

Problem C - Repetition

Again the DNA sequences: DNA sequencing determines the order of the four chemical building blocks - called “bases” - that make up the DNA molecule. In the DNA double helix, the four chemical bases always bond with the same partner to form “base pairs”. Adenine (*A*) always pairs with thymine (*T*); cytosine (*C*) always pairs with guanine (*G*).

Given one side of a DNA double helix, scientists want to know the length of the longest repeated sub sequence. Can you help them?

Input

The input consists out of:

- One line with $1 \leq l \leq 200.000$ for the length of the string
- One line with a string of length l of the alphabet $\{C, T, G, A\}$

Output

Length of the longest string that appears multiple times in the given string. If there is no such string, output zero.

Sample Input 1	Sample Output 1
10 CTACTAGCTA	3
Sample Input 2	Sample Output 2
4 GATC	0