A. Vanya and Cubes

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 $1 + 2 + ... + (i - 1) + i$ 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: