

## Problem F: Blood Transfusion(easy version)

time limit per test: 2 second  
memory limit per test: 256 megabytes  
input: standard input  
output: standard output

Chopper is the doctor of the Straw Hat pirates. After the big war at the country of wano, there are  $n$  injured people that need a blood transfusion.

Chopper is determined to save everyone, so he rounds up  $n$  donors.

Each person has a specific blood type  $A$ ,  $B$ ,  $AB$  or  $O$ .

There are certain rules to the blood transfusion operations:

- A donor can only donate to one injured person
- Blood type  $A$  donors can only donate to recipients with blood types  $A$  and  $AB$ .
- Blood type  $B$  donors can only donate to recipients with blood types  $B$  and  $AB$ .
- Blood type  $AB$  donors can only donate to recipients with blood type  $AB$  only.
- Blood type  $O$  donors can donate to recipients with blood types  $A$ ,  $B$ ,  $AB$  and  $O$ .

Help chopper figure out if he can save every injured person using the donors he picked.

### Input :

The first line contains  $T$  ( $1 \leq T \leq 100$ ) , the number of testcases.

The first line of each testcase contains  $n$  ( $1 \leq n \leq 2 * 10^6$ ) the number of injured people

The second line of each testcase contains  $n$  space separated strings denoting the blood types of the injured people

The third line of each testcase contains  $n$  space separated strings denoting the blood types of the donors

**It is guaranteed that the sum of  $n$  over all the testcases does not exceed  $2 * 10^6$**

### Output :

For each query, output **"YES"**(without quotes) if the injured people can be saved and **"NO"**(without quotes) otherwise.

### Example:

Input :

```
3
2
A A
A B
5
A B AB O A
O O O O O
5
A A A B AB
O O B B B
```

Output :

```
NO
YES
NO
```

### Note:

In the first test case, we can only save one person of blood type A.

In the second testcase, every person can receive a donation from an O donor

In the third testcase, we can only save two people of blood type A.