

C Characterithmetic

Time limit: 3s

While solving one problem after the other in your favourite programming contest (hopefully, the one you are at right now!), you are suddenly faced with an Alternative Arithmetic Problem for the Jury's Entertainment. In this problem, you are not calculating with numbers, but with strings.

For some arbitrary string t and integer k , we define $t \odot k$ (t times k) to be the string t concatenated k times. If t can be written as $t' \odot k$ for some other string t' , we say that k is a *divisor* of t . For example, the divisors of the string "abababab" are 1, 2, and 4, because this string can be written as either "abababab" \odot 1, or "abab" \odot 2, or "ab" \odot 4. Finally, we say that a string is *indivisible* if its only divisor is 1: for example, the string "abc" is indivisible.



Trippi Troppi trying to change a string's largest divisor.
Image generated using Canva AI

You are given a string s of length n , that contains only the characters 'a', 'b', and 'c'. For each divisor d of n , you need to change some of the characters (to either 'a', 'b', or 'c'), so that the largest *divisor* of s becomes d . Find the minimum number of characters that need to be changed in order to make this true.

As an example, consider the first sample input. There are three answers, one for each of the divisors of 4:

- To make the largest divisor of "acac" be 1, we need to make sure that 2 is not a divisor. We can change any character to make the string *indivisible*, e.g. "bcac".
- The largest divisor of "acac" is already 2, so no characters need to change and the answer is 0.
- To make the largest divisor 4, we need to make all characters equal. To do this, 2 characters need to be changed, yielding either "aaaa" or "cccc".

Input

The input consists of:

- One line with an integer n ($2 \leq n \leq 10^5$), the length of your string.
- One line with a string s of length n , consisting only of characters 'a', 'b', and 'c'.

Output

For each divisor d of n , in increasing order, output the minimum number of characters that you need to change to make the largest divisor of s equal to d .

Sample Input 1

4
acac

Sample Output 1

1 0 2

Sample Input 2

6
abccba

Sample Output 2

0 2 4 4