

Problem C. XOR Mixup

Time limit 1000 ms

Mem limit 262144 kB

There is an array a with $n - 1$ integers. Let x be the [bitwise XOR](#) of all elements of the array. The number x is added to the end of the array a (now it has length n), and then the elements are shuffled.

You are given the newly formed array a . What is x ? If there are multiple possible values of x , you can output any of them.

Input

The input consists of multiple test cases. The first line contains an integer t ($1 \leq t \leq 1000$) — the number of test cases. The description of the test cases follows.

The first line of each test case contains an integer n ($2 \leq n \leq 100$) — the number of integers in the resulting array a .

The second line of each test case contains n integers a_1, a_2, \dots, a_n ($0 \leq a_i \leq 127$) — the elements of the newly formed array a .

Additional constraint on the input: the array a is made by the process described in the statement; that is, some value of x exists.

Output

For each test case, output a single integer — the value of x , as described in the statement. If there are multiple possible values of x , output any of them.

Sample 1

Input	Output
4	3
4	7
4 3 2 5	6
5	0
6 1 10 7 10	
6	
6 6 6 6 6 6	
3	
100 100 0	

Note

In the first test case, one possible array a is $a = [2, 5, 4]$. Then $x = 2 \oplus 5 \oplus 4 = 3$ (\oplus denotes the bitwise XOR), so the new array is $[2, 5, 4, 3]$. Afterwards, the array is shuffled to form $[4, 3, 2, 5]$.

In the second test case, one possible array a is $a = [1, 10, 6, 10]$. Then $x = 1 \oplus 10 \oplus 6 \oplus 10 = 7$, so the new array is $[1, 10, 6, 10, 7]$. Afterwards, the array is shuffled to form $[6, 1, 10, 7, 10]$.

In the third test case, all elements of the array are equal to 6, so $x = 6$.

In the fourth test case, one possible array a is $a = [100, 100]$. Then $x = 100 \oplus 100 = 0$, so the new array is $[100, 100, 0]$. Afterwards, the array is shuffled to form $[100, 100, 0]$. (Note that after the shuffle, the array can remain the same.)