Different But Same

Problem Submissions Leaderboard

You will be given two mathematical expressions and your task is to implement an algorithm that can check whether both of those expressions are equivalent or not. For example, $a + (b + c)$ is equivalent to $(a + b) + c$ and $a - (b - c)$ is equivalent to $a - b + c$. You can assume that the expressions will contain only variables(a,b,c,etc) and no any numbers. They will also consist only of addition('+') and subtraction('−') operators and brackets(no multiplication or division operators). An expression can have at most 26 operands from 'a' to 'z' and each operand can appear at most 1 time.

Input Format

- The first line of the input contains a single integer T, the total number of test cases.
- Each test case consists of two lines , each line contains a string S , the mathematical expression. Each expression will be given as a string with no spaces in between.

Constraints

$1 \leq T \leq 100$

Output Format

- For each test case, print " YES " if both of the expressions are equivalent, Otherwise, print " NO ".

Sample Input 0

```
3
-(a+b+c)
-a-b-c
a-b-(c-d)
a-b-c-d
a-b-c-d
a-(b-c)-d
```

Sample Output 0

```
YES
NO
NO
```

Sample Input 1

```
3
-(a-b)-(c-d+e)-(f+g)
(-a)+(b-c+d)-(e+f+g)
a+b+c
a+b+d
a+c+e
e+a+c
```

Sample Output 1

```
YES
NO
YES
```

Contest ends in 2 hours

Submissions: 147
Max Score: 100
Difficulty: Hard

Rate This Challenge:

More

Current Buffer (saved locally, editable)

Python 3

1

Upload Code as File

Test against custom input

Run Code

Submit Code