Bear and Extra Number

Problem Code: **EXTRAN**

All submissions for this problem are available.

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Read problems statements in Mandarin Chinese, Russian and Vietnamese as well.

A sequence is called nice if its elements are distinct consecutive numbers, possibly in changed order. For example, both (6, 7, 8) and (15, 13, 16, 14) are nice, while (4, 6), (4, 5, 5, 6) and (15, 16, 15) are not.

Limak has a nice sequence. While he was in school today, someone inserted one extra number in the sequence. Limak has just returned and realized that the sequence isn't nice anymore! He wants to remove the inserted number and make his sequence nice again. Can you help him to find the number that he should remove?

Formally, in each test case you are given a sequence of **N** numbers A_1, A_2, ..., A_N. Your task is to find the value **X**, such that removing one occurrence of **X** would make the sequence nice. It's guaranteed that exactly one solution exists.

Input

The first line of the input contains an integer **T** denoting the number of test cases. The description of **T** test cases follows.

The first line of each test case contains an integer **N** denoting the size of the new sequence.

The second line of a test case contains **N** integers A_1, A_2, ..., A_N denoting the new sequence.

Output

For each test case, output a single line containing one integer — a number that should be removed from the given sequence.

Constraints

- The given sequence isn't nice.
- There is exactly one solution.

Subtasks

- Subtask #1 (40 points) **3** ≤ **N** ≤ **1000**
- Subtask #2 (60 points) Original constraints

Example

```
Input:
4
5
45 42 46 48 47
3
7 7 8
8
12 156 157 158 159 160 161 162
4
8 7 10 6

Output:
42
7
12
10
```

Explanation

Test case 1. The sequence **A** is (45, 42, 46, 48, 47). We should remove the number 42, and the remaining numbers will form a nice sequence (45, 46, 48, 47).

Test case 2. We should remove one of two 7's to get the sequence (7, 8), which is nice.

Author:	5★ errichto
Tester:	6★ xcwgf666
Editorial:	https://discuss.codechef.com/problems/EXTRAN
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Time Limit:	2 secs
Source Limit:	50000 Bytes
Languages:	C, CPP14, JAVA, PYTH, PYTH 3.5, PYPY, CS2, PAS fpc, PAS gpc, RUBY, PHP, GO, NODEJS, HASK, SCALA, D, PERL, FORT, WSPC, ADA, CAML, ICK, BF, ASM, CLPS, PRLG, ICON, SCM qobi, PIKE, ST, NICE, LUA, BASH, NEM, LISP sbcl, LISP clisp, SCM guile, JS, ERL, TCL, PERL6, TEXT, SCM chicken, CLOJ, FS

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