A. Lazy Caterer Sequence

time limit per test: 2 seconds
memory limit per test: 64 megabytes
input: standard input
output: standard output

Lazy caterer sequence is defined as the maximum number of pieces formed when slicing a convex pancake with n cuts (each cut is a straight line). The formula is $C_n = n \cdot (n + 1) / 2 + 1$. You are given n; calculate n-th element of the sequence.

Input

The only line of the input contains an integer n ($0 \le n \le 100$).

Output

Output the n-th element of lazy caterer sequence.

Examples

input
2
output
4

input
5
output
16