WOOTTON WAWEN C.E. PRIMARY SCHOOL

CALCULATIONS POLICY

This policy sets out the aims and strategies for the teaching of calculations in Mathematics at Wootton Wawen CE Primary School.

Why do we need this?

We need a Calculations Policy to ensure there is consistency and progression in the way calculations are taught.

Although the main focus of this policy is on written calculations it is important we recognise that the ability to calculate mentally is essential because in every written method there is a need for mental processing.

We aim that by the end of key Stage 2 all our children:

- have a secure understanding of mental maths facts to apply to written mathematics
- have a secure knowledge of number facts and understanding of the four operations
- have an efficient written method of calculation for each operation that they are able to apply with confidence
- be able to use this knowledge and understanding to solve problems

Mental Calculations:

The table below gives details of the progression in mental calculations:

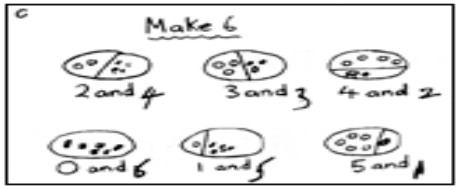
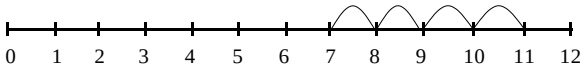
	ADDITION	SUBTRACTION	MULTIPLICATION	DIVISION
STAGE 1	Number bonds ('story of' 5, 6, 7, 8, 9 and 10) Count on in ones from a given 2-digit number Add two single-digit numbers Add three single-digit numbers spotting doubles or pairs to 10 Count on in tens from any given 2-digit number Add 10 to any given 2-digit number Use number facts to add single-digit numbers to two-digit numbers, e.g. use 4 + 3 to work out 24 + 3, 34 + 3… Add by putting the larger number first	Number bonds ('story of' 5, 6, 7, 8, 9 and 10) Count back in ones from a given 2-digit number Subtract one single-digit number from another Count back in tens from any given 2-digit number Subtract 10 from any given 2-digit number Use number facts to subtract single-digit numbers from two-digit numbers, e.g. use 7 – 2 to work out 27 – 2, 37 – 2…	Begin to count in 2s, 5s and 10s Begin to say what three 5s are by counting in 5s or what four 2s are by counting in 2s, etc. Double numbers to 10	Begin to count in 2s, 5s and 10s Find half of even numbers to 12 and know it is hard to halve odd numbers Find half of even numbers by sharing Begin to use visual and concrete arrays or 'sets of' to find how many sets of a small number make a larger number.
STAGE 2	Number bonds – knowing all the pairs of numbers which make all the numbers to 12, and pairs with a total of 20 Count on in ones and tens from any given 2-digit number Add two or three single-digit numbers Add a single-digit number to any 2-digit number using number facts, including bridging multiples of 10. (E.g. 45 + 4, 38 + 7) Add 10 and small multiples of 10 to any given 2-digit number Add any pair of 2-digit numbers	Know pairs of numbers which make each total up to 10 Subtract a single-digit number from a 2-digit number by counting back in ones Subtract 10 and small multiples of 10 from a 2-digit number by counting back in tens	Count in 2s, 5s and 10s Begin to count in 3s. Begin to understand that multiplication is repeated Begin to learn the 2x, 3x, 5x and 10x tables, seeing these as 'lots of', e.g. 5 lots of 2, 6 lots of 2, 7 lots of 2, etc. Double numbers up to 20 Begin to double multiples of 5 to 100 Begin to double two-digit numbers less than 50 with 1s digits of 1, 2, 3 4 or 5	Count in 2s, 5s and 10s Begin to count in 3s Using fingers, say where a given number is in the 2s, 5s or 10s count. (E.g. 8 is the fourth number when I count in twos.) Relate division to grouping. (E.g. how many groups of five in fifteen?) Halve numbers to 20 Begin to halve numbers to 40 and multiples of 10 to 100 Find ½, $^1/_3$, ¼ and ¾ of a quantity of objects and of amounts (whole number answers)

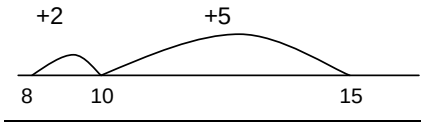
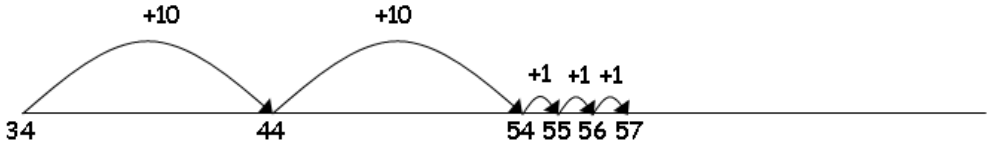
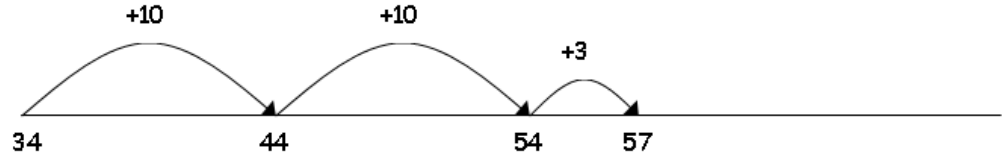
STAGE 3	Know pairs with each total to 20 Know pairs of multiples of 10 with a total of 100 Add any two 2-digit numbers by counting on in 10s and 1s or by using partitioning Add multiples and near multiples of 10 and 100 Perform place value additions without a struggle. (E.g. 300 + 8 + 50 = 358) Use place value and number facts to add a 1-digit or 2-digit number to a 3-digit number. (E.g. 104 + 56 is 160 since 104+50=154 and 6+4=10 and 676 + 8 is 684 since 8=4+4 and 76+4+4=84) Add pairs of 'friendly' 3-digit numbers, e.g. 320 + 450 Begin to add amounts of money using partitioning.	Know pairs with each total to 20 Subtract any two 2-digit numbers Perform place value subtractions without a struggle. (E.g. 536 – 30 = 506, etc.) Subtract 2-digit numbers from numbers >100 by counting up. (E.g. 143 – 76 is done by starting at 76, add 4 (80) then add 20 (100) then add 43 making the difference a total of 67) Subtract multiples and near multiples of 10 and 100 Subtract, when appropriate, by counting back or taking away, using place value and number facts. Find change from £1, £5 and £10.	Know by heart all the multiplication facts in the 2x, 3x, 4x, 5x, 8x and 10x tables Multiply whole numbers by 10 and 100 Recognise that multiplication is commutative Use place value and number facts in mental multiplication. (E.g. 30 x 5 is 15 x 10) Partition teen numbers to multiply by a single-digit number. (E.g. 3 x 14 as 3 x 10 and 3 x 4) Double numbers up to 50	Know by heart all the division facts derived from the 2x, 3x, 4x, 5x, 8x and 10x tables. Divide whole numbers by 10 or 100 to give whole number answers Recognise that division is not commutative. Use place value and number facts in mental division. (E.g. 84 ÷ 4 is half of 42) Divide larger numbers mentally by subtracting the tenth multiple, including those with remainders. (E.g. 57 ÷ 3 is 10 + 9 as 10x3=30 and 9x3=27) Halve even numbers to 100, halve odd numbers to 20
STAGE 4	Add any two 2-digit numbers by partitioning or counting on Know by heart/quickly derive number bonds to 100 and to £1 Add to the next hundred, pound and whole number. (E.g. 234 + 66 = 300, 3.4 + 0.6 = 4) Perform place value additions without a struggle. (E.g. 300 + 8 + 50 + 4000 = 4358) Add multiples and near multiples of 10, 100 and 1000. Add £1, 10p, 1p to amounts of money Use place value and number facts to add 1-, 2-, 3-and 4-digit numbers where a mental calculation is appropriate'. (E.g. 4004 + 156 by knowing that	Subtract any two 2-digit numbers Know by heart/quickly derive number bonds to 100 Perform place value subtractions without a struggle. (E.g. 4736 – 706 = 4030, etc.) Subtract multiples and near multiples of 10, 100 and 100 Subtract by counting up. (E.g. 503 – 368 is done by adding: 368 +2 +30 +100 +3 so we added 135) Subtract, when appropriate, by counting back or taking away, using place value and number facts. Subtract £1, 10p, 1p from amounts of money	Know by heart all the multiplication facts up to 12 x 12. Recognise factors up to 12 of two-digit numbers. Multiply whole numbers and one-place decimals by 10, 100, 1000 Multiply multiples of 10, 100, 1000 by single digit numbers. (E.g. 300 x 6 or 4000 x 8) Use understanding of place value and number facts in mental multiplication. (E.g. 36 x 5 is half of 36 x 10 and 50 x 60 = 3000) Partition 2-digit numbers to multiply by a single-digit number mentally. (E.g. 4 x 24 as 4 x 20 and 4 x 4)	Know by heart all the division facts up to 144 ÷ 12. Divide whole numbers by 10, 100 to give whole number answers or answers with one decimal place Divide multiples of 100 by 1-digit numbers using division facts. (E.g. 3200 ÷ 8 = 400) Use place value and number facts in mental division. (E.g. 245 ÷ 20 is double 245 ÷ 10) Divide larger numbers mentally by subtracting the 10^{th} or 20^{th} multiple as appropriate. (E.g. 156 ÷ 6 is 20 + 6 as 20x6=120 and 6x6=36) Find halves of even numbers to 200 and beyond using

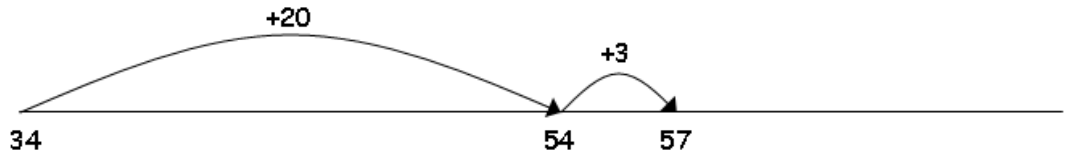
	6+4=10 and that 4004+150= 4154 so total is 4160)	Find change from £10, £20 and £50.	Multiply near multiples using rounding. (E.g. 33 x 19 as 33 x 20 – 33) Find doubles to double 100 and beyond using partitioning Begin to double amounts of money. (E.g. £35.60 doubled = £71.20.)	partitioning Begin to halve amounts of money. (E.g. Half of £52.40 = £26.20)
STAGE 5	Know numbers bonds to 1 and to the next whole number Add to the next 10 from a decimal number, *e.g. 13·6 + 6·4 = 20* Add numbers with two significant digits only, using mental strategies. (E.g. 3.4 + 4.8 or 23,000 + 47,000) Add one or two-digit multiples of 10, 100, 1000, 10,000 and 100,000. (E.g. 8000 + 7000 or 600,000 + 700,000) Add near multiples of 10, 100, 1000, 10,000 and 100,000 to other numbers. (E.g. 82,472 + 30,004) Add decimal numbers which are near multiples of 1 or 10, including money. *(E.g. 6·34 + 1·99 or £34·59 + £19·95)* Use place value and number facts to add two or more friendly numbers including money and decimals. (E.g. 3 + 8 + 6 + 4 + 7, 0.6 + 0.7 + 0.4, or 2,056 + 44)	Subtract numbers with two significant digits only, using mental strategies. (E.g. 6.2 – 4.5 or 72,000 – 47,000) Subtract one or two-digit multiples of 100, 1000, 10,000 and 100,000. (E.g. 8000 – 3000 or 600,000 – 200,000) Subtract one or two digit near multiples of 100, 1000, 10,000 and 100,000 from other numbers. (E.g. 82,472 – 30,004) Subtract decimal numbers which are near multiples of 1 or 10, including money. (E.g. 6·34 – 1·99 or £34·59 – £19·95) Use counting up subtraction, with knowledge of number bonds to 10/100 or £1, as a strategy to perform mental subtraction. (E.g. £10 - £3.45 or 1000 – 782] Recognise fraction complements to 1 and to the next whole number. (E.g. $1\ ^{2}/_{5} + \ ^{3}/_{5} = 2$) 4 – 5	Know by heart all the multiplication facts up to 12 x 12. Multiply whole numbers and one-and two-place decimals by 10, 100, 1000, 10,000 Use knowledge of factors and multiples in multiplication. (E.g. 43 x 6 is double 43 x 3, and 28 x 50 is ½ of 28 x 100 = 1400) Use knowledge of place value and rounding in mental multiplication. (E.g. 67 x 199 as 67 x 200 – 67) Use doubling and halving as a strategy in mental multiplication. (E.g. 58 x 5 = half of 58 x 10, and 34 x 4 is 34 doubled twice) Partition 2-digit numbers, including decimals, to multiply by a single-digit number mentally. (E.g. 6 x 27 as 6 x 20 (120) plus 6 x 7 (42) making 162 or 6.3 x 7 as 6 x 7 plus 0.3 x 7) Double amounts of money by partitioning. (E.g. £37.45 doubled = £37 doubled (£74) plus 45p doubled (90p) £74.90) .	Know by heart all the division facts up to 144 ÷ 12. Divide whole numbers by 10, 100, 1000, 10,000 to give whole number answers or answers with 1, 2 or 3 decimal places Use doubling and halving as mental division strategies. (E.g. 34 ÷ 5 is (34 ÷ 10) x 2) Use knowledge of multiples and factors, also tests for divisibility ,in mental division. (E.g. 246 ÷ 6 is 123 ÷ 3 and we know that 525 divides by 25 and by 3) Halve amounts of money by partitioning. (E.g. Half of £75.40 = half of £75 (37.50) plus half of 40p (20p) which is £37.70) Divide larger numbers mentally by subtracting the 10^{th} or 100^{th} multiple as appropriate. (E.g. 96 ÷ 6 is 10 + 6, as 10 × 6 = 60 and 6 × 6 = 36; 312 ÷ 3 is 100 + 4 as 100 x 3 = 300 and 4 x 3 = 12) Reduce fractions to their simplest form.

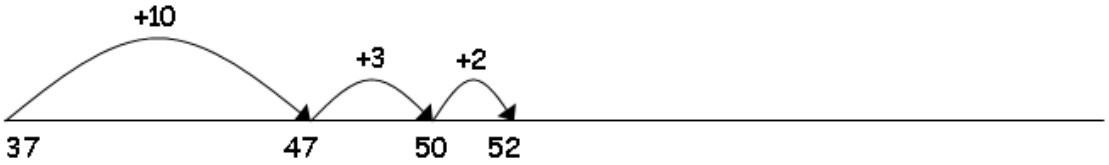
STAGE 6	Know by heart number bonds to 100 and use these to derive related facts. (E.g. 3.46 + 0.54 = 4) Derive quickly and without difficulty, number bonds to 1000 Add small and large whole numbers where the use of place value or number facts makes the calculation do-able 'in our heads'. (E.g. 34,000 + 8000.) Add multiples of powers of ten and near multiples of the same. (E.g. 6345 + 199.) Add negative numbers in a context such as temperature where the numbers make sense. Add two 1-place decimal numbers or two 2-place decimal numbers less than 1 (E.g. 4.5 + 6.3 or 0.74 + 0.33) Add positive numbers to negative numbers, e.g. calculate a rise in temperature, or continue a sequence beginning with a negative number	Use number bonds to 100 to perform mental subtraction of any pair of integers by complementary addition. (E.g. 1000 – 654 as 46 + 300 in our heads Use number bonds to 1 and 10 to perform mental subtraction of any pair of one-place or two-place decimal numbers using complementary addition and including money. (E.g. 10 – 3.65 as 0.35 + 6, £50 – £34.29 as 71p + £15) Use number facts and place value to perform mental subtraction of large numbers or decimal numbers with up to two places. (E.g. 467,900 – 3,005 or 4.63 – 1.02) Subtract multiples of powers of ten and near multiples of the same. Subtract negative numbers in a context such as temperature where the numbers make sense.	Know by heart all the multiplication facts up to 12 x 12. Multiply whole numbers and decimals with up to three places by 10, 100 or 1000, e.g. 234 x 1000 = 234,000 and 0.23 x 1000 = 230) Identify common factors, common multiples and prime numbers and use factors in mental multiplication. (E.g. 326 x 6 is 652 x 3 which is 1956) Use place value and number facts in mental multiplication. (E.g. 40,000 x 6 = 24,000 and 0.03 x 6 = 0.18) Use doubling and halving as mental multiplication strategies, including to multiply by 2, 4, 8, 5, 20, 50 and 25 (E.g. 28 x 25 is ¼ of 28 x 100 = 700) Use rounding in mental multiplication. (34 x 19 as (20 x 34) – 34) Multiply one and two-place decimals by numbers up to and including 10 using place value and partitioning. (E.g. 3.6 x 4 is 12 + 2.4 or 2.53 x 3 is 6 + 1.5 + 0.09) Double decimal numbers with up to 2 places using partitioning *e.g. 36·73 doubled is double 36 (72) plus double 0·73 (1·46)*	Know by heart all the division facts up to 144 ÷ 12. Divide whole numbers by powers of 10 to give whole number answers or answers with up to three decimal places. Identify common factors, common multiples and prime numbers and use factors in mental division. (E.g. 438 ÷ 6 is 219 ÷ 3 which is 73) Use tests for divisibility to aid mental calculation. Use doubling and halving as mental division strategies, e.g. to divide by 2, 4, 8, 5, 20 and 25. (E.g. 628 ÷ 8 is halved three times: 314, 157, 78.5) Divide one and two place decimals by numbers up to and including 10 using place value. (E.g. 2.4 ÷ 6 = 0.4 or 0.65 ÷ 5 = 0.13, £6.33 ÷ 3 = £2.11) Halve decimal numbers with up to 2 places using partitioning *e.g. Half of 36·86 is half of 36 (18) plus half of 0·86 (0·43)* Know and use equivalence between simple fractions, decimals and percentages, including in different contexts. Recognise a given ratio and reduce a given ratio to its lowest terms.

GUIDANCE FOR THE TEACHING OF WRITTEN METHODS OF ADDITION

Step		
1	Counting	Combining groups of objects to find a total 
2	Understanding what the + and = sign mean	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 3 = 3 2 + 2 + 2 = 4 + 2 Children should use number beads or apparatus to support
3	Using a number line to count on in ones	Children use a numbered line to count on in ones. Children use number lines and practical resources to support calculation and teachers *demonstrate* the use of the number line. 7+ 4 
4	Number bonds to 10	Using bead strings and/or numicon children should be aware of how many ways the totals to 10 can be made. eg 10= 9+1 or 8+2 3+3 = 6

5	Using number bonds to add on the number line	Bridge 10 Eg. 8+7 = 15 8 + 7 = 15 
6	Using the number line to jump in tens and single digit numbers from any 2-digit number	First counting on in tens and ones. 34 + 23 = 57  Then helping children to become more efficient by adding the units in one jump (by using the known fact 4 + 3 = 7). 34 + 23 = 57  Followed by adding the tens in one jump and the units in one jump.

<table>
<tr><td></td><td></td><td>34 + 23 = 57
 

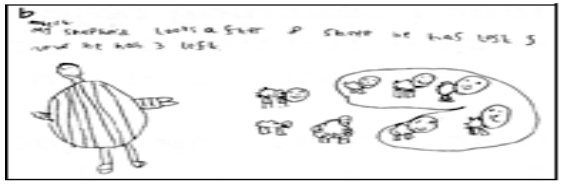
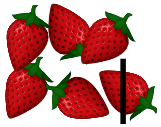
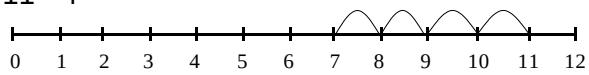
Bridging through ten can help children become more efficient.
37 + 15 = 52
 
</td></tr>
<tr><td>7</td><td>Partition into tens and ones and recombine</td><td>12 + 23 = 10 + 2 + 20 + 3
= 30 + 5
= 35</td></tr>
<tr><td>8</td><td>Column addition for adding pairs of numbers using partitioning</td><td>Use of apparatus such as Base 10 or place value counters may be needed before this stage.
344 + 134
H T U
300 40 4
100 30 4 +
400 70 8 = 478

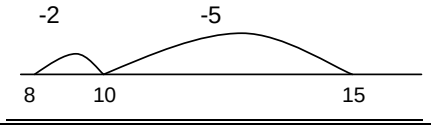
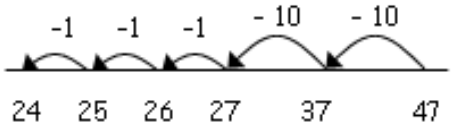
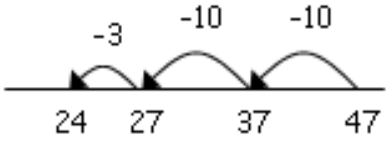
Move to 10 in unit column and 100 in ten column
387 + 134

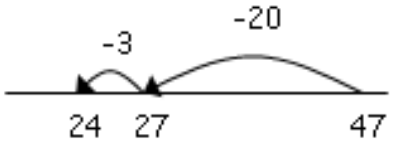
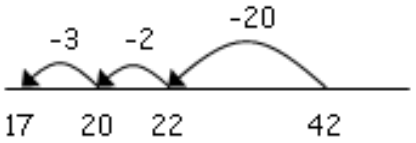
H T U
300 80 7
100 30 4 +
400 110 11 = 521</td></tr>
</table>

9	Column addition using partitioning	The least significant digit needs to added first 67 + 24 11 (7+ 4) 80 (60 + 20) 91 267 + 85 12 (7 + 5) 140 (60 + 80) 200 352
10	Compact column addition	The number carries below the line 625 + 48 673 1 783 + 42 825 1 367 + 85 452 1 1
11	Compact method extended to any numbers of digits and decimals	It is vital that children understand what each column represents in terms of value. 13.86 + 9.481 = 23.341 13.86 + 9.481 23.341 1 1 1

GUIDANCE FOR THE TEACHING OF WRITTEN METHODS OF SUBTRACTION

Step		
1	Counting	Take away a number of objects from the group and count what is left. 
2	Understanding what the - and = sign mean	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'. 7 - 3 = □ □ = 7 - 3 7 - □ = 4 4 = □ - 3 □ - 3 = 4 4 = 7 - □ □ - ∇ = 4 4 = □ - ∇ Children should use number beads or apparatus to support
3	Understanding what take away and find the difference mean	Understand subtraction as 'take away'  Find a 'difference' by counting up; eg, I have 11p and my friend has 7p. How much more money do I have?
4	Using a number line to count back in ones	Children use a numbered line to count back in ones. Children use number lines and practical resources to support calculation and teachers *demonstrate* the use of the number line. 11 - 4 

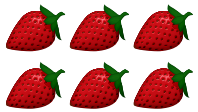
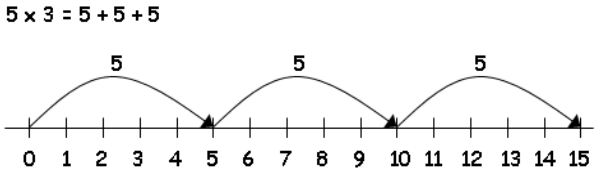
5	Number bonds to 10	Using bead strings and/or numicon children should be aware of how many ways the totals to 10 can be made. eg 5 -4 = 1 10-7= 3
6	Using number bonds to count back on the number line	Bridge 10 Eg. 15-7=8 8 + 7 = 15 
6	Using the number line to jump back in tens and single digit numbers from any 2-digit number	First counting back in tens and ones. 47 – 23 = 24  Then helping children to become more efficient by subtracting the units in one jump (by using the known fact 7 – 3 = 4). 47 – 23 = 24 

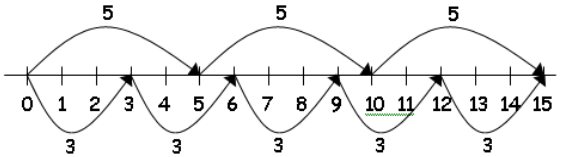
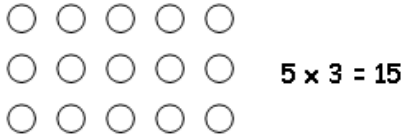
		Subtracting the tens in one jump and the units in one jump. 47 – 23 = 24  Bridging through ten can help children become more efficient. 42 – 25 = 17  **Find a small difference by counting up** e.g. 5003 – 4996 = 7 This can be modelled on an empty number line (see addition policy). Children should be encouraged to use known number facts to reduce the number of steps.
7	Column subtraction for taking away pairs of numbers using partitioning with no decomposition	Use of apparatus such as Base 10 or place value counters may be needed before this stage. The children must always ensure their numbers are correctly set out. The least significant numbers should be taken away first. 89 = 80 + 9 - 57 50 + 7 30 + 2 = 32

8	Column subtraction for taking away pairs of numbers using partitioning with decomposition	71 = = - 46 Step 1 70 + 1 - 40 + 6 Step 2 60 + 11 - 40 + 6 20 + 5 = 25 The calculation should be read as e.g. take 6 from 1. This would be recorded by the children as 60 ~~70~~ + 11 - 40 + 6 20 + 5 = 25 This should move onto HTU Step 1 754 = 700 + 50 + 4 - 286 - 200 + 80 + 6 Step 2 700 + 40 + 14 *(adjust from T to U)* - 200 + 80 + 6 Step 3 600 + 140 + 14 *(adjust from H to T)* - 200 + 80 + 6 400 + 60 + 8 = 468 This would be recorded by the children as 600 140 ~~700~~ + ~~50~~ + 14 - 200 + 80 + 6 400 + 60 + 8 = 468

9	Compact column subtraction	614 1 7 6 4 - 2 8 6 4 6 8
11	Compact method extended to any numbers of digits and decimals	It is vital that children understand what each column represents in terms of value.

GUIDANCE FOR THE TEACHING OF WRITTEN METHODS OF MULTIPLICATION

Step		
1	Understand that multiplication is repeated addition	Multiplication is related to doubling and counting groups of the same size.  Looking at columns 2 + 2 + 2 3 groups of 2 Looking at rows 3 + 3 2 groups of 3
2	Counting in different steps	Counting in 2s e.g. counting socks, shoes, animal's legs… Counting in 5s e.g. counting fingers, fingers in gloves, toes… Counting in 10s e.g. fingers, toes…
3	Counting groups on a number line	5 is 5 + 5 + 5 = 15 or 3 lots of 5 or 5 x3 Repeated addition can be shown easily on a number line:  and on a bead bar.

<table>
<tr><td></td><td></td><td>Commutativity
Children should know that 3 x 5 has the same answer as 5 x 3. This can also be shown on the number line.
 
</td></tr>
<tr><td>4</td><td>Use arrays</td><td>Children should be able to model a multiplication calculation using an array. This knowledge will support with the development of the grid method and secure their understanding of multiplication being repeated addition
 

3 x 5 = 15</td></tr>
<tr><td>5</td><td>Double two digit numbers using partitioning</td><td>8 x 2 = 16 (double the units)
double 15
10 + 5
↓ ↓
20 + 10 = 30</td></tr>
<tr><td>6</td><td>Using grid method to multiply TU by U and then HTU by U</td><td>Use of apparatus such as Base 10 or place value counters may be needed before this stage.

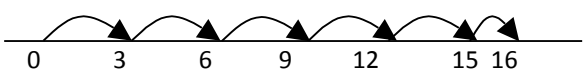
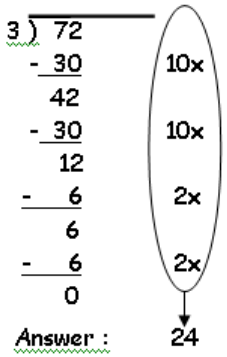
34x6

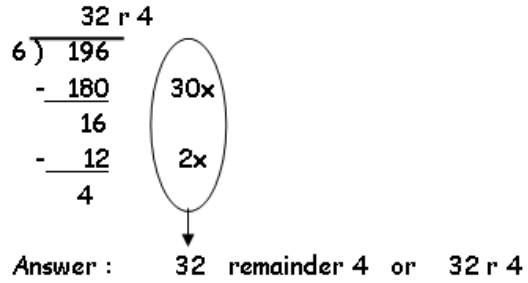
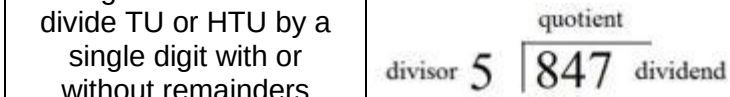
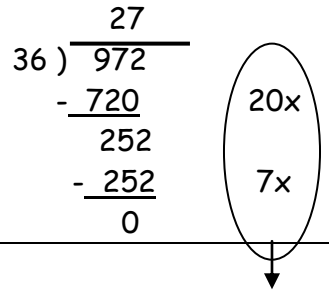
<table><tr><td></td><td>30</td><td>4</td></tr><tr><td>x 6</td><td>180</td><td>24</td></tr></table>
180+24= 204</td></tr>
</table>

7	Using the expanded column method to multiply TU by U and HTU by U	Children should describe what they do by referring to the actual values of the digits in the columns. For example, in 38 × 7 it is 'thirty multiplied by seven', not 'three times seven', although the relationship 3 × 7 should be stressed. 30 + 8 x 7 56 (8 x 7 = 56) 210 (30 x 7 = 210) 266 38 x 7 56 210 266
8	Short column method to multiply TU by U, HTU by U and ThHTU by U	The carry digits recorded below the line. 38 x 7 266 5
9	Short column method to multiply TU by TU, HTU by TU and ThHTU by TU	286 x 29 2574 (9 x 286 = 2574) 5720 (20 x 286 = 5720) 8294 1
10	Short column method extended to any numbers of digits and decimals	It is vital that children understand what each column represents in terms of value.

GUIDANCE FOR THE TEACHING OF WRITTEN METHODS OF DIVISION

Stage		
1	Understand sharing	Sharing – 6 sweets are shared between 2 people. How many do they have each? 
2	Understand grouping	How many pairs of socks are there?  There are 12 crocus bulbs. Plant 3 in each pot. How many pots are there? Jo has 12 Lego wheels. How many cars can she make?
3	Understand the **÷ =** signs and missing numbers	Be able to solve simple sums using apparatus 6 ÷ 2 = □ □ = 6 ÷ 2 6 ÷ □ = 3 3 = 6 ÷ □ □ ÷ 2 = 3 3 = □ ÷ 2 □ ÷ ∇ = 3 3 = □ ÷ ∇
4	Use a number line or bead string to group	  The bead bar will help children with interpreting division calculations such as 10 ÷ 5 as 'how many 5s make 10?'

5	Grouping on a number line with a remainder	16 ÷ 3 = 5 r1 
6	Using chunking to divide TU by U	72 ÷ 5 Partition the dividend into multiples of the divisor: e.g 72 = 50 + 22 50 ÷ 5 = 10 22 ÷ 5 = 4r2 → 10 + 4r2 = 14 r 2
7	Using chunking to divide TU by U setting out vertically	72 ÷ 3 

8	Using chunking to divide TU by U and HTU by U with remainders	196 ÷ 6  Answer : 32 remainder 4 or 32 r 4 Remainders are written as whole numbers
9	Using short method to divide TU or HTU by a single digit with or without remainders	  Answer is 169 r2 or the remainder can be given as a fraction 169 2/5
10	Using chunking to divide HTU by TU	972 ÷ 36 

		Answer : 27
11	Short method extended to any numbers of digits and decimals	87.5 ÷ 7 12.5 7) 87.5 - 70.0 (10x) 17.5 - 14.0 (2x) 3.5 - 3.5 (0.5x) 0 Answer : 12.5