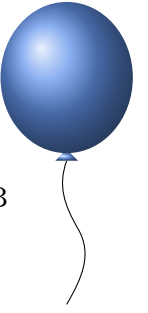


L Vittorio Plays with LEGO Bricks

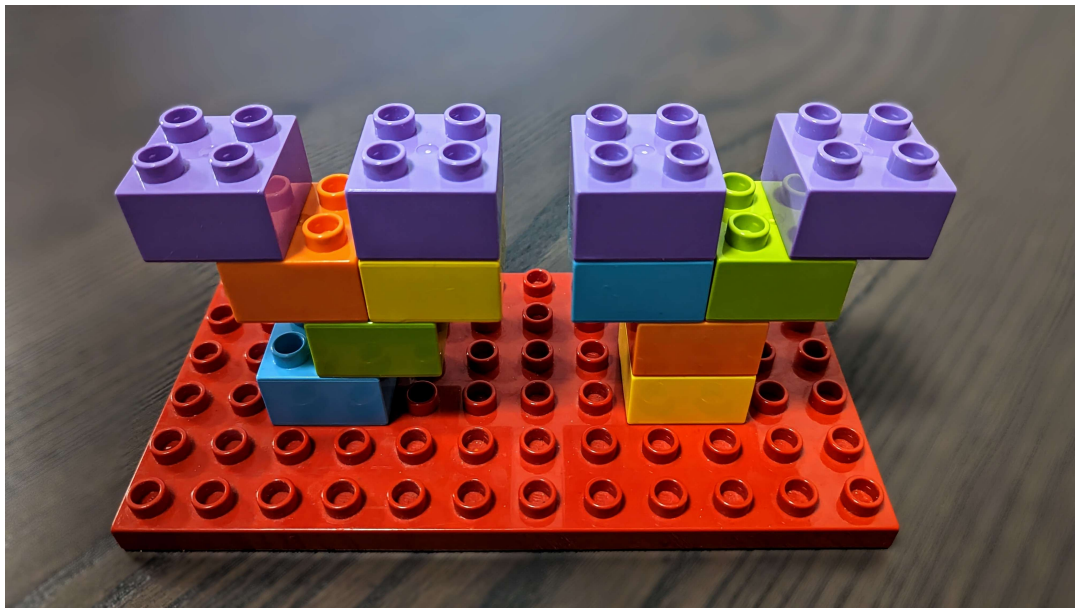
TIME LIMIT: 2.0s
MEMORY LIMIT: 2048MB



Vittorio is playing with his new LEGO Duplo bricks. All the bricks have the shape of a square cuboid with a 2×2 square base and a height of 1. They can be arranged in the 3D space to build structures, provided that the following rules are met:

1. No two bricks can intersect, but they can touch on their faces.
2. The corners of every brick must have integer coordinates (so bricks are axis-aligned) and the z coordinates of all corners must be non-negative.
3. The square bases of every brick must be parallel to the ground (i.e. the plane $z = 0$).
4. The lower base of any brick that is not touching the ground must touch the upper base of some other brick in a region of positive area (when this happens, the two bricks stay attached to each other thanks to small studs).

For example, this is a valid structure:



Vittorio wants to build a structure that includes purple bricks in the following n positions: $(x_1, 0, h)$, $(x_2, 0, h)$, \dots , $(x_n, 0, h)$ — these are the coordinates of the centers of their lower bases; note that all of these bricks have y coordinate equal to 0 and z coordinate equal to h . Vittorio will use additional bricks of other colors to support the purple bricks. He is willing to place bricks only in positions where the center of the lower base has y coordinate equal to 0. What is the minimum number of additional bricks needed?

It can be shown that a valid construction always exists.

INPUT

The first line contains two integers n and h ($1 \leq n \leq 300$, $0 \leq h \leq 10^9$) — the number of purple bricks and their common z coordinate.

The second line contains n integers x_1, x_2, \dots, x_n ($1 \leq x_i \leq 10^9$, $x_i+1 < x_{i+1}$) — the x coordinates of the purple bricks (centers of the bases), given in increasing order.

OUTPUT

Print the minimum number of additional bricks needed.

SAMPLES

Sample input 1	Sample output 1
4 0 2 7 11 13	0

Explanation of sample 1.

All the purple bricks lie on the ground, so no additional bricks are needed.

Sample input 2	Sample output 2
4 1 2 7 11 13	3

Explanation of sample 2.

Vittorio will have to place supporting bricks under the purple bricks, and he can use a single brick to support both the third and the fourth purple bricks. For example, he can place additional bricks at positions $(3,0,0)$, $(7,0,0)$ and $(12,0,0)$. It can be shown that it is impossible to build a valid construction using less than 3 additional bricks.

Sample input 3	Sample output 3
4 100 2 7 11 13	107

Sample input 4	Sample output 4
4 3 2 5 8 11	8

Explanation of sample 4.

A possible structure that minimizes the number of additional bricks is shown in the problem description.