

# Stage 1 – Addition

## + = signs and missing numbers

Children need to know that = sign does not mean answer but should understand it in terms of equality.

$$\begin{array}{l} 2 = 1 + \square \\ 8 = \square + 5 \\ 2 + 4 = 1 + \square \\ 8 + 3 = \square \\ 3 + \square = 9 \end{array}$$

Examples of question starters:

How many more make ...?

What do you need to add to ... to make ...?

How will you make it equal?

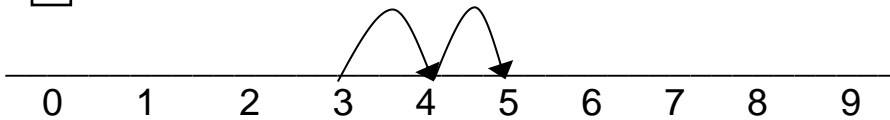
What is the sum of ... and ... ?

## Vocabulary

Number  
More  
Numeral  
Equal to  
Equivalent to  
Many  
Addition  
Add  
Altogether  
Sum  
Total  
How many more  
Same

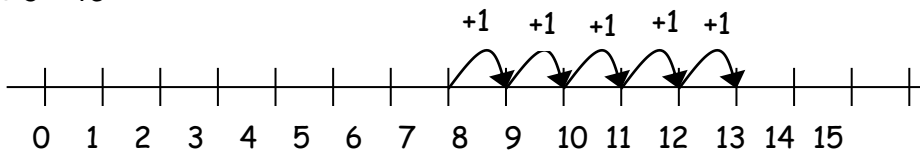
## Number line

$$3 + 2 = \square$$



Children should always start by adding in ones.

$$8 + 5 = 13$$



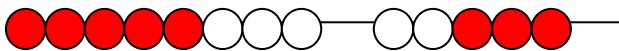
Examples of question starters:

Which number should I put in my head?

How many do I need to add on?

What is the total of ... and ...?

Bridging through ten can be modelled using a bead bar.



$$8 + 5 =$$

Steps to Success:

Show me 8

Now show me 5 next to it.

How many from the 5 will take me to ten?

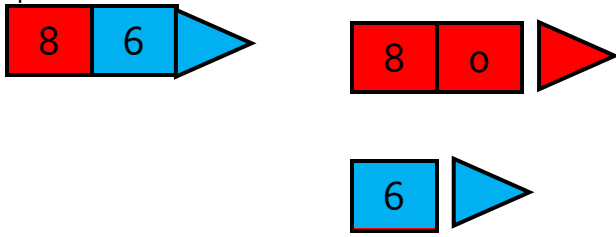
Now count on from 10 until all the beads have been counted.

$$8 + 5 = 13$$

# Stage 2 – Addition

## Partitioning

We can use arrow cards to partition numbers. Each digit in a number has a value. For example, in the number 86, there are 8 tens and 6 ones. To partition 86, you would split the number into 80 + 6.



## Using a Hundred Square

### Do children know...

- that all the numbers with ... ones are in the same columns?
- which way to count when they reach a tens number?
- how to add and subtract one ten?
- how to add and subtract one one?

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

Children should use these to add tens and ones after they have partitioned the number that they are adding.

$$54 + 23 =$$

Steps to Success:

Choose the number you will start with.

Partition the other number.

Find your starting number on the hundred square.

Add your tens.

Add your ones.

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

## Vocabulary

- Number
- More
- Numeral
- Equal to
- Equivalent to
- Many
- Addition
- Add
- Altogether
- Sum
- Total
- How many more
- Same
- Greater than
- Less than
- Place value
- Partition
- Regroup
- Value
- Digit
- Ones
- Tens
- Hundreds
- Bridging through ten
- Tens boundary

## Empty Number Lines

Steps to Success:

$$34 + 23 = 57$$

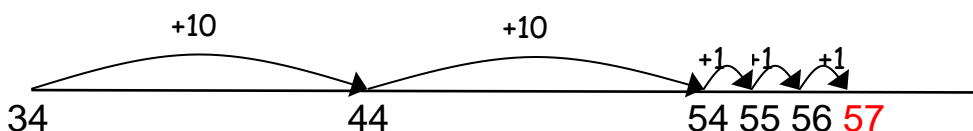
Step 1: Draw a line, write the larger number at the start of the line.

34

Step 2: Partition the number you are adding and begin by adding the tens. Don't forget to note down the numbers you have counted to.

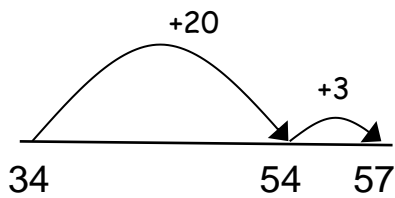


Step 3: Next, add the ones. The answer is the number at the end of the number line.



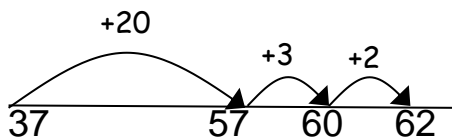
When children are confident with adding in steps of tens and ones they can group the tens together and the ones

together and add in two separate groups.



When the answer requires bridging through ten, children should add the ones to take them to the nearest ten. They should then add the remaining ones.

$$37 + 25 = 52$$



**Examples of questions to support method:**

Which number should I start with?

How many tens do I have?

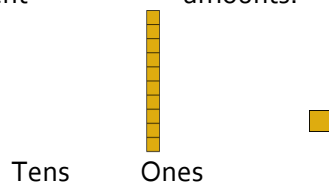
How many ones do I have?

How many ones do I need to add to get to the tens boundary?

How many ones are left to add?

### Using Base 10 in preparation for Column Method

Children should first become familiar with the base 10 equipment. They should be able to use the base 10 to represent different amounts.



It is essential that when using the base 10 they are laid out vertically to represent the column method. Place value charts should be used during these sessions.

### No Regrouping

$$43 + 26 =$$

- Steps to Success:  
 Step 1: Make both numbers using the base 10 equipment.  
 Step 2: Always add the ones first.  
 Step 3: Add the tens.

This should be recorded like this:

**TO**

43

$$\begin{array}{r} + 26 \\ \hline 9 \text{ (3 + 6)} \\ \hline 60 \text{ (40 + 20)} \\ \hline 69 \end{array}$$

T	O

### **Question Examples:**

How many tens do I need to make ...?

How many ones do I need to make ...?

Which column should I start with?

Why do I need to start with the ones column?

## Regrouping

$$48 + 36 =$$

Step 1: Make both numbers using the base 10 equipment.

Step 2: Add the ones first.

There are more than 9 ones in the ones column so we need to regroup ten of them for a ten stick.

T	O

Step 3: The regrouped ten is placed in the tens column underneath the space for the answer.

T	O

Step 4: Add the tens – don't forget to add the regrouped ten too!

Step 5: Record.

$$\begin{array}{r}
 \text{TO} \\
 48 \\
 + 36 \\
 \hline
 14 \text{ (6 + 8)} \\
 70 \text{ (40 + 30)} \\
 \hline
 84
 \end{array}$$

T	O

## Question Examples:

How many tens do I need to make ...?

How many ones do I need to make ...?

Which column should I start with?

Why do I need to start with the ones column?

What happens when there are more than 9 ones?

Why can't I have ... ones in the ones column?

Why do you need to regroup?

