code jam

cout << "hello, world!" << endl;

Practice Mode

Round 1A 2015

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
Kirino	100
winger	100
cgy4ever	100
niquefa.diego	100
tozangezan	100
ACMonster	100
MauricioC	100
kriii	100

Problem A. Mushroom Monster

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
7 points

Download A-small-practice.in

your output file: Choose File No file chosen

source file(s): not needed for the practice contest

Submit file Hide

Large input
8 points

Download A-large-practice.in

your output file: Choose File No file chosen

source file(s): not needed for the practice contest

Submit file Hide

Problem

Kaylin loves mushrooms. Put them on her plate and she'll eat them up! In this problem she's eating a plate of mushrooms, and Bartholomew is putting more pieces on her plate.

In this problem, we'll look at how many pieces of mushroom are on her plate at 10-second intervals. Bartholomew could put any non-negative integer number of mushroom pieces down at any time, and the only way they can leave the plate is by being eaten.

Figure out the minimum number of mushrooms that Kaylin could have eaten using two different methods of computation:

1. Assume Kaylin could eat any number of mushroom pieces at any time.
2. Assume that, starting with the first time we look at the plate, Kaylin eats mushrooms at a constant rate whenever there are mushrooms on her plate.

For example, if the input is `10 5 15 5`:

With the first method, Kaylin must have eaten at least 15 mushroom pieces: first she eats 5, then 10 more are put on her plate, then she eats another 10. There's no way she could have eaten fewer pieces.

With the second method, Kaylin must have eaten at least 25 mushroom pieces. We can determine that she must eat mushrooms at a rate of at least 1 piece per second. She starts with 10 pieces on her plate. In the first 10 seconds, she eats 10 pieces, and 5 more are put on her plate. In the next 5 seconds, she eats 5 pieces, then her plate stays empty for 5 seconds, and then Bartholomew puts 15 more pieces on her plate. Then she eats 10 pieces in the last 10 seconds.

Input

The first line of the input gives the number of test cases, **T**. **T** test cases follow. Each will consist of one line containing a single integer **N**, followed by a line containing **N** space-separated integers $\mathbf{m}_i$; the number of mushrooms on Kaylin's plate at the start, and at 10-second intervals.

Output

For each test case, output one line containing "Case #x: y z", where x is the test case number (starting from 1), y is the minimum number of mushrooms Kaylin could have eaten using the first method of computation, and z is the minimum number of mushrooms Kaylin could have eaten using the second method of computation.

Limits

$1 \leq \mathbf{T} \leq 100$.

Small dataset

$2 \leq \mathbf{N} \leq 10$.
$0 \leq \mathbf{m}_i \leq 100$.

Large dataset

$2 \leq \mathbf{N} \leq 1000$.
$0 \leq \mathbf{m}_i \leq 10000$.

Sample

Input	Output
4 4 10 5 15 5 2 100 100 8 81 81 81 81 81 81 81 0 6 23 90 40 0 100 9	Case #1: 15 25 Case #2: 0 0 Case #3: 81 567 Case #4: 181 244