

Balanced Parentheses

Given a sequence consisting of parentheses, determine whether the expression is balanced. A sequence of parentheses is balanced if every open parentheses can be paired uniquely with a closed parentheses that occurs after the former. Also, the interval between them must be balanced. You will be given three types of parentheses: `(`, `{`, and `[`.

```
{[()]}
```

 - This is a balanced parentheses.

```
{[(())]}
```

 - This is not a balanced parentheses.

Input Format

The first line of input contains the number of test cases, T . Each test case consists of a single line, S , the sequence of parentheses.

Constraints

$1 \leq T \leq 1000$
 $1 \leq len_s \leq 1000$, where len_s is the length of the sequence.
Each character of the sequence will be one of `{`, `}`, `(`, `)`, `[`, `]`.

Output Format

For each test case, print on a new line "YES" if the parentheses are balanced. Otherwise, print "NO". Do not print the quotes.

Sample Input

```
3
{[()]}
```

```
{[(())]}
```

```
{ {[[(())]] }}
```

Sample Output

```
YES
NO
YES
```