

Bulldozer (Easy)

Time limit: 1s

Memory limit: 2GB

A hurricane has ripped through Ezra's farm, and now her land is all uneven! Ezra's farm is N metres wide and made up of 1 m^3 cubes of dirt. a_i is the number of dirt cubes stacked up vertically at i metres to the right of the start of her yard.

Ezra will use her bulldozer to flatten her yard, so that no mound is higher than K metres. Moving a 1 m^3 cube of dirt 1 metre to the right uses 1 litre of fuel. No cubes may be moved to the left.

Note that Ezra may have leftover dirt at the end of her yard after N metres, which she will continue bulldozing beyond her yard, still ensuring no mound is higher than K metres. There are currently no dirt cubes past Ezra's land.

What is the minimum number of litres of fuel Ezra needs to clean up all the dirt? Be careful, the answer may be much larger than 2,147,483,647.

Input and Output

The first line of input data contains two integers N and K .

The next line will contain N integers, a_1, a_2, \dots, a_N .

Print a single integer, the minimum number of litres of fuel Ezra needs.

Constraints

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

$$1 \leq K \leq 10^4$$

$$0 \leq a_i \leq 10^4$$

Sample Input (stdin)

```
2 2
7 0
```

Sample Output (stdout)

```
9
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Explanation

Ezra needs to push 5 cubes to the second metre of her farm, then needs to push 3 of those cubes off her farm, then needs to push 1 more cube a further metre to maintain mounds of at most 2 metres in height. This requires 9 litres of fuel in total.