

cout << "nello, wond!" <<

Round 1A 2015

A. Mushroom Monster

B. Haircut

C. Logging

Contest Analysis

Questions asked

Submissions Mushroom Monster 7pt Not attempted 4848/5156 users correct (94%) Not attempted 4755/4844 users correct (98%)Haircut 11pt Not attempted 2930/4720 users correct (62%)Not attempted 1715/2681 users correct (64%)Logging 18pt Not attempted 1150/1668 users correct (69%)34pt Not attempted 354/673 users correct (53%)

 Top Scores 	
Burunduk1	100
sourspinach	100
Kirino	100
winger	100
cgy4ever	100
niquefa.diego	100
tozangezan	100
ACMonster	100
MauricioC	100
kriii	100

Practice Mode

Contest scoreboard | Sign in

Problem B. Haircut

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 <u>Quick-Start Guide</u> to get started.

Small input 11 points	Solve B-small
Large input 22 points	Solve B-large

Problem

You are waiting in a long line to get a haircut at a trendy barber shop. The shop has ${\bf B}$ barbers on duty, and they are numbered 1 through ${\bf B}$. It always takes the ${\bf k}$ th barber exactly ${\bf M}_{\bf k}$ minutes to cut a customer's hair, and a barber can only cut one customer's hair at a time. Once a barber finishes cutting hair, he is immediately free to help another customer.

While the shop is open, the customer at the head of the queue always goes to the lowest-numbered barber who is available. When no barber is available, that customer waits until at least one becomes available.

You are the ${\bf N}$ th person in line, and the shop has just opened. Which barber will cut your hair?

Input

The first line of the input gives the number of test cases, **T**. **T** test cases follow; each consists of two lines. The first contains two space-separated integers **B** and **N** -- the number of barbers and your place in line. The customer at the head of the line is number 1, the next one is number 2, and so on. The second line contains M_1 , M_2 , ..., M_B .

Output

For each test case, output one line containing "Case #x: y", where x is the test case number (starting from 1) and y is the number of the barber who will cut your hair.

Limits

 $1 \le \mathbf{T} \le 100.$ $1 \le \mathbf{N} \le 10^9.$

Small dataset

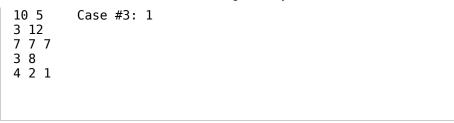
 $1 \le \mathbf{B} \le 5$. $1 \le \mathbf{M_k} \le 25$.

Large dataset

 $1 \le \mathbf{B} \le 1000.$ $1 \le \mathbf{M_k} \le 100000.$

Sample

Input	Output
3	Case #1: 1
2 4	Case #2: 3



In Case #1, you are the fourth person in line, and barbers 1 and 2 take 10 and 5 minutes, respectively, to cut hair. When the shop opens, the first customer immediately has the choice of barbers 1 and 2, and she will choose the lowest-numbered barber, 1. The second customer will immediately be served by barber 2. The third customer will wait since there are no more free barbers. After 5 minutes, barber 2 will finish cutting the second customer's hair, and will serve the third customer. After 10 minutes, both barbers 1 and 2 will finish; you are next in line, and you will have the choice of barbers 1 and 2, and will choose 1.

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