Nursery (EYFS 1)			
Addition	Subtraction	Multiplication	Division
Before addition can be introduced, children need to have a secure knowledge of number. In Nursery, children are introduced to the concept of counting, number order and number recognition through practical activities and games. This is taught through child initiated games such as 'Hide and seek' and 'I spy'. Children also learn how to count 1-1 (pointing to each object as they count) and that anything can be counted, for example, claps, steps and jumps as well as concrete items. This is reinforced by opportunities provided in the outdoor area for the children to count e.g. counting building blocks, twigs etc. **Introduction to addition:** Once children are secure in their number knowledge up to 10, children are introduced to the concept of more and less. Children learn how to distinguish the difference between sets of objects and when two groups are of the same size. Adults model the initial addition vocabulary supported by age appropriate definition. An example of this is "this group has more, this group has less. Wow! These groups have the same. They are equal" ***Children are taught all number objectives within the 30-50 month age band from the Development Matters curriculum.***	Before subtraction can be introduced, children need to have a secure knowledge of number. In Nursery, children are introduced to the concept of counting backwards. This is taught through child initiated games indoors and outdoors such as acting out counting songs and running races (children shouting "5, 4, 3, 2, 1, 0, go!"). **Introduction to subtraction:** Once children are secure in their number knowledge up to 10, children are introduced to the concept of less and subtracting by counting backwards. Children learn how to take 1 object away through singing songs such as '5 little monkeys'. Children use their fingers to represent how many monkeys left with adults modelling how to 'subtract' one finger / monkey away each time. Adults model the initial subtraction vocabulary supported by age appropriate definition. An example of this is "subtract / take away, we have one less monkey, Oh no one monkey has gone away!"	By the end of **Reception,** children are expected to understand the concept of doubling and to be able to double a number up to 10. Before doubling can be introduced, children need to have a secure knowledge of counting, number facts and addition in order to double. Children are then introduced to the concept of doubling through practical games and activities, including the use of the outdoor areas. Children act out 'doubling' by physically add two equal groups together to find out the 'doubles' answer. Children build on their previous knowledge of 'addition' by learning that doubling is when you add two equal amounts together.  	Children build on their previous knowledge of 'addition' by learning that doubling is when you add two equal amounts together. Adults model doubling and initial multiplication vocabulary supported by age appropriate definition. An example of this is "double 2 is 4! Wow – that means that 2 add 2 equals 4, 2 times 2 equals 4". Adults support children in recording their doubling sums in the written form on whiteboards and in their maths books. **Number line:** When children are ready, they use a number line and **practical resources** to support doubling e.g. child orientated / chosen characters linked to topic (e.g. Superman, Ben 10, Cinderella, Minnie Mouse).

Reception (EYFS 2)

Addition

In EYFS:

Children will engage in a wide variety of songs and rhymes, games and activities. They will begin to relate addition to combining 2 groups of objects, first by counting all and then by counting on from the largest number.

They will find one more than a given number.

In practical activities and through discussion, they will begin to use the vocabulary involved in addition.

"You have 4 bananas and I have 2; how many bananas are there altogether?"

Through dice games, they will progress from counting all spots to recognising the patterns and counting on from that:

"That is 6, so there is 7,8,9 altogether".

Subtraction

In EYFS:

Children will engage in a variety of counting songs and rhymes and practical activities.

In practical activities and through discussion they will begin to use the vocabulary associated with subtraction.

They will find one less than a given number.

They will begin to relate subtraction to 'taking away' **using objects** to count 'how many are left' after some have been taken away.

5-2=3

"How many apples do you have? Take 2 apples away. How many are left?"

Children will begin to count back from a given number.

Multiplication

In EYFS:

Children will engage in a variety of counting songs and rhymes and practical activities.

In practical activities and through discussion they will begin to **solve problems** involving **doubling**.

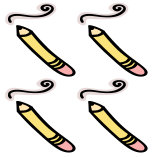
"Three dolls for you and thee dolls for me. How many dolls altogether?"

Division

In EYFS:

Children will engage in a variety of counting songs and rhymes and practical activities.

In practical activities and through discussion they will begin to **solve problems** involving **halving and sharing.**



"Share the pencils between two people. Half for me and half for you".

Year 1

Addition

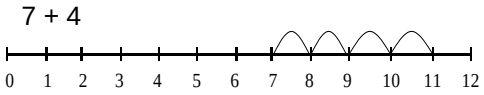
Children will continue to practise counting on from any number, e.g. 'Put 6 in your head and count on 3'.

Number tracks & Number lines (numbered)
Initially use a number track to count forward for addition:

'Put your finger on 4 and count on (forwards) 3'.

Then move on to a marked number line:

Encourage them to count on from the largest number for efficiency, e.g. 4+7 is quicker to do as 7+4



Ensure children are confident with using a marked number line before moving on to an empty number line (see year 2 guidance).

If ready, look at bridging through ten: 8 add 5 is easier as 8+2 +3. This could be shown visually using Numicon pieces once a child is secure with number bonds to 10: Put an 8 piece down. We are adding 5. How many more of the 5 can we put on to the 8 piece to make it a ten piece? Exchange the 5 piece for a 2 and a 3 piece so children can 'see' the addition. 10+3=13.

Subtraction

Children will continue to practise counting back from a given number.

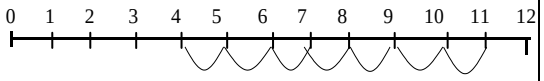
Number tracks & Number lines
(numbered)
Initially use a number track to count back for subtraction:

'Put your finger on 9 and count back 3 places'

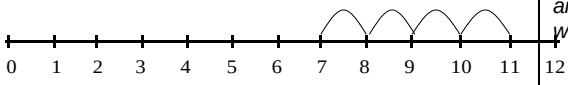
Then progress to a marked number line:

At this stage, begin to introduce the 2 ways to do subtraction: counting back or counting up (finding the difference). See how the number line jumps should be made on the bottom for taking away and on the top for counting on.

11 – 7
(Counting back)



The difference between 7 and 11
(Counting up)



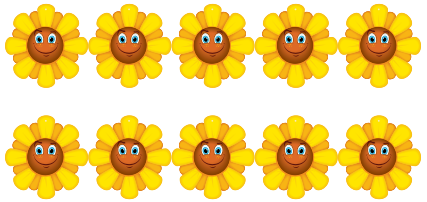
Multiplication

Children will count repeated groups of the same size in practical contexts (repeated addition). They will solve practical problems which involve combining groups of 2, 5 or 10 e.g. socks, fingers, cubes.

"Four pairs of socks; how many socks altogether? 2, 4, 6, 8".

"5 hands each with five fingers; how many fingers altogether? 5, 10, 15, 20, 25"

Use **arrays** to support early multiplication:



"Two groups of 5; how many altogether? 5,10"
"Five groups of 2; how many altogether? 2, 4, 6, 8, 10".

Two groups of 5 equals 5 add 5 so double 5 is 10: 5+5=10 and 2x5=10 (when 'x' is 'lots of')

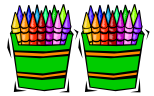
Continue to solve problems in practical contexts and develop the language of early multiplication with appropriate resources throughout Year 1.

Division

Children will start with practical sharing using a variety of resources. They will share objects into equal groups in a variety of situations. They will begin to use the vocabulary associated with division in practical contexts.

"Share these 8 apples equally between 2 children; how many apples will each child get?"

"Share 20 crayons between 2 pots. How many crayons are in each pot?"



Then move from sharing to grouping in a practical way:

"Put 20 crayons in to groups of 10. How many pots do we need?"

How many groups of 10?
20 shared between 2 equals ten.
Half of 20 is equal to 10.

**This enables children to see the inverse relationship between multiplication and division from an early age.*

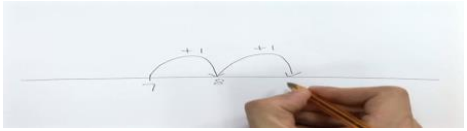
Continue to solve problems in practical contexts and develop the language of early division with appropriate resources throughout Year 1.

Year 2

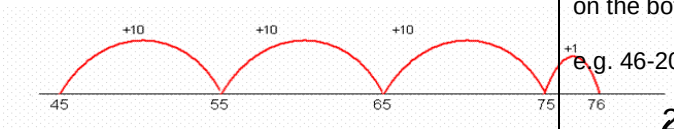
Addition

Using an empty number line within 100:

Children should be taught to count on in ones (or in other small steps) to show answers to additions where only a small number (less than 10) is being added:



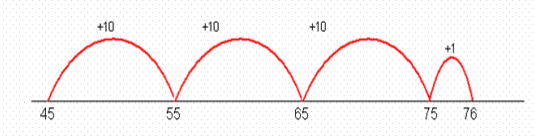
This should then progress to counting in tens:



Use in conjunction with a **100 square** to show jumps of tens (as being directly below).

45+31=76

"Put the biggest number first (45) then partition the smaller number (31=30+1) and count on:



Use in conjunction with a **100** square to show jumps of tens and ones (as being directly below then directly to the right).

Consolidate/introduce bridging through ten (as explained in year 1).

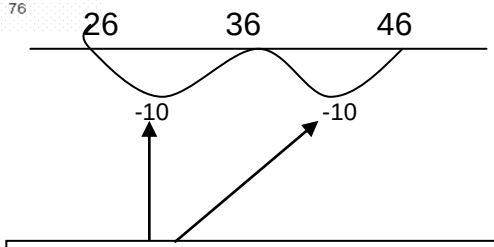
If children are confident, use more efficient jumps which take account of number bonds within ten, e.g. for 27+15: 27+10+3+2 (because partitioning

Subtraction

Children should be taught to count back when **subtracting a one digit** number. This may be with concrete objects, progressing to a number line, then mentally. When ready, children may subtract through rounding and adjusting, e.g. subtract 9 by subtracting 10 then adding 1; subtract 8 by subtracting 10 then adding 2.

When **subtracting a tens number**, use no. square to show how the unit doesn't change and they move directly above for the number to get ten smaller. This can then be transferred on an empty number line. **Counting back** is to be done on the bottom of a number line:

e.g. 46-20



The tens can be combined once confident so they just make one more efficient jump.

This method can then be used when taking away tens and units, always taking the tens away first:

For 35-16, begin at 35, jump back 10 then jump back 6 by counting in ones. As they get more confident, they should use their number bonds to enable them to bridge, so take away 5 to get to 30, then 1 more to get to 29.

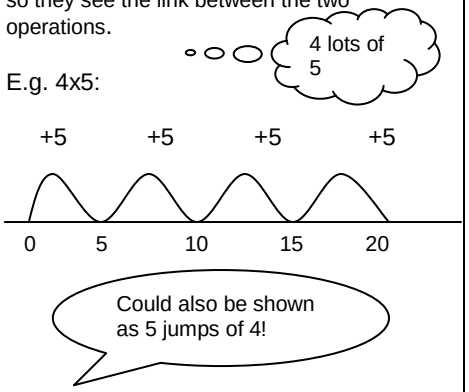
*Children may need a labelled number line from 1-30 to tackle subtraction before moving on to a blank, but the blank should be introduced as soon as possible to encourage independent thinking.

Multiplication

Children should be taught what the x sign means and use the strategies below to answer number sentences such as 4X5=

When being taught that multiplication is 'lots of', children should be taught how to use **repeated addition** and **arrays** simultaneously so they see the link between the two operations.

E.g. 4x5:



Corresponding Array:

* * * * *
* * * * *
* * * * *
* * * * *

4x5=20

* * * *
* * * *
* * * *
* * * *
* * * *

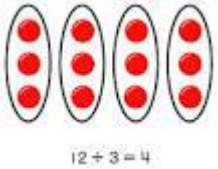
5x4=20

Show that like addition, multiplication is **commutative** (can be done in any order).

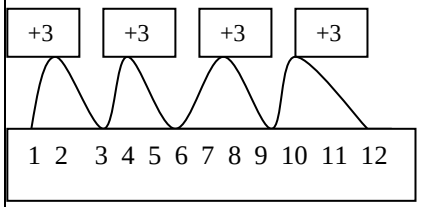
Any able children ready for a more formal method of recording can begin to access the year 3 curriculum.

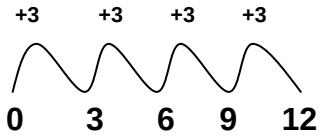
Division

Children need to be taught that division is not just sharing; it can also mean grouping.



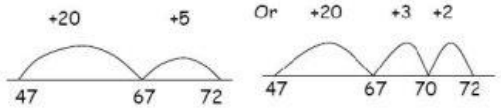
The above image represents how many groups of 3 make 12, but also how many groups of 4 make 12 when ringed horizontally. This should begin with movable objects to physically group then extend to pictorial recordings. The next step is to use a number line to work out the answer through counting on in steps as shown below. This could begin on a numbered line, then once confident, a blank number line could be introduced:





the final 5 units in to 3 and 2 enables efficient rounding to the next ten before then adding the remaining 2).

Below shows similar examples for how 47 add 25 could be tackled (though children may still need to do the twenty as two separate jumps of ten):



When confident use the **partitioning method** to add 2 two digit numbers. This should be seen as progression from the previous number line methods; though it is possible that some children struggling with the number line concept may find this an 'easier' approach, it isn't as visual in aiding their **understanding**.

Begin with numbers where the units remain below ten:

"**Partition** the n umbers in to tens and ones/units. Add the tens together, add the units together then **recombine** to give the answer".

43 + 25 = 68
/ \ / \
40 3 20 5

40+20=60
3+5=8
60+8=68

Once confident, move on to calculations that **bridge** (cross over) the tens:

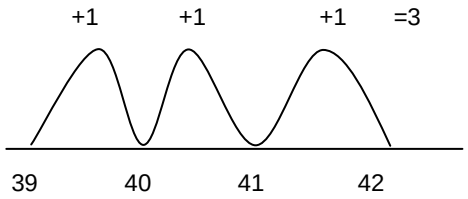
49 + 25 = 74
/ \ / \
40 9 20 5

40+20=60
9+5=14

Combine methods with use of the hundred square to reinforce understanding of number and place value.

Teach children how it is more efficient to count on when numbers are closer together and for this, use the top of the number line to show the inverse relationship between addition and subtraction.

E.g: 42-39=3
Demonstrate the inefficiency of starting at 42 and jumping back 39 places! Explain subtraction just means difference so it is up to them to decide on the quickest way to find that difference, which in this case is through 'counting on'. Use 'counting on' rather than 'adding on' so they don't confuse addition as a method of finding the difference.

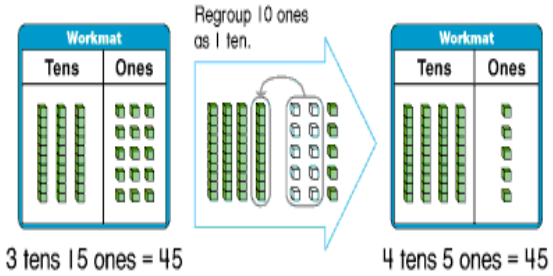


See year 3 for guidance on next steps for more able pupils.

60+14=74

This can be done practically with children physically using tens rods and unit cubes and making the exchange between ten cubes and one rod. This is not a necessity for more able, but with those still needing a firmer grasp on place value and the actual process of addition this will be an invaluable support for them and allow them to tackle such calculations independently.

E.g. for 29 + 16, a child could physically make the two numbers then group on a tens and ones mat. If the units exceed ten, they exchange ten for a rod which then moves in to the left column.



The partitioning approach can then be done in column format:

27
46+
——
60 (20 +40)
13 (7 + 6)
73 (60 + 13)

Year 3

Addition

Build on addition methods from year 2 then when confident introduce the expanded column method. This should be taught by adding the hundreds first, preparing them for more efficient mental addition later. It can also be shown that the same answer is arrived at by adding the units first, preparing them for the compact method which follows on from this.

**Children need to recognise the value of the hundreds, tens and units without needing to partition them and must also be able to add in columns.*

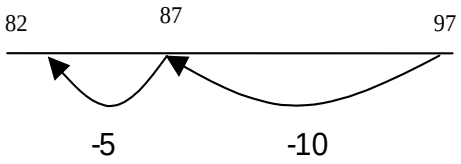
Left to right OR Right to left

Move to the compact column addition method, extending to carrying once children are confident with adding pairs below ten.

Compare this method to the expanded addition, so they can make sense of the process and the reduced number of steps involved. The 'carry over' should be placed beneath the answer row of the sum underneath the relevant place value column:

Subtraction

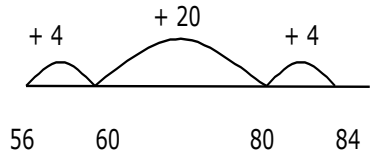
Continue as in Year 2 but with appropriate numbers e.g.
97 – 15 = 72



Complementary addition using a blank number line to count on to find the difference.

**Important that they know subtraction is not just 'taking away'; it is 'finding the difference':*

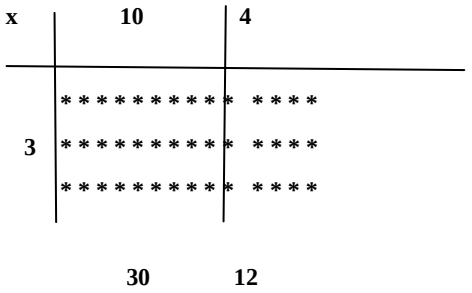
84 – 56 = 28



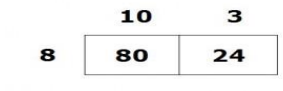
Because counting on goes left to right it is done on the top of the number line.

Multiplication

Introduce the grid method for multiplying 2-digit numbers by a 1-digit number. Initially link the layout of the grid to an array:



Children should be given the opportunity to physically make arrays to represent calculations, e.g. make 8 lots of 13 with tens and ones counters or 10p and 1p coins. This can then be translated to the grid method format:



To do this children must be able to:

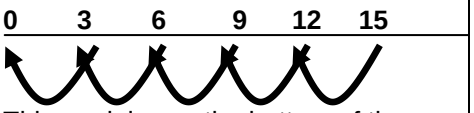
- Partition in to tens and units
- Multiply multiples of ten by single digit numbers using knowledge of multiplication facts and place value.
- Work out unknown multiplication facts by repeated addition or other suitable mental strategies (commutative law, near multiples, adjusting, etc).

Division

Children need to understand division as sharing and grouping.

Example of sharing:

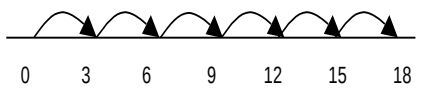
15 ÷ 3



This model uses the bottom of the number line as it is a counting back process.

Example of grouping:

18 ÷ 3

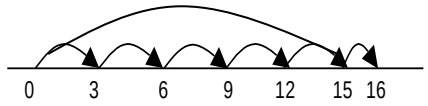


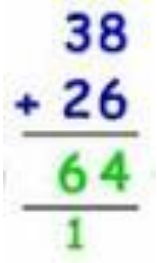
This model uses the top of the number line going left to right to show that it is a counting on process.

Once confident with straightforward factors and multiples, remainders can be introduced using the same strategy:

How many 3's make 16 and how many left over?

e.g. 5 r1





It must be re-iterated when teaching this that they are adding three tens and 2 tens; not 3 and 2.

When ready, introduce partitioned column subtraction method (where no exchanging is required:

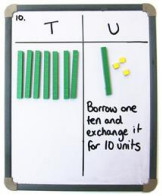
79 – 24 = 55

70+9
20+4-

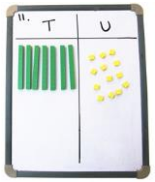
50+5=55

Then progress to exchanging using practical situations first. Tens rods and units or single straws and tens bundles make ideal apparatus for this, as do 1p and 10p coins if it is being taught within a money context:

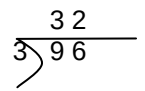
Discuss why 83-56 is not as straightforward. Explain that to do this effectively we must 'exchange' one tens rod for ten unit cubes.



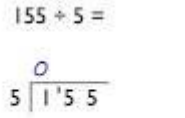
It is now possible to take 6 away, leaving 7.



Once confident with the concept of division as grouping, present larger numbers to group a one digit number in to, but select ones where there is no remainder in the answer or the carryover (each digit must be a multiple of the divisor):



When they have full understanding of remainders (from number line method) and short division without remainders, they can be taught short division when remainders do occur within the calculation and how to 'carry' the remainder on to the next digit where it acquires a tens value:



For how many 5's in 55, encourage them to use known number facts, i.e. ten lots of 5 is 50, so one more 5 makes 55. Therefore the answer is 11.

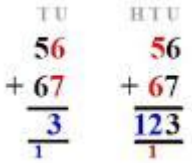
**If needed, children should use a number line to work out individual division facts that they are not yet able to recall mentally (using grouping rather than sharing to enable development of mental skills).*

	Once secure with the concept of exchanging they can begin to use the partitioned column method for any 2 and 3 digit numbers: 425 - 143 Hundreds Tens Units 3 4 0 0 1 2 0 5 -1 0 0 4 0 3 2 0 0 + 8 0 + 2 = 282 ***If more able children are competent with this, try them with larger digits and more challenging numbers before moving them on to the compact column method (see year 4 guidance).***		

Year 4

Addition

Move from expanded addition to the compact column method, **adding units first** and 'carrying' numbers **underneath** the calculation.



Some more able children may already be using this but they can now extend to larger digit numbers.

This should be taught alongside the **expanded method** (see year 3) to begin with so children can make links between the two and see how the compact column method is the more **efficient** method.

**There is no need to teach it for numbers where no carryover is necessary as they should be encouraged to calculate these mentally. However examples can be shown so that they see there is no real benefit of doing this.*

Provide opportunities to apply this method for problems involving calculation of money and measurement values.

Subtraction

Partitioned column subtraction with 'exchanging' (decomposition) as taught in year 3 but with more complex numbers and values.

Use place value apparatus to reinforce the 'exchanging' process with children still not secure.

2754-1562=1192

600 1
2000+700 + 50+ 4
1000+500 + 60 + 2 -
1000+100 + 90 + 2 =1192

Teach the compact method alongside it. It is likely that by now children will already have experience of compact methods (addition). They should recognise that this is the **more efficient** of the two.

6 1
2 7 5 4
1 5 6 2 -
1 1 9 2

A variety of mental methods must be taught and practised, including deciding whether it is best to count on or back based on whether numbers are close together or far apart.

***Encourage use of inverse to check answers so that children are practising addition and subtraction side by side.**

Multiplication

Develop the grid method to extend to three digit numbers by a one digit number. Encourage children to add final answers in a column to aid accuracy and understanding of place value:

X	100	20	7
4	400	80	28

1
400
80
28 + (adding units first)

608

Children also need to be encouraged to approximate before they calculate to enable them to check the reasonableness of their answer. For example:

"346 x9 is close to 350X10 so my answer should be near to 3500".

**Please note the grid method for multiplication is now only to be used when multiplying by a one digit number (short multiplication).*

Division

Continue to develop (or introduce) short division. See year 3 guidelines.

Those who can do this well can be shown how to apply it when dividing a 3-digit number by a single digit number:

2 3
4)9 1 3 6

*Reinforce that any numbers carried across will always have a **tens** value.*

***Encourage use of inverse to check answers so that children are practising muliplication and division side by side.**

Year 5

Addition

Children continue to build on their knowledge of the compact addition method extending to numbers of four digits or more and more than two values.

This will also include decimals. If adding a mixture of 1 and 2 decimal places, teach children to put a zero in the hundredth column to avoid confusion and to enable better development of decimal place value:

```
23.49
 7.81+
30.30
1 1 1
```

Teach how the 0 only needs to be recorded when dealing with money, not straightforward decimals as it has no value.

Model as 9 hundredths add 1 hundredth gives 10 hundredths. Record the unit and carry over the ten to the next column placing it under the answer line.

Children should be able to align integers and decimals accurately.

```
19.01
 3.65
 0.70 +
23.36
1 1
```

As shown above, teach children to fill empty decimal places with zero to show the place value clearly.

Subtraction

Children still not secure with number facts and place value will need to remain on the partitioned column method as taught in years 3 and 4 until ready for the compact method.

Extend use of compact method to numbers beyond 4 digits with 'exchanging':

```
2 10 1 4 1
31056
 2128-
28928
```

Move to subtracting decimal values including calculations which have a mixture of integers and decimals. They should begin by aligning around the decimal point to ensure accurate alignment to begin with and as with addition, zero should be entered in any empty decimal places to ensure children know what to subtract in that column.

```
6 10 1 8 1
7169,0
 372.5 -
6796.5
```

This formal written method should be in addition to using mental subtraction strategies including rounding and adjusting, blank number lines, deciding whether to count on or back, etc.

It is necessary for children to decide when the compact column method is appropriate or when mental methods are more efficient:

Multiplication

Introduce the column method (short multiplication). Initially compare the same calculation e.g. 327x4 to see how the two methods are related, but ensure they can see why the short multiplication method has less steps and is therefore the more efficient of the two:

GRID METHOD

x	300	20	7
4	1200	80	28

```
1200
  80
  28+
1308
 1 2
```

SHORT MULTIPLICATION METHOD

```
 327
   4 x
1308
 1 2
```

Encourage children to approximate to check the likelihood of their answer being accurate; 300x4 is 1200 so the answer shouldn't be too much bigger than this.

Once confident, children should be taught the long multiplication method. The grid method should only be used as a teaching tool to show children the relationship between the place value of the digits. They should not use the grid method themselves when multiplying larger integers as the aim is to have a more **efficient** method:

Division

Children should begin to extend their use of short division to dividing four digit numbers by single digit numbers.

Pupils should be introduced to more calculations which have remainders in the answers. They should then be put in to real life contexts so children have to consider the meaning of the remainder and how to express it; as a fraction, a decimal, or rounded up or down to the next whole number, depending on the context of the problem.

```
   0 6  6  3 r5
     5  5  2
8 | 5 3 0 9
```

This calculation could be expressed as 663 remainder 5, 663 and five eighths, or rounded to either 663 or 664.

Encourage the use of the inverse through short multiplication to check answers so that they are using multiplication and division side by side.

For more able, the long division method could be introduced-see Year 6 guidelines for how to teach this.

Use inverses to check so that children continue to see the link between multiplication and division.

17932-99
Not appropriate-CHILDREN SHOULD RECOGNISE THAT THEY CAN QUICKLY SUBTRACT 100 MENTALLY THEN ADD 1 BACK ON.

29765-29762
Not appropriate-CHILDREN SHOULD RECOGNISE THAT THOUGH THE NUMBERS ARE LARGE, THEY ARE VERY CLOSE TOGETHER SO IT IS FAR EASIER TO MENTALLY FIND THE DIFFERENCE THROUGH COUNTING ON.

4000-327
Not appropriate-CHILDREN SHOULD RECOGNISE THAT THERE WOULD BE TOO MUCH EXCHANGING INVOLVED; FAR EASIER TO ROUND UP MENTALLY OR USING AN INFORMAL NUMBER LINE JOTTING.

***CHILDREN SHOULD NOT USE THE COMPACT COLUMN METHOD WHEN SUBTRACTING A 1 OR 2 DIGIT NUMBER FROM A 2 DIGIT NUMBER AS THEY SHOULD HAVE APPROPRIATE KNOWLEDGE OF NUMBER FACTS TO DO SUCH CALCULATIONS MENTALLY.**

Use inverses to check answers so children continue to see the link between addition and subtraction.

GRID METHOD

18x13

	10	8
10	100	80
3	30	24

100
80
30
24 +

234

This enables them to use their knowledge of place value and partitioning but is long winded so they need to be taught the long multiplication method as shown below.

```
  1 8
  1 3 x
  5 4   (3x18)
  2
1 8 0   (10x18)
2 3 4
```

This should be modelled as '3 x 18' being calculated on the first row (3x8 is 24, the '2' for twenty being carried over, then 3x1 is 3 plus the 2 that has been carried over).

		The second row shows the calculation of '10x18' so begin by putting a zero in the units column. It is then '1x8' (no carry over) and '1x1'. The answers from both rows are then totalled to give the final answer. The brackets shown at the side may be used by children to check they understand the calculation parts but once confident, these should not be used. Once secure they can progress to applying this method to larger integers including multiplying a 2 digit by a 3 or 4 digit.	

Year 6

Addition

Add several numbers of increasing complexity including integers and decimals. Tenths, hundredths and thousandths should be correctly aligned with the decimal points lined up vertically including in the answer row.

As in previous year group, zeros should be added in to any empty decimal places to show there is no value to add.

Example:
23.361 + 9.08 + 59.77 + 1.3
becomes;

```
 23.361
  9.080
 59.770
  1.300 +
 93.511
 2 1  2
```

Children should only use this method when additions cannot be done mentally or using a quicker, more informal approach. See *Key Skills for Addition.*

Subtraction

Use the compact column method to subtract more complex integers:

```
  0 14  9
 15̸0̸, 699
   89, 949 –
 ---------
   60, 750
```

Use the compact column method to subtract decimals with different numbers of decimal places:

```
 105.419
  36.080 -
  69.339
 -------
```

Pupils should be encouraged to apply their knowledge of a range of mental strategies, mental recall skills and informal and formal written methods when selecting the **most efficient** method to work out subtraction problems.

Multiplication

Extend use of short multiplication to multiplying decimals with up to 2 decimal places by a single digit integer:

```
   3.19
      8  x
 -------
  25.52
    1  7
```

They will need to be taught that the single digit belongs to the unit column which is why it is at the left hand side rather than the right hand side when multiplying by an integer.

Decimal points must be aligned correctly for the question and answer.

Pupils should be encouraged to approximate to ensure a sensible answer, e.g. round down to 3 so 3x8 is 24.

The long multiplication method should continue to be taught/consolidated, multiplying a 2 digit by at least a 4 digit number.

Division

Introduce divding a three-digit number by a 2 digit number.

Teach the long division method:

```
25|425
```

```
  0
25|425
```

```
  0
25|425
  0
```

```
  0
25|425
  0
  4
```

```
  0
25|425
 0↓
 42
```

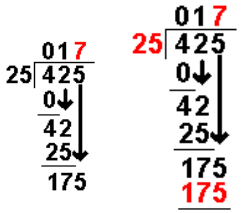
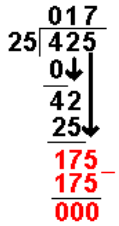
```
  0
25|425
 0↓
 42
```

```
   01
25|425
 0↓
 42
 25
```

```
  01
25|425
 0↓
 42
```

```
  01
25|425
 0↓
 42
 25
 17
```

```
  01
25|425
 0↓
 42
 25↓
 175
```

			  Alongside this they should be taught how to use informal chunking and apply their knowledge of number to find 'short cuts'. For example, if dividing 725 in to 25, children should be expected to chunk mentally rather than use a formal written method: **4X25 is 100** **7x4 is 28** **+(1x25)=29** ***Short division should continue to be applied in a range of problem-solving contexts.***