**[Reverse Pairs](https://leetcode.com/problems/reverse-pairs/description/)**

Given an integer array nums, return *the number of****reverse pairs****in the array*.

A **reverse pair** is a pair (i, j) where:

* 0 <= i < j < nums.length and
* nums[i] > 2 \* nums[j].

**Example 1:**

**Input:** nums = [1,3,2,3,1]

**Output:** 2

**Explanation:** The reverse pairs are:

(1, 4) --> nums[1] = 3, nums[4] = 1, 3 > 2 \* 1

(3, 4) --> nums[3] = 3, nums[4] = 1, 3 > 2 \* 1

**Example 2:**

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

**Output:** 3

**Explanation:** The reverse pairs are:

(1, 4) --> nums[1] = 4, nums[4] = 1, 4 > 2 \* 1

(2, 4) --> nums[2] = 3, nums[4] = 1, 3 > 2 \* 1

(3, 4) --> nums[3] = 5, nums[4] = 1, 5 > 2 \* 1

**Constraints:**

* 1 <= nums.length <= 5 \* 104
* -231 <= nums[i] <= 231 - 1