

Miss Lawton's Pasta Maths: Place Value Year 2

It is important, when exploring addition in early mathematics, to start with concrete objects. Your child will use the skills learnt last week, about place value, to help them with this.

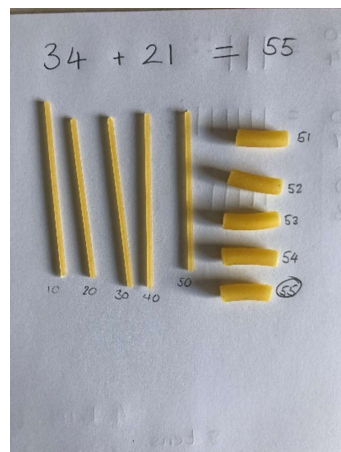
We will be using pasta (or similar) to represent tens and ones.



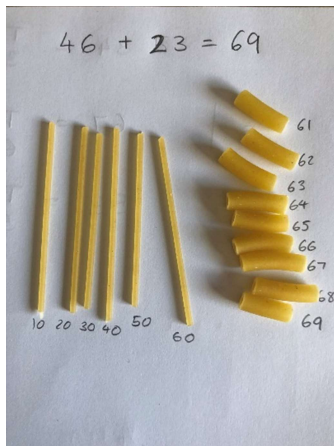
Start by making both numbers using place value knowledge of tens and ones.



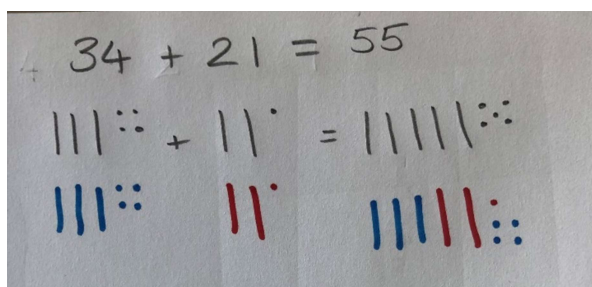
Combine the tens then combine the ones.



Encourage your child to count the tens and ones aloud to find the answer and to **check**.

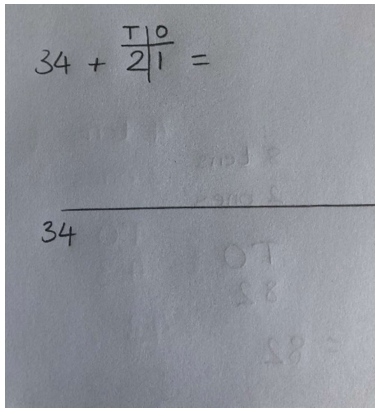


Once your child is secure in adding using concrete objects, they can move on to drawing (pictorial representations) to support them with adding. In Year 2 we use two different methods. First we draw the tens and ones as we did last week.

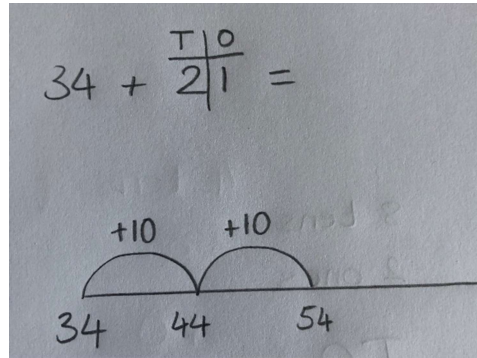


Using a different colour for each of the numbers in the addition number sentence will help to ensure the correct numbers have been drawn. This will also help to make sure both numbers are represented in the total.

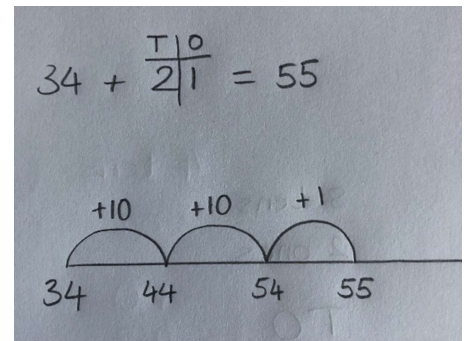
We also use number lines, like so:



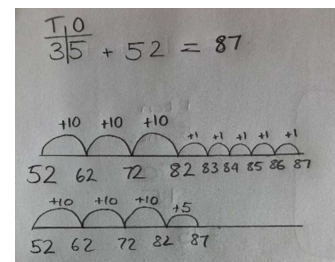
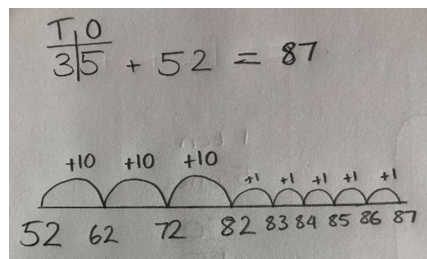
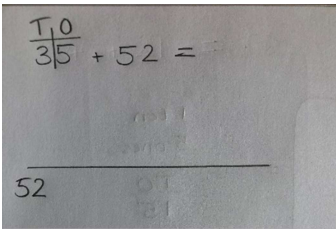
Start by drawing a straight line and writing the largest number at the far left end of the line.



Work out how many tens you need to add. Here the number is 21 so there are 2 tens to add. Add them one at a time, counting on 10 each time.



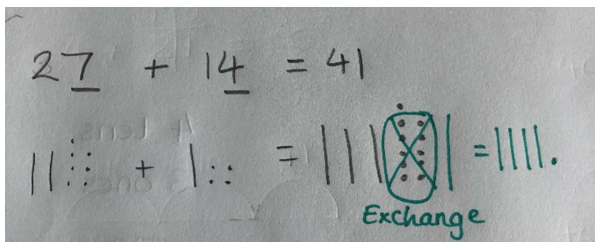
Now work out how many ones you need. There is 1 one in 21 so we add 1 to reach the total.



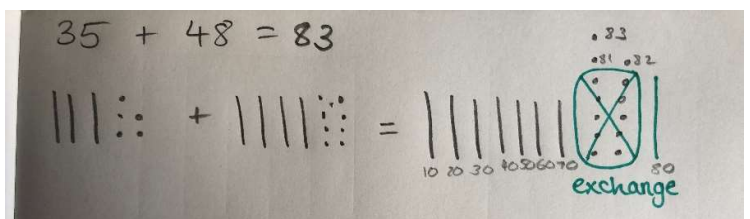
If we need to add more than 1 one we can either do it in jumps of 1 or a big jump.

These examples are all for number sentences where no exchange is required i.e. the ones digits will not add to make more than 10. However, if the ones digits do add to make more than 10 (e.g. $15 + 17 =$) we will need to **exchange** or **bridge** the ten.

Using the same method of drawing the tens and ones then combining them allows you to see there are more than 10 ones.

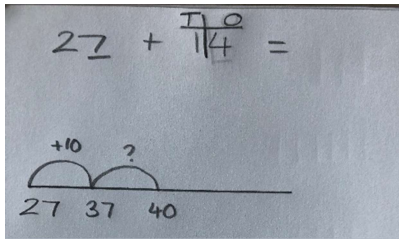


Here we have 3 tens and 11 ones so we **exchange** 10 of the ones for 1 ten and end up with 4 tens and 1 one so our answer is 41.

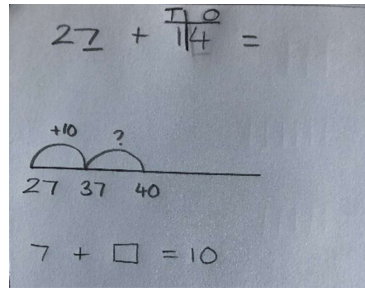


Here we have 7 tens and 13 ones so we **exchange** 10 of the ones for 1 ten and end up with 8 tens and 3 ones so our answer is 83.

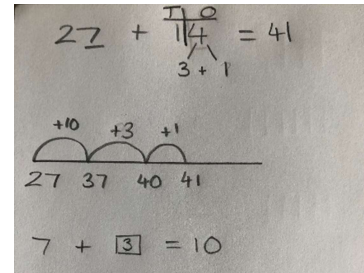
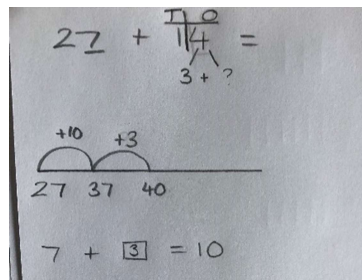
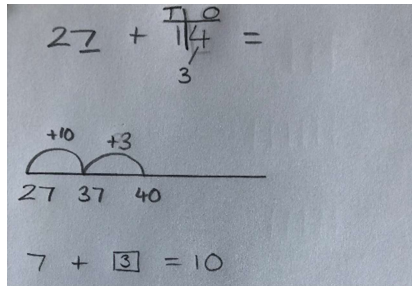
We can also use the number line method and **bridging** to solve the calculation.



Start by adding 10s to the largest number.

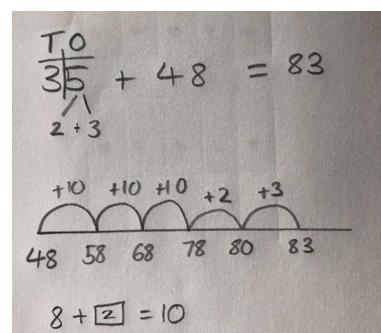
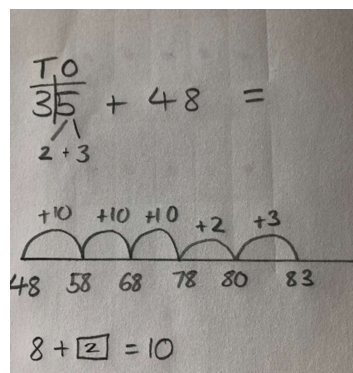
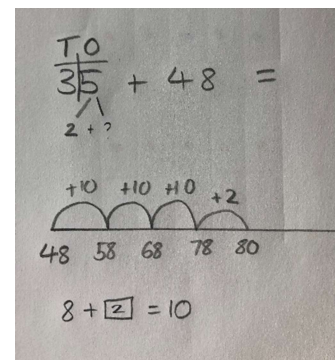
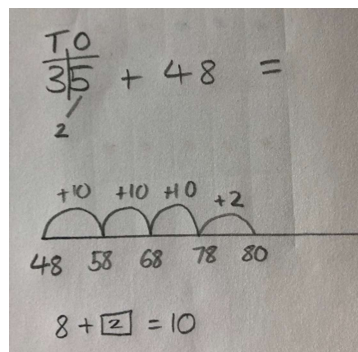
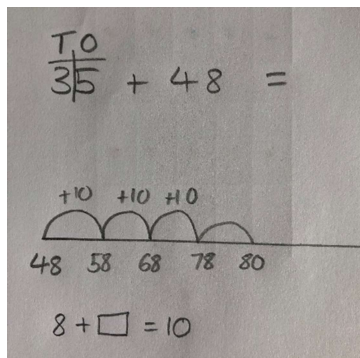


Now we need to add the ones and **bridge** 10. We need to use our number bonds to find out what we need to add to 37 to reach 40. Our number bonds to 10 will help with this.



We need to add 3 to reach 40. Now we need to work out how many ones are left to add on.

4 - 3 = 1 so we need to add 1 more one.



We need to add 2 to reach 80. Now we need to work out how many ones are left to add on.

5 - 2 = 3 so we need to add 3 more one.