Is This Password Strong?

Nizuma wanted to register for an online service, but he was wary of setting up a password. finally, Nizuma mustered up the courage to register for that service. He came up with a handle but is still thinking about the password.

He wants his password to be as strong as possible, so he came up with the following criteria:

- The length of the password should be exactly n;
- The password should only consist of digits from 0 to 9;
- the password should not appear in the password database (given as a string s) as a subsequence (not necessarily contiguous).

Nizuma also came up with two strings of length n; l and r, both consisting only of digits from 0 to 9. He wants the i-th digit of his password to be between l_i and r_i, inclusive. Does there exist a password that fits all criteria?

Input Format

- The first line contains a single integer t, the number of test cases.
- The first line of each test case contains a string s, consisting only of digits from 0 to 9 — the password database.
- The second line contains a single integer n — the required length of the password.
- The third line contains a string l, consisting only of digits from 0 to 9 — the lower restriction on each digit.
- The fourth line contains a string r, consisting only of digits from 0 to 9 — the upper restriction on each digit.

Constraints

- $1 \leq t \leq 10^4$
- $1 \leq |s| \leq 3x10^5$
- $1 \leq n \leq 10$
- $|l| = n$
- $|r| = n$
- $l_i \leq r_i$ for all i from 1 to n.
- The sum of lengths of s over all test cases doesn't exceed $3x10^5$.

Output Format

For each test case, print "YES" if there exists a password that fits all criteria. Print "NO" otherwise.

Sample Input 0

```
5
88005553535123456
2
50
56
123412341234
3
111
444
1234
4
4321
4321
459
2
49
59
00010
2
10
11
```

Sample Output 0

```
YES
NO
YES
NO
YES
```