

# Best Cow Fences

Farmer John's farm consists of a long row of  $n$  fields. Each field contains a certain number of cows.

Farmer John wants to build a fence around a contiguous group of these fields in order to maximize the average number of cows per field within that block. The block must contain at least  $f$  fields, where  $f$  is given in the input.

## Task

Calculate the fence placement that maximizes the average, given the constraint.

## Input specification

The first line contains two space-separated integers  $n$  and  $f$  ( $1 \leq f \leq n \leq 100\,000$ ).

The  $i$ -th of the next  $n$  lines contains the count  $c_i$  of cows on field  $i$  ( $1 \leq c_i \leq 2\,000$ ).

## Output specification

Output a single integer that is 1 000 times the maximal average. Do not perform rounding, just print the integer that is  $1000 \cdot ncows/nfields$ .

## Example

input

```
10 6
6
4
2
10
3
8
5
9
4
1
```

output

```
6500
```