

James the Android is a galaxy-famous detective. In his free time he likes to think about strings containing zeros and ones.

Once he thought about a string of length n consisting of zeroes and ones.

Consider the following operation: we choose any two adjacent positions in the string, and if one of them contains 0, and the other contains 1, then we are allowed to remove these two digits from the string, obtaining a string of length $n - 2$ as a result.

Now James thinks about what is the minimum length of the string that can remain after applying the described operation several times (possibly, zero)? Help him to calculate this number.

Input

First line of the input contains a single integer n ($1 \leq n \leq 200000$), the length of the string that James has.

The second line contains the string of length n consisting only from zeros and ones.

Output

The minimum length of the string that may remain after applying the described operations several times.

Sample Input

```
4
1100
```

Sample Output

```
0
```