

#### Mock Test > doliatius@protonmail.com

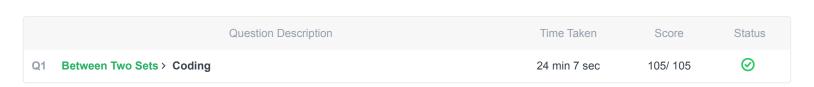
**Full Name:** Musab Oguz Email: doliatius@protonmail.com Test Name: **Mock Test** Taken On: 18 Jan 2024 17:30:43 IST Time Taken: 24 min 17 sec/ 30 min Linkedin: https://www.linkedin.com/in/musab-oguz-68990a200/ Invited by: Ankush Invited on: 18 Jan 2024 17:30:37 IST Skills Score: Tags Score: Algorithms 105/105 Core CS 105/105 Data Structures 105/105 105/105 Easy 105/105 LCM Least Common Multiple 105/105 Math 105/105 gcd 105/105 greatest common divisor 105/105 problem-solving 105/105 sets 105/105

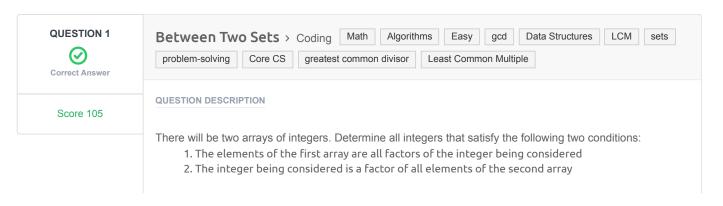
100% 105/105

scored in **Mock Test** in 24 min 17 sec on 18 Jan 2024 17:30:43 IST

## **Recruiter/Team Comments:**

No Comments.





These numbers are referred to as being between the two arrays. Determine how many such numbers exist.

### Example

```
a = [2, 6]
b = [24, 36]
```

There are two numbers between the arrays: 6 and 12.

$$6\%2 = 0$$
,  $6\%6 = 0$ ,  $24\%6 = 0$  and  $36\%6 = 0$  for the first value.

$$12\%2 = 0$$
,  $12\%6 = 0$  and  $24\%12 = 0$ ,  $36\%12 = 0$  for the second value. Return 2.

#### **Function Description**

Complete the *getTotalX* function in the editor below. It should return the number of integers that are betwen the sets.

getTotalX has the following parameter(s):

- int a[n]: an array of integers
- int b[m]: an array of integers

#### Returns

• int: the number of integers that are between the sets

## **Input Format**

The first line contains two space-separated integers, n and m, the number of elements in arrays a and b. The second line contains n distinct space-separated integers a[i] where  $0 \le i < n$ .

The third line contains m distinct space-separated integers b[j] where  $0 \leq j < m$ .

#### **Constraints**

- $1 \le n, m \le 10$
- $1 \le a[i] \le 100$
- $1 \le b[j] \le 100$

# Sample Input

```
2 3
2 4
16 32 96
```

# Sample Output

3

## **Explanation**

2 and 4 divide evenly into 4, 8, 12 and 16.

- 4, 8 and 16 divide evenly into 16, 32, 96.
- 4, 8 and 16 are the only three numbers for which each element of a is a factor and each is a factor of all elements of b.

#### **CANDIDATE ANSWER**

# Language used: C++14

```
1
2 /*
3 * Complete the 'getTotalX' function below.
4 *
5 * The function is expected to return an INTEGER.
6 * The function accepts following parameters:
7 * 1. INTEGER_ARRAY a
8 * 2. INTEGER_ARRAY b
9 */
```

```
int getTotalX(vector<int> a, vector<int> b) {
       sort(a.begin(), a.end());
       sort(b.begin(), b.end());
14
       int limit = b.at(0);
       int first = a.at(0);
       int start = 0;
       vector<int> factors;
      vector<int> ret_vec;
      while (start < limit) {</pre>
          bool is good = true;
24
          start += first;
          for (int i = 0; i<a.size(); i++){
               if (start % a.at(i) > 0) {
                   is_good = false;
           }
           if (is_good) {factors.push_back(start);}
       }
       for (int i = 0; i<factors.size(); i++){
          bool is good = true;
          int divide = factors.at(i);
          for (int ii = 0; ii<b.size(); ii++) {
              if (b.at(ii) % divide > 0) {
                   is_good = false;
41
           }
43
           if (is good) {ret vec.push back(divide);}
45
       return ret_vec.size();
47
```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 1	Easy	Sample case	Success	0	0.0064 sec	8.82 KB
Testcase 2	Easy	Hidden case	Success	15	0.008 sec	8.77 KB
Testcase 3	Easy	Hidden case	Success	15	0.0064 sec	8.87 KB
Testcase 4	Easy	Hidden case	Success	15	0.0066 sec	8.82 KB
Testcase 5	Easy	Hidden case	Success	15	0.0075 sec	8.93 KB
Testcase 6	Easy	Hidden case	Success	15	0.0075 sec	8.88 KB
Testcase 7	Easy	Hidden case	Success	15	0.0064 sec	8.82 KB
Testcase 8	Easy	Hidden case	Success	15	0.0052 sec	8.78 KB
Testcase 9	Easy	Sample case	Success	0	0.0052 sec	8.87 KB

No Comments