

719. Find K-th Smallest Pair Distance

Description

The **distance of a pair** of integers `a` and `b` is defined as the absolute difference between `a` and `b`.

Given an integer array `nums` and an integer `k`, return *the `k`th smallest distance among all the pairs `nums[i]` and `nums[j]` where $0 \leq i < j < \text{nums.length}$* .

Example 1:

Input: `nums = [1,3,1], k = 1`

Output: `0`

Explanation: Here are all the pairs:

`(1,3) -> 2`

`(1,1) -> 0`

`(3,1) -> 2`

Then the 1st smallest distance pair is `(1,1)`, and its distance is `0`.

Example 2:

Input: `nums = [1,1,1], k = 2`

Output: `0`

Example 3:

Input: `nums = [1,6,1], k = 3`

Output: `5`

Constraints:

- `n == nums.length`
- `2 <= n <= 104`
- `0 <= nums[i] <= 106`
- `1 <= k <= n * (n - 1) / 2`

