



TRAINING COMPETITION OF THE BULGARIAN EXTENDED NATIONAL TEAM

Bankya, 18 June 2025

group G

Problem GT1. Rank

 0.1 sec.  32 MB

You are given a string s , consisting of lower-case English letters. Create a 1-indexed sequence of all permutation of the string s , sorted in lexicographical order. Find the index of the given string in this sequence of strings.

Input

The first line of the standard input consists of only the string s .

Output

On the only line of the standard output print the index of the string in the lexicographical ordering.

Constraints

- The length of the string is at most 20.
- In tests awarding at least 57% of the points there are no repeating letters.

Examples

Input	Output	Explanation
daad	4	The constructed sequence is: aadd, adad, adda, daad, dada, ddaa. The string s appears fourth in the sequence.
bac	3	The constructed sequence is: abc, acb, bac, bca, cab, cba. The string s appears third in the sequence.