Problem D. Doublindromes

Input file:	*standard input*
Output file:	*standard output*
Time limit:	3 seconds
Memory limit:	512 mebibytes

A string a is a *doublindrome* if it is a palindrome and it can be represented as concatenation of two non-empty palindromes b and c.

Given a string s composed of lowercase English letters, you must find the number of distinct substrings in s which are doublindromes of length k or more. Two substrings are considered distinct if they differ as strings.

Input

The first line of the input contains one integer k ($2 \le k \le 10^4$). The second line contains the string s consisting of lowercase English letters ($k \le |s| \le 10^4$).

Output

Print one integer: the answer to the problem.

Example

standard input	standard output
3 xyxxyxxyx	2