# 2162. Partition Array Into Two Arrays to Minimize Sum Difference

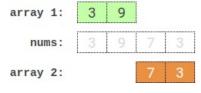
## **Difficulty: Hard**

https://leetcode.com/problems/partition-array-into-two-arrays-to-minimize-sum-difference

You are given an integer array nums of 2 \* n integers. You need to partition nums into **two** arrays of length n to **minimize the absolute difference** of the **sums** of the arrays. To partition nums, put each element of nums into **one** of the two arrays.

Return the **minimum** possible absolute difference.

#### Example 1:



**Input:** nums = [3,9,7,3]

Output: 2

**Explanation:** One optimal partition is: [3,9] and [7,3].

The absolute difference between the sums of the arrays is abs((3 + 9) - (7 + 3)) = 2.

#### Example 2:

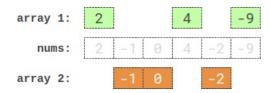
**Input:** nums = [-36,36]

**Output:** 72

**Explanation:** One optimal partition is: [-36] and [36].

The absolute difference between the sums of the arrays is abs((-36) - (36)) = 72.

### Example 3:



**Input:** nums = [2,-1,0,4,-2,-9]

Output: 0

**Explanation:** One optimal partition is: [2,4,-9] and [-1,0,-2].

The absolute difference between the sums of the arrays is abs((2 + 4 + -9) - (-1 + 0 + -2)) = 0.

#### **Constraints:**

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• 1 <= n <= 15
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- nums.length == 2 \* n
- $-10^7 <= nums[i] <= 10^7$