Rebuild Original Array

? Ask Doubt

Time-Limit: 4 sec Score: 0/100 Difficulty :

Memory: 256 MB Accepted Submissions: 100 Relevant For: AZ-201 AZ-202 AZ-301

Description

Your class teacher wrote *N* integers on the board. One of your classmates was being mischievous, he replaced the *N* integers with all possible subset sums of the array when the teacher was not in the class.
Suppose that the integers on the board were [2,1] then the subsets will be: {}, {2}, {1}, {2,1} and the subset sums will be: {0,2,1,3}.
Your task is to rebuild the original array given by your teacher.

Input Format

The first line of the input contains one integer *T* - the number of test cases. Then *T* test cases follow.
The first line of each test case contains one integer *N* - the number of elements in the initial array.
The second line of each test case contains 2^N space-separated integers, the new values on the board.

Output Format

For each test case, print *N* space-separated integers in non-decreasing order.
It is guaranteed that a solution always exists.

Constraints

$1 \le T \le 50$
$1 \le N \le 15$
$0 \le A_i \le 10^{15}$

Sample Input 1

Copy

```
3
2
0 1 2 3
3
0 1 3 4 5 6 8 9
3
0 1 1 1 2 2 2 3
```

Sample Output 1

Copy

```
1 2
1 3 5
1 1 1
```

C++14[GCC]

Submit

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