



Roxeth Primary School Mathematical Calculations

Addition Step 1

+ = signs and missing numbers

Children need to understand the concept of equality before using the '=' sign. Calculations should be written either side of the equality sign so that the sign is not just interpreted as 'the answer'.

$$2 = 1 + 1$$

$$2 + 3 = 4 + 1$$

Missing numbers need to be placed in all possible places.

$$3 + 4 = \square$$

$$\square = 3 + 4$$

$$3 + \square = 7$$

$$7 = \square + 4$$

Counting and combining sets of Objects

Combining two sets of objects (aggregation) which will progress onto adding on to a set (augmentation)



Understanding of counting on with a numbertrack.



Understanding of counting on with a number line (supported by models and images).

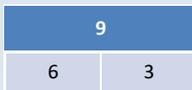
$$7 + 4 = 11$$



Children will use concrete models e.g. numicon



And progress to visual bar modelling



Addition Step 2

Missing number problems:

$$14 + 5 = 10 + \square$$

$$32 + \square + \square = 100$$

$$35 = 1 + \square + 5$$

Counting on in tens using dienes

$$20 + 10 = 30$$



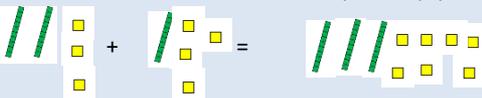
Adding tens and ones using dienes

$$23 + 10 = 33$$



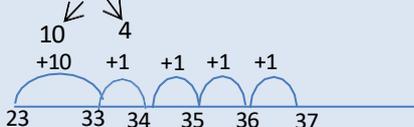
Adding two 2 digit numbers

$$23 + 14 = (20 + 10) + (3 + 4) = 37$$



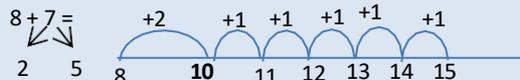
Adding using a number line – partition the second number

$$23 + 14 = 37$$



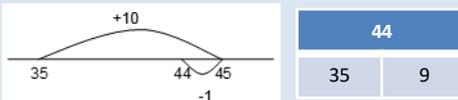
Partitioning and bridging through 10

When adding, you will often need to reach a multiple of 10 e.g. children should be able to partition the 7 to make 2 and 5. You need to add on 2 first to make 10.



Adding 9 or 11 by adding 10 and adding or subtracting 1

35 + 9 (add 10 and subtract 1)



Moving towards a written method without decomposition

Once the child is completely secure with partitioning and the number line, they can then begin the first step towards a formal written method.

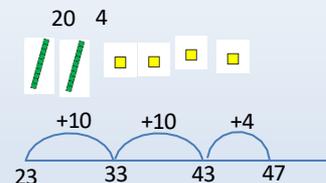
$$\begin{array}{r} 32 \\ + 15 \\ \hline 7 \\ \hline 40 \\ \hline 47 \end{array}$$

Addition Step 3

Missing number problems using a range of equations as in Years 1 and 2 but with appropriate, larger numbers.

Adding using a number line

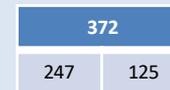
Similar as in Years 1 and 2, however doing larger jumps (not jumps of ones). Partition the second number only. 23 + 24



Expanded written method – partition the second number

Children should only move onto written methods once they are completely secure with partitioning and number lines. **Number lines are used all the way up to Year 6.**

$$247 + 125$$



$$247 + 100 = 347$$

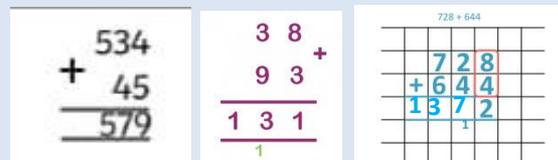
$$347 + 20 = 367$$

$$367 + 5 = 372$$

Children need to be secure adding multiples of 100 and 10 to any three-digit number.

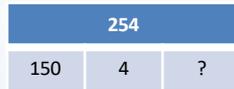
Moving towards a written method (up to 3-digits)

Please see Year 2 written method first and become secure with this before moving on. The numbers carried over to the next column, should be written underneath.



Addition Step 4

Children can solve missing number problems with increasingly large numbers using the **bar model**.



Mental methods should continue to develop, supported by a range of models and images, including the **number line**, **numicon** and **dienes**. The **bar model** should continue to be used to help with problem solving.

Written methods (progressing to 4-digits)

Column addition methods progressing up to calculations with 4-digit numbers.

$$\begin{array}{r} 1945 \\ + 1215 \\ \hline 3160 \\ \text{1 1} \end{array}$$

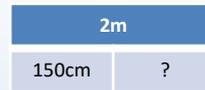
Children should be able to make the choice of reverting to Year 2 written method if experiencing any difficulty.

Extend to up to four decimal places and adding several numbers with different numbers of digits.

$$\begin{array}{r} 72.8 \\ + 54.6 \\ \hline 127.4 \\ \text{1} \end{array}$$

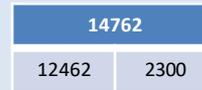
Addition Step 5

Children can solve missing number problems with increasingly large numbers in a variety of contexts such as money or length using the **bar model**.



Mental methods should continue to develop, supported by a range of models and images, including the **number line**, **numicon**, **dienes** and **bar model**. The bar model should continue to be used to help with problem solving. Children should practise with increasingly large numbers to aid fluency

e.g. $12,462 + 2300 = 14,762$



Written methods (progressing to more than 4-digits)

When understanding of the **number line** and **partitioning** is secure, children will move on to using the column method for whole numbers and decimal numbers as an efficient written method.

$$\begin{array}{r} 29.55 \\ + 13.15 \\ \hline 42.70 \\ \text{1 1} \end{array}$$

When adding using the column method, the numbers carried over to the next column should be written underneath (see numbers in blue).

However, if your child is already confident at column addition, placing the carried numbers elsewhere, they should be allowed to continue to do so.

Addition Step 6

Children can solve missing number problems with increasingly large numbers in a variety of contexts, and represent them algebraically.



Mental methods should continue to develop, supported by a range of models and images, including the **number line**, **numicon** and **dienes**. The **bar model** should continue to be used to help with problem solving.

Written methods

As year 5, progressing to larger numbers, aiming for both conceptual understanding and procedural fluency with column method to be secured. Continue calculating with decimals, including those with different numbers of decimal places

Physical objects, such as **numicon** or **dienes**, should be used alongside the column method to develop understanding of addition.

Problem Solving

Pupils must have the opportunity to apply their knowledge in a variety of contexts and problems such as maths investigations.

Subtraction Step 1

Missing number problems:

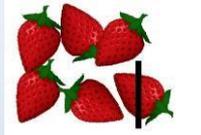
$$20 - \square = 9$$

$$15 - 9 = \square$$

$$16 - 0 = \square$$

Single digit and 2 digit number subtraction:

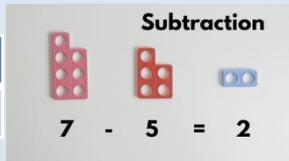
Use concrete objects and pictures.



$$6 - 1 = 5$$

Using manipulatives to subtract: Numicon, dienes, multi-link cubes. Manipulatives are objects that are used to explore maths.

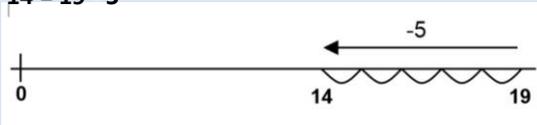
7	
5	?



Number lines:

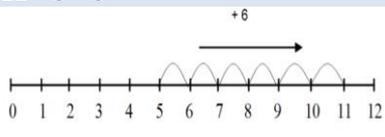
Version 1: Understand subtraction as take-away (counting backwards using a number line):

$$14 = 19 - 5$$



Version 2: Understand subtraction as finding the difference: (counting on using a number line):

$$11 - 5 = 6$$



Subtraction Step 2

Missing number problems:

$$52 - 8 = \square$$

$$\square - 20 = 25$$

$$22 = \square - 6$$

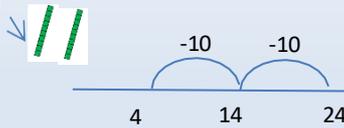
$$6 + \square + 3 = 11$$

It is valuable to use a range of representations (also see Y1). 7

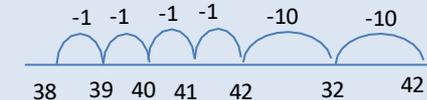
Number lines:

Continue to use number lines to subtract. Refer back to Year 1 version 1 and 2. Partition the second number only.

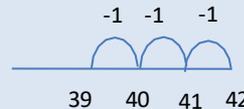
$$24 - 20$$



$$42 - 24$$



$$42 - ? = 39$$



Towards written methods

Children will begin to learn the first step of the column method for subtraction without decomposition only when they are secure with subtracting on a **number line and partitioning**.

$\begin{array}{r} 34 \\ - 12 \\ \hline 22 \end{array}$	<table border="1" style="margin: auto;"> <tr><td colspan="2">34</td></tr> <tr><td>12</td><td>22</td></tr> </table>	34		12	22	$\begin{array}{r} 48 \\ - 16 \\ \hline 32 \end{array}$	<table border="1" style="margin: auto;"> <tr><td colspan="2">48</td></tr> <tr><td>16</td><td>36</td></tr> </table>	48		16	36
34											
12	22										
48											
16	36										

The **bar model** should continue to be used to help children to subtract.

Subtraction Step 3

Missing number problems:

$$\square = 43 - 27$$

$$145 - \square = 138$$

$$274 - 30 = \square$$

$$245 - \square = 195$$

$$532 - 200 = \square$$

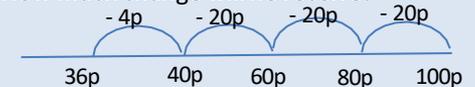
$$364 - 153 = \square$$

Mental methods:

These should continue to develop, supported by a range of models and images, including **dienes** and **numicon**. The **bar model** should continue to be used to help with problem solving (see Years 1 and 2).

Number line:

Children should make choices about whether they prefer to add on or count back (refer to Year 1 version 1 and 2) for all areas of maths e.g. Kevin spends buys a pencil for 64p. He pays with £1. How much change will he receive?



Written methods (progressing to 3-digits)

Once children are secure with using the number line and partitioning, only then should they move on to the written methods.

Expanded written method – partition the second number

$$65 - 12 =$$



$$65 - 10 = 55$$

$$55 - 2 = 53$$

Formal written method (up to 3-digits) with and without decomposition

$\begin{array}{r} 32 \\ - 12 \\ \hline 20 \end{array}$	$\begin{array}{r} 165 \\ - 24 \\ \hline 141 \end{array}$
--	--

H	T	U	4	5	2
-	2	2	-	1	3
	2	6		3	1
	2	1		3	1

Subtraction Step 4

Missing number/digit problems:

$$456 + \square = 710$$

$$1\square7 + 6\square = 200$$

$$60 + 99 + \square = 340$$

$$200 - 90 - 80 = \square$$

$$225 - \square = 150$$

$$\square - 25 = 67$$

$$3450 - 1000 = \square$$

$$\square - 2000 = 900$$

Mental methods should continue to develop, supported by a range of models and images, including the **number line.**, **numicon** and **dienes**. The **bar model** should continue to be used to help with problem solving.

Written methods (progressing to 4-digits)

Column subtraction with **decomposition**, progressing to calculations with 4-digit numbers.

If understanding of the expanded method (please see Year 3) is secure, children will move on to the formal method of column subtraction.

$$\begin{array}{r} \overset{2}{\cancel{6}} \overset{1}{\cancel{2}} \\ - 114 \\ \hline 118 \end{array}$$

When subtracting using the column method, the numbers being decomposed should be written above the top line as the answer is calculated.

However, if your child is already confident at column subtraction, placing the decomposed numbers elsewhere, they should be allowed to continue to do so.

Progress to subtracting decimals.

$$\begin{array}{r} \overset{8}{9} \\ - \overset{9}{\cancel{9}} \overset{10}{10} \\ \hline 1.51 \end{array}$$

Subtraction Step 5

Missing number/digit problems:

$$6.45 = 6 + 0.4 + \square$$

$$119 - \square = 86$$

$$1,000,000 - \square = 999,000$$

$$600,000 + \square + 1000 = 671,000$$

$$12,462 - 2300 = \square$$

6.45

6	0.4	?
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Mental methods should continue to develop, supported by a range of models and images, including the **number line**, **numicon** and **dienes**. The **bar model** should continue to be used to help with problem solving.

Written methods (progressing to more than 4-digits)

When understanding of the expanded method is secure (please see Year 3) children will move on to the formal method of decomposition.

$$\begin{array}{r} \overset{5}{\cancel{6}} \overset{1}{\cancel{2}} \overset{2}{\cancel{3}} \overset{1}{\cancel{2}} \\ - 4814 \\ \hline 1418 \end{array}$$

When subtracting using the column method, the numbers being decomposed should be written above the top line as the answer is calculated.

However, if your child is already confident at column subtraction, placing the decomposed numbers elsewhere, they should be allowed to continue to do so.

Continue subtracting decimals, including those with different numbers of decimal places e.g.

$$12.4 - 3.26 =$$

$$9.8 - 6.21 =$$

$$3.4 - 2.01 =$$

Subtraction Step 6

Missing number/digit problems: \square and \square each stand for a different number. $\square = 34$. $\square + \square = \square + \square + \square$. What is the value of \square ? What if $\square = 28$? What if $\square = 21$?

$$10,000,000 = 9,000,100 + \square$$

$$7 - 2 \times 3 = \square$$

$$(7 - 2) \times 3 = \square$$

$$(\square - 2) \times 3 = 15$$

Mental methods should continue to develop, supported by a range of models and images, including the **number line**, **numicon** and **dienes**. The **bar model** should continue to be used to help with problem solving.

Written methods

As year 5, but progressing to larger numbers past 1 million (7 digits), aiming for children to work through the stages of decomposition fluently. Continue subtracting with decimals, including those with different numbers of decimal places.

	5	4	0	4		
	2	8	5	6		
	2	2	4	5		

Physical objects, such as **numicon**, should be used alongside the column method to develop understanding of subtraction.

Problem Solving

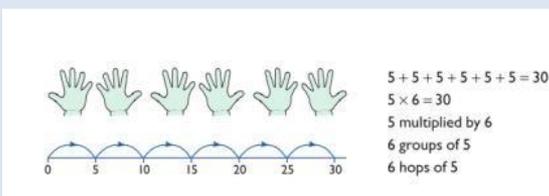
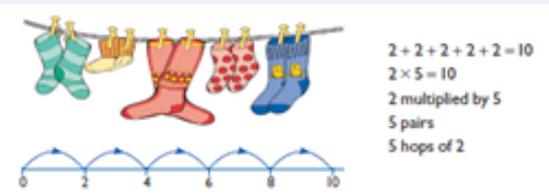
Pupils have the opportunity to apply their knowledge in a variety of contexts and problems such as maths investigations.

Multiplication Step 1

Children to count in 2s, 5s and 10s.

Doubling and combining

Understand multiplication is related to doubling and combining groups of the same size (repeated addition)



Problem solving Use concrete objects (including money and measures) e.g. 3 friends have 5p each. How much is this altogether?



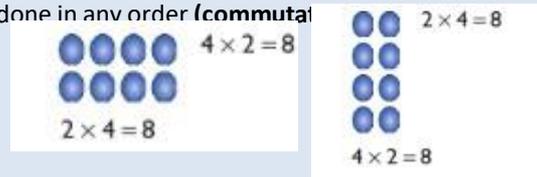
This can be written as:

$5 + 5 + 5$ (repeated addition)
Or 5×3

Use **numicon** to develop the vocabulary relating to



Use **arrays** to understand multiplication can be done in any order (**commutative**)



Multiplication Step 2

Children to count in 2s, 3s, 5s from zero.

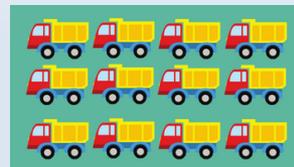
They also need to count in 10s from any number, forwards and backwards e.g. 57, 47, 37, 27

Missing number problems

Using understanding of the inverse and practical resources to solve missing number problems.

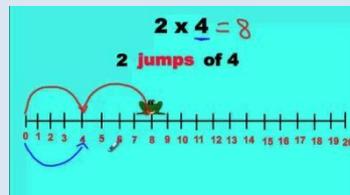
$7 \times 2 = \square$ $\square = 2 \times 7$
 $7 \times \square = 14$ $14 = \square \times 7$
 $\square \times 2 = 14$ $14 = 2 \times \square$

Develop understanding of multiplication using **arrays with repeated addition** and **number lines**.

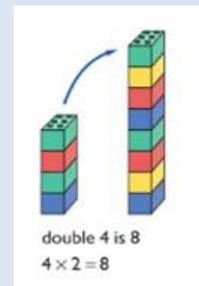


This array can be written in 4 different ways:

- $4 + 4 + 4 = 12$
- $3 + 3 + 3 + 3 = 12$
- $4 \times 3 = 12$
- $3 \times 4 = 12$



Begin to develop understanding of multiplication as scaling (3 times bigger/taller):



Doubling numbers up to 10 + 10
Link with understanding scaling
Using known doubles to work out double 2d numbers
(double 15 = double 10 + double 5)

Multiplication Step 3

Children to know the 2s, 3s, 5s and 10s (Year 2).

Recall and use multiplication and division facts for the 3s, 4s and 8s (Year 3).

Missing number problems

Continue with a range of sums s as in Year 2 but with appropriate numbers.

Mental methods

Doubling 2 digit numbers using partitioning e.g. double 24.

Double 20 is 40

Double 4 is 8.

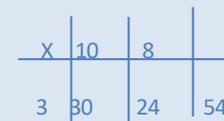
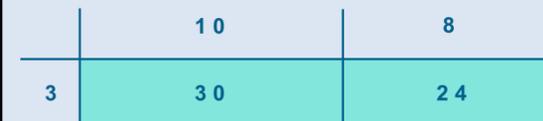
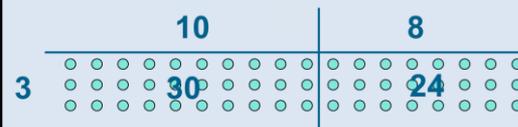
$40 + 8 = 48$

Continue to multiply on a **number line**.

Explore different methods for larger numbers e.g. $13 \times 4 = 10$ groups of 4 and 3 groups of 4

Written methods – grid method

Developing written methods using understanding of visual images e.g. 18×3



$30 + 24 = 54$

Give children opportunities for children to explore this method using **dienes** and **numicon**.

Multiplication Step 4

Children to recall all multiplication and division facts up to 12 x 12

Missing number problems

Continue with a range of equations as in Year 2 but with appropriate numbers.

Also include equations with missing digits e.g.

$$\square \times 5 = 160$$

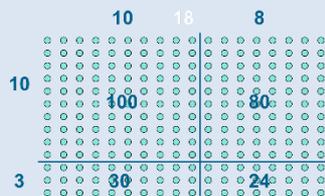
Mental methods

Counting in multiples of 25 and 100, and steps of 1/100.

Solving practical problems where children need to scale up e.g. how tall would a 25cm sunflower be if it grew 6 times taller?

Written methods – grid method (progressing to 3 digits x 2 digits)

Children to embed and deepen their understanding of the grid method to multiply 2 digits x 2 digits (e.g. 18 x 13), progressing to 3 digits x 2 digits (e.g. 123 x 14). Ensure this is linked back to their understanding of arrays and place value.



	10	8	
10	100	80	
3	30	24	

Multiplication Step 5

Children to recall all multiplication and division facts up to 12 x 12 (Year 4)

Missing number problems

Continue with a range of equations as in Year 2 but with appropriate numbers. Also include equations with missing digits.

Mental methods

X by 10, 100, 1000 using moving digits on a place value grid.

Multiply by Tens					
1000	100	10	1	$\frac{1}{10}$	$\frac{1}{100}$
Thousands	Hundreds	Tens	Ones	Tenths	Hundredths
			3	1	4
		3	1	4	$\times 10$

Use practical resources and jottings to explore equivalent statements (e.g. $4 \times 35 = 2 \times 2 \times 35$)

Recall of prime numbers up to 19 and identify prime numbers up to 100 (with reasoning)

Solving practical problems where children need to scale up.

Identify factor pairs for numbers

Written methods (progressing to 4 digits x 2 digits e.g. 1247 x 13)

children to explore how the grid method supports an understanding of the column method.

Grid method:

	10	8	
10	100	80	
3	30	24	

Column method:

		1	8		
	\times	1	3		
		1	8	0	
		5	4		
		2	3	4	

Multiplication Step 6

Children to recall all multiplication and division facts up to 12 x 12 (Year 4)

Missing number problems

Continue with a range of equations as in Year 2 but with appropriate numbers. Also include equations with missing digits.

Mental methods

Identifying common factors and multiples of given numbers.

Solving practical problems where children need to scale up.

Written methods (up to 4-digits by 2-digits)

Continue to refine and deepen understanding of written methods including grid method and column method.

	2	3	1	
	1	3	4	2
\times	1	8		
	1	3	4	2
	1	0	7	3
	2	4	1	5
	2	4	1	5

Physical objects, such as numicon, should be used alongside the column method to develop understanding of multiplication.

Problem Solving

Pupils have the opportunity to apply their knowledge in a variety of contexts and problems such as maths investigations.

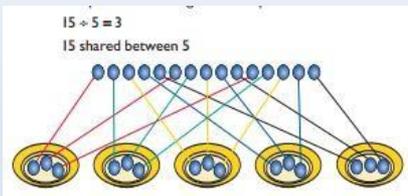
Division Step 1

Children to count in 2s, 5s and 10s.

Children should be given opportunities to reason about what they notice in number patterns.

Group AND share small quantities- understanding the difference between the two concepts.

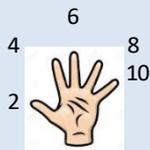
Sharing:



Children should be taught to share using concrete apparatus such as numicon and dienes.

Grouping

Children should apply their counting skills to develop some understanding of grouping. $10 \div 2 = 5$



How many 2s in 10?

Use of arrays as a pictorial representation for division.
 $10 \div 2 = 5$ (Reasoning - there are 5 groups of 2).
 $10 \div 5 = 2$ (Reasoning - there are 2 groups of 5).



Children should be able to find $\frac{1}{2}$ and $\frac{1}{4}$ and simple fractions of objects, numbers and quantities by dividing by 2 and 4.

Division Step 2

Children to count in 2s, 3s, 5s from zero.

They also need to count in 10s from any number, forwards and backwards e.g. 57, 47, 37, 27

\div = signs and missing numbers

$$\begin{array}{ll} 6 \div 2 = \square & \square = 6 \div 2 \\ 6 \div \square = 3 & 3 = 6 \div \square \\ \square \div 2 = 3 & 3 = \square \div 2 \\ \square \div \square = 3 & 3 = \square \div \square \end{array}$$

Know and understand the difference between sharing and grouping.

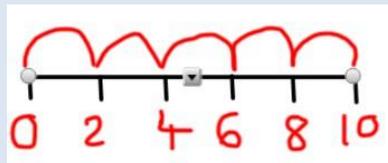
Introduce children to the \div sign.

Children should continue to use grouping and sharing for division using **dienes, numicon, arrays and pictorial representations** such as **bar modelling**.

Grouping using a number line

Group from zero in jumps of the divisor to find out 'how many groups of 2 are there in 10?'

$$10 \div 2 = 5$$

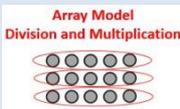


5 groups of 2 equals 10

2 4 6 8 10

Arrays

Continue work on arrays. Support children to understand how multiplication and division are inverse. Look at an array – what do you see?



$$15 \div 3 = 5$$

Total number: 15
Number of groups: 3
Number in each group: 5

$$3 \times 5 = 15$$

Number of groups: 3
Number in each group: 5
Total number: 15

Division Step 3

Children to know the 2s, 3s, 5s and 10s (Year 2).

Recall and use multiplication and division facts for the 3s, 4s and 8s (Year 3).

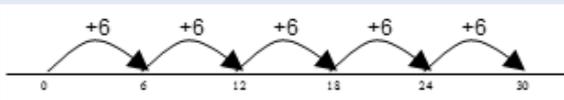
\div = signs and missing numbers

Continue using a range of equations as in year 2 but with appropriate numbers.

Grouping using a number line

How many 6s are in 30?

$30 \div 6$ can be modelled as:



Becoming more efficient using a number line

Children need to be able to partition the dividend in different ways.

$$48 \div 4 = 12$$



Remainders

$$49 \div 4 = 12 \text{ r}1$$



Sharing : 49 shared between 4. How many left over?
 Grouping : How many 4s make 49. How many are left over?

Place value counters can be used to support children apply their knowledge of grouping.

For example:

$60 \div 10 =$ How many groups of 10 in 60?

$600 \div 100 =$ How many groups of 100 in 600?

Division Step 4

Children to recall all multiplication and division facts up to 12 x 12

\div = signs and missing numbers

Continue using a range of equations as in year 2 but with appropriate numbers.

Sharing, Grouping and using a number line

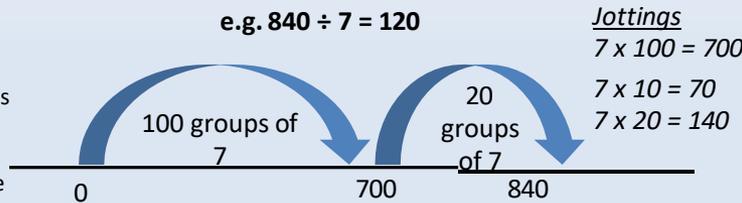
Children will continue to explore division as **sharing and grouping**, and to represent calculations on a **number line** until they have a secure understanding. Children should progress in their use of written division calculations:

- Using tables facts with which they are fluent
- Experiencing a logical progression in the numbers they use, for example:

- Dividend just over 10x the divisor, e.g. $84 \div 7$
- Dividend just over 10x the divisor when the divisor is a teen number, e.g. $173 \div 15$ (learning sensible strategies for calculations such as $102 \div 17$)
- Dividend over 100x the divisor, e.g. $840 \div 7$
- Dividend over 20x the divisor, e.g. $168 \div 7$

All of the above stages should include calculations with remainders as well as without.

Remainders should be interpreted according to the context. (i.e. rounded up or down to relate to the answer to the problem)

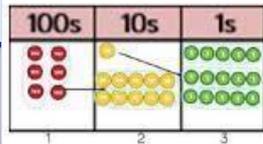


Formal Written Methods (Year 4)

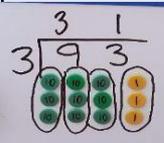
Formal short division should only be introduced once children have a good understanding of division, its links with multiplication and the idea of 'chunking up' to find a target number (see use of number lines above).

Short division to be modelled for understanding using place value counters as shown below. Calculations with 2 and 3-digit dividends.

Short division using place value counters to group.
 $615 \div 5$



- Make 615 with place value counters.
- How many groups of 5 hundreds can you make with 6 hundred counters?
- Exchange 1 hundred for 10 tens.
- How many groups of 5 tens can you make with 11 ten counters?
- Exchange 1 ten for 10 ones.
- How many groups of 5 ones can you make with 15 ones?

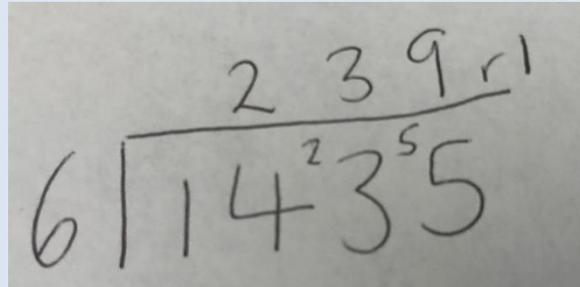


Division Step 5

Formal Written Methods (Year 5)

Continued as shown in Year 4, leading to the efficient use of a formal method. The language of grouping to be used.

E.g. $1435 \div 6$



Children begin to practically develop their understanding of how to express the remainder as a decimal or a fraction. Ensure practical understanding allows children to work through this (e.g. what could I do with this remaining 1? How could I share this between 6 as well?)

Division Step 6

Children to recall all multiplication and division facts up to 12 x 12

\div = signs and missing numbers

Continue using a range of equations but with appropriate numbers

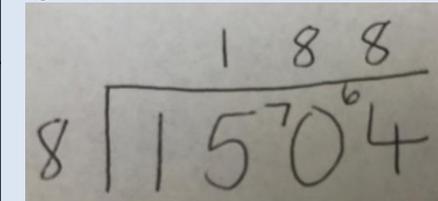
Sharing and Grouping and using a number line

Children will continue to explore division as sharing and grouping, and to represent calculations on a number line as appropriate.

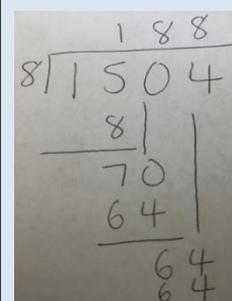
Quotients should be expressed as decimals and fractions

Formal Written Methods – long and short division including decimal remainder.

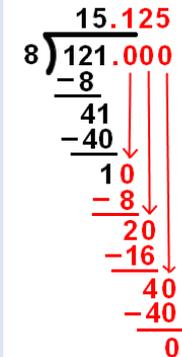
E.g. $1504 \div 8$ (short)



E.g. $1504 \div 8$ (long)



E.g. $121 \div 8$ (long with decimal remainder)



Division continued
ALL YEAR GROUPS

Glossary

Physical objects, such as **numicon**, should be used alongside the column method to develop understanding of division.

Problem Solving

Teachers should ensure that pupils have the opportunity to apply their knowledge in a variety of contexts and problems such as maths investigations.

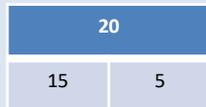
Glossary

Algebra – Maths which uses letters and other symbols to represent numbers and quantities.

Arrays – an orderly arrangement of circles which represent numbers.



Bar modelling – a visual way to organize data for problem solving.



Chunking - repeated subtraction of the divisor and multiples of the divisor – in other words, working out how many groups of a number fit into another number.

Commutative – when the operation means the quantities connected give the same result, no matter which order they are put in e.g. $3 + 4 = 7$ and $4 + 3 = 7$.

Concrete objects/apparatus - physical objects your children can touch and use to represent numbers e.g. cubes, counters, dice etc.

Decomposition – breaking a number apart e.g. $347 = 300 + 40 + 7$.

Dienes apparatus (Dienes) – blocks which represent 1, 10, 100 and 1000.

Dividend – the number you want to divide up.

Divisor – the number dividing the number you want to divide up.

Equation – a maths statement which expresses 2 equal mathematical expressions, indicated by the = sign.

Expanded method – showing working out in division a line at a time.

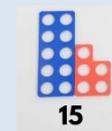
Factor pairs – any 2 numbers multiplied to give a certain number e.g. $16 = 8$ and 2 , or 4 and 4 or 16 and 1 .

Grid method – a way for children to solve multiplication problems as shown in the Multiplication section from Year 3 up.

Grouping – demonstrating division by putting objects into groups.

Manipulatives - physical objects your children can touch and use to represent numbers e.g. numicon, cubes, counters, dice etc.

Numicon - flat plastic shapes with holes in, with each shape representing a number from 1 to 10. The aim of **Numicon** is to make numbers real for children through them being able to see and touch them.



Partitioning - a way of splitting large numbers into smaller units so they're easier to work with.

Pictorial representation – a picture used to show the numbers being calculated in a sum or problem.

Prime numbers – a number greater than 1 that can only be divided by itself and 1 e.g. 7

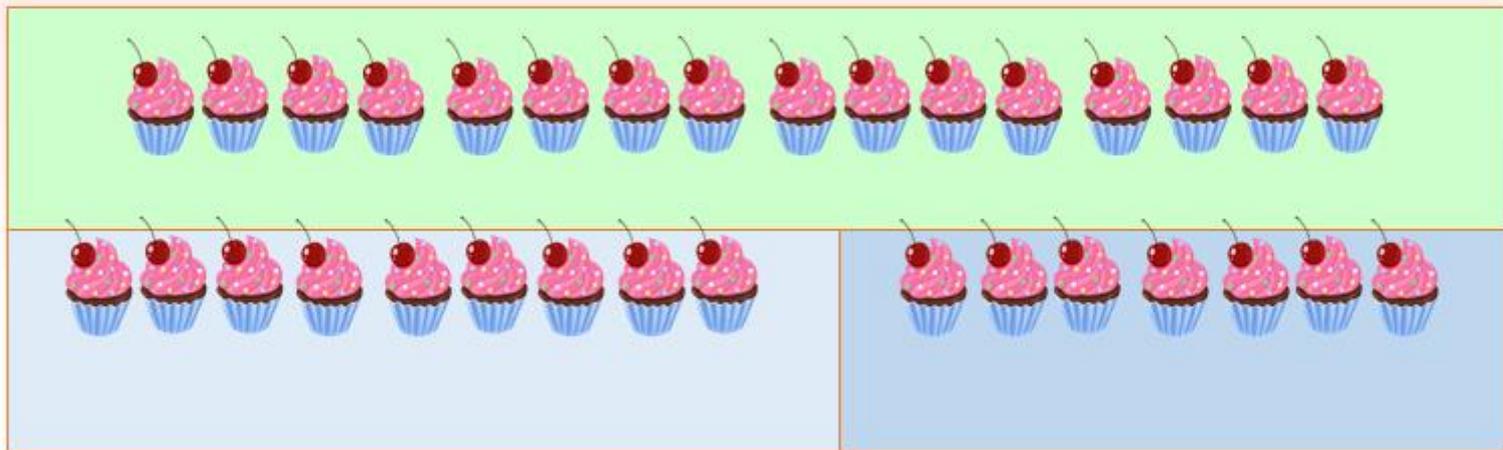
Please see key mathematical
vocabulary for the 4 operations
*(addition, subtraction,
multiplication and division)* on
the next slides

Addition



$$9 + 7 = 16$$

Addend + Addend = Sum



Subtraction



$$16 - 7 = 9$$

$$16 - 9 = 7$$

Minuend - **Subtrahend** = **Difference**

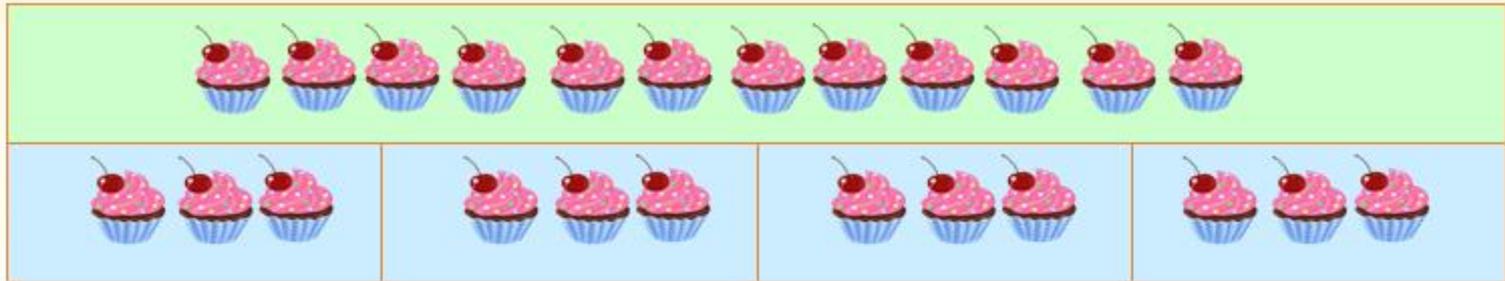


Multiplication



$$4 \times 3 = 12$$

Factor \times Factor = Product



Division



$$12 \div 4 = 3$$

dividend \div divisor = quotient



Websites to support learning

- White Rose Maths
- Times Table Rockstars – Children in KS2 have a school subscription
- Purple Mash
- BBC Bitesize
- NRich
- Oxford Owl
- Top Marks
- Primary Resources
- ICT games
- Maths Frame