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**Started on** Wednesday, 8 October 2025, 8:44 AM

**State** Finished

**Completed on** Wednesday, 8 October 2025, 9:03 AM

**Time taken** 19 mins 18 secs

**Marks** 1.00/1.00

**Grade** 4.00 out of 4.00 (100%)

**Question 1** | Correct Mark 1.00 out of 1.00

Find Duplicate in Array.

Given a read only array of n integers between 1 and n, find one number that repeats.

Input Format:

First Line - Number of elements

n Lines - n Elements

Output Format:

Element x - That is repeated

**For example:**

Input	Result
5	1
1 1 2 3 4	

**Answer:** (penalty regime: 0 %)

```

1 #include <stdio.h>
2 #include <stdlib.h>
3▼ int main() {
4     int n;
5     scanf("%d", &n);
6     int a[n];
7▼     for (int i = 0; i < n; i++) {
8         scanf("%d", &a[i]);
9     }
10▼     for (int i = 0; i < n; i++) {
11         int val = abs(a[i]);
12▼         if (a[val - 1] < 0) {
13             printf("%d\n", val);
14             break;
15         }
16         a[val - 1] = -a[val - 1];
17     }
18     return 0;
19 }
20
21

```

	Input	Expected	Got	
	11 10 9 7 6 5 1 2 3 8 4 7	7	7	
	5 1 2 3 4 4	4	4	
	5 1 1 2 3 4	1	1	

Passed all tests! |

**Correct**

Marks for this submission: 1.00/1.00.

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**Started on** Wednesday, 8 October 2025, 8:46 AM

**State** Finished

**Completed on** Wednesday, 8 October 2025, 9:03 AM

**Time taken** 16 mins 51 secs

**Marks** 1.00/1.00

**Grade** 4.00 out of 4.00 (100%)

**Question 1** | Correct Mark 1.00 out of 1.00

Find Duplicate in Array.

Given a read only array of n integers between 1 and n, find one number that repeats.

Input Format:

First Line - Number of elements

n Lines - n Elements

Output Format:

Element x - That is repeated

**For example:**

Input	Result
5	1
1 1 2 3 4	

**Answer:** (penalty regime: 0 %)

```

1 #include <stdio.h>
2▼ int main() {
3     int n;
4     scanf("%d", &n);
5     int a[n];
6▼     for (int i = 0; i < n; i++) {
7         scanf("%d", &a[i]);
8     }
9▼     for (int i = 0; i < n; i++) {
10▼         for (int j = i + 1; j < n; j++) {
11▼             if (a[i] == a[j]) {
12                 printf("%d\n", a[i]);
13                 return 0;
14             }
15         }
16     }
17 }
18

```

	Input	Expected	Got	
	11 10 9 7 6 5 1 2 3 8 4 7	7	7	
	5 1 2 3 4 4	4	4	
	5 1 1 2 3 4	1	1	

Passed all tests! |

**Correct**

Marks for this submission: 1.00/1.00.

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**Started on** Wednesday, 8 October 2025, 8:50 AM

**State** Finished

**Completed on** Wednesday, 8 October 2025, 9:03 AM

**Time taken** 13 mins 31 secs

**Marks** 1.00/1.00

**Grade** 30.00 out of 30.00 (100%)

**Question 1** | Correct Mark 1.00 out of 1.00

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:

- Line 1 contains N1, followed by N1 integers of the first array
- 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	10 57
3 10 17 57	
6	
2 7 10 15 57 246	

**Answer:** (penalty regime: 0 %)

```

1 #include <stdio.h>
2 int main() {
3     int T;
4     scanf("%d", &T);
5     while (T--) {
6         int N1;
7         scanf("%d", &N1);
8         int A[N1];
9         for (int i = 0; i < N1; i++) {
10             scanf("%d", &A[i]);
11         }
12         int N2;
13         scanf(" %d ", &N2);
14         int B[N2];
15         for (int i = 0; i < N2; i++) {
16             scanf("%d", &B[i]);
17         }
18         int i = 0, j = 0;
19         while (i < N1 && j < N2) {
20             if (A[i] < B[j]) {
21                 i++;
22             }
23             else if (A[i] > B[j]) {
24                 j++;
25             }
26             else {
27                 printf("%d ", A[i]);
28                 i++;
29                 j++;
30             }
31         }
32     }
33 }
```

```
22▼          } 3-PrintIntersectionof2sorted arrays-O(m*n)Time Complexity,O(1) Space Complexity: Attempt review
23          } else if (A[i] > B[j]) {
24          j++;
25          } else {
26          printf("%d ", A[i]);
27          i++;
28          j++;
29          }
30          printf("\n");
31      }
32  }
33 }
```

	Input	Expected	Got	
	1 3 10 17 57 6 2 7 10 15 57 246	10 57	10 57	
	1 6 1 2 3 4 5 6 2 1 6	1 6	1 6	

Passed all tests! |

Correct

Marks for this submission: 1.00/1.00.

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**Started on** Wednesday, 8 October 2025, 8:53 AM

**State** Finished

**Completed on** Wednesday, 8 October 2025, 9:04 AM

**Time taken** 10 mins 47 secs

**Marks** 1.00/1.00

**Grade** 30.00 out of 30.00 (100%)

**Question 1** | Correct Mark 1.00 out of 1.00

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:

- Line 1 contains N1, followed by N1 integers of the first array
- 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	10 57
3 10 17 57	
6	
2 7 10 15 57 246	

**Answer:** (penalty regime: 0 %)

```

1 #include <stdio.h>
2
3▼ int main() {
4     int T;
5     scanf("%d", &T);
6▼     while (T--) {
7         int N1;
8         scanf("%d", &N1);
9         int A[N1];
10▼         for (int i = 0; i < N1; i++) {
11             scanf("%d", &A[i]);
12         }
13
14         int N2;
15         scanf("%d", &N2);
16         int B[N2];
17▼         for (int i = 0; i < N2; i++) {
18             scanf("%d", &B[i]);
19         }
20
21         int i = 0, j = 0;

```

```

22 ▼
23 ▼
24
25▼
26
27▼
28
29
30
31
32
33
34
35
36
37
    while (i < N1 && j < N2) {
        if (A[i] < B[j]) {
            i++;
        } else if (A[i] > B[j]) {
            j++;
        } else {
            printf("%d ", A[i]);
            i++;
            j++;
        }
        printf("\n");
    }
    return 0;
}

```

	<b>Input</b>	<b>Expected</b>	<b>Got</b>	
1	1 3 10 17 57 6 2 7 10 15 57 246	10 57	10 57	1
1	1 6 1 2 3 4 5 6 2 1 6	1 6	1 6	1

Passed all tests!

**Correct**

Marks for this submission: 1.00/1.00.

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**Started on** Wednesday, 8 October 2025, 9:09 AM

**State** Finished

**Completed on** Wednesday, 8 October 2025, 9:18 AM

**Time taken** 9 mins 10 secs

**Marks** 1.00/1.00

**Grade** 4.00 out of 4.00 (100%)

**Question 1** | Correct Mark 1.00 out of 1.00

Given an array A of sorted integers and another non negative integer k, find if there exists 2 indices i and j such that  $A[j] - A[i] = k$ ,  $i \neq j$ .

Input Format:

First Line n - Number of elements in an array

Next n Lines - N elements in the array

k - Non - Negative Integer

Output Format:

1 - If pair exists

0 - If no pair exists

Explanation for the given Sample Testcase:

YES as  $5 - 1 = 4$

So Return 1.

**For example:**

Input	Result
3	1
1 3 5	
4	

**Answer:** (penalty regime: 0 %)

```

1 #include <stdio.h>
2 int main() {
3     int n;
4     scanf("%d", &n);
5     int A[n];
6     for (int i = 0; i < n; i++) {
7         scanf("%d", &A[i]);
8     }
9     int k ;
10    scanf ( " % d " , & k ) ;
11    int i = 0 , j = 1 ;
12    while ( i < n & & j < n ) {
13        int diff = A[j] - A[i];
14        if (diff == k && i != j) {
15            printf("1\n");
16            return 0;
17        } else if (diff < k) {
18            j++;
19        } else {
20            i++;
21            if (i == j) j++;
22        }
23    }
24    printf ( " 0 \\ n " ) ;
25    return 0 ;
26 }
27

```

	Input	Expected	Got	
	3 1 3 5 4	1	1	

	Input	Expected	Got	
	10 1 4 6 8 12 14 15 20 21 25 1	1	1	
	10 1 2 3 5 11 14 16 24 28 29 0	0	0	
	10 0 2 3 7 13 14 15 20 24 25 10	1	1	

Passed all tests! ✅

Correct

Marks for this submission: 1.00/1.00.

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**Started on** Wednesday, 8 October 2025, 8:57 AM

**State** Finished

**Completed on** Wednesday, 8 October 2025, 9:04 AM

**Time taken** 7 mins 24 secs

**Marks** 1.00/1.00

**Grade** 4.00 out of 4.00 (100%)

**Question 1** | Correct Mark 1.00 out of 1.00

Given an array A of sorted integers and another non negative integer k, find if there exists 2 indices i and j such that  $A[j] - A[i] = k$ ,  $i \neq j$ .

Input Format:

First Line n - Number of elements in an array

Next n Lines - N elements in the array

k - Non - Negative Integer

Output Format:

1 - If pair exists

0 - If no pair exists

Explanation for the given Sample Testcase:

YES as  $5 - 1 = 4$

So Return 1.

**For example:**

Input	Result
3	1
1 3 5	
4	

**Answer:** (penalty regime: 0 %)

```

1 #include <stdio.h>
2
3 int main() {
4     int n;
5     scanf("%d", &n);
6     int A[n];
7     for (int i = 0; i < n; i++) {
8         scanf("%d", &A[i]);
9     }
10    int k ;
11    scanf( " % d " , & k ) ;
12
13    int i = 0, j = 1;
14    while (i < n && j < n) {
15        int diff = A[j] - A[i];
16        if (diff == k && i != j) {
17            printf("1\n");
18            return 0;
19        } else if (diff < k) {
20            j++;
21        } else {
22            i++;
23        }
24    }
25
26    printf( " 0 \\ n " ) ;
27    return 0;
28}
29

```

	Input	Expected	Got	
	3 1 3 5 4	1	1	
	10 1 4 6 8 12 14 15 20 21 25 1	1	1	
	10 1 2 3 5 11 14 16 24 28 29 0	0	0	
	10 0 2 3 7 13 14 15 20 24 25 10	1	1	

Passed all tests! |

Correct

Marks for this submission: 1.00/1.00.

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