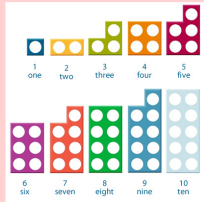




Early Stages

+ Addition +

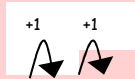
Children are encouraged to develop a mental picture of the number system in their heads to use for calculation. They develop ways of recording calculations using pictures, Numicon, etc.



They use numberlines and practical resources to support calculation and teachers *demonstrate* the use of the numberline.

Counting on in 1s

$3 + 2 = 5$



0 1 2 3 4 5 6 7 8 9

Children then begin to use numbered lines to support their own calculations using a numbered line to count on in ones.

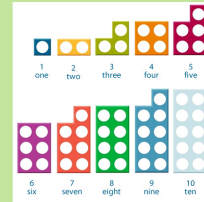
Bead strings or bead bars can be used to illustrate addition

$8 + 2 = 10$



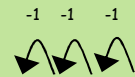
- Subtraction -

Children are encouraged to develop a mental picture of the number system in their heads to use for calculation. They develop ways of recording calculations using pictures, Numicon, etc.



They use numberlines and practical resources to support calculation. Teachers *demonstrate* the use of the numberline.

$6 - 3 = 3$

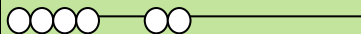


0 1 2 3 4 5 6 7 8 9

The number line should also be used to show that 6-5 means the 'difference between 6 and 5' or 'the difference between 5 and 6' and how many jumps they are apart.

Bead strings or bead bars can be used to illustrate subtraction.

$6 - 2 = 4$



✖ Multiplication ✖

Children will experience equal groups of objects.

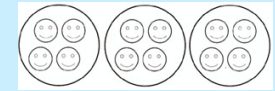
They will count in 2s and 10s and begin to count in 5s.

They will work on practical problem solving activities involving equal sets or groups.



÷ Division ÷

Children will understand equal groups and share items out in play and problem solving. They will count in 2s and 10s and later in 5s.

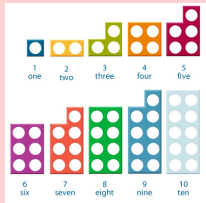




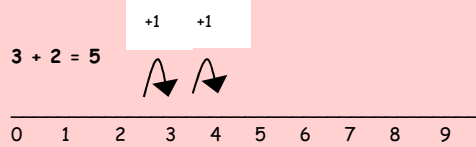
Stage 1

+ Addition +

Children are encouraged to develop a mental picture of the number system in their heads to use for calculation. They develop ways of recording calculations using pictures, Numicon, etc.



They use numberlines and practical resources to support calculation and teachers *demonstrate* the use of the numberline.



Children then begin to use numbered lines to support their own calculations using a numbered line to count on in ones.

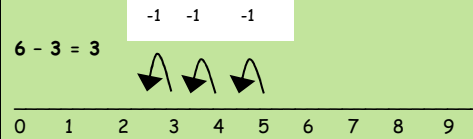
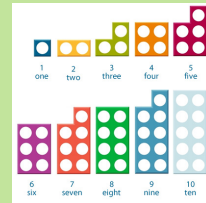
Count on in 10s
e.g. $45+20$ 45 55, 65

Bead strings or bead bars can be used to illustrate addition including bridging through ten by counting on 2 then counting on 3.



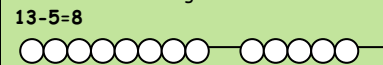
- Subtraction -

Children are encouraged to develop a mental picture of the number system in their heads to use for calculation. They develop ways of recording calculations using pictures, Numicon, etc.



The numberline should also be used to show that $6 - 3$ means the 'difference between 6 and 3' or 'the difference between 3 and 6' and how many jumps they are apart.

Bead strings or bead bars can be used to illustrate subtraction including bridging through ten by counting back 3 then counting back 2.



✖ Multiplication ✖

Children will experience equal groups of objects.

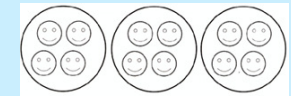
They will count in 2s and 10s and begin to count in 5s.

They will work on practical problem solving activities involving equal sets or groups.



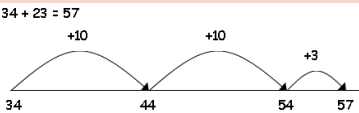
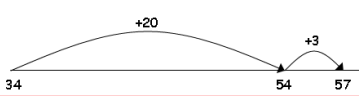
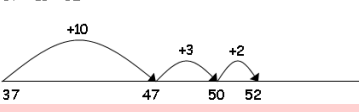
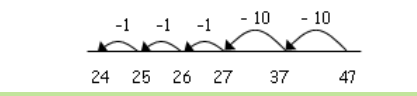
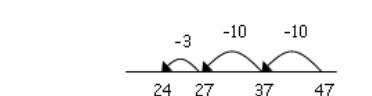
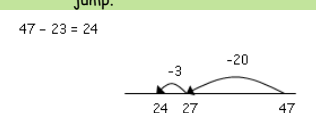
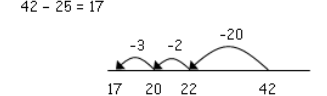
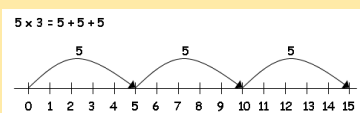
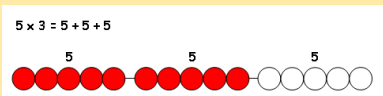
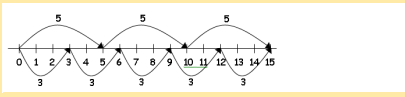
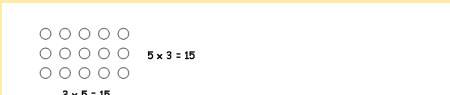
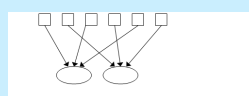

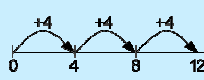
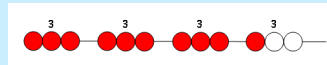
÷ Division ÷

Children will understand equal groups and share items out in play and problem solving. They will count in 2s and 10s and later in 5s.



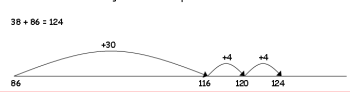
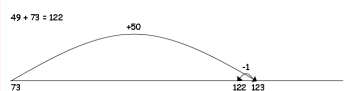
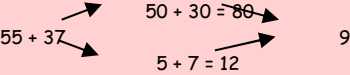
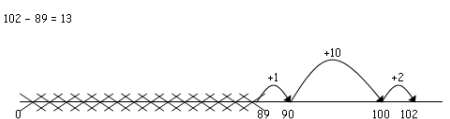
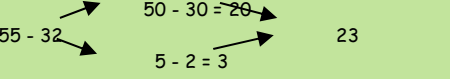
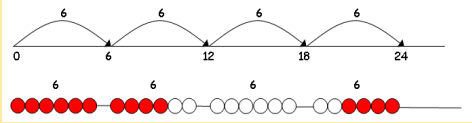
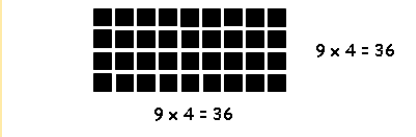

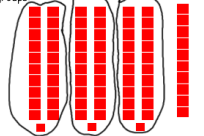
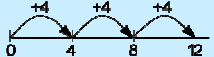


Stage 2

<div style="text-align: center;">+ Addition +</div>	<div style="text-align: center;">- Subtraction -</div>	<div style="text-align: center;">× Multiplication ×</div>	<div style="text-align: center;">÷ Division ÷</div>
<p>Children will begin to use 'empty number lines' themselves starting with the larger number and counting on.</p> <ul style="list-style-type: none"> ✓ First counting on in tens and ones. ✓ Then helping children to become more efficient by adding the units in one jump (by using the known fact $4 + 3 = 7$). <p>$34 + 23 = 57$</p>  <ul style="list-style-type: none"> ✓ Followed by adding the tens in one jump and the units in one jump. <p>$34 + 23 = 57$</p>  <ul style="list-style-type: none"> ✓ Bridging through ten can help children become more efficient. <p>$37 + 15 = 52$</p>  <p>Number bonds to 10 e.g. $5+5, 6+4, 7+3$</p>	<p>Children will begin to use empty number lines to support calculations.</p> <p>Counting back:</p> <ul style="list-style-type: none"> ✓ First counting back in tens and ones. <p>$47 - 23 = 24$</p>  <ul style="list-style-type: none"> ✓ Then helping children to become more efficient by subtracting the units in one jump (by using the known fact $7 - 3 = 4$). <p>$47 - 23 = 24$</p>  <ul style="list-style-type: none"> ✓ Subtracting the tens in one jump and the units in one jump. <p>$47 - 23 = 24$</p>  <ul style="list-style-type: none"> ✓ Bridging through ten can help children become more efficient. <p>$42 - 25 = 17$</p>  <p>Counting on: To begin with the number line should still show 0 so children can cross out the section from 0 to the smallest number. They then associate this method with 'taking away'.</p> <p>Help children to become more efficient with counting on by:</p> <ul style="list-style-type: none"> ✓ Subtracting the units in one jump; ✓ Subtracting the tens in one jump and the units in one jump; 	<p>Children will develop their understanding of multiplication and use jottings to support calculation:</p> <ul style="list-style-type: none"> ✓ Repeated addition 3 times 5 is $5 + 5 + 5 = 15$ or 3 lots of 5 or 5×3 <p>Repeated addition can be shown easily on a number line:</p>  <p>and on a bead bar:</p>  <ul style="list-style-type: none"> ✓ Commutativity Children should know that 3×5 has the same answer as 5×3. This can also be shown on the number line.  <ul style="list-style-type: none"> ✓ Arrays Children should be able to model a multiplication calculation using an array. This knowledge will support with the development of the grid method. 	<p>Children will develop their understanding of division and use jottings to support calculation:</p> <ul style="list-style-type: none"> ✓ Sharing equally 6 sweets shared between 2 people, how many do they each get?  <ul style="list-style-type: none"> ✓ Grouping or repeated subtraction There are 6 sweets, how many people can have 2 sweets each?  <ul style="list-style-type: none"> ✓ Repeated addition using a number line or bead bar $12 \div 4 = 3$   <p>The bead bar will help children with interpreting division calculations such as $10 \div 5$ as 'how many 5s make 10?'</p> <ul style="list-style-type: none"> ✓ Using symbols to stand for unknown numbers to complete equations using inverse operations <p>$\square \div 2 = 4$ $20 \div \triangle = 4$ $\square \div \triangle = 4$</p>



Stage 3

<p style="text-align: center;">+ Addition +</p>	<p style="text-align: center;">- Subtraction -</p>	<p style="text-align: center;">× Multiplication ×</p>	<p style="text-align: center;">÷ Division ÷</p>
<p>Children will continue to use empty number lines with increasingly large numbers, including compensation where appropriate.</p> <ul style="list-style-type: none"> ✓ Count on from the largest number irrespective of the order of the calculation.  <ul style="list-style-type: none"> ✓ Add near multiples of 10, then adjust e.g. $46 + 19$, $63 + 21$  <p>Children will use partitioning to see how numbers are broken down into their different values.</p> $34 + 43 = (4+3) + (30+40) = 7 + 70 = 77$ <p>Children will begin to use informal pencil and paper methods (jottings) to support, record and explain partial mental methods building on existing mental strategies.</p>  <ul style="list-style-type: none"> ✓ Using number facts - know pairs of numbers which make the numbers up to and including 12. ✓ Use patterns based on known facts when adding e.g. $6 + 3 = 9$ so we know $36 + 3 = 39$ 	<p>Children will continue to use empty number lines with increasingly large numbers to:</p> <ul style="list-style-type: none"> - Subtract near multiples of 10 - Subtract using patterns of known facts e.g. $9 - 3 = 6$, so we know $39 - 3 = 36$ - Bridging 10 e.g. $52 - 6$ as $52 - 2 (50) - 4 = 46$ - Counting up in steps of 2s, 3s, 5s and 10s - Begin to know doubles of multiples of 5 to 100. E.g. double 35 is 70. <p>Where the numbers are involved in the calculation are close together or near to multiples of 10, 100 etc counting on using a number line should be used.</p>  <p>Children will begin to use informal pencil and paper methods (jottings).</p> <ul style="list-style-type: none"> ✓ Partitioning <ul style="list-style-type: none"> • E.g. $55 - 32$ as $50 - 30$ and $5 - 2$ and combine the answers: 	<p>Children will continue to use:</p> <ul style="list-style-type: none"> ✓ Repeated addition <p>4 times 6 is $6 + 6 + 6 + 6 = 24$ or 4 lots of 6 or 6×4</p> <p>Children should use number lines or bead bars to support their understanding.</p>  <ul style="list-style-type: none"> ✓ Arrays <p>Children should be able to model a multiplication calculation using an array. This knowledge will support with the development of the grid method.</p>  <ul style="list-style-type: none"> ✓ Scaling <p>e.g. Find a ribbon that is 4 times as long as the blue ribbon</p>  <ul style="list-style-type: none"> ✓ Using symbols to stand for unknown numbers to complete equations using inverse operations $\square \times 5 = 20 \qquad 3 \times \triangle = 18 \qquad \square \times \circ = 32$ <ul style="list-style-type: none"> ✓ Partitioning $38 \times 5 = (30 \times 5) + (8 \times 5) = 150 + 40 = 190$	<p>Ensure that the emphasis in Y3 is on grouping rather than sharing.</p> <p>3)73 or 73 ÷ 3</p> <p>Once the number is represented in base 10 blocks. Begin dividing the base 10 blocks into groups of three. Draw 3 boxes or circles and share the base 10 blocks into three groups:</p>  <p>When we divide the 7 groups of ten into groups there is 1 group of ten left over. We put the 3 1's into groups and there are no 1's left over. To finish sharing the last group of 10, it needs to be traded for 10 1's.</p> <p>Children will continue to use:</p> <ul style="list-style-type: none"> ✓ Repeated addition using a number line  <p>Children should also move onto calculations involving remainders.</p> <ul style="list-style-type: none"> ✓ Using symbols to stand for unknown numbers to complete equations using inverse operations $26 \div 2 = \square \qquad 24 \div \triangle = 12 \qquad \square \div \circ = 8$



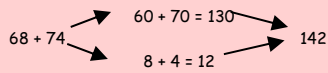
Stage 4

+ Addition +

Use place value

- ✓ Count in 100s
- ✓ Add multiples of 10, 100 and £1

Partitioning



Counting on

- ✓ Add 2 digit numbers by adding multiple of 10, then the 1s
- ✓ Add near multiples of 10 and 100
- ✓ Add pairs of 3 digit numbers

Using number facts

- ✓ Know pairs which total 20
- ✓ Use number bonds to 100
- ✓ Add to the next 10 and the next 100

Written methods

Build on partitioning to develop expanded column addition with 3 numbers e.g. $466 + 358$

$$\begin{array}{r} 400 \ 60 \ 6 \\ 300 \ 50 \ 8 \\ \hline 700 \ 110 \ 14 \end{array}$$

Then, begin to carry numbers across

$$\begin{array}{r} 400 \ 60 \ 6 \\ 300 \ 50 \ 8 \\ \hline 800 \ 20 \ 4 \\ 100 \ 10 \ 0 \end{array}$$

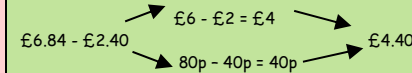
Children should know that ones line up under ones, tens under tens, and so on.

- Subtraction -

Taking away

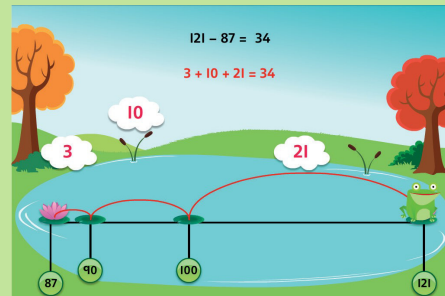
- ✓ Use place value to subtract e.g. $348 - 300$
- ✓ Take away multiples of 10, 100 and £1 e.g. $476 - 40 = 436$, $£4.76 - £2 = £2.76$
- ✓ Subtract near multiples of 10 and 100

Partitioning



Counting up

- Find a difference between two numbers by counting up from the smaller to the larger



- ✓ Begin to exchange.

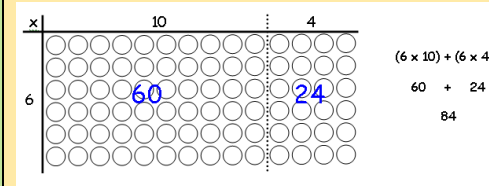
- ✓ Partitioning and Decomposition

This would be recorded by the children as

$$\begin{array}{r} 600 \ 140 \ 14 \\ 700 \ 40 \ 14 \\ \hline 600 \ 60 \ 8 \end{array} = 668$$

✖ Multiplication ✖

Children will continue to use arrays where appropriate leading into the grid method of multiplication.



- ✓ Grid method

TU x U

(Short multiplication - multiplication by a single digit)

$$23 \times 8$$

Children will approximate first

23×8 is approximately $25 \times 8 = 200$

$$\begin{array}{r} \times \ 20 \ 3 \\ 8 \ 160 \ 24 \\ \hline 160 \\ + \ 24 \\ \hline 184 \end{array}$$

N.B. If children are secure in using the above process, they may begin using year 5 and 6 methods as long as they are taught the different approaches in order and there is evidence in their books to show their 'mastery' of each method.

- ✓ Decomposition

$$\begin{array}{r} 6141 \\ 784 \\ - 86 \\ \hline 668 \end{array}$$

Children should:

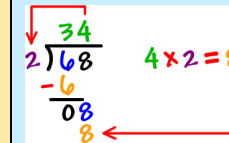
- ✓ be able to subtract numbers with different numbers of digits;
- ✓ using this method, children should also begin to find the difference between two three-digit sums of money, with or without 'adjustment' from the pence to the pounds;
- ✓ know that decimal points should line up under each other.

+ Division +

Children will develop their use of repeated addition to be able to add multiples of the divisor. Initially, these should be multiples of 10s, 5s, 2s and 1s - numbers with which the children are more familiar.

Then onto the vertical method:

Short division $TU \div U$



Leading to subtraction of other multiples.

Any remainders should be shown as integers, i.e. 14 remainder 2 or $14 \text{ r } 2$.

Children need to be able to decide what to do after division and round up or down accordingly. They should make sensible decisions about rounding up or down after division.

N.B. If children are secure in using the above process, they may begin using year 5 and 6 methods as long as they are taught the different approaches in order and there is evidence in their books to show their 'mastery' of each method.

$$\begin{array}{r} \pounds 8.95 = 8 + 0.9 + 0.05 \\ - \pounds 4.38 = -4 + 0.3 + 0.08 \\ \hline = 8 + 0.9 + 0.15 \quad (\text{adjust from T to U}) \quad 8.05 \\ - 4 + 0.3 + 0.08 \quad -4.38 \\ \hline 4 + 0.6 + 0.07 \\ = \pounds 4.57 \end{array}$$

Alternatively, children can set the amounts to whole numbers, i.e. $85 - 438$ and convert to pounds after the calculation. *N.B. If your children have reached the concise stage they will continue this method through into year 5 and 6. They will not go back to using the expanded methods.*



Stage 5

+ Addition +

Use place value

- ✓ Count in 1000s
- ✓ Add multiples of 10, 100 and £1

Counting on

- ✓ Add 2 digit numbers to 2-, 3- and 4 digit numbers by adding the multiple of 10 and the 1s
- ✓ Add near multiple of 10, 100 and 1000
- ✓ Count on to add 3-digit numbers and money

Using number facts

- ✓ Use number bonds to 100 and to the next multiple of 100
- ✓ Number bonds to £1 and to the next whole pound
- ✓ Add to the next whole number

Written methods

Children should build on expanded column addition to develop compact column addition with larger numbers e.g. $1466 + 4868$

$$\begin{array}{r} 1000 \quad 400 \quad 60 \quad 6 \\ \underline{4000 \quad 800 \quad 60 \quad 8} \\ 6000 \quad 300 \quad 30 \quad 4 \\ \underline{1000 \quad 100 \quad 10} \end{array}$$

Then move on to compact column addition with larger numbers

e.g.

$$\begin{array}{r} 587 \\ + 475 \\ \hline 1062 \\ 11 \end{array} \qquad \begin{array}{r} 3587 \\ + 675 \\ \hline 4262 \\ 111 \end{array}$$

Use expanded and compact column addition to add amounts of money

Add like fractions

✓

- Subtraction -

Partitioning and Decomposition

Step 1 $754 = 700 + 50 + 4$
 $\underline{- 286} \quad - 200 + 80 + 6$

Step 2 $700 + 40 + 14$ (adjust from T to U)
 $\underline{- 200 + 80 + 6}$

Step 3 $600 + 140 + 14$ (adjust from H to T)
 $\underline{- 200 + 80 + 6}$
 $400 + 60 + 8 = 468$

This would be recorded by the children as

$$\begin{array}{r} 600 \quad 140 \\ \underline{700 \quad 50} + 14 \\ - 200 + 80 + 6 \\ \hline 400 + 60 + 8 = 468 \end{array}$$

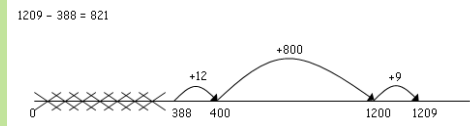
Decomposition

$$\begin{array}{r} 6141 \\ \underline{784} \\ - 286 \\ \hline 468 \end{array}$$

Children should:

- ✓ be able to subtract numbers with different numbers of digits;
 - ✓ begin to find the difference between two decimal fractions with up to three digits and the same number of decimal places;
- know that decimal points should line up under each other

Where the numbers are involved in the calculation are close together or near to multiples of 10, 100 etc counting on using a number line should be used.



Grid method

HTU x U

(Short multiplication - multiplication by a single digit)

346×9

Children will approximate first

346×9 is approximately $350 \times 10 = 3500$

$$\begin{array}{r} \times \quad 300 \quad 40 \quad 6 \\ 9 \quad \boxed{2700} \quad \boxed{360} \quad \boxed{54} \\ \hline 2700 \\ + 360 \\ + 54 \\ \hline 3114 \end{array}$$

TU x TU

(Long multiplication - multiplication by more than a single digit)

72×38

Children will approximate first

72×38 is approximately $70 \times 40 = 2800$

$$\begin{array}{r} \times \quad 70 \quad 2 \\ 30 \quad \boxed{2100} \quad \boxed{60} \\ 8 \quad \boxed{560} \quad \boxed{16} \\ \hline 2100 \\ + 560 \\ + 60 \\ + 16 \\ \hline 2736 \end{array}$$

Using similar methods, they will be able to multiply decimals with one decimal place by a single digit number, approximating first. They should know that the decimal points line up under each other.

e.g. 4.9×3

Children will approximate first

4.9×3 is approximately $5 \times 3 = 15$

$$\begin{array}{r} \times \quad 4 \quad 0.9 \\ 3 \quad \boxed{12} \quad \boxed{2.7} \\ \hline 12 \\ + 2.7 \\ \hline 14.7 \end{array}$$

N.B. If children are secure in using the above process, they may begin using year 5 and 6 methods as long as they are taught the different approaches in order and there is evidence in their books to show their 'mastery' of each method.

÷ Division ÷

Children will continue to use written methods to solve short division $TU \div U$.

Children can start to subtract larger multiples of the divisor, e.g. $30 \times$

Short division HTU ÷ U

Any remainders should be shown as integers, i.e. 14 remainder 2 or $14 \text{ r } 2$.

$$\begin{array}{r} 5 \overline{) 025 \text{ r } 3} \\ \underline{- 0} \quad 12 \\ \underline{- 10} \quad 28 \\ \underline{- 25} \quad 3 \\ \hline \end{array}$$

Children need to be able to decide what to do after division and round up or down accordingly. They should make sensible decisions about rounding up or down after division.

N.B. If children are secure in using the above process, they may begin using year 5 and 6 methods as long as they are taught the different approaches in order and there is evidence in their books to show their 'mastery' of each method.











Stage 6

<p style="text-align: center;">+ Addition +</p>	<p style="text-align: center;">- Subtraction -</p>	<p style="text-align: center;">× Multiplication ×</p>	<p style="text-align: center;">÷ Division ÷</p>																																																																																																																																													
<p>Counting on</p> <ul style="list-style-type: none"> ✓ Add 2 decimal numbers by adding 1s, then the 0.1s/0.01s ✓ Add near multiple of 1 ✓ Count on from large numbers <p>Using number facts</p> <ul style="list-style-type: none"> ✓ Use number bonds to 1 and to the next whole number ✓ Add to the next 10 from a decimal number <p>Written methods</p> <p>Children should build on expanded column addition for money leading to compact column addition for adding several amounts of money e.g. £14.64 + £28.78 + £12.26</p> <table style="margin-left: 20px;"> <tr><td>£14</td><td>60p</td><td>4p</td></tr> <tr><td>£28</td><td>70p</td><td>8p</td></tr> <tr><td>£12</td><td>20p</td><td>6p</td></tr> <tr><td>£55</td><td>60p</td><td>8p</td></tr> <tr><td>£1</td><td>10p</td><td></td></tr> </table> <p>Children to use compact column addition to add pairs of 5 digit numbers.</p> <p>Children to use compact addition to add decimal numbers with up to 2 decimal places</p> <table style="margin-left: 20px;"> <tr><td>15.68</td></tr> <tr><td><u>27.86</u></td></tr> <tr><td><u>43.54</u></td></tr> <tr><td>11.1</td></tr> </table> <p>Add related fractions e.g. $\frac{3}{4} + 1/8 = 7/8$</p>	£14	60p	4p	£28	70p	8p	£12	20p	6p	£55	60p	8p	£1	10p		15.68	<u>27.86</u>	<u>43.54</u>	11.1	<p>Decomposition</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> $\begin{array}{r} 3467 \\ - 2684 \\ \hline 3783 \end{array}$ </div> <p><i>Children should:</i></p> <ul style="list-style-type: none"> ✓ be able to subtract numbers with different numbers of digits; ✓ be able to subtract two or more decimal fractions with up to three digits and either one or two decimal places; ✓ know that decimal points should line up under each other. <p>Where the numbers are involved in the calculation are close together or near to multiples of 10, 100 etc counting on using a number line should be used.</p> <div style="margin-top: 20px;"> <p>3002 - 1997 = 1005</p> </div>	<p>ThHTU × U (Short multiplication - multiplication by a single digit) 4346 × 8</p> <p>Children will approximate first 4346 × 8 is approximately 4346 × 10 = 43460</p> <table style="margin-left: 20px;"> <tr><td>×</td><td>4000</td><td>300</td><td>40</td><td>6</td><td></td></tr> <tr><td>8</td><td>32000</td><td>2400</td><td>320</td><td>48</td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>32000</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>+ 2400</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>+ 320</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>+ 48</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td><u>34768</u></td></tr> </table> <p>HTU × TU (Long multiplication - multiplication by more than a single digit) 372 × 24</p> <p>Children will approximate first 372 × 24 is approximately 400 × 25 = 10000</p> <table style="margin-left: 20px;"> <tr><td>×</td><td>300</td><td>70</td><td>2</td><td></td></tr> <tr><td>20</td><td>6000</td><td>1400</td><td>40</td><td></td></tr> <tr><td>4</td><td>1200</td><td>280</td><td>8</td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td>6000</td></tr> <tr><td></td><td></td><td></td><td></td><td>+ 1400</td></tr> <tr><td></td><td></td><td></td><td></td><td>+ 1200</td></tr> <tr><td></td><td></td><td></td><td></td><td>+ 280</td></tr> <tr><td></td><td></td><td></td><td></td><td>+ 40</td></tr> <tr><td></td><td></td><td></td><td></td><td>+ 8</td></tr> <tr><td></td><td></td><td></td><td></td><td><u>8928</u></td></tr> </table> <p><i>Using similar methods, they will be able to multiply decimals with up to two decimal places by a single digit number and then two digit numbers, approximating first. They should know that the decimal points line up under each other.</i></p> <p><i>For example:</i></p> <p>4.92 × 3</p> <p>Children will approximate first 4.92 × 3 is approximately 5 × 3 = 15</p> <table style="margin-left: 20px;"> <tr><td>×</td><td>4</td><td>0.9</td><td>0.02</td><td></td></tr> <tr><td>3</td><td>12</td><td>2.7</td><td>0.06</td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td>12</td></tr> <tr><td></td><td></td><td></td><td></td><td>+ 0.7</td></tr> <tr><td></td><td></td><td></td><td></td><td>+ 0.06</td></tr> <tr><td></td><td></td><td></td><td></td><td><u>12.76</u></td></tr> </table> <p><i>N.B. If children are secure in using the above process, they may begin using year 5 and 6 methods as long as they are taught the different approaches in order and there is evidence in their books to show their 'mastery' of each method.</i></p> <p><i>Children that are secure with all the multiplication methods can now move onto the compact written method.</i></p>	×	4000	300	40	6		8	32000	2400	320	48							32000						+ 2400						+ 320						+ 48						<u>34768</u>	×	300	70	2		20	6000	1400	40		4	1200	280	8						6000					+ 1400					+ 1200					+ 280					+ 40					+ 8					<u>8928</u>	×	4	0.9	0.02		3	12	2.7	0.06						12					+ 0.7					+ 0.06					<u>12.76</u>	<p>Children will continue to use written methods to solve short division TU ÷ U and HTU ÷ U.</p> <p>Any remainders should be shown as fractions, i.e. if the children were dividing 32 by 10, the answer should be shown as $3\frac{2}{10}$ which could then be written as $3\frac{1}{5}$ in it's lowest terms.</p> <div style="margin-top: 20px;"> </div> <p>Long division HTU ÷ TU</p> <p>Then moving further:</p> <div style="margin-top: 20px;"> </div> <p>Extend to decimals with up to two decimal places. Children should know that decimal points line up under each other.</p> <div style="margin-top: 20px;"> <p>So, $2.35 \div 5 = .47$</p> </div>
£14	60p	4p																																																																																																																																														
£28	70p	8p																																																																																																																																														
£12	20p	6p																																																																																																																																														
£55	60p	8p																																																																																																																																														
£1	10p																																																																																																																																															
15.68																																																																																																																																																
<u>27.86</u>																																																																																																																																																
<u>43.54</u>																																																																																																																																																
11.1																																																																																																																																																
×	4000	300	40	6																																																																																																																																												
8	32000	2400	320	48																																																																																																																																												
					32000																																																																																																																																											
					+ 2400																																																																																																																																											
					+ 320																																																																																																																																											
					+ 48																																																																																																																																											
					<u>34768</u>																																																																																																																																											
×	300	70	2																																																																																																																																													
20	6000	1400	40																																																																																																																																													
4	1200	280	8																																																																																																																																													
				6000																																																																																																																																												
				+ 1400																																																																																																																																												
				+ 1200																																																																																																																																												
				+ 280																																																																																																																																												
				+ 40																																																																																																																																												
				+ 8																																																																																																																																												
				<u>8928</u>																																																																																																																																												
×	4	0.9	0.02																																																																																																																																													
3	12	2.7	0.06																																																																																																																																													
				12																																																																																																																																												
				+ 0.7																																																																																																																																												
				+ 0.06																																																																																																																																												
				<u>12.76</u>																																																																																																																																												



Stage 7

 Addition 	 Subtraction 	 Multiplication 	 Division 
<p>Using number facts</p> <ul style="list-style-type: none"> ✓ Use number bonds to 1 and to the next multiple of 1 e.g. $0.63 + 0.37$ ✓ Add to the next 10 from a decimal number e.g. $4.62 + 5.38$ <p>Written methods</p> <p>Children should use compact column addition for adding several large numbers and decimal numbers with up to 2 decimal places. Use compact column addition with money</p> <p>e.g. $£14.64 + £28.78 + £12.26$</p> $\begin{array}{r} £14.64 \\ £28.78 \\ \underline{£12.26} \\ \underline{£55.68} \\ 111 \end{array}$ <p>Add unlike fractions including mixed numbers e.g. $1/4 + 2/3 = 11/12$ $2\ 1/4 + 1\ 1/3 = 3\ 7/12$</p>		<p>Long multiplication</p> $\begin{array}{r} 124 \times 26 \text{ becomes} \\ \begin{array}{r} 12 \\ 124 \\ \times 26 \\ \hline 2480 \\ 744 \\ \hline 3224 \\ 11 \\ \hline \end{array} \\ \text{Answer: } 3224 \end{array}$	<p>Short Division</p> $\begin{array}{r} 078.33 \\ 3 \overline{) 223^2 5^1 0} \end{array}$