Shortest subarray

Given an array of positive integers A where each element has value at most 10^6. Find the shortest subarray of A such that the sum of elements is not less than k.

Input

The first line contains the number of elements n and the integer k ($0 < n \leq 10^5$, $0 < k \leq 10^9$).

The second line is the elements in array A

Output

The length of the shortest subarray

Sample

Input	Output
5 6	1
1 2 4 1 6	