Problem D. Three Slices

Time limit: 1 second

You are given an array A_0, A_1, A_2, ... , A_{N-1} of N positive integers. Also, you are given an positive integer K. Your task is to find the largest positive integer M such that the following condition is satisfied:

- There exists an integer $0 \leq i \leq N - 3M$ such that
  1. $\sum_{j=i}^{i+M-1} A_j \leq K$
  2. $\sum_{j=i+M}^{i+2M-1} A_j \leq K$
  3. $\sum_{j=i+2M}^{i+3M-1} A_j \leq K$

Input

The first line contains two integers, N and K. The second line contains N integers, the array A given in order.

Output

Output a single positive integer denoting the largest possible M. If there is no such M, output 0.

Constraints

- $1 \leq N \leq 5 \times 10^5$
- $1 \leq K \leq 10^9$
- $1 \leq A_i \leq 10^9$

Subtask 1 (10 points)

This subtask has an additional constraint:

- $N \leq 100$

Subtask 2 (20 points)

This subtask has an additional constraint:

- $N \leq 10000$

Subtask 3 (70 points)

This subtask has no additional constraints.

Examples

standard input	standard output
10 10 3 7 4 3 1 3 5 2 5 1	2