

Single Number

Given a non-empty array of integers `nums`, every element appears twice except for one. Find that single one.

You must implement a solution with a linear runtime complexity and use only constant extra space.

Example 1:

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

Output: 1

Example 2:

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

Output: 4

Example 3:

Input: `nums = [1]`

Output: 1

Constraints:

$1 \leq \text{nums.length} \leq 3 * 10^4$

$-3 * 10^4 \leq \text{nums}[i] \leq 3 * 10^4$

Each element in the array appears twice except for one element which appears only once.