# 3215. Count Triplets with Even XOR Set Bits II

Premium Solved

Medium Topics Companies Hint

Given three integer arrays `a`, `b`, and `c`, return the number of triplets `(a[i], b[j], c[k])`, such that the bitwise `XOR` between the elements of each triplet has an **even** number of set bits.

**Example 1:**

> **Input:** `a = [1], b = [2], c = [3]`
>
> **Output:** 1
>
> **Explanation:**
>
> The only triplet is `(a[0], b[0], c[0])` and their `XOR` is: `1 XOR 2 XOR 3 = 00`$_2$.

**Example 2:**

> **Input:** `a = [1,1], b = [2,3], c = [1,5]`
>
> **Output:** 4
>
> **Explanation:**
>
> Consider these four triplets:
>
> - `(a[0], b[1], c[0])`: `1 XOR 3 XOR 1 = 011`$_2$
> - `(a[1], b[1], c[0])`: `1 XOR 3 XOR 1 = 011`$_2$
> - `(a[0], b[0], c[1])`: `1 XOR 2 XOR 5 = 110`$_2$
> - `(a[1], b[0], c[1])`: `1 XOR 2 XOR 5 = 110`$_2$