CMPUT 275 - Tangible Computing **Winter 2018**
Morning Problem: Simple Sums

Description

Here is a very basic question. Given three lists of numbers a, b and c, how many entries of c can be represented as the sum of an entry in a and an entry in b?

Input

The first line of input consists of a single integer n between 1 and 1000.

The next three lines each contain n integers. The integers on each line are separated by a single space. Every integer lies between -10^6 and 10^6.

Output

Output a single line containing a single integer. This should be the number of entries of the third list that can be represented as the sum of one integer in the first list and one integer in the second list.

Sample Input 1

```
3
1 2 3
6 5 4
3 8 5
```

Sample Output 1

```
2
```

Explanation: We can represent 8 as 2+6 (there are other ways too). We can represent 5 as 1+4. But 3 cannot be represented as the sum of an integer from `[1, 2, 3]` and an integer from `[6, 5, 4]`.

Sample Input 2

```
2
-1 2
1 1
2 0
```

Sample Output 2

```
1
```

Explanation: We have 0 = -1 + 1, but 2 cannot be represented as the sum of an integer from `[-1, 2]` and `[2, 0]`.

Sample Input 3

```
2
1 2
1 2
4 4
```

Sample Output 3

```
2
```

Explanation: We can represent 4 = 2+2. The answer is 2 because both entries of the last list can be represented this way.