Maximize Sum

You are given an array of size *N* and another integer *M*. Your target is to find the maximum value of sum of subarray modulo M.

Subarray is a continuous subset of array elements.

Note that we need to find the maximum value of (Sum of Subarray)%M , where there are $N \times (N+1)/2$ possible subarrays.

For a given array $A[]$ of size N, subarray is a contiguous segment from i to j where $0 \leq i \leq j \leq N$

Input Format
First line contains T , number of test cases to follow. Each test case consists of exactly 2 lines. First line of each test case contain 2 space separated integers N and M, size of the array and modulo value M.
Second line contains N space separated integers representing the elements of the array.

Output Format
For every test case output the maximum value asked above in a newline.

Constraints
$2 \leq N \leq 10^5$
$1 \leq M \leq 10^{14}$
$1 \leq \text{elements of the array} \leq 10^{18}$
$2 \leq \text{Sum of N over all test cases} \leq 500000$

Sample Input

```
1
5 7
3 3 9 9 5
```

Sample Output

```
6
```

Explanation

Possible subarrays are
$\{3\}, \{3\}, \{9\}, \{9\}, \{5\}$
$\{3,3\}, \{3,9\}, \{9,9\}, \{9,5\}$
$\{3,3,9\}, \{3,9,9\}, \{9,9,5\}$
$\{3,3,9,9\}, \{3,3,9,9,5\}, \{3,9,9,5\}$
their sums modulo 7 are

$3, 3, 2, 2, 5, 6, 5, 4, 0, 1, 0, 2, 3, 1, 5$ respectively.
Hence maximum possible sum taking Modulo 7 is 6 , and we can get 6 by adding first and second element of the array.