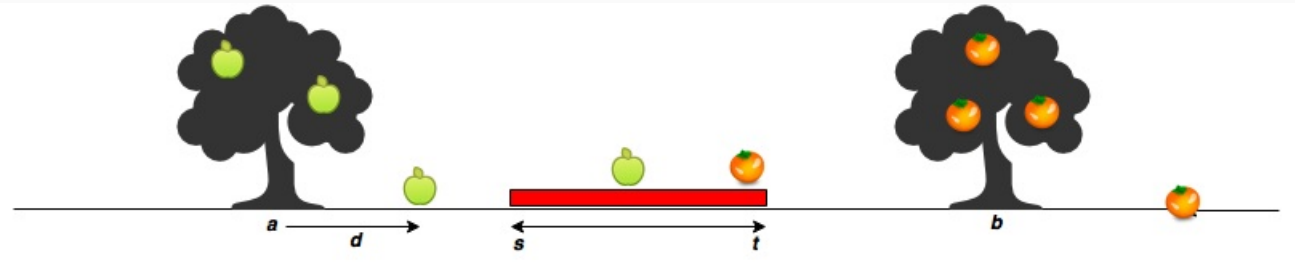
Sam's house has an apple tree and an orange tree that yield an abundance of fruit. In the diagram below, the red region denotes his house, where s is the start point, and t is the endpoint. The apple tree is to the left of his house, and the orange tree is to its right. You can assume the trees are located on a single point, where the apple tree is at point a, and the orange tree is at point b.



When a fruit falls from its tree, it lands d units of distance from its tree of origin along the x-axis. A negative value of d means the fruit fell d units to the tree's left, and a positive value of d means it falls d units to the tree's right.

Given the value of d for m apples and n oranges, determine how many apples and oranges will fall on Sam's house (i.e., in the inclusive range $[s, t]$)?

For example, Sam's house is between $s = 7$ and $t = 10$. The apple tree is located at $a = 4$ and the orange at $b = 12$. There are $m = 3$ apples and $n = 3$ oranges. Apples are thrown $apples = [2, 3, -4]$ units distance from a, and $oranges = [3, -2, -4]$ units distance. Adding each apple distance to the position of the tree, they land at $[4 + 2, 4 + 3, 4 + -4] = [6, 7, 0]$. Oranges land at $[12 + 3, 12 + -2, 12 + -4] = [15, 10, 8]$. One apple and two oranges land in the inclusive range $7 - 10$ so we print

```
1
2
```

Function Description

Complete the *countApplesAndOranges* function in the editor below. It should print the number of apples and oranges that land on Sam's house, each on a separate line.

countApplesAndOranges has the following parameter(s):

- *s*: integer, starting point of Sam's house location.
- *t*: integer, ending location of Sam's house location.
- *a*: integer, location of the Apple tree.
- *b*: integer, location of the Orange tree.
- *apples*: integer array, distances at which each apple falls from the tree.
- *oranges*: integer array, distances at which each orange falls from the tree.

Input Format

The first line contains two space-separated integers denoting the respective values of s and t.
The second line contains two space-separated integers denoting the respective values of a and b.
The third line contains two space-separated integers denoting the respective values of m and n.
The fourth line contains m space-separated integers denoting the respective distances that each apple falls from point a.
The fifth line contains n space-separated integers denoting the respective distances that each orange falls from point b.

Constraints

- $1 \leq s, t, a, b, m, n \leq 10^5$
- $-10^5 \leq d \leq 10^5$
- $a < s < t < b$

Output Format

Print two integers on two different lines:

1. The first integer: the number of apples that fall on Sam's house.
2. The second integer: the number of oranges that fall on Sam's house.

Sample Input 0

```
7 11
5 15
3 2
-2 2 1
5 -6
```

Sample Output 0

```
1
1
```

Explanation 0

The first apple falls at position $5 - 2 = 3$.
The second apple falls at position $5 + 2 = 7$.
The third apple falls at position $5 + 1 = 6$.
The first orange falls at position $15 + 5 = 20$.
The second orange falls at position $15 - 6 = 9$.
Only one fruit (the second apple) falls within the region between 7 and 11, so we print 1 as our first line of output.
Only the second orange falls within the region between 7 and 11, so we print 1 as our second line of output.