First Missing Positive

Try to solve the First Missing Positive problem.

Statement

Given an unsorted integer array, `nums`, return the smallest missing positive integer. Create an algorithm that runs with an $O(n)$ time complexity and utilizes a constant amount of space.

> **Note:** The smallest missing positive isn't the first positive number that's missing in the range of elements in the input, but the first positive number that's missing if we start from 1.
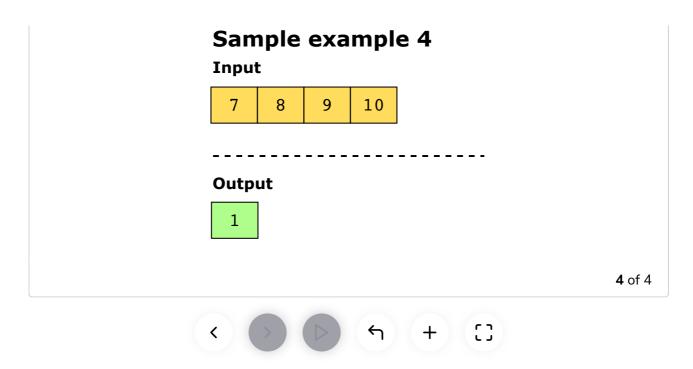
Constraints:

- $1 \leq$ `nums.length` $\leq 10^5$
- $-2^{31} \leq$ `nums[i]` $\leq 2^{31} - 1$

Examples

Sample example 4

Input

7	8	9	10

- -

Output

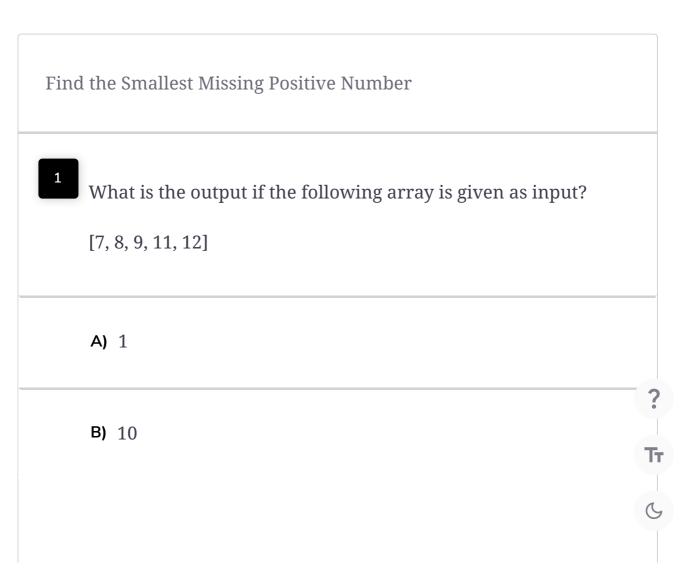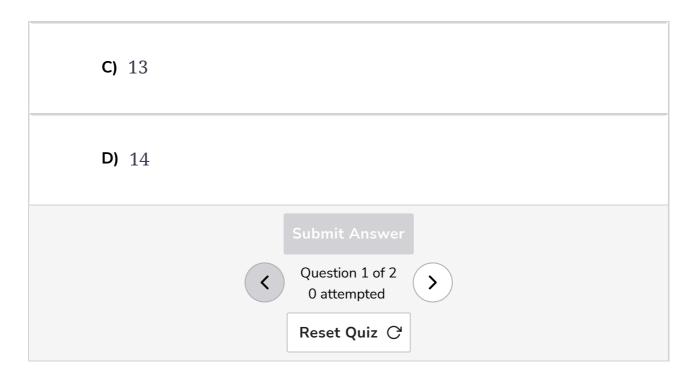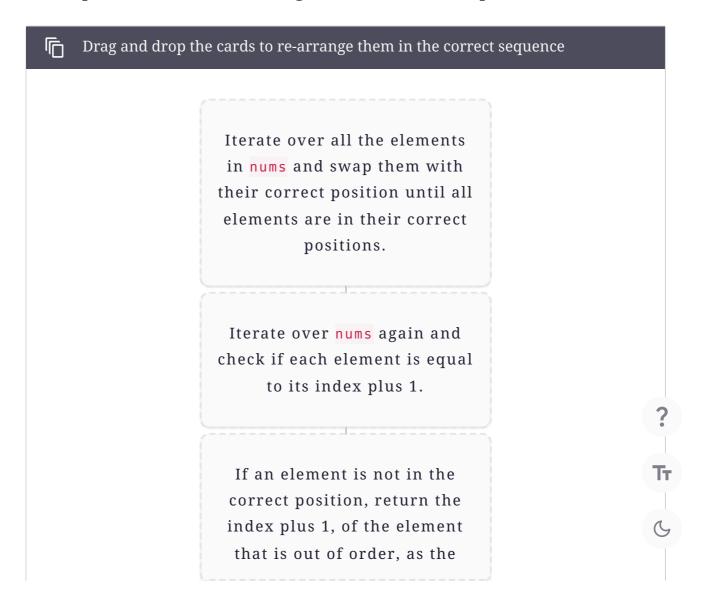| 1 |
|---|

Understand the problem

Let's take a moment to make sure you've correctly understood the problem. The quiz below helps you check if you're solving the correct problem:

Find the Smallest Missing Positive Number

1 What is the output if the following array is given as input?

[7, 8, 9, 11, 12]

A) 1

B) 10

C) 13

D) 14

Figure it out!

We have a game for you to play: re-arrange the logical building blocks to develop a clearer understanding of how to solve this problem.

📑 Drag and drop the cards to re-arrange them in the correct sequence

Iterate over all the elements in `nums` and swap them with their correct position until all elements are in their correct positions.

Iterate over `nums` again and check if each element is equal to its index plus 1.

If an element is not in the correct position, return the index plus 1, of the element that is out of order, as the

smallest missing positive
number.

If all elements are in order,
return the length of the array
plus 1 as the smallest missing
positive integer.

Try it yourself

Implement your solution in the following coding playground:

Java

usercode > FirstMissing.java

```java
1  import java.util.*;
2  public class FirstMissing{
3      public static int firstMissingPositiveInteger(int[] nums) {
4          // Write your code here
5
6          // your code will replace this placeholder return statement
7
8          return -1;
9      }
10 }
```

Powered by AI

Submit

?

Test Cases   Results

Case 1   Case 2   Case 3

Input #1

[1,2,3,5]

First Missing Positive

☑ Mark as Completed

?

Tᴛ

🌙