2616. Minimize the Maximum Difference of Pairs

Description

You are given a **0-indexed** integer array `nums` and an integer `p`. Find `p` pairs of indices of `nums` such that the **maximum** difference amongst all the pairs is **minimized**. Also, ensure no index appears more than once amongst the `p` pairs.

Note that for a pair of elements at the index `i` and `j`, the difference of this pair is `|nums[i] - nums[j]|`, where `|x|` represents the **absolute value** of `x`.

Return *the **minimum** **maximum** difference among all* `p` *pairs.* We define the maximum of an empty set to be zero.

Example 1:

```
Input: nums = [10,1,2,7,1,3], p = 2
Output: 1
Explanation: The first pair is formed from the indices 1 and 4, and the second pair is formed from the indices 2 and 5.
The maximum difference is max(|nums[1] - nums[4]|, |nums[2] - nums[5]|) = max(0, 1) = 1. Therefore, we return 1.
```

Example 2:

```
Input: nums = [4,2,1,2], p = 1
Output: 0
Explanation: Let the indices 1 and 3 form a pair. The difference of that pair is |2 - 2| = 0, which is the minimum we can attain.
```

Constraints:

- `1 <= nums.length <= 10^5`
- `0 <= nums[i] <= 10^9`
- `0 <= p <= (nums.length)/2`