Addition

Without using a pencil and paper method, work the answers out to these three number addition problems:

1. $13 + 8 + 18$ **2.** $5 + 15 + 12$ **3.** $7 + 11 + 13$ **4.** $18 + 7 + 13$

5. $12 + 8 + 14$ **6.** $15 + 13 + 3$ **7.** $13 + 5 + 12$ **8.** $18 + 2 + 16$

9. $16 + 14 + 6$ **10.** $5 + 13 + 18$ **11.** $12 + 4 + 16$ **12.** $15 + 9 + 18$

Remember: 37 + 84 is the same as 84 + 37.
So we can write:

$84 + 37 = 37 + 84$

They both come to 121.

In the same way:

$47 + 39 = 39 + 47$

Fill in the gap in the sums below:

Knowing this helps when adding in your head! It does not matter what order you do it in.

13. $524 + 136 = 136 + \boxed{}$ **14.** $294 + 176 = \boxed{} + 294$

15. $622 + 220 = \boxed{} + 622$ **16.** $359 + 168 = 168 + \boxed{}$

1. 39   **2.** 32   **3.** 31   **4.** 38   **5.** 34   **6.** 31   **7.** 30   **8.** 36   **9.** 36   **10.** 36
11. 32   **12.** 42   **13.** 524   **14.** 176   **15.** 220   **16.** 359

Concepts

Children will continue to meet a variety of vocabulary associated with addition. These include:

More, add, sum, total, altogether, increase, equals, sign, inverse.

These words should be used as often as possible, especially when speaking about what to do, how to do it, etc.

Developing on previous work, they need to understand that
716 + 524 is the same as **524 + 716**

(*this is called the commutative law, but children do not need to know the word!)*

and that:

   (25 + 14) + 71 can be worked out in several different orders
 eg **25 + (14 + 71)** will give the same answer as the above order.
(the associative law)

It is important that children have real confidence with adding any two digit numbers (eg 42 and 58) and that they have a variety of strategies or approaches, depending on the numbers involved - sometimes it is easier to start with the tens, but not always. Constant practice, often not on paper, of these tens and units additions will make larger mental addition much easier.

It is expected that children will usually use mental methods to add two digit numbers - NOT write the sum down.

Children are also expected to understand that subtraction is the opposite of addition and that it can be used to check addition questions.

Where calculators are used the child should make an estimate of the answer first.