

Parenthesis

X85651_en

Write a program that reads a sequence of lines, and for each line prints the number of *clean parenthesized regions* it contains.

A *clean parenthesized region* is a segment of the string that is immediately after an open parenthesis, is immediately followed by a closed parenthesis, and contains no open or closed parenthesis.

For instance the substring "heha" is a clean parenthesized region in the string: "hello (heha) he said". While in the string "hello (he(ha))) he said" the only clean parenthesized region corresponds to the substring "ha" since any larger parenthesized region contains other parenthesis.

Input

The input is a sequence of strings, each in one line.

Output

The output must contain, for each input line with at least one clean parenthesized region, the number of such regions in the line. Follow the format of the examples.

Sample input 1

```
hello (heha) he said.  
hello (he(ha))) he said.
```

Sample output 1

```
Line 1 contains 1 regions.  
Line 2 contains 1 regions.
```

Sample input 2

```
he (ooh (blabla (ky)) ... (sure?)))(  
)))don't((  
))(in fact)(do))  
what about this one...
```

Sample output 2

```
Line 1 contains 2 regions.  
Line 3 contains 2 regions.
```

Sample input 3

```
hello (ha) (he) () uhm  
(((not cool()))
```

Sample output 3

```
Line 1 contains 3 regions.  
Line 2 contains 2 regions.
```

Sample input 4

```
aaaaaaa  
aaaaaaaaa  
bf
```

Sample output 4

Problem information

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