F. Card Substrings

time limit per test: 2 seconds
memory limit per test: 512 megabytes

Given a string s and m cards with letters. Your task is to count the number of substrings of the string s that can be made from these cards.

For example, if s = «aaab», and there are three cards with the letters «a», «a», and «b», then you can make three substrings «a», substring «b», two substrings «aa», substrings «ab» and «aab». And you can not make the substrings «aaa» and «aaab», since there are only two cards with the letter «a».

Input

The first line of the input contains two integers n and m ($1 \le n, m \le 10^5$), the length of the string and the number of cards.

The second line of the input contains a string s of length n.

The third line of the input contains a string of length m that specifies the letters written on the cards.

Both strings consist of only lowercase letters of the English alphabet.

Output

Print one integer, the number of substrings in s that can be made from these cards.

Examples

input	Copy
4 3 aaab aba	

output	Copy
8	

input	Copy
7 3 abacaba abc	

output	Copy
15	