Problem D – Daenerys Targaryen's "Triangle Tower" in Meereen

Daenerys Targaryen is Daenerys Stormborn of the House Targaryen, First of Her Name, the Unburnt, Queen of the Andals and the First Men, Khaleesi of the Great Grass Sea, Breaker of Chains, and Mother of Dragons. Now she is staying in Meereen. She wants to build a great triangle shaped monument. But she doesn't have any Civil Engineers to measure the optimized calculations for building her desire triangular monument. Can you help her?

Given integers **b** and **a**, find the smallest integer **h**, such that there exists a triangle of height **h**, base **b**, having an area of at least **a.**
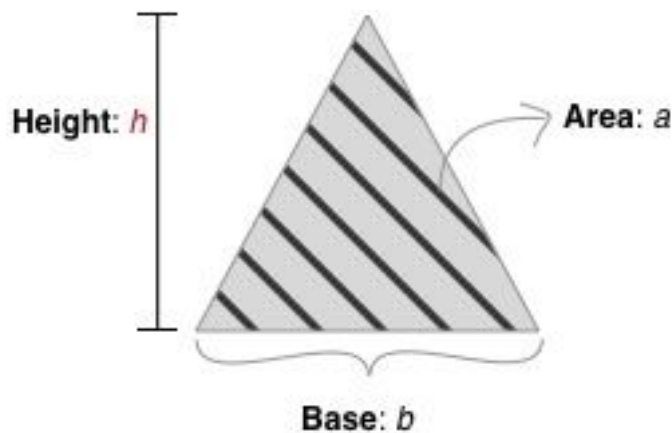
Input Format

In the first and only line, there are two space-separated integers **b** and **a**, denoting respectively the base of a triangle and the desired minimum area.

Constraints

- 1 <= **b** <= 1000000
- 1 <= **a** <= 1000000

Output Format

In a single line, print a single integer **h**, denoting the minimum height of a triangle with base **b** and area at least **a**.

Sample Input 1
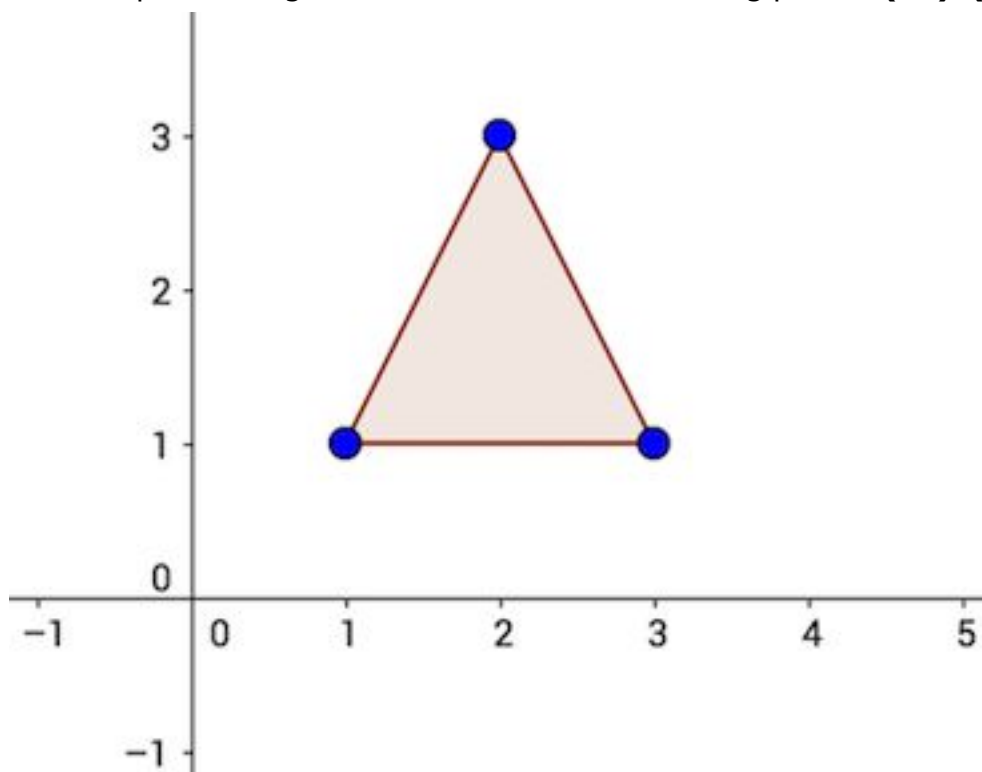
```
2 2
```

Sample Output 1

```
2
```

Explanation 1

The task is to find the smallest integer height of the triangle with base **2** and area at least **2**. It turns out, that there are triangles with height **2**, base **2** and area **2**, for example a triangle with corners in the following points: **(1, 1), (3, 1), (1, 3)** :

It can be proved that there is no triangle with integer height smaller than **2**, base **2** and area at least **2**.

Sample Input 2
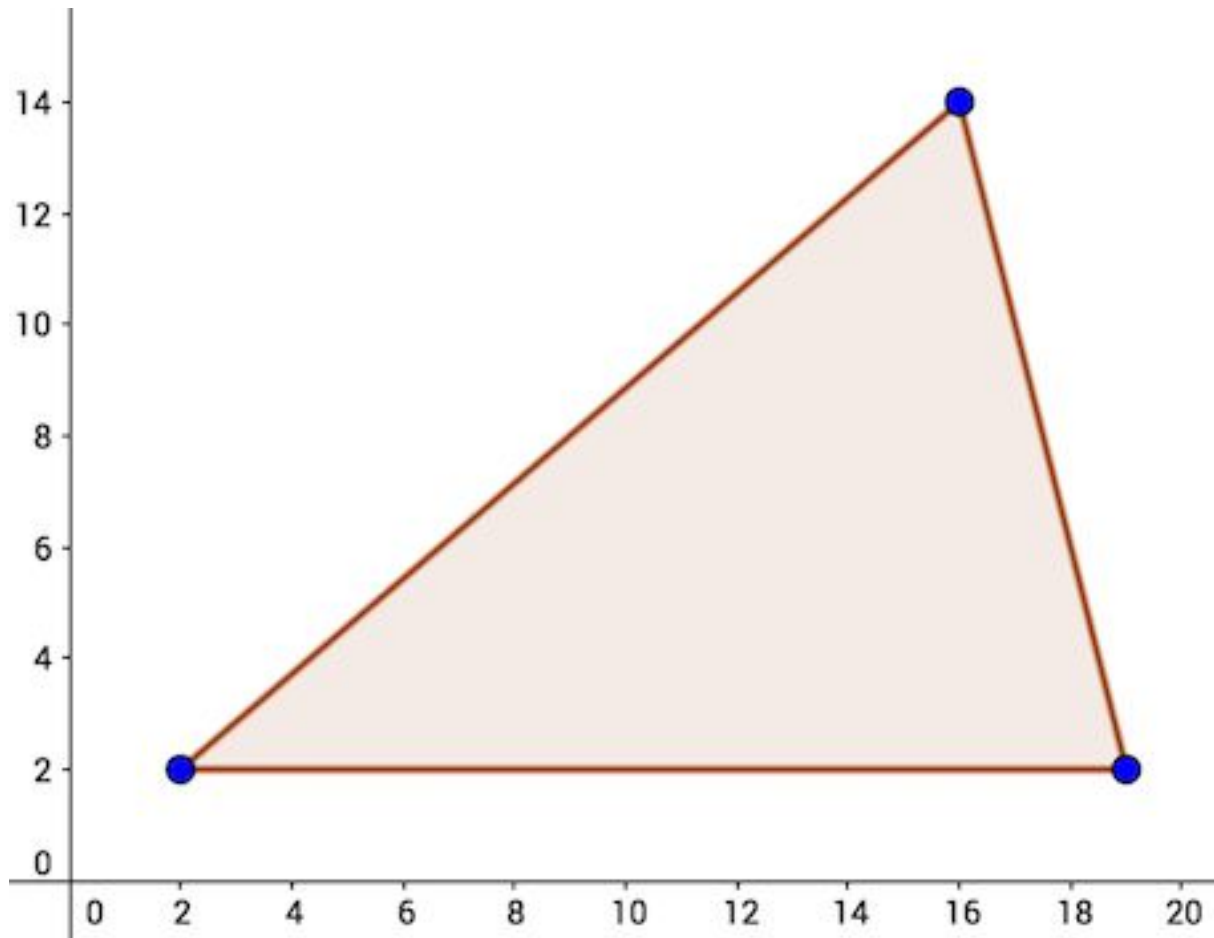
```
17 100
```

Sample Output 2

```
12
```

Explanation 2

The task is to find the smallest integer height of the triangle with base **17** and area at least **100**. It turns out, that there are triangles with height **12**, base **17** and area **102**, for example a triangle with corners in the following points: **(2, 2), (19, 2), (16, 14)**.

It can be proved that there is no triangle with integer height smaller than **12**, base **17** and area at least **100**.