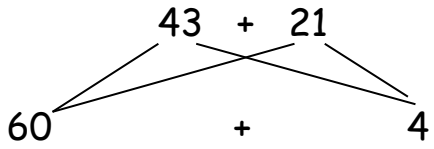
Maths strategies we are currently using in school

Addition—Partitioning Web

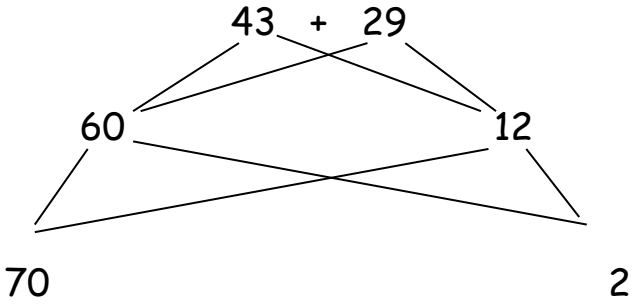
1. Units equal fewer than 10



The tens join to the tens and units to the units.

The calculation is rearranged so that we have a multiple of ten (a number ending in 0) and a single digit unit, which is far easier to add.

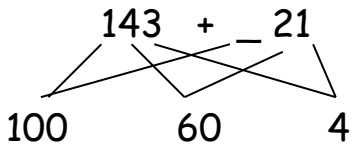
2. Units equal more than 10



Here the units equal a 2 digit number. We cannot have 12 units...the answer is not 6012!

We simply need to repeat the process so that we have the multiple of ten and the single unit.

3. Three digits (or more!) adding to two digits



We just need to remember that there are no hundreds in 21, so imagine an empty space there (shown by _ in this example).

So 100 plus no hundreds remains 100.

Addition—sticks and dots

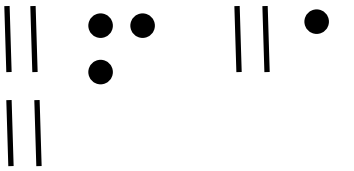
| represents tens

● represents units

1. Units equal fewer than 10:

43 + 21 = 64

T U + T U



(count 6 sticks and 5 dots)

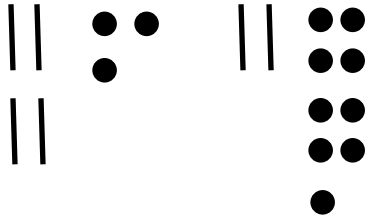
Draw your calculation as a pictorial representation (the sticks and dots)

Then simply count how many tens you have and how many units.

2. Units equal more than 10

43 + 29

T U + T U

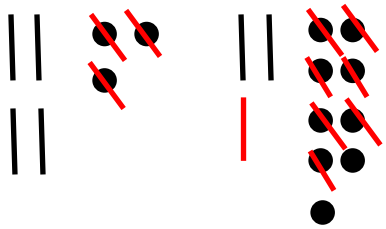


Draw your calculation as a pictorial representation (the sticks and dots)

This time you need to swap the units for a ten because you cannot have 12 units. Cross out 10 units and draw a stick instead. Then count the sticks and dots like you did before.

43 + 29 =72

T U + T U



(Count 7 sticks and 2 dots)

Subtraction—the empty number line

The numbers in any calculation connect in more than one way. 8 + 2 = 10, 10 = 2 + 8, 10 –2 = 8 and 10 = 8-2.

We teach this concept as 'part, part, whole'. There will always be a total and the pieces which make it. In the examples above, the 10 is always the whole and the 8 and 2 are its parts.

2	8
10	

We encourage children to investigate which of these they are trying to find in a maths question.

73	54
?	

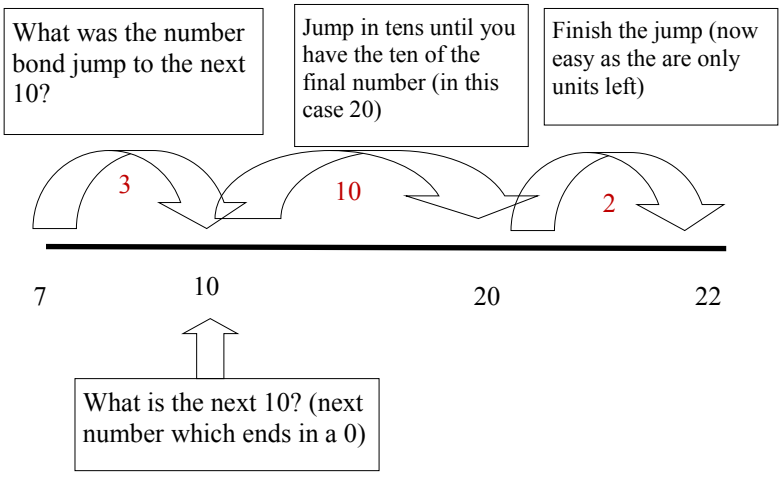
In 73 + 54 = ? We know both parts and are trying to find the whole

73	?
127	

In 127 - 73 we are trying to find is left when one part is taken, and so are looking for the other part. 127 is the whole.

Once we understand this relationship between the trio of numbers, we can interpret the question in different ways: What is 127 take away 73? What do I need to take from 127 to land on 73, and most interestingly, what do I need to add to 73 to get 127?

This understanding allows us to use adding to 'find the difference'.
Many children find counting backwards difficult so this allows them to use adding skills to solve subtraction questions.
For 22— 7 = ?
We can phrase is as 7 + ? = 22 and draw the following numberline.



You need to know your number bonds to 10 for this. Here they are:

0 + 10	3 + 7
1 + 9	4 + 6
2 + 8	5 + 5

Add the jumps together:
10 + 3 + 2 = 15