Task Neboderi

Domagoj is in the big city of London! Right now, there is a sequence of tall skyscrapers in front of him and he wants to take a photograph to remember the moment.

The sequence of skyscrapers can be represented as a sequence of n numbers $h_1, h_2, \ldots, h_n$ where the number h_i represents the height of the i-th skyscraper. Domagoj will photograph a contiguous subsequence of skyscrapers. To capture more of the city's beauty, he wants to photograph at least k skyscrapers.

Domagoj has a strange sense of beauty of a photograph. He is very happy when there are tall skyscrapers in the photograph, but he is even happier when their heights have a large common divisor! If we label the heights of the contiguous skyscrapers on the photograph with $h_l, \ldots, h_r$, and with g the greatest common divisor of the selected heights, then Domagoj defines the beauty of the photograph as $g \cdot (h_l + \ldots + h_r)$.

Help Domagoj determine the beauty of the most beautiful photograph with at least k skyscrapers!

Input

The first line contains two integers n, k ($1 \leq k \leq n \leq 10^6$), the number of skyscrapers, and the number k.

The second line contains n integers $h_1, h_2, \ldots, h_n$ ($1 \leq h_i \leq 10^6$), the heights of the skyscrapers, in order.

Output

Print a single line with the required number from the task.

Scoring

Subtask	Points	Constraints
1	11	$n, k \leq 100$
2	22	$n, k \leq 5000$
3	27	$h_i \leq 100$
4	18	$n, k \leq 5 \cdot 10^4$
5	32	No additional constraints.

Examples

input

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6 2
2 1 4 4 4 2
```

output

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48
```

input

```
4 1
7 3 9 4
```

output

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81
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Clarification of the first example:
Domagoj photographed skyscrapers (4, 4, 4), so the total beauty is $4 \cdot (4 + 4 + 4) = 48$

Clarification of the second example:
Domagoj photographed only the skyscraper (9), so the total beauty is $9 \cdot 9 = 81$.