You are given a **0-indexed** integer array nums of length n.

The **average difference** of the index i is the **absolute** **difference** between the average of the **first** i + 1 elements of nums and the average of the **last** n - i - 1 elements. Both averages should be **rounded down** to the nearest integer.

Return*the index with the****minimum average difference***. If there are multiple such indices, return the **smallest** one.

**Note:**

* The **absolute difference** of two numbers is the absolute value of their difference.
* The **average** of n elements is the **sum** of the n elements divided (**integer division**) by n.
* The average of 0 elements is considered to be 0.

**Example 1:**

**Input:** nums = [2,5,3,9,5,3]

**Output:** 3

**Explanation:**

- The average difference of index 0 is: |2 / 1 - (5 + 3 + 9 + 5 + 3) / 5| = |2 / 1 - 25 / 5| = |2 - 5| = 3.

- The average difference of index 1 is: |(2 + 5) / 2 - (3 + 9 + 5 + 3) / 4| = |7 / 2 - 20 / 4| = |3 - 5| = 2.

- The average difference of index 2 is: |(2 + 5 + 3) / 3 - (9 + 5 + 3) / 3| = |10 / 3 - 17 / 3| = |3 - 5| = 2.

- The average difference of index 3 is: |(2 + 5 + 3 + 9) / 4 - (5 + 3) / 2| = |19 / 4 - 8 / 2| = |4 - 4| = 0.

- The average difference of index 4 is: |(2 + 5 + 3 + 9 + 5) / 5 - 3 / 1| = |24 / 5 - 3 / 1| = |4 - 3| = 1.

- The average difference of index 5 is: |(2 + 5 + 3 + 9 + 5 + 3) / 6 - 0| = |27 / 6 - 0| = |4 - 0| = 4.

The average difference of index 3 is the minimum average difference so return 3.

**Example 2:**

**Input:** nums = [0]

**Output:** 0

**Explanation:**

The only index is 0 so return 0.

The average difference of index 0 is: |0 / 1 - 0| = |0 - 0| = 0.

**Constraints:**

* 1 <= nums.length <= 105
* 0 <= nums[i] <= 105