# Between Two Sets

Consider two sets of positive integers, $A = \{a_0, a_1, \ldots, a_{n-1}\}$ and $B = \{b_0, b_1, \ldots, b_{m-1}\}$. We say that a positive integer, $x$, is *between* sets $A$ and $B$ if the following conditions are satisfied:

1. All elements in $A$ are factors of $x$.
2. $x$ is a factor of all elements in $B$.

In other words, some $x$ is *between* $A$ and $B$ if that value of $x$ satisfies $x \bmod a_i = 0$ for every $a_i$ in $A$ and also satisfies $b_i \bmod x = 0$ for every $b_i$ in $B$. For example, if $A = \{2, 6\}$ and $B = \{12\}$, then our possible $x$ values are $6$ and $12$.

Given $A$ and $B$, find and print the number of integers (i.e., possible $x$'s) that are *between* the two sets.

**Input Format**

The first line contains two space-separated integers describing the respective values of $n$ (the number of elements in set $A$) and $m$ (the number of elements in set $B$).
The second line contains $n$ distinct space-separated integers describing $a_0, a_1, \ldots, a_{n-1}$.
The third line contains $m$ distinct space-separated integers describing $b_0, b_1, \ldots, b_{m-1}$.

**Constraints**

- $1 \leq n, m \leq 10$
- $1 \leq a_i \leq 100$
- $1 \leq b_i \leq 100$

**Output Format**

Print the number of integers that are considered to be *between* $A$ and $B$.

**Sample Input**

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

**Sample Output**

```
3
```

**Explanation**

There are three $x$ values *between* $A = \{2, 4\}$ and $B = \{16, 32, 96\}$:

- $x = 4$:
  - All the elements in $A$ evenly divide $x = 4$.
  - $x = 4$ evenly divides all the elements in $B$.
- $x = 8$:
  - All the elements in $A$ evenly divide $x = 8$.
  - $x = 8$ evenly divides all the elements in $B$.
- $x = 16$:
  - All the elements in $A$ evenly divide $x = 16$.

- $x = 16$ evenly divides all the elements in $B$.

Thus, we print $3$ as our answer.