
Analysis of the analysis of the solution of the task apples

Statement, solutions, analysis, analysis of the analysis: Dimitar Shapatov; Idea: Kiril Zashev; Solution: Boris Bobev

Here the main observation is that the fruits represent the bits of the number (apple - 1, pear - 0).

Subtask 1

From the example we see that we can simply find the XOR of the two numbers.

Subtask 2

Let us look at the example given in the analysis. We can notice that a black line means addition, a green one means XOR, and a red one AND.

So the algorithm reduces to the following: while the first number is not zero, the first number becomes the AND of the two current numbers, shifted one bit to the left, and the second number becomes the XOR of the two current numbers (in the solutions it is implemented the other way around, both ways work). At the end the answer is in the second number. The implementation of this gives full points, and besides that one also sees that the original statement of the task is the sum of two numbers without using the operator + and similar functions.