1073. Square Country

Time limit: 1.0 second
Memory limit: 64 MB

There live square people in a square country. Everything in this country is square also. Thus, the Square Parliament has passed a law about a land. According to the law each citizen of the country has a right to buy land. A land is sold in squares, surely. Moreover, a length of a square side must be a positive integer amount of meters. Buying a square of land with a side a one pays a^2 quadrics (a local currency) and gets a square certificate of a landowner.

One citizen of the country has decided to invest all of his N quadrics into the land. He can, surely, do it, buying square pieces 1×1 meters. At the same time the citizen has requested to minimize an amount of pieces he buys: "It will be easier for me to pay taxes," — he has said. He has bought the land successfully.

Your task is to find out a number of certificates he has gotten.

Input

The only line contains a positive integer $N \leq 60\,000$, that is a number of quadrics that the citizen has invested.

Output

The only line contains a number of certificates that he has gotten.

Sample

input	output
344	3

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Problem Source: Ural State Univerisity Personal Contest Online February'2001 Students Session
Tags: dynamic programming   (hide tags for unsolved problems)

Difficulty: 147   Printable version   Submit solution   Discussion (53)

All submissions (34571)   All accepted submissions (11580)   Solutions rating (8747)