A Fibonacci sequence is calculated by adding the previous two members of the sequence, with the first two members being both 1.

$$f(1) = 1, f(2) = 1, f(n > 2) = f(n-1) + f(n-2)$$

Input

Your task is to take numbers as input (one per line).

Output

And then print the corresponding Fibonacci number (one per line also).

Sample Input

```
3
100
```

Sample Output

```
2
354224848179261915075
```

Note: No generated fibonacci number in excess of 1000 digits will be in the test data, i.e. $f(20) = 6765$ has 4 digits.