

A. Vanya and Cubes

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

Vanya got n cubes. He decided to build a pyramid from them. Vanya wants to build the pyramid as follows: the top level of the pyramid must consist of 1 cube, the second level must consist of $1 + 2 = 3$ cubes, the third level must have $1 + 2 + 3 = 6$ cubes, and so on. Thus, the i -th level of the pyramid must have $1 + 2 + \dots + (i - 1) + i$ cubes.

Vanya wants to know what is the maximum height of the pyramid that he can make using the given cubes.

Input

The first line contains integer n ($1 \leq n \leq 10^4$) — the number of cubes given to Vanya.

Output

Print the maximum possible height of the pyramid in the single line.

Examples

input
1
output
1

input
25
output
4

Note

Illustration to the second sample:

Codeforces Round #280 (Div. 2)

Finished

→ Virtual participation

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Start virtual contest

→ Problem tags

implementation

No tag edit access

→ Contest materials

- Announcement 
- Tutorial 