

Given n integers,

Time limit: 2 sec.
Memory limit: 512MB

Description

print one of the following: the maximum, minimum, median*, or mode**.

*The median is the value located in the exact middle of the set when sorted. For example, the median of the three integers 7, 1, 3 is 3. When there are an even number of integers, the median is the average of the two middle values. For example, the median of the four integers 1, 3, 6, 4 is $(3+4)/2=3.5$. Note that in case of decimal points, no trailing zeroes are allowed. e.g. 3.50000 will be considered incorrect.

**The mode is the value that appears the most. For example, the mode of three integers 2, 2, 3 is 2. If there are multiple modes, print all of them in ascending order, divided by a whitespace. For example, the mode of the four integers 2, 3, 3, 2 is both 2 and 3.

Input

The first line contains an integer, n. ($1 \leq n \leq 10000$)

The second line contains n integers. These integers are nonnegative, and do not exceed 10000.

The third line contains the string "Maximum", "Minimum", "Median", or "Mode" without quotes.

Output

Print the value requested by the string, as described in the problem description.

Sample I/O

Input(s)	Output(s)
4 1 3 6 4 Median	3.5
4 2 3 3 2 Mode	2 3