A. Monsters on Lanrand

Description

There are n monsters living on Lanrand. Every monster has a kind of power with value a_i, but some monsters are weak, so it may have negative a_i. The map of Lanrand can be regarded as a line, where n monsters standing in this line. These monsters are offensive, so any monster can eat its **adjacent** monster. If a monster with power value x eats another one with power value y, the eaten monster disappears, and the power value of the remaining monster changes to $x - y$. Now Lanran wants to know what is the maximum possible value of the last monster(all other monsters are eaten). **Note that, even a monster has negative value of power, it can eat its adjacent monster.**

Input format

The first line contains an integer $n(1 \leq n \leq 500\ 000)$,

The next line contains n integers $a_i(-10^9 \leq a_i \leq 10^9)$.

Output format

Output one integer, indicating the answer.

Samples

Sample input 1

```
3
1 3 2
```

Sample output 1

```
4
```

Sample input 2

```
3
1 -3 2
```

Sample output 2

```
6
```