling and comparing categorical data.	interpret and present data using bar charts, pictograms and tables solve one-step and two- step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.	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.	solve comparison, sum and difference problems using information presented in a line graph complete, read and interpret information in tables, including timetables.	interpret and construct pie charts and line graphs and use these to solve problems calculate and interpret the mean as an average.







Area	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Algebra						use simple formulae
						generate and describe linear number sequences
						express missing number problems algebraically
						find pairs of numbers that satisfy an equation with two unknowns
						enumerate possibilities of combinations of two variables.







Numbers and Place	Fractions	Addition and	Multiplication and	Measures	Properties of shape	Position, direction	Statistics	Algebra
Value		Subtraction	Division			and movement		
count to and across	recognise, find and	read, write and	solve one-step	compare, describe and	recognise and name	describe position,		
100, forwards and	name a half as one	interpret	problems involving	solve practical problems	common 2-D and 3-D	direction and		
backwards,	of two equal parts	mathematical	multiplication and	for:	shapes, including:	movement,		
beginning with 0 or	of an object, shape	statements	division, by	 lengths and 	- 2-D	including whole,		
1, or from any	or quantity	involving addition	calculating the	heights [for	shapes	half, quarter and		
given number		(+), subtraction (–)	answer using	example,	[for	three quarter		
	recognise, find and	and equals (=) signs	concrete objects,	long/short,	example,	turns.		
count, read and	name a quarter as		pictorial	longer/shorter,	rectangles			
write numbers to	one of four equal	represent and use	representations	tall/short,	(including			
100 in numerals;	parts of an object,	number bonds and	and arrays with the	double/half]	squares),			
count in multiples	shape or quantity.	related subtraction	support of the	 mass/weight 	circles			
of twos, fives and		facts within 20	teacher.	[for example,	and			
tens		add and subtract		heavy/light,	triangles			
given a number,		one-digit and two-		heavier than,	- 3-D			
identify one more		digit numbers to		lighter than]	shapes			
and one less		20, including zero		 capacity and 	[for			
		20, including zero		volume [for	example,			
identify and		solve one-step		example,	cuboids			
represent numbers		problems that		full/empty,	(including			
using objects and		involve addition		more than,	cubes),			
pictorial		and subtraction,		less than, half,	pyramids			
representations		using concrete		half full,	and			
including the		objects and		quarter]	spheres].			
number line, and		pictorial		- time [for				
use the language		representations,		example,				
of: equal to, more		and missing		quicker,				
than, less than		number problems		slower, earlier,				
(fewer), most, least		such as 7 = 9.		later]				
		_						
read and write				measure and begin to				
numbers from 1 to				record the following:				
20 in numerals and				 lengths and 				
words.				heights				
				5				
				 mass/weight 				
				 capacity and 				
				volume				







	- time (hours, minutes,	
	seconds)	
	recognise and know the value of different denominations of coins and notes	
	sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]	
	recognise and use language relating to dates, including days of the week, weeks, months and years	
	tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	







Numbers and Place Value	Fractions	Addition and Subtraction	Multiplication and Division	Measures	Properties of shape	Position, direction and movement	Statistics	Algebra
count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward recognise the place value of each digit in a two-digit number (tens, ones) identify, represent and estimate numbers using different representations, including the number line compare and order numbers from 0 up to 100; use and = signs read and write numbers to at least 100 in numerals and in words use place value and number facts to solve problems.	recognise, find, name and write fractions 1/3, 1/4, 2/4, and 3/4 of a length, shape, set of objects or quantity write simple fractions for example, 1/2, of 6 = 3 and recognise the equivalence of 2/4 and 1/2.	solve problems with addition and subtraction: - using concrete objects and pictorial representations, including those involving numbers, quantities and measures - applying their increasing knowledge of mental and written methods recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 add and subtract numbers using concrete objects, pictorial representations, and mentally, including: - a two-digit number and ones - a two-digit number and tens - two two-digit numbers	multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication	choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels compare and order lengths, mass, volume/capacity and record the results using >, < and = recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value find different combinations of coins that equal the same amounts of money	identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] compare and sort common 2-D and 3-D shapes and everyday objects.	order and arrange combinations of mathematical objects in patterns and sequences use mathematical vocabulary to describe position, direction and movement, including movement, in cluding movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three- quarter turns (clockwise and anticlockwise).	interpret and construct simple pictograms, tally charts, block diagrams and simple tables ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity ask and answer questions about totalling and comparing categorical data.	







one-digit	cluding problems contexts.	solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change compare and sequence intervals of time tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times know the number of minutes in an hour and the number of hours in a day.		







Numbers and Place	Fractions	Addition and	Multiplication and	Measures	Properties of shape	Position, direction	Statistics	Algebra
Value		Subtraction	Division			and movement		
count from 0 in	count up and down	add and subtract	recall and use	measure, compare,	draw 2-D shapes		interpret and	
multiples of 4, 8, 50	in tenths; recognise	numbers mentally,	multiplication and	add and subtract:	and make 3-D		present data using	
and 100; find 10 or	that tenths arise	including:	division facts for the	lengths	shapes using		bar charts,	
100 more or less	from dividing an	 a three- 	3, 4 and 8	(m/cm/mm); mass	modelling materials;		pictograms and	
than a given	object into 10 equal	digit	multiplication tables	(kg/g);	recognise 3-D		tables	
number	parts and in dividing	number		volume/capacity	shapes in different			
	one-digit numbers	and ones	write and calculate	(l/ml)	orientations and		solve one-step and	
recognise the place	or quantities by 10		mathematical		describe them		two-step questions	
value of each digit		- a three-	statements for	measure the			[for example, 'How	
in a three-digit	recognise, find and	digit	multiplication and	perimeter of simple	recognise angles as		many more?' and	
number (hundreds,	write fractions of a	number	division using the	2-D shapes	a property of shape		'How many fewer?']	
tens, ones)	discrete set of	and tens	multiplication tables		or a description of a		using information	
	objects: unit	 a three- 	that they know,	add and subtract	turn		presented in scaled	
compare and order	fractions and non-	digit	including for two-	amounts of money			bar charts and	
numbers up to 1000	unit fractions with	number	digit numbers times	to give change,	identify right angles,		pictograms and	
	small denominators	and	one-digit numbers,	using both £ and p	recognise that two		tables.	
identify, represent		hundreds	using mental and	in practical contexts	right angles make a			
and estimate	recognise and use		progressing to		half-turn, three			
numbers using	fractions as	add and subtract	formal written	tell and write the	make three			
different	numbers: unit	numbers with up to	methods	time from an	quarters of a turn			
representations	fractions and non-	three digits, using		analogue clock,	and four a complete			
	unit fractions with	formal written	solve problems,	including using	turn; identify			
read and write	small denominators	methods of	including missing	Roman numerals	whether angles are			
numbers up to 1000		columnar addition	number problems,	from I to XII, and	greater than or less			
in numerals and in	recognise and show,	and subtraction	involving	12-hour and 24-	than a right angle			
words	using diagrams,		multiplication and	hour clocks				
	equivalent fractions	estimate the answer	division, including		identify horizontal			
solve number	with small	to a calculation and	positive integer	estimate and read	and vertical lines			
problems and	denominators	use inverse	scaling problems	time with increasing	and pairs of			
practical problems		operations to check	and	accuracy to the	perpendicular and			
involving these	add and subtract	answers	correspondence	nearest minute;	parallel lines.			
ideas.	fractions with the		problems in which n	record and compare				
	same denominator	solve problems,	objects are	time in terms of				
	within one whole	including missing	connected to m	seconds, minutes				
	[for example, 5/7 +	number problems,	objects.	and hours; use				
	1/7= 6/7	using number facts,		vocabulary such as				
1		place value, and		o'clock, a.m./p.m.,				
		more complex						







				-
compare and orde	er addition and	morning, afternoon,		
unit fractions, and	subtraction.	noon and midnight		
fractions with the				
same denominato	rs	know the number of		
		seconds in a minute		
solve problems the	at	and the number of		
involve all of the		days in each month,		
above.		year and leap year		
		compare durations		
		of events [for		
		example to		
		calculate the time		
		taken by particular		
		events or tasks].		







Numbers and Place	Fractions	Addition and	Multiplication and	Measures	Properties of shape	Position, direction	Statistics	Algebra
Value		Subtraction	Division			and movement		
count in multiples	recognise and show,	add and subtract	recall multiplication	Convert between	compare and	describe positions	interpret and	
of 6, 7, 9, 25 and	using diagrams,	numbers with up to	and division facts	different units of	classify geometric	on a 2-D grid as	present discrete	
1000	families of common	4 digits using the	for multiplication	measure [for	shapes, including	coordinates in the	and continuous data	
	equivalent fractions	formal written	tables up to 12 × 12	example, kilometre	quadrilaterals and	first quadrant	using appropriate	
find 1000 more or		methods of		to metre; hour to	triangles, based on		graphical methods,	
less than a given	count up and down	columnar addition	use place value,	minute]	their properties and	describe	including bar charts	
number	in hundredths;	and subtraction	known and derived		sizes	movements	and time graphs.	
	recognise that	where appropriate	facts to multiply and	measure and		between positions		
count backwards	hundredths arise		divide mentally,	calculate the	identify acute and	as translations of a	solve comparison,	
through zero to	when dividing an	estimate and use	including:	perimeter of a	obtuse angles and	given unit to the	sum and difference	
include negative	object by one	inverse operations	multiplying by 0 and	rectilinear figure	compare and order	left/right and	problems using	
numbers	hundred and	to check answers to	1; dividing by 1;	(including squares)	angles up to two	up/down	information	
	dividing tenths by	a calculation	multiplying together	in centimetres and	right angles by size		presented in bar	
recognise the place	ten.		three numbers	metres		plot specified points	charts, pictograms,	
value of each digit		solve addition and			identify lines of	and draw sides to	tables and other	
in a four-digit	solve problems	subtraction two-	recognise and use	find the area of	symmetry in 2-D	complete a given	graphs.	
number (thousands,	involving	step problems in	factor pairs and	rectilinear shapes	shapes presented in	polygon		
hundreds, tens, and	increasingly harder	contexts, deciding	commutativity in	by counting squares	different			
ones)	fractions to	which operations	mental calculations		orientations			
	calculate quantities,	and methods to use		estimate, compare				
order and compare	and fractions to	and why.	multiply two-digit	and calculate	complete a simple			
numbers beyond	divide quantities,		and three-digit	different measures,	symmetric figure			
1000	including non-unit		numbers by a one-	including money in	with respect to a			
	fractions where the		digit number using	pounds and pence	specific line of			
identify, represent	answer is a whole		formal written		symmetry.			
and estimate	number		layout	read, write and				
numbers using				convert time				
different	add and subtract		solve problems	between analogue				
representations	fractions with the		involving	and digital 12- and				
round any number	same denominator		multiplying and	24-hour clocks				
to the nearest 10,			adding, including					
100 or 1000	recognise and write		using the	solve problems				
	decimal equivalents		distributive law to	involving converting				
solve number and	of any number of		multiply two digit	from hours to				
practical problems	tenths or		numbers by one	minutes; minutes to				
that involve all of	hundredths		digit, integer scaling	seconds; years to				
the above and with			problems and	months; weeks to				
			harder	days.				







increasingly large	recognise and write	correspondence			
positive numbers	decimal equivalents	problems such as n			
	to 1/4 , 1/2 , 3/4	objects are			
read Roman		connected to m			
numerals to 100 (I	find the effect of	objects.			
to C) and know that	dividing a one- or				
over time, the	two-digit number by				
numeral system	10 and 100,				
changed to include	identifying the value				
the concept of zero	of the digits in the				
and place value.	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.				







Numbers and Place	Fractions	Addition and Subtraction	Multiplication and Division	Measures	Properties of shape	Position, direction	Statistics	Algebra
Numbers and Place Value read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 solve number problems and practical problems that involve all of the above	Fractions 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 recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2/5 + 4/5 = 6/5 = 1 1/5] add and subtract fractions with the same denominators that are multiples of the same number	Addition and Subtraction read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 solve number problems and practical problems that involve all of the above	Multiplication and Division identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers establish whether a number up to 100 is prime and recall prime numbers up to 19 multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers multiply and divide numbers mentally	Measures convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres calculate and compare the area of rectangles (including squares), and including using standard units,	Properties of shape identify 3-D shapes, including cubes and other cuboids, from 2-D representations know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles draw given angles, and measure them in degrees (o) identify: - angles at a point and one whole turn (total 3600) - angles at a point on a straight line and 1/2 a turn (total 1800)	Position, direction and movement identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.	Statistics solve comparison, sum and difference problems using information presented in a line graph complete, read and interpret information in tables, including timetables.	Algebra
read Roman numerals to 1000 (M) and recognise	multiply proper fractions and mixed numbers by whole numbers, supported	read Roman numerals to 1000 (M) and recognise	drawing upon known facts	square centimetres (cm2) and square metres (m2) and	- other multiples of 90o			







years written in	by materials and	years written in	divide numbers up	estimate the area of	use the properties		
Roman numerals.	diagrams	Roman numerals.	to 4 digits by a one-	irregular shapes	of rectangles to		
			digit number using		deduce related facts		
	read and write		the formal written	estimate volume	and find missing		
	decimal numbers as		method of short	[for example, using	lengths and angles		
	fractions [for		division and	1 cm3 blocks to			
	example, 0.71 =		interpret	build cuboids	distinguish between		
	71/100]		remainders	(including cubes)]	regular and		
			appropriately for	and capacity [for	irregular polygons		
	recognise and use		the context	example, using	based on reasoning		
	thousandths and			water]	about equal sides		
	relate them to		multiply and divide		and angles.		
	tenths, hundredths		whole numbers and	solve problems			
	and decimal		those involving	involving converting			
	equivalents		decimals by 10, 100	between units of			
			and 1000recognise	time			
	round decimals with		and use square				
	two decimal places		numbers and cube	use all four			
	to the nearest		numbers, and the	operations to solve			
	whole number and		notation for	problems involving			
	to one decimal		squared (2) and	measure [for			
	place		cubed (3)	example, length,			
				mass, volume,			
	read, write, order		solve problems	money] using			
	and compare		involving	decimal notation,			
	numbers with up to		multiplication and	including scaling.			
	three decimal		division including				
	places		using their				
			knowledge of				
	solve problems		factors and				
	involving number		multiples, squares				
	up to three decimal		and cubes				
	places						
	recognise the per		solve problems				
	cent symbol (%) and		involving addition,				
	understand that per		subtraction,				
	cent relates to		multiplication and				
	'number of parts		division and a				
	per hundred', and		combination of				
	write percentages		these, including				
	as a fraction with		understanding the				







denominate	r 100,	meaning of the			
and as a de	imal	equals sign			
solve proble	ems	solve problems			
which requi	re	involving			
knowing pe	rcentage	multiplication and			
and decima		division, including			
equivalents	of 1/2,	scaling by simple			
1/4 , 1/5 , 2	/5 , 4/5	fractions and			
and those f		problems involving			
with a deno	minator	simple rates.			
of a multipl	e of 10				
or 25.					







Numbers and Place	Fractions	Addition and	Multiplication and	Measures	Properties of shape	Position, direction	Statistics	Algebra
Value		Subtraction	Division			and movement		
read, write, order	use common factors	solve addition and	multiply multi-digit	solve problems	draw 2-D shapes	describe positions	interpret and	use simple formulae
and compare	to simplify fractions;	subtraction multi-	numbers up to 4	involving the	using given	on the full	construct pie charts	
numbers up to 10	use common	step problems in	digits by a two-digit	calculation and	dimensions and	coordinate grid (all	and line graphs and	generate and
000 000 and	multiples to express	contexts, deciding	whole number using	conversion of units	angles	four quadrants)	use these to solve	describe linear
determine the value	fractions in the	which operations	the formal written	of measure, using			problems	number sequences
of each digit	same denomination	and methods to use	method of long	decimal notation up	recognise, describe	draw and translate		
		and why	multiplication	to three decimal	and build simple 3-	simple shapes on	calculate and	express missing
round any whole	compare and order			places where	D shapes, including	the coordinate	interpret the mean	number problems
number to a	fractions, including	perform mental	divide numbers up	appropriate	making nets	plane, and reflect	as an average.	algebraically
required degree of	fractions > 1	calculations,	to 4 digits by a two-			them in the axes.		
accuracy		including with	digit whole number	use, read, write and	compare and			find pairs of
	add and subtract	mixed operations	using the formal	convert between	classify geometric			numbers that satisfy
use negative	fractions with	and large numbers	written method of	standard units,	shapes based on			an equation with
numbers in context,	different	-	long division, and	converting	their properties and			two unknowns
and calculate	denominators and	use their knowledge	interpret	measurements of	sizes and find			
intervals across zero	mixed numbers,	of the order of	remainders as	length, mass,	unknown angles in			enumerate
	using the concept of	operations to carry	whole number	volume and time	any triangles,			possibilities of
solve number and	equivalent fractions	out calculations	remainders,	from a smaller unit	quadrilaterals, and			combinations of
practical problems		involving the four	fractions, or by	of measure to a	regular polygons			two variables.
that involve all of	multiply simple	operations	rounding, as	larger unit, and vice	0 1 10			
the above.	pairs of proper		appropriate for the	versa, using decimal	illustrate and name			
	fractions, writing	solve problems	context	notation to up to	parts of circles,			
read, write, order	the answer in its	involving addition,		three decimal	including radius,			
and compare	simplest form [for	subtraction.	divide numbers up	places	diameter and			
numbers up to 10	example, 1/4 × 1/2=		to 4 digits by a two-	·	circumference and			
000 000 and	1/8]	use estimation to	digit number using	convert between	know that the			
determine the value		check answers to	the formal written	miles and	diameter is twice			
of each digit	divide proper	calculations and	method of short	kilometres	the radius			
0	fractions by whole	determine, in the	division where					
round any whole	numbers [for	context of a	appropriate,	recognise that	recognise angles			
number to a	example, $1/3 \div 2 =$	problem, an	interpreting	shapes with the	where they meet at			
required degree of	1/6]	appropriate degree	remainders	same areas can	a point, are on a			
accuracy	, - ,	of accuracy.	according to the	have different	straight line, or are			
	associate a fraction	,	context	perimeters and vice	vertically opposite,			
use negative	with division and			versa	and find missing			
numbers in context,	calculate decimal		perform mental		angles.			
and calculate	fraction equivalents		calculations,	recognise when it is				
			,	•				
intervals across zero	[for example, 0.375]		including with	possible to use				







	for a simple fraction	mixed operations	formulae for area		
solve number and	[for example, 3/8]	and large numbers	and volume of		
practical problems			shapes		
hat involve all of	identify the value of	identify common			
he above.	each digit in	factors, common	calculate the area of		
	numbers given to	multiples and prime	parallelograms and		
	three decimal	numbers	triangles		
	places and multiply				
	and divide numbers	use their knowledge	calculate, estimate		
	by 10, 100 and 1000	of the order of	and compare		
	giving answers up to	operations to carry	volume of cubes		
	three decimal	out calculations	and cuboids using		
	places	involving the four	standard units,		
		operations	including cubic		
	multiply one-digit		centimetres (cm3)		
	numbers with up to	solve problems	and cubic metres		
	two decimal places	involving	(m3), and extending		
	by whole numbers	multiplication and	to other units		
		division			
	use written division				
	methods in cases	use estimation to			
	where the answer	check answers to			
	has up to two	calculations and			
	decimal places	determine, in the			
		context of a			
	solve problems	problem, an			
	which require	appropriate degree			
	answers to be	of accuracy.			
	rounded to				
	specified degrees of				
	accuracy				
	recall and use				
	equivalences				
	between simple				
	fractions, decimals				
	and percentages,				
	including in				
	different contexts.				







Ratio and				
Proportion:				
solve problems				
involving the				
relative sizes of two				
quantities where				
missing values can				
be found by using				
integer				
multiplication and				
division facts				
solve problems				
involving the				
calculation of				
percentages [for				
example, of				
measures, and such				
as 15% of 360] and				
the use of				
percentages for				
comparison				
companson				
solve problems				
involving similar				
shapes where the				
scale factor is				
known or can be				
found				
solve problems				
involving unequal				
sharing and				
grouping using				
knowledge of				
fractions and				
multiples.				