Decrease and Swap

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	1024 megabytes

David Liu has n boxes in a row, denote box i to be the i-th box from the left, indexed from 1 to n. Initially every box is empty.

Frank has a binary string s of length n. He will put 10^{18} stones in box i for each i such that $s_i = \mathsf{1}$, and he will put 0 stones in box i for each i such that $s_i = \mathsf{0}$.

After that, David Liu will try to remove every stone in all the boxes. However, he can't just take them out, and he can only achieve this by doing the following operation zero or more times:

- Choose an integer i such that $1 \leq i \leq n-2$ and there is at least one stone in box i. Then he must take one stone from box i **and** swap the contents of box $i+1$ and box $i+2$.

Since there are a lot of stones, before trying himself, David Liu wants to ask you if it is possible to remove every stone in all the boxes.

Recall that a binary string is a string which only contains `0` and `1`.

Input

The first line contains an integer T ($1 \leq T \leq 10^6$), representing the number of test cases.

There are two lines of input for each test case.

The first line of each test case contains an integer n ($3 \leq n \leq 10^6$), denoting the number of boxes.

The second line of each test case contains a binary string of length n, denoting whether Frank will put stones in each box.

It is guaranteed that the sum of n across all test cases does not exceed 10^6.

Output

For each test case, output `Yes` if David Liu can remove all stones, output `No` otherwise.

Example

standard input	standard output
3 3 101 4 1010 5 00000	No Yes Yes