

Problem E. + -

Time limit 5000 ms

Mem limit 262144 kB

OS Windows

You are given n numbers you need to print how many of them are positive and how many negative.

Note: Zero not negative or positive

Input

The first line contains the number n ($1 \leq n \leq 10^5$).

The next line contains n numbers each of them called x ($-10^9 \leq x \leq 10^9$)

Output

print the answer of the problem

Examples

Input	Output
7 1 2 9 -1 -12 4 -7	Positive: 4 Negative: 3