

Problem G. Long binary sequence

Input file: **stdin**
Output file: **stdout**
Time limit: 1 second
Memory limit: 512 megabytes

bobo has a very very long binary sequence s of length n . All except m positions $x_1, x_2, \dots, x_m$ are 0 (And $s_{x_1} = s_{x_2} = \dots = s_{x_m} = 1$).

Now bobo would like to know the number of **distinct** consecutive substrings of s .

Input

The first line contains 2 integers n, m ($1 \leq n \leq 10^9, 1 \leq m \leq \min\{n, 1000\}$).

The second line contains m integers $x_1, x_2, \dots, x_m$ ($1 \leq x_1 < x_2 < \dots < x_m \leq n$).

Output

A single integer denotes the number of distinct substrings.

Sample input and output

stdin	stdout
3 2 1 3	5
1000000000 1 1	1999999999