# **Triple sum**

# HackerRank

Given 3 arrays a, b, c of different sizes, find the number of *distinct* triplets (p, q, r) where p is an element of a, written as  $p \in a$ ,  $q \in b$ , and  $r \in c$ , satisfying the criteria:  $p \leq q$  and  $q \geq r$ .

For example, given a = [3, 5, 7], b = [3, 6], and c = [4, 6, 9], we find four distinct triplets: (3, 6, 4), (3, 6, 6), (5, 6, 4), (5, 6, 6).

#### **Function Description**

Complete the *triplets* function in the editor below. It must return the number of distinct triplets that can be formed from the given arrays.

triplets has the following parameter(s):

• *a*, *b*, *c*: three arrays of integers .

#### Input Format

The first line contains **3** integers *lena*, *lenb*, *and lenc*, the sizes of the three arrays. The next **3** lines contain space-separated integers numbering *lena*, *lenb*, *and lenc* respectively.

#### Constraints

 $1 \leq lena, lenb, lenc \leq 10^5$ 

 $1 \leq ext{ all elements in } a, b, c \leq 10^8$ 

#### **Output Format**

Print an integer representing the number of distinct triplets.

#### Sample Input 0

#### Sample Output 0

8

#### Explanation 0

The special triplets are (1, 2, 1), (1, 2, 2), (1, 3, 1), (1, 3, 2), (1, 3, 3), (3, 3, 1), (3, 3, 2), (3, 3, 3).

#### Sample Input 1

3 3 3 1 4 5 2 3 3 1 2 3

## Sample Output 1

5

# Explanation 1

The special triplets are (1, 2, 1), (1, 2, 2), (1, 3, 1), (1, 3, 2), (1, 3, 3)

# Sample Input 2

4 3 4 1 3 5 7 5 7 9 7 9 11 13

# Sample Output 2

12

## **Explanation 2**

The special triplets are

(1, 7, 7), (1, 9, 7), (1, 9, 9), (3, 7, 7), (3, 9, 7), (3, 9, 9), (5, 7, 7), (5, 9, 7), (5, 9, 9), (7, 7, 7), (7, 9, 7), (7, 9, 9)