2293. Min Max Game

Description

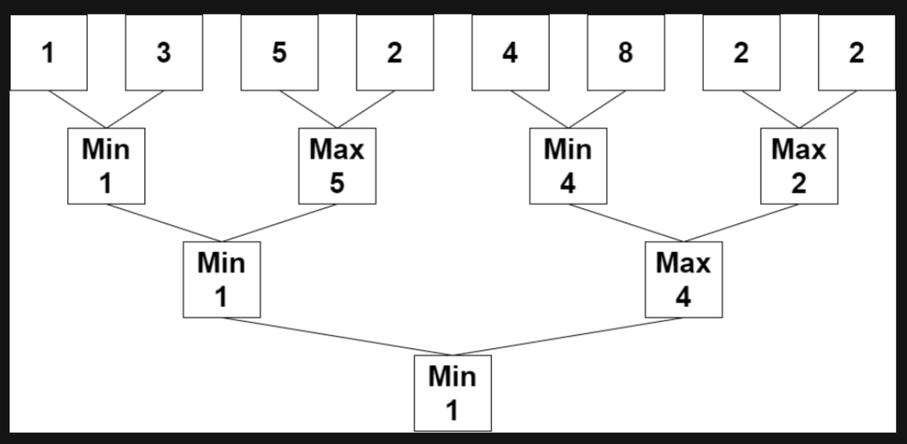
You are given a **0-indexed** integer array `nums` whose length is a power of `2`.

Apply the following algorithm on `nums`:

1. Let `n` be the length of `nums`. If `n == 1`, **end** the process. Otherwise, **create** a new **0-indexed** integer array `newNums` of length `n / 2`.
2. For every **even** index `i` where `0 <= i < n / 2`, **assign** the value of `newNums[i]` as `min(nums[2 * i], nums[2 * i + 1])`.
3. For every **odd** index `i` where `0 <= i < n / 2`, **assign** the value of `newNums[i]` as `max(nums[2 * i], nums[2 * i + 1])`.
4. **Replace** the array `nums` with `newNums`.
5. **Repeat** the entire process starting from step 1.

Return *the last number that remains in* `nums` *after applying the algorithm.*

Example 1:




```
Input: nums = [1,3,5,2,4,8,2,2]
Output: 1
Explanation: The following arrays are the results of applying the algorithm repeatedly.
First: nums = [1,5,4,2]
Second: nums = [1,4]
Third: nums = [1]
1 is the last remaining number, so we return 1.
```

Example 2:

```
Input: nums = [3]
Output: 3
Explanation: 3 is already the last remaining number, so we return 3.
```

Constraints:

- `1 <= nums.length <= 1024`
- `1 <= nums[i] <= 10 ^ 9`
- `nums.length` is a power of `2`.