code jam
hello, world!

Practice Mode

Round 1B 2012

A. Safety in Numbers

B. Tide Goes In, Tide Goes Out

C. Equal Sums

Contest Analysis

Questions asked

- Submissions

Safety in Numbers

10pt	Not attempted **2687/5608 users** correct (48%)
11pt	Not attempted **2008/2680 users** correct (75%)

Tide Goes In, Tide Goes Out

18pt	Not attempted **682/892 users** correct (76%)
18pt	Not attempted **619/670 users** correct (92%)

Equal Sums

6pt	Not attempted **2257/2531 users** correct (89%)
37pt	Not attempted **149/853 users** correct (17%)

- Top Scores

Gennady.Korotkevich	100
bmerry	100
hansonw	100
marcina	100
ZhukovDmitry	100
random.johnnyh	100
yeputons	100
rng..58	100
pashka	100
mikhailOK	100

Problem C. Equal Sums

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 6 points	Solve C-small
Large input 37 points	Solve C-large

Problem

I have a set of positive integers **S**. Can you find two non-empty, distinct subsets with the same sum?

Note: A subset is a set that contains only elements from **S**, and two subsets are distinct if they do not have exactly the same elements.

Input

The first line of the input gives the number of test cases, **T**. **T** test cases follow, one per line. Each test case begins with **N**, the number of positive integers in **S**. It is followed by **N** distinct positive integers, all on the same line.

Output

For each test case, first output one line containing "Case #x:", where x is the case number (starting from 1).

- If there are two different subsets of **S** that have the same sum, then output these subsets, one per line. Each line should contain the numbers in one subset, separated by spaces.
- If it is impossible, then you should output the string "Impossible" on a single line.

If there are multiple ways of choosing two subsets with the same sum, any choice is acceptable.

Limits

No two numbers in **S** will be equal.
$1 \leq \mathbf{T} \leq 10$.

Small dataset

N is *exactly* equal to 20.
Each number in **S** will be a positive integer less than 10^5.

Large dataset

N is *exactly* equal to 500.
Each number in **S** will be a positive integer less than 10^{12}.

Sample

Input

```
2
20 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
20 120 266 858 1243 1657 1771 2328 2490 2665 2894 3117
4210 4454 4943 5690 6170 7048 7125 9512 9600
```

Output

```
Case #1:
1 2
3
Case #2:
3117 4210 4943
2328 2894 7048
```