Contest Instructions

***Important:** The usage of phones, hotspots, other communication devices, or the Internet in any way (other than for documentation purposes only) for the duration of this contest is strictly prohibited.*

General Rules

- The contest is split up into two categories — novice and advanced. Teams may compete in only one of the given categories.
    - Novice: Less than one year of programming experience and basic proficiency.
    - Advanced: More than one year of programming experience and moderate to advanced proficiency.
- Both the novice and advanced divisions will compete using the same problem statements.
- This contest packet contains 15 questions in ascending order of difficulty.
- Teams are ranked by the number of points they earn within the timeframe of the competition.
- In the event of a tie, winners will be determined by the team with the fewest number of submissions and then by the first correct submission.

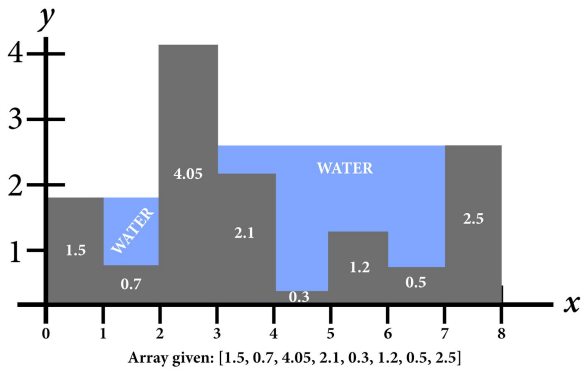
Submission Details

- Supported languages: C, C++, Python 2.7, and Java 8
- Read all input from standard in (*stdin*)
- Output all output to standard out (*stdout*)
- Please name your source files `prob01.java`, `prob05.py`, etc.

Task S: Ewoks' Water Transport

[10 points]

The Ewoks use some unusually shaped cups to transport water, how much can each one bring?



Problem Statement

You are given a series of heights (in meters) of a bar graph in a two-dimensional space. Each "bar" is one meter wide, and you can imagine the space to the left and right of the graph as all having a height of 0. What is the maximum amount of water (in m^2) that the bar graph can hold? Please round to the nearest square meter. No water may flow off to the side.

Input Format

- `N` - the number of bars in the graph
- `N` lines, each with the height of the bar at that point

Output Format

A single line containing the amount of water the graph could hold, rounded to the nearest square meter.

Sample Input

```
6
5.78
32.06
25.61
37.77
10.39
12.87
```

Sample Output

```
9
```