

# Problem A. Array Division

**Time limit** 1000 ms  
**Mem limit** 524288 kB

You are given an array containing  $n$  positive integers.

Your task is to divide the array into  $k$  subarrays so that the maximum sum in a subarray is as small as possible.

## Input

The first input line contains two integers  $n$  and  $k$ : the size of the array and the number of subarrays in the division.

The next line contains  $n$  integers  $x_1, x_2, \dots, x_n$ : the contents of the array.

## Output

Print one integer: the maximum sum in a subarray in the optimal division.

## Constraints

- $1 \leq n \leq 2 \cdot 10^5$
- $1 \leq k \leq n$
- $1 \leq x_i \leq 10^9$

Explanation: An optimal division is  $[2, 4], [7], [3, 5]$  where the sums of the subarrays are 6, 7, 8. The largest sum is the last sum 8.

## Sample

Input	Output
5 3 2 4 7 3 5	8