

Possible Results

Description

Given an array of integers a_1, a_2, \dots, a_n , you need to manipulate i -th element by *either* adding a_i to a_{i-1} and subtracting a_i from a_{i+1} *or* adding a_i to a_{i+1} and subtracting a_i from a_{i-1} for every $2 \leq i \leq n - 1$. You are asked to find the number of possible arrays resulted from the above operations.

For example, if you have the array $[1, 1, 1, 1]$, there are three possible resulting arrays:

1. $[1, 1, 1, 1] \rightarrow [0, 1, 2, 1] \rightarrow [0, -1, 2, 3]$
2. $[1, 1, 1, 1] \rightarrow [0, 1, 2, 1] \rightarrow [0, 3, 2, -1]$
3. $[1, 1, 1, 1] \rightarrow [2, 1, 0, 1] \rightarrow [2, 1, 0, 1]$

Since the number of possible results could be huge, you only need to print it modulo 998244353.

Input

Each test contains multiple test cases. The first line contains the number of test cases T . The description of the test cases follows.

The first line of each test case contains one integer n .

The second line contains n integers a_1, a_2, \dots, a_n .

Output

For each test case, print an integer indicating the possible number of resulting arrays.

Sample Input/Output

input

```
4
4
1 1 1 1
5
1 2 3 4 5
4
6 3 8 2
6
1 2 3 3 2 1
```

output

```
3
8
4
14
```

Constraints and Note

$$1 \leq T \leq 10, 3 \leq n \leq 350, a_i \in [-350, 350].$$