

5881. Maximum Difference Between Increasing Elements

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Given a **0-indexed** integer array `nums` of size `n`, find the **maximum difference** between `nums[i]` and `nums[j]` (i.e., `nums[j] - nums[i]`), such that $0 \leq i < j < n$ and `nums[i] < nums[j]`.

Return the **maximum difference**. If no such `i` and `j` exists, return `-1`.

Example 1:

Input: `nums = [7,1,5,4]`

Output: `4`

Explanation:

The maximum difference occurs with `i = 1` and `j = 2`, `nums[j] - nums[i] = 5 - 1 = 4`.
Note that with `i = 1` and `j = 0`, the difference `nums[j] - nums[i] = 7 - 1 = 6`, but `nums[i] > nums[j]`.

User Accepted: 0

User Tried: 0

Total Accepted: 0

Total Submissions: 0

Difficulty: Easy

Example 2:

Input: `nums = [9,4,3,2]`

Output: `-1`

Explanation:

There is no `i` and `j` such that `i < j` and `nums[i] < nums[j]`.

Example 3:

Input: `nums = [1,5,2,10]`

Output: `9`

Explanation:

The maximum difference occurs with `i = 0` and `j = 3`, `nums[j] - nums[i] = 10 - 1 = 9`.

Constraints:

- `n == nums.length`
- `2 <= n <= 1000`
- `1 <= nums[i] <= 109`

JavaScript



```
1 const maximumDifference = (a) => {
2   let n = a.length, max = -1;
3   for (let i = 0; i < n; i++) {
4     for (let j = i + 1; j < n; j++) {
5       if (a[i] < a[j]) {
6         max = Math.max(max, a[j] - a[i]);
7       }
8     }
9   }
10  return max;
11};
```

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