You are given an array **A** of **N `(N>=3)`** unique integer. Your task is to make the array sinusoidal. An array is sinusoidal if for each **`i (2<=i<=N-1)`** any of the following holds,

- `A[i-1] < A[i] && A[i] > A[i+1]`
- `A[i-1] > A[i] && A[i] < A[i+1]`

Output can be multiple for a single array. You may output **any of them**.

Input	Output
4 1 7 5 3	1 7 3 5
5 1 8 9 2 4	1 9 2 8 4
3 1 2 3	3 1 2

Marking:

1. Total Marks is 10.
2. If you use any additional array other than the input array you will lose 2 marks.
3. If you solve it using nested loop you will lose 2 marks.
4. To get full marks you have to do it with single loop and without additional memory.