

In doing some unusual scientific research lately, Tomas has discovered a peculiar sequence in various naturally occurring situations, where certain measurements of growth produce the consistent pattern 1, 1, 1, 3, 5, 9, 17, and so on. He has recorded the data in stages, where stages 1, 2, and 3 are all the value 1, and then stage 4 begins showing observable growth with the value 3 (sum of the previous three values), stage 5 the value 5 (1+1+3), and so on, following the same arithmetic addition sequence. He wants to be able to predict any particular stage, and needs your help. For example, he wants to know what the value would be at up to stage 50 of this unusual growth pattern.

Input: Several integer values  $N$  ( $1 \leq N \leq 50$ ), each representing a stage of growth according to the pattern described above, each on one line.

Output: The growth size achieved at stage  $N$  in the growth pattern described above.

Sample Input:

1  
3  
5  
7  
9

Sample Output:

1  
1  
5  
17  
57

Create a file called "tomas.dat" that consists of the Sample Input, run your program and check against the Sample Output.