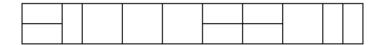# 10359   Tiling

In how many ways can you tile a $2 \times n$ rectangle by 2×1 or 2×2 tiles?

Here is a sample tiling of a 2×17 rectangle.

Input

Input is a sequence of lines, each line containing an integer number $0 \le n \le 250$.

Output

For each line of input, output one integer number in a separate line giving the number of possible tilings of a $2 \times n$ rectangle.

Sample Input

```
2
8
12
100
200
```

Sample Output

```
3
171
2731
845100400152152934331135470251
1071292029505993517027974728227441735014801995855195223534251
```