

Hotels Along the Croatian Coast

There are N hotels along the beautiful Adriatic coast. Each hotel has its value in Euros.

Srojko has won M Euros on the lottery. Now he wants to buy a sequence of consecutive hotels, such that the sum of the values of these consecutive hotels is as great as possible - but not greater than M .

You are to calculate this greatest possible total value.

Input

In the first line of the input there are integers N and M ($1 \leq N \leq 300\,000$, $1 \leq M < 2^{31}$).

In the next line there are N natural numbers less than 10^6 , representing the hotel values in the order they lie along the coast.

Output

Print the required number (it will be greater than 0 in all of the test data).

Example

input

5 12
2 1 3 4 5

output

12

input

4 9
7 3 5 6

output

8