

Tarifa

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You have been using a new cell phone plan for the last n months, and have recorded how much data you use each month.

This phone plan accrues data that you have not used, so you can use it at a later date.

Given a plan, in MB/month, and the phones reported usage for the n months, write a program that calculates the number of MB you are allotted next month, assuming you will not use more data this month.

Input

The first line of the input contains the integer m , the number of MB you are allotted each month, where $1 \leq m \leq 10^6$

The second line contains the integer n , the number of months you have been using the plan, where $0 \leq n \leq 10^5$

The next n lines each contain one integer d_i , the MB used on month i , where $0 \leq d_i \leq 10^6$

It is guaranteed you will never use more data on a given month than you are allotted.

Output

Output consists of one line with one integer, the number of megabytes you are allotted next month, assuming that you will not use more data during this month.

Sample Input 1

```
10
3
4
6
2
```

Sample Output 1

```
28
```

Sample Input 2

```
10
3
10
2
12
```

Sample Output 2

```
16
```

Sample Input 3

```
15
3
15
10
20
```

Sample Output 3

```
15
```