Meal Tickets (`tickets`)

Luca is starving, his fridge is empty and in his small town there aren't fast food resturants nor food delivery. His only option is to go to the small supermarket near his house.

The plan is simple: he will rush between the aisles, pick just the dinner, pay and finally eat on his way home. There are just a few lines where to pay, and of course he went to the less crowded one: what a bad move! The only person in front of him is Evil William, and he has *loads* of meal tickets.

A *meal ticket* is like a banknote of a certain value, you can use it to pay instead of money, but some rules apply in this supermarket: you cannot use 2 tickets of the same value and the total value of used tickes must not exceed the total of your shopping.

Evil William has to pay T euros and he has the ticket of *all* the possible values (from 1 euro up to at least T euros). William could use the single ticket of T euros, but he is evil and is going to use as many tickets as he can in order to waste as much time as possible!

Help Luca, who is hungry, counting how many tickets Evil William can use at most.

> ☞ Among the attachments of this task you may find a template file `tickets.*` with a sample incomplete implementation.

Input

The first and only line contains the only integer T.

Output

You need to write a single line with an integer: the maximum number of tickets Evil William can use.

Constraints

- $1 \leq T \leq 10^{18}$.

Scoring

Your program will be tested against several test cases grouped in subtasks. In order to obtain the score of a subtask, your program needs to correctly solve all of its test cases.

– **Subtask 1** (0 points) Examples.

– **Subtask 2** (10 points) $T \leq 10$.

– **Subtask 3** (20 points) T is the sum of the first k natural numbers.

– **Subtask 4** (20 points) $T \leq 100$.

– **Subtask 5** (30 points) $T \leq 10^6$.

– **Subtask 6** (20 points) No additional limitations.

Examples

input	output
9	3
10	4

Explanation

In the **first sample case** Evil William can use the tickes of value $5 + 3 + 1 = 9$. He can't use 4 tickets without exceeding 9 euros, so 3 is the greatest amount.

In the **second sample case** he can use the tickets of value $1 + 2 + 3 + 4 = 10$. This is the only valid combination of four tickets.