

Curriculum Intent
Key Stage 2 (Yr 3 & 4)
Subject long-term planning
Subject: Maths



**PENK VALLEY
ACADEMY TRUST**

*Learning
Together*



	Autumn Term	Spring Term	Summer Term
Unit Title	Place Value Addition & Subtraction Multiplication & Division	Multiplication & Division Money Statistics Measurement (Length) Fractions	Time Geometry - 2D & 3D shapes Angles & lines Perimeter Measurement (Mass & Capacity)
Overall intent - rationale Why this? Why now?	<p>Place Value Number and place value plays a key role in developing children's number sense. Numbers are used in life every single day. So all pupils can highly benefit from learning how to count, compare and identify numbers. Moves from 2 digit to 3 digit place value. Previously found 10 more and less now 100 more or less. Count in steps of 4, 8, 50 and 100 and order numbers to 1000. Although formal algebraic notation is not introduced until Y6, algebraic thinking starts much earlier as exemplified by the 'missing number' objectives from Y1/2/3</p> <p>Addition & subtraction This unit builds upon pupils practising solving varied addition and subtraction questions. For mental calculations with two-digit numbers, the answers could exceed 100. Pupils use their understanding of place value and partitioning, and practise using columnar addition and subtraction with increasingly large numbers up to 3 digits to become fluent Year 3 begin formal calculation children have the place value knowledge from Year 2 to support this move to formal calculations.</p>	<p>Multiplication & division Pupils develop reliable written methods for multiplication and division, starting with calculations of two-digit numbers by one-digit numbers and progressing to the formal written methods of short multiplication and division. Pupils solve simple problems in contexts, deciding which of the 4 operations to use and why. These include measuring and scaling contexts, (for example 4 times as high, 8 times as long etc) and correspondence problems in which m objects are connected to n objects (for example, 3 hats and 4 coats, how many different outfits?; 12 sweets shared equally between 4 children; 4 cakes shared equally between 8 children). Expand their knowledge of multiplication tables by learning the 3, 4 and 8 tables. 2, 5, 10 covered in Year 2, then 6, 7, 9, 11, 12 for Year 4.</p> <p>Money Pupils continue to become fluent in recognising the value of coins, by adding and subtracting amounts, including mixed units, and giving change using manageable amounts. They record £ and p separately. The decimal recording of money is introduced formally in year 4. Coins and note values covered in Year 2, now an emphasis on addition and subtraction of amounts.</p>	<p>Time Pupils use both analogue and digital 12-hour clocks and record their times. In this way they become fluent in and prepared for using digital 24-hour clocks in year 4. Builds upon Year 2 being able to tell time to the nearest 5 minutes, now moves onto nearest minute. Introduces Roman numerals and the 12 and 24 hour clock.</p> <p>Geometry Knowledge of the properties of shapes is extended at this stage to symmetrical and non-symmetrical polygons and polyhedra. Pupils extend their use of the properties of shapes. They should be able to describe the properties of 2-D and 3-D shapes using accurate language, including lengths of lines and acute and obtuse for angles greater or lesser than a right angle.</p> <p>Angles & lines Connect decimals and rounding to drawing and measuring straight lines in centimetres, in a variety of contexts. Right angles are identified in Year 2.</p> <p>Measurement (Mass & Capacity) Continue to measure using the appropriate tools and units, progressing to using a wider range of measures, including comparing and using mixed units (for</p>

Multiplication & division

Continue to practise their mental recall of multiplication tables when they are calculating mathematical statements in order to improve fluency. Through doubling, they connect the 2, 4 and 8 multiplication tables.

Pupils develop efficient mental methods, for example, using commutativity and associativity (for example, $4 \times 12 \times 5 = 4 \times 5 \times 12 = 20 \times 12 = 240$) and multiplication and division facts (for example, using $3 \times 2 = 6$, $6 \div 3 = 2$ and $2 = 6 \div 3$) to derive related facts ($30 \times 2 = 60$, $60 \div 3 = 20$ and $20 = 60 \div 3$).

Pupils solve simple problems in contexts, deciding which of the 4 operations to use and why. These include measuring and scaling contexts, (for example 4 times as high, 8 times as long etc) and correspondence problems in which m objects are connected to n objects (for example, 3 hats and 4 coats, how many different outfits?; 12 sweets shared equally between 4 children; 4 cakes shared equally between 8 children).

Expand their knowledge of multiplication tables by learning the 3, 4 and 8 tables. 2, 5, 10 covered in Year 2, then 6, 7, 9, 11, 12 for Year 4.

Statistics

They continue to interpret data presented in many contexts.

Learning about statistics improves children's analytical and critical thinking, which are useful life skills

Measurement (Length)

Continue to measure using the appropriate tools and units, progressing to using a wider range of measures, including comparing and using mixed units (for example, 1 kg and 200g) and simple equivalents of mixed units (for example, 5m = 500cm).

The comparison of measures includes simple scaling by integers (for example, a given quantity or measure is twice as long or 5 times as high) and this connects to multiplication.

In Year 2 children measure cm and m, now in Year 3 mm are also introduced, these will link to tenth fractions and this is why measurement is taught after fractions.

Millimeters are introduced in Year 3, building on cm/m measuring from Year 2.

Fractions

This unit connects tenths to place value, decimal measures and to division by 10. They begin to understand unit and non-unit fractions as numbers on the number line, and deduce relations between them, such as size and equivalence. They should go beyond the $[0, 1]$ interval, including relating this to measure. They continue to recognise fractions in the context of parts of a whole, numbers, measurements, a shape, and unit fractions as a division of a quantity. Adding and subtracting fractions with the same denominator through a variety of increasingly complex problems to improve fluency.

example, 1 kg and 200g) and simple equivalents of mixed units (for example, 5m = 500cm).

The comparison of measures includes simple scaling by integers (for example, a given quantity or measure is twice as long or 5 times as high) and this connects to multiplication.

In Year 2 children measure cm and m, now in Year 3 mm are also introduced, these will link to tenth fractions and this is why measurement is taught after fractions.

Millimeters are introduced in Year 3, building on cm/m measuring from Year 2.

		<p>By year 2, pupils would have learned to recognise common fractions such as $\frac{1}{2}$, $\frac{2}{4}$, $\frac{1}{3}$ and $\frac{1}{4}$. But in year 3, they'll be challenged to start completing calculations with these numbers. For example, they learn how to add and subtract fractions with the same denominator and compare and order unit fractions. Decimals introduced in Year 4, when children will have stronger understanding of place value & fractions.</p>	
<p>Key knowledge (information), concepts (understanding) & skills (independent ability)</p> <p>(Must be all three)</p>	<p>Place Value The digits 0-9</p> <p>Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10</p> <p>Understand that apply that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10 to identify and work out how many 10s there are in other three-digit multiples of 10</p> <p>Understanding place value of 2 and 3 digit numbers.</p> <p>To be able to count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number</p> <p>To be able to identify, represent and estimate numbers using different representations</p> <p>To be able to read and write numbers up to 1000 in numerals and in words</p> <p>To be able to recognise the place value of each digit in a three-digit number (hundreds, tens, ones)</p> <p>To be able to compare and order numbers up to 1000</p>	<p>Multiplication & division Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10). Know multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</p> <p>Understand how multiplication facts can be used to identify division facts.</p> <p>To be able to 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.</p> <p>To be able to solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects</p> <p>Money To be able to add and subtract amounts of money to give change, using both £ and p in practical contexts</p>	<p>Time Know the roman numeral from I to XII Know there is a 12 hour clock and a 24 hour clock.</p> <p>know the number of seconds in a minute and the number of days in each month, year and leap year</p> <p>Understand that after 12 am it is 13 on a 24 hour clock and this is equivalent to 1.00pm etc.</p> <p>To be able to tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks</p> <p>To be able to 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</p> <p>To be able to compare durations of events [for example to calculate the time taken by particular events or tasks]</p> <p>Geometry Know the properties of 2D shapes.</p> <p>Understand that orientation changes the position of the shape only.</p>

To be able to solve number problems and practical problems involving these ideas

Addition & subtraction

Know Year 3 vocabulary for addition & subtraction.

Know formal methods for addition and subtraction.

Understand what happens when you add numbers together and what happens when you subtract numbers.

To be able to add and subtract numbers mentally, including:

Ø a three-digit number and ones

Ø a three-digit number and tens

Ø a three-digit number and hundreds

To be able to add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction

To be able to solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction

Multiplication & division

Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10).

Know multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot

Statistics

Place value and number operation knowledge.

To understand graphs show data.

To understand why different types of graphs are used to show data.

To understand simple scales (for example, 2, 5, 10 units per cm) in pictograms and bar charts.

To be able to interpret and present data using bar charts, pictograms and tables

To be able to 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

Measurement

To know vocabulary measure length/height in any direction (m/cm/mm)

To be able to measure, compare, add and subtract: lengths

Fractions

Know $\frac{1}{10}$, unit fraction, no-unit fractions.

Understand the relation between unit fractions as operators (fractions of), and division by integers.

Understand adding and subtracting fractions with the same denominator.

To be able to 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

To be able to draw 2-D shapes

To be able to make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them

Angles & Lines

To know angles & lines vocabulary

To understand how angles create 2D shapes and how angles can be used to turn.

To be able to recognise angles as a property of shape or a description of a turn

To be able to 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

To be able to identify horizontal and vertical lines and pairs of perpendicular and parallel lines

Measurement

To know vocabulary measure mass (kg/g) and capacity (litres/ml)

To be able to measure, compare, add and subtract: mass (kg/g); and volume/capacity (l/ml)

	<p>Understand how multiplication facts can be used to identify division facts.</p> <p>To be able to recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.</p> <p>To be able to solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects</p>	<p>To be able to recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</p> <p>To be able to recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators</p> <p>To be able to recognise and show, using diagrams, equivalent fractions with small denominators</p> <p>To be able to compare and order unit fractions, and fractions with the same denominators</p> <p>To be able to add and subtract fractions with the same denominator within one whole [for example $5/7 + 1/7 = 6/7$]</p> <p>To be able to solve problems that involve all of the above</p>	
--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

Key stage: 2

Subject: Maths

Year 4

School: Marshbrook

	Autumn Term	Spring Term	Summer Term
Title	Place Value Addition & Subtraction Measure - Perimeter Multiplication & Division	Multiplication & Division Measure - Area Fractions Decimals	Money Time Statistics Geometry - Angles & Shapes Geometry - Position & Direction

<p>Overall intent – rationale</p> <p>Why this? Why now?</p>	<p>Place Value Negative numbers introduced in Year 4 building upon place value learning. Linked to decimals in fractions. In Year 4 children will count in steps of 6, 7, 9, 25 and 1000, and round numbers to the nearest 10, 100 and 1000, or whole number for decimals. To count back in negative numbers. They begin to extend their knowledge of the number system to include the decimal numbers and fractions that they have met so far. Move from 3 digit numbers to 4 digit numbers. They connect estimation and rounding numbers to the use of measuring instruments. Roman numerals should be put in their historical context so pupils understand that there have been different ways to write whole numbers and that the important concepts of 0 and place value were introduced over a period of time.</p> <p>Addition & Subtraction Build up Add and subtract three digit numbers, now add and subtract four-digit numbers. Pupils continue to practise both mental methods and columnar addition and subtraction with increasingly large numbers to aid fluency Formal calculations using 4 digit numbers- build on Year 3, 3 digit number addition & subtraction.</p> <p>Perimeter Use their knowledge of multiplication to solve area problems by calculating length x width and will also use addition to figure out the perimeter of different shapes</p> <p>Multiplication & division Multiply three-digit by one-digit numbers. know all</p>	<p>Multiplication & division Multiply three-digit by one-digit numbers. know all the times tables up to 12 x 12 and be able to divide by 10 and 100 to give decimal answers pupils continue to practise recalling and using multiplication tables and related division facts to aid fluency. Pupils practise mental methods and extend this to 3-digit numbers to derive facts, (for example $600 \div 3 = 200$ can be derived from $2 \times 3 = 6$). Pupils practise to become fluent in the formal written method of short multiplication and short division with exact answers. Pupils write statements about the equality of expressions (for example, use the distributive law $39 \times 7 = 30 \times 7 + 9 \times 7$ and associative law $(2 \times 3) \times 4 = 2 \times (3 \times 4)$). They combine their knowledge of number facts and rules of arithmetic to solve mental and written calculations for example, $2 \times 6 \times 5 = 10 \times 6 = 60$. Multiplication Tables Check (MTC) in the Summer Term</p> <p>Area Use their knowledge of multiplication to solve area problems by calculating length x width and will also use addition to figure out the perimeter of different shapes</p> <p>Fractions Connect hundredths to tenths and place value and decimal measure. They extend the use of the number line to connect fractions, numbers and measures. Pupils understand the relation between non-unit fractions and multiplication and division of quantities, with particular emphasis on tenths and hundredths. Decimal fractions are introduced in Year 4.</p>	<p>Money Pupils continue to become fluent in recognising the value of coins, by adding and subtracting amounts, including mixed units, and giving change using manageable amounts. They record £ and p separately. Builds upon place value- decimal points. The decimal recording of money is introduced formally in year 4. Coins and note values covered in Year 2, now an emphasis on addition and subtraction of amounts.</p> <p>Time Pupils use both analogue and digital 12-hour clocks and record their times. Builds upon Year 3 being able to tell time to the nearest 5 minutes, now moves onto nearest minute. Re introduces Roman numerals and the 12 and 24 hour clock.</p> <p>Statistics Pupils understand and use a greater range of scales in their representations. Pupils begin to relate the graphical representation of data to recording change over time. Builds upon Year 3 knowledge of different forms of statistics.</p> <p>Geometry In Year 4, children are asked to identify lines of symmetry in 2D shapes presented in different orientations. They will need to become aware that shapes have more than one line of symmetry. Pupils compare and order angles in preparation for using a protractor and compare lengths and angles to decide if a polygon is regular or irregular. Pupils draw symmetric patterns using a variety of media to become familiar with different orientations of lines of symmetry; and recognise line symmetry in a variety of diagrams, including where the line of symmetry does not dissect the original shape.</p>
---------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>the times tables up to 12×12 and be able to divide by 10 and 100 to give decimal answers pupils continue to practise recalling and using multiplication tables and related division facts to aid fluency. Pupils practise mental methods and extend this to 3-digit numbers to derive facts, (for example $600 \div 3 = 200$ can be derived from $2 \times 3 = 6$).</p> <p>Pupils practise to become fluent in the formal written method of short multiplication and short division with exact answers.</p> <p>Pupils write statements about the equality of expressions (for example, use the distributive law $39 \times 7 = 30 \times 7 + 9 \times 7$ and associative law $(2 \times 3) \times 4 = 2 \times (3 \times 4)$). They combine their knowledge of number facts and rules of arithmetic to solve mental and written calculations for example, $2 \times 6 \times 5 = 10 \times 6 = 60$.</p> <p>Multiplication Tables Check (MTC) in the Summer Term</p> <p>Perimeter, area and volume Use their knowledge of multiplication to solve area problems by calculating length \times width and will also use addition to figure out the perimeter of different shapes</p>	<p>Decimals In Year 4, children are introduced to decimals in line with their fractions units.</p>	<p>Position and direction To build upon Year 3 positional understanding. Draw a pair of axes in one quadrant, with equal scales and integer labels. They read, write and use pairs of co-ordinates, for example (2, 5), including using co-ordinate-plotting ICT tools</p>
<p>Key knowledge (information), concepts (understanding) & skills (independent)</p>	<p>Place Value Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; know that, over time, the numeral system changed to include the concept of 0 and place value. Understand that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100 and apply this to identify and work out how</p>	<p>Multiplication & division Know the distributive property of multiplication. Understanding factors, multiples: what they are and how they are found. To be able to recall multiplication and division facts for multiplication tables up to 12×12 To be able to use place value, known and derived facts to multiply and divide mentally, including:</p>	<p>Money To be able to estimate, compare and calculate different measures, including money in pounds and pence Time Know time language Understand what converting from 12 to 24 hour clock is. Understand you can convert from hours to minutes, minutes to seconds, years to months and weeks to</p>

<p>ent ability)</p> <p>(Must be all three)</p>	<p>many 100s there are in other four-digit multiples of 100</p> <p>To be able to count in multiples of 6, 7, 9, 25 and 1000</p> <p>To be able to count backwards through zero to include negative numbers</p> <p>To be able to find 1000 more or less than a given number</p> <p>To be able to recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)</p> <p>To be able to order and compare numbers beyond 1000</p> <p>To be able to read and write Roman numerals to 100.</p> <p>To be able to round any number to the nearest 10, 100 or 1000</p> <p>To be able to solve number and practical problems that involve all of the above and with increasingly large positive numbers</p> <p>Addition & subtraction Know Year 4 vocabulary for addition & subtraction. Know formal methods for addition and subtraction.</p> <p>To be able to add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate</p>	<p>multiplying by 0 and 1; dividing by 1; multiplying together three numbers</p> <p>To be able to recognise and use factor pairs and in mental calculations</p> <p>To be able to multiply two-digit and three-digit numbers by a one digit number using formal written layout</p> <p>To be able to solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects</p> <p>Area Understand that area is the inside of a 2D shape.</p> <p>To be able to find the area of rectilinear shapes by counting squares</p> <p>Fractions To recognize denominator and share an object into equal parts. To know equivalent fractions are the same amounts. Understand the number system and decimal place value is extended to tenths and then hundredths. To understand what happens when you add and subtract fractions with the same denominator. To be able to count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.</p>	<p>days- Understanding how different units of measure will link to each other.</p> <p>To be able to read, write and convert time between analogue and digital 12- and 24-hour clocks</p> <p>To be able to solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days</p> <p>Statistics Place value and number operation knowledge. To understand continuous data.</p> <p>To be able to interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs</p> <p>To be able solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs</p> <p>Geometry To know the properties of 2D and 3D shapes. Know what an acute and obtuse are. To understand that shapes can have more than one line of symmetry. To be able to compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes To be able to identify lines of symmetry in 2-D shapes presented in different orientations</p>
------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

To be able to solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.

Perimeter

Understand that perimeter is the distance around the edge of the shape.

To be able to measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres

Multiplication & division

Know the distributive property of multiplication.

Understanding factors, multiples: what they are and how they are found.

To be able to recall multiplication and division facts for multiplication tables up to 12×12

To be able to 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

To be able to recognise and use factor pairs and in mental calculations

To be able to multiply two-digit and three-digit numbers by a one digit number using formal written layout

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

To be able to recognise and show, using diagrams, families of common equivalent fractions

To be able to add and subtract fractions with the same denominator

To be able to solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number

Decimals

To be able to recognise and write decimal equivalents of any number of tenths or hundredths

To be able to recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$

To be able to round decimals with one decimal place to the nearest whole number

To be able to compare numbers with the same number of decimal places up to two decimal places

To be able to solve simple measure and money problems involving fractions and decimals to two decimal places

To be able to identify acute and obtuse angles and compare and order angles up to two right angles by size

To be able to identify lines of symmetry in 2-D shapes presented in different orientations

To be able to complete a simple symmetric figure with respect to a specific line of symmetry

Position & direction

To know what a coordinate and a first quadrant are.

To understand the positioning of shapes in the first quadrant.

To be able to describe positions on a 2-D grid as coordinates in the first quadrant

To be able to describe movements between positions as translations of a given unit to the left/right and up/down

To be able to plot specified points and draw sides to complete a given polygon