

# Find the Value of the Partition

You are given a **positive** integer array `nums`.

Partition `nums` into two arrays, `nums1` and `nums2`, such that:

- Each element of the array `nums` belongs to either the array `nums1` or the array `nums2`.
- Both arrays are **non-empty**.
- The value of the partition is **minimized**.

The value of the partition is  $|\max(\text{nums1}) - \min(\text{nums2})|$ .

Here,  $\max(\text{nums1})$  denotes the maximum element of the array `nums1`, and  $\min(\text{nums2})$  denotes the minimum element of the array `nums2`.

Return *the integer denoting the value of such partition*.

## Example 1:

**Input:** `nums = [1,3,2,4]`

**Output:** 1

**Explanation:** We can partition the array `nums` into `nums1 = [1,2]` and `nums2 = [3,4]`.

- The maximum element of the array `nums1` is equal to 2.
- The minimum element of the array `nums2` is equal to 3.

The value of the partition is  $|2 - 3| = 1$ .

It can be proven that 1 is the minimum value out of all partitions.

## Example 2:

**Input:** `nums = [100,1,10]`

**Output:** 9

**Explanation:** We can partition the array `nums` into `nums1 = [10]` and `nums2 = [100,1]`.

- The maximum element of the array `nums1` is equal to 10.
- The minimum element of the array `nums2` is equal to 1.

The value of the partition is  $|10 - 1| = 9$ .

It can be proven that 9 is the minimum value out of all partitions.

## Constraints:

- $2 \leq \text{nums.length} \leq 10^5$
- $1 \leq \text{nums}[i] \leq 10^9$