

2748. Number of Beautiful Pairs

Description

You are given a **0-indexed** integer array `nums`. A pair of indices `i`, `j` where `0 <= i < j < nums.length` is called beautiful if the **first digit** of `nums[i]` and the **last digit** of `nums[j]` are **coprime**.

Return *the total number of beautiful pairs in* `nums`.

Two integers `x` and `y` are **coprime** if there is no integer greater than 1 that divides both of them. In other words, `x` and `y` are coprime if `gcd(x, y) == 1`, where `gcd(x, y)` is the **greatest common divisor** of `x` and `y`.

Example 1:

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

Output: 5

Explanation: There are 5 beautiful pairs in `nums`:

When `i = 0` and `j = 1`: the first digit of `nums[0]` is 2, and the last digit of `nums[1]` is 5. We can confirm that 2 and 5 are coprime, since `gcd(2,5) == 1`.

When `i = 0` and `j = 2`: the first digit of `nums[0]` is 2, and the last digit of `nums[2]` is 1. Indeed, `gcd(2,1) == 1`.

When `i = 1` and `j = 2`: the first digit of `nums[1]` is 5, and the last digit of `nums[2]` is 1. Indeed, `gcd(5,1) == 1`.

When `i = 1` and `j = 3`: the first digit of `nums[1]` is 5, and the last digit of `nums[3]` is 4. Indeed, `gcd(5,4) == 1`.

When `i = 2` and `j = 3`: the first digit of `nums[2]` is 1, and the last digit of `nums[3]` is 4. Indeed, `gcd(1,4) == 1`.

Thus, we return 5.

Example 2:

Input: `nums = [11,21,12]`

Output: 2

Explanation: There are 2 beautiful pairs:

When `i = 0` and `j = 1`: the first digit of `nums[0]` is 1, and the last digit of `nums[1]` is 1. Indeed, `gcd(1,1) == 1`.

When `i = 0` and `j = 2`: the first digit of `nums[0]` is 1, and the last digit of `nums[2]` is 2. Indeed, `gcd(1,2) == 1`.

Thus, we return 2.

Constraints:

- `2 <= nums.length <= 100`
- `1 <= nums[i] <= 9999`
- `nums[i] % 10 != 0`

