

## Problem I. Incomparable Pairs

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

You are given a string  $s = s_1s_2\dots s_n$ . Consider an unordered pair of its substrings  $\{a, b\}$ . Let us call such pair *incomparable* if neither  $a$  is a substring of  $b$  nor  $b$  is a substring of  $a$ . You have to compute the number of incomparable pairs of substrings of  $s$ .

### Input

The first line of input contains a single string  $s$  consisting of lowercase English letters ( $1 \leq |s| \leq 10^5$ ).

### Output

Output a single integer which is the answer to the problem.

### Examples

standard input	standard output
abba	8
abacaba	64