Spaghetti with Hotdogs

In the whimsical world of Sheldon Cooper, where intellect and quirkiness go hand in hand, a special day was approaching – Sheldon's birthday. His loving fiancée, Amy Farrah Fowler, decided to surprise him with a unique birthday game that would truly test his intelligence.

As part of his birthday celebration, Amy had prepared Sheldon's favorite meal – spaghetti with hotdogs. However, she wanted to add an exciting twist to the occasion. With the help of Sheldon's friends Leonard, Rajesh, and Howard, she devised a playful challenge that revolved around unlocking dishes of spaghetti with hotdogs.

Spaghetti with little pieces of hot dog cut up in it!
Just like your mommy used to make.

There were n dishes, each marked with an integer d_i, and n electronic coupons, each displaying an integer c_j. These coupons were specially designed to electronically lock and unlock the dishes. The tricky part was that each coupon could only unlock a dish if the numbers on the coupon and the dish were **not co-prime**. Additionally, once a coupon was used to unlock a dish, it couldn't be used again.

Now, here's the fun part. Imagine yourself as Sheldon Cooper, the brilliant mind of the group. Your task is to find out the **maximum number of dishes you can unlock** to enjoy your favorite meal of spaghetti with hotdogs on your birthday.

So, Sheldon, with your exceptional intellect and unparalleled problem-solving skills, it's time to embrace this challenge and demonstrate your mastery.

Input Format

The first line contains the integer n. The following two lines describe the numbers d_i on the dishes, and the numbers c_j on the coupons, respectively, where the numbers are separated by spaces in each of the two lines.

Constraints

$0 < n \leq 10^6$

$2 \leq d_i, c_j \leq 10^9$

Output Format

Output the maximum number of dishes you can unlock.

Sample Input 0

```
5
3 19 12 22 18
17 30 15 8 25
```

Sample Output 0

```
3
```

Explanation 0

You can pick the following coupons and unlock the corresponding dish to get maximum number of dishes unlocked, which is 3.

Coupon ID	Unlocked Dish ID
15	3
30	12
8	22