

Problem 3 – Valid Usernames

You are part of the back-end development team of the next Facebook. You are given **a line of usernames**, between one of the following symbols: **space**, **"/"**, **"\"**, **"(""**, **")"**. First you have to export all **valid** usernames. A valid username **starts with a letter** and can contain **only letters, digits and "_"**. It cannot be **less than 3 or more than 25 symbols** long. Your task is to **sum** the length of **every 2 consecutive valid** usernames and print on the console the 2 valid usernames with **biggest sum** of their **lengths**, each on a separate line.

Input

The input comes from the console. One line will hold all the data. It will hold **usernames**, divided by the symbols: **space**, **"/"**, **"\"**, **"(""**, **")"**.

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

Output

Print at the console the 2 **consecutive valid usernames** with the **biggest sum** of their lengths each on a separate. If there are **2 or more couples** of usernames with the same sum of their lengths, print the **left most**.

Constraints

- The input line will hold characters in the range [0...9999].
- The usernames should **start with a letter** and can contain **only letters, digits and "_"**.
- The username cannot be **less than 3 or more than 25 symbols** long.
- Time limit: 0.5 sec. Memory limit: 16 MB.

Examples

Input	Output
ds3bhj y1ter/wfsdg 1nh_jgf ds2c_vbg\4htref	wfsdg ds2c_vbg

Input	Output
min23/ace hahah21 (sasa) att3454/a/a2/abc	hahah21 sasa

Input	Output
chico/ gosho \ sapunerka (3sas) mazut lelQ_Van4e	mazut lelQ_Van4e