

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
```