

Funny Cost

Input file: **standard input**
Output file: **standard output**
Time limit: 1 second
Memory limit: 256 megabytes

Cost of an array a of (odd number) $n - 1$ elements is the maximum weight of a perfect matching in the graph with n vertices, where the weight of the edge between vertices u and v ($1 \leq u < v \leq n$) is the maximum value among $a_u, a_{u+1}, \dots, a_{v-1}$.

You need to find the sum of costs of all permutations of the given array with n different elements, modulo 998 244 353.

Input

The first line contains one odd integer n ($1 \leq n \leq 100\,000$).

The second line contains n different elements a_1, a_2, \dots, a_n ($1 \leq a_i \leq 10^8$).

Output

Print one integer: the sum of costs of all permutations of the given array, modulo 998 244 353.

Example

standard input	standard output
3 1 30 15	300