**Find all pairs with a given sum**

Submissions: [23638](https://practice.geeksforgeeks.org/problem_submissions.php?pid=1770)  Accuracy:

20.74%

   Difficulty: [Easy](https://practice.geeksforgeeks.org/Easy/0/0/)   Marks: 2

Show Topic Tags   

[Amazon](https://practice.geeksforgeeks.org/company/Amazon/)[Facebook](https://practice.geeksforgeeks.org/company/Facebook/)[United Health Group](https://practice.geeksforgeeks.org/company/United%20Health%20Group/)

Given two unsorted arrays **A** of size **N** and **B** of size **M** of distinct elements, the task is to find all pairs from both arrays whose sum is equal to **X**.

**Input:**  
The first line of input contains an integer T denoting the no of test cases. Then T test cases follow. Each test case contains 3 lines . The first line contains 3 space separated integers N, M, X. Then in the next two lines are space separated values of the array A and B respectively.

**Output:**  
For each test case in a new line print the sorted space separated values of all the pairs u,v where u belongs to array A and v belongs to array B, such that each pair is separated from the other by a ',' without quotes also add a space after the ',' . If no such pair exist print **-1**.

**Constraints:**  
1 <= T <= 100  
1 <= N, M, X <= 106  
-106 <= A, B <= 106

**Example:  
Input:**  
2  
5 5 9  
1 2 4 5 7  
5 6 3 4 8  
2 2 3  
0 2  
1 3  
**Output:**  
1 8, 4 5, 5 4  
0 3, 2 1

**Explanation:  
Testcase 1:**(1, 8), (4, 5), (5, 4) are the pairs which sum to 9.

\*\* For More Input/Output Examples Use ['Expected Output'](https://practice.geeksforgeeks.org/problems/find-all-pairs-whose-sum-is-x/0/?ref=self#ExpectOP) option \*\*

[Author: Shubham Joshi 1](https://auth.geeksforgeeks.org/user/Shubham%20Joshi%201/practice/)

<https://practice.geeksforgeeks.org/problems/find-all-pairs-whose-sum-is-x/0/?ref=self>

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

public class GFG

{

static void Main(string[] args)

{

int t = int.Parse(Console.ReadLine());

while (t-- > 0)

{

string[] input = Console.ReadLine().Trim().Split(' ');

int n = int.Parse(input[0]);

int m = int.Parse(input[1]);

int x = int.Parse(input[2]);

int[] a = Array.ConvertAll(Console.ReadLine().Trim().Split(' '), e => int.Parse(e));

int[] b = Array.ConvertAll(Console.ReadLine().Trim().Split(' '), e => int.Parse(e));

HashSet<int> hash\_b = new HashSet<int>(b);

Array.Sort(a);

List<string> lista = new List<string>();

//int cont = 0;

StringBuilder sb = new StringBuilder();

for (int i = 0; i < a.Length; i++)

{

if (hash\_b.Contains(x - a[i]))

{

sb.Append(a[i]);

sb.Append(" ");

sb.Append(x - a[i]);

sb.Append(", ");

}

}

if (sb.Length == 0)

{

Console.WriteLine(-1);

}

else

{

Console.WriteLine(sb.ToString(). TrimEnd(new char[] { ' ', ',' }));

}

}

Console.ReadLine();

}

}