
JoQuence

Jojo invented a new sequence called JoQuence. It is adapted from Fibonacci Sequence. The formula is $J[n] = J[n-2] + J[n-1] + 1$ with $J[0] = 2$ and $J[1] = 1$. What is the N-th JoQuence number?

Format Input

The first input consist integer T, the number of the test cases. The next T lines will consist of an integer N.

Format Output

For each test case, print "Case #X: Y" where X is the test case number and Y is the N-th JoQuence number. It is guaranted that the N-th JoQuence number fit in integer data type.

Constraints

$1 \leq T \leq 1000$

$0 \leq N \leq 40$

Sample Input	Sample Output
3 1 3 10	Case #1: 1 Case #2: 6 Case #3: 211