

Year 1

Mental mathematics and fluency in rapid recall of number facts are one of the main aims of the new Mathematics Curriculum. The attached list shows the mental maths skills which pupils should master by the end of Year 1.

Oral and Mental calculation

- Recite numbers to 100 forwards and backwards from any number
- Read and write numbers to 100 in numerals
- Read and write numbers to 20 in words
- Order numbers to 100
- Compare numbers within 100
- Count on and back in 1s from any one or two-digit number including across 100
- Count in multiples of 2, 5 and 10
- Begin to recall multiplication facts for the 2, 5 and 10 times tables
- Find 1 more/ 1 less or 10 more / 10 less of any number to 1- 100
- Find numbers between 2 given numbers
- Recall addition and subtraction facts for each number up to 20.
- Recall doubles of numbers to $10 + 10$
- Find doubles +1
- Recall halves of even numbers to 20.
- Add a single digit number to any number up to 20. ($17 + 2$)
- Take away a single digit number from any number up to 20. ($15 - 7$)
- Recite days of the week and months of the year
- Tell the time on an analogue clock to the hour and half past the hour.
- Revise the names and properties of 2D and 3D shapes

Year 2

Mental mathematics and fluency in rapid recall of number facts are one of the main aims of the new Mathematics Curriculum. The attached list shows the mental maths skills which pupils should master by the end of Year 2.

Oral and Mental calculation

- Count to and beyond 100 starting from any number
- Read and write numbers to 100 in numerals
- Read and write numbers to 100 in words
- Order a set of random numbers to 100.
- Find 1 more/1 less of any number to 100
- Find 10 more / 10 less of any number within 100
- Count in tens from any number, forwards and backwards
- Count on and back in 1s from any number to 100
- Count on and back in steps of 2, 3 and 5 from 0
- Count on and back in 10s from any number.
- Recall multiplication facts for the 2x, 5x and 10x tables
- Recognise odd and even numbers.
- Recall addition and subtraction facts for each number up to 20 including missing number questions
- Begin to recall related facts up to 100 i.e. $2+8=10$ so $20+80=100$
- Recall doubles of numbers to at least 50
- Recall halves of even numbers to 100
- Round number to 100 to the nearest 10
- Add a single digit number to any 2-digit number.
- Take away a single digit number from 2-digit number
- Find the difference between two numbers within 50
- Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot
- Use the inverse relationship between addition and subtraction to check calculations and solve missing number problems
- Use the inverse relationship between addition and subtraction to solve missing number problems
- Recall multiplication division facts for 2x, 5x and 10 tables
- Revise names and properties of 2D and 3D shapes

Year 3

Mental mathematics and fluency in rapid recall of number facts are one of the main aims of the new Mathematics Curriculum. The attached list shows the mental maths skills which pupils should master by the end of Year 3.

Oral and Mental calculation

- Read and write numbers to 1000 in numerals and words
- Partition three-digit numbers in different ways, (*e.g.* $325 = 300 + 20 + 5$ but is also $200 + 125$ etc.).
- Count on and back in 1s, 10 s or 100 s from any two- or three-digit number.
- Count from 0 in multiples of 2,3,4, 5, 8 , 10 , 50 and 100
- Find 1, 10 or 100 more/less than a given number
- Recall addition and subtraction facts for 10 ,20 and 100
- Mentally add groups of one digit numbers and/or multiples of 5 or 10.
- Add and subtract mentally:
 - 2 two-digit numbers
 - a three-digit number and ones
 - a three-digit number and tens
 - a three-digit number and hundreds.
- Recall multiplication facts for 2, 3, 4, 5, 8 and 10 times tables and associated division facts.
- Describe and extend number sequences involving counting on or back in different steps.
- Double any number up to 100.
- Halve any number up to 200.
- Count in fraction steps, *e.g.* $\frac{1}{5}, \frac{2}{5}, \frac{3}{5}$,
- Solve missing number problems
- Identify and describe 2-D and 3D shapes

Year 4

Mental mathematics and fluency in rapid recall of number facts are one of the main aims of the new Mathematics Curriculum. The attached list shows the mental maths skills which pupils should master by the end of Year 4.

Oral and Mental calculation

- Read and write numbers to 10,000 including those with one decimal place
- *Describe and extend number sequences involving counting on or back in different steps, including steps that are multiples, doubles or halves.*
- Count on and back in 0.1 s, 1s, 10 s or 100 s from any number up to 10,000.
- Count backwards through zero to include negative numbers.
- Count up and down in tenths. ($1/10, 2/10, 3/10, 4/10 \dots$ $10/10 = 1$ whole, 1 and $1/10$, 1 and $2/10$, 1 and $3/10 \dots$ 1 and $9/10$, 2)
- Count in fraction steps, e.g. $1/5, 2/5, 3/5 \dots$
- Order a set of random numbers to at least 10,000 including amounts of money and measures and numbers involving decimals
- Round any number to the nearest 10, 100 or 1000
- Recall and use addition and subtraction facts for 100.
- Recall and use addition and subtraction facts for multiples of 100 totalling 1000.
- Derive and use addition and subtraction facts for 1 and 10 (including with decimal numbers to one decimal place).
- Use partitioning to double or halve any number, including decimals to one decimal place.
- Count in multiples of 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 20, 25, 50 100, 250, 500 and 1000.
- Recall multiplication facts for all times up to 12×12 and derive associated division facts Multiply and divide numbers by 10, including those which have answers to one decimal place
- Multiply by 0 and 1
- Divide by 1
- Multiply together three numbers ($5 \times 6 \times 3$)
- Recognise and use factor pairs (factors of 12 are 2 and 6 because $2 \times 6 = 12$, factors of 12 are 3 and 4 because $3 \times 4 = 12$)
- Identify and use patterns of similar calculations for addition and subtraction and for multiplication and division statements
- Recognise 2D and 3D shapes in different orientations and describe them.

Year 5

Mental mathematics and fluency in rapid recall of number facts are one of the main aims of the new Mathematics Curriculum. The attached list shows the mental maths skills which pupils should master by the end of Year 5.

Oral and Mental calculation

- Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit.
- Read, write, order and compare numbers with up to three decimal places.
- Round decimals with two decimal places to the nearest whole number.
- Round decimals with two decimal places to one decimal place
- Round whole numbers and decimal numbers to the nearest 10, 100, 1000.
- Know what each digit represents in any number or decimal number
- Count forwards and backwards in steps of 0.01, 0.1, 1, 10, 100, and 1000 from any positive number or decimal
- Count forwards and backwards with positive and negative whole numbers, including through zero.
- Count forwards and backwards in equal steps
- Count on and back in fractional steps including mixed numbers such as $1\frac{1}{2}$.
- Count on and back in decimal steps.
- Order and compare numbers, negative numbers, fractions or decimal numbers up to two decimal places.
- Know by heart facts for all multiplication tables up to 12 x 12
- Find all the factors pairs of a number (factors of 12 are 2 and 6 because $2 \times 6 = 12$, factors of 12 are 3 and 4 because $3 \times 4 = 12$)
- Find the common factors of two numbers.
- Add and subtract numbers mentally
- Find related facts from known addition, subtraction, multiplication or division facts
- Use partitioning to double or halve any decimal number
- Multiply and divide whole numbers and decimals by 10, 100 or 1000 and apply this to converting units of measurement.

Year 6

Mental mathematics and fluency in rapid recall of number facts are one of the main aims of the new Mathematics Curriculum. The attached list shows the mental maths skills which pupils should master by the end of Year 6.

- Read and write any integer and know what each digit represents.
- Read and write decimal notation for tenths, hundredths and thousandths and know what each digit represents.
- Order and compare whole numbers up to 1 000 000 including negative numbers, and decimals.
- Count forwards and backwards from any number including decimals
- Know by heart and use all multiplication and division facts for tables up to 12×12 .
- Find and use all the pairs of decimals with a sum of 0.1, 1 or 10.
- Find and use related facts from those already known e.g. “ If I know $3 \times 6 = 18$ or $10 + 90 = 100$..then what else do I know “
- Multiply and divide two-digit and single-digit numbers –*with jottings*.
- Double or halve any number-*use partitioning and jottings*.
- Multiply and divide two-digit decimals by a single digit number –*use jottings*.
- Mentally multiply and divide two-digit decimals by a single digit number, e.g., $(O.t \times O$ or $O.t \div O)$.
- Convert between units of measurement by multiplying or dividing 10, 100 or 100
- Round whole numbers to the nearest 10, 100, 1000
- Round numbers with up to two decimal places to the nearest integer or number of decimal places
- Compare and order fractions, including fractions >1 *on a number line*
- Count in fractional steps including mixed numbers