

# Help at Home

Parents Booklet

*Maths* NI  
Improvement



Key Stage 1

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# Targets & Strategies

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**During KS1 your child may be working towards achieving and being competent in the following areas:**

- Count to 1000 and be able to recognise, read or write any 3-digit number
- Count in tens. E.g. 36, 46, 56, 66, 76, 86, 96, 106, 116 ...
- Know the pairs of numbers which make ten. E.g. 4+6, 7+3, 5+5 ...
- Add 2 single digit numbers bridging 10 e.g. 6+8
- Add two numbers by counting on the tens and then counting on the units. E.g. 46+23
- Add a string of small numbers. E.g. 6+4+7+2+6
- Add 10, 20 or 30 or 40 to a number. E.g. 94+20
- Subtract one number from another when the numbers are close. E.g. 43-37
- Subtract one number from another when the numbers are not close. E.g. 54-9
- Know the 2x, 3x, 5x, 9x and 10x tables (if necessary, using fingers fast!)
- Recognise dividing as the opposite of multiplying. E.g. 27/3 means 'How many 3's in 27?'
- Recognised odd and even numbers
- Double numbers up to 20 and halve even numbers up to 40
- Add/Subtract 1,2, 0 to any number, answers within 100
- Add/Subtract 10 to/from a 2-digit number, answers within 100
- Subtract a single digit from 20
- Add a single digit to a 2 digit number without bridging 10 (54+3)
- Subtract a single digit from a number within 20, without bridging 10 (17-4)
- Subtract a single digit from a 2-digit number without bridging 10 (56-4)
- Know position of tens digit indicates its value
- Know all single digit subtraction facts within 10
- Find what must be added to a number to make 20
- Find what must be added to a multiple of 10 to make 100 (60+?=100)
- Find what must be added to any 2 digit number to make the next highest multiple of 10 (33+?=40)
- Find what must be subtracted from any 2 digit number to make the next lower multiple of 10 (47-?=40)
- Add/subtract a multiple of 10 to/from a multiple of 10, answers within 100 (30+40, 60-20)
- Add/subtract 9, 11 to/from any 2 digit number, answers within 100
- Add/subtract a multiple of 10 to/from any 2 digit number, answers within 100 (o) (34 + 50, 89-40)
- Use to add/subtract 21, 31, 19, 29 etc to/from any 2 digit number, answers within 100 (47+29, 53-19)
- Know position of hundreds digit indicates its value
- Understand zero as a place holder
- Know multiplication facts for 1x, 2x, 5x, 10x tables

# 50 Grid (Un-Numbered)

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# 50 Grid Numbered

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1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

# 100 Square (Un-Numbered)

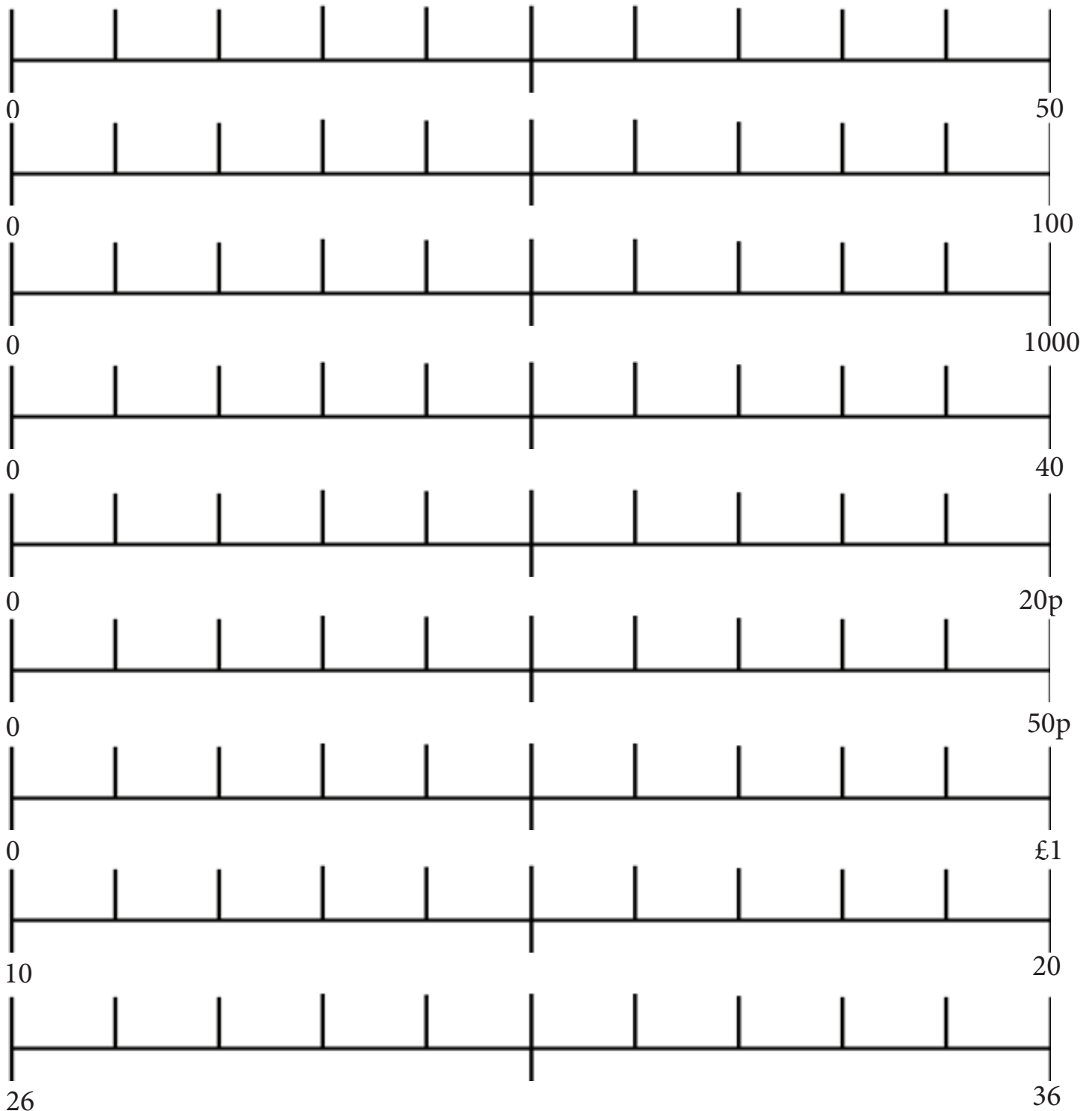
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# 100 Square (Numbered)

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1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

# Counting On/Back using empty number line



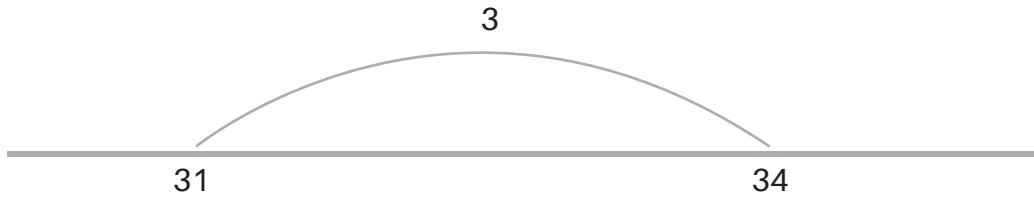
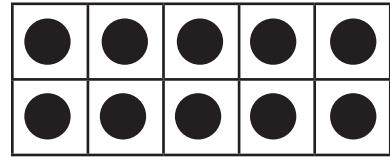
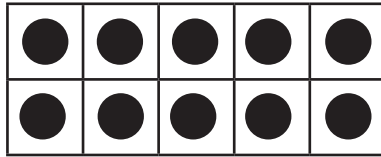
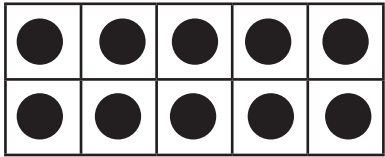
## Typical Questions to ask your child:

1. What number is this?
2. Point/Show me e.g. 90
3. Use different starting numbers e.g. 10-20, 36-46
4. Count in 4s (4x tables)
5. Show me 37p. How much more to make 50p? £1 etc.



# Higher Level Combining

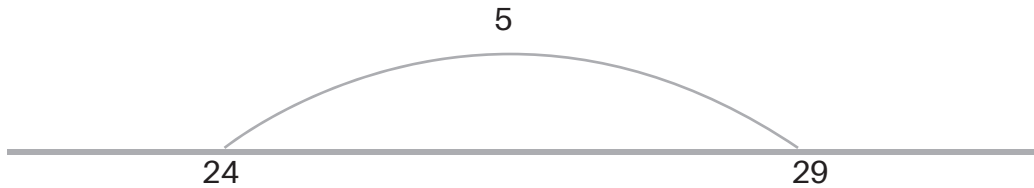
$31 + 3 = ?$



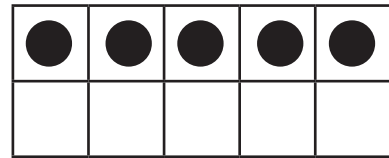
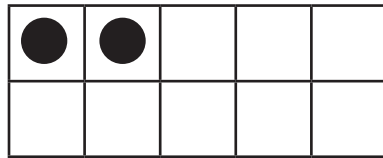
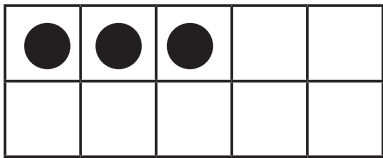
$24 + \square = 29$

Display, then screen

Display, then screen



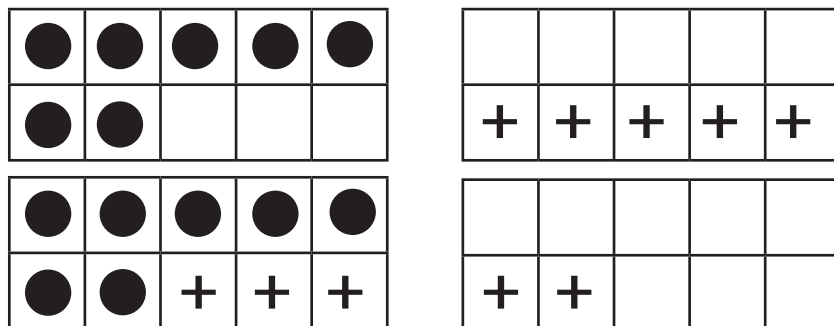
Combining 2 single-digit numbers



# Higher Level Partitioning

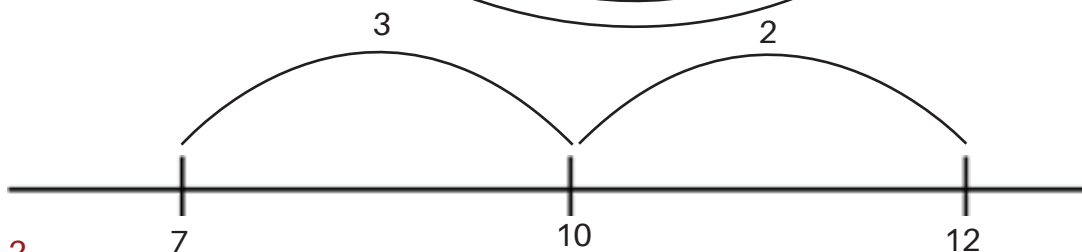
## Example 1

$7 + 5 = ?$



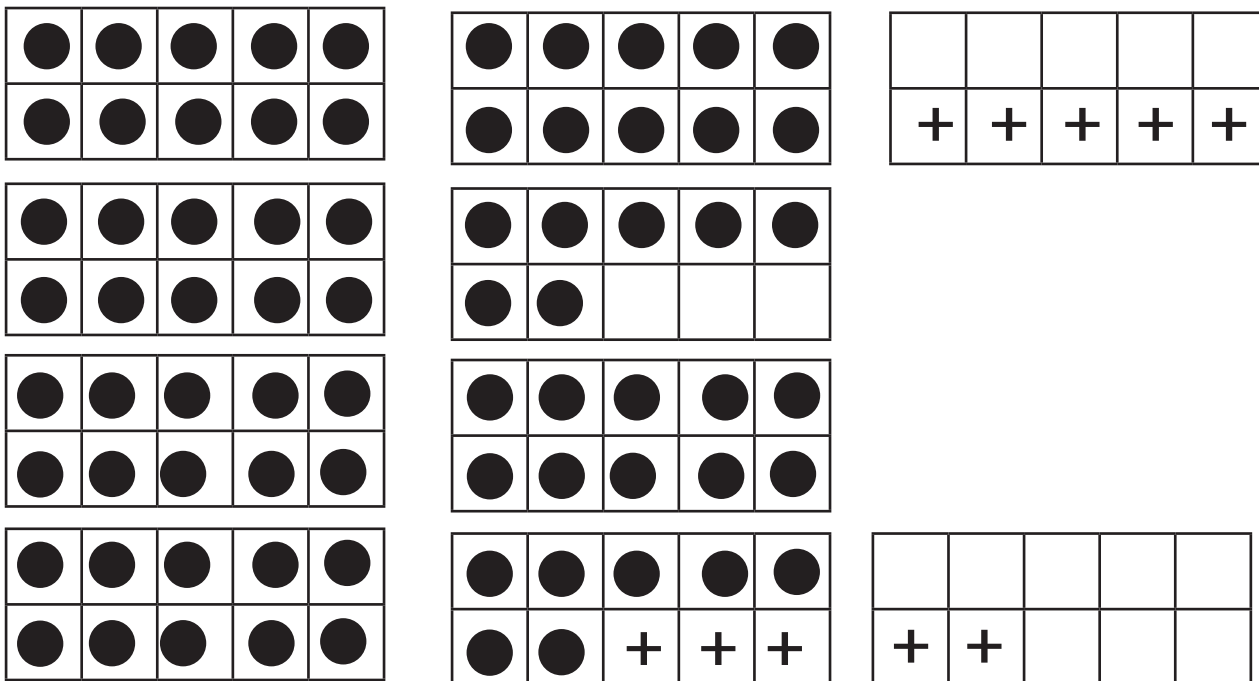
$7 + 5 = 12$

$7 + 3 + 2 = 12$



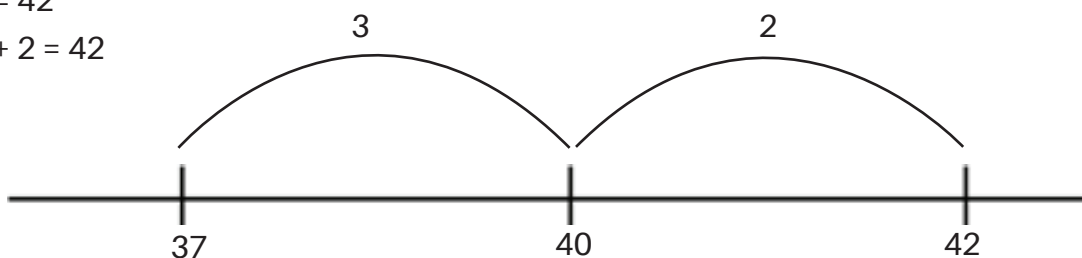
## Example 2

$37 + 5 = ?$



$37 + 5 = 42$

$37 + 3 + 2 = 42$



# Rounding and Adjusting Strategy

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

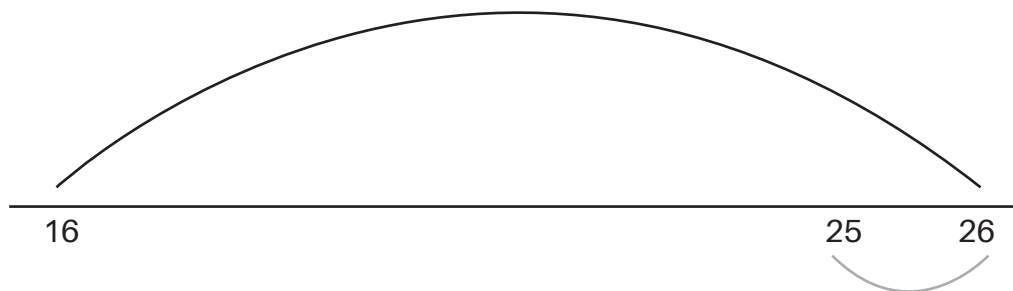
All you need to do is draw an empty number line.

## 1. Adding 'near 10' to a number

### Example 1

$$16 + 9 = 25$$

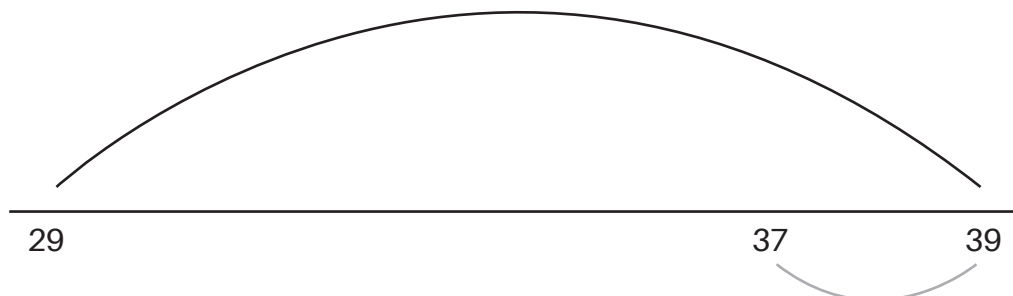
$$16 + 10 - 1 = 25$$



### Example 2

$$29 + 8 = 37$$

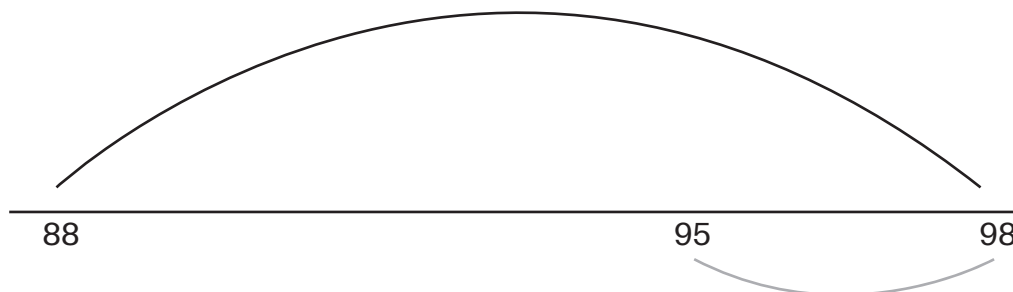
$$29 + 10 - 2 = 37$$



### Example 3

$$88 + 7 = 95$$

$$88 + 10 - 3 = 95$$



# Rounding and Adjusting Strategy

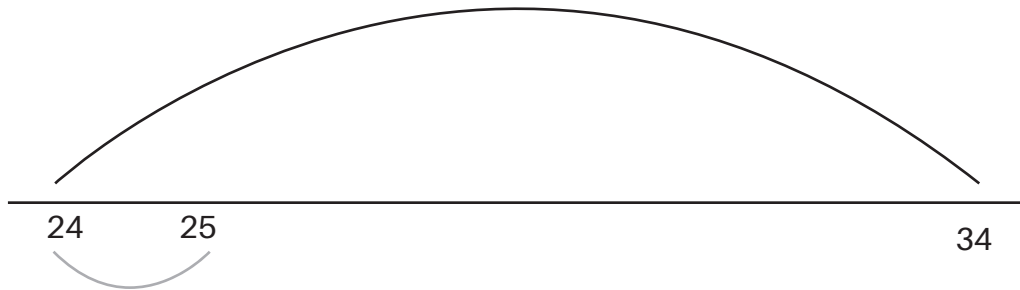
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## 1. Subtracting to a 'near 10' from a number

### Example 1

$$34 - 9 = 25$$

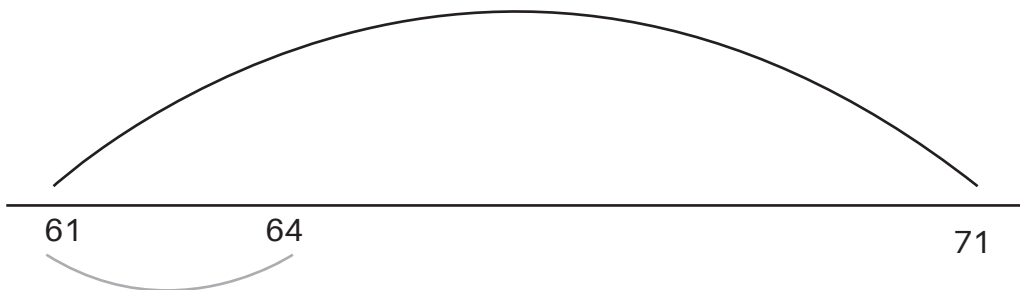
$$34 - 10 + 1 = 25$$



### Example 2

$$71 - 7 = 64$$

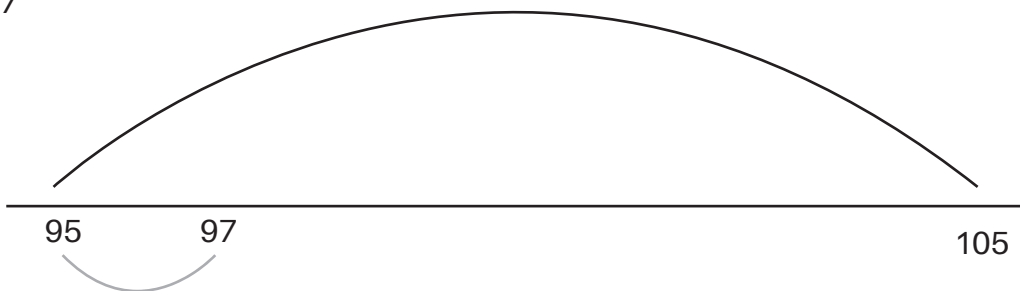
$$71 - 10 + 3 = 64$$



### Example 3

$$105 - 8 = 97$$

$$105 - 10 + 2 = 97$$

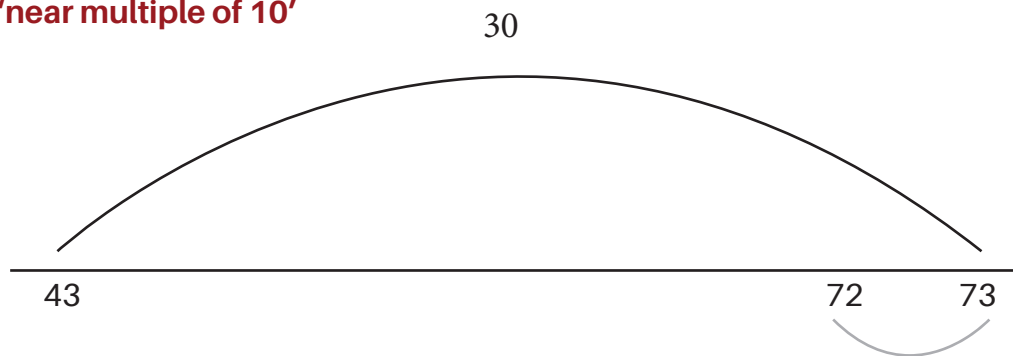


# Rounding and Adjusting Strategy

## 1. Adding to a 'near multiple of 10'

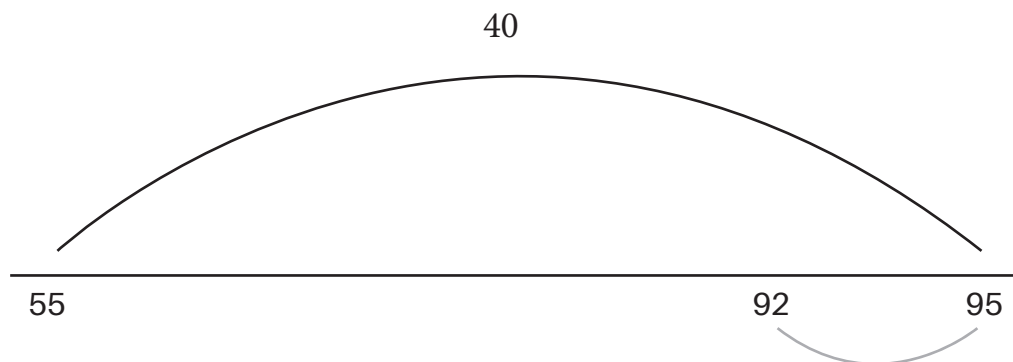
### Example 1

$$43 + 29 = 72$$



### Example 2

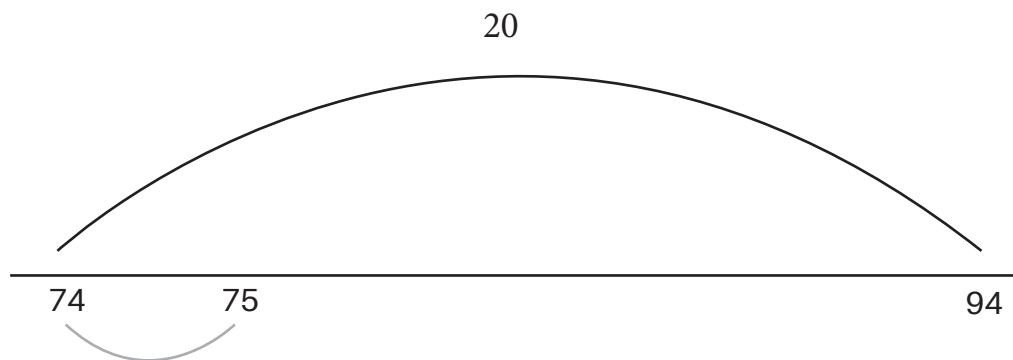
$$55 + 37 = 92$$



## 2. Subtracting to a 'near multiple of 10'

### Example 1

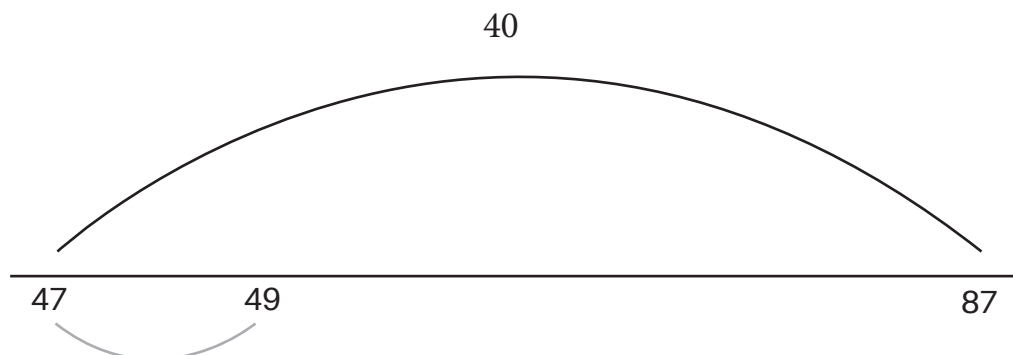
$$94 - 19 = 75$$



### Example 2

$$87 - 38 = 49$$

$$87 - 40 + 2 = 49$$



# Which Strategy is Best?

When pupils have worked through a variety of mental strategies e.g;

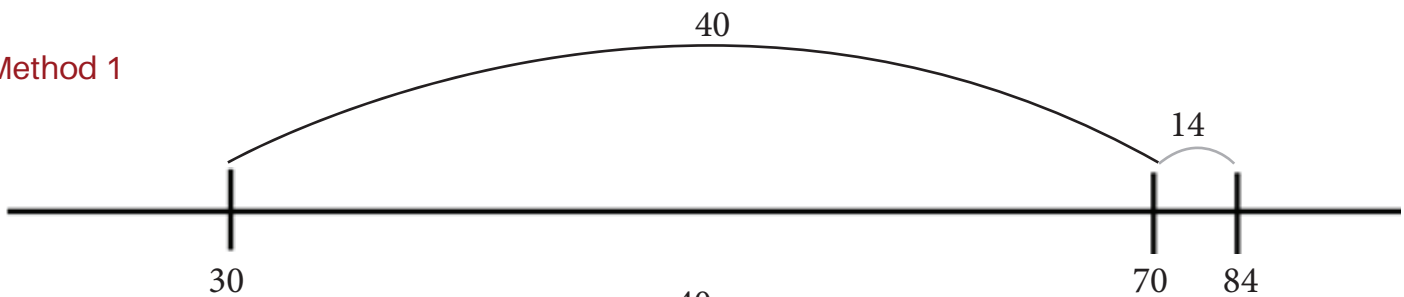
- Counting on/back
- Rounding/adjusting
- Combining
- Partitioning etc.

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.

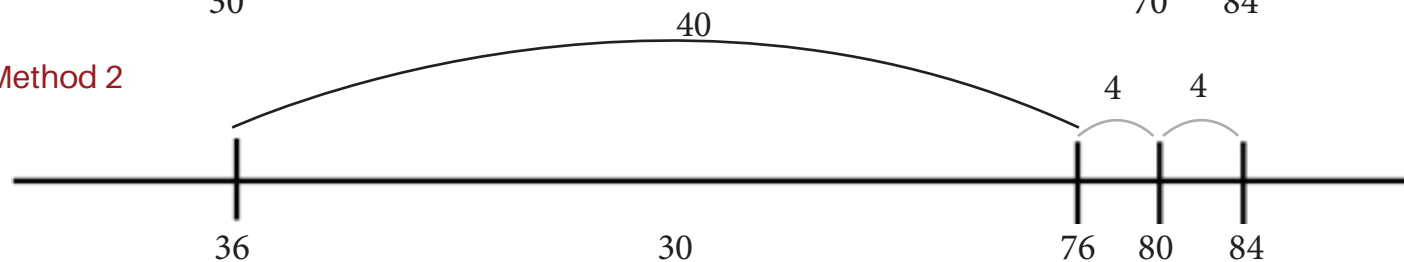
## Problem:

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

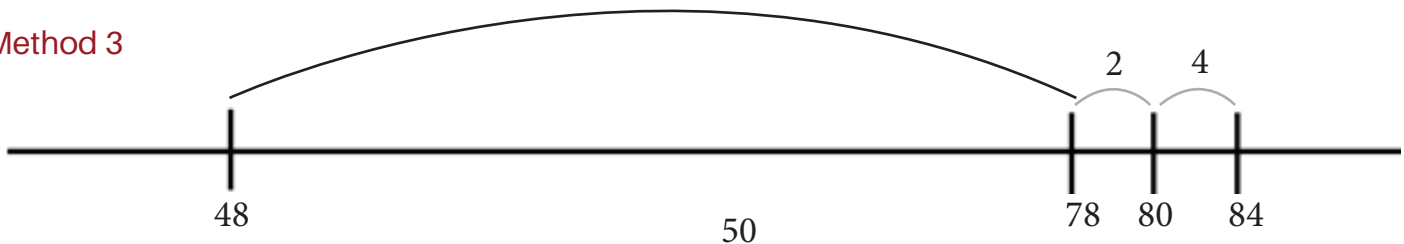
### Method 1



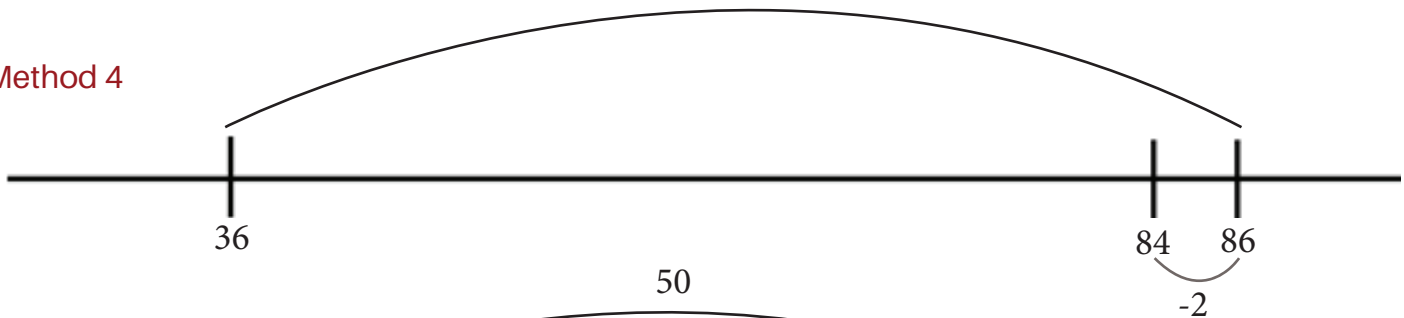
### Method 2



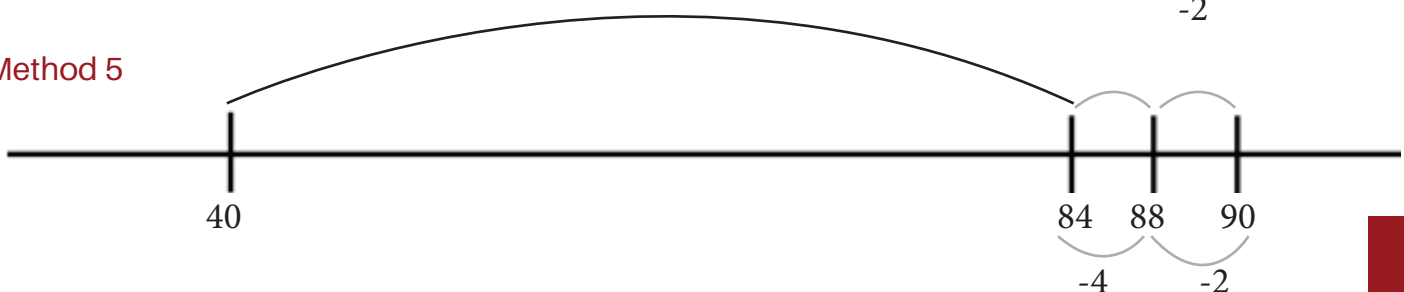
### Method 3



### Method 4



### Method 5

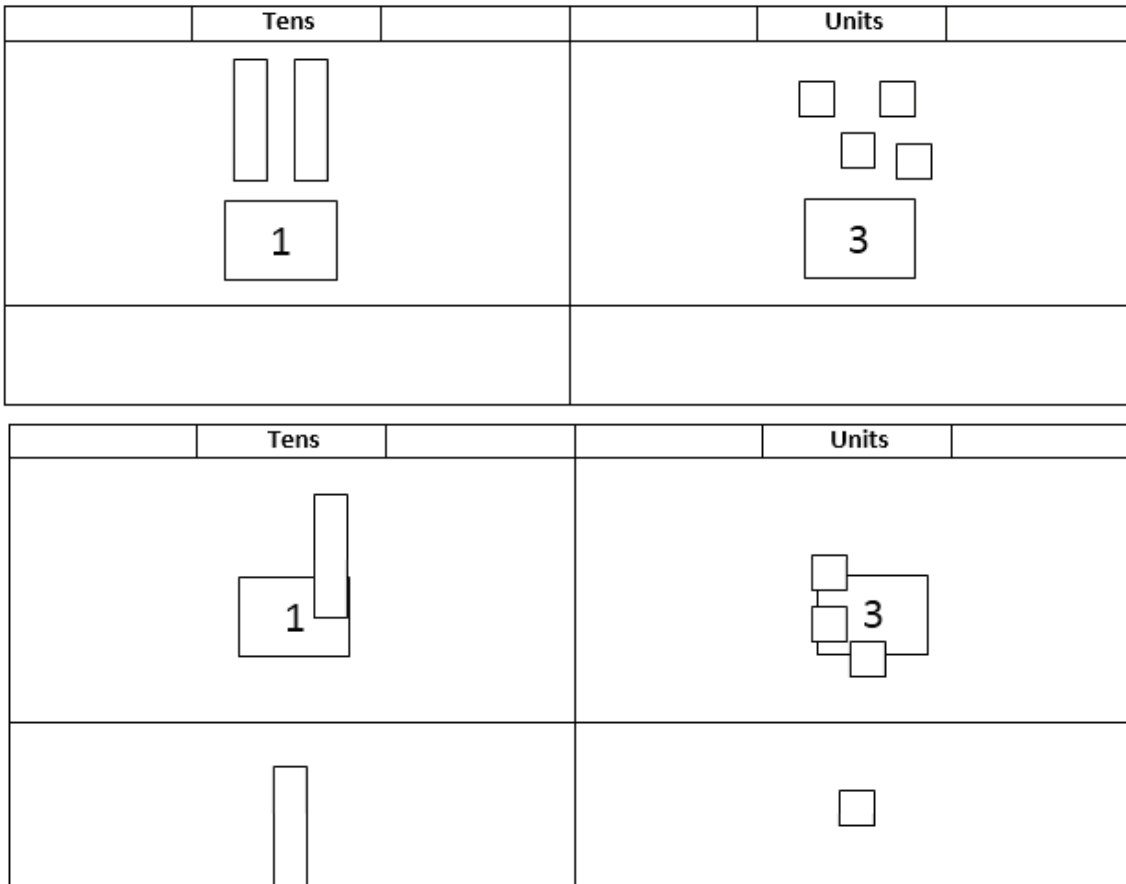


# Subtraction by Decomposition

One of the best resources to use is money; 10ps, 1ps.

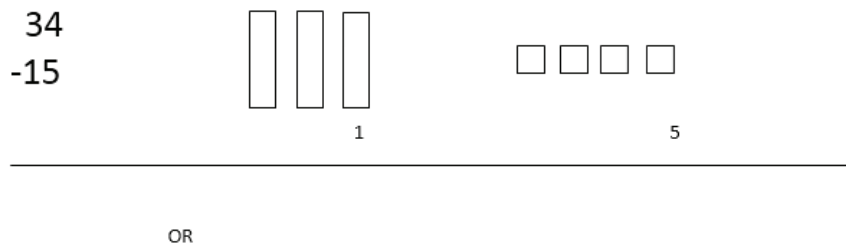
Don't go back to 'your way' of doing subtraction, go with the way your child is doing it in school!

Example 1: 24 - 13

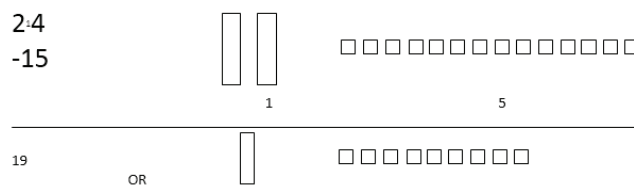


Example 2: 34 - 15

This time it is not as simple as this sum involves using "Decomposition".



This time, we cannot take away 5 units because there are only 4 units so we must 'exchange' 1 Ten for 10 Units and therefore we have:



Through time and practice, we can leave out the right hand side of the problem. However, this takes Time, Practice and Patience.

# Useful Websites/Links

Website Address	Details
<a href="http://nlvm.usu.edu/en/nav/vlibrary.html">http://nlvm.usu.edu/en/nav/vlibrary.html</a>	Go to PreK2 Base Blocks Base Blocks Addition Base Blocks Subtraction
<a href="http://www.topmarks.co.uk">www.topmarks.co.uk</a>	Go to Whiteboard Resources Go to Maths KS1 - loads of activities in all areas of maths OR Go to Parents Resources
<a href="http://www.clounagh.org">www.clounagh.org</a>	
<a href="http://www.ictgames.com">www.ictgames.com</a>	
<a href="http://www.mathsisfun.co.uk">www.mathsisfun.co.uk</a>	
<a href="http://www.counton.org">www.counton.org</a>	
<a href="http://www.mad4maths.com">www.mad4maths.com</a>	

## Games

- Jigsaws (number)
- Interactive jigsaws in Topmarks
- Go to - Parents
- Go to - Maths Games
- Playing Cards
- Money Games
- Ludo
- Snakes/Ladders
- Connect 4
- Dominoes
- Draughts
- Simple Sudoku

## Helping out at Home

### Out and About

- Plan your trip around the shops
- Recognising new coins 20p, 50p, £1, £2
- Change from 10p, 20p, 50p, £1 - adding/ subtracting
- Exchanging coins for least amount
- Sequence shopping from lightest to heaviest



### In the Kitchen

- Read analogue/digital clock
- Sharing out dinner (e.g. pizzas etc)/fractions
- Reading scales on kettle, weighing scales -working out how much to fill, get to 1kg etc
- Non uniform measuring - Baking: how many spoonfuls of flour weigh 100g etc.



### Around the House

- Talk about different shapes, squares, rectangles, triangles, circles etc.
- Estimate lengths, widths, heights etc.
- Fractions - half an apple, kit kat, sandwich etc.

