

Fibonacci

Description

Remember Fibonacci numbers? The fibonacci sequence is defined as $f(0) = 1$, $f(1) = 1$, $f(n) = f(n-1) + f(n-2)$. It was originally developed as a means of calculating the size of a population of rabbits after n years or something like that. Now, it's a famous CS and math nerd thing for some reason.

Honestly, I think it's more impressive if you know the first 10 fibonacci numbers than if you know 10 digits of pi.

Input

The first line will contain a single integer **T** ($1 < T < 101$), which will be the number of lines in the input file. The next **T** lines will contain a number **N** ($1 < T < 420$), which is the n value in $f(n)$

Output

For each number **T**, output the value of $f(N)$ to the console..

Examples

Input

6
1
2
3
4
5
6

Output

1
2
3
5
8
13

