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Minimize Deviation in Array - LeetCode

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1675. Minimize Deviation in Array

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You are given an array `nums` of `n` positive integers.

You can perform two types of operations on any element of the array any number of times:

- If the element is **even**, **divide** it by `2`.
  - For example, if the array is `[1,2,3,4]`, then you can do this operation on the last element, and the array will be `[1,2,3,2]`.
- If the element is **odd**, **multiply** it by `2`.
  - For example, if the array is `[1,2,3,4]`, then you can do this operation on the first element, and the array will be `[2,2,3,4]`.

The **deviation** of the array is the **maximum difference** between any two elements in the array.

Return *the **minimum deviation** the array can have after performing some number of operations.*

Example 1:

Input: `nums = [1,2,3,4]`

Output: `1`

Explanation: You can transform the array to `[1,2,3,2]`, then to `[2,2,3,2]`, then the deviation will be `3 - 2 = 1`.

Example 2:

Input: `nums = [4,1,5,20,3]`

Output: `3`

Explanation: You can transform the array after two operations to `[4,2,5,5,3]`, then the deviation will be `5 - 2 = 3`.

Example 3:

Input: `nums = [2,10,8]`

Output: `3`

Constraints:

- `n == nums.length`
- `2 <= n <= 105`
- `1 <= nums[i] <= 109`

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class Solution {

public int minimumDeviation(int[] nums) {

}

}

⌵

Problems

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