Problem G

Combinatorial Summation

Input: standard input
Output: standard output
Time Limit: 2 seconds

I am sure about your interest with combinations. Why not put yourself into a test to see your flair? So here is the problem:

You are given an integer ***n***(less than 999). You have to evaluate the expression given at right. Hope to see you successful with this.

You should count any term as **zero** which has $k < j$.

$$\sum_{\substack{i=1 \\ k=n}}^{\substack{i=\infty \\ k=-\infty}} \sum_{1 \le j \le i} {}^{k}C_{j}$$

[Click here if you don't see the image]

Input

The first line of input is an integer ***t***(less than 2000). Then follows ***t*** lines each of which contain ***n*** as described before.

Output

There should be one line of output for each input which will be the value of the above expression for the corresponding ***n***.

Sample Input

```
2
3
4
```

Sample Output

```
7
14
```

Problem setter: Mohammad Sajjad Hossain
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