



# Four Numbers

You are given an array  $a$ , consisting of  $n$  distinct integers:  $a[1], a[2], \dots, a[n]$ . Find the maximum possible value of the following expression –

$$\frac{A + B}{C - D}$$

Where,  $A, B, C$ , and  $D$  are four distinct integers from the array  $a$ .

## Input

Read the input from the standard input in the following format:

- line 1:  $n$
- line 2:  $a[1] \ a[2] \ \dots \ a[n]$

## Output

Write the output to the standard output in the following format:

- line 1: the maximum value of the expression.

Your answer will be considered correct if its relative or absolute error doesn't exceed  $10^{-9}$ .

## Constraints

- $4 \leq n \leq 100\,000$
- $1 \leq a[i] \leq 10^8$
- $a[i] \neq a[j]$  (for all  $1 \leq i < j \leq n$ )

## Subtasks

1. (20 points)  $n \leq 50$
2. (30 points)  $n \leq 500$
3. (50 points)  $n \leq 100\,000$

## Examples

### Example 1

```
10
1 2 3 4 5 6 7 8 9 10
```

The correct output is:

```
19
```

Here, taking  $A = 9$ ,  $B = 10$ ,  $C = 2$ ,  $D = 1$  gives the maximum value  $\frac{9+10}{2-1} = 19$ .

## Example 2

```
5
22 100 42 3 86
```

The correct output is:

```
9.7894736842
```

Here, taking  $A = 100$ ,  $B = 86$ ,  $C = 22$ ,  $D = 3$  gives the maximum value  $\frac{100+86}{22-3} \approx 9.789473$ .