Input Specification

The input consists of several instances; input of each instance consists of single line (whose length is at most 1000000 characters). This line contains a nonempty list of integers n_1 , n_2 , ... , n_k ($1 \leq n_i \leq 10^9$), separated by single spaces. The numbers represent the sizes of the chocolate bars.

Output Specification

For each input instance, output a single line containing a single integer n - the number of pieces of chocolate Alice can eat assuming that both Alice and Bob play the game using the optimal strategy.

Sample Input

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3 2 1
```

Output for Sample Input

```
3
```

Comment: For example, the game may proceed as follows: Alice eats one piece of chocolate. Bob splits the bar that consists of two pieces. Alice eats one of the created pieces, and Bob the other one. Alice splits the last remaining piece of chocolate to bars with 1 and 2 pieces. Bob eats one piece. Alice splits the last chocolate bar, and each of the players eats one of the created pieces.





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Reversed number is a number written in arabic numerals but the order of digits is reversed. The first digit becomes last and vice versa. For example, if the original number is 1245, the reversed one becomes 5421. Note that all the leading zeros are omitted. That means if the number ends with a zero, the zero is lost by reversing (e.g. 1200, gives 21). Also note that the reversed number never has any trailing zeros.

We need to calculate with reversed numbers. Your task is to add two reversed numbers and output their reversed sum. Of course, the result is not unique, because any particular number is a reversed form of several numbers (e.g., 21 could be 12, 120 or 1200 before reversing). Thus, we must assume that no zeros were lost by reversing (e.g., assume that the original number was 12).

Input Specification

The input consists of *N* cases. The first line of the input contains only positive integer *N*. Then follow the cases. Each case consists of exactly one line with two positive integers separated by space. These are the reversed numbers you are to add.