

Between Two Sets

 locked

Problem

Submissions

Leaderboard

You will be given two arrays of integers and asked to determine all integers that satisfy the following two conditions:

1. The elements of the first array are all factors of the integer being considered
2. The integer being considered is a factor of all elements of the second array

These numbers are referred to as being *between* the two arrays. You must determine how many such numbers exist.

For example, given the arrays $a = [2, 6]$ and $b = [24, 36]$, there are two numbers between them: **6** and **12**. $6\%2 = 0$, $6\%6 = 0$, $24\%6 = 0$ and $36\%6 = 0$ for the first value. Similarly, $12\%2 = 0$, $12\%6 = 0$ and $24\%12 = 0$, $36\%12 = 0$.



Submissions: 60

Max Score: 30

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OK

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

getTotalX has the following parameter(s):

- *a*: an array of integers
- *b*: an array of integers

Input Format

The first line contains two space-separated integers, *n* and *m*, the number of elements in array *a* and the number of elements in array *b*.

The second line contains *n* distinct space-separated integers describing *a[i]* where $0 \leq i < n$.

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

Constraints

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

Output Format

Print the number of integers that are considered to be *between a* and *b*.



```
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.

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