## Year 4 New Primary NC in Mathematics Statutory requirements

## Number, place value

- count in multiples of $6,7,9,25$ and 1000
- find 1000 more or less than a given number
- count backwards through zero to include negative numbers
- recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, \& ones)
- order and compare numbers beyond 1000
- identify, represent and estimate numbers using different representations
- round any number to the nearest 10,100 or 1000
- solve number and practical problems that involve all of the above and with increasingly large positive numbers
- read Roman numerals to 100 (I to C) and know that, over time, the numeral system changed to include the concept of zero and place value.


## Addition and subtraction

- add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate
- estimate and use inverse operations to check answers to a calculation
- solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.


## Multiplication and division

- recall multiplication and division facts for multiplication tables up to $12 \times 12$
- use place value, known and derived facts to multiply mentally and divide mentally, including: multiplying by 0 and 1 ; dividing by 1 ; multiplying together three numbers
- recognise and use factor pairs and commutativity in mental calculations
- multiply two-digit and three-digit numbers by a one-digit number using formal written layout
- solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as which n objects are connected to m objects.


## Fractions (including decimals)

- recognise and show, using diagrams, families of common equivalent fractions
- count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten
- 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
- add and subtract fractions with the same denominator.
- recognise \& write decimal equivalents of any number of tenths or hundredths
- recognise and write decimal equivalents to $1 / 4,1 / 2,3 / 4$
- 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 units, tenths and hundredths
- round decimals with one decimal place to the nearest whole number
- compare numbers with the same number of decimal places up to two decimal places
- solve simple measure \& money problems involving fractions \& decimals to two decimal places.


## Measurement

- convert between different units of measure (e.g. kilometre to metre; hour to minute)
- measure \& calculate the perimeter of a rectilinear figure (incl squares) in centimetres and metres
- find the area of rectilinear shapes by counting squares
- estimate, compare and calculate different measures, including money in pounds and pence
- read, write and convert time between analogue and digital 12 and 24-hour clocks
- solve problems involving converting from hrs to mins; mins to secs; years to months; weeks to days

Geometry: properties of shapes

- compare and classify geometric shapes, including quadrilaterals and triangles, based on thei properties and sizes
- identify acute and obtuse angles and compare and order angles up to two right angles by size
- identify lines of symmetry in 2-D shapes presented in different orientations
- complete a simple symmetric figure with respect to a specific line of symmetry

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 \& up/down
- plot specified points and draw sides to complete a given polygon

Statistics

- interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs
- solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.

Comment
Previously Y4: 'Derive and recall multiplication facts up to $10 \times 10$ ' and 'use knowledge of addition and subtraction facts and place value to derive sums and differences of pairs of multiples of 10, 100 or 1000'. Previously Y5: 'multiply by 25 (e.g. $16 \times 25$ )'
Not specified beyond 'saying 1 more or less than' or '10 more or less than' (Y1) in the old framework
Brought down from Y5: 'Count from any given number in whole-number and decimal steps, extending beyond zero when counting backwards'.
Y4 previously: 'Partition, round and order 4 digit whole numbers.'
Moved up from Y3: 'Read, write and order whole numbers to at least 1000 and position them on a number line'
No mention of Roman numerals previously.

No year group previously specified addition and subtraction with numbers up to 4 digits.

Y4 previously: 'Derive and recall multiplication facts up to $10 \times 10$ '.
No previous mention of multiplying mentally until Y : 'Extend mental methods for whole-number calculations, for example to multiply a 2 digit by a 1 digit number'; multiplying by 0 and 1 and multiplying 3 numbers not previously specified. Mental division not previously specified, including dividing by 1 . Moved down from Y5 'Identify pairs of factors of two-digit whole numbers and find common multiples', although not specifically related to mental calculations. No mention previously of commutativity in mental calculations. Y4 previously stated: 'Develop and use written methods to record, support and explain multiplication of 2 digit numbers by a 1 digit number'. Moved down from Y5: refining written methods to multiply and HTU. Formal written layout not previously stated. Y4 previously stated: 'Solve one-step and two-step problems; choose and carry out appropriate calculations'.
Previously Y4: Use diagrams to identify equivalent fractions (e.g. 6/8 and 3/4, or 70/100 and $7 / 10$ )'
The previous Y4 framework only stated: 'counting on or back in steps of constant size'; no specific mention of counting in fractions.
Previously Y4: 'Find fractions of numbers, quantities or shapes' Y5 stated: ‘solve problems involving proportions of quantities (e.g. decrease quantities in a recipe designed to feed six people)
Y4 previously: 'Divide numbers to 1000 by 10 and the 100 (whole number answers).
Brought down from Y5: 'Use understanding of place value to divide whole numbers and decimals by 10, 100 or 1000'.

Moved down from Y5: 'Explain what each digit represents in whole numbers and decimals with up to two places, and partition, round and order these numbers'.
Rounding to one decimal place not mentioned previously.
Moved down from Y5: 'Convert larger to smaller units using decimals to one place (e.g. change 2.6kg to 2600 g ) Y4 previously: 'Draw rectangles and measure and calculate their perimeter. Y5 stated: 'measure and calculate the perimeter of regular and irregular polygons'.
No previous mention of estimating and calculating money.
Moved down from Y5: 'Read timetables and time using 24 hour clock notation'.
Terms 'acute' and 'obtuse' not previously introduced until Y5. Y4 stated: 'compare and order angles less than 180 degrees'.

Moved up from Y3: 'Draw and complete shapes with reflective symmetry; draw the reflection of a shape in a mirror line along one side.

Moved down from Y5: 'Read and plot coordinates in the first quadrant'. 'Follow \& give instructions involving position, direction \& movement' was Y2; objectives in subsequent years refer to using compass directions to describe movements. Drawing the position of a shape after translation was not expected until Y5
Y4 previously: 'Answer a question by identifying what data to collect; organise, present, analyse and interpret the data in tables, diagrams, tally charts, pictograms and bar charts, using ICT where appropriate.'

