Banana Queries

A monkey named Baljeet really likes bananas. He has a calendar that tells him how many bananas he can get each day. Baljeet doesn't want to go collect bananas everyday because he is lazy but he also wants the maximum amount of bananas. He wants the biggest subarray of days where the sum of the bananas he collects is divisible by the length of the subsequence of days.

Input:

The first line contains N (1 <= N <= 1000) , the size of array a. The next line contains N integers (1 <= a_i <= 1000), separated by spaces, where a_i is the amount of bananas collected on day i.

Output:

Output the size of the biggest subarray of days in which the sum of its bananas is divisible by the number of days in the subarray.
Sample Input/Output

Input:

3
1 2 0

Output:

3

When looking at the set of numbers we can make different sub arrays. For example [1], [2,0], and [1,2,0], all of these subarrays are valid as their sums are divisible by their lengths. However when looking at the biggest subarray it has a length of 3, so we return 3.

***HINT:Remember to not try to query for the sum of a sub array everytime you want to figure out if a subarray is valid as it will time out.**

Time complexity: N^2