



Write a program that, given a sequence of  $N$  integers, calculates the **maximum** integer that can be written as the sum of some two elements of the sequence.

**Note:** use 64-bit integral data types – `int64` in Pascal, `long long` in C/C++.

### INPUT

The first line of input contains the integer  $N$  ( $2 \leq N \leq 200\,000$ ), the length of the sequence.

The second line of input contains the elements of the sequence –  $N$  integers separated by single spaces. Each of the integers will be greater than 0 and not greater than  $10^{15}$ .

### OUTPUT

Output the required sum, a single integer on its own line.

### EXAMPLES

**input**

3  
1 2 3

**output**

5

**input**

4  
4 2 3 1

**output**

7

**input**

5  
3 6 3 6 7

**output**

13