ICPC DHAKA REGIONAL PRELIMINARY CONTEST, 2019 (HOST OF REGIONAL: SOUTHEAST UNIVERSITY)

2:26:11

YOU ARE PARTICIPATING IN THIS CONTEST

SUBMIT

Language

C

Source

CHOOSE..

SUBMIT

C. ICGeSi Standings

Score: 1

CPU: 1s
Memory: 1500MB

“Programming contest fosters creativity, teamwork, and innovation in solving critical problems, and enables students to test their ability to perform under pressure.”

ICGeSi maintains a simplified contest ranklist that has only 3 columns consisting of team id, the number of problems solved by that team and their total penalty time. To make the contest more thrilling, the contest ranklist is frozen for the last 1 hour, no update is shown.

The contest, ranklist and result is determined by the following rules:

- The team with the higher number of solved problems will get a higher rank. Rank 1 is considered as the highest rank.
- In case of a tie between two teams with the same number of problems solved, the higher rank is determined by the penalty time. The team with the lower penalty time will get the higher rank.
- The penalty time for a particular problem is determined by the following formula:
    - If a problem is not solved, then the penalty time for that problem is 0 (zero).
    - The time consumed for a solved problem to be solved is considered as its penalty time. For example, if a problem is solved at the 20th minute of the contest, then the penalty time for that problem is, P = 20.
    - Total Penalty for a team is the summation of penalties for all problems. $P_{TEAM} = P_A + P_B + P_C + \dots$, where problems are named as A, B, C, … in alphabetic order. A team can not submit for a particular problem after getting it accepted once.
- After considering the number of solved problems and penalty time, if there is still a tie, teams will share a common rank. For example, let's assume that, both TeamX and TeamY solved 2 problems with total penalty time $P_{TeamX} = P_{TeamY} = 220$. It is a tie. So, they will share a common rank. In the ranklist, TeamX may come before TeamY, or TeamY may come before TeamX. Both are valid. The same also holds when more than 2 teams are tied.
- You may safely assume that each team solved at least one problem before the ranklist was frozen.

It is ICGeSi DRPC-2019 (Dhaka Regional Premier Contest, 2019). This is one of the biggest competitions in the history of DRPC and is a high voltage contest. All the problems are critical and require a lot of analysis and coding skills to be solved. For any team anything is possible, the agony and the ecstasy.

The contest has already finished and the jury is ready to unfreeze the rank list and publish the result. The jury of the contest posted an interesting statistic: **"in ICGeSi DRPC-2019, there is no such team who got an accepted verdict after any of their submissions had been rejected during the frozen hour. "** For example, let's assume there are 5 submissions from a particular team in the frozen hour. If their 2nd submission was rejected, we know for sure that the following 3 submissions were rejected too.

Everyone is eagerly waiting for the result. The organizer decided to arrange a closing ceremony in order to address the winners, participants, supporters, owners, sponsors and stakeholders. It's been five hours after the contest, but the ceremony is yet to start. A lot of rumours are going on. A lot of criticizations are also being made. From the judges' perspective, there are two types of critics: positive critics, negative critics. Negative critics are claiming that the jury is taking time to actually manipulate the results, while positive critics are claiming that the organizers are not ready as the guests are yet to arrive. A group of people is also claiming that they have the result which has been leaked from judgeroom.

You are given the frozen ranklist of ICGeSi DRPC-2019. For each team you also know when they submitted solutions during frozen hour but you do not know their verdicts (whether they were accepted or rejected). You are also given the result which is claimed as being leaked from the judges room. You have to determine whether such a final ranklist is possible or not!

Input

Input starts with an integer **K(1≤K≤750)** in a single line denoting the number of test cases. Each of the **K** test cases starts with an integer **N (1≤N≤50)** denoting the number of teams participating in the contest. Each of the next **N** lines describe teams starting with four integers **Id (1≤Id≤N)**, **S (1≤S≤120)**, **TP (1≤TP≤7260)** and **M (0≤M≤60)** denoting team id, number of problems solved by them, their total penalty time before the ranklist was frozen and the number of submissions during the frozen hour respectively. Then in the same line, there will be M

integers $T_1, T_2, ..., T_M$ **(121≤** $T_1 < T_2 < ... < T_M$ **≤180)** denoting the time of their submissions in frozen hour. Summation of **M** over all test cases **1.5x10^6**. Next line contains **N** space separated integers representing team Id from higher rank to lower rank in the leaked result (from left to right).

Output

For each test case, print the case number followed by a string "**Say no to rumour >:**" if no such result is possible, otherwise print "**We respect our judges :)**" in a single line. Check the sample I/O section for more clarity.

Sample

Input	Output
2 3 2 3 100 1 130 3 2 110 2 150 160 1 1 110 3 170 175 180 1 2 3 2 1 2 100 0 2 1 110 1 130 2 1	Case 1: We respect our judges :) Case 2: Say no to rumour >:

Explanation:

Case 1: A possible solution is as follows. Team Id = 1 (4/635) , Team Id = 2 (3/100), Team Id = 3 (2/110).

Case 2: There is no way team Id = 2 can get a higher rank than team Id = 1. So, it's a rumour.