

5488. Minimum Operations to Make Array Equal

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You have an array `arr` of length `n` where $arr[i] = (2 * i) + 1$ for all valid values of `i` (i.e. $0 \leq i < n$).

In one operation, you can select two indices `x` and `y` where $0 \leq x, y < n$ and subtract 1 from `arr[x]` and add 1 to `arr[y]` (i.e. perform `arr[x] -= 1` and `arr[y] += 1`). The goal is to make all the elements of the array **equal**. It is **guaranteed** that all the elements of the array can be made equal using some operations.

Given an integer `n`, the length of the array. Return *the minimum number of operations* needed to make all the elements of `arr` equal.

User Accepted: 0

User Tried: 0

Total Accepted: 0

Total Submissions: 0

Difficulty: Medium

Example 1:

Input: `n = 3`

Output: 2

Explanation: `arr = [1, 3, 5]`

First operation choose `x = 2` and `y = 0`, this leads `arr` to be `[2, 3, 4]`

In the second operation choose `x = 2` and `y = 0` again, thus `arr = [3, 3, 3]`.

Example 2:

Input: `n = 6`

Output: 9

Constraints:

- $1 \leq n \leq 10^4$

JavaScript



```
1 /**
2  * @param {number} n
3  * @return {number}
4  */
5 const minOperations = (n) => {
6     let arr = [];
7     for (let i = 0; i < n; i++) {
8         arr.push(2 * i + 1);
```

```
9      }
10     let sum = arr.reduce((acc, cur) => acc + cur);
11     let avg = sum / n;
12     if (n % 2 !== 0) {
13         let middle = arr.indexOf(avg);
14         let left = arr.slice(0, middle);
15         let right = arr.slice(middle + 1, n);
16         let sum = 0;
17         for (let i = 0; i < left.length; i++) {
18             sum += ((right[i] - left[i]) >> 1);
19         }
20         return sum;
21     } else {
22         let rightIdx;
23         for (let i = 1; i < n; i++) {
24             if (arr[i - 1] < avg && arr[i] > avg) {
25                 rightIdx = i;
26             }
27         }
28         let left = arr.slice(0, rightIdx);
29         let right = arr.slice(rightIdx, n);
30         let sum = 0;
31         for (let i = 0; i < left.length; i++) {
32             sum += ((right[i] - left[i]) >> 1);
33         }
34         return sum;
35     }
36 };
```

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