Project Euler #247: Squares under a hyperbola



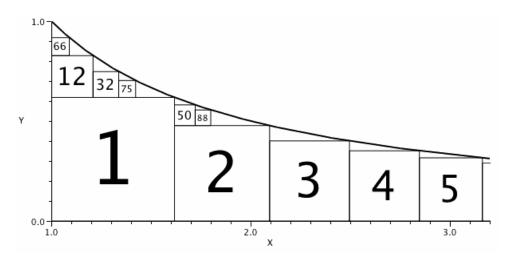
This problem is a programming version of Problem 247 from projecteuler.net

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

- ullet $1 \leq k \leq$ number of such n that index of S_n is (l,b)
- $0 \leq l, b$
- ullet The answer is less than $5 imes 10^7$

Output Format

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

Sample Input 0



Sample Output 0

1

Sample Input 1

1 1 1

Sample Output 1

50