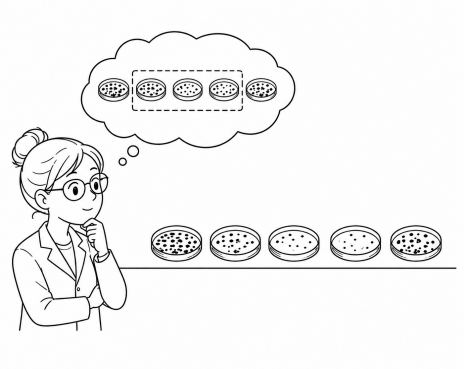
Germs

Time Limit: 1.0 s | Memory Limit: 512 MiB

The New Zealand Pathology Centre (NZPC) is home to some of the country's most dedicated scientific researchers — the kind who find a new strain of bacteria genuinely exciting.

Dr. Gemma works in the field of bacteriological research. As part of her work, she has to determine which range of temperatures helps to suppress the growth of a particularly nasty strain of the sniffles. Her experiments measure n petri dishes that are stored in a range of increasing temperatures. Dr Gemma is very keen to find a very specific range of temperatures where the bacteria is less frequent. Your task is to find which contiguous range of r dishes contains the lowest total sum of bacteria.



Input

The first line contains two space-separated integers, n $(0 < n \leq 10^3)$ and r $(0 < r \leq 100, r \leq n)$. The integer n represents the total number of petri dishes, and r represents the size of the contiguous range of dishes to consider.

The second line contains n space-separated integers, representing the amount of bacteria (b) present in each dish at the end of the experiment $(0 \leq b_i \leq 10^3)$.

Output

Output a single integer: the lowest total bacteria count in any contiguous range of exactly r dishes.

In the sample below, the values at index 2 and 3 sum to 9. No other contiguous range of values with 2 dishes sums to less than 9.

Sample Input 1	Sample Output 1
6 2 10 12 4 5 6 12	9

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