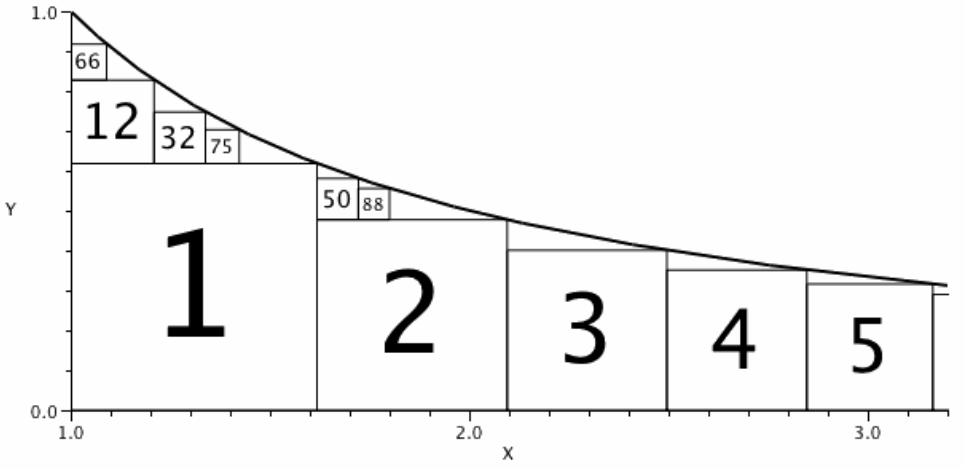
Project Euler #247: Squares under a hyperbola

This problem is a programming version of Problem 247 from projecteuler.net

Consider the region constrained by $1 \leq x$ and $0 \leq y \leq \frac{1}{x}$.

Let S_1 be the largest square that can fit under the curve.
Let S_2 be the largest square that fits in the remaining area, and so on.
Let the $index$ of S_n be the pair (left, below) indicating the number of squares to the left of S_n and the number of squares below S_n.



The diagram shows some such squares labelled by number.
S_2 has one square to its left and none below, so the index of S_2 is $(1, 0)$.
It can be seen that the index of S_{32} is (1,1) as is the index of S_{50}.
50 is the largest n for which the index of S_n is $(1, 1)$.

What is the k-th largest n for which the index of S_n is (l, b)?

Input Format

First line of each test file contains three integers separated by single spaces: k, l and b.

Constraints

- $1 \leq k \leq$ number of such n that index of S_n is (l, b)
- $0 \leq l, b$
- For every l and b from the test files the maximum possible answer is less than 4×10^7

Output Format

Print exactly one number which is the answer to the problem.

Sample Input 0

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1 0 0
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Sample Output 0

```
1
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Sample Input 1

```
1 1 1
```

Sample Output 1

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50
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