

Key Learning in Mathematics – Year 1

Number – number and place value	Number – addition and	Number – multiplication and division
<ul style="list-style-type: none"> Start on any number less than 100. Count forwards and backwards in 1s. Count in twos, fives and tens. Read and write numbers to 100 in numerals Read and write numbers from 1 to 20 in numerals and words Begin to understand tens and ones (units) Make numbers using objects and pictures. E.g. when asked draw 4 ice cream cones or count 4 beads. Use the following words to compare numbers: equal; more; less (fewer); most; least. Say one more and one less than a given number. Make repeating patterns with numbers, objects or shapes Identify odd and even numbers 	<ul style="list-style-type: none"> Read, write and understand calculations using the following symbols: addition (+); subtraction (-) and equals (=). Add and subtract to make any number to 20. Add and subtract using objects and pictures. Solve missing number problems such as $7 = \square - 9$ 	<ul style="list-style-type: none"> Double up to 10, e.g. double 7 is 14. Know the related halves, e.g. half of 14 is 7. Begin to investigate multiplication and division using objects and real life equipment. E.g. Looking at the layout of egg boxes. "There are 3 rows of 2. Or sharing out objects so that everyone has the same amount.
Number – fractions	Measurement	
<ul style="list-style-type: none"> Understand that a fraction can describe part of a whole, e.g. "you have half of the cake" Halve objects (e.g. pizzas, cakes) and groups of objects (e.g. sweets, stickers) equally. Split objects (e.g. pizzas, cakes) and groups of objects (e.g. sweets, stickers) into 4 equal parts and know these are quarters. 	<ul style="list-style-type: none"> Measure and begin to record: <ul style="list-style-type: none"> lengths and heights, using non-standard (cubes etc.) and then standard units (m/cm) mass/weight, using non-standard (cubes etc.) and then standard units (kg/g) capacity and volume using non-standard (milk bottles, cups, etc.) and then standard units (litres/ml) time (hours/minutes/seconds) Use the following vocabulary: <ul style="list-style-type: none"> 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) Recognise and use language relating to dates, including days of the week, weeks, months and years Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening) Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times Recognise and know the value of different coins and notes. E.g. a 5p coin is the same as 5 1p coins. 	
Geometry – properties of shapes	Geometry – position and direction	
<ul style="list-style-type: none"> Recognise and name the following 2-D shapes: rectangles (including squares); circles and triangles Recognise and name the following 3-D shapes: cuboids (including cubes); pyramids and spheres 	<ul style="list-style-type: none"> Make and discuss whole, half, quarter and three-quarter turns. E.g. using the hands on a clock. Describe position and direction using the following words: on top; underneath; in front; behind; next to; etc. 	
Statistics		
<ul style="list-style-type: none"> Sort objects, numbers and shapes, e.g. all the blue objects together, all the even numbers together, all the triangles together. Make block graphs and talk about them. Ask and answer simple questions by counting the number of objects in each category Comparing categories, e.g. which category is the most popular, least frequent. 		

Key Learning in Mathematics – Year 2

Number – number and place value	Number – addition and subtraction	Number – multiplication and division
<ul style="list-style-type: none"> Count in 2s, 3s, and 5s from 0, and in tens from any number. Children count forwards and backwards. Read and write numbers to at least 100 in numerals and in words Recognise tens and ones in a 2 digit number. E.g. 23 is 2 tens and 3 ones. Partition numbers in different ways (for example, $23 = 20 + 3$ and $23 = 10 + 13$) Show numbers in different ways, including place on a number line Compare and order numbers from 0 up to 100; use < (smaller), > (greater) and = (equal) signs Find 1 or 10 more or less than a given number Round numbers to at least 100 to the nearest 10 Understand the connection between the 10 times table and place value (e.g. $10 \times 6 = 60$ the 6 has moved into the tens column) Recognise and continue simple sequences involving counting on or back in different steps. E.g. 20 22 24 we are counting in 2s. 	<ul style="list-style-type: none"> Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting) Show that addition of two numbers can be done in any order and subtraction of one number from another cannot Understand subtraction as take away and difference. E.g. the difference between 5 and 15 is 10. Recall and use addition and subtraction facts to 20, and work out related facts up to 100. Know what two multiples of 5 (numbers in the 5 times table) total, up to 60 (to support telling time to nearest 5 minutes) Add and subtract numbers using objects, pictures and mentally, including: a two-digit number and ones; a two-digit number and tens; two, two-digit numbers; adding three one-digit numbers. Recognise and use the inverse relationship between addition and subtraction (they are opposites) and use this to check calculations and solve missing number problems. E.g. $20 + \underline{\quad} = 34$ $34 - 20 = 14$ $20 + 14 = 34$ Solve problems with addition and subtraction including those with missing numbers and those involving numbers, quantities and measures applying their knowledge of mental and written methods 	<ul style="list-style-type: none"> Understand multiplication as repeated addition (e.g. $3 \times 5 = 5 + 5 + 5$) Understand division as sharing and grouping Understand that a division calculation can have a remainder. Show that multiplication of two numbers can be done in any order and division of one number by another cannot Know the 2, 5 and 10 times tables (know the linked division facts). Find and use doubles of simple two-digit numbers (numbers in which the ones total less than 10) Find and use halves of simple two-digit even numbers (numbers in which the tens are even) Calculate mathematical statements for multiplication and division within the 2, 5, and 10 times tables and write them using the multiplication (\times), division (\div) and equals (=) signs Solve problems involving multiplication and division (including those with remainders) including problems in contexts
<h3>Number – fractions</h3> <ul style="list-style-type: none"> Understand and use the terms numerator (top number telling us how many parts we have) and denominator (the bottom number telling us how many pieces there are altogether). Understand that a fraction can describe part of a group. Understand that the larger the denominator is, the more pieces it is split into and therefore the smaller each part will be Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity. Count on and back in steps of $\frac{1}{2}$ and $\frac{1}{4}$ Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ 	<h3>Geometry – properties of shapes</h3> <ul style="list-style-type: none"> Name and describe the properties of 2-D shapes, including the number of sides and line symmetry Name 2-D shapes on the surface of 3-D shapes, (for example, a circle on a cylinder and a triangle on a pyramid) Name and describe the properties of 3-D shapes, including the number of edges, vertices and faces Describe how a shape has been moved using words such as rotation, Know a quarter turn is a right angle and recognise half and three- quarter turns (clockwise and anti-clockwise) <h3>Geometry – position and direction</h3> <ul style="list-style-type: none"> Recognise and continue patterns and sequences <h3>Statistics</h3> <ul style="list-style-type: none"> Compare and sort objects, numbers and common 2-D and 3-D shapes and everyday objects Make and 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 finding totals and comparing each piece of information. 	<h3>Measurement</h3> <ul style="list-style-type: none"> Estimate and measure length/height to the nearest metre (m) or centimetre (cm) using rulers. Compare and order lengths and record the results using > (greater than), < (smaller than) and = (equal to). Estimate and measure mass to the nearest kilogram (kg) or gram (g) using scales. Compare and order mass and record the results using > (greater than), < (smaller than) and = (equal to). Estimate and measure capacity and volume to the nearest litre (l) or millilitre (ml) using measuring vessels. Compare and order volume/capacity and record the results using > (greater than), < (smaller than) and = (equal to). Read thermometers to the nearest degree ($^{\circ}\text{C}$). Know there are 60 minutes in an hour and 24 hours in a day. 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. 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. Add and subtract money and give change.

Informal written methods and solve problems in all areas of the mathematics curriculum.

Key Learning in Mathematics – Year 3

<p>Number – number and place value</p> <ul style="list-style-type: none"> Count from 0 in 4s, 8s, 50s and 100s Count up and down in tenths Read and write numbers up to 1000 in numbers and in words Read and write numbers with one decimal place, e.g. 0.4 – four tenths – nought point four. Recognise the place value of each digit in a three-digit number, e.g. 356 – 3 hundreds, 5 tens and 6 ones. Partition (split) numbers in different ways (for example, $146 = 100 + 40 + 6$ & $146 = 130 + 16$) Show numbers in different ways, including place on a number line Compare and order numbers up to 1000 Compare and order numbers with one decimal place Find 1, 10 or 100 more or less than a given number Round numbers to at least 1000 to the nearest 10 or 100 Multiply by 10 and 100. Recognise and continue number sequences involving counting on or back in different steps, e.g. 20 22 24 we are counting in 2s. Read Roman numerals from I to XII 	<p>Number – addition and subtraction</p> <ul style="list-style-type: none"> Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method) Understand takeaway as taking a number away or finding the difference between 2 numbers (when they are close together). E.g. $47 - 43 = 43$ $44 \ 45 \ 46 \ 47 \quad 47 - 43 = 4$ Know what two multiples of 5 (numbers in the 5 times table) total, up to 100 Find and use addition and subtraction facts for 100 Find and use addition and subtraction facts for multiples of 100 totalling 1000, e.g. $100 + 900$ or $300 + 700$ 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 column addition and subtraction (see calculation policies) Use inverse operations to check answers, e.g. $30 + 40 = 70 \quad 70 - 30 = 40$ 	<p>Number – multiplication and division</p> <ul style="list-style-type: none"> Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known or related fact, calculate mentally, use a jotting, written method) Understand that division is the inverse (opposite) of multiplication Understand how multiplication and division statements can be represented using arrays (see calculation policy) Understand division as sharing and grouping Know the 3, 4 and 8 times tables and the related division facts. Find and use doubles of all numbers to 100 and know the corresponding halves Find and use doubles of all multiples of 50 (50 times tables number) to 500 Write and calculate mathematical statements for multiplication and division using the times tables that they know, including for two-digit numbers times one-digit numbers (e.g. 23×4), using mental methods Write and calculate mathematical statements for multiplication using the times tables that they know, including for two-digit numbers times one-digit numbers (e.g. 23×4), progressing to formal written methods (see calculation policy) Write and calculate mathematical statements for division using the times tables that they know, including for two-digit numbers divided by one-digit numbers (e.g. 84 divided by 4), progressing to formal written methods (see calculation policy) Solve problems, including missing number problems, involving multiplication and division
<p>Number – fractions</p> <ul style="list-style-type: none"> Understand that finding a fraction of an amount relates to division Find fractions of a group of objects. Read fractions and understand them. (e.g. $\frac{1}{2}$ is half) Recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 Count on and back in steps of $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{3}$ Compare and order unit fractions and fractions with the same denominators (including on a number line) Recognise and show, using diagrams, equivalent fractions with small denominators. (Fractions that are the same e.g. $\frac{1}{2}$ is the same as $\frac{5}{10}$) Add and subtract fractions with the same denominator within one whole (using diagrams) (for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$) 	<p>Geometry – properties of shapes</p> <ul style="list-style-type: none"> Draw 2-D shapes and describe them 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 <p>Geometry – position and direction</p> <ul style="list-style-type: none"> Describe positions on a square grid labelled with letters and numbers (map type references) <p>Statistics</p> <ul style="list-style-type: none"> Sort objects, numbers and common 2-D and 3-D shapes and everyday objects into sorting diagrams. 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 	<p>Measurement</p> <ul style="list-style-type: none"> Measure, add and subtract lengths (m/cm/mm) Compare lengths (m/cm/mm) Understand that perimeter is a measure of distance around the edge of a shape Measure the perimeter of simple 2-D shapes Measure, add and subtract mass (kg/g) Compare mass (kg/g) Measure, add and subtract volume/capacity (l/ml) Compare volume/capacity (l/ml) Continue to estimate and measure temperature to the nearest degree ($^{\circ}\text{C}$) using thermometers 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 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 Compare durations of events (for example different durations of bus journeys) Continue to recognise and use symbols for pounds (£) and pence (p) and understand that the decimal point separates pounds and pence Recognise that ten 10p coins are equivalent to £1 and that each coin is $\frac{1}{10}$ of £1 Add and subtract amounts of money to give change, using both £ and p in practical contexts

For each area of the mathematics curriculum children choose appropriate ways to solve problems.

Key Learning in Mathematics – Year 4

Number – number and place value		Number – addition and subtraction	Number – multiplication and division
<ul style="list-style-type: none"> Count in 6, 7, 9, 25 and 1000 Count backwards through zero to include negative numbers 3, 2, 1, 0, -1, -2, -3 Count up and down in hundredths, e.g. 0.01, 0.02, 0.03 Read and write numbers to at least 10 000 Read and write numbers with up to two decimal places, e.g. 3.27, three point two, seven or 3 ones, 2 tenths and 7 hundredths. Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) Partition numbers in different ways (for example, $2.3 = 2 + 0.3$ and $2.3 = 1 + 1.3$) Order and compare numbers beyond 1000 Order and compare numbers with the same number of decimal places, up to two decimal places. Find 0.1, 1, 10, 100 or 1000 more or less than a given number Round any number to the nearest 10, 100 or 1000 Round decimals with one decimal place to the nearest whole number Divide a one- or two-digit number by 10 and 100. Describe and extend number sequences involving counting on or back in different steps. Read Roman numerals to 100 (I to C) 		<ul style="list-style-type: none"> Recall and use addition and subtraction facts for 100 Recall and use addition and subtraction facts for multiples of 100 totalling 1000, e.g. $400 + 300 = 700$ Find and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place, e.g. $0.3 + 0.7 = 1$ or $4.2 + 5.8 = 10$) Add and subtract mentally combinations of two and three digit numbers and decimals to one decimal place Use column addition and subtraction when using numbers with up to 4 digits and decimals with one decimal place Use inverse operations to check answers, e.g. $56 + 43 = 99$ $99 - 56 = 43$ Solve addition and subtraction real life problems Solve addition and subtraction problems involving missing numbers, e.g. $67 - \underline{\quad} = 34$ 	<ul style="list-style-type: none"> Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method) Recall multiplication and division facts for times tables up to 12×12 Use partitioning to double or halve any number, including decimals to one decimal place (see calculation policy) Use place value, known and derived facts to multiply and divide mentally. Multiply two-digit and three-digit numbers by a one-digit number using formal written layout (see calculation policy) Divide numbers up to 3 digits by a one-digit number using short division and interpret remainders appropriately for the context (see calculation policy) Use estimation and inverse to check answers to calculations.
Number – fractions	Geometry – properties of shapes	Measurement	
<ul style="list-style-type: none"> Understand that a fraction is one whole number divided by another. Recognise, find and write fractions of a set of objects. Recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten. Count on and back in steps of unit fractions Compare and order fractions. Recognise and show, using diagrams, families of equivalent fractions Recognise and write decimal equivalents of any number of tenths or hundredths Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ Add and subtract fractions with the same denominator (using diagrams) 	<ul style="list-style-type: none"> Compare and classify shapes Identify lines of symmetry in 2-D shapes Compare and classify shapes based on their properties and sizes Identify acute (smaller than 90 degrees) and obtuse (bigger than 180 degrees) angles compare and order angles by size 	<ul style="list-style-type: none"> Estimate and calculate lengths Compare lengths Measure and calculate the perimeter of any rectangle (including squares) in centimetres and metres Find the area of any rectangle by counting squares Estimate and calculate mass Compare mass Estimate and calculate volume/capacity Compare volume/capacity Order temperatures including those below 0°C Convert between different units of measure (e.g. kilometre to metre $2.3\text{km} = 2300\text{m}$; hour to minute) Convert between different units of time, (e.g. hour to minute $1 \frac{1}{2}$ hours = 90 minutes) Read, write and convert time between analogue and digital 12 and 24-hour clocks Write amounts of money using decimal notation Recognise that one hundred 1p coins is the same as $\text{£}1$ and that each coin is $\frac{1}{100}$ of $\text{£}1$ Estimate, compare and calculate money in pounds and pence Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days and problems involving money and measures 	
Statistics		Geometry – position and direction	
<ul style="list-style-type: none"> Use a variety of sorting diagrams to compare and classify numbers and geometric shapes Interpret and present 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 		<ul style="list-style-type: none"> Describe positions on a 2-D grid as coordinates Plot specified points and draw sides to complete a given polygon Describe movements between positions as translations of a given unit to the left/right and up/down 	

Solve problems in all areas of the mathematics curriculum.

Key Learning in Mathematics – Year 5

Number – number and place value		Number – addition and subtraction	Number – multiplication and division
<ul style="list-style-type: none"> Count forwards or backwards in steps of powers of 10 from any number up to 1 000 000 Count forwards and backwards in decimal steps (e.g. 0, 0.25, 0.5, 0.75, 1, 1.25) Read and write numbers to at least 1 000 000 Read and write numbers with up to three decimal places (e.g. 0.354) Know the value of each digit in numbers to at least 1 000 000 (e.g. 32,456 = 3 tens of thousands, 2 thousands, 4 hundreds, 5 tens and 6 ones/units) Know the value of each digit to three decimal places (e.g. 5.327 = 5 ones, 3 tenths, 2 hundredths, 7 thousandths) Order and compare numbers to at least 1 000 000 Order and compare numbers with up to three decimal places Find 0.01, 0.1, 1, 10, 100, and 1000 more or less than a given number Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 Round decimals with two decimal places to the nearest whole number and to one decimal place Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 Count forwards and backwards with positive and negative whole numbers through zero. Use negative numbers in context. Describe and extend number sequences including those with multiplication and division steps and those where the step size is a decimal Read Roman numerals to 1000 (M) and recognise years written in Roman numerals 		<ul style="list-style-type: none"> Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method) Know and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place) Find and use addition and subtraction facts for 1 (with decimal numbers to two decimal places) Select a mental strategy appropriate for the numbers involved in the calculation Add and subtract numbers mentally with increasingly large numbers and decimals to two decimal places Use the column method to add and subtract whole numbers with more than 4 digits and decimals with two decimal places (see calculation policy) 	<ul style="list-style-type: none"> Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known or related fact, calculate mentally, use a jotting, written method) Identify multiples and factors Know and use the vocabulary of 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 (²) and cubed (³) Use partitioning to double or halve any number Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes Multiply numbers up to 4 digits by a one- or two-digit number Divide numbers up to 4 digits by a one-digit number
Number – fractions	Geometry – properties of shapes	Measurement	
<ul style="list-style-type: none"> Read and write decimal numbers as fractions (e.g. $0.71 = \frac{71}{100}$) Count on and back in mixed number steps such as $1\frac{1}{2}$ Compare and order fractions Identify, name and write equivalent fractions Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents Add and subtract fractions with the same denominator and denominators that are multiples of the same number (using diagrams) Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams Recognise the percent symbol (%) and understand that percent relates to 'number of parts per hundred', and write percentages as a fractions and decimals. 	<ul style="list-style-type: none"> Distinguish between regular and irregular polygons talking about equal sides and angles Use the properties of rectangles to find related facts and find missing lengths and angles Identify 3-D shapes, including cubes and other cuboids, from 2-D diagrams Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles Draw given angles, and measure them in degrees (°) Identify: <ul style="list-style-type: none"> 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° 	<ul style="list-style-type: none"> Use, read and write standard units of length to a suitable degree of accuracy (km, m, cm, mm) Measure and calculate the perimeter of any rectangle (including squares) in centimetres and metres Calculate and compare the area of rectangles (including squares), using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes Use, read and write standard units of mass to a suitable degree of accuracy (kg, g) Estimate, measure and calculate volume (for example, using 1 cm³ blocks to build cuboids (including cubes) and capacity (for example, using water) Understand and use approximate equivalences between metric and common imperial units such as miles, inches, pounds, pints. Continue to order temperatures including those below 0°C Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) Convert between units of time in a problem solving context Continue to read, write and convert time between analogue and digital 12 and 24-hour clocks Solve problems involving measure involving adding, subtracting, multiplying and dividing (for example, length, mass, volume, money) using decimal notation including scaling. Solve problems involving converting between units of time 	
Statistics	Geometry – position and direction		
<ul style="list-style-type: none"> Complete and interpret information in a variety of sorting diagrams Complete, read and interpret information in tables, including timetables Calculate and interpret the mode, median and range 	<ul style="list-style-type: none"> Describe positions on the first quadrant of a coordinate grid Plot specified points and complete shapes 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 		

Solve problems in all areas of the mathematics curriculum.

Key Learning in Mathematics – Year 6

Number – number and place value	Number – addition and subtraction	Number – multiplication and division
<ul style="list-style-type: none"> Count forwards or backwards in different steps. (Whole numbers, fractions, decimals, etc.) Read and write numbers to at least 10 000 000 Determine the value of each digit in numbers to at least 1 000 000 (E.g. 356,070 = 300,000) Identify the value of each digit to three decimal places (E.g. 0.345 = 0.3 / 3 tenths) Order and compare numbers up to 10 000 000 Order and compare numbers including whole numbers, decimals and negative numbers Find 0.001, 0.01, 0.1, 1, and 10 more or less than a given number Round any whole number to a required degree of accuracy Round decimals with three decimal places to the nearest whole number or one or two decimal places Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places Use negative numbers in context Describe and extend number sequences including those with multiplication and division steps, inconsistent steps, alternating steps and decimal steps 	<ul style="list-style-type: none"> Choose an appropriate written or mental strategy to solve a calculation based upon the numbers involved. Know addition and subtraction facts for 1 with decimal numbers to two decimal places (e.g. $0.32 + 0.68 = 1$) Work out calculations in your head, including with mixed operations and large numbers and decimals. Use column addition and subtraction when using whole numbers and decimals. Use estimation to check answers to calculations Use their knowledge of the order of operations to carry out calculations involving the four operations 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, including those with missing numbers 	<ul style="list-style-type: none"> Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known or related fact, calculate mentally, use a jotting, written method) Identify common factors, common multiples and prime numbers Use partitioning to double or halve any number Perform mental calculations, including with mixed operations and large numbers Multiply multi-digit numbers up to 4 digits by a two-digit whole number Multiply one-digit numbers with up to two decimal places by whole numbers Divide numbers up to 4 digits by a two-digit number Use written division methods in cases where the answer has up to two decimal places Use estimation and inverse to check answers to calculations Solve problems involving addition, subtraction, multiplication and division, including those with missing numbers Use their knowledge of the order of operations to carry out calculations involving the four operations
<p>Number – fractions</p> <ul style="list-style-type: none"> Compare and order fractions, including fractions greater than 1 (including on a number line) Simplify fractions Know links between simple fractions, decimals and percentages (e.g. $0.5 = 50\% = \frac{1}{2}$) Associate a fraction with division and calculate decimal fraction equivalents Add and subtract fractions, using the concept of equivalent fractions Multiply simple pairs of fractions Divide proper fractions by whole numbers (using diagrams) (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$) Find simple percentages of amounts (e.g. 50% of 30 = 15) 	<p>Geometry – properties of shapes</p> <ul style="list-style-type: none"> Compare and classify shapes based on their properties and sizes Draw 2-D shapes using given dimensions and angles Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius Recognise, describe and build simple 3-D shapes, including making nets Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles Find unknown angles in any triangles, quadrilaterals, and regular polygons 	<p>Measurement</p> <ul style="list-style-type: none"> Use, read and write standard units of length using decimal notation to three decimal places Recognise that shapes with the same areas can have different perimeters and vice versa Calculate the area of parallelograms and triangles Use, read and write standard units of mass using decimal notation to three decimal places Use, read and write standard units of volume using decimal notation to three decimal places Calculate and estimate volume of cubes and cuboids using standard units, including cubic centimetres (cm³) and cubic metres (m³) and extending to other units (for example, mm³ and km³) Compare volume of cubes and cuboids using standard units, including cubic centimetres (cm³) and cubic metres (m³) and extending to other units (for example, mm³ and km³) Calculate differences in temperature, including those that involve a positive and negative temperature 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 three decimal places Convert between miles and kilometres Use, read and write standard units of time
<p>Ratio and Proportion</p> <ul style="list-style-type: none"> Solve problems involving the relative sizes of two quantities where missing values can be found using integer multiplication and division facts Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples Solve problems involving similar shapes where the scale factor is known or can be found 	<p>Algebra</p> <ul style="list-style-type: none"> Use symbols or letters in missing number problems. (E.g. $A + 1.7 = 9.7$ or $3B = 15$) Use simple formulae Find pairs of numbers that satisfy an equation with two unknowns e.g. $A + B = 7.53$ 	<p>Statistics</p> <ul style="list-style-type: none"> Continue to complete and interpret information in a variety of sorting diagrams Interpret and construct pie charts and line graphs and use these to solve problems Solve comparison, sum and difference problems using information presented in all types of graph Calculate and interpret the mean as an average

Solve problems in all areas of the mathematics curriculum.