BSSPC '21 S3 - James's Egirl Discord Status

Time limit: 1.0s **Memory limit:** 256M

James, being the egirl he is, likes to set quirky and cool messages as his Discord status!

James has a new Discord status he wants to use for a single contiguous (possibly empty) range of days within the next N days. He knows that using his new status on the i^{th} day will net him a_i *egirl points* and that days for which he does not use his new status will not affect his *egirl points*. Note that a_i may be negative.

Furthermore, because James is quirky and cool, the number of days for which the new status is applied must be a multiple of a given positive integer K.

Find the maximum number of *egirl points* James can gain within the next N days from using his new status!

Constraints

$1 \leq N \leq 10^6$

$1 \leq K \leq N$

$-10^9 \leq a_i \leq 10^9$

Subtask 1 [5%]

$1 \leq N \leq 5 \times 10^3$

Subtask 2 [15%]

$1 \leq N \leq 10^5$

$1 \leq K \leq 10$

Subtask 3 [80%]

No additional constraints.

Input Specification

The first line contains two integers, N and K.

The next line contains N integers, the values of a_i.

Output Specification

Output a single integer, the maximum number of *egirl points* James can gain by using his new Discord status on a contiguous subsequence of the next N days, where the number of days for which the status is applied is a multiple of K.

Sample Input 1

```
5 2
1 3 2 -4 3
```

Sample Output 1

```
5
```

Explanation for Sample 1

James uses his new Discord status on days 2 and 3, netting $3 + 2 = 5$ *egirl points*.

Sample Input 2

```
4 3
1 2 -69 8
```

Sample Output 2

```
0
```

Explanation for Sample 2

James chooses not to apply his new Discord status at all, netting 0 *egirl points*.