

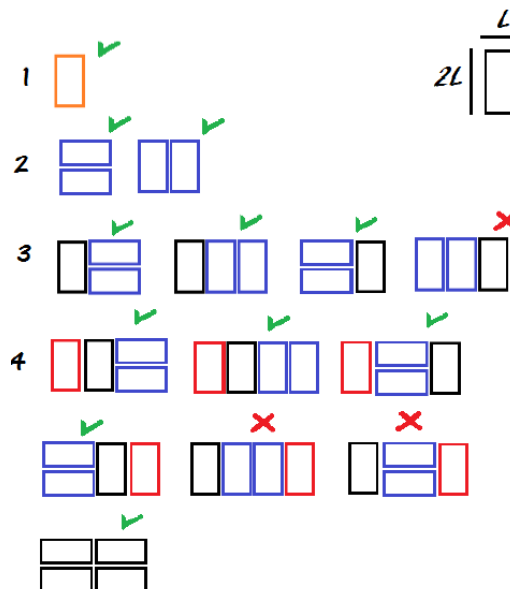
II BXComp

2º Campeonato de Programação para Calouros do Curso de Sistemas de Informação 2012

5ª Etapa – Desafio 1

Brick Wall Patterns

If we want to build a brick wall out of the usual size of brick which has a length twice as long as its height, and if our wall is to be two units tall, we can make our wall in a number of patterns, depending on how long we want it. From the figure one observe that (1 brick equals 1 solution, 2 bricks equal 2 solutions, 3 bricks equal 3 solutions, 4 bricks equal 5 solutions, 5 bricks equal 8 solutions, ...):



Image's credits: Nilton A. O. Jr.

Problem

Your task is to write a program that given the length of a wall, determines how many patterns there may be for a wall of that length.

Input

Your program receives a sequence of positive integers, one per line, each representing the length of a wall. The maximum length of a wall is 40. The input ends with a 0 (zero).

Output

For each wall length given in the input, your program must output the corresponding number of different patterns for such a wall in a separate line.

Sample Input

```
1
2
3
4
5
0
```

Sample Output

```
1
2
3
5
8
```

Restrictions

Only positive numbers smaller than 40 will be used on input.