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Coding Area

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# Coding Area

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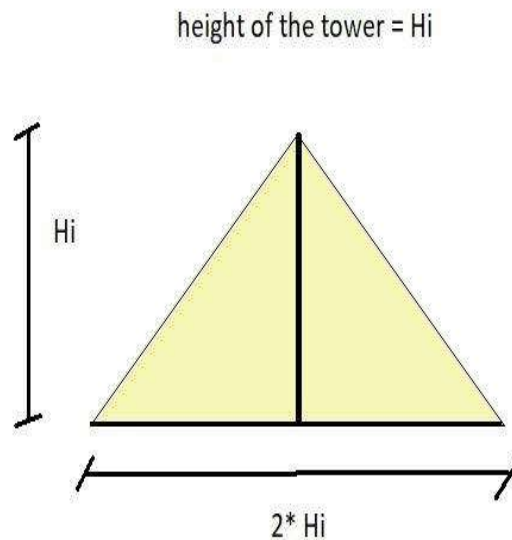
H

**ONLINE EDITOR (D)**

## Tower of Lights

### + Problem Description

There are N number of Light towers ( $L_1 \dots L_N$ ) with height ( $H_i$ ). Amount of area lighted by a tower of height  $H_i$  is shown in the image.



Total Area for this case is  $H_i^2$ . These towers are placed on a long road. You need to find the total amount of area has light.

### + Constraints

$$1 \leq T \leq 100$$

$$1 \leq N \leq 1000$$

$$0 \leq P \leq 1000$$

$$1 \leq H \leq 1000$$

### + Input Format

The first line contains one Integer T, the number of test cases.

For each test case,

The first line contains one Integer N, the number of light towers. In next N lines, each line contains two integers P and H, where P represents the position and H represents the height.

### + Output

T double values in T lines represent the area for each test case.

### + Test Case

### + Explanation

#### **Example 1**

Input 1

1

10 2

Output

4.0

#### **Example 2**

Input 2

3 4 8 6 2 12 3

2

5 4

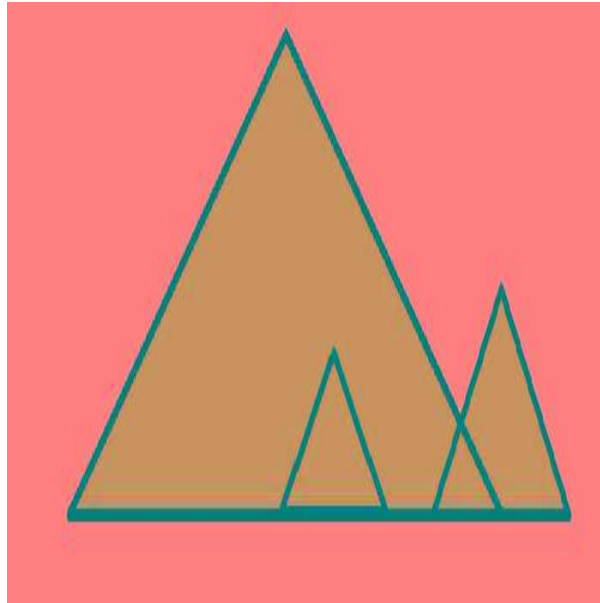
7 4

Output

70.75

23.0

Explanation picture for Example #2 and Example #1



### Upload Solution [ Question : D ]

☐ I, **ranick patra** confirm that the answer submitted is my own. ☐ Took help from online sources (attributions)

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