

## Algorithms Lab

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### Exercise – Sort

In this exercise you are supposed to do some sorting of integers.

**Input** The first line of the input contains the number  $t \leq 10$  of test cases. Each of the  $t$  test cases is described as follows.

- It starts with a line that contains an integer  $n$ , such that  $0 \leq n \leq 10^5$ .
- The following line contains  $n$  integers  $a_0 \dots a_{n-1}$ , separated by a space, such that  $-1000 \leq a_i \leq 1000$ , for all  $i \in \{0, \dots, n-1\}$ .
- The following line contains an integer  $x$ , denoting whether the numbers should be sorted in a non-decreasing order or in a non-increasing order, and such that  $x \in \{0, 1\}$ .

**Output** For each test case output one line with the numbers sorted in a non-decreasing order if  $x = 0$ , and in a non-increasing order otherwise.

**Points** There is one group of test sets, worth 100 points in total.

#### Sample Input

```
1
6
-3 -1 4 2 0 3
1
```

#### Sample Output

```
4 3 2 0 -1 -3
```