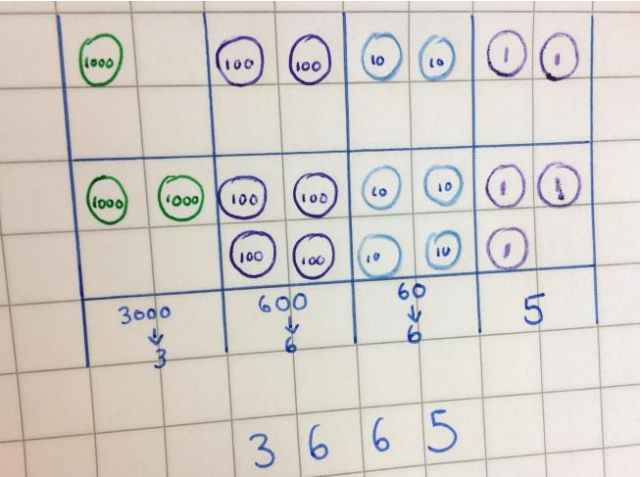
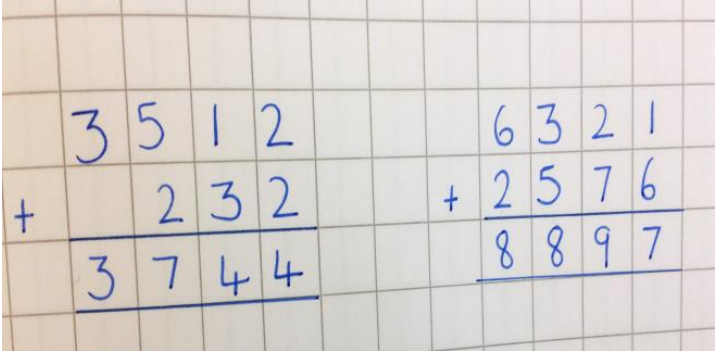
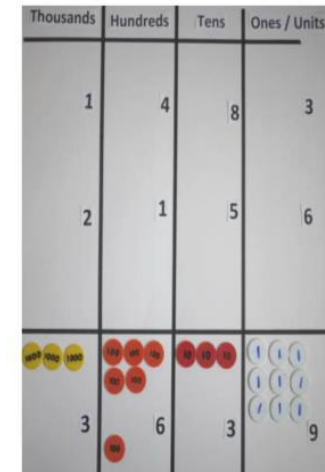
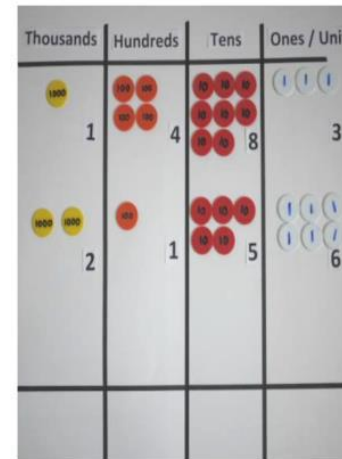
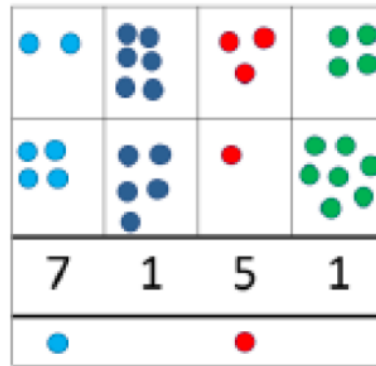


Year Four Addition

Year Four	Pupils should be able to:	
Pupils should be taught to:		
<ul style="list-style-type: none"> add numbers with up to 4 digits using the formal written methods of columnar addition 		
Compact Columnar Addition with no regrouping		
<p>Children can draw a pictorial representation of the columns and place value counters</p> <p>$1222 + 2443 = 3665$</p> 	<p>Formal column method involving no regrouping</p> <p>$3512 + 232 = 3744$</p> <p>$6321 + 2576 = 8897$</p> 	
Compact Columnar Addition with regrouping		

Children can use or draw a pictorial representation of the columns and place value counters

$$2634 + 4517 = 7151$$

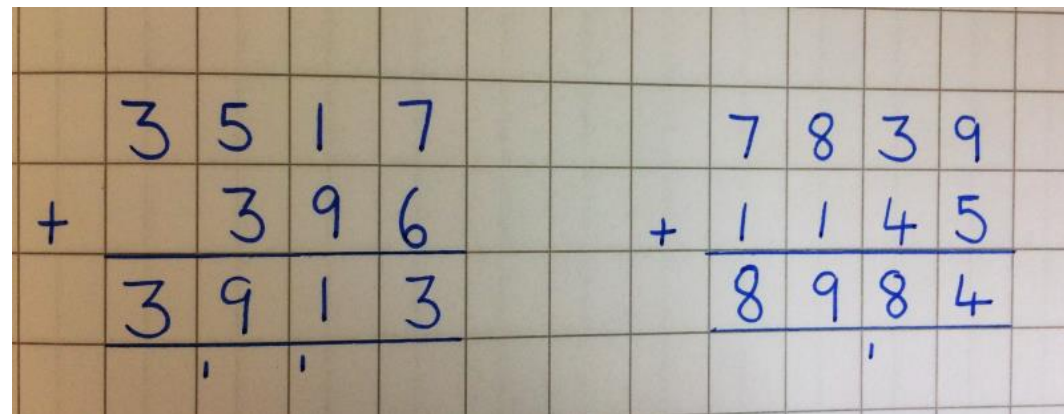


Formal column method involving regrouping

$$3517 + 396 = 3913$$

$$7839 + 1145 = 8984$$

Use the language of place value to ensure understanding

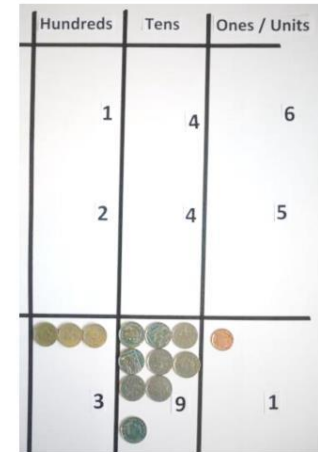
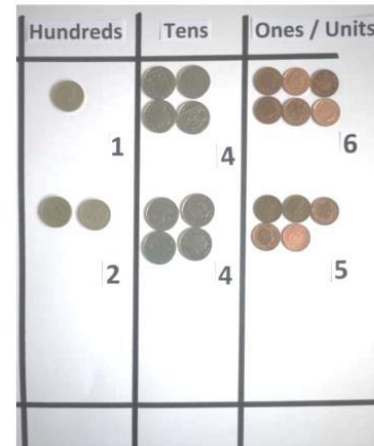


Addition with Decimals

Children use coins to add two decimal amounts together

Example exemplifies regrouping

$$£1.46 + £2.45 = £3.91$$

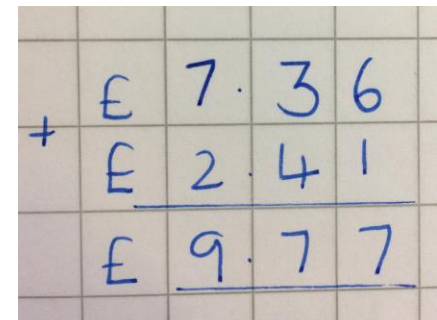


Formal column method with decimals in different contexts including money

$$£ 7.36 + £ 2.41 = £9.77$$

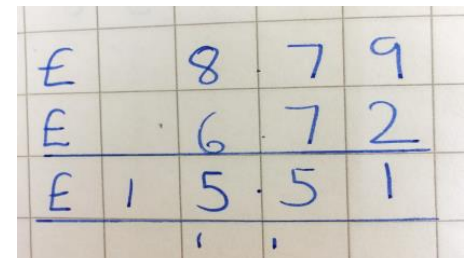
The decimal point needs to be lined up like all the other place value columns

It is important that children recognise that they are adding tenths and hundredths and that they understand they are adding part of a number not a whole number



Formal column method with decimals in different contexts including money

$$£8.79 + £ 6.72 = £15.51$$



Subtraction

Year Four	<p>Pupils should be able to:</p> <p>Pupils should be able to:</p> <ul style="list-style-type: none"> Subtract numbers with up to 4 digits using the formal written methods of columnar subtraction
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Compact Columnar Subtraction

Children can use concrete or draw a pictorial representation of the columns and place value counters. Can physically cross out in books to solve.

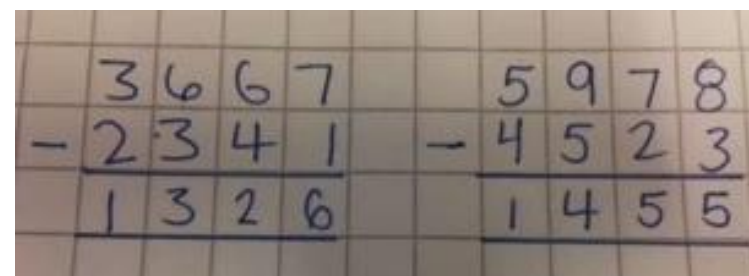
$$3667 - 2341 = 1326$$



Formal column method involving no regrouping.

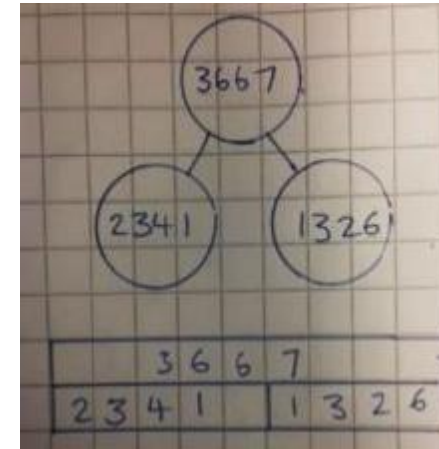
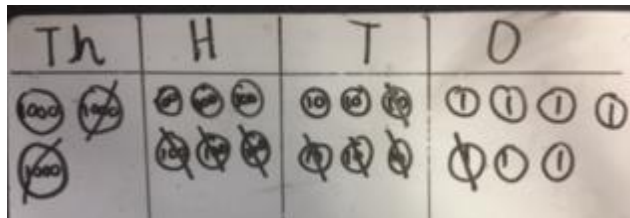
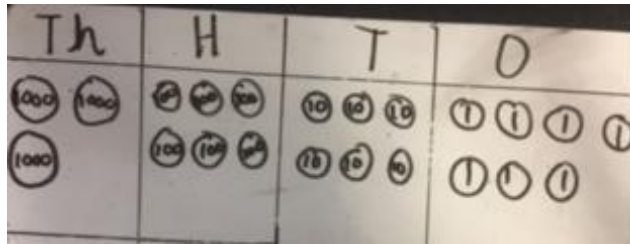
$$3667 - 2341 =$$

$$5978 - 4523 =$$



Children should be able to represent their understanding of addition and subtraction within a bar model and a part-part whole model.

Children should be able to explain that they are finding a part when they subtract and they are finding a whole or a total when adding.



Children can use or draw a pictorial representation of the columns and place value counters

$$6421 - 3278 = 3143$$



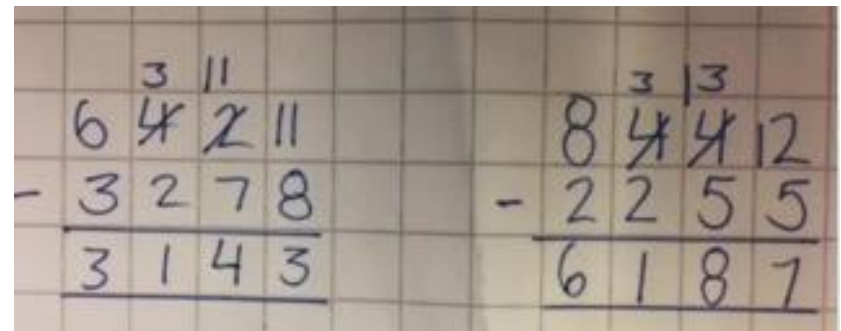


Formal column method involving regrouping above

$$6421 - 3278 =$$

$$8442 - 2255 =$$

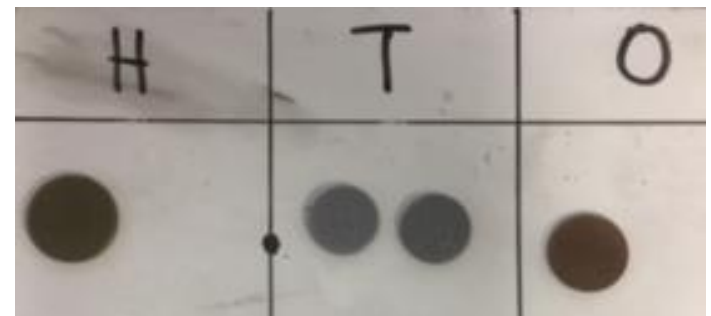
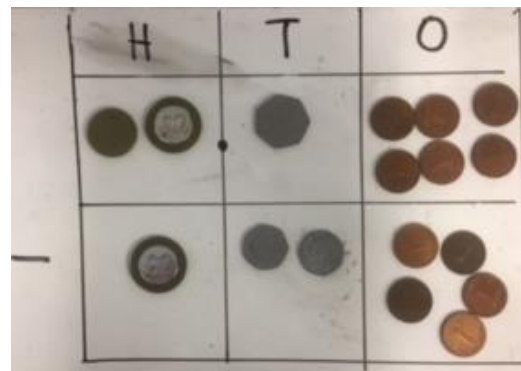
Reminding children of place value when regrouping – is this a ten or a one I'm regrouping?



Subtraction with decimals

Children use coins to subtract two decimal amounts to find change

$$£3.56 - £2.45 = £1.11$$



Formal column method with decimals in different contexts including money

$$£ 3.56 - £ 2.45 = £1.11$$

The decimal point needs to be lined up like all the other place value columns

It is important that children recognise that they are subtracting tenths and hundredths and that they understand they are subtracting part of a number not a whole number

	£	3	.	5	6
-	£	2	.	4	5
	£	1	.	1	1

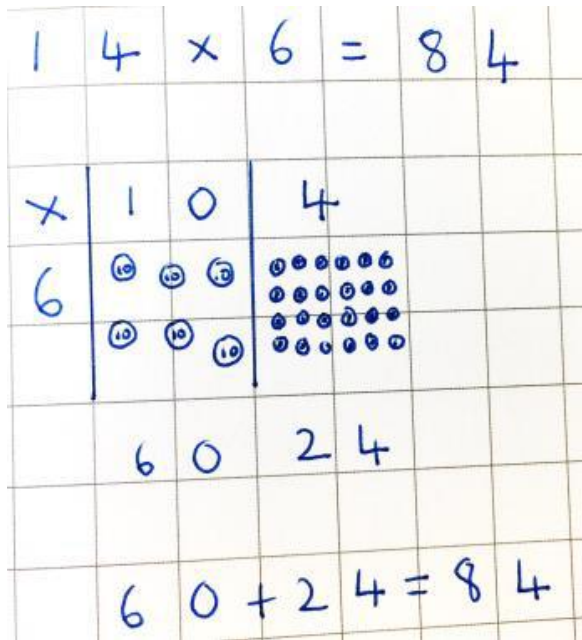
$$£2.51 - £ 1.45 = 1.06$$

				4	
	£	2	.	8	1
-	£	1	.	4	5
	£	1	.	0	6

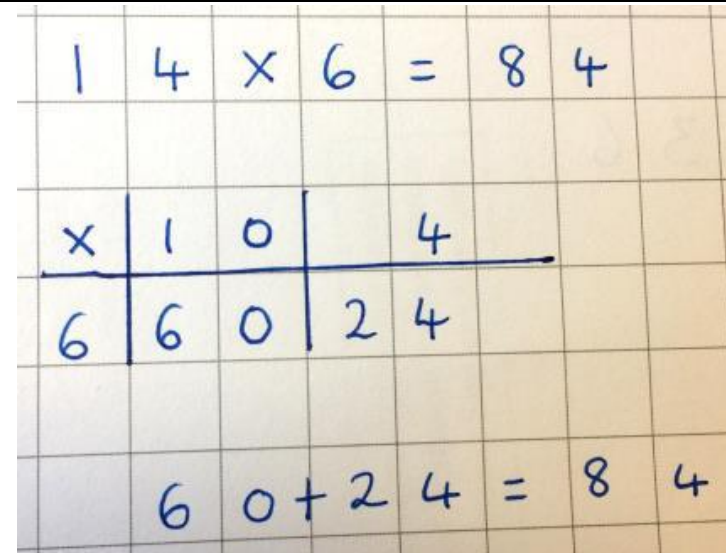
Multiplication

Year Four	Pupils should be able to: <ul style="list-style-type: none">• Count in multiples and solve problems within 0,1, 6, 7, 9, 11 and 12 times tables• multiply two-digit and three-digit numbers by a one-digit number using formal written layout
Grid Method 2 digit by 1 digit	
Grid method-pictorial The two digit number is partitioned horizontally with the tens digit coming first. The number is represented by the children's drawings of place value counters.	Grid method $14 \times 6 =$ <ul style="list-style-type: none">• Partition the number into tens and ones• Multiply the pairs of numbers• Record the answer in the grid• Add the two answers together

$14 \times 6 =$



Answer: 84



Answer: 84

Expanded short 2 digit by 1 digit

The children will use the expanded short method to multiply a two digit number by a one digit number

$24 \times 6 =$

Short 2 digit by 1 digit

Once the children are secure with the expanded short method they can use the short method to multiply a two digit number by a one digit number

$24 \times 6 =$

$$24 \times 6 = 144$$

	2	4		
	2	4		
x		6		
	2	4	(6 × 4)	
1	2	0	(6 × 20)	
1	4	4		

Answer: 144

$$24 \times 6 = 144$$

	2	4		
	2	4		
x		6		
	1	4	4	
			2	

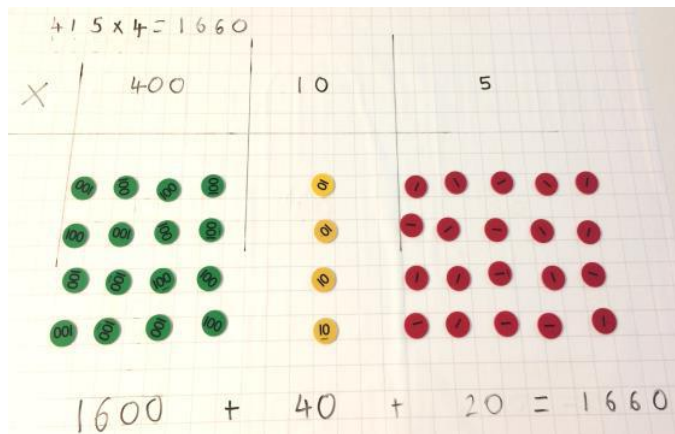
Answer: 144

Grid Method Three Digit by One Digit

Grid method-place value counters

The two digit number is partitioned horizontally with the tens digit coming first. The number is represented by the children's drawings of place value counters.

$$415 \times 4 =$$

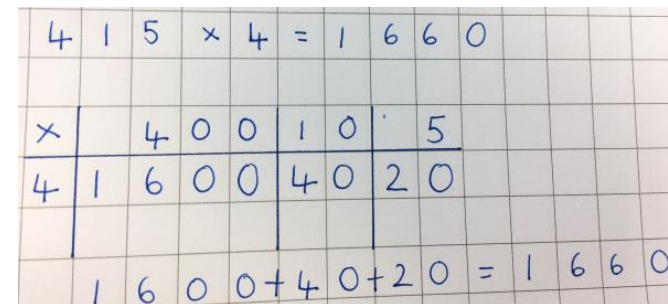


Answer: 1660

Grid method

- Partition the number into tens and ones
- Multiply the pairs of numbers
- Record the answer in the grid
- Add the two answers together

$$415 \times 4 =$$



Answer: 1660

Division

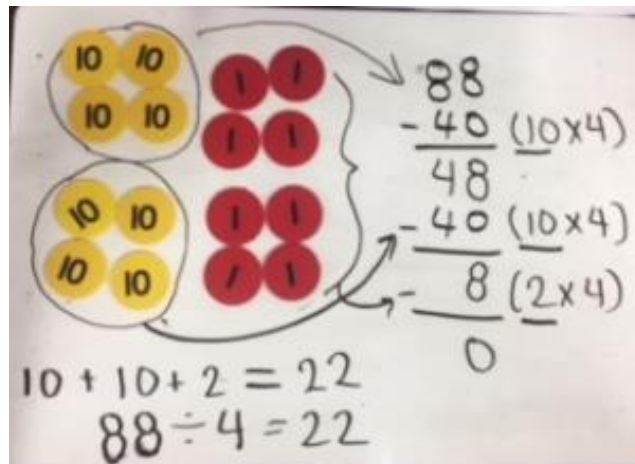
Year Four

Pupils should be able to:

- Recall multiplication and division facts for multiplication tables up to 12×12
- Use place value, known and derived facts to divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers
- Recognise and use factor pairs and commutativity in mental calculations
- Multiply two-digit and three-digit numbers by a one-digit number using formal written layout

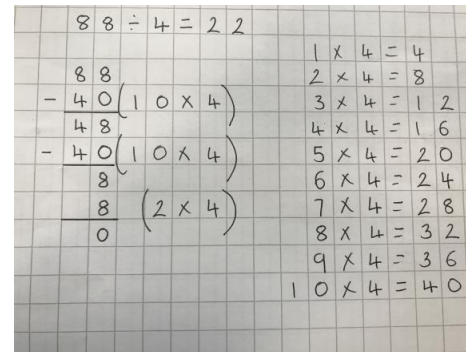
Chunking

Children can use place value counters to consolidate chunking



Children should consolidate chunking before moving on to the more formal short division

TO \div O



HTO \div O

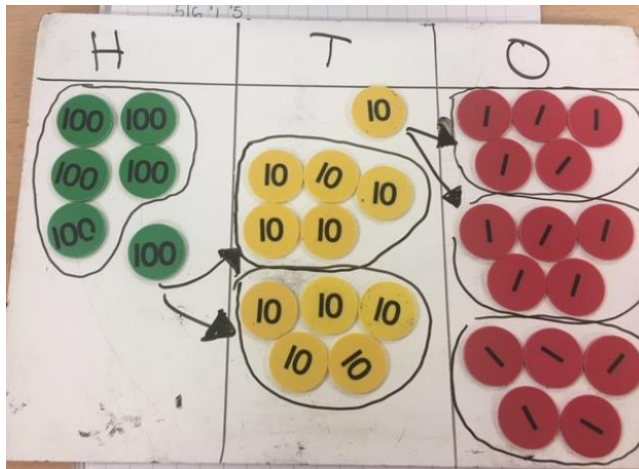
$$192 \div 6 = 32$$

-	192	(10 x 6)	1 x 6 = 6
-	60		2 x 6 = 12
-	132		3 x 6 = 18
-	60		4 x 6 = 24
-	72		5 x 6 = 30
-	60		6 x 6 = 36
-	12		7 x 6 = 42
-	12		8 x 6 = 48
-	0	(2 x 6)	9 x 6 = 54
			10 x 6 = 60

Formal Short

Children should understand short division as grouping. Start by using concrete resources such as place value counters

$$615 \div 5 = 123$$



Children should consolidate chunking before moving on to the more formal short division

