Problem A. AUS

Pigeland University will host the 2224 Animal Collegiate Programming Contest (ACPC 2224). Unlike previous years, where teams from the host institution were marked as unofficial, Pigeland will send official teams to compete in the contest with three workstations for each team. Nevertheless, Pig-head, the coach of Pigeland University, remains uncertain about his teams' chances of securing gold medals. As a result, he decides to acquire the contest problems in advance from the AUS problem-setting group, using the excuse of needing to upload data to the online judge.

To prevent cheating, AUS attempts to encrypt the problems using a special cipher. Specifically, problems are represented by strings consisting of lowercase English letters. AUS wants to design a cipher function $f(x)$ that maps lowercase English letters to lowercase English letters. For a problem $S = s_1 s_2 \dots s_n$, the encrypted version of the problem is another string given by $F(S) = f(s_1)f(s_2)\dots f(s_n)$. For example, when $S = \texttt{abcabc}$ and $f(\texttt{a}) = \texttt{a}$, $f(\texttt{b}) = \texttt{k}$, $f(\texttt{c}) = \texttt{a}$, the encrypted version is $F(S) = \texttt{akaaka}$.

As a member of AUS, your task is to design the cipher function f. The leader of AUS believes that the function is *strong* if and only if there exists at least one problem that can be encrypted into the same encrypted version as another, while not all problems produce the same encrypted output. To validate this, he will give you three problems S_1, S_2, and S_3, and you need to find a cipher function f such that $F(S_1) = F(S_2)$ and $F(S_1) \neq F(S_3)$. Since AUS has several experienced members, your task is simply to determine whether such a cipher function exists.

Input

There are multiple test cases. The first line contains an integer T ($1 \le T \le 10^4$) indicating the number of test cases. For each test case:

The first line contains a string S_1 ($1 \le |S_1| \le 10^3$) consisting of only lowercase English letters.

The second line contains a string S_2 ($1 \le |S_2| \le 10^3$) consisting of only lowercase English letters.

The third line contains a string S_3 ($1 \le |S_3| \le 10^3$) consisting of only lowercase English letters.

It is guaranteed that the sum of $|S_1| + |S_2| + |S_3|$ of all test cases does not exceed 3×10^4.

Output

For each test case, if such cipher function exists, output `YES` in one line. Otherwise, output `NO` instead.

Example

standard input	standard output
4 abab cdcd abce abab cdcd abcd abab cdcd abc x yz def	YES NO YES NO

Note

For the first and third sample test cases, one valid cipher function can be $f(\texttt{a}) = f(\texttt{b}) = f(\texttt{c}) = f(\texttt{d}) = \texttt{a}$ and $f(\texttt{e}) = \texttt{b}$.