



Place Value						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Counting - Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number - Count to 100 in numerals; count in multiples of twos, fives and tens Representing - Identify and represent numbers using objects and pictorial representations - Read and write numbers to 100 in numerals - Read and write numbers from 1 to 20 in numerals and words Use Place Value and Compare - Given a number, identify one more and one less	Counting - Count in steps of 2,3 and 5 from 0, and in tens from any number, forward and backward Representing - Read and write numbers to at least 100 in numerals and in words - Identify, represent and estimate numbers using different representations, including the number line Use place value and compare - Recognise the place value of each digit in a two-digit number (tens, ones) - Compare and order numbers from 0 up to 100; use <, > and = signs	Counting - Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number Representing - Identify, represent and estimate numbers using different representations - Read and write numbers up to 1000 in numerals and in words Use place value and compare - Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) - Compare and order numbers up to 1000	Counting - Count in multiples of 6,7,9,25 and 1000 - Count backwards through zero to include negative numbers Representing - Identify, represent and estimate numbers using different representations - Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the Use place value and compare - Find 1000 more or less than a given number - Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens and ones) - Order and	Counting - Count forwards or backwards in steps of powers of 10 for any given number up to 1000000 - Count forwards and backwards with positive and negative whole numbers, including through zero. Representing - Read, write (order and compare) numbers to at least 1000000 and determine the value of each digit - Read Roman numerals to 1000 (M) and recognise years written in Roman numerals Use place value and compare (read, write) order and compare numbers to at least 1000000 and determine the value of each digit	Representing - Read, write, (order and compare) numbers up to 10000000 and determine the value of each digit Use place value and compare (read, write), order and compare numbers up to 10 000 000 and determine the value of each digit



		Problems and Rounding Use place value and number facts to solve problems	Problems and Rounding Solve number problems and practical problems involving these ideas	compare numbers beyond 1000 Problems and Rounding - 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	Problems and Rounding - Interpret negative numbers in context - Round any number up to 1000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 - Solve number problems and practical problems that involve all of the above	Problems and Rounding - 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
Addition and Subtraction						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Recall, Represent, Use - Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs - Represent and use number bonds and related subtraction facts within 20	Recall, Represent, Use - Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 - Show that addition of two numbers can be done in any order (commutative) and subtraction	Recall, Represent, Use Estimate the answer to a calculation and use inverse operations to check answers	Recall, Represent, Use Estimate and use inverse operations to check answers to a calculation	Recall, Represent, Use Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	Recall, Represent, Use



		of one number from another cannot				
	Calculations - Add and subtract one-digit and two-digit numbers to 20, including zero Solve Problems - Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems such as $7 = ? - 9$	Calculations - 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 Solve Problems - 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	Calculations - 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 Solve Problems - Solve problems, including missing number problems, using number facts, place value and more complex addition and subtraction	Calculations - Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate Solve Problems - Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	Calculations - Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) - Add and subtract numbers mentally with increasingly large numbers Solve Problems - Solve addition and subtraction multi-step problems in contexts, deciding 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	Calculations - 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 - Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
Multiplication and Division						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6



		Recall, Represent, Use - Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers - Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot Calculations - Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication, division and equals signs.	Recall, Represent, Use - Recall and use multiplication and division facts for the 3,4 and 8 multiplication tables Calculations - 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	Recall, Represent, Use - Recall multiplication and division facts for multiplication tables up to 12x12 - 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 commutatively in mental calculations Calculations - Multiply to-digit numbers and three-digit numbers by a one-digit number using formal written layout	Recall, Represent, Use - Identify multiples and factors, including all factor pairs of a number, and common factors of two numbers - 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 - Recognise and use square numbers and cube numbers, and the notation for squared and cubed Calculations - Multiply numbers up to 4 digits by a one-digit number using a formal written method, including long multiplication for two-digit numbers - Multiply and	Recall, Represent, Use - Identify common factors, common multiples and prime numbers - Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy Calculations - 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
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			written methods			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 1000	number using the formal written method of long division, and interpret remainders as whole number 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
	Solve Problems Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher	Solve Problems Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in	Solve Problems Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects	Solve Problems 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	Solve Problems - Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes - Solve problems involving multiplication and division,	Solve Problems Solve problems involving addition, subtraction, multiplication and division	



		contexts	are connected to m objects	problems such as n objects are connected to m objects	including scaling by simple fractions and problems involving simple rates	
					Combined Operations Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	Combined Operations Use their knowledge of the order of operations to carry out calculations involving the four operations
Fractions						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Recognise and Write - 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	Recognise and Write 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 and quantity	Recognise and Write - 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 - Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators	Recognise and Write Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.	Recognise and Write - 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 $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$)	



		Compare Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ Calculations Write simple fractions for example, $\frac{1}{2}$ of 6 = 3	Compare - Recognise and show using diagrams, equivalent fractions with small denominators - Compare and order unit fractions, and fractions with the same denominators Calculations - Add and subtract fractions with the same denominator within one whole (e.g. $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$) Solve Problems - Solve problems that involve all of the above	Compare - Recognise and show, using diagrams, families of common equivalent fractions Calculations - Add and subtract fractions with the same denominator Solve Problems - Solve problems involving increasingly harder fractions	Compare - Compare and order fractions whose denominators are all multiples of the same number Calculations - 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	Compare - Use common factors to simplify fractions; use common multiples to express fractions in the same denomination - Compare and order fractions, including fractions >1 Calculations - 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 (for example $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$) - Divide proper fractions by whole numbers (for example $\frac{1}{3} \div 2 = \frac{1}{6}$)
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				to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number		
Decimals						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				Recognise and Write - Recognise and write decimal equivalents of any number of tenths or hundredths - Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ Compare - 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	Recognise and Write - Read and write decimal numbers as fractions (e.g. $0.71 = \frac{71}{100}$) - Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents Compare - 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	Recognise and Write Identify the value of each digit in numbers given to three decimal places



				Calculations and Problems 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	Calculations and Problems Solve problems involving numbers up to three decimal places	Calculations and Problems - Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places - Multiply one-digit numbers with up to two decimal places by whole numbers - Use written division methods in cases where the answer has up to two decimal places - Solve problems which require answers to be rounded to specified degrees of accuracy
Fractions, Decimals and Percentages						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				Solve simple measure and money problems involving fractions and decimals to two decimal places	Recognise the per cent symbol and understand that per cent relates to 'number of parts per hundred', and	Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple



					write percentages as a fraction with denominator 100, and as a decimal 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	fraction (e.g. $\frac{3}{8}$). Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts
Ratio and Proportion						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
						- 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 calculation of percentages (e.g. 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 Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples
Algebra						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$	Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems	Solve problems, including missing number problems			- 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
Measurement						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Using Measures - Compare and solve practical problems for: - Lengths and heights (e.g. long/short, longer/shorter, tall/short, double/half) - Mass/weight (e.g.	Using Measures Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature ($^{\circ}\text{C}$); capacity (litres/ml) to the nearest appropriate unit,	Using Measures Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	Using Measures - Convert between different units of measure (e.g. kilometre to metre; hour to minute) - Estimate, compare and calculate different	Using Measures Convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre;	Using Measures Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate



	heavy/light, heavier than/lighter than) ➤ Capacity and volume (e.g. full/empty, more than, less than, half, half full, quarter) ➤ Time (e.g. quicker, slower, earlier, later) • Measure and begin to record the following: ➤ Lengths and heights ➤ Mass/weight ➤ Capacity and volume Time (hours, minutes, seconds) Money • Recognise and know the value of different denominations of coins and notes	using rulers, scales, thermometers and measuring vessels • Compare and order lengths, mass, volume/capacity and record the results using >, < and = Money • Recognise and use symbols for pounds and pence; 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		measures Money • Add and subtract amounts of money to give change, using both £ and p in practical contexts	gram and kilogram; litre and millilitre) • Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints • Use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation, including scaling Money • Estimate, compare and calculate different measures, including money in pounds and pence	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
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		addition and subtraction of money of the same unit, including giving change				
	Time - Sequence events in chronological order using language (e.g. 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	Time - Compare and sequence intervals of time - Tell and write the time to five minutes, including quarter past / to the hour on a clock face to show these times - Know the number of minutes in an hour and the number of hours in a day	Time - 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 (e.g. to calculate the	Time - Read, write and covert 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	Time Solve problems involving converting units of time	Time Use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa



			time taken by particular events of tasks) Perimeter, Area, Volume Measure the perimeter of simple 2-D shapes	Perimeter, Area, Volume - Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres - Find the area of rectilinear shapes by counting squares	Perimeter, Area, Volume - 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 and square metres and estimate the area of irregular shapes - Estimate volume (for example, using 1cm³ blocks to build cuboids (including cubes) and capacity e.g. using water	Perimeter, Area, Volume - 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 and cubic metres and extending to other units (e.g. cubic millimetres and cubic kilometres)
Geometry						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	2-D Shapes Recognise and name common 2-D shapes e.g.	2-D Shapes Identify and describe the properties of 2-	2-D Shapes Draw 2-D Shapes	2-D Shapes Compare and classify geometric	2-D Shapes Distinguish between regular and	2-D Shapes Draw 2-D shapes using given



	rectangles (including squares), circles and triangles	D shapes, including the number of sides and line of symmetry in a vertical line - Identify 2-D shapes on the surface of 3-D shapes e.g. a circle on a cylinder and a triangle on a pyramid - Compare and sort common 2-D shapes and everyday objects		shapes, including quadrilaterals and triangles, based on their properties and sizes Identify lines of symmetry in 2-D shapes presented in different orientations	irregular polygons based on reasoning about equal sides and angles Use the properties of rectangles to deduce related facts and find missing lengths and angles	dimensions and angles - Compare and classify geometric shapes based on their properties and sizes - Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
	3-D Shapes Recognise and name common 3-D shapes (e.g. cuboids(including cubes), pyramids and spheres)	3-D Shapes - Recognise and name common 3-D shapes e.g. cuboids (including cubes), pyramids and spheres - Compare and sort common 3-D shapes and everyday objects	3-D Shapes Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them		3-D Shapes Identify 3-D shapes, including cubes and other cuboids, from 2-D representations	3-D Shapes Recognise, describe and build simple 3-D shapes, including making nets
			Angles and Lines - Recognise angles as a property of shape or a description of a turn - Identify right angles, recognise that two right angles	Angles and Lines - 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	Angles and Lines - Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles - Draw given angles, and measure them	Angles in Lines - Find unknown angles in any triangles, quadrilaterals and regular polygons - Recognise angles where they meet at a point, are on a



			make a half turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than a right angle Identify horizontal and vertical lines and pairs of perpendicular and parallel lines	presented in different orientations Complete a simple symmetric figure with respect to a specific line of symmetry	in degrees - Identify: ➤ Angles at a point and one whole turn (total 360) ➤ Angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180) ➤ Other multiples of 90	straight line, or are vertically opposite and find missing angles
	Position and Direction Describe position, direction and movement including whole, half, quarter and three-quarter turns	Position and Direction - 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		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	Position and Direction 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	Position and Direction - 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.



		(clockwise and anti-clockwise)				
Statistics						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		Present and Interpret - Interpret and construct simple pictograms, tally charts, block diagrams and simple tables Solve Problems - 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	Present and Interpret - Interpret and present data using bar charts, pictograms and tables Solve Problems - Solve one-step and two-step questions (e.g. How many more? And 'How many fewer?') using information presented in scaled bar charts and pictograms and tables	Present and Interpret - Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs Solve Problems - Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	Present and Interpret - Complete, read and interpret information in tables, including timetables Solve Problems - Solve comparison, sum and difference problems using information presented in a line graph	Present and Interpret - Interpret and construct pie charts and line graphs and use these to solve problems Solve Problems - Calculate and interpret the mean as an average

