YEAR 3

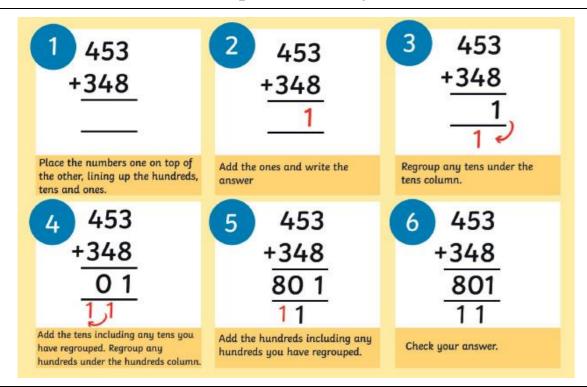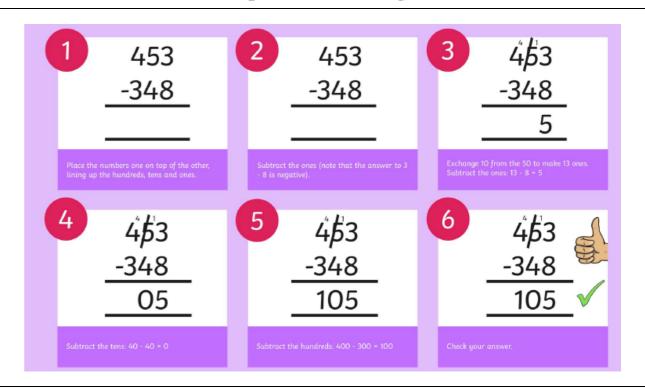## Addition: Column Method
The children are expected to add 3 digit by 3 digit numbers where they are required to carry.

1 453 +348 — Place the numbers one on top of the other, lining up the hundreds, tens and ones.

2 453 +348 = 1 — Add the ones and write the answer

3 453 +348 = 1 1 — Regroup any tens under the tens column.

4 453 +348 = 0 1, 1 1 — Add the tens including any tens you have regrouped. Regroup any hundreds under the hundreds column.

5 453 +348 = 80 1, 1 1 — Add the hundreds including any hundreds you have regrouped.

6 453 +348 = 801, 1 1 — Check your answer.

Subtraction: Colum Method
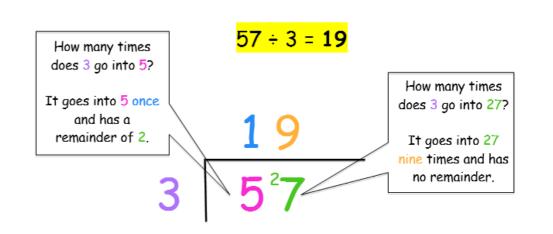The children are expected to subtract 3 digit by 3 digit numbers where they are required to exchange.

1 453 -348 — Place the numbers one on top of the other, lining up the hundreds, tens and ones.

2 453 -348 — Subtract the ones (note that the answer to 3 - 8 is negative).

3 4⁴5¹3 -348 = 5 — Exchange 10 from the 50 to make 13 ones. Subtract the ones: 13 - 8 = 5

4 4⁴5¹3 -348 = 05 — Subtract the tens: 40 - 40 = 0

5 4⁴5¹3 -348 = 105 — Subtract the hundreds: 400 - 300 = 100

6 4⁴5¹3 -348 = 105 ✓ — Check your answer.

Multiplication: Column Multiplication
The children are expected to multiply a 2 digit number by a 1 digit number.

1 98 × 6 — Write each number above each other in the columns.

2 98 × 6 = 8 (with 4 carried) — Multiply the ones column by the multiplier (the bottom number) and carry the tens on the top.

3 98 × 6 = 588 (with 4 carried) — Finally, multiply the tens by the multiplier making sure you add on any tens you have carried over.

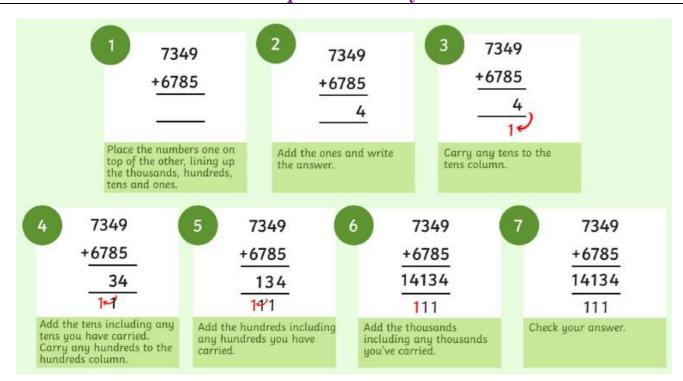## Division: Bus stop method
The children are expected to be able to divide 2 digit numbers by a 1 digit number with no remainders.

57 ÷ 3 = 19
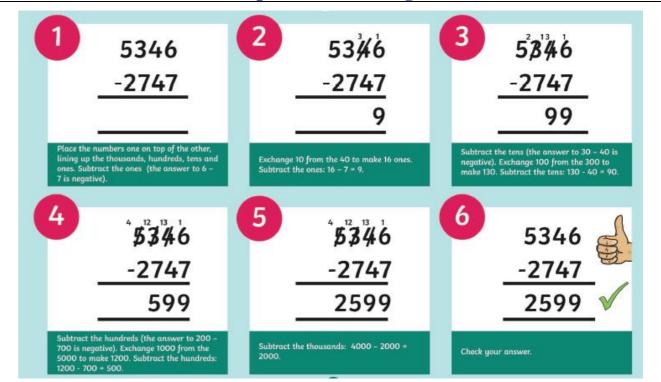
How many times does 3 go into 5? It goes into 5 once and has a remainder of 2.

How many times does 3 go into 27? It goes into 27 nine times and has no remainder.

$3 \overline{) 5\,^2 7}$ = 19

YEAR 4

Addition: Column Method
The children are expected to add 4 digit by 4 digit numbers where they are required to carry.

1
7349
+6785
_____

Place the numbers one on top of the other, lining up the thousands, hundreds, tens and ones.

2
7349
+6785
_____
4

Add the ones and write the answer.

3
7349
+6785
_____
4
1

Carry any tens to the tens column.

4
7349
+6785
_____
34
1

Add the tens including any tens you have carried. Carry any hundreds to the hundreds column.

5
7349
+6785
_____
134
1 1

Add the hundreds including any hundreds you have carried.

6
7349
+6785
_____
14134
111

Add the thousands including any thousands you've carried.

7
7349
+6785
_____
14134
111

Check your answer.

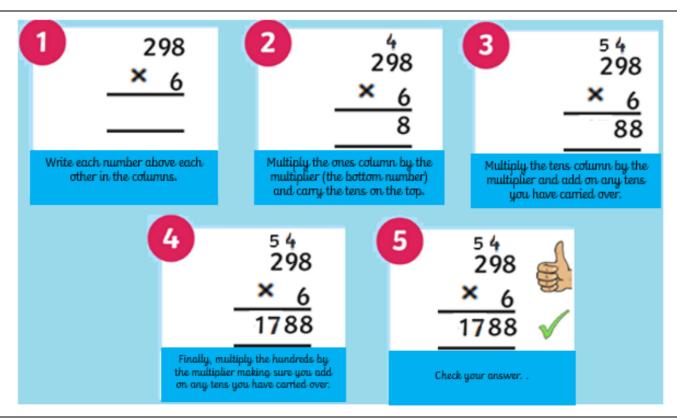## Subtraction: Colum Method
The children are expected to subtract 4 digit by 4 digit numbers where they are required to exchange.

1
5346
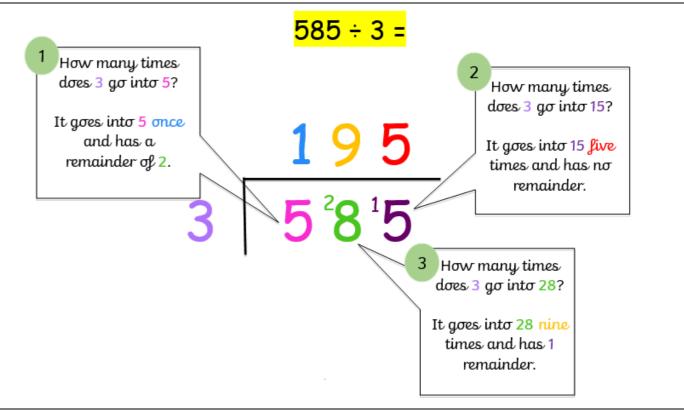-2747
_____

Place the numbers one on top of the other, lining up the thousands, hundreds, tens and ones. Subtract the ones (the answer to 6 – 7 is negative).

2
5346 (3 1)
-2747
_____
9

Exchange 10 from the 40 to make 16 ones. Subtract the ones: 16 – 7 = 9.

3
5346 (2 13 1)
-2747
_____
99

Subtract the tens (the answer to 30 – 40 is negative). Exchange 100 from the 300 to make 130. Subtract the tens: 130 – 40 = 90.

4
5346 (4 12 13 1)
-2747
_____
599

Subtract the hundreds (the answer to 200 – 700 is negative). Exchange 1000 from the 5000 to make 1200. Subtract the hundreds: 1200 - 700 = 500.

5
5346 (4 12 13 1)
-2747
_____
2599

Subtract the thousands: 4000 – 2000 = 2000.

6
5346
-2747
_____
2599 ✓

Check your answer.

Multiplication: Column Multiplication
The children are expected to multiply a 3 digit number by a 1 digit number.

1
298
× 6
_____

Write each number above each other in the columns.

2
298 (4)
× 6
_____
8

Multiply the ones column by the multiplier (the bottom number) and carry the tens on the top.

3
298 (5 4)
× 6
_____
88

Multiply the tens column by the multiplier and add on any tens you have carried over.

4
298 (5 4)
× 6
_____
1788

Finally, multiply the hundreds by the multiplier making sure you add on any tens you have carried over.

5
298 (5 4)
× 6
_____
1788 ✓

Check your answer.

Division: Bus stop method
The children are expected to be able to divide 3 digit numbers by a 1 digit number with no remainders.

$585 \div 3 =$

$$3 \overline{) 5\,^{2}8\,^{1}5} = 195$$

1 How many times does 3 go into 5?

It goes into 5 once and has a remainder of 2.

2 How many times does 3 go into 15?

It goes into 15 five times and has no remainder.

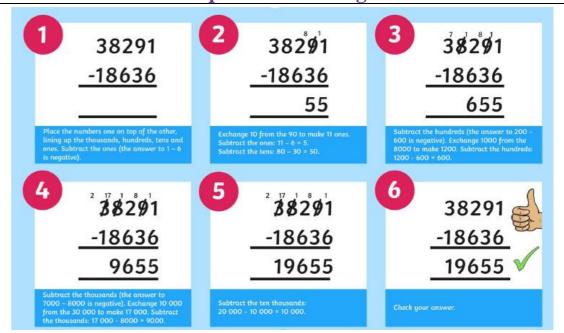**3** How many times does 3 go into 28?

It goes into 28 nine times and has 1 remainder.

YEAR 5

Addition: Column Method
The children are expected to add 5 digit by 5 digit numbers where they are required to carry.

1
85683
+45978
_____

Place the numbers one on top of the other, lining up the hundreds, tens and

2
85683
+45978
_____
       1

Add the ones and write the answer.

3
85683
+45978
_____
       1
    1

Carry any tens to the tens column.

4
85683
+45978
_____
      61
    11

Add the tens including any tens you have carried. Carry any hundreds to the hundreds column.

5
85683
+45978
_____
     661
    111

Add the hundreds including any hundreds you have carried.

6
85683
+45978
_____
    1661
    111

Add the thousands including any thousands you've carried.

7
85683
+45978
_____
  131661
    1111

Add the tens thousands including any thousands you've carried.

8
85683
+45978
_____
  131661
    1111

Check your answer.

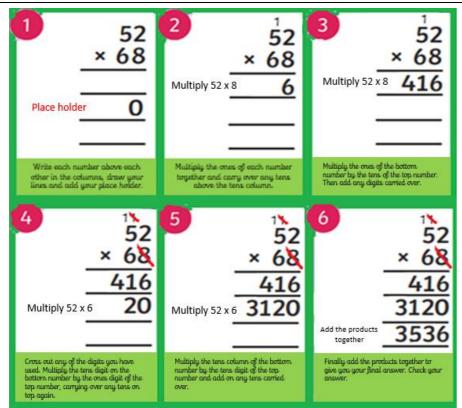## Subtraction: Colum Method
The children are expected to subtract 5 digit by 5 digit numbers where they are required to exchange.

1
38291
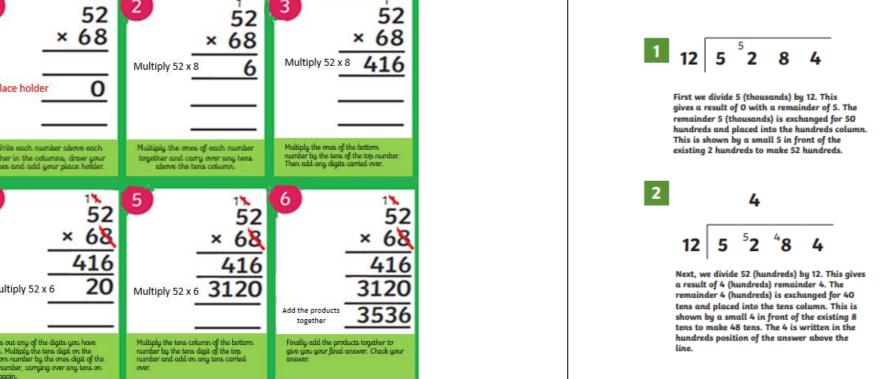-18636
_____

Place the numbers one on top of the other, lining up the thousands, hundreds, tens and ones. Subtract the ones (the answer to 1 – 6 is negative).

2
38291
-18636
_____
        55

Exchange 10 from the 90 to make 11 ones. Subtract the ones: 11 – 6 = 5. Subtract the tens: 80 – 30 = 50.

3
38291
-18636
_____
       655

Subtract the hundreds (the answer to 200 – 600 is negative). Exchange 1000 from the 8000 to make 1200. Subtract the hundreds: 1200 – 600 = 600.

4
38291
-18636
_____
      9655

Subtract the thousands (the answer to 7000 – 8000 is negative). Exchange 10 000 from the 30 000 to make 17 000. Subtract the thousands: 17 000 – 8000 = 9000.

5
38291
-18636
_____
     19655

Subtract the ten thousands: 20 000 – 10 000 = 10 000.

6
38291
-18636
_____
     19655

Check your answer.

Multiplication: Column Multiplication
The children are expected to multiply a 2 digit number by a 2 digit number.

1
52
× 68
_____
Place holder   0
_____

Write each number above each other in the columns, draw your lines and add your place holder.

2
52
× 68
_____
Multiply 52 x 8   6
_____

Multiply the ones of each number together and carry over any tens above the tens column.

3
52
× 68
_____
Multiply 52 x 8   416
_____

Multiply the ones of the bottom number by the tens of the top number. Then add any digits carried over.

4
52
× 68
_____
       416
Multiply 52 x 6   20
_____

Cross out any of the digits you have used. Multiply the tens digit on the bottom number by the ones digit of the top number, carrying over any tens on top again.

5
52
× 68
_____
       416
Multiply 52 x 6 3120
_____

Multiply the tens column of the bottom number by the tens digit of the top number and add on any tens carried over.

6
52
× 68
_____
       416
      3120
_____
Add the products together 3536

Finally add the products together to give you your final answer. Check your answer.
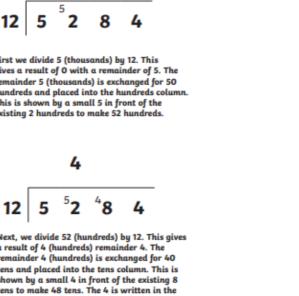
Division: Bus stop method
The children are expected to be able to divide 3 digit numbers by 1 digit numbers.

5284 ÷ 12

1
              5
12 | 5 ²2 8 4

First we divide 5 (thousands) by 12. This gives a result of 0 with a remainder of 5. The remainder 5 (thousands) is exchanged for 50 hundreds and placed into the hundreds column. This is shown by a small 5 in front of the existing 2 hundreds to make 52 hundreds.

2
        4
12 | 5 ⁵2 ⁴8 4

Next, we divide 52 (hundreds) by 12. This gives a result of 4 (hundreds) remainder 4. The remainder 4 (hundreds) is exchanged for 40 tens and placed into the tens column. This is shown by a small 4 in front of the existing 8 tens to make 48 tens. The 4 is written in the hundreds position of the answer above the line.

3
        4 4
12 | 5 ⁵2 ⁴8 4

Next we divide 48 (tens) by 12. This gives a result of 4. The 4 is written in the tens position of the answer above the line.
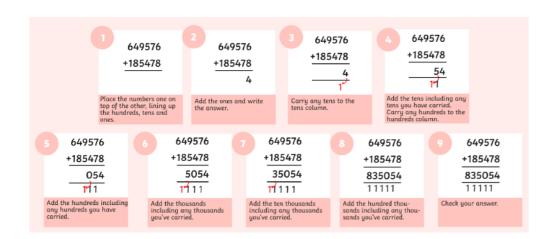
4
        4 4 0
12 | 5 2 8 4

Next, we divide 4 (ones) by 12. This cannot be done, so there are four remaining. A zero is placed in the ones answer section as well as remainder 4.

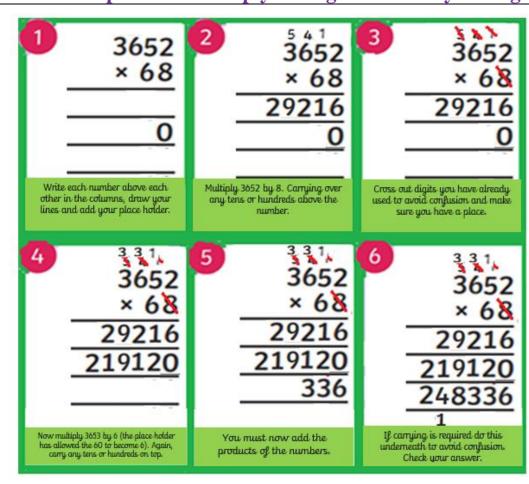5284 ÷ 12 = 440 r4

YEAR 6

Addition: Column Method
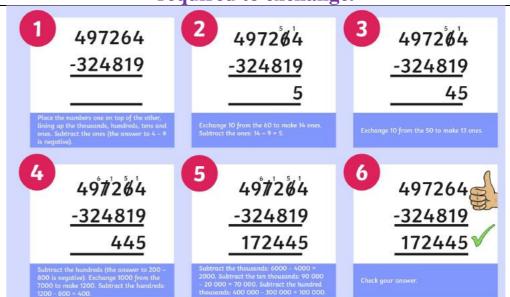**The children are expected to add 6 digit by 6 digit numbers where they are required to carry.**

1 649576 +185478	**2** 649576 +185478 4	**3** 649576 +185478 4	**4** 649576 +185478 54
Place the numbers one on top of the other, lining up the hundreds, tens and ones.	Add the ones and write the answer.	Carry any tens to the tens column.	Add the tens including any tens you have carried. Carry any hundreds to the hundreds column.
5 649576 +185478 054	**6** 649576 +185478 5054	**7** 649576 +185478 35054	**8** 649576 +185478 835054	**9** 649576 +185478 835054
Add the hundreds including any hundreds you have carried.	Add the thousands including any thousands you've carried.	Add the ten thousands including any thousands you've carried.	Add the hundred thousands including any thousands you've carried.	Check your answer.

Subtraction: Colum Method
The children are expected to subtract 6 digit by 6 digit numbers where they are required to exchange.

1 497264 -324819	**2** 497264 -324819 5	**3** 497264 -324819 45
Place the numbers one on top of the other, lining up the thousands, hundreds and ones. Subtract the ones (the answer to 4 – 9 is negative).	Exchange 10 from the 60 to make 14 ones. Subtract the ones: 14 – 9 = 5.	Exchange 10 from the 50 to make 13 ones.
4 497264 -324819 445	**5** 497264 -324819 172445	**6** 497264 -324819 172445 ✓
Subtract the hundreds (the answer to 200 – 800 is negative). Exchange 1000 from the 7000 to make 1200. Subtract the hundreds: 1200 – 800 = 400.	Subtract the thousands: 6000 – 4000 = 2000. Subtract the ten thousands: 90 000 – 20 000 = 70 000. Subtract the hundred thousands: 400 000 – 300 000 = 100 000.	Check your answer.

Multiplication: Column Multiplication
The children are expected to multiply a 3 digit number by a 2 digit number.

1 3652 × 68 ____ 0	**2** 3652 × 68 ____ 29216 0	**3** 3652 × 68 ____ 29216 0
Write each number above each other in the columns, draw your lines and add your place holder.	Multiply 3652 by 8. Carrying over any tens or hundreds above the number.	Cross out digits you have already used to avoid confusion and make sure you have a place.
4 3652 × 68 29216 219120	**5** 3652 × 68 29216 219120 336	**6** 3652 × 68 29216 219120 248336 1
Now multiply 3653 by 6 (the place holder has allowed the 60 to become 6). Again, carry any tens or hundreds on top.	You must now add the products of the numbers.	If carrying is required do this underneath to avoid confusion. Check your answer.

Division: Bus stop method (short, long multiplication)
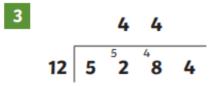**The children are expected to divide a 4 digit number by a 2 digit number.**
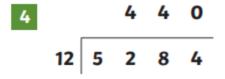
$$5284 \div 12$$

1 First we divide 5 (thousand) by 12. This gives a result of 0 with a remainder of 5. The remainder 5 (thousands) is exchanged for 50 hundred and placed into the hundreds column. This is shown by a small 5 in front of the existing 2 hundreds to make 52 hundreds.

2 Next, we divide 52 (hundreds) by 12. This gives a result of 4 (hundreds) remainder 4. The remainder 4 (hundreds) is exchanged for 40 tens and placed into the tens column. This is shown by a small 4 in front of the existing 8 tens to make 48 tens. The 4 is written in the hundreds position of the answer above the line.

3 Next we divide 48 (tens) by 12. This gives a result of 4. The 4 is written in the tens position of the answer above the line.

4 Next we divide 4 (ones) by 12. This cannot be done, so there are four remaining. A zero is place in the ones answer section as well as remainder 4.

$$440 \text{ r } 4 \qquad 440 \frac{4}{12} = 440 \frac{1}{3}$$

When writing the answer the children need to be able to express it as a remainder, fraction and decimal.

$$440.333$$