Problem A. Expression

Input file:	*standard input*
Output file:	*standard output*
Time limit:	1 second
Memory limit:	64 mebibytes

Teacher Mai has n numbers $a_1, a_2, \ldots, a_n$ and $n-1$ operators (each operator is one of '+', '-' or '*') $op_1, op_2, \ldots, op_{n-1}$, which are arranged in the form $a_1\ op_1\ a_2\ op_2\ a_3 \ldots a_n$.

He wants to erase numbers one by one. In i-th round, there are $n+1-i$ numbers remained. He can erase two adjacent numbers and the operator between them, and then put a new number (derived from this one operation) in this position. After $n-1$ rounds, there is the only one number remained. The result of this sequence of operations is the last number remained.

He wants to know the sum of results of all different sequences of operations. Two sequences of operations are considered different if and only if in one round he chooses different numbers.

For example, a possible sequence of operations for $1 + 4 * 6 - 8 * 3$ is $1+4*6-8*3 \to 1+4*(-2)*3 \to 1+(-8)*3 \to (-7)*3 \to -21$.

Input

First line of the input contains one integer T ($1 \le T \le 20$) — number of the test cases. Then T test cases follow.

For each test case, the first line contains one number n ($2 \le n \le 100$).

The second line contains n integers $a_1, a_2, \ldots, a_n$ ($0 \le a_i \le 10^9$).

The third line contains a string with length $n-1$ consisting of '+', '-' and '*', which represents the operator sequence.

Output

For each test case print the answer modulo $10^9 + 7$.

Example

standard input	standard output
2 3 3 2 1 -+ 5 1 4 6 8 3 +*-*	2 999999689