

Problem B: Magic brackets

Time Limit: 1 Sec Memory Limit: 128 MB

Submit: 455 Solved: 193

[Submit (submitpage.php?cid=1056&pid=1&langmask=0)][Status (problemstatus.php?id=1214)][Web Board (bbs.php?pid=1214&cid=1056)]

Description

IceRuler likes Brackets. He has n brackets sequences. And you should tell him whether they are matched. The brackets will only contain {, }, (,), [,]. The matching rules are the same as in Math.

Input

The first line is integer T , the number of test cases. ($1 \leq T \leq 20$) For each test case, there is an integer n in one line ($1 \leq n \leq 30000$) and n lines means n brackets sequences.

Output

For each brackets sequences, print "YES" if it is matched. Otherwise, print "NO".

Sample Input

```
7
1
(
2
()
2
{}
6
[()]
4
()[]
8
[[{}]]
6
[]{}

```

Sample Output

```
NO
YES
NO
YES
NO
YES
NO

```

HINT

Origin pro.

[Submit (submitpage.php?cid=1056&pid=1&langmask=0)][Status (problemstatus.php?id=1214)]