

Minimize the Maximum Difference of Pairs

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 $|\text{nums}[i] - \text{nums}[j]|$, 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 $\max(|\text{nums}[1] - \text{nums}[4]|, |\text{nums}[2] - \text{nums}[5]|) = \max(0, 1) = 1$. 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:

- $1 \leq \text{nums.length} \leq 10^5$
- $0 \leq \text{nums}[i] \leq 10^9$
- $0 \leq p \leq (\text{nums.length})/2$