

How to support your child in Maths in Year 5

The main focus of maths teaching in Year 5 is to ensure that pupils extend their understanding of the number system and place value to include larger whole numbers (positive and negative). This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio.

Number and Place value

Children should already be able to:

- 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, and 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.

New learning:

- Read and write numbers to at least 1 000 000 and determine the value of each digit
- Order and compare numbers to at least 1 000 000
- Read, write, order and compare numbers with up to three decimal places
- Convert between different units of metric measure (e.g. x or ÷ by 10, 100, 1000)
- Count forwards and backwards with positive and negative whole numbers, including through zero
- interpret negative numbers in context

Example of deeper understanding:

What can we say about 48000?		
It isless than		
It is made of	thousands.	
It is made of It is made of	hundreds. tens.	
	, 1	

Mental and written calculations

Addition and subtraction

Children should already be able to:

- Add multiples of 10s , 100s, 1000s, tenths,
- Be fluent when adding 2 digit + 2 digit including with decimals
- Partition second number to add
- Use number facts, bridging and place value
- Adjust numbers to add
- Partition and recombine
- Subtract multiples of 10s, 100s, 1000s, tenths,
- Be fluent when subtracting 2 digit 2 digit including with decimals
- Partition second number to subtract
- Find the difference between 2 numbers
- Adjust numbers to subtract

New learning:

- Add and subtract numbers mentally with increasingly large numbers
- Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)
- Solve problems involving addition and subtraction involving numbers up to three decimal places
- Add and subtract decimals including those with a different number of decimal places

How we teach it

Addition

Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) 23454 + 596 24050 111 Set out the calculation 23454 in columns. + 596 Find the sum of the ones. 4 ones + 6 ones = 10 ones 23454 (or 1 ten and 0 ones) +__596 so record 0 in the ones and 1 below the line in the tens. Find the sum of the tens. 5 tens + 9 tens + 1 ten - 15 tens (or 1 hundred +__596 50 and 5 tens) so record a 5 In the tens and 1 below the line in the hundreds. Find the sum of the hundreds. 4 hundreds + 5 hundreds +_596 + 1 hundred - 10 hundreds 050 (or 1 thousand and 0 hundreds) so record a 0 In the hundreds and a 1 In the thousands. Find the sum of the thousands. 23454 3 thousands + 1 thousand +__596 - 4 thousands so record a 4050 4 In the thousands column. Find the sum of the ten thousan 23454 There are only 2 ten thousands * 596 so record a 2 in the final column 24050

Subtraction

Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)

Set out the calculation in columns	52344 1187
The 1s column: four subtract seven Because seven is greater than four, exchange a 10 for ten 1s. So there are now three 10s and fourteen 1s.	523#4 1187
Fourteen 1s subtract seven 1s makes seven 1s – record this.	52344 1187
The 10s column: three subtract eight. Because eight is greater than three, exchange a 100 for ten 10s. So there are now two 100s and thirteen 10s.	527#4 1187 7
Thirteen 10s subtract eight 10s makes five 10s – record this.	52364 - 1187 - 57
The 100s column: two subtract one. Two 100s subtract one 100 makes one 100 – record this.	523,44 -1187 -257
The 1000s column: two subtract one. Two 1000s subtract one 1000 makes one 1000 – record this. The 10,000s column: there are only five 10000s with nothing to subtract. So record 5.	5 2 3/4 4 - 1187 -1157 -157 5 2 3/4 4 - 1187 5 1157

Example of deeper understanding:

Set out and solve these calculations using a column method.

3254 + = 7999

2431 = - 3456

6373 - = 35816719 = -4562

Multiplication and Division

Children should already be able to:

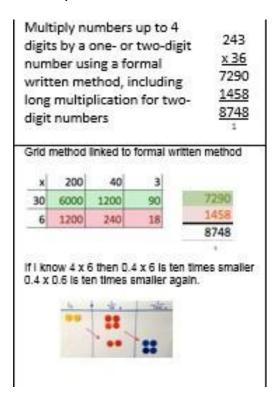
- Know 4x, 8x tables and division facts
- Make a number 100, 1000 times bigger
- Know 3x, 6x and 12x tables and division facts
- Make a number 10, 100, 1000 times smaller
- Double larger numbers and decimals
- Know 9x tables and division facts
- Know 11x, 7x tables and division facts
- Partition to multiply mentally
- Know 6x, 12 x tables and division facts
- Partition to divide mentally
- Halve larger numbers and decimals
- Partition decimals to divide mentally

New learning:

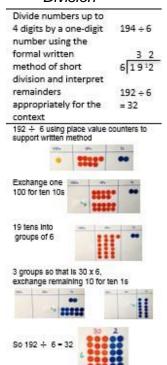
- · Identify multiples and factors, including all factor pairs of a number, and common factors of 2 numbers
- Solve calculation problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes
- Read and write decimal numbers as fractions

How we teach it:

Multiplication



Division



Example of deeper understanding:

Fill in the missing numbers in this multiplication pyramid.

