

H2: Smallest missing number

Given an unsorted vector of integers, find the lowest possible value missing in the vector that is larger than the smallest value that is present in the vector. Write a program that first reads from the user the number of values in the vector, followed by the vector's numbers. The program then outputs the smallest missing number.

Here are some correct example runs of the program:

```
How many numbers? 5
```

```
Please enter the numbers 1 2 -7 -6 3
```

```
The smallest missing number is -5
```

```
How many numbers? 3
```

```
Please enter the numbers 1 2 3
```

```
The smallest missing number is 4
```

```
How many numbers? 4
```

```
Please enter the numbers 4 2 1 0
```

```
The smallest missing number is 3
```

Use functions where appropriate for structuring your program.