

Problem D

Maximum Sum

Time limit: 1 second
Memory: 1024 megabytes

Problem Description

In a research study on arithmetic sequences, mathematicians discovered that in an integer sequence, they can find subarrays with interesting properties. A research group at the National University of Mathematics is focusing on analyzing an integer sequence of length n , and they want to find a special subarray within this sequence. Specifically, the subarray they are looking for must have a length that is a multiple of k , and the sum of that subarray must be as large as possible.

You, as a research assistant, are tasked with helping the scientists solve this problem. You need to write a program that helps them find the subarray with a length that is a *multiple* of k and has the *maximum* sum in the sequence.

Suppose you have a sequence of integers a_1, a_2, \dots, a_n . Each subarray of this sequence could be part of the research, and the weight of the subarray is the sum of all the numbers in that subarray. However, in your research, you are only interested in subarrays whose length is divisible by k . So, can you find the subarray that has the largest sum among all subarrays that satisfy this condition?

Input:

- The first line contains two integers n and k ($1 \leq k \leq n \leq 10^6$).
- The second line contains n integers a_1, a_2, \dots, a_n ($|a_i| \leq 10^9$).

Output:

- A single integer: the maximum sum of a subarray with a length that is divisible by k .

Example:

INPUT	OUTPUT
11 3 1 1 1 -9 1 1 1 1 -1 1 -9	4