Problem B
Subarray Sums
Max no. of test cases: 10
Time limit: 2 seconds

Given an array X that stores a set of positive integers, please write a program to find the maximum value among the remainders obtained by dividing the sums of the subarrays in X by a given divisor. For example, if we have the array X = [2, 1, 3, 4], then there are 10 subarrays, namely [2], [2, 1], [2, 1, 3], [2, 1, 3, 4], [1], [1, 3], [1, 3, 4], [3], [3, 4], [4]. And the subarray sums are: $2, 2+1=3, 2+1+3=6, 2+1+3+4=10, 1, 1+3=4, 1+3+4=8, 3, 3+4=7$, and 4. If the divisor is set to 5, the remainders are: 2, 3, 1, 0, 1, 4, 3, 3, 2, and 4, respectively. The maximum remainder value is 4 which would be from subarrays [1, 3] and [4].

Input File Format

The first line of input contains an integer n, indicating the number of test cases. For each test case, the first line contains an integer s, $1 \leq s \leq 5000$, which is the size of the array X. The second line contains s positive integers (≤ 99999), indicating the s elements in the array X. The last line contains an integer d, representing the divisor.

Output Format

For each test case, output an integer on a single line, indicating the number of subarrays with the maximum remainder value.

Sample Input

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

Output for the Sample Input

```
2
```