Mudith is highly interested in permutations. Mudith is given a permutation of the numbers from 1 to 2N-1. Let the permutation be a\_1,a\_2,…., a\_(2N-1). He repeatedly performs the following operation on the set of numbers. Let b\_1,b\_2,.., b\_k be the sequence of numbers before the operation (Before the first operation the set of number is a\_1,a\_2,…., a\_(2N-1) ). In the operation b\_i is replaced with the median of numbers b\_i,b\_(i+1),b\_(i+2) for all 0<=i<=k-2. Note that in one operation the number of terms of the sequence is reduced by 2. This operation is performed till the number of elements in the sequence is reduced to 1. Find the number which will remain at the end.

Constraints

2<= N <= 10000

Input

First line contains integer N

Second line contains 2N-1 space separated integers a\_1, a\_2,.. , a\_(2N-1)

Output

Print the integer which will remain at the end