Years 3 & 4 Maths Workshop

Addition

Expectations in Addition & Subtraction

Year 3 vs. Year 4

- I can add and subtract in my head, including a 3-digit number and ones.
- I can add and subtract in my head, including a 3-digit number and tens.
- I can add and subtract in my head, including a 3-digit number and hundreds.
- I can add and subtract numbers with up to 3-digits using formal column methods.
- I can estimate the answer to a calculation and use this and inverse operations to check answers.
- I can solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.

- I can add and subtract numbers with up to 4-digits using formal column methods.
- I can use estimating and inverse operations to check my answers.
- I can solve two step addition and subtraction problems, using different methods and explain why I used them.

Number & Place Value links

Year 3 vs. Year 4

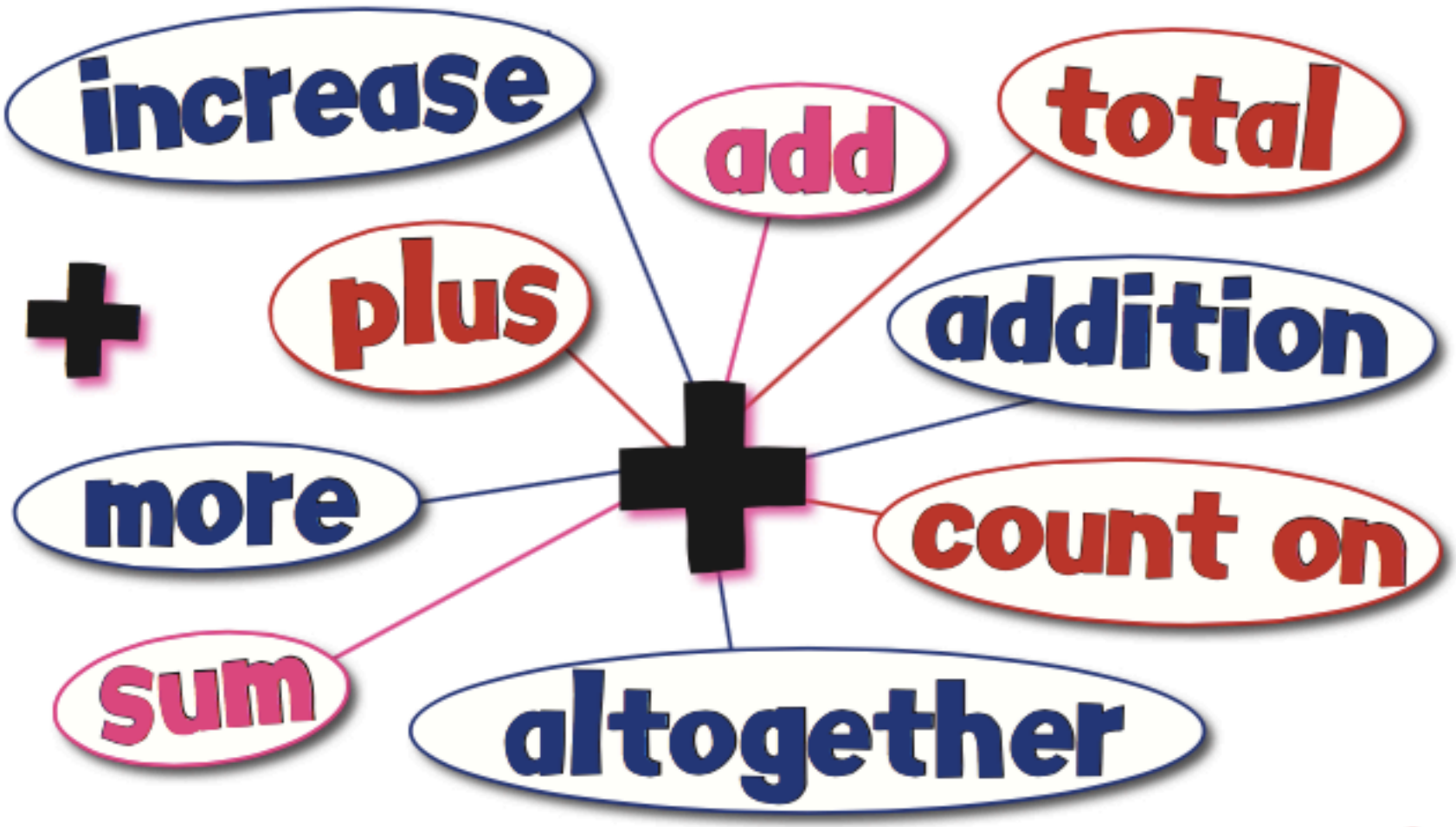
- I can recognise the place value of each digit of a 3-digit number (hundreds, tens and ones).
- I can solve number and word problems.

- I can find 1000 more or less than a given number.
- I can recognise the place value of each digit of a 4-digit number (thousands, hundreds, tens and ones).
- I can round numbers to the nearest 10, 100 or 1000.
- I can solve number and practical problems that involve large positive numbers.

Vocabulary

List as many words as you can to do with addition

Addition Vocabulary



Coopers Lane Primary School

The School Run Glossary

Why not use Column Addition from the very beginning?

- It is a quick and efficient method for working out addition and subtraction, but the downside is that a child could use this method without having any awareness of place value (that is: they would not understand that the 3 in the tens column is actually 30). It also means that they are not learning to add and subtract multiples of 10 or 100 (e.g. 30 + 90, 120 – 50 etc). In order to help children understand these concepts, we use partitioning and number line strategies.

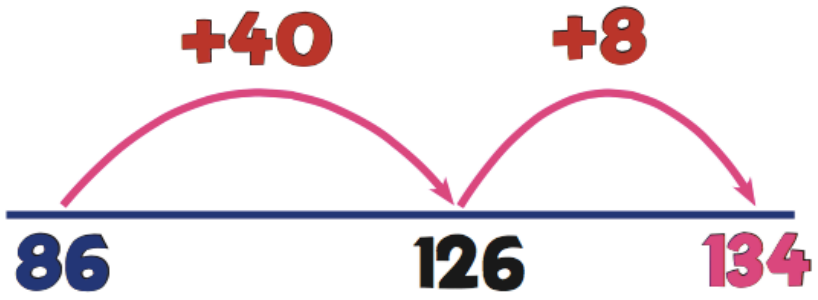
- Once children are aware of place value and also have the ability to mentally add and subtract multiples of ten and one hundred, they will be encouraged to move onto the column method involving ‘carrying’ numbers, as this is the quickest method.

Method 1: Forwards Jump

A3b: Forwards Jump

2/3

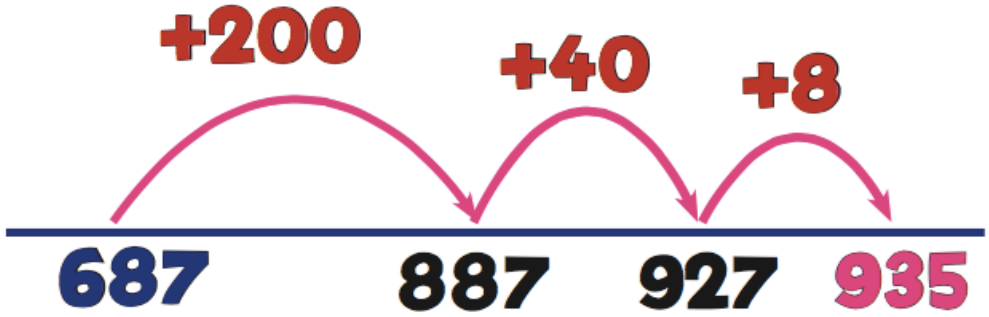
86 + 48 = 134



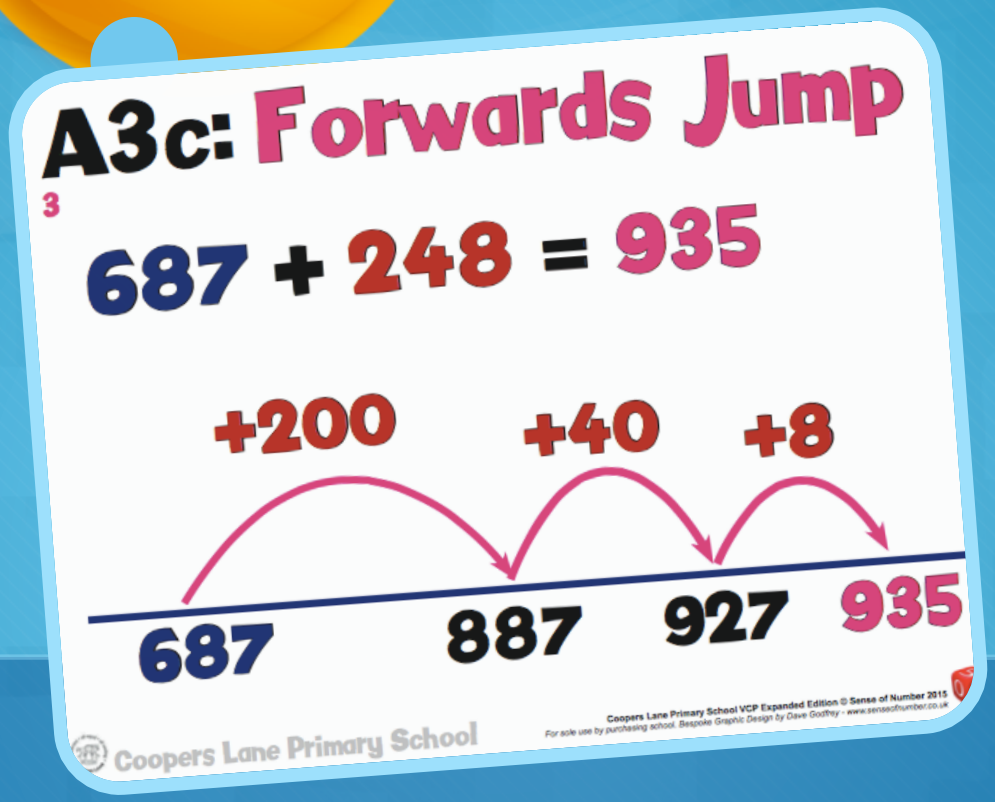
Coopers Lane Primary School

Forwards Jump

687 + 248 = 935



Coopers Lane Primary School

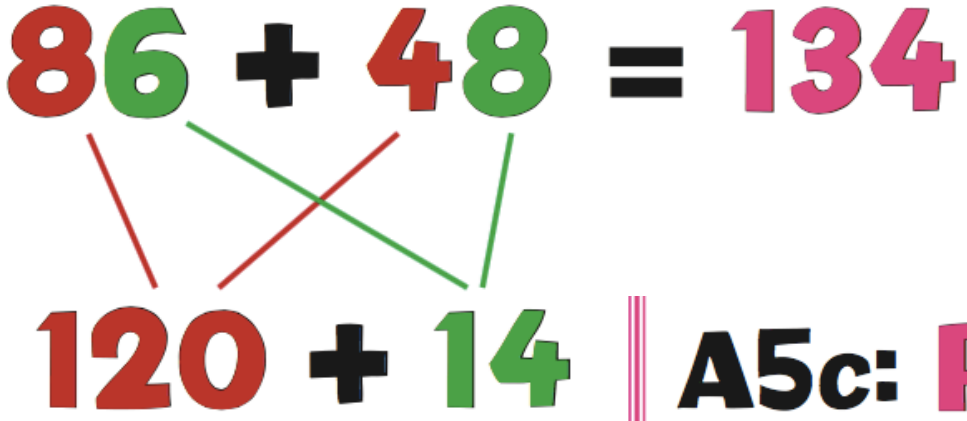

A3c: Forwards Jump
3
687 + 248 = 935
+200
+40
+8
687
887
927
935
Coopers Lane Primary School
Coopers Lane Primary School VCP Expanded Edition © Sense of Number 2015
For sole use by purchasing school. Bespoke Graphic Design by Dave Godfrey - www.senseofnumber.co.uk

324 + 268

Method 2: Partition Jot

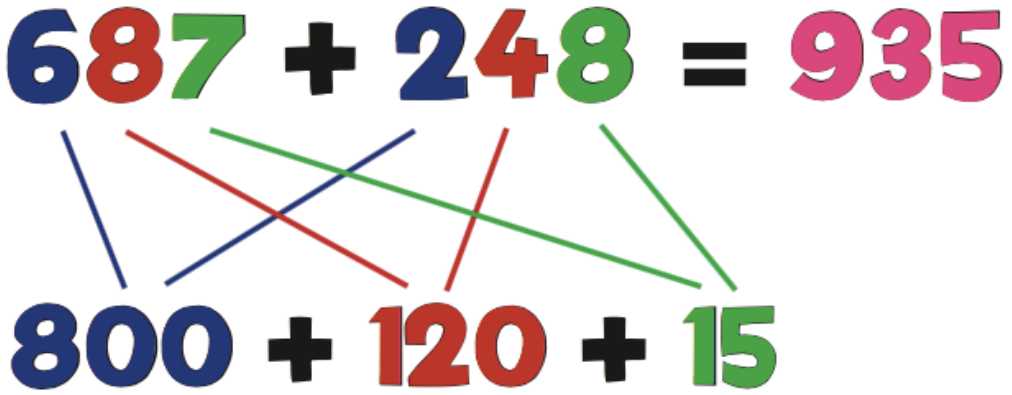
A5b: Partition Jot

2/3



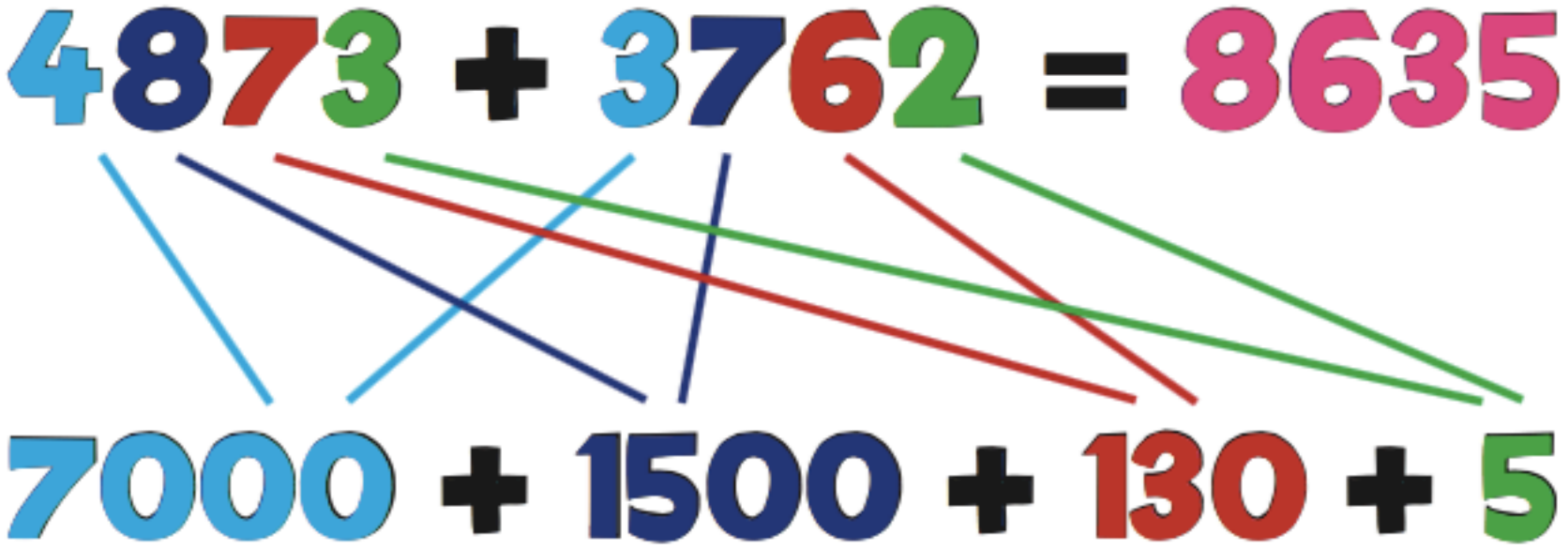
A5c: Partition Jot

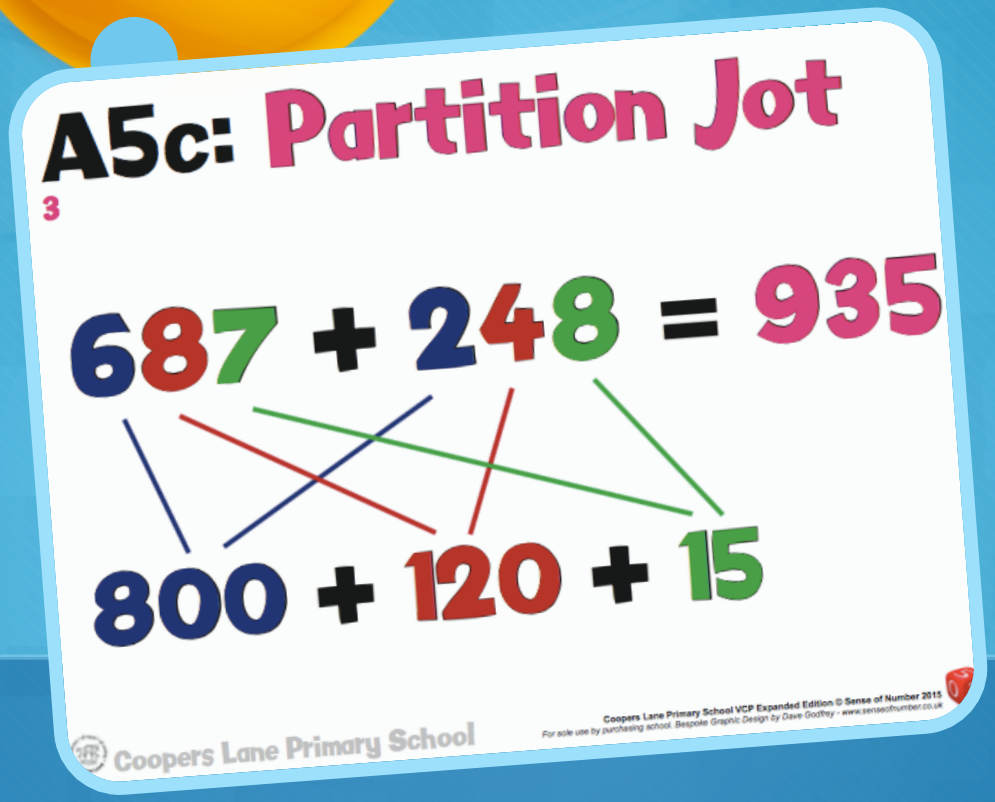
3



A5d: Partition Jot

4




A5c: Partition Jot
3
687 + 248 = 935
800 + 120 + 15
Coopers Lane Primary School
Coopers Lane Primary School VCP Expanded Edition © Sense of Number 2015
For sole use by purchasing school. Bespoke Graphic Design by Dave Godfrey - www.senseofnumber.co.uk

563 + 374

Method 3: Partitioning

A4b: Partitioning

2/3

$$86 + 48 = 134$$

$$80 + 40 = 120$$
$$6 + 8 = 14$$
$$134$$

Coopers Lane Primary School

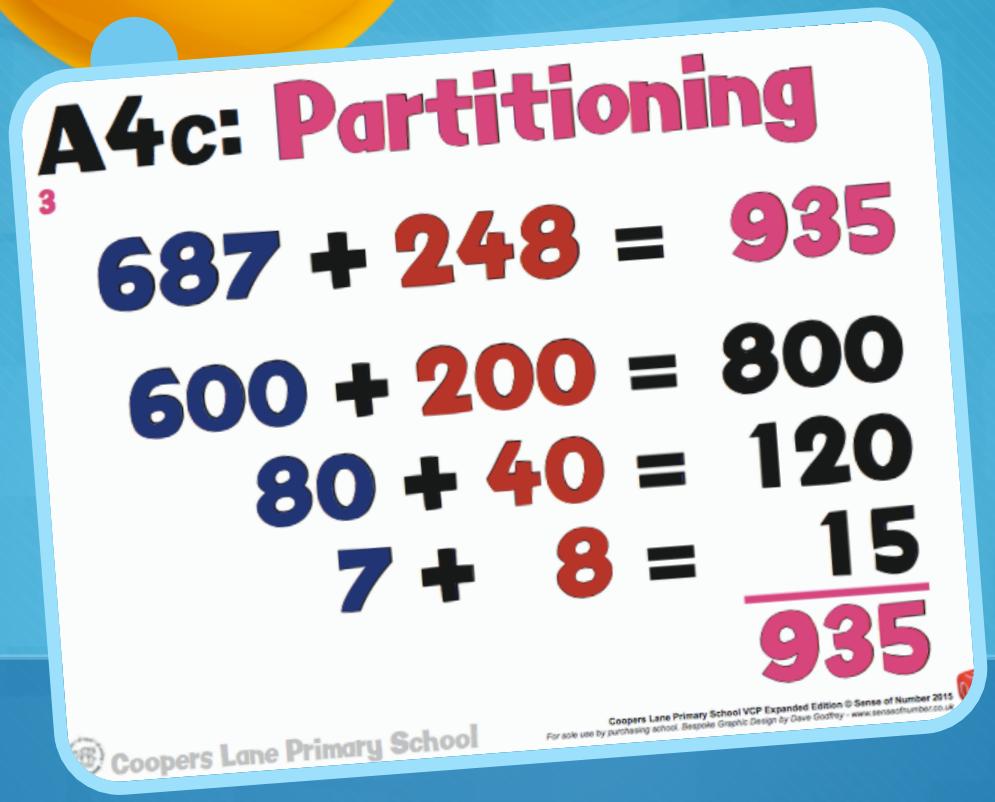
: Partitioning

3

$$687 + 248 = 935$$

$$600 + 200 = 800$$
$$80 + 40 = 120$$
$$7 + 8 = 15$$
$$935$$

Coopers Lane Primary School

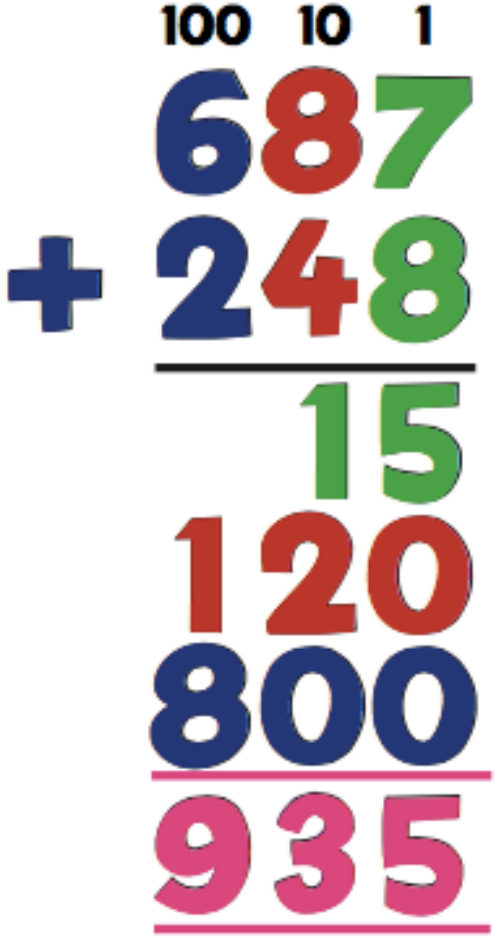

A4c: Partitioning
3
687 + 248 = 935
600 + 200 = 800
80 + 40 = 120
7 + 8 = 15
935
Coopers Lane Primary School
Coopers Lane Primary School VCP Expanded Edition © Sense of Number 2015
For sole use by purchasing school. Bespoke Graphic Design by Dave Godfrey - www.senseofnumber.co.uk

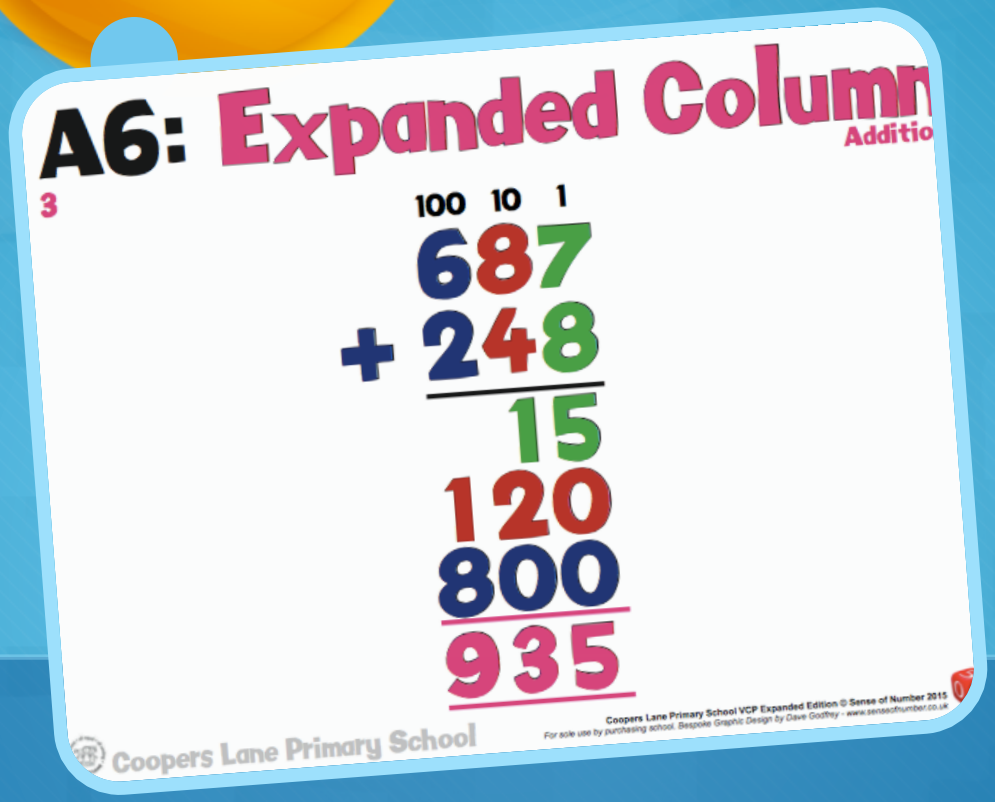
627 + 219

Method 4: Expanded Column

A6: Expanded Column Addition

3




A6: Expanded Column
Additio
3
100 10 1
687
+ 248
15
120
800
935
Coopers Lane Primary School
Coopers Lane Primary School VCP Expanded Edition © Sense of Number 2015
For sole use by purchasing school. Bespoke Graphic Design by Dave Godfrey - www.senseofnumber.co.uk

245 + 396

Method 5: Column Addition

A7: Column Addition

3

100	10	1
6	8	7
+ 2	4	8
9	3	5
1	1	

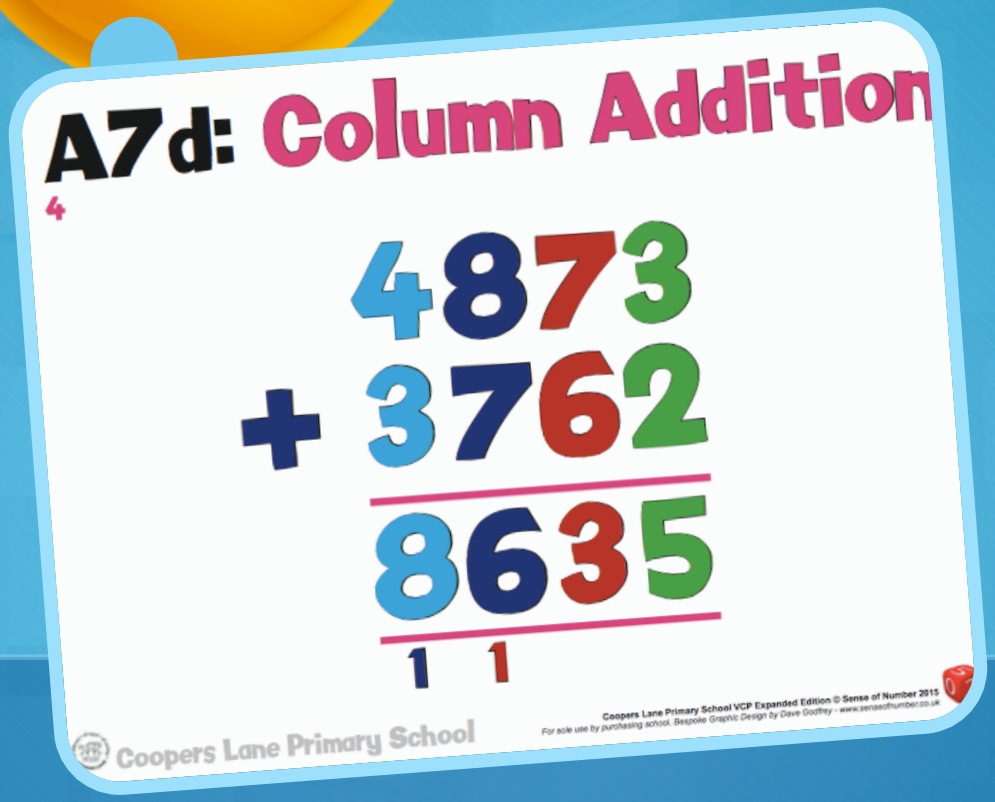
Coopers Lane Primary School

A7d: Column Addition

4

4	8	7	3
+ 3	7	6	2
8	6	3	5
1	1		

Coopers Lane Primary School


A7d: Column Addition
4
4873
+ 3762
8635
1 1
Coopers Lane Primary School
Coopers Lane Primary School VCP Expanded Edition © Sense of Number 2015
For sole use by purchasing school. Bespoke Graphic Design by Dave Godfrey - www.senseofnumber.co.uk

5694 + 2723

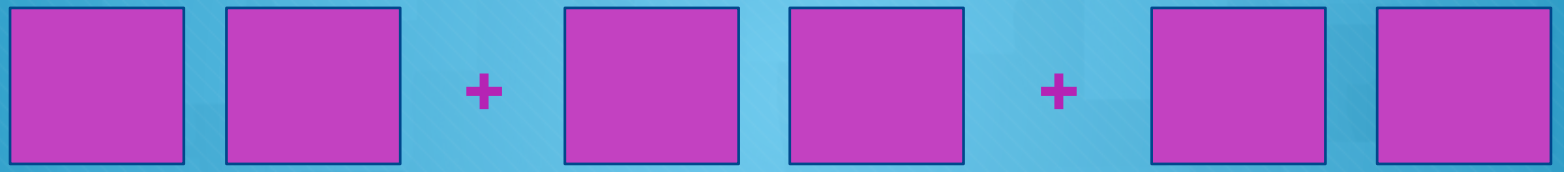
Developing greater depth in Maths

Reasoning

Always, Sometimes, Never

Is it always, sometimes or never true that when you add two numbers together you will get an even number?

Convince Me



The total is 201

Each missing digit is either a 9 or a 1.

Write in the missing digits.

Is there only one way of doing this or lots of ways?

Convince me

More methods for mental addition

MA1: Partitioning

3

57 + 25 = 82

70 + 12 = 82

Coopers Lane Primary School

Coopers Lane Primary School VCP Exp
For sole use by purchasing school. Bespoke Graphic Design

MA1: Partitioning

4

648 + 231 = 879

800 + 70 + 9 = 879

Coopers Lane Primary School

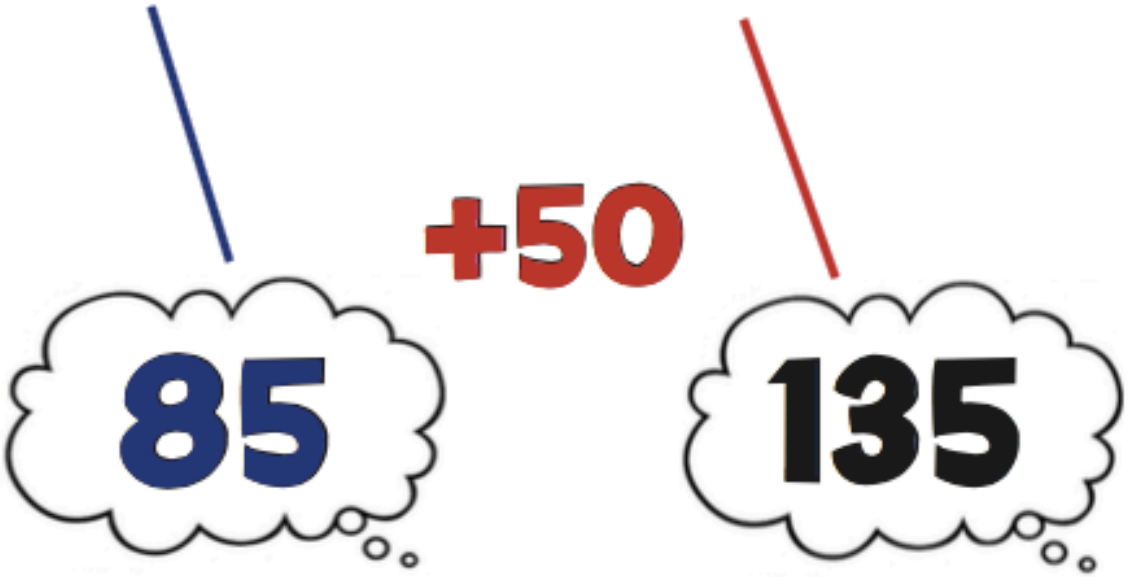
Coopers Lane Primary School VCP Expanded Edition © Sense of Number 2015
For sole use by purchasing school. Bespoke Graphic Design by Dave Godfrey - www.senseofnumber.co.uk

MA2a: Counting On

3

Tens

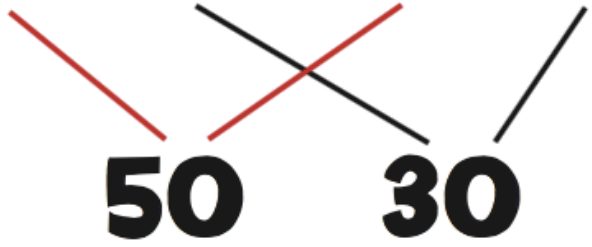
85 + 50 = 135



MA3: Number Bonds

3

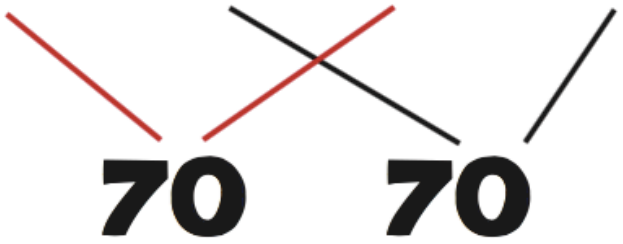
43 + 9 + 7 + 21 = 80



MA3: Number Bonds

4

42 + 16 + 28 + 54 = 140



MA4: Double & Adjust

3

16 + 17 = 33

16 + 16 + 1

32 + 1 = 33

MA4: Double & Adjust

4

37 + 38 = 75

37 + 37 + 1

74 + 1 = 75

MA5: Round & Adjust

3

45 + 97 = 142

45 + 100 - 3

145 - 3 = 142

Coopers Lane Primary School

Round & Adjust

345 + 298 = 643

345 + 300 - 2

645 - 2 = 643

Coopers Lane Primary School

Coopers Lane Primary School VCP Expanded Edition © Sense of Number 2015
For sole use by purchasing school. Bespoke Graphic Design by Dave Godfrey - www.senseofnumber.co.uk