B. Text Document Analysis

time limit per test: 1 second
memory limit per test: 256 megabytes

Modern text editors usually show some information regarding the document being edited. For example, the number of words, the number of pages, or the number of characters.

In this problem you should implement the similar functionality.

You are given a string which only consists of:

- uppercase and lowercase English letters,
- underscore symbols (they are used as separators),
- parentheses (both opening and closing).

It is guaranteed that each opening parenthesis has a succeeding closing parenthesis. Similarly, each closing parentheses has a preceding opening parentheses matching it. For each pair of matching parentheses there are no other parenthesis between them. In other words, each parenthesis in the string belongs to a matching "opening-closing" pair, and such pairs can't be nested.

For example, the following string is valid: "`_Hello_Vasya(and_Petya)__bye_(and_OK)`".

Word is a maximal sequence of consecutive letters, i.e. such sequence that the first character to the left and the first character to the right of it is an underscore, a parenthesis, or it just does not exist. For example, the string above consists of seven words: "`Hello`", "`Vasya`", "`and`", "`Petya`", "`bye`", "`and`" and "`OK`". Write a program that finds:

- the length of the longest word outside the parentheses (print `0`, if there is no word outside the parentheses),
- the number of words inside the parentheses (print `0`, if there is no word inside the parentheses).

Input

The first line of the input contains a single integer n ($1 \le n \le 255$) — the length of the given string. The second line contains the string consisting of only lowercase and uppercase English letters, parentheses and underscore symbols.

Output

Print two space-separated integers:

- the length of the longest word outside the parentheses (print `0`, if there is no word outside the parentheses),
- the number of words inside the parentheses (print `0`, if there is no word inside the parentheses).

Examples

input Copy

```
37
_Hello_Vasya(and_Petya)__bye_(and_OK)
```

output Copy

```
5 4
```

input Copy

```
37
_a_(_b___c)__de_f(g_)__h__i(j_k_l)m__
```

output Copy

```
2 6
```

input Copy

```
27
(LoooonG)__shOrt__(LoooonG)
```

output Copy

```
5 2
```


→ Last submissions

Submission	Time	Verdict
248285599	Feb/26/2024 00:48	Accepted
248285446	Feb/26/2024 00:45	Wrong answer on test 6
248285412	Feb/26/2024 00:44	Wrong answer on test 9
248284916	Feb/26/2024 00:35	Wrong answer on test 9
248284863	Feb/26/2024 00:35	Wrong answer on test 1
248284750	Feb/26/2024 00:33	Wrong answer on test 9
248284685	Feb/26/2024 00:31	Wrong answer on test 6
248284344	Feb/26/2024 00:26	Wrong answer on test 2

→ Problem tags

expression parsing | implementation | strings | *1100

No tag edit access

→ Contest materials

- Announcement
- Tutorial

input	Copy
5 (___)	

output	Copy
0 0	

Note

In the first sample, the words "Hello", "Vasya" and "bye" are outside any of the parentheses, and the words "and", "Petya", "and" and "OK" are inside. Note, that the word "and" is given twice and you should count it twice in the answer.