10366   Faucet Flow

A faucet is pouring water into a long, thin aquarium with
various vertical dividers (walls) in it. The aquarium is ini-
tially empty, and its bottom is perfectly level. How long will
it take for water to spill over its left- or right-most divider?
The faucet is above location $x = 0$, and the dividers are
located at $x = -1, -3, -5, \ldots left_x$ and $1, 3, 5, \ldots right_x$.
The dividers are attached perpendicular to the floor and
sides of the aquarium, and have various heights. The aquar-
ium's length is greater than $right_x - left_x$, its walls are
higher than the highest divider, and its width is 1 unit ev-
erywhere. Water pours from the faucet at a rate of 1 cubic
unit per second.

   You may assume that water is an ideal liquid: it always
flows downhill and if it cannot flow downhill it spreads at
an equal rate in all horizontal directions.

Sample Case 1

Input

Each test case consists of two integers $left_x$ (an odd number
≤ -1) and $right_x$ (an odd number ≥ 1). Subsequent lines
contain the height (a positive integer) of each divider from
left to right. There will be no more than 1000 dividers in any test case.
   Input is terminated with a line containing two zeros.

Output

For each case, output an integer on a single line, indicating how long it will take, in seconds, before
water starts spilling over either the left or right divider.

Sample Input

```
-1 1
3 5
-3 3
4 3 2 1
-3 5
1 2 2 1 1
0 0
```

Sample Output

```
6
6
8
```