

QUE 1

```
var input_array = getProgramInputs();
var arr = input_array.map(Number);

let numSet = new Set(arr);
let maxNum = Math.max(...arr);

// check from 0 to maxNum
for (let i = 0; i <= maxNum; i++) {
  if (!numSet.has(i)) {
    console.log(i);
    return;
  }
}

// if nothing missing in between, then last number is missing
console.log(maxNum + 1);
```

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```
// Input is automatically provided
var input_array = getProgramInputs();
var str = String(input_array[0]);

function lengthOfLongestSubstring(s) {
  let charIndexMap = {};
  let start = 0;
  let maxLength = 0;
```

```
for (let end = 0; end < s.length; end++) {  
    let currentChar = s[end];  
  
    // If character already seen and inside current window  
    if (charIndexMap[currentChar] >= start) {  
        start = charIndexMap[currentChar] + 1;  
    }  
  
    // Update character index  
    charIndexMap[currentChar] = end;  
  
    // Update maximum length  
    maxLength = Math.max(maxLength, end - start + 1);  
}  
  
return maxLength;  
}  
  
// Print result  
console.log(lengthOfLongestSubstring(str));
```