CODEFORCES
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PROBLEMS   SUBMIT CODE   MY SUBMISSIONS   STATUS   STANDINGS   CUSTOM INVOCATION

N. Detective Hussien

time limit per test: 1 second ❓
memory limit per test: 256 megabytes

In Assiut-cpc cheating is allowed, but any way Hussien likes to check if the participants are cheating or not, (especially Hawary and hafez :P)

In Assiut-cpc you can only submit codes in one programming languages which is Aymoon programming language,a language developed by Ayman

Ayman didn't finish developing it yet but he created 4 commands

`define` x

$a = b + c$

`read` x

`print` x

Every command should be on one line. Hussien thinks that two students cheated if and only if you can rename the variables so that the first code becomes exactly the same as the second code.

You are given two codes, did they cheat?

Input
The first line contains one integer n $(1 \le n \le 1000)$, which is the number of lines of the first code.

The next n lines will contain one of four commands.

`define` x

$a = b + c$

`read` x

`print` x

Where x, a, b and c are a names of variables.

The first line contains one integer m $(1 \le m \le 1000)$, which is the number of lines of the second code.

The next m lines will contain one of four commands.

`define` x

$a = b + c$

`read` x

`print` x

where x, a, b and c are a names of variables.

It's guaranteed that before using any variable it will be defined, and the name of every variable will contain lowercase English letters of length at most 10, and no variable is defined twice.

The variables can't be one of the reserved word(define, print, read).

Output
if they cheated print `YES` otherwise print `NO`.

Examples

input
```
5
define a
define b
define c
a=b+c
print a
5
define a
define b
define c
a=c+b
print a
```

output
```
NO
```

→ **Group Contests** ⌄

- Juniors Phase 1 Practice #5 (Bitmask, Bitset, Bits)
- Juniors Phase 1 Practice #4 (Binary search , Two pointers)
- Juniors Phase 1 Practice #3 (STL 2)
- Juniors Phase 1 Practice #2 (STL 1)
- Juniors Phase 1 Practice #1 (Prefix sum , Frequency Array)

Juniors Phase 1 Practice #3 (STL 2)

Finished

Practice

⭐

→ **About Time Scaling** ⌄

This contest uses time limits scaling policy (depending on a programming language). The system automatically adjusts time limits by the following multipliers for some languages. Despite scaling (adjustment), the time limit cannot be more than 30 seconds. Read the details by the link.

→ **Virtual participation** ⌄

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

[Start virtual contest]

→ **Submit?**

Language: [GNU G++20 13.2 (64 bit, win ▾]

Choose file: [Choose File] No file chosen

[Submit]

→ **Last submissions**

Submission	Time	Verdict
316622681	Apr/22/2025 04:28	Accepted

```
input                                                    Copy

5
define a
define b
define c
a=b+c
print a
5
define a
define c
define b
a=c+b
print a

output                                                   Copy

YES
```

```
input                                                    Copy

5
define a
define b
define c
a=b+c
print a
5
define a
define b
define c
a=b+c
print a

output                                                   Copy

YES
```