# A test of "fundamentals of programming" 18 March 2017

## Task 1. Doghouse

Write a program to calculate **how many gallons of paint needed** to paint the doghouse . **For walls**used **Green paint**, and on **the roof – red**. **The cost** of **the Green paint** **is 1 litre for 3 m2**, and the **Red – 1 litre per 5 m2**. Will be read from the console:

        **The length of the side wall –**

        **The height of the House – B**

You need to calculate the surface area of all countries and areas of the roof to find out how many liters of any paint will be needed. **The dimensions of the walls are**:

        **Pages**are rectangles with **length** **A**and **height a/2**

        **Back wall**consists **of a square of side a/2** and **a triangle with a base and height a/2** **B – A/2**

        **The front wall is the same as the back**but you have **to remove the area of the entrance** **– a square of side a/5**

        **The roof**consists of **two rectangles with the length** **A and height a/2**



### Login

From the console read **2 lines**:

**1.** **The length of the page and – a real number in the interval [1. .. 100]**

**2.** **The height of the House B – a real number in the interval [1. .. 100]**

### Exit

To be printed on the console **two numbers**each on a new line:

        **Litres of green paint**

        **Litrit e red paint**

**Formatted to the nearest second decimal.**

### Sample input and output

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Login** | **Exit** | **Explanations** | **Login** | **Exit** |
| 6  10 | 24.52  7.20 | **Both pages are**: 6 \* (6/2) \* 2 = **36 m2**;  **Back wall:**9 + 10.5 = **19.5 m2**  ***square****= (6/2) \* (6/2) =****9****;*  ***trigilnik****: (6/2 \* (10-6/2)) / 2 = 21/2 =****10.5***  **Login**: (6/5) \* (6/5) = 1.2 \* 1.2 = **1.44 m2**  **Front wall**: 19.5-1.44 = **18.06 m2**  **The total area of the walls**: 36 + 19.5 + 1 8 . 0 6 = **73 . 5 6 m2**  **Green paint**= 73.56 / 3 = **2** **4 . 5 2 liters**  **The roof is**: 6 \* (6/2) \* 2 = **36 m2**  **Red paint**= 36/5 = **7.2 liters** | 10.25  15.45 | 68.77  21.01 |