Together with Jesus, we grow in love

Holy Family Catholic Primary School

Calculation Policy

Last Reviewed: Sep 2021
Review date Sep 2022

Introduction

We have adapted this policy from School Improvement Liverpool.

The policy focuses on the four operations of addition, subtraction, multiplication and division and includes a list of the key mental maths skills that support written methods.

For each operation, there are stages, starting with the practical methods that support conceptual understanding moving through to methods that allow children to demonstrate efficiency in procedural approaches.

It is important to emphasise that alternative methods may be more appropriate for certain calculations and that informal methods currently used successfully in schools may continue to be used as they support the raised expectations in calculation outlined in this policy. At Holy Family, we use a ‘Stage not age’ approach where teacher knowledge of individual children is used to ascertain which stage a child is at and therefore, which strategies they will be using.

Addition

Written methods for addition

It is important that children's mental methods of calculation are practised on a regular basis and secured alongside their learning and use of written methods of addition.

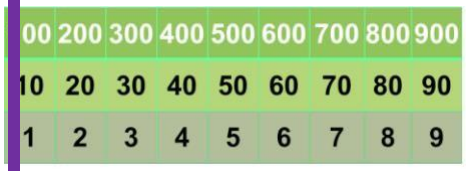
The aim is that children use mental methods when appropriate, but for calculations that they cannot do in their heads they use a written method accurately and with confidence.

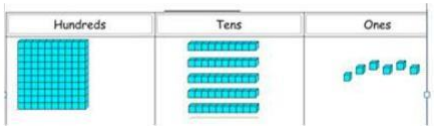
Children are taught and acquire secure mental methods of calculation and one written method of calculation for addition which they know they can rely on when mental methods are not appropriate.

This policy shows the possible stages of each written method for addition, each stage building towards a more refined method.

There are some key basic skills that children need to help with addition, which include:

- counting
- estimating amounts and totals
  - recalling all addition **pairs** to 10, 20 and 100 (7 + 3 = 10, 17 + 3 = 20, 70 + 30 = 100)
  - knowing number **facts** to 10 (6 + 2 = 8)
- adding mentally a series of one-digit numbers (5 + 8 + 4)
- adding multiples of 10 (60 + 70) or of 100 (600 + 700) using the related addition fact, 6 + 7, and their knowledge of place value
- partitioning two-digit and three-digit numbers into multiples of 100, 10 and 1 in different ways (432 into 400 + 30 + 2 and also into 300 + 120 + 12) – (
  Additive component of place value):

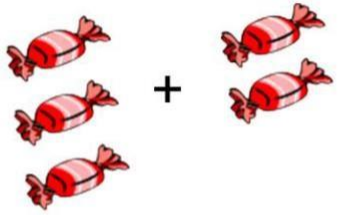
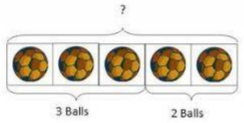
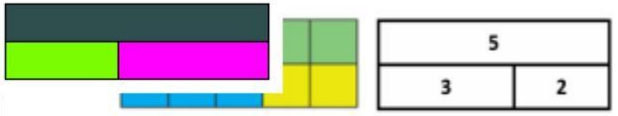
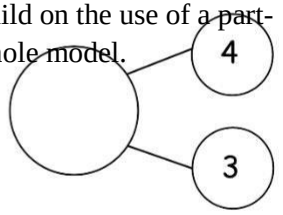




- understanding and using addition and subtraction as inverse operations

Using and applying i s a key theme and one of the aims of National Curriculum and before children move onto th e next stage in written calculation it is impo rtant that their skills are broadened th rough their use and application in a range of context s, these include:

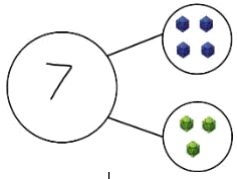
- using inverse
- missing box questio ns
- using units of mea sure including money and time
- word problems
- open ended investi gations

Objective and Strategies	Concrete	Pictorial	Abstract
Combining two parts to make a whole: part-whole model	Use a variety of concrete items, eg. cubes, toys, Cuisenaire rods and Numicon, to add two numbers together, as a group. Placing cubes in a bar formation builds understanding of the bar model.  	Use given pictures to add two numbers together, as a group. Pictures can be shown in a bar formation. Children can then progress to drawing their own pictures, or dots, to represent the numbers.   Link work with cubes, to the bar model, by initially shading individual squares, to represent the numbers.  	Use numerical recording, alongside concrete and pictorial representations, to help children progress towards an abstract understanding of numbers. Build on the use of a part-whole model.  **4+3=7** **3+4=7** **7=3+4** **7=4+3**

Starting at the bigger number and counting on

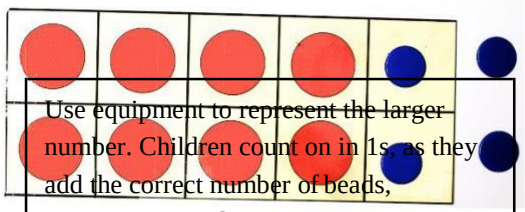
Place concrete equipment on a part-whole model.

One part is 4,
one part is 3,
the whole is 7.



Children represent the larger number, using ~~concrete equipment, and then~~ count on in 1s, while adding the correct number of beads, counters etc.

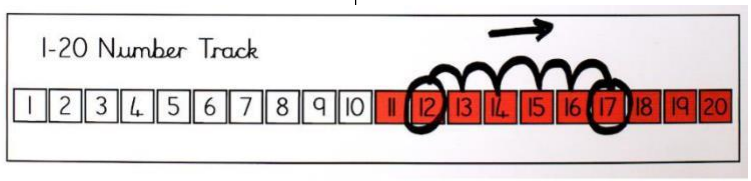
8+4=12



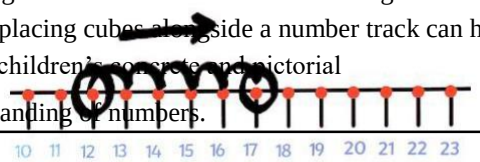
Use equipment to represent the larger number. Children count on in 1s, as they add the correct number of beads, counters etc, to the starting number.

12+5=17

Children progress to counting on using a number track, ~~then a number line. Placing cubes on a number track,~~ can help to reinforce children's understanding of the number sequence.



Use number tracks, then number lines, to add by counting on in 1s. When children start using number tracks, placing cubes alongside a number track can help to link children's concrete and pictorial understanding of numbers.



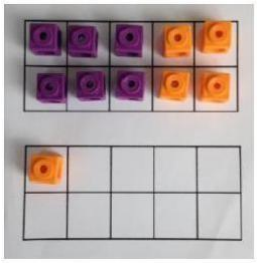
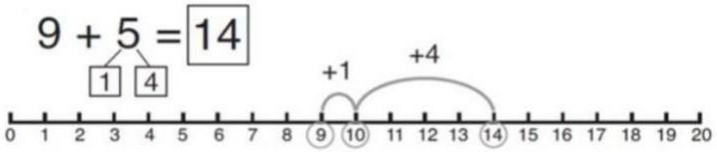
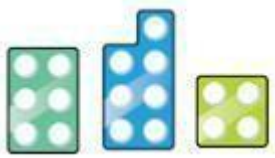
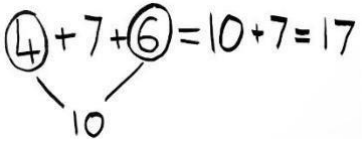
12+5=17

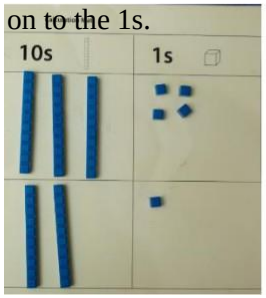
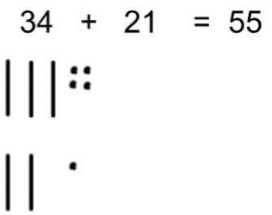
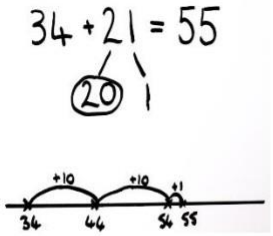
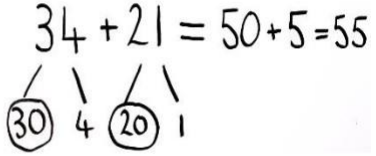
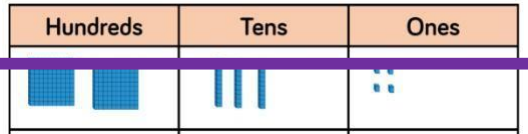
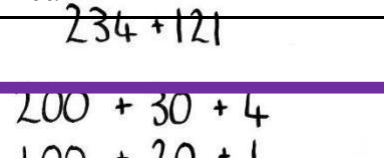
Children can begin to ~~calculate mentally, by~~ placing the larger number in their head and counting on in 1s, using their fingers to keep track of the count.

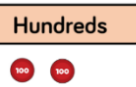
5+12=17

Children begin to calculate **Put the larger number in your head. Count on in ones. How many have you got altogether?** mentally by placing the larger number in their head and counting on in 1s, keeping track with their fingers.

Ensure children explore commutativity and regularly encounter the = symbol at the beginning of calculations, as well as calculations involving 0.

		Circle the larger number. Count on in ones. How many have you got altogether?	
grouping to ke 10.	Children can begin to calculate more efficiently, by partitioning the number to be added. They make a whole group of 10 first, then add the remainder. 6+5=11  **Start with the larger number. How many more do you need to make 10? How many have you got left to add?**	Children can show their understanding of regrouping using a number line. 	Children regroup mentally, in order to add efficiently. 7+4=11 **Start with the larger number. How many more do you need to make 10? How many have you got left to add?**
ding three ingle digits	Children can calculate efficiently, by looking for pairs of numbers that total 10, then adding the third number. 4+7+6=10+7=17  	 	 **Add the two numbers that make 10. Then add the remaining number.**

Adding 2-digit numbers mentally, using equipment or pictorial support	Represent the calculation on a calculation mat, using Base 10. Children total the equipment, starting their count with the 10s and then counting on to the 1s. 	Children can then draw Base 10 and total, as with concrete equipment. 34 + 21 = 55   Some children find it helpful to draw a number line, or bar, to visualise their calculation.	Children partition the numbers and recombine, to support them in calculating mentally. 
Column method without regrouping	Represent the calculation on a calculation mat, using Base 10 or place value counters. Children record a separate total for each column, starting with the 1s. They then combine the totals for each column. Place value counters can be used for calculations involving decimals. 	Children can then draw base 10 or place value counters, to suppport calculation.	Children need to record calculations using an expanded method, before moving on to a compact method. Both methods can be introduced alongside equipment on a calculation mat. 

Hundreds	Tens	Ones
		
		

300 + 50 + 5 = 355

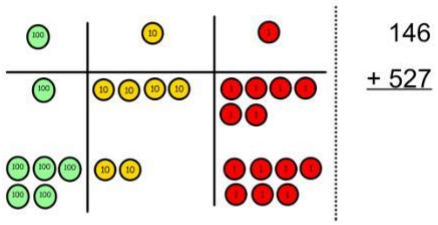
Hundreds	Tens	Ones
□ □	| | |	: :
□	| |	.

300 + 50 + 5 = 355

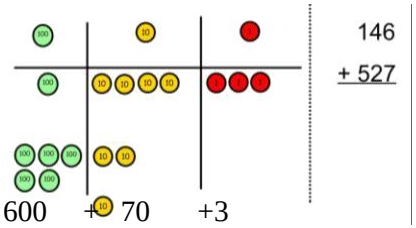
$$\begin{array}{r} 234 \\ +\ 121 \\ \hline 355 \end{array}$$

lumn method with grouping

Represent both numbers on a calculation mat, using place value counters or base 10.



Add the units and exchange ten 1s for one 10. Record a total below the 1s column.

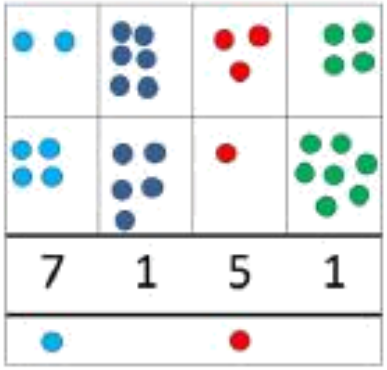


Add the rest of the columns, exchanging counters, where necessary and totalling each column. Add the totals together.

As children move on to decimals, money and decimal place value counters can be used to support learning.

Children can draw a pictoral representation of the columns and place value counters to further support their learning and understanding.

2634 + 4517 = 7151



It may help children to begin with an expanded method, before moving on to exploring a compact method using equipment The compact method can be used for calculations involving decimals and money.

146 + 527

100 + 40 + 6
500 + 20 + 7
600 + 60 + 13 = 673

789 + 642 becomes

	7	8	9
+	6	4	2
1	4	3	1
	1	1	

Answer: 1431

2	3	.	3	6	1
	9	.	0	8	0
5	9	.	7	7	0
+	1	.	3	0	0
9	3	.	5	1	1
2	1		2		

Subtraction

Written methods for Subtraction

It is important that children's mental methods of calculation are practised on a regular basis and secured alongside their learning and use of written methods of subtraction.

The aim is that children use mental methods when appropriate, but for calculations that they cannot do in their heads they use a written method accurately and with confidence.

Children are taught and acquire secure mental methods of calculation and one written method of calculation for subtraction which they know they can rely on when mental methods are not appropriate.

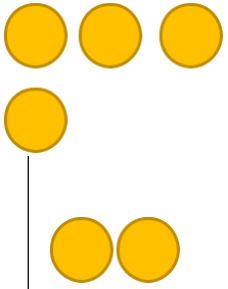
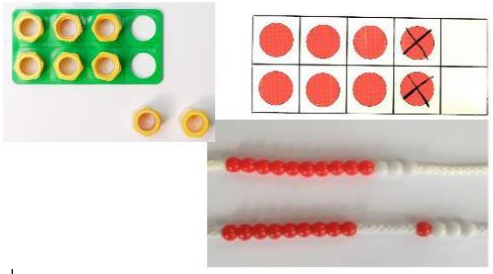
This policy shows the possible stages of each written method for subtraction, each stage building towards a more refined method.

There are some key basic skills that children need to help with subtraction, which include:

- counting
- estimating
- recalling all addition **pairs** to 10, 20 and 100 along with their inverses (7 + 3 = 10, 10 – 3 = 7, 17 + 3 = 20, 20 – 3 = 17, 70 + 30 = 100, 100 – 30 = 70)
- knowing number **facts** to 10 and their inverses (6 + 2 = 8, 8 - 2 = 6)
- subtracting multiples of 10 (160 - 70) using the related subtraction fact, 16 - 7, and their knowledge of place value
- partitioning two-digit and three-digit numbers into multiples of 100, 10 and 1 in different ways (432 into 400 + 30 + 2 and also into 300 + 120 + 12) understanding and using subtraction and addition as inverse operations

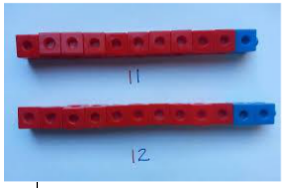
Using and applying is a key theme and one of the aims of National Curriculum and before children move onto the next stage in written calculation it is important that their skills are broadened through their use and application in a range of contexts, these include:

- using inverse
- missing box questions
- using units of measure including money and time
- word problems
- open ended investigations

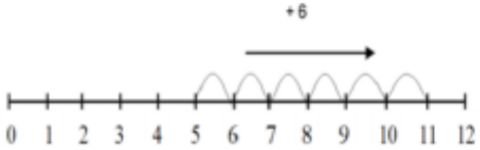
Objective and Strategies	Concrete	Pictorial	Abstract
Taking away ones	Use a variety of concrete items eg. toys, counters, cubes, to model taking a number away from a group.  6–2=4	Cross out drawn objects to show what has been taken away. 	Use numerical recording, alongside concrete and pictorial representations, to help children progress towards an abstract understanding of numbers. 8–2=6
Counting back	Represent the larger number using equipment. Count back in as you remove the correct number of beads / cubes. 	Placing cubes on a number line makes links between different representations. Children can counting back using a number track, then number line.  **Circle the larger number. Count back in 1s. How many have you got left?**	Children can begin to concrete calculate mentally, by ones, placing the larger number in their head and counting back in 1s, using their fingers to keep track of the count. 13–4=9 **Put the larger number in your head. Count back in ones. How many have you got left?**

Find the difference

Represent both numbers with concrete equipment and compare to find the difference.

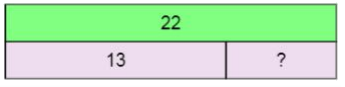


Count on using a number track or number line, to find the difference.



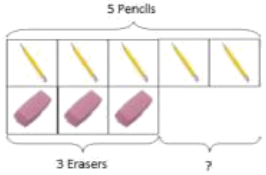
Children are able to understand find the difference problems as subtraction, drawing jottings for support.

Lisa is 13 years old. Her sister is 22 years old. Find the difference between their ages.



22–13=9

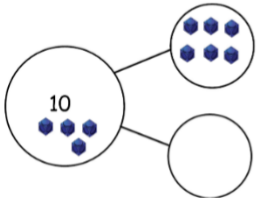
Use basic bar models, with pictorial representations or shaded squares, to more efficient to count on, to find the difference.



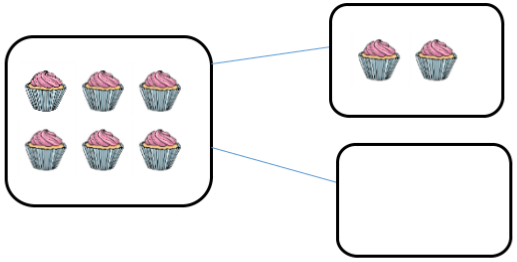
As children start to calculate with larger numbers, drawing a bar model can hep them to decide whether it's difference, or count find the back.

Ad ate subtraction to ed ition

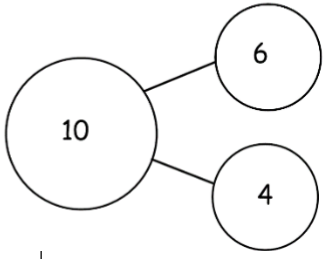
Use part whole models and cuisenaire rods to help children understand the inverse relationship between addition and subtraction.



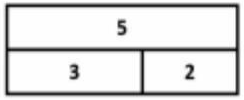
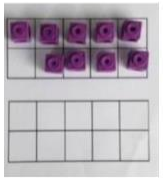
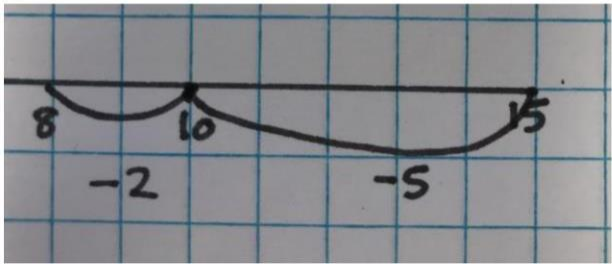
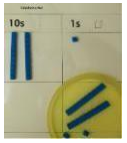
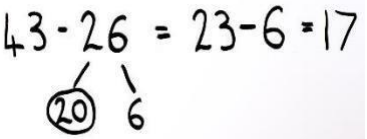
Use a pictorial representation of objects to show the part whole model.



Children can progress to recording numbers within the part whole model.

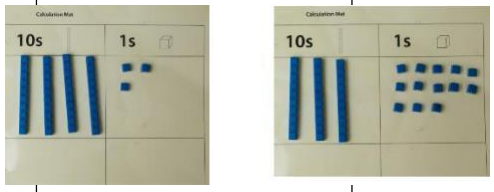


6+4=10 10=6+4

	10 is the whole. 6 is one of the parts. **What is the other part?** 9-2 	Use the bar model to help children find related addition and subtraction calculations.  	4+6=10 10=4+6 10–4=6 6=10-4 10–6=4 4=10-6
Regrouping to make 10	As with addition, children can begin to calculate more efficiently, by partitioning the number to be subtracted. They subtract part of the number, to leave a multiple of 10, and then subtract the remainder 14–5=9   	Children can show their undesrtanding of regrouping, using a number line. 	Children regroup mentally, in order to subtract efficiently. 13–7=6 **How many do you need to subtract to leave 10? How many have you got left to subtract?**
Subtracting 2-digit numbers using equipment or pictorial support	Represent the calculation on a calculation mat, using Base 10. Children remove the number to be subtracted. They count the equipment that remains  43–22=21 	Children can then draw Base 10 and cross out the number they are subtracting. They count the remaining number, to find out how many are left. 55 - 21 = 34  When regrouping is required, children can cross out one ten, and draw ten 1s in its place, before subtracting.	Children partition the number to be subtracted, to support them in calculating mentally. 

Where regrouping is required, children can exchange one 10 for ten 1s, before subtracting.

43–26=



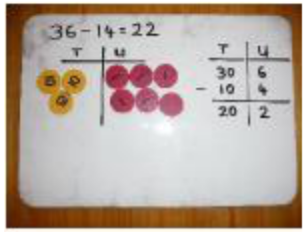
They can now subtract 26.

Children can also draw a number line, to support mental calculation.

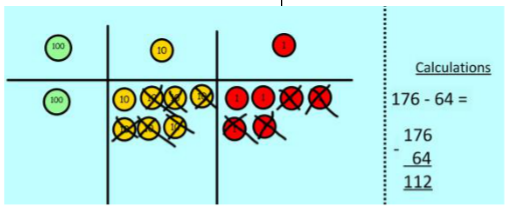
Column method without regrouping

Represent the calculation, using base 10, as above. Record the calculation, in expanded form, alongside the base 10.

The same can be done using place value counters.

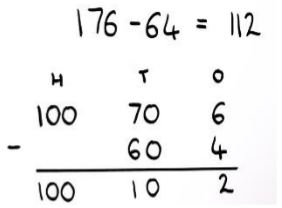


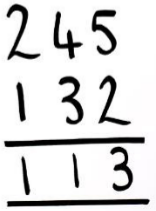
Children can draw the base 10, or place value counters, alongside the written calculation, to help deepen undersatnding.



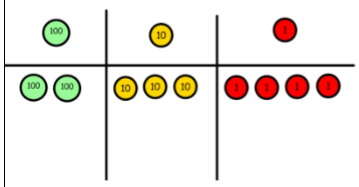
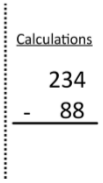
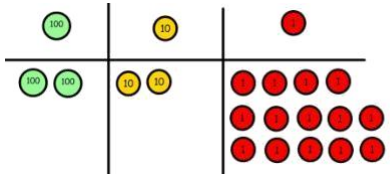
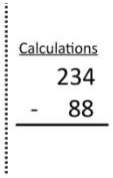
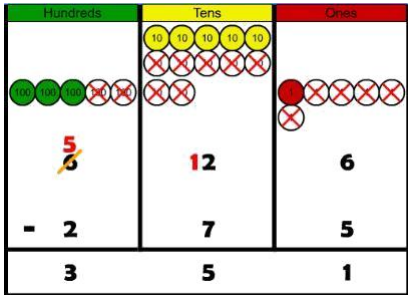
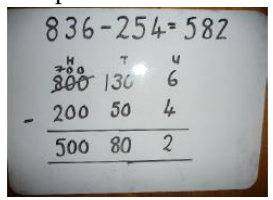
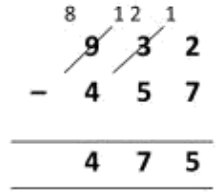
Record expanded or compact method alongside the picture.

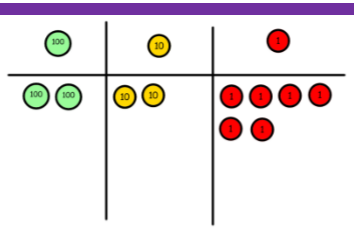
Children need to record calculations using an expanded method, before moving on to a compact





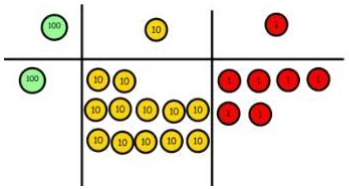
method.

lumn ethod with grouping	Use Base 10 to start with, before moving on to place value counters. Start with one exchange before moving onto subtractions with two exchanges. Compact or expanded method can be shown alongside equipment.   Calculations 234 - 88 Make the larger number with the place value counters Start with the ones, can I take away 8 from 4 easily? I need to exchange one of my tens for ten ones.   Calculations 234 - 88 Now I can subtract my ones. Now look at the tens, can I take away 8 tens easily? I need to exchange one hundred for ten tens.	Children can progress to drawing Base 10 or place value counters on a calculation grid. They can draw counters to show the exchnges they make and cross out as they subtract.  	Children need to record calculations using an expanded method, showing exchange, before moving on to a compact method.  932 – 457 becomes  Answer: 475 This will lead to an



Calculations

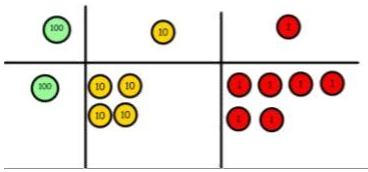
234
- 88



Calculations

234
- 88

Now I can take away eight tens and complete my subtraction



Calculations

~~2~~ 234
- 88
146

Show children how the concrete method links to the written method alongside your working. Cross out the numbers when exchanging and show where we write our new amount.

understanding of subtracting any number, including decimals.

$$\begin{array}{r} \ 5\ \ 12\ \ \ 1 \\ 2\ \not{6}\ \not{3}\ .\ \mathbf{0} \\ -\quad 2\ 6\ .\ 5 \\ \hline 2\ 3\ 6\ .\ 5 \end{array}$$

Multiplication

Written methods for multiplication

It is important that children's mental methods of calculation are practised on a regular basis and secured alongside their learning and use of written methods of multiplication.

The aim is that children use mental methods when appropriate, but for calculations that they cannot do in their heads they use a written method accurately and with confidence.

Children are taught and acquire secure mental methods of calculation and one written method of calculation for multiplication which they know they can rely on when mental methods are not appropriate.

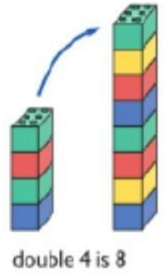
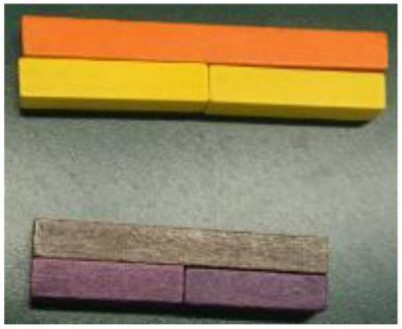
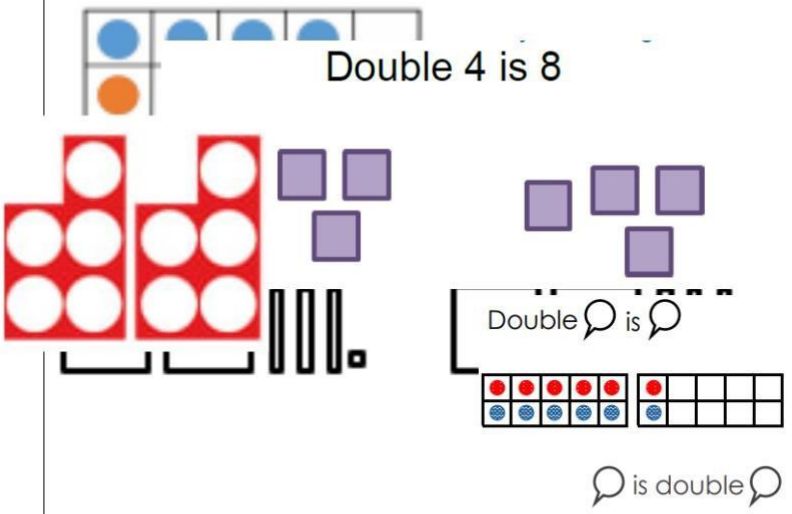
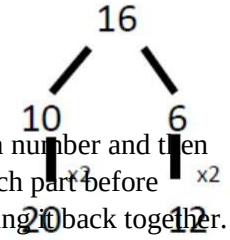
This policy shows the possible stages of each written method for multiplication, each stage building towards a more refined method.

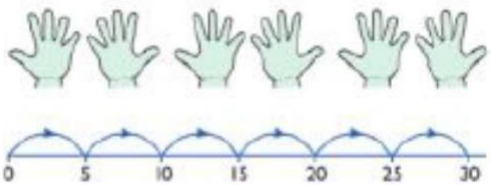
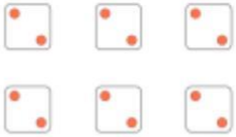
There are some key basic skills that children need to help with multiplication, which include:

- counting
- estimating
- understanding multiplication as repeated addition
- recalling all multiplication facts to 12 × 12
- partitioning numbers into multiples of one hundred, ten and one
- working out products (70 × 5, 70 × 50, 700 × 5, 700 × 50) using the related fact 7 × 5 and their knowledge of place value adding two or more single-digit numbers mentally
- adding multiples of 10 (60 + 70) or of 100 (600 + 700) using the related addition fact, 6 + 7, and their knowledge of place value
- adding combinations of whole numbers
- understanding and using division and multiplication as inverse operations

Using and applying is a key theme and one of the aims of National Curriculum and before children move onto the next stage in written calculation it is important that their skills are broadened through their use and application in a range of contexts, these include:

- using inverse
- missing box questions
- using units of measure including money and time
- word problems
- open ended investigations

Objective and Strategies	Concrete	Pictorial	Abstract
Doubling	Use practical activities to show how to double a number.  2 x 4 = 8 	Draw pictures to show how to double a number.  	 Partition a number and then double each part before recombining it back together.

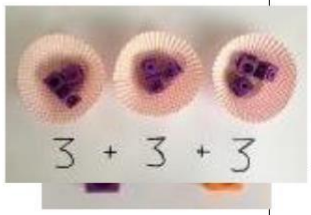
unting in ltiples	   Count in multiples supported by concrete objects in equal groups.  Use Cuisenaire rods to support use of model	 Use a number line or pictures to continue support in counting in multiples.  Bar model shows relationship between whole/ parts and makes links to division. 12 3 3 3 3	Count in multiples of a number aloud. Write sequences with multiples of numbers. 2, 4, 6, 8, 10 5, 10, 15, 20, 25 , 30

Repeated addition – linking to multiplication

5+5+5=15

3 groups of 5 equals 15

3 x 5 = 15



3+3+3=9

3 x 3 = 9

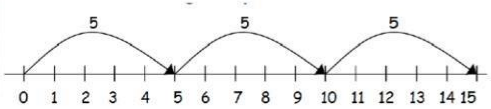
3 groups of 3 = 9

Use Cuisenaire rods as shown above

There are 3 plates. Each plate has 2 star biscuits on. How many biscuits are there?

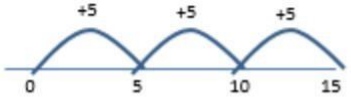
2 add 2 add 2 equals 6

3 groups of 2 = 3 x 2 = 6



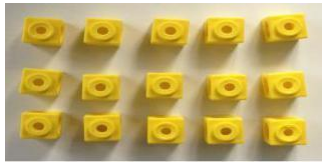
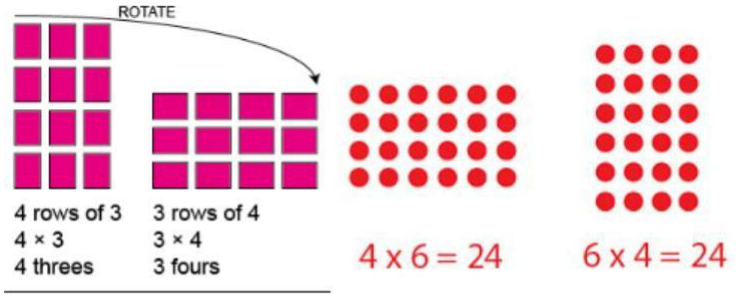
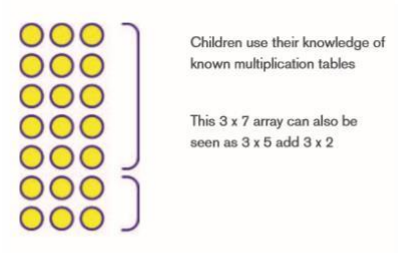
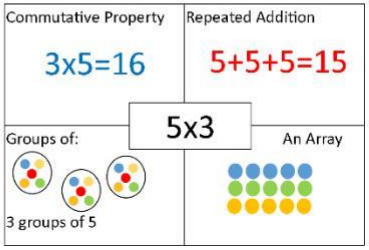
5 + 5 + 5 = 15

3 groups of 5 = 3 x 5 = 15



Write addition sentences to describe objects and pictures.

5 groups of 2 = 5 x 2 = 10

rays- owing mmutative ultiplication	Create arrays using counters/ cubes to show multiplication sentences.   Cuisenaire Rods – create the shape with 5 lots of 3 and 3 lots of 5 Pile on top – same size	Draw arrays in different rotations to find **commutative** multiplication sentences.   7 x 3 = 21 3 x 7 = 21 Link arrays to area of rectangles.	Use an array to write multiplication sentences and reinforce repeated addition.  5 + 5 + 5 = 15 3 + 3 + 3 + 3 + 3 = 15 5 x 3 = 15 3 x 5 = 15 

Grid Method

introduce the grid method.

4 rows of 10

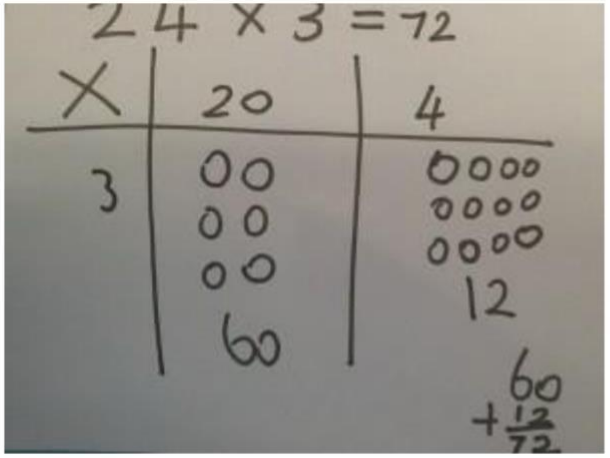
4 rows of 3

Move on to using Base 10 or Cuisenaire Rods to move towards a more compact method.

4 rows of 13

Move on to place value counters to show how we are finding groups of a number.We are multiplying by 4 so we need 4 rows.

place value counters in a way that they understand. They can draw the counters, using colours to show different amounts or just use circles in the different columns to show their thinking as shown below.



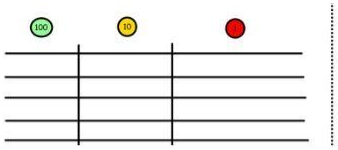
one digit numbers and showing the clear addition alongside the grid.

×	30	5
7	210	35

210 + 35 = 245

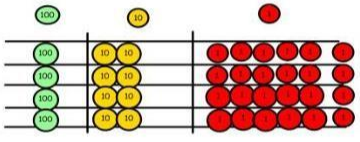
by a 2 digit number showing the different rows within the grid method.

X	1000	300	40	2
10	10000	3000	400	20
8	8000	2400	320	16



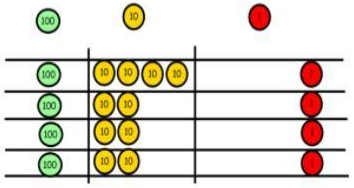
Calculations
4 x 126

Fill each row with 126.

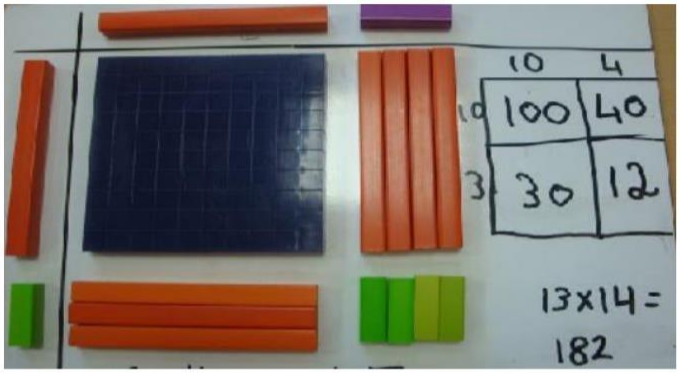


Calculations
4 x 126

Add up each column, starting with the ones making any exchanges needed.



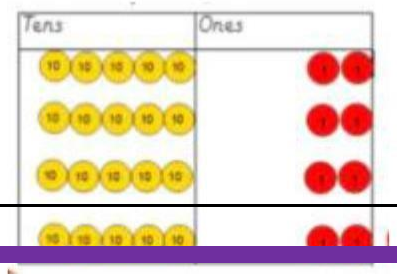
4 x 126 = 504



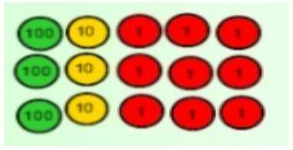
Column multiplication – short multiplication

Children can continue to be supported by place value counters at the stage of multiplication.

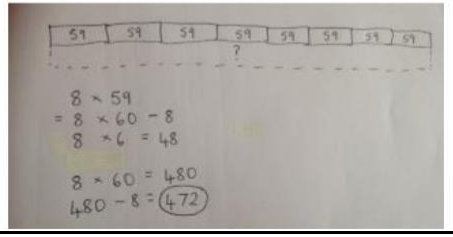
It is important at this stage that they always multiply the ones first and note down their answer followed by the tens which they note below.



Bar modelling and number lines can support learners when solving problems with multiplication alongside the formal written methods.

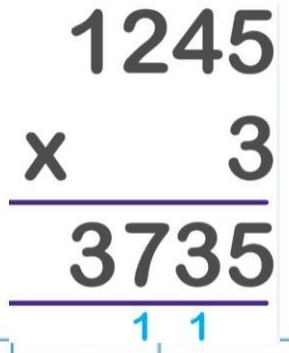


113 x 3



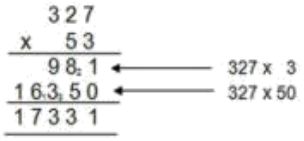
A lemon costs 45p. Tom buys 4. What is

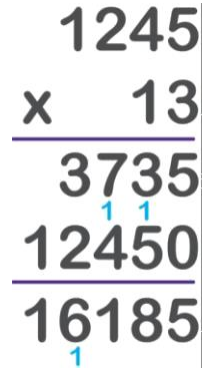
Short multiplication



	52X4	the total cost? Using bar model, effective mental strategies and related number facts.	
lumn ltiplication – long ltiplication			Start with long multiplication, reminding the children about lining up their numbers clearly in columns. If it helps, children can write out what they are solving next to their answer. 32 x 24 8 (4 x 2) 120 (4 x 30) 40 (20 x 2) 600 (20 x 30) 768

This moves to the more compact method.





Written methods for division

It is important that children's mental methods of calculation are practised on a regular basis and secured alongside their learning and use of written methods of division.

The aim is that children use mental methods when appropriate, but for calculations that they cannot do in their heads they use a written method accurately and with confidence.

Children are taught and acquire secure mental methods of calculation and one written method of calculation for division which they know they can rely on when mental methods are not appropriate.

This policy shows the possible stages of each written method for division, each stage building towards a more refined method.

There are some key basic skills that children need to help with division, which include:

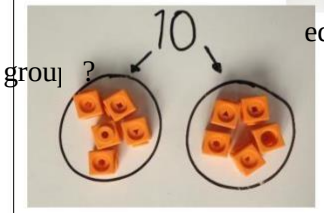
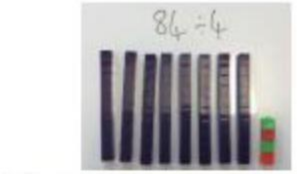
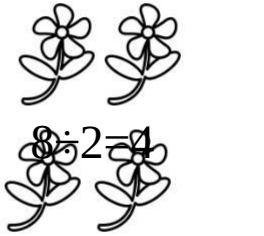
- counting
- estimating
- understanding division as repeated subtraction
- partitioning two-digit and three-digit numbers into multiples of 100, 10 and 1 in different ways (432 into 400 + 30 + 2 and also into 300 + 120 + 12) recalling multiplication and division facts to 12 × 12
- recognising multiples of one-digit numbers and dividing multiples of 10 or 100 by a single-digit number using their knowledge of division facts and place value
- knowing how to find a remainder working mentally, for example, find the remainder when 48 is divided by 5
- understanding and using division and multiplication as inverse operations

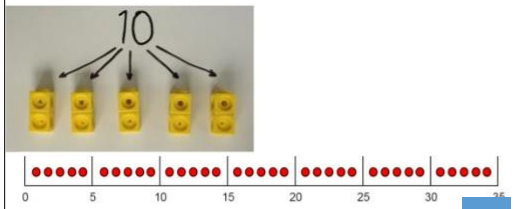
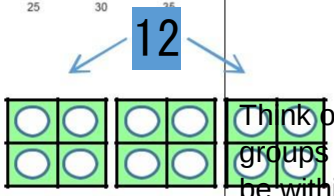
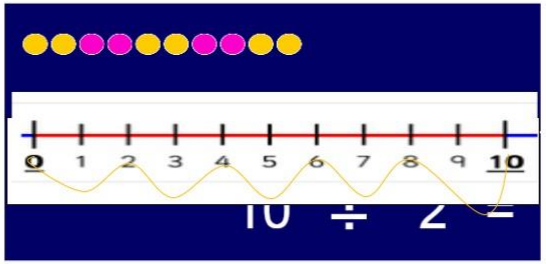
Using and applying is a key theme and one of the aims of National Curriculum and before children move onto the next stage in written calculation it is important that their skills are broadened through their use and application in a range of contexts, these include:

- using inverse
- missing box questions
- using units of measure including money and time

word problems

open ended investigations

Objective and Strategies	Concrete	Pictorial	Abstract
Sharing objects into groups	  I have 10 cubes, can you share them equally in 2 group ?   	Children use pictures or shapes to share quantities.   8÷2=4	Share 9 buns between three people. 9÷3=3

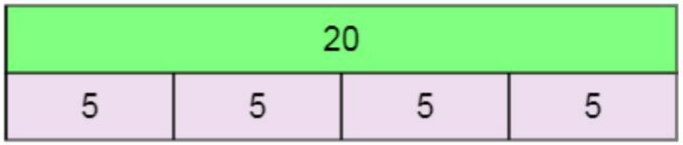
Division as grouping	Divide quantities into equal groups. Use cubes, counters, objects or place value counters to aid understanding.     20 ÷ 5 = 4	Use a number line to show jumps in groups. The number of jumps equals the number of groups.  Think of the bar as a whole. Split it into the number of groups you are dividing by and work out how many would be within each group. 20÷4=5 20 divided into groups of 4 equals 5	28÷7=4 Divide 28 into 7 groups. How many are in each group?

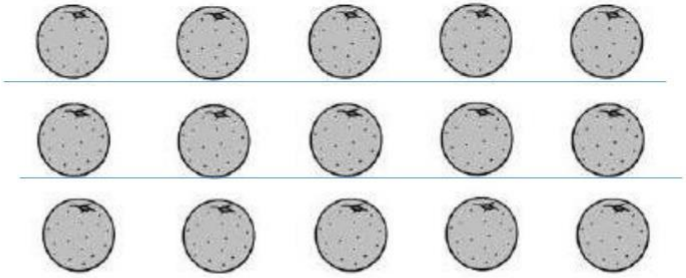
Division within arrays

Link division to multiplication by creating an array and thinking about the number sentences that can be created.

Eg 15 ÷ 3 = 5 5 x 3 = 15

15 ÷ 5 = 3 3 x 5 = 15





Draw an array and use lines to split the array into groups to make multiplication and division sentences.

Find the inverse of multiplication and division sentences by creating four linking number sentences.

7 x 4 = 28

4 x 7 = 28

28÷7=4

28÷4=7

Division with a remainder

14÷3=

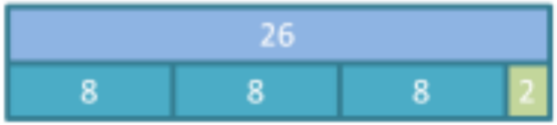
Divide objects between groups and see how much is left over

Jump forward in equal jumps on a number line then see

how many more you need to jump to find a remainder.

Draw dots and group them to divide an amount and clearly show a remainder.

Understand division as ‘how many [divisors] in [dividend]’ showing remainders using bar models.



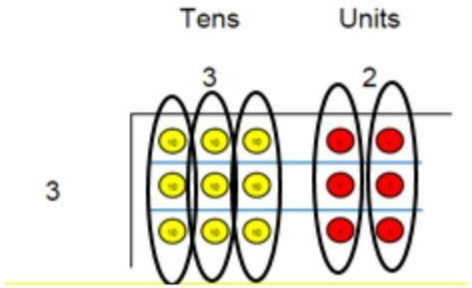
Understand division as ‘how many [divisors] in [dividend]’ showing remainders using matchsticks to make shapes

How many triangles? How many left over?

Complete written divisions and show the remainder using r.

Short division

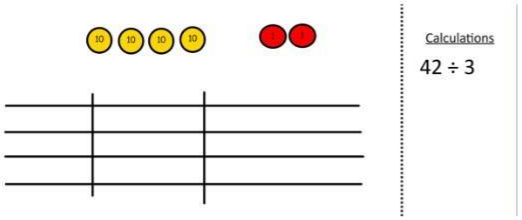
96÷3



How many groups of 3 tens are there?

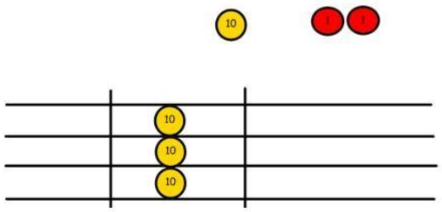
How many groups of 3 ones are there?

Use place value counters to divide using the bus stop method alongside

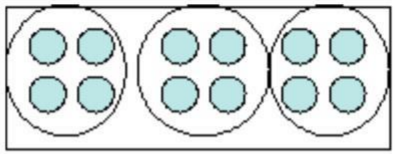


42÷3=

Start with the biggest place value, we are sharing 40 into three groups. We can put 1 ten in each group and we have 1 ten left over.

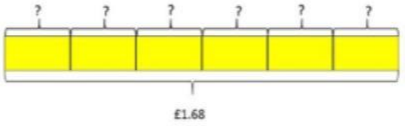


Students can continue to use drawn diagrams with dots or circles to help them divide numbers into equal groups.

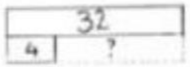


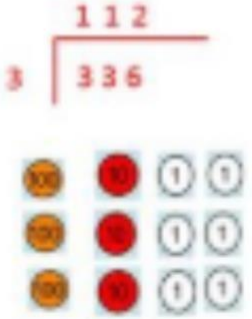
Encourage them to move towards counting in multiples to divide more efficiently.

6 pencils cost £1.68 or 168p. How much does one cost?

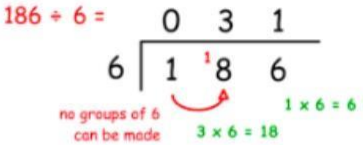


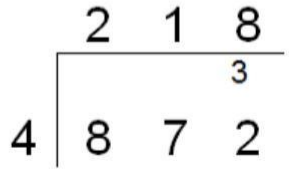
There are 32 children in a class. 4 children can fit around a table. How many tables are needed?



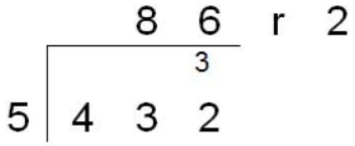


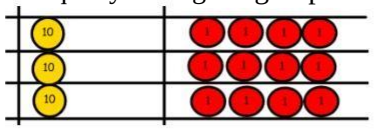
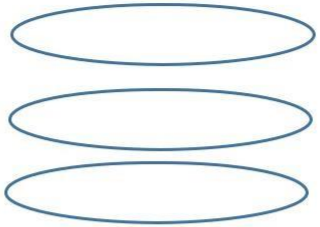
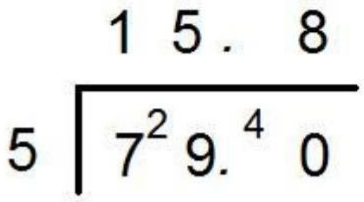
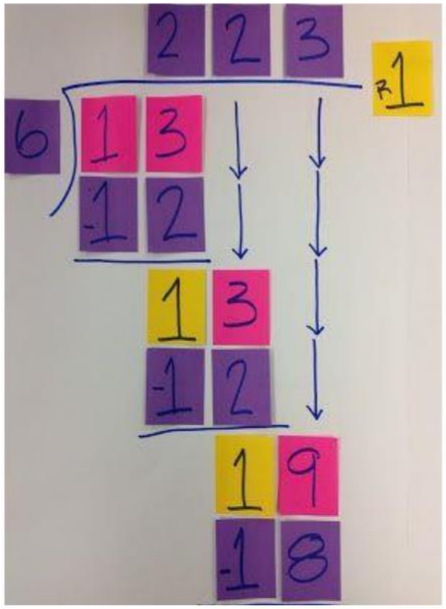
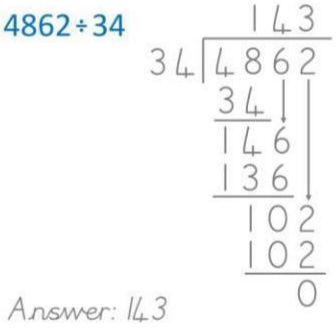
Begin with divisions that divide equally with no remainder.





Move onto divisions with a remainder. Then expressing the remainder as a part of the divisor



	We exchange this ten for ten ones and then share the ones equally among the groups.  We look how much in 1 group so the answer is 14.		Finally move into decimal places to divide the total accurately. 
~~Long Division~~		Use of post it notes and large paper to physically bring down the numbers 	

Appendix One

The Calculation Sequence – applying the skills

The Sequence	Prompts	Planning
Provide an estimate for the calculation	Using knowledge of number and the number system, rounding and approximating, make a reasonable estimate.	
Teach the calculation skill	What is the objective you are teaching? Include example questions, increasing in complexity, for both operations.	
Ensure you have taught the inverse	Plan example questions, increasing in complexity. Ensure methods used are in line with school calculation policy. Check that children understand that inverse can also be used to check calculations	
Devise similar calculations but include units	Which units do you need to include? Check the measures applicable to your year group for length, weight, capacity, money and time.	
Complete missing box questions	Include units in these questions as above. The box may cover single digits or an entire number. Vary the position of the missing box within the calculation.	
Complete word problems, 1 and 2 step, including units	Write problems, ensuring the numbers are sized correctly in line with the objective and that units are also used.	
Provide opportunities for open ended investigations	Plan example questions and investigations. Ensure children are working with the correct operations, appropriate size of numbers and use of units for context.	

School Improvement Liverpool
Primary Curriculum Team