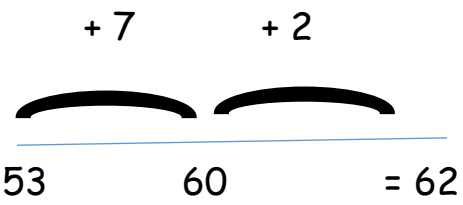
# Numeracy in P4

**Have a look at some of the strategies we are using in P4 to help us to quickly find the answer to addition and subtraction sums.**

## 1. Using numberlines to add a 2 digit number and a single digit

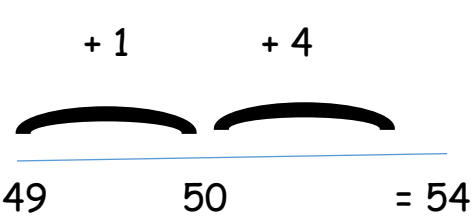
Examples:

a, 53 + 9



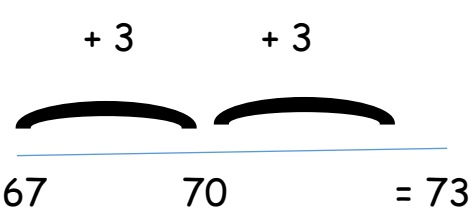

Process: Use knowledge of number bonds to ten to complete this sum. Add on the number to get to the next ten (**53** + **7**) and then add on the remaining amount, in this sum we had to add on 9 altogether so after adding the 7 to get to the next ten we were left with having to add on 2 more.

b, 49 + 5




Same process as above- adding on to get to the next multiple of ten and then adding the remaining amount.

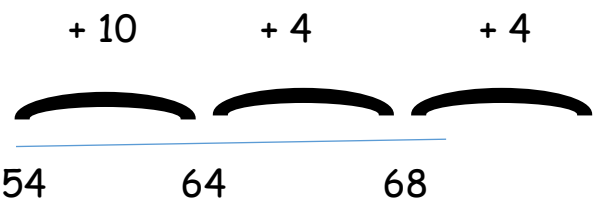
c, 67 + 6



## 2. Using numberlines to add 2 double digit numbers together

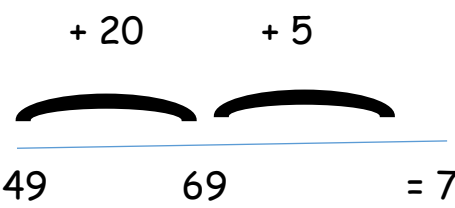
Examples:

a, 54 + 18



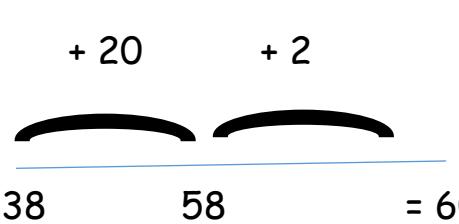

Process: Add on the ten and then add the units. In this case we split the units digit (8) into 4 and 4 to make it more manageable to add.

b, 49 + 25




Same process as above- adding the tens first and then the units.

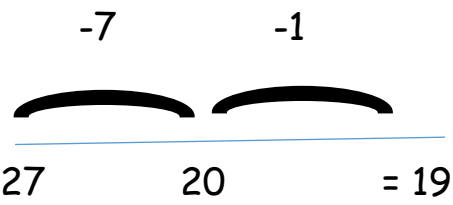
c, 38 + 22



**3. Using numberlines to subtract a single digit from a double digit.**

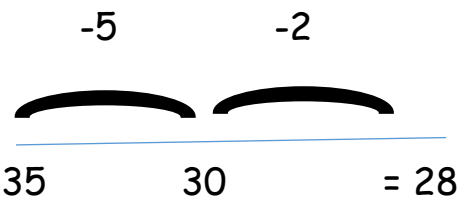
Examples:

a, 27 – 8 =

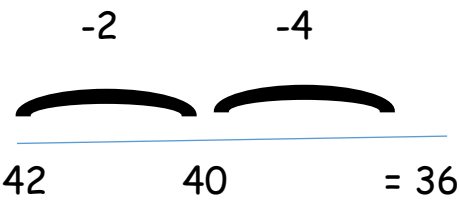



Process: This sum asks us to subtract a total of 8. First we subtract 7 to bring us back to the previous multiple of ten (27 – 7 = 20) and then we subtract 1 more.

b, 35 – 7 =




c, 42 – 6 =

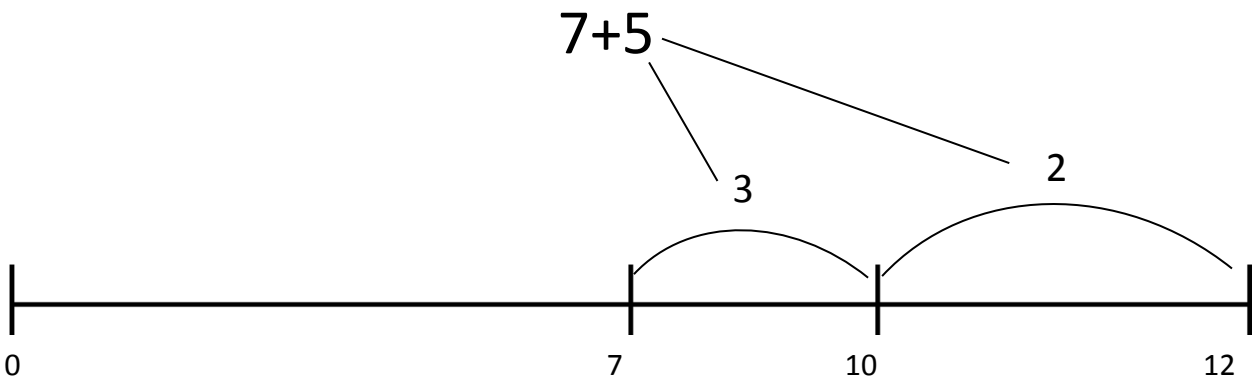



Try some of these strategies at home with your child.

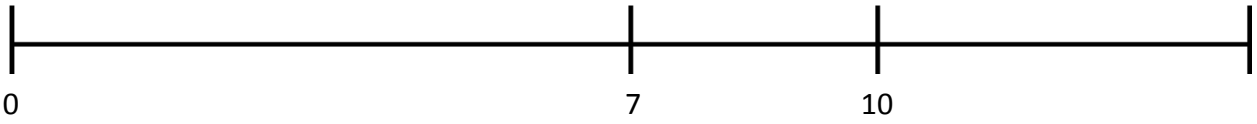
By breaking the sums up and using the numberline as a visual tool the children find the sums less daunting.

## 1. Using ENLs to Partition Numbers, Bridging 10s etc.

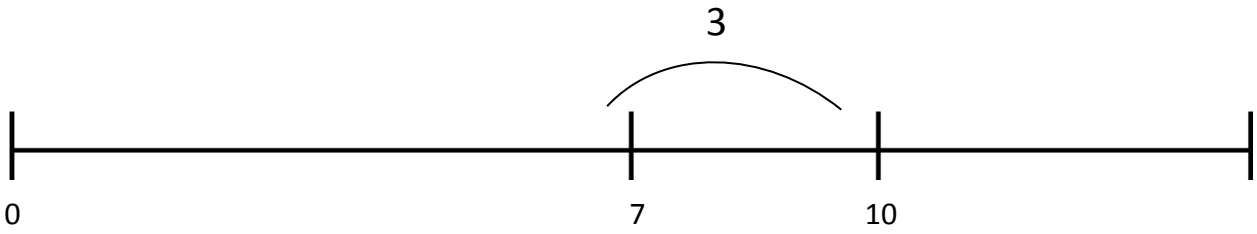
***Example 1:***



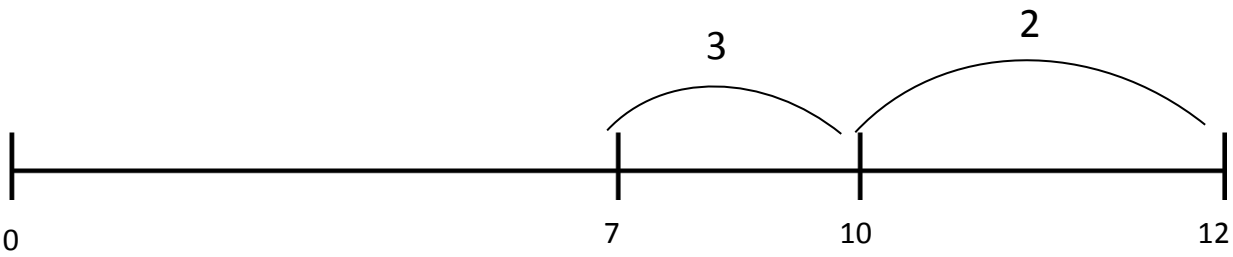

**Tip:** Show me 7 on ENL




How many more to next 10? (Answer 3)

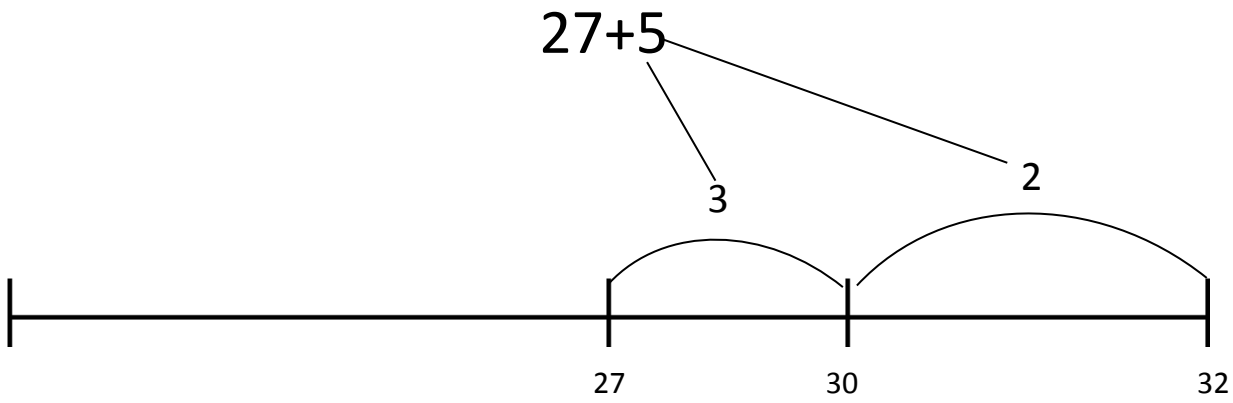



But the problem asked you 7+5. How many more have you still to add? (Answer 2)




So 7+5 = 12

***Example 2:***



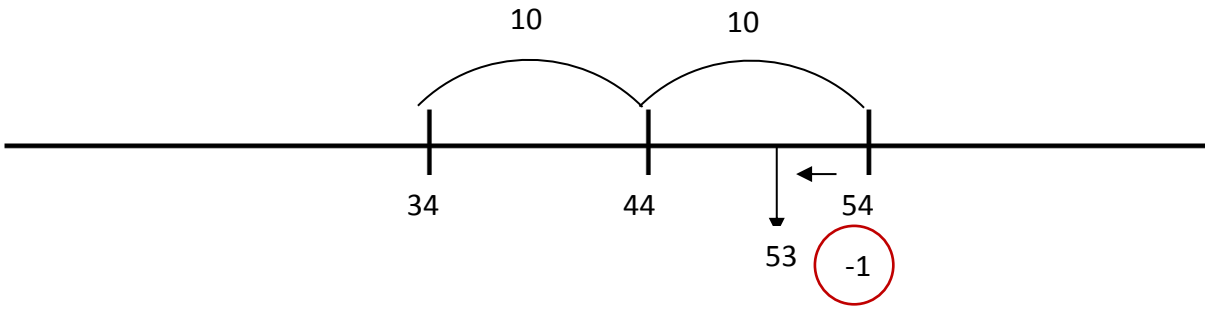

Same as 8 (a): Split the 5 into 3+2.

Try with different examples

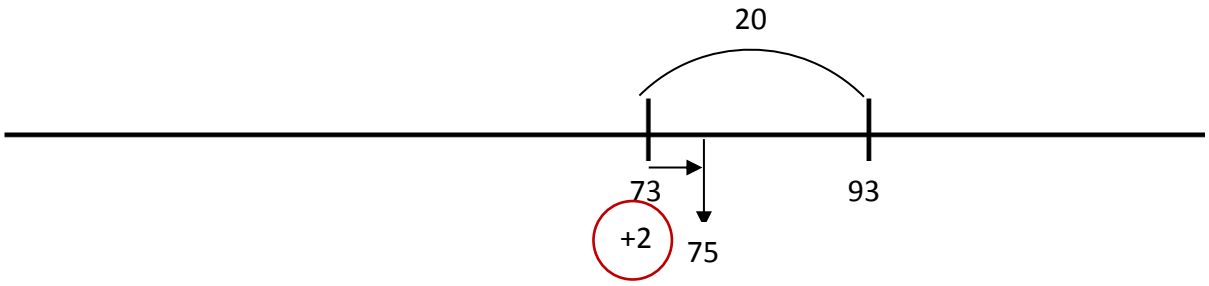
## 2. Using ENLs with number problems where numbers can be rounded up/adjusted

***Example:***

**34+19**



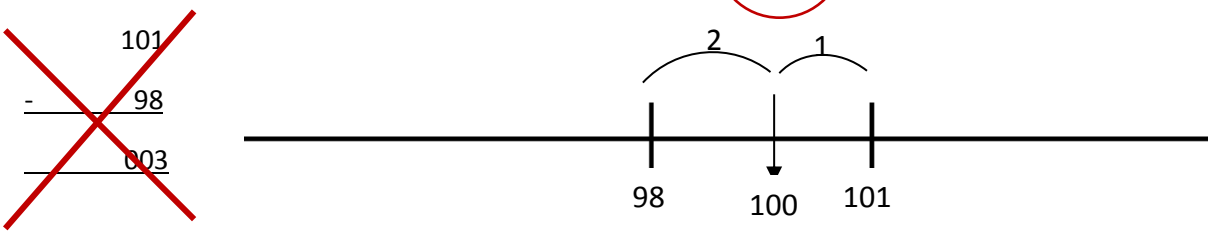

**93-18**



## 3. Using ENLs with subtraction problems where the numbers are close together

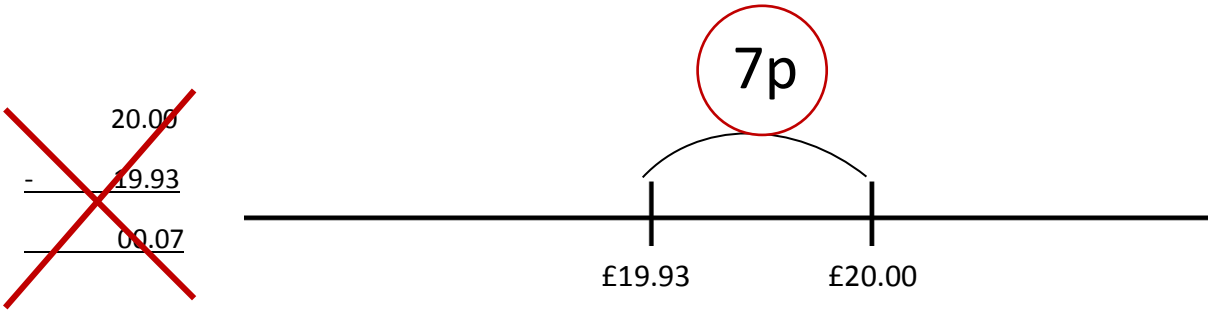
***Example 1:***

101 parents attended the school concert, 98 of them were women. How many men attended?




***Example 2:***

The bill in the shop came to £19.93. How much change from £20?



# Partitioning Strategy

## 3 Key Questions

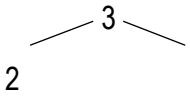
a) How many dots do you see altogether?
b) How many black dots?
c) How many grey dots?

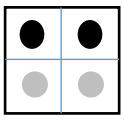
Examples:

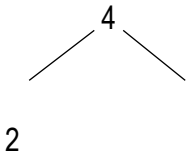
3 

Altogether (A) 3 Black (B) 2 Grey (G) 1

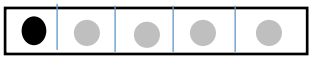
Record when / if appropriate

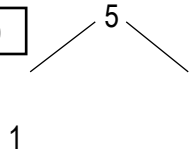



4 



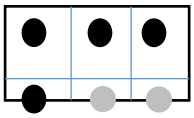

| (A) | (B) | (G) |
|---|---|---|
| 4 | 2 | 2 |

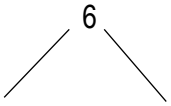
5 




| (A) | (B) | (G) |
|---|---|---|
| 5 | 1 | 4 |

6

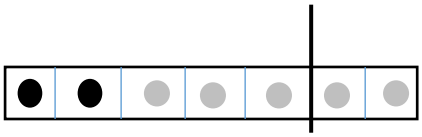


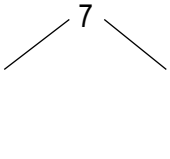



(A) (B) (G)

6 4 2

7

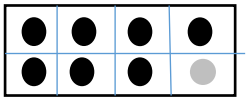


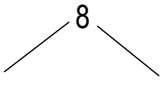



(A) (B) (G)

7 2 5

8

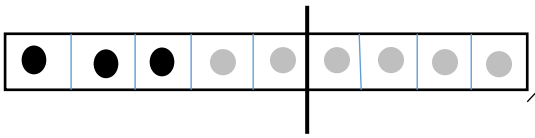


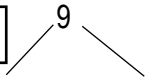



(A) (B) (G)

8 7 1

9

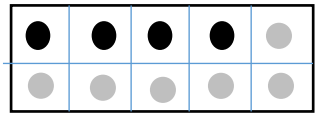


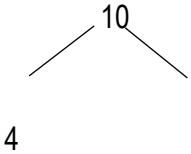



(A) (B) (G)

9 3 6

10






(A) (B) (G)

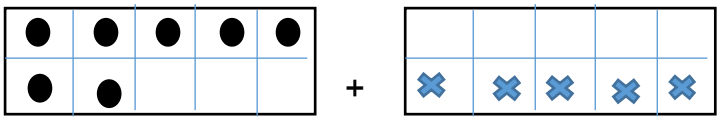
10 4 6

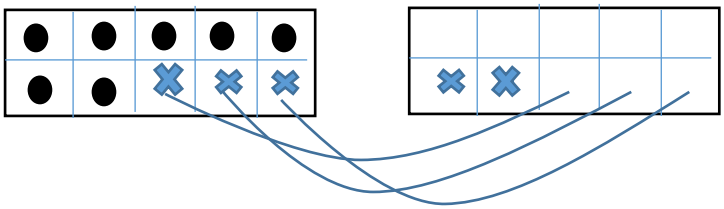
## 3 Teaching Points

1. Practise above frames with first (a) displaying then (b) flashing for about 1 second
2. Particular emphasis should be placed through time and practise on 5 and 10 frames
3. Practise different partitions for each number

## HIGHER LEVEL PARTITIONING

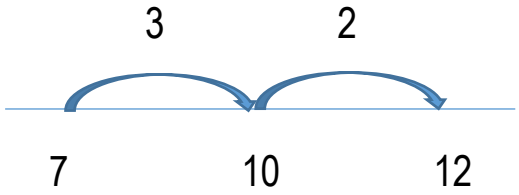
Eg. (1) 7 + 5 = ?



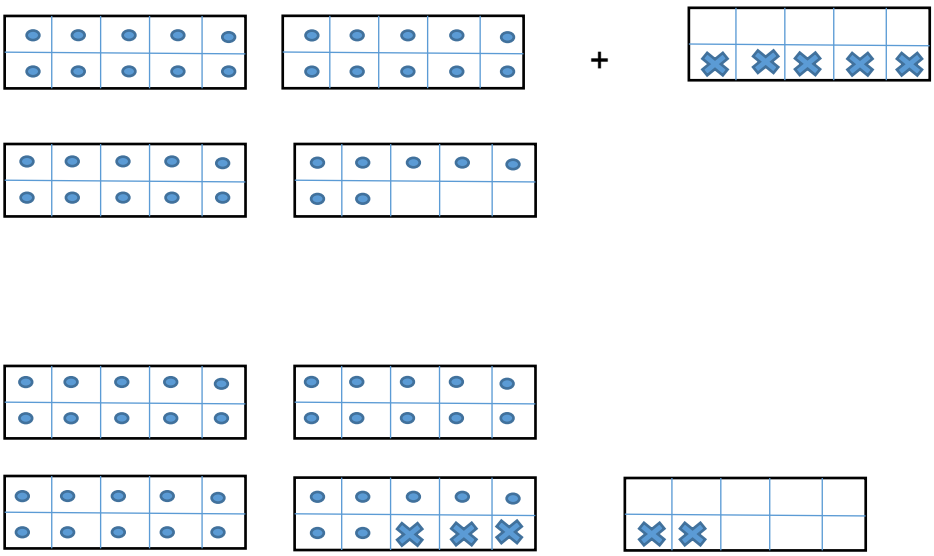


7 + 5 = 12

7 + 3 + 2 = 12

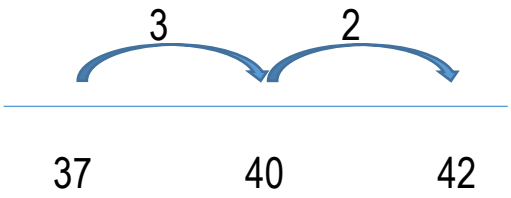


Eg. (2)  37  +  5  =  ?



37  +  5  =  42

37  +  3  +  2  =  42



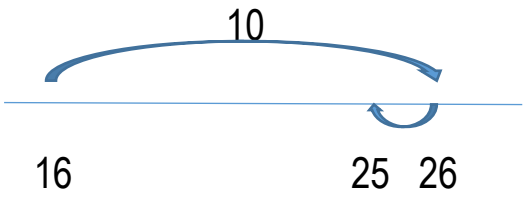
# ROUNDING AND ADJUSTING STRATEGY

Sometimes it is easier to adjust when adding or subtracting numbers. This is often the 'forgotten' strategy

| 1 Adding 'near 10' to a number |
|---|

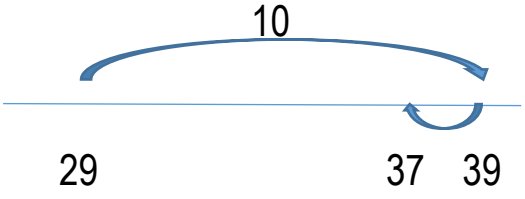
eg. (1) 16 + 9 = 25

16 + 10 - 1 = 25



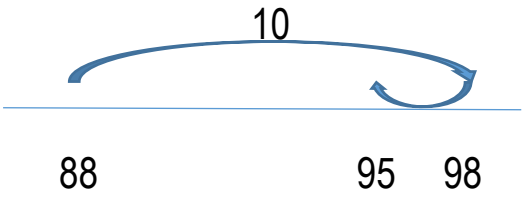

eg. (2) 29 + 8 = 37

29 + 10 - 2 = 37



eg. (3) 88 + 7 = 95

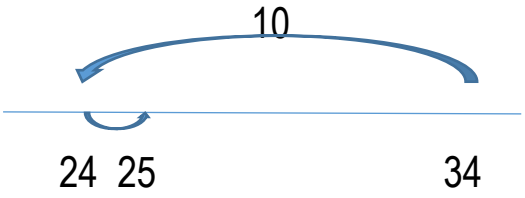
88 + 10 - 3 = 95




## 2 Subtracting a ‘near 10’ from a number

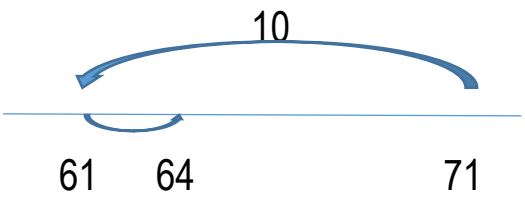
eg. (1) 34 - 9 = 25

34 - 10 + 1 = 25



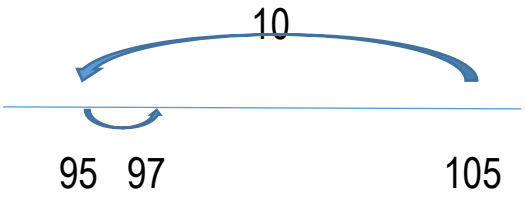

eg. (2) 71 - 7 = 64

71 - 10 + 3 = 64



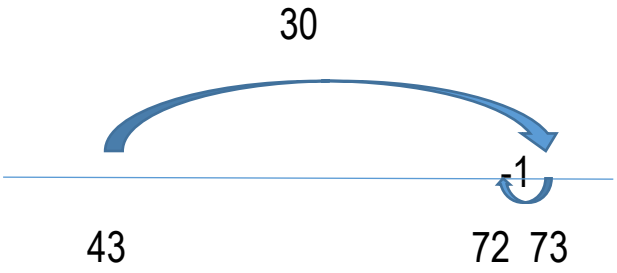
eg. (3) 105 - 8 = 97

105 - 10 + 2 = 97

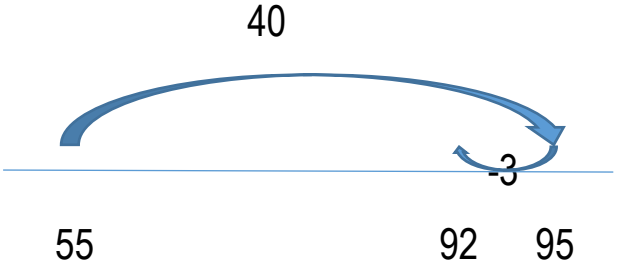



| 3 | Adding ‘near’ multiples of 10 to a number |
|---|---|

eg. (1) 43 + 29 = 72

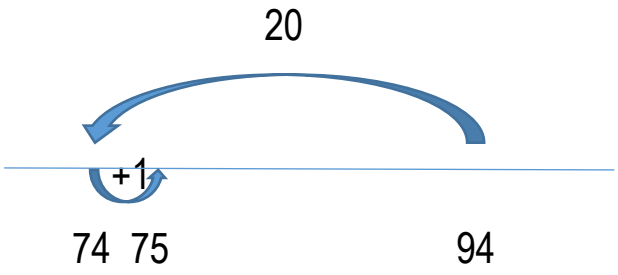



eg.(2) 55 + 37 = 92

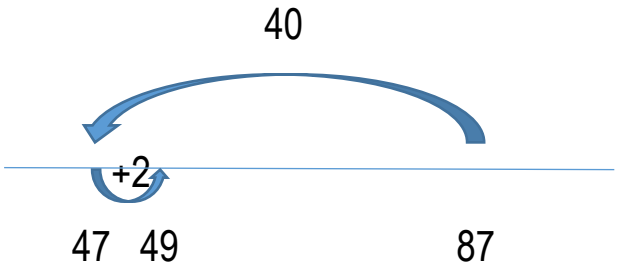


| 4 | Subtracting ‘near’ multiples of 10 from a number |
|---|---|

eg. (1) 94 - 19 = 75




eg. (2) 87 - 38 = 49




## Which Strategy is Best?

When pupils have worked through a variety of mental strategies eg.

- Counting on / back
- Rounding / adjusting
- Combining
- Partitioning etc.,

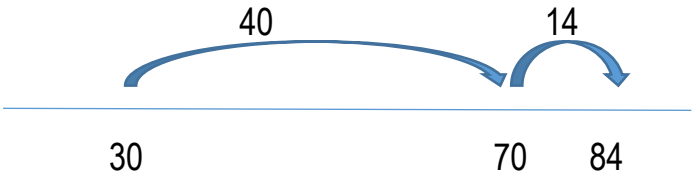
they can use the most efficient / practical one (or very often the one they feel most comfortable with.

This final example shows a variety of ways to do the same problem mentally.

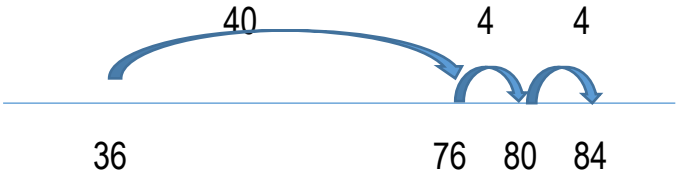
Problem:

For his break, Charlie buys a banana at 36p and a bottle of water at 48p. How much does he owe the shop?

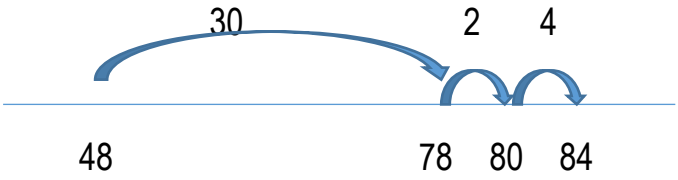
Method 1



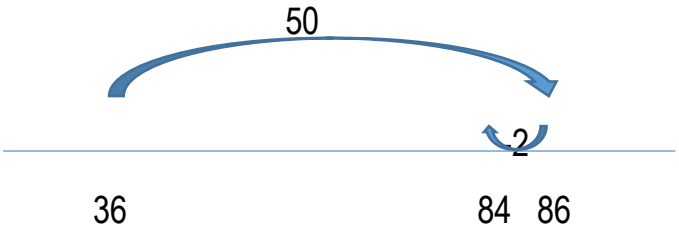

Method 2




Method 3




Method 4



Method 5