

Sharmeen and parentheses

Sharmeen the little girl learned about parentheses a few days ago. So as usual Mozahid gives her a problem to solve related with parentheses. As she is a little girl, she can't find a solution. As you are a good programmer can you solve it for Sharmeen?

You will be given a string consisting of only parentheses '(' or ')' and question marks '?'. You can replace a question mark with an opening or closing parentheses. If it is possible to make the string a valid parentheses sequence, output yes otherwise no. **You must have to replace all the question marks with parentheses.**

Input

First line of the input is the number of test cases T ($1 \leq T \leq 10^5$).

A string of length n ($1 \leq n \leq 10^5$) consisting of only '(', '(' or '?'.

Total length of all string will be at most 10^6 .

Output

For each testcase, if it is possible to make the string a valid parentheses sequence replacing the '?' marks with parentheses output 'yes' otherwise 'no' without quotes in one line.

Constrain:

$1 \leq T \leq 10^5$

$1 \leq n \leq 10^5$

Total length of all strings will be at most 10^6 .

See the sample input output for better understanding.

Example

Input:

```
2
()??((??)
((??
```

Output:

```
yes
yes
```

Explanation:

Possible valid parentheses sequences for testcase 1 are:-

```
(( ))(( ))
(( ))(( ))
```