Problem 3 – Weird Strings

We are given a sequence of characters **S**. This sequence holds **junk** characters. **Junk** characters are:
 "\", "/", "(", ")", "|" and all **empty spaces** (1 or more)**.** Your first task is to remove all **junk** characters. Then you have to find all words in the resulted string. Word is considered any sequence of letters (**a-z A-Z**). Each of those words has **weight**. Each letter weight corresponds to its value in the English alphabet (**a = 1, b=2…z=26**). Small and capital letters have the same weight. Your task is to find the **sum** of every **2 consecutive** words and print on the console the **2 words** with **biggest** sum.

Example:

S = (a)bc||de|f: (Hello)3 '' |(soap|Box)rAc|e=(somnambulSkiGiganti)

After removing all junk characters we have the string:

abcdef:Hello3''soapBoxrAce=somnambulSkiGiganti

There are **4 words** in the new string: "**abcdef**", "**Hello**", "**soapBoxrAce**" and "**somnambulSkiGiganti**" with weights: **21, 52, 119** and **216.** The sums of every 2 consecutive words are as follows: **sum1= 21+52 = 73, sum2 = 52+119, sum3 = 119+216.** The sum of the last 2 words is the biggest, so you should print "**soapBoxrAce**" and "**somnambulSkiGiganti**" on the console.

Input

The input data should be read from the console. At the only input line, you have **sequence of** ASCII characters.

The input data will always be valid and in the format described. There is no need to check it explicitly.

Output

The output should consist of **2 lines**. Print the **2 consecutive** words that have the **biggest sum** of their **weights**. Print them on **separate** lines. In case there are 2 couples with **same weight** print the **right most** of them.

Constraints

- The **count** of the words will be in the range [2..1000].
- The input line will consist of visible ASCII characters.
- Time limit: 0.3 sec. Memory limit: 16 MB.

Examples

Input	Output
(a)bc||de|f: (Hello)3 '' |(soap|Box)rAc|e=(somnambulSkiGiganti)	soapBoxrAce somnambulSkiGiganti
(ooopa)+(opa)..(opa)+(opa)|nqkoiMi (*&sa NaHaKa""vStopa	opanqkoiMi saNaHaKa
#|toDo|#(toDo)...#todo|todo()()todo|todo|!to(d)o--todooooooo	todotodotodotodo todo