

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%)8pt Not attempted
4755/4844 users
correct (98%)

Haircut

11pt Not attempted
2930/4720 users
correct (62%)22pt 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
dreamoon	100
winger	100
cgy4ever	100
niquefa.diego	100
tozangezan	100
ACMonster	100
MauricioC	100
kriii	100

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 [Quick-Start Guide](#) 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 **B** barbers on duty, and they are numbered 1 through **B**. It always takes the **k**th barber exactly **M_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 **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 **M₁**, **M₂**, ..., **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

$1 \leq T \leq 100$.
 $1 \leq N \leq 10^9$.

Small dataset

$1 \leq B \leq 5$.
 $1 \leq M_k \leq 25$.

Large dataset

$1 \leq B \leq 1000$.
 $1 \leq M_k \leq 100000$.

Sample

Input	Output
3	Case #1: 1
2 4	Case #2: 3
10 5	Case #3: 1
3 12	
7 7 7	
3 8	
4 2 1	

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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