Problem C: Sorting K Window Sums

Filename: `ksums`

Time limit: `2 seconds`

Given a sequence of **n** integers, we define a k-window to be k contiguous terms in the sequence. There are **n** - **k** + 1 k-windows in a sequence of **n** integers so long as **n** ≥ **k**. We can label each of these windows with their starting index, with the leftmost window having the label 1. Naturally, we can define the sum of a specific k-window to be the sum of the terms within the window. We can sort each of the **n** - **k** + 1 k-windows in a sequence of **n** integers based upon the sum of each window, with windows with larger sums coming first. If two k-windows have the same sum, we break ties by having the one with the lower label come first.

For this problem, given a sequence of **n** integers and a value of **k,** determine the sorted order of each of the k-windows of the sequence.

Input

The first line will contain two space separated integers, **n** ($1 \le n \le 10^5$) and **k** ($1 \le k \le n$), representing the length of the input sequence and the size of the windows, respectively. The next line will contain **n** space separated integers x_i ($1 \le x_i \le 10^9$), representing the ith value in the sequence.

Output

Output **n** - **k** + 1 space separated integers representing the sorted order (as defined above) of all of the k-windows, where each integer is the label of the window represented.

Samples

Input	Output
5 3 2 3 4 3 2	2 1 3
10 4 14 12 18 19 13 12 14 14 10 20	1 2 3 4 7 5 6