PROBLEMS   SUBMIT   STATUS   STANDINGS   CUSTOM TEST

C. Lucky Numbers

time limit per test: 0.5 seconds
memory limit per test: 64 megabytes
input: standard input
output: standard output

The numbers of all offices in the new building of the Tax Office of IT City will have lucky numbers.

Lucky number is a number that consists of digits 7 and 8 only. Find the maximum number of offices in the new building of the Tax Office given that a door-plate can hold a number not longer than n digits.

Input

The only line of input contains one integer n ($1 \le n \le 55$) — the maximum length of a number that a door-plate can hold.

Output

Output one integer — the maximum number of offices, than can have unique lucky numbers not longer than n digits.

Examples

input
2
output
6