

YOU & MATHS Sylvia is studying for the local maths games at her school, so she tries the following problem from the practice test: «Find two consecutive natural numbers whose sum is equal to 31.» What solution will she find?

Sylvia's problem tells us that the two numbers we are looking for are consecutive, that is, if we call the first number a , the second number will be $a + 1$. For example, the following pairs are consecutive numbers: 3 and 4; 9 and 10; 101 and 102.

To solve the problem, we have to «guess» the answer and then test it. For instance, we can try to see if 16 and 17 would be two suitable consecutive numbers. Their sum is:

$$16 + 17 = 33,$$

but that's greater than 31. We can try a different pair of numbers, say, 14 and 15:

$$14 + 15 = 29,$$

but that's less than 31. Let's see what happens with 15 and 16:

$$15 + 16 = 31,$$

which is the desired sum. So the solution to this problem is 15 and 16.