

910. Smallest Range II

Description

You are given an integer array `nums` and an integer `k`.

For each index `i` where $0 \leq i < \text{nums.length}$, change `nums[i]` to be either `nums[i] + k` or `nums[i] - k`.

The **score** of `nums` is the difference between the maximum and minimum elements in `nums`.

Return *the minimum score of `nums` after changing the values at each index*.

Example 1:

Input: `nums = [1], k = 0`

Output: 0

Explanation: The score is $\max(\text{nums}) - \min(\text{nums}) = 1 - 1 = 0$.

Example 2:

Input: `nums = [0,10], k = 2`

Output: 6

Explanation: Change `nums` to be `[2, 8]`. The score is $\max(\text{nums}) - \min(\text{nums}) = 8 - 2 = 6$.

Example 3:

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

Output: 3

Explanation: Change `nums` to be `[4, 6, 3]`. The score is $\max(\text{nums}) - \min(\text{nums}) = 6 - 3 = 3$.

Constraints:

- $1 \leq \text{nums.length} \leq 10^4$
- $0 \leq \text{nums}[i] \leq 10^4$
- $0 \leq k \leq 10^4$

