You are given a string consisting of parentheses () and []. A string of this type is said to be *correct*:

  (a) if it is the empty string

  (b) if A and B are correct, AB is correct,

  (c) if A is correct, (A) and $[A]$ is correct.

    Write a program that takes a sequence of strings of this type and check their correctness. Your program can assume that the maximum string length is 128.

Input

The file contains a positive integer n and a sequence of n strings of parentheses '()' and '[]', one string a line.

Output

A sequence of 'Yes' or 'No' on the output file.

Sample Input

```
3
([])
((([)])))
([()[]()])()
```

Sample Output

```
Yes
No
Yes
```