

Order of the sequence

Given an array of length n . Check if the array is strictly increasing or strictly decreasing. An array, named A is strictly increasing if $A[i] > A[i-1]$ for every $i \geq 1$

Input

The first line contains the length of the array n ($1 < n \leq 10^5$)

The second line contains n integers which are elements of the array, respectively.

Output

If the given array is strictly increasing, output "increasing".

If the given array is strictly decreasing, output "decreasing", otherwise output "none".

Sample

Input	Output
4 1 1 1 1	none
3 1 2 2	none