

A. Juice

B. Ping Pong Balls

C. Mine Layer

D. Bridge Builders

E. The Year of Code Jam

Contest Analysis

Questions asked

Submissions

Juice	
3pt	Not attempted 97/97 users correct (100%)
10pt	Not attempted 74/93 users correct (80%)
Ping Pong Balls	
4pt	Not attempted 92/97 users correct (95%)
11pt	Not attempted 18/32 users correct (56%)
Mine Layer	
4pt	Not attempted 85/88 users correct (97%)
13pt	Not attempted 14/33 users correct (42%)
Bridge Builders	
8pt	Not attempted 69/73 users correct (95%)
17pt	Not attempted 20/31 users correct (65%)
The Year of Code Jam	
7pt	Not attempted 47/68 users correct (69%)
23pt	Not attempted 6/9 users correct (67%)

Top Scores

ACRush	89
Innovative.Cat	89
bmerry	87
pmnox	76
yuhch123	66
gawry	66
Eryx	60
mystic	60
ploh	60
blueblimp	59

Problem A. Juice

This contest is open for practice. You can try every problem as many times as you like, though we won't keep track of which problems you solve. Read the [Quick-Start Guide](#) to get started.

Small input
3 points

Solve A-small

Large input
10 points

Solve A-large

Problem

You are holding a party. In preparation, you are making a drink by mixing together three different types of fruit juice: Apple, Banana, and Carrot. Let's name the juices A, B and C.

You want to decide what fraction of the drink should be made from each type of juice, in such a way that the maximum possible number of people attending the party like it.

Each person has a minimum fraction of each of the 3 juices they would like to have in the drink. They will only like the drink if the fraction of each of the 3 juices in the drink is greater or equal to their minimum fraction for that juice.

Determine the maximum number of people that you can satisfy.

Input

- One line containing an integer **T**, the number of test cases in the input file.

For each test case, there will be:

- One line containing the integer **N**, the number of people going to the party.
- N** lines, one for each person, each containing three space-separated numbers "A B C", indicating the minimum fraction of each juice that would like in the drink. A, B and C are integers between 0 and 10000 inclusive, indicating the fraction in parts-per-ten-thousand. $A + B + C \leq 10000$.

Output

- T** lines, one for each test case in the order they occur in the input file, each containing the string "Case #X: Y" where X is the number of the test case, starting from 1, and Y is the maximum number of people who will like your drink.

Limits

$1 \leq T \leq 12$

Small dataset

$1 \leq N \leq 10$

Large dataset

$1 \leq N \leq 5000$

Sample

Input	Output
3	Case #1: 1
3	Case #2: 2
10000 0 0	Case #3: 5
0 10000 0	
0 0 10000	
3	
5000 0 0	
0 2000 0	
0 0 4000	
5	
0 1250 0	
3000 0 3000	
1000 1000 1000	
2000 1000 2000	
1000 3000 2000	

In the first case, for each juice, we have one person that wants the drink to be made entirely out of that juice! Clearly we can only satisfy one of them.

In the second case, we can satisfy any two of the three preferences.

In the third case, all five people will like the drink if we make it using equal thirds of each juice.

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