

### Use known facts

What's the same and what's different?

$6 + 4 =$	$564 - 213 =$
$60 + 40 =$	$563 - 212 =$
$66 + 4 =$	$562 - 211 =$
$666 + 4 =$	$554 - 203 =$
$600 + 400 =$	

### Known facts and place value

$282 + 7$   
I know that  $2 + 7 = 9$   
So  $282 + 7 = 289$

### Adjust

$234 + 99$  - add 100 then subtract 1  
 $367 - 39$  - subtract 40 then add 1

### Estimate

$141 + 58$  is approximately  
 $140 + 60$

### Representations to support addition and subtraction

These structures show the relationship between addition and subtraction.

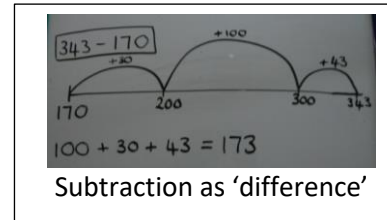
#### Part-Part Whole Model



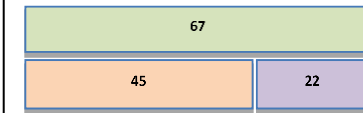
#### Bar Model



#### Number Lines



### Understand the inverse relationship between addition and subtraction.



$45 + 22 = 67$      $22 + 45 = 67$   
 $67 = 45 + \square$      $\square = 22 + 45$   
 $\square = 67 - 45$      $45 = 67 - 22$   
 $67 - 22 = 45$      $67 - \square = 22$

Carl says 'If I add two numbers together I can check my answer by taking them away afterwards. So to check  $123 + 14$ , I can do  $14 - 123$ . 'Is he right? Explain your answer.

### Know pairs of numbers that total 100 and derived subtraction facts

$100 = 74 + \square$      $43 + \square = 100$   
 $100 - \square = 26$      $100 - \square = 57$

### Fluency

Add three numbers to total 247  
 $\underline{\quad} + \underline{\quad} + \underline{\quad} = 247$   
Now find a different three numbers

## Year 3 Addition and Subtraction

### Money Problems

Shivam buys 2 pencils that cost 29p each. How much change will he get from £1?

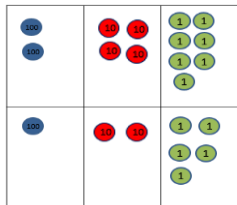
### Use the correct vocabulary

plus, add, total, increase, amount, sum, addition, minus, subtract, take away, less, difference, decrease, partition, round, calculate, inverse, operation, exchange

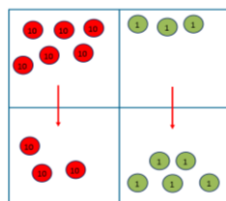
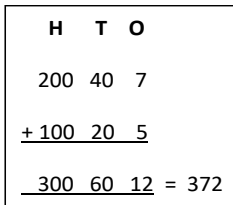
### Problems with more than one solution

3 monkeys ate 22 bananas. Each of them ate a different number. How many bananas did they each eat? Find as many solutions as you can.

We can use equipment to find the total of 2 numbers. This supports the conceptual understanding before moving to formal methods.



leading to



$$\begin{array}{r} 90 \quad 8 \\ - 30 \quad 5 \\ \hline 60 \quad 3 \end{array}$$

Equipment can also support subtraction.

### Investigate - True or False?

2 odd numbers add up to make an even number.  
3 odd numbers add up to make an even number.

### Investigate

How many different rectangles can you draw with a perimeter of 20cm?