

## MATHEMATICS Year 4

All children will access age related curriculum objectives	All children will:	Children, who grasp concepts rapidly, may:
Number Place Value		
Count in multiples of 6, 7, 9, 25 and 1000.	<i>I can count in multiples of 6, 7, 9, 25 and 1000.</i>	<i>I can count in multiples of 6, 7, 9, 25 and 1000 and use this to spot number patterns and rules.</i>
Find 1000 more or less than a given number.	<i>I can find 1000 more or less than a given number.</i>	<i>I can find 1000 more or less than a given number or unit of measure.</i>
Count backwards through zero to include negative numbers.	<i>I can count backwards to negative numbers below zero.</i>	<i>I can count backwards quickly to negative numbers below zero.</i>
Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones).	<i>I know what each digit means in four-digit numbers such as 2024.</i>	<i>I know what each digit means in four-digit numbers when working with money and measures such as 7024g.</i>
Order and compare numbers beyond 1000.	<i>I can order and compare numbers above 1000.</i>	<i>I can confidently order and compare numbers above 1000 in contexts of money or measures.</i>
Identify, represent and estimate numbers using different representations.	<i>I can make estimates of a range of things - such as how many small objects there are in a large jar, how long in cm an object is, how heavy an object may weigh in kg.</i>	<i>I can make estimates of a range of things across different subjects - such as how many small objects there are in a large jar, how long in cm an object is, how heavy an object may weigh in kg.</i>
Round any number to the nearest 10, 100 or 1000.	<i>I can round a number to the nearest 10, 100 or 1000.</i>	<i>I can round a number to the nearest 10, 100 or 1000 and use this in different problems.</i>
Solve number and practical problems that involve rounding, ordering and exploring negative numbers and with increasingly large positive numbers.	<i>I can solve number and practical problems that involve rounding, ordering and exploring negative numbers and with increasingly large positive numbers.</i>	<i>I can solve more complex number and practical problems that involve rounding, ordering and exploring negative numbers and with large positive numbers confidently.</i>
Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.	<i>I can read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.</i>	<i>I can read and use Roman numerals to 100 (I to C) independently and know that over time, the numeral system changed to include the concept of zero and place value.</i>
Addition Subtraction		

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Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.	<i>I can add and subtract numbers with up to 4 digits using written methods (for example, using column addition and subtraction).</i>	<i>I can add and subtract numbers with up to 4 digits, including decimal numbers, using written methods (for example, using column addition and subtraction).</i>
Estimate and use inverse operations to check answers to a calculation.	<i>I can estimate an answer and check my answer using inverse operations.</i>	<i>I can accurately estimate an answer and independently check my answer using inverse operations.</i>
Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	<i>I can solve longer addition and subtraction problems and explain all the steps I took and why I worked things out as I did.</i>	<i>I can solve addition and subtraction two-step problems involving decimal notation, choosing the most efficient methods.</i>
<b>Multiplication Division</b>		
Recall multiplication and division facts for multiplication tables up to 12 x 12	<i>I know all my times table up to the 12 times tables.</i>	<i>I know all my times table up to the 12 times tables and can use them quickly.</i>
Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1.	<i>I know what the outcome is when I multiply a number by 1 or by zero.</i>	<i>I know what the outcome is when I multiply a decimal value by 1 or by zero.</i>
Use place value, known and derived facts to multiply and divide mentally, including: Dividing by 1.	<i>I know what the outcome is when I divide a number by 1.</i>	<i>I can calculate the outcome of a decimal divided by another number.</i>
Use place value, known and derived facts to multiply and divide mentally, including: multiplying together three numbers.	<i>I can multiply three numbers together, such as 3 x 6 x 9.</i>	<i>I can multiply three numbers together, such as 7 x 6 x 9 quickly and accurately.</i>
Recognise and use factor pairs and commutativity in mental calculations.	<i>I know what factor pairs are how I can multiply numbers in any order and use my knowledge to work out questions in my head.</i>	<i>I know what factor pairs are I can multiply numbers in any order and use my knowledge to work out questions in my head confidently.</i>
Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.	<i>I can multiply a two-digit or a three-digit number by a one-digit number using written methods.</i>	<i>I can solve real-life problems by multiplying a two-digit or a three-digit number by a one-digit number using written methods.</i>
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.	<i>I can solve maths problems such as - how many different outfits can I make from 3 hats and 4 coats.</i>	<i>I can solve more complex maths problems such as - how many different outfits can I make from 3 hats and 4 coats and begin to write a mathematical rule.</i>
<b>Fractions</b>		
Recognise and show, using diagrams, families of common equivalent fractions.	<i>I can show in drawings why a number of fractions equal each other (such as 3/5 and 6/10) and are</i>	<i>I can show in drawings why a number of fractions equal each other (such as 3/7 and 6/14) and are called equivalent fractions and begin to</i>

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	<i>called equivalent fractions.</i>	<i>use this in different subjects and contexts.</i>
Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.	<i>I can count up and down in hundredths and know that a hundredth is made by dividing an object by one hundred and a tenth is made by dividing an object by ten.</i>	<i>I can count up and down in hundredths and know that a hundredth is made by dividing an object by one hundred and a tenth is made by dividing an object by ten and begin to compare this with units of measurement</i>
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.	<i>I can work out the fractions of numbers such as <math>\frac{4}{5}</math> of 25 or <math>\frac{7}{10}</math> of 700.</i>	<i>I can work out the fractions of numbers such as <math>\frac{4}{7}</math> of 28 or <math>\frac{7}{12}</math> of 648 to solve part of a multi-step problem</i>
Add and subtract fractions with the same denominator.	<i>I can add and subtract fractions with the same denominator.</i>	<i>I can add and subtract fractions with the same denominator to solve problems in different subjects.</i>
Recognise and write decimal equivalents of any number of tenths or hundredths.	<i>I can tell you the decimal equivalents of any number of tenths or hundredths - such as <math>\frac{1}{10} = 0.1</math> and <math>\frac{23}{100} = 0.23</math>.</i>	<i>I can tell you the decimal equivalents of any number of tenths or hundredths - such as <math>\frac{1}{10} = 0.1</math> and <math>\frac{43}{100} = 0.43</math> and order them.</i>
Recognise and write decimal equivalents to $\frac{1}{4}$ , $\frac{1}{2}$ , $\frac{3}{4}$ .	<i>I know what the decimal equivalents are for <math>\frac{1}{4}</math>, <math>\frac{1}{2}</math> and <math>\frac{3}{4}</math>.</i>	<i>I know what the decimal equivalents are for <math>\frac{1}{4}</math>, <math>\frac{1}{2}</math>, <math>\frac{2}{4}</math> and <math>\frac{3}{4}</math> and can order them independently.</i>
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.	<i>I can divide a one- or two-digit number by 10 and 100 and I know what the tenths and hundredths mean after the decimal point.</i>	<i>I can confidently divide a one- or two-digit number by 10 and 100 and I know what the tenths and hundredths mean after the decimal point.</i>
Round decimals with one decimal place to the nearest whole number.	<i>I can round decimals with one decimal place to the nearest whole number.</i>	<i>I can round decimals with one decimal place to the nearest whole number and use this to estimate and check the answers to problems.</i>
Compare numbers with the same number of decimal places up to two decimal places.	<i>I can compare numbers such as 0.26 and 0.56 to say which is bigger or lower.</i>	<i>I can compare and order a string of numbers such as 0.26, 0.31 and 0.56 to say which is bigger or lower.</i>
Solve simple measure and money problems involving fractions and decimals to two decimal places.	<i>I can solve measure and money problems involving fractions and decimals to two decimal places.</i>	<i>I can solve more complex measure and money problems involving fractions and decimals to two decimal places.</i>
<b>Measurement</b>		
Convert between different units of measure [for example, kilometre to metre; hour to minute].	<i>I can convert one unit of measurement to another, such as kilometre to metre, hour to minute and cm to mm.</i>	<i>I can convert one unit of measurement to another, such as kilometre to metre, hour to minute and cm to mm to solve real-life problems.</i>
Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.	<i>I can measure and calculate the perimeter of a rectangle (including a square).</i>	<i>I can measure and calculate the perimeter of compound rectangles.</i>
Find the area of rectilinear shapes by counting squares.	<i>I can find the area of a rectangular shape by counting</i>	<i>I can find the area of a rectangular shape by multiplying the length and</i>

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	<i>the number of squares the shape takes up.</i>	<i>width together.</i>
Estimate, compare and calculate different measures, including money in pounds and pence.	<i>I can estimate and compare the measurements of a range of measures (such as cm, km, g, litres) and money.</i>	<i>I can estimate and compare the measurements of a range of measures (such as cm, km, g, litres) and money, and use this to solve real-life problems.</i>
Read, write and convert time between analogue and digital 12- and 24-hour clocks.	<i>I can read, write and convert time between clocks with hands (analogue clocks) and digital 12- and 24-hour clocks.</i>	<i>I can solve problems involving reading, writing and converting time between clocks with hands (analogue clocks) and digital 12- and 24-hour clocks.</i>
Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	<i>I can convert hours to minutes, minutes to seconds, years to months and weeks to days.</i>	<i>I can confidently solve problems by converting between hours and minutes, minutes and seconds, years and months, and weeks and days</i>
<b>Shape</b>		
Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.	<i>I can group 2-D shapes based on their properties (such as the number of sides) and sizes.</i>	<i>I can organise and compare 2-D shapes based on their range of properties (such as the number of sides) and sizes.</i>
Identify acute and obtuse angles and compare and order angles up to two right angles by size.	<i>I can find acute and obtuse angles and order a set of given angles by size.</i>	<i>I can find acute and obtuse angles and order a large set of given angles by size independently.</i>
Identify lines of symmetry in 2-D shapes presented in different orientations.	<i>I can find all the lines of symmetry in 2-D shapes.</i>	<i>I can find all the lines of symmetry in 2-D shapes independently.</i>
Complete a simple symmetric figure with respect to a specific line of symmetry..	<i>If I have been given one half of a symmetrical shape, I can complete the other half based on the position of the line of symmetry.</i>	<i>If I have been given one half of a complex symmetrical shape, I can complete the other half based on the position of the line of symmetry.</i>
<b>Position</b>		
Describe positions on a 2-D grid as coordinates in the first quadrant.	<i>I can find the coordinates of a point on a grid.</i>	<i>I can find and plot the coordinates of a point on a grid.</i>
Describe movements between positions as translations of a given unit to the left/right and up/down.	<i>I can move (translate) a point on a grid by a given set of jumps either up/down or left/right.</i>	<i>I can accurately move (translate) a shape or set of points on a grid by a given set of jumps either up/down or left/right.</i>
Plot specified points and draw sides to complete a given polygon.	<i>I can plot points using coordinates and join up the points to create a shape.</i>	<i>I can plot points using coordinates and join up the points to create regular and irregular shapes.</i>
<b>Statistics</b>		
Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.	<i>I can take continuous and discrete data and create a bar chart or time graph.</i>	<i>I can take continuous and discrete data and create a bar chart or time graph from a range of different subjects.</i>

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<p>Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.</p>	<p><i>I can solve comparison, sum and difference problems using information in bar charts, pictograms, tables and other graphs.</i></p>	<p><i>I can solve comparison, sum and difference problems using information in bar charts, pictograms, tables and other graphs across different subjects.</i></p>
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