

H Human Pyramid

Time limit: 1s

As chairman of the Building A Pyramid Committee, you are specialized in breaking one specific world record: building the highest human pyramid. Unfortunately, you only know a limited number of people who are willing to be in the pyramid. After all, building human pyramids does not make much money, so most people are volunteers.



An example of a non-world record breaking pyramid. CC BY-SA 3.0 by Amotoki on Wikimedia Commons.

A full human pyramid of height h consists of h layers of people. As seen from below, it has h people on the first layer, $h - 1$ on the second, $h - 2$ on the third, and so forth until eventually the final layer has just a single person. To determine whether you can break the world record, you need to know how high a pyramid you can build. Given how many people are available, how tall is the highest possible human pyramid that these people can make?

Input

The input consists of:

- One line with an integer n ($1 \leq n \leq 10^{12}$), the number of people available to build the pyramid.

Output

Output the height of the highest possible pyramid you can build with n people.

Sample Input 1

3

Sample Output 1

2

Sample Input 2

12

Sample Output 2

4