



PRACTICE

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[All Contests](#) > [e2csd](#) > Count subarrays with all elements greater than K

Count subarrays with all elements greater than K

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Problem

Submissions

Leaderboard

Given an array of **N** integers and a number **K**, the task is to find the number of subarrays such that all elements are greater than **K** in it.

Examples:

Input: $N = 8$, $a[] = \{3, 4, 5, 6, 7, 2, 10, 11\}$, $K = 5$ Output: 6 The possible subarrays are $\{6\}$, $\{7\}$, $\{6, 7\}$, $\{10\}$, $\{11\}$ and $\{10, 11\}$.

Input: $N = 9$, $a[] = \{8, 25, 10, 19, 19, 18, 20, 11, 18\}$, $K = 13$ Output: 12

Input Format

- N as size of array
- $X[i]$ as array values

- K

Constraints

- $1 \leq N \leq 100$
- $1 \leq x[i] \leq 10^3$
- $1 \leq K \leq 10^3$

Output Format

No of valid subarrays.

Sample Input 0

```
5
1 2 3 4 5
3
```

Sample Output 0

```
3
```

Sample Input 1

```
24
1 2 3 4 5 6 7 8 9 9 8 7 6 5 4 3 2 1 1 2 3 4 3 5
6
```

Sample Output 1

21

Sample Input 2

```
8
3 4 5 6 7 2 10 11
3
```



Sample Output 2

13

Submissions: [32](#)

Max Score: 20

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C++



```
1 ▼ #include <cmath>
2  #include <cstdio>
3  #include <vector>
4  #include <iostream>
5  #include <algorithm>
6  using namespace std;
```

```
7
8 int f(int a[],int n,int k)
9 {
10     int c=0,sum=0;
11     for(int i=0;i<n;i++)
12     {
13         if(a[i]>k)
14         {
15             c++;
16         }
17         else
18         {
19             sum+=c*(c+1)/2;
20             c=0;
21         }
22     }
23     if(c) sum+=c*(c+1)/2;
24
25     return sum;
26 }
27 int main() {
28     int n;
29     cin>>n;
30     int a[n];
31
32     for(int i=0;i<n;i++)
33         cin>>a[i];
34     int k;
35     cin>>k;
36
37     cout<<f(a,n,k)<<"\n";
38     return 0;
39 }
40
```

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Testcase 0 ✓

Testcase 1 ✓

Testcase 2 ✓

Congratulations, you passed the sample test case.

Click the **Submit Code** button to run your code against all the test cases.

Input (stdin)

```
5
1 2 3 4 5
3
```

Your Output (stdout)

```
3
```

Expected Output

```
3
```