Allocate Books

Problem Description

Given an array of integers **A** of size **N** and an integer **B**.

The College library has **N** books. The **ith** book has **A[i]** number of pages.

You have to allocate books to **B** number of students so that the maximum number of pages allocated to a student is minimum.

1. A book will be allocated to exactly one student.
2. Each student has to be allocated at least one book.
3. Allotment should be in contiguous order, for example: A student cannot be allocated book 1 and book 3, skipping book 2.

Calculate and return that minimum possible number.

NOTE: Return -1 if a valid assignment is not possible.

Problem Constraints

1 <= **N** <= 10^5
1 <= **A[i]**, **B** <= 10^5

Input Format

The first argument given is the integer array A. The second argument given is the integer B.

Output Format

Return that minimum possible number.

Example Input

Input 1:

```
A = [12, 34, 67, 90]
B = 2
```

Input 2:

```
A = [5, 17, 100, 11]
B = 4
```

Example Output

Output 1:

```
113
```

Output 2:

```
100
```

Example Explanation

Explanation 1:

```
There are two students. Books can be distributed in following fashion :
1)  [12] and [34, 67, 90]
    Max number of pages is allocated to student 2 with 34 + 67 + 90 = 191
pages
2)  [12, 34] and [67, 90]
    Max number of pages is allocated to student 2 with 67 + 90 = 157
pages
3)  [12, 34, 67] and [90]
    Max number of pages is allocated to student 1 with 12 + 34 + 67 = 113
pages
    Of the 3 cases, Option 3 has the minimum pages = 113.
```