

Addition

Year 1

5 = 5 + 0 5 - 0 = 5
 5 = 4 + 1 5 - 1 = 4
 5 = 3 + 2 5 - 2 = 3
 5 = 2 + 3 5 - 3 = 2
 5 = 1 + 4 5 - 4 = 1
 5 = 0 + 5 5 - 5 = 0

6 = 6 + 0 6 - 0 = 6
 6 = 5 + 1 6 - 1 = 5
 6 = 4 + 2 6 - 2 = 4
 6 = 3 + 3 6 - 3 = 3
 6 = 2 + 4 6 - 4 = 2
 6 = 1 + 5 6 - 5 = 1
 6 = 0 + 6 6 - 6 = 0

5 is the whole
 2 is a part
 3 is a part

add total
 subtract left

7 = 7 + 0 7 - 0 = 7
 7 = 6 + 1 7 - 1 = 6
 7 = 5 + 2 7 - 2 = 5
 7 = 4 + 3 7 - 3 = 4
 7 = 3 + 4 7 - 4 = 3
 7 = 2 + 5 7 - 5 = 2
 7 = 1 + 6 7 - 6 = 1
 7 = 0 + 7 7 - 7 = 0

8 is the whole
 2 is a part
 6 is a part

10 is the whole
 5 is one part
 5 is one part

12 is the whole
 5 is one part
 7 is one part

15 is the whole
 7 is one part
 8 is one part

17 = 17 + 0 17 - 0 = 17
 17 = 16 + 1 17 - 1 = 16
 17 = 15 + 2 17 - 2 = 15
 17 = 14 + 3 17 - 3 = 14
 17 = 13 + 4 17 - 4 = 13
 17 = 12 + 5 17 - 5 = 12
 17 = 11 + 6 17 - 6 = 11
 17 = 10 + 7 17 - 7 = 10
 17 = 9 + 8 17 - 8 = 9
 17 = 8 + 9 17 - 9 = 8
 17 = 7 + 10 17 - 10 = 7
 17 = 6 + 11 17 - 11 = 6
 17 = 5 + 12 17 - 12 = 5
 17 = 4 + 13 17 - 13 = 4
 17 = 3 + 14 17 - 14 = 3
 17 = 2 + 15 17 - 15 = 2
 17 = 1 + 16 17 - 16 = 1
 17 = 0 + 17 17 - 17 = 0

18 = 18 + 0 18 - 0 = 18
 18 = 17 + 1 18 - 1 = 17
 18 = 16 + 2 18 - 2 = 16
 18 = 15 + 3 18 - 3 = 15
 18 = 14 + 4 18 - 4 = 14
 18 = 13 + 5 18 - 5 = 13
 18 = 12 + 6 18 - 6 = 12
 18 = 11 + 7 18 - 7 = 11
 18 = 10 + 8 18 - 8 = 10
 18 = 9 + 9 18 - 9 = 9
 18 = 8 + 10 18 - 10 = 8
 18 = 7 + 11 18 - 11 = 7
 18 = 6 + 12 18 - 12 = 6
 18 = 5 + 13 18 - 13 = 5
 18 = 4 + 14 18 - 14 = 4
 18 = 3 + 15 18 - 15 = 3
 18 = 2 + 16 18 - 16 = 2
 18 = 1 + 17 18 - 17 = 1
 18 = 0 + 18 18 - 18 = 0

20 = 20 + 0 20 - 0 = 20
 20 = 19 + 1 20 - 1 = 19
 20 = 18 + 2 20 - 2 = 18
 20 = 17 + 3 20 - 3 = 17
 20 = 16 + 4 20 - 4 = 16
 20 = 15 + 5 20 - 5 = 15
 20 = 14 + 6 20 - 6 = 14
 20 = 13 + 7 20 - 7 = 13
 20 = 12 + 8 20 - 8 = 12
 20 = 11 + 9 20 - 9 = 11
 20 = 10 + 10 20 - 10 = 10
 20 = 9 + 11 20 - 11 = 9
 20 = 8 + 12 20 - 12 = 8
 20 = 7 + 13 20 - 13 = 7
 20 = 6 + 14 20 - 14 = 6
 20 = 5 + 15 20 - 15 = 5
 20 = 4 + 16 20 - 16 = 4
 20 = 3 + 17 20 - 17 = 3
 20 = 2 + 18 20 - 18 = 2
 20 = 1 + 19 20 - 19 = 1
 20 = 0 + 20 20 - 20 = 0

If I know
 5 + 4 = 9
 then I also know
 15 + 4 = 19

12 is one part
 8 is one part
 20 is the whole

10 is the whole
 5 is one part
 5 is one part

15 is the whole
 7 is one part
 8 is one part

20 is the whole
 10 is one part
 10 is one part

Year 2

35 + 20
 Add multiples of ten

If I know 3 + 2 then I also know

37 + 19
 Round then adjust

Add 20 then subtract 1

35 + 23
 Partition and recombine

35 + 23
 30 + 5 + 20 + 3
 50 + 8 = 58

35 + 23 = 23 + 35
 Addition is commutative

Year 3

150 + 80
 Bridging boundaries

325 + 200
 Add multiples of ten and a hundred

234 + 199
 Round then adjust

348 + 224
 Regrouping the ones

388 + 264
 Regroup in multiple columns

76 + 388
 Different numbers of digits

388 + 199
 388 + 140
 388 + 51

In my head?
 With jottings?
 Formal written method?

Year 4

3543 + 2312
 No regrouping

3544 + 2318
 Regrouping the ones

3544 + 2658
 Regrouping in multiple columns

Year 5

63,452 + 14,991
 Round then adjust

2,452 - 0,999
 Round then adjust

40,007 - 91,995
 Find the difference between two numbers

Written methods

Year 6

2997 + 6
 Bridging boundaries

3754 + 600
 Add multiples of ten and a hundred

3452 + 1999
 Round then adjust