Find the intersection of two sorted arrays.

OR in other words,

Given 2 sorted arrays, find all the elements which occur in both the arrays.

Input Format

- The first line contains T, the number of test cases. Following T lines contain:

1. Line 1 contains N1, followed by N1 integers of the first array
2. Line 2 contains N2, followed by N2 integers of the second array

Output Format

The intersection of the arrays in a single line

Example

Input:

1

3 10 17 57

6 2 7 10 15 57 246

Output:

10 57

Input:

1

6 1 2 3 4 5 6

2 1 6

Output:

1 6

**For example:**

| Input | Result |
| --- | --- |
| 1<br>3 10 17 57<br>6<br>2 7 10 15 57 246 | 10 57 |

```c
#include <stdio.h>

int main() {
    int T;
    scanf("%d", &T);  // number of test cases

    while (T--) {
        int n1, n2;
        scanf("%d", &n1);
        int a[n1];
        for (int i = 0; i < n1; i++)
            scanf("%d", &a[i]);

        scanf("%d", &n2);
        int b[n2];
        for (int i = 0; i < n2; i++)
            scanf("%d", &b[i]);

        int i = 0, j = 0;
        int printed = 0;

        // Find intersection
        while (i < n1 && j < n2) {
            if (a[i] == b[j]) {
                if (printed) printf(" ");
                printf("%d", a[i]);
                printed = 1;
                i++;
                j++;
            } else if (a[i] < b[j]) {
                i++;
            } else {
                j++;
            }
        }
        printf("\n");
    }

    return 0;
}
```

| | Input | Expected | Got | |
|---|---|---|---|---|
| ✔ | 1<br>3 10 17 57<br>6<br>2 7 10 15 57 246 | 10 57 | 10 57 | ✔ |
| ✔ | 1<br>6 1 2 3 4 5 6<br>2<br>1 6 | 1 6 | 1 6 | ✔ |

Passed all tests! ✔

**Correct**

Marks for this submission: 1.00/1.00.