**XVI INTERNATIONAL ADVANCED TOURNAMENT IN INFORMATICS
SHUMEN 2025**

Task C01. PALIN

⏳ 0.3 сек.   💾 24 MB

Author: Emil Kelevedjiev

Given a string of n lowercase Latin letters, write a program **palin** that finds the minimum number of palindromes such that the given string can be represented as a concatenation of these palindromes.

Input

The first line of the standard input contains the given string.

Output

On a single line of the standard output, your program should output an integer equal to the minimum count you are looking for.

Constraints

- $0 < n \le 10\,000$
- For tests that provide 20 points, the value of n is less than 12 and the given string is composed of some of the first 5 lowercase letters of the Latin alphabet.
- For tests that provide 60 points, the value of n is less than 1001 and the given string is composed of some of the first 9 lowercase letters of the Latin alphabet.

Example

Input	Output	Explanation
bccbababbba	4	The string is a concatenation of palindromes bccb, aba, bbb, and a.