

53. Maximum Subarray

Given an integer array `nums`, find the subarray with the largest sum, and return *its sum*.

Example 1:

Input: `nums = [-2,1,-3,4,-1,2,1,-5,4]`

Output: 6

Explanation: The subarray `[4,-1,2,1]` has the largest sum 6.

Example 2:

Input: `nums = [1]`

Output: 1

Explanation: The subarray `[1]` has the largest sum 1.

Example 3:

Input: `nums = [5,4,-1,7,8]`

Output: 23

Explanation: The subarray `[5,4,-1,7,8]` has the largest sum 23.

Constraints:

$$1 \leq \text{nums.length} \leq 10^5$$

$$-10^4 \leq \text{nums}[i] \leq 10^4$$

Follow up: If you have figured out the $O(n)$ solution, try coding another solution using the divide and conquer approach, which is more subtle.