E   Epic Party on a Boat

Wojti, Majki, and Franki go to Delft for Northwestern Europe Regional Contest. Since it's winter, they decide to sleep on a boat without any heating or appropriate sleeping bags. As soon as they realise their mistake, they decide to invite friends over in order to make it a little warmer. Unfortunately, the boat is very small and can fit a limited number of people.

Source: what-if.xkcd.com.

They asked their Airbnb host how many people can fit, but he turned out to be very greedy and told them: "The number of additional people that the boat can sustain is between 1 and n. You can try to guess the number and I will tell you if the true one is smaller, equal to or larger than your guess. However, each time you guess number k, I will charge you k Grumpy Angry Panda Coins. Moreover, you always have to guess until I answer 'equal', even if you can already deduce the answer from the earlier guesses.". Wojti, Majki, and Franki are wondering if that deal is worth it. They want to calculate the worst-case cost (in Grumpy Angry Panda Coins) they would have to pay if they were guessing numbers optimally.

Input

The input consists of:

- One line with an integer n ($1 \leq n \leq 100$), the largest possible number of people that the boat can sustain in addition to Wojti, Majki, and Franki.

Output

Output the best worst-case cost of guessing the number of people that the boat can sustain.

Sample Input 1	Sample Output 1
3	5

Sample Input 2	Sample Output 2
4	7

Sample Input 3	Sample Output 3
5	9