Module_7.5(Week 02 Practice Day 02)

Problem - A - Codeforces

Given a number N and an array A of N numbers. Print the **absolute summation** of these numbers.

absolute value : means to remove any negative sign in front of a number.

EX : |-5| = 5 , |7| = 7

Input

First line contains a number N $(1 \leq N \leq 10^5)$ number of elements.

Second line contains N numbers ($-10^9 \leq A_i \leq 10^9$).

Output

Print the **absolute summation** of these numbers.

Examples

input

```
4
7 2 1 3
```

output

```
13
```

input

Copy

```
3
-1 2 -3
```

output

```
2
```

Note

Second Example:

-1 + 2 + -3 = -2 and it absolute is 2 so the answer is **2**.

Problem - B - Codeforces

B. Searching

Given a number N and an array A of N numbers. Determine if the number X **exists** in array A or **not** and print its position **(0-index)**.

Note: X may be found **once** or **more than once** and **may not be found**.

Input

First line contains a number N $(1 \leq N \leq 10^9)$ number of elements.

Second line contains N numbers $(0 \leq A_i \leq 10^9)$.

Third line contains a number X $(0 \leq X \leq 10^9)$.

Output

Print the **position** of X in the first time you find it. If it doesn't **exist** print **-1**.

Examples

input

```
3
3 0 1
0
```

output

```
1
```

input

```
5
1 3 0 4 5
10
```

output

```
-1
```

input

```
4
2 3 2 1
2
```

output

```
0
```

Problem - C - Codeforces

C. Replacement

Given a number N and an array A of N numbers. Print the array after doing the following operations:

- Replace every **positive** number by 1.
- Replace every **negative** number by 2.

Input

First line contains a number N $(2 \leq N \leq 1000)$ number of elements.

Second line contains N numbers ($-10^5 \leq A_i \leq 10^5$).

Output

Print the array after the **replacement** and it's values separated by space.

Example

input

Copy

```
5
1 -2 0 3 4
```

output

Copy

```
1 2 0 1 1
```

Problem - D - Codeforces

D. Positions in array

Given a number N and an array A of N numbers. Print all array **positions** that store a number less than or equal to **10** and the **number stored** in that position.

Input

First line contains a number N $(2 \leq N \leq 1000)$ number of elements.

Second line contains N numbers ($-10^5 \leq A_i \leq 10^5$).

it's guaranteed that there is at least one number in array less than or equal to 10.

Output

For each number in the array that is equal to or less than **10** print a single line contains "A[i] = X", where **i** is the **position** in the array and X is the number **stored in the position**.

Example

input

Copy

```
5
1 2 100 0 30
```

output

Copy

```
A[0] = 1
A[1] = 2
A[3] = 0
```

Problem - E - Codeforces

E. Lowest Number

Given a number N and an array A of N numbers. Print the **lowest number** and its **position**.

Note: if there are more than one answer print **first one's** position.

Input

First line contains a number N $(2 \leq N \leq 1000)$ number of elements.

Second line contains N numbers ($-10^5 \leq A_i \leq 10^5$).

Output

Print the **lowest number** and its **position (1-index)**.

Examples

input

```
3
1 2 3
```

output

Copy

```
1 1
```

input

```
5
5 6 2 3 2
```

output

```
2 3
```

Problem - F - Codeforces

F. Reversing

Given a number N and an array A of N numbers. Print the array in a **reversed order**.

Note:

*Don't use built-in-functions.

Input

First line contains a number N $(1 \leq N \leq 10^3)$ number of elements.

Second line contains N numbers $(0 \leq A_i \leq 10^9)$.

Output

Print the array in a **reversed order**.

Examples

input

```
4
5 1 3 2
```

output

```
2 3 1 5
```

input

```
5
1 2 3 4 5
```

output

```
5 4 3 2 1
```