Problem 9: Fibonacci (10 points)

(General) In mathematics, the Fibonacci numbers are the numbers in the following integer sequence, called the Fibonacci sequence, and characterized by the fact that every number after the first two is the sum of the two preceding ones:

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, ...

Hence, a Fibonacci number *n* may be found with $f(n) = f(n-1) + f(n-2)$.

Write a simple program that finds the the Fibonacci number at a specified position in the Fibonacci series.

Facts

- Each number in Fibonacci is the sum of the previous two numbers in sequence.
- FIbonacci of 0 equals 0, i.e. $f(0) = 0$
- The starting two values in the series for this formula may be considered as 0 and 1
- In order to find a specific Fibonacci number, you must first find all of its preceding fibonacci numbers using the formula above.

Input

The first input is the number of test cases. Each additional input is a non-negative integer and represents the specified index into the Fibonacci sequence.

Output

Print the value at that position in the Fibonacci series.

Sample Input	**Sample Output**
4 1 2 4 20	1 1 3 6765