

# Sort the Half Sorted

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Given an integer array of which both first half and second half are sorted. The task is to merge two sorted halves of the array into a single sorted array.

## Input:

The first line of input contains an integer T denoting the number of test cases. Each test case contains an integer n which denotes the number of elements in the array a[]. Next line contains space separated n elements in the array a[].

## Output:

Print the sorted array with space separated values.

## Constraints:

$1 \leq T \leq 100$

$1 \leq n \leq 1000$

$-1000 \leq a[i] \leq 1000$

## Example:

### Input:

2

6

2 3 8 -1 7 10

5

-4 6 9 -1 3

### Output:

-1 2 3 7 8 10

-4 -1 3 6 9