

Consecutive Subsequences



Jigar got a sequence of n positive integers as his birthday present! He likes consecutive subsequences whose sum is divisible by k . He asks you to write a program to count them for him.

Input Format

The first line contains T , the number of testcases.

T testcases follow. Each testcase consists of 2 lines.

The first line contains n and k separated by a single space.

And the second line contains n space separated integers.

Output Format

For each test case, output the number of consecutive subsequences whose sum is divisible by k in a newline.

Constraints

$$1 \leq T \leq 20$$

$$1 \leq n \leq 10^6$$

$$1 \leq k \leq 100$$

$$1 \leq a[i] \leq 10^4$$

Sample Input

```
2
5 3
1 2 3 4 1
6 2
1 2 1 2 1 2
```

Sample Output

```
4
9
```

Explanation

For

```
1 2 3 4 1
```

there exists, 4 subsequences whose sum is divisible by 3, they are

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

For

```
1 2 1 2 1 2
```

there exists, 9 subsequences whose sum is divisible by 2, they are

```
2
2
```

2
1 2 1
1 2 1
1 2 1 2
2 1 2 1
1 2 1 2
2 1 2 1 2