Problem A **Expression Bracketing**

Input: standard input
Output: standard output
Time Limit: 1 second
Memory Limit: 32 MB

In this problem you will have to find in how many ways **n** letters can be bracketed so that the bracketing is non-binary bracketing. For example **4** letters have **11** possible bracketing:

xxxx, (xx)xx, x(xx)x, x(xx), (xx)x, x(xx), ((xx)x)x, (x(xx))x, (xx)(xx), x((xx)x), x((xx)x). Of these the first six bracketing are not binary. Given the number of letters you will have to find the total number of non-binary bracketing.

Input

The input file contains several lines of input. Each line contains a single integer n (0 < n < 26). Input is terminated by end of file.

Output

For each line of input produce one line of output which denotes the number of non binary bracketing with **n** letters.

Sample Input

3

4

5

10

Sample Output

1 6

31

98187

(The Decider Contest, Problem setter: Shahriar Manzoor)