COCI '14 Contest 7 #5 Prosjek

You are given an array of N integers. Find a consecutive subsequence of numbers of the length at least K that has the maximal possible average.

Please note: the average of a subsequence is the sum of all the numbers in the subsequence divided by its length.

Input

The first line of input contains two integers N $(1 \leq N \leq 3 \cdot 10^5)$ and K $(1 \leq K \leq N)$. The second line of input contains N integers a_i $(1 \leq a_i \leq 10^6)$

Output

The first and only line of output must contain the maximal possible average. An absolute deviation of ± 0.001 from the official solution is permitted.

Scoring

In test cases worth 30% of total points, it will hold that N is not larger than $5\,000$.

Sample Input 1

```
4 1
1 2 3 4
```

Sample Output 1

```
4.000000
```

Sample Input 2

```
4 2
2 4 3 4
```

Sample Output 2

```
3.666666
```

Sample Input 3

```
6 3
7 1 2 1 3 6
```

Sample Output 3

```
3.333333
```