Problem 45: Fibonacci

Difficulty: Easy

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Problem Background

The Fibonacci sequence is attributed to Italian mathematician Leonardo of Pisa. It is represented as a sequence of integers, starting with 0, 1 where every number after the first 2 is the sum of the two preceding numbers. The beginning of the Fibonacci sequence looks like...

0, 1, 1, 2, 3, 5, 8, 13, 21, 34...

Problem Description

Your task is to write a program which renders the nth number of the Fibonacci sequence. For example if given an n value of 9, you are to return the 9th number of the sequence, which would be the number 21.

Sample Input

The first line of your program's input, received from the standard input channel, will contain a positive integer representing the number of test cases. Each test case will include:

• A single positive integer which represents the position in the sequence for which you are to determine the value. The number will be less than or equal to 90.

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Sample Output

For each test case, your program should output one line containing the sequence position and the value of the integer at that position in the Fibonacci sequence. Each line of output should be in the format <POSITION> = <VALUE>.

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1 = 0
5 = 3
8 = 13
11 = 55
13 = 144
21 = 6765
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40 = 63245986