477. Total Hamming Distance

Description

The Hamming distance between two integers is the number of positions at which the corresponding bits are different.

Given an integer array `nums`, return *the sum of* ***Hamming distances*** *between all the pairs of the integers in* `nums`.

Example 1:

```
Input: nums = [4,14,2]
Output: 6
Explanation: In binary representation, the 4 is 0100, 14 is 1110, and 2 is 0010 (just
showing the four bits relevant in this case).
The answer will be:
HammingDistance(4, 14) + HammingDistance(4, 2) + HammingDistance(14, 2) = 2 + 2 + 2 = 6.
```

Example 2:

```
Input: nums = [4,14,4]
Output: 4
```

Constraints:

- `1 <= nums.length <= 10^4`
- `0 <= nums[i] <= 10^9`
- The answer for the given input will fit in a **32-bit** integer.