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

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 TESTS

input	**input**	**input**
4 1 1 2 3 4	4 2 2 4 3 4	6 3 7 1 2 1 3 6
output	**output**	**output**
4.000000	3.666666	3.333333